



THE REGISTRATION OF EARTHQUAKES  
AT THE BERKELEY STATION

AND

AT THE LICK OBSERVATORY STATION

FROM

April 1, 1926, to September 30, 1926

BY

PERRY BYERLY

AND

AUSTIN E. JONES

BULLETIN OF THE SEISMOGRAPHIC STATIONS, VOL 2, No. 12

UNIVERSITY OF CALIFORNIA PRESS  
BERKELEY, CALIFORNIA

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CONSTANTS

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## 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).
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## 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 <sub>n</sub>	Waves n times reflected at the earth's surface.
S (undae secundae)	Second phase, or second preliminary tremors (transverse).
SR <sub>n</sub>	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 <sub>c</sub> denotes the boundary at about 2900 km. depth between the metallic core and the middle shell which surrounds it. Thus:

S <sub>c</sub> P <sub>c</sub> S	Waves which have penetrated the core, having been transverse before entering and after leaving the core, and longitudinal within the core.
P <sub>c</sub> P <sub>c</sub> P <sub>c</sub>	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.
L (undae longae)	Long waves at the beginning of the surface phase.
M (undae maximae)	Shorter and more regular waves of large amplitude in the surface phase.
M <sub>n</sub>	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:	
P	The longitudinal wave which has traveled its whole path in the surface layer or crust of the earth.
S	The transverse wave which has traveled its whole path in the surface layer of the earth.

In general R<sub>1</sub> denotes reflection once at the lower (inferior) surface of the earth's crust. R<sub>12</sub> denotes reflection twice at this surface. R<sub>s</sub> indicates reflection at the upper (superior) surface of the crust, i.e., the surface of the earth. Thus, e.g.: R<sub>12</sub>F<sub>2</sub>S<sub>2</sub> 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 <sub>E</sub>	E-W component of A.
A <sub>N</sub>	N-S component of A.
A <sub>Z</sub>	Vertical component of A.

## 4. Time—

O (origin)	Time of shock at point of origin.
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## THE BERKELEY STATION

## CONSTANTS

Latitude and longitude of the center of the seismographic room:

$$\varphi = 37^\circ 52' 15'' N. Lat.$$

$$\lambda = 122^\circ 15' 36'' W. from Greenwich.$$

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 <sub>0</sub>	$\epsilon$	$\frac{r}{T_0^2}$
1926 Mar. 3	Bosch-Omori 100 kg.	E	45	12.5	4.6	0.0026
	"	N	44	12.1	3.9	0.0020
	Wiechert 80 kg.	Z	43	5.3	4.0	0.0036
May 13	Bosch-Omori 100 kg.	E	45	12.8	5.8	0.0027
	"	N	43	12.1	4.0	0.0022
	Wiechert 80 kg.	Z	42	5.4	{ 4.6 5.9 } 0.0045	
July 20	Bosch-Omori 100 kg.	E	43	12.8	5.6	0.0030
	"	N	47	12.0	4.1	0.0026
	Wiechert 80 kg.	Z	39	5.3	6.5	0.0068
Sept. 24	Bosch-Omori 100 kg.	E	42	12.9	4	0.0020
	"	N	44	12.0	5.3	0.0020
	Wiechert 80 kg.	Z	37	5.5	7.8	0.0053

## BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						A <sub>E</sub>	A <sub>N</sub>	A <sub>Z</sub>	
1	Apr. 1	I	e <sub>E</sub>	7 07 43	6	μ	μ	μ	May not be seismic.
			e <sub>E</sub>	7 09 03	6				
			e <sub>E</sub>	7 11 03	9				
			e <sub>E</sub>	7 14 36	6				
2	Apr. 3	IV	e <sub>P</sub> <sub>N</sub>	20 11 10	3	- 2			
			i <sub>S</sub> <sub>E</sub>	20 11 27	3	- 4	- 2		
			e <sub>S</sub> <sub>Z</sub>	20 11 28	4				
			i <sub>S</sub> <sub>N</sub>	20 11 30	3	+ 4			
			F	20 16 4±					
3	Apr. 12	IIu	e <sub>Z</sub>	8 45 06	5		+ 1		Epicenter near Solomon Islands.
			e <sub>E</sub> <sub>N</sub>	8 45 20	5 <sub>E</sub>	+ 1	- 2		
			e <sub>S</sub> <sub>EN</sub> ?	8 55 34	4	+ 2	+ 4		
			i <sub>E</sub>	8 55 44	22	+ 11			
			i <sub>N</sub>	8 55 59	16	+ 15			
			e <sub>E</sub>	9 00 9±	22	- 11			
			e <sub>N</sub>	9 08 1±	24	+ 16			
			L <sub>E</sub>	9 11 4±	33	- 40			
			L <sub>Z</sub>	9 11 5±	33		- 261		
			i <sub>M</sub> <sub>E</sub>	9 13 8±	22	- 12			
			e <sub>M</sub> <sub>Z</sub>	9 14 1±	20	+ 50			
			W <sub>2</sub> <sub>E</sub>	10 53 8±	24	- 11			
			W <sub>2</sub> <sub>Z</sub>	11 00 7±	23	+ 42			
			W <sub>2</sub> <sub>N</sub>	11 00 9±	18	+ 2			
			F	11 28 2±					
4	Apr. 19	I	e <sub>N</sub>	15 21 25	6	+ 2			Imperial Valley, California, reported an earthquake at 15h 15m.
			e <sub>E</sub>	15 21 31	8	- 1			
			e <sub>E</sub>	15 21 39	24	- 11			
			e <sub>N</sub>	15 22 0±	18	- 4			
			F	15 32 0±					
5	May 3	I	e <sub>N</sub> <sub>Z</sub>	13 53 07					May be earlier, barely perceptible.
			e <sub>E</sub>	13 53 08					
			e <sub>E</sub> <sub>N</sub>	13 53 50	2	- 2	+ 5		
			e <sub>E</sub> <sub>N</sub>	13 54 03	3		- 3		
			e <sub>Z</sub>	13 54 13	3		+ 2	- 2	
			e <sub>N</sub>	13 54 48	6		+ 4	+ 2	
							- 1		

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						A <sub>E</sub>	A <sub>N</sub>	A <sub>Z</sub>	
5	May 3	I	e <sub>Z</sub>	13 56 23	6			- 1	
			e <sub>Z</sub>	13 57 26				+ 1	
			F	14 01 0±					
			e <sub>E</sub> <sub>N</sub>	7 48 6±					
			e <sub>N</sub>	14 56 4±					
			e <sub>E</sub>	14 56 59					
			e <sub>E</sub>	14 57 49	16	- 3	+ 3		
8	May 16	Id	e <sub>E</sub> <sub>N</sub> <sub>Z</sub>	21 12 25					A blur only and in minute mark. A local shock not reported felt.
			i <sub>N</sub>	21 12 28	1		+ 2		
			i <sub>N</sub>	21 12 29 5	2		+ 6		
			F	21 12 41					
			e <sub>P</sub> <sub>E</sub> <sub>N</sub> <sub>Z</sub>	17 37 43	<0.5				
			i <sub>S</sub> <sub>N</sub>	17 37 49	<0.5		+ 7		
			i <sub>S</sub> <sub>Z</sub>	17 37 49	1				
9	May 26	Id	i <sub>S</sub> <sub>E</sub>	17 37 50	1	- 11	- 4	- 5	Just a blur on all components. Reported felt by two people in Oakland.
			e <sub>L</sub> <sub>N</sub>	17 37 53	7				
			e <sub>L</sub> <sub>E</sub>	17 37 57					
			F	17 39 2±					
			e <sub>P</sub> <sub>N</sub>	16 53 03					
			e <sub>P</sub> <sub>E</sub>	16 53 04					
			i <sub>S</sub> <sub>E</sub>	16 53 14	1	+ 2			
10	May 30	Id	F	16 54 2±					A blur, almost swarm type. Not recorded on Z.
			e <sub>Z</sub>	5 59 24	7				
			e <sub>E</sub>	4 59 26					
			e <sub>E</sub>	5 07 05	9	- 2			
			e <sub>E</sub>	5 09 56					
			e <sub>L</sub> <sub>E</sub>	5 24 59	28	+ 29			
			e <sub>L</sub> <sub>Z</sub>	5 25 05					
11	June 3	I	F <sub>E</sub>	5 56 1±					
			F <sub>Z</sub>	5 58 1±					

Very slight record on N.

## BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	Az	
12	June 5	IIv	eP <sub>Z</sub>	19 52 04	6	-	-	-2	A longer period enters.
			eP <sub>E</sub>	19 52 05	6	-3	+2		
			eP <sub>N</sub>	19 52 05	7	+5	-		
			eE	19 52 26	15	+4			
			eN	19 53 21	8	+23	-14		
			eS <sub>E</sub>	19 53 31	20	-3			
			eS <sub>Z</sub>	19 53 32	8	-3			
			eS <sub>N</sub>	19 53 13	20	-3			
			iM <sub>E</sub>	19 53 52	13	-2			
			i <sub>N</sub>	19 53 52	14	-35			
			M <sub>IE</sub>	19 55 54	9	+171			
			M <sub>I<sub>Z</sub></sub>	19 57 02	7				
			M <sub>I<sub>N</sub></sub>	19 57 04	6	-128			
			F	21 08±					
13	June 8	Id	i <sub>N</sub>	15 51 18	<0.1	-2			On N-S seismogram this is evidently a swarm of several tiny earthquakes. The periods are so short as to blur the line until toward the end when a longer period emerges. On the E-W the long period is registered at the beginning and the swarm type is not evident. This swarm was not registered on the Z component.
			ee	15 51 19	5	3			
			i <sub>N</sub>	15 51 25	<0.1				
			eN	15 51 29	5				
			F	15 52 0±					
14	June 26	IIu	iP <sub>Z</sub>	20 00 26	4	+2			Epicenter in Eastern Mediterranean Sea
			iP <sub>N</sub>	20 00 28					
			iP <sub>E</sub>	20 00 30	4	<-2			
			i <sub>Z</sub>	20 04 28	7	+8			
			iPR <sub>IN</sub>	20 04 33	5	-2	+10		
			iPR <sub>I<sub>Z</sub></sub>	20 04 35	5				
			iPR <sub>IE</sub>	20 04 40	6	-2			
			i <sub>E</sub>	20 04 57	8	-6			
			i <sub>N</sub>	20 04 58	8	-5			
			i <sub>Z</sub>	20 04 58	8	+35			

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	Az	
14	June 26 (Contd.)	IIu	iS <sub>c</sub> P <sub>c</sub> S <sub>E</sub>	20 10 41	8	-6	-	-	<+10
			iS <sub>c</sub> P <sub>c</sub> S <sub>N</sub>	20 10 45	6	-5	-	-	
			iS <sub>c</sub> P <sub>c</sub> S <sub>Z</sub>	20 10 45	5	-2	-	-20	
			eP <sub>S<sub>N</sub></sub>	20 13 53	14	-5	-	-	
			iP <sub>S<sub>Z</sub></sub>	20 14 20	11	-2	-	-	
			eP <sub>S<sub>E</sub></sub> ?	20 14.9±	14	-5	-	-	
			eS <sub>R<sub>N</sub></sub>	20 19.0±	14	+2	-	-	
			eS <sub>R<sub>E</sub></sub>	20 19.1±	14	-5	-	-	
			eS <sub>R<sub>Z</sub></sub>	20 19.2±	11	-	-	-	
			eL <sub>E</sub>	20 27.8±	20	<-5	-	-	
			iM <sub>E</sub>	20 34 15	15	-3	-	-	
			eM <sub>N</sub>	20 34 22	14	-2	-	-	
			iM <sub>IE</sub>	20 45 10	18	-19	-	-	
			iM <sub>I<sub>Z</sub></sub>	20 50 19	18	-	-	-86	
15	June 28	I?	eE	20 51 16	18	+16	-	-	Irregular waves of very small amplitude appear almost continuously throughout this time interval. May not be seismic. Not present on N and Z.
			F	21 25.6±					
16	June 29	I	eP <sub>Z?</sub>	14 39 45?	3				Time ±1 or 2 seconds. Barely perceptible.
			eP <sub>E?</sub>	14 39 46?					
			eEN	14 50 20	9	-8	-8		
						+16	+16	-1	
			eZ	14 50 21	5			+1	
			eEN	14 50 57					
			eE	14 52 06					
			EE	14 55.9±					
			eLE	15 03.0±	16				
			eLEN	15 03.5±	24				
17	June 29	IV	eP <sub>N?</sub>	23 22 04					May begin before on N as it builds up very slowly. Doubtful.
			eP <sub>E?</sub>	23 22 05?					

## BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	AZ	
17	1926 June 29 (Contd.)	IV	ez	h. 22 11	s.	$\mu$	$\mu$	$\mu$	N barely perceptible.
			ee	22 14					
			cez	22 17	3	- 2	+ 2	- 2	
			en	22 49					
			en	22 54					
			eSENZ?	22 59	4E	+ 2	- 2	+ 2	
					5z	- 2	+ 2		
			iSN	23 03	3	- 6	+ 3		
			iSE	23 09		- 6	+ 6		
			iN	23 14					
			iz	23 21	5		+ 10	- 10	
18	June 30	IV	iMN	23 31	5	- 11			Not recorded on Z.
			iMEZ	23 36	5	+ 11	- 9	+ 8	
			FE	23 35.0±					
			ePE?	13 32 2±					
			ePN?	13 32 15					
			ePE?	13 32.3±					
			eSEN	13 32 39	2N	- 2	+ 2		
19	July 1	I?	ee	15 08.9±	30	<+12			Barely perceptible on E.
				16 02.5±					
			eE	13 32 43					
20	July 2	Id	FE	13 34.0±					A blur. Not recorded on Z. Local, almost swarm type.
			FN	13 35.0±					
			iSEN	1 24 56	0.3	0.5			
				1 24 57	0.4	+ 7	+ 4		
21	July 15	Id				- 9	- 4		Local, swarm type. Recorded only on N.
			FN	1 25.5±					
			FE	1 26.0±					
			iPN	22 34 15					
			iSN	22 34 19					
			FN	22 34.5±					

## BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	AZ	
22	July 16	Ir	eLE	h. 49.5±	s. 27	-19			End of distant earthquake not recorded on N or Z.
			ee	55.0±	18	- 8			
			FE	22.2±					
23	July 25	Id	iPEN	1 55 43					Not recorded on Z.
			iS <sub>E</sub> ?	55 56					
			iS <sub>N</sub> ?	55 58					
			FE	57.0±					
			FN	58.5±					
24	July 25	IIV	ePENZ	17 58 26	2	-34	+23	+ 1	Epicenter near Idria, California. E feeble, time poor.
			eEN	58 33	2N		-23	- 2	
			iz	58 34?	3			- 3	
			iz	58 41	2			- 7	
			iN	58 43	2			- 7	
			iEN	58 47	5E	-26	+30		
					3N	+22	0		
			iz	58 48	2			-10	
			iSEZ	58 55	3	-78		-14	
						+53		+18	
			MIE	59.2	7	+67			
			MIN	59.3	7	-67			
			MIZ	59.5	4			+50	No vertical record on this date.
			F	18 13±					
			ePEN?	17 43 12					
			ez	43 19					
			ee	43 35	3	- 5	+ 5		
			en	44 07					
			iSEZ?	44 47					
			iSN?	44 49	3				
			FZ	46.1±					
			FEN	50.6±					
26	Aug. 6	I	en	46 45	10		<+2		
			ee	47 08	4	<-2			
			ee	55.9±	30	<+12			
			en	57.6±	32		+27		
			F	01 6±					

## BERKELEY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						Ae	An	Az	
27	1926 Aug. 25	Ir	ePE	h. 5 57 30	s. 5	$\mu$	$\mu$	$\mu$	Epicenter probably in Chile.
			ePN	5 57 38					
			eSE?	6 07 42					
			eSN	6 07 46					
			eLEN	6 21.2±	20				
			eME	6 24.2±	29				
			eMN	6 24.7±	29				
			FN	6 49 2±					
			FE	8 35.2±					
28	Sept. 2	Iu	ePE	1 42 10	3	<+2			Epicenter probably in Chile.
			EN	1 43 42	4	- 2			
			ePR <sub>2N</sub>	1 47 35	4	+ 2			
			ePR <sub>2Z</sub>	1 47 36	4				
			ePR <sub>2E</sub>	1 47 38	4	+ 2			
			EN	1 54 29	8	+ 4			
			EE	1 54 29	8	- 2			
			eLE	2 09.0±	15	- 3			
			eLN	2 09.0±	16	<+3			
			EE	2 16.6±	30	- 11			
			EE	2 50.2±	20	<-4			
			EN	2 51.0±	22	<+7			
			eME	2 59.6±	20	- 9			
			eMN	3 01.3±	20	- 5			
			F	3 34±					
29	Sept. 7	I?	EE	12 29 4±					May begin here.
			EE	12 36.4±	4	<-1			
			EE			+1			
			EE	12 40.2±	5	+ 2			
			EE			- 2			
			EE	12 49.4±	10	- 3			
			EE	12 55.1±	16	<-3			
			EE	13 07.6±	39	-20			
			FE	13 31.9±					
30	Sept. 10	I?	EE	11 00 8±	14	- 2			Long sinusoidal waves at irregular intervals, not recorded on N or Z.
			EE	11 12.1±	22	+ 6			
			EE	11 29.8±	28	<+10			
			EE	12 50.5±	16	<+3			
			F	13 01.8±					
31	Sept. 16	Iu	iPE	18 11 57	4	- 4			Dilatation from NW; probably Japan.
			iPN	18 11 57	2		+ 2		
			iPZ	18 11 57	3		- 5		

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						Ae	An	Az	
31	1926 Sept. 16 (contd.)	Iu	iE	h. 18 12 09	s. 4	$\mu$	$\mu$	$\mu$	Slight displacement of line.
			iN	18 12 11	3				
			iN	18 12 34	3				
			iE	18 12 35	4	- 4			
			iZ	18 12 37					
			iE	18 13 39	3	+ 5			
			eSe	18 22 22	8	- 2			
			eSN	18 22 28	8		+ 2		
			en	18 24 56	8		+ 2		
			ee	18 25 19	8	- 4			
			eSR <sub>IN</sub>	18 28 46	9		+ 4		
			eSR <sub>IE</sub>	18 29 01	12	- 2			
32	Sept. 17 18	Iv?	eLN	18 36.3±	20			+11	Not recorded on Z.
			eLE	18 36 6±					
			iME	18 41 40	10	- 2			
			iMN	18 42 32	12	- 2			
			F	19 41.6±					
			ee	23 18.0±	20	<-4			
			en	23 18.0±	12		+2		
			ee	23 18 43	17	- 3			
			en	23 19 06	12	+ 2			
			iE	23 20 51	10	- 2			
			iN	23 21 15	9	- 4			
			iE	23 21 22	10	- 7			
33	Sept. 28	Iv	ee	0 19 3±	8	<-2			Small sinusoidal waves, no definite phases.
			en	0 19 3±	7		+2		
			en	0 20 6±	8		+2		
			en	0 30.2±	12		+2		
			ee	0 30 4±	12	<+2			
			ee	1 41.7±	20	<-4			
			en	1 42 1±	10		+2		
			ee	1 43 04	10	- 2			
			en	1 43 08	8		+2		
			F	1 54 6±					
			en	17 50 23					

## LICK OBSERVATORY STATION

## THE LICK OBSERVATORY STATION

## CONSTANTS

## CONSTANTS OF THE STATION

Latitude and longitude of the center of the seismographic room:

$\varphi = 37^\circ 20' 24\frac{1}{2}''$  N. Lat.

$\lambda = 121^\circ 38' 34\frac{1}{2}''$  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	$T_0$	$\epsilon$	$\frac{r}{T_0^2}$
May 6	Wiechert 160 Kg. H.	E	86	9.3	2.1	0.0042
		N	89	7.4	1.4	0.0046
	Wiechert 80 Kg. V.	Z	.....	3.0	.....	.....
Sept. 3	160 Kg. H.	E	91	10.1	5.4	0.0039
		N	91	8.3	4.0	0.0057
	80 Kg. V.	Z	55	3.1	7.1	0.0008

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	Az	
1	1926 Apr. 12	I	iz	h. m. s. 8 44 16	s. 4	$\mu$	$\mu$	$\mu$	-6.4 +3 2
			ez	9 11.8	30				
			ez	9 21.4	17				
			ez	9 32.0	16				
			ez	9 36.0	15				
			ez	9 43.6					
			Fz	9 48.0±					
2	May 11	Ir	ePE	11 24					$\pm 10$ min. Time marker failed. Waves continued for $\frac{1}{2}$ hr. on E-W only.
3	May 30	Id	iPENZ	14 51					$\pm 10$ min. Time marker failed. Lasted for about 2 min.
4	June 3	I	ePE?	4 59 20	4	-1			May be microseisms.
			iPE	4 59 27	10	-1	+1		
			en	4 59 39					
			en	5 00 21	4		-1	+1	
			ee	5 00 30	6	-1			
			ee	5 02 10					
			en	5 08.6					
			ee	5 09 52					
			eLE?	9 25 18	36	-49	+49		
			en	5 29 19	13				
5	June 5	IIv	ePN?	19 52 19					Slight.
			ePz	19 52 20	2				
			iPN	19 52 21	8	-1	+19		

## LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	Az	
5	1926 June 5 (Contd.)	IIv	ePE	h. m. s.	s.	$\mu$	$\mu$	$\mu$	Barely perceptible.
			iSN	19 53 55	14	-25	+244		
			eSz	19 53 56	8		-244		
			eSE	19 53 57					Barely perceptible.
			iE	19 54 04	7	-5	+14		
			FZ	20 05.7±					
			FE	20 08.7±					
			FN	20 35.7±					
			iP <sub>EN</sub>	18 22 30	2	-3	+3		Faint on E-W.
			iP <sub>Z</sub>	18 22 30	1		-2		
6	June 6	Id	RiP <sub>N?</sub>	18 22 32	2	-3	+2		
			iS <sub>NZ</sub>	18 22 41	2	-4	-4		
			FN	18 26.2±		+4	+6		
			eP <sub>ENZ</sub>	15 51 24					Barely perceptible.
			eN	15 51 28.5					
			iE	15 51 28.5	1	+2	-2		
			iS <sub>NZ</sub>	15 51 30	1	+3	-2		
			FZ	15 51.7±		-3	+3		
			FE	15 52.2±					
			FN	15 53.1±					
8	June 26	IIr	eN	20 04 34	4	+0.5			Barely perceptible.
			ez	20 04 39					
			enZ	20 04 58	4	-1			
			eN	20 05 20	8	+1			
			ez	20 05 45		-1			
			eN	20 05 52	6	+7			
			FZ	20 06.2±		-7			
			iN	20 10 50	7	-1			
			iN	20 11 53	6	+3	-5		
						+3			

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	Az	
8	1926 June 26 (Contd.)	IIr	iN	20 13 58	8	$\mu$	-2		
			eN	20 14 25	8		+1		
			eN	20 14 33	14		-1		
			FN	20 21.0±			+4		
			ePNZ	23 21 46	1		-4		
			eEN	23 21 49	1		+0.5		E-W doubtful.
			ee	23 21 53					
			ez	23 21 56	1				
			ez	23 22 42			+1		
			eSz	23 22 46	4		-1		
9	June 29	IV	iSN	23 22 47	3		+9		
			iE	23 22 54	4	-13	-8		
			iz	23 23 02	3		+8		
			FN	23 35.9±			+7		
			ePN	13 31 35	3		-0.5		
			ez	13 31 36?			+0.5		
			ee	13 31 38					
			iN	13 32 05	2		+3		
			iSz	13 32 10			-3		
			iSN	13 32 11	2		+9		
10	June 30	IV	iSE	13 32 12	1	+2	-4		
			iz	13 32 13					
			FE	13 32 9±					
			FZ	13 33.2±					
			FN	13 37.9±					
			ee	10 34 29					
			eN	10 34 30	1		+0.5		
			eN	10 34 34	1		-0.5		
							+0.5		
							-0.5		
11	July 25	Id							E-W record not well smoked.

## LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	AZ	
11	1926 July 25 (Contd.)	Id	iEN	10 34 37	1	μ	+ 2	μ	A shorter period superposed on N-S. Not recorded on Z.
			iEN	10 34 43	1		+ 2		
			iE	10 34.8±			- 3		
			iN	10 34 53	2		- 8		
			iN	10 34 58	5		+ 4		
			FE	10 36.3±			+ 3		
			FN	10 37.7±			- 1		
			iPEN	12 55 31	2 <sub>N</sub>	- 4	- 5		
					1 <sub>E</sub>	+ 2	+ 2		
			iSN	12 55 36					
12	July 25	Id	iSE	12 55 38	1	+20			A shorter period superposed on N-S. Not recorded on Z.
			iN	12 55 50	3		- 5		
			FN	12 58 3±					
			FE	12 59.8±					
			iPE	17 58 19	4	-12			Epicenter near Idria, California. Shorter period superposed on $\bar{P}_{EN}$ .
13	July 25	IIId	iPNZ	17 58 19	2	+16	+11		
						-31	-19		
			iENZ	17 58 31	2 <sub>E</sub>	-15	+77	+25	
					1 <sub>NZ</sub>	+ 9	-90	-58	
			iz	17 58 33	1			-58	
			iz	17 58 35	2		+86		
			iSENZ	17 58 39	2	-223	+130	-116	
14	July 25	Id				+101	-250	+147	
			FZ	18 02.8±					
			FN	18 11.1±					
			FE	18 20.3±					
			ePN	18 08 45					Superposed on last shock on N and E. Very faint on Z.
			ePEZ	18 08.8±					
			eSN	18 09 01	1	+ 1			
						- 1			
			enZ	18 09 09	1	+ 1	<+2		
						- 1	<-2		
									Ca. ±1.

## LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	AZ	
14	1926 July 25 (Contd.)	Id	FZ	18 09.3±					Poor E and Z records
			FN	18 09.6±					
			FE	18 09.8±					
			ePN	17 43 26	1				
			ePZ	17 43.5±					
			iE	17 43 52					
			iN	17 43 53	1		+ 4		
			iSN	17 44 08	3		+ 3		
							- 5		
			iSE	17 44 10					
15	Aug. 6	Id	iSz	17 44.3±					Not recorded on E or Z.
			FEZ	17 45.4±					
			FN	17 54.0±					
			en	3 47 04	3			0.5	
			en	3 53.2±	5				
			en	3 55.5±					
			en	4 01.2±	8				
			eMN	4 02 42					
			M <sub>IN</sub>	4 03.3±	9			2	
			en	4 05 49					
16	Aug. 9	Ir	en	4 08 15					Barely perceptible.
			en	4 10 28					
			FN	4 50±					
			ePN	4 12 47	1				
			eSN	4 13 29	4				
				4 15.6±					
			ePN	5 57 20					
			ePE	5 57 22					
			iEN	5 57 36	4	- 1	- 2		
						+ 1	+ 4		
17	Aug. 9	Id	iN	6 00 50	4	+ 0.5	+ 0.5		Ca.
						- 0.5	- 0.5		
			en	6 03 01					
			en	6 07 4±					
			en	6 08 1±	18	+ 3			
						- 3			
			eEN	6 21 4±	23		+23		
							-16		
18	Aug. 25	IIR	eMENZ	6 24.8±	22				Barely perceptible on Z.

## LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	Az	
18	1926 Aug. 25 (Contd.)	IIr	M <sub>IENZ</sub>	h. m. s. 6 27.6±	22	$\mu$ +58 -58	$\mu$ +44 -44	$\mu$	Barely perceptible on Z.
			F <sub>Z</sub>	6 33±					
			e <sub>N</sub>	6 36.0±					
			F <sub>E</sub>	7 04.6±					
			F <sub>N</sub>	7 09.6±					
			e <sub>N</sub>	11 56.3±	4	+0.5			
19	Aug. 30	I	e <sub>N</sub>	11 56.7±					May not be seismic. Microseisms present on E. Shock not recorded on Z.
			e <sub>E</sub>	12 01.8±		+1			
			e <sub>N</sub>	12 02.16	5	-2			
			F <sub>N</sub>	12 08.5±					
			e <sub>E</sub>	12 13.5±					
			F <sub>E</sub>	12 14.5±					
20	Sept. 2	Ir	eP <sub>IENZ</sub>	1 42 04	7	-1 +0.5			Barely perceptible on N and Z.
			e <sub>N</sub>	1 42 08	3	+0.5 -0.5			
			e <sub>Z</sub>	1 43.8±					
			e <sub>E</sub>	1 43 51	5	-0.5 +0.5			
			i <sub>N</sub>	1 43 57	4	+2 -1			
			e <sub>E</sub>	1 44 47	8	-1 +1			
			e <sub>N</sub>	1 46 01					
			i <sub>IENZ</sub>	1 47 38	4 <sub>EZ</sub>	-1 5 <sub>N</sub>	+3 -1	-3 +3	
			i <sub>E</sub>	1 47 46	4	-3 +4			
			i <sub>N</sub>	1 48 08	5	+2 -5			
			i <sub>E</sub>	1 48 16	5	+3 -3			
			e <sub>N</sub>	1 51.2±	6	-1 +1			
			e <sub>E</sub>	1 51.4±	6	+1 -2			
			e <sub>NE</sub>	2 09 25	23	+17 -17			

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						AE	AN	Az	
20	1926 Sept. 2 (Contd.)	Ir	e <sub>E</sub>	h. m. s. 2 09 53	18	$\mu$ -6 +16			May begin earlier on E. ca. 12-33-10. Barely perceptible.
			F <sub>E</sub>	3 29.5±					
21	Sept. 7	Ir	e <sub>E</sub>	12 36 26	4	-0.5 +0.5			
			e <sub>Z</sub>	12 36 26	4				
			e <sub>N</sub>	12 36 30	4		+0.5 -0.5		
			e <sub>SE</sub>	12 40 14	5	+1 -2			
			e <sub>SNZ</sub>	12 40 17	6 <sub>N</sub> 4 <sub>Z</sub>		+0.5 -0.5	-1 +1	
			F <sub>Z</sub>	12 40.6±					
			e <sub>E</sub>	12 49.0±	9	-0.5 +0.5			
			e <sub>E</sub>	12 54 32	15	-2 +2			
			e <sub>E</sub>	13 06.9±	35	-19 +19			
			F <sub>E</sub>	13 27.4±					
22	Sept. 16	Iu	i <sub>P</sub> <sub>E</sub>	18 11 59	4	-3 +5			
			e <sub>P</sub> <sub>N</sub>	18 11 59	2		-1 +2		
			e <sub>P</sub> <sub>IE?</sub>	18 15 29	7	-2 +2			
			e <sub>S</sub> <sub>EN</sub>	18 22 38	11	+2	-4		Displacement to one side.
			e <sub>E</sub> <sub>N</sub>	18 23 26					
			e <sub>N</sub>	18 23 46	10		-5 +6		
			e <sub>L</sub> <sub>EN</sub>	18 36.7±	35	-38 +38	-38 +38		
			e <sub>M</sub> <sub>E</sub>	18 42.7±	17	-5 +5			
			e <sub>M</sub> <sub>N</sub>	18 43.0±	23		-16 +16		
			F <sub>N</sub>	19 39.2±					
			F <sub>E</sub>	19 59.2±					

## LICK OBSERVATORY STATION

No.	Date	Character	Phase	Time G. M. C. T.	Period	Amplitude			Remarks
						A <sub>E</sub>	A <sub>N</sub>	A <sub>Z</sub>	
23	1926 Sept. 17 and 18	I?	e <sub>N</sub>	h. m. s. 23 17 2±	s.		μ	μ	May have begun at ca. 22-47.2 as there were micro- seisms present.
			e <sub>E</sub>	23 19 18	11	- 2	+ 2		
			e <sub>N</sub>	23 19 28	10		+ 2	- 2	
			e <sub>N</sub>	23 20.6±					
			e <sub>E</sub>	23 20.8±	7	+ 2	- 2		
			e <sub>E</sub>	0 18.2±					
			e <sub>N</sub>	0 21.2±					
			e <sub>E</sub>	0 22 01	8	- 1	+ 1		
			e <sub>N</sub>	1 39.5±					
			e <sub>EN</sub>	1 41.5±					
24	Sept. 28	Id	F <sub>EN</sub>	2 00±					
			e <sub>N</sub>	17 50.1±					Very faint.
			e <sub>EN</sub>	17 50 15					
			e <sub>Z</sub>	17 50 16					
			e <sub>S<sub>EN</sub></sub>	17 51 03	6 <sub>E</sub>	- 3	+ 2		
					4 <sub>N</sub>	+ 3	- 4		
			e <sub>N</sub>	17 51 05					
			e <sub>Z</sub>	17 51 10					
			F <sub>Z</sub>	17 51.7±					
			F <sub>EN</sub>	18 02.1±					