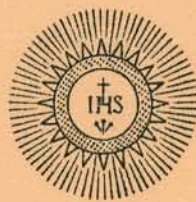


11 AUG 1967

RIVERVIEW COLLEGE OBSERVATORY

SEISMOLOGICAL BULLETIN

1 9 6 6



RIVERVIEW, SYDNEY, AUSTRALIA





RIVERVIEW COLLEGE OBSERVATORY

WORLD WIDE STANDARD SEISMOGRAPH NETWORK

STATION RIV.

SEISMOLOGICAL BULLETIN, JANUARY-DECEMBER, 1966.

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.  
 T<sub>0</sub> 1.0s, T<sub>g</sub> 0.75s, Magnification 12,500 at 1.0s.  
 Sprengnether Long-Period Seismometer NS, EW, Z.  
 T<sub>0</sub> 15s, T<sub>g</sub> 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 km.	Remarks
					AN	AE	AZ		
2	1966 Jan. 1	iP N'Z'N"Z"	12 29 47	5	-2		+3	Compression  USCGS: 9.7 S, 154.7 E H 12 24 30.1 h 33 km. Mag. 5.6	
		e(S) E'	34 05	12					
		e N'	34 08	11	2				
		eLR N'Z'	35 50	36					
		LR max. N'Z'	36.7	26	4		5		
		M E'	38 14	13		3			
		M N'Z'	39 02	17	5		6		
3	1	iP N'Z'N"Z"	16 15 41	5	-1		+3	Compression  USCGS: 9.7 S, 154.8 E H 16 10 23.9 h 33 km. Mag. 5.1	
		pP N'Z'	15 51	5	1		1		
		eS E'	19 59	12					
		e N'	20 05	12	2				
		eLR N'Z'	21 44	36					
		LR max. N'Z'	22 39	26	3		4		
		M E'	24 08	13		2			
		M N'	24 59	16	4				
M Z'	25 10	16			4				
6	3	(P) Z	13 38 53					Masked by microseisms USCGS: 20.3 S, 178.5 W H 13 33 32.6 h 537 km. Mag. 5.3	
		eS E'	43 18						
		e N'	46 17						
		e Z'	46 32	20					
		(ScS) E'	48 36						
7	3	iP Z	15 49 20.9	0.6			Dilatation. Microseisms present  USCGS: 18.9 S, 169.4 E H 15 44 44.9 h 249 km. Mag. 5.4 4.8-5 Berkeley		
		iP Z'Z"	49 21	3*				-3*	
		m EZ	49 22	0.8		0.13		0.40	
		ipP Z	50 02	1.0				-0.10	
		e(S) E'	53 12	11					
		e N'	53 15	10					
		e Z'	54 19	15				2	
8	5	eS N'	17 41 59	11			P masked by microseisms  USCGS: 13.2 N, 95.5 E H 17 21 28.4 h 37 km. Mag. 5.3		
		e E'	42 10	7				1	
		eL N'	55 17	40					
		eL E'Z'	56 04	40					
		M N'	18 00 00	22	4				
		M N'	05 04	17	5				
M E'Z'	06 36	19		5	7				
10	7	eP Z'	15 03 37				Microseisms present USCGS: 5.2 S, 152.6 E H 14 57 43.8 h 47 km. Mag. 5.3		
		e N'	08 38	18					
		eLR Z'	11 50	30					
		M E'	13 55	18		2			
		M N'Z'	14 12	20	3			3	

*Pending.*



No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks
								AN	AE	AZ		
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.	
11	1966 Jan. 7	e	Z'	20	24	00	10					Masked by microseisms  USCGS: 62.6 S, 155.6 E H 20 17 14* h 33 km. Mag. 5.8
		e(S)	E'		28	08	8		2			
		e	E'		29	15	16		5			
		e	N'		29	25	15	2				
		eLR	Z'		30	15	25				9	
		eL	N'		30	21	25	8				
		M	E'		32	21	11		6			
		M	N'Z'		33	06	14	7		7		
12	9	P	Z	03	12	18 $\frac{1}{2}$						Microseisms present. N'E'Z' masked by long-period wanderings. USCGS: 5.4 S, 113.6 E, H 03 04 01* h 39 km. Mag. 5.6
		e(SS)	N'Z'		22	20						
		M	N'E'Z'		33	33	18					
15	10	i(P)	Z	16	18	02.7	1.0				-0.08	Masked by microseisms  USCGS: 6.6 S, 154.5 E H 16 12 14.8 h 64 km. Mag. 5.2
		e	Z'		18	08						
		i	Z		18	09	0.9				+0.06	
		e(S)	N'		22	38						
		e	N'		22	56	15	3				
		eL	E'		24	09	32					
		eL	Z'		26	12	24					
		M	E'		27	13	15		3			
		M	N'Z'		28	22	16	4		4		
17	11	eP	Z'	14	27	39	10				7620	Microseisms present  USCGS: 33.7N, 137.2 E H 14 16 32.2 h 33 km. Mag. 5.3
		eS	N'		36	38	16	1			6896	
		e	E'Z'		36	40	15		1	1		
		ePS	N'		36	58	16	2				
		eLQ	E'		46	53	30		2			
		eL	Z'		51	04	30					
		M	Z'		58	21	18				2	
		M	N'E'		59	06	18	2	1			
18	13	e(SKS)	N'	11	04.6							Masked by large microseisms. USCGS: 52.9 N, 172.0 E, H 10 41 11.0 h 14 km. Mag. 5.6 5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Palisades 4-4 $\frac{1}{2}$ Berkeley
		e	N'		11.0	22						
		eL	Z'		22.1	32						
		M	N'Z'		27.3	22	2			3		
19	14	eP	Z	20	45	59.5	1.6				0.32	USCGS: 17.4S, 166.7 E H 20 41 07.5 h 33 km. Mag. 5.4
		eS	E'		49	57	11		3			
		eS	N'		49	58	9	2				
		e	Z'		50	07	11				1	
		esS	N'		50	12	10	3				
		eL	Z'		51	32	23				2	
		M	N'		55	49	14	3				
		M	Z'		56	00	15				3	
		M	E'		56	17	15		2			
	15	(iP)	Z	11	37	28.3	0.8				+0.06	Microseisms present USCGS: 18.8 S, 169.2 E, H 11 32 48.1 h 212 km. Mag. 4.4
22	16	e(S)	N'	00	24	22	15	2				Masked by microseisms
		eL	E'		27.7	24						
		eL	Z'		28.5	27						
		L max.	N'E'		28	42	21	6	6			
		M	Z'		31	08	23				5	
24	16	e(SS)	N'	09	41	20	20					Masked by microseisms USCGS: 52.9 N, 171.9 E, H 09 11 50.0 h 25 km. Mag. 5.7
		eL	Z'		57	22						
25	17	iP	Z	17	55	24.2	1.3				3310	Compression. Microseisms present h 0.085 USCGS: 20.8 S, 178.5 W H 17 49 59.3 h 543 km. Mag. 5.7
		epP	Z		56	57	2.0				2998	
		e(sP)	Z'		58	07	11				1	
		eS	E'		59	42	9		2			
		e	N'		18	00	35	16	2			
		e	E'		00	39	16			2		
		e	Z'		00	46	16				2	



RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
27	1966 Jan. 18	iP	Z	06 33 05.2	1.1			+0.26	km.	Compression. Microseisms present. USCGS: 18.6 S, 177.8 W, H 06 27 12.7 h 364 km. Mag. 5.3
		e	N'	40 35						
28	18	P	Z	20 26 01						Microseisms present.
		eL	N'E'	35 36	32					
		i	E'	37 26	7		+4			USCGS: 2.6 S, 138.8 E
		eL	Z'	38.2	27					H 20 19 25.6
		M	E'	39 01	21		4			h 54 km.
		M	N'Z'	40 39	17	5		7		Mag. 5.5
29	20	eP	Z	04 33 01						Microseisms present.
		iP	Z'Z''	33 01½	5			+4		Compression
		i	Z	33 04	1.5			+0.66		
		i	N'E'	33 04	7	+2	+1			USCGS: 15.1 S, 168.0 E
		i	Z''	33 07	6*			+6*		H 04 27 44.9
		e	Z'	37 28	16					h 28 km.
		e	N'	37 29						Mag. 5.5
		i	E'	37 31	7		+3			5½ Pasadena
		i	N'	37 35	12	+4				
		i	N'	38 23	15	-5				
		eL	Z'	38 42	33					
		M	E'Z'	40 29	21		6	8		
		M	N'	41 12	16	7				
34	22	eSKS	N'	14 51 35	10	1				Microseisms obscure earlier phases.
		eS	N'	52 38	15	1				
		iS	E'	52 41	15		-3			USCGS: 56.0 N, 153.7 W
		eSS	E'	59 35	15		2			H 14 27 07.9 h 33 km.
		e	E'	15 03 08	23					Mag. 5.8
		e	Z'	04 32	22					6 Pasadena
		M	N'E'Z'	20.9	21	5	4	8		6¼ Berkeley
		W <sub>2</sub> M	N'Z'	16 45	21	2		2		6¼-6½ Palisades
38	24	ePS	Z'	07 50.2						
		e	Z'	08 00 26						USCGS: 29.8 N, 69.7 E
		e	Z'	03 13	17					H 07 23 07.6
		eL	Z'	11 25	?					h 12 km.
		M	Z'	19 32	25			1		Mag. 5.8
		M	E'	21 10	23		1			
		M	N'	23 17	20	½				
39	25	e	Z'	18 15 31						Masked by microseisms.
		e(PPS)	E'	21 35	14					
		e	E'	24 57	14					USCGS: 1.6 N, 117.8 E
		e	Z'	25 41	18					H 18 05 54.4
		eL	Z'	30 43	29					h 42 km.
		M	N'E'	32 28	22	1	1			
41	26	iP	Z	15 35 44.0	0.8			+0.13		Compression
		e	N'	41 17						USCGS: 14.3 S, 167.3 E, H 15 30 42.7 h 207 km. Mag. 4.8
43	28	iP	EZ	04 41 57.2	1.0		-0.09	+0.22	3140	Compression. h 0.08ca. H 04 36 46
		i	N	42 07.8	0.8	-0.05			2893	
		epP	Z	43 26	2.5			1.2		USCGS: 17.5 S, 176.9 E
		i	Z''	43 30	6*			+4*		H 04 36 46.1
		isP	Z'Z''	44 32	8			+3		h 558 km.
		iS	N'E'Z'N''E''Z''	46 06	9	-5	+5	+2		Mag. 5.6
		i	E'	47 10	9			-2		5 Berkeley
		i	N'	48 51	11	+3				
		e	E'	48 56	11		3			
		iScS	N'	51 41	11	-2				
44	28	iP	N'E'Z'N''E''Z''	05 47 21	4&9	-9	-9	+22		Compression
		e	NEZ	47 22	3					
		m	Z	47 28	2.5			5.7		USCGS: 17.1 S, 168.4 E
		i	N'E'Z'	47 43	5&13	+14	+15	-28		H 05 42 16.4
		eS	N'	51 31	?					h 24 km.
		i	N'E'N''E''	51 36	12	+38	+50			Mag. 5.7
		i	Z'	51 40	12			+45		5¾-6 Berkeley
		i	E'	52 00	14			-59		6½ Pasadena



No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks		
								AN	AE	AZ				
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.			
44 cont.	1966 Jan. 28	iSSS	N'N''	05	52	20	11	+72						
		iSSS	E'E''		52	23	12		+49					
		iLR	E'Z'		53	07	29		+95		+130			
		M	E'		54	18	20			130				
		M	Z'		54	36	21				130			
		M	E'Z'		55	17	18			120		130ca		
		M	N'		55	.7	14		150ca					
		e(W <sub>2</sub> )	E'	08	28	.8	36							
		M	N'Z'		39		22		1			1		
45	29	eP	Z'	00	15	48								
		e(S)	N'E'		20	09	9	2	2				Microseisms present	
		e	Z'		20	11	10				2			
		eL	E'Z'		21	36	26						USCGS: 17.0 S, 168.3 E	
		M	Z'		23	22	19				2		H 00 10 44.5	
		M	E'		23	46	15		2				h 33 km.	
		M	N'		24	07	13		3				Mag. 4.7	
46	29	e	Z'	06	29	34								
		e	E'		33	41	8		1				Masked by microseisms	
		e	N'		33	45	8		1					
		e	N'		34	05	8		2				USCGS: 16.9 S, 168.4 E	
		e	N'		34	43	13		2				H 06 24 22.7	
		eL	Z'		35	35	22						h 33 km.	
		M	E'		38	40	13			2			Mag. 4.9	
		M	N'Z'		38	55	14		3			2		
47	30	e	N'	11	11	05								
		e	E'Z'		13	39							Masked by large microseisms	
		e(L)	Z'		14	46								
		i	N'		19	07	5	+3					USCGS: 22.1 S, 170.0 E	
		M	Z'		19	10	14				2		H 11 05 02.3	
		M	N'		19	18	12		2				h 46 km.	
		M	E'		20	12	14			2			Mag. 5.3	
54	Feb. 1	e(S)	E'	08	29	47								
		e	N'		30	12							Masked by microseisms. N'E' confused	
		eL	Z'		32	12	22						by long-period wanderings.	
55	2	e(PPP)	Z'	05	42	39							USCGS: 15.8 S, 167.2 E, H 08 20 48.9	
		e	Z'		46	52	16						h 30 km. Mag. 5.2	
		e	E'		46	55	16						Masked by large microseisms etc.	
		eL	Z'		50	40	30						USCGS: 17.8 S, 173.2 W	
		M	N'		54	20	14	2					H 05 34 01.8	
		M	E'Z'		55	14	17			4		5	h 33 km.	
56	3	eP	Z	05	55	54	1.1			0.15	4800		h 0.02	
		i	Z		55	58	1.2			+0.20	4392			
		e	Z		56	21	2.0			0.23				
		iP	Z		56	28.3	1.3			+1.23			USCGS: 0.1 N, 123.5 E	
		i	Z'Z''		56	28.2	4			-2			H 05 48 06.1	
		i	N'Z'N''Z''		56	42	5	+2		-3			h 131 km.	
		iS	E	06	02	07	2.3		+1.28				Mag. 5.9	
		iS	N'Z'N''		02	07	6	-4		-4				
		iS	E'E''		02	08	11		+6					
		i	Z''		02	10	6*			+7*				
		eSS	Z'		05	22	10				2			
		eSS	N'N''		05	23	10							
		iScS	E'E''		05	29	9		+4					
		i	N'N''		05	30	10	+5						
		e	Z'		05	44	16							
		m	Z'		06	15	16					3		
		eL	Z'		08	19	45							
M	N'E'		10	50	17	3		2						
M	Z'		14	04	16					3				
61	4	e(S)	N'	05	16	25								
		e(SS)	N'		18	28							Masked by microseisms & l.p.wanderings	
		eL	Z'		21	03	24							
		M	E'Z'		22	45	19		4		6		USCGS: 21.4 S, 174.1 W	
		M	N'		23	00	13	4					H 05 04 24* h 26 km.	



RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
62	1966 Feb. 4	iP Z	10 44 06.7	s				km. 2630	Dilatation. Preceded by microseisms h 0.02 ca.  USCGS: 15.9S, 167.9E H 10 39 12.2 h 190 km. Mag. 6.0
		iP N'E'Z'N"E"Z"	44 07	8	+5	+5	-14	2397	
		m Z	44 08	2.5			9.1		
		ipP N'E'N"E"	44 39	6	+5	+4			
		ipP Z'Z"	44 41	6			+9		
		iPP Z'Z"	44 53	7			+18		
		iPPP Z'	45 03	10			+15		
		iS N'N"	48 07	7	-37				
		iS E'E"	48 08	7		+14			
		i E'E"	48 17	10		+24			
		i Z'Z"	48 20	11			+16		
		i E'Z'E"Z"	48 45	8		+24	+12		
		isS E'E"	49 07	8		+13			
		iSS Z'	49 08	18			+29		
		i N'N"	49 19	17	-85				
i E'E"	49 20	17		+35					
m N'E'Z'	49 30	18	98	52	38				
eL Z'	50.6	28							
iScS E E'	54 58	13		+10					
63	4	(P) Z'	15 43 12					Masked by large microseisms USCGS: 21.3 S, 174.3 W H 15 36 31* h 27 km. Mag. 5.0	
		e(S) N'	48 29						
		eL Z'	50 35	22					
		M N'	53 41	15	3				
		M E'Z'	54 53	19		4	5		
64	4	P Z'	20 50 14					Masked by large microseisms USCGS: 45.9 S, 123.0 E H 20 44 55.7 h 33 km. Mag. 5.3	
		e(S) E'	54 37	12					
		e N'	54 44	20					
		eL Z'	56.40	26					
		M N'	57 20	13	2				
M E'	57 49	12		3					
65	4	eP Z	22 20 17					Large microseisms present USCGS: 7.1 S, 155.1 E, H 22 14 42.3 h 88 km. Mag. 5.0	
		eL Z'	27.9	23					
66	5	ePKP Z	02 21 15½					Large microseisms present USCGS: 39.2 N, 22.0 E, H 02 01 48.3 h 38 km. Mag. 5.8 6½ Pasadena 5½-6 Berkeley	
		eL E'	03 01 12	(30)					
		eLR Z'	10 09	33					
		M E'	21 40	23		1			
		M Z'	22 33	22			2		
		M N'	22 46	23	1				
67	5	iP Z	07 13 26.5	0.9				Dilatation. Microseisms present USCGS: 21.5 S, 170.4 E, H 07 08 52.9 h 165 km. Mag. 5.4	
							-0.15		
68	5	eP Z'	15 24 19				8340	Microseisms present USCGS: 26.1 N, 103.1 E H 15 12 29.1 h 15 km. Mag. 6.1	
		eS E'	33 57				7591		
		e N'	34 04						
		e(SS) N'	39 06	24					
		e(LQ) E'	47 19	32					
		eLR Z'	49 57	34					
		M E'	52 00	25		5			
		M N'	53 10	26	5				
		M Z'	55 15	25			4		
		M N'	58 00	23	8				
		M Z'	58 43	20			5		
M E'	59 39	20		6					
69	5	iP Z	23 20 02.5	1.0				Compression. Microseisms present. USCGS: 7.1S, 155.4E H 23 14 25.3 h 70 km. Mag. 5.0	
		e N'	24 44						
		eLR Z'	27 38	25					
		M E'	29 22	15		2			
		M N'Z'	30 26	17	3		3		
	6	(iP) Z	14 30 03.5					Masked by microseisms. USCGS: 22.2 S, 179.4 W H 14 24 57.8 h 562 km. Mag. 3.8	



No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			$\Delta$	Remarks	
							AN	AE	AZ			
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.	
71	1966 Feb. 7	eP	Z'	04	39	48						Microseisms present
		e(PS)	E'		53	15						
		e(SS)	E'		59	10	40		2			USCGS: 29.8 N, 69.7 E
		eLQ	N'	05	07	30	45					H 04 26 13.9
		eLR	E'		13	19	50		5			h 33 km.
		M	N'		17	56	28	6				Mag. 6.0
		M	E'Z'		23	23	25		11	12		6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Pal., 6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Pal.
74	8	iP	Z	10	07	33.0	1			+		Microseisms present.
												USCGS: 21.2S, 178.5W, H 10 02 09.0
												h 525 km. Mag. 5.1
76	9	iP	Z'Z''	04	53	26	9			+4	10,070	Compression
		eP	N'		53	27	9	1			9096	
		i	Z'		53	51	10			-4		USCGS: 56.7 S, 25.7 W
		i	Z''		53	54	10			+		H 04 40 28.4
		iPP	Z'Z''		57	01	9			+2		h 27 km.
		eSKS	N'	05	03	53	8	1				Mag. 5.9
		iS	E'E''		04	17	15		+14			6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Palisades
		eSS	N'		10	19	13	2				
		eSS	E'		10	25	15		3			
		eSSS	E'		14	04	15		1			
		iLQ	E'		17	16	19		+7			
		e	E'		17.6		30		9			
		eLR	N'		23	17	32					
		eL	Z'		23	26	(30)					
		M	E'		31	07	20		11			
		M	N'Z'		31	58	20	18		23		
		M	E'		32	38	18		11			
		M	N'Z'		33	28	18	20		25		
77	9	iP	Z	07	26	21.1	1.2			-0.16		Dilatation
		i	Z		26	38.3	0.9			-0.18		N'E'Z' confused by
		i	Z		27	16	1.3			+0.18		coda of no.76
		e	E'		32	24	?					
		eL	N'		37	42	34					
		M	N'		41	06	17	2				
		M	E'		42	11	20		2			
		M	Z'		42	17	21			2		
80	9	eSKS	E'	14	20	07						USCGS: 35.3 S, 106.0 W
		e(SS)	E'		25	35						H 13 57 48.7 h 33 km.
		eL	Z'		34.7		30					Mag. 5.4
		M	N'E'Z'		39		18	$\frac{1}{2}$	$\frac{1}{2}$	1		5 $\frac{1}{2}$ -5 $\frac{1}{2}$ Palisades
82	9	eS	E'	20	20	38						USCGS: 56.6S, 25.5 W
		M	N'Z'		48		19	1		1		H 19 56 51.9 h 33 km.
83	10	eP	Z'	01	29	50						Microseisms present
		i	Z		30	14.5	1.0			+0.06		
		i	Z		30	18.2	1.3			+0.11		USCGS: 29.9 S, 178.5 W
		eS	N'		34	23	10	1				H 01 24 15*
		eS	N'		34	39	10	1 $\frac{1}{2}$				h 33 km.
		e	N'		35	08	18	1				Mag. 4.7
		eL	N'		36	29	20					
		M	N'		37	31	15	4				
		M	Z'		38	23	19			2		
		M	E'		38	46	16		1			
84	10	(e)	Z'	05	39	34						Masked by microseisms
		eS	E'		48	43	12		1			USCGS: 31.1 N, 141.6 E
		e	E'		59	30	15					H 05 29 13.3
		M	N'E'	06	08	18	17	1	1			h 33 km.
		M	Z'		11	12	17			2		Mag. 5.3
85	10	iP	Z'	14	30	36	7			+2	6080	Compression. P masked by micro-
		i	Z		30	39.5	0.8			-0.20	5497	seisms on NEZ.
		i	Z		30	50	1.3			+0.42		USCGS: 20.8 N, 146.3 E
		i	Z'		30	59	5			+3		H 14 21 10.9 h 43 km.
		e	N'		38	03	12					Mag. 6.2
		iS	E'E''		38	12	15	-10				6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Palisades
		i	Z'		38	14	9			3		6 $\frac{1}{2}$ Pasadena, Berkeley.

Continued



RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			$\Delta$	Remarks
					AN	AE	AZ		
			h m s	s	$\mu$	$\mu$	$\mu$	km.	
85 cont.	1966 Feb. 10	i E'	14 38 35	7		-4			
		e N'	38 38	17	6				
		e N'	39 05	21	6				
		iScS E'E''	40 27	10		-8			
		i N'	40 30	9	-4				
		eSS E'	41 51	14		3			
		i Z'	42 11	9			3		
		SSS E'	43 47	?					
		i E'Z'	44 16	17		+15	8		
		eL N'	44.8	37					
		iL E'	45 00	38		+48			
		eLR N'	45 44	30					
		eL Z'	47.2	40					
		M E'	47 27	26		49			
M N'	49 01	30	26						
M Z'	49 21	28			27				
eW <sub>2</sub> Z'	16 55.1	27							
M N'Z'	17 02	22	$\frac{1}{2}$		1				
88	11	i(P) Z	24 02 00.8	1.0			+0.05	Compression. USCGS: 12.8 N, 141.8 E, H 23 53 34* h 33 km. Mag. 4.8	
89	12	eP Z'	11 45 54.						Microseisms present
		e Z	45 55	1.6			0.02		USCGS: 18.3 S, 174.8 W, H 11 39 25.5 h 190 km.
		e N'	52 15						Mag. 5.6
		e(L) N'	53 56	15	1				
92	13	eP Z	06 42 26.5	1.3					Microseisms present
		e Z	42 37	1.2					USCGS: 6.6 S, 132.6 E
		e Z	42 43.5	1.3			0.15		H 06 35 55.7 h 12 km.
		e E'	51 33	7					Mag. 5.9
		M N'E'	53 40	17	8	10			5 $\frac{3}{4}$ -6 Palisades
		M Z'	54 48	17			4		
93	13	iP Z	10 56 24.0	1.1				+0.09	Compression
		eS N'	11 06 06	9	1				USCGS: 26.1 N, 103.2 E
		eL E'Z'	23.4	28					H 10 44 41.0 h 33 km
		M N'	30 10	24	2				Mag. 5.7
		M Z'	31 12	19			2		5 $\frac{3}{4}$ -6 Palisades
		M E'	32 32	20			2		
94	14	eP N'Z'Z''	06 17 07 $\frac{1}{2}$	7	1		2		USCGS: 50.7 S, 139.7 E
		eP E'	17 08	7		$\frac{1}{2}$			H 06 12 48*
		e(S) E'	20 39	11		1			h 33 km.
		e Z'	20 49	9			1		Mag. 5.0
		eLR N'	21 35	28					
		eLR Z'	21 46	26					
		M N'Z'	23.1	20	6		7		
		M E'	23 26	16			4		
95	14	iP EZ	08 37 05.1	0.7		+0.03	-0.04		Dilatation Microseisms present
		eS N'N''	40 49	10	1				USCGS: 22.3 S, 171.3 E, H 08 32 12.2
		e E'E''	40 51	9		2			h 98 km.
		eL Z'	42 03	25					Mag. 4.8
		(iP) Z	08 56 10.4					+	Microseisms present
96	15	(iP) Z	08 56 10.4						USCGS: 7.7 N, 126.4 E, H 08 47 48*
									h 109 km.
		e(S) E'	10 07 35						Masked by microseisms
		eL Z'	10 35	31					USCGS: 22.7 S, 176.2 W
		M N'	12 05	16	4				H 09 56 29.8 h 33 km.
97	15	M E'Z'	13 31	18		4	5		Mag. 5.0
		(P) Z	12 11 26						Microseisms present
97	15	iP EZ	22 19 19.8	0.6		+0.04	-0.20		USCGS: 17.7 S, 178.7 W, H 12 05 46*
									h 544 km.
97	15	iP EZ	22 19 19.8	0.6		+0.04	-0.20		Dilatation
									USCGS: 26.6 S, 178.3 E
								H 22 14 43.2	
								h 595 km. Mag. 4.9	



No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ	Remarks
							AN	AE	AZ		
98	1966 Feb. 15	iP	EZ	h m s	s		μ	μ	μ	km.	Dilatation h 0.09 USCGS: 26.5 S, 178.2 E, H 22 34.05:4 h 593 km. Mag. 5.6
		i	N	22 38 43.0	0.7			+0.08	-0.25	2720	
		iS	NE	38 49.4	0.7	+0.06				2495	
		oS	E	42 23	1.4	-0.44	+0.26				
		oS	E	48 31½	1.5			0.12			
99	16	iP	NEZ	03 23 23.0	1.2		-0.35	-0.38	+1.62	2490	Compression USCGS: 17.7 S, 167.9 E H 03 18 27.2 h 31 km. Mag. 6.5 6½ Pasadena, Berkeley 6½-6¾ Palisades
		iP	N'E'Z'N"E'Z''	23 23½	5	-4½	-5	+12		2294	
		i	Z	23 29.2	1.1				+		
		m	NEZ	23 31	1.1	0.65	1.00	2.60			
		iP	N'E'Z'	23 34	10	+22	+25	-42			
		iP	Z'	27 20	6			+14			
		iS	E'E''	27 22	12		+47				
		iS	N'N''	27 23	12	+45					
		i	Z'	27 29	12						
		m	N'E'Z'	27 38	12	125ca	100ca	95			
		SSS	Z'	28 10	20			62			
		iL	E'	28 30	20		+61				
		oL	Z'	29.0	26						
		M	E'Z'	30.8	18		110ca	115			
M	N'	31.3	14	125ca							
ScS	N	34 43	?								
101	17	iP	Z'	11 58 04	5			-3		6790	Dilatation Large microseisms present USCGS: 32.2 S, 78.9 E H 11 48 00.8 h 33 km. Mag. 6.4 6½ Pasadena 6.2-6.6 Berkeley 6½ Palisades
		i	Z'	58 12	7			-5		6191	
		oS	N'E'Z'N'E''	12 06 19	8	4	3				
		o	N'Z'	06 34	23	11		4			
		oi	E'	06 35	23		+16				
		o	N'	08 04	31						
		oSS	E'	10 13	27		5				
		oSS	N'	10 16	27	4					
		oG	N'	12 23	40						
		o(SSS)	E'	13 00	30		10				
		LQ	N'	13 27	30	29					
		oL	E'	15 33	38		14				
		oL	Z'	15 47	32			12			
		M	N'	17 47	20	11					
M	E'	18 07	21		10						
M	Z'	18 15	22			16					
102	18	iP	Z'Z''	07 07 43	5			+3		5470	Compression Microseisms and long-period wanderings present. USCGS: 6.9 N, 124.0 E H 06 59 05.0 h 57 km. Mag. 5.5
		oPP	Z'	09 36	?					4992	
		oS	E'	14 45	14		1½				
		o	N'	14 55	16	2					
		oSS	Z'	18 19	15			2½			
		oL	Z'	22.5	40						
		M	E'	28 55	22		3				
		M	N'Z'	30 09	18	3		4			
104	21	oP	Z	00 35 39						10,030	Microseisms present USCGS: 55.6 S, 26.9 W H 00 22 29.7 h 33 km. Mag. 5.9 5¾-6 Palisades
		oS	N'	46 06 (12)						9093	
		oS	E'	46 32	18			1½			
		oSS	E'	52 39	16		1				
		oLQ	E'	01 00 23	20		1				
		oL	Z'	05 23	34						
		LR	Z'	07 18	27			2			
		M	E'Z'	16 04	18		2½	4			
M	N'	16 29	18	3½							
106	21	iP	Z	13 29 15.3	1.2			+0.14		Compression Microseisms present USCGS: 26.3 N, 125.7 E, H 13 18 47.0 h 103 km. Mag. 5.6	
107	21	iP	Z	16 52 56.3	1.0			+0.04		Compression Microseisms mask N'E'Z' USCGS: 0.1 N, 123.5 E, H 16 45 16.0 h 188 km. Mag. 4.8	
		M	N'Z'	17 28 26	20	1		1			
110	22	iP	Z	05 08 30.3				+		3090	Compression USCGS: 5.4 S, 151.5 E H 05 02 37.2 h 28 km. Mag. 6.2 6¾ Pasadena (continued)
		iP	N'Z'Z''	08 30½	4	-3		+4		2798	
		m	Z	08 34	1.4			0.68			
		i	N'Z'N'Z''	08 38	5	-6		+11			
		isP	N'Z'	08 44	5	+		-			

Continued



## RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks
								AN	AE	AZ		
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.	
110 cont.	1966 Feb.22	m	N'Z'	05	08.9		17	19		24		Mag. (cont.): 6 $\frac{3}{4}$ -7 Palisados, Berkeley
		iPP	Z''	09	16		6*			+17*		
		iS	N'E'	13	09		15	+26	-			
		i	Z'	13	33		24			+180		
		i	E'	13	35		17		+19			
		m	N'	13.9			23	270ca				
		eL	Z''	15	20		30*					
		L	E'	16.0			32		240ca			
		iM	N'Z'	17	00		30	+130		-165		
		M	E''	19.0			18*		180ca			
M	N''Z''	19.6			19*	260ca		390ca				
F	Z'	08	58									
111	22	eP	Z	18	24	25	0.5					Microseisms present
		e	Z'	24	36		12					
		eS	N'	29	07		22					USCGS: 5.6 S, 151.5 E
		e	Z'	29	24		20					H 18 18 36.4
		m	N'Z'	29.7			20	4		3		h 58 km.
		eL	Z'	32	20		32					Mag. 5.5
		M	E'	34	51		19		5			
		M	N'	35	29		18	7				
M	Z'	35	42		18				8			
115	24	P	Z	20	14	46	1.0				0.08	Microseisms present
		e(PP)	N'	15	31		10					
		e(S)	N'	19	28		21					USCGS: 6.1 S, 147.4 E
		e	Z'	19	37		20					H 20 08 57.0
		eLQ	E'	21	16		37					h 59 km.
		eL	N'	22	32		28					Mag. 5.5
		eL	Z'	22	59		30					
		M	N'	24	40		22	7				
		M	Z'	24	58		22				7	
		M	E'	25	10		17		4			
117	25	eP	Z'	22	57	57					4110	Microseisms present
		epP	Z'		58	07					3790	
		ePP	Z'		59	23						USCGS: 15.1 S, 173.2 W
		eS	N'	23	03	40	18	1				H 22 50 47.1
		esS	E'Z'	03	56		16		3	3		h 33 km.
		iL	N'	06	39		27	+21				Mag. 5.5
		M	N'	08	37		17	7				
		M	E'Z'	09	44		20		8	9		
M	E'Z'	13			16		10	14				
118	26	(iP)	Z	00	46	48.5						Masked by microseisms
		eL	N'Z'	01	18		22					USCGS: 52.4 N, 173.6 E, H 00 33 50.1 h 51 km. Mag. 5.3
121	26	iP	Z	10	53	41.0	0.8			+0.08		Compression. Microseisms present USCGS: 14.6 S, 167.3 E, H 10 48 37.3 h 161 km. Mag. 4.0
123	26	e	Z	18	43	44						Masked by microseisms
		e	E'	46	40		13					
		eL	Z'	47	20		18					USCGS: 44.5 S, 168.0 E
		eL	N'	47	27		18					H 18 39 28*
		eT	NZ	59	40							h 33 km.
T max.	NEZ	19	00.4		0.7	0.17	0.24	0.23			Mag. 5.0	
124	27	P	Z	20	31	21	1.2				0.11	Microseisms present
		e	N'	36	50		14					USCGS: 5.8 S, 148.5 E
		eL	E'	38	38		24					H 20 25 36*
		M	E'	41	41		15		$\frac{1}{2}$			h 123 km.
		M	N'Z'	44.0			14	1		1		Mag. 5.0
125	28	iP	Z	02	13	49.1	1.0			+0.12		Compression USCGS: 43.7 N, 139.6 E, H 02 02 13.6 h 225 km. Mag. 5.5
126	28	eS	N'	13	55	13						Masked by microseisms
		e	N'	56	04							USCGS: 29.2 N, 130.1 E, H 13 35 39.0
		eLR	Z'	14	08	27	30					h 33 km. Mag. 5.5
		M	E'	13	11		20		1			



No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
								AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.	
131	1966 Mar. 2	P	Z	07	32	03						Microseisms present
		eS	E'		37	46						USCGS: 2.9 S, 129.8 E
		eL	N'		44	05	25					H 07 24 55.6
		M	E'		49	15	18		3			h 41 km.
		M	N'		51	35	16	4				Mag. 5.9
		M	Z'		51	45	16			4		
133	3	e(P)	Z'	03	37	49						Masked by microseisms
		e(S)	N'		47	57						USCGS: 48.3 N, 154.3 E
		e(S)	E'		47	58						H 03 25 28.0
		eLQ	E'		59	38	40					h 45 km.
		eL	N'Z'	04	04	02	30					Mag. 5.9
		M	N'Z'		08	47	23	3		3		5½ Palisades
		M	E'		10	42	22		1			Masked by microseisms.
		4 (P)	Z	03	53	00	1.0					USCGS: 25.2 S, 178.9 W, H 03 47 44.6
												h 370 km. Mag. 4.5
136	4	eiP	Z	24	03	52.0	1.6					Compression
		iP	N"E"Z"		03	52	5*	+2*	-4*	+1.70		N'E'Z' disturbed by calibration pulse
		ipP	Z		04	01	1.5			+11*		USCGS: 38.8 S, 177.9 E
		e(S)	N'		07	57	15			+0.60		H 23 58 55.9
		i	Z'		08	22	17					h 27 km.
		i	N'		08	26	17	+13		+14		Mag. 6.1
		eLR	Z'		09	32	27					
		M	N"		11	40	16*	12*				
		M	E'		12	00	17		26			
		M	Z'		12	45	17			38		
138	5	e(PPP)	Z'	22	57	21						Masked by microseisms
		e(S)	E'	23	01	12	15					USCGS: 21.5 S, 175.3 W
		eL	Z'		04	20	33					H 22 49 34.9
		eLR	E'		05	08	25					h 40 km.
		M	N'		05	20	17	2				Mag. 5.1
		M	E'Z'		07	37	17		3	4		
140	6	eP	Z'	02	29	08	7				10,410	USCGS: 31.6 N, 80.5 E
		i	Z		29	14	1.5			+0.36	93°7	H 02 15 56.7
		ePP	Z'		32	55	8					H 44 km.
		ePPP	Z'		34	57	8					Mag. 6.1
		eSKS	E'		39	45	?					6½ Pasadena
		eSKKS	N'E'		39	54	11	2	2			6.5-7 Berkeley
		eS	E'		40	12	14		2½			6½-6¾ Palisades
		iPS	Z'		41	41	13			+6		
		eSS	N'E'		46	39	23	4				
		e	Z'		47	26	35					
		o	N'		50	55						
		e	Z'		51	22	33	6	7			
		eLQ	N'E'		56	03	63	27	22	6		
		M	E'	03	07	06	30		11			
		M	N'		07	29	27	14				
		M	Z'		09	40	26			16		
141	6	e(S)	E'	18	12	38						USCGS: 24.1 S, 176.9 W
		e	N'		12	49						H 18 01 50.0
		M	N'		17	38	13	31				h 33 km.
		M	E'		18	42	16		8			Mag. 5.4
		M	Z'		18	54	17			7		
		7 (P)	Z	02	40	51.5						Microseisms present
												USCGS: 20.5 S, 178.4 W, H 02 35 28*
												h 601 km. Mag. 4.9
143	7	eP	Z'	21	41	16	14					Microseisms present
		eS	N'E'		51	17	15	2	1	1		
		e	E'		51	30	20		5			
		ePS	E'		52	00	20		4			USCGS: 37.2 N, 114.8 E
		eSS	N'		55	57	22	5				H 21 29 17.0 h 33 km.
		eSSS	N'Z'	22	00	09	21	9		9		Mag. 5.8
		eLQ	E'		02	18	(40)					6.4 Berkeley
												6¾ Pasadena
												7-7¼ Palisades

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## RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			$\Delta$	Remarks
					AN	AE	AZ		
			h m s	s	$\mu$	$\mu$	$\mu$	km.	
143 cont.	1966 Mar. 7	eL Z'	22 06 20	50			21		
		M E'	10 36	27		14			
		M N'Z'	14 37	23	35		47		
144	8	eP Z	00 24 59						Microseisms present
		M E'	38 15	17		5			USCGS: 18.9 S, 173.3 W, H 00 18 09.8
		M Z'	38 28	18			8		h 33 km. Mag. 5.3
		M N'	38 52	12	5				
145	8	iP Z'Z"	01 19 00	5			+2	2710	Compression
		m Z	19 06	1.0			0.64	2494	
		ipP N'E'Z'	19 10	8	+5	+2	-7		USCGS: 13.9 S, 166.6 E
		eS N'	23 15						H 01 13 42.3
		i E'	23 23	16		-14			h 37 km.
		i N'	23 24	16	-16				Mag. 5.8
		eLQ E'	24 05	32					6 Pasadena
		SSS N'	24 21	22	24				5.9-6.3 Berkeley
		M Z'	25 36	27			34		6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Palisades
		M E'	25 43	25			22		
		M N'	26 12	23	13				
146	8	iP Z	01 26 27.5	1.2			-0.18	Dilatation Microseisms present	
147	8	iP Z	05 48 59.5	1.0			+	4760	Compression Microseisms present
		m Z	49 10	1.2			0.30	4298	
		e Z'	49 15						USCGS: 1.9 N, 126.4 E
		iPcP N'E'Z'	50 49	7	+3	-2	-5		H 05 41 04.5
		o N'	55 11	20					h 33 km.
		iS E'	55 21	16			+3		Mag. 5.9
		e N'E'Z'	55 25	40	14	10	12		4.7-5.2 Berkeley
		eSS Z'	58 30	25			18		
		eL Z'	06 01 00	50					
		eLR Z'	03 42	32					
148	8	M N'	05 37	23	24				
		M E'	06 00	24		38			
		M Z'	08 07	21			27		
		i(P) Z	12 27 16.5	1.2			+0.12		Compression Microseisms present
		e Z'	37 02						USCGS: 1.9 N, 126.4 E
		M N'	43 46	21	$\frac{1}{2}$	1			H 12 19 20.8
150	9	M E'	44 07	22					h 78 km.
		M Z'	46 12	18			1		Mag. 5.5
		i(P) Z	23 22 18.5				+		Masked by microseisms
		e(S) E'	29 00						USCGS: 7.4 S, 108.4 E, H 23 13 52*
151	10	e(SS) E'	32 30	15		1			h 148 km. Mag. 5.6
		M N'	39 38	20	1				
		P Z	04 36 34						Microseisms present
153	10	eS E'	44 58	11		1			USCGS: 32.2 N, 137.5 E, H 04 26 19.6
		e E'	46 00	11					h 382 km.
		o E'	47 27	16					Mag. 5.6
									5.5-5.9 Berkeley
155	11	iP Z	12 21 16.5	1.2			+0.28		Compression Microseisms present
		eS E'	26 03	7					USCGS: 19.3 S, 177.0 W,
		e N'	28 06	8					H 12 15 19.4
		e N'	28 40	8					h 320 km. Mag. 5.4
156	12	e(S) N'	08 12 21	20					USCGS: 55.2 S, 126.6 W
		e E'	12 35	20					H 07 54 17.0
		o N'E'	19 12	20					h 33 km.
		eLR Z'	21 20	30					Mag. 5.3
		LR max N'E'Z'	22.	28	1	1	2		
156	12	(eP) Z	01 11 05						Masked by microseisms
		e Z'	11 35						
		e N'	16 02	12	2				USCGS: 30.8 S, 178.5 W
		eL Z'	18 10	22					H 01 05 34.6 h 94 km.
		M Z'	20 55	19			$\frac{1}{2}$		Mag. 5.4
		M N'	21 10	14	1				4 $\frac{1}{2}$ -5 Berkeley



No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			$\Delta$	Remarks
						AN	AE	AZ		
				h m s	$\mu$	$\mu$	km.			
157	1966 Mar. 12	iP	Z	16 41 50.7	1.3			-0.56	7140 6493	Dilatation h 0.005 N'E'Z' N'E'Z" hard to read. Lines overlapping.  USCGS: 24.1 N, 122.6 E H 16 31 21.8 h 63 km. Mag. 6.7 7-7 $\frac{1}{2}$ Berkeley 7 $\frac{1}{2}$ -7 $\frac{3}{4}$ Pasadena 7 $\frac{3}{4}$ -8 Palisades
		iP	Z'	41 51				-		
		i	Z'	41 57				-		
		i	Z	41 58	1.3			-1.96		
		i	N'E'N"E"	41 58	10	+12	-5			
		iP	N'E'N"E"	42 07	12	+42	-21			
		iPP	Z'	44 13	16			+37		
		iPPP	E'	45 49	15		+18			
		eS	N'	50 22	?					
		i	E'	50 28	15		-70			
		i	N'	50 32	?					
		L	Z'	17 01.6	50			560ca		
		M	E"	06.5	24*		520ca*			
		M	N"	07	24*	470ca*				
F		21.6 ca								
158	13	iP	Z	15 04 16				+	Microseisms present USCGS: 23.8 N, 122.7 E, H 14 53 47.6 h 51 km. Mag. 5.0	
160	13	eP	Z	18 08 37					Microseisms present USCGS: 55.0 S, 126.4 W H 17 58 36* h 33 km. Mag. 5.4 6-6.4 Berkeley	
		eS	N'	16 38	20	1				
		e	E'	16 52	20		1			
		eL	N'E'	23 30	20	2	2			
		eLR	N'Z'	25 30	30					
		LR max	N'E'Z'	26.3	27	4	-2	6		
161	13	(P)	Z	18 47 09 $\frac{1}{2}$					Masked by microseisms USCGS: 20.9 S, 175.4 W, H 18 40 40.7 h 65 km. Mag. 5.2	
		eL	E'Z'	56.1	25					
164	14	i(P)	Z	23 36 44.8	1.5			+	Microseisms present USCGS: 6.0 N, 146.4 E, H 23 28 52* h 8 km. Mag. 4.8	
169	16	eS	E'	20 54.7	?				Masked by microseisms USCGS: 9.5 N, 121.9 E, H 20 38 23.5 h 24 km. Mag. 5.4	
		e	N'	54.8	?					
170	17	e	Z'	04 05 30					Masked by microseisms USCGS: 2.0 N, 126.4 E H 03 57 27.0 h 79 km. Mag. 5.4	
		eS	N'	11 40						
		eSS	E'	14 42	23					
		e	N'	14 48	26					
		e	Z'	15 09	24					
		eL	Z'	19.3	34					
		M	E'	25 22	20		2			
		M	N'	25 48	18	2				
		M	Z'	26 00	17			2		
172	17	iP	EZ	15 55 47.7	1.3		+0.11	-0.56	3190 2897	Dilatation h 0.09  USCGS: 21.1 S, 179.2 W H 15 50 32.2 h 626 km. Mag. 6.2 6 $\frac{3}{4}$ Pasadena
		iP	E'Z'E"Z"	55 48	8		+1	-3		
		i(pP)	Z	57 21.5	1.2			+0.20		
		isP	Z	58 35	0.9			-0.20		
		iPcP	Z'Z"	58 39	10			+12		
		i	E'E"	58 41	10		-7			
		i	N'N"	58 47	8*	+5*				
		i	Z'	59 52	15			-13		
		iS	E'E"	59 57	15		+19			
		i	N'N"	16 00 01	9*	-5*				
		i(sS)	N'N"	03 06	15	+41				
		f	Z'	03 07	17			-19		
		i	E'E"	03 10	14		-16			
		i	Z"	03 15	14*			+13*		
		iScS	N'N'N"	05 15	11	-24				
iScS	E'E'E"	05 16	11		+12					
M	Z'	11 01	18			11				
174	18	P	Z	20 51 02					Masked by microseisms USCGS: 20.7 S, 169.7 E H 20 46 19.4 h 78 km. Mag. 5.1	
		e(S)	N'	54 52	8					
		e	N'	55 13	9	2				
		e(L)	N'	55 32	23	2				
		M	N'	58 08	13	1				



RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks	
						AN	AE	AZ			
						μ	μ	μ	km.		
175	1966 Mar. 19	e(P)	Z'	13 48 04						Masked by microseisms	
		eS	N'	52 20	17						
		e	E'	52 28	18					USCGS: 9.4 S, 159.2 E	
		eL	N'E'	53 17	26	3	3			H 13 42 27.2	
		M	N'E'	57 08	14	4	4			h 33 km.	
		M	Z'	57 37	18			3		Mag. 5.4	
176	19	P	Z'	17 29 10	6			2		Masked by microseisms	
		e(S)	N'	39 39	13						
		eL	E'	51 23						USCGS: 52.7 S, 19.9 E	
		eLR	Z'	55 28	36					H 17 16 40.9 h 33 km.	
		M	Z'	59 35	22			2		Mag. 5.4	
178	20	eP	Z'	01 57 58	13					Microseisms present	
		iPP	Z'	02 02 39	6			-7			
		e	E'	02 48	13		1			USCGS: 0.6 N, 30.2 E	
		ePPP	E'Z'	05 16	18		1	1		H 01 42 49.9	
		eSKS	E'	08 42	(26)					h 36 km.	
		eiPS	N'E'	12 28	26		+20			Mag. 6.1	
		e	Z'	12 37	26			6		6.4-6.6 Berkeley	
		ePPS	Z'	13 33	26			11		6 <sup>3</sup> / <sub>4</sub> -7 Pasadena	
		iSS	E'	19 19	38		+50			7-7 <sup>1</sup> / <sub>4</sub> Palisades	
		e	E'	21 03	55						
		eiSSS	E'	23 26	32		-24				
		eLR	E'Z'	36 51	45			65	83		
		LR max.	E'Z'	38.0	45						
		M	N'	51 00	19	14					
		M	Z'	51 21	19				29		
M	E'	51 34	19			20					
F	Z'	05 30 ca									
180	20	iP	Z	07 54 35.7				+		Compression Microseisms present	
		eS	N'	08 00 05						USCGS: 17.0 S, 174.3 W	
		i	N'	02 50	20	+5				H 07 47 50.2	
		eL	Z'	04 06	21					h 117 km. Mag. 5.7	
181	20	eP	Z'	09 10 58						Microseisms present	
		ePP	E'	12 10	12						
		eS	E'	16 16	?					USCGS: 21.0 S, 174.5 W	
		e	N'	16 26	18					H 09 04 31.8	
		e	Z'	16 32	18					h 95 km.	
		e	E'	16 48	16		1			Mag. 5.2	
		eLQ	N'	18 27	26	3				5 <sup>3</sup> / <sub>4</sub> Pasadena	
		eLR	Z'	20 09	25			4		6 Berkeley	
M	N'	21 51	15	6							
M	E'Z'	24 00	18			7	9				
183	20	P	Z	17 36 31						Masked by microseisms	
										USCGS: 13.2 N, 124.9 E, H 17 27 12.6 h 33 km. Mag. 5.0	
185	20	eP	Z'	18 14 41						Microseisms present	
		i	Z	14 41.8	0.9			-0.20			
		e	N'	19 15	12					USCGS: 12.3 S, 167.4 E	
		eL	N'	20 27	24					H 18 09 09.5	
		i	N'	20 42	20	+8				h 57 km.	
		eL	Z'	20 44	25					Mag. 5.4	
		M	E'Z'	22 16	23			7	9		
		M	N'	24 08	15	11					
M	Z'	24 35	17				9				
M	E'	24 54	14			9					
188	22	iP	Z	08 23 39.0	1.2			+0.08		Compression	
		eS	E'	33 39						USCGS: 37.5 N, 115.0 E	
		M	N'Z'	50 54	22	28		29		H 08 11 33.7 h 11 km.	
		M	N'	58 04	23	46				Mag. 6.0 5.8-6.2 Berkeley	
189	22	iP	Z	08 31 36.5	1.3			+0.17	8780	Compression	
		i N'E'Z'N"E"Z"		31 40	14	-2	+1	+6	7990	USCGS: 37.5 N, 115.1 E	
		iPcP	Z	31 43	1.2			+0.14		H 08 19 33.8 H 33 km.	
		iS	N'N"	41 34	12	+8				Mag. 6.0 6.5-6.8 Berkeley	

Continued on next page



No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			$\Delta$	Remarks
							AN	AE	AZ		
189 cont.	1966 Mar. 22	i	E'E"	h m s	s		$\mu$	$\mu$	$\mu$	km.	Mag. (cont.): 6 $\frac{3}{4}$ -7 Pasadena 7 $\frac{1}{4}$ -7 $\frac{1}{2}$ Palisades
		iSP	N'Z'	08 41 39	25			-18			
		iSS	N'	42 12	15	+12			+6		
		oLQ	E'	46 23	20	+15					
		oLR	Z"	52.7	(36)						
		M	N'Z'	55.7	28						
		M	E'	09 04 54	23	70			92		
	F	Z'	05 50	21		30					
			Z'	12 35 ca							
190	23	iP	Z	00 15 02.3	1.3				+0.17	7130 6492	Compression USCGS: 23.8 N, 122.8 E H 00 04 34.7 h 51 km. Mag. 6.3 5.5-5.9 Berkeley 6 Pasadena 6-6 $\frac{1}{2}$ Palisades
		iP	Z'	15 02 $\frac{1}{2}$	5				+2		
		i	Z	15 12.7	1.2				-0.14		
		i	Z'Z"	15 13	6				-3		
		i	Z	15 22	1.0				+0.13		
		i	Z'	15 26	?				-		
		iS	N'E'N"E"	23 36	10	-3		-2			
		o	Z'	23 40	18				2		
		i	N'N"	23 56	11	-4					
		i	E'E"	24 00	13			+4			
		oLR	E'	34 08	27			7			
		M	E'	39 39	23						
		M	N'	40 14	21	8					
		M	Z'	40 30	21				8		
	oW <sub>2</sub>	Z'	02 36								
196	24	iP	NZ	08 33 10.0	1.1	-0.15			+0.90	2730 2496	Compression USCGS: 13.7 S, 166.8 E H 08 27 51.3 h 43 km. Mag. 5.2
		iP	Z'Z"	33 10	6*				+6*		
		i	E	33 10.5	1.0			+0.13			
		i	Z	33 28	1.2				+0.24		
		oS	N'	37 26	9	1					
		o	E'	37 36	12			1			
		o	Z'	37 43	18						
		o	E'	38 06	12			1			
		iSS	N'	38 18	10	-3					
		oSSS	N'	38 35	16	2					
		oLR	E'Z'	39 30	28			3	5		
200	24	P	Z	20 10 20						Masked by microseisms USCGS: 9.2 S, 113.5 E, H 20 02 30.6 h 75 km. Mag. 5.0	
		M	Z'	29 12	19				1		
204	28	iP	Z	15 54 53.0	0.7				+0.08	Compression USCGS: 17.4 N, 145.6 E, H 15 46 08.9 h 218 km. Mag. 5.5	
		o	E'	16 05 41	(23)						
		o	N'	06 06	23						
207	29	iP	Z	02 27 24.9	1.0				-0.54	6430 5799	Dilatation Microseisms present h 0.005 USCGS: 23.7 N, 142.1 E H 02 17 38.5 h 79 km. Mag. 5.9 5 $\frac{1}{2}$ Palisades
		i	Z'Z"	27 25	4				+2		
		i	N	27 25.4	1.0	-0.08					
		ipP	N	27 41	0.9	+0.10					
		iPcP	Z	28 17	0.9				+0.09		
		iS	N'	35 18	7	-2					
		iS	E'Z'	35 19	7			-1 $\frac{1}{2}$	-2		
		esS	N'E'Z'	35 46	9	2		$\frac{1}{2}$	1		
		i	N'	36 11	?	+					
		oL	E'	43 08	35			4			
		oL	N'	45 32	40	4					
		oLR	Z'	45 40	42				6		
		M	N'	48 35	23	2					
		M	E'	48 55	23			1			
M	Z'	49 16	21				3				
210	30	i(P)	Z	01 32 01.5						Masked by microseisms USCGS: 10.3 S, 161.6 E, H 01 26 34.8 h 40 km. Mag. 5.2	
		o(L)	N'	39							
214	31	oP	Z'	05 10 51	6				2	USCGS: 17.3 S, 167.8 E H 05 05 54.7 h 34 km. Mag. 5.4	
		i(S)	N'N"	15 00	11	-9					
		i	E'Z'E"	15 03	11			-5	-5		
		i	E"	15 12	9*			-6*			
		oL	E'	16 04	25						
		oLR	Z'	16 37	27						
		M	N'E'Z'	18.3	16-19	8		8	10		



## RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			$\Delta$ km.	Remarks	
							AN $\mu$	AE $\mu$	AZ $\mu$			
216	1966 Apr. 1	eP	Z'	03 46 24							Microseisms present	
		e(S)	E'	57 24	12		1					
		eSS	E'	04 03 14	22		2					USCGS: 53.5 S, 3.1 W
		eSS	N'	03 19								H 03 33 28.9
		eLQ	E'	10 26	28		4					h 33 km.
		eG	E'	11 56	46		4					Mag. 5.8
		eL	N'Z'	17 15	34							
		M	E'	22 15	20			2				
		M	N'Z'	22 38	20	3		5				
217	1	P	Z	05 26 52							Microseisms present	
		i	Z	26 56.3	1.0			-0.08			USCGS: 5.8 S, 149.1 E, H 05 21 09.7	
		eL	Z'	35.3							h 112 km., Mag. 6.1	
222	4	eP	Z'	05 42 35	9				3			
		i	N'N''	42 40	9	-2						USCGS: 54.7 S, 146.2 E
		isP	N'	42 48	7	+4						H 05 37 50*
		i(S)	E'E''	46 37	13		+15					h 33 km.
		i	N'	46 46	9	+5						Mag. 5.4
		i	Z'	46 47	9				+4			
		i	E'	46 55	15			-12				
		i	N'	47 04	9	+6						
		e	E'	47 29	16							
		eL	N'Z'	47 35	25	14				13		
		M	N'E'	50 00	10	18	20					
		M	Z'	50 23	12				14			
223	4	e(S)	E'	07 03 10							Masked by microseisms	
		e	N'	03 13								
		eL	E'	14 23	40							USCGS: 12.1 N, 92.7 E
		eL	N'	14 29	40							H 06 42 13.9
		M	N'	21 49	24	2						h 33 km.
		M	N'E'Z'	24 28	26	2	2	3				Mag. 5.0
		M	E'Z'	28 57	20		3	3				
225	4	iP	Z	23 37 55.6	1.2				+0.30		Compression	
		M	N'Z'	45	22	1			1		USCGS: 10.8 S, 164.3 E, H 23 32 22.3	
										h 37 km. Mag. 5.3		
226	5	eP	Z	12 02 32.2	1.6				0.30			
		m	Z	02 36	1.2				0.36			USCGS: 55.1 S, 158.4 E
		e	N'	06 43	9	2						H 11 57 37*
		e	E'	06 57	20			5				h 5 km.
		eLR	Z'	07 47	21					4		Mag. 5.6
		M	E'	08 43	12			5				
		M	N'Z'	08 57	12-16	4				4		
227	5	e(P)	Z	19 05 46							Masked by microseisms	
		eL	Z'	14 30	26							USCGS: 5.9 S, 147.6 E, H 18 59 54.1
		M	N'Z'	16 01	24	2			1		h 61 km. Mag. 5.2	
228	6	iP	Z'Z''	03 07 04	6				+5	4920	Compression	
		iS	E'E''	13 35	14			-14		4493	Microseisms present	
		i	Z'	13 37	7				+5			USCGS: 45.8 S, 96.1 E
		i	N'N''	13 39	11	-6						H 02 59 01.7
		iScS	N'E'	16 54	13	-6	+5					h 33 km.
		eLQ	N'	17 27	32							Mag. 5.8
		eLR	Z'	19 30	32							6 Pasadena
		M	N'	20 38	25	24						
		M	Z'	21 27	21					31		
		M	E'	21 43	19			25				
229	6	P	Z	19 50 28	0.8				0.05		Microseisms present	
		i	Z	50 31.6	?				+			
		i	N'N''	54 22	8	+2						USCGS: 22.3 S, 171.7 E
		i	E'E''	54 28	6			-4				H 19 45 46*
		eL	N'	55 04	25	4						h 113 km.
		eL	E'	55 07	33			2				Mag. 5.3
		(P)	Z	22 01 52								Masked by microseisms
											USCGS: 8.9 N, 126.4 E	
											H 21 53 10.3	
											h 69 km. Mag. 5.8	





No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks	
						AN	AE	Az			
				h m s	s	μ	μ	μ	km.		
234	1966 Apr. 7	P	Z	09 53 03							Masked by microseisms  USCGS: 26.1 N, 127.4 E H 09 42 32.1 h 46 km. Mag. 5.7
		e(PS)	E'	10 01 55							
		e	N'	02 08							
		eL	E'	15 06	28						
		eL	Z'	15 11	29						
		M	N'	19 40	20	2					
		M	Z'	19 57	20			2			
236	8	eP	Z	01 59 17	1.3			0.15	9530	Large microseisms on N'E'Z'N"E"Z"  USCGS: 51.2 N, 157.7 E H 01 46 44.9 h 47 km. Mag. 5.9 6-6 $\frac{1}{2}$ Berkeley 6 $\frac{1}{2}$ Pasadena	
		e	Z'	59 21	17				85 $\frac{1}{8}$		
		ePcP	Z	59 22	1.5			0.22			
		esP	Z	59 30	1.5			0.44			
		iSKS	N'	02 09 37	22	+5					
		iS	E'	09 46	22			-3			
		e	Z'	09 47	27						
		eSS	N'	15 27	30	5					
		eLQ	E'	22 05	48			11			
		eL	N'	23 27	35						
		eLR	N'	26 09	37						
		LR max	N'E'Z'	28.5	28	12	7	14			
240	9	iP	Z	14 54 37.8	0.8			+0.15		Compression  USCGS: 14.1 S, 166.7 E H 14 49 22.8 h 47 km. Mag. 5.4	
		ipP	Z'Z''	54 46	6			+2			
		i	N'	59 02	9	-3					
		e	E'	59 03							
		e	Z'	59 07	17			2			
		eL	E'Z'	15 01 03	26						
		M	E'Z'	02 38	19			2	3		
		M	N'	03 20	17	2					
241	9	eP	Z	20 09 14					Microseisms present USCGS: 5.4 N, 126.0 E H 20 00 58.5 h 133 km. Mag. 5.6		
		ipP	Z	09 38				+			
		e(S)	N'	15 54							
		e(SS)	E'	19 11	14			2			
245	12	eP	Z	23 20 23					Microseisms present. N'E'Z' confused by calibration pulses. USCGS: 17.9 S, 168.0 E H 23 15 29.6 h 30 km. Mag. 5.3		
		ePp	Z	20 32.6	1.3			0.24			
		e(S)	N''	24 26	9*						
		eL	Z'	26 14	22			3			
		M	N'E'Z'	28 00	17	2	2	3			
246	12	eSKS	N''	24 01 44					USCGS: 38.1 S, 73.0 W H 23 37 42.1 h 44 km. Mag. 5.7 6 Pasadena 6-6 $\frac{1}{2}$ Palisades 6.4 Berkeley		
		e	E'	02 39	22			3			
		eSS	E'	09 22	22			3			
		eLQ	N'E'	18 22	40						
		eLR	Z'	21 24	33						
		M	E'	26 08	19			5			
		M	Z'	27 00	19					10	
		M	N'	27 13	19	6					
		W2 M	N'E'Z'	26 11	21	3	2	4			
247	13	e(SKS)	N'	03 59 25					Masked by microseisms USCGS: 38.2 S, 73.2 W H 03 35 16.3 h 40 km. Mag. 5.8 5 $\frac{1}{2}$ Pasadena 5 $\frac{1}{2}$ -5 $\frac{1}{2}$ Palisades		
		e	E'	04 00 16							
		e(PS)	N'	01 36							
		eLQ	E'	16.3	34						
		eLR	N'Z'	20.0	28						
		M	E'	24.0	19			2			
		M	N'Z'	24.6	19	2				5	
251	14	e(S)	N'	19 27 11	20				USCGS: 3.8 S, 151.4 E H 19 16 01* h 33 km. Mag. 5.1		
		eL	Z'	30 21	30						
		M	N'E'	33.0	20	4		4			
		M	Z'	33.2	20					5	
255	17	iP	EZ	13 14 30.0	0.9			-0.08	Dilatation USCGS: 26.0 S, 178.4 E, H 13 09 52.7 h 650 km. Mag. 4.7		
257	19	eP	Z	19 35 01					Feeble and masked by microseisms  USCGS: 7.8 S, 130.0 E H 19 28 30* h 33 km. Mag. 5.1		
		e	N'E'	41 05							
		eL	E'	44.5	35						
		eLg	Z'	45.7	4						
		(Lg)	N'E'	46.1	7	2		3			
		M	N'E'	46 45	16	2		2			
		M	N'E'Z'	49 15	12	2		2			



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.	
258	1966 Apr. 20	(P)	Z	02 42 03						Masked by microseisms
		eS	E'	49 36	13					
		eL	E'	55 37	38					USCGS: 18.8 N, 147.0 E
		M	E'	57 37	25		2			H 02 32 49.7
		M	N'	59 12	20	2				h 12 km.
		M	Z'	03 01 27	18			1		Mag. 5.0
260	20	P	Z	06 09 54						Masked by microseisms
		i	Z	09 59.5	1.0			+		
		eS	E'	17 23	14					USCGS: 18.9 N, 146.8 E
		eL	E'	23 25	35					H 06 00 39.4
		M	E'	25 22	27		2			h 33 km.
		M	N'	26 59	21	2				Mag. 5.1
		M	Z'	29 31	19			1		
263	20	eP	Z'	16 35 31						Microseisms present
		e	N'	42 31	12					
		e(S)	N'E'	43 02	12	1	1			USCGS: 18.8 N, 146.9 E
		e	E'	45 28	12		1			H 16 26 21.2
		eL	E'	49 03	38		3			h 55 km.
		N	E'	51 52	21		4			Mag. 5.4
		M	N'Z'	52.6	21	3		2		5.2-5.4 Berkeley
265	21	eP	Z'	15 56 35						Microseisms present
		eS	N'E'	16 05 42	9	1	1			USCGS: 36.1 N, 141.8 E
		M	E'	25 10	18		1			H 15 45 25.4
		M	Z'	27 32	20			1		h 30 km.
		M	N'	27 58	20	1				Mag. 5.5
267	22	eSKS	N'E'	03 30 44	8					Masked by microseisms
		e	E'	31 40	14					
		e(PS)	N'	33 04	20					USCGS: 37.8 S, 73.4 W
		eSS	Z'	38 06	14					H 03 06 32.3
		e	E'	38 22	17					h 18 km.
		eL	E'	47 48	26					Mag. 5.7
		eL	N'	51 30	26					
		M	E'	55 08	20		2			
		M	Z'	55 22	19			3		
		M	N'	55 36	19	1				
270	22	iP	Z	13 27 37.4	0.5					Dilatation
		eP	NE	27 37.5	0.5					
		iS	E	28 10.8	0.5		+0.10			Felt at Galong, New South Wales,
		iS	N	28 11.2	0.5	+0.25				M.M. III-IV
		m	N	28 19	0.8	0.53				
		m	Z	28 21	0.8			0.37		
		m	E	28 23	0.8		0.48			
271	23	eP	Z'	00 17 33					4840	Microseisms obscure NEZ
		i N'E'Z'N'E"Z"	Z'	17 36	10	+6	-5½	-18	4396	
		i	Z'	17 59	8			+7		USCGS: 0.9 S, 122.4 E
		iS N'E'N"E"	Z'	24 00	19	+	-16			H 00 09 34.4
		i N'N"	Z'	24 08	15	-28				h 45 km.
		e	Z'	24 11	34					Mag. 6.0
		iSS N'E'	Z'	27 10	16	+64ca	52ca			6¼ Pasadena
		iScS E'	Z'	27 30	10		-23			6¼-7 Palisades
		i N'	Z'	27 46	15	+40ca				
		SSS	Z'	28 03	17			31		
		LQ	N'	28.3	55					
		L	Z'	30 43	40			48		
		M N'E'	Z'	32 24	23	135ca	95ca			
		M	Z'	35 50	23			90ca		
		F	Z'	04 25						
272	23	eP	Z'	06 54 13	5					Microseisms obscure NEZ
		i E'Z'E"Z"	Z'	54 20	6		-2½	+3½		
		i	Z	54 23	2.5			+5.2		USCGS: 41.6 S, 174.4 E
		i	Z'Z"	54 26	6			+7		H 06 49 38.6
		i N'N"	Z'	54 27	6	+4				h 15 km.
		iS N'N"	Z'	58 03	14	-14				Mag. 5.8
		e	Z'	58 03	14					
		i	E'E"	58 04	13		-8			Continued



No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			$\Delta$	Remarks	
							AN	AE	Az			
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.	
272 cont.	1966 Apr. 23	i	Z'Z''	06	58	10	13			+8		
		m	N'E'		58	23	16	26	11			
		i	N'E'		58	27	13	+9	+4			
		oLR	Z'		59	22	25					
		M	E'		07	00	03	14		18		
		M	N'			00	16	13	28			
		M	Z'			00	39	19			22	
		T	NEZ		12	45						
273	23	oP	Z'	09	04	43					4770	Microseisms present
		iS	N'E'N''E''		11	05	13	-5	-7		4299	
		i	Z'		11	32	10			+4		
		oSS	E'		14	09	15					
		i	N'		14	16	17	+9				
		iScS	N'		14	33	11	+8				
		oG	N'		15	17	50					
		oL	Z'		17	1	48					
		M	N'		19	46	20	20				
		M	E'		19	54	18		11			
		M	Z'		22	50	24				10	
		M	Z'		25	43	20				13	
		M	N'		26	22	18	6				
276	25	iP	EZ'	10	47	19.8	0.7		+0.04	-0.13		Dilatation
		o	N'		54	31	12					USCGS: 21.0 S, 178.7 W, H 10 41 58.2
		o	Z'		54	48	16					h 561 km. Mag. 5.3
278	28	iP	N'Z'N''Z''	01	19	50	4	+3		+4 $\frac{1}{2}$	2000	Compression
		iP	NEZ		19	50.5	1.0	+0.13	-0.10	+0.24	18°	
		ipP	Z		19	59	1.0			+0.30		
		ipp	N		20	04	0.8	+0.10				USCGS: 49.1 S, 164.1 E
		oS	E'		23	07	?					H 01 15 34*
		oLQ	N'E'		23	16	16					h 3 km.
		oSS	Z'		23	29	?					Mag. 5.8
		m	N'E'		23	40	15	4	5			
		eLR	Z'		24	06	24					
		M	E'		24	42	11		5			
		M	N'		24	54	12	4				
		M	Z'		25	18	16				5	
		eT	N		37	07	0.5					
T max.	N		38	23	0.6	0.16						
T "	Z		38	28	0.6				0.15			
T "	E		38	36	0.6		0.14					
279	28	o	Z'	17	03	39						Masked by microseisms
		oS	E'		08	32						USCGS: 19.1 S, 173.6 W
		o(L)	N'		11	14	18					H 16 56 20*
		M	N'		15	44	13	8				h 27 km.
		M	E'Z'		16	31	18		9	13		Mag. 5.2
280	May 1	oP	Z	10	56	48 $\frac{1}{2}$						Microseisms present on all records
		o(S)	N'		11	01	38					USCGS: 4.5 S, 153.5 E
		o(sS)	N'		02	14						H 10 50 52.8
		oLR	Z'		04	52	33					h 102 km. Mag. 4.8
283	1	oPP	Z'	16	42	56						Masked by microseisms
		oPS	E'		52	48	20		1			USCGS: 8.5 S, 74.3 W
		o	N'		52	53	20	1				H 16 22 56.3
		oSS	N'E'		59	14	20	2	2			h 165 km. Mag. 5.7
		o	Z'		17	00	56	20			1	6 $\frac{3}{4}$ Pasadena
284	2	oP	N'Z'	09	58	34	9	1		1 $\frac{1}{2}$	3100	
		m	N'Z'		58	51	9	2		4	2799	
		oPP	N'Z'		59	25	9			2		USCGS: 6.0 S, 149.7 E
		oS	N'	10	03	14	21	6				H 09 52 48.5
		i	Z'		03	31	21			+13		h 52 km.
		o	E'		03	47	21		3			Mag. 5.2
		m	N'		03	50	21	18				6 Pasadena, Palisades
		oL	Z'		05	50	35					
		M	N'Z'		08	16	22	17			18	
		M	E'		09	25	16		14			



## RIVERVIEW COLLEGE OBSERVATORY

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No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			$\Delta$	Remarks
							AN	AE	AZ		
				h m s	s	$\mu$	$\mu$	$\mu$	km.		
286	1966 May 2	iP	Z	16 47 26.5	0.6			-0.06		Dilatation	
		e	Z'	56 52		Feeble. Masked by microseisms				USCGS: 8.6 S, 114.9 E, H 16 39 44* h 103 km. Mag 5.8	
287	3	iP	Z	19 09 03.5	0.5			-		Dilatation.	
		i	NEZ	09 04	0.5	+0.02	+0.03	+0.05		Felt in Victoria and New South Wales	
		e	Z'	10 17						USCGS: 37.1 S, 147.2 E	
		i	N'E'	10 19	1½	-	+8			H 19 07 55.0	
		eL	N'E'	10 23	6	6	5			h 37 km.	
		M	N'E'Z'	10 41	7	6	6	8		Mag. 3.8	
288	4	eS	E'	17 04 04						USCGS: 62.6 S, 155.1 E	
		eL	E'	05 08	18		1			H 16 53 18*	
		eL	N'	05 23	18	½				h 33 km.	
		eL	Z'	06 16	27			1			
290	5	eP	Z	14 31 55½	1.2				7190	Large microseisms present	
		op <sup>D</sup>	Z'Z''	32 07	8			4	6497		
		i	Z	32 09	1.3			+0.31		USCGS: 24.4 N, 122.6 E	
		i	Z	32 12	1.3			+0.29		H 14 21 22.7	
		iS	N'N''	40 32	15	-3				h 60 km.	
		e	Z'	40 34	12			3		Mag. 5.7	
		ePS	E'	40 56	16		3			5½-6 Pasadana	
		eSSS	E'	47 42	16		3			6-6½ Palisades	
		eLQ	N'	49 06	47						
		eLR	E'	51 38	26						
		eL	Z'	52 24	35						
		M	E'	57 29	22		7				
		H	N'E'Z'	58 58	20	8	7	10		** 294 May 6 See end of Bulletin	
** 294 295	6 7	oW2	N'Z'	16 53	24						
		eS	N'	10 02 23		Feeble				USCGS: 0.7 S, 122.2 E	
		e	E'	02 31		"				H 09 48 03.0	
		eSS	N'E'	05.5		"				h 43 km. Mag. 5.6	
299	9	iP	Z	10 05 42	1.0			-0.05		Dilatation	
										USCGS: 13.2 S, 166.6 E, H 10 00 33* h 205 km. Mag. 5.0	
301	9	e(S)	E'	20 18 49	18					USCGS: 15.4 S, 175.2 W	
		eL	E'	22 55	31					H 20 06 18*	
		M	E'Z'	28 10	17		2	2		h 70 km. Mag. 4.6	
302	9	eS	E'	21 29.4	13					USCGS: 42.1 S, 87.6 E	
		e	N'	29.5	13					H 21 13 30* h 33 km.	
		eL	Z'	37	30					Mag. 4.6	
308	11	P	Z	14 29 59.7	0.8			0.04		Microseisms present	
		eS	E'	40 17	11		2				
		eL	E'	51 50	27					USCGS: 48.9 N, 156.2 E	
		L	E'	54 53	21		2			H 14 17 34.1	
		M	E'	15 03 36	19		1			h 13 km.	
		M	Z'	04 27	18			2		Mag. 5.8	
		M	N'	05 12	19	2				5.4-5.8 Berkeley	
		M	Z'	11 54	18			4		6 Palisades	
309	11	eS	E'	22 02 16	10		1			Masked by microseisms	
		M	N'	24 48	17	1				USCGS: 48.8N, 156.3 E, H 21 39 35.3	
		H	E'	25 14	18		1			h 28 km. Mag. 5.7	
		M	Z'	25 45	20			1		5.1-5.3 Berk. 5½-5¾ Palisades	
316	15	iP	Z	14 59 00.5	1.3			+0.24	10,000	Compression	
		iP	Z'Z''	59 01	4*			+2*	9090		
		ipP	Z	59 11	1.1			+0.23		USCGS: 51.5 N, 178.4 W	
		isP	Z	59 14.5	1.1			+0.28		H 14 46 06.5	
		iSKS	N'N''	15 09 28	8	+2				h 31 km.	
		iS	E'E''	09 49	10		-3			Mag. 5.8	
		iScS	N'N''	09 51	10	-2				5.5-5.7 Berkeley	
		oS	E'E''	10 05	9		2			5¾-6 Pasadana	
		eSS	E'	15 40	22		1			6 Palisades	
		eSS	N'Z'	15 54	22	2		1			
		eL	E'	22 22	?						

Continued



No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			$\Delta$	Remarks
						AN	AE	AZ		
316	1966 May 15	M	N'Z'	h m s	s	$\mu$	$\mu$	$\mu$	km.	
cont.		M	E'	15 31 11	23	3		4		
		M	E'	33 18	22		2			
		oW2	N'Z'	16 59.5	25					
317	16	iP	Z	02 53 03.5	1.2			-0.46		Dilatation
		iP	Z'Z''	53 04	5			-1		
		iPP	Z	54 22	1.3			-0.39		
		i	Z'Z''	54 23	3			+1		
		oS	E'E''	58 13	8		2			USCGS: 6.9 S, 129.4 E
		i	N'N''	03 00 08	7	+2				H 02 46 42.4
		M	E'	04 16	9		4			h 212 km.
		M	N'Z'	08 23	12			2		Mag. 5.9
320	17	o(S)	E'	17 22 24						
		oL	Z'	42						USCGS: 44.0 S, 75.2 W, H 16 58 17.0
										h 33 km. Mag. 5.7
324	19	o	Z'	07 20 21						Masked by microseisms
		iS	E'E''	31 11	12		-4			
		oPS	N'	32 24	21	1				USCGS: 54.1 N, 164.1 W
		o	Z'	32 30	22					H 07 06 26.8
		oS	E'	37 32	30		1			h 28 km.
		o	N'	38 45	21	2				Mag. 5.8
		e	N'	41 43	22	1				5.6-6.0 Berkeley
		oL	N'E'	45 57	36	2	2			6 Pasadena, Palisados
		oL	Z'	50 19	34			3		
		oL	E'	50 25	32		2			
		M	Z'	54 09	23			3		
		M	N'	57 00	22	2				
		M	E'	57 46	21		2			
326	20	o	Z'	09 24 19						Masked by large microseisms
		iS	E'	30 16	12		-3			USCGS: 13.9 N, 146.1 E
		i	E'	33 22	12		+3			H 09 14 49.2
		o	N'	36 11	18	4				h 66 km.
		M	E'	37 01	26		15			Mag. 6.0
		oL	Z'	37 31	?					6-6.4 Berkeley
		M	N'Z'	41 22	22	6		6		6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Pasadena
327	21	iP	Z	22 43 52.8	1.2			+0.34		Compression. Large microseisms present
										USCGS: 19.1 S, 169.5 E, H 22 39 14.8
										h 238 km. Mag. 5.0
328	22	oS	N'	03 02 23	17	2				USCGS: 7.4 S, 155.5 E
		oL	Z'	05 12	30					H 02 52 12.7
		M	E'	07 03	14		2			h 83 km.
		M	N'	08 27	16	2				Mag. 5.6
		i	N'	09 07	10	+2				
333	23	oS	E'	14 38 04						Masked by microseisms
		oL	E'	44 04	28		4			USCGS: 13.8 N, 146.4 E
		M	Z'	49 20	21			2		H 14 22 32.5 h 39 km.
		M	N'	49 30	20	2				Mag. 5.9
		M	E'	50 14	14		2			5.5-5.7 Berkeley
336	25	(i)	Z	08 35 19	1.6			+		Masked by microseisms
		iPPP	Z	36 59	1.3			-0.15		
		oS	N'	40 44	11					USCGS: 6.4 S, 131.1 E
		oS	E'	42 46	11					H 08 28 58.6
		i	N'N''	43 49	5	+4				h 39 km.
		oL	N'E'	44 09	45					Mag. 5.8
		L	N'E'	46.4	25	9	12			
		M	N'E'Z'	49.0	17	9	7	8		
337	25	iP	NEZ	12 11 45.8	1.4	-	-	+0.46	2360	Compression
		i	Z'Z''	11 47	7			-4	2192	
		i	Z	11 52.7	1.0			-0.14		
		iS	N'E'	15 35	13	-15	+			USCGS: 21.6 S, 169.9 E
		o	Z'	15 39						H 12 07 04.8
		i	N'Z''	15 42	11*	+11*		+		h 35 km.
		i	E'E''	15 43	7		-7			Mag. 5.5
		iPcP	Z'Z''	15 48	13			+16		
		oS	E'	16 10	15		4			
		iL	N'	16 20	23	+10				

Continued



## RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			$\Delta$	Remarks
					AN	AE	AZ		
			h m s	s	$\mu$	$\mu$	$\mu$	km.	
337 cont.	1966 May 25	eL E'	12 16 26	25		5			
		i Z'Z''	16 28	11			+4		
		eLR Z'	17 02	23					
		L Max. E'	17 28	23		8			
		L Max. Z'	17 46	21			13		
		M N'	18 52	14	11				
338	25	iP NEZ	13 25 29.6	2.2	+4.82	-1.22	+13.40	2180	Compression
		iP N'E'Z'N"E"Z''	25 30	9	+27	-6	+40	1926	
		i N'	25 45	9	+12				USCGS: 52.9 S, 160.0 E
		eS E'E''	29 03	16					H 13 20 56.2
		i N'E'Z'N"E"Z''	29 21	15	+61	+34*	+21		h 33 km.
		i Z'Z''	29 34	14			+24		Mag. 6.6
		m E''	29 42	15*		140*			
		m N'	29 47	15	90				
		i Z'Z''	30 00	18			+46		
		M Z'	30 50	22			83		
		M E''	32.9	10*		140*			
		M N'	33 06	12	82				
		T Max. NE	44 58	0.6	0.10	0.10			
Z	45 05	0.6			0.10				
339	26	(P) Z	04 38 58						Masked by microseisms
		e(S) N'	43 12	12					USCGS: 15.8 S, 167.1 E, H 04 33 51.0
		eL Z'	45 13	22					h 34 km. Mag. 5.0
340	26	iP Z	12 31 25.5	0.7			-0.05		Dilatation. Microseisms present
		eS Z'	35 25	13					USCGS: 25.5 S, 179.8 W
		e N'	36 11	15					H 12 26 23.8
		o Z'	37 58	14			2		h 455 km.
		M N'	40 07	13	1				Mag. 5.0
343	28	(e) Z'	00 14 14	5					Masked by microseisms
		eS N'	23 04	18	1				
		ePS E'	23 31						USCGS: 24.4 N, 122.5 E
		eLQ N'	32 16	40					H 00 03 56.8
		eLR Z'	35 06	32					h 33 km.
		M E'	40 05	20		2			Mag. 5.7
		M Z'	40 38	22			2		
M N'	41 25	20	2						
344	28	iP Z	02 15 01.8	0.7			-0.07		Dilatation. Microseisms mask N'E'Z'
		(eS) E'	19 09	(5)					USCGS: 22.2 S, 179.6 W, H 02 09 53.4 h 600 km. Mag. 4.9
347	28	iP NZ	22 29 38.5	1.0	+0.02		-0.13		Dilatation. Microseisms mask N'E'Z'
		e N'	34 33	13					USCGS: 4.4 S, 153.4 E, H 22 23 45.3
		eL E'	37 58	22					h 122 km. Mag. 5.4
348	29	iP Z	13 49 55.8	1.0			+0.06		Compression
		m EZ	49 58	0.7		0.05	0.12		
		iS NE	54 14.5	1.5	-0.18	+0.34			USCGS: 21.6 S, 178.7 W
		iS N'E'N"E''	54 15	5	-1½	+3½			H 13 44 32.9
		e N'	57 10	19					h 516 km.
		o E'	57 21	13					Mag. 5.2
		e Z'	58 07	15					
350	31	(P) Z	12 10 51½						Masked by microseisms
		o N'	14 27	13					
		eL Z'	15.5	24					
		M N'	16 20	16	1				
		M E'Z'	16 30	19		1	1		
353	June 1	(P) Z	10 20 06	1					Masked by microseisms
		e N'	24 28	10					
		o Z'	24 30	16					USCGS: 13.8 S, 166.6 E
		eL Z'	26 13	27					H 10 14 43.2
		M E'	27 22	22		1			h 48 km.
		M N'Z'	28 38	18	1		2		Mag. 5.5



No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			$\Delta$	Remarks
							AN	AE	AZ		
							$\mu$	$\mu$	$\mu$	km.	
354	1966 June 1	ePP	Z'	11 55 03	9						Masked by microseisms  USCGS: 23.4 S, 174.9 W H 11 47 33.1 h 24 km. Mag. 5.9
		e	E'	55 07	13						
		e	E'	58 47	23						
		e	Z'	59 03	20						
		c	N'	12 01 02	13						
		eL	E'Z'	02 35	32						
		M	N'	04 15	14	10					
		M	E'Z'	06 25	18		10	15			
355	1	iP	NEZ	12 39 37.9	1.0	+0.10	+0.10	-0.60			Dilatation N'E'Z'N"E'Z'" masked by microseisms  USCGS: 15.2 S, 167.2 E H 12 34 33.5 h 93 km. Mag. 5.6
		i(S)	N'	43 46	5	+3					
		e	N'	43 56	9	3					
		i	Z'	44 20	5			+5			
		i	N'N"	44 22	6	-3					
		eL	Z'	45 36	26				4		
		eL	N'E'	45 43	26	2	2				
357	2	P	Z	03 40 36.5	1.0			0.06			Microseisms present  USCGS: 51.1 N, 176.0 E H 03 27 53.3 h 41 km. Mag. 6.0 6 Pasadena 5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Palisades
		eSKS	N'	51 04	12						
		e(SS)	N'	57 21	20						
		(eL)	E'	04 03.2	(43)						
		eL	N'Z'	08.0	38						
		M	N'Z'	11.2	24	1			1		
		M	E'	13.9	20			$\frac{1}{2}$			
359	2	iP	Z	07 15 50.0	1.5			+0.34			Compression Microseisms present  USCGS: 0.0 N, 123.2 E H 07 08 08.4 h 185 km. Mag. 5.8
		e(S)	E'	22 05	7			1			
		e	N'	22 12							
		e(cS)	E'	23 02	9			1			
		e(SS)	N'Z'	25 15	13	1			$\frac{1}{2}$		
		e	E'	25 26	9			1			
		eL	Z'	29 27	30						
		M	Z'	35 13	16				1		
		M	N'	35 23	16	$\frac{1}{2}$					
363	4	iP	Z	08 40 04.1	1.0			+0.33			Compression USCGS: 14.8 S, 171.2 E H 08 35 15.4 h 660 km. Mag. 4.6
		i	NE	40 04.5	0.8	+0.05	+0.05				
		i	Z	40 28	?			+			
		i	Z	41 31.5	1.5			+0.30			
364	5	(P)	Z	00 00 29							Masked by microseisms. N'E'Z' confused by calibration pulses USCGS: 46.5 N, 152.5 E H 23 48 17.8 h 27 km. Mag. 5.9 5 $\frac{3}{4}$ -6 Pasadena, Palisades
		eSKS	E'	10 41	13						
		ePS	N'	11 20	20						
		eL	E'	22 20	35						
		eL	N'	25 32	40						
		M	N'E'	28 24	25	4	2				
365	6	eP	Z	01 51 00							Microseisms present  USCGS: 14.9 S, 167.8 E H 01 45 45.5 h 37 km. Mag. 5.5
		i	Z	51 07.8	1.5			+0.36			
		e(S)	E'	55 23	13			1			
		e	N'	55 28	13	3					
		e	N'E'	55 41	12	3 $\frac{1}{2}$	2				
		e	N'	56 17	17	4					
		eL	E'Z'	57 28	26			3	3		
		M	N'	58 54	17	3					
		M	E'Z'	02 02 12	15		3	3			
367	6	eP	Z'	07 59 47	8			1	11,400ca		h 0.03  USCGS: 36.3 N, 71.2 E H 07 46 16.2 h 225 km. Mag. 6.3 6 $\frac{3}{4}$ Pasadena
		epP	Z	08 00 40	2			0.50	103 $^{\circ}$ ca		
		ipP	Z'	00 41	7			-4			
		ePP	N'E'Z'	04 06	8	1	1	3			
		e	Z'	04 27	7			3			
		e	Z	04 35	2.5			1.43			
		ipPP	Z'	04 48	5			-4			
		i	Z	04 53	2.2			-1.51			
		e	Z	05 02	2.5			1.87			
		i	Z'	05 03	6			+4			
		isPP	N'E'Z'	05 18	7	+2	-2 $\frac{1}{2}$	-9			
		e	Z'	07 16	7						
		i	N'E'Z'	07 26	8	+1 $\frac{1}{2}$	-2	-5			
		e	Z'	09 09	10			3			
		eSKS	N'	10 04	11	2					

Continued



No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			$\Delta$	Remarks	
					AN	AE	AZ			
			h m s	s	$\mu$	$\mu$	$\mu$	km.		
367 cont.	1966 June 6	iSKS	E'	08 10 07	11	-3				
		i(S)	E'	11 22	11	+3				
		iSP	Z'	12 41	8			+6		
		o	Z'	13 23						
		o	Z'	13 43	15			4		
		isSP	N'E'Z'	14 02	14	+5	-6	-9		
		o	Z'	15 07	12			4		
		iSS	E'	18 26	14		+6			
		iSS	N'	18 29	13	+4				
		o	N'	18 39	40	8				
		isSS	N'	19 51	12	+4				
		i	E'	20 05	16		+8			
		o	N'	28.2	32	8				
		o	E'	28 46	32		7			
oG	N'	29.0	50							
oL	Z'	35 14	60			22				
M	Z'	40 38	23			6				
368	6	oP	Z	20 56 00.5	1.6		0.30	5420	USCGS: 9.6 N, 126.4 E H 20 47 11.5 h 45 km. Mag. 5.7	
		oP	Z'	56 01	(5)			4898		
		o	Z'	56 09	8			2		
		i	Z	56 13	1.7			+0.30		
		i	Z	56 31	1.7			-0.36		
		iPP	N'Z'	57 54	11	+1		-2		
		iS	N'E'	21 03 00	14	-7	-2			
		oScS	E'	05 50	11		2			
		oSS	N'	06 24	14	6		3		
		oSS	E'	06 26	16					
		i	Z'	06 43	14			+3		
		M	E'Z'	15 34	17		6	8		
		M	N'	17 13	18	7				
		M	E'	25 04	16		5			
M	N'Z'	26.3	16	7		11				
369	6	oS	N'	23 23 22	16				Confused by microseisms & calib.pulse USCGS: 9.7 N, 126.6 E, H 23 07 30* h 45 km. Mag. 5.3	
		M	E'Z'	36	18		1	1		
		M	N'	37	18	1				
370	7	oPP	Z'	01 19 18	16			1	USCGS: 15.0 S, 75.8 W H 00 59 46.6 h 48 km. Mag. 5.5 6 $\frac{1}{2}$ Pasadena 6-6 $\frac{1}{2}$ Palisados	
		oSKS	N'	25 10	14	1				
		oSKS	E'	25 12	14		1			
		oSKKS	N'	26 16	14	1				
		o	E'	26 21	14		1			
		oPS	Z'	28 54	23					
		oPS	E'	28 56	23					
		PS	N'E'Z'	29 18	23	4	4	4		
		oPPS	E'	30 11	17		1			
		oPPS	Z'	30 13	17			2		
		oSS	N'Z'	35 18	28					
		i	N'E'Z'	35 43	20	+8	-10	5		
		(o)	E'	42 07	50					
		oLQ	N'	46 27	36					
oLR	Z'	52 44	30							
LR	N'E'Z'	53.4	30	4	4	7				
M	N'E'Z'	57	19	2	2	5				
F	Z'	04 53								
371	7	iP	Z	11 55 23.2	1.3			+0.18	Compression USCGS: 24.2 N, 122.5 E, H 11 44 51.5 h 41 km. Mag. 5.7	
		oL	E'	12 17 21		Footlo				
		oL	Z'	20 07	24					
372	7	iP	Z	14 07 58.8	1.6			-0.53	Dilatation Complex P N'Z'-Waves of 4s period superposed on waves of 18s period USCGS: 11.3 N, 139.6 E H 13 59 36.0 h 50 km. Mag. 6.5 6 $\frac{1}{2}$ -7 Pasadena, Palisados	
		iP	N'Z'N"Z"	07 59	4	+		-		
		i	N'Z'	08 04	4	+		-		
		m	Z	08 05	1.6			0.90		
		i	N'Z'N"Z"	08 08	4	-		+		
		i	Z	08 12	1.8			+1.33		
		i	N'Z'N"Z"	08 16	4	-13		+25		
		o	Z'	09 00	16			6		
		oPP	N'	09 48	17	6				
		iS	E'E"	14 40	11		+4			

Continued



No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
								AN	AE	AZ		
372 cont.	1966 June 7	i	N'N"	14 14 46	22		-45			km.		
		i	E'E"	14 50	16			+12				
		iPS	N"	14 52	9*		+23*					
		o	N'E'	15 14	40		41	40				
		oSS	Z'	17 52	25				22			
		i	N'	18 03	18		-25					
		i	E'	18 20	30			+				
		i	N'	18 33	18		+24					
		m	Z'	18 35	25				42			
		i	E'	18 37	20			+51				
		iSSS	Z'	18 56	25				-47			
		i	N'	19 36	26		+45					
		oiL	E'	20.1	40			+200				
		oiL	N'	20.4	40		+70					
		oL	Z'	21.0	35							
		L	E'	21.1	40			280ca				
		iLR	Z'	21 56	40				-110			
		iL	N'	22 30	32		+180					
		LR Max.	Z'	23.1	36				270			
		L Max.	N'	23.3	36		230					
M	E'	25.8	20			210ca						
M	N'	26.7	20		190							
M	Z'	27.8	20				240ca					
o	E'	16 06	62									
e	E'	12	75									
F	Z'	18 08										
378	9	iP	Z	15 51 16.1	1.2					-0.18	Dilatation USCGS: 44.3 N, 147.6 E, H 15 39 27.8 h 110 km. Mag 5.5	
379	9	oS	E'	22 35 30	8						Masked by microseisms USCGS: 30.1 N, 142.2 E, H 22 16 22* h 12 km. Mag. 5.1	
		oL	E'	45.0	24							
		M	N'Z'	50	22		1/2			1/2		
381	10	o(S)	N'	12 25 36	19		2				Masked by microseisms USCGS: 6.1 S, 149.8 E H 12 15 05.7 h 53 km. Mag. 5.0	
		o	Z'	25 45	19					2		
		oL	E'	27 56	27							
		M	N'Z'	30 29	22		2			2		
		M	E'	31 39	18					2		
	11	(iP)	Z	05 09 40							Masked by large microseisms	
	11	(iP)	Z	18 26 32							Masked by large microseisms	
383	12	oP	Z	00 33 00.5							Dilatation ? USCGS: 12.1 S, 166.6 E, H 05 04 15.2 h 99 km. Mag 5.6	
		i	Z	33 01.2	1.2						Dilatation ? USCGS: 51.6 N, 178.4 W, H 18 13 40.6 h 60 km. Mag. 5.9	
384	13	(oP)	Z	07 38 22							Microseisms present / USCGS: 19.1 S, 169.6 E, H 00 28 25.0 h 265 km. Mag. 4.7	
		i	Z'	38 26	7						Very large microseisms present	
		i	Z'	38 48	6					+11		
		i	Z'	38 56	7					+10		
		i(S)	N'	42 45	8		+5			+11		
		i	E'	42 50	13					-17		
		i	N'	43 07	9					+24		
		i	N'	43 37	11					-33		
		eL	N'	44 00	22							
		oLR	Z'	44 34	25							
		M	N'	45 15	18		53					
		M	E'	46 00	20					29		
		M	Z'	46 32	17						43	
385	13	iP	Z	18 13 49.2	0.8							
		ipP N'E'Z'N'E"Z"		14 33	7		+12			+0.25	2830	
		i	NEZ	14 34.5	1.4		-0.44			-27	2525	
		iPP	N'E'Z'	14 41	7		-13			-0.43	+2.13	
		o(S)	E'	17 54	14					-13	+27	
		iS	N'N"	17 58	12		+16					

Continued



No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks
								AN	AE	Az		
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.	
385 cont.	1966 June 13	i	E'E"	18	18	03	15		-11			Mag. (cont.) 6.1-6.4 Berkeley 6 $\frac{3}{4}$ Pasadena
		e	N'	18	56		16	8				
		iSS	N'	19	23		11	+24				
		i	E'E"	19	31		11		+25			
		i	Z'Z"	19	38		16			-37		
		i	N'E'	20	04		16	+62	-34			
		M	N'	21	48		15	18				
		M	Z'	22	15		19			43		
		M	E'	22	19		18		23			
386	14	iP	Z	16	46	15.4	1.0			+0.25	4260	Compression. h 0.09 USCGS: 5.3 S, 124.5 E H 16 39 50.5 h 656 km. Mag. 5.4
		eP	Z'	46	16		?				3893	
		ipP	Z	47	57.5		1.1			-0.22		
		eS	E'	51	29		11					
387	15	(P)	Z	01	05	06	1.5					Microseisms present on NEZ Compression. After 01h 05m 32s. N'E'Z' N"E"Z" indcipherable. USCGS: 10.4 S, 160.8 E H 00 59 45.8 h 31 km. Mag. 6.1 7-7.3 Berkeley 7 $\frac{1}{2}$ Pasadena 7 $\frac{1}{2}$ -7 $\frac{3}{4}$ Palisades
		iP	N'E'Z'N"Z"	05	08		9	-61ca	-31ca	+110ca		
		m	NEZ	05	25		2.5	7.0	5.5	23.9		
		i	N'E'	05	32		9	+	+			
		i	N	05	52.5		2	-4.8				
		F		06.0								
388	15	(P)	Z	01	38	20						Masked by preceding shock USCGS: 10.2 S, 161.1 E H 01 32 55.5 H 33 km. Mag. 6.2 7 $\frac{1}{4}$ Pasadena
		m	Z	38	43		2.8			15.1		
389	15	iP	Z	02	41	48	1			+0.10		Compression. Microseisms present USCGS: 10.7 S, 161.0 E, H 02 36 27* h 33 km. Mag. 5.5
390	15	(P)	Z'	06	19	17						Masked by microseisms USCGS: 10.1 S, 161.0 E H 06 13 52.3 h 39 km. Mag. 5.9
		m	Z	19	25		2.8			2.4		
		e(S)	N'	23	44		18	7				
		e	E'	23	53		14		5			
		i	E'	24	14		15		+5			
		eL	E'	24.9	25		25		6			
		eL	N'	25.2	24		11					
		eL	Z'	25	21		28			6		
		M	N'	27	00		19	11			15	
M	Z'	28	50		18							
M	E'	29	12		16			9				
391	15	(P)	Z	16	22	36						Masked by microseisms USCGS: 10.7 S, 161.2 E H 16 17 13.2 h 21 km. Mag. 5.4
		e	Z'	22	40		7					
		e	N'E'	27	05							
		i	N'E'	27	10		10	+3	+2			
		e	Z'	27	12		8			2		
		eL	Z'	29	06		26					
		M	N'Z'	30.3	20		2			2		
M	E'	32	12		15			2				
392	15	P	Z	16	41	50 $\frac{1}{2}$						Masked by microseisms & coda of 391 USCGS: 10.3 S, 160.7 E H 16 36 24.1 h 18 km. Mag. 5.8 5.9 Berkeley
		i	N'	46	25		13	+5				
		e	Z'	46	29		13			3		
		i	E'	46	31		13		-5			
		e	N'	47	35		15	3				
		eLR	Z'	48	38		25					
		iM	N'	49	21		20	+10				
		M	Z'	50	00		20			12		
M	E'	51	00		16			7				
397	16	eP	Z	00	09	10						Microseisms present USCGS: 10.8 S, 161.3 E H 00 03 48.5 h 33 km. Mag. 4.9
		e	N'Z'	13	46		11	2		1		
		eL	Z'	16	26		21					
		M	N'Z'	17	20		18	2		2		
		M	E'	18	33		14			2		





No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
								AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.	
399	1966 June 16	eP	Z Z'	14	36	52						
		e	N'	41	35		11	3				Obscured by microseisms
		e	Z'	41	39		13					
		e	N'	42	37		16			2		USCGS: 10.2 S, 160.9 E
		eL	N'	43	20		26					H 14 31 28.0
		M	N'	44	44		20	5				h 38 km.
		M	Z'	45	00		20					Mag. 5.1
		M	E'	46	00		15		3	5		
402	17	eP	Z Z'	00	50	26						Obscured by microseisms
		e	E'	55	10		13		1			
		e	N'	55	11		14	2				USCGS: 10.3 S, 160.8 E
		e	Z'	55	13		14			2		H 00 45 02.9
		eL	E'	56	50		26					h 33 km.
		eL	Z'	56	55		29					Mag. 5.5
		M	N'Z'	58	20		20	4		4		4.8-5.2 Berkeley
		M	E'	59	52		16		3			
404	17	P	Z	12	09	41.2						Obscured by microseisms
		i	Z	09	50		1.2					USCGS: 10.2 S, 160.6 E
		e	N'	14	13		11			+0.08		H 12 04 18* h 33 km.
		eL	Z'	16.4								Mag. 4.6
405	17	iP	Z	13	25	37	0.7			+0.03		Compression. Microseisms present
406	17	eP	Z	22	31	29						USCGS: 22.0 S, 179.8 E, H 13 20 28*
		e(sS)	E'	36	06							h 539 km. Mag. 4.9
		e	N'	36	09							Microseisms present
		e	E'	37	03							USCGS: 10.2 S, 161.0 E
		eL	Z'	37.6		27						H 22 26 04.1
		M	N'	39	14		19	3				h 33 km.
		M	Z'	40	11		18			4		Mag. 5.6
		M	E'	40	36		17		2			
407	18	P	Z	00	36	28						Microseisms present
410	18	i(P)	Z	19	22	01.3	1.1					USCGS: 2.8 S, 141.6 E, H 00 30 01.0
		e(S)	N'	27	15		20	2		+0.06		h 33 km. Mag. 5.0
		e	Z'	27	19		25					Microseisms present
		e(LQ)	E'	29	14		45		7			USCGS: 3.3S, 143.2 E
		eLR	Z'	31	04		35			7		H 19 15 24.4
		M	E'	33	45		19	25				h 17 km.
		M	N'	34	16		20	22				Mag. 5.2
		M	Z'	37	57		13			18		
411	19	iP	Z	00	19	36.4	1.0					Compression. Microseisms present
		M	N'Z'	32	14		2			+0.05		USCGS: 10.6 S, 160.9 E,
412	19	eP	Z	07	57	42	1.0					H 00 14 15* h 39 km.
		iP	NZZ'Z''	57	49		1.3	-0.14	0.04	2840		On N'E'Z' N'E"Z" periods of early
		iS	NE	57	53.5		1.0	-0.08	+0.49	2526		phases' confused by microseisms
		eS	N'	08	02	05			+0.03			USCGS: 8.8S, 149.5 E
		e	N'Z'	02	24		20					H 07 52 20*
		eL	E'	03	58		27					h 54 km.
		eL	Z'	04	12		27					Mag. 5.4
		eL	N'	04	15		27					
		M	E'	06	23		17		6			
		M	N'E'Z'	07	50		17	5	7	9		
413	19	iP	Z	19	41	37.5	0.8					Compression
		i	Z	41	53		1.1			+0.04		USCGS: 51.7 N, 176.2 W, H 19 28 43.1
		i	Z	41	55		1.1			+0.07		h 57 km. Mag. 5.2
420	21	eP	N'E'Z'	00	48	49	8					USCGS: 10.9 S, 165.3 E
		i	Z	48	50.0		0.8					H 00 43 13.5
		i	E	49	01.3		1.1			+0.09		h 25 km.
		i	Z	49	03.7		1.1			+0.10		Mag. 5.3
		eS	N'	53	20		8	1				4.9-5.3 Berkeley
		e	E'	53	25		9					
		e	N'	53	28		12	3				

Continued



No	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			$\Delta$	Remarks	
					AN	AE	AZ			
					$\mu$	$\mu$	$\mu$	km.		
420 cont.	1966 June 21	e	E'	00 53 44	12					
		i	E'	54 13	17		-5			
		i	N'	54 18	?					
		iSS	N'	54 31	22	+12				
		oSSS	Z'	54 54	20			5		
		oL	Z'	55 14	(40)					
		M	E'	56 34	17		7			
**		M	N'	57 00	16	7			** 423 June 21 19h & 424 June 22 01h see last page of Bulletin.	
		M	N'	57 00	16			5		
		M	Z'	57 31	15					
425	22	iP	Z	20 35 24.6	1.3			-1.89	4040	Dilatation h 0.08
		iP	NE	35 25.0	1.3	+0.31	-0.52		36 <sup>9</sup> / <sub>4</sub>	iP followed by complex waves on N'E'Z'N"E'Z". 2s. periods superposed on waves of 14s. period.
		iP	N'E'Z'N"E'Z'	35 25	4	+4	-4	-18		
		i	N'E'Z'N"E'Z'	35 29	28 <sup>1</sup> / <sub>4</sub>	+17	+13	-39		
		m	NEZ	35 31	1.6	3.75	6.25	37.5		
		i	N"E'Z"	35 32	9*	-	+25*	+75*ca		USCGS: 7.2 S, 124.6 E
		ipP	E'Z'	37 00	13		+8	+16		H 20 29 03.6
		osP	N'	37 57	14	7				h 507 km.
		(S)	E'	40 24	8					Mag. 6.1
		iS	N'E"	40 29	16	+34	-25*			
		i	E'	40 34	8		+25			
		m	E'	40 48	16		29			
		e	E'	41.0	32					
		i(sS)	N'E'	43 10	12	+	+14			
		i	Z'	43 17	14			+23		
		i	N'	43 27	13	-22				
		i	E'	43 31	10		+			
		iSS	Z'	43 36	14			+59		
		m	N'E'	43 44	10	48	61			
		i	N'	43 49	13	+34				
i	E'	43 53	13		+21					
m	Z'	43 57	25			93				
M	N'	49 00	16	61						
M	E'	49 20	20		54					
F	Z'	23.6								
426	24	iP	Z	03 02 37.3	0.7			-0.04		Dilatation. Microseisms present
		i	Z	02 42.2	0.8			-0.66		USCGS: 6.3 S, 155.0 E, H 02 57 02.5 h 155 km. Mag. 5.6
428	25	oP	Z'	01 56 36	5					Microseisms present
		oS	N'E'	02 05 11	13					USCGS: 29.6 N, 142.1 E, H 01 46 10.4 h 49 km. Mag. 5.5
		oL	E'	14.6	32					
429	25	oP	Z	10 36 44						Microseisms present
		o(S)	E'	40 34	10					USCGS: 19.7 S, 169.5 E, H 10 32 07.6 h 199 km. Mag. 4.8
		e	N'Z'	41 30	14					
430	25	oP	Z	16 06 42						Microseisms present
		o(sP)	Z	07 09						USCGS: 10.1 S, 160.9 E
		oSS	E'	12 10						H 16 01 21.5
		e	N'	12 34						h 78 km.
		M	N'Z'	14.4	21	1		1		Mag 5.6
431	25	oPP	Z	18 45 19.5	1.1			0.08		Obscured by microseisms
		o	E'	50 50	10		1			
		oL	E'	52 22	23					USCGS: 5.0 S, 151.4 E
		M	E'	53 38	18			1		H 18 38 35.7
		oL	Z'	54 06	20					h 123 km.
		M	N'Z'	57.0	16	1		1		Mag. 5.6
433	27	iP	Z	06 32 46.2	1.0			-0.11		Dilatation. Microseisms present
		iPP	Z	33 07.5	1.4			+0.14		USCGS: 21.4 S, 170.0 E, H 06 28 05* h 43 km. Mag. 4.9
435	27	oP	Z	10 54 13	1.5			0.16	10,120	Microseisms present
		oP	Z'	54 14	8			3	91 <sup>9</sup> / <sub>1</sub>	USCGS: 29.7 N, 80.9 E
		i	Z	54 19.3	1.3			+0.14		H 10 41 08.6
		o(SKS)	E'	11 04 46	9			2		h 37 km.
		oS	E'	05 06	12			2		Mag. 6.1
		oS	N'	05 10	10	1				5 <sup>3</sup> / <sub>4</sub> Pasadona
		oPS	N'E'	06 21	14	1	1 <sup>1</sup> / <sub>2</sub>			6 <sup>1</sup> / <sub>2</sub> -6 <sup>1</sup> / <sub>2</sub> Palisades

Continued





No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitudo			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
435 cont.	1966 June 27	oL	N'	11	18	14	30					
		oL	N'E'	20	21		(60)					
		N	N'	30	50		25	4				
		M	E'	32	53		22		4			
		M	Z'	33	21		22			4		
		M	N'E'Z'	38			20	6	6	7		
436	27	oP	Z'	11	12	24	5					
		i	Z	12	29		2.0					
		i	Z	12	32.5		2.0			-1.01		
		i	Z'	12	33		5			-0.87		
438	27	iP	Z	21	51	53.5	1.2					
		iP	Z'	51	54		6			+0.18		
		isP	Z	52	13		1.3			+3		
		oPPP	Z'	52	27		8			+0.25		
		o	N'	56	02		14			3		
		oSS	Z'	56	18		18			3		
		e	N'E'	56	21		17	3	3½		3	
		oL	Z'	57	16		29				4	
		oL	E'	57	23		27			2		
		440	28	oSS	N'	05	00.5					
oLQ	N'E'			11.0		40	8	3				
M	Z'			20.9		20				2		
442	28	oP	Z	11	44	28						
		oL	N'Z'	51.1								
444	29	iP	Z'	21	52	12	5					
		ipP	Z'	52	20		5			+2		
		isP	N'E'	52	24		6	+2	+2		-3	
		m	Z'	52	29		8				4	
		i	E'Z'	52	38		7		+1		+4	
		i	N'	52	39		7	-2				
		i(S)	N'N''	56	33		8	-3				
		i	E'E''	56	36		8		-2			
		isS	N'N''	56	43	12	12	+10				
		i	E'Z'E''	56	46	9-16	18		+7	+11		
		o	E'	56	58		18		5			
		i	N''E''	56	58	7*	7*	+9*	+5*			
		i	Z'	57	07		16				+6	
		e	E'	57	36		18		3			
		i	N'	57	38		18	-8				
446	30	oLR	E'Z'	58	29		28					
		M	E'Z'	59	57		21		9	13		
		M	N'	22	00	58	18	9				
		M	Z'	01	12		18				15	
		oP	Z	12	36	31					5420	
		oPP	Z'	38	29		9				4898	
447	30	oS	N'E'	43	31		15	2	1			
		oSS	N'E'	46	58		14	2	1			
		M	E'	56	05		17		2			
		M	Z'	56	11		17				3	
		M	N'	57	43		18	3				
		P	Z	15	55	59½						
450	July 1	oL	E'	16	20.5							
		iP	Z	06	01	06.5	1.1					
Continued		iP	N'E'Z'N''Z''	01	07		7	-1	+½	+0.39	7240	
		i	Z	01	11.3		7			+5	6592	
		ipP	N'Z'N''Z''	01	31		7	+3	-1	+0.14		
		ipP	Z	01	32		7			-8		
		i	E'E''	01	33		7			-0.37		
		is	E'E''	09	40		12			+8		

Confused by coda of 435  
 USCGS: 29.7 N, 81.0 E  
 H 10 59 18.1 h 40 km.  
 Mag. 6.0  
 6 Pasadena, 6½-6¾ Pal.  
 Compression. Microseisms present

USCGS: 38.0 S, 177.2 E  
 H 21 47 05.5  
 h 54 km.  
 Mag. 5.7

Masked by microseisms  
 USCGS: 35.9 N, 120.5 W, H 04 26 12.4  
 h 4 km., Mag. 5.3  
 5.5 Berkeley  
 5.8 Pasadena  
 6½ Palisados

USCGS: 10.2 S, 161.2 E, H 11 39 02.1  
 h 33 km. Mag. 5.6  
 Compression. Microseisms present

USCGS: 13.8 S, 166.7 E  
 H 21 46 54.5  
 h 35 km.  
 Mag. 6.2  
 5.4-5.8 Berkeley

Microseisms present

USCGS: 9.6 N, 126.7 E  
 H 12 27 41.9  
 h 44 km.  
 Mag. 5.4

Masked by microseisms  
 USCGS: 24.4 N, 122.2 E, H 15 45 26.0  
 h 47 km. Mag. 5.4

Compression h 0.01

USCGS: 24.8 N, 122.5 E  
 H 05 50 39.2  
 h 117 km.  
 Mag. 6.4  
 6 Berkeley  
 cont.



## RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			$\Delta$ km.	Remarks
					AN	AE	AZ		
450 Cont.	1966 July 1	i Z'	06 09 41	12			-3	Mag. (cont.) 6-6 $\frac{1}{2}$ Palisades 6 $\frac{3}{4}$ Pasadena	
		i N'	09 52	7	+4				
		isS N'E'N"	10 21	7-15	+4	-8			
		iPPS E"	10 26	13*		+5*			
		i(PPS) Z'Z"	10 29	14			-3		
		i(ScS) N'N"	10 53	9	+5				
		i E'	10 54	10		+3			
		iSSS N'Z'N"Z"	16 55	11-20	-3		-4		
		oL N'	21 12	26					
		M E'	23 18	23		6			
		M N'Z'	27 19	16	4		6		
		i(PKPPKP) Z'Z"	30 05	(7)			+		
		i Z	30 05.5	1.5			+0.24		
453	4	oP Z	18 46 34.5	1.5			10,030	USCGS: 51.7 N, 179.9 E H 18 33 35.7 h 13 km. Mag. 6.2 6-6.5 Berkeley 6 $\frac{3}{4}$ -7 Pasadena	
		i Z	46 40.8	1.3			-0.50		
		ipP Z'Z"	46 43	5			+8		
		i Z	46 43.8	2.0			-3.68		
		iSKKS N'N"	57 10	8	-7				
		iS E'E"	57 24	9		-4			
		i N'N"	57 36	8	-16				
		isS E'	57 43	8		+16			
		i E'	58 08	18					
		o N'	58 18	36ca					
		i E'	58 31	11		+11			
		i N'	58 51	11	-14				
		i Z'	58 57	18			+11		
		iPPS N'	59 08	22	+20				
		oSS N'	19 03 12	25	10				
		oSS E'	03 23	24		16			
		oG N'E'	10.0	55	75	130			
		o Z'	10.2	42			22		
		LQ N'	11.0	30	52				
		iLR Z'	14 44	34			+55		
M E'	20.0	24		17					
oX E'	20 27.7	80		30					
W <sub>2</sub> M N'Z'	58	22	16		20				
F Z'	23.0								
454	5	oP Z'	02 34 45		Feeble. Masked by microseisms			USCGS: 52.2 N, 178.4 W H 02 21 43.8 h 66 km. Mag. 4.9 4.9-5.3 Berkeley	
		o Z	34 46						
		o N'	46 32						
		oL N'	59.0						
462	10	iP EZ	10 06 16.7	1.2		+0.13	-0.62	Dilatation. N'E'Z' confused by microseisms.  USCGS: 30.5 S, 177.8 W H 10 00 39.1 h 40 km. Mag. 5.8 5-5.4 Berkeley	
		i Z'	06 17	(3)			+		
		i Z	06 19.5	1.2			+0.25		
		i E	06 21.7	1.0		+0.14			
		o E'Z'	06 22	16		1	1		
		i Z	06 25	1.4			-0.34		
		o E'	07 05	14		1			
		o E'	09 19	18		1			
		o E'	10 52	14		1			
		o N'	11 03	13					
		o Z'	11 11	16			2		
		o N'	12 22	18	2				
		oLR E'Z'	12 56	32					
LR Max. E'Z'	14.0	22		5	8				
M N'	15 14	15	3						
463	10	oP Z'	16 23 10	7			2	7070 6396 Microseisms present  USCGS: 24.2 N, 125.2 E H 16 12 41.5 h 28 km. Mag. 5.9 4.5-4.9 Berkeley	
		(oS) E'	31 38						
		iS N'N"	31 40	10	-4				
		o E'Z'	31 45	14		2	3		
		o N'	31 54	27	4				
		oPS E'	32 05	24		3			
		oScS E'	32 57	10					
		i N'N"	33 04	7	+2				
		o(SSS) E'	38 29	26					
oL E'	40 24	(34)							

Continued



No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			$\Delta$	Remarks
					AN	AE	AZ		
463 cont.	1966 July 10	eL Z'	16 43 18	s	$\mu$	$\mu$	$\mu$	km.	
		M N'Z'	47 16	36					
		M E'	48 01	24	11		15		
		eW2 N'Z'	18 47	21		7			
464	11	M N'E'Z'	19 00	20	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$		
		eP Z	22 52 42						
		e Z	52 44						
		eS E'	58 03						
		e Z'	58 10	12					
		e N'	23 00 38	8					
		e N'	00.8	18					
		eL Z'	02 53	23			3		
		M N'	05 19	13	6				
		M E'	06 08	17		8			
465	12	M Z'	06 21	17					
		iP Z	17 42 02.5	1.4			11		
		ei(S) E'	45 55	10		-2	-0.20		
		e N'	46 10	16					
		e Z'	46 25	12			2		
		e N'	46 28	24	2				
468	13	M N'	49 10	13	1				
		iP Z	14 48 14.0	1.0					
		eP Z'	48 15				+0.24		
		iPcP Z	50 04	1.5			4770		
		e Z'	50 17				4299		
		eS E'	54 36	8		2			
		eSS N'	57 46	12	1				
		eScS E'	58 05	9		1			
		e Z'	58 12	23					
		eL E'Z'	15 01.0	40					
469	15	M N'	06	18	1				
		M E'Z'	07	18		1	1		
		PKP Z	08 19 35	1.0			0.06		
471	16	eP Z'	07 25 43						
		(eS) N'	30 06						
		e Z'	30 14	16			1		
		e N'E'	30 22	10	1				
		e N'E'	30 36	13	1	1			
		eLR Z'	32 24	26					
		LR Max. N'E'Z'	33.1	24	1	1	2		
472	17	eP Z'	02 28 42	7					
		i Z	28 43.5	1.0			2		
		e(S) N'	32 28	(10)			+0.16		
		e N'Z'	32 41	10	2				
		i E'	32 42	12		-2			
		i Z'	32 46	12					
		e N'	33 22	20	2		+5		
		eL E'	33 52	22					
		eLR Z'	34 10	22					
		LR Max. N'E'Z'	34.9	20	2	3	4		
473	17	eP Z	06 54 17						
		eS N'	59 04	20	1				
		e Z'	59 16	17					
		eL Z'	07 02 25	26					
		M N'	03 57	21	1				
474	18	M Z'	04 15	21					
		(P) Z'	22 07 50				2		
475	19	M N'Z'	57	20	$\frac{1}{2}$				
		e(S) E'	02 05 08				1		
		e N'	05 26						
		e N'	06 55	24					
eSS N'Z'	10.9	30							

Continued

Masked by microseisms

 USCGS: 5.5 S, 153.6 E  
 H 06 48 27.6  
 h 72 km.  
 Mag. 5.0

Masked by microseisms

 USCGS: 56.2 N, 164.9 E  
 H 01 40 53.9  
 h 18 km.  
 Mag. 5.4 (cont.)

Confused by microseisms

 USCGS: 19.2 S, 173.6 W  
 H 22 46 05.7  
 h 120 km.  
 Mag. 5.6  
 4.7-5.3 Berkeley

Dilatation Microseisms present

 USCGS: 21.5 S, 170.5 E  
 H 17 37 27.3  
 h 134 km.  
 Mag. 5.3

 Compression  
 N'E'Z' confused by microseisms

 USCGS: 0.1 S, 122.8 E  
 H 14 40 25.6  
 h 126 km.  
 Mag. 5.0

 Microseisms present  
 USCGS: 16.9 N, 61.5 W, H 08 00 00.7  
 h 89 km., Mag. 5.4

Confused by microseisms

 USCGS: 10.9 S, 165.9 E  
 H 07 19 55.8  
 h 68 km.  
 Mag. 5.2

 Microseisms present Long-period  
 wanderings confuse N'E'

 USCGS: 21.6 S, 169.9 E  
 H 02 24 06.9  
 h 63 km.  
 Mag. 5.2



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.	
475 cont.	1966 July 19	e	E'	02	17	33	21					Mag. (cont.) 6 Palisades 6-6.1 Pasadena 6-6.3 Berkeley
		oL	N'	19	00		37					
		oLR	Z'	22	36		38					
		M	N'Z'	26	00		25	7		10		
		M	E'	26	50		25		3			
484	21	iP	EZ	18	35	51.5	2.0		+0.32	-1.24	3420	Dilatation h 0.08 Microseisms present on all records  USCGS: 17.8 S, 178.6 W H 18 30 14.9 h 591 km. Mag. 5.6 5-5.3 Berkeley 6 Pasadena
		iP	Z'Z''	35	51.2		4			-3	3098	
		i	E'	36	16.5		1.0		+0.06			
		i	Z	37	11.5		1.0			+0.07		
		i	Z	39	07		1.3			+0.20		
		e	Z'	40	14		16					
		iS	N'N''	40	18		11	-6				
		iS	E'E''	40	19		11		+5			
		e	E'	40	32		16					
		iScP	Z	41	16		0.8			-0.05		
		i	N'N''	43	11		10	+3				
		e	E'	43	16		16		3			
		e	N'	43	24		20	3				
		i	Z'	43	29		?			-		
		i	N'N''	43	51		7*	+5*				
iScS	E'E''	45	19		6		+3					
M	N'	45	28		13	6						
485	22	oP	Z	07	46	35						Microseisms present USCGS: 18.3 S, 167.2 E H 07 41 42.7, h 33 km. Mag. 5.1
		e	E'	50	40							
		e	N'	50	53							
		M	N'E'Z'	55.3			15	1	1	1		
486	22	oP	Z	08	30	40.2						Microseisms present  USCGS: 16.0 S, 168.0 E H 08 25 54.7 h 187 km. Mag. 5.5
		oPP	Z	31	29		2			0.78		
		oS	E'	34	44		8		2			
		oSs	E'	35	43		12		2			
		oSS	N'	35	52		8	3				
		e	N'	36	07		15	3				
		i	Z'	36	11		7			+3		
		oL	Z'	37.0			24					
487	22	oP	Z	10	30	21	1.2			0.10		Microseisms present USCGS: 51.7 N, 173.5 W H 10 17 22.5 h 56 km. Mag. 5.6 5.3 Palisades
		oSKS	N'	40	53		8	2				
		oS	E'	41	23		14		1			
		e	E'	47	13		22					
		oL	Z'	11	01	30						
M	N'Z'	05.5			20	2		2				
493	23	oP	Z	14	44	53.2						Masked by microseisms USCGS: 51.7 N, 173.5 W H 14 31 51.2 h 55 km. Mag. 5.3 4.5-4.9 Berkeley
		i	Z	45	03					+		
		oSKS	N'	55	20							
		e	N'	55	34							
		e	E'	15	01	30						
e	E'	08	25									
494	23	oP	Z	22	53	44						Masked by microseisms USCGS: 12.0 S, 166.2 E, H 22 48 15.3 h 47 km. Mag. 5.0
		e	N'	58.5								
497	24	o(S)	E'	09	05	11	16					Masked by microseisms USCGS: 16.3 S, 172.8 W H 08 52 13* h 49 km. Mag. 4.8
		oL	N'	07	43		23					
		oL	Z'	09	36		23					
		M	N'	12	01		13	3				
		M	E'Z'	13	21		17		3	5		
498	24	P	Z	17	24	38						Masked by microseisms USCGS: 20.4 S, 175.8 W, H 17 18 17.6 h 112 km., Mag. 5.2
		e	N'	31.5								
506	28	iP	Z	01	23	29.0	1.5			+0.22		Compression Microseisms present  USCGS: 17.2 S, 167.7 E H 01 18 27.4 h 17 km. Mag. 5.3
		e	Z	23	33		2.0			1.06		
		i	Z'	23	34		6			+3		
		iS	N'	27	32		10	+8				
		i	E'Z'	27	41		11		+5	+5		
		i	N'Z'	27	55		10	+5		+5		
		oL	E'	29	09		25		5			
		oLR	Z'	29	24		25			6		
		M	N'E'Z'	31			15-19	7	6	9		



No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			$\Delta$	Remarks		
							AN	AE	AZ				
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.		
508	1966 July 28	iP	Z	09	47	40.2	0.9			+0.21		Compression Microseisms present USCGS: 14.9 S, 167.3 E, H 09 42 36.8 h 141 km. Mag. 5.0	
509	28	oP	Z	12	13	34.2	0.7					Microseisms present	
		oL	E'	20	29		26					USCGS: 29.0 S, 177.5 W, H 12 07 52.5 h 59 km. Mag. 5.4	
		oL	Z'	20	55		26			3			
		M	E'Z'	23	2		16		2	3			
	28	(P)	Z	14	30	27.2		Masked by microseisms				USCGS: 21.8 S, 179.5 W, H 14 25 13* h 561 km.	
	30	(iP)	Z	17	48	01.8	1			+0.10		Microseisms present USCGS: 9.1 N, 126.6 E, H 17 39 18.8 h 36 km. Mag. 5.4	
511	31	o(S)	E'	11	59	16	13					Masked by microseisms	
		o	N'	59	30		10						
		oL	N'	12	00	1	25						
		oL	E'Z'	01	03		25						USCGS: 18.1 S, 173.7 W H 11 47 05* h 33 km. Mag. 4.6
		M	N'	02	15		15	2					
		M	E'Z'	02	46		17		1	2			
512	Aug. 1	iP	Z	03	28	25.5	1.0						
		oL	N'	34	1		30				-0.13		
		oLR	Z'	35	02		26						Dilatation
		M	N'Z'	36	2		22	3					USCGS: 10.2 S, 161.1 E H 03 23 03.1 h 70 km. Mag. 5.7
515	1	oPP	Z'	21	21	10	17						
		o(PS)	Z'	30	08		30						Confused by coda of earlier shock.
		o(SS)	Z'	35	40		50				6		
		o	E'	36	09		35		19				USCGS: 30.0 N, 68.7 E H 21 02 59.6 h 33 km. Mag. 6.2 6 <sup>3</sup> Pasadena
		o	N'	36	15		35	12					
		o	N'Z'	40	25		30	11			17		
		i	Z'	43	41		25				+24		
		oLQ	N'	45	21		40	14					
		oLR	N'	50	3		32	28					
		oL	Z'	50	7		50						
		L	E'	51	7		50		54				
		L	Z'	51	9		50					62	
		M	N'	54	04		34	38					
		M	E'	54	52		32		34				
		M	E'Z'	22	00	21	26		28			34	
M	Z'	01	44		22					39			
M	E'	02	01		22			27					
M	N'	02	18		20	23							
516	1	i(S)	E'	23	44	17	13						
		M	N'Z'	46	0		20	2			2		Confused by coda of No.515 USCGS: 55.9 S, 147.0 E, H 23 35 06* h 33 km. Mag. 4.9
518	2	iP	Z	18	30	34.6	1.0			+0.08		Compression Microseisms obscure N'E'Z'	
		i	Z	30	41	5	1.0			+0.08		USCGS: 14.0 S, 165.9 E H 18 25 22.6 h 50 km. Mag. 5.1	
		i	Z	30	59	7	1.1			+0.10			
		o	E'	35	10		(9)						
		o	N'	35	18								
519	4	oP	Z	05	49	03.2						USCGS: 7.3 S, 120.3 E, H 05 42 21.3 h 531 km. Mag. 5.5	
520	5	oP	Z	04	38	24	1			0.12		Microseisms present on all records	
		i	Z'	38	28		9			-3			
		i	Z	38	50	5	1.6				-0.38		
		i	N	38	54	5	1.6	-0.28					USCGS: 10.9 S, 162.3 E H 04 33 07.4 h 93 km. Mag. 5.7
		o(S)	N'E'	42	54		13						
		i	Z'Z''	43	02		10				+7		
		i	N'E'N''E''	43	03		9	-6	-6				
		i(SSS)	N'Z'	44	04		9	-6			+5		
		oL	Z'	45	04		22						
		M	Z'	46	54		17				6		
		M	N'	47	31		15	10					
M	E'	47	38		15			8					



No.	Date	Phase & Component		Time (G.M.T.)		Per	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
521	1966 Aug. 6	(iP)	E	12	53	33						All records masked by microseisms USCGS: 46.6 S, 165.7 E, H 12 49 36* h 33 km.
		o	N'E'		57	03						
		T Max	NEZ	13	10.8		0.6	0.09	0.07	0.09		
522	7	iP	Z	02	26	05.8	0.8			+0.07	10,160	Compression USCGS: 50.6 N, 171.3 W H 02 13 05.1 h 39 km. Mag. 6.5 7.0 Berkeley
		i	Z		26	09.5	1.2			+0.46	91.4	
		i	Z'Z''		26	10	7			+5		
		o	Z'		27	02	16			2		
		oPP	Z'		29	40	6			4		
		iSKS	N'E'N''E''		36	36	14	-18	-6			
		i	Z'		36	37	14			-4		
		o	N''		36	46	19*					
		iS	N'E'		37	00	13	+9	+6			
		i	N''E''		37	06	9*	-12*	-8*			
		iPS	N'Z'		38	08	13	-7		+9		
		oPPS	N'		38	46	18					
		oSS	N'		42	45	26	8				
		oSS	E'		42	48	26		8			
		oLQ	E'		49	49	30		7			
		L	N'		50	28	36	11				
		o(G)	E'		50.5		42		14			
		oLR	Z'		54.6		40					
		LR Max.	N'Z'		56	50	27	22		27		
M	E'		03	00	09	21		16				
M	N'			01	35	21	14					
M	Z'			01	50	21		19				
o(G <sub>2</sub> )	E'		04	07.4	50							
o(W <sub>2</sub> )	Z'			21.5	36							
M W <sub>2</sub>	N'Z'			33	24	3		4				
523	7	iP	Z	03	12	35.6	2			-0.81	Dilatation. Coda of 522 masks N'E'Z' USCGS: 10.6 S, 161.0 E, H 03 07 16.2 h 48 km. Mag. 5.5	
		i	Z'		12	39	4			-4		
		m	Z		12	43	3			2.9		
524	7	P	Z	13	47	10					Masked by microseisms USCGS: 24.0 S, 179.9 W, H 13 42 07.8 h 537 km. Mag. 4.7	
525	7	o	N'E'	18	03	38					2	Masked by microseisms USCGS: 31.8 N, 114.5 W H 17 36 26.7 h 33 km. Mag. 6.3 6½-6¾ Pasadena 6.7-7.0 Berkeley
		o	Z'		04	26	16					
		o	E'		05	25						
		oSS	N'E'		11	16	18	3	2			
		oLQ	N'		21	48	50					
		(G)	N'		23.1		45	10				
		oL(R)	Z'		25.2		34					
		LR Max	E'Z'		28.0		33		11	14		
M	E'Z'		31.0		22		8	11				
M	N'		35	50	19	3						
527	8	oP	Z	07	29	53	1.5			0.14	N'E'Z' masked by microseisms USCGS: 10.5 S, 164.3 E H 07 24 13.8 h 16 km. Mag. 5.3	
		o	Z		30	02	1.2			0.13		
		o	E'		34	41	?					
		oSS	N'		35	35	20	2				
		M	N'		38	06	15	2				
		M	E'		40	00	12		1			
530	10	iP	Z'Z''	05	07	33	5			+3	Compression Large microseisms on all records USCGS: 20.1 S, 175.3 W H 05 01 09.4 h 96 km. Mag. 5.8 6½ Pasadena 5.2-5.6 Berkeley	
		i	Z		07	34	3			-2.75		
		o(PP)	E'Z'		08	52	6			3		
		i	E'E''		08	55	6			-4		
		iPcP	Z		10	20	0.8			+0.11		
		i(S)	Z'		12	48	5			+4		
		i	Z'		13	18	5			+4		
		o	N'		15	22	20					
		o	E'		15	42	25					
		m	N'		16	00	20	7				
		oL	E'Z'		16	42	34					
		L Max.	E'Z'		17.4		34		10	16		
		iScS	N'E'N''E''		18	01	7	-4	+6			
		M	E'Z'		20	30	17		2	4		



No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			$\Delta$	Remarks	
						AN	AE	AZ			
				h m s	s	$\mu$	$\mu$	$\mu$	km.		
531	1966 Aug. 10	(oP)	Z'	12 39 45						Large microseisms on all records USCGS: 5.5 S, 151.8 E H 12 33 42.2 h 40 km. Mag. 5.3 5-5.5 Berkeley	
		i	Z'	39 49	6			+4			
		oS	N'	44 17	20	5					
		i	Z'	44 38	18			+9			
		i	N'	44 40	20	-16					
		oL	Z'	46 37	42						
		oL	N'	47 32	36						
		M	E'	50 01	19		17				
533	11	oP	Z'	05 19 27	6					Microseisms present USCGS: 19.3 S, 173.9 W H 05 12 42.2 h 33 km. Mag. 5.5 5.4-5.8 Berkeley	
		e	Z'	25 11	20			3			
		o(LQ)	N'	27 16	30	4		2			
		oLR	Z'	29 13	26						
		M	E'	32 25	17		9				
		M	Z'	32 38	17			14			
		M	N'	33 13	14	5					
							23		29		
534	11	iP	Z	10 59 06.3	0.7				+0.07	Compression. Microseisms mask N'E'Z' USCGS: 52.8 N, 169.7 W, H 10 45 59.6 h 61 km. Mag. 5.3	
536	11	(oP)	Z'	23 31 51						Masked by microseisms USCGS: 23.4 S, 175.9 W H 23 25 37.9 h 37 km. Mag. 5.3 5.4-5.8 Berkeley	
		e	Z'	31 56							
		oL	N'	38 53	28						
		oLR	E'	40 00	30						
		oLR	Z'	40 10	30						
		M	N'	41 22	16	13					
		M	E'Z'	42 09	19		13	20			
		M	E'Z'	44 22	16		14	20			
			12	(P)	Z	04 06 04		Masked by microseisms			
542	14	oP	E'Z'	04 55 45	(7)					Microseisms present USCGS: 21.9 S, 170.0 E H 04 51 04.5 h 18 km Mag. 5.1	
		e	Z	55 47	1.0			0.06			
		oPP	Z	56 03	1.3			0.14			
		e	N'	59 40	25	4					
		oL	E'	59 57	33						
		oSS	E''	05 00 02	7*		4*				
		e	Z'Z''	00 04	11			4			
		oLR	Z'	00.6	28			8			
		M	Z'	02 35	17			6			
		M	E'	02 59	16		4				
544	14	P	Z	11 56 41		Feeble. Masked by microseisms				USCGS: 22.1 S, 170.3 E H 11 51 59.6 h 33 km.	
		e	N'	12 00 36							
		oL	N'	03.3							
545	14	(P)	Z	21 23 44.2						Masked by microseisms USCGS: 21.8 S, 170.1 E H 21 18 56* h 38 km.	
		e	N'	27 26							
		oL	N'	27 34	27						
		oL	Z'	28 14	28						
		M	N'	29 57	16	3					
		M	E'Z'	30 28	16		1	1			
546	15	iP	Z	02 18 26.6	1.3				+0.10	Compression USCGS: 17.7 S, 178.4 W, H 02 12 47.1 h 556 km. Mag. 4.8	
547	15	iP	Z	02 55 04.8	1.2				6190	Compression Microseisms present N'E'Z'N''E''Z'' USCGS: 13.3 N, 121.3 E H 02 45 32.3 h 14 km. Mag. 5.7	
		i	Z'Z''	55 06	5			+0.40	5527		
		oS	N'	03 02 47	8	2		+2			
		i	E'	02 55	7		-2				
		oPS	E'	03 04	15						
		e	N'	03 15	22						
		oSS	Z'	06 33	24						
		e	Z'	07 04	18			4			
		i	Z'	07 58	18			+4			
		oSSS	N'	08 39	19	3					
		oLQ	E'	08.7	60						
		o(G)	N'	09.5	65						
		oL	N'	10 50	52						

Continued



RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
							μ	μ	μ	km.		
547	1966	oL	Z'	h	m	s						
cont.	Aug. 15	M	E'Z'	03	11	40						
		M	N'	16	45	16		4	6			
				17	55	24	5					
549	15	oP	Z'	10	33	39			1			Microseisms present on all records
		o	Z	33	40	2.7			0.8			
		oPS	E'	45	40	15						USCGS: 3.8 N, 64.0 E
		oSS	E'	50	38	20						H 10 20 42.2
		oL	N'	59	42	29						h 37 km.
		oL	E'	11	03	15						Mag. 5.6
		oLR	Z'	04	00	32						
		LR Max.	E'Z'	06.2		26		1	2			
			N'	06.9		22	1					
552	16	oP	Z	04	59	11			0.07			Microseisms present on all records
		oS	N'	05	02	59	2					
		o	E'	03	05	15		1				
		o	Z'	03	12	15						
		oLQ	N'	03	25	29						
		oLR	E'	04	11	26		3				
		oLR	Z'	04	22	26			5			
		M	E'Z'	05	43	19		3	4			
		M	N'	05	51	15	2					
		M	N'	09	56	10	5					
555	16	iP	N'E'Z'N"E'Z"	19	50	32	5	+1	+2	-5 <sup>1</sup>		Dilatation Microseisms mask NEZ
		i	Z	50	34	1.5				+0.26		
		i	Z	50	39	1.0				+0.14		
		i	N'E'Z'	50	39	8	-1	-2	+4			USCGS: 21.4 S, 171.3 E
		m	E'Z'	51	12	8		5	11			H 19 45 38.7
		e(S)	E'	54	16	10						h 36 km.
		i	N'N"	54	37	12	-38					Mag. 5.3
		o	E'	54	38							5.6-6.0 Berkeley
		i	Z'	54	40	14				-9		
		i	E'E"	54	45	12		+19				
		i	N'N"	54	50	10	+22					
		m	N'	55	05	14	47					
		i	Z'Z"	55	11	11				+23		
		oL	E'	55	12	28			28			
		i(SSS)	N"	55	12	9*	+43*					
		iLR	N'	55	31	22	+53					
		M	Z'	57	04	19				27		
		M	E'	57	40	16			22			
		M	N'	58	00	14	88					
556	17	e(S)	N'	01	02	39	13	2				Masked by microseisms
		oL	N'	03.5		21	3					USCGS: 21.5 S, 171.2 E
		oL	Z'	04	22	20			2			H 00 53 43*
		M	E'	05	34	16		1				h 51 km.
		M	N'	05	43	15	5					Mag. 4.7
558	17	iP	Z	20	00	40.9	1.2			+0.27		Compression Microseisms present
		iP	Z'Z"	00	41	6				+1		
		iPP	Z	02	22	2				-0.64		USCGS: 5.0 S, 125.2 E
		iScP	Z	05	38.5	0.7				+0.03		H 19 54 10.2
		iS	N'	05	51	8	+1					h 538 km.
		i	E'E"	05	54	8		+1				Mag. 5.6
		e(SS)	E'	09	04	8		1				
		e	Z'	09	09	16				1		
		e	N'	09	13	8	1					
559	17	i	Z	21	11	38				+		Masked by microseisms
		e(S)	E'	22	16	(8)						USCGS: 52.3 N, 174.9 E
		oSS	N'	28	06	25						H 20 58 35.9
		oL	Z'	39	45	32						h 32 km. Mag. 5.6
560	18	oPP	Z'	10	53	27						Masked by microseisms
		opPP	Z'	53	47	8				1		
		oSKS	E'	58	51	12		1				USCGS: 14.6 N, 91.7 W
		oSKKS	E'	11	00	25		1				H 10 33 16.5
		iPS	Z'	03	20	20				-4		h 76 km.
		Continued										Mag. 5.9 (cont.)



No.	Date	Phase & Component	Time (G.M.T.)		Per.	Amplitude			$\Delta$ km.	Remarks
			h	m		s	AN	AE		
560 cont.	1966 Aug. 18	e E'	11	03	25	20				Mag. (cont.) 6.0 Pasadena 5.9-6.2 Berkeley 6-6 $\frac{1}{2}$ Palisades
		e E'		04	30	22				
		eSS N'		10	04	27				
		eSS E'		10	11	30				
		e E'		13.5		23				
		eLQ N'		23	57	40	3			
		eLR E'Z'		28.3		33				
		LR Max. N'E'Z'		29.4		29	2	6	10	
561	18	e E'Z'	12	29.8		35				4690 4292 Microseisms present h 0.006 ca.  USCGS: 0.2 S, 125.1 E H 14 33 59.8 h 56 km. Mag. 6.3
		eP Z'	14	41	45	6				
		i Z		41	47	1.6				
		eP N'E'Z'		42	03	8	1	1		
		i Z		42	09.3	1.5				
		ePP E'		43	25	12				
		ePP Z'		43	27	12				
		ePP N'		43	28	12	1			
		iS N'N''		48	00	13	-8			
		iS E'E''		48	01	13				
		e E'Z'		48	12	36		+4		
		eSS E'		51	03	15		5	5	
		i Z'		51	09	20		4		
		i N'N''		51	15	9	+5			
		i E'E''		51	20	9			+5	
		eLR Z'		53	10	28				
M N'		58	53	26	16					
M E'Z'		59	33	25		13	16			
562	18	eP Z'	14	45	39	6				4720 42.5 Microseisms present h 0.006 ca.  USCGS: 0.1 S, 125.1 E H 14 37 53* h 33 km Mag. 6.3
		i Z		45	49	1.2				
		i Z		45	56	1.3			+0.26	
		eP Z'		45	58	9			+0.34	
		i Z		46	03.5	1.4			3	
		ePP N'		47	18	12	1		+0.78	
		iS N'E'		51	56	12	-6	+5		
		e E'		52	06	38		8		
		i E'E''		55	00	8		+4		
		i Z'		55	03	20			+9	
		i E'E''		55	13	8		+7		
		eL N'Z'	15	01.0	32					
		L Max. N'Z'		01.8	27	18			25	
		M E'		02	38	25		15		
		M N'		02	50	25	14			
		M Z'		03	32	25			24	
563	18	(iP) Z	15	07	01	1				Masked by microseisms USCGS: 21.7 S, 169.8 E, H 15 02 17* h 20 km. Mag. 5.2
		iP Z	15	48	54.5	1.2			-0.28	
564	19	e(PP) Z''	12	43	10					Masked by microseisms. All readings from Galitzin. No long-period records  USCGS: 39.2 N, 41.7 E H 12 22 09.6 h 26 km. Mag. 6.1 (6.7 surface wave) 6.7-6.9 Berkeley 6 $\frac{1}{2}$ Palisades 7 Pasadena
		e(PPP) Z''		45	55					
		ePS E''		52	58					
		e E''		55	12					
		eL N''	13	19.2	42*					
		eL E''		20.1	36*					
		M N''		28	28	25*	6*			
565	20	M Z''		29	51	27*			15*	Compression. Microseisms on all records. USCGS: 43.1 N, 140.6 E H 09 32 31.7 h 161 km. Mag. 5.8 6 $\frac{1}{2}$ Pasadena
		M E''		30	13	25*			13*	
		iP Z	09	44	09.3	1.0			+0.10	
		i Z		44	10.7	1.0			-0.18	
		(eS) E'		53	50					
		e N'		54	38	20				



## 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.	
566	1966 Aug. 20	e	Z'	12 34 27						Masked by microseisms  USCGS: 39.3 N, 40.9 E H 11 59 12.1 h 37 km. Mag. 5.4
		e	N'	43 50						
		e	E'	44 30						
		eLQ	N'	52.4	56					
		eL	E'	53.0	45					
		L	N'	58 20	38	5				
		eLR	Z'	13 00.2	42					
		M	N'Z'	03.3	34	4		5		
		M	E'	04.4	28		3			
M	E'Z'	10.4	24		5	6				
567	20	eP	Z'	23 01 13						Microseisms confuse all records  USCGS: 23.4 S, 176.0 W H 22 55 03.0 h 57 km. Mag. 5.6 5 1/2 Pasadona 5.6-5.8 Berkeley
		e	Z'	02 25						
		e	Z'	06 34	18					
		eL	N'	08 15	32					
		eLR	Z'	09 14	30					
		M	N'	10 42	16	21				
		M	E'Z'	11.7	19		20	31		
569	21	iP	Z	05 09 02.5	1.5			+0.40	5340	Compression 4821  USCGS: 8.5 N, 126.7 E H 05 00 26.8 h 67 km. Mag. 6.0 6.6-6.9 Berkeley
		iP	Z'	09 03	4			+3		
		iP	Z	09 13	1.0			+0.12		
		ePP	Z'	10 48	7			2		
		iS	N'N"	15 58	10	-4				
		e	E'	16 01	9		1			
		i	Z'	16 13	9			+2		
		eSS	E'	19 22	18		4			
		e	N'	19 36	20	4				
		e	Z'	19 44	22			3		
		eL	Z'	24.1	38					
		M	N'	26 11	18	4				
		M	E'	26 20	20		4			
M	Z'	27 12	24			5				
570	22	eP	Z'	17 09 06						Large microseisms on all records  USCGS: 1.8 S, 134.2 E H 17 02 03.5 h 13 km. Mag. 5.9
		e	N'	14 59	(22)					
		eL	E'	18 26	40					
		eL	N'	20.3	30					
		M	E'	24 50	14		14			
		M	N'Z'	25 14	14	26		30		
571	22	iP	N'E'Z'	17 46 49	16	+9	+15	-20		Dilatation  USCGS: 22.4 S, 170.6 E H 17 42 10.6 h 39 km. Mag. 5.5 6.7-7.1 Berkeley
		iPP	N"E"	47 06	7*	+10*	+12*			
		i	Z"	47 08	8*			+38*		
		i(S)	N'	50 37	30	+ 110				
		i	E'	50 44	19		-72			
		i	Z'	50 46	17			-84		
		L	E'	51 48	30		70			
		i	Z'	51 50	18			+43		
		iL	Z'	52 09	27			+99		
		M	N'E'Z'	54 00	14-18	47	25	31		
M	N'E'Z'	58 25	14	30	37	42				
572	22	e(P)	Z'	20 36 38		Masked by large microseisms				USCGS: 22.5 S, 170.5 E, H 20 31 58.2 h 33 km. Mag. 5.2
576	26	eP	N'E'Z'	09 11 29						Large microseisms present  USCGS: 22.1 S, 170.0 E H 09 06 50.4 h 33 km. Mag. 5.6 5.4-5.8 Berkeley
		i	Z'	11 35	9			+8		
		i	N'E'	11 37	9	-3	-5			
		PP	E'	11 49	9		6			
		PP	N'Z'	11 52	9	4		12		
		e(S)	N'	15 20	9					
		i	N'	15 24	11	-12				
		iPcP	E'	15 35	12		+14			
		i	Z'	15 37	10			+12		
		i	N'	15 43	6	-10				
		i(SS)	Z'	15 48	10			+23		
		eL	E'	16 17	30					
		eLR	Z'	16 27	26			37		
		M	E'	17 33	19		22			
M	N'	17 57	17	29	Continued					



No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			$\Delta$	Remarks
						AN	AE	AZ		
				h m s	s	$\mu$	$\mu$	$\mu$	km.	
576	1966 Aug. 26	M	Z'	09 18 16	17			33		
cont.		M	N'	21 11	11	43				
577	26	i	Z'	13 36 34				+		Masked by large microseisms
		e	N'	36 37						
		e(L)	E'	37 37	30					
		M	E'	38 55	18		2			
		M	N'	39 26	16	3				
		M	Z'	39 54	17				3	
579	27	i(P)	Z	02 44 23.7				+		Large microseisms present
		i	N'	53 04	6	+1				USCGS: 3.2 N, 128.2 E, H 02 36 33.0 h 170 km. Mag. 5.6
583	28	iP	Z'	07 34 31	8			+2		Compression. Microseisms present
		ipP	Z	35 01	1.5			+0.26		h 0.018 ca.
		e	E'	35 02	8		1			
		e	Z'	35 04	10				2	
		e	E'	35 29	10		1			USCGS: 35.8 S, 178.5 E
		iPcP	Z	38 15.5	1.5			+0.16		H 07 29 34.7
		eS	N'	38 31	8	1				h 94 km.
		ieS	N'N''	39 23	18	-8				Mag. 5.8
		e	E'	39 31	18		2			
		M	N'	44 54	12	2				
		M	E'Z'	45 12	12		1		2	
584	28	iP	NEZ	10 08 26.2	0.9	+0.06	+0.04	-0.25		Dilatation h 0.07 ca.
		ipP	Z	09 49.3	2.2			-1.58		
		i	N'Z'N''	09 50	5	+2		-2		USCGS: 4.6 S, 155.2 E
		i	Z	09 53.5	1.8			+0.88		H 10 03 03.0
		i	Z'	10 56	5			-2		h 509 km.
		iS	Z'	12 43	7			+3		Mag. 5.6
		iS	N'N''	12 44	4*	+4*				
		iS	N	12 44	1.8	+0.42				
		i	N	12 46	1.6	+0.28				
		e	N'E'	13 00	19	3				
		e	Z'	13 06	23					
		eSS	Z'	15 22	?					
		i	N'	15 27	16	-4				
		e	Z'	15 34	18				3	
		i	N'	15 43	16	-4				
		M	N'Z'	20.3	15	2			2	
585	28	(P)	Z	16 49 01 $\frac{1}{2}$						Masked by microseisms.
		e	N'	53 07	6					USCGS: 23.5 S, 179.6 E, H 16 44 26* h 640 km. Mag. 4.2
586	28	(P)	Z'	22 38 29						Masked by microseisms
		e(S)	N'	45 04						
		e(SS)	E'	47 54						USCGS: 2.3 N, 128.4 E
		e(L)	E'	50.6						H 22 30 55.1
		eL	N'	52 15						h 75 km.
		eLR	Z'	54 40	26					
		M	N'E'Z'	57.9	17	3	2	4		
589	29	eP	Z'	13 17 19						Microseisms present
		e(S)	E'	22 55	13					
		e	N'	22 58	13					
		eL	N'E'	24 55	20					USCGS: 65.2 S, 176.9 E
		L Max.	N'E'	25 35	20	5	10			H 13 10 27*
		L	Z'	26 09	16				3	h 33 km
		M	E'	27 48	12		5			Mag. 5.5
		M	N'Z'	29 33	12	3			4	
591	30	eP	EZ	02 48 29		Very small & masked by microseisms				USCGS: 44.8 S, 167.8 E
		T	NEZ	03 05.5						H 02 44 33* h 36 km.
597	Sept. 1	P	Z	09 04 17 $\frac{1}{2}$	1.2					Masked by microseisms
		e(L)	E'	17.4	18					USCGS: 0.5 S, 134.3 E, H 08 57 14.0
		M	Z'	21.9	13			2		h 66 km. Mag. 5.1
	1	(P)	Z	14 26 57 $\frac{1}{2}$		Very small & masked by microseisms				USCGS: 31.8 N, 142.4 E, H 14 16 14.1
										h 42 km. Mag. 5.5



## RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	Az		
				h m s.	s	μ	μ	μ	km.	
598	1966 Sept. 1	(P)	Z	14 33 05						Very small. Microseisms present
		M	Z'	15 00						
599	1	P	Z	15 31 32	0.7					Small. Microseisms present USCGS: 20.6 S, 175.4 W, H 15 24 59.2 h 33 km. Mag. 5.2
601	2	oS	E'	08 24 25	15					Masked by microseisms
		oPS	E'	25 42	15					
		oPPS	E'	26 24	15					USCGS: 4.5 S, 105.9 W
		o	Z'	26 31	14					H 07 59 05.7
		oSS	Z'	30 40	25					h 33 km.
		oSS	E'	31 05	22		2			Mag. 5.1
		oSSS	Z'	34 43	25					5.7-6.1 Berkeley
		oLQ	N'	39.8	35					6 1/4 Pasadena
		oLR	E'Z'	44 37	32					
		M	N'	47 42	20	2				
		M	E'Z'	48 12	20		3			
		M	E'Z'	54 42	17		3			
604	4	P	Z	09 47 58 <sup>1</sup>	1.8					Large microseisms present
		e	N'	53 38	12					
		eL	E'	55 48	50					USCGS: 2.5 S, 138.8 E
		i	E'	59 10	7		+15			H 09 41 23.8
		M	N'	10 01 25	21	12				h 39 km.
		M	E'Z'	02 28	16		16	19		Mag. 6.0
605	4	o(S)	N'	13 38 03						Masked by microseisms
		o(L)	E'	40.6						USCGS: 16.5 S, 167.4 E, H 13 28 47.6
										h 9 km. Mag. 5.3
608	5	iP	Z	18 03 38.3	0.9					Dilatation Microseisms present
		o(sS)	N'	07 56	8					USCGS: 15.9 S, 167.4 E, H 17 58 31.0
		oL	Z'	09.6	25					h 38 km. Mag. 5.4
613	7	iP	Z	16 01 03.8	0.8					Compression Microseisms present
		oL	N'Z'	09 30	26					USCGS: 5.1 S, 154.7 E, H 15 55 11.5
										h 77 km. Mag. 5.5
616	8	iP	Z	21 23 35.0	1.5				4710	Compression Preceded by microseisms
		i	Z	23 37	2.5				4294	
		i N'E'Z'N'E"Z"		23 37 <sup>1</sup>	6	-14	+8	+35		USCGS: 2.4 N, 128.4 E
		e	Z'	23 47	22					H 21 15 52.8
		ipP	Z	23 48	1.5					h 96 km.
		isP	N'E'Z'	23 52	6		+	+18		Mag. 6.9
		i	E"	24 27	6*		+7*			6 3/4-7 Pasadena, Palisades
		i	N"	24 28	6*	+12*				6.7-7.1 Berkeley
		iPP N'E'Z'N'E"Z"		25 17	5*	-12*	+5*	+19*		
		o	N'E'Z'	25 24	24	17	10	24		
		iS	N'Z'	29 54	13	-29				
		o	Z'	30 05	42					
		isS	N'	30 12	12	+17				
		i	E'E"	30 18	10*		+17*			
		X	N'	30 50	35	55				
		i	N'	32 42	14	+16				
		iSS	Z'	32 54	12					+15
		iSS	E'	33 02	10		+19			
		i	Z'	33 07	10					+33
		i	N'	33 08	7	+24				
		m	N'	33 24	14	39				
		SSS	Z'	33 39	22					67
		eL	N'	34.5	50					
		eL	E'	35.1	40					
		iLR	Z'	36 08	45					+
		iM	Z'	39 18	28					-69
		M	E'	39 25	25			90ca		
		M	N'	40 17	25	59				
		M	E'	40 56	25			100ca		
		M	Z'	41 06	27					98
		M	N'	41 36	26	65				
		M	Z'	43 00	19					84 ca
		M	N'	43 22	18	77 ca				F Z' 24.9h



No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks
								AN	AE	AZ		
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.	
618	1966 Sept. 9	i	Z	23	18	33				+		Masked by microseisms USCGS: 17.6 S, 168.0 E H 23 13 19.8 h 36 km. Mag. 5.2
		e	N'	22	24							
		M	E'Z'	25	39		17		1	1		
		M	N'	26	36		15	$\frac{1}{2}$				
	10	(iP)	Z	17	37	19				+		Microseisms present USCGS: 23.3 S, 179.8 W, H 17 32 03* h 550 km. Mag. 5.0
620	11	iP	Z	07	09	03.0	1.0			+0.06		Compression Microseisms present USCGS: 6.3 S, 147.3 E, H 07 03 18.1 h 78 km. Mag. 5.3
		e	N'	14	28							
622	11	i(PKS)	Z	18	00	08.3	1.6			+0.30		Microseisms present USCGS: 6.8 N, 72.9 W, H 17 38 04.2 h 167 km. Mag. 5.9
		i	Z'	00	09		5			+2		
		e	Z	00	10		2.0			0.52		
623	12	(P)	Z	00	47	34						Masked by microseisms USCGS: 15.9 S, 167.0 E, H 00 42 25.5 h 62 km. Mag. 4.9
		e	N'	51	44		14					
		e	Z'	53	48		14					
624	12	iP	Z	11	34	14.5	0.8			-0.11	2280	Dilatation USCGS: 23.1 S, 170.6 E H 11 29 40.3 h 49 km. Mag. 6.1 6.4-6.7 Berkeley 6 $\frac{1}{2}$ -6 $\frac{3}{4}$ Pasadena 6 $\frac{3}{4}$ Palisades
		iP N'E'Z'N"E"Z"		34	15		9	+31	+60	-108	2095	
		i	Z	34	19		1.0			-0.61		
		iPP	E'	34	31		7		+67			
		iPP	N'	34	32		8	+19				
		iPPP	N'E'N"E"	34	45		8	+29	+32			
		iS	N'	37	58		(10)	-(87)				
		i	Z'	38	06		11					
		i	E"E"	38	09		10		+125ca	-150ca		
		iLQ	N'	38	13		30	+155ca				
		iPcP	E'	38	25		9		-84			
		iSS	Z'	38	30		13			+91		
		iL	Z'	39	05		30			+170ca		
		iL	E'	39	18		22		+100ca			
		M	N'	40.5	16		165ca					
M	Z'	41.0	17					150ca				
M	E'	41.3	16				105ca					
M	N'	42.2	12		210ca							
M	E'Z'	43.5	14				145ca	155ca				
		F		15.3								
625	12	iP	Z	12	44	36.5	1.5			+0.14		Microseisms present USCGS: 23.1 S, 170.6 E, H 12 40 06.3 h 33 km. Mag. 4.8
		i	Z	44	43		1.5			-0.22		
626	12	eSS	N'	17	15	41	24					USCGS: 39.4 N, 120.1 W H 16 41 01.7 h 8 km. Mag. 5.4 6.1 Berkeley 6 $\frac{1}{4}$ -6 $\frac{1}{2}$ Pasadena
		e	E'	16	04		24					
		eLQ	N'E'	27.0	35		2					
		eLR	Z'	31.8	30							
		M	E'Z'	35	22			$1\frac{1}{2}$	2			
627	13	eP	Z	00	36	06	1.2					Microseisms present USCGS: 23.0 S, 170.5 E H 00 31 30.9 h 31 km.
		e	N'	40	06		9					
		eL	E'	41	05		24					
		M	E'	43	32		15		$\frac{1}{2}$			
		M	N'Z'	44.1	13		1			1		
628	13	iP	Z'Z"	00	55	19 $\frac{1}{2}$	8			+4		Compression USCGS: 23.0 S, 170.6 E H 00 50 42.8 h 28 km. Mag. 5.0
		iP	N'E'N"E"	55	20		8	-1	-2			
		i	Z	55	20		1.0			-0.10		
		ePP	N'E'Z'	55	44		9	$1\frac{1}{2}$	$1\frac{1}{2}$	3		
		i(S)	N'N"	59	10		12	-4				
		i	E'Z'E"	59	13		12		+4	+4		
		i	N'N"	59	26		9	+5				
		i	E'E"	59	27		12		+5			
		eL	E'Z'	01	00	16	26		5	7		
		M	N'	02	52		13	11				
		M	Z'	03	18		13			4		
M	E'	04	38		12			4				



## 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.	
629	1966 Sept. 13	oP	Z'	07 49 39					Feeble & masked by microseisms USCGS: 22.9 S, 170.7 E H 07 44 57* h 33 km. Mag. 4.4
		o	N'	53 24					
		o	E'Z'	53 40	9		1/2	1	
		oL	E'Z'	54.5	24		1/2	1	
		M	E'Z'	56.1	16				
		M	N'	57.1	12	1			
631	13	o(S)	N'	15 59 38	8	1			Masked by microseisms USCGS: 9.4 N, 126.2 E, H 23 45 16.3 h 70 km. Mag. 5.3
		oL	Z'	16 06 07	25			1	
		(P)	Z	23 54 00		Masked by microseisms			
637	14	iP	Z'Z''	23 31 21	13			+12	9680 87:1 Compression USCGS: 60.1 S, 27.0 W H 23 18 41.6 h 33 km. Mag. 6.2
		i	N'N''	31 22	13	+4			
		iPcP	Z	31 23	1.1			+0.09	
		i	Z	31 26.7	1.5			+0.28	
		i	Z	31 31	1.5			+0.34	
		iPP	Z'	34 44	10			+5	
		iPP	N'N''	34 45	10	+3			
		iSKS	N'N''	41 47	7	+4			
		iS	E'E''	41 56	19		+31		
		i	N'Z'N''	41 58	20	+19		-11	
		i	E''	42 10	13*		+6*		
		iPS	N'	43 02	18	-18			
		oPPS	Z'	43 30	18			4	
		o	N'	47 08	22	9			
		iSS	E'	47 35	20		+23		
		iSS	Z'	47 37	19			+18	
		m	N'	47.9	17	23			
		iSSS	Z'	51 08	17			+7	
		oLQ	E'	53 38	30				
		LQ Max.	E'	54.2	30		48		
o	E'	56 20	45		13				
M	E'	24 08.2	20		17				
M	N'Z'	09.2	19	83ca		90ca			
F		27.9							
638	15	o(P)	Z'	04 13 20	7				USCGS: 23.6 S, 175.8 W H 04 07 04.8 h 67 km. Mag. 5.3
		i	E'Z'	14 20	9		-1 1/2	+2	
		o	Z'	18 39	12				
		o	N'	20 20	13	3			
		oLR	E'Z'	22 00	23				
M	N'E'Z'	24 48	13-18	18	13	18			
640	15	iP	Z	07 58 18	0.7			-0.07	Dilatation Microseisms present USCGS: 8.1 S, 117.0 E, H 07 50 54* h 181 km. Mag. 5.2
		i	Z	08 00 35	1.5			-0.28	
641	15	oP	N'Z'	12 04 35 1/2	10			2	USCGS: 60.3 S, 26.7 W H 11 51 55.7 h 33 km. Mag. 5.7
		o	N'	04 48	12				
		o	Z'	04 52	12			3	
		o	N'Z'	08 14	10	1		2	
		oSKS	N'	15 02	7	2			
		iS	E'	15 10	15		+7		
		o	N'	15 13	20	3			
		oPS	N'	16 19	18	3			
		o	N'	20 22	20				
		oSS	Z'	20 52	18			3	
		m	E'	21 12	17		4		
		m	N'	21 25	16	5			
		oLQ	E'	26 52	30		9		
		LQ Max.	E'	27.5	30				
M	N'Z'	42.8	18	13		17			
M	E'	43.4	16		6				
642	15	iP	Z	12 30 18				+	Compression Microseisms present USCGS: 10.0 S, 160.8 E H 12 24 56* h 53 km. Mag. 5.3





No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			$\Delta$	Remarks	
							AN	AE	AZ			
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.	
643	1966 Sept. 15	iP	Z	17	21	12.5	0.9			+0.22	Compression Microseisms present USCGS: 22.8 N, 121.4 E H 17 10 46.8 h 47 km. Mag. 5.5	
		e	N'Z'		21	17	12			1		
		e	N'		29	56						
		e	E'		30	00						
		e	E'		31	18						
		eSS	E'		33	53						
		eL	N'		40	12	24					
		M	N'		46	.9	21	1				
		M	E'		50	00	17		2			
		M	Z'		50	50	18			3		
644	15	iP	Z	17	35	18.5	1.5		+0.22	Compression Microseisms present USCGS: 22.9 N, 121.3 E, H 17 24 45.6 h 49 km. Mag. 4.8		
645	16	eP	Z	07	57	43					Masked by microseisms USCGS: 1.8 S, 134.3 E H 07 50 39.7 h 21 km. Mag. 5.4	
		eL	N'E'	08	08	28	30					
		M	N'E'		10	09	20	2	3			
		M	N'Z'		13	48	14	4		4		
646	16	eP	Z	13	16	30					Masked by microseisms USCGS: 23.0 S, 170.6 E H 13 11 54.5 h 33 km. Mag. 5.1	
		e	N'		17	16	16					
		e	Z'		20	24	8					
		e	E'		20	37	10					
		eL	Z'		21	22	25					
648	16	eP	Z	17	10	04.7	1				Microseisms present USCGS: 18.7 S, 169.0 E, H 17 05 25.2 h 212 km. Mag. 5.9	
		e(S)	N'		14	04	8					
		e	Z'		15	03	12					
651	17	eP	Z'	20	23	14	13				Microseisms present USCGS: 27.7 S, 176.6 W H 20 17 26.0 h 37 km. Mag. 5.2	
		e	Z'		27	17	14					
		e	N'		28	16						
		eLR	Z'		30	51	26					
		M	E'Z'		33	.1	18		4	8		
		M	N'		33	.3	15	6				
652	17	eP	Z	21	11	34	1			Microseisms present USCGS: 20.7 S, 176.3 W, H 21 05 26.8 h 220 km. Mag. 4.6		
655	18	eS	E'	15	37	38	8		1		USCGS: 60.4 S, 27.0 W H 15 14 24.9 h 33 km. Mag. 5.4	
		eSS	E'		43	12	16					
		eLQ	E'		49	10	27		1			
		M	E'		16	03	30	18		1		
		M	N'Z'		04	20	21	2				3
657	19	(P)	Z	03	41	52					Masked by microseisms	
		e(L)	Z'		45	30	16					
		M	N'		49		12	1				
665	22	eP	Z'	21	42	21					Masked by microseisms USCGS: 17.0 S, 172.8 W H 21 35 09* h 10 km. Mag. 4.4	
		eL	N'		50	43	22					
		M	N'		55	15	13	3				
		M	E'Z'		56	56	16		3	4		
668	23	iP	Z	18	38	41.5	1.5			+0.20	Compression Microseisms present USCGS: 59.5 S, 26.3 W H 18 25 53.0 h 33 km. Mag. 5.6	
		e(S)	E'		49	32	8					
		e	N'		50	36	16					
		eLQ	E'	19	01	.4	32					
		eL	Z'		09	.1	26					
		M	E'		15	40	18		1/2			
		M	N'Z'		16	11	18	1				2
669	24	(iP)	Z	13	11	23.7	1.5			+0.22	Microseisms present	
		eL	E'		20	.1	28					
670	24	iP	Z	16	53	12.5	0.8			-0.08	Dilatation Microseisms present USCGS: 22.4 S, 171.6 E H 16 48 31.7 h 127 km. Mag. 5.1	
		eS	N'		57	06	8					
		i	N'		57	10	8	+2				
		i	E'E"		57	14	7		+2			



## RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			$\Delta$	Remarks
					AN	AE	AZ		
			h m s	s	$\mu$	$\mu$	$\mu$	km.	
676	1966 Sept. 28	eP Z	14 12 24						
		iP Z Z'	12 25	1.9			+0.96		Compression
		eS E'	22 18						N'E'Z' confused by microseisms
		eSKS N'	22 30	11					
		e N'	28 03	26					USCGS: 27.4 N, 100.1 E
		e Z'	33 06	22				4	H 14 00 22.9
		eL E'	34 21	30					h 33 km.
		eL N'Z'	38.3	26	3			4	Mag. 6.2
		eL E'	40.3	33			5		
		M N'	46 03	22	13				
M Z'	46 54	23				8			
M E'Z'	50 30	21			9	13			
677	29	P Z	02 50 23 $\frac{1}{2}$						Microseisms on all records, large on N'E'Z'
		S E	55 18 $\frac{1}{2}$						USCGS: 19.9 S, 176.2 W, H 02 44 19.0
		e N'	57 54					h 246 km. Mag. 5.5	
678	Oct. 2	iP Z	07 36 50.0	1.5			+0.20		Compression Microseisms present
		e N'	47 21						
		e(S) E'	47 33	15			1		USCGS: 51.6 N, 174.5 W
		e(SS) E'	53 28	22					H 07 23 35.3
		e E'	08 00 04	20					h 34 km.
		eLR Z'	05 27	30					Mag. 5.1
		M N'Z'	08.4	23	1			1	4.9-5.3 Berkeley
		M E'	11 22	20			$\frac{1}{2}$		
679	2	iP Z	19 46 53.5	1.5			+0.26		Compression Large microseisms
		i Z	46 55	1.5			+0.32		
		e(S) E'	50 51	12			1		USCGS: 53.7 S, 140.1 E
		i N'	51 03	10	+2				H 19 42 10*
		e E'	51 17	20			1		h 57 km.
		eL N'Z'	52 04	25	3			3	Mag. 5.2
		M E'	53 59	10			2		
		M Z'	54 26	13				2	
M N'	54 53	10	2						
680	4	(iP) Z	16 04 07				+		Large microseisms mask all records
		i(S) E'	08 12	8			+3		USCGS: 53.7 S, 140.5 E
		e E'	08 32	21					H 15 59 23*
		eL N'Z'	09 18	27	4			4	h 43 km.
682	7	iP Z	15 59 45.5	( $\frac{0.8}{3.0}$ )			( $\frac{-2.56}{-53.4}$ )	2270	Dilatation h 0.02
		iP NE	59 45.7	0.8-3.0	( $\frac{+0.52}{+11.0}$ )	( $\frac{+0.98}{+20.4}$ )		20 $\frac{3}{4}$	
		iP N'E'Z'N"E'Z"	59 46	4 $\frac{1}{2}$ 15	+52	+85	-165		@ T=4s. T=15s: AN+24 $\mu$ AE+39 $\mu$ AZ-77 $\mu$
		i(pP) E'	16 00 07	6		+29			
		iPP N'Z'	00 11	4 $\frac{1}{2}$ 15	-43		+105		@ T=4s. T=15s: AN-20 $\mu$ AZ+48 $\mu$
		m N'E'Z'	00.4	15	-23	55	61		
		iS E'	03 20	12			-28		USCGS: 21.6 S, 170.5 E
		i Z'	03 22	13				+33	H 15 55 10.8
		i N'	03 29	12	+67				h 161 km.
		i E"	03 33	13*			-65ca*		Mag. 6.4
		i N'Z'Z"	03 37	13	-90		-130ca		6 Berkeley
		i N'	04 27	16	-100				6 $\frac{3}{4}$ Pasadena
		m Z	04 28	16				140	
		L E'Z'	05.2	30			87	140	
		M Z'	08 47	15				53	
eScS N	10 52	1.5	+0.26						
iScS E	10 53	1.5			-0.38				
683	8	(iP) Z	00 18 56				+		Large microseisms on all records
		(e) Z'	19 11						
		i(S) N'	24 11	15	+4				USCGS: 16.4 S, 177.6 W
		eL N'	25 40	41					H 00 12 18.1
		L Max N'	26 50	22	12				h 33 km.
		eLR Z'	27.1	27					Mag. 5.7
		M N'	30 55	13	15				6.6-6.9 Berkeley
		M E'Z'	31 07	16			11	16	



No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks		
								AN	AE	AZ				
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.			
684	1966 Oct. 8	eP	Z	02	40	50						All records masked by microseisms USCGS: 16.5 S, 177.5 W H 02 34 16.1 h 57 km. Mag. 4.9		
		i	N'	46	10		13	+3						
		i	E'	46	13		10		-4					
		eL	N'	47	36		40ca							
		L Max	N'	48	46		22	12						
		M	Z'	50	25		23			20				
		M	E'	50	30		24		15					
		M	N'	51	36		15	9						
		9	(iP)	Z	02	12	08						+	
		685	9	e(PPS)	Z'	07	20	46						
e	E'			21	35									
e(SS)	E'			26	52									
e(SSS)	E'			30	47									
e	N'			39	52									
eLR	E'Z'			46	30		40							
M	N'			48	55		23							
M	E'Z'			53.0			23							
689	11	eP	Z'	06	38	36	8				1	Microseisms present USCGS: 60.3 S, 26.0 W H 06 25 55.1 h 37 km. Mag. 5.9		
		i	Z	38	45.8		1.2				+0.19			
		eS	N'	49	02		12	2						
		e	E'	49	09									
		e	Z'	49	10		16							
		e	N'	49	19		15	2						
		eSS	E'	54	52		17		1					
		eLQ	E'	07	00	41	30							
		LQ Max	E'	01	39		30		7					
		eL	N'	06	40		36							
		M	E'	15	26		17		3					
		M	N'Z'	16	14		18	9			12			
690	11	eP	Z'	20	46	02						Microseisms present USCGS: 32.6 S, 178.7 W H 20 40 39.8 h 33 km. Mag. 5.1 4.8-5.2 Berkeley		
		e	N'	50	39		14							
		e	Z'	50	49		20							
		eL	N'	51	24		24	3						
		eL	E'	52	24		27		2					
		eLR	Z'	52	47		27			7				
		M	E'Z'	54	12		20		6	11				
		M	N'	54	25		17	5						
691	12	iP	Z	00	13	26.5	0.7				-0.04	Dilatation USCGS: 11.9 S, 121.8 E H 00 06 37.8 h 33 km. Mag. 5.7		
		iP	E'Z'E"Z"	13	27		6						-1 $\frac{1}{2}$	
		m	NEZ	13	30		0.8	0.03	0.07	0.31			-4 $\frac{1}{2}$	
		epP	E'Z'	13	37		6		1	3				
		i	Z	13	37.5		0.8						-0.12	
		m	NEZ	13	40		0.8	0.05	0.09	0.31				
		ePP	Z'	14	46		6						2	
		eS	N'	18	53		12	2						
		i	E'E"	18	59		12						-4	
		e	E'Z'	19	22		24						8	
		i	N'E'	19	36		21						+8	
		eL	E'	21	58		44						10	
		eL	N'	22	44		40	18						
		eL	Z'	23	09		40						17	
		M	E'	26	21		18						41	
M	N'	26	30		18	95ca								
M	Z'	27	11		18					25				
M	Z'	29	44		11					34				
692	12	eP	Z'	04	27	50						Microseisms present USCGS: 31.2 S, 177.8 W H 04 22 14.0 h 14 km. Mag. 5.2 4.5-4.9 Berkeley		
		i	Z	27	55		1.1						+0.10	
		ePP	E'Z'	28	33		10						$\frac{1}{2}$	
		eLR	E'Z'	34	24		30						1	
		M	E'Z'	35	58		21						5	
		M	N'	36	33		17	4					9	
		M	E'Z'	38	35		16						6	



RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ km.	Remarks
						AN	AE	AZ		
						μ	μ	μ		
693	1966 Oct. 12	P	Z	08 02 21						Masked by microseisms
		e	N'	06 54	9	1				
		e	Z'	06 57	15			1		USCGS: 11.0 S, 162.3 E
		e	E'	06 59	15		1			H 07 56 59.4
		e	N'	07 08	14	1				h 41 km.
		eL	E'	08 43	25					Mag. 5.0
		M	Z'	09 46	21			1		
		M	N'	09 53	21	1				
701	14	iP	Z	02 39 41.5					+	Compression Microseisms present
		(e)	E'	45 37	9					
		e	E'	45 53	13					USCGS: 15.1 S, 173.5 W
		e(SSS)	N'	48 23	20	2				H 02 32 32*
		eL	Z'	50 22	25					h 33 km.
		eL	E'	50 37	20					Mag. 4.8
		M	N'E'Z'	52 40	14-18	2	1	2		
708	16	iP	Z	13 08 22.3	1.0				+0.16	Compression USCGS: 56.1 S, 27.1 W, H 12 55 30.8 h 101 km. Mag. 5.6
709	17	eP	Z'	04 03 44						Microseisms present Long-period wanderings on N'E'
		e(S)	N'	08 25	14	1/2				USCGS: 11.1 S, 166.7 E
		e	E'	08 26	14		1			H 03 57 51.9
		e	N'	09 22	(30)					h 55 km.
		eLR	Z'	10 29	30					Mag. 4.9
		LR Max	N'E'Z'	11.3	25	2	2	3		
710	17	eP	Z	10 21 19						Microseisms present
		e	N'Z'	21 27						
		iP	Z	21 29	1.3				+0.32	USCGS: 11.0 S, 166.7 E
		i	Z	21 47.5	1.3				+0.29	H 10 15 40.6
		eS	N'	25 57	13	2 1/2				h 55 km.
		oi	N'E'	26 13	15	+5 1/2	+6			Mag. 5.5
		oi	Z'	26 21	13				+7	4.6-5.0 Berkeley
		eSS	Z'	27 17	18					5 1/2 Pasadena
		eLR	Z'	28 18	30					
		i	Z'	28 31	27				+22	
		LR Max	N'E'Z'	29.1	27	18	16		29	
712	17	P	Z	12 41 19						Masked by microseisms
		e(S)	N'	45 53	13					USCGS: 10.4 S, 161.1 E
		eL	Z'	47.8	26					H 13 35 59.8
		M	N'Z'	49	21	1			1 1/2	h 77 km. Mag. 5.1
713	17	e(S)	N'	13 59 19	13					Masked by microseisms
		e	E'	59 29	12					USCGS: 11.2 S, 166.8 E
		e	N'	14 00 54	13					H 13 48 54.3
		eL	N'E'	01.7	27					h 33 km.
		eLR	Z'	01 53	27				3	Mag. 4.8
714	17	P	Z	18 25 06						Microseisms present
		i	Z	25 08	0.9				+0.15	h 0.09
		e(sP)	Z'	27 55	4				3	USCGS: 22.3 S, 179.1 E
		iS	N'E'	29 04 1/2	9	-1/2	+2			H 18 20 07.8
		e	E'	32 12	16					h 635 km.
		eScS	N'	34 42	6	1				Mag. 5.0
715	17	eP	Z'	21 56 55						
		e	N'E'Z'	57 20	20	1 1/2	2	9		USCGS: 10.7 S, 78.7 W
		e	Z'	22 01 25						H 21 41 56.3
		ePP	N'E'Z'	01 45						h 38 km.
		i	Z'	01 57	10				+13	Mag. 7 1/2 Pasadena
		m	N'E'Z'	02 18	22	9	13	35		7.5 Berkeley
		e	N'	07 23						
		iSKS	E'	07 29	22				+35	
		i	N'	07 32	22	-26				
		o	N'E'	08.0	(35)					
		iSKKS	E'	08 25	24				+21	
		i	N'	08 45	18	-24				
		iS	N'E'	09 19	14	-10	+13			

Continued



No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
								AN	AE	AZ		
715 cont.	1966 Oct. 17	i	Z'	22	10	20	20	μ	μ	μ	km.	
		iPS	Z'	10	54	16				+17		
		iPS	N'	10	57	16	+14			+29		
		i	Z''	11	30	18*				+105ca*		
		iSS	E''	17	59	15*						
		M	E''	42.5		18*				+29*		
		M	N''	43.6		18*	130*ca			200*ca		
		M	N''	49.3		16*	110*ca					
		e	N'	24	59	70						
		e	Z'	25	43.5	120						
722	19	(oPKP)	Z	08	21	11						Masked by microseisms
		e(PKP)	Z'	21	28	12				2		
		i	Z'	22	32	8				+3		
		e(PP)	Z	24	38	3						
		e	N'	25	19	10	2					
		i	N'	25	36	8	+2					
		i	Z'	25	44	10				-5		
		i	Z'	27	52	10				-3		
		e(SKS)	E'	28	29	9						
		i	N'	28	37	10	-3					
		eSS	E'	42	39	20						
		e	N'	42	54	30	9					
		i	E'	42	58	16				+7		
		m	E'	43.5		28				16		
		i	N'	44	07	40	-16					
		eSSS	E'	48	15	30				16		
		eLQ	N'	58	47	50	9					
		eLQ	E'	58	53	50				22		
		eG	E'	09	00	54	70			115		
		L	N'	01	51	60	42					
eL	Z'	02	34	44								
LR Max	Z'	08.5		40				18				
M	N'Z'	14.1		25	18			24				
M	E'	27.5		22				16				
eX	E'	31	16	60				28				
X	E'	32	58	60				69				
723	19	iP	Z	11	27	28	0.7			+	Masked by microseisms	USCGS: 12.6 S, 167.2 E, H 11 22 14.7 h 218 km. Mag. 5.1
		i	E	34	03.5	1.0			+0.06			
		i	Z'	34	05	5				-2		
726	20	iP	NEZ	13	40	50.7	0.8	+0.07	+0.11	-0.37		Dilatation Microseisms present USCGS: 15.5 S, 167.7 E, H 13 35 50.5 h 139 km. Mag. 4.8
730	23	P	Z	09	21	35	0.8			0.04		Microseisms present USCGS: 6.5 S, 155.2 E, H 09 15 48* h 34 km. Mag. 5.0
732	23	eS	E'	17	31	50					Masked by microseisms	USCGS: 6.3 S, 129.9 E H 17 20 00.2 h 95 km. Mag. 5.1
		eL	E'	37	12	30						
		M	E'	41	18	19				1		
		M	N'Z'	41	42	19	1 1/2			2		
733	24	(P)	Z'	15	43	12					Masked by microseisms	USCGS: 30.5 S, 177.2 W, H 15 37 25.9 h 26 km. Mag. 4.6
734	25	iP	Z	00	32	18	1.0			+0.07	Compression Microseisms present USCGS: 6.6 S, 147.2 E, H 00 26 35.5 h 67 km. Mag. 5.3	
		i	Z	32	21.5	1.2				+0.11		
		eL	Z'	40.5		25						
737	25	iP	Z	23	21	02.5	0.8			+0.09		Compression Microseisms present USCGS: 14.6 S, 167.4 E, H 23 16 00.2 h 179 km. Mag. 4.5
738	26	(iP)	Z	18	33	45.5	1.3				Continued	Compression Large microseisms USCGS: 18.4 S, 167.6 E H 18 28 54.1 h 36 km. Mag. 5.6 5-5.4 Berkeley
		i	Z	33	46.8	1.3				+0.11		
		i	Z	33	53.3	1.2				+0.42		
		e(S)	N'	37	40	8	3			-0.38		
		e	E'Z'	37	43	8						
		i	N'	37	56	8	+2 1/2			2		
		e	Z'	37	58	20				2		



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.		
738 cont.	1966 Oct.26	oL	E'	18	39	06	25						
		oLR	Z'		39	11	30						
		LR Max.	E'Z'		40.0		23		2	4			
		M	N'		40	53	16	3					
739	27	iP	NEZ	00	27	28.2	0.6	+0.14	-0.14	+0.26		Compression	
740	27	iPKP	Z	06	16	58.5	0.7			+0.30		Compression USCGS: 73.4 N, 54.8 E H 05 57 58.0 h 0 km. Mag. 6.3 5.8-6 Berkeley 5-5½ Palisades	
741	27	iP	Z	14	30	42.5	1.8				-1.05	6240	Dilatation
		o	Z'		30	49	(4)					5692	
		e	Z		30	50	2.3			1.7			USCGS: 22.2 N, 145.9 E H 14 21 04.8 h 29 km. Mag. 6.0 5.8-6.2 Berkeley 6-6½ Pasadena
		i	Z'Z''		30	51	4			+6			
		e	Z'		38	27	11				3		
		iS	E'E''		38	28	8		+3				
		iS	N'		38	29	15	+4					
		oPS	Z'		38	44	9				3		
		o	N'		39	13	22	5					
		oScS	N'		40	48	7	1					
		oSS	N'		42	21	16	2					
		oL	E'		44	10	50						
		o	Z'		44	51	16					5	
		L	E'		45	46	38			10			
		oLR	Z'		47	48	40						
		LR Max.	N'Z'		49.4		30	8				7	
M	E'		51	46	22			6					
M	N'Z'		53	10	20	8				10			
743	28	iP	Z	01	46	44.5	0.8				+0.07		Compression Microseisms present
		i	Z		46	59.4	0.8				-0.07		
		oS	N'		51	11	9						USCGS: 9.6 S, 159.8 E H 01 41 19.1 h 32 km. Mag. 5.5
		o	E'Z'		51	19	13		1½		2		
		e	N'		51	21	15	3					
		e	N'		52	36	21						
		oL	Z'		53	26	28						
		M	N'E'		55	31	15	2	2			3	
M	Z'		58	01	15								
744	28	iP	Z	22	16	32.7	1.1				+0.25		Compression Microseisms present
		oP	N'E'Z'		16	33	7	1	1		2		
		opP	Z		16	42	1.5				0.20		USCGS: 20.1 S, 168.8 E H 22 11 47.6 h 19 km. Mag. 5.3 4.8-5.2 Berkeley
		i	Z		16	44	1.3				-0.50		
		oPP	N'E'Z'		16	57	11	1½	1½		3		
		oi	N'Z'		20	31	13	-7			-8		
		i	N''		20	33	8*	+5*					
		i	E'E''		20	34	11			-5			
		i	N''		20	44	8*	+5*					
		o	E'		20	54	10						
		iL	E'		21	52	23			+5			
M	N'		22	43	16	4							
M	E'Z'		23	52	17				7	9			
745	28	i(P)	Z	23	29	00.5	1.5				+0.34		Microseisms present
		o	N'		32	51	9						USCGS: 22.5 S, 170.9 E H 23 24 14.5 h 25 km. Mag. 4.9
		e	E'		32	55	10						
		e	Z'		33	03	10				2		
		oLR	E'Z'		34	16	25						
		M	N'		34.9		17	1					
M	E'Z'		35.9		17			1	1				
749	29	P	Z	07	14	08							Masked by microseisms
		i	Z		14	27.5	0.9				-0.06		USCGS: 6.8 S, 155.7 E H 07 08 27.8 h 67 km. Mag. 4.6
		oL	Z'		22.0		18						
750	29	(oP)	Z'	10	43	08	7						Masked by microseisms
		i	Z		43	18.5	1.5				+0.20		
		o(S)	N'E'		47	14	8						
		oL	Z'		48	36	20						
		M	E'Z'		51	28	17			1	1		



No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			$\Delta$	Remarks	
							AN	AE	AZ			
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.	
751	1966 Oct. 29	iP	Z	11	14	05.8	1.0			-0.04		Dilatation Microseisms present USCGS: 0.3 N, 122.0 E, H 11 06 19* h 224 km. Mag. 4.8
		i(S)	E	20	09		1.0		+0.05			
752	29	oPS	E'	16	01	40	15					Masked by microseisms  USCGS: 10.7 S, 79.0 W H 15 32 19* h 22 km. Mag. 5.0
		o	N'	01	47		13					
		e	Z'	01	50		15					
		oSS	E'	08	14		16					
		o	N'	08	20		16					
		M	N'E'Z'	30.6			18	$\frac{1}{2}$	$\frac{1}{2}$	1		
755	30	(P)	Z	12	33	42						Masked by microseisms USCGS: 0.7 S, 128.8 E, H 12 26 11* h 33 km. Mag. 4.9
		M	Z'	52.6			13			1		
756	30	iP	Z	22	27	54.0	1.2			+0.11		Compression Microseisms present USCGS: 31.3 S, 179.3 W, H 22 22 46.3 h 213 km. Mag. 4.4
		i	Z	28	01		1.3			+0.11		
760	Nov. 3	iP	NZ	03	34	15.8	0.8	+0.10		+0.28		Compression Large microseisms USCGS: 15.1 S, 167.4 E, H 03 29 16.3 h 153 km. Mag. 5.0
		i	E	34	17.0		0.8		+0.10			
761	3	PKP	Z	16	44	11 $\frac{1}{2}$						Large microseisms on all records  USCGS: 19.2 N, 67.9 W H 16 24 31.0 h 22 km. Mag. 5.6 6-6 $\frac{1}{4}$ Pasadena 5 $\frac{1}{4}$ Palisades
		oPP	Z'	47	13							
		o(PS)	Z'	57	30							
		oPPS	Z'	59	50		(20)					
		oL	N'	17	24.8		(35)					
		M	N'	35.7			21	2				
		M	E'Z'	36.7			21		3	6		
762	4	iP	Z	15	47	46.3	1			+		Compression Masked by microseisms USCGS: 25.9 S, 178.3 E, H 15 43 09.0 h 620 km. Mag. 4.7
763	5	oS	N'E'	02	31	13	20					Masked by large microseisms USCGS: 41.8 S, 80.1 E, H 02 13 51.2 h 33 km. Mag. 5.5
764	5	iP	Z	02	35	13.5				+		Compression Microseisms present  USCGS: 19.2 S, 169.2 E H 02 30 15.0 h 29 km. Mag. 5.3
		i	Z	35	15.0		1.3			-0.59		
		o	N'	38	47		18					
		o	N'	39	09		10	4				
		i	N'	39	20		8	+5				
		i	N'	39	44		13	+10				
		oL	Z'	40	30		30			11		
		M	N'	41	48		18	15		12		
		M	Z'	42	18		19			12		
		M	E'	43	01		16		7			
766	5	iP	Z	12	52	09				+		Compression Microseisms present  USCGS: 15.3 S, 175.2 W H 12 45 13.9 h 38 km. Mag. 5.3 6-6 $\frac{1}{4}$ Pasadena
		i	Z'Z''	52	11		8			-2		
		oPP	E'Z'	53	34		12		2	2		
		iPPP	E'Z'	53	52		12		+2	-3		
		o	E'	57	30		11		2			
		i(S)	N'E'	57	48		14	2	-8			
		i	Z'	57	52		16			-7		
		oL	N'E'	13	00	23	30	14				
		i	Z'	02	10		25			+22		
		i	E'	02	12		25		+17			
		M	N'	04	13		13	16				
		M	E'Z'	07	46		18		23	34		
767	6	iP	Z	14	48	54.4	1.5			-0.26		Dilatation Microseisms present USCGS: 17.9 S, 178.5 W, H 14 43 16.6 h 548 km. Mag. 4.8
769	7	oS	E'	13	32	42	16					Masked by microseisms USCGS: 41.8 S, 88.3 E H 13 16 46* h 33 km. Mag. 5.1
		o(LQ)	N'	37.7			34		1			
		oLR	E'Z'	40	18		32					
		LR Max.	N'E'Z'	41.5			22	1	1	1 $\frac{1}{2}$		



## RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			$\Delta$	Remarks		
							AN	AE	AZ				
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.		
772	1966 Nov. 11	i(pP)	NEZ	09	52	43.8	0.6	+0.04	+0.10	-0.22		Microseisms present	
		ePP	E'Z'	52	51		7						
		e(S)	N'	56	19		7	2					USCGS: 18.8 S, 168.9 E
		e	N'	56	33		20						H 09 47 36.7
		eLR	Z'	58	02		22				1½		h 81 km.
		M	N'E'Z'	10	00	20	15	1½	1	1		Mag. 4.9	
774	11	iP	Z	18	03	43	1.0			-0.06		Microseisms present	
												USCGS: 17.5 S, 177.2 W, H 17 57 43.4	
												h 390 km. Mag. 4.7	
777	12	eP	Z	13	01	30					8460	Microseisms present	
		i	EZ	02	18.3		1.0		-0.04	-0.06	76°1		
		eS	E'	11	10		17			1			USCGS: 41.8 N, 144.1 E
		e	N'	11	13		20						H 12 49 43.6
		e	N'	11	48		20						h 33 km.
		e	Z'	11	56		18						Mag. 5.8
		eSS	N'	16	22		22						
		eLQ	E'	21	15		25						
		M	E'	28	30		20			1			
		M	N'	28	54		22	1½					
		M	Z'	29	14		22			2½			
778	12	(P)	Z	16	02	43.5						P masked by microseisms	
		i	Z	02	49.6		1			+			USCGS: 4.8 S, 134.2 E
		e	N'	08	18		20						H 15 56 04.7
		i	E'Z'	13	50		7		+4	+3			h 33 km.
		M	N'E'Z'	17	22		14	6	5	10			Mag. 5.4
779	12	eP	Z	18	50	07.3					2550		
		iP	NEZ	50	08.5		1.3	-0.10	-0.10	+0.67	23°0		Compression
		i	N'E'Z'	50	11		12	-5	-5	+11			
		m	Z	50	13		1.2			2.88			USCGS: 15.6 S, 167.3 E
		i	NE	50	15		1.0	-0.44	-0.42				H 18 45 01.0
		i	N'E'Z'	50	26		20	-15	-14	+23			h 40 km.
		iPP	Z	50	31.5		1.4			+1.19			Mag. 5.2
		e	N'	54	04		10	6					6.4-6.6 Berkeley
		iS	E'Z'	54	11		12		-7	+17			
		i	N'	54	16		15	+35					
		i	N''	54	27		9	+					
		i	Z'	54	29		20			+115			
		m	N'E'	54.5	15		98	43					
		iSS	E'E''	54	47		12	+48					
M	E'	56	50		22	105							
M	N'Z'	57	12		21	73		125ca					
iScP	Z	57	37		2.4			-1.65					
eScS	N	19	01	25	1.7	0.21							
F		22	29										
780	13	PKP	Z	03	11	25	0.8					Masked by microseisms.	
		i	Z	11	29.2		0.8			+0.06			USCGS: 17.1 N, 61.9 W, H 02 51 50.6
		i	Z	11	46.5		1.0			+0.10			h 65 km. Mag. 5.5
783	16	e(S)	N'	01	03	31	13	1				P obscured by microseisms	
		eL	N'	04	42		21						USCGS: 18.3 S, 168.1 E
		eL	Z'	05	18		22			1½			H 00 54 32.1
		M	N'	06	28		16	1					h 18 km.
		M	E'Z'	07	00		16			1	1		Mag. 5.0
785	16	P	Z	06	04	54						Microseisms present	
		e(S)	E'	10	20		16			1			USCGS: 19.5 S, 176.3 W
		eLR	E'Z'	13	25		26			2	2		H 05 58 30*
		M	E'Z'	15	08		21			3	4		h 48 km.
		M	N'	15	59		13	2					Mag. 5.0
786	16	iP	Z	08	13	34.7	1.2			+0.42		Compression	
		e	N'	18	06		15						USCGS: 13.1 S, 166.5 E
		e	N'	19	04		17	1					H 08 08 14.0
		eL	Z'	20.4	24		24						h 50 km.
		M	N'E'Z'	21.2	20		20	1	½	1½			Mag. 5.1



No.	Date	Phase & Component		Time (G.M.T.)			Por.	Amplitude			$\Delta$	Remarks		
								AN	AE	AZ				
				h	m	s	s	$\mu$	$\mu$	$\mu$	km.			
788	1966 Nov. 18	(oP)	Z'	09	24	45							Masked by microseisms  USCGS: 36.3 S, 100.7 W H 09 12 09.9 h 33 km. Mag. 5.1	
		o(S)	N'		35	02	16	1						
		o	E'		35	13	20			$\frac{1}{2}$				
		o(PS)	N'		35	53	18	1						
		o	N'		40	08	18			1				
		oSS	E'		40	20	17							
		o	N'		40	28	16	$\frac{1}{2}$						
		o	Z'		40	40	16				$\frac{1}{2}$			
		oLQ	N'		47	12	27					1		
		oLR	Z'		50	20	30					1		
M	E'Z'		53.0		21			$\frac{1}{2}$		1				
M	N'		55	36	18	1								
789	20	(oP)	Z	04	27	22 $\frac{1}{2}$	0.8					Masked by microseisms  USCGS: 6.4 S, 153.8 E H 04 21 52* h 128 km. Mag 5.0		
		o(S)	N'		32	08								
		oL	Z'		34	46	28							
		M	E'		36	40	15			$1\frac{1}{2}$				
		M	N'		37	42	16	$1\frac{1}{2}$						
		M	Z'		38	15	16						2	
790	20	(P)	Z	16	57	20 $\frac{1}{2}$						Masked by microseisms  USCGS: 55.1 S, 129.4 W H 16 47 33* h 33 km. Mag. 4.9		
		o	N'	17	05	19	22	2						
		o	E'		05	34	15			1				
		o	Z'		05	36	22						1	
		o	Z'		09	16	22							
		o	N'E'		11	35	50							
		oLR	Z'		14	02	32							
		LR Max.	N'E'Z'		14.7		30	3		2			6	
		M	Z'		19	30	16						2	
		M	N'		19	41	15	1						
M	E'		19	52	14			$\frac{1}{2}$						
794	22	iP	Z	06	41	24.1	1.2					9160ca 8294ca Compression h 0.065 USCGS: 48.2 N, 146.7 E H 06 29 53.5 h 453 km. Mag. 5.6 6.2 Berkeley 6 $\frac{1}{4}$ -6 $\frac{1}{2}$ Pasadena		
		iP	Z'Z"		41	24 $\frac{1}{2}$	5			+0.21				
		o	Z'		43	02	7			+1				
		oS	N'		51	02	8	$\frac{1}{2}$						
		oS	E'		51	03	8			$\frac{1}{2}$				
		oS	E'		54	03	9			1				
795	22	oP	Z	07	14	01	1.5				0.20	Masked by microseisms.  USCGS: 57.9 S, 25.3 W H 07 01 11.1 h 38 km. Mag. 5.6		
		o	Z'		14	02								
		o(S)	E'		24	46	15							
		o	N'		24	58	13							
		o	N'		31	48	15							
		o	E'		37	23	25							
		oL	Z'		45	34	30							
		M	N'Z'		51.0		20	2					2	
		M	E'		51.4		20			1				
796	23	iP	NEZ	02	24	22.9	1.1	+0.12	+0.11	-0.62		Dilatation  USCGS: 14.9 S, 166.9 E H 02 19 13.8 h 48 km. Mag. 5.6 5.5-5.9 Berkeley 5 $\frac{1}{2}$ -6 Pasadena		
		iP	N'E'Z'N"E"Z"		24	23	6	+3	+3	-8				
		iP	N'E'Z'N"E"Z"		24	34	8	+2	+2	-4				
		i	N'E'Z'		24	44	8	+4	+4	-10				
		i	N"E"Z"		24	46	7*	-9*	-8*	+28*				
		oS	N'E'		28	37	14	6	4					
		i	N'		29	02	12	+14						
		iSS	N'		29	23	9	+16						
		oLR	Z'		30	17	30							
		oLR	E'		30	21	30							
		LR Max.	E'Z'		31.0		28			18			28	
		M	E'Z'		32	09	19			12			20	
		M	N'		32	23	18	13						
797	23	iP	NZ	09	11	42.3	0.6	-0.02		+0.04		Compression Felt at Dubbo, New South Wales.		
		iS	NE		12	03.5	0.6	+0.10	+0.07					
		i	Z		12	04.8	0.5				+0.03			
798	23	(P)	E	20	50	22 $\frac{1}{2}$						Masked by microseisms  USCGS: 34.2 S, 139.2 E H 20 48 03* h 33 km. Mag. 4.1		
		(S)	N		52	10	0.7							
		i	N		52	31.5	0.8	+0.05						
		m	NEZ		53	27	0.8	0.25		0.23			0.16	
		M	E'Z'		54	20	8			1			$1\frac{1}{2}$	



## RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Par.	Amplitude			$\Delta$	Remarks
					AN	AE	AZ		
799	1966 Nov. 24	iP Z	07 37 31.5	0.8			+0.09	Compression USCGS: 30.6 S, 177.9 W, H 07 31 51.8 h 11 km. Mag. 5.0	
		eL E'Z'	44.5	25					
		M E'Z'	46.2	16		1	1		
800	24	(P) Z'	16 58 40	5			+2	Masked by microseisms USCGS: 38.3 S, 92.1 W H 16 45 47* h 33 km. Mag. 4.7	
		(i) Z'	58 51	5			+2		
		e Z'	58 56	6					
		eS N'	17 09 09	20					
		ePS N'	10 09	20					
		eLQ N'	22 12	34					
		eLR Z'	25 48	30					
		M N'E'Z'	29.3	19	2	2	5		
803	27	(P) Z	13 50 03	1.5				Large microseisms present USCGS: 17.5 N, 145.4 E, H 13 41 19.0 h 214 km. Mag. 5.5	
		e Z	50 05	1.0					
806	29	iP NEZ	22 22 33.2	1.0	0.14	0.15	-0.62	2710 2494 Dilatation h 0.02 USCGS: 14.7 S, 167.4 E H 22 17 29.9 h 161 km. Mag. 5.2 5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Pasadena	
		i Z'Z''	22 34	8			+7		
		i N'E'N''E''	22 35	8	-2	-2			
		ipP Z'	23 07	7			-10		
		i N''E''Z''	23 09	4*	-3*	-6*	+20*		
		isP Z'Z''	23 23	8			-25		
		i N'E'N''E''	23 24	8	+9	+10			
		iS N'N''	26 38	9	+12				
		i E'E''	26 40	9		+5			
		i N'	26 52	9	+16				
		i E'Z'	26 54	11		+12	+12		
		i E'E''	27 21	8		+12			
		i N'N''	27 25	9	+15				
		i E'	27 45	12		-16			
		iSS Z'	27 48	7&20			-23		
		i N'	28 00	14	+28				
		i E'	28 03	15		-16			
		iScS E'	33 25	9		+4			
809	Dec. 1	(P) Z	00 40 17					Masked by microseisms USCGS: 0.1 N, 125.6 E H 00 32 32* H 123 km. Mag. 5.3	
		eS N'	46 22	12					
		e(SS) E'	49 35	12					
		eL Z'	52 40	40					
		M N'	57 10	25	2				
		M E'Z'	57 26	25		2	3		
810	1	iP NEZ	05 02 07.5	1.0	-0.72	-0.94	+4.88	2710 2494 Compression h 0.015 USCGS: 14.0 S, 167.1 E H 04 56 58.2 h 132 km. Mag. 6.1 6.4-6.6 Berkeley 6 $\frac{3}{4}$ Pasadena	
		iP N'E'Z'N''E''Z''	02 08	6&11	-8	-8	+20		
		ipP N'E'Z'	02 33	6	+	+	-13		
		i N'E'	02 42	11	-28	-23			
		i(P) Z'	02 45	13			-62		
		i E'	03 20	14		+22			
		i Z'	03 25	14			+25		
		i N'	03 29	13	-19				
		(S) N'	06 05	10					
		iS E'	06 15	10		+54			
		i N'	06 17	10	+46				
		i Z'	06 20	8			-26		
		i N'E'Z'	06 34	14	+68	+65	+72		
		i(SS) N'	07 16	15	-82				
		iL Z'	07 24	26			+135		
		M N'E'Z'	08 40	25	56	73	105		
		i(PcS) Z	09 14	2			+1.75		
		M N'E'Z'	10 14	17	71	51	80		
		i(ScS) E'	13 03	11					
	1	(P) Z	19 07 46					Masked by microseisms USCGS: 41.6 N, 139.6 E, H 18 56 23.1 h 173 km. Mag. 5.4	
812	2	iP Z	09 39 12.5	0.7			+0.08	Compression Microseisms present USCGS: 3.2 N, 128.1 E H 09 31 17.6 h 92 km. Mag. 5.8	
		e(S) N'	45 38						
		e N'	46 13						
		eSS Z'	48 40						
		eL Z'	52 39	30					
		M N'E'Z'	59.1	16	1 $\frac{1}{2}$	2	2		



No.	Date	Phase & Component	Time (G.M.T.)	Per. s	Amplitude			$\Delta$ km.	Remarks
					AN $\mu$	AE $\mu$	AZ $\mu$		
814	1966 Dec. 3	iP	EZ	14 18 25.3	1.0				Dilatation h 0.07 USCGS: 24.7 S, 179.9 E H 14 13 25.2 h 492 km. Mag. 5.1
		e	E'Z'	20 49	7			2960	
		iPcP	Z	21 33.5	1.0			2696	
		oS	N'	22 26	(5)			+0.06	
		e	Z'	24 56	14			1	
		e	N'	25 04	14	$\frac{1}{2}$		1	
		e	Z'	25 20	15			1	
		eScS	N'	28 18	8	1			
		o	E'	28 21	6		1		
		M	E'Z'	30.2	14		$\frac{1}{2}$	$\frac{1}{2}$	
816	4	eP	Z'	18 09 25				USCGS: 15.3 S, 173.2 W H 18 02 08* h 21 km. Mag. 4.9	
		e(S)	E'	15 20	13				
		e	Z'	15 21	18				
		e	N'	18 00	20	$1\frac{1}{2}$			
		M	E'Z'	22 21	18	1	1		$1\frac{1}{2}$
		M	N'	23 07	12	1			
819	7	(P)	Z	17 07 40 $\frac{1}{2}$				Masked by microseisms	
		o(L)	E'	19.5					
		M	N'E'Z'	24.7	24	$\frac{1}{2}$	$\frac{1}{2}$		1
821	8	(P)	Z	06 28 27.5				Masked by microseisms USCGS: 15.4 S, 176.2 W H 06 21 34* h 111 km. Mag. 4.4	
		o	E'	34 07					
		oL	N'	36 17	23				
		M	N'	39 24	14	1			
		M	E'Z'	43 22	19		1		1
822	8	e(S)	N'	12 47 07	11			Masked by microseisms USCGS: 0.2 S, 125.3 E, H 12 33 09.5 h 71 km. Mag. 5.4	
		oL	N'	52 47	42				
		M	N'E'Z'	58.2	25	1	1		2
826	10	iPKP	Z	13 25 17.5	1.5			Compression Microseisms present USCGS: 14.3 N, 92.0 W H 13 06 32.6 h 70 km. Mag. 5.6 6 $\frac{1}{2}$ Pasadena 6.5-6.7 Berkeley	
		oPP	Z'	26 40	13				+0.26
		oS	E'	32 18	18				1
		i	E'	33 48	16				+2
		ePS	Z'	36 26	20				
		i	E'Z'	36 42	18				+3
		ePPS	E'Z'	37 43	26				2 $\frac{1}{2}$
		iSS	E'	43 31	32				3 $\frac{1}{2}$
		e(SSS)	E'	47 04	23				+16
		eSSS	Z'	47 35	26				5
		eG	N'	57 03	50	8			5
		eLR	E'Z'	14 01 51	30				7
		M	N'E'Z'	07	21	2 $\frac{1}{2}$			3 $\frac{1}{2}$
		827	10	eP	Z'	18 14 28	7		
ePP	N'Z'			15 34	11			3410	
iS	N'E'			19 31	13	+5		3192	
i	N'			19 43	13	-6		+5 $\frac{1}{2}$	
i	E'			19 58	13			-5	
i	N'N"			20 01	13	+11			
i	Z'			20 04	11			9	
eG	E'			21 36	48			57	
i	N'			22 00	14	-14			
oL	Z'			23 37	35			22	
M	E'			26 30	17			60	
M	N'Z'			27 00	19	61		65	
M	E'			28 30	15			65	
M	Z'			28 48	15			71	
F	Z'	21 40							
828	11	iP	Z	17 40 27.1	1.0			Dilatation Microseisms present USCGS: 11.7 S, 166.5 E, H 17 34 53* h 16 km. Mag. 4.8	
		e	N'	45 21					-0.08
		oL	Z'	47.2					
829	11	iP	Z	18 02 23.2	0.7			Dilatation Microseisms present USCGS: 15.0 S, 167.4 E, H 17 57 18.7 h 116 km. Mag. 5.0	



## 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.
830	1966 Dec. 11	(P)	Z'	20	00	38					Masked by microseisms  USCGS: 13.4 N, 145.8 E H 19 52 09.4 h 59 km. Mag. 5.4
		oS	E'	07	32	12					
		o(SS)	E'	10	38	12					
		oL	E'	13	36	24		2			
		M	N'Z'	18	16	18	2		2		
		M	E'	21	14	12		2			
832	13	iP	Z	10	16	57	1.2			-0.16	Dilatation Microseisms present USCGS: 5.1 S, 129.7 E, H 10 10 07* h 41 km. Mag. 4.9
		o(L)	E'	28.4							
835	14	iP	Z	21	13	55.0	1.5			+0.52	Compression h 0.01  USCGS: 4.8 S, 143.9 E H 21 07 52.1 h 74 km. Mag. 6.0 6½-6½ Pasadena 6.3-6.7 Berkeley
		iP	N'Z'N"Z"	13	56	14	-4			+8	
		ipP	Z'	14	17	11				-8	
		isP	Z'	14	31	8				-4	
		iPPP	Z'	15	14	8				-5	
		i	N'	15	15	9	+6				
		oS	N'	18	48	16	-9				
		i	E'	19	10	18		+7			
		i	N'	19	14	16	-15				
		i	N'	19	55	14	-20				
		i	Z'	20	49	18				+21	
		oLQ	E'	21	11	42			55		
		oLR	Z'	22	08	38					
		LR Max.	N'Z'	23	11	33	44			56	
		M	E'	24	44	20			49		
M	N'	25	32	20	36						
M	N'	27	38	14	40						
M	Z'	27	47	16				45			
836	15	iP	Z	02	19	50.5	1.1			+0.15	Compression USCGS: 21.7 N, 94.5 E, H 02 08 03.0 h 81 km. Mag. 5.7
		e	N'	30	20						
837	15	iP	Z	14	38	00.1	1.2			+0.14	Compression USCGS: 5.5 S, 147.4 E, H 14 32 20.7 h 179 km. Mag. 5.0
839	15	iP	NEZ	19	10	15.6	0.5	+0.21	-0.21	+0.48	Compression USCGS: 40.4 S, 155.4 E H 19 08 29* h 33 km.
		i(S)	E	11	32	0.4			+0.05		
		m	NE	11	37	0.5	0.14	0.19			
		m	Z	11	45	0.7				0.11	
		o(L)	N'	12.0	18						
o(L)	Z'	12.1	18								
840	16	oP	Z'	21	05	25					Large microseisms present USCGS: 29.6 N, 81.0 E H 20 52 13.5 h 9 km. Mag. 5.9
		o(SKS)	E'	16	02	15					
		oL	N'	31.6	38						
		oL	Z'	39	36						
M	N'E'Z'	49	20	2	2	3					
844	20	(P)	Z'	16	25	57					Masked by large microseisms USCGS: 7.2 S, 126.1 E, H 16 20 05.8 h 441 km. Mag. 5.4
		(S)	E'	31	34						
		L	Z'	34.5							
845	20	(P)	Z'	18	49	20					Masked by large microseisms  USCGS: 14.3 N, 122.1 E H 18 39 40.3 h 37 km. Mag. 5.4
		(S)	E'	57	13						
		o	E'	58	07						
		o	N'	58	18						
		oLQ	N'E'	19	03.6	54					
		LR	E'	07.5	30						
M	N'E'Z'	13.5	21								
846	21	iP	N"E"Z"	08	56	32.5	5*	-10*	-14*	+48*	Compression  USCGS: 20.0 S, 169.7 E H 08 52 00.2 h 245 km. Mag. 5.6
		iS	N"E"Z"	09	00	16	5*	+29*	-31*	+27*	
		i	N"	00	48	9*	9*	-55*			
		oL	N"	01.1	21*						
		i	N"Z"	01	33	12*	12*	-69*		+120*	
		M	N"	03	53	15*	15*	26*			

N.B. Dec. 21 No Standard records. Maintenance team working on instruments.





No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
847	1966 Dec.23	iP	NZ	15 55 57.8					Compression 2980 2628 USCGS: 7.1 S, 148.3 E H 15 50 20.4 h 43 km. Mag. 6.4 6 $\frac{3}{4}$ Pasadena 7.1-7.3 Berkeley
		iP	N'Z'N''Z''	55 58	11	-11		+14	
		i	NZ	56 00	1.2	-0.32		+1.50	
		iSP	N'Z'	56 18	11	+17		-23	
		iPPP	N'Z'	56 59	13	+20		-15	
		iS	N'N''	16 00 30	12	-45			
		i	N'	00 44	13	+76			
		m	Z'	00 54	16			57	
		i	E'	01 30	13		+24		
		iSS	N'	01 46	14	-61			
		i	E'	01 55	14		-39		
		L	E'	02 20	35		94		
		iLR	N'	03 33	30	+128			
		M	E'	04.7	25		146		
		M	Z'	05.0	25			230	
		M	N'	05.9	22	148			
		M	E'	06.8	14		140		
F	Z'	19 35							
851	26	iP	Z	17 22 07.7				Dilatation Microseisms present USCGS: 11.0 S, 164.2 E H 17 16 36.6 h 37 km. Mag. 5.2	
		e	N'E'	27 03					
		eL	N'	27 44	(20)				
		M	N'	29 48	17	$\frac{1}{2}$			
		M	E'Z'	31 46	16		1		
854	27	eP	Z'	21 32 32	6			Microseisms present USCGS: 21.3 S, 175.6 W H 21 26 07* h 14 km. Mag. 5.0	
		ePP	Z'	33 36	6				
		e	Z'	37 55	14				
		e	E'	37 59	19				
		eLR	E'Z'	41.0	28		3		4
		M	N'	42 05	16	1			
		M	E'Z'	42 28	21		3		4
856	28	eP	Z'	08 32 30	21			USCGS: 25.5 S, 70.7 W H 08 18 07.4 h 47 km. Mag. 6.9 7.5-7.8 Berkeley 7 $\frac{3}{4}$ Pasadena	
		o	N'E'	32 34	21				
		m	N'E'Z'	33.0	21	4	3		17
		iPP	Z'	37 05	22				+32
		iPP	N'E'	37 06	22	+15	-12		
		iSKS	N'E'	43 08	23	-22	+20		
		i	N''	43 30	13*	-23*			
		e(PS)	N'E'	46 04	15				
		iPS	N'Z'	46 20	22	+25			+
		i	E'	46 29	20		+22		
		m	Z'	46 50	21				+68
		i	N'	46 59	21	+45			
		iPKKP	Z	47 48.5	1.2				+0.13
		e	N'	51 31	40				
		eSS	Z'	52 11	33				36
		m	N'	52 34	40	100			
		i	E'	52 39	30		+100		
m	Z'	53 00	33			61			
eG	E'	09 03.6	70		340				
eLQ	N'	04.0	50	165					
LR Max.	Z'	11.0	65			280			
857	29	e(SKS)	N'	12 18 16	(10)			USCGS: 32.6 S, 111.8 W H 11 56 23.0 h 33 km. Mag. 4.9 6 Pasadena	
		e(SS)	N'	23 14	14				
		e	N'	26.8	(20)				
		eLQ	N'	28 22	26				
		L	N'E'	29.0	24	$1\frac{1}{2}$	1		
		eLR	Z'	31.4	35				
		M	N'	32.0	18	1			
M	E'Z'	34.2	21		$1\frac{1}{2}$	$1\frac{1}{2}$			
859	29	P	Z	22 28 18				Microseisms present USCGS: 32.8 S, 111.7 W H 22 16 22.7 h 33 km. Mag. 5.4 5-5.4 Berkeley 6 Pasadena	
		e(S)	E'	38 13	16				
		e	N'	38 16					
		e(SS)	N'E'	43 21	17				
		eLQ	N'E'	48.4	27	3	2		
		eL	Z'	50.4	30				
		M	E'Z'	56.1	18		2		2



RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ	Remarks
							AN	AE	Az		
860	1966 Dec. 30	iP	EZ	01 05 42.0	1.1		+0.06	-0.35		Dilatation USCGS: 17.8 S, 178.9 E, H 01 00 25.4 h 658 km. Mag. 5.0	
861	30	iP	Z	04 31 24.0	1.2			-0.08	4340	Dilatation Microseisms present	
		epP	Z	33 05	1.2			0.08	3921	h 0.09	
		ePP	EZ	33 10	1.3		0.07	0.28		USCGS: 7.2 S, 119.9 E	
		i	NZ	33 14.5	1.3	+0.08		+0.14		H 04 24 43.1	
		iPcP	E	33 20.5	1.0		+0.03			h 601 km.	
		iS	N	36 42.4	1.8	+0.28				Mag. 5.2	
		iS	N'N"	36 43	5	+1					
		i	E'E"	36 44	5		-1½				
		M	N'E'	39.9	13	1	1				
862	31	(P)	Z	03 26 59	1.5			0.32		Large microseisms present	
		e	E'	31 28	8		1			USCGS: 17.4 S, 172.0 E	
		eL	Z'	33 20	27					H 03 21 32* h 52 km.	
		eL	E'	33 33	23					Mag. 4.9	
863	31	iP	Z	18 28 36.5	0.8			+0.21		Compression From 18h 28m 53s	
		iP N'E'Z'N"E"Z"		28 37	9	-6	-5	+12		N'E'Z' N"E"Z" indcipherable until 24h	
		i	NEZ	28 39.8	1.0	-0.16	-0.14	+0.94		USCGS: 11.8 S, 166.5 E	
		i N'E'Z'N"E"Z"		28 53	20	+64ca	+43ca	-71ca		H 18 23 03.9	
										h 33 km.	
										Mag. 7.7 (surface wave)	
										7.5 Pasadena	
										7.4-7.8 Berkeley	
864	31	P	Z	18 48 54	1.0			0.34			
865	31	P	Z	18 58 45	1.0			0.64		USCGS: 11.6 S, 165.9 E, H 18 53 13*	
										h 33 km. Mag. 5.0	
866	31	P	Z	19 44 02½	1.2			0.22		USCGS: 11.6 S, 166.0 E, H 19 38 29.9	
										h 33 km. Mag. 5.1	
867	31	P	Z	21 05 18						Microseisms present	
		i	Z	06 36	1.1			-0.08		USCGS: 11.6 S, 166.0 E, H 20 59 45*	
		i	Z	07 11	1.2			+0.16		h 33 km. Mag. 4.6	
868	31	(P)	Z	22 20 42						Microseisms present	
		i	Z	20 54	1.1			-0.82		USCGS: 11.3 S, 164.8 E, H 22 15 14.0	
		i	Z	20 59	1.1			+1.00		h 33 km. Mag. 7.3 (surface w.)	
		eX	N'E'	24 55.8	60	18	30			7-7.6 Berkeley	
										7½-7½ Pasadena	
869	31	P	Z	23 00 03	1.0			0.10			
870	31	P	Z	23 43 33	1.1			0.07			

294	May 6	iP	EZ	07 19 11.0	0.9		+0.05	-0.10		Dilatation USCGS: 25.0 S, 179.6 E H 07 14 13.5 h 488 km. Mag. 5.3
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CORRECTION 1955 BULLETIN.  
Page 75 No.1139 Dec.10 21h ipP Z 59m 04.3s  
e N'E' 59 06  
i Z'Z" 59 08

ADDITION. 1966

423	June 21	iP	Z	19 25 53.3	1.0			-0.14		Dilatation USCGS: 11.9 S, 166.2 E, H 19 20 27* h 68 km. Mag. 5.5
424	22	iP	Z	01 54 50.5				-		Dilatation Microseisms present
		e	E'Z'	58 56	13					USCGS: 17.5 S, 167.2 E
		eL	Z'	02 00 09	26					H 01 49 52.8
		eL	E'	00 23	27					h 13 km.
		M	E'	01 47	18		1			Mag. 5.1
		M	Z'	02 00	18			2		
		M	N'	02 44	17	1				