

5 JUN 1968

RIVERVIEW COLLEGE OBSERVATORY

SEISMOLOGICAL BULLETIN

1 9 6 7



RIVERVIEW, SYDNEY, AUSTRALIA

RIVERVIEW COLLEGE OBSERVATORY.

WORLD WIDE STANDARD SEISMOGRAPH NETWORK

STATION RIV.

SEISMOLOGICAL BULLETIN, JANUARY-DECEMBER, 1967.

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

INSTRUMENTS:

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

Benioff Variable Reluctance Seismometer NS, EW, Z.
T₀ 1.0s, T_g 0.75s, Magnification 12,500 at 1.0s.
Sprengnether Long-Period Seismometer NS, EW, Z.
T₀ 15s, T_g 100s, Magnification 750 at 15s.

Galitzin Aperiodic Seismometer NS, EW, Z.

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

U.S.C.G.S. 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.		
1	1967 Jan. 1	oP	Z	00	26	36	1.0			0.26		Microseisms present. N'E'Z'N"E'Z'" confused by coda of shocks Dec.31. USCGS: 12.1 S, 166.2 E H 00 21 06.6 h 33 km. Mag. 4.9	
		i	Z	26	49.5		1.2		+0.56				
		i	N'	31	14		14	+17					
		i	Z'	31	17		14			+13			
		i	E'	31	21		14			-14			
2	1	P	Z	00	50	45 1/2						USCGS: 12.0 S, 166.4 E, H 00 45 13* h 33 km.	
3	1	iP	Z	03	18	48.5	1.0			+0.13		Compression. Microseisms present USCGS: 11.9 S, 166.2 E, H 03 13 18.0 h 33 km. Mag. 4.6	
		o(L)	Z'	25.8		26							
4	1	oP	Z	04	09	37						USCGS: 12.0 S, 166.0 E H 04 04 06.5 h 33 km. Mag. 4.5	
		i	Z	09	40		1.2			+0.19			
		o(S)	N'	14	06								
		i	E'	14	16		11			+5			
		i	N'Z'	14	18		11	+5		+5			
		M	E'	21	12		15			4			
5	1	M	N'Z'	21.4			16	4		6		4130 37°2 Compression USCGS: 15.3 S, 173.6 W H 07 05 48.6 h 33 km. Mag. 6.0 6.4 Berkeley 6 1/2-6 3/4 Pasadena	
		iP	Z	07	12	56.0	1.7			+0.33			
		iP	E'Z'E'Z"	12	56		6			-2			+4
		opP	E'Z'	13	07		9			1 1/2			2
		i	Z	13	08		1.0						+0.09
		iPP	E'Z'E'Z"	14	25		7			-5			+7
		iPPP	E'Z'E'Z"	14	41		7			+8			-10
		i	N'N"	14	51		6	+3					
		i	Z'	14	53		7						+4
		i	E'E"	14	55		8			4			
		oS	N'	18	40								
		e	E'	19	02		20			5			
		o	Z'	19	05		16						4
		oSS	E'	21	06		17			2			
		oLQ	N'	21	22		26						
		oL	Z'	21	29		28						
oSSS	E'	21	38		28			5					
LQ max.	N'	22.1			26	26							
oLR	E'Z'	23	25		28			34	39				
LR max.	E'Z'	24	03		28			26					
M	E'	26	02		17								
M	Z'	26	15		17				16				
M	N'	26	26		13	11							

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		
6	1967 Jan. 1	oP	Z	07	51	23						Microseisms present
		ipP	Z		51	33.5	1.2			-0.28		USCGS: 12.1 S, 166.2 E, H 07 45 53.6 h 33 km. Mag. 4.7
7	1	oP	Z	08	16	41½						Microseisms present
												USCGS: 12.2 S, 166.1 E, H 08 11 12.8 h 33 km. Mag. 4.5
8	1	iP	Z	08	59	50.0	0.7			-0.05		Dilatation. Microseisms present
												USCGS: 11.6S, 165.8 E, H 08 54 16* h 33 km. Mag. 4.4
9	1	oP	Z	09	00	46	0.8			0.07		Microseisms present
		e	Z'		00	48	8			2		
		e	N'		05	12						USCGS: 12.3 S, 166.0 E
		e	E'		05	21	11					H 08 55 17*
		i	Z'		05	28	10			+4		h 33 km.
		m	N'E'		05	38	10	6	8			Mag. 4.7
		oL	Z'		07	28	27					
		M	E'		10	39	15		3			
		M	Z'		11	25	18			3		
		M	N'		11	31	15	4				
10	1	iP	Z	09	20	07.2	1.0			+0.08		Compression. Microseisms present
11	1	oP	Z	10	31	53						Microseisms present
												USCGS: 11.9 S, 166.4 E, H 10 26 21* h 58 km. Mag. 4.8
13	1	P	Z	13	10	32	1.0			0.05		Microseisms present
												USCGS: 11.3 S, 166.0 E, H 13 04 56* h 33 km. Mag. 4.3
14	1	oP	Z	13	23	58½	1.1			0.07		Microseisms present
		e	N'		28	31						USCGS: 11.6 S, 165.3 E,
		e	E'		28	38						H 13 18 27.3 h 33 km.
		oL	Z'		30	31	26					Mag. 4.9
15	1	oP	Z'	14	24	15	6			2		Microseisms present
		m	Z		24	20	0.8			0.16		
		e	E'		28	50	12					USCGS: 12.4 S, 165.8 E
		m	N'E'Z'		29	04	11	3	3	3		H 14 18 51*
		oL	Z'		31	02	27					h 33 km.
		M	N'		33	18	17	2				Mag. 5.0
		M	Z'		33	32	17			2		
		M	E'		34	09	16		2			
16	1	oP	Z	17	47	17						Microseisms present
		oL	Z'		57.3							USCGS: 49.2 S, 108.6 E, H 17 40 18.7 h 33 km. Mag. 4.2
17	1	oP	Z	20	50	57						Microseisms present
		e	N'		55	46						USCGS: 11.9 S, 165.9 E, H 20 45 26.7
		oL	Z'		58.6							h 33 km. Mag. 4.4
18	1	oP	N'E'Z'	22	04	31	12	1	1	2	2930	Microseisms present
		m	Z		04	39	1.4			0.64	2694	
		eS	N'		09	00	10					USCGS: 11.1 S, 165.3 E
		m	N'		09	16	15	6				H 21 58 57.8
		m	E'		09	32	15		8			h 33 km.
		o(LQ)	N'		09	56	23	6				Mag. 5.4
		M	N'		14	50	14	14				6 Pasadena
		M	E'		16	48	14		8			
		M	Z'		17	01	15			11		
19	2	P	Z	00	45	17						Microseisms present
		oL	Z'		56							USCGS: 12.4 S, 165.7 E, H 00 39 51.9 h 33 km.
20	2	P	Z	01	00	57						Microseisms present
22	2	oP	Z	02	40	45						Microseisms present
		m	Z		40	49	1.0			0.09		USCGS: 11.4 S, 165.2 E, H 02 35 15.3
		oL	E'		50.6		25		1			h 33 km. Mag. 5.0

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
25	1967 Jan. 2	P	Z	07	37	41	0.7			0.06		Microseisms present USCGS: 11.5 S, 165.6 E, H 07 32 08* h 33 km. Mag. 4.5
		oL	Z'			44.3	24					
26	2	P	Z	10	05	52	0.7			0.03		Microseisms present USCGS: 11.9 S, 165.1 E, H 10 00 23* h 33 km. Mag. 4.7
		M	E'			23						
28	2	oP	Z	15	16	43						Microseisms present USCGS: 12.2 S, 165.9 E, H 15 11 16.1 h 45 km. Mag. 4.5
		e	N'			21 23						
		M	Z'			28 26	14			1/2		
30	2	iP	Z	20	05	25.3	1.3			+0.31	2890	Compression. Microseisms present
		o	N'E'Z'			05 30	16	+1	+1	-3	2690	
		pP	Z			05 35	1.3			0.53		USCGS: 12.3 S, 166.4 E
		iPP	Z			06 06	1.0			+0.22		H 19 59 58.2
		oS	N'			09 50	9					h 33 km.
		e	E'			09 52	9					Mag. 5.2
		i	N'			10 04	15	+9				5.9-6.1 Borkoloy
		i	Z'			10 11	13			+8		
		i	E'			10 13	14					
		j	N'E'			10 33	12	-7	-5			
		i	N'			11 02	23	-7				
		o	Z'			11 09	23			5		
		oL	Z'			12 20	28			8		
		M	Z'			13 45	21			12		
		M	N'			14 09	16	10				
		M	E'			15 32	15			8		
31	3	P	Z	00	01	06						Microseisms present USCGS: 11.7 S, 165.1 E, h 33 km. H 23 55 36* Jan.2, Mag. 5.2
35	3	iP	N'E'Z'	05	41	23	16	+2 1/2	+2	-5	2890	Dilatation. NEZ masked by microseisms
		i	Z			41 41.5	1.3			+0.25	2690	
		oS	N'N''			45 49	13					USCGS: 10.9 S, 165.5 E
		i	E'E''			46 03	13			+15		H 05 35 46.6
		m	N'			46 08	15	13				h 33 km.
		i	Z'			46 10	18			+8		Mag. 5.2
		i	E'E''			46 18	13			+15		6.1-6.3 Borkoloy
		e	N'			47.0	25	16				
		M	Z'			51 17	17			23		
		M	N'			51 40	14	35				
		M	E'			51 48	14			15		
		M	Z'			53 52	15			23		
36	3	oP	Z	05	58	26 1/2	1.0			0.06		Microseisms present USCGS: 11.2 S, 165.5 E
		M	N'			06 08 45	13	35				H 05 52 51.8 h 33 km.
		M	E'			09 58	14			22		Mag. 5.3
		M	Z'			10 55	12			29		
38	3	oP	Z	11	10	50						Microseisms present
		e	N'E'Z'			11 05	11					
		m	N'E'Z'			11 26	11	1	1	2		USCGS: 11.2 S, 165.4 E
		o(S)	N'			15 20	10					H 11 05 15.4
		e	E'			15 29	10					h 33 km.
		i	E'			15 41	9			-5		Mag. 5.3
		o	N'			16 13	23	4				5.1-5.5 Borkoloy
		oL	Z'			17 47	26			5		
		M	N'E'			22 12	12	7	9			
		M	Z'			23 55	13			6		
39	3	P	Z	11	37	09						Microseisms present USCGS: 11.2 S, 165.4 E, H 11 31 34.4 h 33 km. Mag. 5.1
40	3	P	Z	12	37	46						Microseisms present USCGS: 10.9 S, 165.4 E
		i	Z			37 55	1.5			-0.24		H 12 32 09.2
		e	N'			42 22	15					h 33 km.
		o(L)	Z'			44.7	(27)					Mag. 5.2
		M	N'E'Z'			49	12	1	2	1		

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Por.	Amplitudo			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
41	1967 Jan. 3	P	Z	13 29 18	1			0.12		Microseisms present USCGS: 12.0 S, 165.4 E, H 13 23 51.7 h 33 km. Mag 4.9
43	3	(P)	Z	20 35 54						USCGS: 11.1 S, 165.5 E, H 20 30 18.0 h 33 km. Mag. 4.5
		o	N'	43.7						
44	3	iP	Z	21 28 49.6	1.2			+0.18	2890	Compression. Microseisms present
		i	Z	28 54	0.9			+0.13	2690	
		ipP	Z	29 01	1.0			+0.45		USCGS: 12.4 S, 166.4 E
		i	Z	29 07	1.0			+0.30		H 21 23 22*
		oS	N'E'	33 16	9					h 33 km.
		o	N'	33 27	15	6				Mag. 5.0
		i	E'Z'	33 35	15		-7	+4		5.4-5.8 Berkeley
		o(LQ)	N'	34 30	24	5				
		oLR	Z'	35 43	30					
		M	E'Z'	37.1	20					
		M	N'	37 32	16	6				
45	3	iP	Z	21 39 02.4	1.2			+0.26		Compression
46	4	iP	Z	00 20 14.1	1.0			-0.08		Dilatation. Microseisms present
		o	N'	24 52						USCGS: 11.1 S, 165.5 E
		o	N'	26 08	17					H 00 14 38.2 h 33 km.
		oL	Z'	27 28	23					Mag. 4.5
47	4	iP	Z	02 00 38.0	1.0			-0.12		Dilatation. Microseisms present
										USCGS: 11.6 S, 165.5 E, H 01 55 07* h 33 km. Mag. 4.5
48	4	oPP	N'Z'	03 00 44	6					Masked by microseisms
		oS	N'	04 47	20					
		o	E'	06 44	44		4			USCGS: 3.6 S, 148.9 E
		oLR	Z'	08 18	34					H 02 53 28*
		M	N'Z'	10 26	23	4		3		h 9 km.
		M	E'	10 38	18			5		Mag. 4.9
49	4	P	Z	03 51 53						Microseism present.
		M	N'E'	04 15		Feeble				USCGS: 20.3 N, 120.0 E, H 03 41 36.4 h 33 km. Mag. 5.6
50	5	oP	Z'	00 27 48						Microseisms present
		i	Z'Z''	28 00	9*			-17*		
		PP	N'Z'	31 35	24	2		6		USCGS: 48.1 N, 102.8 E
		iSKS	N'	38 28	19	-12				H 00 14 40.4
		i	E'	38 33	19			+5		h 33 km.
		i	N'	39 02	17	+13				Mag. 6.4; 7 $\frac{1}{4}$ -7 $\frac{1}{2}$ surface wave
		i	E'	39 09	19			+10		7 $\frac{1}{4}$ Pasadena, Palisados
		iSP	E'	40 04	24			-27		7.4-7.6 Berkeley
		iPS	Z'	40 12	24				+21	
		iPS	N'	40 14	24	-41				
		SS	N'E'	45 04	32	69		50		
		SS	Z'	45 18	34				27	
		oL	E'	55.0	50					
		oL	N'	57.0	35	75				
		M	N'	01 01.0	27	115ca				
		M	E'	01.6	27			195ca		
		M	N'Z'	08.2	22	110ca			150ca	
		F	Z'	05.2						
	5	(P)	Z	00 55 29						Masked by microseisms
										USCGS: 48.4 N, 103.1 E, H 00 42 13.3 h 33 km. Mag. 5.6
	5	(P)	Z	02 15 54						masked by microseisms
										USCGS: 11.3 S, 165.6 E, H 02 10 17* h 33 km. Mag. 5.0
52	5	oP	Z'	06 22 48						Microseisms present
		oS	N'	30 23	12					USCGS: 13.8 N, 120.7E, H 06 13 31.6
		o	N'	31 42	17	$\frac{1}{2}$				h 166 km. Mag. 5.4
53	5	oP	Z	10 41 22.0	1.2			0.13		Microseisms present
		i	Z	41 24.5	1.0			+0.16		USCGS: 11.3 S, 166.2 E
		ipP	Z	41 37	1.0			-0.19		H 10 35 50.3
		o	N'	46 04	12					h 62 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.
69	1967 Jan. 9	iP	Z	19	52	32.7	1.2	0.18	0.13	+0.82	Compression Microseisms present USCGS: 11.5 S, 165.4 E H 19 47 06* h 78 km. Mag. 5.5
		o(S)	N'	57	07		9	½			
		o	E'	57	22		9		1		
		o(LQ)	N'	58	17		16	1			
		M	E'	20	03	36	14		1		
		M	N'Z'	04	40		14	2		1	
72	11	iP	Z	03	02	34.4	1.2			+0.24	Compression Microseisms present USCGS: 11.4 S, 165.6 E H 02 58 01.2 h 33 km. Mag. 5.3
		o	N'	08	07						
		o	E'	08	16		12				
		M	Z'	15	31		15			½	
		M	N'E'	18	00		14	1	½		
73	11	oS	N'	06	08	50	16				Masked by microseisms USCGS: 0.1 S, 120.1 E H 05 54 00* h 23 km. Mag. 5.6
		o(SS)	Z'	11	53						
		o	N'E'	12	07		18	1	1		
		oL	N'E'	14.4			41				
		oLR	Z'	17	20		33				
		M	N'E'	19	07		22	2	2		
		M	Z'	22	07		18			2	
74	11	P	Z	10	49	10.5					Microseisms present USCGS: 11.5 S, 165.5 E, H 10 43 39* h 33 km. Mag. 4.7
		o	N'	54	44						
		M	N'	11	01.1		12	½			
76	11	P	Z	11	37	59					Microseisms present USCGS: 11.4 S, 165.6 E H 11 32 26* h 33 km. Mag. 4.5
		(L)	N'E'Z'	43							
		M	E'	48.3			13		1		
		M	N'	49.6			14	1			
		M	Z'	53.6			13			1	
81	12	P	Z	05	30	20½	1.0				Microseisms present USCGS: 56.1 S, 26.7 W, H 05 17 22* h 33 km. Mag. 5.4
		L	Z'	06	00			Feeble			
82	13	oP	Z'	13	53	35	5				2810 2593 USCGS: 10.6 S, 161.4 E H 13 48 11.7 h 32 km. Mag. 5.7; 6 Surface wave. 5.7-6.1 Borkoly 6½ Pasadona
		o	N'E'Z'	53	41		7				
		ipP	N'E'Z'N'E'Z"	53	46		10	-2	-1	+5	
		m	Z	53	49		2.8			3.3	
		i	Z	54	03		1.0			+0.14	
		oS	E'	57	56		10		2½		
		i	N'N"	57	59		7*	-5*			
		i	E'	58	07		16		+10		
		i	N'N"	58	08		16	+19			
		i	Z'Z"	58	11		16			+14	
		iL	N'E'	58	54		27	+20	-16		
		oL	Z'	59	11		27			12	
		L max.	N'	59	25		27	23			
		M	Z'	14	01	28	21			22	
M	N'	01	53		16	15					
M	E'	02	14		16		12				
84	14	oP	Z	14	19	15	1.3			0.17	Microseisms present USCGS: 11.3 S, 165.7 E H 14 13 40.8 h 33 km. Mag. 5.0
		o	Z	19	24		1.0			0.10	
		o	Z	19	35		1.2			0.18	
		o	E'	24	07						
		o	N'	24	37						
		i	N'	27	25		8	+2			
		M	N'E'	29	20		14	2	2		
		M	Z'	32	09		14			1	
87	16	P	Z'	04	49	59	4			4	Largo microseisms present USCGS: 11.3 S, 165.7 E H 04 44 27.3 h 33 km. Mag. 5.3
		i	Z	50	02.5		0.8			+0.10	
		o(S)	N'	54	37		15	1½			
		o	E'	54	54		15		2½		
		o	N'	55	18		15	2			
		iSSS	N'	55	57		13	+4			
		M	N'	58	01		15	4			
		M	E'	59	55		14		3		
M	Z'	05	01	06	15			4			

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
					μ	μ	μ	km.	
88	1967 Jan. 16	θ Z'	11 14 42						Microseisms present
		θ S N'	18 47	12					
		i N'	19 04	13	+4				USCGS: 10.7 S, 161.3 E
		i E'Z'	19 09	13		+4	+4		H 11 09 08.4
		θ L N'	19 56	28	5				h 40 km
		θ L Z'	20 01	28					Mag. 5.1
		M N'Z'	22 42	18	5		3		5.3-5.7 Berkeley
M E'	23 58	14			4				
89	16	iP Z	14 32 01.0	1.2			+0.44	2920	Compression
		i N'E'Z'N'E"Z"	32 02	8	+2	+1	-4	2693	
		i Z	32 11	1.2			+0.42		USCGS: 11.2 S, 165.7 E
		i N'N"	36 21	11	+4				H 14 26 22.9
		iS E'	36 33	8		+6			h 6 km.
		θ Z'	36 37						Mag. 5.3
		i E'	36 50	12		-13			5.8-6.2 Berkeley
		i N'E'	37 02	12	+8	+12			
		i Z	37 03	8			+8		
		i N'E'	37 15	12	+10	+7			
		i N'	37 28	12	+8				
		i N'	37 49	12	-19				
		θ L Z'	38 54	24			19		
		M E'	39 50	22		14			
M N'	40 02	16	19						
M Z'	41 26	16			19				
M N'	42 10	14	19						
90	16	iP Z	14 47 42.5	1.2			+0.43	Compression	
USCGS: 5.8 N, 123.5 E; H 14 39 09.0									
h 42 km. Mag. 5.2									
91	16	iP Z	14 54 23.0	1.1			+0.50	Compression	
		pP Z	54 32	1.1			0.42	USCGS: 11.3 S, 165.7 E, H 14 48 49.3	
h 33 km. Mag. 5.1									
92	16	iP N'Z'	16 07 56	9	+2		-3		Dilatation
		i Z	07 58.5	1.4			+0.61		
		i Z	08 05	1.4			+0.69		USCGS: 11.3 S, 165.6 E
		θ S N'	12 24	10	3				H 16 02 22.7
		θ E'	12 32	9		2			h 38 km.
		θ Z'	12 39	10			3		Mag. 5.1
		θ N'	12 43	9	4				
		i E'	12 46	9		-5			
		θ N'	13 17	25					
		M N'	18 01	13	6				
M E'	20 52	12		7					
M Z'	21 21	13				7			
93	17	iP NEZ	01 22 27.5	1.0	-0.10	-0.11	+0.68		Compression
		iP Z'Z"	22 27 $\frac{1}{2}$	5			+1		
		θ Z'Z"	23 01	7			1		USCGS: 14.7 S, 167.2 E
		θ (S) N'Z'N"	26 48	9	$\frac{1}{2}$		1		H 01 17 19.4
		θ N'	27 18	7	1				h 90 km.
		θ Z'	27 25	7			1		Mag. 4.9
		i E'E"	27 26	7		+2			
θ L Z'	28 40	28			1				
95	17	θ P Z'	12 10 54					8080	
		i N'Z'N"Z"	11 04	11	+2		-4	7297	USCGS: 38.3 N, 142.1 E
		θ N'	20 08	13					H 11 59 31.5
		iS N'E'N"E"	20 16	13	-8	-10			h 44 km.
		i Z'	20 21	20			+4		Mag. 5.9; 5.9 surface wave
		iS E'E"	20 41	13		-8			6.5 Berkeley
		i N'E'	21 03	13	+5 $\frac{1}{2}$	-5			6 $\frac{1}{2}$ Pasadena
		θ SS N'	24 46	30	5 $\frac{1}{2}$				
		θ SS Z'	25 09	30			5		
		θ LQ E'	30 06	44		20			
		θ LR N'Z'	33 51	40	11		18		
		M N'Z'	37 25	23	10		13		
		M E'	38 01	21		10			
W ₂ M N'Z'	14 30	25	1		1 $\frac{1}{2}$				

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
97	1967 Jan. 18	iP	Z'Z''	05 47 52	6				Dilatation 10560 95°0 USCGS: 56.6 N, 120.8 E H 05 34 32.6 h 11 km. Mag. 6.1 6.5 Berkeley 6½-6¾ Pasadena
		oSKS	N'	58 26					
		oS	E'	59 02	14		1		
		o	N'	06 00 15	15	2			
		o	Z'	00 18	14			1	
		o	Z'	05 00	47			3	
		oSS	E'	05 25	25		2		
		i	N'	05 27	27	-7			
		oL	E'	16 22	37		9		
		oL	N'Z'	20.0	34				
		M	E'	20 23	22		8		
M	N'Z'	22 34	31	7		10			
98	18	P	Z	08 31 37	1.2				Microseisms present USCGS: 52.5 N, 168.3 W H 08 18 22.0 h 37 km. Mag. 5.7 5.5-5.7 Berkeley 6 Pasadena
		oSKS	N'	42.1					
		oSS	N'	49.0	21				
		o	N'E'	56.6	35				
		oL	Z'	09 00.5	40				
102	19	iP	Z	12 43 51.5	1.0				Compression USCGS: 11.8 S, 166.4 E H 12 38 31.3 h 156 km. Mag. 5.1
		oP	Z'	43 52				+0.34	
		i	N'E'Z'Z''	43 53	11	-1	-1	+4	
		i(sP)	N'E'Z'Z''	44 33	8	+3	+3	-7	
		i	N'E'Z'E''Z''	46 49	7	+3	+3	-16	
		iS	N'E'N''E''	48 02	5&14	+8	+14		
		i	Z'	48 11	12			+19	
103	19	iP	Z	12 46 52.3	2.3				Compression USCGS: 14.8 S, 178.8 W H 12 40 12.6 h 18 km. Mag. 6.6; 6.8 surface wave 6¾ Pasadena iS Z' period 20s
		i	N'N''	47 26	7	+5			
			Z'	47 54	11			11	
		iPP	Z''	48 01	7*			-32*	
		iPPP	N'E'	48 16	12	-10	-18		
		i	E'E''	48 44	8		+14		
		i	E'	49 49	10		-12		
		i	E'	51 06	11		+12		
		iS	N'Z'N''	52 11	11	+31		-61	
		i	E'E''	52 15	15			-51	
		i	Z''	52 18	15*			+90*	
		iLR	N'	54 30	28	+85			
		oL	E'	54 41	30				
		i	E'	55 16	19		+48		
M	N'	55 55	21	125					
M	Z'	56 38	32			270ca			
M	E'	56 48	30		225				
M	E'Z'	58 30	19		120	165			
oX	N'E'	14 58	60						
W2M	E'Z'	15 36	21		3	4			
F	Z'	16 40							
105	20	iP	Z	02 10 31.9	2.0				Compression USCGS: 48.0 N, 102.9 E H 01 57 23.1 h 33 km. Mag. 6.1 6¾ Pasadena 6.8-7.2 Berkeley
		iP	Z'Z''	10 32	8			+0.46	
		i(PcP)	Z	10 36	1.5			+4	
		iPP	N'Z'	14 10	6	-1½		+0.44	
		oSKS	N'	21 03	11	2		+2½	
		i(S)	N'E'	21 40	9	-2	+2½		
		oSP	Z'	22 44	10			3	
		i	N''	22 45	7*	+6*			
		oSS	N'	27 50	15	2			
		oL	E'	38.0	65				
		oL	N'	38.4	51				
		oLR	E'	41 28	31				
		oL	N'	43 04	28				
		M	N'	50 47	20	5			
		M	Z'	51 48	20			7	
		M	E'	55 14	19		5		
W2M	N'E'Z'	04 27	19	1	1	2			
107	21	oP	Z'	03 04 54					Microseisms present USCGS: 49.8 S, 114.8 W H 02 54 00.8 h 33 km. Mag. 5.3
		oS	N'	13 54	15	3			
		o	E'Z'	14 01	17		2	2	

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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		
107 cont.	1967 Jan. 21	i	N'	03	14	16	20	+11					
		i	E'Z'		14	20	20		+10	+7			
		oSS	N'Z'		18	06	20	1		2			
		oSS	E'		18	13	?						
		oLR	N'E'Z'		25	.0	33						
		LR Max.	N'E'Z'		26	32	23	16	15	30			
108	21	oP	Z	13	53	47						Masked by microseisms	
		o	Z'		54	03	8			1			
		o	E'		58	24	20					USCGS: 30.7 S, 178.2 W	
		o	Z'		58	36	20					H 13 48 14.1	
		oLR	E'Z'	14	00	12	28					h 65 km.	
		LR Max.	E'Z'		01	.0	24		3	4		Mag. 4.9	
		M	N'		02	.0	18	1					
		M	E'Z'		03	.0	17		2	3			
109	23	P	Z	09	27	32						Masked by microseisms	
		o(L)	N'		37							USCGS: 0.7 N, 122.5 E, H 09 19 38.4 h 166km. Mag. 5.2	
111	23	(P)	Z	18	39	48 ¹ / ₂						Masked by microseisms	
		o	N'		45	55						USCGS: 7.1 S, 144.8 E	
		oL	E'		48	06	24		2			H 18 34 06*	
		M	E'		51	03	16					h 17 km.	
		M	N'		51	25	16	1					
		M	Z'		52	14	16			2			
112	23	o	E'	20	54	14	13		$\frac{1}{2}$			USCGS: 19.9 N, 109.3 W	
		o	E'		55	07	16		$\frac{1}{2}$			H 20 25 38.3	
		o	E'	21	00	16	18		1			h 56 km.	
		oLQ	N'		10	25	33	2				Mag. 5.3	
		oLR	E'Z'		15	.4	31		2	2		5.7-5.9 Berkoley	
		M	N'		22	30	18	1					
		M	E'Z'		23	32	18		2	3			
											+		
113	24	iP	Z	01	49	47.8						Microseisms present USCGS: 11.3 S, 165.2 E, H 01 44 14* h 33 km. Mag. 4.6	
114	24	o	Z	03	17	30						Masked by microseisms	
		oS	N'		26	59	20					USCGS: 41.4 N, 141.9 E	
		oPS	E'		27	34	18					H 03 05 39.0	
		o	N'		32	40	24					h 69 km.	
		oLQ	E'		37	19	40					Mag. 5.7	
		oLR	Z'		41	24	35					5 ¹ / ₂ Palisados	
115	24	(PKP)	Z'	09	49	09						Microseisms present	
		i	Z		49	28	1.5			+1.01			
		o	Z'		49	30	9				1		
		o	Z'		50	06	12				3		
		oSS	N'	10	11	03	34	4					
		oSS	E'		11	08	34		9				
		o	E'		12	32	42		4				
		oSSS	E'		16	04	36		10				
		oLQ	E'		27	01	62		19				
		oG	N'		30	04	60						
		G	N'E'		30	32	60	30	70				
		oLR	N'		36	.8	38						
LR Max.	N'Z'		38		38	9		9					
117	24	P	Z	23	26	28 ¹ / ₂							
		i	NEZ		26	29	0.3	+0.05	+0.05	+0.13			
		iS	N		26	51.7	0.6	+0.06					
		i	E		26	52	0.6		+0.18				
		i	N		26	53	0.5	+0.36					
		i	Z		26	54.4	0.5			+0.65			
		m	NEZ		26	55	0.5	0.45	0.70	0.75			
120	26	(oP)	EZ	00	15	28							
		i(S)	NEZ		15	50	0.5	-0.10	+0.09	+0.10			

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitudo			Δ	Remarks		
							AN	AE	AZ				
				h	m	s	s	μ	μ	μ	km.		
124	1967 Jan. 28	oP	Z'	14	06	07	8			3	10,420		
		iPcP	Z	06	09.5		0.8			+0.06	9398	USCGS: 52.4 N, 169.5 W	
		i	Z'	06	23		10				+5		H 13 52 58.3
		oPP	Z'	09	58		10				2		h 47 km.
		o	Z'	10	15		11				2		Mag. 6.7 surfaco wavo
		o	N'	16	15		18						6.4-6.2 Pasadona
		iSKS	N'E'N"	16	40		16	+11	+5				6.3-6.7 Borkoloy
		o	Z'	16	41		20				2		
		iS	E'	17	11		21			-17			
		i	N"	17	15		11*	+9*					
		iPS	N'	18	23		?	+					
		i	Z'	18	24		20				-12		
		iPPS	N'	18	59		?	+					
		o	N'	19	18		32	9					
		oSS	E'	22	48		26						
		o	N'	23	01		26						
		m	N'E'	24	04		26	14	14				
		i	E'	29	44		21			-9			
		oL	E'	31	04		38			18			
		oL	N'	31	24		40	15					
oL	Z'	34	52		40								
M	N'Z'	38	00		25	18			22				
M	N'	40	23		22	23							
M	E'	41	49		21			22					
M	Z'	42	14		21				24				
126	28	P	Z	17	55	09	0.8			0.08		Microseisms present	
		o(SKS)	N'	18	05	38	18					USCGS: 52.4 N, 169.4 W	
		o(S)	E'	06	00		18					H 17 42 01.5	
		o(L)	E'	20.0			35					h 50 km.	
		M	N'	29			20	1				Mag. 5.6	
		M	N'E'Z'	31			20	1	1	2		6 Pasadona	
128	Feb. 2	iP	Z	06	38	34.9	1.2			+0.13	9890	Compression. Microseisms present	
		oP	Z'	38	35		13			2	8990		
		i	Z"	38	49		4*			+4*		USCGS: 57.9 S, 25.7 W	
		i	Z	38	49.6		2.0			-1.15		H 06 25 49.8	
		oPP	Z'	42	06		14			1		h 81 km.	
		oSKS	N'	49	03		(14)					Mag. 5.8	
		oS	E'	49	19		10			2			
		o	N'E'	49	31		15	1	3				
		oPS	N'	50	31		16	1					
		oSS	E'	55	09		16			1			
		oSS	N'	55	17		16	2					
		oLQ	E'	07	02.0		26			3			
		oLR	Z'	08.0			32				2		
		M	E'	14	04		20			3			
M	N'Z'	15	40		20	4			5				
131	2	iP	NZ	18	23	59.5	1.0	+0.14		-0.62		Dilatation	
		i	Z	24	53		1.3			-0.17		USCGS: 4.3 S, 153.7 E	
		oS	N'	28	38		(16)					H 18 18 17.4	
		o	Z'	30	34		14					h 247 km. Mag. 5.0	
132	3	P	Z	03	02	28		Fooblo. Maskod by microseisms.			USCGS: 20.8 S, 175.3 W, H02 56 00*		
133	3	iP	Z	12	55	52.8	1.2			+0.20	5240	Compression h 0.085	
		o	Z'	57	14							4792	
		o	E'Z'	13	00	10	16						USCGS: 5.6 S, 110.5 E
		o	N'	00	18		16						H 12 48 09.2
		oS	N'	02	04		12	1					h 560 km.
		i	E'	02	05		15			-2			Mag. 5.4
		o	Z'	02	10		10				2		
		o	E'	04	52								
		oS	N'	05	09		15	1					
o	Z'	05	16		22								
M	N'E'	13	20		18	2	1						

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
			h m s	s	μ	μ	μ	km.	
135	1967 Feb. 6	o NEZ	18 48 20	0.5					Local
136	6	o NEZ	19 22 19½						Local
		i(S) E	22 36.2	0.7		+0.04			
		m NEZ	23 03	1.2	0.10	0.12	0.25		
141	8	o(S) E'	15 59 15						
		o N'E'	16 05 04	16					USCGS: 58.3 S, 13.0 W
		oLQ E'	11 12	28		5			H 15 35 43*
		o E'	13 09	58		5			h 33 km.
		M E'	19 27	17		2			Mag. 5.1
		M N'Z'	23 14	20	2		3		
142	9	o(P) Z'	15 40 51½	9			1	14,000ca	Microseisms present
		iPKP Z	43 48.1	0.9			+0.17	126°ca	Compression
		i Z'	44 01	9			-2		
		iPP Z'Z''	45 48	10			+6		USCGS: 2.9 N, 74.9 W
		i N'E'Z'N''E''Z''	46 00	8	-4	+8	-22		H 15 24 47.2
		i Z'	47 03	13			+9		h 58 km.
		i Z''	47 15	10*			+26*		Mag. 6.3
		iPKS N'E'N''E''	47 22	9	-7	+12			6¾ Pasadona
		i Z'	47 25	9			+19		7-7½ Palisados
		oSKS E'	50 48	7		6			7.3-7.5 Berkloy
		o N'	51 00	12					
		i E'E''	51 16	9		+8			
		iSKKS N'	52 18	8	+3				
		o E'	52 44	15		5			
		o N'	52 55	23	4				
		iSKKKS E'	53 03	11		-10			
		i N'	54 16	17	+3				
		o Z'	54 46	21					
		iPS E'Z'	55 49	13		-8	+15		
		i N''	56 05	8*	+14*				
		i Z'	56 09	12			+9		
		i N'E'	56 15	10	+10	-14			
		i E'	57 12	24		+11			
		iPPS Z'	57 28	13			+10		
		i E'	57 34	20		+12			
		i E'	58 47	21		+14			
		i N'	59 23	13	+9				
		iSS N'N''	16 03 25	14	+21				
		o N'	03 50	20	15				
		i E'	03 53	22		-22			
		i Z'	11 09	13			-10		
		i Z'	11 27	28			+19		
		oLQ N'	17 30	60	48				
		oLQ E'	17 42	50		29			
		(G) N'E'	19 11	40	91	74			
		iLR N'	24 51	36	+34				
		iLR Z'	25 00	34			+105		
		LR E'	25 04	32		77			
		M Z'	26 40	24			135		
		M E'	27 12	23		82			
		M N'	27 21	22	62				
		F Z'	20 18						
146	12	P Z	18 00 18½						Microseisms present
		i Z	00 23.3	1.0			+0.10		USCGS: 5.9 S, 149.3 E
		o E'	07.5	?					H 17 54 35.9
		M E'Z'	12.4	12		½	½		h 95 km. Mag. 5
149	13	o(PKP) Z'	23 34 44						Masked by microseisms
		i Z'	39 52	8			+2		
		i Z'	43 30	8			+2		USCGS: 52.7 N, 34.1 W
		i Z'	44 53	8			+2		H 23 14 19.6
		o N'	56 02	12	2				h 10 km.
		oSS E''	59 16	12*					Mag. 6.3 surfaco wavo
		i N''	59 25	10*	+3*				6¾ Pasadona
		o E'	24 18 18	30		6			6.5-6.9 Berkloy
		o N'	18 45	26	7				
		oLQ E'	21 35	48		35			

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s		μ	μ	μ	km.	
149 cont.	1967 Feb. 13	oG	E'	24	24	39	60		32			
		LR	N'Z'			30.9	36	13		19		
		oX	E'			37 32	70		62			
150	14	oP	Z'	01	47	16	5					
		o	Z'			47 21	9			2		
		iPcP	Z'Z'			47 39	1.5			+0.54		
		i	Z'			47 47	7			-7		
		o(S)	N'			56 44	12	3				
		i	E'			56 52	12			-5		
		iPS	N'			57 00	12	-8				
		iPPS	E'			57 14	13			-10		
		i	Z'			57 21	14				-4	
		iSS	E'	02	01	24	18			+7		
		iSS	N'			01 32	18	+6				
		o	Z'			01 39	22					6
		iSSS	E'			04 30	16			+8		
		oL	E'			06 52	(36)					
		M	E'			11 40	41			57		
M	Z'			12 30	38					73		
M	N'			13 12	32	66						
M	Z'			14 12	31					58		
M	E'			14 31	27			46				
M	N'			15 14	23	55						
151	14	iP	EZ	05	07	38.2	1.2		-	+1.56		Compression
		iP	Z'Z''			07 38.2	7			+2		
		i	NE			07 40	0.6	+0.09	+0.13			
		i	E'			09 08	8		+1			
		o	Z'			09 10	8					
		o	N'			10 26	20					
		o	Z'			10 28	14					
		o	E'			11 04	14					
		M	E'Z'			16 48	18		3	4		
(ScS)	E'			17 17	?							
M	N'			17 28	16	3						
155	15	iP	Z	15	12	30.6	1.0			-0.10		Dilatation. Microseisms present
		i	Z			12 33.8	1.0			+0.20		
		isP	Z			12 46	1.0			+0.10		
		o	N'			17 08	10					
		o	N'			18 27	16					
		oL	Z'			19 32	18					
		M	N'			21 30	13	1				
		M	E'			22 55	12		1			
M	Z'			23 42	15				1			
156	15	o(P)	Z'	16	25	37	12					Microseisms present
		o(pP)	Z'			27 43	12					h 0.09 ca
		iPKP	Z			29 01	0.7					Compression
		i	Z'			29 02	10					
		i	Z			29 03	0.7					
		i	Z			29 27	1.2					
		oPP	Z'			30 42	20					
		i	Z			31 41	0.9					
		o	N'E'			32 12	12	1	1/2			
		iPpP	Z'Z''			32 35	18					
		i	Z''			32 41	6*					
		i	Z'Z''			33 38	22					
		o	E'			33 48	15					
		iSKS	N'E'N''E''			35 06	12	+3	-4			
		iSKKS	N'			36 33	12	-4				
		i	E'E''			36 35	12		+6			
		i	N''			36 38	9*	+9*				
o(S)	N'			37 31	20							
i	Z'			39 27	11							
o	N'			39 28	11	2						
o	E'			39 33	11		3					
i	Z'			41 00	16							
i	N'E'N''E''			41 06	16	-4	+6					

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.		
156 cont.	1967 Feb. 15	e	N'	16 41 44	26	4					
		iPPS	Z'	42 19	20			+12			
		i	N'E'	42 25	15	+4	-6				
		e	Z'	43 42	22			6			
		eSS	N'	46 20	26						
		i	E'	46 32	18		+6				
		i	Z'	46 50	18			+9			
		m	N'E'	47.0	26	10	11				
		e	E'	50 03	18		8				
		i	N'	50 12	16	-8					
		i	N'E'	50 40	22	-16	+25				
		m	Z'	51.1	22			13			
e	Z'	54 34	24			7					
e	Z'	57 42	32			6					
e	N'Z'	17 01 18	28	7		7					
e	N'	20	44								
158	16	iP	Z	17 07 44				+		Masked by microseisms USCGS: 7.1 S, 123.3 E, H 17 01 23.4 h 653 km. Mag. 4.7	
160	16	(P)	EZ	21 37 10						Masked by microseisms	
		i	Z	37 13.3				+			
		iS	NZ	37 34.5	0.5	-0.17		+0.15			
i	E	37 35.0	0.5		-0.16						
161	17	eP	Z'	00 45 51	5			1	5020	Large microseisms on NEZ	
		PP'	Z	47 40	2.2			1.44	4592		
		eS	E'	52 31	13		$\frac{1}{2}$			USCGS: 4.4 N, 125.6 E H 00 37 42.5 h 66 km. Mag. 5.5	
		e	N'	56 04	12	1					
		e	E'	56 06	12		1				
		eL	N'	01 01 48	24						
		eL	Z'	02 46	25						
M	E'	04 36	19			1					
M	N'E'Z'	07.1	18	1	1	2					
162	17	iP	Z	10 17 10.5	1.0			+0.10	3500	Compression. Microseisms present	
		eP	E'Z'	17 11	8		2	$3\frac{1}{2}$	3195		
		i	Z''	17 14	7*			+10*		USCGS: 23.7 S, 175.2 W H 10 10 51.5 h 19 km. Mag. 6.4 $6\frac{1}{2}$ Pasadona	
		m	Z	17 16	1.6			0.78			
		e	E'Z'	17 42	16			2	3		
		iPP	E'Z'E''Z''	18 16	8		+5	-5			
		i	E'	18 29	9		+9				
		iPPP	Z'Z''	18 33	8			+11			
		i	E'E''	18 43	6		+16				
		i	N'Z'N''Z''	19 08	6	-3		-8			
		i	N'N''	19 39	8	-3					
		i(PcP)	Z	20 11	1.0			+0.16			
		iS	N'E'N''	22 15	16	+4*	+7				
		e	Z'	22 13	28			12			
		i	E'	22 51	12		+5				
i(SSS)	N'	24 29	22	-21							
e	Z'	24 35	24			17					
e	E'	24 53	24			13					
eL	E'	25 41	27								
M	N'	27 42	16	84							
M	E'Z'	28 11	20		94	200ca					
F	Z'	14 06									
164	18	(eP)	Z	02 45 07					3120	Large microseisms on NEZ	
		P	Z''	45 07 $\frac{1}{2}$	4*			3*	2891		
		e	Z'	45 12	7					USCGS: 5.9 S, 153.2 E H 02 39 19.4 h 41 km. Mag. 5.4	
		eS	N'	49 51	9	2					
		i	N'N''	50 12	15	+4					
		e	E'Z'	50 13	15		1	2			
		i	N'N''	50 37	8	+2					
		eL	N'	52 47	20						
		M	N'E'Z'	55.3	19	4	5	6			
M	N'E'Z'	56.9	16	6	5	8					

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitudo			Δ	Remarks	
						AN	AE	AZ			
				h m s	s	μ	μ	μ	km.		
165	1967 Feb. 18	iP	Z	06 50 00.5						Large microsoisms present USCGS: 6.4 S, 130.1 E H 06 43 31.2 h 159 km. Mag. 5.0	
		oP	Z'	50 01	3			1			
		o	E'	56 06	7						
		o	Z'	57 07	14						
		i	N'	07 00 19	6	+2					
		M	N'E'	01 54	17	2	3				
		M	Z'	04 45	16			2			
166	19	oP	Z	10 44 51						Feeble and masked by microsoisms USCGS: 0.5 S, 131.5 E H 10 37 34.3 h 39 km. Mag. 5.0	
		oS	E'	50 45							
		o	E'	53 40							
		oL	N'	58 11	21						
		M	E'	11 00 16	15		1				
		M	N'Z'	02 40	13	2		2			
167	19	o(P)	Z'	14 28 24						Masked by microsoisms USCGS: 21.7 S, 174.9 W H 14 21 53* h 33 km. Mag. 4.4	
		o	N'	35 57							
		oL	Z'	37 52							
		M	E'	40 24							
		M	N'Z'	40 37							
168	19	P	Z	17 58 30						Microsoisms present USCGS: 21.7 S, 169.8 E, H 17 53 50.6 h 33 km. Mag 4,5	
		o	Z'	18 02 29	14						
		oL	Z'	03 54	22						
169	19	iP	Z	22 22 27.6	1.0			+	4780	Compression Microsoisms present h 0.01 ca USCGS: 9.2 S, 113.1 E H 22 14 35.3 h 80 km. Mag. 6.2 6 1/2 Pasadena	
		iP	Z'	22 28	4			+1	4390		
		i	Z	22 29	1.0			+0.16			
		i	NE	22 30	1.0	-0.06	+0.16				
		m	Z	22 30	1.0			0.74			
		i	Z	22 37	1.5			+0.52			
		ipP	Z'	22 48	5			-4			
		i	Z	22 51	1.0			+0.44			
		i	Z	22 57	0.9			+0.29			
		o	N'E'Z'	24 22	?						
		i	N'E'Z'	24 32	16	+2	-3	-4			
		iS	N'N"	28 45	12	+2					
		i	E'E"	28 48	12		+4				
		isS	N'N"	29 22	12	-9					
		i	E'E"	29 26	12		+7				
		i	E'E"	32 00	10		+2				
		iScS	N'N"	32 13	18	-17					
		i	E'	32 19	20		10				
		o	Z'	32 25	20			7			
		i	N"	32 36	9*	+15*					
o	N'	32 46	60ca								
oL	Z'	34 10	50								
M	N'E'	37 15	19	15	9						
M	Z'	38 51	20			9					
170	19	oP	Z	23 36 13	1.5			0.36	4770	h 0.01 ca. Microsoisms present N'E'Z' confused by coda of no.169 USCGS: 0.0 S, 124.2 E H 23 28 28.0 h 101 km. Mag. 5.7	
		o	Z'	36 18	9			2	4299		
		i	Z	36 29	1.3			+0.28			
		ipP	Z	36 36	1.4			+0.54			
		iPP	Z	37 56	1.3			+0.20			
		iS	N'E'N"E"	42 30	10	-14	-7				
		i	Z'	42 31	8			-3			
		isS	N'	43 09	10	+6					
		oSS	N'E'	45 29	16	4	6				
		o	Z'	45 39	18			7			
		i	E"	45 41	9*			-8*			
		i	N'N"	45 45	9	+12					
		i	E'	45 51	9		+14				
		i	E"	45 53	9*		-24*				
		oL	N'E'	47 40	43						
oL	Z'	49 21	35								
M	Z'	52 02	30			19					
M	N'	52 08	29	15							
M	E'	52 53	28			12					

No.	Date	Phase & Component	Time (G.M.T.)	Por.	Amplitudo			Δ km.	Remarks
					AN	AE	AZ		
173	1967 Feb. 20	(P) Z	02 41 38.2					Microsoisms present	
		(i) Z	44 42	1.2			-0.12		
		oP Z'	19 21 13	6			1		
		o(S) N'	25 36	11	1				
		o E'Z'	25 49	11		1	1/2		
		oL E'	26 52	26					
		oL Z'	27.4	33					
		M N'Z'	30 13	18	2		2		
174	20	M E'	30 53	13		2		USCGS: 11.8 S, 166.3 E H 22 41 44.6 h 22 km. Mag. 4.7	
		oP Z'	22 47 24						
		o(S) N'	51 36	15					
		o N'E'Z'	51 53	15	2	2	1		
		i Z'	52 26	11			+2		
		oL Z'	53 09	26					
		M N'E'Z'	55 24	19	1	1	2		
176	21	iP Z	18 49 47.2	1.0			+0.17	Compression USCGS: 1.5 N, 127.2 E, H 18 42 07.2 h 129 km. Mag. 5.2	
		o N'Z'	59 46		Footlo				
177	22	iP Z	14 00 02.0	1.2			+0.25	Compression USCGS: 11.8 S, 166.4 E, H 13 54 34.7 h 84 km. Mag. 4.8	
		o N'	03 11						
		oL Z'	06.7	31					
178	22	oP Z'	18 31 30					Microsoisms present USCGS: 19.5 S, 169.0 E H 18 26 46.7 h 87 km. Mag. 5.6	
		i Z	31 35	1.2			+0.25		
		i Z	31 45	1.2			+0.30		
		i Z'	31 53	?			+		
		m Z	31 55	1.2			1.02		
		iPP N E	31 57	1.2	+0.25	+0.22			
		iPP N'E'Z'N"E"	31 57	8	+3	+5	-7		
		i(S) N'E'N"E"	35 26	10	-11	+3			
		i E'E"	35 37	6		+4			
		i N'	35 43	10	-5				
		i E'	35 46	8		+4			
		i(sS) N'	35 58	11	-8				
		i E'E"	36 03	10		+7			
		oL N'E'Z'	37 00	28	5	8	10		
		M N'	38 34	16	6				
M Z'	38 47	18			6				
M E'	39 01	16		4					
182	23	(iP) Z	20 49 18					Masked by microsoisms USCGS: 26.1 N, 128.5 E H 20 38 56.3 h 30 km. Mag. 5.4	
		o N'	58 08	22					
		oL Z'	21 11.0	30					
		M Z'	16 38	20			1		
183	24	iP Z	10 49 04.5	1.0			+0.17	4040 3694 Compression Microsoisms present h 0.09 ca. USCGS: 7.2 S, 123.8 E H 10 42 42.4 h 575 km. Mag. 5.0	
		ipP Z	50 45	?			-		
		i Z	52 07	?			+		
		oS E'	54 06	10					
		oS S N'	57 05	12					
		o E'	57 07	14					
184	25	iP Z	05 46 37.3					Masked by microsoisms USCGS: 10.3 S, 161.3 E, H 05 41 18.0 h 101 km. Mag. 4.9	
		o E'	51 22	7					
		oL N'Z'	53 16	25					
185	25	iP Z	11 28 36.7	1.3			+0.42	4740 4297 Compression USCGS: 0.0 S, 123.9 E H 11 20 47.4 h 70 km. Mag. 5.8	
		ipP N'E'Z'	28 37.2	6	-1	+1	+3		
		i Z	28 39.0	1.5			+0.46		
		i Z	28 41.2	1.5			+0.48		
		iS E'E"	34 55	10			+5		
		oS S E'	35 21	10			2		
		oS S Z'	38 03	16			2		
		i N'E'E"	38 14	8	-2	+2			
		oL Z'	41 12	40					
		M Z'	43 26	32			6		
		M N'	43 35	32	5				
		M E'	44 53	26			4		

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.	
186	1967 Feb. 25	oP	Z	11 46 31					4820	Microseisms present h 0.01 USCGS: 0.1 S, 123.9 E H 11 38 46.0 h 105 km. Mag. 5.7
		i	Z	46 32	1.2			-0.30	4394	
		ipP	Z	46 53	1.5			+0.28		
		iS	N'N''	52 51	11	-3				
		i	E'E''	52 54	7		+2			
		oSS	N'	55 56	11	3				
		i	N''	56 00	8*	-4*				
		o	Z'	56 04	23				4	
		oL	N'	57 21	42					
		oL	E'	58 04	40					
		oL	Z'	59 38	40				7	
		M	N'	12 01 30	31	7				
		M	E'	03 00	26			7		
M	Z'	04 20	23				9			
188	28	o(P)	Z'	09 48 20						Masked by microseisms USCGS: 32.7 N, 141.7 E H 09 37 18.0 h 23 km. Mag. 5.5
		iS	N'E'	57 03	13	-1	-2			
		o	Z'	57 27	12					
		o	E'	58 15	13			2		
		oL	Z'	10 09.2	32					
		M	N'	14 33	17	1				
		M	Z'	14 42	18				2	
		M	E'	16 09	18			2		
190	Mar. 1	(oP)	Z	14 32 22						Masked by microseisms USCGS: 1.5 N, 126.4 E H 14 24 26.5 h 49 km. Mag. 5.3
		o	Z'	32 31						
		oS	N'	38 36	11	1				
		oSS	N'E'	41 41	15	1	½			
		oL	E'	43 48	?					
		oLR	E'	45 27	36					
		oL	Z'	45 38	36					
		M	E'	49 09	25			1		
M	N'Z'	52 01	19	1			1			
191	2	iP	Z	01 32 03.1	1.0			+0.12		Compression
		iP	N'Z'N''Z''	32 04	5	+1		+1		
		i	Z	32 12.5	0.8			-0.10		
		o	E'	35 31	14			1		
		o	N'	35 35	12	½				
		oLR	Z'	36 20	21					
		M	N'	37 07	11	1				
		M	E'Z'	37 11	11			1	1	
T Max	NEZ	50 32	0.6	0.05	0.06	0.06				
196	3	P	Z	09 00 16					4360	Masked by microseisms USCGS: 0.2 S, 129.8 E H 08 52 49* h 47 km. Mag. 5.0
		i	Z	00 28.7				+	3992	
		oS	E'	06 14	9			½		
		o	N'	06 16	9	1				
		oSS	N'	08 57	12					
		o	Z'	08 58	12					
		oL	E'	10 46	39					
		oL	N'Z'	11 30	40					
		M	N'	15 24	22	2				
		M	E'	15 53	20			2		
		M	Z'	16 27	24				2	
M	N'	18 28	17	2						
M	N'Z'	19 45	14	3			4			
197	3	(P)	Z'	12 48 18						Masked by microseisms USCGS: 50.3 S, 139.6 E H 12 44 00* h 33 km.
		oLR	Z'	52 49	26					
		M	N'	55 21	20	3				
		M	Z'	55 50	19				4	
M	E'	56 12	17			2				
198	3	iP	Z'Z''	14 44 30	7			+1		Compression USCGS: 50.2 S, 139.8 E H 14 40 14.1 h 33 km. Mag. 4.7
		o	E'	47 57	14					
		o	Z'	48 07	11				1	
		oL	N'	48 48	32					
		oLR	Z'	49 03	26					
		M	Z'	50 06	21				5	
		M	N' E'	50 23	20	3	3			

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ km.	Remarks
							AN	AE	AZ		
199	1967 Mar. 4	iP	Z	05 19 30.7	1.2			+0.12		Compression Microseisms present	
		i	Z	19 32.7	1.2			+0.18			
		oS	E'	27 44	14		1				
		o	N'	27 57	21	1					
		M	E'	40 50	21		2				
		M	N'Z'	43 29	18	1		2			
200	4	iP	Z	06 22 42.1	1.2			+0.38		Compression	
		i	Z'	22 43	6			-2			
		oPP	E'E''	24 06	7		2				
		i	Z'	24 08	7			-3			
		i	Z''	24 10	7*			+9*			
		iS	N'N''	27 46	9	-2					
		i(sS)	N'	29 16	12	+3					
		i	N''	29 22	9*	-5*					
		o	N'N''	30 19	9	2					
		i	N'N''	30 35	16	+7					
		i	Z'	30 36	14			+4			
		o	Z'	31 30	26						
		o	N'	32 26	13	3					
		iScS	N'N''	32 49	9*	-11*					
iScS	E'E''	32 50	7*		+8*						
M	E'Z'	36 00	17		2	2					
201	4	oPKP	Z	18 17 29						Microseisms present	
		iPKS	Z'	21 08	14			+3			
		o	E'	22 30	(12)						
		oSJKS	E'	27 08	9		1				
		i	E'	32 29	9		+2				
		o	Z'	32 38	18						
		o	N'E'	38 35	20						
		o	N'	41 16	21						
		o	Z'	45 57	20						
		oL	N'	55 56	32						
		oL	E'	57 12	37						
		oL	N'	58 43	(35)						
		o	N'	19 01 00	60						
		oLR	N'E'	03 03	36	5					
oL	Z'	05 10	35								
M	N'	17 44	20	6							
M	E'Z'	17 55	20		8	8					
M	N'E'Z'	20 26	20	6	7	9					
205	6	o(S)	N'	04 58 19	11	1				Masked by microseisms USCGS: 30.5 N, 137.6 E, H 04 40 17.8 h 490 km. Mag. 5.1	
		o	E'	05 01 22	7		1				
211	9	P	Z	03 30 00						Large microseisms present USCGS: 10.7 S, 166.3 E, H 03 24 18.9 h 30 km. Mag. 5.6	
		o	N'	34 54							
		oL	E'Z'	37.0	28		2	2			
213	9	iP	N'E'Z'	07 04 21	11	-4	-3	+8		Compression Microseisms present	
		i	Z	04 32	1.4			+0.43			
		oPP	E'	05 09	?						
		i	Z'	05 10	8			+4			
		oPPP	N'E'	05 20	?						
		i	Z'	05 25	9			-5			
		o	E'	08 38							
		o(S)	E'	08 57							
		i	Z'	08 58	?			+			
		i	N'	09 00	16	+					
		i	E'	09 07	16			-			
		i	Z'	09 21	15			+12			
		m	N'E'	09 22	16	19	18				
		i	N'E'	09 55	14	+11	+7				
m	E'	10 14	14		20						
oL	Z'	10.9	36								
L Max	N'E'	11 39	30	43	46						
L Max	Z'	12 02	29			68					
M	N'	12 35	19	34							
M	N'	16 16	14	21							
M	E'Z'	16 35	15		18	26					

No.	Date	Phase & Component	Time (G.M.T.)	Por.	Amplitude			Δ	Remarks
					AN	AE	AZ		
216	1967 Mar. 9	oP	Z'	18 08 25	10			3	Microsoisms present USCGS: 10.7 S, 166.3 E H 18 02 45.7 h 59 km. Mag. 6.4 6 Pasadona 5.9-6.1 Borkoley
		o	Z'	09 33	10			3	
		o(S)	N'	13 04	13				
		i	N'E'	13 13	16	-7	-6		
		i	E'	14 02	12		+5		
		oL	Z'	15 12	34			28	
		oL	E'	15 27	29		19		
		M	N'	16 37	18	13			
M	Z'	20 24	16			15			
M	N'E'	20 36	15	8	10				
220	10	P	Z	10 19 04.5				+	Masked by microsoisms USCGS: 17.8 S, 178.6 W, H 10 13 22* h 517 km. Mag. 4.2
222	11	iP	Z'	08 39 05	6			-3	Dilatation USCGS: 10.7 S, 166.2 E H 08 33 27.4 h 49 km. Mag. 6.1 6 1/2 Pasadona
		m	Z	39 10	1.2			0.30	
		iP	N'E'Z'	39 16	8	+1	+1	-3	
		i	Z'	40 11	9			-3	
		oS	N'	43 44	15				
		i	N'Z'	43 54	18	-8		-	
		i	E'	43 56	18		-7		
		i	Z'	44 08	13			+8	
		i	N'	44 39	13	-5			
		i	E'Z'	44 43	13		+6	-6	
		oL	Z'	45 52	37			30	
		oL	N'E'	46 10	30	16	16		
		M	E'Z'	51 15	15		12	11	
		M	N'	51 26	14	9			
224	11	(iPKP)	Z	15 03 24				+	Masked by microsoisms USCGS: 19.1 N, 95.8 W H 11 44 59.2 h 33 km. Mag. 5.5 5 1/2 Pasadona 5.2-5.6 Borkoley
		oPS	E'	15 06	16		1		
		oSS	E'	21 55	30		1		
		oLQ	N'	35 13	?				
		oLR	Z'	40 24	30			2	
		oLR	E'	40 34	30		1		
		M	E'Z'	45 36	20		1	2	
		M	N'	45 45	20	1			
225	13	(iP)	Z	04 59 25				+	Masked by microsoisms USCGS: 3.2 S, 147.6 E H 04 53 30* h 33 km. Mag. 4.9
		o(S)	N'	05 04 52					
		oL	E'	06 54	42				
		o	Z'	06 57	13				
		oL	Z'	08 57	28				
		M	E'	10 57	20		2		
		M	N'	11 31	20	1			
		M	Z'	11 51	20			2	
		M	E'	13 13	14		3		
M	Z'	13 45	18			3			
M	N'	14 06	16	3					
228	13	o(S)	E'	16 31 34					Masked by microsoisms USCGS: 40.1 S, 74.5 W H 16 06 54.3 h 33 km. Mag. 7.0 7.1-7.5 Borkoley
		oL	Z'	52 34	22				
		M	N'	56	17	1			
		M	E'Z'	58	17		1	1	
231	14	oS	N'E'	07 20 42	11	2	2		Masked by microsoisms USCGS: 28.4 N, 94.3 E H 06 58 04.6 h 24 km. Mag. 5.9
		oSS	E'	25 55	15				
		o	E'	32 09	15				
		o	N'	32 47	15				
		o	Z'	32 53	17				
		oLR	Z'	37 05	40				
		M	N'	49 47	22	1			
M	E'Z'	50 35	22		2	2			
232	15	iP	Z	06 44 37.0	1.0			+0.16	Compression Microsoisms present USCGS: 18.9 S, 169.3 E H 06 39 59.8 h 253 km. Mag. 4.9

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
235	1967 Mar. 16	iP NEZ	12 14 16.4	1.2	+0.08	+0.22	-0.94	km.	Dilatation USCGS: 22.1 S, 170.5 E H 12 09 37.7 h 66 km. Mag. 5.4
		iPN'E'Z'N'E"Z"	14 17	8	+1	+2	-4		
		iPp N'E'Z'	14 28	8	-2	-5	+6		
		iPP E'	14 40	8		+4			
		iPPP N'	14 52	7	+3				
		i(S) N'	18 09	11	-7				
		i E'E"	18 10	12		+3			
		i N"	18 14	11*	+6*				
		o N'	18 15	30	11				
		iPcP Z'	18 20	7			+4		
		o(LQ) E'	18 36	30		7			
		oLR E'Z'	19 07	33					
		L Max. N'	19 27	24	8				
L Max. E'Z'	19 59	23		18	20				
M N'	21 10	15	5						
236	16	iP Z	17 38 01.3	0.7			+0.13	Compression Microseisms present USCGS: 13.6 S, 170.7 E, H 17 33 07.5 h 637 km. Mag. 4.8	
		oL E'	46.6	18					
237	17	oP N'Z'	11 30 54	11	1		2	3390 3095 USCGS: 3.6 S, 150.9 E H 11 24 45.7 h 33 km. Mag. 6½ Pasadena	
		i N'Z'	31 17	11	-2		+4		
		o N'Z'	31 50	11	4		3		
		i Z'	32 11	11			-6		
		oS E'	35 52	14		5			
		i N'N"	35 54	14	+13				
		o Z'	36 07	25			11		
		i N'	36 10	22	+22				
		iSS E'	37 31	20		-16			
		o Z'	37 40	14			+10		
		iL E'	38 06	34		+			
		i N'	38 35	18	+22				
		iLR Z'	39 30	33			-44		
L Max E'	39 51	30		84					
M E'Z'	42 06	20		46	86				
M N'	42 29	18	70						
239	18	P Z	09 32 56	1.1			0.08	Microseisms present USCGS: 20.7 S, 179.4 W, H 09 27 42.7 h 650 km. Mag. 4.9	
		i E'	40 19	10		+1			
		o Z'	40 27	16					
242	19	P Z	01 17 21	1.5			0.54	Large microseisms present USCGS: 6.7 S, 129.9 E, H 01 10 45.8 h 60 km. Mag. 5.9	
		i Z	17 54	1.5			0.76		
		PP Z	18 33	1.5			1.08		
		iS N'E'	22 36	11	-3	+6			
		oL Z'	26 43	45			15		
		M N'E'	29 02	16	11	15			
M Z'	32 18	15			13				
243	19	iP Z	04 13 45.5	1.2			+0.25	8790 7991 Compression Large microseisms on all records USCGS: 45.4 N, 151.3 E H 04 01 36.7 h 33 km. Mag. 6½ Pasadena	
		o Z'	13 53						
		i Z'	14 00	12			+6		
		iS E'E"	23 41	20		-19			
		iS N'N"	23 43	20	-13				
		iPS N'	24 25	18	13				
		oS N'	28 52	25	16				
		oLQ E'	34 46	38		41			
		oL Z'	38 28	(40)					
		M Z'	41 24	25			30		
M N'	41 30	25	24						
M E'	42 22	24		17					
245	20	oP Z	13 43 39				8820	Confused by microseisms 7994 USCGS: 45.6 N, 151.4 E H 13 31 34.0 h 51 km. Mag. 5.7 5.5-5.9 Borkloy	
		oS E'	53 36	15		1			
		oS N'	53 37	11	1				
		o N'	54 13	20	1				
		oS N'	58 44	21					
		oS Z'	58 49	21					
		oLQ E'	14 04 43	34		2			
		M N'E'Z'	11.3	22	1	1	1		
M N'	12 36	22	2						
M Z'	13 18	22			2				

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitudo			Δ	Remarks	
							AN	AE	Az			
				h	m	s		μ	μ	μ	km.	
247	1967 Mar. 20	iP	NEZ	19	12	06.8	1.1	+0.05	+0.12	-0.50		Dilatation USCGS: 22.1 S, 170.6 E H 19 07 25.2 h 28 km. Mag. 5.5
		i	NEZ		12	09.1	1.2	+0.16	+0.30	-0.91		
		i	Z		12	11.6	1.4			+0.76		
		i	N'Z'		12	15	8	-1		+3		
		o	Z'		12	34	10			1		
		i(S)	N'		12	58	9	-4				
		i	E'E"		16	00	10		+4			
		iPcP	Z'		16	14	11			+5		
		i	N'		16	15	10	+5				
		oLQ	E'		16	24	30					
		oL	Z'		17	00	32					
		L Max	Z'		17	45	24			13		
		M	E'		18	51	18			10		
		M	N'		18	58	15	6				
250	21	oP	Z	19	12	01					Microseisms present USCGS: 11.5 S, 165.6 E, H 19 06 30.3 h 39 km. Mag. 4.9	
		i	Z		12	13	1.0		+0.14			
		M	N'Z'		24	.8	14	1		1		
251	22	P	Z	13	06	19					Microseisms present USCGS: 5.4 S, 146.4 E H 13 00 26.9 h 70 km. Mag. 5.3	
		o(sS)	N'		11	33	(13)					
		oL	Z'		14	14	38					
		M	E'		16	55	19		5			
		M	Z'		17	03	23			5		
M	N'		17	09	23	6						
254	24	P	Z	02	05	30					Microseisms present USCGS: 6.0 S, 105.3 E, H 01 56 24* h 22 km. Mag. 5.2	
255	24	iP	Z	09	07	47.9	0.8			-0.72	5060 4595 USCGS: 6.0 S, 112.3 E H 09 00 19.5 h 600 km. Mag. 6.0 6.7-7.2 Borkoloy	
		iP	N'E'Z'N'E"Z"		07	48	4*	+2*	-4*	-19*		
		oPcP	Z'		09	12	7			1		
		i	Z		09	40	1.3			-0.59		
		oPP	Z'		09	45	8			2		
		osP	N'E'Z'		10	36	11	1	2	4		
		i	Z"		11	52	6*			+7*		
		i	N'E'Z'		12	24	13	+2	-3	-3		
		iS	N'N"		13	47	10	+11				
		i	Z'Z"		13	48	10			+7		
		i	E'E"		13	49	10		-10			
		iScS	N'N"		16	37	11	+7				
		i	E'		16	38	11		+5			
		i	N'		16	51	12	-9				
		i	E'E"		17	15	12		-10			
		i	N'N"		17	28	10	+6				
		o	Z'		17	49	22			9		
		i	E'E"		17	53	15		-6			
M	N'		24	43	17	15						
M	E'Z'		29	15	16		12	13				
256	24	P	Z	11	53	42	0.9			0.08	Microseisms present USCGS: 6.0 S, 112.3 E, H 11 46 13.0 h 600 km. Mag. 5.3	
		o(L)	Z'		12	03 32	(22)					
259	25	o	Z	23	00	15					Masked by microseisms USCGS: 45.5 N, 151.4 E H 22 47 58.4 h 41 km. Mag. 5.5 5.2-5.6 Brk., 5 3/4 Pa1.	
		oS	N'E'		10	00	13	1	2			
		oLQ	E'		21	.0	36		2			
		M	N'Z'		29		22	3		3		
		M	E'		30		20		1			
261	26	oP	Z	22	44	24	1.2			0.12	USCGS: 9.3 S, 148.6 E H 22 39 01.5 h 14 km. Mag. 5.3	
		oS	N'		48	48	13	1				
		oLR	Z'		52	24	20					
		M	N'		52	44	19	2				
		M	Z'		55	29	14		4	4		
262	27	oS	E'	09	20	28	18				Masked by microseisms USCGS: 38.4 N, 116.5 E, H 08 58 25.5 h 61 km. Mag. 5.4	
		o(SS)	N'		25	20	(30)					
		o	E'		26	11	22					
		o	N'Z'		29	13	21					

Continued

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks		
					AN	AE	AZ				
			h m s	s	μ	μ	μ	km.			
262 cont.	1967 Mar. 27	oL E'	09 33.0	27							
		oL N'	35.1	27							
		M N'E'Z'	43.3	23	2	2	2				
263	27	oP Z	10 06 53								
		iP N'E'Z'N'E"Z"	06 53	4	-3	-4	+10		Compression		
		m NEZ	06 56	2.5	0.88	1.32	3.63				
		i N'E'Z'	06 57	6	-5	-7	+12		USCGS: 16.5 S, 168.1 E		
		iPPP N'E'Z'	07 37	9	+7	+9	-10		H 10 01 42.0		
		iS N'E'N'E"	11 08	11	-13	+44			h 11 km.		
		i Z'	11 16	11			+27		Mag. 5.5		
		m N'E'Z'	11 26	12	53	51	48		5.3-5.7 Borkoloy		
		LR Z'	12 45	30			95		6 1/4 Pasadona		
		LR E'	12 48	30			54				
		M E'	13 54	20			82				
		M E'Z'	14 53	18			77	77			
M N'	15 00	15	68								
267	29	oP Z	01 54 20						Masked by microseisms		
		oL Z'	02 01	30							
		M N'E'Z'	03	19	1/2	1	2				
269	29	P Z	10 40 17						Masked by microseisms		
		oS N'	45 36	10							
		o Z'	45 50	28					USCGS: 2.4 S, 138.5 E		
		oL Z'	49 56	42					H 10 33 38.4		
		o E'	51 14	26			6		h 38 km.		
		M N'Z'	54 34	14	8		7		Mag. 5.5		
		M E'	55 50	21			10				
270	29	iP Z'Z"	13 17 59	6			+2		Compression		
		o(S) N'	22 18	?					USCGS: 16.5 S, 168.1 E		
		oL E'	24 14	24					H 13 12 53*		
		M E'Z'	26 25	15			1	1	h 33 km.		
		M N'	26 45	14	3				Mag. 4.9		
272	30	iP Z	02 15 35.0	1.2			+0.56	4490	Compression		
		i E'Z'Z"	15 36	8			-1	4024			
		iPP N'E'Z'	17 13	13	-2	+4	+5		USCGS: 11.0 S, 115.5 E		
		iS E'Z'E"	21 41	12			-14	+4	H 02 08 02.4		
		o N'	21 50	23	4				h 33 km.		
		o N'E'	24 20	26	16	8			Mag. 6.0		
		iSS Z'	24 31	15				+10			
		oL N'	25 13	50	17						
		oL Z'	26 30	50				19			
		M N'E'	29 48	17	77	45					
		M Z'	30 22	16				23			
		274	30	(P) Z	12 24 40						Masked by microseisms
				oS N"	23 16 40	10*	3*				S.P. & L.P. records confused by
				oL Z'	19 06	27					microseisms & calibration pulsos.
oL N'E'	19 11			25	5	2			USCGS: 16.9 S, 176.9 W		
M Z'	22 40			17			6		H 23 04 46*		
M E'	22 55			16			5		h 33 km.		
M N'	23 10	13	10				Mag. 5.1				
276	31	iP Z	20 10 20.7	0.9			+0.15		Compression Microseisms present		
		o(sP) Z'	11 01	7			3				
		o(S) E'	14 29	11			1		USCGS: 15.4 S, 167.5 E		
		i N'N"	14 34	8	-4				H 20 05 18.9		
		o E'	14 40	15			2		h 132 km.		
		o N'	14 56	10	2				Mag. 5.3		
		i N"	15 06	8*	+5*						
		i(SS) E'	15 19	10			-4				
		i Z'	15 21	7				-5			
		i N'N"	15 23	8*	+5*						
		m N'	15 53	18	4						
		oL Z'	15 48	20							
		oL E'	16 43	23							
		M N'	17 53	15	2						
M E'	18 13	15			2						
M Z'	18 28	18				2					

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitudo			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
277	1967 Apr. 1	(P)	Z'	06	06	28						Masked by microseisms USCGS: 45.8 N, 151.8 E H 05 54 19.1 h 40 km. Mag. 5.7 5 ³ / ₄ Pasadona, Palisados 5.9-6.1 Borkoloy
		o	Z'		06	44						
		oS	E'	16	24		14		3			
		o	N'	16	26		16	2				
		oS	N'	21	35		19	1				
		oLQ	E'	27	24		38		5			
		oLR	Z'	31	25		32					
278	1	M	N'E'Z'	34.5			25	4	3	5		
		o(SKS)	E'	11	05	15						Masked by microseisms USCGS: 4.6 S, 105.8 W H 10 41 00.2 h 33km. Mag. 5.9-6.1 Borkoloy 6.0 Palisados
		o	E'		07	40	27					
		o	Z'		13	00	28					
		o	E'		13	04	24			3		
		oL	E'Z'	26	44		32			3	4	
		M	E'	36	10		17			3		
M	Z'	36	40		17				4			
279	1	P	Z	12	35	42						Microseisms present USCGS: 45.7 N, 151.8 E H 12 23 35.5 h 40 km. Mag. 5.9 5 ³ / ₄ Pasadona 5.4-5.8 Borkoloy
		i	Z		35	51	1.0				+0.10	
		iS	E'	45	38		16			-3		
		o	N'	45	43		18	2				
		o	N'	46	19		19	2				
		o	E'	49	53		30					
		oS	N'	50	46		22	3				
		oLQ	E'	56	43		38			6		
		oLR	Z'	13	00	28	34					
		M	Z'	03	23		24				6	
		M	N'E'	03	56		24	4		2		
283	2	oP	Z	17	46	26						Microseisms present USCGS: 6.3 S, 148.8 E H 17 40 38.8 h 37 km. Mag. 5.0 5 ³ / ₄ Pasadona
		isP	Z	46	39.5		1.2				-0.28	
		oS	N'	51	03		18	3				
		isS	N'	51	19		15	+7				
		i	Z'	51	24		15				+6	
		oL	E'	53	28		30			8		
		oL	Z'	54	28		30				8	
		M	E'	56	58		17			21		
		M	Z'	57	50		18				17	
		M	N'	59	23		17	11				
		284	3	oP	E'Z'	08	10	05	7			
i	Z'				10	09	7				+5	
oPP	Z'				10	56	10				3	
iS	N'			14	49		18	-3				
o	Z'			15	04		20				4	
i	N''			15	09		13*	+7*				
oL	E'			16	54		30					
oLR	Z'			17	46		32					
M	E'			21	20		17			18		
M	N'Z'			21	48		17	29			34	
285	3			o	Z'	13	07	03				
		oS	N'		10	47						
		o	Z'		13	28	25					
		oLR	Z'		15	06	24					
		M	E'		16	50	19			10		
		M	N'Z'		17	04	14-20	5			14	
287	4	(P)	Z	00	44	03						Masked by microseisms USCGS: 2.3 S, 138.7 E H 00 37 26.1 h 11 km. Mag. 5.6
		o(P)	Z		44	12						
		oS	N'	49	32		10	1 ¹ / ₂				
		o	N'	49	51		28	2				
		oL	E'	53	39		36					
		oL	Z'	53	45		40					
		M	E'	57	15		15			16		
M	N'Z'	58	54		14	15			14			
290	5	P	Z	02	43	31						Masked by microseisms USCGS: 20.0 N, 147.1 E H 02 34 11.1 h 50 km. Mag. 5.9 5.6-5.8 Borkoloy
		oS	N'		51	03	12	3				
		oLQ	E'		57	24	36			5		
		M	N'Z'	03	02	30	20	2			3	
		M	E'		02	55	20			3		

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
291	1967 Apr.5	iP	Z	02	57	14.5				-		Dilatation Masked by microseisms USCGS: 20.0 N, 147.2 E, H 02 47 55.4 h 50 km. Mag. 5.7
295	6	(P)	Z	12	06	46	1.0			0.14		Microseisms present USCGS: 6.3 S, 148.8 E H 12 01 07.5 h 43 km. Mag. 4.9
		oS	N'	11	35		22	3				
		oL	E'	13	58		28					
		M	E'	18	00		16		8			
		M	N'	19	16		17	5				
296	6	P	Z	12	31	20						Large microseisms present USCGS: 20.1 N, 147.2 E, H 12 21 57.0 h 22 km. Mag.5.7; 5-5.4 Brk.
298	8	P	Z	05	40	42						Microseisms present
		i	Z	41	07.5		1.2			+0.08		
		oS	N'	44	59		10	1				USCGS: 19.9 S, 178.6 W H 05 35 17.1
		o	N'	48	07		11	2				h 616 km.
		o	Z'	48	20		20			1		Mag. 5.3
		iScS	N'N''	50	10		8	-2				
		iScS	E'E''	50	11		8		+2			
299	9	oP	Z'	00	11	45	8				3640	Microseisms present
		PcP	Z'	14	28		4				3298	
		oS	N'E'	17	02		13					USCGS: 4.0 S, 135.8 E
		o	N'E'Z'	17	11		24	5	3	4		H 00 05 07.0
		oL	Z'	20	37		43					h 15 km.
		oL	N'	20	54		40					Mag. 5.1
		i(Lg)	Z'	22	46		5			-10		
		M	N'E'	23	16		22	22	45			
		(Lg) Max	Z'	23	24		6			34		
		M	N'	26	30		12	38				
		M	Z'	26	36		12			65		
		M	E'	26	50		10		52			
301	9	o(S)	N'	09	07	14	18	3				Masked by microseisms USCGS: 7.2 S, 155.8 E H 08 56 59.7 h 40 km. Mag. 5.1
		o	E'	07	18		18		1			
		oL	Z'	10	12		22					
		M	E'	11	38		17		2			
		M	N'Z'	13.0			17	3		2		
303	9	oS	N'	21	28	49	13	1				Masked by microseisms USCGS: 7.3 S, 155.7 E H 21 18 36.5 h 44 km. Mag. 5.6
		oL	Z'	31	34		26					
		M	E'	33	25		14		2			
		M	N'	34	52		14	2				
		M	Z'	35	02		14			1		
305	10	P	Z	05	05	33						Microseisms present
		i	Z'Z''	05	40		12			+3		
		i	N'Z'	06	21		12	-2		+3		USCGS: 7.4 S, 155.7 E
		oS	N'	10	00		12	4				H 04 59 53.9
		o	E'	10	14		16		4			h 37 km.
		o	N'	10	25		15	11				Mag. 5.5
		i	Z'Z''	10	26		14			+9		5.2-5.6 Berkeley
		oL	Z'	12	04		38					6 Pasadena
		M	Z'	13	48		25			13		
		M	N'E'	14	52		15	8	9			
306	10	oP	N'Z'	15	08	23					3020	Microseisms present
		ipP	N'Z'N''Z''	08	33		13	-4		+6	2792	
		i	N'Z'	09	15		12	-5		+5		USCGS: 7.3 S, 155.8 E
		iS	N'N''	12	58		16	-40				H 15 02 42.2
		i	E'Z'	13	16		16		-15	+25		h 29 km.
		i	N''	13	21		10*	+46*				Mag. 5.6
		iSS	E'	14	17		16		+21			5.2-5.6 Berkeley
		i	N'E'	14	59		16	+20	-30			6 Pasadena
		oL	Z'	15	35		38					
		L Max	Z'	16	30		26			32		
		M	N'Z'	19	03		15	38		28		
		M	E'	19	50		14		27			

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
307	1967 Apr. 10	P	Z	16 55 20						Masked by microseisms. USCGS: 63.6 S, 167.3 W H 16 47 50* h 33 km. Mag. 5.4
		i	N'N"	17 00 27	6	+2				
		i	E'E"	01 25	14		+5			
		i	N'N"	01 28	11	+4				
		oL	N'	03 33	26					
		i	E'	04 07	17		+13			
		i	N'	04 08	18	+8				
		L Max	N'E'	04 50	25	23	33			
		M	N'	06 42	11	14				
310	10	o(P)	Z'	21 55 06	10			1		Microseisms present USCGS: 7.3 S, 155.9 E H 21 49 19.5 h 39 km. Mag. 5.3
		oS	N'	59 34	15	3				
		o	E'	59 42	15		2			
		isS	N'	59 52	17	-5				
		o	E'	22 01 05	16		3			
		oL	Z'	02 10	?					
		M	E'	03 59	15		4			
		M	N'Z'	05 35	15	5		3		
		312	11	oP	Z'	05 17 10				
oS	N'			23 34	8	2			4297	
i	E'			23 52	5		+4			
oL	Z'			29 39	42					
M	E'			33 20	21		8			
M	N'			34 04	21	11				
M	E'Z'			38 15	16		9	8		
316	12	iP	NEZ	04 36 20.8	1.0	+	+0.06	-0.26		Dilatation USCGS: 19.2 S, 168.9 E H 04 31 45* h 200 km. Mag. 4.7
		iP	N'E'Z'Z"	36 21	6			-3		
		i	Z	36 31	1.1			+0.17		
		o	Z'	37 06	9			1		
		o(S)	N'	40 11						
		i	N'E'	40 17	9	-3	+2½			
317	12	iP	Z	05 02 13.5	1.5			+0.70	7210	Compression USCGS: 5.3N, 96.5 E H 04 51 40.2 h 55 km. Mag. 6.1 6 Berkeley 6½ Pasadena 6¾-7 Goldon
		iP	E'Z'E"Z"	02 14	4		+5½	+15	6499	
		i	N'E'Z'	02 19	5	-4½	+7	+18		
		i	N"E'Z"	02 25	5*	-4*	+8*	+19*		
		m	N'E'Z'	02 32	15	3	6	14		
		oS	E'	10 51	10		9			
		i	N'N"	10 55	16	-15				
		o	Z'	15 30	24			8		
		oG	N'	20 00	50					
		oL	Z'	22 47	41					
		L Max	N'E'	24.0	35	110	90			
		M	N'	26.7	23	125				
M	E'Z'	32.8	20		125ca	145ca				
318	12	oP	N'Z'	13 51 43	11	½		2		USCGS: 7.5 S, 155.8 E H 13 46 05.0 h 49 km. Mag. 5.1
		o	Z'	52 17	9			1		
		oS	N'	56 10	12	3				
		o	Z'	56 32	12			3		
		i	N'E'	56 36	10	-5	-2			
		oL	Z'	58 53	34					
		M	Z'	14 01 37	15			4		
		M	E'	02 37	12		5			
		M	N'	03 21	12	4				
319	12	(P)	Z	14 00 42	1.2			0.18		Microseisms present USCGS: 7.3 S, 155.6 E H 13 54 57.2 h 52 km. Mag. 5.2; 4.9-5.3 Berkeley
		iS	N'	05 09	12	-7				
		i	N'	05 29	13	-10				
		oL	Z'	07 43	35			14		
		M	Z'	10 30	18			6		
		M	N'E'	11 07	13	9	8			
320	12	P	Z	14 57 27	1.2					Masked by microseisms USCGS: 7.4 S, 155.7 E H 14 51 49.4 h 21 km. Mag. 5.3
		o(S)	N'	15 02 04	11					
		oL	Z'	04 38	31					
		M	E'	07 00	12		6			

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks	
						AN	AE	AZ			
						μ	μ	μ	km.		
324	1967 Apr. 13	i(pP)	Z	04 19 42	0.6			+		Small and masked by microseisms USCGS: 18.7 S, 168.8 E, H 04 14 33.6 h 123 km. Mag. 5.2	
		o(S)	E'	23 17	7						
325	13	(P)	Z'	08 36 23	3					Masked by microseisms USCGS: 5.5 N, 96.6 E H 08 25 43.8 h 68 km. Mag. 5.2	
		o	Z'	38 12	5						
		oL	N'	58.3	27						
		oL	Z'	59.2	27						
		M	Z'	09 05.9	20			1			
	13	(P)	Z	17 19 18					Masked by microseisms USCGS: 18.0 S, 178.6 W, H 17 13 43.5 h 610 km. Mag. 5.0		
329	14	oS	E'	14 51 19		Feeble & masked by microseisms				USCGS: 7.4 S, 155.5 E, H 14 41 18* h 77 km. Mag. 5.1	
		oL	E'Z'	54.3							
333	15	o	N'E'	16 01 15						USCGS: 16.7 S, 167.6 E H 15 56 07.4 h 10 km. Mag. 4.7	
		o	Z'	01 18	14						
		oS	N'	05 15	11						
		i	N'	05 21	11	-6					
		i	E'Z'	05 28	11		+4	+4			
		oL	Z'	06 23	25						
		M	E'Z'	08.0	19		3	4			
		M	N'	08.4	16	4					
337	16	oP	Z	16 39 53		Small & masked by microseisms				USCGS: 4.2 N, 123.2 E, H 16 32 17* h 590 km. Mag. 5.2	
339	17	oP	Z	11 23 45	1.2			0.14		USCGS: 12.5 S, 166.3 E, H 11 18 19.3 h 45 km. Mag. 4.9	
		opP	Z	23 55	0.8			0.11			
		o(S)	N'	28 13	(9)						
		o	N'	28 22	13	2					
		o	E'	28 29	11		2				
		oLQ	N'	29 24	21	1					
		oL	Z'	30 36	26						
		M	N'Z'	32 20	18	3		3			
		M	E'	32 59	13		2				
340	17	P	Z	17 51 18 ¹		Masked by microseisms				USCGS: 20.6 S, 178.2 W, H 17 45 52.2 h 570 km. Mag. 4.5	
342	18	P	Z	06 28 21		Small & Masked by microseisms				USCGS: 13.6 S, 166.6 E, H 06 23 01.6 h 49 km. Mag. 4.9	
		o	Z	28 23							
343	20	iP	Z	00 08 00.0	1.2			+0.24		Compression USCGS: 5.5 S, 129.7 E H 00 01 24.9 h 163 km. Mag. 5.7	
		iP	Z"	08 00	4*			+2*			
		oPP	Z	09 18	1.8			0.25			
		i	Z	09 21	1.2			+0.13			
		iS	E"	13 13	8*		+5*				
		o	E	13 15	1.7		0.33				
		oPcS	Z	13 56	0.7						
		o	N'	15 42	8	2					
		i	N"	15 47	7*	-5*					
		i	E'	17 39	6		+3				
		M	E'	21 50	16		1				
				M	N'Z'	23.0	15	2			2
344	21	oP	Z	08 21 27	1.4			0.20		USCGS: 5.4 S, 126.9 E H 08 14 25.0 h 33 km. Mag. 6 ¹ / ₂ Pasadena 6.4-6.6 Berkeley	
		i	Z	21 34	1.8			+1.19			
		iPP	Z'	22 49	9			+3			
		iS	N'E'N'E"	27 08	10	+9	+10				
		o	N'E'	27 22	20						
		iSS	N'E'N'E"	29 35	14	+21	+20				
		oG	E'	30 07	52						
		oL	N'	30 42	45	45					
		oL	Z'	33 26	32			22			
		M	N'E'	34 29	19	77	98				
		M	Z'	37 20	12		76				
347	22	(iP)	Z	08 44 19.5				+		Masked by microseisms USCGS: 5.6 S, 126.8 E H 08 37 25.5 h 33 km. Mag. 5.2	
		o	Z	44 31							
		iS	E'	50 10	10		+3				
		o	E'	51 50	22						
		o	N'	52 44	16	2	Continued				

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km.	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ		
376	1967 May 1	ePKP	Z'	07	28	20	10			$\frac{1}{2}$	Microseisms present USCGS: 39.7 N, 21.3 E H 07 09 00.5 h 15 km. Mag. 5.6 5 $\frac{1}{2}$ Palisades 5 $\frac{1}{2}$ -6 Pasadena, Golden 5.8-6.2 Berkeley	
		e	E'		32	04	10			$\frac{1}{2}$		
		e	Z'		32	17	8			1		
		ePPS	Z'		43	42	18			1		
		e	E'		50	28	?					
		eSSS	E'		55	09	30			1		
		e	N'		56	07	20		$\frac{1}{2}$			
		e	Z'		56	42	34					
		eL	N'	08	08	38	52					
		M	N'		14	40	36	2				
377	2	eLR	E'Z'		15	16	50		2		Masked by microseisms USCGS: 5.6 S, 147.2 E H 17 10 04.7 h 148 km. Mag. 5.4	
		M	E'Z'		20	18	34		1	2		
		M	E'Z'		31.1		22		2	2		
		P	Z	17	15	48						
		e	Z		16	24	1.2			0.08		
		eS	E'		20	22	?					
		e(ScP)	Z	22	26 $\frac{1}{2}$		1.5			0.20		
		M	N'		24	44	26	1				
		M	E'		25	16	26		1			
		M	N'E'		28	10	14	1	1			
379	4	M	Z'		28	50	14			1	Masked by microseisms Microseisms present USCGS: 55.7 S, 27.9 W H 08 17 32.1 h 33 km. Mag. 5.8	
		(P)	Z	21	32	34						
		eP	Z	08	30	34	1.2			0.12		
		e	N'		40	28	22					
		eS	E'		41	29	22					
		e	N'		42	31	24					
		e	Z'		47	50	26					
		e	E'		55	16	22			$\frac{1}{2}$		
		eLR	N'Z'	09	01	08	48					
		M	N'Z'		09	44	22	3		3		
380	4	M	E'		10	08	20		1		Masked by microseisms USCGS: 18.0 S, 168.4 E, H 19 18 51.0 h 74 km. Mag. 4.2	
		e(pP)	Z	09	24	03 $\frac{1}{2}$	0.7					
381	4	(P)	Z	10	25	32					Masked by microseisms USCGS: 19.7 S, 176.2 W H 10 18 58.0 h 33 km. Mag. 4.9	
		e	Z'		25	50						
		eS	N'		30	42	10		$\frac{1}{2}$			
		e	E'		30	54	14			$\frac{1}{2}$		
		eSS	N'		32	30	18		$\frac{1}{2}$			
		eL	Z'		33	08	24					
		L Max.	E'Z'		34.5		26			2		2
		M	E'		35	25	20			2		
		M	Z'		36	00	20					3
		M	N'		36	18	14	4				
383	4	eP	Z'	16	27	52	5				Masked by microseisms USCGS: 6.0 S, 146.7 E H 16 22 00.9 h 49 km. Mag. 5.2	
		e	N'		32	38	18					
		e	Z'		32	42	18					
		eL	E'		34	31	36					
		M	E'		38	06	20			3		
		M	N'Z'		38	12	23	2		2		
385	5	eP	Z	12	37	33	1.0			0.05	Microseisms present USCGS: 49.4 S, 125.7 E H 12 32 15.3 h 33 km. Mag. 4.9	
		e	Z'		37	36	6			$\frac{1}{2}$		
		e	N'		41	54	14	1				
		isS	E'		42	02	14			-2		
		i	Z'		42	06	14			+1		
		eL	Z'		43	25	34					
		M	E'		44	42	16			5		
		M	N'		45	04	16	4				
		M	Z'		45	09	22					4
387	5	iP	N'E'Z'	15	05	31	9	-1		$-\frac{1}{2}$	Compression USCGS: 10.5 S, 161.3 E H 15 00 07.7 h 41 km. Mag. 5.4 5.1-5.5 Berkeley	
		i	Z		05	31.7	0.9			+0.14		
		isP	Z'Z''		05	44	9					-2
		eS	N'		09	56	?					
		i	E'		10	05	14					+3
		i	N'		10	08	16	+6	Continued			

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
387 cont.	1967 May 5	i Z'	15 10 10	22	μ	μ	μ	km.	
		e E'	10 19	38		11	+6		
		i N'	10 36	12	-4				
		eL N'	10 42	31	13				
		i Z'	11 19	24			+5		
		M E'	12 22	25		11			
		M N'	12 54	22	15				
		M Z'	13 11	24			18		
388	5	eP Z	17 35 09		Small & feeble				USCGS: 14.1 S, 166.8 E, H 17 29 54.4 h 48 km. Mag. 4.7
		L Z'	44						
389	5	eP Z	17 46 43					5330 4890	Microseisms present USCGS: 8.0 S, 107.2 E H 17 38 05.3 h 33 km. Mag. 5.3
		eS E'	53 38	16		½			
		e N'	53 44	22	½				
		ePPS E'	53 56	28		1			
		e N'	57 14	18	1				
		e Z'	57 16	20			1		
		eL N'	59 53	36					
		M E'	18 02 50	24		2			
		M N'	03 39	21	3				
		M Z'	05 23	24			3		
		M N'	06 59	14	4				
		M E'Z'	10 41	19		4	5		
395	7	eP Z	10 23 05					3290 2996	Microseisms present USCGS: 4.1 S, 152.8 E H 10 16 56.2 h 47 km. Mag. 5.0
		i Z	23 06	1.0			-0.05		
		eS N'	27 57	20	1				
		e Z'	28 08	20					
		eL E'	29 56	32					
		eL N'	30 08	33					
		eL Z'	31 29	28					
		M E'	32 20	22		1			
		M N'	32 44	22	2				
		M Z'	33 00	22			2		
396	8	(pP) Z	18 50 35						Masked by microseisms USCGS: 33.2 S, 178.4 W H 18 44 56.8 h 50 km. Mag. 5.3
		e E'	55 08						
		e Z'	55 14	20					
		eL Z'	56 52	30					
		eL E'	57 04	28					
		M N'Z'	59 54	18	½		1		
		M E'	19 00 02	18		1			
		(iP) Z	21 14 35				+	Microseisms present	
400	9	iP Z	21 38 13.0	1.4				5010 4591	Compression h 0.01 ca USCGS: 5.2 N, 127.5 E H 21 30 08.3 h 119 km. Mag. 5.5
		iP N'Z'	38 14	5	-½		+0.34 +1½ -1		
		isP Z'	38 47	6					
		eS N'E'	44 44	12	1	1			
		esS E'	45 24	12					
		e N'E'	47 56	12	1	1			
		i E'	48 45	10		+1			
		eL Z'	49 30	44					
		M E'	53 52	18		1			
		M Z'	56 50	10			1		
		M N'	56 54	18	1				
404	12	eP Z	02 04 22		Small & Masked by microseisms				USCGS: 13.9 S, 170.0 E, H 01 59 31.6 h 620 km. Mag 4.1
		e(L) N'	11.1						
408	13	P Z	03 04 49					Microseisms present USCGS: 11.7 S, 166.3 E, H 02 59 18.5 h 70 km. Mag. 4.7	
		eL Z'	11 34	26					
411	14	(P) Z	12 29 29					Microseisms mask all records USCGS: 10.5 S, 161.4 E H 12 24 08.9 h 37 km. Mag. 5.4	
		e N'	34 04	14					
		e Z'	34 06	18					
		M E'	36 44	25		½			
		M N'Z'	37 12	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.		
414	1967 May 15	θ P	Z'	02	38	31						Microseisms present	
		θ	N'	47	14	14	$\frac{1}{2}$						
		θ S	E'	47	22	12		$\frac{1}{2}$				USCGS: 32.5 N, 141.4 E	
		θ L	E'	56	58	26						H 02 27 36.0	
		M	N'Z'	03	03	48	22	1		1			h 40 km.
		M	E'	05	32	20		1				Mag. 5.4	
417	16	P	Z	06	24	22						Masked by microseisms	
		θ S	N'	29	02	22							
		θ	E'	31	48	26						USCGS: 5.7 S, 146.4 E	
		θ LR	Z'	32	28	34						H 06 18 24.4	
		M	E'Z'	34	41	23			4	3			h 53 km.
		M	N'	34	50	22	3						Mag. 5.4
422	17	θ P	Z	08	27	37	0.7			0.08		Microseisms present	
		θ (S)	E'	32	02	8							
		θ	N'	32	22	9	$\frac{1}{2}$					USCGS: 15.1 S, 168.1 E	
		θ L	E'	34	05	22						H 08 22 20.3	
		M	N'	35	50	15	$\frac{1}{2}$						h 36 km.
		M	E'Z'	38.9		15		$\frac{1}{2}$	$\frac{1}{2}$				Mag. 5.1
424	17	θ P	Z	13	02	21						Microseisms present	
		θ (S)	N'	06	48								
		i sS	N'E'	06	58	15	+2	+1				USCGS: 9.7 S, 159.8 E	
		i	Z'	07	02	14				+1			H 12 56 55.4
		θ L	N'	07	54	22							h 32 km.
		θ L	Z'	09	06	24							Mag. 5.1
		M	N'	10	26	16	1						
		M	E'	10	50	16			1				
		M	Z'	13	10	15				1			
430	19	θ	Z	05	14	46						Masked by microseisms	
		θ (PP)	E'	15	09	12							
		θ (S)	N'	18	51	12						USCGS: 34.9 S, 179.0 W	
		θ	Z'	19	00	(20)						H 05 09 10.9	
		θ	N'	19	08	12	$\frac{1}{2}$						h 35 km.
		θ LR	Z'	21	00	28							Mag. 5.2
		θ L	E'	21	04	28							
		L Max.	E'Z'	21.7		26			1	2			
431	19	i P	Z	07	44	16						Masked by microseisms	
		θ (S)	E'	48	14	14			1				
		θ	N'	48	22	11	1					USCGS: 54.3 S, 143.6 E	
		θ	E'	48	34	20			1			H 07 39 27*	
		θ L	N'	49	10	28	1						h 33 km.
		θ L	Z'	49	19	26				1			
		M	E'	51	01	12			2				
M	N'Z'	51	27	12	2			1					
432	19	P	Z	12	08	00	0.8			0.05		Microseisms present	
		θ	Z'	12	48	24						USCGS: 30.3 S, 177.9 W	
		θ L	E'	14	36	26						H 12 02 20*	
		θ L	Z'	14	56	26				1			h 25 km.
		M	E'Z'	16	20	18			1	1			Mag. 4.7
434	20	θ P	Z	03	00	29						Microseisms present	
		θ (S)	E'	08	12							USCGS: 19.8 N, 146.0 E	
		θ L	E'	14	06	34						H 02 51 09.4	
		M	E'	16	36	26			1				h 42 km.
		M	N'Z'	18	36	25	$\frac{1}{2}$			$\frac{1}{2}$			Mag. 5.5
435	20	θ (PP)	N'Z'	05	45	17						Masked by microseisms	
		θ	E'	49	16								
		θ	E'	50	07	11			1			USCGS: 59.4 S, 148.2 E	
		θ L	Z'	50	31	26						H 05 39 14*	
		θ L	N'	50	52	26							h 33 km.
		L Max.	N'Z'	51	16	22	$\frac{1}{2}$			1			
442	21	i P	Z	18	54	39.8	1.4			+1.46	6300	Compression	
		i P	N'E'Z'N'E'Z'	54	40	6	-2	+5	+13	5697		USCGS: 1.0 S, 101.5 E, H 18 45 11.7	
		i	Z	54	53	1.2			+0.41			h 173 km. Mag. 6.3 (cont.)	
		i	Z	55	00	1.4			+0.68				

Continued

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ km.	Remarks
					AN μ	AE μ	AZ μ		
442 cont.	1967 May 21	iPcP Z'	18 55 34	10			+6		Mag. (cont.): 6.1-6.3 Berkeley 6 3/4 Pasadena
		i N'E'	55 42	14	+2	-3			
		i Z'	55 46	14			+5		
		iPP Z'	56 52	14			+4		
		i E'Z'	57 47	14		-4	-6		
		i E'	59 06	14		+5			
		iS N'E'N"E"	19 02 18	10	+19	+14			
		i Z'Z"	02 24	11			+5		
		o N'E'	02 28	34					
		i Z'	03 04	11			-5		
		i E'	03 32	22		+24			
		iScS E'E"	04 10	14		+10			
		i N'N"	04 11	14	+13				
		i E'	04 31	24		-23			
		i E'	07 40	19		-18			
		i Z'	08 02	18			+24		
		i N'	08 07	19	-26				
		oL E'	10 02	45		29			
oL N'	10 10	42	48						
oL Z'	12 10	50			50				
M N'	14 22	20	51						
M E'	14 38	20		31					
M Z'	14 44	20			26				
443	22	oP Z	03 24 28					Microseisms present USCGS: 15.0 S, 167.2 E, H 03 19 22.5 h 102 km. Mag. 4.7	
		i Z	24 29	1.0		+0.13			
		ipP Z	24 49	1.2		+0.20			
	22	(iP) Z	04 47 16.0					Masked by microseisms	
	23	(iP) Z	09 49 16.0	1.5				+0.48 Large microseisms present	
446	23	oP Z	19 30 33 1/2					Large microseisms present USCGS: 56.2 S, 27.3 W, H 19 17 47.5 h 130 km. Mag. 5.9	
		i Z	30 35.5	1.2		+0.36			
		o N'	42 33						
		oL N'	20 01.0	(36)					
449	25	oS N'	18 53 22					Masked by microseisms USCGS: 3.0 S, 127.8 E, H 18 40 18* h 56 km. Mag. 4.9	
		o(L) N'	57 42	24					
		M N'E'	19 00 40	20	1/2	1			
		M Z'	04 48	16					1
451	26	iP Z	21 23 54.8	1.1				Compression Microseisms present USCGS: 6.1 S, 130.3 E, H 21 17 23.8 h 137 km. Mag 5.3	
		o N'	29 03						+0.17
		oL E'	34 46	26					
452	27	iP Z'	17 35 47	6			9910 8922	Compression Microseisms present USCGS: 51.9 N, 176.1 E H 17 22 58.7 h 34 km. Mag. 5.8 5.3 Berkeley 6 Pasadena 6-6 1/4 Palisados	
		iSKS N'N"	46 13	8	+2				
		iS N'E'N"E"	46 32	16	-2	-3			
		o N'	47 30	14					
		o N'	48 20	22					
		oSS E'	52 21	24		2			
		oSS N'	52 28	24	4				
		oLQ E'	59 15	52		5			
		oLR Z'	18 03 50	40					4
		M N'Z'	07.0	24	3				4
		M E'	10 44	20		2			
		453	27	(iP) Z	19 19 30.5				
o Z'	42 00			24			1		
o N'	42 20			24	1				
oLQ N'	50 33			45	1				
oL E'	54 16			44		1			
oL Z'	54 22			50			2		
M N'	20 00 20			22	2				
M Z'	01 34			26			2		
M E'	01 55	26		2					
457	29	iP Z	05 01 01.6	1.0				Compression Microseisms present USCGS: 14.9 S, 167.4 E, H 04 55 56.2 h 122 km. Mag. 4.6	
		M N'E'Z'	13.7	18	1	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.	
462	1967 May 31	oP	Z	10 52 24						Masked by microseisms USCGS: 12.0 S, 166.2 E, H 10 46 54.6 h 50 km. Mag. 4.7
		i	Z	52 33.7	1.2			+0.10		
463	31	iP	Z	16 35 32.5	1.0			+0.10		Compression USCGS: 11.4 N, 125.5 E, H 16 26 32.5 h 66 km. Mag. 5.0
465	June 1	iP	Z	20 53 29				+	3060	Compression Microseisms present USCGS: 6.8 S, 155.0 E H 20 47 45.6 h 31 km. Mag 5.6
		i	Z	53 34.6				-	2795	
		i	Z	53 36.4	1.1			+0.11		
		i	Z	53 40.8	1.0			-0.11		
		iS	N'	58 06	12	-2				
		i	N'Z'	58 25	15	-5		+3		
		i	E'	58 26	14		-2			
		i	E'	59 48	11		+3			
		o	Z'	59 49	28					
		M	N'E'Z'	21 02 41	15-21	5	4	6		
		M	N'Z'	04 00	16	7		7		
470	5	oP	Z'	01 27 50	9					Masked by microseisms USCGS: 21.3 S, 174.5 W H 01 21 20.2 h 33 km. Mag. 5.2 5.0-5.2 Berkeley
		o	E'	33 12						
		o	N'	33 23						
		o	Z'	33 30	22			2		
		oL	N'	35 16	26	3				
		o	Z'	35 34	18			2		
		oL	E'	36 38	32					
		L	Z'	37 00	25			7		
		M	N'	39 44	14	6				
		M	E'Z'	40 44	18		9	11		
473	6	iP	Z	09 36 04.0	1.0			+0.12		Compression Large microseisms USCGS: 10.8 S, 165.3 E H 09 30 26.7 h 33 km. Mag. 5.1
		i	Z	36 10.6	1.2			-0.24		
		o(S)	N'	40 36	14	1				
		i	E'	40 45	11		+1			
		M	N'	44 35	15	1				
		M	E'	47 44	13		1			
		M	Z'	49 44	13			1		
474	7	i	Z	19 34 49.4	0.9			+0.12		Large microseisms present
		i	Z	35 04.7	1.0			+0.10		
		o	N'	38 28	8	1/2				
		o	E'	38 32	10		1			
		o	N'Z'	39 05	14	1		1		
		T	N	53 01	0.6	0.02				
476	8	(P)	Z	12 10 08						Masked by microseisms USCGS: 4.6 N, 127.1 E H 12 01 57.3 h 73 km. Mag. 5.3
		o	N'	11 24						
		oS	N'	16 40	16					
		oL	Z'	27 08	20					
		M	N'	30 10	18	1				
		M	E'	30 16	18		1			
		M	Z'	30 40	18			2		
477	8	iP	NEZ	13 26 52.8	1.5	+0.16	+0.30	-1.16		Dilatation USCGS: 21.4 S, 170.3 E H 13 22 13.7 h 90 km. Mag. 5.3
		iP	N'E'Z'	26 53	12	+2 1/2	+3 1/2	-5		
		i	Z	27 13	1.5			+0.38		
		iPP	N'E'Z'	27 19	11	-2	-2	+3 1/2		
		i	Z	27 41	1.7			+0.78		
		i(S)	N'N''	30 44	11	+5				
		iSS	Z'	31 13	13			+5		
		i	N'	31 16	26	+11				
		oL	E'	31 27	32					
		oL	Z'	31 49	35					
		M	E'	32 13	30		7			
		M	Z'	32 38	24			8		
		M	N'	34 37	14	9				
481	9	(oP)	Z	12 45 53						Microseisms present USCGS: 52.4 S, 143.5 E, H 12 41 22* h 33 km. Mag. 5.1
		o	Z'	45 58						
		i	E'	49 42	11		+3			
		o	N'	49 48	9					

Continued

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	μ	μ	μ	km.		
481 cont.	1967 June 9	i	N'	12	49	57	8	+2				
		oL	N'		50	40	30					
		M	Z'		51	04	26			6		
		M	N'		51	27	26	5				
		M	E'		51	34	16		4			
		M	Z'		55	24	12			4		
485	11	oP	Z	15	28	41					Masked by microseisms USCGS: 10.8 S, 115.1 E, H 15 21 06.5 h 46 km. Mag. 5.1	
		oL	N'		41.2		24					
487	12	i	Z	03	10	45.2	1.3			+0.17	Masked by microseisms USCGS: 18.0 S, 167.7 E H 03 05 34.1 h 8 km. Mag. 4.8	
		iPP	Z		10	52.7	0.7			+0.03		
		i	Z		11	01	1.3			+0.31		
		i(S)	E'E"		14	36	6		-2			
		o	N'		14	38	13	2				
		i	Z'		14	40	6			+2		
		i	E'E"		15	08	6		+2			
		o	N'		15	47	18					
		oL	Z'		16	19	20			2		
		oL	E'		16	23	20		2			
		M	N'		17	12	16	2				
M	E'Z'		17	56	18		2	2				
489	12	(i)	Z'	05	33	02	5				Masked by microseisms USCGS: 44.9 S, 35.7 E H 05 21 11* h 36 km. Mag. 5.6	
		o	N'		43	50	20	1				
		o	E'		44	04	20		1			
		o	N'		44	41	20	2				
		o	E'		45	09	44		3			
		o	N'		45	24	28	1				
		o	N'		47	39	52					
		oL	N'E'		55	24	40	4	3			
		oL	Z'		59	30	30			4		
M	N'E'Z'		06	01.5	22	2	2	3				
490	12	(P)	Z	21	27	37					Masked by microseisms USCGS: 3.1 S, 100.6 E H 21 17 48.9 h 33 km. Mag. 5.4	
		o(S)	E'		35	22						
		oL	E'		44	16	36					
		M	E'		49	50	26		3			
		M	N'		49	54	22	2				
		M	Z'		50	20	26			3		
		M	E'		54	26	20		3			
		M	N'		54	38	22	2				
492	13	i(S)	N'	00	26	20	8	-3			Large microseisms present USCGS: 17.5 S, 167.5 E H 00 17 15.6 h 9 km. Mag. 4.8	
		i	N"		26	21	8*	+6*				
		i	E'E"		26	25	7		+2			
		oL	E'		27	50	32			3		
		M	E'		30	35	13					
		M	Z'		31	38	15			3		
		M	N'		32	30	14	4				
494	13	I(P)	Z	03	16	39				+	Large microseisms present USCGS: 21.2 S, 169.6 E, H 03 11 59.0 h 33 km. Mag. 4.5	
496	13	iP	Z	15	45	06.6	1.2			+0.28	3140	Compression h 0.03 ca USCGS: 5.6 S, 148.1 E H 15 39 29.7 h 213 km. Mag. 5.4
		i	Z		46	01	1.7			+0.60	2893	
		i	N'Z'		46	10	6	+2		-3		
		iS	E'		49	35	?		+			
		i	N'		49	38	14	-2				
		osS	N'		50	55	21	2				
		iSS	Z'		51	19	15			-2		
		i	N'		51	27	10	+3				
		i	E'		51	41	7		+2			
		oL	E'		51	45	42					
		M	E'		53	20	26		7			
		M	N'E'Z'		54	46	16	3	4	3		

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
498	June 14	iP	Z	05 13 26.2	1.0			+0.11	9830 8895	Compression Large microseisms present.
		iP	Z'Z''	13 26½	5			+1		
		o	Z'	13 42	?					
		iPP	Z'	14 49	5			+1½		
		iPPP	E'E''	15 11	6		+2½			
		i	Z'	15 13	6			+2		
		o	E'	19 33	14		1			
		oL	N'	21 58	27	4				
		oLR	Z'	23 57	28					
		LR Max.	N'E'Z'	24 25	28	3	8	10		
		M	E'Z'	26 25	18		4	4		
		M	N'	26 50	13	3				
499	14	(iP)	Z	08 18 02.0				+	9830 8895	Masked by microseisms
		oS	E'	28 16	14					
		o	N'	28 23	14					
		oSS	N'	33 39	20					
		oLQ	E'	39 52	38					
		o	N'	40 10						
		M	N'Z'	49 18	20	1		2		
		M	E'	50 05	20		1			
502	16	(iP)	Z'	05 48 58				+	9830 8895	Masked by large microseisms
		o	Z	49 02						
		i	E'	53 11	11		+3			
		o	E'	53 34	22		3			
		oL	N'	54 15	26	4				
		oL	Z'	54 17	26			5		
		M	E'	56 47	9		5			
503	16	i	E'	06 12 12	12		+3	9830 8895	Masked by large microseisms	
		o	E'	12 45	22		4			
		oL	N'	13 24	26	5				
		oL	Z'	13 26	26					5
		M	E'	15 06	14		5			
505	17	iP	Z'	05 12 48	12			-11	9830 8895	Dilatation h 0.02 Large microseisms present
		i	N''Z''	12 50	7*	+7*		+21*		
		m	Z	12 52	1.3			1.32		
		iP	Z'	13 30	8			+3		
		iS	Z'	13 43	11			+6		
		iPP	Z'	16 19	14			-8		
		iSPP	Z'	17 12	10			+5		
		iSKS	N'N''	23 00	12	-11				
		iS	N'E'N''E''	23 18	14	+11	-8			
		i	Z'	23 21	10			-6		
		i	N'	24 17	12	-				
		iS	E'	24 30	11		-10			
		oSS	E'	29 16	14		4			
		i	Z'	30 28	14			+6		
		i	E'	36 16	22		-10			
		o	Z'	37 20	30			9		
		oL	E'	38 15	52					
		oL	N'	42 00	46	16				
oL	Z'	42 11	46			19				
M	E'	48 42	18		6					
M	Z'	51 12	18			10				
M	N'	51 26	18	6						
506	17	iP	Z	07 47 54.8	0.8			-0.10	9830 8895	Dilatation Large microseisms USCGS: 14.9 S, 167.3 E, H 07 42 48.3 h 105 km. Mag. 4.4
509	18	(P)	Z	12 30 39					9830 8895	Masked by microseisms
		o	N'	36 20	(16)					
		oL	E'	38 09	38		3			
		oL	Z'	39 48	36			2		
		oL	N'	40 08	28	1				
		M	E'	44 46	12		2			
M	Z'	45 56	14			1				

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
510	1967 June 18	o(S)	N'	14	03	28	14					Masked by microseisms
		oL	E'	05	32		38		3			
		oL	Z'	07	0		30					
		M	N'Z'	09	09		23	3		2		USCGS: 3.3 S, 149.2 E
		M	E'	09	40		19		3			H 13 52 21* h 61 km.
511	18	(iP)	Z	20	10	37				+		Masked by microseisms
		o	N'	17	52			Fooble				USCGS: 3.9 S, 151.6 E, H 20 04 56.7
		o	E'	20	00			"				h 301 km. Mag. 4.9
514	19	oP	Z	17	21	00.5						Microseisms present
		o	Z'	21	25							
		iSKS	N'N"	31	36		11	+2				USCGS: 52.7 N, 166.9 W
		iS	E'E"	32	12		14		-4			H 17 07 45.4
		oSS	E'	38	28		18					h 33 km.
		o	N'	38	43		18	1				Mag. 5.7
		M	Z'	18	07	05	18			2		5 ³ / ₄ -6 Palisados, Golden
		M	E'	07	46		18		2			6 Pasadona
		F	Z'	20	24							6.3-6.5 Berkeley
515	19	o(P)	Z	18	18	34						Regional
		i(S)	E	19	02.7	(0.7)			+			
		i	NEZ	19	03.7	0.5		-0.07	-0.14	-0.04		
519	20	oP	Z	07	52	04 ¹ / ₂					10,520	Microseisms present
		iSKS	N'N"	08	02	38	11	+1			9497	USCGS: 52.8 N, 167.1 W
		iS	E'E"	03	16		14		-2			H 07 38 44.9 h 11 km.
		oL	N'	17.6			(28)					Mag. 5.2
		M	Z'	38	23		18			1		4.5-5.0 Berkeley
		M	E'	38	47		18		1			5.5 Palisados
524	21	o(P)	Z'	15	50	52	10					Masked by microseisms
		oS	N'	54	52		12					
		i	N'E'	55	10		7	+1	+1			USCGS: 55.4 S, 146.9 E
		oLR	N'E'	56	02		26					H 15 46 02*
		M	N'	57	06		19	4				h 33 km.
		M	Z'	57	12		18			5		Mag. 5.0
		M	E'	57	52		14		3			
527	21	o(PS)	Z'	20	37	56						Masked by microseisms
		o(SS)	N'	43	40		30					
		oL	Z'	54	48		30					USCGS: 25.2 S, 70.5 W
		M	N'	21	00	44	26	1				H 20 09 28.4
		M	E'	00	56		26		1			h 23 km.
		M	Z'	01	17		26			2		Mag. 5.7
		(P)	Z	22	11	32						Masked by microseisms
531	22	(P)	Z'	19	15	07						USCGS: 17.8 S, 178.7 W, H 22 05 54.0
		o(S)	N'	20	12		12					h 574 km. Mag. 4.6
		oL	E'	22	52		36					Masked by large microseisms
		oL	Z'	24	12		34					USCGS: 1.3 S, 149.8 E
		M	N'E'Z'	27	18		20	3	4	5		H 19 08 33.5
												h 34 km. Mag. 5.0
532	23	oP	Z'	00	32	46						Microseisms present
		o(S)	E'	38	29		18					
		o	N'	41	18		18	1				USCGS: 15.0 S, 172.3 W
		oL	E'Z'	43	34		28		2	3		H 00 25 29.8
		M	E'Z'	46	12.		18		2	3		h 33 km.
		M	N'	46	46		13	1				Mag. 5.1
533	23	iP	Z	05	11	42.5	1.1			+0.36		Compression Microseisms obscure
		i	Z	11	50		0.9			+0.10		N'E'Z' N"E"Z"
		i(sP)	Z	12	10.7		1.2			+0.28		
		o(S)	N'	16	54		11	1				USCGS: 5.8 S, 130.5 E
		oS	E'	16	57		11		1			H 05 05 04.8
		oL	N'	20	38		48	3				h 85 km.
		oL	Z'	21	02		50			4		Mag. 5.9
		M	E'	23	18		26		7			
534	23	oP	Z'	11	53	27						Microseisms present
		iPPP	Z'	54	16		8			+1		USCGS: 62.5 S, H 155.2 E, H 11 47 29*
		i	E'	58	22		10	+2				h 33 km. Mag. 5.3

Continued

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ	Remarks		
							AN	AE	AZ				
				h	m	s		μ	μ	μ	km.		
534 cont.	1967 June 23	o(LQ)	E'	11	58	52	(24)						
		o	N'		59	38	16	3					
		M	E'		59	46	18		6				
		oLR	Z'	12	00	00	36						
		M	N'Z'		00	52	22	7			10		
535	23	iP	Z	14	43	49.0	1.0			-0.14		Dilatation	
		o	E'		48	06		Microseisms mask			N'E'Z'	N"E"Z"	USCGS: 21.3 S, 179.3 W, H 14 38 35.7
		o	Z'		51	18	16					h 605 km. Mag. 5.1	
536	23	oP	Z'	21	34	54	8				+1		
		i	Z		34	56.5	1.1				-0.13	USCGS: 19.2 S, 167.7 E	
		i	Z		35	02	1.0				-0.16	H 21 30 11.5	
		i	E'Z'		35	12	10		+2		-2	h 37 km.	
		iS	N'		38	46	12	+4				Mag. 5.3	
		i	E'		38	52	6				-4	4.7-5.1 Borkoley	
		oL	N'		39	14	25	4					
		o	E'		39	38	18				3		
		oL	Z'		39	52	30						
		M	Z'		40	42	22				5		
537	24	o	Z	06	38	41						Regional Masked by microseisms	
		i	N		39	06	0.5						
		m	NEZ		39	10	0.5	+ 0.10	0.09		0.08		
		oP	Z	13	33	50							
		i	Z		33	54					+	Microseisms present	
		o	E'		41	04						USCGS: 21.4 S, 179.3 W, H 13 28 35.9	
		oP	Z	21	09	00						5300	
		i	Z'		09	07	6				+1	4797	
		o	N'		10	39	11						
		o	Z'		15	40	16						
538	24	oP	Z	13	33	50						Microseisms present	
		i	Z		33	54					+	USCGS: 21.4 S, 179.3 W, H 13 28 35.9	
		o	E'		41	04						h 592 km. Mag. 4.7	
		oP	Z	21	09	00						5300	
		i	Z'		09	07	6				+1	4797	
		o	N'		10	39	11						
		o	Z'		15	40	16						
		oS	N'		15	56	18	2					
		o	Z'		19	16	17				1		
		oLR	Z'		22	46	38						
539	24	oLR	N'		22	52	38						
		LR Max.	Z'		23	48	38				10		
		LR Max.	N'		24	00	36	8					
		iP	Z	21	12	37.2	1.2				+0.18	Compression	
												USCGS: 11.4 N, 125.7 E, H 21 03 36*	
												h 53 km. Mag. 5.0	
		o(S)	N'	23	33	34	20	3					
		oL	E'		38	32	40						
		oL	N'		40	16	50						
		L Max.	N'Z'		41	38	36	10				11	
M	E'		45	22	16				5				
546	25	o(S)	N'	23	33	34	20	3				Masked by microseisms	
		oL	E'		38	32	40					USCGS: 12.4 N, 141.8 E	
		oL	N'		40	16	50					H 23 18 04.3 h 42 km.	
		L Max.	N'Z'		41	38	36	10				Mag. 5.6	
		M	E'		45	22	16				5	6.3 Borkoley	
549	27	o(S)	N'	21	52	22	12	1				Masked by microseisms	
		i	E'		52	26	12				+4	USCGS: 46.4 S, 96.0 E	
		oL	Z'		58	12	24					H 21 37 48.1	
		M	N'		59	44	19	3				h 33 km.	
		M	E'Z'		22	00	29	19			7	7	
550	28	(P)	N	00	19	54						Masked by large microseisms	
		i	N'		24	32	12	+3					
		i	E'		24	34	10				+3	USCGS: 9.5 S, 157.4 E	
		oL	N'E'		25	32	26	4			6	H 00 14 34.5	
		M	Z'		28	55	16				3	h 16 km.	
552	28	M	N'E'		29	49	12	4			10	Mag. 5.4	
		oP	Z'	14	38	04						1870	
		o	Z'		38	11	16					1698	
		oPP	N'E'		38	16	16	2			2	USCGS: 47.0 S, 165.8 E	
		oS	N'		41	08						H 14 34 04.5	
		i	E'		41	21	16				+19	h 37 km.	
		iSS	Z'		41	31	16					-6	
		i	N'		41	33	14	-14					Mag. 5.6
		M	Z'		43	23	17					9	

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No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
562	1967 July 6	oP	Z	13	55	38					10,400	Microseisms present USCGS: 52.6 N, 168.2 W H 13 42 22.5 h 14 km. Mag. 5.9 5 $\frac{1}{4}$ Golden 5.8-6.0 Borkoloy 6-6 $\frac{1}{4}$ Palisados 6 $\frac{1}{4}$ -6 $\frac{1}{2}$ Pasadana
		iSKS	N'	14	06	12	10	+1 $\frac{1}{2}$			9396	
		i	N'		06	31	11	+1 $\frac{1}{2}$				
		iS	E'		06	45	12		-2			
		oSS	E'		13	01	21		1			
		oLQ	E'		19	58	40					
		M	N'Z'		29	36	22	2		2		
		M	E'		30	54	22		2			
563	6	PKP	Z	18	51	56						Microseisms present USCGS: 18.9 N, 61.9 W, H 18 32 15.1 h 57 km. Mag. 5.1
569	8	iP	Z	01	03	54.9	1.3			+0.28	2660	Compression Microseisms present USCGS: 15.4 S, 167.5 E H 00 58 54.7 h 137 km. Mag. 5.2 5.0-5.4 Brisbane N -0.55 μ E +0.42 μ
		iP	Z''		03	55	5*			+2*	2399	
		i	Z'		04	20	6			-1		
		i(sP)	Z		04	27	1.5			+0.30		
		iPP	Z'Z''		04	34	6			-3		
		iPPP	Z''		04	43	4*			+3*		
		iS	N'E'N''		08	01	8	-2	+1			
		i	N N'		08	08	2.0&9	-3				
		i	E E'		08	09	1.8&11		+3			
		o	Z'		08	32	25					
		i(sS)	N'		08	35	10	-4				
		i	N''		08	40	9*	+8*				
		i	E'Z'		08	54	9		-4	-4		
		iSS	N'N''		08	57	8	+3				
		oSSS	N'		09	17	14	5				
		oL	E'		10	08	28					
M	E'		11	48	16			3				
M	N'		12	08	15	3						
570	8	oP	Z	06	27	57	1.3				2460	Microseisms present USCGS: 16.3 S, 166.8 E H 06 22 52.8 h 9 km. Mag. 5.0 5.0-5.4 Borkoloy
		i	N'Z'N''Z''		28	00	10	+1		-2	2291	
		i	Z		28	03	1.3			+0.17		
		oS	N'		31	54	(12)					
		i	N'E'		32	03	10	-5	-11			
		i	Z'		32	07	11			-6		
		i	N''		32	07	10*	+10*				
		i	E''Z''		32	08	10*	+16*	+8*			
		i	N'E'		32	26	14	+3	+4			
		oL	Z'		33	06	24					
		M	E'		34	40	20			5		
M	N'		35	02	16	7						
M	Z'		35	16	18			7				
572	10	(P)	Z	06	35	12						Fooble. Masked by microseisms
		o	E'		39	40						
573	10	(iP)	Z	07	27	23.0						Microseisms present
		T Max.	Z		44	24	0.5			0.02		
574	10	oS	N'	11	09	09	14					Masked by microseisms USCGS: 3.2 S, 130.0 E H 10 56 26* h 33 km. Mag. 5.1
		o	Z'		09	32	30					
		oL	Z'		13	38	42					
		oL	E'		13	42	40					
		M	N'E'		16	24	18	1	2			
		M	N'E'Z'		20	12	18	1	2	2		
575	10	iP	Z	12	08	56.9	0.9			+0.14		Compression USCGS: 5.9 S, 113.1 E H 12 01 31.5 h 591 km. Mag. 5.4
		iS	E'Z'E''		14	54	8			-2	+1	
		o(sS)	E'		18	23	10			1		
		o	N'		18	26	16	1				
		o	Z'		18	49	16				1	
576	10	iP	Z'	19	26	19						Dilatation USCGS: 4.8 N, 127.1 E H 19 18 14.7 h 118 km. Mag. 5.2
		oS	N'		32	50	10	1				
		o	E'		32	54	10			$\frac{1}{2}$		
		i(SS)	E'		36	13	12				-2	
		i	N'		36	17	12	+1				
		o	N'		39	32	32					

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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.	
576 cont.	1967 July 10	oL	Z'	19 40 16	36					
		M	N'	45 10	20	1				
		M	E'	45 38	20		1			
		M	Z'	46 46	20			2		
577	11	o	Z	04 22 50						
		m	Z	22 53	1.2			0.17		
		oS	N'	27 15	22					USCGS: 7.0 S, 155.8 E
		oL	E'	28 54	28					H 14 17 02.1
		M	Z'	31 28	24			2		h 88 km. Mag. 4.8
578	11	(P)	Z	17 37 09		Masked by microseisms				USCGS: 19.4 S, 177.7 W, H 17 31 23* h 381 km. Mag. 4.2
579	12	oP	Z	04 36 17	1.2	Feeble. Microseisms present				USCGS: 0.2 S, 125.5 E, H 04 28 33* h 34 km. Mag. 4.8
		oL	Z'	51 28	30					
581	12	oP	Z'	21 21 02	6			1		Microseisms present
		oS	E'	25 54	8		1			
		i	E'	26 12	8		+2			
		SSS	E'	27 56	22					USCGS: 16.1 S, 178.3 E
		SSS	N'	27 58	22					H 21 14 53*
		m	N'E'	28 16	24	11	4			h 33 km.
		oL	E'Z'	29 06	30					Mag. 5.3
		L Max.	E'Z'	29 49	26		10	12		
		oX	Z'	22 53.0	50			2		
584	13	oP	Z'	10 09 02	9			1		Microseisms present
		i	Z	09 14	1.1			+0.18		
		i(S)	N'	12 58	11	-6				USCGS: 20.4 S, 169.3 E
		i	E'Z'E''	12 59	9		-4	-4		H 10 04 19.0
		i	E'	13 19	8		-6			h 46 km.
		oLR	E'	14 04	27					Mag. 5.0
		oL	Z'	14 14	27					
		L Max.	E'Z'	14 54	25		5	6		
585	14	iP	Z	02 53 22.6	1.2			+0.35		Compression
		iP	Z'Z''	53 23	3			+2		
		i	NEZ	53 26	0.8	+0.05	+0.05	-0.19		USCGS: 11.4 S, 166.2 E
		ipP	Z	53 41				+		H 02 47 53.0
		i	Z'Z''	53 45	8			-2		h 80 km.
		o	E'	57 56	12					Mag. 5.2
		o	N'	58 02	10					5.2-5.5 Berkeley
		i	Z'	58 17	14			-2		
		oL	Z'	03 00 18	32			7		
oL	N'E'	00.4	30	4	5					
586	14	P	Z	09 13 18		Masked by microseisms				USCGS: 8.8 S, 124.1 E, H 09 06 22.2
		oL	E'	25.6	25					h 23 km. Mag. 5.3
587	14	iP	Z	22 43 10.5	1.0			+0.06	3410	Compression
		oS	N'	48 10	10	1			3097	
		o	N'	48 25	20	1				USCGS: 3.6 S, 149.4 E
		oL	E'	50 12	38					H 22 37 00*
		oL	Z'	51 27	32					h 33 km.
		M	Z'	53 32	22			2		Mag. 4.6
		M	E'	54 48	15		2			
M	N'	54 52	20	2						
588	15	iP	Z	14 49 04.5	1.0			+0.06		Compression
		o(S)	N'	55 58	14	½				
		o	E'	59 16	15		1			USCGS: 6.8 N, 126.3 E
		o	Z'	59 45	16			½		H 14 40 35.0
		M	Z'	15 09 33	23			1		h 37 km.
M	N'E'	09 40	23	½	1			Mag. 5.3		
590	16	o(P)	Z	00 02 28						Masked by microseisms
		oT	NE	20 31						
		T Max.	Z	21 23	0.7			0.03		

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
591	1967 July 16	oP	Z'	h	m	s				km.		
				13	41	39	12				4140	
		ipP	Z	41	47.5	1.2					3793	USCGS: 0.8 S, 132.6 E
		opP	N'E'Z'	41	48	13	1	1			2	H 13 34 29.9
		PP	Z'	43	08	14					3	h 33 km.
		e	N'E'	43	14	16	3	2				Mag. 6 Pasadona
		o	Z'	47	22	32						5.8-6.2 Berkeley
		iS	E'	47	24	14		+4				
		i	N'	47	26	14	+9					
		o	N'Z'	47	46	32	16			10		
		i	E'	48	10	22		+7				
		iSS	E'	49	56	22		+19				
		oL(Q)	N'	50	20	60	48					
		oL(Q)	E'	50	30	56		48				
		iLR	Z'	52	14	49				-24		
M	E'	54	14	30			105					
M	N'	54	36	25	48							
M	Z'	56	04	24				38				
M	E'	57	12	22			82					
M	N'Z'	59	24	18	66			81				
592	16	oP	Z	21	18	19	Microseisms present				USCGS: 16.8 S, 173.4 W, H 21 11 16.5 h 24 km. Mag. 4.9	
596	20	ipP	Z	11	46	30.4	1.1			+0.05	Microseisms present	
		eS	N'	51	07	20						
		oL	E'	53	00	36					USCGS: 6.3 S, 147.0 E	
		oL	Z'	54	10	35					H 11 40 41.2	
		M	N'Z'	55	24	30	2			2	h 61 km. Mag. 5.1	
M	E'	56	12	15			2					
597	20	(oP)	Z'	14	39	12	Feeble & masked by microseisms				USCGS: 51.4 N, 178.3 E	
		i	Z	39	15					+	H 14 26 14.1	
		eS	E'	49	50	16					h 33 km.	
		oL	N'Z'	15	07.1	30					Mag. 5.3	
598	20	oP	Z	15	44	32	0.8				4930	
		i	Z'Z''	44	33	6					-1	4494
		i	Z	44	34	0.8					+0.10	USCGS: 7.7 N, 134.9 E
		ipP	N'E'Z'N'E''Z''	44	43	8	+5½	-2½			-11	H 15 36 20.1
		oPP	E'E''	46	17	8		2½				h 8 km.
		i	N'Z'N''Z''	46	26	8	+5				-8	Mag. 6½ Pasadona
		iS	E'E''	51	04	14		-22				6.2-6.7 Berkeley
		i	N'Z'N''	51	06	26	-28				-11	
		iSS	N'E'N''E''	54	20	11	+7	-15				
		i	Z'	54	24	11					+9	
		i	N'	54	41	12	+25					
		m	E'	54	44	30		49				
		i	Z'	55	00	24					+19	
oG	E'	55	36	56		40						
M	E'	16	00	30	20		55					
M	Z'	03	30	20					41			
M	N'	03	36	20		39						
599	20	ipP	EZ	23	17	33.4	0.7		+0.06	-0.18	Dilatation USCGS: 26.5 S, 178.5 E, H 23 12 54.4 h 596 km. Mag. 5.2	
600	21	oP	Z	02	27	05	1.0	Feeble & masked by microseisms			USCGS: 54.3 S, 158.8 E, H 02 22 18.9	
		oL	Z'	32	10	20					h 25 km.	
603	21	i(P)	Z	19	33	00.2	1.0			+0.06	Masked by microseisms	
		o	N'	37	14	?					USCGS: 19.2 S, 168.6 E, H 19 28 08.0	
		oL	E'Z'	38.8	24						h 53 km. Mag. 4.8	
604	22	(P)	Z	01	39	15					Masked by microseisms	
		o	N'	47	34	22						
605	22	ipP	E'Z'Z''	04	03	25	10		-3	+5	Compression	
		i	Z	03	27	1.2				-0.18	USCGS: 33.5 S, 179.0 W	
		i	N'E'	04	04	8	+2	-5			H 03 58 02.4	
		i	N'	04	17	8	+2				h 39 km.	
		o	E'	08	03	18			3		mag. 5.0	
i	Z'	08	08	20				+6		5.8-6.2 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.		
605 cont.	1967 July 22	i	N'	04	08	14	16	+3					
		i	E'		08	19	16		-6				
		i	N'		08	42	17	-8					
		oL	E'		09	48	28						
		iLR	Z'		10	13	28				+13		
		M	N'		12	56	15	18					
		M	E'Z'		13	25	16		32	40			
606	22	oP	Z	05	34	12		Microseisms present				USCGS: 10.9S, 165.8 E, H 05 28 34.1 h 64 km. Mag. 5.0	
		o(L)	Z'		41	10	24						
607	22	oP	Z'	06	46	17	6					Microseisms present	
		o	E'		51	20	7						
		o	N'		51	44	14						
		oL	Z'		53	02	26					USCGS: 33.7 S, 178.7 W H 06 40 53* h 26 km. Mag. 4.6	
		oL	E'		53	07	25						
		M	E'Z'		55	16	16		2	3			
		M	N'		55	34	15	1					
608	22	oP	Z	11	16	00		Feeblo. Microseisms present				USCGS: 8.1 S, 117.7 E, H 11 08 21.9 h 21 km. Mag. 4.9	
610	22	oPKP	Z	17	16	19						Microseisms present	
		o	Z'		16	32	20						
		oPP	Z'		18	54	16				2		
		iPKS	E'Z'		19	40	10		+2	+5		USCGS: 40.7 N, 30.8 E H 16 56 53.3 h 4 km. Mag. 7.4 Pasadena 7.1-7.3 Borkoloy	
		i	E'		19	47	8		+3				
		i	N'		19	49	8	+2					
		i	Z'		19	56	9				+7		
		o	Z'		20	34	20						
		oPPP	E'Z'		21	50	30			5	8		
		i	Z'		22	08	26				+13		
		oSKS	N'E'		23	32	22	4		7			
		i	E'		32	12	25			-16			
		iSS	N'		36	22	28	-22					
		iL	N'		51	52	40	+68					
		iL	N'		54	20	66	+140ca					
		iL	E'		54	30	50			+79			
iLR	E'		59	28	50			-79					
LR Max.	E'Z'		18	01.0	54			125ca	130ca				
M	N'			03	00	38	110						
M	E'Z'			08.2	28			135	165ca				
611	22	iP	Z	22	04	36.2	0.8				-0.04	Microseisms present USCGS: 13.8 S, 166.9 E, H 21 59 18* h 53 km. Mag. 4.9	
612	23	iP	Z	03	13	49.8	1.5					-0.24	Dilatation
		iP	Z'Z''		13	50	4					-2	
		o(S)	E'		17	58	10						USCGS: 15.7 S, 167.1 E H 03 08 43.7 h 33 km. Mag. 4.9
		i	N'E'		18	03	14	-5	-2				
		i	N''		18	08	11*	+4*					
		i	Z'		18	10	16				+5		
		i	E'E''		18	19	14			-4			
		i	Z''		18	21	9*				-6*		
		iSS	N'N''		18	39	9	+4					
		oL	E'		20	00	22			4			
M	N'		21	08	17	3							
M	E'Z'		21	24	18			4	4				
613	23	oP	Z'	13	53	04	6					Preceded by microseisms	
		o	N'		53	09	10	2					
		ipP	Z'		53	13	10				+3		
		oS	N'		57	10	14	1				USCGS: 56.2 S, 158.3 E H 13 48 06* h 33 km. Mag. 5.1	
		oS	E'		57	26	16			3			
		i	Z'		57	34	14				-3		
		iSS	E'		57	51	20			+15			
		oL	Z'		58	10	30						
		L Max.	Z'		58	52	26				19		
		M	E'		59	22	14			22			
M	N'		59	34	22	16							
M	Z'		59	58	19				15				
oT	N		14	15	32	0.5							

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
								AN	AE	AZ		
614	1967 July 24	iP	NEZ	07 46 29.0	0.9	+0.06	-0.11	-0.53	km.	Dilatation N'E'Z' masked by microsoisms. USCGS: 8.3 S, 121.3 E H 07 39 31.7 h 197 km. Mag. 5.7		
		ipP	Z	47 13	1.5			-0.16				
		o(S)	E	52 06	1.5		0.14					
		o	E'	52 10	9		1					
		o	N'	54 32	10	1						
		o	Z'	54 48	10			1				
		M	N'	08 02 08	18	1						
		M	Z'	02 14	22			1				
618	26	(oP)	Z'	06 36 34		Very fooblo & masked by microsoisms				USCGS: 31.8 S, 178.7 W H 06 31 10.6 h 37 km. Mag. 5.1		
		oL	Z'	43 22	28							
		oL	E'	43 27	28							
619	26	iP	Z	08 19 34.9	1.0			-0.10		Dilatation Microsoisms present USCGS: 22.0 S, 170.1 E H 08 14 56.3 h 30 km. Mag. 5.0		
		iP	N'E'Z'	19 35	8	+1	+3	-4				
		iPP	N'E'	19 58	8	+2	+3					
		o(S)	N'	23 24	12	2						
		i	E'	23 30	14		-6					
		i	Z'	23 32	7			-				
		i	E''	23 36	6*		+8*					
		iPcP	Z'	23 38	11			+9				
		o(LQ)	N'	23 42	25							
		SS	Z'	23 56	14			3				
		i	Z'	24 20	16			+4				
		oL	E'	24 30	26							
		L Max.	E'Z'	25 06	26		6	8				
		M	E'Z'	26 32	19		6	7				
		M	N'	26 55	15	4						
620	26	o(SSS)	N'	19 35 38						Masked by microsoisms USCGS: 39.5 N, 40.4 E H 18 53 01.3 h 33 km. Mag. 5.6 5 $\frac{3}{4}$ -6 Palisados		
		o	E'	36 55								
		o	Z'	44 15	24							
		o	N'	45 29	23							
		oL	N'	47 14	45							
		oL	Z'	52.5	50							
		M	N'	56 16	34	2						
		M	Z'	20 00 48	26			3				
621	27	iP	Z	00 14 21.9	0.8			+0.12		Compression Microsoisms present USCGS: 6.8 S, 155.4 E, H 00 08 40.1 h 54 km. Mag. 5.2		
		oL	Z'	21 49	27							
623	28	(P)	Z	05 21 07				+		Masked by microsoisms USCGS: 22.1 S, 169.9 E H 05 16 28* h 33 km. Mag. 4.1		
		i	Z'	25 08	7			+2				
		oL	Z'	26 18	26							
626 P.T.O. 627	29	iPKP	Z	10 43 21.3	1.0			+0.21		Compression h 0.02 ca USCGS: 6.8 N, 73.0 W H 10 24 24.6 h 161 km. Mag. 6.0 6.1-6.3 Berkoley 6 $\frac{1}{2}$ Palisados 6 $\frac{1}{2}$ -6 $\frac{3}{4}$ Pasadena		
		ipPKP	Z'	44 01	6			-2				
		i	Z	44 02	1.3			+0.29				
		i	Z'	46 16	6			-6				
		i	Z'	46 30	12			+14				
		i	Z	46 31	1.0			+0.13				
		i	N'E'	46 32	8	+2	-3					
		i	Z	46 39	1.0			+0.18				
		i	N'	46 46	7	+3						
		i	E'	46 48	7		+4					
		i	N'	47 28	8	+3						
		i	E'	47 29	8		-5					
		i	Z'	47 38	8			-11				
		i	E'	47 42	7		+3					
		i	Z	47 43	2.0			+1.52				
		i	N'	47 50	8	+3						
		i	E'	47 58	8		-4					
		iSKS	E'	50 18	9		+3					
		iSKKS	E'	52 15	12		-4					
		i	N'	53 49	14	-5						
i	Z'	55 40	10			-4						
iSS	E'	11 02 58	18			-7						
i	N'	03 08	22		+8							

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.		
627 cont.	1967 July 29	i(sSS)	N'	11 04 08	14	+11					
		o	N'	18 23	32	7					
		o	E'	18 27	25			6			
		oL	Z'	27 02	48						
		M	N'	29 56	20	5					
		M	E'Z'	31 04	20		7	10			
626	29	iP	Z	05 25 18.4	0.7			+0.09		Compression USCGS: 6.6 S, 155.2 E, H 05 20 05.3 h 381 km. Mag. 5.0	
628	29	(P)	Z	22 10 53						Masked by microseisms	
		o	N'	18 34	18						
		oL	Z'	19 40	20						
		M	N'	22 30	12	3				USCGS: 17.1 S, 177.1 W H 22 04 27* h 187 km. Mag. 4.2	
		M	E'	23 30	12			2			
		M	Z'	25 10	16			2			
629	30	o	Z	00 19 38						Microseisms present	
		oPKS	Z'	22 34	14				1		
		oPFP	Z'	23 14	14					3	
		o	Z'	27 59	14					3	USCGS: 10.6 N, 67.3 W H 23 59 58.7 h 10 km. Mag. 6.2 Pasadena 6.3-6.5 Berkeley 5.2-6 Palisados
		o	E'	39 47	60						
		o	N'	41 20	52						
		oLR	Z'	01 06.0	36						
		LR Max.	Z'	06 50	32						
		LR Max.	E'	07 32	32			10		11	
		M	E'Z'	13 28	21			6		9	
		M	N'	18 50	18	6					
631	30	iP	Z	10 54 30.7	?					Compression	
		iP	N'Z'N"Z"	54 31	10	+3				+5	
		i	N'	54 42	10	-3					
		iP	Z'	54 44	10					+3	USCGS: 56.2 S, 146.9 E H 10 49 32.8 h 33 km. Mag. 5.1
		iPPP	N'	55 16	12	+3					
		i(S)	N'E'N"E"	58 45	14	+4	+23				
		i	N'	59 00	12	+10					
		i	E'	59 17	14			+19			
		oLR	Z'	59 30	30						
		M	E'	11 00 18	16			21			
		M	N'	00 34	20	30					
		M	Z'	00 59	20				39		
632	30	oP	Z'	13 41 07	8				2	Microseisms present	
		i	Z	41 09.4	1.0				+0.16		
		i	Z	41 14	1.2				+0.22		
		iS	N'E'N"E"	45 54	18	-5	-4				USCGS: 5.3 S, 153.6 E H 13 35 14.4 h 50 km. Mag. 5.3
		i	Z'	46 15	19					+7	
		i	N'N"	46 17	18	-12					
		oL	E'	47 44	32			14			
		oL	Z'	49 05	36						
		M	E'	49 12	24			18			
		M	N'Z'	50 53	22	17				21	
		M	E'	50 59	16			16			
		M	N'Z'	54 26	15	16			20		
633	30	iP	EZ	17 30 19.5	1.0		+0.08	-0.26		Dilatation N'E'Z' masked by microseisms.	
		i	Z	30 30	0.7			+0.07			
		i	E	30 44	1.2			-0.17			
		o	E'Z'	37 44	14						USCGS: 17.8 S, 178.8 W, H 17 24 43.1 h 564 km. Mag. 5.1
634	31	o(P)	Z	06 52 46.5	0.8					Masked by microseisms USCGS: 12.8 S, 165.6 E, H 06 47 15.5 h 33 km. Mag. 5.0	
636	31	oP	N'Z'	22 54 12	8	1			1	Microseisms present	
		oL	N'	58 30	24						
		M	E'	23 00 15	18			20			
		M	N'Z'	01 00	15-22	10				11	USCGS: 60.0 S, 159.1 E, H 22 48 35.6 h 33 km. Mag. 5.2
638	Aug. 1	oP	Z'	09 11 28						Masked by microseisms	
		oL	N'	16 30	26						
		M	E'	17 28	17			30			
		M	N'	18 10	13	14					
		M	Z'	19 03	22					10	USCGS: 60.0 S, 159.2 E H 09 05 49.3 h 33km. 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.	
639	1967 Aug. 2	o(SS)	E'	11 47 39	18	Maskod by microseisms				USCGS: 71.2 N, 8.0 W H 11 06 38.7 h 33 km. Mag. 5.0
		oLQ	E'	12 05.6	50					
		oL	N'	08.6	50					
642	3	P	Z	02 00 25	1.0			0.06		Masked by microseisms USCGS: 6.8 S, 129.4 E H 01 53 56.5 h 162 km. Mag. 5.3
		i(S)	E	05 28	1.2		+0.08			
		i	N	11 38	1.6	-0.45				
		i	E	11 49	1.4		+0.31			
		M	E'	12 16	16		2			
643	3	oP	Z	06 48 52		Maskod by microseisms.				USCGS: 11.8 S, 165.5 E H 06 43 24.7 h 57 km. Mag. 4.7
		m	Z	48 56	1.2			0.24		
		X	N'	57		Feeble. Masked by microseisms.				
647	7	(oP)	Z	17 12 53		Maskod by large microseisms				USCGS: 29.4 S, 177.4 W, H 17 07 20.1 h 147 km. Mag. 4.8
		M	E'Z'	21.6	18		2	2		
649	8	o(P)	Z	07 19 31		Masked by microseisms				USCGS: 17.5 S, 179.0 W, H 07 13 50.8 h 523 km. Mag. 4.4
650	9	iP	Z	08 26 35.0	1.0			-0.26	3710	Dilatation N'E'Z' maskod by microseisms. h 0.01 USCGS: 6.4 S, 130.4 E H 08 20 03.7 h 89 km. Mag. 5.7
		isP	Z	27 08.5	1.2			+0.22	3354	
		o	Z	27 40	1.0			0.19		
		i	Z	27 53	1.0			+0.17		
		iS	E'E"	31 48	10		+3			
		o	N'	32 23	18	2				
		i	E"	34 52	7*		+4*			
		i	E'E"	35 22	7		+4			
		oL	Z'	35 46	48					
		i	E	36 12	1.3		-0.22			
		i	N'	36 39	6	+5				
		i	Z'	37 22	5			+6		
		M	N'E'	38 06	22	8	12			
M	Z'	40 58	18			6				
652	10	oP	Z	11 33 24		Maskod by microseisms				USCGS: 45.4 N, 150.3 E H 11 21 22.3 h 37 km. Mag. 5.7 5.5-5.9 Borkoley
		oS	N'	43 22	13					
		o	E'	43 24	11					
		oSS	N'	48 27	24					
		(oL)	E'	54 28	38					
		M	N'Z'	12 01.1	25	1		1		
653	10	iP	Z	21 52 16	?					Dilatation Maskod by microseisms USCGS: 4.7 S, 126.5 E, H 21 45 42.5 h 423 km. Mag. 5.0 USCGS: 22.1 N, 144.0 E, H 18 54 28.8 h 125 km. Mag. 5.3
		(iP)	Z	19 03 54.5		Masked by microseisms +				
654	12	oP	Z	09 45 33					3210ca	Compression h 0.02 ca USCGS: 24.7 S, 177.5 W H 09 39 44.3 h 134 km. Mag. 5.8 6.1-6.3 Borkoley 6½ Pasadona
		iP	E'Z'E"Z"	45 34	6		-5	+7	2899ca	
		i	EZ	45 35	1.0		+0.10	-0.22		
		i	Z	45 39	2.0			+2.16		
		i	E'Z'E"Z"	46 15	7		-3	+4		
		isP	N'E'Z'E"Z"	46 23	8	+3½	+11	-8		
		i	E'Z'E"Z"	47 15	8		+19	-15		
		i	N"	47 19	7*	-6*				
		i	N'	47 46	7	+5				
		i	E'E"	48 00	8		+11			
		i	N	48 06	2.0	+0.69				
		iPcP	Z	48 41	?			+		
		i	Z	48 45	0.9			+0.12		
		iS	N'N"	50 10	12	+10				
		i	Z'	50 15	20			-12		
		i	E'	50 18	18		+10			
isS	N'	51 10	15	+53						
i	E'	51 14	8		+15					
i	E"	51 16	8*		-41*					
o	NE	51 19	5	12	7					
i	Z'	51 22	18			+14				
m	E'	51 44	19			28				
i	Z'	52 14	16			+28				
m	N'	52 32	25	145ca						
m	Z'	53 10	30			40				

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RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
654 cont.	1967 Aug. 12	i	E''	09 53 30	10*		μ	μ		km.	
		L	E'	53 48	40			+35*			
		iScS	N'	55 54	10	+14		43			
		i	N	56 03.5	3.0	-3.85					
		i	E''	56 05	10*			+25*			
		i	E	56 06	3.0			+3.14			
		X	N'	10 11 18	12	8					
		X	N'	12 08	12	6					
655	12	iP	NZ	12 36 07.1	1.0	+0.06			-0.22	Dilatation	USCGS: 14.9 S, 166.7 E H 12 30 56.1 h 23 km. Mag. 5.2
		iP	Z''	36 07½	4*				-3*		
		i	Z	36 12	0.9				+0.29		
		i	Z	36 16	1.0				+0.13		
		e(S)	N'	40 21	14						
		i	N'N''	40 28	15	+8					
		i	E'	40 30	16			+4			
		i	Z'	40 33	18				+5		
		i	E'	40 58	8			-4			
		i	E''	41 00	8*			+9*			
		i	Z''	41 03	5*				+6*		
		i	N'	41 04	10	+8					
		LR	E'Z'	42 30	24			8	7		
M	E'	43 50	18			8					
M	Z'	44 07	19				9				
M	N'	44 12	12	8							
661	13	(P)	Z	16 45 20	1.1	Masked by microseisms				USCGS: 50.9 S, 29.1 E, H 16 33 04.0 h 33 km. Mag. 5.4	
		o	N'E'	55 37							
662	13	iP	Z'	17 00 52	6				+1	3270 29.4	Compression Microseisms present
		iS	N'	05 42	20	+5					
		o	E'	05 54	20						
		i	N''	06 03	5*						
		e	N'Z'	06 08	22	10			4		
		eL	Z'	08 26	44						
		eL	N'	08 34	44						
		M	E'	10 12	20			16			
M	N'Z'	10 35	25	13			15				
M	N'Z'	11 58	19	11			14				
663	13	iP	NZ	20 17 29.0	1.2	+0.20			-2.04	7820 70.4	Dilatation h 0.05
		iP	N'Z'	17 29	6	+1			-4		
		ipP	Z'	18 48	6				-2		
		i(sP)	N'Z'	19 28	6	-2			+3		
		iS	E'E''	26 12	12			-3			
		i	N'N''	26 14	12	+1½					
		i	E'	27 10	12			+1			
		i	N'E'	27 39	12	+2		-1			
		isS	N'	28 34	14	-2					
		isS	E'	28 35	14			+2			
		e	E'	33 08	28			2			
		(L)	Z'	36 40	24				3		
		M	E'	38 26	24			4			
664	13	iP	Z'	22 21 12	5				+2	Compression Microseisms present	
		i	N'	21 14	5	-1					
		i	N'Z'	21 23	12	+2			-3		
		ipP	N'Z'	22 11	14	-3			+3		
		o	E'	23 52	16						
		o	Z'	25 56	26						
		i(S)	N'	26 07	20	+15					
		m	N'Z'	26 30	22	28			11		
		eL	Z'	28 50	48						
		M	E'	32.0	18			100ca			
M	N'Z'	32 22	18	62ca			77ca				
667	15	iP	Z	09 33 34	Masked by microseisms +					USCGS: 31.1 N, 93.7 E, H 09 21 02.3 h 33 km. Mag. 5.7	
		(iP)	Z	21 17 27.1	1.3			+0.17	Microseisms present		

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
669	1967 Aug. 16	iP	Z	19	29	03.5	0.7			+0.07	6630	Compression Microseisms present USCGS: 0.9 N, 98.9 E H 19 18 57.6 h 26 km. Mag. 5.6
		e	E'		37	04	12				5997	
		eS	N'		37	10	12					
		eL	N'		45	18	40					
		eL	E'Z'		47	28	48					
		M	N'E'Z'		52	.3	26	1	1	1		
673	18	oP	NZ	19	04	20						Felt at Dunedoo, about 250 km. N.W. of Sydney.
		iS	N		04	50.0	0.5	-0.04				
		iS	E		04	50.3	0.5		+0.05			
		m	NE		04	53	0.7	0.20	0.14			
675	19	iP	Z	15	37	00.5	1.0			+0.28	5560	Compression USCGS: 10.4 N, 126.0 E H 15 28 08.5 h 58 km. Mag. 5.6 5.5-6 Berkeley
		iP	Z'Z''		37	01	5			+2	5090	
		o	N'		37	07	6	1				
		i	Z'		37	08	6			-2		
		ePP	N'		38	58	14					
		iS	N'N''		44	08	16	-4				
		i	E'E''		44	12	16		+2			
		o	N'		44	31	22	4				
		iSS	N'		47	39	14	+5				
		m	Z'		48	22	20			6		
		eL	E'		50	37	46			10		
		L	E'		54	14	30					
		eL	Z'		55	00	30			7		
		M	E'		58	17	21			7		
M	N'Z'		16	00	44	18	7		7			
676	19	iP	NEZ Z''	15	47	17.2	1.1	-0.13	-0.12	+0.95		Compression USCGS: 12.4 S, 166.6 E, H 15 41 53.3 h 86 km. Mag. 5.4
		i	N''		52	00	5*	-2*				
679	21	iP	Z	07	43	34.9	1.1			+0.09	7170	Compression USCGS: 3.6 N, 95.8 E H 07 33 00.6 h 33 km. Mag. 5.9 6.3-6.7 Berkeley 6½-6¾ Pasadena
		iP	E'Z'Z''		43	35	6&17		+2	+5	6495	
		i	Z		43	54	1.3			+0.24		
		i	Z		44	03	1.5			+0.42		
		iS	N'N''		52	10	14	+12				
		iS	E'E''		52	11	14		+8			
		i	Z'		52	12	18			-4		
		iSP	N'E'		52	32	16	+11	+8			
		iScS	N'		53	24	14	+5				
		i	N'		56	05	14	+4				
		iSS	N'		56	24	18	+5				
		eL	N'		08	00	42	50				
		L Max.	N'		02	04	50	25				
		eL	Z'		03	46	46					
M	N'		07	24	25	31						
M	E'Z'		11	13	22			39	42			
681	22	(iP)	Z	13	14	43.5				(+)		Large microseisms present Dilatation USCGS: 60.8 S, 24.6 W H 13 02 06.8 h 33 km. Mag. 6.1 5.7-6.1 Berkeley 6¾ Pasadena
		iP	N'Z'		14	46	10	-3			9580	
		iPP	Z'		18	06	10				8692	
		i	N'		18	12	10	+4				
		iSKS	N'		25	07	10	-3				
		iS	E'E''		25	17	20		-29			
		i	N'Z'		25	18	10	-9		-14		
		m	N'		25	38	20	21				
		i	N''		26	04	6*	-8*				
		iPS	N'		26	18	20	+23				
		e	N'		30	36	20					
		iSS	E'Z'		30	54	18		-26	-14		
		iSS	N'		30	56	18	+32				
		iSSS	E'		34	26	22		+11			
		i	E'		36	45	32		-59			
		i	N'		36	53	20	-12				
		i	Z'		37	32	20			-12		
		m	E'		37	45	32			136		
		eL	E'		39	10	50					
eL	N'		40	50	56							
eLR	Z'		42	04	56							
M	N'Z'		52	00	17	69			78			
M	E'		52	20	17			32				

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.	
682	1967 Aug. 24	iP Z	10 38 03.8	1.2			+0.26	2660	Compression USCGS: 14.9 S, 166.9 E H 10 32 52.6 h 23 km. Mag. 5.3
		i Z	38 08.5	2.5			+0.19	2399	
		i N'E'Z'Z"	38 11	3	+3½	+3½	-8		
		m Z	38 14	2.5			0.45		
		i Z	38 18	1.5			+0.54		
		m Z	38 22	1.5			0.96		
		oS E'	42 15	8		2			
		i N'	42 22	14	-10				
		i E'Z'E"	42 27	10		+8	+10		
		i E'E"	42 47	9		+11			
		(LQ) N'	42 48	28	10				
		i E'	43 15	11		+8			
		oL Z'	43 58	28					
		M E'Z'	45 48	18		12	15		
		M N'	46 30	16	10				
683	26	iP Z	00 45 11.0	1.1			-0.12	5160	Dilatation USCGS: 12.2 N, 140.7 E H 00 36 42.1 h 33 km. Mag. 6.1 6.0-6.4 Berkeley 6½-6¾ Pasadena
		iP N'Z'N"Z"	45 11	11	+4		-7	4694	
		i Z	45 16	1.1			+0.15		
		iPP Z'	46 59	12			-6		
		i N'	47 07	12	-5				
		oS N'	51 56	25					
		i Z'	52 01	25			+10		
		i(PS) N'	52 14	25	-32				
		i E'E"	52 18	25		+10			
		i E"	52 57	7*		+5*			
		i N'	53 02	16	-6				
		i N'	55 18	11	+				
		i Z'	55 37	20			-25		
		(LQ) E'	56 36	32					
		i N'	58 54	14	+11				
		oLR N'	59 10	48					
		oLR Z'	59 14	48					
		LR Max. Z'	01 00 02	40			80		
LR Max. N'	00 13	40	67						
M N'Z'	03 25	22	53		48				
M E'	05 56	18		45					
oX E'	50 50	65ca							
692	29	iP Z'	07 34 45	9			+2	4140	Compression Microseisms present
		oS E'	40 30	16				3793	
		i N'	40 32	13	+2				
		o Z'	40 42	28			2		
		i E'E"	40 43	10		-5			
		o(LQ) N'	43 14	50					
		o(LQ) E'	43 17	50					
		oLR Z'	44 54	44					
		L Max. N'	45 24	45	12				
		L Max. Z'	46 01	44			10		
M E'	49 38	18		17					
M N'	50 12	17	21						
M Z'	51 46	15			17				
693	29	oP Z	10 56 32						Microseisms present USCGS: 3.3 S, 141.5 E H 10 50 09.4 h 41 km. Mag. 4.1
		o(S) N'	11 01 46	26					
		oL E'	04 02	46					
		oL N'	04 32	42					
		M E'	08 50	22		9			
		M N'	09 23	16	5				
M Z'	10 24	14			6				
694	30	iP N'E'Z'	04 34 19	9	+2	-1½	-7	9040	Dilatation USCGS: 31.7 N, 100.3 E H 04 22 01.5 h 3 km. Mag. 6.1
		o Z	34 20	2.2			2.52	8124	
		i E"Z"	34 23	7*		+4*	+19*		
		iPP E'Z'	37 30	10		+2	+3		
		iS N'E'Z'	44 30	13	+5	+7	+3		
		i(ScS) N'	44 50	12	-4				
		i E'	45 08	10		-5			
		i N'	45 10	10	+4				
i(PS) Z'	45 14	14			+6				

Continued

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km.	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ		
694 cont.	1967 Aug. 30	i	E'	04	45	28	16		-5			
		i	N'		45	31	13	-4				
		o	N'		45	51	46	13				
		o	E'		46	06	50		14			
		o	E'		48	46	38		5			
		oSS	E'		49	45	26		7			
		i	N'		50	12	24	-15				
		o	Z'		50	22	27			7		
		oSSS	Z'		53	15	40			9		
		o	E'		54	18	22		7			
		o	E'		55	26	32		18			
		oL	Z'	05	00	30	50					
		L Max.	Z'		01	55	50			32		
		M	E'		08	28	24		14			
M	N'		09	24	26	17						
M	Z'		11	02	22			14				
o(W2)	Z'		06	35.7	48							
696	30	iP	Z	12	01	10.0	1.5			-0.40	Dilatation USCGS: 30.4 S, 178.6 W, H 11 55 50.5 h 161 km. Mag. 4.8	
697	30	i	Z	13	45	45.6	1.0			-0.14		
		o(SKS)	N'		55	32	14	1			USCGS: 45.4 N, 151.5 E H 13 33 26.4 h 33 km. Mag. 5.5	
		o	E'		55	35	14		1			
		oL	E'	14	06.5	40			-3			
		M	N'Z'		13	14	24	2		2		
M	E'		13	40	22			2				
698	31	iP	Z	18	59	47.0	1.5			-0.30	Dilatation USCGS: 17.5 S, 175.2 W, H 18 53 25.2 h 277 km. Mag. 5.4	
		i	N'		19	07	46	16	+3			
699	Sept. 1	iP	Z	03	36	40.0	1.3			+0.17	Compression Microseisms present	
		iPP	Z'		37	52	6			+2		
		oS	E'		41	19	(14)				USCGS: 5.6 S, 147.2 E H 03 31 10.5 h 182 km. Mag. 5.6	
		i	N'		41	26	16	-2				
		o	Z'		41	36	21					
		oi	N'		42	37	16	+3				
		M	E'		46	01	21			3		
		M	N'		47	32	18	3				
704	3	oP	Z'	21	22	20	18				2	Microseisms present
		iPP	N'Z'		27	06	14	2			+5	
		o	E'		27	12	22			4		USCGS: 10.6 S, 79.8 W H 21 07 30.8 h 38 km. Mag. 6.5 6 ³ -7 Pasadena
		oS	E'		32	57	20			5		
		i	N'		33	08	15	+4				
		iSKKKS	N'		34	06	16	+4				
		i	E'		34	10	20			+4		
		o	N'		35	08	18	4				
		o	E'		35	22	20			5		
		o	Z'		36	13	18				3	
		oPS	N'		36	35	20	7				
		i	E'Z'		36	47	26			+19	-43	
		i	N'		37	00	16	-11				
		iPPS	N'		37	52	24	+13				
		i	Z'		38	08	26				-12	
		o	N'		42	04	40					
		o	E'		42	22	40					
		oSS	N'		42	46	40	11				
		iSSP	E'		43	07	26			-74		
		i	N'		43	22	22	-37				
i	Z'		43	26	28				+38			
i	N'		54	16	38	-28						
i	E'		54	29	34			+18				
i	E'		55	30	34			-27				
i	N'		55	41	36	+35						
oLR	Z'		59	10	30							
oL	N'		22	00	00	36						
M	N'E'Z'		04.9		20	47		48		90ca		

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
705	1967 Sept. 4	iP	EZ	03	57	05.0	1.5		-0.30	+1.02		Compression USCGS: 31.4 S, 179.4 W H 03 51 58.9 h 231 km. Mag. 5.5 6.0-6.2 Berkeley
		iP	E'Z'E"Z"	57	05		4*		-6*	+10*		
		o	Z'	57	45		9			3		
		iPP	Z	57	52		1.8			+0.94		
		i	Z"	57	54		4*			+15*		
		i	E'E"	57	56		6		+9			
		m	Z	57	57		2.6			6.9		
		isP	Z'	58	12		10			+8		
		oPcP	Z	04	00	31	0.7					
		o	E'	01	18		16		4			
		i	Z'	01	42		9			+4		
		i	Z'	02	27		10			+3		
		i	N'	02	39		15	+7				
		i	Z'	02	47		8			-4		
		m	E'Z'	03	10		18		5	8		
iScP	Z	03	46		?			+				
711	7	iP	Z	07	20	23.3	1.0		+0.19		4940	Compression h 0.04 ca USCGS: 2.7 N, 124.3 E H 07 12 36.6 h 274 km. Mag. 5.8
		i	Z	20	37.5		?		-		4495	
		o	Z'	21	40		12			2		
		o	N'	21	48		12	1				
		o	Z'	23	17		18			2		
		o	N'	23	30		18	2				
		iS	N'Z'N"	26	36		12	+9		+4		
		i	E'E"	26	37		12		-5			
		isS	N'E'	28	18		12	+3	-2			
		iSS	N'N"	29	59		11	+7				
		i	E'Z'E"	30	01		11		-13	+7		
		M	E'	37	40		22		5			
		M	N'	39	32		16	5				
		M	Z'	39	45		16			4		
		713	7	o(P)	Z	11	13	00				
o(sP)	E'Z'			15	05		20		2	2		
o	N'			18	52		18					
i	N'Z'			19	06		10	+3		-3		
i	E'			19	22		11		+4			
716	8	oP	Z'	22	46	07	8			1	5300	USCGS: 12.2 N, 140.8 E H 22 37 39.5 h 27 km. Mag. 5.3 5.4-5.6 Berkeley 5½ - 5¾ Golden
		oS	N'	53	00		24	5			4797	
		oSS	N'	56	22		16	3				
		i	Z'	56	40		18			+5		
		o	E'	58	05		28					
		L	E'	58	58		28		5			
		oL	N'Z'	23	00	00	42					
		L.Max.	N'Z'	01	40		32	14		20		
		M	E'	03	34		19		7			
		M	Z'	04	16		22			14		
M	N'	04	24		22	17						
718	9	P	Z	08	46	38					Masked by microseisms USCGS: 18.0 N, 145.5 E, H 08 37 50.4 h 241 km. Mag. 5.2; 3.9-4.1 Brk.	
719	9	o	Z'	10	22	25	8			1		USCGS: 27.7 S, 63.1 W H 10 06 44.1 h 578 km. Mag. 5.8 5.0-5.2 Berkeley
		oPP	N'	25	07		10					
		iPP	Z'	25	11		9			+1		
		o	N'Z'	26	49		16	½		1½		
		iSKS	N'E'	30	02		18	+3	-2			
		iSKKS	N'E'	31	00		10	-3	+2			
		i	E'	31	44		14		+2			
		o	E'	33	23		20					
		iSP	N'E'Z'	33	38		22	+8	-5	+11		
		i	Z'	34	46		15			-3		
		i	N'	34	48		22	+4				
		o	E'	34	54		18		3			
		o	N'	37	16		30	3				
		i	N'	38	44		16	+3				
		iSS	E'	39	54		18		-4			
		i	N'	40	11		24	+5				
		o	N'	42	48		30	4				
o(sSS)	E'	43	12		26		3					

Continued

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ km.	Remarks
					AN μ	AE μ	AZ μ		
719 cont.	1967 Sept. 9	o	Z'	10 43 18			3		
		i	Z'	47 22			-4		
		o	N'	47 28	4				
		o	E'	50 51	48	4			
720	9	oP	Z'	14 52 30			1	5260	
		o	Z'	52 42	9		1	4793	
		oPP	Z'	54 18	11		1		
		oS	N'	59 20	20	2			
		o	Z'	15 02 56	18		2		
		oLR	Z'	06 17	40				
		LR Max.	N'Z'	07 57	32	8		11	USCGS: 12.3 N, 140.7 E
		M	Z'	10 12	24			9	H 14 43 57.7
		M	N'	10 40	21	8			h 33 km.
		M	E'	10 52	19		4		Mag. 5.4
721	9	oP	Z'	17 01 21	8		1		
		o	Z'	08 56	14				
		iPS	N'N''	09 02	16	+14			USCGS: 54.8 S, 136.0 W
		i	E'E''	09 03	15		-8		H 16 52 01.3
		i	Z'	09 14	20			+9	h 33 km.
		i	N'E'	09 28	13	+7	-7		Mag. 5.4
		o(SS)	Z'	12 44	28			4	6 1/2 Pasadona
		iLR	Z'	16 42	32			+23	
		LR Max.	N'E'Z'	17 22	28	17	21	30	
		M	N'	19 52	18	12			
		M	Z'	19 57	18			24	
M	E'	21 12	18		16				
722	9	o(P)	Z'	21 52 48					
		oL	E'	58 00	36				
		L Max.	E'	58 51	18		4		
		oL	Z'	59 02	40				
		L Max.	N'Z'	22 00 00	24	4		5	
727	11	oP	Z'Z''	01 27 53	4*		2*		
		m	Z	27 56	1.5		0.46		
		o	Z'	32 07	16				
		o	E'	32 16	8		1		
		o	N'	33 31	20	1			
		oLR	Z'	33 54	28			3	
		oL	E'	34 04	28		3		
		M	N'	34 40	18	3			
		M	E'	35 26	18		2		
M	Z'	35 40	18			3			
729	11	iP	Z	04 42 03.5	1.5		+0.20	Compression	
		iP	Z'Z''	42 04	4*		+4*		
		i(S)	N'E'	45 52	11	-4	+2		
		i	Z'	45 56	6		-3		
		i	N''	45 59	5*	+4*			
		i	Z''	46 00	5*		+5*		
		i	E''	46 02	7*		+5*		
		iPcP	Z'	46 05	16			+7	
		oL	E'	47 10	24				
		oLR	Z'	47 20	22				
		LR Max.	Z'	47 42	22			6	
"	"	E'	47 46	23		5			
"	"	N'	48 09	17	2				
731	11	iP	Z	06 57 27.0	1.7		-0.42	Dilatation	
		i	Z'Z''	57 29	4		+2		
		o(S)	N'	07 01 45	7				
		i	E'	01 58	12		+4		
		i	N'	02 05	9	+4			
		i	N'	02 35	11	-6			
		oL	N'	03 04	22	6			
		oL	Z'	03 30	25			4	
		M	N'	04 30	18	9			
		M	Z'	05 30	18			6	
M	E'	05 36	16		6				

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
733	1967 Sept. 11	oP	Z	10 19 37						Masked by microseisms
		o	N'	23 55	14					
		i	E'Z'	24 09	7		+2	-1		USCGS: 21.3 S, 173.7 E
		oL	N'	24 30	30					H 10 14 30.4
		M	N'	26 38	17	4				h 34 km.
		M	E'	26 45	17		1			Mag. 4.8
		M	Z'	28 29	16			2		
735	12	(P)	Z	11 56 51		Masked by microseisms				USCGS: 22.0 S, 174.2 E, H 11 51 51*
		oL	E'	12 03 12						h 33 km. Mag. 4.4
736	12	(P)	Z	12 42 08		Masked by microseisms				USCGS: 19.2 S, 167.5 E, H 12 37 18*
		o	N'	46 02	8					h 9 km. Mag. 4.9
		oL	E'	47 44	18					
737	12	oP	Z'	21 55 41						Microseisms present
		iP	N'Z'	55 51	14	+2		-3		
		iS	N'	22 00 21	20	-8				USCGS: 5.5 S, 151.7 E
		i	Z'	00 41	20			+14		H 21 49 47.6
		i	N'	00 44	20	-23				h 50 km.
		oL	Z'	03 18	40					Mag. 5.2
		oL	N'	03 40	36	15				6.0-6.4 Berkeley
		M	E'	06 12	19		30			
		M	Z'	06 24	19			41		
		M	N'	06 46	19	32				
738	13	iP	Z	00 10 40.0	1.8			+0.28		Compression Microseisms present
		o	N'	14 35	10	1				USCGS: 19.4 S, 167.5 E, H 00 05 55.8
		M	N'E'Z'	16 39	19	½	1	½		h 17 km. Mag. 5.0
742	13	oS	E'	19 04 52	18	Masked by microseisms				USCGS: 52.7 N, 172.5 E
		oSS	N'	10 44	24					H 18 41 15.4
		o	N'E'	11 08	24	1	½			h 34 km.
		oL	Z'	22 08	38					Mag. 5.7
		M	N'Z'	27 00	22	1		1		5 Goldon
743	13	iP	Z	20 10 33.6	1.0			+0.14		Compression Microseisms present
		oL	E'	34 44	30					USCGS: 56.0 S, 27.4 W, H 19 57 47.9
										h 148 km. Mag. 5.3
748	14	o(P)	Z	15 40 19	0.9			0.15		Masked by microseisms
		o	E'	44 33	10		1			
		o	N'	44 34	8	1				USCGS: 15.4 S, 167.5 E
		M	N'	45 54	15	2				H 15 35 17.3
		oL	Z'	46 27	24					h 142 km.
		M	Z'	48 27	19			1		Mag. 4.9
752	15	oP	Z	10 45 13	1.0			0.06	9230	Microseisms present
		oS	N'	55 29					8391	USCGS: 27.4 N, 91.8 E
		o	E'	55 33						H 10 32 48.7
		oL	N'	11 11.8						h 57 km. Mag. 5.8
753	16	(o)	Z	03 48 17		Masked by microseisms				
		o(S)	E'	54 02	20					
		o	N'	54 09	20					USCGS: 2.0 S, 128.9 E
		oL	Z'	58.5	50					H 03 40 55.3
		oL	N'	58 52	44					h 50 km.
		M	E'	04 06 32	16		7			Mag. 5.4
		M	N'	07 28	16	4				
		M	Z'	08 27	18			4		
754	16	iP	Z	08 44 52.8	0.8			+0.11		Compression Microseisms present
										USCGS: 52.0 N, 176.4 W, H 08 31 58.4
										h 65 km. Mag. 5.4
755	16	oP	Z	15 16 20	1.0	Masked by microseisms				USCGS: 15.7 S, 167.3 E, H 15 11 15.5
		(L)	N'E'	22.7		Feeble				h 65 km. Mag. 4.6
757	18	iP	Z'	15 38 55	8			+2	3170	Compression Microseisms present
		i	Z	39 00	1.1			+0.16	2895	
		i	Z	39 36	1.0			+0.18		
		iS	N'	43 39	22	-4				USCGS: 5.9 S, 146.6 E
		o	Z'	43 52	18			3		H 15 33 06.5
		i	N'	44 13	11	+7				h 39 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.	
757 cont.	1967 Sept. 18	i	Z'	15 44 14	10			-5		
		oL	E'	45 38	38		12			
		oLR	N'	46 54	30	13				
		M	E'	49 14	20		43			
		M	N'Z'	49 22	23	38		34		
758	19	iP	Z	11 07 53.5	1.0			-0.34	8510	Dilatation Largo microseisms present
		iP	Z'Z''	07 54	10			-6	7696	
		iS	E'	17 36	12		-3			
		o	N'	17 45	24	3				USCGS: 43.0 N, 145.2 E
		oPS	Z'	18 24	22			5		H 10 56 08.6
		o	N'	18 59	14	4				h 84 km.
		oSS	N'	22 42	36	4				Mag. 5.9
		o	E'	28 04	20		3			6.2-6.6 Berkeley
		o	Z'	28 20	20			5		6 1/2 Palisados
		oL	Z'	30 55	38					6 1/2 Pasadena
		L Max.	Z'	32 26	34			10		
		L Max.	N'	32 36	36	7				
759	19	P	Z	12 58 27	1.3			0.24		Microseisms present
										USCGS: 57.8 S, 23.4 W, H 12 45 35.3 h 33 km. Mag. 5.7
760	19	oP	Z	19 11 28		Small.	Microseisms present.			USCGS: 1.6 S, 100.5 E, H 19 01 47.4 h 83 km. Mag. 5.0
761	20	iP N'E'Z'N''E''Z''	Z	09 43 29	8	-24	+12	-34	2040	Dilatation
		i	NZ	43 30.2	1.5	-0.62		-2.24	1894	
		iP	NE	43 39	2.5	+	-			USCGS: 49.8 S, 163.4 E
		m	NEZ	43 41	3.0	41.5	24.2	93.5		H 09 39 15.2
		m	N'E'Z'	44 00	16	110	56	145		h 30 km.
		iS	N'E'Z'	46 50	12	+28	+21	+17		Mag. 6.1
		i	E'	47 08	14		+130ca			6 1/2 Pasadena
		i	Z'	47 40	14			+155ca		6.3-6.7 Berkeley
		m	Z'	48.0	18			175ca		
		M	E'	49.0	11		180			
		M	Z'	49.9	11			160		
		T Max.	Z	10 02 17	0.5			0.54		
		" "	N	02 22	0.5	0.57				
" "	E	02 40	0.5		0.51					
762	20	iP	Z	10 35 06.2	1.5			+0.22		Compression
		i	Z	35 10.2	1.2			+0.78		
		i	Z	35 14	1.0			+0.58		USCGS: 49.8 S, 163.4 E
		m	NE	35 17	1.4	0.65	0.28			H 10 30 53.4
		i	Z	35 20	1.0			-0.82		h 19 km.
		T Max.	Z	54 18	0.5			0.25		Mag. 5.8
		" "	N	54 20	0.5	0.16				
" "	E	54 22	0.5		0.11					
763	20	iP	Z	10 41 57.0	1.1			-0.65		Dilatation
		i	NE	42 05	1.1	+0.21				
		T Max.	Z	11 00 40	0.5			0.06		USCGS: 20.8 S, 169.8 E
" "	NE	00 50	0.5	0.07	0.05			H 10 37 20.3 h 129 km.		
								Mag. 5.9	5.3-5.5 Berkeley	
767	20	P	Z	12 11 08	1.8			0.81		USCGS: 49.8 S, 163.8 E
		i	NEZ	11 12	0.7	-0.07	+0.06	+0.15		
		o	E'	14 19	18					H 12 06 52.7
		iS	E'	14 37	18		+29			h 33 km.
		i	N'	14 38	18	+13				Mag. 5.2
		i	Z'	14 42	7			+6		
		oL	Z'	15 22	22			10		
		T Max.	NZ	30 03	0.6	0.13		0.19		
" "	E	30 06	0.6		0.17					
769	20	(P)	Z	14 08 38 1/2		Masked by microseisms				USCGS: 49.7 S, 164.0 E H 14 04 19* h 33 km
		oL	Z'	12 32	24					
		T Max.	Z	27 35						
770	20	i(P)	Z'	15 02 26	7			-2		Dilatation USCGS: 49.7 S, 163.6 E, H 14 58 15* h 33 km. Mag. 5.4
		oL	Z'	06.6	24					
		T Max.	Z	21 15						

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.		
772	1967 Sept.20	iP	N'Z'N''Z''	20	21	12	6	-3		-4	2090	Dilatation Microseisms present USCGS: 49.7 S, 163.9 E H 20 16 57.5 h 33 km.	
		ipP	N'Z'	21	22		5	+3		+4	1898		
		oS	N'E'	24	37		14						
		i	E'	24	43		12			+5			
		i	N'	24	58		14	+3					
		oL	Z'	25	12		26						
		L Max.	N'	25	41		20	5					
		" "	Z'	25	47		22				8		
		" "	E'	26	13		20			6			
		T Max.	Z	40	02		0.6				0.08		
777	22	(P)	Z	05	24	55.2		Masked by microseisms					
		o	N'Z'	29	13		18						
778	22	PKP	Z	08	27	41	1.0			0.09		USCGS: 0.7 S, 20.1 W, H 08 08 04.3 h 33 km. Mag. 5.3	
779	22	i(P)	Z	10	29	56.7	1.0			+0.08		Microseisms present USCGS: 44.5 N, 149.4 E H 10 17 59.9 h 60 km. Mag. 5.6 5.3-5.7 Borkoley 5.9 Palisados	
		i	Z	30	15		1.5			-0.26			
		o(S)	E'Z'	39	51		20		3	1			
		i	N'	40	13		14	-2					
		o(LQ)	E'	50	44		25						
		oLR	N'Z'	54	17		32						
		M	N'Z'	11	00	38	22	3			5		
M	E'	01	43		20			3					
780	22	oP	Z	20	54	23						Microseisms present USCGS: 4.6 S, 153.0 E, H 20 48 26.7 h 76 km. Mag. 5.0	
		oL	E'	21	01.0		30						
		M	N'Z'	04.5		20	1			1			
781	22	oP	Z	21	33	22	1.4			0.10			
		o	E'	36	48		14		1				
		oL	Z'	37	24		22						
		L Max.	Z'	37.9		20				1			
783*	23	T Max.	Z	52	19		0.6			0.03		* 783 Sept.23 03h See last page	
784	23	iP	Z	07	01	52.8	0.6			-0.21		Dilatation USCGS: 21.8S, 179.7 W, H 06 56 43.6 h 595 km. Mag. 5.4	
		i	E	01	53.0		0.6		+0.06				
		o	E	06	00		1.3		0.14				
785	23	iP	NEZ	07	06	20.5	1.4	-0.42	+0.25	-1.05		Dilatation USCGS: 49.7 S, 164.0 E H 07 02 03.3 h 15 km. Mag. 5.7	
		iP	N'E'Z'N''E''Z''	06	21		10	-9	+4	-12			
		i	N''E''Z''	06	25		7*	+13*	-6*	+28*			
		oS	N'	09	46		18						
		iS	E'	09	50		18		+24				
		i	N'	09	59		12	-16					
		i(SS)	N'	10	20		14	+14					
		i	Z'	10	22		16			+6			
		oiL	Z'	10	38		25			-21			
		L	N'	10	50		24	17					
		T Max.	NEZ	25.0		0.5	0.09	0.08	0.08				
786	23	P	Z	07	44	58	1.3			0.11		Microseisms present USCGS: 22.1 S, 179.6 W, H 07 39 47.8 h 600 km. Mag. 4.6	
787	23	P	Z	18	02	48	1.3			0.12		Microseisms present	
		T Max.	Z	21	30								
788	23	P	Z	22	48	17	1.3			0.11		Microseisms present. USCGS: 29.6 S, 179.3 W, H 22 43 16.6 h 347 km. Mag. 4.5	
790	24	P	Z	06	17	50						Masked by microseisms USCGS: 2.8 N, 128.5 E, H 06 10 16.2 h 226 km. Mag. 5.4	
		i	Z	19	41		1.0						
		o	E'	27	24		16						
791	24	(P)	Z	07	54	29						Masked by microseisms USCGS: 6.2 S, 146.9 E H 07 48 36.4 h 84 km. Mag. 5.1	
		o	N'	59	08		20						
		oL	E'	08	00	56	38						
		oL	N'	02	14		32						
		M	E'	03	54		21		2				
		M	Z'	04	17		24				3		
		M	N'	04	24		22	3					

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
			h m s	s	μ	μ	μ	km.	
795	1967 Sept. 26	o N'	16 36 06	15	1/2				Masked by large microseisms USCGS: 30.0 S, 71.5 W H 16 11 23.9 h 55 km. Mag. 5.8-6.0 Berkeley 6 1/2 Pasadena
		o N'Z'	39 07	20			2		
		oSS N'	44 38	30	3				
		o E'	44 42	30		3			
		oL N'	55 26	36	6				
		oL E'	55 32	36		7			
		M E'	17 00 18	26		4			
		M N'	00 31	27	3				
		M Z'	00 38	27			5		
796	26	oP Z	17 11 30						Large microseisms present USCGS: 7.1 S, 155.8 E, H 17 05 55.0 h 94 km. Mag. 5.7
		o(S) N'	16 05	26					
		oL Z'	18 46	34					
797	28	iP Z	05 02 38.6	1.2			-0.19	3080	Dilatation USCGS: 6.6 S, 153.4 E H 04 56 56.3 h 44 km. Mag. 5.9 6.1-6.3 Berkeley 6.5 Pasadena 6.9 Goldon
		iP Z'Z''	02 39	?			-	2797	
		i N'E'Z'N''E''Z''	02 43	10	-10	-1	+15		
		i Z	02 45	1.0			+0.47		
		i Z	03 02	1.1			+0.53		
		i N'Z'	03 03	10	-5		+8		
		iS N'	07 17	18	+40				
		i Z'	07 33	17				-64	
		i(sS) E'	07 35	24		+51			
		oL N'	08 58	32				87	
		oL E'	09 06	30					
		oLR Z'	09 30	26					
		L Max. N'	10 10	32	78				
		L Max. Z'	10 40	30				100	
		M E'	12 20	14		125ca			
M Z'	17 12	14				100			
M N'	17 22	14	83						
798	28	o E'	16 11 14	18					USCGS: 59.5 N, 147.1 W H 15 44 55.7 h 28 km. Mag. 5.6 5.4-5.8 Berkeley
		o(SS) E'	18 36	16					
		oL E'	28 34	30					
		M N'	37 54	20	1				
		M E'	38 10	23		1			
		M Z'	39 12	22				1	
803	29	iP NZ	22 25 28.8	1.2	-0.02		-0.06	2090	Dilatation USCGS: 49.9 S, 163.5 E H 22 21 14.7 h 33 km. Mag. 5.1
		i N'E'Z'	25 30	6	-1 1/2	+1	-1	1898	
		i NZ	25 31	1.2	+0.07		+0.15		
		oPP Z	25 44	2.4			1.46		
		oS E'	28 54	?					
		o N'	28 55	14					
		i E'	29 00	16		+3			
		i Z'	29 04	8				+1	
		SS N'	29 17	13	2				
		oL Z'	29 31	24					
		L Max. N'Z'	29 58	22	4			4	
		M E'	30 52	12		4			
T Max. E	44.0	0.6		0.03					
T Max. NZ	44.3	0.6	0.04		0.04				
804	30	o(S) N'Z'	08 16 54	18	Masked by microseisms				USCGS: 28.9 N, 129.9 E H 07 57 19.9 h 32 km. Mag. 5.5 4.9-5.2
		oL E'	25 25	(32)					
		M N'	32 48	20	1				
		M E'	33 35	20		2			
		M Z'	34 07	22			3		
808	Oct. 2	oP Z	00 18 11.4	1.5			0.16	3280	Microseisms present h 0.09 USCGS: 21.0 S, 178.8 W H 00 12 52.8 h 604 km. Mag. 5.2
		i Z	18 13.8	1.5			+0.20	2995	
		oPP Z	19 46	1.2			0.08		
		oSP Z'	20 55	12			2		
		oPcP Z	20 59	1.0			0.04		
		iS N'E'Z'N''E''	22 26	12	-1 1/2	+4	+1 1/2		
		o N'	25 12	12	1				
		o E'	25 30	14		2			
		o Z'	25 34	22			1		
		iScS N'	27 38	10	+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.	
810	1967 Oct. 2	iP	Z	14 59 53.5	1.3				-0.31	3040 2794	Dilatation Large microseisms present USCGS: 6.7 S, 153.4 E H 14 54 08.4 h 27 km. Mag. 5.3
		i	Z'	59 54	5				+2		
		ipP	Z	15 00 03	1.1				+0.22		
		oS	N'	04 30	12						
		isS	N'	04 47	14	+4					
		e	Z'	04 50	14				3		
		i	N'	05 11	9	+3					
		eLR	N'Z'	07 08	36						
		LR Max	N'Z'	08 18	26	5			6		
		M	E'	08 50	20			4			
		M	Z'	09 24	20				7		
M	N'	09 30	20	5							
811	2	(P)	Z	17 33 07		Masked by large microseisms.					
		L	Z'	53		Feeble.					
812	3	(iP)	Z	05 01 22.7	1.3				+0.13	Masked by large microseisms USCGS: 1.0 S, 149.5 E, H 04 54 47.3 h 17 km. Mag. 4.6	
		o(S)	N'	06 48							
		M	E'	12 34	16			1			
813	3	oPP	Z'	18 36 37	14				1	Masked by microseisms USCGS: 10.9 N, 85.9 W H 18 16 03.2 h 21 km. Mag. 5.8 6.0-6.2 Berkeley 6-6½ Golden 6½-6½ Palisades 6½ Pasadena	
		e	E'	42 20	?						
		oSKKS	E'	43 45	18			1			
		oPS	E'	46 40	20						
		e	Z'	46 47	16				2		
		iPPS	Z'	48 19	14				+2		
		oSS	E'	53 49	26			3			
		oL	N'	19 08 04	30	1					
		M	Z'	16 06	22				4		
		M	N'	16 22	21	2			3		
		M	E'	16 33	22			3			
817	4	oP	N'E'Z'	17 27 10						Microseisms present USCGS: 5.7 S, 153.9 E H 17 21 20.7 h 52 km. Mag. 6½ Pasadena 7.0-7.2 Berkeley 7½-7½ Palisades 7.6 Golden	
		i	Z	27 11.2	1.7				+0.60		
		i	N'E'Z'	27 14	12	-20	-3		+29		
		m	Z	27 17	1.7				2.31		
		ipP	Z	27 19	1.0				+0.90		
		i	NE	27 23	1.0	+0.34	+0.22				
		m	Z	27 27	1.0				1.18		
		i	N'E'Z'	27 32	15	-32	-5		+39		
		iPP	Z'	28 04	10				+7		
		i	N'E'Z'	28 10	12	-24	-7		+27		
		iS	N'N"	31 53	20	+55					
		i	E'	32 02	20			+45			
		i	Z'	32 11	24				+200ca		
		m	N'	32 20	24	220ca					
		m	E'	32 30	20			90ca			
		L	N'	34 16	30	225ca					
		L	E'	35.1	20			220ca			
		L	Z'	35 08	22				160ca		
		M	E'	38.0	16			200ca			
		M	N'Z'	38.9	16	175ca			190ca		
		oX	N'	18 58.0	60	18					
oX	N'E'Z'	19 04.4	80-90								
oX	E'	39.5	80								
W2 M	N'E'Z'	20 08.5	26	8	6		12				
819	5	iP	Z	04 13 28.2	1.2				+0.14	Compression Microseisms present USCGS: 5.8 S, 154.0 E H 04 07 41.9 h 75 km. Mag. 4.6	
		i	N'Z'	13 40	4	+1			-1		
		oS	N'	18 12	22	2					
		o	E'	18 14	20			1			
		e	Z'	18 26	20				2		
		i	N'N"	18 35	18	-3					
		oL	E'	19 57	30			2			
		oLR	Z'	21 05	29						
		M	Z'	23 02	22				5		
		M	N'	23 08	22	4					
M	E'	23 32	18			3					

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
827	1967 Oct. 7	P	Z	10 38 46	1.2			0.31		Microseisms present USCGS: 17.3 S, 178.9 W, H 10 33 08.2 h 563 km. Mag. 4.9
		i	Z	39 17	1.0			+0.08		
		i	E'	43 23	6		+1			
828	7	iP	Z	19 57 54.3	1.4			+0.15		Compression Microseisms present
		o(S)	N'	20 02 42	22	2				USCGS: 5.6 S, 153.7 E H 19 52 07.4 h 92 km. Mag. 5.3
		e	Z'	02 52	22			1		
		oL	E'	04 23	32					
		oL	Z'	05 30	30					
		M	N'	07 10	24	2				
		M	E'	07 16	20		2			
		M	Z'	07 30	23			3		
829	8	iP	Z	17 04 55.5	1.6			+0.23		Compression Microseisms present
		iS	N'N''	09 17	12	+8				USCGS: 9.5 S, 148.8 E H 16 59 34.4 h 17 km. Mag. 5.5
		i	Z'	09 28	10			-4		
		oL	Z'	11 02	38					
		oL	N'	11 10	38					
		M	N'	12 59	22	12				
		M	Z'	13 40	21			12		
		M	E'	13 47	15		13			
830	8	iP	Z	18 14 06.2	1.9			+0.88	3070	Compression
		i	Z'Z''	14 07	4			+1	2796	USCGS: 5.6 S, 154.0 E H 18 08 18.1 h 70 km. Mag. 5.1
		opP	N'	14 16	14	2				
		isP	Z'	14 19	8			-3		
		iS	N'	18 44	12	+3				
		isS	N'	19 00	22	+11				
		i	Z'	19 08	22			+8		
		oSS	Z'	20 06	20			3		
		oL	E'	20 41	34		11			
		oL	N'	20 52	32	7				
		oLR	Z'	21 39	32					
		M	N'Z'	23 18	24	15		20		
		M	E'	24 14	16		12			
831	9	iP	Z	04 12 35.7	1.2			+0.10		Compression Microseisms present USCGS: 1.5 N, 127.1 E, H 04 04 55.9 h 127 km. Mag. 5.3
833	9	(e)	Z'	13 33 47					3160	Microseisms present
		oP	Z	33 48					2824	USCGS: 5.7 S, 154.0 E H 13 27 56.7 h 41 km. Mag. 4.9
		i	N'Z'N''Z''	33 55	12	+2		-3		
		i	Z	33 56.5	1.0			+0.08		
		i	Z	34 26.5	1.4			+0.22		
		iS	N'N''	38 31	14	-8				
		i	Z'	38 45	18			+11		
		i	N'	38 50	18	-19				
		i	E'	38 54	14			-6		
		i	N''	38 56	14*	+12*				
		oL	E'	40 08	34			15		
		M	Z'	43 41	21			26		
		M	N'	43 46	21	19				
		M	E'	43 50	16			18		
834	9	iP	Z	17 27 01.8				-	3190	Dilatation h 0.09
		i	Z	27 02.7	0.8			+0.69	2827	USCGS: 21.1 S, 179.3 W H 17 21 49.5 h 654 km. Mag. 6.9-7.1 Berkeley 7-7 1/2 MB Pasadena
		i	N'E'Z'N''E''Z''	27 03	6	-2 1/2	-6 1/2	+12		
		i	Z	27 05.0	1.2			+2.78		
		iPcP	Z'	29 52	16			+27		
		i	E'	29 56	16			-19		
		i	Z'	31 06	16			-31		
		iS	N	31 11	2.5	-16.6				
		iS	N'E'N''E''	31 11	16	-65	+64			
		iScP	Z	32 33	1.2			-1.16		
		i	N'N''	34 18	16	+155ca				
		i	E'	34 21	16			-112		
		i	Z'	34 24	16			-54		
		i	E''	34 27	12*			+95*		
		i	Z''	34 32	7*			+62*		
		iScS	NE	36 30	2.5	-25.85	-27.50			
		iScS	N'E'N''E''	36 30	11	-160ca	-67			

Continued

No.	Date	Phase & Component	Time (G.M.T.)	Por.	Amplitude			Δ	Remarks
					AN	AE	AZ		
834 cont.	1967 Oct. 9	i N'	17 40 50	18	+71	μ	μ	km.	
		M' E'Z'	42 20	19		53	66		
		(T Max.) Z	47 19	0.6			0.05		
		i N'	51 31	20	-48				
		oX N'	18 54 16	68					
		oX N'E'	58.1	30	10	6			
		oX N'	19 02 36	36	7				
		oX N'	03 50	45	16				
		oX N'	09 22	32	11				
835	10	oP Z	03 07 04.5	1.0			0.06	3180 2826	Microseisms present
		i Z'	07 06	6			+1		
		oS E'	11 27	13		1			
		oS N'	11 28	13	2				
		oL N'	13 11	(40)					
		oL Z'	13 13	38					
		oL E'	13 35	24		2			
		L Max. Z'	14 08	28			4		
		L Max. N'	14 16	26	2				
		M' E'	15 38	14		3			
836	10	oP Z	05 21 01½	1.2			0.12	3180 2826	Microseisms present
		i Z'	21 13	8			-1		
		i Z	21 14.4	1.2			-0.11		
		oPP Z'	21 55	7			½		
		oS N'	25 46	16	2				
		o E'	25 50	16		1			
		o Z'	25 55	22			3		
		i N'	26 10	18	-4				
		(LQ) N'	26 52	(56)					
		oL E'	27 32	33		3			
		oLR Z'	28 32	31					
		M N'	30 18	23	5				
		M E'	30 24	18		4			
M Z'	30 38	23			7				
837	10	iP Z	06 32 04.5	2.0			+0.87	3180 2826	Compression
		iP Z'Z''	32 05	6			+2		
		o(S) N'	36 24	10	1				
		i E'	36 25	10		+3			
		i N'E'N''E''	36 38	11	+2	+2			
		i Z'	36 41	11			+2		
		oLR Z'	38 19	30			4		
		oLR E'	38 22	30		3			
		M N'	39 32	18	3				
838	11	(P) Z	04 07 24					3180 2826	Masked by microseisms
		o N'	11 46	11					
		M N'E'	16 04	20	½	½			
		M Z'	19 10	18			½		
839	11	o Z'	13 20 23					3180 2826	Masked by microseisms
		o(S) N'	24 57	21	1				
		o Z'	25 10	20			1		
		oL E'	26 41	32					
		M Z'	29 01	24			1		
		M N'	29 07	24	1				
		M E'	29 36	18		1			
844	12	iP Z	06 40 23.5	1.0			-0.08	3180 2826	Dilatation Microseisms present
		o(PcP) Z	43 07	0.8					
		o(sP) E'	43 14	10		1			
		o Z'	43 17	10			1½		
		o E'	44 26						
		iS N'E'	44 31	10	-1½	+3			
		o Z'	44 32	12			1		
		i(sS) E'	47 41	13		-3			
		i N'N''	47 42	13	+9				
		o Z'	47 43	12			2		
		iScS N'N''	49 49	10	-6				
		i E'E''	49 51	10		+3			
		M N'	54 12	14	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.	
844 cont.	1967 Oct. 12	M	E'	06	55	35	18		1			
		M	Z'		55	46	18			2		
847	12	iP	Z	18	38	16.8	1.0			-0.11	Dilatation Microseisms present	
		e	N'Z'		38	22	14	1		2		
		i	Z		38	32	1.5			+0.72		
		e	E'		38	35	14		1			
		iS	N'E'N"E"		43	24	12	-3	+3			USCGS: 7.1 S, 129.8 E
		e	N'		43	40	24	3				H 18 31 37.1
		oL	Z'		47	14	48			22		h 45 km.
		oL	N'		47	33	46	19				Mag. 6.2
		M	E'		49	44	21			27		
		M	N'		51	10	10	20				
M	E'Z'		53	00	10			24	25			
851	14	iP	Z	16	13	20.3	1.2			+0.18	Compression Microseisms present	
		i	Z		13	31	1.2			+0.14		
		o(S)	N'		17	32	14	1				USCGS: 15.9 S, 167.2 E
		e	E'		17	36	14		1			H 16 08 11.9
		e	Z'		17	40	14			1		h 15 km.
		oL	E'		19	04	30					Mag. 5.1
		oL	N'		19	34	30					
		M	E'Z'		19	45	22			2	2	
		M	N'		20	38	18	1				
		852	15	o(P)	Z'	08	16	22	26			
e	Z'				16	44	26			2		
iPKP	Z'Z"				19	32	4			+2		USCGS: 11.9 N, 86.0 W
iPKP	Z				19	33	1.2			+1.27		H 08 00 50.3
e	Z'				20	16	11			2		h 162 km.
oPP	E'Z'				21	18	24			2		Mag. 6.2
ipPP	E'Z'				21	50	18		+4	-8		6 $\frac{1}{2}$ Palisados
i	Z				22	53.5	1.3			+0.28		6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Goldon
i	E'				23	22	16		+4			6.6-6.9 Borkoloy
iSKS	E'E"				26	22	22		+7			6 $\frac{3}{4}$ Pasadona
iSKKS	E'E"				28	02	18		-13			
i	Z'				28	04	18				-4	
e	E'				28	58	18			5		
i	Z'				30	39	16				+6	
iPS	E'Z'Z"				31	09	22		+12	-19		
i	Z'				31	51	22				+15	
i	E'				32	07	22			-7		
i(SS)	Z'				38	04	22				+8	
i	E'				38	13	40			-34		
i	E'				41	04	24			+23		
i	Z'				41	07	22				+8	
i	N'				41	12	24	+6				
i	E'				41	58	24		+13			
iSSS	Z'				42	35	28				-10	
i	E'				42	44	22		+12			
i	Z'		45	58	28				+9			
i	N'		53	27	48	-15			-10			
i	Z'		59	47	24				-10			
oL	Z'		09	00	20	68			56			
e	E'			01.0	70			47				
oX	Z'			01.4	88				95			
oX	E'			09.5	68			33				
oX	N'			39.2	72	15						
X	E'Z'			53.4	48			14	14			
856	16	iP	Z	17	05	42.5	1.3			+0.50	Compression	
		iP	Z'		05	43	4			+1		
		oPP	Z		07	23	2.0			0.46		USCGS: 1.7 N, 127.5 E
		oPPP	N'E'		08	02						H 16 58 02.0
		o	Z'		08	05	10			1		h 120 km.
		o	N'		12	10	18					Mag. 5.6
		o	E'		12	41	14					
		o	Z'		15	45	16				1	
		oL	E'		18	04	48					
		oL	Z'		18	12	48					
oL	N'		18	34	44							

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.	
857	1967 Oct. 16	oP	Z	20 28 46						Microseisms present USCGS: 17.3 S, 66.6 E H 20 16 56.1 h 18 km. Mag. 5.2
		o(S)	E'	38 39	20					
		oL	Z'	52.0	40					
		oL	E'	52 42	30					
		M	N'	56 58	22	1				
		M	E'	59 04	22		1			
		M	Z'	59 26	19			1		
860	17	P	Z	13 50 16.5	1.2			0.13		Microseisms present USCGS: 6.6 S, 128.8 E H 13 43 50.2 h 225 km. Mag. 5.0
		oPP	Z	51 38	1.5			0.22		
		o	E'	56 58	16					
		o	N'	57 05	16					
		M	Z'	14 06 12	16				1	
861	17	oP	Z	14 14 12						Microseisms present USCGS: 21.2 S, 179.1 W H 14 08 58.4 h 636 km. Mag. 4.8
		iS	E'	18 24	10		+1			
		i	N'	21 30	13	+2				
		o	Z'	21 37	18				1	
		i	N'	23 42	9	-1				
864	18	i	Z'	01 31 06	4			+2		Masked by large microseisms USCGS: 79.8 N, 2.4 E H 01 11 45* h 33 km. Mag. 5.7 5.8-6.2 Berkeley 6 $\frac{3}{4}$ Goldon, Pasadena
		oSS	E'	50 56	20			2		
		o	N'	51 46	?					
		oL	E'	02 05 50	52					
		M	N'	10 12	34	4				
		M	E'	11 42	34			6		
865	18	oP	Z'	22 11 39	8				1	USCGS: 33.9 S, 179.6 W H 22 06 23.5 h 26 km. Mag. 5.4 5.2-5.4 Berkeley 5 $\frac{3}{4}$ Goldon
		oPP	E'	12 15	12			1		
		oPPP	Z'	12 25	10				2	
		i	E'	12 32	10			+2		
		i	Z'	12 52	8				+2	
		o	N'	16 07	28					
		o	Z'	16 11	22				2	
		o	E'	16 31	14			2		
		oLR	Z'	17 50	32					
		oL	E'	17 57	32					
		M	E'Z'	20 03	17			9	13	
		M	N'	20 16	16	5				
866	18	oP	Z'	23 40 20						Microseisms present USCGS: 13.9 S, 166.5 E H 23 35 11.0 h 87 km. Mag. 5.0
		o	Z	40 24	0.8				0.04	
		o	Z'	40 35	7					
		o	Z	40 48	1.0				0.16	
		o	N'	44 46	?					
		o	E'	44 48	12			2		
		i	N'	44 52	12	+2				
		i	Z'	44 55	16				+2	
		oSS	N'	45 18	12					
		o	N'	45 44	18	2				
		oLR	Z'	46 35	28					
		M	E'	48 08	20			3		
		M	N'	48 51	17	2				
		M	Z'	49 09	19				4	
869	20	iP	Z'Z''	01 15 33	4			+1	9710 87 $\frac{3}{4}$	Compression Microseisms present USCGS: 58.6 S, 25.0 W H 01 02 43.8 h 12 km. Mag. 5.6
		o	N'	25 43	22					
		oS	E'	26 14	?					
		o	N'	27 43	16	1				
		oSS	Z'	32 00	22					
		o	E'	32 13						
		o	E'	38 47	28			2		
		oL	Z'	45 36	36					
		M	E'	52 22	19			2		
		M	N'	53 08	19	3				
		M	Z'	53 14	19				5	
877	23	(P)	Z'	02 14 21						Masked by microseisms
		M	Z'	22 26	22				1	
		M	N'	22 42	20	$\frac{1}{2}$				
		M	E'	23 48	16			$\frac{1}{2}$		

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
			h m s	s	μ	μ	μ	km.	
878	1967 Oct.23	iP Z	08 36 51.6	1.0			+0.06		Compression Microseisms present USCGS: 28.9 N, 139.1 E H 08 27 06.2 h 463 km. Mag. 5.3 5.5-5.7 Berkeley
		i Z	37 14	1.2			-0.16		
		iS N'N"	44 47	8	+2				
		i N"	46 02	5*	-2*				
		iS E'E"	47 42	9		-2			
		i N'N"	47 50	10	+1				
		M N'	58 40	18	1				
879	24	iP Z	03 18 27.8	1.3			-0.38	Dilatation USCGS: 31.3 S, 179.7 W H 03 13 26.5 h 250 km. Mag. 5.4	
		i E	18 32.4	1.0		+0.05			
		i Z	18 59	1.5			-0.26		
		oS N'	22 33	?					
		o N'E'	24 09	18					
		o Z'	24 10	18					
882	25	iP Z	01 09 53.2	0.8			+0.14	7230 65:1 Compression USCGS: 24.5 N, 122.2 E H 00 59 22.6 h 65 km. Mag. 6.0 6.2-6.5 Berkeley 7.0 Golden	
		iP Z'Z"	09 54	10			+20		
		i N'E'N"E"	09 55	10	-7	+5			
		i Z	09 55.5	1.3			+1.79		
		i NE	09 55.7	1.3	-0.17	+0.14			
		i(ρP) Z	10 10	2.0			+		
		m Z	10 15	2.0			3.17		
		i Z'	10 37	6			-5		
		i Z'	10 46	10			+8		
		i Z'	13 34	9			+9		
		iS N'E'	18 32	18	-18	+32			
		i Z'	18 34	14			-30		
		PPS N'E'Z'	19 08	15	26	50	12		
		i E'	20 11	14			-26		
		iSS E'	22 49	20			-20		
		i N'	23 03	14	+27				
		i E'	25 50	20		+44			
		i N'	26 04	13	-21				
		i Z'	26 14	22			-31		
		oL N'	27 45	41	52				
LR E'	29 54	26		58					
M E'	34 35	22		71					
M Z'	36 16	22			80ca				
M N'	36 23	22	59						
885	26	oiP Z	00 32 51.5	1.5			+0.42	Compression USCGS: 24.5 N, 122.2 E H 00 22 21.6 h 63 km. Mag. 5.6	
		iP Z'Z"	32 52	6			+2		
		oPcP Z	33 27	1.5			0.26		
		oS N'	41 30	24	1				
		o Z'	41 36	6			1		
		oPS E'	41 54	14		1			
		o Z'	48 45	28					
		M E'	53 26	24		2			
M Z'	59 15	22			2				
M N'	59 20	22	1						
890	26	oP Z'	17 29 51	8			1	4620 41:6 Microseisms present USCGS: 0.2 S, 125.2 E H 17 22 05.3 h 42 km. Mag. 5.6	
		o Z'	30 07	7			2		
		o N'	31 25	12	1				
		oPP. E'Z'	31 32	12		1/2	1		
		iS N'E'	36 05	13	-3	+2			
		o Z'	36 07	36					
		oSS Z'	39 08	20			2		
		i E'	39 15	10		-2			
		i N'	39 20	9	+2				
		oL N'	41 05	44					
		oL E'	41 14	42					
		M N'	46 56	25	4				
		M Z'	47 15	25			6		
M E'	47 34	24			4				
893	29	o(S) N'	13 00 30	13				Masked by microseisms USCGS: 60.8 S, 23.1 W H 12 37 22.2 h 33 km Mag. 5.3	
		o(SS) N'	06 06	16					
		oL E'	12 12	28		2			
		oL N'	18.2	36					
		M N'E'Z'	26	18	3	1	3		

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks		
							AN	AE	AZ				
				h	m	s		μ	μ	μ	km.		
894	1967 Oct.30	iP	Z	02	41	25.7	1.5			+0.18	Compression Microseisms present- large on N'E'Z'N'E'Z' USCGS: 22.0 S, 170.1 E H 02 36 45.1 h 32 km. Mag. 4.4		
		o	Z		41	33	1.5			0.22			
		oPP	Z		41	49	1.8			0.45			
		i	Z		41	57	1.6			+0.04			
		oS	N'		45	04	24						
		M	Z'		47	34	20			3			
		M	E'		47	40	20		2				
		i	Z'		58	08	8			-4			
			(PKP)	Z	21	27	42.2		Masked by microseisms			USCGS: 37.8N, 14.6 E, H 21 08 07.2 h 33 km. Mag. 4.8	
		899	Nov. 1	iP	Z	17	25	39.0	1.0				+0.10
900	1	oP	Z'	19	03	24					Microseisms present USCGS: 4.8 S, 135.7 E H 18 56 54.8 h 14 km. Mag. 5.8 5.8-6.2 Berkeley		
		iS	N'		08	40	8	+1					
		o	Z'		08	48	28			2			
		i	N'		08	49	12	-4					
		o	E'		08	50	12		2				
		oL	Z'		13	06	36						
		M	E'		17	44	12		28				
M	N'Z'		17	54	12	42		57					
901	2	iP	Z	06	57	26.0	0.8			+0.04	Compression Microseisms present USCGS: 30.8 S, 178.5 W, H 06 52 25* h 365 km. Mag. 3.9		
		M	E'Z'		07	05.2	20		1/2	1/2			
902	3	iP	Z	07	37	28.0	0.5			-0.04	Dilatation USCGS: 18.7 S, 169.0 E H 07 32 50.1 h 230 km. Mag. 5.3 4.7-5.0 Berkeley		
		i	NEZ		37	29	0.8	+0.08	+0.16	-0.58			
		o	N'E'Z'		38	00	9	1	2	3			
		i	E'		38	22	6		+3				
		i(S)	N'N"		41	18	9	-					
		i	E'E"		41	24	10		+8				
		i	N'N"		41	26	10	+3					
		i	Z'Z"		41	28	10			+5			
		i	N'N"		41	39	11	-4					
		i(SS)	N'		42	09	16	+10					
		i	Z'		42	10	14			3			
		i	E'E"		42	20	14		+8				
		M	Z'		42	28	22			9			
		M	N'		42	34	22	23					
		M	N'E'		43	58	18	8	4				
M	Z'		44	18	19			5					
903	3	iP	Z	22	50	35.2	1.2			+0.24	Compression Microseisms present USCGS: 56.1 S, 27.2 W, H 22 37 49.6 h 155 km. Mag. 5.4		
		oPS	N'		23	02 43	16						
904	4	oP	Z	05	17	47		Masked by microseisms			USCGS: 24.3 N, 122.2 E, H 05 07 18.0 h 76 km. Mag. 5.0		
905	4	P	Z	10	22	51					3410		
		m	Z		22	54	1.5			0.60	30:7		
		iPP	Z		24	25	1.0			-0.07			
		i	Z		24	36	1.0			-0.09			
		iPcP	Z		25	31	0.8			+0.04			
		iS	N'E'N"E"		27	17	8	+1 1/2	+6				
		i	N'		28	04	6	+2					
		iScP	Z		28	22	1.5			-0.30			
		o	Z'		30	13	18			3			
		i	Z'		30	22	?			+			
		iScS	N'N"		32	23	7	+4					
		906	4	(iP)	Z	13	38	03				+	Masked by microseisms USCGS: 37.4 N, 141.6 E H 13 26 47.7 h 46 km. Mag. 5.7
iS	N'				47	16	8	1					
i	E'				47	18	9		+2				
oPS	N'				47	46	18	1					
oSS	N'				51	50	26						
oSS	Z'				52	05	26						
oL	E'				57	15	36						
oL	Z'				14	00	44	36					
M	N'E'Z'				04		24	2	2	2			

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
907	1967 Nov. 4	(P)	Z	14 42 33						Masked by microseisms
		iSKS	E'	52 34	7		+2			
		i	E'	53 24	8		+2			USCGS: 43.5 N, 144.1 E
		oL	E'	15 03 24	44		13			H 14 30 37.5
		L Max.	N'E'	05.1	32	4	10			h 30 km.
		M	Z'	13 20	20			4		Mag. 5.8
		M	N'	13 26	15	4				6 Golden
		M	E'	14 26	18		4			
909	6	iP	Z	21 38 34.6	1.0			+0.14		Compression Microseisms present
										USCGS: 17.7 S, 178.7 W, H 21 32 56.5
										h 549 km. Mag. 4.5
910	7	(P)	Z'	03 56 26						P feeble & masked by microseisms
		o	Z'	56 45	16					
		o	E'	04 01 25	20					USCGS: 14.9 S, 173.0 W
		o(S)	Z'	02 16	24			1		H 03 49 17.4
		o	E'	02 26	16		2			h 43 km.
		o	N'	05 03	14					Mag. 5.6
		o	Z'	05 10	18			3		5 1/2 Golden
		o	N'	05 16	26	4				
		oL	Z'	07 00	34			3		
		oL	E'	07 06	34		3			
		M	N'	09 06	13	4				
		M	Z'	09 44	18			4		
		M	E'	10 08	18		4			
914	8	P	Z	06 13 53						Masked by microseisms
		iSP	Z'	14 06	7			+1		
		oS	N'	19 06	11	1				USCGS: 5.3 S, 134.0 E
		o	E'	19 14	16					H 06 07 21.4
		o	Z'	19 35	22			2		h 33 km.
		o	N'	19 36	24	3				Mag. 5.9
		oL	E'	22 13	44					
		oL	N'	22 24	38					
		M	E'	25 32	14		26			
		M	N'	25 44	14	17				
		M	N'	28 27	14	25				
		M	E'Z'	28 34	14		26	43		
915	8	oP	Z'	17 22 21					9790	Microseisms present. Fooble ampli-
		oS	N'	32 46	13				8891	tudes throughout.
		oS	E'	33 01	14		1			
		o	Z'	33 04	14					USCGS: 51.1 N, 178.5 E
		oPS	Z'	34 10	18					H 17 09 27.1
		oSS	E'	38 48	19					h 29 km.
		oSS	N'	38 50	19					Mag. 5.3
		oLQ	E'	45 31	42					5.3-5.5 Berkeley
		oLR	Z'	50 12	32					
		M	E'	57 28	19		1			
		M	N'Z'	18 02 38	19	1		2		
916	9	iP	NEZ	02 25 08.8	1.0	-0.05	+0.08	+0.39	4060ca	Compression h 0.08 ca
		ipP	Z	26 46	1.1			-0.48	3695ca	
		i	Z"	26 47	3*			+5*		USCGS: 7.2 S, 123.6 E
		i	Z'	26 48	5			-2		H 02 18 45.5
		i	Z	30 06	1.0			+0.22		h 560 km.
		iS	E'Z'E"Z"	30 14	10			-6		Mag. 5.8
		i	N'	30 16	10	+2				
		oS	E'	33 05	12					
		o	Z'	33 12	16					
		iSS	N'N"	33 13	10	+3				
		i	E"	33 14	7*			-4*		
		i	N'	33 24	12	-4				
		i	E'E"	33 29	9			+4		
		o	Z'	33 45	26					
		o	E'	33 50	26					
		M	N'	34 14	26	4				
		M	Z'	35 40	28				3	
		M	E'	35 52	22			2		

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ	Remarks
							AN	AE	AZ		
							μ	μ	μ	km.	
921	1967 Nov. 10	eP	Z	13	16	54	1.0		0.10		Microseisms present USCGS: 18.0 S, 178.5 W, H 13 11 18.1 h 592 km. Mag. 5.0
922	10	eP	Z	18	50	36	0.8				Microseisms present
		o(S)	N'	19	00	35					
		o(L)	N'	10	08		24				USCGS: 6.0 S, 71.4 E
		oL	N'	12	14		32				H 18 38 37.6
		M	N'	16	10		22	2			h 32 km.
		M	Z'	17	32		28		1		Mag. 5.4
		M	E'	18	48		22		1		
923	10	eP	Z	20	00	10.5	1.0		+0.06		Microseisms present
		o	Z'	07	56		12				USCGS: 6.2 S, 128.7 E, H 19 53 46.6 h 270 km. Mag. 5.2
924	11	iP	Z	00	31	14.5	?		+		Compression Microseisms present
											USCGS: 28.4 N, 138.6 E, H 00 21 37.6 h 529 km. Mag. 4.3
925	11	eP	Z	06	12	17	0.6		0.05		Microseisms present
											USCGS: 8.4 S, 114.8 E, H 06 04 27* h 35 km.
927	11	iP	Z	12	07	54			-		Dilatation Masked by microseisms
		oL	N'	29	0		36				USCGS: 6.0 S, 71.4 E, H 11 55 55.6 h 37 km. Mag. 5.6
928	11	eP	Z	12	26	55					Masked by microseisms
		oL	N'	48	0		40	3			USCGS: 6.0 S, 71.3 E, H 12 14 57.3
		M	N'	51	30		19	4			h 34 km. Mag. 5.7
930	11	P	Z	18	11	59					Masked by microseisms
		i(S)	N'	21	56		9				USCGS: 6.1 S, 71.4 E,
		oL	N'	33	32		32				H 18 00 00.7
		M	N'	37	10		16	1			h 33 km. Mag. 5.7
932	12	(P)	Z	05	59	02		Masked by microseisms			
		o(L)	Z'	06	07	0	26				
933	12	eP	Z	10	44	02				4070	Microseisms present
		i	E'Z'E"	44	11		8		+1	-3	3696
		i	Z'	45	35		6			-2	USCGS: 17.2 S, 172.0 W
		i	E'E"	45	36		6		+2		H 10 36 52.0
		iS	N'N"	49	42		15	-6			h 33 km.
		i	E'Z'E"	49	44		15		-7	-4	Mag. 5.6
		i(LQ)	N'	52	28		28	+12			5.6-5.8 Borkoley
		i	Z'	52	37		20			+6	5 $\frac{3}{4}$ -6 Golden
		oL	Z'	54	24		32				6-6 $\frac{1}{2}$ Pasadona
		M	Z'	55	58		21			13	
		M	E'	56	04		21		12		
935	12	iP	N'E'Z'N"E"	17	29	11	10	+1	+3	-4	Dilatation Microseisms present
		pP	Z	29	19		1.5			0.38	
		i(S)	N'N"	33	03		12	+7			USCGS: 22.8 S, 170.7 E
		i	E'	33	07		16		-6		H 17 24 31.9
		i	Z'	33	15		14			+5	h 26 km.
		oL	E'	34	01		26		6		Mag. 5.1
		oL	Z'	34	27		22			8	
		M	N'	36	42		13	13			
		M	Z'	37	43		15			9	
		M	E'	38	16		14		11		
936	12	P	Z	22	05	30					Masked by microseisms
		o	N'	12	10						USCGS: 25.2 S, 177.2 W, H 21 59 50.7
		oL	Z'	13	36		25				h 225 km. Mag. 4.9
937	13	(eP)	Z	06	33	08.5	0.7	Feeble & masked by microseisms			
		oL	Z'	40	3						
939	14	eP	Z	05	34	15	1.3			0.27	
		i	Z'Z"	34	16		5			-1	USCGS: 5.4 S, 147.1 E
		i	Z	35	03		1.0			+0.10	H 05 28 36.9
		iPP	N'Z'N"Z"	35	20		10	+4		-5	h 201 km.
		o	Z	35	21		2.2			1.28	Mag. 5.8
		o(sP)	Z	35	27		2.2			1.20	4.9-5.3 Borkoley

Continued

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks	
								AN	AE	AZ			
				h	m	s	s	μ	μ	μ			
939 cont.	1967 Nov. 14	iS	N'E'N"E"	05	38	48	18	-5	+				
		e	Z'		39	00	22			3			
		i	N'		40	13	16	+5					
		i	Z'		40	29	16			-6			
		eL	E'		40	55	40			8			
		eL	Z'		42	44	30				7		
		M	E'		43	20	22			11			
		M	N'		44	03	20	9					
		M	Z'		47	52	17			7			
	15	(P)	Z	07	44	19		Masked by microseisms					
941	15	ePP	Z'	21	50	28	22			3		Masked by large microseisms	
		ePS	N'		59	46	22	3				USCGS: 28.7 S, 71.2 W	
		eL	N'E'	22	16	25	40	7	9			H 21 31 51.5 h 15 km.	
		M	N'E'Z'		21.4		27	4	4	7		Mag. 6.2; 5.7 Berkeley 6-6 Pasadena, Golden	
945	17	iP	Z	09	25	04.5	1.0			+0.10		Compression Microseisms present	
		i	Z		25	17.3	0.9			+0.18			
		eS	N'		29	42	22	2				USCGS: 6.3 S 154.9 E	
		e	Z'		29	50	26			3		H 09 19 21.0	
		eL	E'		31	30	36			5		h 60 km.	
		M	E'		33	20	22			3		Mag. 5.1	
		M	N'Z'		33	48	26	5		6		4.6-5 Berkeley	
946	17	iP	Z	10	15	09.2	1.2			-0.25		Dilatation Microseisms present	
											USCGS: 13.7 S 167.3 E, H 10 10 04.7 h 215 km. Mag. 4.5		
949	19	(P)	Z	12	18	12						Masked by microseisms	
		eS	N'E'		27	32						USCGS: 36.4 N 141.1 E	
		eL	E'		37	06	40		1			H 12 06 59.5	
		M	Z'		44	08	26			3		h 41 km.	
		M	N'		46	04	23	2				Mag. 5.5	
		M	E'		46	44	22			1			
950	19	iP	N'E'Z'N"E'Z"	17	34	01	12	+11	+23	-49		Dilatation	
		m	Z		34	06	1.1			0.39			
		iPP	Z'		34	22	8			+18		USCGS: 22.6 S 170.9 E	
		i	N'E'		34	25	10	+8	+23			H 17 29 20.9	
		i	N'E'		37	39	13	-	+13			h 33 km.	
		i	N'		37	48	22	+92				Mag. 5.2	
		i(sS)	E'		37	57	16			-99			
		i	Z'		37	59	15				-74		
		i(SSS)	N'		38	26	24	+97					
		iL	E'		39.0		26			+105			
		iL	Z'		39	10	28				-145		
		M	N'		41.6		13	115					
		M	Z'		42.6		16				110		
		M	E'		43.2		14			98			
			19	(P)	Z	17	54	04		Masked by microseisms			USCGS: 22.6 S 170.8 E H 17 49 20* h 38 km. Mag. 4.5
			19	(P)	Z	20	24	20		Masked by microseisms			USCGS: 22.6 S 170.7 E H 20 19 35* h 33 km. Mag. 4.3
955	21	eP	Z	20	04	58						Masked by microseisms	
		i	Z		05	03				+			
		i	Z		05	06	1.0			+0.10		USCGS: 12.6 S 166.3 E	
		e	N'		09	24	19					H 19 59 32.4	
		M	Z'		13	14	21				1	h 48 km.	
		M	N'		13	20	16	1				Mag. 4.5	
958	22	eP	Z	14	50	21						Microseisms present	
		i	Z		50	29.5	0.8			+0.03			
		eL	N'	15	00	18	36					USCGS: 9.9 S 120.5 E	
		eL	E'		01	36	32					H 14 43 11.1	
		M	E'		04	24	24			1		h 18 km.	
		M	Z'		04	56	24				1	Mag. 5.1	
		M	N'		05	28	21	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.	
959	1967 Nov.22	iP Z	15 24 05.7	1.0				2290	Dilatation USCGS: 22.7 S 170.9 E H 15 19 26.8 h 42 km. Mag. 5.2 5 ³ / ₄ -6 Golden 6.1-6.3 Borkoley
		iP N'E'Z'N"E"	24 06	9	+4	+3	-15	2096	
		i Z	24 07.3	2.0			+1.61		
		i Z	24 09.5	2.0			+1.88		
		i Z	24 16	2.0			+1.38		
		i Z	24 22	2.1			+1.61		
		i Z'	24 32	6			-6		
		i E'	24 33	9			-11		
		i Z'	24 41	10			+19		
		i N'	24 48	10	+4				
		oS E'	27 50	10					
		i N'	28 00	12	+27				
		i Z'	28 02	8			+10		
		i Z'	28 12	13			+27		
		m E'	28 14	14			30		
		i Z'	28 48	11			+23		
		oL E'	29 04	30			24		
oL N'	29 12	22	.17						
oL Z'	29 24	22			20				
M N'	31 40	13	71						
M E'	32 00	15			38				
M Z'	34 40	14			45				
960	22	P Z	16 45 14.5	?	Masked by microseisms			USCGS: 23.0 S 171.0 E H 16 40 33.0 h 22 km. Mag. 4.7	
		i Z	45 18	?			+		
961	22	P Z	22 10 34					USCGS: 6.0 S 130.3 E H 22 04 00.0 h 107 km. Mag. 5.5	
		oL N'	19.5						
		M N'E'	22.0	22	1	1			
962	23	o E'	08 52 48					Masked by microseisms USCGS: 14.5 N 52.1 E H 08 35 49.5 h 3 km. Mag. 6 ³ / ₄ -7 Pasadena, Goldon	
		oS KS E'	09 00 54						
		i S N'	01 56	10	-3				
		i SS N'	09 26	22	+6				
		o G N'	19 28	64					
		o L E'	20 36	50					
		L N'	20 58	54	39				
		M N'	30 16	22	8				
		M Z'	30 42	22			8		
		M E'	32 00	22			7		
963	23	o SS E'	14 21 12	22		1		Masked by microseisms USCGS: 80.2 N 1.0 W H 13 42 01.6 h 10 km. Mag. 5.8 6 ¹ / ₄ Pasadena 6 ³ / ₄ -7 Goldon	
		o N'	21 20	30					
		o LQ E'	36 32	50			3		
		o E'	38 16	70			11		
		M E'	48 38	28			2		
		M N'	49 08	28	4				
		M Z'	49 28	28			5		
964	24	iP Z	05 48 12.5	1.0			-0.17	Dilatation USCGS: 16.4 S 177.9 W H 05 42 14.0 h 428 km. Mag. 5.4	
965	25	i(P) Z	13 03 30.5	1.2			+0.12	Masked by microseisms USCGS: 22.6 S 170.7 E H 12 58 48.1 h 64 km. Mag. 4.8	
		o N'	07 17	(14)					
		o E'Z'	07 28	12		1	1		
		o(L) N'	07 40	24					
		oL Z'	08 44	26					
		M N'	09 38	16	1				
		M Z'	10 08	18			1		
M E'	10 28	18			1				
966	26	o(S) N'Z'	00 27 38					Masked by microseisms USCGS: 28.6 N 130.0 E H 00 08 09.8 h 33 km. Mag. 5.7	
		M N'	44 08	22	3				
		M Z'	44 24	22			4		
		M E'	45 08	20			4		
967	26	iP Z	03 01 55.7	1.3			-0.43	Microseisms present USCGS: 8.1 S 112.9 E H 02 53 57.8 h 80 km. Mag. 5.7	
		o N'	09 06	(10)					
		oS N'	11 27	12	1				
		o Z'	11 41	11			1		

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
968	1967 No.26	eP	Z	11 00 44						Microseisms present USCGS: 1.9 S 127.8 E H 10 53 21.9 h 8 km. Mag. 5.5
		eS	E'	06 44	10					
		e	N'	06 49	?					
		e	Z'	09 14	12					
		M	N'E'	14 47	22	2	3			
		M	N'Z'	18.0	18	3		4		
969	26	(P)	Z	12 00 35						USCGS: 22.9 S 171.4 E H 11 55 53.3 h 58 km. Mag. 4.7
		e	N'	04 28	10	1				
		i	E'	04 34	10		-3			
		i	Z'	04 44	10			+3		
		eL	E'	05 09	25					
		eL	Z'	05 35	24					
		M	N'	06 14	19	6				
		M	Z'	07 20	19			3		
973	28	iP	Z	02 47 44.5	1.3			+0.13		Compression Microseisms present USCGS: 32.1 N 130.8 E H 02 36 54.1 h 125 km. Mag. 5.6 5-5.2 Berkeley
		iS	E'	56 38	10		-2			
		e	N'	56 44	?					
		i(sS)	E'	57 39	10		-2			
		eL	E'	03 06 12	46			3		
976	29	eS	E'	15 27 02						Masked by microseisms USCGS: 53.6 S 6.1 E H 15 03 38* h 33 km. Mag. 5.4
		e	N'	27 10						
		e	E'	33 03						
		e	E'	39 37	26					
		eL	N'E'	40 16	44		3			
		eL	Z'	43 47	30					
		M	N'	46 24	26	1				
978	30	ePKP	Z'	07 43 19	7			2		Microseisms present USCGS: 41.5 N 20.5 E H 07 23 51.5 h 29 km. Mag. 6.0 6½ Pasadena 6½-6¾ Golden 6.6-6.8 Berkeley 6¾ Palisados
		ePP	Z'	46 21	12			1		
		i	E'E"	46 58	8		+2			
		i	N'	47 02	8	+1				
		e(PPS)	E'	58 45	12		1			
		eL	Z'	08 30 11	52					
		M	E'	35 45	34		7			
		M	Z'	35 52	34			9		
980	30	(eP)	Z	15 53 20		Masked by microseisms				USCGS: 17.9 S 178.3 W H 15 47 44.2 h 629 km. Mag. 4.7
		iS	N'E'	57 47	10	-1	+1			
		e	N'	16 01 02	12					
		M	Z'	07 16	22			1		
982	Dec. 1	eP	Z	07 26 11	1.2			0.14		Microseisms present USCGS: 2.3 N 127.1 E H 07 18 22.7 h 95 km. Mag. 5.4
		e	N'	32 33	?					
		e	E'	35 41	13		1			
		eL	Z'	39.0	36					
		M	N'Z'	44	16	½		½		
984	1	iP	Z	14 09 13.8	1.0			-0.18	9300ca	Dilatation h 0.015 ca USCGS: 49.5 N 154.4 E H 13 57 02.4 h 136 km. Mag. 5.9 5.4-5.6 Berkeley 6¾ Golden
		iP	N'Z'Z"	09 14	8	+1		-2	8327ca	
		i(PcP)	Z	09 20.5	1.3			+0.18		
		ipP	Z'	09 46	10			-2		
		isP	Z'	09 59	10			+2		
		iSKS	N'N"	19 21	10	+2				
		iS	E'E"	19 24	10			-6		
		iScS	N'	19 36	12	+2				
		i	N'	20 03	10	+2				
		isS	E'	20 20	13			+4		
		i	N'	20 45	16	+4				
		eSS	N'	25 03	26	2				
		eL	E'	31 14	50			6		
		eL	N'	35 34	40	4				
eL	Z'	35 46	38			6				

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.
1018 cont.	1967 Dec. 9	i	Z'	11	01	04	13			+4	
		i	Z'		01	46	12			+3	
		oL	E'		02	41	32		6		
		oL	Z'		02	50	32			9	
		i	N'		03	02	12	+4			
		M	N'		05	06	14	6			
		M	Z'		05	40	18			3	
		M	E'		05	45	18		5		
1019	10	o(PS)	E'	12	35	14	(18)	Masked by microseisms			
		o(SS)	E'		41	06	16		1		USCGS: 40.5 N, 124.6 W
		o	N'		41	10	16	1			H 12 06 50.3 h 5 km.
		oLQ	N'		50	58	40	2			Mag. 5.8
		oL	E'		51	15	40		2		5 1/4-5 1/2 Pasadena, Golden
		oL	Z'		55	40	36				5.5-5.7 Berkeley
		M	E'Z'		58	0	24		1	1	5 1/2-6 Palisados
1020	10	iP	Z	23	04	21.4	1.3			+0.24	Compression Microseisms present
		i	Z'		04	22	6			-2	S & SKS confused by calibration pulse
		iS	N''		15	07	10*	+8*			on L.P. records
		o	E''		15	11	10*		3*		USCGS: 17.7 N, 73.9 E
		oSS	N'		21	00	28	3			H 22 51 24.3
		oL	N'		27	52	30	8			h 33 km.
		oL	N'		28	56	54				Mag. 6.0
		L Max.	N'		31	10	40	18			6 1/4-6 1/2 Golden
		M	N'		36	58	19	16			6.4-6.6 Berkeley
M	E'Z'		41	23	22		21	24	6 1/2 Pasadena		
1024	12	oP	Z	04	30	35					Masked by microseisms
		o	N'		35	31	17	2			
		o	Z'		35	35	15			1	USCGS: 5.2 S, 152.8 E
		oL	N'		38	08	34				H 04 24 42.3
		oL	Z'		38	34	32				h 54 km.
		M	E'		40	24	18		2		Mag. 4.9
		M	Z'		40	58	20			3	
1026	12	(P)	Z	06	31	53		Masked by microseisms			
		iP	N'E'Z'	08	10	57	10	+1 1/2	+2 1/2	-4	Dilatation
		i	Z		11	02.4	1.7			+0.78	
		i	E'		11	18	10		+2 1/2		USCGS: 22.7 S, 171.1 E
		i(S)	N'E'N''E''		14	51	12	+13	+12		H 08 06 16.7
		i	Z'		15	00	12			-8	h 39 km.
		oL	N'		15	16	30	15			Mag. 4.9
		oL	E'		15	42	27				5.5-5.9 Berkeley
		oL	Z'		15	50	27				
		L Max.	E'		16	24	27		11		
L Max.	Z'		16	29	26			14			
M	E'		18	03	16		12				
M	N'		19	01	12	29					
M	Z'		19	24	16			17			
1030	12	P	Z	16	01	50		Masked by microseisms			USCGS: 17.4 N, 73.9 E, H 15 48 55.5
		o	E'Z'		16	36		Feeble			h 27 km. Mag. 5.0
1033	13	oP	Z'	19	12	02	6			2	
		m	Z		12	07	1.2			0.34	USCGS: 19.1 S, 168.7 E
		i	Z'Z''		12	12	6			+6	H 19 07 14.4
		i	N'E'N''E''		12	14	8	+1	+3		h 51 km.
		i	Z		12	14.5	2.5			+2.97	Mag. 5.7
		iPP	Z'		12	28	12			+5	5.4-5.8 Berkeley
		i	N'E'		12	34	8	+3	+3		
		o(S)	N'		15	56	?				
		iPcP	N'E'Z'N''E''Z''		16	02	9	-17	-17	-12	
		i	Z''		16	09	9*			+23*	
		i	N'		16	23	14	+12			
		oL	Z'		17	14	30				
oL	E'		17	28	30						
M	E'		18	36	22		14				
M	Z'		19	01	20			15			
M	N'		19	38	15	8					

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	μ	μ	μ	km.		
1035	1967 Dec. 13	oPP	Z	23	14	42	1.2			0.16		Masked by microseisms
		o(S)	N'	18	02			Feeble				USCGS: 22.8 S, 171.5 E, H 23 09 37*
		o	E'	18	22			"				h 43 km. Mag. 4.3
1038	14	P	Z	14	44	48						Masked by microseisms
		o	Z	44	52.5							
		o(S)	E'	49	07		10		1/2			USCGS: 14.9 S, 166.8 E
		o	N'	49	09		10	1				H 14 39 34.8
		o	Z'	49	10		12			1/2		h 18 km.
		oL	Z'	51	10		23					Mag. 5.0
		M	Z'	52	27		18			1		
		M	E'	52	30		18		1			
		M	N'	52	56		17	1/2				
1039	14	P	Z	18	38	07		Feeble				Masked by microseisms
		oL	Z'	19	06.7							USCGS: 54.6 N, 160.4 E, H 18 25 16.6
												h 33 km. Mag. 5.5
1044	16	P	Z	17	54	24						Microseisms present
		(L)	Z'	18	08							USCGS: 19.2 S, 168.7 E, H 17 49 36.7
												h 42 km. Mag. 4.5
1045	16	(oP)	Z'	21	06	38						Masked by microseisms
		oS	N'	17	00		22	2				USCGS: 51.2 N, 157.7 E
		o	E'	17	04		22		1			H 20 53 58.3
		oS	E'	22	26		30					h 24 km.
		oS	N'	22	28		30	1				Mag. 5.5
		oL	E'	29	20		46					
		M	N'	34	20		32	3				
		M	Z'	34	44		32			4		
		M	E'	35	50		27		2			
1047	17	(P)	Z	16	12	45						Masked by microseisms
		oS	N'	19	53		14					USCGS: 11.6 N, 125.9 E
		o	E'	19	57		12					H 16 03 26.9
		o	Z'	23	48		16					h 3 km.
		oL	E'	28	56		28					Mag. 5.3
1049	18	(P)	Z	06	28	56						Masked by microseisms
		oS	E'	32	46		12		1			
		o	Z'	32	48		11			1		USCGS: 22.4 S, 170.8 E
		o(L)	N'	32	59		(28)					H 06 24 19.7
		oL	Z'	34	08		24					h 34 km.
		M	Z'	35	46		18			1		Mag. 4.8
		M	E'	36	08		16		1			
		M	N'	36	12		14	1				
1054	20	iP	Z	08	53	56.1	0.8			+0.06		Compression Microseisms present
		o(S)	E'	58	06		8		1/2			USCGS: 15.1 S, 167.6 E
		o	N'	58	18		10	1/2				H 08 48 52.3
		o	N'	59	01		8	1				h 129 km.
		oL	Z'	59	20		(28)					Mag. 5.1
		M	N'E'Z'	09	02.0		16	1/2	1/2	1/2		
1055	20	P	Z	11	45	43						Masked by microseisms
		o(S)	N'	54	51		(20)					USCGS: 11.8 N, 93.0 E
		o	E'	55	08		(14)					H 13 34 25.9
		o	N'	12	03	04	20					h 61 km.
		oL	N'	06	26		52					Mag. 5.4
		oLR	Z'	08	54		40					
		M	N'	11	32		27	1				
		M	E'	11	57		28		1			
		M	Z'	16	01		25			2		
1056	20	iP	Z	17	12	51.5	1.0			+0.98		Compression
		iP N'E'Z'N'E'Z'		12	52		6	-1	-1	+2		
		i	NE	12	52.1		1.0	+0.18	+0.26			USCGS: 15.1 S, 167.4 E
		o	Z'	13	30		8			1		H 17 07 49.1
		i	Z'	13	41		5			+1		h 135 km.
		o	E'	17	04		6					Mag. 5.1
		i	N'E'Z'	17	10		7	+1	+2	-1		
		i	N'	17	54		9	+2				
		oL	Z'	19.0			26					
		oL	E'	19	09		26		1			

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
1 068	1967 Dec.24	iPKP	Z	20	22	55.9	1.2			+0.60	Compression Microseisms present USCGS: 17.4 N, 61.1 W H 20 03 10.9 h 24 km. Mag. 6.4 6.3-6.5 Borkoloy 6½ Golden 6¾-7 Pasadona	
		i	Z'Z''	22	56½	8				+12		
		i	N'E'	23	02	6		-1	+3			
		i	Z''	23	03	5*						+31*
		i	Z'	23	15	9						+10
		iSKKS	E'	33	09	11				+2		
		M	E'Z'	21	15	39	28			8		11
		M	E'Z''	17	26	24				8		13
		M	N'	18	26	24		6				
1069	24	i(PP)	Z	21	52	15.9	1.3			+0.39	USCGS: 17.4 N, 61.3 W, H 21 32 31.3 h 20 km. Mag. 5.9, 5.6-6.0 Brk. 6½ Pasadona	
1070	25	iP	Z	01	29	25.6	0.8			+0.59	Compression Complex P & following waves on N'Z' 3s periods superposed on largo waves of 14-18s periods. (see below) USCGS: 5.3 S, 153.7 E H 01 23 33.6 h 64 km. Mag. 6¾-7 Pasadona 6.8-7.2 Borkoloy 7½ Golden iP N'Z' per. 3s AN 30μ AZ 40μ m N'E'Z' " " AN 79μ AE 16μ AZ 113μ	
		iP	N'Z'Z''	29	26	3&14		-12		+16		3180 2826
		ipP	Z	29	35	0.8				+1.05		
		m	N'E'Z'	30	09	3&18	31		7			45
		i	Z	30	10	3.0						+19.25
		i	Z'	34	08	10						-
		iS	N'	34	10	16		-54				
		i	E'Z'	34	30	24				+99		+185ca
		m	N'	34.7	24	390ca						
		L	E'	36.0	36					310ca		
		M	N'	38.0	15ca	300ca						
		M	E'Z'	39.7	15ca					180ca		290ca
		oX	N'	02 49.7	56ca	29						
		oX	N'	59.4	90ca	45						
		oX	E'	03 41.4	100							
X	N'E'	43.7	100	55		64						
W2M	N'E'Z'	04 06	30	10		9			19			
1074	25	iP	Z	12	15	30.6	0.8			+0.12	Compression Microseisms present USCGS: 4.9 S, 153.7 E, H 12 09 38.4 h 104 km. Mag. 5.1	
		M	N'E'Z'	24.0	30			2	2	3		
1076	26	oP	Z	08	58	35					Microseisms present USCGS: 5.1 S, 153.7 E H 08 52 42.3 h 59 km. Mag. 5.2	
		opP	N'Z'	58	50	16		½		1		
		iS	N'	09	03	21	22	-4				
		i	Z'	03	38	22						+4
		i	N'	03	43	22		-6				
		oL	E'	05	13	32				6		
		M	N'Z'	07	57	24		7				9
		M	E'	08	46	16				6		
1082	27	P	Z	03	50	03					Masked by microseisms USCGS: 11.2 S, 163.3 E, H 03 44 43* h 33 km. Mag. 4.4	
		o	Z	50	08	1.0				0.08		
1083	27	oP	Z'	04	34	05	10			½	Microseisms present USCGS: 5.0 S, 153.7 E H 04 28 21* h 130 km. Mag. 4.9	
		o	Z'	34	34	9				1		
		o(S)	E'	38	52	10				1		
		o	N'E'	39	22	14		2				
		oL	N'Z'	42.1	35	5						7
		L	E'	42	30	24				4		
1084	27	o(P)	Z'	09	32	31	?				Microseisms present USCGS: 21.2 S, 68.3 W H 09 17 55.7 h 135 km. Mag. 6.4 6.7-7.0 Borkoloy 7 Pasadona	
		iPP	N'E'Z'	37	10	8		+1	-½	+2		
		o	Z'	37	44	8						
		i	E'	37	48	6				+1		
		i	N'	37	50	6		+1				
		i	Z'	37	56	12						+2
		o	N'E'	43	54	12		1	1			
		o	E'	44	50	14				1		
		o	N'	45	03	13		2				
		oPS	N'	46	40	18		4				
		i	Z'	46	44	18						+4
		i	E'	46	48	16				-3		
		i	Z'	47	30	22						-8
		i	N'E'	47	35	22		+6	-4			
		o(SS)	N'E'	53	18	24		5	4			
o	Z'	57	52	42					3			
o	N'	10 04 02	34									
oL	N'Z'	11.8	62			4			8			

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
1085	1967 Dec.27	iP	Z	10 32 52.0	1.3			-0.21		Dilatation Microseisms present USCGS: 10.7 S, 165.1 E, H 10 27 15.8 h 46 km. Mag. 4.9
1086	27	oP	Z	14 45 29	1.0			0.11		Microseisms present
		o	N'Z'	46 40	10	½		½		
		oS	N'	50 34	22	½				USCGS: 3.5 S, 141.3 E
		oL	E'	52 49	50					H 14 39 08.5
		oL	Z'	54 58	36					h 36 km.
		M	E'	57 28	23		8			Mag. 5.1
		M	N'	58 00	22	4				
		M	Z'	58 24	23			4		
1087	27	oP	Z'	16 29 14	12				3590	
		i	N'E'Z'	29 20	12	+½	+1	-2½	3293	USCGS: 22.3 S, 174.8 W
		i	E'	30 26	12		-3			H 16 22 48.5
		i	Z'	30 27	12			+3		h 33 km.
		iS	N'	34 24	12	+5				Mag. 6.1
		i	E'	34 26	12		+4			6 Pasadena
		i	Z'	34 31	20			+3		6.2 Berkeley
		iSSS	N'	36 42	17	-13				
		i	Z'	37 06	13			+6		
		oLR	Z'	38 03	28					
		iL	E'	38 30	26		+17			
		M	N'	40 50	13	40				
		M	E'Z'	41 20	17		43	56		
1089	28	o(PS)	E'	06 54 02	14	Masked by microseisms				USCGS: 44.2 N, 128.8 W
		o(SS)	N'E'	07 00 10	22	1	2			H 06 26 15.8
		o(LQ)	N'	09 34	50					h 33 km.
		oL	E'	10 02	50					Mag. 5.4
		oLR	E'	14 34	32					5-5½ Golden
		M	N'E'Z'	16.3	28	2	3	4		5.6-6.1 Berkeley
1094	29	oP	Z	20 35 56						Microseisms present
		iPP	Z'	37 04	8			+1		
		o(S)	N'	41 10	24					USCGS: 22.8 S, 175.3 W
		o	E'	41 12	20					H 20 29 32.2
		o	Z'	41 22	20			1		h 30 km.
		oSS	N'	43 07	13					Mag. 5.3
		oLR	Z'	44 54	22					5.4-5.8 Berkeley
		M	N'	46 13	15	8				5½ Golden
		M	E'Z'	47 42	17		12	16		
1095	29	P	Z	22 29 29		Masked by microseisms				USCGS: 22.7 S, 175.2 W
		o	E'	35 14	?					H 22 23 06.0
		oL	N'	37 09	22					h 33 km.
		M	N'	40 29	14	2				Mag. 5.1
		M	E'Z'	41 15	18		3	4		
1101	31	oP	N'Z'	15 11 16	6	1		2		Microseisms present
		iS	N'	15 57	10	+1				
		i	N'	16 08	11	+3				USCGS: 7.1 S, 154.8 E
		i	Z'	16 10	14			+2		H 15 05 32.3
		i(SS)	E'	17 16	10		-2			h 19 km.
		oL	E'	18 20	26					Mag. 5.4
		oL	Z'	18 32	32			2		
		oL	N'	18 40	34	2				
		M	E'	21 08	14		6			
		M	N'	21 28	16	5				
		M	Z'	22 30	16			5		
783	ADDITION: Sept.23	oP	Z	03 28 37	0.8			0.04		Microseisms present USCGS: 17.7 S, 178.7 W, H 03 22 59.7 h 567 km. Mag. 5.0
