SHASTA DAM SEISMOLOGICAL STATION

MONTH OF December 31 1942
January 1943

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
△t is time correction referred to R. M.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M.	△t	Remarks
Dec. 1942											
31	iP?	02	07	51				-10	15:00½	-26.7	
31	iP	12	14	38.5	1.5			+8			
	e		18	51					-28+		
31	e	19	25	05					15:01	-29	
Jan. 1943											
1	iP	03	36	57.5			+	-18	15:00	+30	
1	iP	18	27	34.7	1.0	+		+10	15:00½	+28.2	
	i		29	36							
1	eP	22	25	25					+27.7		
	i			35							
	i		26	31	1.0	100	60	75			
3	iP	03	06	34.5	1.2			-10	15:00½	+23.7	
3	iP	20	41	03.5					15:00	+21.0	Very small regional shock. Δ = 80 mi
	iS			20		20					
4	eP	11	00	09				+	+18.3		
	e		03	03							
4	eP	11	31	03					+18.2		Small regional shock. Δ = 220 mi.
	iS			43		25					
4	iP	19	30	26.1		+12	+5	-5	15:00½	+17.0	Blast? Δ = 9 mi
	iS			28.0				+30			
4	iP	23	25	39.2		+175?	-80	-	+16.3		Light local shock. Δ = 60 mi ESE
	i?			45.2							
	iS			51.7			290				
5	iP	00	22	32.4		+10	-9		+16.2		Probably a blast. Δ = 6 mi
	iS			33.6							
5	iP	03	20	45.3		+8	-4		+15.7		Very small local shock. Δ = 33 mi
	iS			49.8							
5	iP	05	22	37.5		+9	-5		+15.3		Very small local shock. Δ = 33 mi.
	iS			42.0							
6	iP	22	20	30.3				-10	15:00	+08.5	Small local shock. Δ = 25 mi
	iS			35.4							
7	iP	03	40	48.3	1.0	-		-14	+07.6		
	i			53				30			

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
8	iP	20	09	59	1.0	+20	-	+48	15:13	+01	Estimated depth of focus 110 mi
	epP		10	41							△ = 5250 mi
	iS		19	32							
9	iP	18	44	58.7	1.3	-		-21	15:00½	-2.5	△ = 750 mi
	eS		47	01							
10	e?	09	55	00					-05		
10	iP	20	18	38				+6	15:00½	-6.8	
11	eP	00	53	01	1.5				-7.5		
13	e	02	12	39					15:00½	-15.8	
	e		13	21	1.7			20			
14	eP	02	00	07					15:00½	-20.0	△ = 260 mi
	iP			10							
	eS			43							
	iS			45.5	0.8			22			
14	e	20	39	27					15:00½	-23	△ = 160 mi
	e			58							
16	iP	09	08	06				+	15:00½		
	iP			07		+22		-	-28.3		△ = 60 mi Eastward
	iS			18.3		80	65	40			
17	iP	05	16	38	1.2	-?		-12	15:00	+28.7	
18	iP	01	52	00.3		-14	+	+10	15:00½	+25.8	
18	i	11	29	26	1.1				+24.5		
	i			32							
	i			40							
18	i	13	00	00				+	+24.4		
19	iP	20	17	31.2				+12	16:43	+21.3	
19	eP	21	35	34					+21.3		
20	iP	03	40	41.3		+		+23	+21.3		
	i		42	54							
23	iP	05	53	52					15:00	+11.2	△ = 100 mi.
	eS		54	12				20			
23	i	06	38	22					+11.1		△ = 105 mi
	e			43		50					

SHASTA DAM SEISMOLOGICAL STATION MONTH OF January 19 43
February

Bureau of Reclamation and
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
24	iP	20	49	05	1.5			+10	15:00	+7.7	U.S.C. & G.S. epicenter
	e		50	39							15° N Lat, 91° W Long
	e		51	18							Δ = 2600 mi.
	eS		54	42	4.0						
25	iP	14	18	40				+21	+6.3		
25	iP	18	40	07				-10	15:00	+6.1	
25	i	23	57	00.5				-25	+6.0		
27	i	01	58	49					15:00	+4.8	
27	iP	02	52	50.2	1.5			-20	+4.7		U.S.C. & G.S. epicente
	i		53	39				125			52° N Lat, 180° W Long
	eS		58	55							O = 2h 45m 2s
	e	03	02	55							Δ = 41° (2830 mi)
27	iP	03	04	46				-5	+4.6		Probably an aftershock
27	e	03	15	15					+4.6		
27	e	03	20	47					+4.6		
	e		28	55							
30	eP	05	42	43.5					15:00½	-0.5	U.S.C. & G.S. epicente
	iP			44.7	1.3	-	+	+66			2.0° S Lat, 80.0 W Lon
	i		43	05							O = 5h 33m 0s
	i			31							Δ = 4000 mi (58°)
31	e	08	35	47					15:14	-2	
Feb. 1	iP	20	18	12				+	15:00½	-5.7	
3	iP	08	27	49		+10	+12	-	15:01½	-9.8	Small local shock
	iS			56.5		60	60				Δ = 38 mi NE
3	e	22	39	14					17:00½	-11.3	
	i			18							
6	iP	08	48	04.5					15:00½		Δ = 170 mi
	iP			08				+	-17		
	eS			36							
	iS			43							
6	e	08?	52	55					-17		Δ = 170 mi
	iP		53	02				+			
	eS			30							
	iS			37	0.6			50			

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
6	e?	09	45	00					-17.1		
	i			07							
8	i	06	06	46				+10	15:00½	-20.6	
8	iP	13	54	51	0.8	+7	-6	+28	-21.2		
11	iP	15	38	36	1.5	+28		+25	15:09½	+29.2	
	i		39	20							
	e		40	57	3.0			25			
13	iP	06	23	02.6		+26		+20	15:00	+24.4	Small regional shock.
	iS			15.1		100					Δ = 60 mi
	iS			15.9							
13	e	10	19	40							Small regional shock.
	iP			44					+24		Δ = 65 mi.
	e			55							
	iS			57			125				
13	e?	12	59	44							Small regional shock.
	iP			46.5		+25	-8	-	+23.6		Δ = 60 mi
	i			47				+40			
	iS			59.0				Blur			
16	iP	07	39	50	1.5	+24	-15	-60	15:00	+16.4	Δ = 4770 mi.
	eS		49	00							
16	iP	14	50	49.5	1.5			+9	+15.6		
	i		51	03				75			
	iZ			16				62			Δ = 1170 mi ?
	iZ		51	29							
	e		54	05							
16	e	17	03	32					15:00		
	iP			33				-6	+15.5		
	iP			35.5	1.5	+20		+55			
	i		04	15							
16	iP	18	22	31.3				+10	+15.3		
	i		23	10							
17	e	02	33	33					+14.5		
18	iP	05	38	38.5	1.1			-	15:00	+11.7	
18	i?	22	26	09					15:00	+9.7	
	i?			30							

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
19	i?	03	21	27					+9.0	
	e?			50						
19	iP	08	39	02	1.9			-	+8.5	
20	iP	11	43	57		?	+40	+10	15:00	Small local shock
	iS		44	06.5			-60		+4+	Δ = 47 mi S?
21	iP	06	20	01.0		+35	?	+	14:34	Small regional shock.
	iP			01.5						Δ = 100 mi W
	i			11					+0.5	
	iS			21						
22	iP	09	26	49.3	1.4	-	+	+20	15:00½	Destructive in Southern
	i		27	07	3.0	-		-50	-3.7	Mexico.
	iZ			47	3.0			-60		U.S.C. & G.S. epicenter
	eS		31	48						17.6° N Lat, 101.3°
	e		34.3							W Long.
	G		35.0		30					0 = 9h 20m 8s
	e		36.4		4	280				Δ = 2000 mi (29°)
	M		40		13	300				
23	iP	00	16	07		-10	?	+	15:00½	Very small regional
	iS			19			+	+	-5.5	shock.
										Δ = 60 mi E
24	e	04	40	06	3.5				15:00½ -8.4	
	e		43	22	9					
24	iP?	09	11	04.5				-		
	i			05		+25	-5	-20		
	iE			16					-8.8	Δ = 175 mi E
	iZ			26						
	iE			36						
	eS?			38						
24	e	19	52	32					15:00½ -9.5	
25	iP	04	04	45.3	1.2	-	+?	-15	-10	
25	iP	05	17	51		+10		+14	-10.1	
	iP			52.5		+	+10	+28		
25	iP	22	18	27	0.7			+8	15:00½ -11.4	
	iP			28.5				+20		
28	eP	13	08	06					15:01 -20.1	
	ePP		11	19						
	i		12	18	1.5			15		
	iS		18	26	2.5	31	-12			
	e		20	03						

SHASTA DAM SEISMOLOGICAL STATION MONTH OF February March 1943

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
28	iP	13	24	22				+20			
	e		25	21					-20.1		
	iS		34	49							
	iS		36	22							
March 1	iP	19	02	42.5		+50?	-12	+15	15:00½	-24.5	Local shock or blast 2 to 2½ mi WNW
	iS			43							
1	iP	20	14	31		+45	-10	+20	-25		
	iS			31.5							
1	iP	20	24	40		+12	+12	+2			Local shock or blast 2½ mi
	iS			40.5					-25		
1	iP	20	32	19		+35	-8	+10	-25		Local shock or blast 2½ to 3 mi WNW
	iS			19.6							
3	iP	20	36	52		+120?	-25	+50	15:00	+28.3	Local shock or blast 1 to 2 mi W
	iS			52.4							
3	iP	21	01	34		+100?	-20	+35	+28.3		Local shock or blast 1 to 2 mi W
	iS			34.4							
4	iP	06	27	02				-10	+27		
	e		27	50							
4	iP	06	43	45	1.2	+5	+10	+32			
	i		44	03					+26.8		
	eZ			46							
	e		45	53							
	e		47	01							
4	e	10	25	37							
4	i	10	47	22					+26.2		
4	i	16	01	02.0		-10	-?		15:00		
	iP			02.5		+30	-15	-22			Δ = 55 to 60 mi ESE?
	iS			13.5				100	+25.5		
4	iP	17	05	00		-26	+4	+10	+25.3		Δ = 60 mi E
				12		60		60			
4	iP	20	02	00.5	1.0			-10	+25.0		
5	eP	00	40	37				-	+24.4		U.S.C. & G.S. epicenter
	iP			40				-25			5.8° N Lat, 82.8° W
	e		43	27							Long. 0 = oh 31m 47s
											Δ = 50° (3450 mi)

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
5	iP	04	29	59				-8	+24		
7	iP	03	10	15		+	-	+15	15:00	+18.3	
	iP			18	1.8	40	40	75			U.S.C. & G.S. epicenter
	iPP		12	15							57 N Lat, 164 E Long,
	eS		17	08							O = 3h 01m 5s
	eSS		20	08							Δ = 49° (3380 mi)
9	ePKP	10	07	56					15:00	+12.2	U.S.C. & G.S. epicenter
											56 S Lat, 22 W Long.
											O = 9h 48m 37s
											Δ = 130° (8950 mi)
9	iP	20	30	18		-	-	-35	14:01		Dilatation from the SW
	iE			24					+11.3		
	iZ			53							
	iZ		31	32							
11	e	01	12	05					14:02	+8.5	
	i			26							
11	iP	01	13	37.8	0.6	?	-50	-50	+8.5		Regional shock
	iS?		14	00							~~Δ = 220 mi? S~~
	i			06		1300		1120			Felt in Colusa, Glenn,
	eSS		14	17.5	1.0			900			Lake and Medocino Count
11	eP	09	47	15	2.5						
	e		50	35					+7.6		
12	iP	16	36	33.5	1.0			+10	15:00	+4.0	
12	e	23	38	57					+3.2		
	eP		39	02							
	i		43	41							
14	iP	03	20	33.9		+75	-28	+50	15:07	-0.0	Light local shock
	iS			45			225				Δ = 55 mi WNW
14	i	05	43	42					-0.2		
14	eP	12	10	40					-1.0		
14	eP	12	54	12					-1.0		
14	e?	17	23	53					15:00½	-1.5	
	iP			56.5	3.0			+15			U.S.C. & G.S. epicenter
	e		34	44							22 S Lat, 170 E Long;
											O = 17h 11m 0s
											Δ = 89° (6140 mi)

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
14	iP	18	49	46	1.4	+	-	-15		U.S.C. & G.S. epicenter
	i		50	59					-1.7	21 S Lat, 71 W Long.
	e		51	27						0 = 18h 37m 8s
	i	19	00	17						Δ = 78.5° (5420 mi)
	i			38						
14	e	19	48	20					-1.8	
	e			38						
15	iP	01	03	48				+10	-2.3	
	i	01	35	32				+		
15	iP	02	37	24		-?		-20		U.S.C. & G.S. epicenter
	i			29					-2.3	21 S Lat, 169 E Long;
	e		47	49						0 = 2h 24m 6s
										Δ = 88° (6080 mi)
15	iP	05	00	50.4				-6		U.S.C. & G.S. epicenter
	iP		01	09	1.5			60	-2.4	10 N Lat, 142 E Long;
	eSKS		11	17						0 = 4h 47m 9s
	eSKKS			36						Δ = 90° (6200 mi)
15	iP	18	41	42		-		+	15:00½ -2.5	Probably a blast
	iS			42.6						Δ = 3 mi
15	iP	19	45	42.3		+?	-10	+10	-2.5	
	e		46	08						
15	iP	23	10	24.7	1.0	+16	+12	+55	-2.5	Depth of focus 185 mi
	ipP		11	33.5	2.5		-12	-50		Δ = 5175 mi (75°)
	ePP		13	07						U.S.C. & G.S. epicenter
	e		14	09						14 S Lat, 174 W Long;
	iS		19	35		-25	-10			0 = 22h 59m 2s
	eSKS		20	04						
	eSS		21	33						
15	e	23	37	53					-2.5	May be waves from pre-
	e		41	04						ceding shock.
16	iP	04	34	11		+		+45	-2.6	
16	iP	23	15	44		+		+10	15:00½ -4.6	
	iP			47	0.9	+	-	+38		
17	e	23	09	49					15:00½ -7.2	
	iP			54	1.5	-	+	+		
	i			59						
19	i	13	47	56					15:00½ -12.5	
	i		48	10						
	e			19						

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19	eP	17	32	12				-	-12.8	15:00½	
19	eP	22	09	23					-13.3		Small regional shock
	e			45							Δ = 200 mi
	eS		10	00							
20	eP	05	02	54					-14		
21	eP	20	48	44	2				15:00½	-18.2	U.S.C. & G.S. epicenter
	e		52	40							6 S Lat, 146 E Long;
	e		53	57							0 = 20h 35m 4s
	e		59	20							Δ = 95° (6550 mi)
	Coda	21	49		15						
22	iP	02	04	39.5	1.0			+	-18.5		
22	eP	08	37	54				+	-19.1		Δ = 86°
	e		41	50							
	eS		48	29							
22	e	23	30	15					15:00½	-20.8	
23	iP	20	09	42	1.0			-2	15:00½	-23.3	
	iP			42.3		+10	-5	+20			
	i		10	23							
24	e	09	02	49					-25.4		
24	iP	10	23	07.8				-10	-25.6		
	iP			10.4	1.0			50			
	e		24	45							
24	eP	11	40	55					-25.8		
	iP		41	10							
			50	52							
25	eP	11	44	33					15:00½	-29.1	Small regional shock.
	eS			52							Δ = 95 mi
25	e	18	46	18					15:00½	+30	
26	eP	02	51	15		+20	-		+29		Δ = 160 mi
	eS			45							
26	i	04	53	36.7				+10	+28.7		
	iP			38.7				+15			

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26	eP	17	50	20					15:00		
	iP			22		+15	+6	+25	+26.9		Focal depth 50 mi
	ipP			46.5			+	+110			△ = 81° WSW
	i		51	12							
	iS	18	00	18							
	isS		01	03							
27	eP	05	07	38.5		-6	-	+10			Small regional shock
	eS		08	13		+20	-10		+25.5		△ = 190 mi
27	iP	08	01	32.5				+?	+25.2		△ = 70 mi
	iS			46			50				
27	iP	18	23	59	1.0			-10	15:00	+24	
28	iP	00	34	40				+15	+23.2		
29	iP	05	33	58.5	1.3			+15	15:00	+19.5	
	iP		34	06.5							
	i			23							
29	i	11	46	24							
	i			43	0.7				+18.8		
	i			45							
	e		47	29			50	60			
30	eP	00	01	37					15:00		
	e			42					+17.5		△ = 210 mi
	i			46							
	i			56							
	i		02	10							
	eS			15	0.7			50			
30	iP	20	28	36		+?	-12	-6	15:00	+15.3	△ = 160 mi S
	i			37							
	iS			56	0.7			15			
	i		29	00							
30	iP	21	08	02.0		-25	+10	+15	+15.2		Regional shock
	i			15		550	400	400			△ = 170 mi ESE
	iS			33.2	0.7	1090	600	940			Reported felt from Ren
	i			39							to Sacramento
31	iP	00	58	03				+20	+14.7		
	i			31	0.7			10			
31	e	07	06	55							
	i		07	00					+14		
	i			37							
	e		08	30	1.5						

SHASTA DAM SEISMOLOGICAL STATION MONTH OF March 1943

Bureau of Reclamation and
Coast and Geodetic Survey

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△t is time correction referred to R. M.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
31	iP	08	56	48		+10	?	+15	+13.5		Δ = 60 mi W
	iS		57	00				50			
31	iP	09	07	27.5	0.3	+20		+10			Δ = 120? mi W
	iS			51.5					+13.5		
31	iP	21	18	46.5					15:00	+11.5	Δ = 40 mi
	iS			54.5			40				

In regard to the March 30th earthquake, 21h 08m G.C.T., the epicenter of this shock was located by virtue of data from Shasta Dam and Lake Mead stations in the general neighborhood of Truckee, California, although the location is fairly indefinite without benefit of control from Grand Coulee Dam and other stations. At the Grand Coulee Dam station, ground unrest due to impact caused by the Columbia River flowing over the dam is rather heavy and probably the beginning of the P-wave is masked out. The following is quoted from a preliminary copy which is to go into the abstracts prepared in San Francisco by the Seismological Field Survey of the Coast and Geodetic Survey:

"The earthquake was felt over a land area of about 10,500 square miles in northern California and western Nevada. The limits of the felt area extended from Fernley, Nevada, southwesterly to Markleeville, California, thence to Sacramento, then northwesterly to Colusa, and northeasterly to Las Plumas, Sierra City, Loyalton.

Intensity V was reported from Stewart, Nevada and Truckee, California. Fall of knickknacks was reported from Stewart, Nevada; felt by all from Truckee, California. No damage of any kind was reported from any locality."

In regard to the March 11th shock, questionnaires have been received by the Seismological Field Survey. March 11, 01h 13m G.C.T. The following are taken from questionnaires received by the Seismological Field Survey:

Ukiah, Calif. Motion slow; felt by few. "Felt stronger north of here. Felt at P. G. & E. Power Plant, Potter Valley. Centered probably 40 miles N to NE of here. Not strong enough to do any damage anywhere.

Stonyford, Colusa County, Calif. Motion abrupt; direction NW-SE; frightened no one; rattled windows, doors, dishes; creaked walls and frame; damage none.

Potter Valley, Calif. Felt by several.

Pillsbury and Van Arsdale Reservoirs. Motion rapid; felt by several.

Comptche, Medocino County. Motion rapid; felt by many; direction EW; rattled windows, doors, dishes; creaked walls and frame.

SHASTA DAM SEISMOLOGICAL STATION

INSTRUMENTAL REPORT - - - APRIL, MAY AND JUNE, 1943

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

The following shocks were felt in central California and questionnaires were collected by the Seismological Field Survey, 214 Old Mint Building, San Francisco, and abstracted as follows:

April 15 - 15h 23m G.C.T.: The earthquake was felt over an area of approximately 2,000 square miles, in west-central California. Limits of the felt area extended from Concord on the north, due east to Stockton, then due south to Vernalis, southwesterly to Palo Alto, thence westerly to Moss Beach on the Pacific Coast and then north to San Francisco to Concord. Maximum intensity of V was reported from Tracy, where a heavy floor lamp was shaken. Intensity of IV was reported from other localities in the felt area, where either rattling of windows, doors, and dishes was heard or the shock reported as being felt by many.

It seems probable that the main shock occurred at 15h 31m.

April 26 - 11h 54m G.C.T.: The earthquake was felt over a land area of approximately 1,545 square miles in west-central California. The limits of the felt area extended from Rio Vista on the north, southeasterly to Holt; southwesterly to Glenwood; westerly to El Granada on the Pacific Coast and then to San Francisco to Rio Vista. Maximum intensity of V was reported from Dublin (10 miles northwest of Livermore), Livermore, Moraga, Niles. Dublin is the only place reporting the overturning of small objects. Other localities in the felt area reported the rattling of windows, doors and dishes, and of the shock being felt by many or all.

Both of the above shocks were followed by a number of aftershocks.

May 31 - 20h 18m G.C.T.: This shock was felt in east-central California over an area of approximately 5,500 square miles. The limits of the felt area extended from Benton on the north, southeasterly to Deep Springs, thence due south to Olancha, thence northwesterly through Dunlap to Yosemite National Park and then east through June Lake to Benton. This shock appeared to be centered just north of Bishop and intensity V was reported at Bishop, Owens River Gorge, Tungsten City (15 miles north of Bishop), and Olancha. At Bishop, plaster was cracked in the school building, and the school was evacuated. A strong-motion record was obtained of this shock from the accelerograph located at Bishop.

The Mt. Lassen region was active during the period. The following shocks from this region may be of local interest:

May 2 - 16h 35m 22s G.C.T. Probable epicenter, Mt. Lassen Peak.

May 3 - 18h 45m 49s G.C.T. From Mt. Lassen or the Hat Creek region north of the Mt. Lassen Volcanic National Park. This should have been felt locally.

June 26 - 16h 43m 33s to June 27, 02h 01m 49s G.C.T. A swarm of 15 recorded shocks from immediate vicinity of Mt. Lassen Peak.

Other shocks:

June 2 - 15h 54m G.C.T.: 180 miles due west off Cape Medecino. This probably was too far at sea to have been felt on land.

June 25 - 17h 00m 16s G.C.T. From the records at Shasta Dam alone, this shock was located in the general region of southern Humboldt County about 75 miles SW of the station. It should have been felt in the epicentral area.

Bureau of Reclamation and
Coast and Geodetic Survey

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. Δt		Remarks
April 1	eP	04	13	11					15:00	+10.6	
	i			21	1.0			+15			
1	eP	14	37	17				-5	+9.1		
1	eP	21	07	15		-		+	15:00	+8.0	
	iP			15.7	0.4	+24	+	-25			Δ = 160 mi E.
	i			41.7							
	iS			45.5							
2	e	11	31	57					+5½		
3	iP	18	37	00		-40	+10	-20	15:01		Light local shock or blast
	i			00.4							
	iS?			02.7		disappears			+1		Δ = 2 or 14 mi WNW
4	iP	05	54	09	0.9	+10		+25	-0.2		
4	i	15	51	40				-10	15:00½	-1.2	
	i		54	40							
4	eP	18	50	56					-1.5		Very small local shock.
	iS		51	05			30				Δ = 45 mi.
4	i	22	30	59	0.9				-1.9		
5	eP	01	44	10.5					-2.1		
	iP			25.5				+10			
5	i	03	19	15					-2.3		
	e			46							
5	eP	08	29	11	1.5				-2.8		
5	iP	20	58	21	1.5			+15	15:00½		
	e			27					-3.9		
	e			44							
6	eP	16	19	49		+		+	15:00½		
	iP			51	1.0;4.0	-30	+20	+90	-5.5		Δ = 5750 mi SE
	eS		30	13							
	G		42.4		50						
	M		52		16	40					
	Coda	17	52		13,16						
6	e	20	31	59					-6		
6	iP	22	30	45.4		+10	-25	-			Small local shock
	iS			55				100	-6		Δ = 48 mi SSE

SHASTA DAM SEISMOLOGICAL STATION MONTH OF April 1943

Bureau of Reclamation and
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. Δt	Remarks
6	iP	22	42	39.5				40	-6	Small local shock
	iS			49						Δ = 48 mi
7	eP	00	16	03					-6.2	Small regional shock.
	e			27						Δ = 370 mi
	eS		17	07						
	iS			18						
7	e	06	26	07					-6.8	
7	eP	08	59	00	0.9			-10	-7	
7	eP	13	19	33.5						
	iP			39.5					-7.4	
7	eP	18	13	21					15:00½ -7.8	
7	iP	22	46	06	1.5	-		+20	-8.0	
	e		56	34						
7	iP	23	30	30.5	1.1			-10	-8.1	Small regional shock.
	eS		40	56						Δ = 120 mi.
8	iP	00	58	34		-40	+15	?	-8.2	Small local shock
	e			44						Δ = 50 mi
	eS			45.5			100±			
8	eP	01	01	12		Blur				Out of focus. Probably
	eS			13 to					-8.2	a blast 5 to 10 miles
				14						distant.
8	iP	18	10	13					15:00½ -9.5	
	iS			48.3				40		Δ = 190 mi.
8	iP	22	34	48.5		-25	-	-	-10	Small local shock or
	iS			49						blast.
										Δ = 2½ mi W.
8	iP	23	14	11				+	-10	
9	iP	09	00	46		-10	-	-20	-11.0	
	mP			49	3.5	390		300		Probable depth of focus
	i		01	14						140 mi.
	iPP?			43						Δ = 80° SW
	ePP		03	42						
	eS		10	31						
	iS			35		-90	+60			
	i		11	08						
	ePS			37						
	eSS			51				40		

SHASTA DAM SEISMOLOGICAL STATION MONTH OF April, 1943

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
9	e	23	40	55					15:00½	-12.5	
10	eP	03	04	26					-12.9		Regional shock
	iP			27		+	-	-15			Δ = 170 mi SE
	iS			58	1.0			120			
	i		05	23	1.7						
10	eP	08	21	17					-13.5		Δ = 165 mi.
	eS			48				20			
11	iP	06	03	48.5		+20	+15	+15	15:12	-16.1	Δ = 110 mi SW
	iS		04	11				25			
11	eP	14	57	21				+	-17.2		
	iP			28				+			
12	eP	04	27	04					15:00½		
	e		30	38					-19		
12	eP	09	13	48					-19.5		
12	iP	19	54	44		-		+6	15:00½	-20.8	
	iP			53.5	1.2	+		+25			Δ = 54½° (3750 mi)
	iZ		55	23							
	eS	20	02	28	1.7						
	iS			40							
12	i	20	34	18				+	-21		
12	e	21	36	58							
13	eP	04	45	51.5							
	iP			52.5				+	-22.0		Δ = 150 mi
	eS		46	20							
13	eP	06	48	44					-22.2		
13	eP	09	09	04.5				-	-22.5		
	iP			05.5	1.5		-	-20			
	iE			14							
	iZ			19			25	20			
13	eP	12	43	12					-23		
	e		46	42							
14	i	06	28	58				+	15:01	-24.6	
14	iP	11	21	01.5				+	-25.1		
	e			25							

SHASTA DAM SEISMOLOGICAL STATION MONTH OF April 1943

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
14	iP	19	30	32.3		+40	?	+?	15:00½		Light local shock or
	iS			33.0		Disappears			-26		blast.
											△ = 3½ mi.
15	eP	10	54	43					-27.6		
	iZ		55	03							
	e		56	00							
15	e	11	47	22	2.0				-27.7		
	e		48	23							
15	eP	12	29	05					-27.8		△ = 290 mi.
	eS			56				10			
15	eP	15	23	53.4					15:00½	-28.1	Foreshock of Livermore
	e		24	21.4							earthquake swarm.
	e			30							△ = 215 mi.
	e			34				48			
	iZ			53							
15	eP?	15	31	49							May be wave from preced-
	iP			51.5	0.8		-15	-15	-28.1		ing shock. Main shock
	i		32	01							of Livermore earthquake
	i			12							swarm. Felt in Central
	iS			30.5	1.2		160	175			California.
	i			34.5							△ = 215 mi S.
15	eP	15	38	07					-28.1		Aftershock of Livermore
	eS			47.5							earthquake.
	eS			50.1				50			△ = 220 mi.
15	eP	17	29	53							Aftershock.
	iP			59					-28.2		△ = 220+ mi.
	eS		30	37				60			
	i		33	24							
15	e	17	48	51							Faint waves of after-
			49	31					-28.2		shock.
											△ = 215 mi.
15	eP	18	00	08.8				-	-28.2		Aftershock.
	iP			11.3	0.8		-15	-14			△ = 220 mi. S.
	e			20							
	i			37							
	iS			51.3	2.0		75	52			
	Coda		07.5		4.0						
15	i	21	27	12					-28.5		
15	eP	22	08	32					-28.6		Probably an aftershock.
	i		09	11							△ = 215 mi.
	i			35							

SHASTA DAM SEISMOLOGICAL STATION MONTH OF April 1943

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
16	e	00	45	25	1.1				-28.9		
16	e	10	45	37					-29.7		
16	e	16	53	14					15:00	+30	
17	iP	00	48	10.7	1.4			+7	+29.4		
17	iP	01	48	49.3				+			
	iP			50					+29.3		Small regional shock.
	iS			08.3							Δ = 95 mi.
	iS			09.2							
17	iPZ	02	51	41	1.0			+8	+29.3		
	iPE		51	42							
	e		55	17							
18	iP	07	38	54			+20	+14	15:21	+27.5	Small regional shock.
	iS		39	14.5		40		50			Δ = 105 mi. S.
	i			28.5				50			
18	iP	07	48	39		+	+15	-5?	+27.5		Small regional shock.
	eS		49	08							Δ = 150 mi.
	iS			13			50	50			
20	iP	04	18	51				-10	+24.7	15:00	
20	iP	23	52	40				+	15:00	+23.2	Blast or local dis-
	iS			40.4				60			turbance 2 mi.
21	e	17	12	57					15:20	+21.6	Δ = 220 mi.
	i		13	11	1.3						
	i			38	2.0			25			
21	e	23	29	02					+21		
	i			18							
	i			40			40	35			
21	iP	23	40	35.5		+	-15	-12	15:20	+21	Livermore?
				50							Δ = 220 mi E of S
	e		41	11							
	eS			16	1.5	75	55	60			
	Coda		46		4.0						
21	i	23	58	47							
	eP			48				-10	+21		Δ = 230 mi.
	e		59	26	0.9			50			
	iS			30							
22	iP	14	06	38.5	1.2			-10	+20.0		

SHASTA DAM SEISMOLOGICAL STATION MONTH OF April 1943

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
22	e	17	21	52					15:00	+19.8	Probably an artificial disturbance lasting 95 sec.
	e			56				110			
23	iP	18	19	51.7	1.2			-6	15:08½	+17.9	
24	iP	06	30	56.5		-	+	-	+17.2		Δ = 43 mi NW?
	mP					40	25	30			
	iS		31	05.0		50	40	32			
25	iP	05	13	06.5	1.0	-		-20	15:00	+16.5	Regional shock. Felt near Livermore
26	eP	11	54	50					15:00		Δ = 200 mi S
	iP			52							
	i		55	11					+14.1		
	i			23							
	eS			27		100		75			
26	e	12	02	59					+14.1		Small aftershock. Δ = 210 mi.
	e		03	38							
26	iP	12	32	07	2.0	-		-20	+14		Aftershock
	iP			15	1.0						
	e		35	23							
	e		42	42							
26	e	18	24	47					15:00	+13	Small aftershock
	e		25	26							
26	e	23	33	07					+12.3		Small aftershock?
27	e	00	40	55					+12.1		Small aftershock
	e		41	31							
27	i	04	59	46				-	+11.7		
28	eP	00	34	15					15:00	+9.8	
28	eP	03	18	55					+9.5		
	e		19	17							
	i			24.5							
28-29	iP	23	54	58.2			+		15:00	+7.7	Δ = 74°
	i		56	53							
	eS	00	04	34							
	eS			45							

SHASTA DAM SEISMOLOGICAL STATION MONTH OF April, May 1943

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
29	iP	15	35	17.6	01.			-10	15:00	+6.6	△ = 61°
	e		42	24							
	eS		43	44							
29	iP	20	01	13.6				-	+6.2		
30	eP	06	55	31					+5.3		
	eP			46							
May 1	eP	02	52	24					15:00	+3.7	
	e		53	02							
	e			11							
1	iP	12	19	26.0				-	+3.0		
1	iP	17	09	45.5					15:01	+2.5	
	iP			58.5							
1	iP	21	08	55.7				+	+2.2		
2	eP	05	23	41.5					+1.6		△ = 200 mi.
	iP		23	44.0							
	i		24	13.5							
	iS			17.5							
	iS			20							
2	e	06	37	10					+1.4		
	e			24							
2	iP	16	35	37		-80	+25	+45	15:00½	+0.6	Light local shock 53 mi. ESE in region of Lassen Peak
	iS			47.5			350				
2	iP	17	27	02.5	2.0	-	+	+25	+0.5		U.S.C. & G.S. epicenter 6.4 N Lat., 80.1 W Long O = 17h 18.2m △ = 51° SE
	e		28	08							
	e		30	00							
	eS		34	17	3.2						
	eG		43.9		40						
2	eP	18	31	19					+0.4		
3	eP	02	12	44					-0.2		
	iP			47							
	e		16	14							
	i		17	13							
	e		23	08							
	e		26	48							

SHASTA DAM SEISMOLOGICAL STATION MONTH OF May 1943

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
3	iP	08	52	22						-0.7	△ = 45 mi.
	iS			31				40			
3	iP	10	23	40.5				-	-0.9		May be 2 earthquakes
	iP		26	23							
3	eP	12	53	22					-1.0		
3	iP	16	50	12.5	1.5			-10	15:00½	-1.5	
3	iP	18	46	02.6		+40	-720	+335	-1.8		Moderate local shock,
	i			11.1							△ = 48 mi., E., in
	iS			12.2		2500		550			Hat Creek or Mt. Lassen
											region.
3	iP	18	49	01					-1.8		△ = 45 to 50 mi.
	iS			10							
	iS			11							
4	iP	18	29	24.8	0.9	-15	+25	+50	15:00½	-4.0	
	i			54							
	e		31	03							
	e		39	10							
5	iP	21	32	08.6					15:00½	-5.3	△ = 18 mi. May be 2 local
	iS			12							disturbances
6	eP	10	18	33					-6.4		
	eP			48							
6	iP	17	59	02.3		+90	-50	+110	15:01	-7.2	Blast or local shock
	iS			02.8				320			2½ mi. NW to WNW
	i			05							
7	iP	20	34	03	1.8			+20	15:01	-10.0	
	i			10							
8	e	12	30	38					-12.1		
	i		31	08							
9	iP	23	14	52				-10	15:00½	-16.7	
10	iP	00	08	32				-10	-16.8		
10	e	05	52	34					-17.5		
10	e	10	15	38					-18.0		
12	iP	08	34	48.4				-10	15:01	-25.2	
	i		35	49							

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
12	iP	08	45	27.8				-20	-25.2		
12	i?	23	03	50					15:01	-27.2	
	i			29							
13	iP	03	07	59		-12	+25	+	-27.6		Small regional shock
	M					75	125	85			△ = 125 mi. WNW
	iS		08	23.5		75	70	40			
13	eP	23	22	23					15:00	+30.4	
14	iP	13	12	58					+29.1		△ = 65 mi.
	iS		13	11		80	80				
15	iP	02	29	44				-10	15:00	+2.8	
	i			51.5							
	ipP		30	22							
May 15 records missing											
17	iP	22	11	01.5					15:00	+23	Small local shock
	iS			10.5		75	50				△ = 45 mi.
18	e	06	17	46					+22.5		
	e		21	36							
20	eP	22	19	45.5					15:00	+17.5	
	eS			54.5							Very small local shock
	iS			55		45					△ = 45-50 mi.
21	iP	23	31	50				-	+15		
22	eP	09	14	32.0					+14.1		
	i			42.5							
	e		24	58							
23	iP	11	39.	34.3		+3	?	-	15:15	+12.0	
	i			41							Small regional shock
	i			51							△ = 95 mi. E?
	eS			53		125	100	75			
24	e	18	38	14					15:00	+09	
25	e	00	09	50					+08.5		
25	iP	11	50	44.3		+20	+4	+20	+07.5		
	i			48.5							△ = 105 mi. W
	eS		51	05.5		80					

SHASTA DAM SEISMOLOGICAL STATION MONTH OF May 19 43

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
25	iP	18	00	45.0		+262	-40	+80	15:00	+07.0	Local shock or heavy
	iS			45.6		600+	650	350+			blast. △ = 3 mi. WNW
25	iP	23	21	24.0	1.5	+	-	+30			Distant earthquake
	i		24	56					+6.5		U.S.C. & G.S. epicenter
	i		25	27							7½ N Lat., 126½° E Long.
	i			44							O = 23h 7.6m; Off
	i		31	28	2.6			90			Mindanao. △ = 102°
	e		34.1								
	eG		39.2		30						
	Coda	24	18		16.5						
26	eP	10	37	08	1.7	+	+?	-	+05.5		U.S.C. & G.S. epicenter
	iP			15.5							17½° N Lat., 106½° W Long.
	e		41	55							O = 10h 31.4m
	e		47	55							△ = 27°
27	iP	05	35	44	0.8			-20	15:00	+3.9	
28	eP	10	48	39.5					15:00½	+1.1	△ = 200 mi.
	eS		49	17							
28	iP	20	12	44.5	1.0	+	+	+10	15:01		
	e		14	57				-70	+0.2		
29	iP	09	21	4.8				-	-0.9		△ = 60 mi.
	i			15							
	iS			16.8			80	30			
30	eP	01	05	00					15:05	-2.5	
	iP			04.5							△ = 190 mi.
	e			23							
	eS			35							
	iS			51	1.0			25			
30	e?	07	52	59							
	e		53	15					-3.3		
	e			51							
31	eP	20	18	03					15:00½		Felt in Bishop, Calif.
	iP			13					-6.8		△ = 380 mi.
	iS		19	08							
	iS			11	1.0	180		110			
	iS			21							
31	eP	22	18	55.5					-7.0		
	i		19	03.5							
	i			43							

SHASTA DAM SEISMOLOGICAL STATION MONTH OF June 19 43

Bureau of Reclamation and
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
June 1	iP	00	05	11					-7	Small local shock
	iS			20		75		30		△ = 45 mi.
1	e	04	20	21					-7.4	
1	iP	09	06	43					-7.8	△ = 43 mi.
	iS			51.5				50		
1	iP	09	17	30				-	-7.8	Very small regional shock
	iS			55.5				20		△ = 135 mi.
1	iP	22	09	07				+10	15:00½ -8.6	
2	e	05	31	31					-9	
2	iP	15	54	02.7		+25	?	+20	15:00½ -9.8	Regional shock off
	iP			03.6			-			Cape Medecino
	iS			35.7	0.6	275	200	180		△ = 180 mi. due West
3	iP	12	24	39.8	0.7	-	-	-20	-11.2	Focal depth may be
	ipP		26	47						(600 km) 370 mi.
	i		34	14						△ = 84°
3	eP	20	05	16.5				-	15:00½ -12	
	iP			29				-45		
3	eP	20	59	36					-12.1	
	iP			42						
	i	21	00	11						
4	i	00	05	14.5				-45	-12.5	
4	eP?	00	47	20						Blast 2½ or 10 mi. away
	eP			21.5						
	iS			22					-12.6	
4	eP	02	19	58			-	-5	-12.8	Regional shock
	iP			59.2		-25	-20	-30		△ = 120 mi SW
	mP				1.0			480		
	iS		20	21.7						
4	iP	05	10	37					-13	△ = 100 mi.
	iS		11	57.5						
4	iP	09	51	03.7					-13.8	
4	iP	10	50	21.5				+	-14	
4	iP	11	53	26.4				+	-14.1	△ = 95 mi.
	eS			45.4						

SHASTA DAM SEISMOLOGICAL STATION MONTH OF June 1943

Bureau of Reclamation and
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
5	iP	20	39	37.4	1.0			-10	15:08	-18.4	
	i		40	34.4	2.0			-10			
	e		49	39							
6	iP	07	03	54		+135	+25	+90	-19.7		Light local shock
	i		04	01.8		500+	400				△ = 40 mi. W by SW
	i			15.4							△ may be 105 mi.
7	eP	23	39	07.5					-24.4	15:00½	
	iP			16	1.1			-10			
	e		41	04							
8	e	01	26	20					-24.5		
	i			29							
	e		30	25							
	e		33	26							
8	e	18	47	25					15:00½	-26	
	iP			28.5							
8	eP	21	01	39					-26.2		U.S.C. & G.S. epicenter
	e		03	34							19° N Lat., 116° E Long.,
	i			49							O = 20h 42.2m
											△ = 100°
9	e	03	25	10					-26.8		U.S.C. & G.S. epicenter
	iPP			16							9[illegible]° N Lat., 120° E Long.,
	eSK		32	10							O = 03h 6.7m
	e	04	10.6		45						△ = 107°
	Coda	04	40		16						
9	iP	04	15	07.7	1.5	-15	-10	-50			
	e		17	13					-26.8		
	eS		24	26							
9	iP	18	47	39.4				-10	15:00	-28	
10	iP	22	25	33.4		+100	-12	+30	+30		Local shock or blast
	iS			34.2			300	300			4 mi. West
11	i	01h to 03h									Several disturbances; some resembling blasts at 2 or 3 mi.
12	iP	16	18	12.4				-	15:07	+27.4	
13	e	04	30	10					+26.5		

SHASTA DAM SEISMOLOGICAL STATION MONTH OF June 1943

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
13	iP	05	22	36.5				-	+26.5		U.S.C. & G.S. epicenter
	iP		23	03.1	1.5		+	-220			43° N Lat., 142° E. Long.
	i			27.5							O = 5h 11m 44s
	eS		31	28		3.0					On Island of Hokkaido, Japan. △ = 67°
13	e	05	50	51					+26.5		
	e		51	36							
13	iP	06	09	08.4				+	+26.4		△ = 71°
	iP			15.4							Depth of focus = 95 mi.
	iPP			45.4	1.6			+			
	iS		18	05							
	isS		19	04							
13	eP	08	26	58					+26.3		
	iP		27	01.3							
13	iP	08	47	53.7				+	+26.2		△ = 71°
	iP		48	06.5							Depth of focus 100 mi.
	iPP			30	1.5			-60			
	e			55							
	e		49	08							
	iS		56	50							
	isS		57	48							
	e		58	33							
13	eP	09	02	16.7					+26.2		
	iP			32.0				-15			
13	eP	16	33						+25.7	15:00	
13	eP	17	50	09.5					+25.6		△ = 67°
	iP			13.5							Aftershock of Japanese earthquake
	eS		59	07							
13	iP	21	36	49.3		+	+		+25.3		△ = 50 mi. SW?
	i			57.3							
	iS			59.5				50			
14	eP	03	20	01					+25		
	e		21	14							
	e		25	03							
14	eP	16	33	19					15:00	+23.9	Aftershock of Japanese earthquake
	iP			29							
	eS		42	16							
14	e	17	26	47					+23.8		
	eP			53							
	e		30	59							
	e		31	49							

SHASTA DAM SEISMOLOGICAL STATION MONTH OF June 19 43

Bureau of Reclamation and
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
14	eP	17	42	40					+23.8		
	iP			50							
	e		44	30							
14	iP	20	20	21				+10	+23.6		
	i		29	51.5							
15	eP	00	06	00					+23.3		
	iP			01.8				-30			
	i		06	46							
15	eP	11	21	39					+22.6		Δ = 71°. Depth of focus 100 mi.
	iP			44.5							
	ipP		22	22.5							
	iS		30	48							
	ePS		31	04							
	esS			31							
15	eP	18	28	47					+22.1		U.S.C. & G.S. epicenter 14½° N Lat., 93° W Long.; 0 = 18h 21.7m Δ = 40°
	e		30	09							
	e		37	25							
	e		39	07							
	e		41	45							
	G		40.7		30						
	Coda	19	00		08						
15	iP	19	52	18.4					+22.1		
	e		53	58							
15	e	20	32	44					+22.1		
15	iP	23	46	08.5					+22.0		
	e			48							
17	iP	01	21	04.5		+		-	15:00	+20.5	Δ = 130 mi.
	eS			29.5			30				
	iS			31.5							
18	iP	09	19	53.0				-	+18.5		
18	iP	16	37	13.2					+18.2		
18	e	19	35	03					+18		
	iP			07							
19	e	09	18	28					+17		
19	iP	18	51	45.6		-16	?	+	15:01	+16.1	Small local shock Δ = 45 mi. E
	iP			46.3							
	iS			54.6				60			

SHASTA DAM SEISMOLOGICAL STATION MONTH OF June 1943

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
20	eP	15	46	04.5					15:00	+14.5	
	e		49	58.5							
21	eP	10	22	57					+12.5		10 hrs. of record lost
21	iP	22	34	16		+80	-10		+11.5		Blast 3 mi. N of West
	iS			16.6		130					
22	eP	08	41	00					+10.5		Very small regional shock
	eS			25.5							Δ = 130 miles
22	eP	08	42	37.5					+10.5		Small regional shock
	iP			40.3							Δ = 130 mi.
	iP			41.8				-			
	iS			59.5							
	iS		43	01.5			40	30			
22	e	15	32	34					15:00	+9.9	Δ = 350 mi.
	eP			38							
	iP			42							
	iS		33	35		40					
22	eP	20	02	19					+9.4		
	e		04	30							
23	iP	08	04	46.5		+10			+8.1		Small regional shock.
	eS		05	07.5		30					Δ = 110 mi.
23	iP	17	30	24.5		-	+	+15	15:00	+7.2	
24	iP	12	27	24.3	1.0	+	-	-20	+5.3		
	iP			30.8							
	eS		37	11							
24	iP	16	01	12.2		+130	-30	+45	15:00	+5.0	Local shock or blast
	iS			12.8		310	250	260			Δ = 3 mi N of West
24	eP	20	34	00					+4.5		
	iP			03.0				-			
	iP			45	1.5			-			
	eS		44	00							
25	iP	04	28	51.5				-10	+3.9		
25	iP	17	00	37.8		+175	+70	+130	15:00	+2.8	Moderate regional shock.
	i			40.3							Δ = 75 to 80 miles WSW.
	i			43.5							Epicenter probably in
	i			49.5							Southern Humboldt County.
	iS			54.3	1.0	980	560	650			

SHASTA DAM SEISMOLOGICAL STATION MONTH OF June 19 43

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
25	iP	17	05	54		+6	+	+	+2.8	Small aftershock
	i			59.4						
	eS		06	09.8				30		
25	eP	17	18	34.8					+2.8	Very small aftershock.
	e			46.3						
	eS			52.3						
25	eP	18	45	05					+2.7	Very small aftershock
	eS			20						
25	iP	19	24	33.6					+2.6	
	i			43.6						
	iP		26	28.6				+		
	iS		33	43.6						
25	iP	22	04	54.7		+25	+15	+25	+2.5	Light aftershock
	i			56.9						Δ = 80 mi. SW to WSW
	i		05	00.0				65		
	iZS			06.0				75		
	e		07	09.5				85		
	iS			11.0				120		
	eS			15.5		190				
26	eP	01	46	24					+2.2	Very small aftershock
	eS			39						
	eS			41						
26	iP	07	57	49.7		+20	-	-	+1.7	Very small local shock
	iS			53.0		40		40		or blast 16 mi. E
26	iP	16	43	47					15:01 +1.0	Very small foreshock of
	iS			56						Mt. Lassen swarm.
										Δ = 45 mi.
26	iP	16	45	10.5		-			+1.0	Very small foreshock of
	eS			20						Mt. Lassen swarm.
										Δ = 45 mi.
26	iP	17	26	49		-			+1.0	Very small foreshock of
	iS			58						Mt. Lassen swarm.
										Δ = 45 mi.
26	iP	18	10	46.6		-45	+10	+25	+01.1	Small local shock 47 mi.
	iS			56		120		60		S of East. Epicenter
										on or near Mt. Lassen.
										Unless otherwise desig-
										nated, this and the next
										15 shocks have nearly
										the same source.

SHASTA DAM SEISMOLOGICAL STATION MONTH OF June 1943

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
26	iP	18	14	13.8		-25	+5	+15	+01.0	
	iS			22.5		50		40		
26	iP	18	55	55.1			+	+10	+1.0	Very small swarm type
	iS		56	04.5				10		
26	iP	18	56	52.0		-10	+	+5	+1.0	Very small swarm type
	iS		57	01.0				10		
26	iP	20	30	38.4		+10	?	+	+1.0	Δ = 130 mi W.
	eS		31	04.4				10		
26	e	20	45	25.0					+1.0	Faint trace from distant shock.
26	eP	21	39	20					+1.0	Very small swarm type
	e			29.5						
26	iP	21	58	44				+	+1.0	Very small swarm type
	iS			53						
26	iP	22	35	41.5		-40	+12	+15	+1.0	Small shock of Mt. Lassen swarm. Δ = 45 mi. ESE
	iS			50.5		75	60	30		
26	iP	22	37	04.3		-100	+20	+30	+1.0	Small shock of Mt. Lassen swarm. Δ = 45 mi. ESE
	iS			13.3		125	150	80		
26	iP	23	39	06		-			+1.0	Very small swarm type
	iS			15						
27	iP	00	33	45.0		-25	+10	+12	+1.0	Small shock of Mt. Lassen swarm Δ = 45 mi. ESE
	eS			54.0		50	30			
27	iP	01	26	50		-			+0.8	Very small swarm type
	eS		27	00						
27	iP	01	35	16.2		-75	+22	+40	+0.8	Small shock of Mt. Lassen swarm. Δ = 48 mi. ESE
	iS			25.7		130	100	50		
27	iP	02	02	02.5		-15	+5	+5	+0.7	Very small swarm type
	iS			12						
27	iP	09	47	43.9					+0.3	Small local shock or blast. Δ = 12 mi.
	iS			46.3		70	75	40		

SHASTA DAM SEISMOLOGICAL STATION MONTH OF June 1943

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. Δt		Remarks
27	iP	15	21	05				+5	15:00½	0.0	Δ = 75 mi.
	eS			20.5							
	eS			21.5				40			
28	iP	01	15	04	1.2			+15	-0.8		Preliminary waves of distant shock
	iP			27.2							
28	eP	02	54	39.1	1.3				-0.9		
	i		55	07.1							
28	iP	11	43	08.7		+16	+30	+45	-1.6		Light local shock Δ = 30 mi. SSW
	i			13.9							
	iS			14.7		400+					
28	iP	15	12	56.8			-10		15:00½	-1.9	
	eS		18	59							
28	iP	19	17	58.5			-20?		-2.1		
	iS		18	15			100				
29	iP	04	43	25			+		-3		
29	eP	04	55	18					-3		
	i			37							
	i			51							
	i		56	02							
29	eN	09	23	17					-3.4		E & Z defective faint trace of distant shock.
30	eP	11	02	49					-5.7	15:00½	
30	iP	11	06	31.3				-	-5.7		
	iP		07	28				+30			
	i			32	1.5						
	i		12	21							
30	e	19	10	04					-6.4		
	e			21							
30	e	20	24	15					-6.5		U.S.C. & G.S. epicenter
	iP			16.3				-20			14½° S Lat., 74° W Long.
	e		30	30							0 = 20h 13.0m
											Δ = 71°
30	iP	22	24	13.3		+70	-10	+30	-6.6		Sharp local shock or blas
	iS			14.0			225	110			Δ = 4 mi. W.

SHASTA DAM SEISMOLOGICAL STATION

(MINERAL SEISMOLOGICAL STATION)

INSTRUMENTAL REPORT - - - JULY, AUGUST, AND SEPTEMBER, 1943.

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

The old portable chronometer was replaced with a Mercer land type chronometer on September 21. Several weeks thereafter the contacts thereof gave somewhat erratic performance until proper adjustment had been made. However, otherwise smooth performance of the instruments made accurate time control possible. Initial ground motion response of the seismometers was tested September 21-25.

The Wood-Anderson seismograph at Mineral was inspected and adjusted on September 19-20. The Mineral station is located at the National Park Service headquarters about 1 mile west of Mineral and 47 miles S 60° E from the Shasta Dam station. The approximate geographic coordinates are 40° 21'N, 121° 37'W. This station is operated jointly by the National Park Service and the University of California. Mr. Harry B. Robinson, Jr. Park Naturalist is in charge. The records retroactive to August 29, are now being forwarded to the Boulder City office for review from whence they are forwarded to Berkeley where they are kept on file. Data from the Mineral records appearing in these reports are of local and certain regional shocks only with particular emphasis on shocks local to the Shasta Dam area.

The following shocks may be of local interest:

July 22 - 00:10:52 G.C.T. : 61 or 110 miles west of south. This shock should have been felt in the epicentral area.

July 29 - 19:23:12 G.C.T. : Heavy blast 7½ miles SW. This explosion was accidental.

August 9 - 05:30:09 G.C.T. : Felt in Western Nevada and mid-Eastern California. Tentative epicenter mid way between Bishop, California and Tonopah Junction, Nevada.

SHASTA DAM SEISMOLOGICAL STATION MONTH OF July 19 43 1.

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
△t is time correction referred to R. M.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
July 1	iP	04	51	06	1.2			+25	-7.1		
	e		59	28							
1	eP	05	58	44					-7.3		
	iP			45.1				-			
2	iP	14	00	12.5					15:00½	-9.5	
	i			46.5							
	e		02	03							
3	iP	19	39	33.5		+			15:08	-10.5	
	e		41	23							
4	iP	20	03	15.2		-10	?	-	15:00½	-12.4	Δ = 100 mi. W
	iS			34.6		58					
4	e?	22	29	12.5					-12.5		
	i		33	27.5							
5	i	16	31	45					15:00½	-13.3	
	i		32	53							
5	eP	21	19	14					-13.6		U.S.C. & G.S. epicenter 17½° S Lat., 73° W Long. O = 21h 07.6m Δ = 75°
	e		29	16							
6	iP	08	11	59.1		-10		-	-14.3		Δ = 55 mi. W
	iP		12	00.2							
	i			09.3							
	iS			10.6		50					
6	iP	09	51	31		+		-6	-14.4		Δ = 220 mi.
	iS		52	11	0.9						
6	iP	22	15	04.6		-90	+125	+60	15:00½	-15.3	Blast 2 mi NW
	iS			05				275			
7	iP	12	58	17.7					-16.3		Δ = 84°
	eS	13	08	44							
7	eP	13	40	04					-16.3		
8	iP	22	59	03		+35			15:00½	-19	Blast? Δ = 3 mi W?
	iS			03.6		125					
9	eP	07	32	22					-19.6		Δ = 300 mi.
	eS		33	11							

SHASTA DAM SEISMOLOGICAL STATION MONTH OF July 1943

Bureau of Reclamation and
Coast and Geodetic Survey

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
9	iP	23	35	02.2		+8	-		15:00½	-21.0	
	iP			03.2		+35	-20				Δ = 70°
	e		44	19							
10	i	00	10	42					-21		
10	e	03	15	37					-21.2		
11	eP	02	23	06					15:21	-23.8	
	iP			09.2		+	-				Estimated focal depth 125 mi.
	ipP			53							Δ = 92°
	eS		33	41							
	eSS		34	45							
	e		48.6		15						
11	iP	03	33	23.9		-35	-20		-23.9		Δ = 23 mi.
	iS			28.6		80					
12	iS	16	56	48		+50	+?	+15	15:00	+31.2	Blast 3 mi W
	iP			48.6							
12	i	22	18	43.5					+30.5		
12	iP	22	34	08.4		+140	-15	+30	+30.5		Heavy blast 3 mi W
	iS			09				500			
13	iP	23	15	46		+			+27.6		Blast 3½ mi.
	iS			46.7		50					
14	iP	07	27	21		+		+	+26.7		Very small local to regional shock.
	iS			42.7							Δ = 110 mi.
14	e	10	46	26	1.0				+26.4		
	e		47	41							
	e		48	36	6.0						
14	e?	19	54	49					15:00	+25.5	
	e		57	55							
15	iP	07	40	54.5				+	+24.5		
15	iP	20	51	02.7				-20	15:00	+23.2	
	e	21	01	33							
16	iP	01	30	58.8				-	+22.8		
	eP			12.3							
	iP			15.3							
16	iP	08	20	25.5				+	+22		

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
17	iP	06	41	20.4		+25	?	+15	15:00	+19.3	Δ = 110 mi W
	iPN			22			+25				
	eS			41.7		120	40				
18	iP	08	08	14.5	0.7			+10	15:06		
	iP			24	1.2			30	+16.5		
	i		14	19	1.3						
	i			48							
18	iP	23	22	59		+35	-38	+25	15:00		Sharp blast 2 mi NW
	iS			59.4		300	250	150	+15		
19	iP	15	50	45		+40	-10	+	+13.6		Blast 4 mi W
	iS			45.8				110			
20	i	01	25	44				-	15:00	+12.8	
20	iP	11	06	18.7		+67	-60	-50	+11.8		Light to moderate local shock 30 to 33 mi SE
	i			23.3							
	iS			25.3		350+	850+				
20	iP	11	45	57.7				+	+11.7		Very small regional shock Δ = 180 mi.
	eS		46	28.7							
20	iP	20	06	55.5		-10	?	-	15:00	+11.0	
	iP			56				+			
	iS		07	04.3		40					
21	eP	04	25	33.5					+10.3		
	iP			39.1	1.1						
21	iP	22	52	36.5				-4	15:00	+8.5	
21	iP	23	15	52.8		+40	-28	+25	+8.5		Sharp blast 2 mi NW
	iS			53.2		300		150			
22	iP	00	11	10.2	0.4	-12	-50	-50	+8.4		Moderate local or regional shock. Δ = 61 or 110 mi W of South
	M				0.8	400		130			
	i			21.4		900					
	iS			31.6		1240					
	iS			32.7	1.2			1650			
	Coda		15		1.6						
22	iP	02	18	54				-7	+8.3		
22	iP	10	37	27.7		+			+7.5		Very small regional shock Δ = 90 mi.
	iP			28.8				-			
	iS			45.5							
	iS			47.5							

SHASTA DAM SEISMOLOGICAL STATION MONTH OF July 19 43 4.

Bureau of Reclamation and
Coast and Geodetic Survey

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
22	iP	22	32	46		+125	-45	+90	15:00	+6.5	Blast 2 mi WNW
	iS			46.4				275			
23	e?	15	07	31					15:00	+5.0	U.S.C. & G.S. epicenter
	iP		11	59.7				+			10½° S Lat., 117½° E Lon
	iPZ		12	02.7	3			+55			
	iPZ		12	24.2	2						
	iZ		13	36.5	3						
	i			47				75			
	i		20	34							Δ = 112°
23	iP	23	11	19.6		+40	-20	+	+4		Blast 2 mi WNW
	iS			20		155					
25	i	01	34	55				-	15:01	+1	
25	i	07	41	37					0		
26	eP	20	03	14					15:01	-4	
27	iP	11	14	41		-15	+5	+	-6		Small local shock
	iS			52		+20	+15				Δ = 55 mi ESE
	M					75		20			
28	iP	01	48	48		+20	-15	+	15:00½	-7.6	Blast 2½ mi NW
	iS			48.5		200					
28	iP	04	10	12.5		-	+	-10	-8		
	iP			20.5	1.8	30					
29	iP	03	11	20	0.8	?		+10	-10.2		
	i			47		100		210			Distant earthquake
	e		14	34	4						U.S.C. & G.S. epicenter
	iS?		18	43	7						16.9° N Lat., 67.0° W Lo
	e		23.1		15						O = 3:02:14
	e		28.4		30						Δ = 51°
	M		30		15	175					
	Coda	04.3			13±						
29	iP	19	23	14.1		+32	+20?	+10	15:04	-11.5	Heavy blast
	iS			15.6	04	200	160				7.5 mi SW
	i			16.5				115			
29	i?	19	23	40.4?		-			-11.5		Sharp impulse from beneath. May be part of blast.
	i			41.9		45	+138	-500			
29	iP	19	44	44.8		+8		+	-11.6		Δ = 90 mi.
	iS		45	03		75					

SHASTA DAM SEISMOLOGICAL STATION MONTH OF July August 1943 5.

Bureau of Reclamation and
Coast and Geodetic Survey

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
29	iP	20	20	05.6		+12		+6	-11.6		Δ = 110 mi W
	i			14.9	0.4	140		70			
	iS			26							
30	iP	01	11	36.3				+	-12.2		U.S.C. & G.S. epicenter
	e		15	12.8							18.9° N; 67.0° W;
											O = 1:02:32
											Δ = 52°
30	e?	03	38	27?		?			-12.3		Blast or local dis-
	i			32.6							turbance probably 2 mi.
	i			33		80					
30	i	05	03	01			-		-12.5		Very small disturbance
	i			14.5							or local shock
											Δ = 17 mi?
30	iP	10	14	44				-			Very small regional shoc
	iS		14	02					-13		Δ = 90 mi.
30	iP	23	10	13.4		+25	-18	+10	15:00½	-14.1	Blast 2 mi NW
	iS			13.8		350		275			
31	iP	17	39	09				+?	15:00½	-15.9	
31	iP	23	12	10		+24	-25	+10	-16.4		Blast 2½ mi NW
	iS			10.5				150			
August											
1	iP	06	57	27				-?	-17		
1	iP	14	27	32	1.0			+10	-17.4		
1	iP	16	31	06.8	1.3	+	+	+40	15:00½	-17.5	
	iE		32	02.5							
	iE			18.5							
	iS		41	28.5				-20			
	eS		42	28.5							
2	iP	05	39	46					-18.2		Very small local shock
	iS			57							Δ = 55 mi.
2	i	05	45	36					-18.2		
	i		46	05							
2	iP	08	49	43.6					-18.4		
2	eP	13	33	40					-18.7		Δ = 65 mi.
	iP			44.3							
	eS			52.8							

SHASTA DAM SEISMOLOGICAL STATION MONTH OF August 1963 6.

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
3	eP	16	21	14.4					15:00½	-21.0	Seismic origin doubtful
	iP			18							
	e			27							
	e			29.5							
3	iP	18	01	40.8		+*	-170	+64	-21.0		Local shock or heavy blast 2½? mi N of W
	iSN			41.3?		*		*			* trace disappears
3	iP	18	13	00.1		+175	-30	+65			Sharp blast 3½ mi N of W
	iS			00.8				500+	-21.1		
3	iP	21	20	15.2		-10	-10	+10	-21.4		Light local shock
	M				0.2			90			Δ = 37 mi NE
	iS			22.6				+90			
	M							200			
4	iP	03	00	28.6		+15	-15	+10	-21.8		Blast 2 mi NW
	iS			29				125			
4	iP	09	34	17					-22.3		Seismic origin doubtful
	eS			27		+50					
4	iP	23	13	03.6		+40	-30	+15	-23.5	15:00½	Blast 2 mi NW
	iS			04				200			
5	iP	06	02	38		+	?	+?	-24		Very small regional shock 110 mi W
	iS		03	00							
5	iP	08	21	29					-24.3		Very small local shock Δ = 45 mi.
	iS			38							
5	iP	17	25	43					15:00½	-25.0	
6	eP	02	50	16					-25.3		Δ = 28 mi.
	iS			21.5		60					
6	iP	08	28	36		-	?	+?	-26.3		Δ = 40 mi S
	iS			44		70					
6	iP	12	14	43				+	-26.5		
7	iP	03	01	02		+10	-10	+	15:00½	-28	Blast 2½ mi NW
	iS			02.5		140					
7	e	11	11	54					-29		
8	iP	00	47	47.5				+	15:04	+30	
	iP			57				+?			

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
8	iP	03	06	21		+30	-26	+15	+29.8		Blast 2½ mi NW
	iS			21.5				250			
8	iP	03	29	29.3	0.2	+50	-15	+25	+29.8		△ = 70 mi WNW
	i			42							
	iS			43	0.4	200					
9	iP	05	31	12.1	0.8	-20	+15	+25	15:00	+27.2	Regional shock. Reported felt in Bishop and upper Owens Valley Region. △ = 300 mi SE
	iP			23.8							
	i			32.5				1140			
	i			45							
	eS		32	04.5							Tentative epicenter ~~about 18 mi N~~ of Bishop 20 to 30 mi NE
	iS			21.6	1.5	1560	880	1440			
	i			37							
	Coda				4.0						
10	iP	04	00	21.5		-5			15:00	+25.1	
10	e	12	25	02					+24.4		Probable aftershock of Owens Valley earthquake
	iP			10							
	iP			20							
	eS			48		140					
	iS			52							
10	eP	13	35	47					+24.3		Probable aftershock of Owens Valley earthquake
	iP			53							
	i		36	20							
	eS			35		50					
10	e	14	06	06					+24.2		
10	iP	15	22	17	1.7	+		-24	15:05	+24.2	U.S.C. & G.S. epicenter 54° N Lat., 161° E Long △ = 52°
	iS		29	28							
10	iZ	15	45	29				-	+24.2		Compression from NE △ = 52°
	iP			31.4	0.9	+	-	+10			
	i		46	14							
	iS		52	46							
10	iP	15	53	14				+10			
10	iP	18	08	59.2		+10	-10	+	+24.0		Blast 2½ mi NW followed by sharp downward impulse toward NNW. Origin of latter unknown
	i			59.7		100		60			
	i		09	06.4		-33	+70	-290			
10	e	23	36	45					+23.4		Probably a small aftershock of Owens Valley earthquke.
	eP			49							
	eS		37	30							
11	iP	05	32	38				-	+22.8		

SHASTA DAM SEISMOLOGICAL STATION MONTH OF August 1943 8.

Bureau of Reclamation and
Coast and Geodetic Survey

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
11	iP iS	16	14 15	34 00					15:00	+22	Very small regional shock Δ = 140 mi.
12	iP	05	02	03	1.4			+20	+21		
13	iP iS	02	44 45	59 09		– 40	?		15:00	+19	Δ = 50 mi E
14	iP iS	03	11	06 06.4		–10 80	?		15:00	+17.0	Small blast 2 mi W?
14	iP iS	07	36	00.7 07.2		–		+	+16.7		Very small local shock Δ = 33 mi.
14	iP	08	20	43	1.8			+15	+16.7		
14	iP iS	23	18	11.5 12		+ 60	–		15:04	+15.5	Blast 2½ mi NW
15	iP i	00	22	16.4 29				+15	+15.4		
15	iP i	02	42	01 15		–		+10	+15.2		
15	eP	13	10	58					+14.5		
15	iP i iS	18	21	47 47.5 53.8		–10 60	–10	+	15:00 +14.0		Small local shock 34 mi NE
16	iP M iS	21	48	01.2 35.5	 0.3 0.5	+25 420 650	? 125 250	+15 150	15:00	+12.2	Regional shock off Pt. Mendecino. Δ = 185 mi W
17	iP	01	16	11.5				+	+12.0		
17	i i	09	16 17	48 14				 +	+11.3		Seismic origin doubtful
17	e	09	22	03	1.8				+11.3		Seismic origin doubtful
17	iP?	15	37	36				+	+11.0		
18	iP	16	39	42.5	0.9	+6		–15	+8.9		
18	iP iS	22	19 20	48.5 09		+6		–15	+8.4		Very small regional shock Δ = 105 mi.
19	iP	05	18	30.3	1.0			+?	+7.8		

SHASTA DAM SEISMOLOGICAL STATION MONTH OF August 19 43 9.

Bureau of Reclamation and
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
19	iP	10	51	03.4				+6	+7.4		
	iP			11							
20	iP	01	05	02.7				+	+6.3		
20	iP	01	35	47.3	1.4			-7	+6.3		Δ = 89°
	eS		46	36	2.4						
20	iP	03	10	34.8	0.9			-10	+6.2		
20	iP	18	53	37					15:00	+4.9	Δ = 55 mi.
	eS			48							
21	iP	06	21	01.4		+3		-	+4		Δ = 53 mi.
	iS			12		50		40			
21	iP	06	57	12		-			+4		Very small local shock
	iS			22.6		40					Δ = 53 mi.
21	iP	08	13	14		+12	?	+10	+3.8		Small regional shock
	e					80		50			100 mi W
	iS			34							
21	e	09	21	22		+		+?	+3.7		Δ = 65°
	iP			23				-10			
	eS		30	12							
21	iP	21	11	05		+			15:03	+2.8	Δ = 40 mi.
	iS			13		100					
22	eP	01	35	50					+2.4		
	i		36	05							
22	iP	11	10	50		+			+1.5		
23	iP	03	00	04.6		+15	-12	+8	15:00	+0.2	Blast 2 mi NW
	iS			05.0		120		150			

SHASTA DAM SEISMOLOGICAL STATION MONTH OF August 1943

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
August 24	iP	03	01	34		+10	-10	+	15:00½	-1.8	Blast 2+ mi. NW
	iS			34.5				75			
27	iP	00	53	47.6				+10	-7.2		
27	e	04	16	49					-7.4		
27	eP	10	28	18.5							
	iP			21.9				+8?	-7.9		Δ = 1060 mi.
	iP		31	21							
27	iP	11	28	07		+		+10	-8		
28	e?	10	21	28					-9.5		Δ = 1100 ? mi.
	eS		24	37				15			
28	iP	23	08	12.6		+48	-38	+25	15:01	-10.5	sharp blast 2 mi. NW
	iS			13.0		300+		300			
29	ePZ	03	47	08.5	1.0				-11		Moderate regional shock
	ePEN			14							Δ = 680 mi.
	i			34							
	iS		49	11	2+						
	iS			14		400		200			
	Coda		59		3						
29	e	04	01	56	1.2				-11		
30	iP	09	37	23		+15	-	-	15:00½	-13	Small local shock
	iS			25.6		80					13 mi. ESE
30	iP	22	20	53.6		+5		+	-13.8		Very small local shock
	iS		21	03				50			Δ = 47. mi.
30	e	23	41	38	1.2				-14		
31	i	06	59	38	1.0				-14.4		
31	iP	16	17	52.6		+			-15.1		
	iE		18	34	1.2			02			May be two earthquakes.
	i		20	10							
	i			29							U.S.C. & G.S. epicenter
	i		23	48							13½°N. 91½°W. O =
	iEN		28	03							16 h 10.5m Δ=38½°
	i			37							
	e		30	28							

SHASTA DAM SEISMOLOGICAL STATION MONTH OF September 19 43 11.

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.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. Δt		Remarks
September 1	i	00	46	05.3					15:00½	-15.7	
	e			32							
2	iP	03	07	33.6		+60	-50	+25	-17.6		Sharp blast 2 mi. NW
	iS			34.0		300+		260			
2	iP	09	14	35	0.9				-18		
3	iP	20	05	30.6		+	-	+135	15:00½	-20.4	Sharp blast 2 mi.NW
	iS			31.0				500			
4	e	07	35	37					-21.2		Faint trace of distant earthquake
	e		37	21	8						
5	e	08	49	09					15:01	-23.1	U.S.C. & G.S. epicenter 0° Lat. 125° E; 0 = 8h 34.8m
	e		52	23							
	e		53	07							
6	e?	03	56	56					15:00½	-24.5	
	ePKP	04	00	10.5							U.S.C.& G.S. epicenter 53.2°S, 159.4°E. 0 = 3h 41.5m. Δ = 116°
	ePP		01	08.5	4			40			
	ePS		10	41.5							
	e		38.3		20						
	Coda	05	20		16						
6	iP	08	31	47.5		+10		+10	-24.7		
	iS		32	07.0		150		100			Δ = 100 mi. W.
7	iP	05	03	50		-			-26.1		Small local shock
	iS			58.5		70					Δ = 43 mi. E?
7	iP	05	12	23					-26.1		Small local shock
	iS			31.5		50					Δ = 43 mi. E?
7	e	19	32	19					-27.1		
9	eP	04	19	50					14:49	-29.2	Δ = 85°
	iS		30	12							
	eS		31	37							
10	iP	02	40	43				+?	15:00	+29.4	U.S.C.& G.S. epicenter 18.9°N. 67.0°W. 0 = 2h 31.6m Δ = 53°
	e		44	41							
10	iP	07	11	40.5		-15	+4	+	+29.2		Small local shock
				53.5		150		90			Δ = 65 mi. ESE
10	eP	08	48	45.5					+29		
	iP			48	1.5	-	+	-20			Dilatation from the NW
	m					75		150			Δ = 77.5°
	iS		58	40							
	Coda	09.8			16						U.S.C.& G.S. epicenter 35.1°N. 133.3°E; 0 = 8h 36.9m.

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SHASTA DAM SEISMOLOGICAL STATION MONTH OF September 19 43

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
△t is time correction referred to R. M.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t		Remarks
September											
10	iP	09	16	47.8				+10	+29		
10	i	09	30	44				+	+29		
10	iP	13	47	57.4				+	+28.8		
10	eP	20	31	14.5					+23.5		Δ = 28 mi.
	iS			20							
11	iP	01	28	28.3					+28.3		
11	i	06	01	45.5					+28		
11	eP	19	45	36.7					15:04	+27.3	
	iP			39.7	2	+	-?	+30			U.S.C.& G.S. epicenter
	eS		55	40							16½°S., 173° W.
	Coda	20	27		8						Δ = 75° SW O= 19h 34.0m
12	i	01	19	37					+27		
12	e	01	49	18					+27		
	i		51	55							
12	eP	05	21	09					+26.8		Very small regional shock
	iP			10.3		+?					Δ = 180 mi.
	iS			42.3							
	iS			46.3							
12	iP	08	27	35.5		+22	?	+20	+26.7		Small regional shock.
	iS			57.7		70	70	70			Δ = 110 mi.W.
13	i	05	35	16				+10	15:00	+25.2	
13	iP	06	28	34.8	1.0			+10	+25.2		
14	eP	02	14	03					+23.8		Δ = 81°
	e		21	22							Pasadena eP=02:14:03
	eS		24	12							South Pacific - probably
	Coda	03.0			16.5						near Fiji Islands.
14	iP	04	00	06.3				+	+23.7		Pasadena eP=04:00:04
	e		11	26							Probably aftershock of
	e			59	7						above.
	Coda	04.6			17						

SHASTA DAM SEISMOLOGICAL STATION MONTH OF SEPTEMBER 19 43 13.

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.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. Δt		Remarks
September 14	iPZ	07	30	49.5	2.0		+?	+12	+23.5		Δ = 84°
	iPE			51.5							Pasadena iP = 07:30:42
	i		31	09	2.8	100	65	300			Probably S. Pacific.
	eS		41	13							
	Coda	08.5			16						
14	iP	09	52	37.4	12			+12	+23.4		
14	iP	15	46	59	0.8	+15?	?	-10	-23.0		Light regional shock
	iS		47	24.7	0.4	200		170			Δ = 135 mi. E?
14	e	20	29	03					+22.7		
15	e	09	17	33					+22		
15	iP	16	32	31.5				+	15:00	+21.5	Small regional shock
	iS			37.5		80		70			Δ = 30 mi.
15	iP	18	34	05		+			+21.4		Very small trace of
	iS			15.2							local shock; Δ = 51 mi.
15	e	18	40	58					+21.4		
16	eP	00	17	55					+21.1		Δ = 500 mi.
	eS		19	20							
	eS		20	12	1.5			15			
16	eP	07	53	59					+20.8		Δ = 460 mi.
	iP		54	06.3	0.8			+			
	eS		55	17							
	iS			22	1.5	60		50			
16	iP	13	00	30	1.2			+	+20.5		Δ = 1150 mi.
	iS		03	43	3						
17	iP	03	08	11					+19.6		Small blast
	iS			11.4							Δ = 2 mi.
17	iP	10	21	56.7	1.5			+10	+19.2		Δ = 80°
	eS		32	04							
19	iP	00	31	34				+10	+17.1		
19	eP	04	58	57	1.2			-?	+16.9		Pasadena eP=04:58:15
	e		06	13							Δ = ca 70°
	e		08	13							Probably SE
19	iP	05	27	26.6		+20	-20	+10	16.8		Blast, 2 mi. NW
	iS			27.0		80					
19	iP	06	10	57	1.7			+?	16.8		Pasadena epicenter = 06:10:50

Bureau of Reclamation and
Coast and Geodetic Survey

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
September 19	iP	09	11	41	1.5				16.6	Pasadena eP=09:11:42
20	eP	00	58	53.5	1.7				+15.9	U.S.C & G.S. epicenter
	eSS	01	04	12						19½°N. 109°W.
										O = 0h 53.7m, Δ=23½°
23	iP	09	05	47.3		+12		+15	15:00½ +0.3	
	m					60				
	e		06	09						
23	e	15	07	35					-01.5	U.S.C. & G.S. epicenter
	iP			44.7		-	+	+25		15°N, 92°W, O = 15h 00.5m
	iPcP		10	04		-36	+12	+30		Δ = 37°. Notations used
	eS		13	12						here are according to
	iPcP			43				+25		Gutenberg. Original
	iScS		17	49						interpretation at this
	e		20	02						office was:
	e		38	58						iP 07:45 eS 13:12
										iP 10:04 iS 17:49
										iP 13:43 eS 20:02
	See Grand Coulee Dam report for comparison with other stations.									
24	e	02	53	47					15:06 -28	
24	e	06	52	50					-27.6	
24	iP	11	20	41	1.0	+	+	+18	-27.5	
24	e	11	45	18					-27.5	
25	iP	01	15	20.5		+25	-25	+20	15:01+ -26.8	
	iS			21.0				300		Blast 2½ mi. NW
25	iP	01	40	18.5		-8	+1		-26.7	Δ=55 mi. S. of E.
	iS			29.5		60				
26	iP	02	28	27	1.8			+	15:01 -25.7	Pasadena iP 02:28:27
	e		34	48	2.8					Δ = roughly 170°
	e		37	33						according to Pasadena.
26	iP	18	18	46	1.0	-	-	-15	-26	
	e		20	25						
26	iP	22	31	23	0.2	+10	0	+10	-25.5	Light regional shock
	m				0.4	310	220	150		Δ = 170 mi.W
	iS			55.4				300		
	Coda		34		1.6					
27	iP	04	51	46	1.2	-10	+10	-35	-25.5	Dilatation from the NW
										Pasadena iP = 04:52:22
27	iP	22	16	24.2	1;2	+		+25	-26.3	Pasadena 22:16:14

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SHASTA DAM SEISMOLOGICAL STATION MONTH OF September 1943 25.

International Seismological Centre

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
△t is time correction referred to R. M.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
September 27	e	22	26	34						
	e		27	06						
27	e	22	30	09					-26.3	
28	iP	07	14	22		+20	-16	+10	-27.8	Blast 2 mi. NW
	iS			22.4				160		
28	iP	08	25	39				-	-28.1	
28	iP	10	57	33.4	2.0	-		-25	-28.6	Pasadena iP=10:58:00
	e?	11	07	29						
28	iP	13	50	44	1.2			-	-29.2	
28	e	16	05	28					15:06½ +30	
29	iP	03	05	52.5			-		+27.4	Blast 2½ mi.
	iS			53			80			
29	iP	05	19	45.5	1.5 1.0	+?	-	+6	+26.7	
29	e	09	29	12					+26	
29	iP	11	56	44		+25	-20	-20	+24.8	Light local shock
	iS			50.5		300+		200		33 mi. SE
29	e	23	19	50	1.5				14:53 +20.9	
30	e	07	29	39	1.6				+17.8	
30	eP	12	06	22.5	1.5				+16	

SHASTA DAM SEISMOLOGICAL STATION

(MINERAL SEISMOLOGICAL STATION)

INSTRUMENTAL REPORT - October, November, and December, 1949

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

With the aid of data from the Mineral station several local epicenters were roughly located, for the most part in the Mt. Lassen area. The Mt. Lassen shocks were grouped along the west or southwest flank of Mt. Lassen or south or southwest of Juniper Lake, probably along the Warner Valley faults or extensions thereof.

Two shocks, September 29, 11:56; and October 23, 15:10 G.C.T. were located about ten miles northeast of Red Bluff.

Two shocks or heavy blasts local to Shasta Dam occurred on November 8 16:14:42 and 18:26:27.8 G.C.T. There is no report of either having been felt.

The following shocks, which were located near Cape Mendocino were reported felt in Ferndale and the Cape Mendocino area:

October 2 - 06:57 - Felt at Ferndale, Fortuna and near Cape Mendocino.

October 5 - 20:17 - Felt at Ferndale and Upper Matole.

The following swarm was reported felt in Colusa County:

October 14 - 05:50 G.C.T. -

November 14 - 18:28 G.C.T.

14 - 22:02 G.C.T.

15 - 05:36 G.C.T. - Moderate Shock

15 - 06:54 G.C.T.

16 - 06:15 G.C.T. - This was the main shock of the swarm. The greatest intensity was reported near Stoneyford

16 - 10:45 G.C.T.

17 - 07:11 G.C.T.

December 4 - 20:14 G.C.T.

A number of aftershocks, not reported felt, were recorded.

SHASTA DAM SEISMOLOGICAL STATION MONTH OF October 1949

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
October 1	iP	07	08	57.6		+12	-15	+10	15:02	Small blast 2 mi. N.W.
	iS			58		90		100	+8.5	
1	iP	18	05	16.0				+		
1	e	18	21	47					16:55 +19.4	Distant shock N.W.
2	iP	06	57	13.3		+300	+40	+250	16:48	Moderate regional shock
	i			15.7					+14.3	120? mi. W., off Cape Mendocino
	iS?			37.0				800		Felt in Ferndale, Fortuna, and
	Coda		01		2.0					near cape Mendocino.
2	iP	08	11	48.8				-	+13.8	
2	iP	17	32	39.8					16:49 +9.8	
4	iP	03	03	58		+20	-20	+10	16:58	Blast, 2 mi. N.W.
	iS			58.4					-5	
4	eP	03	05	23.7		+	?	+	-5	120 mi. W.
	e		04	48						
4	e	10	15	14					-8.2	Coulee Dam iP=10:14:28.1 Δ = 51°
4	iP	10	52	18.7	3	+		+15	-8.5	Δ = 84° South Pacific.
	eS	11	02	48	4					Probably New Hebrides.
5	iP	02	59	23		+24		+15	16:52	Blast, 2 mi. N.W.
	iS			23.4		100			-16.3	
5	iP	10	30	18		+24	-10	-10	-20	Local shock
	eS			27?						Δ = 45 mi. ESE
5	iP	20	17	51		+35	+5	+15	17:03	Regional shock Felt in Ferndale
	iS		18	10.7			100	60	+5.5	and Upper Matole Δ = 100 mi. W
5	iP	20	22	42.7		+10	0	+	+5.5	Aftershock of above
	iS		23	02.0		150		90		
5	iP	22	51	06.8		+30	+3	+12	+4.3	Local shock or blast
	iS			08.5				60		Δ = 8½ mi.
6	iP	01	10	34.9		-12	0	+?	+3.1	Δ = 46 mi. E.
	iS			44.1						
6	iP	02	09	30		+	-2	+	+2.7	Δ = 25 mi. SE?
	iS			35		-10	-10			
	m					70				

SHASTA

SEISMOLOGICAL STATION MONTH OF October 19 43 2.

International Seismological Centre

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end ~~or~~ beginning of record.
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
6	iP	02	29	00		-60	+2	+25	+2.6	Δ = 45 mi. E
	iS			09		200	200	100		
6	iP	03	04	35.6		+25	-20	+	+2.2	Blast - 2 mi. NW
	iS			36						
6-7	No record									
8	iP	13	14	11		+			+3.6	Δ = 68 mi.
	eS			24.5		40				
9	iP	03	05	16.6		+	-	+10	15:02	Blast - 2 mi. NW
	iS			17				100	-04.0	
9	iP	09	54	45					-07.8	Blast 2 mi.
	iS			45.4						
10	iP	03	06	59.6		+	-		15:05½	Blast - 2 mi. NW
	iS		07	00					+13	
10	iP	04	16	28.8	0.8	-?	-?	-5	+12.3	Boulder City 04:16:39.5
12	iP	17	06	35.2	1.5			-?	15:00	Δ = 240 mi.?
	iEN		07	18					+8.7	
	iZ			21						
13	iP	01	41	49				-6	+04	
13	iP	04	48	56.3		+	-	-10	+02.3	Δ = 18°
	i		49	00	2.0	-40		+60		Tentative epicenter 26°N,
	eS		52	16						109°W on W coast of Sinaloa,
	e		54	41						Mexico.
	e		55	50						
13	iP	05	54	31.8				+10	+01.8	Probably NW
14	eP	05	50	41.0		?	?	+	+18.4	Moderate regional shock
	i			42.8						Δ = 20 mi. or more
	i			45.1						Felt in Butte and Colusa Countie
	i			46.4		disappears				
14	i	06	28	32					+18	Boulder City 06:28:42.3
										Regional shock, Δ = 550 mi.
14	iP	12	11	33.5		+		+15	+14.8	Boulder City 12:11:50.2
	e?		15	41						
14	iP	14	30	51.5					+13.5	Epicenter in San Bernardino
	eS		32	23						Mountains
	e			43						

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SHASTA SEISMOLOGICAL STATION MONTH OF October 1943 3.

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.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. Δt	Remarks
14	3	20	24	26					+10.2	Δ = 120 mi.
	i			32.2						
	e			50						
14	iP	22	26	52.6		+	+3		+10.2	Δ = 36 mi.?
	i			53.4						
	i			57.0						
	iS?			59.8						
	Coda				1.6					
15	e	16	52	23					15:01	Probably S. California
	e		53	47					-01.2	
15	e	22	19	00					-04.2	
	e			18						
15	iP	22	21	14				+	-04.2	Boulder City 22:20:34.7
16	i	13	22	19.5					-12.5	Boulder City 13:22:02
16	iP	15	08	06.5					15:06 +16.5	Probably Alaska
17	iP	03	04	12		+	-		+10	Blast 2 mi. NW
	iS			12.5						
17	iP	09	11	52.3		-38	-3	-	+6.5	Very small local shock
	iS			53.8				45		7½ mi. W
17	iP	17	30	27.8				+10	15:00½	Compression from NW
	iP			37					-06.2	
17	iP?	22	50	01				-?	-09.5	
19	iP	01	24	39				-	15:01 -25.5	Grand Coulee 01:24:39
19	iP	03	04	48		+20	-20		-26.5	Blast 2 mi. NW
	iS			48.4		120				
19	iP	07	27	00.5		+5	?		-29	Δ = 65 mi.
	eS			13.5		25				
19	iP	17	04	37.6		+125	-80	+	15:00 +25	Sharp blast 2 mi. NW
	iS			38						
20	e	00	11	33.5					+21.1	
20	iP	03	06	04.6		+15	-15		+19.5	Blast 2 mi. NW
	iS			05						

SHASTA SEISMOLOGICAL STATION MONTH OF October 1943 4.

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. Δt	Remarks
21	iP	23	19	43	10;32			-	15:00	U.S.C. & G.S. epicenter
	i		20	08.5					+29.4	16.5°S, 178°E O = 23:07.7
	e		28	08						Δ = 81°
	eS		29	37						
22	iP	16	14	27.3	1.1			+20	+24.3	Δ = 64°
	i			33						
	e		25	00						
22	eP?	18	59	11					+23	Δ = 95 mi.
	eS			30						
23	iP	15	10	01.8		-3	-15	-15	15:06	Light local shock
	iS			08.3		200+		150+	+13.6	Δ = 33 mi. S
23	iP	17	20	21.7				-10	+13.7	Dilatation SE
23	eP	17	37	30					+13.7	U.S.C. & G.S. epicenter
	iPP		41	55						25°N, 92.5°E O = 17:23.3
	eSKS		47	55						Δ = 107°
24	iP	13	50	02.8	1.5			-5	15:00	Dilatation from NW
	eS?		58	02					+14	Δ = 58°?
24	iP	16	16	42.5	10;33	-20	-16	-60	+14.1	Dilatation from SW
	eS		26	40						Δ = 78°
24	iP	23	31	59				-8	+14.5	Dilatation from NW
25	iP	09	09	07		-?	?	+10	+14.8	Blast or small local shock
	iS			08.8		80				Δ = 9 mi.
26	iP	04	51	23.7		0	+10	+10	+15.4	Δ = 225 mi. S.
	i			25.6		+	-20	-20		Epicenter a few mi. N of San
	iSN		52	04.9						Jose. Felt in San Francisco B a
	iSZ			06.9	1.0	1100		640		region.
	iEN2			16						
	Coda	05.0			3.8					
26	iP	11	59	21.2		0	+6	+6	+15.5	Moderate regional shock
	iP			21.9		+25	-10	-10		Δ = 140 mi.
	i			23.9						
	iNZ			48						
	iE			51				880		
26	iP	16	31	39.9					+15.6	Local shock,
	iS			50.5						Δ = 53 mi.
				51.1						

SHASTA SEISMOLOGICAL STATION MONTH OF October 1943 5.
November

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
△t is time correction referred to R. M.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
27	eP	00	02	51					15:00	
	e		03	06					+16	
	e			23						
27	e	16	24	17.5					+16.6	Grand Coulee 16:24:05.8
29	eP	00	32	02					+17.2	
29	iP	08	38	50.8	1.4			-20	+17.7	Grand Coulee 08:38:27.2
29	eP	16	43	02.0				-	15:05	△ = 68 mi. S.
	iP			02.8		-10	+25	+20	+18.3	Epicenter W. of Orland
	eS			15.3			90			
29	e	17	42	27					+18.3	
31	iP	15	44	57.5		+15	0	+8	15:00	Very small regional
	iS		45	09		30			+19	shock △ = 110 mi. W
November 2	e	18	27	20.5					+18.6	Distant earthquake
	e		30	34						
	e		34	32						
2	eP	19	07	35.5					+18.7	Grand Coulee 19:07:43
2	eP	20	45	50.7					+18.7	△ = 59 mi.
	eS		46	02.5						
2	iP	23	07	34		-10			+18.8	△ = 150 mi.
	eS		08	01.5						
3	iP	08	49	50.7		+35		-12	+18.7	△ = 170 mi. E
	eS		50	22.7				15		
3	iP	14	38	03.1				-	+18.7	U.S.C. & G.S. epicenter
	iP			05.1		-?		-25		62°N, 151°W, O = 14:32.3
	m				1.0	480		450		△ = 27.5°
	eS		42	44						
	e		44.3							
	M		46.8		18					
	Coda	16.0			10					
5	iP	04	26	27.7		-100	-20	-56	+17.8	△ = 62 mi. E
	eS			40.1						

M-1839-4(1)

SHASTA SEISMOLOGICAL STATION MONTH OF November 1943 6.

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
△t is time correction referred to R. M.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
6	e	08	45	37					15:00	U.S.C. & G.S. epicenter
	eP			40					+17	5.5°S, 134°E
	i		46	09						0 = 8:31.6
	ePP		49	40						Δ = 105°
	i		50	20						
	eSKS		56	40						
	e	09	21.3		30					
	M		32		18	110				
	Coda	10.1			16					
6	iP	14	48	51.2		-25	+10	+10	+16.7	Δ = 55 mi. ESE
	iS		49	02.0		180				
	No time marks on record of 6 - 7; 3 small local shocks, phases indistinct, and 1 distant shock, P-waves only, recorded.									
8	iP	16	14	42.0		+380	-60	+100	+2.5	Moderate local shock
	iS?			42.6		disappears				Δ = 3 or more mi. W
8	iP	18	26	27.8		+165	-20	+50	+2.5	Moderate local shock
	iS			28.5						Δ = 4 mi. or more W
9	iP	11	56	56.6	0.9	-25		-45	+2.2	Dilatation from NW
	ipP		57	34.7						Δ = 64°
	i			53						Focal depth = ca 100 mi.
	iS	12	05	21						
	e			56						
	e		06	40						
	e		07	15						
10	eP	02	16	28.5		+?		+?	+2.0	Δ = 60 mi.
	eS			40.5		75				
10	eP	22	41	19.8		+		+	+2.0	
	iP			23.6	0.4					
	e			42						
	e			48	0.7	40				
11	iP	01	03	58		+		+	+1.7	Δ = 76 mi.
	iS		13	45						
11	iP	04	57	52		+		+	+1.7	Grand Coulee 04:58:14
11	iP	10	07	41.6		+50	0	+28	+1.7	Regional shock
	iS			58.2			300	250+	+	Δ = 83 mi. W
11	iP	18	56	01.0		-?		-	+1.7	Coulee 18:55:52.7
12	iP	02	27	22.7		?		+10	+1.7	Coulee 02:27:57.5

SHASTA SEISMOLOGICAL STATION MONTH OF November 1943 7.

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
△t is time correction referred to R. M.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
12	iP	05	22	15.5		+		+15	+1.7	Δ = 70½°
	e		23	49						B.C. 05:22:55
	eS		31	28						
	iS			45						
12	iP	07	29	22		-		-	+1.6	Coulee 07:29:35
	e		33	18						
13	e?	18	56	33	2.5				+1.5	Δ = 84°
	eP			31.5						
	e	19	00	04						
	eS		07	08						
	e			49						
	ePS		08	21						
14	eP	18	28	06.5					+0.5	Δ = 130 mi.
	iP			07.5						
	iP			11						
	i			12						
	i			32.5						
	i			41.5						
14	e	18	49	48					+0.5	
14	eP	22	02	02.2				-?	+0.4	
	iP			05.6						
	i			28.5						
	iS			39.5		450		150		
15	i	00	01	39					+0.4	Δ = 140 mi.
	i			53						Felt in Colusa County
	e		04	24						
	e		05	27						
	e			39						
	e		06	05				10		
15	eP	05	36	53.7		0			+0.4	Regional shock
	iP			57.9						Δ = 100 mi.
	i			12.5				260		Felt in Colusa County and
	i			30						neighboring territory
	Coda				2.2					
15	i	06	54	57				+	+0.3	Felt in Colusa County
	eP		55	04.5						
	iP			08						
	iS			22.5						
	e			35.5						
	i			40.5						
15	eP	21	05	55				-	+0.3	

SHASTA SEISMOLOGICAL STATION MONTH OF November 19 43 S.

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.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. Δt	Remarks
15	i	21	58	04.7					+0.4	Very small regional shock
	i			06						
	i			24.7						Δ = 130 mi.?
	iS			30.4						
16	eP	05	36	26					+0.4	Coulee 05:37:06.3
16	iP	06	15	50.4				-?	+0.4	Moderate regional shock
	i			54.6						The main shock of a swarm.
	i			57.8						Δ uncertain but probably 90 to
	i		16	08.4		disappears	500+			130 mi. Direction uncertain.
16	iP	08	34	4.0		-10	0		+0.4	Δ = 46 mi. E?
	iS			13.2		60				
16	iP	09	39	59			+		+0.4	Very small aftershock
	i		40	15						
	e			25						
16	eP	10	45	26					+0.4	Aftershock
	i			32.8						
	i			42.2			75	70		
16	iP	10	55	44.1		-5	-2	-12	+0.4	Δ = 48 mi. ESE
	iS			53.7		30		10		
	iS			54.4						
16	e	11	10	55.4					+0.4	Very small aftershock
	iP			57.8						
	iE		11	08.4						
	iZ			20.8						
	i			24.2						
16	iP	11	32	25.5	.14			-	+0.4	Direction uncertain.
	i			29.6						Aftershock
	i			32.4	0.6					
	i			35.0		150	150	80		
16	iP	11	49	14.5	2			+	+0.4	Δ = 78°
	i			20.5						
	eS		59	12						
16	i	18	20	24.4					15:00+	Aftershock
	i			28.9					+0.4	
	i			30.4						
	i			31.7						
	i			53.0		225				

SHASTA SEISMOLOGICAL STATION MONTH OF November 1963 9.

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
△t is time correction referred to R. M.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
16	i	18	26	14.7					+0.4	Aftershock
	i			17.0						
	i			18.8		75				
16	e	19	03	46.4					+0.4	Very small aftershock
	i			49.0						
	e		04	11.4						
16	e	21	39	36.4					+0.4	Felt in East Bay Area. Some damage in San Leandro
	i			50.4						
	i		40	08.4						Δ = 200 mi.
	i			11.1						
	i			15.4						
17	3	07	11	48.2					+0.2	Aftershock
	i			52.2						
	i			54.2	1.0			90		
17	e	07	15	28					+0.2	Aftershock
	i			41						
17	e	11	32	19					+0.1	Distant earthquake
	e			42						
	eP			51						
17	iP	12	33	55.5		-4			+1	Small local shock
	i			56.7						Δ = 17 mi.
	iS			58.9		60				
17	e	13	41	49					+1	Very small aftershock
	i			55						
	i		42	20.5						
17	iP	12	50	35					+0.1	Aftershock
	iP			39.5						
	i			58.7						
	i		51	05.5						
17	e	12	51	49.9					+0.1	Aftershock
	iPE			50.8		-3				
	i			53.8				+		
	i			56.1						
	i		52	22.6	1.0	185		200		
17	iP	15	08	35.2		+22		+88	+0.1	Δ = 72° NW
	i			50.0						
	i		11	28						
	e?		18	24						Masked by local disturbance.
	iS			45						
17	e	17	35	49					+0.0	Very small aftershock

SHASTA SEISMOLOGICAL STATION MONTH OF November 1943 - 10

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
17	i	18	36	25.8					+0.0	Aftershock
	i			28.0						Felt in Colusa County
	i			39.5						
	i			45.7		70				
18	e	07	12	44.6					-0.1	Aftershock
	i			48.9						Felt in Colusa County
	i			51.5		110		60		
18	iP	18	49	57.8				+	16:52+	
									-0.2	
18	iP	22	02	32.3		+8		-15	-0.2	Coulee 22:02:47
	iE			39						
	e			57.3						
	i		03	52.5	1.0					
19	i	15	31	59					-0.1	Δ = 155 mi.?
	i		32	03.3						
	i			18.5						
	iS			28.6						
19	iP	23	52	30		+		+15	15:00	Coulee 23:52:22.2
									-0.1	
20	i	04	24	29.0				+	-0.2	Very small regional shock
	iP			37.3						Δ = 100 mi.
	iS			56.6						
20	eP	07	18	52					-0.2	Coulee 07:19:28
20	eP	19	05	36				+	-0.4	Coulee 19:06:21
20	iP	20	09	44.7		+?		-	-0.5	Δ = 82 mi. E?
	iS		10	01.1				30		
20	iP	22	15	26.3		+25	-?	±15	-0.6	Δ = 130 mi. W
	i			40.9						
	iZ			51.4						
	iS			53.6		80		40		
21	iP	09	10	20.6		-15	-	-10	-1.4	Local Shock
	i			23.2						Δ = 8 mi. E, or
	i			25.9				45		local disturbance.
21	e	09	38	48.2					-01.3	Aftershock
	i			50.7						
	i			53.6				60		
21	e	14	23	09					-01.6	Very small shock
	i			24						Δ = 65 mi.?

SHASTA SEISMOLOGICAL STATION MONTH OF November 19 43 12.

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (~~or beginning~~) of record.
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
22	i	12	55	21		+			-2.1	Very small shock
	i			32.8						Δ = 55 mi.?
22	i	14	39	18					-2.1	Very small shock
	i			37						Δ = 95 mi.?
23	iP	10	34	18.3		+10	-22	+15	-3.3	Small local shock
	iS			21.7		95	100			Δ = 17 mi. NNW
23	iP	12	33	45					-3.3	Δ = 170? mi.
	iS		34	17		+20				
23	iP	22	04	35.5	1.3				-3.3	Coulee 22:04:25
24	eP	13	30	28.5					-3.4	Δ = 94°
	i			34.5						
	e		33	16						
	e		34	30						
	eSKS		41	17						
	eS			44						
24	iP	21	06	23.8					-3.3	Δ = 28 mi.
	iS			29.4		60				
25	iP	08	47	10		+10	?	+	-3.2	Δ = 180 mi. W
	iP			16.7						
	i			43.1						
25	iP	16	59	46.2		+5	?	-3	15:10	Small local shock
	iS			48.5		50			-3.2	Δ = 12 mi. E
26	iP	11	12	0.5		+5	+8	-5	-3.9	Small local shock
	iS			5.4						Δ = 25 mi. NNE
	iS			5.8		50				
26		19h to 24h - 3 regional or distant earthquakes occurred in this interim, times of beginning in doubt as traces were super imposed.								
27	eP	19	56	31					15:02	Coulee 19:56:52.5?
									-3.8	57:07
28	eP	06	33	38.5					-3.8	Coulee 06:33:37.6
28	eP	17	20	31				+	16:42	Δ = 54°
	i		23	00					-03.7	
	iS		28	00						
28	iP	21	54	53.5	1.5	+		-10	-3.6	Coulee 21:55:24.5
28	eP	23	29	45				-	-3.6	Δ = 54°
	iP			46				-		

SHASTA SEISMOLOGICAL STATION MONTH OF November 19~~43~~ 12

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. Δt	Remarks
29	eNZ	00	44	10					-3.6	Faint trace of a regional shock
	e			18						Δ = 510 mi. N
	e			59						
	eS		45	28						
	e		46	15						
	e			23						
	e			42						
29	iP	19	49	38.5	1.6	-		+19	15:55	Δ = 82° probably SE
	eS		59	58.9					-4.1	
29	eP	21	28	01.2					-4.3	Coulee 21:27:36
30	i	21	58	26	0.4				-4.3	Δ = 190 mi.
	i			36.3	0.8					
	iS		59	30.8						
	i			42	1.0			22		
December 1	eNZ	06	18	11	25			+10	16:03	Δ = 98°
	iPE			14					-4.1	
	iP			42						
	i		19	32						
	eP		21	28						
	iPP		22	05						
	eZ			49						
	iSKS		28	33						
	e		29	02						
	iS			30						
	e			53						
	e		30	19						
	e		31	22	8					
	e		32	46						
1	iP	10	46	36.4		+8		-20	-4	U.S.C. & G.S. epicenter
	i		47	24						20.2°S, 68.1°W
	i		48	34						O = 10:34.7
	iPP		49	14.2						Δ = 75°
	i		56	23						
	iS			33.5						
	ieN		57	16						
	iE			32						
1	iP	22	24	38		+	-	+	19:56	Blast or small local shock
	iS			39.6		90			-3.7	Δ = 8 mi. NW
2	iP	01	03	30.0		+	?	+	-3.6	Small local shock
	iS			33.6		70				Δ = 17 mi. W

SHASTA SEISMOLOGICAL STATION MONTH OF December 1943 13.

Bureau of Reclamation and
Coast and Geodetic Survey

R. M. is hour and minute of flasher mark at end (or beginning) of record.
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
2	iP	02	06	49				+10	19:56	Δ = 88°
	iP			55.3				-20	-3.6	
	i		07	09.2						
	i			30						
	ePP		10	10						
	e			33						
	eSKS			19						
	iS		17	36						
2	eP	05	22	13.5	0.6				-3.5	Δ = 92°
	ePP		25	52.5						
2	eP	15	37	02					-3.2	Coulee 15:38:20
3	ePE	04	51	36					20:00	Δ = 82°?
	iP			38.7				+10		
	i			40						
	iZ		55	15						
	i			28						
	e		57	11						
3	iP	07	03	33.5		+		+20	-3	Compression from NW
	iP			34.7		+15	-60			Δ = 65°
	i			46						
	i		04	00						
	i			13						
	iS		12	15						
	iS		13	23						
3	iP	08	09	34	1.5			+10	-3	Coulee 08:09:23
4	i	12	29	26.1		+		+	15:00	Δ = 105 mi. W?
	i			46.7						
	i			59.7						
4	e	20	14	07.1					15:01	Moderate regional shock
	iP			08.2		+	+?	-5	-2.1	Felt in Colusa County
	i			12.2						
	i			20.3						
	i			24.1		trace disappears				
	i			33.4						
	iN			43			550+			
5	e	03	33	39					15:12+	Faint trace of a
	i			46					-02	seismic disturbance
5	e	21	58	53					-01.7	Faint trace of a
	e			05						regional shock
7	ePZ	01	14	09.2					15:00	Distant earthquake SE
	ePE			22.7	1.0				-1.3	
	iN		19	58						
	iE		24	16						

SHASTA SEISMOLOGICAL STATION MONTH OF December 19 43 24.

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.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. Δt	Remarks
8	eP	19	45	49					+0.9	Distant earthquake SE
	eE		50	48						
	e		57	57						
	e		58.4		20					
8	iP	22	34	18		+12	+5	+10	15:00	Small regional shock
	iZ			22.6					-01.0	Δ = 90 mi. WSW
	iPZ			25						
	iS			36						
	iS			37.8						
	iNZ			49.6						
	iE			52.5	1.0	100		88		
9	iP	03	27	27				+	+01.4	Coulee 03:26:54
9	e	10	52	36.5					+1.9	Δ = 90? mi.
	i			55.5						
11	iP	01	02	36.6					+3.4	
	i			50.2						
11	e	03	46	04.5					+3.5	
	e			31						
11	e	22	23	25					+3.8	
	iP			27						
12	iP	04	31	24.2		-10		+	+3.9	Small local shock
	iS			32.9		40				Δ = 43.5 mi. E
12	e	16	11	17					+3.8	
	e		12	11						
	e		33	07						
13	iP	02	24	35.2		+			+3	Very small local shock
	iS			37.3		30				or disturbance Δ = 105 mi.
13	i	06	22	26.8					+3	
13	eP	16	06	55.5					+3.1	Distant earthquake
	i		07	08.5						
	i			46						
	i		10	59						
	i		13	05						
13	iP	16	37	15.5		+15	?	+	+3.1	Local shock or blast
	iS			17.5		115				10 mi. W
13	iP	23	17	09		?	-100	+172	+3.4	Sharp local shock or
	iS			09.6		480				heavy blast 3 mi. NW?

SHASTA SEISMOLOGICAL STATION MONTH OF December 19 45 1.5.

Bureau of Reclamation and
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
14	eP	16	08	34					+3.5	
	i		09	28.5						
16	eP	02	14	11		+		+	15:00	Regional shock
	iP			11.5					+4.5	Δ = 100 mi. W
	eS			30.6						iS is transverse to path
	iS			31.2		0	+75			
	m					70				
17	eP	00	20	54.3					+5.8	Δ = 350 mi.
	i		21	32						
	iS			55.3						
	iS			56.8		40		20		
17	e	02	25	10					+5.9	Δ = 250 mi.?
	i		26	55						
17	eP	04	39	17.6					+6.0	Δ = 350 mi.
	i			25						
	i			29.4						
	i		40	18.5						
	eS			28						
	iS			29.8		70		40		
17	iP	14	06	14.4	1.0	0		+10	+6.6	Coulee 14:06:04
	i			22.6						
	i			33						
18	iP	07	57	06					16:54	Coulee 07:56:57.5
									+8	
18	e	15	18	50					+8.6	Δ = 45 mi.?
	e			59						
19	e	01	53	19					15:14	Δ = 240 mi.?
	i			20.7					+9.3	
	i			24.3						
	i		54	02		12				
19	iP	09	40	02		+12	-?	+	+9.7	disturbance or local
	iS			03.6		80				shock or blast 8 mi. N?W
20	eP	00	28	13					17:33+	Δ = 200 mi. WNW
	iP			13.4		-20	+	-	+10.6	
	iS			50.6						
20	e	00	58	06					+10.6	Δ = 220 mi.
	e			34						
	e			46						
20	e	04	24	12					+10.9	Δ = 125 mi.?
	i			36						

SHASTA SEISMOLOGICAL STATION MONTH OF December 1943.

Bureau of Reclamation and
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Δt is time correction referred to R. M.

Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. Δt	Remarks
20	e	10	39	28.5					+11.3	Δ = 74°
	iP			46		-		-8		
	e		41	50.5						
	e		49	03						
20	iP	13	36	13		+8	+	+28	+11.6	Compression from SW
	i		38	24						Δ = 72½°
	i		45	37.5						
21	eP	13	55	33.7					19:49	U.S.C. & G.S. epicenter
	i		56	09.3					+13.3	13°N, 70.5°W; O = 13:46.4
										Δ = 53½°; estimated focal
										depth 70 mi.
21	eP	14	05	27						
21	eP	22	15	29					+13.9	Coulee 22:15:49
22	iP	05	04	02.8		+15	-4		20:05	Very small local shock
	iS			12.2					+14.3	Δ = 47 mi. S of E
22	iP	06	25	34		+18	-4		+14.5	Very small local shock
	e			43.6				8		Δ = 48 mi. ESE
22	i	06	58	55.2		+15		-	+14.4	Very small local shock
	i		59	04.4						Δ = 46 mi. E
22	iP	07	03	36.5		+40	-12		+14.5	Local shock
	iS			45.8						Δ = 47 mi. S of E
22	eP	07	05	05					+14.5	Very small local shock
	iP			06	0.2	+10				Δ = 48 mi. E?
	iS			14.5						
22	iP	07	09	40		+35			+14.5	Δ = 47 mi. E?
	eS			49.3						
22	eP	07	11	45.7				-	+14.5	Estimated focal depth
	ipP		12	17.5						70 mi.
	iSP			30						Δ = 38°?
	e		41.2							
22	iP	08	17	50.3		+40	-12	-15	+14.5	Δ = 52 mi. ESE
	eS		18	59.5						
22	iP	13	02	20.6				+9	+14.8	Δ = 53° SE
	e		05	24						

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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
22	eP	15	52	31					+15	Δ = 560 mi.
	iZ			58						Reported felt in Twenty-nine
	iS		54	22						Palms area in Southern Californi
	iS			44						
23	eP	16	05	19				-	+17.7	U.S.C. & G.S. epicenter
	e		06	17						13.3°N, 70.4°W 0 = 15:56.0
										Δ = 53½°
23	eP	19	13	10					23:27	Much of record is lost. U.S.C.
	i			28					+17	G.S. epicenter 6°S, 152°E
	iPP		16	45						0 = 19:00.1
	eSKS		23	32						Δ = 92°
	iS			55						(Near New Britain)
	Coda	20.4			15					
24	eP	01	09	33.5					+17.5	Coulee 01:09:31
24	eP	02	00	54					23:33	Δ = 18½°?
	e		04	19					+17.5	Coulee 01:09:31
	e			33						
24	eP	11	57	28.5	0.7				+18.3	Coulee 11:57:43
26	e	05	02	56.5					20:01	Faint trace of a distant shock
									-8.4	
27	iP	01	06	34		-25	-?	-18	17:02	Small local shock
	iS			36.2		100+			-06.8	Δ = 11 mi. W
27	iP	01	07	50.5		-?	?	-1	-6.8	Very small local shock
	iS			53				20		Δ = 12½ mi. W?
27	eP	04	08	10	1.6				-6.5	
	e		13	44.5						
28	iP	20	21	38.5		-25	-15	+15	-4.6	Small local shock
	iS			42		100		40		Δ = 17½ mi. NE
29	eP	03	18	09.3					15:01	Faint trace of a regional shock
	iP			14.8					-4.5	Δ = 220 mi.
30	i	06	37	15.3				+	15:01	Coulee 06:37:29.5
									-2.7	
30	eP	07	49	05.5					-2.6	
30	eP	08	28	53.3		+	0	+	-2.6	Small regional shock
	i			54		+	0	+		Δ = 85 mi. W
	iP			54.4			+	+		
	eS			10.2						
	iS			11.1				24		

SHASTA SEISMOLOGICAL STATION MONTH OF December 1942 16.

Bureau of Reclamation and
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Date	Phase	G. C. T. h	m	s	Period T	Trace Amplitude, .01 mm E	N	Z	R. M. △t	Remarks
30	i	10	32	06.5				+	-2.5	
30	eP	22	15	44	1.1				15:01 -1.7	Coulee 22:16:01
31	eP	17	17	44.8					-0.4	
	iP			45.8						
	iP			48.7						
	iP			51.6						
	i		18	00						
	i			13						
	m				0.8			140		