THE REGISTRATION OF EARTHQUAKES AT THE BERKELEY STATION

AND

AT THE LICK OBSERVATORY STATION

FROM

October 1, 1926, to March 31, 1927

BY

PERRY BYERLY
AND
AUSTIN E. JONES

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CONTENTS

Symbols and Notations

1. *Character of the Earthquake*—

I. Perceptible. II. Moderately strong. III. Strong.

d (terrae motus domesticus)	Local shock (origin less than 100 kilometers distant).
v (terrae motus vicinus)	Near shock (origin from 100 to 1,000 kilometers distant).
r (terrae motus remotus)	Distant shock (origin from 1,000 to 5,000 kilometers distant).
u (terrae motus ultimus)	Very distant shock or teleseism (origin more than 5,000 kilometers distant).

2. *Phases of the Seismogram*—

P (undae primae)	Normal first phase, or first preliminary tremors (longitudinal).
P′	First preliminary tremors which have penetrated the core of the earth.
PR_n	Waves n times reflected at the earth's surface.
S (undae secundae)	Second phase, or second preliminary tremors (transverse).
SR_n	Waves n times reflected at the earth's surface.
PS	Waves changed from longitudinal to transverse oscillation or vice versa through reflection at the earth's surface.
PPS	Waves twice reflected at the earth's surface, having been longitudinal on two branches of the path and transverse on one branch.

In general a bar over two letters denoting types of waves indicates refraction. The subscript $_c$ denotes the boundary at about 2900 km. depth between the metallic core and the middle shell which surrounds it. Thus:

$\overline{S_cP_cS}$	Waves which have penetrated the core, having been transverse before entering and after leaving the core, and longitudinal within the core.
$\overline{P_cP_c}$ $\overline{P_cP}$	Waves refracted at the core boundary into the core, reflected once at this boundary while within the core and again refracted out of the core, having remained longitudinal on all branches of the path.
G	Long waves at beginning of surface phase. Velocity about $4.4\frac{\text{km.}}{\text{sec.}}$
L (undae longae)	Long waves preceding M. Velocity about $3.8\frac{\text{km.}}{\text{sec.}}$
M (undae maximae)	Shorter and more regular waves of large amplitude in the surface phase.
M_n	Greatest motion in the surface phase.
C (coda)	Tail or end portion.
F (finis)	End of discernible movement.

For local earthquakes a special notation is used:

$\overline{P}$	The longitudinal wave which has traveled its whole path in the surface layer or crust of the earth.
$\overline{S}$	The transverse wave which has traveled its whole path in the surface layer of the earth.

In general R_i denotes reflection once at the lower (inferior) surface of the earth's crust. R_{i2} denotes reflection twice at this surface. R_s indicates reflection at the upper (superior) surface of the crust, i.e., the surface of the earth. Thus, e.g.:

$R_{i2}\overline{P}_2\overline{S}_2$	A wave in the earth's crust which has been reflected twice at the lower surface, having been longitudinal on two branches of its path and transverse on two branches.

3. *Nature of the Motion*—

i (impetus)	Sudden beginning of the motion.
e (emersio)	Gradual beginning of the motion.
T (period)	Time of one complete oscillation.
A	Amplitude of the earth motion, measured from the median line in microns ($\mu=\frac{1}{1000}$mm.), + toward the north, east, or zenith, − toward the south, west, or nadir.
A_E	E–W component of A.
A_N	N–S component of A.
A_Z	Vertical component of A.

4. *Time*—

O (origin)	Time of shock at point of origin.

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CONSTANTS

Latitude and longitude of the center of the seismographic room:

$\varphi=37°\ 52'\ 15''.9$ N. Lat.
$\lambda=122°\ 15'\ 36''.6$ W. from Greenwich.

Time. All determinations are reduced to Greenwich mean civil time.

Altitude, 85.4 meters (280 feet) above mean sea level.

Constants of the Seismographs

Date	Apparatus	Component	V	T_0	ϵ	$\frac{r}{T_0^2}\left(\frac{\text{cm}}{\text{sec}^2}\right)$
1926 Nov. 20	Bosch-Omori 100 kg.	E (changed)	40	11.7	5	0.002
	"	N	43	12.1	4	0.002
	Wiechert 80 kg.	Z	40	5.4	5	0.003
1927 Jan. 14	Bosch-Omori 100 kg.	E	38	11.7	5	0.002
	"	N	43	12.3	5	0.002
	Wiechert 80 kg.	Z	41	5.4	6	0.003
Mar. 3	Bosch-Omori 100 kg.	E	42	11.6	5	0.002
	"	N	45	12.1	4	0.002
	Wiechert 80 kg.	Z	42	5.4	4	0.003

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No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						A_E	A_N	A_Z	
	1926			h. m. s.	s.	μ	μ	μ	
1	Oct. 1	I?	e_E	9 14.1±					Long sinusoidal waves.
			e_E	9 23.1±					
			F_E	9 35.1±					
2	Oct. 3	Iu	eP_N	19 57.2±?					
			eP_E	19 58.2±					
			eS_N	20 06 39?					
			eS_E	20 07.2±					
			eL_E	20 23 24	53	− 80			
						+100			
			eL_N	20 23 25	49		+ 76		
							−152		
			M_{1ENZ}	20 49.0±	16	16	51	8	
			e_N	21 02.5±					
			e_E	21 03.0±					
			F	21 23±					
3	Oct. 12	I?	e_N	1 00.1±?					May be microseisms.
			e_N	1 11.7±					
			e_E	1 12.7±					
			F	1 21.7±					
4	Oct. 13	Ir	eP_{EN}	6 10.2±					Epicenter 50° N 180° W according to Macelwane. eP barely perceptible.
			e_Z	6 10.3±					
			e_N	6 12.5±					
			eS_N	6 16.3±					
			eS_E	6 16.7±					
			e_E	6 19.8±					
			e_N	6 20 01					
			eL_E	6 22 02					
			eM_N	6 23.8±					
			eM_E	6 24.1±					
			F	7 44.7±					
5	Oct. 13	Ir	eP_E	14 25.5±					Not recorded on Z.
			eP_N	14 25.7±					
			eS_E	14 31 59	15	+ 7			
						− 12			
			eS_N	14 32 00	10		+ 2		
							− 8		
			e_E	14 35 16	30	− 22			
						+ 22			
			e_N	14 35 23	28		− 11		
							+ 11		
			eL_E	14 37.7±					
			F	15 42.±					

BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						A_E	A_N	A_Z	
	1926			h. m. s.	s.	μ	μ	μ	
6	Oct. 13	Ir	eP_{EN}	19 15 45					Epicenter 51° N 178° W according to Macelwane.
			e_N	19 16 00	2		+ 2		
							− 1		
			e_E	19 16 08					
			e_N	19 17 29	8		− 2		
			e_E	19 17 33	9	− 4			
						+ 7			
			eS_E	19 21 47	19	− 12			
						+ 16			
			eS_N	19 22 04	6		+ 4		
							− 4		
			eSR_{1EN}?	19 24 36	14_E				
					10_N				
			eG_N	19 24.7±	36		− 76		
							+114		
			eG_E	19 24.8±	36				V=4.4 km. per sec.
			i_N	19 26 01	8		+ 14		
							− 14		
			eL_E	19 26.1±	30				
			eM_E	19 34.8±	12				
			e_Z	19 35.4±					Maximum only on Z.
			F	22 10±					
7	Oct. 22	IIIv	$e\overline{P}_N$	12 35 32					Epicenter in Pacific Ocean off Santa Cruz.
			$i\overline{P}_{EN}$	12 35 33	1_E	+ 36	− 46		
					2_N	− 24	+138		
			$e\overline{P}_Z$	12 35 34	2			+ 18	Intensity R.F. 7–8 in Santa Cruz, Calif. See note at end of bulletin.
								− 11	
			$R_i\overline{P}_Z$?	12 35 39	2			+408	
								−101	
			$?R_{i2}\overline{PS}_Z$	12 35 45	2			−287	
								+ 66	
			i_E	12 35 47.5					Off record.
			$i\overline{S}_{NZ}$	12 35 50	3			−1347	N off record.
								+456	Bumped.
			F_Z	12 42.0±					
8	Oct. 22	IIIv	$i\overline{P}_Z$	13 35 47	2			− 18	E and N pens remain off record.
								+ 66	
			$R_i\overline{P}_Z$?	13 35 48	2			−184	Intensity R.F. 7–8 in Santa Cruz, Calif.
								+335	
			$i\overline{S}_Z$	13 36 02	3			−1295	
								+ 500	Bumped.
			F	13 43.4±					

BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
9	Oct. 22	Id	$e\overline{P}_Z$	14 42 14					E and N not recording.
			$R_1\overline{P}_Z$?	14 42 17					Aftershock.
			e_Z	14 42 22					
			e_Z	14 42 26					
			$i\overline{S}_Z$	14 42 27	2			− 27	
								+ 35	
			i_Z	14 42 30					
			i_Z	14 42 35					
			i_Z	14 42 36					
			F	14 43 4±					
10	Oct. 22	Id	$e\overline{P}_{NZ}$?	16 04 12					Aftershock.
			$i\overline{P}_{NZ}$	16 04 14	2		− 5	+ 3	
							+ 5	− 3	
			$R_1\overline{P}?_{NZ}$	16 04 17	1		+ 9	+ 7	
							− 2	− 5	
			i_{NZ}	16 04 26	1		+ 7		
							− 4		
			$i\overline{S}_{NZ}$	16 04 29	2		− 4	+ 8	
							+ 4	− 20	
			i_Z	16 04 42					
			i_N	16 05 17	4		+ 11		
			F	16 10.4±					
11	Oct. 24	IId	$e\overline{P}_{EZ}$	22 52 05					
			$i\overline{P}_N$	22 52 06	2		− 11		
							+ 23		
			iP_{ENZ}	22 52 07	1	+ 12	− 23	+ 38	
						− 13	+ 46	− 12	
			$i\overline{S}_{ENZ}$	22 52 18	2	−212	+ 92	209	
						+106			
			e_E	22 52 3±	12				Long underlying wave.
			F	23 00±					
12	Oct. 26	Iu	e_E?	3 58 26					Slight microseisms preceding this, and this also may be microseisms.
			e_E	4 02.4±	8	− 1			
						+ 1			
			e_N	4 03.7±					
			iS_E	4 08 57	12	− 16			
						+ 38			
			e_N	4 09.0±					
			i_E	4 11 16	40	−210			
			i_E	4 16 54	20	+ 43			
			eL_{EN}	4 25.3±					
			F_E	7 12±					

BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
13	Oct. 30	Ir	eP_E	19 44 51					Possible beginning.
			eP_{ENZ}	19 44 52	2	− 2	− 2	+ 1	Epicenter near Queen
						+ 2	+ 2	− 1	Charlotte Island,
			ePR_{1EN}?	19 44 56					British Columbia.
			ePR_{2EN}?	19 44 58					
			eS_{ENZ}	19 47 20	9_E	− 13	− 2	− 4	E good, N very poor.
					11_N	+ 9	+ 2	0	
					10_Z				
			e_N	19 47 25					
			eL_N	19 47 58					L may begin here.
			eL_N	19 48.3±	12		+ 9		Sinusoidal waves.
							− 9		
			eL_E	19 58.6±	10	+ 5			Sinusoidal waves.
						− 5			
			F_E	20 39±					
14	Nov. 1	Ir	eP_{EN}	1 42 12	3	− 5	+ 7		Epicenter Queen
						+ 2	− 4		Charlotte Sound.
			?PR_{1EN}	1 42 17	9_E	+ 11	− 27		
					7_N	− 7	+ 14		
			?PR_{2EN}	1 42 18					Very small wave.
			?PR_{3N}	1 42 20					
			e_{EN}	1 42 23	2		+ 2		Barely perceptible on
							− 2		E.
			e_{EN}	1 42 25	3_E	+ 9	+ 17		
					6_N	− 9	− 19		
			e_E	1 42 35	6	− 6			
						+ 6			
			eS_{EN}	1 44 39	12	− 44	− 4		
						+ 25	+ 7		
			SR_{1N}	1 44 52	15		− 30		
							+ 30		
			eL_N	1 45 46	12		− 62		V=3.6 km. per sec.
							+ 66		
			eL_E	1 45 57	12	− 22			Not recorded on Z.
						+ 27			
			F	2 49±					
15	Nov. 5	Ir	eP_Z	8 03 07	2			+ 1	
			eP_E	8 03 08	2	+ 1			
			eP_N	8 08 10					Barely perceptible.

BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
15	Nov. 5 (contd.)	Ir	eS_E	8 08 59	10	− 7 + 9			Epicenter 13° N 87° W according to Macelwane. Reported destructive in Nicaragua.
			eS_N	8 09 06	10		+ 9 − 4		
			eG_N	8 09 14	14		− 5 + 8		
			eG_E	8 09 16	14	− 4 + 6			
			e_N?	8 12.3±	10		− 7 − 3		
			e_E?	8 12.4±	10	+ 4 − 9			
			F	9 04±					
16	Nov. 15	Id	$e\overline{P}_N$?	8 32 38					Barely perceptible.
			$e\overline{P}_Z$?	8 32 39					Barely perceptible.
			$e\overline{P}_{EN}$	8 32 40	2				
			eS_{EN}	8 32 54	3	− 5 + 9	+ 4 − 4		Short period superposed.
			e_Z	8 32 56					
			e_Z	8 32 58					
			eL_E?	8 33 03	8	− 4 + 4			
			F_E	8 34±					
17	Dec. 9	Iv	eP_Z	0 42 02?					May begin here.
			eP_E	0 42 07?					
			$R_i\overline{P}_{ENZ}$?	0 42 09					
			e_E	0 42 29	5	+ 3 − 3			
			$R_i\overline{PS}_E$?	0 42 40	3	+ 2 − 2			
			e_Z	0 42 42	4			− 2 + 2	
			e_N	0 42 44	3		− 2 + 2		
			eS_{EN}	0 42 50	4_E 2_N	+ 9 − 5	− 5 + 5		
			eS_Z?	0 42 52	2			− 3 + 3	
			e_Z	0 42 59	4			− 6 + 6	
			F	0 46.2±					

BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
18	Dec. 10	Id	$e\overline{P}_{NZ}$	4 26 31					Barely perceptible.
			e_E	4 26 33					Barely perceptible.
			$e\overline{S}_{EN}$	4 26 39					Barely perceptible.
			F	4 26.9±					
19	Dec. 10	IIv	e_Z	8 39 58?					May be microseisms.
			e_Z	8 40 15					May be microseisms.
			eP_{EN}	8 40 20					May begin here.
			e_Z	8 40 21					
			e_Z	8 41 21					
			e_E	8 41 24					
			e_N	8 41 32					
			eL_E	8 42 22	22	− 55 + 55			
			eL_N	8 42 23	21		− 11 + 28		
			eM_E	8 43.8±	12	+ 50 − 63			
			M_{IENZ}	8 44.4±	9	−105 +112	+ 43 − 61	− 83 + 83	
			F	9 13±					
20	Dec. 27	Iv	eP_{NZ}	9 20 08					Barely perceptible, slight thickening of line on E.
			eP_Z	9 20 10	1			<−1 <+1	
			e_E	9 20 22					
			eS_{EN}	9 20 35	5	− 5 + 5			Slight jog on N.
			eS_N	9 20 38	4		+ 4 − 4		
			e_Z	9 20 38	2			− 1 + 1	
			eM_N	9 21 17	2		+ 5 − 5		
			eM_E	9 21 26					
			F	9 24±					
21	Dec. 28	Id	$e\overline{P}_E$	13 00 28					
			$i\overline{P}_N$	13 00 30	0.3		5		Blurred.
			$i\overline{S}_{EN}$	13 00 34	0.3	6	6		Blurred.
			F	13 00.8±					

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No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
22	Dec. 31	Iv	ePE?	20 09 41					May begin earlier. Microseims present.
			ePN?	20 09 44					
			$ePEN$?	20 09 45	2	+ 4	− 2		
						− 4	+ 2		
			eZ	20 09 48					Destructive in Calexico, California.
			eEZ	20 09 52					
			$eSEZ$	20 10 23	4	− 10		− 2	
						0		+ 2	
			eGE	20 10 34	8				
			eGZ?	20 10 34	6				
			eGN?	20 10 35	7				
			F	20 13±					
	1927								
23	Jan. 1	Iv	ePE?	8 20 16					Barely perceptible.
			$ePNZ$?	8 20 17					Barely perceptible.
			eZ	8 20 38					
			eZ	8 20 44					
			eN	8 20 45	3		+ 2		Epicenter near Calexico, California.
							− 2		
			eE	8 20 45	4	+ 4			
						− 4			
			$eSNZ$?	8 20 59	4		+ 5	+ 2	
							− 5	− 2	
			eSE?	8 21 02	4	+ 2			
						− 2			
			eN	8 21 07					
			eZ	8 21 10					
			eE	8 21 24					
			eZ	8 21 26	10			− 11	
								+ 11	
			$eLEN$	8 21 39	13 ca.				
			F	8 29.9±					
24	Jan. 1	Iv	eN	9 17 21					No time marks on Z.
			eE	9 17 23					
			eSE	9 17 54					Calexico.
			eSN	9 17 58					
			F	9 27±					
25	Jan. 1	Iv	eE	13 02 6±	14				Barely perceptible.
			eN	13 02 44					
			F	13 12±					

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No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1927			h. m. s.	s.	μ	μ	μ	
26	Jan. 18	I?	eE?	23 57.7±					
	19		F	0 06±					
27	Jan. 19	I?	eZ	1 22.7±					Two earthquakes reported in Tucson, Arizona.
			eE	1 22.8±					
			eE	1 25.3±					
			eE	1 55.3±					
			eE	2 25.3±					
			eE	2 30.7±					
			F	2 56.±					
28	Jan. 24	Iu	ePZ?	1 18 04?					
			ePZ	1 18 13					Or earlier.
			$ePEN$?	1 18 36					
			eSN?	1 28 33					Epicenter near New Hebrides according to Macelwane.
			eE	1 28 54					
			eLN	1 41 33					
			eLE	1 41 36					
			F	2 45±					
29	Jan. 25	I?	eEZ	23 55.9±					Long sinusoidal waves; end of distant earthquake.
	26		eE	0 10.4±					
			eZ	0 10.9±					
			F	0 19.1±					
30	Feb. 1	I?	$ePEZ$	18 09 26	4	+ 2		+ 3	Not recorded on N.
						− 2		− 8	
			eEZ	18 12 50	4	+0.5		+ 2	
						−0.5		− 2	
			eE	18 19.8±	8	+0.2			
						−0.2			
			eE	18 36.±	43	− 35			
						+ 35			
			eZ	18 36.9±	30			+ 37	
								− 37	
			$M_{1}EZ$	18 45±	20	13		52	
			F	19 25±					
31	Feb. 4	Id	$eENZ$	10 02.5±					
			F	10 03.5±					

BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	AZ	
	1927			h. m. s.	s.	μ	μ	μ	
32	Feb. 15	IId	$e\overline{P}_{ENZ}$	23 54 21	2	+ 1	− 6	− 5	Felt as far north as Sonoma. Epicenter off coast near Santa Cruz, California. R.F. 7 in Santa Cruz.
			$R_1\overline{P}_{ENZ}$	23 54 22	1	+ 6	− 7	− 3	
								+ 37	
			$i\overline{S}_N$	23 54 34					
			$i\overline{S}_E$	23 54 35	3	− 6			
						+ 9			
			$i\overline{S}_Z$	23 54 36	1			− 37	
								+ 76	
			F	24 00±					
33	Feb. 16	Iu	eP_Z	1 45 34	6			+ 4	Macelwane's epicenter 47°5 N 152° E.
								− 4	
			e_N	1 45 36	.4		1		
			e_E	1 45 47					
			eS_E	1 53 48	10	+ 8			
						− 10			
			eS_N	1 53 53	10		2		
			eS_Z	1 53 55	10			+ 14	
								− 14	
			eG_{EN}	2 00 55					
			F	4 19±					
34	Feb. 27	Iv	eP_{ENZ}	3 59 25	1	− 2	+ 1	− 2	
						+ 3	− 1	+ 2	
			e_N	3 59 27	1				
			e_E	3 59 31	1	− 5			Superposed on 10 sec. wave.
						+ 2			
			e_N	3 59 33	1		− 2		
							+ 2		
			e_Z	3 59 34	1			− 2	
								+ 2	
			e_{EN}	3 59 55	11_E	+ 3	+ 1		May be a surface wave.
					12_N	− 3	− 1		
			e_Z	4 00 33	11			− 17	May be a surface wave.
								+ 17	
			e_{ENZ}	4 01 06	11_E	− 4	− 3	+ 7	This quake marked by early surface waves and no apparent S.
					9_N	+ 5	+ 5	− 7	
					8_Z				
			e_N	4 02 20	11		+ 3		
							− 3		
			e_E	4 02 42	9	+ 14			
						− 18			

BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	AZ	
	1927			h. m. s.	s.	μ	μ	μ	
34	Feb. 27 (contd.)	Iv	e_Z	4 02 43	8			+ 9	
								− 11	
			e_N	4 02 49	10		− 3		
							+ 5		
			F	4 16±					
35	Mar. 3	Iu	eP_Z	1 24 43	3			−0 5	Not recorded on E or N.
								+0 5	
			eS_Z	1 34 33	10			− 3	
								+ 3	
			e_Z	1 59 31	24			− 23	
								+ 23	
			F	2 36±					
36	Mar. 7	Iu	eP_E	9 39 38?					
			eP_Z	9 39 38	3			+ 2	Average period ca. 2 sec.
								− 4	
			eP_E	9 39 43					
			eP_N	9 39 44					
			eP_cP_Z?	9 40 15	8				Long wave.
			eS_N	9 49 31	12			+ 2	Very destructive in Osaka, Japan.
								0	
			eS_E	9 49 33	8	+ 2			
						− 2			
			eL_E?	9 51 09	26	− 11			
						+ 16			
			L_{1E}	9 52 0±	23	+ 16			
						− 24			
			e_{EN}	10 00 04	24_E	− 9	− 26		
					40_N	+ 9	+ 77		
			eM_{EN}	10 01 37	24_E	− 28	+ 22		
					19_N	+ 28	− 22		
			M_{1EN}	10 02 0±	20_E				
					18_N				
			M_{2EN}	10 03 0±	16_E	15	24		
					18_N				
			M_{3EN}	10 04 0±	14_E	3	4		
					13_N				
			e_E	10 36 4±	20	− 12			
						+ 12			
			F_E	11 21 ±					

BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1927			h. m. s.	s.	μ	μ	μ	
37	Mar. 8	Iv	eP_E	9 02 05?					Barely perceptible.
								− 1	
			eP_{NZ}	9 02 07	3_Z			+ 1	Barely perceptible on N.
			eS_E	9 02 32	3	− 4			
						+ 9			
			eS_Z	9 02 33?					Barely perceptible.
			eS_N	9 02 34	2		− 4		
							+ 7		
			eL_Z?	9 02 38	6			− 2	
								+ 4	
			eL_E	9 02 41	6	− 6			
						+ 6			
			eL_Z	9 02 43	6			− 4	
								+ 4	
			eL_N?	9 02 49					
			F	9 04±					
38	Mar. 25	I?	e_Z	12 37.5±?					May come in here.
			e_E	13 05.8±					
			e_Z	13 07.3±					
			eM_{EZ}	13 09.0±	21				
			F	13 26±					

THE LICK OBSERVATORY STATION

CONTENTS

Constants of the Station

Latitude and longitude of the center of the seismographic room:

$\varphi = 37° 20' 24''.5$ N. Lat.
$\lambda = 121° 38' 34''$ W. from Greenwich.

Time. All determinations are reduced to Greenwich mean civil time.

Altitude, 1281.7 meters (4202.25 feet) above mean sea level.

Constants of the Seismographs

Date	Apparatus	Component	V	T_0	ϵ	$\frac{r}{T_0^2}$
1926 Sept. 3	Wiechert 160 Kg. H. Wiechert 80 Kg. V.	E	91	10.1	5	0.004
		N	91	8.3	4	0.006
		Z	55	3.1	7	0.0008
1927 Mar. 30	160 Kg. H.	E	93	9.2	5	0.003
		N	88	7.2	6	0.005
		Z	52	3.2	7	0.0008

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
1	Oct. 1	I?	eL_{EN}?	9 23.0±	22	− 2	+ 3		Part of a distant earthquake.
						+ 2	− 3		
			eM_E?	9 26.0±	14	+ 1			
						− 1			
			F	9 39.0±					
2	Oct. 3	IIu	eP_E	19 57.3±	5	0.5			
			ePR_{1E}?	20 00 21					
			ePR_{2E}?	20 01 51					
			ePR_{3E}?	20 03 03					
			eS_{EN}	20 07 09	12	+ 3	+ 1		
						− 3	− 1		
			eSR_{1E}?	20 13.2±					
			eG_E?	20 19.6±	34	− 24			V=4.3 km. per sec.
						+ 24			
			eL_E	20 23 34	43	− 91			
						+232			
			eL_N	20 23.7±	44		+ 60		
							−181		
			e_N	20 31.5±					
			e_Z	20 34.0±					
			M_{1EN}	20 42.6±	17	68	56		
			M_{2EN}	20 45.0±	17	59	24		
			F	21 59±					
3	Oct. 12	Id	e_N	1 15 09					May be microseisms.
			e_{EN}	1 15 20					
			e_E	1 15 27					
			e_E	1 15 33					
			F	1 16.5±					
4	Oct. 13	Ir	eP_N	6 10 25	2		−0.2		Poor records on E and Z.
							+0.2		
			eS_N	6 16 48	7		+ 1		
			eG_N	6 20 14	13		− 1		V=4.3 km. per sec.
							+ 1		
			eM_N	6 24 35	10		− 2		V=3.5 km. per sec.
			F	7 04±					
5	Oct. 13	I?	e_N	14 32.2±					May be S or L.
			e_N	14 35.6±					
			e_{EN}	14 42.2±					
			F	15 02±					

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
6	Oct. 13	IIr	eP_{ENZ}?	19 15 47					Barely perceptible.
			eP_{ENZ}	19 15 51	3	− 2	+ 2	−0.2	
						+ 2	0	0	
			ePR_{2E}?	19 17 41					
			eS_E	19 21 51	22	− 19			
						+ 38			
			eS_Z	19 21 54					Very small amplitude.
			eS_N	19 22.2±	7		− 1		
							+0.5		
			e_N	19 25 18	11		+ 14		
			e_E	19 25.3±	14	+ 18			
			eM_E	19 30 08	11	+ 18			
						− 15			
			eM_N	19 30 19	9		+ 15		
							− 10		
			F_E	23 59±					
7	Oct. 22	IIId	$i\overline{P}_Z$	12 35 24	2			− 24	Poor E and N records.
								+ 16	
			$i\overline{P}_{EN}$	12 35 25	6	−228	−310		
						+132	+ 68		
			$i\overline{S}_Z$	12 35 37					E blurred, N off record, Z bumped.
			F	12 50±					
8	Oct. 22	Id	$e\overline{P}_Z$	12 56 42	1			1	Record poor, small aftershock of previous earthquake.
			$e\overline{S}_Z$	12 56 51	2			− 1	
								+ 1	
			F	12 57.5±					
9	Oct. 22	IIId	$i\overline{P}_{EZ}$	13 35 39	3			− 56	E record poor.
								+106	
			$i\overline{P}$	13 35 42	4			+381	
								−262	
			$i\overline{S}_Z$	13 35 50	2			+378	
								−167	Bumped at 167.
			F	13 51±					
10	Oct. 22	IId	$i\overline{P}_{ENZ}$	14 42 05	2	− 5	− 4	− 9	
						+ 9	+ 10	+ 1	
			i_{ENZ}	14 42 06	1			+ 14	
								− 17	
			i_N	14 42 07	1		− 8		
							+ 8		

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
10	Oct. 22 (contd.)	IId	i_{NZ}	14 42 10	1		+ 6	+ 7	
							− 5	− 4	
			i_Z	14 42 13	1			− 11	
								+ 4	
			$i\overline{S}_N$?	14 42 14	2		− 22		
							+ 20		
			i_Z	14 42 15	1			− 13	
								+ 7	
			$i\overline{S}_{NZ}$?	14 42 17	2		− 42	− 21	
							+ 34	+ 15	
			e_N	14 42.2±	7		+ 4		
							− 4		
			F	14 49±					
11	Oct. 22	IId	$e\overline{P}_{ENZ}$	16 04 04	1	−0.5	− 2	− 1	
						+ 3	+ 3	0	
			e_N	16 04 06	9		+ 5		
							− 5		
			$R_i\overline{P}_{ENZ}$	16 04 07.5	1	− 4	− 4	− 5	
						+ 4	+ 4	+ 7	
			e_Z	16 04 08	7			− 17	
								+ 17	
			$R_{i2}\overline{P}_{ENZ}$	16 04 10.5	1	− 4	+ 5	− 5	
						+ 4	− 5	+ 4	
			$i\overline{S}_N$?	16 04 15	3		+ 26		
							− 48		
			$i\overline{S}_{EN}$	16 04 17	2	− 41	− 51		
						+ 39	+ 38		
			$i\overline{S}_Z$	16 04 18	2			+ 14	
								− 25	
			F	16 14±					
12	Oct. 22	Id	$e\overline{P}_E$	19 38 29					E and Z records poor.
			$e\overline{P}_{NZ}$	19 38 30	< 1		1		
			$R_i\overline{P}_N$?	19 38 32	< 1		1		
			i_Z	19 38 34					
			$i\overline{S}_E$	19 38 41					
			$i\overline{S}_N$	19 38 42	< 1		− 2		
							+ 1		
			$i\overline{S}_Z$	19 38 43					
			i_E	19 38 43					
			$R_i\overline{PS}_{NZ}$?	19 38 44	< 1		− 4		
							0		
			F	19 40 0±					

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
13	Oct. 23	Id	$e\overline{P}_N$	5 50 17					
			$eR_i\overline{P}_{NZ}$?	5 50 20					
			e_Z	5 50 25					
			$e\overline{S}_N$	5 50 27					
			$R_i\overline{PS}?_N$	5 50 30					
			$R_i\overline{S}_Z$?	5 50 31					
			F	5 51 0±					
14	Oct. 23	Id	$e\overline{P}_{EZ}$	7 19 52					A disturbance precedes this by 5 sec. on N.
			$R_i\overline{P}_{ENZ}$?	7 19 55					
			e_N	7 19 60					
			$e\overline{S}_{ENZ}$	7 20 01					Long wave enters here on N.
			e_N	7 20 08					
			e_{EZ}	7 20 04	1	+ 2			
						− 3			
			$R_i\overline{S}?_E$	7 20 06	1	+ 2			
						− 1			
			F	7 21.0±					
15	Oct. 24	Id	$i\overline{P}_{ENZ}$	22 52 00	2	− 21	− 17	− 20	
						+ 26	+ 51	+ 65	
			e_E	22 52 04	8	+ 1			
			i_Z	22 52 05	1				Reinforcement.
			i_N	22 52 06					
			e_N	22 52 06	8		+ 7		
			$i\overline{S}_{ENZ}$	22 52 07	1	− 25	− 46	− 41	
						+ 65	+ 4	0	
			$i\overline{S}_{ENZ}$?	22 52 09	1	+ 64	+ 59	− 13	
						− 38	− 81	+ 68	
			i_{ENZ}	22 52 11	2	− 52	+ 11	+ 97	
						+ 49	− 26	− 58	
			i_Z	22 52 19	2			− 12	
								+ 7	
			i_{NZ}	22 52 20	2		−108	−113	
							+ 11	+ 68	
			i_Z	22 52 31	2			− 22	
								+ 20	
			F	23 01±					
16	Oct. 26	Ir	eP_{EN}	4 02 32	S_E	− 1			N barely perceptible.
			eS_E?	4 08 50					
			eS_N	4 08 57					

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
16	Oct. 26 (contd.)	Ir	eS_E	4 09 01	16	− 17			
						+ 52			
			iG_E	4 11 24	35	−175			V=4.6 km. per sec.
						+100			
			e_N	4 11.5±					Faint.
			eL_{EN}	4 16.8±	28_E	− 38	+ 11		
					20_N	+115	− 11		
			eM_N	4 28.9±	25		− 18		
							+ 18		
			eM_E	4 29.4±	33	− 31			
						+ 31			
			M_{IE}	4 30.4±	31	118			
			e_E	4 59.3±					
			e_E	5 10.±	18	12			
			F	5 39±					
17	Oct. 30	Ir	ePZ_{EN}	19 45 03	4_E	− 1	+ 1	+ 1	Z recorded only P.
					3_{NZ}	+ 1	− 2	− 1	
			PR_{1N}	19 45 15					
			PR_{2E}	19 45 17?					
			e_N	19 45 28					
			e_E	19 45 34?					
			e_N	19 45 39					
			e_N	19 45 56					
			e_E	19 45 57?					
			e_Z	19 46 08					
			e_Z	19 42 12					
			e_Z	19 42 22					
			eS_{EN}	19 47 39	9_E	− 5	+0.5		
					3_N	+ 5	−0.5		
			eS_N	19 47 42	5		− 2		
							+ 4		
			SR_{1N}	19 48 04					
			eG_E	19 48 36	25				V ca. 4.1 km. per sec.
			eG_N	19 49 00	11		− 7		
							+ 7		
			e_{EN}	19 49.9±					
			e_N	19 50 00	12		+ 9		
							− 14		
			e_E	19 50 02	11	+ 8			
						− 12			
			F	20 18.9±					

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
18	Nov. 1	IIr	iP_{EN}	1 42 24	3	− 2	+ 4		
						+ 2	− 0		
			ePZ_E	1 42 24	3			−0.5	
								+ 2	
			i_E	1 42 54					
			i_{EN}	1 43 20					
			i_E	1 43 40					
			i_E	1 44 25					
			eS_Z	1 44 52	4			− 23	
								+ 0	
			eS_E	1 44.9±	13	− 6			
						+ 43			
			e_Z	1 44 59	13			+ 15	
								− 44	
			eS_N?	1 45 02	4		− 8		
							+ 2		
			iL_E	1 46.0±	22	−141			
						+ 71			
			F_E	2 59±					
19	Nov. 1	Id	iP_{ENZ}	22 16 53	< 1	<0.5	<0.5		
			i_{EN}	22 17 03					
			iS_{EN}	22 17 04	< 1	− 4	+ 5		
						+ 4	− 4		
			F	22 17.9±					
20	Nov. 5	Ir	eP_{EN}	8 03 02	2	− 1			Barely perceptible on N.
						0			
			iP_N	8 03 05	2		− 2		
							0		
			eS_{EN}	8 08 51	12_E	− 2	+ 34		
					20_N	+ 16	− 34		
			F	8 49±					
21	Nov. 8	Id	eP_N	9 41 06					
			R_1P_{EN}	9 41 07					
			i_N	9 41 15					May be on E also.
			iS_{EN}	9 41 16					
			i_{EN}	9 41 17					
			i_E	9 41 19					Did not record on Z.
			F	9 41.8±					

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
22	Nov. 10	Id	$i\overline{P}_{EN}$	19 06 13	< 1	1	1		Blur.
			e_{EN}	19 06 15	< 1	0.5	0.5		
			$i\overline{S}_{ENZ}$?	19 06 22	< 1	2	1		
			iS_{EN}	19 06 23	< 1	4	2		
			F	19 06.8±					
23	Nov. 15	Id	i_E	8 32 26	0 3	0.5			Blurred. May be swarm type on E only.
			$i\overline{P}_Z$	8 32 27	1			− 3	
								+ 2	
			$i\overline{P}_{ENZ}$	8 32 28	<0.3$_E$	<−0.5	− 3	− 5	
					2$_{NZ}$	<+0.5	+ 2	+ 3	
			$R_i\overline{P}_E$	8 32 29	<0.3	0.1			
			$R_{i2}\overline{P}_E$?	8 32 31	1			− 3	
								+ 3	
			i_{EN}	8 32 33	<0.3	+ 1	+ 1		
							− 1		
			$i\overline{S}_{ENZ}$	8 32 36	1	− 5	+ 6	+ 5	
						+ 4	− 3	− 3	
			$R_i\overline{S}?_Z$	8 32 38	1			+ 3	
								− 4	
			F	8 36.2±					
24	Nov. 25	Id	$e\overline{P}_Z$	8 17.5±					Barely perceptible on Z. Not on E or N.
			$i\overline{S}_{ENZ}$	8 17 40					Poor time on N and E.
			F	8 18.3±					
25	Nov. 27	Id	$i\overline{P}_Z$	5 13 11	<0.3			− 16	
								+ 7	
			$R_i\overline{P}_Z$?	5 13 13	<0.3			+ 2	
								− 14	
			i_N	5 13 13	<0.3		− 7		
							+ 2		
			i_E	5 13 14	<0.3	+ 4			
						− 7			
			i_{ENZ}	5 13 15	<0.3	+ 30	+ 27	− 5	
						− 25	− 38	+ 4	
			F	5 17.8±					
26	Dec. 9	Iv	$e\overline{P}_{NZ}$	0 41 53					Barely perceptible.
			$e\overline{P}_Z$	0 41 56	1			+ 2	
								− 2	
			$e\overline{P}_N$	0 41 57	1		− 1		
							+ 2		

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
26	Dec. 9	Iv	e_{NZ}	0 42 01	1				
	(contd.)		e_Z	0 42 11	2			− 2	
								+ 2	
			e_{NZ}	0 42 13					Here wave begins to build up on N obscuring $\overline{S}_N$.
			$R_i\overline{PS}?_{NZ}$	0 42 18					Clear on Z not very apparent on N.
			$e\overline{S}?_Z$	0 42 21					S may begin here.
			i_Z	0 42 22	1			+ 5	
								− 1	
			eL_Z?	0 42 26	2			− 2	
								+ 3	
			i_Z	0 42 33	2			+ 3	
								− 3	
			i_N	0 42 34	2		− 2		
							+ 5		
			F	0 44.3±					E failed to record.
27	Dec. 10	Id	$i\overline{P}_{ENZ}$	4 26 22	<0.3	+ 12	3	+ 11	
						− 8		− 5	
			$i\overline{S}_Z$	4 26 24	1			− 3	
								+ 5	
			$i\overline{S}_{EN}$	4 26 25	1	+ 31	+ 18		
						− 17	− 3		
			i_Z	4 26 25	1			− 4	
								+ 4	
			F	4 26.5±					
28	Dec. 10	Iv	eP_N	8 40.7±					May begin here.
			eS_N?	8 41 43	9		− 3		
							+ 2		
			e_Z	8 41 41					
			e_E	8 41.8±					
			i_N	8 41 55	18		+ 44		
							− 79		
			i_N	8 42 47	10		+ 35		
							− 41		
			iM_N	8 45.2±	11		+ 60		
							− 70		
			F	9 10±					

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1926			h. m. s.	s.	μ	μ	μ	
29	Dec. 27	Id	$i\overline{P}_{ENZ}$	9 19 53	1		− 2	+0.3	E barely perceptible.
							0	−0 3	
			$R_i\overline{P}_{NZ}$?	9 19 55	1		− 1	+ 1	
							+ 1	− 1	
			$R_{i2}\overline{P}_{ENZ}$?	9 19 59	2	− 1	+ 3	+ 1	
						+ 1	0	− 1	
			i_{ENZ}?	9 20 03	2	+ 1	+ 3	− 2	
						− 1	− 2	+ 1	
			i_{EN}	9 20 08	1	− 2	− 2		
						+ 2	+ 4		
			$i\overline{S}_{EN}$	9 20 11	2	+ 3	+ 7		
						− 7	− 4		
			i_Z	9 20 13					
			i_N	9 20 15					
			iL_Z?	9 20 27	3			+ 9	
								− 6	
			F	9 25 4±					
30	Dec. 28	Id	$e\overline{P}_N$	13 00 36					Barely perceptible.
			e_N	13 00 39					
			e_{EN}	13 00 43					
			e_E	13 00 47					
			$e\overline{S}_N$	13 00 49	1		− 1		
							+ 1		
			F	13 01 6±					
31	Dec. 31	Iv	$e\overline{P}_N$?	20 09 07					Barely perceptible.
			$e\overline{P}_N$?	20 09 08	2		+ 1		
							−0.5		Destructive in Calexico, California.
			$e\overline{S}_N$	20 09 44	3		− 1		
							+ 2		
			eL_N	20 09 51	4				
			i_N	20 09 57	3		+ 4		
							− 3		
			i_N	20 10 01					
			e_N	20 10 10	2				
			F	20 13 6±					
	1927								
32	Jan. 1	Iv	$e\overline{P}_N$	8 19 06	1				Barely perceptible, builds up rapidly.
			e_N	8 19 19					
			e_N	8 19 34					
			e_N	8 19 44					
			$i\overline{S}_N$	8 20 34	5		+ 5		Epicenter near Calexico, California.
							− 2		

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1927			h. m. s.	s.	μ	μ	μ	
32	Jan. 1 (contd.)	Iv.	i_N	8 20 42	4		+ 10		
							− 3		
			i_N	8 20 56	4		+ 10		
							− 10		
			eL_N?	8 21 09	11				
			iM_N	8 22 39	9		+ 18		
							− 23		
			F_N	8 33.6±					
33	Jan. 1	Iv	eP_N	9 15 51					Barely perceptible.
			iS_N	9 17 21	5		− 2		
							+ 8		Calexico, California.
			i_N	9 17 29					
			i_N	9 17 48	4		− 8		
							+ 3		
			iL_N	9 18 08	12		+ 49		
							− 23		
			eM_N	9 19 28	9		+ 12		
							− 18		
			F	9 28.6±					
34	Jan. 1	Iv	eP_N	10 07 55	2		+0.5		Calexico, California.
							−0.5		
			eS_N	10 08 57	7		+ 1		
							− 1		
			F_N	10 11.6±					
35	Jan. 1	Iv	eP_N	10 33 47	2				May begin here.
			eS_N	10 35 07	2				
			e_N	10 35 28					Calexico, California.
			F_N	10 39.6±					
36	Jan. 1	Iv	eP_N	13 00 50					May begin here.
			eS_N	13 02 01	4		+ 1		
							− 1		Calexico, California.
			i_N	13 02 30	4		+ 6		
							− 2		
			eL_N?	13 04 07	11				Barely perceptible.
			F_N	13 07.6±					
37	Jan. 12	Id	$i\overline{P}_{EN}$	9 59 38	<0.3	0.3	0.2		Blurred.
			$i\overline{P}_Z$	9 59 39	<0.3			0.2	
			$i\overline{S}_{EN}$	9 59 40	1	+ 8	− 5		
						− 2	+ 6		
			$i\overline{S}_Z$	9 59 41					
			F	10 00.1±					

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1927			h. m. s.	s.	μ	μ	μ	
38	Jan. 12	Id	$i\overline{P}_{ENZ}$	10 07 57	<0.3	2	1	2	Blurred.
			$i\overline{S}_{Z}$	10 07 58					
			$i\overline{S}_{EN}$	10 07 59	0.3	+ 6	− 5		
						− 5	+ 5		
			i_N	10 08 01					$\overline{S}$ reflection?
			F	10 08.3±					
39	Jan. 13	Id	$i\overline{P}_{E}$	1 50 01	<0.3	+ 11			E poorly recorded.
						− 7			
			$i\overline{P}_{N}$	1 50 02	<0.3		+ 7		
							− 9		
			$i\overline{P}_{Z}$	?	<0.3			+ 13	No time marks
								− 5	visible on Z.
			$i\overline{S}_{N}$	1 50 03	<0.3		+ 6		
							− 4		
			$i\overline{S}_{Z}$	?	<0.3			+ 2	
								− 7	
			F_N	1 50.8±					
40	Jan. 19	Iv	$e\overline{P}_{N}$?	1 22 17					Barely perceptible.
			$e\overline{P}_{N}$	1 22 19	1		+0.1		
							−0.1		
			$e\overline{S}_{N}$	1 22 39	2		+0.3		
							−0.3		
			eL_N?	1 22.9±	3		+0.5		
							−0.5		
			eM_N?	1 23 17	2		− 1		
							+ 1		
			F	1 25.4±					Only on N.
41	Jan. 20	Id	$i\overline{P}_{EN}$	7 31 37	0.3	0.5	0.5		Blurred.
			$i\overline{S}_{EN}$	7 31 40	0.7	+ 2	+ 2		
						− 1	− 0		
			F	7 31.9±					Not recorded on Z.
42	Jan. 24	Iu	eP_N?	1 18.3±					May begin here.
			eP_N	1 18 24	6		−0.5		
							+0.5		
			e_N	1 18.9±					
			e_N	1 20.2±					
			e_N	1 21.0±					
			e_N	1 22.4±					
			e_N	1 24.1±					
			eS_N?	1 29 09	4		+0.5		
							−0.5		

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1927			h. m. s.	s.	μ	μ	μ	
42	Jan. 24 (contd.)	Iu	eS_N	1 30 23	15		+ 2		
							− 2		
			eL_N?	1 41.6±	37		− 30		
							+ 30		
			eM_N?	1 47.5±	21			<−5	
								<+5	
			M_{1N}	1 50.5±	18		10		
			e_N	2 02.2±	15		− 2		
							+ 4		
			e_N	2 06±					
			e_N	2 14.5±					
			F	2 40±					
43	Feb. 1	Id	$e\overline{P}_{N}$?	18 09.3±					May begin here.
			e_N	18 09 28					
			$e\overline{S}_{N}$?	18 09 35	5		− 2		
							+ 2		
			F_N	18 12.3±					Not recorded on E or Z.
44	Feb. 4	Id	$e\overline{P}_{ENZ}$	10 02 00					
			$R_i\overline{P}_{ENZ}$?	10 02 05	2	− 2	+ 2	− 3	
						+ 2	− 2	+ 3	
			$R_i\overline{PS}_{ENZ}$?	10 02 08	1	− 2	+ 3	− 2	
						+ 2	− 3	+ 2	
			$i\overline{S}_{ENZ}$	10 02 10	1	− 14	+ 6	− 6	
						+ 7	− 9	+ 3	
			i_{ENZ}	10 02 11					
			F	10 05.4±					
45	Feb. 12	I?	eP_E?	9 01 43					Microseisms present. Small irregular waves, cannot distinguish phases. Did not record on Z.
			e_E	9 01 46					
			e_N	9 01 52					
			eS_{EN}?	9 01 58					
			e_N	9 02 22					
			e_E	9 02 23					
			F	9 06.1±					
46	Feb. 15	Id	$i\overline{P}_{Z}$	7 49 20?	<0.5			−21?	
								+ 2	
			$i\overline{S}_{ENZ}$	7 49 23	<0.5	14	− 15	15	
							+ 14		
			i_{ENZ}	7 49 24	<0.5	− 49	+ 29	9	
						+ 14	− 31		
			F	7 50.6±					

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1927			h. m. s.	s.	μ	μ	μ	
47	Feb. 15	IId	$i\overline{P}_{EN}$	23 54 14	2	− 23	− 19		Epicenter off coast near Santa Cruz. Region seismically active since Oct. 22, 1926.
						+ 48	+ 42		
			$i\overline{P}_{Z}$	23 54 15	2			− 33	
								+ 67	
			$i\overline{PS}_{EZ}$?	23 54 22	1	+ 95		+ 37	
						0		− 41	
			$i\overline{PS}_{N}$?	23 54 23	1				
			$i\overline{S}_{EN}$	23 54 24	1	+154	−278		
						−180	+248		
			i_Z	23 54 27	1			− 60	
								+ 79	
			F	24 01.6±					
48	Feb. 16	Iu	e_E	1 44.6±?					May begin here.
			e_N	1 45.6±?					Microseisms present.
			e_E	1 55.9±	12	+ 5			
						− 11			Unusually irregular distant earthquake record.
			e_N	1 56.0±	9		+ 2		
							− 2		
			eG_{EN}?	2 01.3±	17	− 7	− 12		Irregularities probably caused by microseisms.
						+ 7	+ 12		
			eM_E	2 10.1±					
			eM_N	2 11.1±					
			F	3 04.6±					
49	Feb. 27	Iv	$e\overline{P}_{ENZ}$	4±30	2	+0.5	<+0.5	<−0.7	No time marks.
						−0.5	<−0.5	<+0.7	
			$e\overline{S}_{N}$?		2		+ 1		
							− 1		
			$eG?_N$		21		+ 10		
							− 10		
			eL_N		10		+ 6		
							− 6		
			L_{IN}		10		− 19		
							+ 19		
			F	4 20±30					
50	Mar. 7	Iu	eP_Z	9 39 45	2			+0.4	Barely perceptible.
								−0.4	
			eP_N	9 39 47	2		+0.5		Microseisms present.
							−0.5		See Berkeley report.
			e_N	9 39 52	3		+ 1		
							−0.5		

LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude AE	Amplitude AN	Amplitude AZ	Remarks
	1927			h. m. s.	s.	μ	μ	μ	
50	May 7	Iu	eS_N	9 49 46	12		+ 11		
	(contd.)		e_N	9 54 15	9		+ 2		
							− 2		
			e_N	9 59 50	50		− 82		
							+ 55		
			eM_N	10 01.9±	18		− 13		
							+ 86		
			M_{IN}	10 03.3±	16		+130		
							−130		
			F	11 24.9±					
51	Mar. 8	Iv	eP_{EN}	9 02 21	1		+0.3		
							−0.3		
			e_N	9 02 27	1		+0.5		
							−0.5		
			e_N	9 02 35	2		+0.7		
							−0.7		
			e_N	9 02 56	3		+ 2		
							0		
			eS_N	9 03 02	3		+ 4		
			F	9 07.9±					
52	Mar. 10	Iv	eP_E	16 27 49					Microseisms present.
			eP_N	16 27.8±					
			eS_N	16 28 06					
			eS_{EZ}	16 28.1±					Very faint on Z.
			F	16 29.9±					
53	Mar. 21	I?	e_{EN}	1 56.6±					May not be seismic; rest point disturbed; very few waves apparent.
			i_{EN}	1 56 40					
			F	2 00.1±					
54	Mar. 25	I?	eL_E?	13 09.5±		20	− 2		
							+ 2		
			eL_N?	13 09.9±		20		− 1	
								+ 1	
			L_{IN}	13 10.2±		20		3	
			F	13 17.2±					
55	Mar. 31	Id	$i\overline{P}_{ENZ}$	14 30 16		< 1	+ 5	− 2	+ 6
							− 2	+ 1	− 3
			$i\overline{S}_{ENZ}$	14 31 19		< 1	+ 13	+ 15	− 5
							− 5	− 6	+ 5
			F	14 31.9±					

The Earthquakes of October 22, 1926 and their Aftershocks

As noted in the preceding measurements, two earthquakes were felt throughout Central California on the morning of October 22. The epicenters of these earthquakes as well as those of a number of aftershocks were located at sea about thirty miles off the coast near Santa Cruz. These two shocks were of intensity 7 to 8, Rossi-Forel, in Santa Cruz. The intensity was about 7 in some districts in San Francisco. These earthquakes were felt as far north as Healdsburg, as far south as Lompoc, and as far east as the foothills of the Sierras. The times of these earthquakes were about 4:35 and 5:35 A.M. (P.S.T.). At about 8:42 an aftershock occurred which attained an intensity of about 3 or 4 at Santa Cruz. This also was felt in the San Francisco Bay district with an intensity very slight, about 2 in Oakland.

On October 24 at 2:52 P.M. (P.S.T.), another aftershock occurred which was of intensity about 4 at Santa Cruz and about 2 in Oakland.

Since October a number of small aftershocks have been registered.

These earthquakes are being studied in detail by Mr. George D. Mitchell, Jr., and the results of his investigation will be published in the Bulletin of the Seismological Society of America.