PASADENA LOCAL SHOCKS

January, February, March 1950

Date	P.S.T.	Lat.N.	Long.W.	Q	M	Remarks
January						
3	03:27:28	33 52	115 50	C	3.1	Pinto Basin. Also small aftershocks at 03:31 and 04:02
3	09:26:38	34 03	117 18	B	2.8	Near Colton
4	08:38:46	34 05	117 44	B	2.4	Near Pomona. Reported felt at Big Dalton and other dams.
4	23:24:09	33 50	115 48	B	2.9	Pinto Basin
5	04:51:30	34 16	117 00	B	2.4	Near Big Bear
5	05:46:49	33 41	119 11	C	3.2	Northwest of Santa Barbara Island
7	01:37:35	32.1	116.6	D	4.0	Lower California
9	05:24:57	34 05	116 58	B	3.9	Near Forest Home. Sharp at Banning (press); Big Bear City, Cabazon, Fawnskin, Hemet, Montone
9	05:29:30	35 07	116 51	C	2.4	Calico Mountains (CGS)
9	13:40:56	33 50	116 08	C	3.1	Little San Bernardino Mts.
9	14:30:08	35 41	117 53	C	2.8	Near China Lake
10	18:38:52	33 53	118 51	C	2.8	South of Point Dume
11	13:41:35	33 57	118 12	B	4.1	Near Southgate. IV at Pasadena. Generally felt in metropolitan area
11	15:18:00	36 03	118 05	C	2.3	Southwest of Haiwee
11	15:20:21	36 03	118 05	C	2.5	Southwest of Haiwee
11	23:37:49	34 01	118 10	C	2.3	Near Huntington Park
12	21:07:19	34 01	116 29	B	4.1	Near Desert Hot Springs. Felt there, at Palm Springs and slightly at Riverside (CGS)
13	15:07:52	34 18	118 38	C	2.3	Near Chatsworth
14	11:52:37	40	123½		4.8	Eureka (press). Epicenter and origin time by USCGS. VI at Punta Gorda (CGS)
14	18:36:16	34 59	116 30	C	3.0	East of Manix
15	17:28:32	33 48	118 32	C	2.4	West of Palos Verdes Hills
16	11:55:56	34 05	118 59	C	2.8	East of Point Mugu County
16	12:34:43	32 40	116 45	C	2.6	Near Dulzura, San Diego/
18	18:33:49	34 16	117 01	B	3.1	West of Big Bear
19	01:33:48	33 45	118 26	B	3.6	Near Point Vicente. Felt at Santa Monica, Beverly Hills, Hollywood, etc. (press) V at San Pedro (CGS)
19	19:36:35	36 08	118 13	C	2.2	West of Haiwee
19	19:49:05	36 08	118 13	C	1.4	West of Haiwee
19	20:00:00	36 09	117 56	C	1.9	Near Haiwee
20	05:24:03	36 07	118 12	C	1.9	West of Haiwee
20	08:16:54	32 56	115 48	C	3.3	West of Brawley. One of a swarm
20	08:24:11	33 10	115 25	D	3.6	Near Calipatria. Largest of swarm
20	11:29:46	33 38	116 15	C	2.9	South of Long Beach
21	06:47:58	33 51	117 37	B	2.4	Southwest of Corona
21	13:55:01	36 18	117 50	C	1.8	Near Haiwee
23	17:59:45	33 44	118 24	C	2.3	Near Point Vicente
24	13:56:59	34 40	118 50	C	4.0	South of Gorman. Felt at Fillmore and Piru, not felt at Santa Paula (press)
25	02:34:01	34 44	118 50	C	3.1	South of Gorman
27	--07:01:25	34 38	118 53	C	2.6	South of Gorman
27	12:36:57	33 26	116 16	C	3.4	Santa Rosa Mountains
27	14:11:37	34 34	116 14	C	3.0	Old Woman Mountains
27	23:42:38	33 59	116 29	C	2.8	Near Desert Hot Springs
28	04:10:05	36 05	117 24	C	2.2	Argus Range
28	14:36:21	35 50	117 36	B	2.6	Near China Lake
28	14:45:11	35 47	117 32		2.1	Northeast of China Lake
28	21:21:16	33 59	117 31	B	2.7	Near Mira Loma
29	17:34:11	33 39	118 22	C	2.7	South of San Pedro
February						
1	00:21:55±	31.7	113.3	D	4.1	Mexico (south of Arizona)
1	12:41:05			C	1.7	Near China Lake
2	02:37:24	32	113		4.2	Mexico (south of Arizona) Epicenter and origin time by CGS
2	05:57:49	35 54	117 56	C	1.7	South of Little Lake
2	06:07:02	36 02	117 33	C	1.3	Argus Range
3	07:51:31±	32.0±	113.0±	D	4.3	Near Mexican Border, Arizon
3	08:24:37	33 57	116 48	B	2.8	Near Cabazon
3	1[illegible]	32 0±	113±	D	[illegible]	Arizona, Mexican Border
3	15[illegible]	34 [illegible]	117 08	C	2.5	Near Lenwood
3	19[illegible]	34 [illegible]	116 51	C	2.7	North of Banning

Date	P.S.T.	Lat.N.	Long.W.	Q	M	Remarks
January						
3	03:27:28	33 52	115 50	C	3.1	Pinto Basin. Also small aftershocks at 03:31 and 04:02
3	09:26:38	34 03	117 18	B	2.8	Near Colton
4	08:38:46	34 05	117 44	B	2.4	Near Pomona. Reported felt at Big Dalton and other dams.
4	23:24:09	33 50	115 48	B	2.9	Pinto Basin
5	04:51:30	34 16	117 00	B	2.4	Near Big Bear
5	05:46:49	33 41	119 11	C	3.2	Northwest of Santa Barbara
7	01:37:35	32.1	116.6	D	4.0	Lower California
9	05:24:57	34 05	116 58	B	3.9	Near Forest Home. Sharp at Banning (press); Big Bear City, Cabazon, Fawnskin, Hemet, Mentone
9	05:29:30	35 07	116 51	C	2.4	Calico Mountains (CGS)
9	13:40:36	33 50	116 08	C	3.1	Little San Bernardino Mts.
9	14:30:08	35 41	117 53	C	2.8	Near China Lake
10	18:38:52	33 53	118 51	C	2.8	South of Point Dume
11	13:41:35	33 57	118 12	B	4.1	Near Southgate. IV at Pasadena. Generally felt in metropolitan area
11	15:18:00	36 03	118 05	C	2.3	Southwest of Haiwee
11	15:20:21	36 03	118 05	C	2.5	Southwest of Haiwee
11	23:37:49	34 01	118 10	C	2.3	Near Huntington Park
12	21:07:19	34 01	116 29	B	4.1	Near Desert Hot Springs. Felt there, at Palm Springs and slightly at Riverside (CGS)
13	15:07:52	34 18	118 38	C	2.3	Near Chatsworth
14	11:52:37	40	123½		4.8	Eureka (press). Epicenter and origin time by USCGS. VI at Punta Gorda (CGS)
14	18:36:16	34 59	116 30	C	3.0	East of Manix
15	17:28:32	33 48	118 32	C	2.4	West of Palos Verdes Hills
16	11:55:56	34 05	118 59	C	2.8	East of Point Mugu
16	12:34:43	32 40	116 45	C	2.6	Near Dulzura, San Diego County
18	18:33:49	34 16	117 01	B	3.1	West of Big Bear
19	01:33:48	33 45	118 26	B	3.6	Near Point Vicente. Felt at Santa Monica, Beverly Hills, Hollywood, etc. (press) V at San Pedro (CGS)
19	19:36:35	36 08	118 13	C	2.2	West of Haiwee
19	19:49:05	36 08	118 13	C	1.4	West of Haiwee
19	20:00:00	36 09	117 56	C	1.9	Near Haiwee
20	05:24:03	36 07	118 12	C	1.9	West of Haiwee
20	08:16:54	32 56	115 48	C	3.3	West of Brawley. One of a swarm
20	08:24:11	33 10	115 25	D	3.6	Near Calipatria. Largest of swarm
20	11:29:46	33 38	116 15	C	2.9	South of Long Beach
21	06:47:58	33 51	117 37	B	2.4	Southwest of Corona
21	13:55:01	36 18	117 50	C	1.8	Near Haiwee
23	17:59:45	33 44	118 24	C	2.3	Near Point Vicente
24	13:56:59	34 40	118 50	C	4.0	South of Gorman. Felt at Fillmore and Piru, not felt at Santa Paula (press)
25	02:34:01	34 44	118 50	C	3.1	South of Gorman
27	07:01:25	34 38	118 53	C	2.6	South of Gorman
27	12:36:57	33 26	116 16	C	3.4	Santa Rosa Mountains
27	14:11:37	34 34	116 14	C	3.0	Old Woman Mountains
27	23:42:38	33 59	116 29	C	2.8	Near Desert Hot Springs
28	04:10:05	36 05	117 24	C	2.2	Argus Range
28	14:36:21	35 50	117 36	B	2.6	Near China Lake
28	14:45:11	35 47	117 32		2.1	Northeast of China Lake
28	21:21:16	33 59	117 31	B	2.7	Near Mira Loma
29	17:34:11	33 39	118 22	C	2.7	South of San Pedro
February						
1	00:21:55±	31.7	113.3	D	4.1	Mexico (south of Arizona)
1	12:41:05			C	1.7	Near China Lake
2	02:37:24	32	113		4.2	Mexico (south of Arizona) Epicenter and origin time by CGS
2	05:57:49	35 54	117 56	C	1.7	South of Little Lake
2	06:07:02	36 02	117 33	C	1.3	Argus Range
3	07:51:31±	32.0±	113.0±	D	4.3	Near Mexican Border, Arizona
3	08:34:37	33 57	116 48	B	2.8	Near Cabazon
3	12:22:13±	32.0±	113±	D	4.3	Arizona, Mexican Border
4	13:33:56	34 43	117 08	C	2.6	Near Lenwood
4	13:56:03	34 00	116 51	C	2.7	North of Banning
4	19:53:07	33 49	115 50	C	3.2	Southwest of Pinto Basin. Smaller shocks at 19:50 and 19:55.

February							
4	21:16:35	34 12	118 07	B	1.8	Near Mount Wilson	
7	01:21:27	33 27	116 19	C	2.6	Santa Rosa Mountains	
7	13:36:31	34 07	116 59	B	3.2	Near Forest Home	
9	19:32:50	34 02	116 24	C	3.6	Northeast of Desert Hot Springs	
10	14:38:55	35 12	118 46	C	2.7	East ofArvin	
11	17:05:31	36 18	117 50	C	1.7	Near Haiwee	
11	19:17:03	36 18	117 50	C	1.6	Near Haiwee	
15	17:43:13	33 52	115 49	B	3.2	Pinto Basin	
15	20:37:39	33 45	115 49	C	3.2	Cottonwood Mountains	
17	22:32:31	33 58	116 28	C	2.8	Near Desert Hot Springs	
19	00:29:44	34.5	120.7	D	3.5	Southwest of Arguello	
19	17:22:46	33 51	118 31	C	2.5	West of Redondo Beach	
19	22:36:46	34 36	118 00	B	3.3	East of Palmdale	
20	11:34:37±			C	1.8	Near La Jolla. Peculiar	
20	12:31:28	36 07	118 02	C	1.9	West of Haiwee	
22	15:59:58	33 32	116 14	C	3.1	East of Santa Rosa Mt. Mt.	
22	16:28:03	34 06	116 22	C	3.2	N. of Little San Bernardino/	
23	23:13:12	34 07	117 26	B	2.7	Near Fontana	
24	20:47:19	33 40	120 17	B	3.6	Southwest of Santa Rosa Is.	
25	06:20:43	33 32	116 32	C	2.9	Southeast of Anza	
25	11:47:09	33 54	117 01	B	2.5	Near Eden Hot Springs	
25	16:06:22	34 37	119 05	C	4.7	Sespe Hot Springs (north of Santa Paula). Minor damage at Ventura; plaster cracked at Santa Paula. Felt as far as Casmalia and Palmdale (CGS)	
25	16:32:23	34 37	119 05	C	2.9	Aftershock of 16:06	
26	21:12:32	36 30	116 32	C	3.0	Nevada-California border, Amaragosa Desert	
27	18:54:06	34 03	116 56	B	2.0	Near Forest Home	
28	02:23:45	33 52	115 41	C	3.0	Pinto Basin	
28	06:51:03	37 10	118 32	C	3.1	West of Big Pine	
28	10:31:22	33 05	117 38	B	2.7	West of Encinitas	
March							
3	02:41:48	33 54	116 48	B	2.7	South of Cabazon	
3	05:05:26	34 22	116 29	B	3.5	East of Old Woman Springs	
3	09:02:33	34 25	116 32	C	3.1	East of Old Woman Springs	
6	21:19:04	34 20	118 05	B	2.0	North of Mount Wilson. Felt sharply in Montrose (telephone call)	
12	10:13:30	34 48	118 23	B	2.6	South of Willow Springs	
12	15:11:28±	36.1	117.9	C	1.6	Near Haiwee	
14	09:06:15	34 01	118 24	C	2.3	Near Culver City	
15	21:12:16	36 11	118 06	C	1.7	Northwest of Haiwee	
18	19:04:06	35 31	118 21	B	2.9	South of Weldon	
18	20:06:27±			C	1.8	Near Haiwee	
19	22:48:02	34 23	118 36	C	2.5	W st of Newhall	
20	04:16:39	35 46	117 33	C	3.2	East of China Lake	
20	07:22:17	40½	121½		5.5	Epicenter and origin time by USCGS. Near Lassen Peak; felt at Chico, Sacramento, etc.	
20	07:45:06	34 05	117 23	B	2.3	Near Fontana	
20	10:42:00	33 48	115 45	C	3.1	Eagle Mountains	
21	17:31:57	35 58	120 38	C	3.7	Southwest of Corcoran (San Joaquin Valley)	
21	21:06:04	34 11	117 37	B	3.2	Near Cucamonga Peak. Felt at Riverside, Colton, Pomona	
22	06:39:40±			B	1.8	Near Haiwee	
22	09:17:11	34 11	117 37	B	2.6	Near Cucamonga Peak. After-shock of March 21	
22	20:18				4.6	Northern California	
23	02:52:47	35 05	118 20	B	3.0	Southeast of Tehachapi	
24	13:47:14	34 50	116 47	C	2.7	Near Minneola (southeast of Yermo)	
27	05:47:16	34 41	118 43	C	2.8	Near Sandbergs (southeast of Gorman)	
28	15:58:25±			B	1.1	Near Mount Wilson	
28	21:11:50	35 37	118 42	C	2.4	Northwest of Democrat Springs	
29	04:43:20	35 58	120 53	D	3.5	Near San Ardo (south of King City) V at Lonoak (CGS)	
30	03:21:53	34 53	117 50	B	3.3	Southeast of Muroc. Felt there (CGS)	
31	04:48:33	34 25	117 13	B	2.5	East of Hesperia	

PASADENA LOCAL SHOCKS
July, August, September, 1950

No. 3

Date	P.S.T.	Lat.N.	Long.W.	Q	M	Remarks

Note: Times are Pacific Standard Time. For California daylight saving time prior to September 24, add one hour.

July						
4	03:03:11	33 44	117 56	B	2.4	West of Santa Ana
6	20:38:35	33 57	117 49	B	3.0	North of Olinda. Felt at Anaheim
7	03:35:36	33 50	116 16	C	3.2	North of Indio
11	01:19:42	35 23	119 15	C	3.6	West of Bakersfield
13	07:01:47	34 20	119 30	C	2.8	Off Carpinteria. Felt at Santa Barbara and Montecito (press and telephone)
17	02:16:56	33 37	118 04	C	2.4	Off Huntington Beach. Felt in Los Angeles (telephone)
25	08:55:40	33 24	116 20	B	3.4	Near Clark Lake
26	22:19:30	33 59	117 14	C	3.0	East of Riverside
27	01:40	33 07	115 34			Near Calipatria. First of swarm. See list at end of this issue.
27	03:29:26				4.8	Near Calipatria
28	09:50:48				5.4	Near Calipatria
28	09:58:12				4.8	Near Calipatria
29	06:36:32				5.5	Near Calipatria
29	23:59:49	34 29	117 54	B	2.4	Near Little Rock
AUGUST						
1	00:37:20	33 07	115 34		4.7	Near Calipatria
1	22:50:48	34 40	120 38	C	3.3	West of Lompoc
3	17:46:56	33 00	116 05	C	3.7	Southeast of Borego Valley
10	01:55:26	35 43	118 15	C	3.6	North of Weldon
11	18:17:17	34 19	116 48	B	4.3	Near Baldwin Lake. Felt at Big Bear (press), Highland, Riverside (CGS)
14	11:16	33 07	115 34	C	4.7	Near Calipatria
15	03:02:00	32 35	119 04	C	3.5	Southwest of San Clemente Island
15	03:30:33	34 10	116 51	B	2.5	East of Seven Oaks
17	06:37:10	34 09	119 21	B	2.8	Off Ventura
17	17:44:00	34 07	117 13	C	2.2	Near San Bernardino
18	06:55:52	34 05	117 15	B	2.3	Near San Bernardino
18	11:50:06	34 13	117 26	B	2.8	Near Devore
20	01:20:14	33 54	118 36	C	2.5	Santa Monica Bay
20	08:31:04	34 44	118 40	C	2.8	Near Sandbergs
21	06:43:58	34 09	119 21	C	2.9	Off Ventura
21	17:58	33 07	115 34	D	2.3	Felt at Calipatria and Niland(CGS)
22	14:47:58	34 09	119 21	B	4.2	Felt near Ventura (telephone)
22	16:39:38	34 09	119 21	C	2.3	Off Ventura?
22	16:40:59	34 09	119 21	C	2.5	Off Ventura
22	16:47:59	34 09	119 19	C	3.1	Off Ventura
22	20:34:52	32 56	116 08	C	3.3	Near Carrizo
23	06:00:10	34 09	119 21	C	3.0	Off Ventura
23	08:35:28	33 41	116 41	B	3.2	Near Keen Camp
23	09:50:16	34 09	119 21	C	2.4	Off Ventura
23	14:33:57	34 09	119 21	C	2.6	Off Ventura
23	15:54:16	34 09	119 21	C	2.5	Off Ventura
23	16:27:01	34 09	119 21	B	3.0	Off Ventura
23	17:48:21	34 09	119 21	C	2.7	Off Ventura
23	18:02:24	34 09	119 21	C	2.3	Off Ventura
23	20:15:28	34 09	119 21	C	3.2	Off Ventura
23	20:42:13	34 10	119 21	B	3.4	Off Ventura
23	21:03:13	34 09	119 21	B	2.7	Off Ventura
23	22:34:51	33 59	116 53	B	2.1	North of Beaumont
23	23:52:19	34 09	119 21	C	2.5	Off Ventura
24	01:08:48	34 09	119 21	B	3.3	Off Ventura
24	01:31:29	34 09	119 21	C	2.5	Off Ventura
24	21:17:24	34 02	117 01	B	3.0	Near Yucaipa. Felt at Moreno(CGS)
25	21:34:09	34 02	116 22	B	2.8	East of Morongo Valley
25	21:35:13	34 02	116 22	B	2.8	East of Morongo Valley
26	01:20:09	34 02	116 24	C	2.0	East of Morongo Valley
26	03:20:02	34 09	119 21	B	2.6	Off Ventura
26	04:07:26	34 00	116 22	B	2.6	East of Morongo Valley
28	11:45:26	34 18	116 47	B	4.2	North of Baldwin Lake. Felt at Big Bear (press) and Fawnskin (CGS).
28	14:07:08	34 19	116 54	B	2.7	North of Big Bear Lake
28	16:29:00	34 20	116 48	B	3.3	North of Baldwin Lake
29	01:17:46	35 35	117 00	C	3.2	Garlock fault (Leach trough)

August (continued)							
29	05:07:35	34	21	117	40	C	2.3 Near Big Pines
29	20:07:23	32	09	116	45	C	3.0 Region of Guadalupe, Baja, Calif.
30	08:59:04	34	58	116	49	C	4.2 Near Calico
September							
1	09:30:46	34	05	117	12	B	2.9 Near Redlands
2	15:14:34	34	17	116	54	B	2.4 North of Big Bear Lake
5	11:19:56	33	39	116	45	B	4.8 Northwest of Anza. VI in that vicinity. Felt over most of southeastern California, and as far as Barstow (CGS).
7	00:07:26	35	45	117	35	C	3.2 Near China Lake
7	00:42:53	34	10	119	21	B	3.0 Off Ventura
7	04:23					D	3.5 Vicinity of El Centro
7	12:38:57	34	05	115	50	C	3.0 Pinto Mountains
7	15:46:09	32	50	115	58	C	3.2 North of Coyote Well
8	02:31:46	32	59	115	45	C	3.6 East of El Centro
9	04:23:00	35	50	117	42	C	2.4 Near China Lake
9	13:05:30	34	57	116	38	B	3.4 Near Manix
9	23:16:05	33	29	116	18	B	3.0 Santa Rosa Mountains
10	21:05:49	32	35	116	20	C	2.9 East of Campo
10	21:30:57	35	44	118	20	B	3.2 North of Weldon
12	05:57:01	35	50	117	42	C	2.6 Near China Lake
12	23:14:29	36	00	117	35	C	2.8 North of China Lake
16	13:46:35	33	28	116	25	B	3.5 Near Santa Rosa Mountain
16	13:51:33	33	26	116	25	B	2.4 Near Santa Rosa Mountain
17	00:31:42	32	34	116	01	C	2.8 South of Mountain Springs
17	11:13:30	32	10	116	25	C	4.5 Lower California. Felt, San Diego to Jacumba (CGS)
17	20:41:38	34	10	117	16	B	3.2 Near Arrowhead Springs. Felt at Riverside (CGS)
17	23:53:46	32	59	115	38	C	2.7 West of Brawley
19	04:53:40	33	41	118	38	B	2.6 South of Sandbergs
19	11:57:20	34	04	116	18	B	2.9 Southwest of Twenty-nine Palms
19	21:37:55	33	54	118	35	B	2.2 Santa Monica Bay
20	06:20:07	34	19	118	36	B	2.4 Santa Susana Mountains
21	06:30:58	34	09	117	16	B	2.3 Near Arrowhead Springs
21	14:45:12	34	00	117	18	B	3.4 East of Riverside
22	11:48:35	35	41	118	19	C	3.0 Near Weldon
22	17:58:49	33	50	118	23	B	2.6 Near Redondo. Felt at Inglewood (press) and International Airport (CGS)
23	21:41:48	34	12	117	21	C	1.4 Cajon Pass
23	22:17:18	34	11	117	19	B	1.4 Near Arrowhead Springs
24	04:23:00	34	13	119	35	C	3.3 Off Carpinteria
24	05:18:12	34	10	117	35	B	2.2 Near Alta Loma
24	16:22:52	33	59	115	57	C	3.0 Pinto Mountains
24	23:46:24	33	30	116	03	C	2.5 Near Mecca
28	03:03:22	37	29	118	35	C	4.1 Northwest of Bishop. Felt at Bishop, Laws and Owens Gorge (CGS)
29	13:22:44	33	58	116	28	B	2.8 Near Desert Hot Springs
29	16:27:31	33	18	115	59	C	3.4 West shore of Salton Sea
30	13:18:54	33	30	116	34	B	2.0 West of Santa Rosa Mountain
30	13:19:04	33	30	116	34	B	2.5 West of Santa Rosa Mountain
30	13:19:31	33	30	116	34	B	2.2 West of Santa Rosa Mountain
30	16:25:36	34	13	116	50	B	2.9 Near Baldwin Lake
30	19:19:20	33	25	116	20	B	3.0 Near Santa Rosa Mountain

February 6, 1951
C. F. Richter
Marion Reid

Imperial Valley earthquake swarm, July-August 1950
Shocks of magnitude 3.5 and over.

Epicenters near 33° 07' N. 115° 34' W.

List prepared by J. M. Nordquist

	P.S.T.	M
July 27	01:40	3.6
	01:54	4.1
	03:29	4.8
	03:32	3.6
	03:43	3.5
	04:02	4.2
	04:19	3.8
	04:57	3.9
	08:49	3.8
	14:51	4.5
	19:25	4.7
	19:33	3.7
	19:35	3.9
	19:39	3.6
	19:54	3.5
	20:00	3.8
	21:14	3.5
	21:38	3.8
July 28	00:24	3.6
	08:24	4.0
	09:15	3.5
	09:24	3.5
	09:27	4.7
	09:30	4.1
	09:50	5.4
	09:58	4.8
	10:17	4.2
	10:40	4.0
	11:49	4.2
	13:13	4.1
	13:19	3.9
	14:20	3.8
	14:57	3.9
	16:17	4.5
	19:01	3.9
	23:36	3.9
July 29	02:15	3.8
	06:36	5.5
	06:42	3.6
	06:50	3.8
	07:09	4.5
	07:20	3.9
	07:26	3.5
	07:59	3.5
	08:02	3.5
	09:05	3.7
	09:08	3.7
	09:14	4.3
	10:43	4.7
	13:49	3.5
	14:05	3.5
Aug. 1	00:37	4.8
3	20:51	3.6

Approximately eighty shocks of this group with magnitudes from 3.0 to 3.4 were recorded.

These shocks were investigated in the field by the U. S. Coast and Geodetic Survey. Most of them occurred in four distinct groups, each including many small shocks, preceding and immediately following the shocks of July 27, 03:29 and 19:25, July 28,09:50 and July 29, 06:36

The shock of July 27, 03:29 occasioned minor damage (mostly to plaster, windows, dishes, etc.; intensity VI) at Brawley and Niland. That of July 28, 09:50 reached intensity VI at Brawley, Calipatria, Niland and Westmorland; it was felt as far as San Diego and Parker. That of July 29, 06:36 reached intensity VIII near Calipatria, and caused enough damage, chiefly to old and weak structures, to be rated as of intensity VII at Calipatria, Niland and Westmorland. Intensity at Brawley, VI. Felt at San Diego and Parker.

The shock on August 1 at 00:37 came after a long interval of comparative inactivity; its aftershocks were very few and small. Intensity VI at Calipatria.

PASADENA LOCAL SHOCKS

October, November, December 1950

No. 2

Date	P.S.T.	Lat.N.	Long.W.	Q	M	Remarks
October						
1	09:44:31	34 00	116 31	B	3.0	Near Desert Hot Springs
1	18:19:23	34 06	117 27	B	2.5	Near Fontana
4	01:58:47	32 06	116 50	C	2.3	Northwestern Baja California
4	07:46:02	34 48	116 25	C	2.6	Near Hector, Mojave Desert
4	12:36:40	33 45	118 59	C	2.4	South of Point Dume
5	16:01:11	34 40	117 00	C	2.3	South of Barstow
5	17:39:00	33 57	115 50	B	3.4	Pinto Mountains
5	17:40:06	33 57	115 50	B	3.0	Pinto Mountains
6	00:16:25	34 10	115 50	C	2.7	Pinto Mountains
6	03:05:08	36 01	117 45	B	2.7	Near Coso Hot Springs
6	03:47:54	36 01	117 45	B	2.3	Near Coso Hot Springs
6	06:52:00	36 01	117 45	B	2.9	Near Coso Hot Springs. Felt at Haiwee power plant
6	06:55:24	36 01	117 45	B	2.1	Near Coso Hot Springs
6	08:38:57	36 01	117 45	B	2.0	Near Coso Hot Springs. Numerous smaller shocks from this source recorded at Haiwee on this date.
7	03:48:12	34 01	116 56	B	2.8	North of Beaumont
7	22:40:18	33 09	119 53	C	3.5	Near San Nicolas Island USCGS
8	04:24:17	40½	125		4.5	Epicenter and origin time by,
8	12:50:01	35 26	117 30	B	3.0	Northeast of Randsburg
8	18:35:23	33 55	118 43	B	2.7	Southeast of Point Dume
9	03:16:02	33 45	118 43	C	2.0	Santa Monica Bay
10	23:46:32	34 41	118 51	B	2.3	South of Tejon Pass
12	03:04:04	33 59	116 42	B	2.6	North of Whitewater
14	06:04:10	34 00	117 30	B	2.3	Near Mira Loma
14	08:32:51	34 28	116 43	B	2.4	South of Cahuilla
14	09:59:31	33 41	116 47	C	3.1	Near Hemet Reservoir
14	12:25:38	32 10	116 34	D	3.8	Lower California
15	12:40:11	33.0	115.4	D	3.8	Near Brawley? Felt there.
15	16:48:45	33.0	115.4	D	3.9	Near Brawley? Felt there.
19	15:13:07	35 43	117 55	C	3.2	Near Brown
19	21:01:55	34 15	116 34	B	2.7	Eastern San Bernardino Mts.
21	23:17:01	33 08	116 26	B	2.7	East of Julian
22	13:49:11	33 16	116 10	B	3.0	Near Borego Valley
23	00:12:50	39½	117		4.6	Central Nevada. Epicenter and origin time by USCGS
27	20:20:02	33 34	118 20	B	2.7	San Pedro Channel
29	08:35:21	33 52	117 09	B	2.4	Northeast of Perris (CGS).
29	12:34:02	33 16	116 45	B	2.6	Near Lake Henshaw. Felt there/
30	12:22:59	34 00	117 04	B	2.8	Near Yucaipa
30	16:31:01	34 13	116 44	B	3.4	Southeast of Baldwin Lake
November						
1	08 55:13	34 00	116 59	B	3.0	Southeast of Yucaipa (CGS).
1	12:21:22	32 07	116 28	C	3.9	Baja California. Felt at Campo/
1	22:39:25	35 20	118 50	C	2.6	East of Bakersfield
3	16:47:45	35 13	118 45	B	2.5	East of Arvin
3	18:32:47	33 55	116 40	B	2.7	Near Whitewater
4	21:50:42	33 59	115 48	C	2.7	Pinto Mountains
5	03:35:40	32 55	115 27	C	3.4	Southeast of Brawley.
5	03:36:57	32 55	115 33	C	3.5	Southeast of Brawley.
5	19:45:13	34 01	115 49	B	3.1	Pinto Mountains
6	10:26:58	36 35	115 40	C	3.8	Near Indian Springs, Nevada

November							
6	12:55:46	32 43	117 50	B	4.4	Northwest of Los Coronados. Felt at San Diego (press, CGS)	
7	07:02:35	33 38	118 01	B	2.9	Off Huntington Beach. Felt there (Murray)	
7	07:44:37	34 13	118 43	B	2.8	Near Santa Susana	
8	00:54:43	34 04	118 41	B	3.1	Near Calabasas. Largest of swar	
8	01:14:23	34 04	118 43	B	2.6	Near Calabasas.	
8	21:48:51	34 04	118 41	B	2.6	Near Calabasas	
9	08:28:41	35 03	116 29	C	3.0	Northeast of Manix	
9	16:35:42	34 08	116 31	B	3.5	Northeast of Morongo Valley	
10	18:03:58	34 14	117 25	B	2.0	Cajon Pass	
11	11:14:39	34 40	118 50	C	3.3	South of Gorman	
11	11:27:22	34 40	118 50	C	2.7	South of Gorman	
11	11:32:28	34 40	118 50	C	3.1	South of Gorman	(CGS)
11	21:05:33	33 57	118 26	B	2.9	Near Culver City and airport/	
12	15:32:28	34 01	116 00	B	3.8	Little San Bernardino Mts.	
13	13:28:26	35 07	117 32	C	2.9	North of Kramer	
14	11:16:39	33 29	116 29	B	2.8	Near Santa Rosa Mountain	
15	17:59:19	33 57	118 24	B	3.1	Felt in West Los Angeles, etc. (press, CGS).	
16	16:56:21	34 00	115 46	C	2.5±	Pinto Mountains	
16	18:47:53	34 01	116 39	B	2.7	West of Morongo Valley	
16	19:46:42	33 55	118 19	C	1.8	Near Hawthorne.	
16	19:46:51	33 55	118 19	B	3.8	Felt (telephone) Los Angeles, etc. (press, CGS).	
17	03:57:23	34 08	115 50	C	3.3	Pinto Mountains	
17	13:15:31	36 00	116 25	C	2.6	West of Shoshone	
17	20:57:52	36 00	116 25	C	3.5	West of Shoshone	
18	09:09:16	34 03	117 44	B	1.8	Near Pomona	
19	04:17:14	34 15	116 27	B	3.2	East of San Bernardino Mts.	
19	05:08:08	34 15	116 28	B	2.7	Near the preceding	
20	01:53:19	34 00	116 59	B	2.2	North of Beaumont	
20	03:31:15	34 00	116 23	C	2.0±	Northeast of Desert Hot Springs	
23	14:18:04	36 08	117 58	B	1.4	Near Haiwee	
24	23:18:36	35 47	117 34	C	2.2±	Near China Lake	
25	02:34:53	36 08	117 58	B	1.8	Near Haiwee	
25	08:47:27	33 06	116 05	B	3.1	Southeast of Borego Valley	
25	09:37:10	34 58	116 52	B	2.9	Northeast of Barstow	
25	14:46:56	34 00	117 35	B	2.2±	Near Mira Loma	
25	15:10:10	34 38	116 59	C	2.7	South of Barstow. Possibly more than one shock	
25	15:53:16	34 00	117 35	B	2.0±	Near Mira Loma. Same as 14:46. Time difference 1h 6m 20s.	
25	21:52:52	36 02	117 46	C	2.0	Near Coso Hot Springs	
25	22:33:36	33 48	116 09	C	2.5	Northeast of Indio	
26	09:56:20	36 08	117 53	D	2.5	Near Haiwee	
28	00:33:49	34 56	119 19	C	2.8	Near Pattiway	
29	15:43:07	33 39	118 28	B	2.6	San Pedro Channel	
30	23:35:54	33 38	118 01	C	2.3	Off Huntington Beach	
December							
4	01:27:42	35 47	118 00	B	2.9	North of Walker Pass	
4	04:45:08	33 24	116 45	C	2.3	Near Oak Grove (northeast of Palomar)	
5	01:22:49	34 10	117 24	B	2.0	Northwest of San Bernardino	
6	19:51:09	36 23	118 14	C	2.7	Near Cottonwood Lakes. Felt at Cottonwood Gates (CGS).	

December

6	19:53:15	36 24	118 08	C	2.3	Near Cottonwood Lakes
6	20:54.8	32.4	115.1	D	3.9	Near Volcano Lake
6	21:04.9	32.4	115.1	D	4.1	Near Volcano Lake
6	23:14:30	35 29	118 49	C	2.9	Northeast of Bakersfield. Felt, Kern River Powerhouse No. 1(CGS)
6	23:39:24	32 18	116 31	C	3.0	Region of Guadalupe, Lower California
7	01:21:55	34 12	117 23	B	2.3	Near Devore
7	18:13:58	32 18	116 31	C	3.1	Region of Guadalupe, Lower California
7	20:18:19	35 31	118 49	B	3.0	Northeast of Bakersfield. Felt/ Kern River No. 1 (CGS)
7	20:25:47	35 31	118 49	C	2.6	Northeast of Bakersfield
8	16:05:24	34 00	118 24	B	2.0	Near Culver City
9	00:40:15	33 51	118 33	B	2.1	Santa Monica Bay
9	15:14:38	33 59	118 21	B	2.0	Near Inglewood
10	00:31:10	33 21	116 25	B	3.4	West of Clark Lake
10	09:35:10	33 28	116 35	C	2.4	Southwest of Santa Rosa Mt.
10	15:56:48	34 40	117 03	B	2.4	South of Barstow
11	18:05:06	33 31	116 31	B	2.0±	Near Santa Rosa Mountain
12	21:13:56	34 19	117 04	B	2.1	Northern San Bernardino Mts.
12	23:40:30	34 00	115 45	C	2.6	Pinto Mountains
13	00:45:46	33 55	115 49	C	2.6	Pinto Mountains
13	03:37:21	34 03	115 50	C	2.4	Pinto Mountains
13	07:42:01	33 28	116 37	B	3.0	Southwest of Santa Rosa Mt.
14	00:59:34	40.1	120.2		5±	Felt at Herlong, Calif.(USCGS)
14	01:29:54	40.1	120.2		$4\frac{3}{4}$±	Felt at Herlong, Calif.(USCGS)
14	05:24:21	40.1	120.2		$5\frac{3}{4}$±	Damage at Herlong, Calif. Epicenter by USCGS
14	05:56:23	35 03	119 10	B	4.4	Near Wheeler Ridge
15	15:41:25	35 31	118 52	C	2.6	Near Democrat Springs
17	10:58:50	34 54	118 52	C	2.5	South of Grapevine
17	21:49:02	32 57	116 08	C	3.1	East of Vallecito
19	11:45:47	34 40	117 40	C	2.3	Near Wilsona
20	01:37:18	36 07	117 59	B	2.2	Near Haiwee
21	16:34:58	33 59	119 06	C	2.6	Near Wheeler Ridge
21	18:05:36	33 25	116 34	B	4.0	Southwest of Santa Rosa Mt. Felt in the Santa Rosa Mountains (letter) and at Campo, Hemet, Warner's etc., (CGS).
22	04:27:04	36 04	118 01	B	3.2	Near Haiwee
22	13:45:15	36 04	118 01	C	3.5	Near Haiwee
22	23:56:00	36 04	118 01	C	2.9	Near Haiwee
24	16:16:09	37 20	118 04	C	3.5	Near Deep Springs
26	00:17:37	36 46	115 54	C	3.6	Near Frenchman's Flat, Nevada
26	04:05:49	33 57	117 35	B	3.1	North of Arlington. Felt at Riverside (press)
26	04:26:14	37 16	118 33	C	3.0	Southwest of Bishop
26	05:32:08	33 46	118 12	B	2.5	Long Beach
26	06:20:57	37 16	118 33	C	2.3	Southwest of Bishop
27	11:58:21	33 30	116 28	B	2.9	Near Santa Rosa Mountain
27	12:14:33	34 06	116 42	B	3.1	Near Mount San Gorgonio
27	21:22:11	33 12	116 07	C	4.2	Southeast of Borego Valley
28	04:19:03	34 06	117 26	B	2.1	Near Fontana
29	05:12:51	35 48	117 57	C	2.4	West of Brown
29	19:48:09	33 57	116 30	B	3.7	Near Desert Hot Springs. IV at Whitewater (CGS)
30	08:08:52	36 26	118 13	C	3.2	Near Cottonwood Lakes. Felt at Cottonwood (CGS)
Add: 10	22:12:09	35 30	118 49	C	2.4	Northeast of Bakersfield; felt Kern River No. 1

C. F. Richter
Marion Reid
April 10, 1951

Special notice

For nearly twenty years the times of local earthquakes in this report have been given as Pacific Standard Time (P.S.T., 120° W.). Since times for distant shocks are, following international custom, expressed in Greenwich Civil Time (G.C.T.), and so appear in our other Bulletin, this has necessitated additional bookkeeping work.

Official use of daylight-saving time largely destroys the convenience and utility of reporting in local standard time. This is particularly so when daylight-saving is introduced and abandoned arbitrarily or irregularly.

Beginning January 1, 1951, times in this report are Greenwich Civil Time and the dates given correspond to these. To reduce to Pacific Standard Time, subtract eight hours; for Pacific Daylight Time, subtract seven hours. For about one-third of the day this will also change the date.

A conversion table follows.

Grrenwich Civil Time (G.C.T.)	Pacific Standard Time (P.S.T.)	Pacific Daylight Time (P.D.T.)
00h	16h previous date 4 p.m.	17h previous date 5 p.m.
01	17 5	18 6
02	18 6	19 7
03	19 7	20 8
04	20 8	21 9
05	21 9	22 10
06	22 10	23 11
07	23 11	00 same date 12
08	00 same date 12	01 1 a.m.
09	01 1 a.m.	02 2
10	02 2	03 3
11	03 3	04 4
12	04 4	05 5
13	05 5	06 6
14	06 6	07 7
15	07 7	08 8
16	08 8	09 9
17	09 9	10 10
18	10 10	11 11
19	11 11	12 12
20	12 noon	13 1 p.m.
21	13 1 p.m.	14 2
22	14 2	15 3
23	15 3	16 4