

SHASTA DAM SEISMOLOGICAL STATION

INSTRUMENTAL REPORT - January, February, March, 1944

The Shasta Dam station continued in routine operation throughout the period of the report.

The following earthquake swarms are of interest:

January 9 - 11 - Lassen Volcanic National Park Area. A number of light to moderate shocks, the following of which were felt at Mineral:

January 10, 7:44 a.m. PWT - Felt by one family in community. The Shasta Dam record for this time was defective.

January 10, 9:54 p.m. PWT - Felt by several in community. Floor lamp vibrated.

January 11, 10:55 a.m. PWT - Reported felt by 2 families. No record for this hour was obtained. However a moderate shock was recorded at 10:52 p.m. on January 10 which is probably the shock for which the questionnaire was intended.

January 17, 14:22 - Felt by several, awakened few.

January 12 - 16 - 3 strong shocks and a number of smaller shocks occurred in the Humboldt Bay and Cape Mendocino regions, probably a few miles off the coast. The strongest, January 12, 8:03 a.m. PWT was reported felt in Eureka, Ferndale, Westport, Scotia, Cape Mendocino and Upper Mattole. No damage reported.

January 14, 9:24 p.m. PWT - reported felt in Ferndale and Upper Mattole. This may be an aftershock of the above. If so, the tentative epicenter indicated in the text probably is in error.

January 15, 7:26 p.m. PWT - reported felt in Ferndale and Upper Mattole.

Information relating to earthquakes reported felt was supplied by the Seismological Field Survey of the Coast and Geodetic Survey.

February 18, 2:18 p.m. to 8:25 p.m. PWT - 31 small local shocks or disturbances were recorded during this time. Distances ranged to 25 mi. from the station with more than half of them at 5 mi. or less.

March 6, off the Oregon Coast. This swarm is of some interest since epicenters thereof are in the general alignment of the San Andreas rift zone as it leaves the coast of northern California. The epicenter of the main shock, March 6, 20h 10m GCT, was tentatively placed at 44.7°N , 128.6°W or eastward thereof toward mainland depending on the time of origin which is a bit indefinite. Epicenters of certain aftershocks were probably 10 to 50 miles southeastward.

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Coast and Geodetic SurveyR. M. is hour and minute of flasher mark at end (or
beginning) of record. Δt is time correction referred to R. M.

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
2	eP iP iS	04	37	15 15.6 26.3		-	+	80 50	15:02- +2.6	$\Delta = 57$ mi. SE
3	eP iP	13	18	07 08.4	0.8	-	-	-15	15:13- +4.9	C 13:18:40
3	iP	10	28	27.6				-10	+4.6	C 10:28:30.5
4	iP	01	07	06.3				-15	15:01- +5.8	
4	iP	23	24	50.8					15:17- +7.6	
5	iP	03	05	55.7	1.5		+	-20	+7.9	C 03:05:44
5	eP	04	19	43.5	1.3				+8	C 04:20:06
5	iP iS	04	35	09.6 20.9					+8	Very small local shock $\Delta = 57$ mi. E?
5	iP	11	08	24.5	1.5			-10	+8.5	C 11:08:27.7
5	eP iP	21	31	44 33 34.6					15:01- +9.3	C 21:31:37.5
6	iP iS iS	03	26	55.5 16 16.8		-15	-6	+	+9.8	Very small trace of region shock - 100 mi. WSW
6	iP iS	05	33	57.7 34 01.3		+2	-5 60	-	+10	Small local shock 18 mi. S
6	iP iS	10	50	33.3 36.1		-80+	+20	?	+10.3	Light local shock 14 mi. W or WSW
6	iP iP i i	13	45	11.2 25.3 34.1 49.6	0.8 0.8	+3 +15	-2 -8	+5 +20	+10.6	C 13:44:55.5
6	eP	16	55	15.5				+	15:01- +10.9	
7	iP iS	00	59	40.0 42.7	0.16 0.16	+50 250+	+74 300	?+ 100?	+11.6	Light local shock 12½ mi. SSW

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		h	m	s		E	N	Z		
7	eP ipP? e ePP iS eSS	03	02	38.5	2.5			+	+11.7	$\Delta = 87^\circ$ h = 70 mi.?
			03	10						
			05	24						
			06	28						
			13	05						
				53						
8	iP iP	00	13	31.5 41.5		5			15:00- +13.5	I Local shock $\Delta = 50$ mi. M = 12 mi.
8	eP iP e	19	29	18 20.7 15				+ +20	15:08- +15.1	C 19:29:52.8
9	iP iS	01	19	51 18.5		+			+15.5	$\Delta = 140$ mi. W
9	i i	06	47	35 44					+16	I $\Delta = 45$ mi.
9	iP iS	06	51	37.7 46.7		-10		+10	+16	$\Delta = 45$ mi. E M = $7\frac{1}{2}$ mi.
9	iP eS	07	44	01.8 11					+16	I $\Delta = 46$ mi. M = 9 mi.
9	i i	12	45	20.2 29.3					+16.5	I $\Delta = 46+$ mi. M = 10 mi.
9	iP iS iS	13	13	17.0 25.9 26.2		-10 100	-10?	+	+16.5	$\Delta = 45$ mi. M = $8\frac{1}{2}$ mi.
9	i i i	14	26	27.4 37.1 37.4					+16.6	I $\Delta = 48$ mi. M = $7\frac{1}{2}$ mi.
10	iP iS	16	41	25.7 36.3					15:00+ -10.8	I $\Delta = 53$ mi.
10	iP e eL	20	15	33.7 20 42	1.2;3 4.0	-	+	+30	-10.5	CGS $18.1^\circ N$, $100.6^\circ W$ (Mexico) O = 20:10.0 $\Delta = 1620$ mi.
10	iP e e	20	39	03.3 23 51	1.7 3.5	-	+	+25	-10.6	Aftershock of above
10	eP iS iS	21	54	59.6 11.0 12.1					-10.3	$\Delta = 57$ mi. Mt. Lassen M = 10 mi.

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		h	m	s		E	N	Z		
11	iP i	01	44	40.5 12.8		1.0		+10 -10		C 01:44:56.3
11	iP iP Coda	04	54	12.8 14.0 25.2	2.0	-10		+ -25 300+	-9.6	Moderate local shock $\Delta = 62$ mi., SE of Mt. Lassen M $8\frac{1}{2}$ mi.?
11	iP iP iP iS iS	05	10	27.1 27.7 28.2 38.4 39.1					-0.6	$\Delta = 57$ - mi. Mt. Lassen
						130		100		
11	iP eS iS	05	12	57.2 08.7 09.1					-9.6	I $\Delta = 57\frac{1}{2}$ mi. M $8\frac{1}{2}$ mi. Mt. Lassen
11	eP iP iP iS iS Coda	05	52	11.4 12.2 13.4 23.9 24.6	1.8	+	-	+	-9.6	Moderate local shock 58 to 62 mi. ESE Felt at Mineral M 9? mi.
11	iP iP iS iS	06	07	01.0 01.5 12.1 12.5					-9.5	$\Delta = 56$ mi. M $12\frac{1}{2}$ mi. Mt. Lassen
11	e i i	08	32	54.1 04.2 04.8					-9.4	I $\Delta = 52$ mi. M 13 mi. Mt. Lassen
11	eP iP iS	21	39	58.4 59.1 10.1	-				-8.1	$\Delta = 58\frac{1}{2}$ mi. Mt. Lassen
12	iP	06	31	11	1.8			-	-7.3	C 06:30:41
12	iP	07	48	11				-	-7.1	C 07:48:00
12	iP iS iS	09	37	55.4 06.4 07.0					-7	I $\Delta = 55$ mi. Mt. Lassen
12	i	14	25	46.1	0.9				-6.5	
12	i iP S Coda	15	03	11.9 12.6 40--	0.4 0.5 4.5			+5 -40	15:00+ -6.4	Strong Regional shock felt at Eureka. III Record incomplet as seismic waves arrived at time of changing records. 140 mi.? W
						Disappears				

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		h	m	s		E	N	Z		
12	iP iS iS	15	48	15.7 42.6 44.4		+15		+30	-6.4	Aftershock of Eureka earth- quake $\Delta = 140$ mi. W
12	iP iS iS	16	06	07.6 35.2 35.6		+10 20		+10	-6.4	Aftershock $\Delta = 140$ mi. W
12	iP iP iS	19	15	13.7 14.5 24.8		-10 60	+3	+ -40	-6.1	$\Delta = 56$ mi. ESE Mt. Lassen
13	iP eS	03	26	31.7 48.8		-			-5.5	I $\Delta = 85$ mi.
14	iP iS	02	56 57	43.6 04.1					-3.4	I $\Delta = 100$ mi.
14	iP i iS Coda	03	43 44	55.6 01.8 16	.15; .6 1.0	+38	0	+30	-3.2	$\Delta = 100$ mi. W
15	iP eS	03	49	08.0 17.2		-10 25	+4		15:00+ -.9	46 mi. ESE M 8 mi. near Mt. Lassen
15	iP iS	04	24	06.2 26.2		+70 1000	-10 700	+45 580	-.8	Moderate regional shock III $\Delta = 100$ mi. N of W Probably a few miles W of Trinidad
15	eP eP	05	56 57	57.5 01.3					-.7	C 05:56:59
15	iP iP e	23	14 18	24.1 38.2 18	0.8	+10	-	+ +20	15:13+ +.9	C 23:14:09.5
15	iP i?	23	28	03.9 04.4				+? +.9	+.9	Sharp blast or local shock $\Delta = 2\frac{1}{2}$? mi.
16	iP iSKS iS	00	02 12	14.9 37 54	1.5; 2.5	-20	+12	+50	+1	Destructive at San Juan, Argentina. C. & G.S. 31.5°S, 68°W, 23:49.4 $\Delta = 88.5^\circ$
16	iP iS	02	07	11 16.3				-	+1.2	Small local shock $\Delta = 26.5$ mi.
16	iP i? iS? Coda	02	26	03.7 33? 35	5.0	+509	+45	+360	+1.2	III Disappears at P. Strong regional shock 140? mi. S of off Cape Mendocino.

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		h	m	s		E	N	Z		
16	iP eS	02	47	21.7 48.2		+40	-?	+25	1.2	Aftershock $\Delta = 140$ mi. W
16	iP eS	04	05 06	53 20.5		+8	-		1.5	Aftershock $\Delta = 140$ mi. W
16	iP eS	04	16 17	38 04		+	+	+15	1.2	Aftershock $\Delta = 140$ mi. S of W
16	iP iS	09	37	12.7 14.4		-35	-12 80	+?	1.8	Small local shock or blast $8\frac{1}{2}$ mi. EnE?
16	iP eS	11	22 23	39.4 05.5		+20	+2	+12 40	2	Aftershock 140 mi. S of W
16	iP iS	12	38 39	57.5 06.7		- 40	-8	+?	2	$\Delta = 46$ mi.
17	iP iP iS iS	00	10 11	52.3 53.4 03.5 04.8					15:00+ +3.3	$\Delta = 56$ mi. Mt. Lassen
17	iP eS	02	05 06	59 26.2		+			+3.5	$\Delta = 145$ mi.
17	iP eS	12	00 01	47.2 13.5		-20	-	-	+4.5	$\Delta = 145$ mi. S of W Focus bad
17	iP iS iS	14	22	00.5 09.7 10.5		-28	+8	+8 320	+4.7	$\Delta = 46$ mi. ESE Mt. Lassen M 10 mi.?
18	iP	01	04	36.8		-?	+	+10	15:00+ +5.8	C 01:05:06 Compression from SE
18	eP iP iS iS	03	18	01.1 01.8 35.6 36.6		+25 60	?	+15	+6.1	$\Delta = 185$ mi. W
19	iP iPcP	05	41 43	26.3 21.8				+25	15:00+ +8.8	C 05:41:19.5
19	e iP	07	46	53 54.2					+9.0	C 07:46:45
20	iP ePP eS	03	10 13 20	40 31 02				+20	15:00+ +10.9	$\Delta = 72^\circ$

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		h	m	s		E	N	Z		
21	iP iS	04	48	16 21.6					15:00+ +13.3	Small local shock $\Delta = 28$ mi. direction indefinite
22	iP iS	13	07	18.5 27		-16 60	0	+ 25	15:00+ +15.6	$\Delta = 43$ mi. E
22	iP eS? eS	13	15	07 34.7 38	.16	+10 40	-1	+	+15.7	$\Delta = 160$ mi. W
23	iP iP i	07	24	32.1 36.1 31 15	0.9 1.3			+5 +25	+17.9	C 07:24:08.2
23	eP iP iS	09	17	58.5 59 18 09.7				-?	+18.0	$\Delta = 56$ mi. M 10 mi. Mt. Lassen
23	eP eP iS	11	00	48.2 50 01 12.2				- -	15:00+ +17.2	$\Delta = 150$ mi.
23	eP eS	11	08 09	36 03.2		+6			+17.2	$\Delta = 150$ mi.
23	iP i i e	23	23	33.7 39.3 54 24 04	0.2	+8		+2	-12.2	$\Delta = 105$ mi. W
23	iP i iS	23	28 29	52.5 00.4 12.3		+12 60	-1	+10 40	15:01- -12.2	$\Delta = 100$ mi. W
24	iP i iS iS	05	39	26 29 36.6 37.1					-11.9	$\Delta = 53$ mi. M 10 mi. Mt. Lassen
24	iP	06	02	58.5	1.3	+		+	-11.8	C
24	i? iE i iS	13	41	45 45.6 46.5 57					-11.5	I $\Delta = 55$ mi. Mt. Lassen
24	iP e	16	43	21.2 41.7		+6	+1	+	-11.3	$\Delta = 105$ mi. W
26	iP	23	59	18.5				-6	-7.0	C 23:58:35

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		h	m	s		E	N	Z		
27	iP	06	51	41.4				+	15:01- -6.4	
27	iP iS	09	35	27.2 28.8		-32 80	-2	-12 40	-6.2	Blast? or small local shock 8 mi. S of West
27	iP iS	09	36	05 06.6		+70 80	-6	+30 60	-6.2	Blast? or small local shock 8 mi. S of West
27	e	23	11	01.5					-5	
28	e i	05	22	49.5 51.5					-4.5	C 05:23:00
28	eP iS	05	30	54.6 31 00.8					-4.4	I Δ = 31 mi.
28	iP iS	07	37	00.7 03.6		+25 60	-1	-12	-4.2	Small local shock 15 mi. E
28	e e e	11	12 15 16	22 49 02					-4	C 11:12:38
28	iP iS iS	20	27 28	58 09.1 09.4		-15 180	+8 150	+10 80	-3.3	Local shock 57 mi. ESE M = 13 mi. Near Mt. Lassen
29	iP e e e	02	31 35 38 39	12.7 45 21 26	1.2	+	-15	+20	-3	Compression from NW
30	i i e	10	19	19.7 26.7 07		0.8		+4	15:11- -1	
30	iP iPN iS	20	10	04 04.4 26.3		+15	0 -	+6	15:01- +.1	Δ = 110 mi. W
31	i	00	05	30					+.3	
31	iP	09	38	47.2		+		+10	+1.2	C 09:38:32
31	iP iP iS	21	11	28.4 29.0 39.8					+1.4	Very small trace Δ = 52 mi., M 12 mi. Mt. Lassen
31	iP iS	22	57 58	51.6 00.4					+2.4	I Δ = 44 mi.

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		h	m	s		E	N	Z		
1	iP eSKS eS eG M Coda	03 04	36 46 47 06.0 14 50	05.3 52 36	50 30 16	50		+8	+2.8	III Destructive in Turkey CGS 41°N, 31°E 3 h 22.7 m $\Delta = 96^\circ$
1	eP iP iP iS iS	05	27	06.5 07.2 09.0 35 59 37 00	-				+3.0	$\Delta = 67^\circ$ h = ca 75 mi.
1	eP	06	22	14.5					+3.1	C 06:21:40
1	iP	14	15	25				+10	+3.8	
2	e	03	46	38					15:06- +5.4	C 03:46:04.3
2	iP	03	59	38	1.0			+5	+5.4	C 03:59:41
2	e	11	07	32					+6	I Faint trace of a regional shock
3	eP	11	35	09.5					15:00- +8.5	C 11:35:18.3
3	iP e? e L	12	19 24 27 28.0	51.4 23 07	2 12	0?	-20	+30	+8.7	$\Delta = 1450$ mi. NW CGS 59° N, 138° W 12 h 15.2 m
3	iP	20	40	05.4				-	15:01- +9.4	C 20:40:37.7
4	iP i iS i?	02	19 20	54.6 00.5 04.2 06.0					+10	I Mt. Lassen $\Delta = 48^\circ$
4	iP iP i eS	02	21	14.3 15.2 23.9 26.5					+10	I
4	e iP iS i	02	21 22	51.6 52.5 01.3 03.5					+10	I

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		h	m	s		E	N	Z		
4	iP iP iS i	02	26	15.4 16.3 24.9 28.1					+10	I Mt. Lassen $\Delta = 48^\circ$
4	iP iP i i	02	31	55.5 56.5 05.5 08.5					+10	I Mt. Lassen $\Delta = 48^\circ$
4	iP iP	21	16	07.1 39.2	1.3			+10 -10	15:01- +11.7	C 21:15:50
4	eP iS	22	46	52.2 57.4		Poor	focus 80?		+11.8	Small local shock $\Delta = 26$ mi.
5	e	09	26	36					+12.7	I Faint trace of regional shock
5	eP ePP eSKS e	17	33	16.2 37 07 44 13 34					15:08- +13.4	$\Delta = \text{ca } 100^\circ$
5	iP	20	15	21.7	1.5				+13.7	
6	eP	02	37	51.5					+14.3	
6	e	03	27	40	1.3				+14.4	
6	iP iP eS eS	11	20	40.4 44.1 21 18.3 22.3		+10 +30	+1 +4	-3 -15	+15.1	$\Delta = 210$ mi.
6	iP	16	33	22.4	1.1			-	15:00+ -14.3	
6	iP iS	18	43	37.6 41.4					-14.2	Very small local shock $\Delta = 19$ mi.
6	e	18	50	36					-14.2	C 18:50:34
7	iP iS	07	58	43.8 50.6				+? 60	-12.8	Small local shock $\Delta = 34$ mi.
7	iP eS	09	06	29 45.1					-12.6	I Faint trace $\Delta = 80$ mi.
7	eP	17	44	44					15:00+ -11.7	C 17:43:45

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		h	m	s		E	N	Z		
9	iP iS	02	11	38.2 43.7					-8.6	I $\Delta = 27$ mi.
10	eP	12	18	36.4					-4.6	C 12:18:19
11	iP iS	04	59	50.8 53.5					-2.5	I $\Delta = 13\frac{1}{2}$ mi.
11	eP eS	05	28	06.5 25.5					15:00+ -2.5	Small trace $\Delta = 95$ mi.
11	iP iS iS	06	13	04.6 14.0 14.4		-40	+5	+15 80	-2.4	Mt. Lassen $\Delta = 47$ mi. S of E
11	iP iS	06	15	46.3 55.7		-40+	+10	+15 80	-2.4	$\Delta = 47$ mi. S of E
11	iP eS	08	07 08	55.6 28.3					-2.2	I $\Delta = 180$ mi.
11	eP e i	09	42 44	16 25.5 30				Blur	-2.0	
12	iP iS	09	31	07.2 13.4		-30 80+	-24	+15	15:00+ +0.9	Local Shock $\Delta = 32$ mi. NE
12	iP e	13	26 37	52.1 01	1.1	+?		+15	+1.3	$\Delta = 80^\circ$
13	iP iS	09	34	11.3 12.8		+10 70	-3	+	15:07+ +3.8	Blast or small local shock $\Delta = 7\frac{1}{2}$ mi. N of W
14	iP ipP e e e	03	03 12 13	12.5 55 24 54 39	1.1	+10	-6	+24 +	15:00+ +5.9	h = 100+ mi. Compression from the NW C 03:02:55.6
14	e	16	35	18.5					+7.6	
15	e	05	49	34.9	1.1				+8.9	C 05:48:46
15	iP eS eS	10	36 37	44.7 13.4 15.9		-10 20			+9.4	$\Delta = 160$ mi.

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		h	m	s		E	N	Z		
16	eP iP e i	11	17	30.3 44 22 24 56	1.2		.		15:00 +12.5	C 11:17:12.5
16	iP is	17	56	28.3 48.3	.15	-8	?	+	+13.3	I Δ = 100 mi. E
16	iP es	18	18	48.7 19 04.7	.16	+4	+?	+	+13.4	I Δ = 80 mi. W
17	iP	00	04	58.7				+10	+14	
18	iP	09	23	38	0.9	+10		+25	+18.2	C 09:24:07.3
18	iP	19	28	46.8	1.5			+8	15:01- -10.7	C 19:28:31.7
18	iP is	23	18	48.2 49.0		-450 800	-60	-30 710	-10.4	Sharp local shock Δ = 4 mi. S of W
19	iP is	02	06	42.0 42.6		24			-10.1	Very small local shock Δ = 3 mi.
19	e i i	02	08	08.6 09.5 10.3				20	-10.1	Very small local shock or disturbance
19	i	02	09	40					-10.1	Blast? 1 mi.
19	iP? is	02	19	25.7 26.1		+	+	-3 100	-10.1	Small local shock 2 mi. N?
19	iP iP is	02	26	18.2 18.7 19.5		-	+	- 120	-10.1	Small local shock Δ = 4 to 6 mi. NW.
19	is	02	26	22.4				100	-10.1	Small local shock
19	iP is	02	28	36.7 37.2		-		+? 40	-10.1	Very small local shock Δ = 2½ mi.
19	iP is	02	29	32.6 37.4		-		-	-10.1	Very small local shock Δ = 24 mi. W?
19	i i	02	32	08.7 09.1				-	-10.1	Very small local shock or disturbance Δ = 2 mi.

Bureau of Reclamation and
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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
19	i i	02	32	14.1 16.2					-10.1	Very small local shock or disturbance $\Delta = 5\frac{1}{2}$ mi.
19		02	41							7 very small local disturbances $\Delta = 3$ to 10 mi.
19	iP iS	02	57	14.3 16.3			+	-	-10	Very small local shock $\Delta = 10$ mi.
19	e iP iS	02	57	24.8 25.2 25.5		-15	-	-20	-10	Light local shock $\Delta = 1\frac{1}{2}$ to $3\frac{1}{2}$ mi. S of E
							340	300		
19	iP iS	03	08	33.2 38.3	-?			+	-10	Small local shock $\Delta = 25$ mi. E?
								70		
19	i i	03	10	22.5 26.3				+	-10	Very small disturbance or local shock
19	e iP iS	03	10	40.8 42.3 45.3				-15	-10	Very small disturbance or local shock
19	iP iS	03	14	57.4 58.5	+				-10	Very small local shock or disturbance $\Delta = 5\frac{1}{2}$ mi.
19	iP iS	03	15	05.4 06.7					-10	Very small local shock or disturbance $\Delta = 6\frac{1}{2}$ mi.
19	iP e	03	16	51.5 57	-10				-10	Very small local shock or disturbance $\Delta = 22$ mi.?
19	eP eS	03	18	54.5 55.0	-10	+10			-10	Very small local shock $\Delta = 2\frac{1}{2}$ mi. NW
19	i e	03	20	27.0 30.6				-	-10	Very small local shock or disturbance $\Delta = 18$ mi.
								20		
19	iP eS	03	23	18.0 18.8				-	-10	Very small local shock or disturbance $\Delta = 4$ mi.
19	eS	03	23	24.0					-10	Very small local shock or disturbance
19	iP eS	03	24	58 24 01	-			-	-10	Very small local shock or disturbance $\Delta = 15$ mi.
								30		
19	i i	03	29	51.9 58.5	-			-	-10	$\Delta = 33$ mi.?

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
19	eP iP	13	00	44 01 02	2 1.8				-9	
19	iP	16	09	18	0.8	+	-	+	15:13- -8.8	C 16:08:28.5
20	eP	04	14	00.2					-7.6	C 04:13:23.4
20	iP iP	19	33	33.6 35.2	1.0	+	-	-10 -24	15:01 -6.0	C Dilatation from SE
21	iP	11	25	20.7	1.0			+	-4.3	
21	iP eL	11	34	22.7 46.0	1.5 10			+	-4.3	C
21	ePZ eP e eS iS	13	01	10.3 17.4 02 04 06.4 09.1					-4.1	Regional shock $\Delta = 320$ mi.
22	e e e	04	11	04.5 24.5 53.5	0.7 1.0				15:01- -2.5	
23	iP iPcP iE iZ i iS eS e	12	32	39.4 34 45.9 35 50 37 36 38 29.5 38 59 42 41	1.0 1.0 1.2	+20	-15	+45 +20 +	+ .9	Compression from the NW $\Delta = 39.5^\circ$
23	eP	20	21	47.5	1.5			-	+1.5	
23	e	23	45	37	0.8				+2.2	I
24	iP iS	02	02	47.1 52.7		+250 1000	-210	-190 620	+2.5	Moderate local shock Epicenter 28 mi. SE at 40° 28'N, 122° 55'W, a few mi. SW of Shingletown M = $18\frac{1}{2}$ mi.
24	iP iP iS	17	41	39.2 39.6 49.5	0.2	+	+	+	+4.3	Local shock $\Delta = 50$ mi. SW
25	eP iP eS i	02	10	24.3 25 33.3 35.6		-			+5.1	$\Delta = \text{ca } 50$ mi.

SHASTA DAM SEISMOLOGICAL STATION

MONTH OF February


 19 44 14.
Bureau of Reclamation and
Coast and Geodetic SurveyR. M. is hour and minute of flasher mark at end (or
beginning) of record. Δt is time correction referred to R. M.

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
25	eP eS eS	02	44	36 44.6 45.5					+5.2	$\Delta = \text{ca } 45 \text{ mi.}$
25	iP e	07	39 40	32 46	1.3			+	+5.8	C
25	iP iP iS iS	12	49	00.1 01.2 08.9 09.4			- - 70		+6.4	$\Delta = 44 \text{ mi.}$
25	iP i eE	12	52 54	08 52.5 22	1.5	-		-	+6.4	
26	iP eS	22	29 36	07.8 04	0.8; 1.5		+	+	15:02 +10	C
28	i i	06	12	53.8 57.5		-25 +55	-10 -50	+15 -18	+13.5	Blast or local shock 18 $\frac{1}{2}$ mi. ENE
28	eP eS	09	44	41.0 48.6					+13.8	$\Delta = 38 \text{ mi.}$ M 16 mi.
28	eP eS	09	53	24.3 31.8		?	? Blur	-	+13.8	$\Delta = 38 \text{ mi.}$ M 16 mi.
28	i i i	20	23	03.3 04.0 44.3				-	15:00- +15	$\Delta = 50 \text{ mi.}?$
28	i i i	22	20 23 24	40 59 08	3.5 2.0				+15.3	
28	eP eS eS	23	22	23.6 56.3 59.3					+15.3	$\Delta = 180 \text{ mi.}$
29	i i	03	18	05 21.8		-8 -40	+12		+15.7	Seismic disturbance $\Delta = 85 \text{ mi.}$
29	iP iP iP eS eP i	03 04	53 02 13	06.1 56 21 45 12 58 12	1.2 1.5	+50	-50	-120	+15.7	CGS 13.7°S, 70.6°W O = 3:42.0 Peru $\Delta = 73^\circ$ h = 125 mi. May be iP

Bureau of Reclamation and
Coast and Geodetic SurveyR. M. is hour and minute of flasher mark at end (or
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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
29	i i	05	06	24.4 25.4		-25			+15.9	Seismic disturbance
29	i i	05	14	40.4 41.7		-12			+15.9	Seismic disturbance
29	eP eP eS iEN iZ	16	47	16.4 27.5 50 00 11 51 46	1.0 1.2			- -40	15:00+ -13.1	$\Delta = 1025$ mi. C
29	iP i iZ i	20	39 40 43 59	49.0 34 51 38	1.5 1.5	+30	-8	+20	-12.7	C
29	eP e	21	15	06.3 44.3	1.5				-12.7	
29	iP iP	21	51 52	41.7 26	1.4		+10		-12.6	
29	e e	21 22	59 02	27 20					-12.6	Probably not part of earlier shock
29	eP e	23	20 21	49.5 34	1.5				-12.5	C
29	eP e	23	50 51	25 10					-12.5	C
1	iP iS	00	25	23.4 26.4		-8 50	?		-12.4	Small local shock $\Delta = 15$ mi. E?
1	eP	21	04	14.3	1.2			-	-10.5	
1	iP iS	23	14	24.7 26.4		-22 50	-2	-	-10.3	Small local shock $\Delta = 8\frac{1}{2}$ mi. W
1	eP	23	15	15					-10.3	
2	eP iP e	00	38 39	32.5 34 16	1.5				-10.1	C
2	iP e	16 17	59 01	19.2 14.5	1.3	+10	+5	+25	15:00+ -8.5	Compression from the SW

Bureau of Reclamation and
 Coast and Geodetic Survey

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
3	iP iS	20	57	20.4 23.1		+4	+2	- 60	-5.5	Small local shock $\Delta = 13\frac{1}{2}$ mi. NE
5	eP i iPP iSKS?	17	29	31.5 42.5 36.5 40 05					15:00+ -.8	$\Delta = 89^\circ$
6	iP	09	00	44.7				+15	+1	C
6	e e e	14	05	03 41 02.4	2.0 9			-	+1.7	First shock of swarm off Oregon coast.
6	eP iP e	20	10	43 44 11 57	2.5 7.5				15:00+ +2.3	Main shock of a swarm off Oregon coast.
6	e	20	29	55					+2.3	Faint trace
6	iP e	21	07	31 08 37	.8;1.8 5			-	+2.4	
6	e i	21	28	47 30 07	7				+2.5	Aftershock
6	e eP e	22	04	57.5 05 00 06 24	1.3 7				+2.5	Aftershock
6	e e	22	22	19.5 23 37	7				+2.5	Aftershock
6	ePZ eE e	22	52	38 48 54 02	8				+2.6	Aftershock
6	eP e	23	18	07.7 19 28	9				+2.7	Aftershock
7	eP iP e	01	02	25.5 27 03 56	1.5 7				+2.9	Aftershock
7	iP iS	04	53	57.4 05 03 26	1.8	-6	-	-20	+3.4	II Distant
7	e	05	50	44.5					+3.5	Aftershock
7	iP e	06	10	47.2 11 58	2.0 8	-?		+	+3.5	Aftershock

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
7	e iP iP e	06	46	41.5 43 47.5 48 00	0.7 1.8 8			+	+3.6	Aftershock
7	e eP e	08	22	58 23 01 24 09	8				+3.8	Aftershock
7	e e e	11	18	52 24 30 27 54	2				+4.2	
7	e	20	48	52					15:00 +5.1	
7	iP S?	23	00	30.1 30.7		+280	-55		+5.4	Sharp blast or local shock 3 mi. N of W?
8	eP i e e	06	58	30.6 32.6 41.3 42.4	25				+6.1	Very small local shock $\Delta = 53$ mi.
8	iP iP iS iS	12	00	40.2 40.6 01 12.6 14.7		- -30 40	-4		+6.6	$\Delta = 170$ mi. W?
8	e	14	29	32					+6.9	
8	iP	23	12	18	1.7			+5	+7.8	C
9	iP iS?	05	02	21.5 35.3		+130	+50	+80	+8.4	$\Delta = 69?$ mi. WSW
Record of 9-10 faulty - Several distant shocks recorded but time control blank.										
10	iP	18	41	54.2				+15	+12.5	C
11	iP e	06	23	42 31 46	1.0			-	+13.8	C
11	iP	17	41	22.3				-12	15:05 +15.1	$\Delta = 260$ mi.
12	eP i eS iS	02	57	58.8 58 12.2 45 52		-			+16.0	

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
12	i	11	20	55					+16.7	Impulses each of which have characteristics of iP or eP most of which are probably seismic
	i		21	21.5				-		
	i		22	40						
	i		26	05						
	i			40						
	i		46	25.5						
	e	12	15	35						
	i		40	14						
12	e	13	12	53				+	+16.8	C
	i		19	57						
12	iP	23	15	38.4		+12	-10		+17.9	Blast or small local shock 3½ mi. NW?
	iS			39.1		70				
12	iP	23	53	10.5		-			+18	$\Delta = 110$ mi. W?
	eS			32.2						
	iS			33						
13	iP	22	29	16.7		+	-	-	15:01	Very small local shock 32 mi. SE
	iS			33.1					-9.5	
14	iP	05	16	00.6	.15	+55	-30	+40	-8.7	Light local shock $\Delta = 60$ mi. WNW
	iS?			12.1						
	iS			13.3				200		
14	eP	07	30	03					-8.4	C
	iP			05.5	1.2					
14	eP	18	46	16	1.5				15:00½	C
									-7.1	
14	iP	19	00	58		+12	-15	+10	-7	Blast 2½ mi. NW
	iS			58.5				50		
14	eP	23	10	49.5					-6.6	Faint trace C
	iP			57.5						
	e		11	51						
15	i	00	10	30.7					-6.5	C
15	eP	08	15	45					-5.7	$\Delta = 410$ mi.
	iP			50		+				
	e		16	44						
	eS			55	0.7					
15	eP	09	09	45.5				+	-5.5	C From NW
	iP			47.7	1.6			-75		
	ePP?		13	20.5						

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M.		Remarks
		h	m	s		E	N	Z	Δt		
15	iP	20	52	31.5	1.5				15:00 $\frac{1}{2}$ -4.3		
16	iP	12	39	35.2	2			-	-2.6	C	
16	iP i iZ iS	22	12	26.8 28.5 35.3 35.8		-25	+3	+10 50 180	-1.5		Light local shock $\Delta = 45$ mi. S of E M 15 mi.
16	iP iS	23	05	51.7 52.2		+62	-52 360	+70 250	-1.4		Sharp blast or local shock $\Delta = 2\frac{1}{2}$ mi. NW
16	eP	23	43	48.5					-1.4	C	
17	iP	03	08	29	1.0			+	-1	C	
17	eP iP iS iS	11	24	47.2 47.9 58.4 59.3					-.1		Faint trace $\Delta = 56$ mi.
17	e? iS	09	30	32.4 39.5					-.3		Faint trace of local shock
17	iP iS	23	49	19.6 21.4		-13 50	-13	+?	+1.4		Blast or small local shock 9 mi. SW
18	iP iZ iS iS	23	00	27.5 38 38.7 39.2	.17	-12 70	+2	+	15:07 +4.2		$\Delta = 56$ mi. E M 15 mi. Mt. Lassen
18	iP iN iS	23	22	55 55.5 56		+5 125	0	+	+4.2		Blast $\Delta = 5$ mi. (2.5 mi.?) W
19	i i	08	32	29.7 31.3		-38	-3	-15	+5.4		Small local shock or dis- turbance $\Delta = 8$ mi. W
19	iP i	08	45	30 42	1			+	+5.4	C	
20	iP	21	58	46	1.0			+	15:00 +10	C c	
21	iP iP iS iS	07	04	13.8 14.9 25.0 26.4					+11.4		Faint trace of local shock $\Delta = 56$ mi. Mt. Lassen?

SHASTA DAM SEISMOLOGICAL STATION

MONTH OF

March

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International
Seismological
CentreBureau of Reclamation and
Coast and Geodetic SurveyR. M. is hour and minute of flasher mark at end (or
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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
21	iP i	14	02	28.3 42	1.4	+		+	+12.3	C
21	iP iE iS	18	22	14 14.2 14.6		+5	+22	+	+13	Blast or small local shock 3 mi. W of S
21	iP iP e	22	20	51.8 21 06.9 29 32.5	1.4	+20	-20	+10 +70	+13.5	C
22	eP iP e e iPKP iPP eSKS eSKKS ePS ePPS	00 01	57 00 01	43 51 57 20 35 21 02 06 51 46	1.5				+14	$\Delta = 113^\circ$ CGS $7^\circ S$, $126^\circ E$ on 43.0m, Banda Sea
22	i i	01	12	18 16 10	0.8			-	+14	C
22	iP	17	42	44	1.2				+16.2	C
22	iP	17	54	17	1.2			+	+16.2	C
22	eP	19	19	44.5					+16.5	
23	iP iS	14	57	32 32.6	.20	+55 220	-18	+20 110	+19	Blast or small local shock 3 mi. WNW
23	iP iS	22	30	37.7 38.7		+3 125	0	+	15:00 $\frac{1}{2}$ -10	Probably small local shock 5 mi. W
24	iP	17	10	26				+	-7.2	C
24	iP iS	19	00	23.8 24.3		+50 350	-63 360	+22 115	-7.0	Heavy blast or light local shock $2\frac{1}{2}$ mi. NW
24	iP	22	10	13.5				+	-6.6	C
25	iP	04	31	17.5				+	-5.7	C
25	iP	05	32	27.6				-	-5.6	C

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
25	iP i iS iZ	18	04	17.2 20.9 21.3 22.2		-80	-30	+30	-3.8	Light local shock 20 mi. ENE about 5 mi. W of Round Mountain
25	iP iS	18	30	58.3 58.9		+20 200	-21	+10 125	-3.7	Heavy blast or light local shock 3 mi. NW
25	i	20	24	21.5				+	-3.4	C
27	iP iP iSE iS	00	17	32 32.4 37.9 39.3		-			15:00+ 0.6	Small local shock $\Delta = 31$ mi.
27	e i	04	41	52 55.5					+1.3	Faint trace
27	eP i eZ iSEN iSZN	07	21	05.8 07.2 15.8 16.8 17.6	0.3 0.4	- 60		+	+1.6	$\Delta = 55$ mi. Near Mt. Lassen M 16 mi. ($12\frac{1}{2}$ mi.)
27	iP	17	13	38.3				-	15:01 +3.1	C
29	eP i eS	08	13	40.2 14 02.6 25.1					15:00 +7.6	$\Delta = 285$ mi.
29	i i	13	10	19.5 26					+8.2	Seismic origin doubtful
29	iP iS	21	39	56.2 56.7	.12	+75 100+	-75	+ 60+	+9.0	Blast $2\frac{1}{2}$ mi. NW
29	iP	22	02	01				+	+9	C
31	eP e ePP eSKS eS	03	05 06 09 16 17	55 21 53 25 15					+12.6	$\Delta = 95^\circ$
31	iP e	19	07 09	57 33.5	0.7			-	+14.6	$\Delta = 580$ mi.? C
31	iP	20	44	45.2	1.5	+		+	+14.8	

SHASTA DAM SEISMOLOGICAL STATION

MONTH OF

March

International
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		h	m	s		E	N	Z		
31	eP eP e	21	16	53.4	0.7				+15	I Δ = 430 mi. N Near Eatonville, Washington. Felt in Puget Sound Area
31	iP iS	21	42	35.4 36		+24 140	-24	+12 80	+15	Blast or local shock 3 mi. NW

SHASTA DAM SEISMOLOGICAL STATION

INSTRUMENTAL REPORT APRIL AND ~~MAY~~, 1944

The Shasta Dam station continued in routine operation throughout the period of the report.

The reservoir began filling in January or February and continued through April and May. Several local shocks, not identified as blasts, were recorded. Some of them should have been felt locally under favorable conditions. However, it is too early to associate these definitely with readjustments of the earth's crust to load in the reservoir.

Roman numerals I, II, and III refer to the size of the record; shocks marked I are barely recorded, II well recorded, and III well recorded with large trace amplitudes. The last should have been felt under favorable conditions. Letters C, PF, O and B refer to the other Bureau of Reclamation stations, and M refers to the Mineral Station.

Confidential-not for publication.

SHASTA DAM SEISMOLOGICAL STATION

MONTH OF April 1944

Bureau of Reclamation and
Coast and Geodetic SurveyR. M. is hour and minute of flasher mark at end (or
beginning) of record. Δt is time correction referred to R. M.

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
1	iP iS	20	38	16.2 21.2		+ 50	-	-	15:00 -12.4	Small local shock 25 mi. NE
2	iP iS	09	42	26.5 28.2		+ -84	-10	+ -25	-11.1	Blast? 8 mi. S of W
2	i i	20	32	06 09.8		- 50	-?	+	15:00 $\frac{1}{2}$ -9.9	$\Delta = 17$ mi. S?W
3	iP	18	03	09.5					14:52 -7.9	C B
4	iP	18	13	44				-	15:00 $\frac{1}{2}$ -6.9	PF
4	iP iS	18	35	55 55.5		+15 100	-12	+	-6.8	Blast 2 $\frac{1}{2}$ mi. N 225# Powder
4	iP e	22 23	58 07	06 50	1.3			+	-6.4	C
5	e iP iS iS	04	12	15.2 16.2 48.2 49.5		+ +	? ?	+ +	-5.8	$\Delta = 170$ mi. W
5	eP	04	54	06					-5.7	C PF
5	iP	09	29	49.4	.8	+		+	-5.2	C
5	i i	12 23	22 07	54 07					-4.8	Faint trace
5	iP eS iS	12	23	19.5 31.2 31.9	.16	+			-4.8	$\Delta = 58\frac{1}{2}$ mi. M 17
5	iP iS	18	37	08.2 08.7		+150	-140	+150 350+	-4	Sharp blast or local shock 2 $\frac{1}{2}$ mi. NE
5	iP iS	21	58	15 15.5		+28	-30	+ 150	-3.5	Blast 2 $\frac{1}{2}$ mi. NE 900# powder
6	iP	10	53	42	1.4			-?	-2	C PF
7	iP	00	03	44.6	0.6	+		+	-0.2	C?
7	iP iS	22	47	41.5 42	.16	+65 250	-65 250	+25 160	15:00 +2.7	Blast 2 $\frac{1}{2}$ mi. NW 1600 lb. powder

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		h	m	s		E	N	Z		
8	iP iP	03	19	03.8 25		-25			+3.2	$\Delta = 105$ mi.
8	iP	03	36	52.5	1.0			+	+3.2	C
8	iP i	09	27 28	53 18	0.8 0.8			- -	+4	C B
9	i e i e i e?	18	24 27 28 30 39 44	14 37 35 59 36 38	3				+8.2	C
9	eP i	19	14 15	50.3 15.5	1.4			-	+8.3	C
9	iP	22	43	55				+	+8.7	C
10	eP	02	32	42					+9.2	C
10	iP iP	10	16	32 58.5	1.4			+	+10.2	C
11	iP iS	20	29	32 32.6		+15 150	-15 150	+ 130	+14.5	Blast 3 mi. NW 800 lb. powder
13	iP i eS eS	01	55	40.2 44 53 58		0 170	-10	- 150	+17.9	II $\Delta = 64$ mi. S Reported felt at Orland
13	iP i e iE	08	18	18.8 20.0 29.3 33.3		-		+	+18.8	II $\Delta = 53?$ mi. M $12\frac{1}{2}$ mi.
13	iP i iSN	13	51 52	51.0 17.6 27.6		+75	-40	+68	+19.6	II Regional 200 mi. WNW off Cape Blanco
13	iP iS	15	17	35 35.7		+90? -500?	-70 350		15:00 $\frac{1}{2}$ -10.3	Blast? $3\frac{1}{2}$ mi. NW
13	eP e	15	39 41	06 18					-10.3	I Distant C O
13	iP iS	22	13	50 50.6		+90	-100	+40 200	-9.3	Blast 3 mi. NW 2250 lb. powder

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		h	m	s		E	N	Z		
15	eP iS	06	05	12.8 16.1					-5.2	I Local $\Delta = 16\frac{1}{2}$ mi.
15	iP iS	20	55	00 00.6		+20 175	-	+	-3.2	Blast 3 mi. NW 850 lb. powder
16	iP	01	40	36	.8			-	-2.6	I C
16	i iP i iPP e e	09 10	56	11.3 12.2 38.5 08.5 00 18 05 18	1.4	+15	-	+	-1.5	II Distant - compression from NW C B
16	iP i e e	20	49	49.5 33 04 14	1.5	-	+	-	+0.1	Distant C I
17	e	21	26	50					15:00 +3.3	I Distant
18	eP eS	00	03	54 05.2					+3.7	I $\Delta = 56$ mi.
18	iP iS	09	17	47 58.3		+			+4.8	$\Delta = 55$ mi. I
18	iP i iS iS	09	59	25.3 26.9 35.2 37.6		-5		+	+4.9	$\Delta = 50$ mi. I M 10 mi.
18	iP iS	14	49	21.7 31.7	.15	-8			+5.4	$\Delta = 50$ mi. I
19	iP iS	02	26	48.9 15.3	0.5	+8	0	+	+7.1	$\Delta = 135$ mi. W I
19	eP	22	43	07.5					15:19 $\frac{1}{2}$ +9.5	I C Distant B
19	eP	23	22	47					+9.5	I Distant
20	iP iS	22	10	11 11.5		+25 200	-25	+	15:00 +13	Blast 2 $\frac{1}{2}$ mi. NW
20	iP	22	19	21.5					+13	I C B

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		h	m	s		E	N	Z		
20	iP iS	23	46	17.2 43.6		+10	0	+	+13.2	I $\Delta = 135$ mi. W
21	iP iS	22	45	50 50.4		+	- 250	+	+16	Blast 2 mi. NW 1000 lb. powder
22	iP	02	28	01.3	1.5			+	15:00 $\frac{1}{2}$ +16.8	I C B
22	e?	03	27	09					+17	I C
22	eP? eP	03	46	43 45	1.5				+17	I C B
22	iP iS	07	51	21 32.5					+17.5	I $\Delta = 57$ mi.
22	iP iS	23	36	27 37 09	0.5				-10.2	I Regional
23	iP i i	06	21	15.3 34 44	0.8	-		-	-9.2	I Regional? C
23	iP iS	09	45	03 04.6		+25	-25 250	+ 125	-8.7	Local shock or blast 8 mi. NW
23	iP epP e iS e esS?	11	09	20.4 46.5 01 58 14 49		+	+	-30	-8.5	II C B h = 230 mi. $\Delta = 81^\circ$
23	iE i m i	23	17	50.5 54 57				+10? 200 300 480	-6.7	2 heavy blasts. Also several other blasts or disturbances about this time.
24	eP i	02	02	43.5 07.5					-6.3	I C B
24	iP iS	19	01	48.4 49		+28	-30	+ 120	-3.8	Blast 3 mi. NW 1200 lb.
24	iP iS	23	23	50.5 53.1		-20 90	?	-15	-3.2	I 13 mi. E
25	iP	03	56	19.5					-2.6	I

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		h	m	s		E	N	Z		
25	i iP	05	27	10 11.5				-	-2.4	I
25	iP iS	14	38	58.5 59		+85	-25	+ 100	-1.3	Blast 2½ mi. WNW
25	iP	18	20	02					15:00 -0.7	I
25	i? iP	21	41	02 36.8					-0.2	I
26	1:36 and 12:37 GCT - 2 blasts or small shocks at 13 mi. E?									
26	eP ePP eSKS eS	02	08	02.5 12 06 18 44 20 20	2.5 2.5				+0.5	II Distant 104°
26	iP iS	18	35	21 23.5		-40		-?	+3	I Local - 12 mi.
27	eP eS	05	28	05.7 28.1					+4.5	I 115 mi.
27	eP iP iP iPP eSKS eSKKS ePS	14	51	55 57 52 07 56 12 15 02 46 03 11 05 15	1.5 2.5				+5.8	II Distant 103° CGS 1°S, 131°E, 14:37.9 (Western New Guinea)
27	iP	19	18	58					+6.5	I C
27	iP iS	22	06	15.4 16		+ 110	-		+7	Blast 3 mi. NW
28	iP iS	19	02	49.4 52		-12 75	+2	-	+10	I Local 13 mi. E
29	iP i eS e	06	32	58 33 36 36 29 46	01	+	-	+	+11.8	I Distant C O
29	iP	16	28	10	0.8			+	+13.3	I C B
30	eP	00	18	29	1.5				+14.3	I PF

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		h	m	s		E	N	Z		
1	iP iS	21	48 49	57.5 00					15:00 $\frac{1}{2}$ -10.6	I Local 12 $\frac{1}{2}$ mi.
1	iP iS	22	49	31 31.5		+55	-50	+30	-10.5	Blast 2 $\frac{1}{2}$ mi. NW 1250 lb.
3	iP iS	17	47	21.4 22		Disappears			-5.9	Blast 3 mi.
4	iP	06	07	25.6	0.8			+	-4.8	I
4	iP i	06	17	43 56	1.0				-4.8	I C
4	iP iS	13	10	19.5 21.8		-120	+40		-4.1	Probably blast 11+ mi.
4	i	20	05	54.3					-3.5	I
4	i	22	56							Blast 3 mi. NW 1100 lb.
5	eP iP eS iS	06	25	17.7 18 29.2 30.4		+ -38 130	+ +	- +	-2.6	II Local 57 mi. ESE M 17 mi.
6	eP iP e e	00	24 25 36	31 36 37 10					15:00 +0.8	I C
6	iP	01	59	42					+0.6	I
6	eP eS eS	03	41 42	54.5 36.5 43.5					-0.4	I
6	iP	17	45	14.5				+	+0.2	I C
6	i	18	01	30				140		Blast 3 mi.
7	eP	15	15	43	2				+2.4	I C
8	iP eS	23	04	05.3 30.1					+6.1	I 90 mi.
9	iP	10	25	41	0.9			+	+7.5	I
9	eP	14	39	36					+8	I C

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		h	m	s		E	N	Z		
9		23	13			50				Blast - 3 mi. 400 lb.
10		22	49			220				1150 lb. Blast 2½ mi. NW
11	eP	00	06	18					+11.7	
11	eP iP eSNZ eS	03	11	31.5 34.2 12 10.7 13		+20			+12.2	I 215 mi.
11	iP e eSN eS	08	53	25.2 31.8 45.2 59					+12.8	I 100 mi.
11	iP eS	19	51	08 33					+14	I Regional 130 mi.
11	iP eS	21	38	03 29.2		+	?	+	+14.2	I Regional 135 mi. W
12	iP iS	08	13	56.6 59.2		+62	-50	-40	+15.3	II Local 13 mi. SE
13	e i	22	08	32.5 40	1.0				15:00½ -10.4	I C
13	i iZ	22	50	22 32.5		260			-10.3	1400 lb. blast 3 mi. NW
14	iP	06	49	03.3	1.0			+	-9.5	I C
14	iP ipP iS	09	03 05 12	05.3 11.3 40	1.2	-	+	-15	-9.2	II $\Delta = 87^\circ$ NW h = 400 mi. (650 km)
14	iP eS	11	05 15	50.8 05	1.5	+		-	-9	II Distant 71°
15	iP iS	09	45	03.7 13.5		+50 500+	-20	+25 250+	-6.6	II Local 49 mi. WNW
15	e e	19	31 32	34.5 08.5	1.2				-6.5	I
15	eP eSN eS	20	10 11	31 08 11.5					-6.5	I 200 mi.

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		h	m	s		E	N	Z		
16	eP iP eS eS	00	44	39 43 28 30.5					-6.2	I 280 mi.
16	iP eS	22	53	54.1 54 05		+10	-10		-3.7	I Local 54 mi. or 2 blasts
17	iP	07	05	35.8	.9			+	-3.0	I
17	iP	20	29	46.3	1.0			+	-1.7	I
18	eP eS	04 05	56 06	10 33	2.0				-.9	II Distant 5720 mi.
18	eP e	20	07 09	48 03				+	15:00 +0.3	I
19	eP iP iP e eSKS eS	00	32	06 08.2 26 35 29 42 38 51	1.5				+.7	II Distant 6000 mi.
19	iP	16	48	45.5	1.2			-	+2.0	I
19	iP	18	28	35	0.7			+	+2.0	I
19	iP	19	50	39.7	1	-			+2.2	I
19	iP iS	21	15	39.5 40.3		+	-110	+165 1120	+2.4	III Sharp local? ca 4 mi. WNW
20	eP iP eS iS	18	42	16.5 17.0 25.6 26.3					15:01 +4.3	I Local 45 mi.
20		20 22	20 55.3			240				Blast 4 mi. Blast 3 mi.
21	eP iS	17	13 14	58 04		90			+6.4	I 30 mi.
21	iP iP iSZ iSE	21	28	56.2 56.9 07.4 07.9	.18 .3	+15 +90 700	+30 +55 1000	+10 +55 800	+6.7	III local 56 mi. WSW M 95 mi.

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		h	m	s		E	N	Z		
21	iP eS	21	52	39 56					+6.7	I 35 mi.
22	eP iP iS iS	01	11 12	59.6 00 12.6 13.5		- +80 480	+ -50 -50	+ -50 110	15:00 +6.9	II Local 65 mi. ESE M 18 mi.
22	iP iS	15	38	46.5 49.0	.17	+5 750	+2 900	+ 280	+8.0	II 12½ mi. WSW
23	iP	10	45	21					+9.3	I
25	iP iP ipP esP ipPP eS esP esS e iP'P' ipP'P' i isP'P'N	01	17	51.4 51.9 20 04.9 21 12 24 25 27 12 28 16 31 09 40 16 44 14.5 46 41.5 56.5 47 56	1.5	-60	-50	-15 -230	+12.4	III Distant 81° SW CGS 21.5°S, 179.0°W 01:06:39
25	eP e ePP eSKS eS ePS eSS iPKKP M Coda	13	10 12 14 21 24 25 26 13 44 14.0	57 11 40 21 43 26 09 04 20 16	1.2				+13.4	III Distant 92° 6030 mi. CGS 3°S, 152°E 12:58.1
25	iP i	14	30 41	52.5 54.5	1.5 1.5				+13.5	I
25	iP	15	27	41.3					+13.8	
25	i	17	06			800		140		Blast 3 mi.
25	i	22	56.5			450		210		1500 lb. Blast 3 mi.
26	iP iP iS iS	15	13	40.4 42.0 49.4 50.8		-26	+10	+ 125	+15.2	II Local 45 mi. ESE M 17 mi.

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		h	m	s		E	N	Z	Δt		
27	e	05	04	59					+16.7	I	
27	iP	07	21	24.5	.8				+16.4	I	
27	iP	09	40	04.5	0.9	-	-	-20	+17.1	I C	
29	iP	02	52	13.3	1.3			+	15:00 $\frac{1}{2}$ -11.7	I C	
29	iP	02	59	18	1.0			-	-11.7	I C	
29	iP	04	07	55.4		-		+	-11.6	I	Local 59 mi.
	iP			55.7		+20	+10	-			M 04:07:43.9 - 18 $\frac{1}{2}$ mi.
	iS	08	07.2								
29	eP	13	53	17.7					-11	I	Local - 44 mi.
	eS			36.5							
29	iP	18	12	25.4		+25	-12		-10.6	II	23 mi. ESE
	iS			30							
29	iP	18	58	49		+20	-12	-	-10.5	II	24 mi. ESE
	iS			53.8							
29		22	54.0			225					1100 lb. Blast 3 mi. NW
30	iP	03	18	29.1		+25	-15	-	-9.9	II	24 mi. ESE
	iS			34.0							
30	iP	03	50	07				+	-9.8	I	32 mi.
	iS		53	13.5							
30	e	10	15	01					-9.4	I	
	e		16	08.5							
31	iP	10	03	16.8				-10	-7.7	I	
31	iP	14	23	17.9					-7.4	I	46 mi.
	iS			27.1							
31	i	22	04	13.8		+	?	-	-7.0	II	49 mi. E
	i			23.6		100					

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		h	m	s		E	N	Z		
1	iP iS	20	11	35.8 38.4				-	15:00 $\frac{1}{2}$ -5.7	II 13 mi.
2	e? eP eZ eS	02	07	42 44.3 29 47					-5.2	I Regional
2	e i	02	37	32 47	1.1				-5.2	I
2	iP iS	06	27	53.0 55.6	.16	+1190 1000+	-1000 750+	-? 580	-4.9	III Moderate local, 13 mi. SE (or NW) Felt by several
3	iP ipP eS e esS	04	21	40.3 23 10 30 51 31 12 33 14					-3.2	II h = 250 mi.
3	iP	07	21	39.2					-3	I
3	iP	10	00	46.5	1.5				-2.9	I
3	eP	11	52	46					-2.7	I
4	iP iS	09	40	36 36.8					-1.6	I Local, 4 mi.
4	e?	09	41	00					-1.6	I
4	e?	12	34	56					-1.5	I
4	e	17	25	25					-1.6	I
4	eP	19	45	48					-2	I
4	eP	20	03	31.5	0.9				-2	I
4	i	22	56			82				600 lb. blast
5	eP	00	54	10					-2.8	I
5	iP iS	09	33	41.0 50.2	+		+		-2.7	I Local, 46 mi. W?
5	i	22	14.5			90				450 lb. blast
6	iP iSZ iSEN	00	38	53.3 39 12.5 13.0		+100 800	+2 340	+65	-2.0	III Moderate regional 96 mi. W

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		h	m	s		E	N	Z		
6	eP e eS	03 04	57 00 07	10 47 58					-2	II Distant
6	eP i i i eS	11	58 59 01 08	57 05 19 51 03					-1.7	II
6	iP	13	01	52					-1.7	I
6	e? e i i	23	31 34 35	15 22 53 18	1.5 1				15:00 -1.1	I Regional
7	iP i e	10	27 30	03 21.5 25	1.0		+		-.6	II Regional?
7	e e i i i	12	36 37 40 41	50 38 57 31 19					-.5	I Regional?
8	e e	01	13 14	11 09					15:00 $\frac{1}{2}$ -.2	I Regional?
8	iP	02	48	14	0.7				-.2	I Regional
8	iP i i i	12	37	03.9 04.0 04.6 13.1		- +55	+ -20	+ -	0	II Local, 42 mi. ESE
8	iP iS	19	54	14.2 15		+15 120	-	+	15:00 +.4	II Blast or local, 4 mi. W
8	i	22	51.3		400					1800 lb. blast 2 $\frac{1}{2}$ mi.
8	iP iS	23	10	53.2 54.6		-20	-	-	0.6	I Local, 7 mi. W
9	eP e ePP e eS e	20 21	47 48 51 59 00	55 01 56 15 52 36					+2	II Distant

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		h	m	s		E	N	Z		
10	eP	11	15	46.5					+2.7	I Regional
10	iP	23	40	29.6	0.12	+310	-120	+115	+3.4	III Sharp local shock
	iS			30.3		-510	-1210	-500		3.5 mi. WNW
	m			30.9		1150+	1750	1120		
11	e	19	28	10	1.5				+4	I
11	i	22	54.8			275				1250 lb. blast?
12	eP	01	58	00	1.2				+3	I
12	iP	07	52	13.4		-20	+15	+	+2	II 67 mi. SE
	i			14.6						
	iS			26.8		300				
12	e?	10	47	42					+2.1	I Regional
	eP			58						Felt in southern California
	e		49	29						
	e			47						
12	eP	11	18	38					+2.2	II Regional to distant
	iP			42						Felt in southern California
	i			54						
	i		19	12						
	i		20	37						
	i			43	2					
13	e	08	29	04					+3.3	I
	e		30	27						
	e			45						
13	eP	10	02	00.5					+3.4	I Distant
13	eP	11	09	16.5					+3.5	I
	e		10	42						
13	iP	19	36	00.3		+		+	+4.0	I Regional, 100 mi. W
	iS			20.5						
14	iP	17	39	17.6		+75	-25	+25	+5.3	II 3½ mi. WNW Local shock
	iS			18.3		500		160		
15	iP	18	30	12.7		-75	-10	+100?	+6.7	III sharp local
	iS			15.1		1000		450		
15	iP	18	33	40.3		-10		+	+6.7	II Aftershock, 11 mi.
	iS			42.7		180		50		
15	eP	19	02	16					+6.7	I Local, 4 mi.
	iS			17.8		50				

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
15	iP iS	19	24	46.2 48.5		60			+6.7	I Aftershock 11 mi.
15	eP iS	19	55	15.1 27.5		50			+6.7	I Aftershock, 11 mi.
16	iP iS	04	28	39 37 58	1.2		+		+7.1	I Regional, 95 mi.
16	iP iPP eZ e e Coda	21 22	57 00	06.8 40 28 01 53 05.8 22.3	1.4 3 9		+		+8.1	II Distant (Off Colima) C.G.S. 19° N, 105° W O = 21:51.5 Δ = 1800 mi.
17	iP	18	37	40			-		+9.5	I
18	eP	02	12	24	2				+10	I
18	iP	14	42	44.3	1.3				+10.8	I Distant
19	e i i	00	05 07	40 16 36	1.5				+11.5	I Regional, Felt in Los Angeles Metropolitan area
19	eP	01	55	22.5					+11.5	I Distant
19	e i	03	08 09	15.5 55.5					+11.6	I Regional, Felt in Los Angeles Metropolitan area
19	iP iS	10	01 02	31 08.5		+15	0	+	+12.2	I Regional, 200 mi. W
19	iP iS	12	36	07.1 26.3		-14	-25	-25	+12.3	II Regional, 96 mi. SSW
20	iP iP iSEZ iSN	08	48 49	55.7 56.3 08.3 08.9		-20	+10?	+	14:39 +13.3	II 63 mi. ESE
20	iP	12	27	21.5			+		+13.5	I Regional
June 20-21 no record										
21	iP	15	56	19.2	1.0		+		15:00 +15.2	I
22	iP	18	33	01	1.0		+		+15.2	I

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
23	iP	02	18	36	0.8			+15	+15.3	I
23	iP	06	38	55.6					+15.6	I Local, 60 mi.
	iP			56.6						
	iS		39	07.6						
	i			08.8						
23	eP	16	52	38					+16	I
24		23	46.6			70				500 lb. blast?
25	e?	01	14	36					+17.7	I Obscured by local disturbance
	e		17	08						
	e		21	28						
25	eP	04	29	48	1.7				+17.9	I
25	eP	08	13	59	1.5				+18	I
	i		14	41						
	i		17	13						
25	eP	14	30	18	1.8				+18.4	
26	iP	14	11	17.3	1.2				15:00 $\frac{1}{2}$	I
	iP			48.6					-10.2	
26	iP	15	18	32.3				-	-10.1	II Local, 9 mi.
	iS			34.2		140				
28	iP	08	05	59.0	1.4			+15	-8.9	III Distant (off southern Mexico) CGS 14.6° N, 92.6° W
	i		06	15						O = 7:58.9
	iPP		07	34	2.5					$\Delta = 36.3^\circ$ (2500 mi.)
	iPcP		08	24	1.0					
	e		11	43						
	eS		12	02	8					
	eSS		14	38	8					
	iScS		16	17	3					
	e			41						
	eG		17	36	30					
	M		20.0		16	80				
	iP'iP'		36	22	1.5					
	Goda	09.0			8;13					
28	iP	10	02	25	1.6				-9	I Distant
	e		03	47						
	i		04	48						
29	iP	22	04	56.5		+	-	+?	-7.1	III Sharp local
	iS			57.1		840		600		3 mi. NW

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
30	1P eS	11	34	46.3 57.9					-6.2	I Local, 58 mi.
30	1P iS	13	11	21.1 32.6		-25 900	-25	+ 300	-6.1	II Local, 57 mi. NE
30	1P iS	21	30	00.5 11.9		- 280	-	+	-5.5	II Local, 57 mi. NE

Bureau of Reclamation and
Coast and Geodetic SurveyR. M. is hour and minute of flasher mark at
beginning) of record. Δt is time correction referred to R. M.

Date	Phase	G. C. T.			Period T	Trace Amplitude			R. M. Δt	Remarks
		h	m	s		E	N	Z		
1	iP	20	05	21.5	1.1	-	-	-	+6 -1 min.	I
2	iP i iS	20	04	46.5 47.5 49.2		-22	+20	+	+7.3 -1 min.	II Local 13 mi. SE
2	iP	20	21	42.3	1.0				+7.3 -1 min.	I Distant
2	iP iS	20	41	07.4 23.9	1.4				+7.4 -1 min. +7.4 -1 min.	I 82 mi.
2	iP iS	20	48	10.6 20.7					+7.4 -1 min.	I Local 50 mi. Near Lassen Peak
2	iP iS?	21	22	08.3 10.1		-?	+135	+260	+7.4 -1 min.	III Local 9? mi. ESE? Near Bella Vista? M=37 mi.
2	iP iS	21	42	09.7 10.6				+	+7.4 -1 min.	II 54 mi.
3	iP iS	01	11	22.0 32.3		+	-	-	+7.6 -1 min.	I Local 51 mi. SE Near Lassen Peak
3	iP iS	01	12	33.8 13.5					+7.6 -1 min.	I Local 48 mi. Near Lassen Peak
3	iP iS	02	19	42.4 45.2		-12	+10	+	+7.7 -1 min.	I Local 14 mi. SE
3	iP iS	09	04	55.8 58.6				+	+8.1 -1 min.	I Local 14 mi.
4	iP iS	02	52	03.5 06.1					+7.2 -2½ min.	I Local 13 mi.
4	iP iS	04	32	59.5 02.8					+7.0 -2½ min.	I Local 16 mi.
4	iP i e	16	38	08.4 42.9 30.9				+	+6.4 -2½ min.	I Distant
4	iP	20	42	42.3				+	+6.0 -2½ min.	I Distant
5	iP i	01	07	29 57	1.3			+	+6.4 -2½ min.	I Distant
5	iP i	01	34	20 38				+	+6.4 -2½ min.	I Distant



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		h	m	s		E	N	Z		
5	i i	07	03	35 54					+6.7 -2½ min.	I Regional
6	iP iS	21	36	50.8 51.5		-177	-55	+90 750	+6.8	III Sharp Local 3½ mi. ENE
7	iP iP iP iS i	01	19	36.6 39.1 40.3 09.6 12.1		+		- -165 280	+6.6	II Regional
7	eP eS	03	36	49.5 46					+6.5	I Distant CGS 16.9°S, 71.5°W (Peru) O=3:25.3 $\Delta=73$
7	eP iP	12	53	20.5 34.5					+6.5	I Distant
7	iP	13	45	38.5					+6.5	I Distant
8	iP i e	8 8	46 47	51 15 53	1.2				+5.0	I Distant
8	iP iS	10	37	60.7 21.9	0.8			+	+4.9	I Distant
9	iP i	04	24	33.5 48.5				+	+3.5	I Distant?
9	iP i i	09	07	04.2 12.4 13.0		-	?		+3.1	I Local 41? mi.
9	e e i	14	02 03 04	56 12 11					+2.8	I Regional or Distant
10	iP i? e e e e	01	55	43 57 58 59 15 36	15 8 7	+		+	+1.9	II Distant CGS 51.4°N, 130.5°W; (Off British Columbia) O=1:52.7 $\Delta=830$ mi.
10	i	07	37	55.5					+1.5	I
10	e	11	01	51					+1.4	I Regional

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
10	iP e e	11	38	1.5					+1.3	
			48	25						
			49	17						
10	iP iS	19	00	07.7		+50	-10	+210	+0.9	II Local $4\frac{1}{2}$ mi. N of W
11	iP	08	03	00.6	.8	+	-	+	-2.5	I
11	iP iS	17	05	1.4 5.8		-?		-280	-5.0	II 22 mi. W?
11	e iP	17	11	34.0 35.6	1.5				-5.0	I Distant
12	eP iP iS iS	08	27	4.4 11.8 27.4 41.6					-7.4	I Regional
12	iP iS	22	24	53.0 53.7				+	-9.0	I Local $3\frac{1}{2}$ mi.
13		02+			Time uncertain					I Distant
14	eP iP e iS	00	53	20.5 22.5 26 27					-13.4	I Local 27 mi.
14	iP iP e e i e	11	13	00 20 31 44 48 57	1.0 1.0	+	-	+120	-13.8	II Distant
15	e e	1	33	04 24				-	-14.1	I
15	iP iP iP iP iS iS e	12	00	2.5 16.5 30.5 39 01 00 10 15.5 11 07	1.3 1.3 2.9			-	-14.4	II Distant
						+	+		-14.4	
16	iP iS	22	13	35.7 38.4				+	-15.1	I Blast? 13 mi.

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
17	iP iS i	19	11	14.1 15.0 31.7		+10	+?	+	-16.3	I Local, 5 mi. W
17	e i i	21	22	49.6 51.6 9.5					-16.6	I Regional
18	e e i	01	39	50.8 40 03.8 41 46.8					-17.2	I
18	iP M iPeP ipP isP iS eScS epS	10	44	24.2 41.5 45 07 30 53 31 54 07 28	1.1	-	+	- 50	-18.3	II Distant CGS 35°N, 137°E (Japan); O=10:33.1 Δ =75°
18	e	11	12	00.1	1.7				-18.4	I Local
18	i	11	21	08.6	1.2				-18.4	I
18	e	19	34	28.2				-	-19.3	I
19	iP iS	10	52	06.5 11.5		-		+ 110	-21.1	I Local, 25 mi.
20	i	19		10.0				+		I Local, 4 mi.
20	iP	21	47	18.5	1.2			-	+5.5	I Distant
21	iP iS	16	12	22.6 28.8				-	+3.8	I Local, 31 mi.
21	iP iS	16	17	49.8 52.4					+3.8	I Local, 13 mi.
22	iP iS m	08	18	06.8 09.5	0.15	+40	-60	- 155 1200	+2.1	III Local, 13 mi. ESE Near Palo Cedro or Bella Vista M=37 mi.
22	iP iS	08	28	18.1 20.7				-	+2.1	I Local, 13 mi.
22	iP	16	59	52	1.0				+1.4 -1 min.	I Distant
22	iP iS	22	18	03.3 06.0		-	+	+ 160	+1.0 -1 min.	II Local, 13 mi. SE

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
23	e	21	33	34					-1.2 -1 min. I	
24	iP	02	41	48	0.7			+	-1.6 -1 min. I	
24	eP e	16	08	41.0 09 19.0					-3.0 -1 min. I Distant	
24	iP	21	34	29.8				-	-3.5 -1 min. I	
24	iP e iPeP i	23	44 46 47	41.5 13.5 10.5 33.5	1.2 1.0	-	+	-	-3.6 -1 min. I	CGS 15.0°N, 93.0°W, (Guatamala) 0=23:37.8 $\Delta=36^\circ$
24	e e e	23	54 56 57	52.4 37.4 06			+		-3.6 -1 min. I	
25	iP iS	00	32	22.8 25.5		-16 550	-10	-80 450	-3.7 -1 min. II 13 mi. WSW	
25	iP	00	43					-		I Local, 14 mi.
25	iP i	12	36 37	28 24.5	1.0			-	-4.6 -1 min. II Distant	
27	e	02	00	28	1.0				-7.6	I
27	eP i i	18	52 53 55	43.1 10.4 38	1.7	+	+	+	-8.9	II Distant
27	iP i iS	22	08 09	56.6 02.7 05.4		-100	+10	+55	-9.1	II Local, 44 mi. S of E
27	iP iS	22	19	30.4 39.4		-	0	+	-9.1	I Local, 45 mi. E
27	eP	22	25	36	1.0			+	-9.1	I
28	iP iE e eS	05	44 45	58.4 59.6 08.4 09.9					-9.6	I Local, 50 mi.
28	i i	10	28	04 20					-10.0	I
28	iP iS	11	30	03 05.6					-10	I Local, 13 mi.

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		h	m	s		E	N	Z		
28	e	14	09	41					-10.1	I
28	iP	17	41	42.1	1.0				-10.4	I
29	iP iS	06	40	33.9 44.7		-38		-25 480	-11	II Local, 53 mi. E
29	iP iS	18	52	21.6 32.4		-200	+110	+150 900	-16.6	III Local, 54 mi. ESE Probably Warner Valley in Lassen Nat'l. Park
29	iP iS	18	57	06.4 17.8		-	+	+	-16.6	I Local, 57 mi. ESE? Warner Valley?
29	iP iS	19	11	39.5 50.5		-	+	+	-16.7	II Local, 55 mi. ESE? Warner Valley?
30	iP	01	26	50	0.8			+	-18.9	I Regional or Distant
30	iP i	04	11 12	38.3 16.1		-		-	-19.9	I Regional or Distant
30	iP iS	06	32	42.7 53.5		-190	+100	+150 600	-20.7	III Local, 54 mi. ESE Warner Valley
30	iP i i iS	07	04	14.3 15.3 34.3 35.3		-150	+90	+125 560	-20.8	II Local, 55 mi. ESE Warner Valley
30	iP iS	07	32 33	58.4 09.4		-	0	+	-21.0	I Local, 55 mi. ESE Warner Valley
30	eP i iS	11	30	32.2 33.7 41.7					-22.3	I Local, 47 mi. SW slope Mt. Lassen
30	iP iS	16	01 02	52.6 04.1		-20	+12	+18	-23.7	II Local, 57 mi. ESE Warner Valley
31		00	53	34.2					-26.8	I Local, 55 mi. Warner Valley
31	i iS	07	25	32.3 43.6		-	+		-29.2	I Local, 56 mi. Warner Valley
31	iP iS	19	20 21	50.9 02.1		-80	+50	+65	-33.3	II Local, 56 mi. ESE Warner Valley

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Seismological
Centre

Date	Phase	G. C. T.			Period	Trace Amplitude, .01 mm			R. M.	Remarks
		h	m	s		E	N	Z		
1	iP iS	7	17	18 20.6				-	0	I Local, 13 mi.
1	iP i? i	05	29	04.7 05.7 07.3		-113	+98	+140 1250+	-2.2	III Local, 13 mi. SE M = 38 mi. Felt in Toyon Gov't. Camp
1	iP iS	08	11	32.8 44.0		±?	+	+	+0.6	I Local, 56 mi. ESE? Warner Valley
2	e i	20	02	11.3 14.3			-		-4.2	I
2	iP iS	22	15	37.2 37.8		+	-	+	-4.5 250	II Local blast 250#, 3 mi. NW
3	iP e	23	10	43.8 11 11				-	-4.7	I
4	i	3	01							I Local, 13 mi.
5	iP i	01	18 19	36.4 12	1.4			+	-3.8	I Distant
5	iP i eN eE	04	45 50 56 57	35.9 31.6 41.6 16.7				+	-3.4 -3.3	I Distant CGS 45°01'N; 74°44'W, O=4:38.8
6	iP	03	37	50.3				+	-1.0	I
6	iP eS	06	05 15	10.5 44	1.5			+	-1.0	I Distant
6	i	8	35	54	1.0				-1	I Distant
6	e	21	01							I Local, 11 mi.
7	iP e iS	16	10	35.4 43.5 44.5				+	-1.5	I Local, 45 mi.
8	iP	01	33	11.1	1.0				-2.7	I Distant
8	iP	09	36	32.5		+	+		-2.9	I Local, 11 mi.
8	iP iS	20	18	23.4 24.1				+	-2.6	I Local, 3½ mi.
9	iP iS	00	28	28.9 41.4		?	?	+?	-2.4	I Local, 62 mi.

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International
Seismological
Centre

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
9	iP	17	40	29.4	1.0			-	-2.6	I Distant
10	iP	04	59	54.7					-2.0	I Local, 63 mi.
	i	05	00	05.5						
	iS			07.4						
10	iP	21	55	17.5		-		-	-0.6	I Local, 12 mi.
	iS			19.9						
10	iP	22	30	54.1		-		-	-0.5	I Local, 12 mi.
	iS			56.5						
11	iP	9	59	35.5	1.0			+	+0.5	I Distant
	e	10	02	35						
	e		03	21						
	i			59						
	e		10	12						
	e		11	13						
11	i	10	15	14					+0.5	I Distant
	iP			29.5	1.5					
	iE			38.5						
11	i	10	19	26.5	1.5				+0.5	
	e		23	20						
11	iP	17	54	21.1	0.9	-	-	-	+0.5	II Regional
	iS?			41.5				550		100 mi. SW?
11	e	18	00	21.5	0.8				+0.5	I
	i			44.5						
11	e	18	26	0.9					+0.5	I
	i			51.5						
12	iP	02	41	2.6		+	-	+	0.0	II Regional
	iS			27.0						115 mi. N.W.
12	i	21	00	8.6					-1.2	I Faint
12	e	22	54	24.6					-1.4	I Faint
	i			34.2						
12	e	23	03	0.1					-1.4	I Faint
14	e	02	03	38					-2.2	I
	i		04	35						
14	e	06	58	00					-2.5	I

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
15	e	02	20	13				-	-3.2	I
15	iP iS	02	32	01.3 04.7					-3.2	I Local, 12 mi.
15	i	18	41	45.0					-3.3	I
16	iP i i i e e	02	45 46	43.7 3. 32 52 08 42	1.5	+	-	+	-2.5	III Distant
16	iP	04	47	30.6	0.9	+		-	-2.4	I Distant
17	e iP e	06	11	12 13.5 31					-1.6	I Distant
17	iP i	09	27	02.7 25.5	1.0			+	-1.5	I Distant
17	i i	10	25	43.5 53.0					-1.5	I Local, 47 mi.
19	iP iS	01	29	40.1 40.7		+	-	+	-4.6 220	II Sharp Local 3 mi. NW
19	i i	09	15	44.5 50					-5	I Local, 27 mi.
19	i	09	36	30.7					-4.9	I Local, 12 mi.
19	iP i	13	15	10 20	1.5	+	-	+	-4.8	I Distant
20	i	08	00	09.5					-3.0	I Local, 35 mi.
20	iP	18	36	31.8					-3.2	I Distant
20	iP iS	22	15	34.8 42.6					-3.4	I Local, 38 mi.
21	iP	01	55	07					-3.5	I Distant
21	e i	06	27 28	57.6 22.2					-3.6	I Distant

SHASTA DAM

SEISMOLOGICAL STATION

MONTH OF September

1944

International
Seismological
CentreBureau of Reclamation and
Coast and Geodetic SurveyR. M. is hour and minute of flasher mark at
(beginning) of record. Δt is time correction referred to R. M.

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
21	iP i i	17	18	53.4 06.5 09.8		+100+	+70	+	-3.6	III Regional, 80? mi. WSW Eel River Valley
21	iP	19	57	45.5					-3.5	I Distant
21	iP i	22	40	31.3 47.2		+20	-	+	-3.5	II
21	iP iS	23	11	56.3 56.8		+?	-	+	-3.5	II Sharp Local probably Blast 2½ mi. NW
22	iP iN i i i	10	55	54.6 59.9 04.2 07.9 11.4		+40	-20	+40	-3.6	II 65? mi. WNW
22	iP iS	22	16	44 54				-	-3	I Local, 50 mi.
22	iP	22	44	36					-2.7	I Distant
23	iP i	03	22	41 58				+	-2.3	I Distant
23	e i i	11	38	36 45.5 16.5					-1.7	I Distant
23	iP i eS e e coda	12	22	23.6 36.4 51 20 08		+		+	-1.6	III Distant CGS 55.5°N, 160.7°E, (Kamchatka) 0=12:13.3 Δ =3600 mi.
23	iP	13	28	54	9				-1.5	I Distant
23	e iP i i	16	14	03.2 04.5 15.0 39.7				-	-1.3	I Distant
23	iP iS	22	34	44.5 54.5					-0.5	I Local
23	iP iS	22	57	41.7 03.8					-0.5	I Local
23	e	23	33	04.7					-0.3	I Regional

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.

Δt is time correction referred to R. M.

International
Seismological
Center

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
24	iP i i	11	04	51.5		+	-	+	+1.2	I Distant
25	eP iP i iS?	16	24	45.9 47.4 64.4 59.9					-3.1	I Distant
26	iP	01	03	28.4				-	-4.1	I Distant
26	e iP	17	18	56.3					-5.7	I Distant
26	iP i i	17	50	26.4 33.3 45.3					-5.7	I Distant
27	iP i	14	23	35.3 45.1	0				-9.1	I Distant
29	iP	07	53	30.0					-12.2	I Distant
29	iP	11	32	27.7					-12.5	I Regional
29	iP	12	28	16.0					-12.5	I Distant
29	iP iS i	14	51	07.7 26.6 43.9					-12.6	I Distant
29	iP i	17	04	23.5 30.0					-12.7	I Distant
29	eP i i	19	14 15	57.8 23.3 39.3					-12.7	I Distant
29	iP	22	08	44.6					-12.7	I
31	e iP	08	23	45.4 48.4					-13.6	I Distant

SHASTA DAM SEISMOLOGICAL STATION

INSTRUMENTAL REPORT October, November,
December, 1944

The Shasta Dam station continued in routine operation throughout the period of the report.

Roman numerals I, II, and III refer to the size of the record; shocks marked I are barely recorded, II well recorded, and III well recorded with large trace amplitudes. The last should have been felt under favorable conditions. Local shocks are less than 70 mi., regional shocks from 70 to 700 mi., and distant shocks greater than 700 mi. Regional shocks of unknown distance may be classed as distant.

A number of local shocks—class III, originating from an area 13 mi. SE of the station were recorded during the quarter. Some of these should have been felt in the epicentral area.

Confidential—not for publication.

Bureau of Reclamation and
Coast and Geodetic SurveyR. M. is hour and minute of flasher mark at end (or
beginning) of record. Δt is time correction referred to R. M.

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			R. M. Δt	Remarks
		h	m	s		E	N	Z		
1	1P 1 1 1	15	16	49.7 12.6 54 03.5	1.0				-14	I Distant
2	1P 1	09	31	42.5 56.5					-13.3	I Regional
2	1P 1 1	17	29	06 38 51					-13.3	I Distant CGS 14.5°N, 90.1°W (Guatemala) O=17:21.9 $\Delta=38^\circ$
2	1P 1S	18	54	47 47.6		+	-	+	-13.3	I Blast? 3 mi. NW
2	1P 1S	20	40	40 49 38		+	-	+	-13.3	I Distant Japan (Pasa)
3	eP 1P	02	30	12.5 37					-13.3	I Distant
3	1P 1S	06	08	26 35.2					-13.3	I Local 46 mi.
3	1P	16	20	51					-13.4	I Distant
5	1P 1S	02	27	33.5 28 09.5		+			-15.4	I Regional
5	e 1P eS	17	09	54.5 10 15.5 20 53					-16.6	I Distant
5	1P 1 1S 1S	17	41	07 09 51 22.5 43	1.4	+	+		-16.6	II Distant New Hebrides (Pasa)
5	e	18	06	59					-16.6	I Distant
6	eP e	02	48	07 52 09				-	-16.2	I Distant CGS 39°N, 27°E O=2:34.7 (Turkey) $\Delta=95.5^\circ$
6	1P 1S	17	00	08 08.7		+	-	+	-15	I Local 3½ mi. NW
6	1P 1S	20	34	54 54.2				+	-15	II Blast? 1 mi.

Bureau of Reclamation and
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 Δt is time correction

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			Δt	Remarks
		h	m	s		E	N	Z		
7	1P eS	08	03	43.4 04 06.6		-	?	-	-13.9	I Regional
7	1P 1 1	13	46 47	38.0 14 57					-13.7	I Regional
9	1P 1	02	30	10 23.5		-	+	-	-11	I Distant
9	eP	20	58	16.5					-11.4	Distant
10	1P 13	00	04	14 14.6		+90	-40	+	-11.4	II Blast? 3 mi. WNW
11	1P eS	02	52	25.8 41.8		+15	-8	+	-11.4	I Regional 80 mi. WNW
11	1P 1 1	09 10	56 07	35.7 44.5 16	1.5 1.3	+	+	+	-10.8	II Distant <i>Samoa?</i> (Pasa)?
12	1P 13	09	07	21 33					-10	I Local 60 mi.
12	1P 1	16	19 20	38.5 28				+	-10.2	I Distant
12	1P	16	45.0					+		II local or blast 2 1/2 mi. 2300 ft
12	1P	17	35	04					-10	I Distant? Preceded about 11 mins. by an indecisive disturbance
12	1P 13	23	23	13 13.8		+31		+	-10	I Blast or local, 4 mi.
13	1P 13	04	10 11	56.4 05.9		-10	-10	-	-9.8	I Local, 47 mi. SW
13	1P 1	05	45 46	54 45				+	-10	I Distant
13	eP 1	15	46	09 29.5	.8				-9.6	I Regional
13	1P 13	19	32	13.5 16.7		-10	?	+	-9.5	II Local, 16 mi. E
14	1P 1	02	31	29.5 58.5					-9.6	I Distant

Bureau of Reclamation and
Coast and Geodetic Survey Δt is time correction

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			Δt	Remarks
		h	m	s		E	N	Z		
14	1P 1	15	25	50 27 27	1.0			+	-9.6	I Distant
14	e	16	32	50					-9.6	I Distant
14	e e e	20	30	13 17 34 35					-9.8	I Distant
14	eP	22	18	28					-10	I Distant
15	1P	04	14	41					-10.4	I Distant
15	eP	09	26	15.5					-10.5	I Distant
17	1P 1	01	51	24 27				-	-12.8	I Distant
19	1P 13	00	40	43 54.2		-	-	+	-15.6	I Local 56 mi. NNE
19	1P	13	57	04				-	-15.7	I Distant
20	eP 1 e	01	13	05.1 15.5 14 05.8					-16.7	I Regional?
20	1P 1 1P	09	09	44 51 11 39					-17.2	I Distant?
20	1P 13	22	41	02 02.5		+	-	+	-18.1	II Blast 2 1/2 mi. NW
20	1 1P?	23	12	06.3 08.1					-18.2	I Regional? First 1 may be of local disturbance. 1P? may be 13 of same, but a P of regional shock start above here.
21	eP 1	21	27	05.5 30					-19.7	I Distant
22	1P 13	09	36	45.5 47.2		-	?	-	-20.5	I Local 6 mi. W
22	1P 1P 13	16	13	46 47 14 06		+10	+4	+	-21	II Regional 105 mi. NSW

Bureau of Reclamation and
Coast and Geodetic Survey Δt is time correction

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			Δt	Remarks
		h	m	s		E	N	Z		
22	1B 1PP eS 1	18	58	51	1.0 1.2	+	-	+	-21.2	I Distant Compression from NW
23	eP 1	05	47	11.5 14					-21.9	I Distant?
23	1	20	25	34					-22.6	II Blast 2 min.
23	eP	22	23	27				+	-22.7	I Distant
23-24	eP 1P 1 eS e	23	49	38. 43.8 19 57 22 00 19 41					-22.7	I Distant CGS 0.5°N, 80.0°W (Ecuador) O=23:40.03 $\Delta=55\frac{1}{2}^{\circ}$
24	eP	00	37	17				+	-22.8	Distant
24	1	01	57	30			-	-	-22.8	I? Seismic origin doubtful
24	1P	12	46	53					-23.4	Distant
27	eP	09	24	43					-30.2	I Distant
27	1P 1S	13	33	24 33		-35	+6	+	-30.7	II Local, 45 mi. S of E
28	e e	18	33	45 34 23					-34.1	I Distant <i>San Geronio Pass (Basin)</i>
29-30										Heavy microseisms
Nov. 1	e	12	20	19					-8.7	I Distant
2	e 1	05	01	39 02 56					-8.2	I Faint trace-regional
2	1P	11	09	33	.8			-	-8.1	I Distant?
4	e e	08	13	19 14 13					-5.8	I faint trace-regional
5	1P	06	32	11					-4.2	I Distant?
5	1P 1 eS	16	29	22 31 01.5 38 03				-	-3.4	I Distant

Bureau of Reclamation and
Coast and Geodetic Survey Δt is time correction

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			Δt	Remarks
		h	m	s		E	N	Z		
7	1P	09	51	05.4	1.0	+	+	+		I Distant Compression from SW
8	1P 1S	05	52	03 03.5		+100 480	-80	+7	+3	Local II ¹ blast? 2½ mi. NW
8	1P 1S	13	30	01.2 04.0		?		-7	+4.2	I Local, 13 mi.
8	1P 1S	13	31	01.7 04.4		-65	+43 1170	+	+4.2	III Local, 13 mi. SE
8	1P 1S	13	32	06.2 08.9		-7 170	+6	+	+4.2	II Local, 13 mi. SE
8	1P 1S	14	15	11.1 13.8		+	-	+7	+4.3	I Local, 13 mi.
8	1P 1S	14	17	09.1 11.8		-20	+17 450	+	+4.3	II Local, 13 mi SE
8	1P 1S	14	24	14.5 17.2		+19	-18 700	+	+4.3	III Local, 13 mi SE
8	1P 1S	14	49	41.1 43.8		-58 1080	+37	+		III Local, 13 mi SE
10	1P 1S coda	08	06	46.8 49.5	0.16	-135	+110 1100+	+150	+7.3	III Local, 13 mi. SE
10	oP oT	13	22 27	24.5 12	1.5				+8.2	I Distant
10	1P 1S	22	14	09 09.7		+	-	+	+9.7	I Local or blast 3½ mi NW
11	1 1 1S	11	26	31 38.2 53.3					+12	I Regional
13	1P 1S	05	31	26.5 37.9		-	+	+	+15.5	I Regional, 57 mi. SE
13	1P 1S	14	56	26.7 29.4					+16.3	I Local, 13 mi.
13	1P 1 1S	19	35	06.7 08.7 12.5				+	+16.9	I Distant

Bureau of Reclamation and
Coast and Geodetic Survey Δt is time correction

Date	Phase	G. C. T.			Period T	Trace Amplitude, 01 mm			Δt	Remarks
		h	m	s		E	N	Z		
13	1P 13	21	10	33.4 36.1					+17.1	I Local 13 mi.
13	1P 13	21	18	08.1 10.7					+17.1	I Local 13 mi.
13	1P 13	22	59	44 44.5					+17.4	I Local 2 1/2 mi.
14	1P 1	00	42	01.7 24				-	+17.5	I Distant
14	1P 13	19	05	18 50.5				+	+20.7	I Regional 170 mi.
14	1P 1	23	24	06.5 24				+	+21.5	I Distant
15	1P 1	08	11	38 08.5		+20	-5	-	+22.5	I Regional 160 mi. ESE
15	eP 1 ePP 1SKS SKS PKP	21	00	53.5 01 12 05 13 11 27 53 57	1.0 1.0			+	+24.8	II Distant OBS 4°N, 128°E (SE of Philippines) O-20:47.0 $\Delta=102\frac{1}{2}^\circ$
16	eP 1P e eSKS e	12	23	25 32 26 55 33 42 34 11	3.5				+26.7	II Distant OBS 12°S, 166°E (Near Solomon Is.) O-12:10. $\Delta=84^\circ$
16	eP? e coda	12	36	55 17	0.8 16				+26.7	
16	1P 13	23	54	41.5 55 03		+15	+5	+	+29	II Regional 110 mi. WSW
17	eP eP 1 1	00	33	57.5 06 07 13					+29	I Regional 400 mi.
17	eP	02	40	09.5				+	+29.2	I Distant
17	1P	18	40	34.5				500	+31.1	II blast 2 mi. 3650 #
17	1P 1	18	49	55.5 51 13.5				-	+31.1	Regional?

Bureau of Reclamation and
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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			Δt	Remarks
		h	m	s		E	N	Z		
17	1	22	22	50.5					+31.5	Distant
18	1P	05	23	42				+	+32.7	Distant
18	1P	08	04	24					+33.1	I Distant
	1			27.5						
	1			38						
19	1P	02	21	07.3		+25	-15	+	-24.7	II Regional 150 mi WNW
	1			36.3						
19	e	19	20	34.5					-22.4	I Distant
	e			43.5						
19	e	21	25	38					-22	I Distant
19	1P	22	48	01					-22	II Blast? 2 1/2 mi. 3800 #
	1S			01.5				300		
20	1P	04	54	11				-	-20.5	I Distant
	1			29.5						
20	1P	20	21	42					-18.2	I Distant
20	1P	22	22	58.4		+15	-10	+	-18.0	I Regional
	1S7		23							
20	1P	21	39	40.4		+	-	+	-18.1	II Distant
	1P		40	08						
	e		47	16						
21	1	03		56.5						I Local 10 mi.?
23	1P	00	34	11.5					+10	II Blast 2 1/2 mi. 1800 #
	1S			12				300		
23	1P	05	52	33.5				+	+9.4	I Distant
23	1P	10	59	06.2					+9	I Distant
24	1P	05	01	34.0		+40	+36	+220	+7.9	III Distant 86° SW
	1			54						h=125 mi.?
	1P2		02	17						CGS 20°S, 171°E
	1		04	59.4						O=4:48.9
	e		09	22						
	e		11	16						
	1S			43						
	e		12	08						
	es3			56						
	e		14	08						

Bureau of Reclamation and
Coast and Geodetic Survey Δt is time correction

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			Δt	Remarks
		h	m	s		E	N	Z		
24	1P 13	22	50	06 20.8		+80 380	+26	+60	+6.8	II Local 64 mi. WSW Probably near Zenia
26	1P eP	07 08	54 04	48.0 44.8	1.4	-10	+	-35	+4.8	I Distant
26	eP 1P is	19	29	20.7 21.3 53.4		+ -35	-10	+ -35	+4.9	I Regional
27	1P 13	20	23	16.8 27.8					+4.8	I Local? 55 mi.
28	e e	16	14	42 48					+4.3	I Distant
28	eP	19	05	04					+4.2	I Distant
29	1P e	19	03 04	53 00				+	+4.0	I Distant
30	eP 1P	01	57	57 58					+4.1	I Distant
Dec. 1	1P	04	11	39.5	0.9			-	+4.5	I Distant
2	1	09	20	39					+4.6	I Regional?
2	1	21	04	32					+4.4	I blast? 2½ mi.
3	1P 1	07	55	07.3 50					+4.3	I Distant
3	1	21	52	31					+4.6	I blast 2½ mi. 1550
4	1P 1 13	20	46	50.4 06.5 58.5	1.3	+?		+	+5.4	II Distant Felt on Saipan (Pass.)
5	eP	01	03	40.5					+5.5	I Distant
5	1	02	19	25					+5.4	I Local 2½ mi.
5	1P 1P 13 13	08	39	40.7 42.1 49.2 51.4		-20	0	+	+5.4	II Local 42 mi.
5	1P 1	14	38	12 45 44	1.0 2				+5.5	I Distant
5	1P?	15	18	02.5					+5.5	I Distant? Obscured by local disturbance

Bureau of Reclamation and
Coast and Geodetic Survey Δt is time correction

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			Δt	Remarks
		h	m	s		E	N	Z		
5	1P 1 es 13	16	04	25.1 32.5 59 01		+15	-10	+	+5.5	II Regional 180 mi. WNW
5	esP 1P e	17	13	43 49.5 56	1.8				+5.5	I Distant
6	1P	16	38	16	0.8				+5.6	I Regional
7	es? 1P 1 1 es 1 1 1PKP 1P'P' 1 1P'P'P' 1 coda	04	47	12 31 43 01 57 59 50 01 06 14 24 34 41 48	0.9 2.5 10 1.5 1.5 1.5 1.5 1.0 15;10			+	+5.7	III Distant Destructive in Japan CGS 33° N, 137° E O=4:35.7 $\Delta=76^{\circ}$
7	1P	05	59	51.5	0.8				+5.8	I Regional?
7	e 1	06	14	18 24	 1.5				+5.8	I Distant
7	esP 1P 1 13	06	37	21.3 34 40 47 08					+5.8	I Aftershock—Japanese Earthquake
7	esP 1P	07	00	29 38					+5.8	I Distant
7	1P 1P 13	20	10	31.7 32.8 42.6		-15			+5.7	I Local 55 mi.
7	1P 13	20	58	45.7 57				+7	+5.7	I Local 56 mi.
7	1P	21	09	29.5				+	+5.7	I Distant
7	1	22	52	59.5	0.9			-	+5.7	I

Bureau of Reclamation and
 Coast and Geodetic Survey
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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			Δt	Remarks
		h	m	s		E	N	Z		
8	1P	01	22	37				-	+5.6	I Distant
8	eP 1	07	29 30	55 18					+5.5	I Distant
8	1P 1P eS	18	32 38 41	33.5 38 59				+ + +	+5.7	I Distant
8	1P	22	13	12.5	1			-	+6.0	I Distant
9	i	00	22	26.6	0.8				+6.1	I Regional
9	1P	02	04	17.7				-	+6.2	I Regional
9	1P	07	58	49.4	1.0	-	-	-	+6.1	I Regional SW
10	eP 1P 1 e	05	31 32 36 42	31.4 19.4 05.4 58	2.5				+6.4	I Distant
10	1P	09	39	24.3	1.0	+	-	+	+6.4	I Compression from NW
10	1P 1P 13 coda	16	37 48	42.7 43.7 07	5 16	+		+	+6.7	II Distant $\Delta=87^\circ$ New Hebrides CGS $18^\circ S, 167^\circ E$ O-16:24.9
10	1P i e	16 17	57 07	24 36.5 50	1.4 4.5				+6.7	I Distant
10	eP 1P	19	42 43	56 03.3	1.6			+	+6.9	I Distant
12	1P 1 eS e 1 coda	04	24 26 30 33 34	46.2 21 49 56 49	1.2 1.8 8	+	-	+	+11.2	II Distant Aleutian Is.—Compression from NW CGS $51.5^\circ N, 179^\circ E$ O-4:17.0 $\Delta=41.5^\circ$
12	1P 1	10	36 37	57.5 12	1.5	+	-	+	+12.1	I Distant
15	1P 1 e e	08	17 19 26	12.8 17.3 54 09	1.1 1.3	+	-	+	+23.7	I Distant

Bureau of Reclamation and
Coast and Geodetic Survey
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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			Δt	Remarks
		h	m	s		E	N	Z		
15	1P 1 13	09	37	10 13 16		+	-	-	+24	I Local 30 mi. SE
15	1P 13	20	28	25.5 26.1		+75	-100	+	+25.5	II blast 3 mi. NW 2150#
16	1P	15	42	51	1.0			-	+29.4	I Distant
17	1P 1P e	07	31	14 28.2 41 26	0.9	+	-	+	+32.3	II Distant compression from NW $\Delta = 81^\circ$
18	1	22		52.0						I Local 2 1/2 mi. NW
19	1	03	54	20						I Local 13 mi.
19	1 1 1	12	40	39 49 51					+10.7	I Local? 50 mi.
19	1P 1 e	14	21	04.5 24 28 06	.7; 1.5			-	+10.9	I Distant
19	1P 13 13	18	10	36.5 45 46.5		-	0	+	+11.5	I Local 43 mi. E
20	1P	20	57	41.7	1.3			+	+16.2	I Distant
20	1P	23	33	20				+	+16.7	I Distant
21	1P 1 1 e 1 coda	05	19	50.3 20 32.0 21 52.5 22 11 24 01	.8 1.7 4 5 4	+	-	+	+17.5	II Regional?
21	1P 1	05	53	06.8 47.5	.7			+	+17.5	I Regional
21	1P	09	14	15	1.5				+18	I Distant
21	1P 1 13 1	11	26	00.9 02.5 09.5 11.9		-105	-8	+80	+18.2	III Local, 43 mi. E
						600		300		

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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			Δt	Remarks
		h	m	s		E	N	Z		
21	1P 1P 1S 1	14	04	55.3 57 03.8 07.5		-35	-6	+52 500	+18.5	II Local 47 mi. E
21	eP 1P	20	26	24.5 26.5	.8				+19.7	I Distant
21	1P	22	40	21					+20	I Distant So. America (Pass.)
22	eP e	05	48	02.5 58 21	1.3				+21.5	I Distant, 82°
22	1P 1 1S 1S	08	26	18 19.6 26.5 28.2		-19	0	+	+22	I Local 47 mi. W
22	eP	10	48	35.5	1.2				+22.5	I Distant
22	eP	16	00	44.5					+23.4	I Distant
22	1P 1S 1	18	08	50 01.7 07.2	.16	-35	+20	+	+23.7	I Local 57 mi. WSW
22	1P 1P 1pP e 1S 1S	22	43	57 58.5 11 08 17 43	1.2 1.2			+	+24.5	I Distant $\Delta = 82^\circ$
22	eP eS e	23	01	24.5 41 36					+24.5	I Distant
23	eP 1 eH eSE 1S2H coda	08	17	51 02.5 48 00 13	0.8 0.4 1.0 0.5 1.5				+25.9	II Regional Owens Valley (Pass.)
23	1P	17	01	00	0.9			+	+27.1	I Distant
23	1P 1S	23	58	10.8 20.2		-	-	+	+28.3	I Local, 47 mi. NE

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 Δt is time correction

Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			Δt	Remarks
		h	m	s		E	N	Z		
24	oP 1P?	07	27	15.3	0.7			2	+29.3	I Regional
			28	20.3		-		+20		
25	1P 1P 1S	09	26	56.5	0.3				+3.2	I Regional--270 mi.
				58.8						
			27	44.7	1.3					
27	oP	14	18	32	1.7				+11.6 -2min.	I Distant Hawaii? (Pasa.)
27	1P 1 e o3 o3	15	38	43.3	1.4			+	+11.8 +1min.	II Distant New Britain? (Pasa.)
			39	02.3						
			42	29						
			49	14						
				46	4.5					
27	1P 1S	19	04	24.2		+		+	+12.4 +1min.	I Local 42 mi.
				32.5						
27	1S?	19	04	43.4					+12.4 +1min.	Probably 2nd shock
28	1P 1	01	18	43	1.0				+13.5 +1min.	I Distant
			19	29						
28	1P 1S	23	27	47.5	.20	-40	-	+	-13	I Local 40 mi. E
				55.5	.16					
29	1P	11	14	02					-11.4	I Distant
29	1P	14	02	09.5					-11	I Distant
29	1P	23	03	07.5	0.9				-9.5	I Distant?
29	oP	23	52	23	1.0				-9.3	I Distant
30	1P	05	15	33	0.9			+	-8.7	I Distant?
30	1P 1EN 1L 1S	18	16	43		-98	+39	+72	-6.8	III Local 57 mi. ESE Probably Warner Valley
				44.3						
				45						
				54.7		520	880	480		
30	1P 1P 1S	18	32	51.8		-12	+6	+	-6.8	I Local 56 mi. ESE Probably Warner Valley
				54.0						
			33	03.0						
30	1P	20	51	51	1.4				-6.5	I Distant

SHASTA DAM

SEISMOLOGICAL STATION

MONTH OF December

Bureau of Reclamation and
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Date	Phase	G. C. T.			Period T	Trace Amplitude, .01 mm			Δt	Remarks
		h	m	s		E	N	Z		
30	SP	22	04	12.5					-6.4	II Distant or regional Dilatation SW Probably off Oregon Coast
	1P			19.5						
	i			22.5		-	+	-		
	i			33.5						
	e	05	03		10					
	em	08.3			5	90				
	coda				7					