

SEISMOLOGICAL LABORATORY
California Institute of Technology

Bulletin on Local Shocks

January-March, 1954



This issue catalogues earthquakes in the general Southern California area for which seismograph data are sufficient to make good epicenter locations. In general this includes shocks of magnitude 3.0 and over. The larger shocks in adjacent areas are also catalogued. Smaller shocks are listed when reported as felt, or when circumstances are unusually favorable for location, or when there is some special reason for interest.

Especial care has been taken to keep the catalogue complete for shocks of magnitude 3.0 and over in Kern County. These are mostly aftershocks of the major earthquake on July 21, 1952. The shock on January 12, 1954, at 23:33:48 (magnitude 5.9), was the largest in the Kern County area since August, 1952. Listing of smaller Kern County shocks is incomplete; those shown were investigated in the course of cataloguing the larger ones.

On March 19 an earthquake of magnitude 6.2 originated in the Santa Rosa Mountains in northeastern San Diego County. Between 30 and 40 aftershocks of magnitude 4.0 and over, and many more of magnitudes 3.0-3.9, followed before the end of March. Only a few of the larger aftershocks are included here; it is planned later to provide a supplementary list for statistical purposes.

Note that dates as well as times are given in terms of Greenwich Civil Time (G.C.T.). To reduce to Pacific Standard Time subtract 8 hours; this will occasionally change the date. The time given is that of origination of the shock, to the nearest second (where possible; occasionally only the tenth of a minute or the whole minute is given).

Latitude and longitude are given in degrees and minutes, or in degrees and tenths. Magnitudes appear in the column headed M.

Under Q is a rating of the quality of location:

- A - specially investigated
- B - probably within 5 kilometers (3 miles)
- C - probably within 15 kilometers (10 miles)
- D - very rough

USCGS - United States Coast and Geodetic Survey (chiefly reports of felt earthquakes as collected by the San Francisco office).

Charles F. Richter
June 8, 1954

PASADENA LOCAL SHOCKS

No. 1

January, February, March 1954

International
Seismological
Centre

Date	G.C.T.	Lat.N.	Long.W.	Q	M	Remarks
Jan.						
1	07:13:14	35 16	118 30	B	2.8	East of Caliente
1	08:55:40	35 22	118 30	B	2.7	Northeast of Caliente
4	15:13:30	33 17	116 10	B	3.1	Borego Valley
4	18:50:56	33 16	116 03	B	3.9	Near Truckhaven. Felt in San Gorgonio Pass.
4	19:49:09	33 15	116 06	B	3.0	West of Truckhaven
4	21:06:12	33 16	116 09	B	3.0	Near Seventeen Palms
4	23:03:14	35.9	120.5	D	3.4	Near Parkfield
4	23:31:52	33 16	116 06	B	4.2	Borego Valley. Felt in San Gorgonio Pass
5	00:23:22	36.0	120.2	D	3.2	Northeast of Parkfield
6	03:48:44	33 57	116 58	B	3.1	Near Beaumont. Felt in San Gorgonio Pass and at Hemet.
6	11:12:30	36 12	118 04	C	2.7	Northwest of Haiwee
7	16:08:35	35 48	117 38	B	3.6	Near China Lake
7	21:22:10	33 16	116 03	B	3.2	Near Truckhaven
8	16:25:26	33 10	116 20	B	3.4	South of Borego Valley
9	11:22:56	35 14	118 33	B	2.7	Southeast of Caliente
12	01:15:40	34 08	118 18	C	1.5	Near Glendale (Artificial?)
12	11:02:00	35 10	118 31	C	2.8	Northwest of Tehachapi. IV at Tehachapi (CGS)
12	23:33:49	35 00	119 01	A	5.9	Near Wheeler Ridge. Felt over most of Southern California, from Sacramento to the Mexican boundary. Intensity at least VII near the epicenter (which is almost identical with that of 1952 July 21). Followed by many smaller shocks in the same area; only the larger of these are listed.
12	23:40:37	35 02	119 06	B	4.1	Near Wheeler Ridge
12	23:49:54	35 02	119 06	B	2.9	Near Wheeler Ridge
12	23:50:25	34 59	119 08	B	3.2	Near San Emigdio Ranch
13	00:14:28	35 02	119 05	B	2.9	Near Wheeler Ridge
13	00:14:32	35 09	119 04	B	3.2	Near Kern Lake
13	00:54:47	35 02	119 06	B	3.5	Near Wheeler Ridge
13	01:45:31	35 02	119 06	A	4.4	Near Wheeler Ridge
13	02:32:44	35 00	119 01	C	3.2	Near Wheeler Ridge
13	02:52:44	35 02	119 04	B	3.2	Near Wheeler Ridge
13	03:18:19	35 02	119 06	B	3.6	Near Wheeler Ridge
13	04:14:51	35 02	119 06	B	3.5	Near Wheeler Ridge
13	04:51:43	35 00	119 01	C	2.9	Near Wheeler Ridge
13	08:11:57	35 02	119 06	B	3.2	Near Wheeler Ridge
13	08:13:36	35 02	119 06	B	2.7	Near Wheeler Ridge
13	09:12:40	35 00	119 01	B	3.0	Near Wheeler Ridge
13	10:28:22	35 00	119 01	B	2.8	Near Wheeler Ridge
13	14:40:12	35 00	119 01	B	3.3	Near Wheeler Ridge
13	21:47:35	35 02	119 06	B	3.2	Near Wheeler Ridge
13	22:00:56	35 02	119 06	B	3.6	Near Wheeler Ridge
13	22:11:03	35 02	119 06	B	2.7	Near Wheeler Ridge
13	22:55:53	35 02	119 06	B	3.2	Near Wheeler Ridge
13	23:00:20	35 02	119 06	B	3.5	Near Wheeler Ridge
13	23:04:24	35 02	119 06	B	3.1	Near Wheeler Ridge
14	00:26:28	35 08	118 38	B	3.3	Cummings Valley
14	02:08:58	35 02	119 06	B	2.8	Near Wheeler Ridge
14	04:52:43	35 23	118 32	B	2.7	Northeast of Caliente
15	00:59:40	33.9	119.1	D	2.9	Off the coast; Santa Barbara Channel?
15	03:42:59	35 07	119 04	B	2.7	Near Kern Lake
15	09:54:07	35 02	119 06	B	2.9	Near Wheeler Ridge
16	09:32:57	35 07	119 04	B	2.9	Near Kern Lake
16	10:22:07	35 22	118 32	B	2.8	Northeast of Caliente
16	10:37:46	35 04	119 02	B	2.5	North of Wheeler Ridge

1954 (continued)

- 2 -

Jan.

17	05:55:14	37 33	118 33	C	3.3	Northwest of Bishop
17	08:57:39	35 04	119 02	B	2.8	North of Wheeler Ridge
17	21:44:56	35 20	118 34	B	3.1	Near Caliente
20	01:04:52	35 22	118 35	B	3.1	North of Caliente
20	13:05:37	35 38	118 25	B	3.1	Near Isabella
21	02:17:07	34 02	116 48	B	3.1	Northeast of Banning
22	03:14:40	33 57	118 45	C	2.3	Off Point Dume
22	09:27:36	37 19	118 00	C	3.4	Near Deep Springs
22	16:38:07	33 57	118 45	C	2.7	Off Point Dume
22	23:31				5	Gulf of California?
22	23:44				4.5±	Gulf of California?
23	01:10:51	35 00	119 01	B	3.1	Near Wheeler Ridge
23	05:09:14	33 50	118 08	C	3.1	North of Long Beach. Felt at Long Beach, Lakewood, Los Alamitos (press)
23	08:03:17	33 15	116 16	C	3.0	Borego Valley
23	16:13:23	33 50	118 08	C	2.6	North of Long Beach
24	07:20:29	35 00	119 01	B	3.1	Near Wheeler Ridge
26	09:43:22	34 30	120 20	C	3.8	West of Las Cruces. Felt, Santa Ynez Valley (telephone report)
27	09:43:36	35 38	118 27	B	2.7	Near Isabella
27	14:19:48	35 09	118 38		5.0	Cummings Valley. Felt in Kern County; reported from Tehachapi as the strongest there since 1952. Felt slightly as far as Pasadena, Alhambra, Hollywood, Ventura (press) VI at Arvin, Keene, Wheeler Ridge; V at Caliente, Mojave, Tehachapi, etc. (CGS)
27	14:23:41	35 09	118 38	B	3.1	Cummings Valley
28	17:42:02	35 04	119 02	B	3.1	North of Wheeler Ridge
30	19:14:11	35 19	118 30	B	2.9	East of Caliente

Feb.

1	04:23:57	32.3	115.3	D	5.2	Lower California. Foreshock of next. Felt in Imperial Valley
1	04:32:02	32.3	115.3	D	5.6	Lower California. Felt in Imperial Valley and as far as San Diego
1	05:07:48	32.3	115.3	D	3.8	
1	05:10:07	32.3	115.3	D	4.6	
1	13:05:29	32.3	115.3	D	5.1	Lower California. Felt in Imperial Valley
2	13:50:27	32 58	116 00	B	3.3	Northeast of Carrizo
2	22:58:59	33 05	117 30	C	2.2±	Off Oceanside. Felt(?), San Clemente
4	20:48:41	35 21	118 58	B	4.0	Felt at Bakersfield and vicinity. IV, Edison oil field (CGS)
5	21:26:42	33 00	115 40	C	3.2	West of Brawley
6	12:19:47	34 10	116 36	B	2.9	North of Morongo Valley
7	00:09:53	35 02	119 06	B	4.4	Near Wheeler Ridge. IV at Lebec, Wheeler Ridge, Tehachapi (CGS)
7	08:02:39	34 19	116 47	B	3.1	Near Baldwin Lake
7	20:17:33	35 21	118 44	B	3.0	Near Bena
10	15:41:36	33 18	116 00	B	3.3	Near Truckhaven
10	23:58:38	34 56	119 04	A	4.5	West of Grapevine Station. Sharp shock at Bakersfield; strong at Frazier Park noticed by many at Santa Barbara and by a few at Ventura (press; Pacific Tel. and Tel. Co.) V at Grapevine and Lebec (CGS)
12	09:44:28	33 20	116 26	B	4.5	Northwest of Borego Valley. Sharp at Borego Valley (telephone). Felt at Riverside, Brawley, Holtville, Calexico, Escondido and in part of San Diego (P.T. and T. Co.) V at Alpine Julian, Ranchita and Thermal (CGS)
13	18:21:37	33 40	118 02	C	2.6	Off Huntington Beach
14	12:42:34	35 23	118 38	C	2.7	North of Caliente. Poorly recorded
14	13:34:24	35 23	118 38	C	2.6	North of Caliente. Poorly recorded
17	16:29:15	35 19	118 31	B	2.9	East of Caliente

1954 (continued)

- 3 -

Feb.

18	04:41:18	35 25	118 36	B	2.8	North of Caliente
18	20:14:57	35 08	119 00	B	3.4	East of Kern Lake
21	04:01:30	34 56	119 04	B	3.1	West of Grapevine
22	04:03:07	35 53	116 57	B	3.7	Panamint Range
23	07:15:02	34 58	119 05	B	3.1	Wheeler Ridge
24	05:06:46	34 53	116 48	B	3.0	Near Yermo
24	05:31:14	35 37	118 29	B	3.0	Near Bodfish
24	06:10:17	33 42	118 30	C	2.7	San Pedro Channel
24	22:30:22	35 04	119 04	B	4.5	North of Wheeler Ridge. Felt sharply at Bakersfield (IV; V at Wheeler Ridge, CGS).
24	23:08:32	35 04	119 04	B	3.0	North of Wheeler Ridge
25	00:37:43	35 04	119 04	B	2.9	North of Wheeler Ridge
26	09:09:33	33 08	116 00	B	3.6	West of Kane Springs
26	12:54:47	36 13	118 10	B	2.7	Northwest of Haiwee
27	00:55:45	35 04	118 20	B	3.0	Near Cameron
27	01:00:31	35 04	118 20	C	2.7	Near Cameron
27	15:00:27	35 00	119 00	B	3.0	Near Wheeler Ridge
28	10:32:04	35 05	119 02	B	3.3	North of Wheeler Ridge
28	21:44:17	35 12	118 39	B	3.5	Bear Mountain

Mar.

1	06:46:24	35 03	119 01	B	2.7	North of Wheeler Ridge
2	00:11:31	35 50	116 50	C	2.9	Panamint Range
2	21:18:00	34 00	118 28	C	2.2±	Near Culver City. Felt there and at Inglewood and Leimert Park (press, CGS)
3	12:39:49	35 23	119 13	B	3.0	West of Bakersfield
5	09:27:51	35 04	118 59	B	2.7	North of Wheeler Ridge
6	04:49:53	35 17	118 27	B	3.4	North of Tehachapi. IV at Tehachapi (CGS)
6	05:02:57	35 17	118 27	B	2.6	North of Tehachapi
7	01:56:08	33 16	115 55	B	3.0	Near Truckhaven
7	02:37:33	33 44	118 20	B	2.5	Near San Pedro
7	06:15:37	35 18	118 28	B	2.5	East of Caliente
8	01:04:54	33 42	117 28	B	3.1	Near Alberhill
9	19:55:29	36 00	120 20	C	4.0	Northeast of Parkfield. Felt at Herb Durham ranch near Parkfield (press)
10	18:46:31	34 03	117 14	B	2.7	Near Redlands
11	05:15:05	35 23	118 28	B	2.7	East of Piute Ranch
11	12:06:56	35 20	118 32	B	2.5	East of Caliente
13	06:21:59	35 19	118 32	B	2.9	East of Caliente. IV at Tehachapi (CGS)
13	12:44:35	34 18	117 00	B	2.9	Northwest of Big Bear
13	18:03:00	35 02	119 06	B	3.1	West of Wheeler Ridge
13	22:43.5	35.0	120.7	D	3.4	West of Santa Maria
14	04:24:22	33 30	118 50	C	2.6±	Northwest of Santa Barbara <u>Island</u>
14	06:24:41	35 02	118 50	B	2.9	Tejon Ranch
14	14:27:40	35 04	118 53	B	2.5	East of Wheeler Ridge
14	19:04:40	35 04	119 02	B	3.0	North of Wheeler Ridge
19	09:54:29	33 17	116 11	B	6.2	Santa Rosa Mountains. Felt as far as Oxnard, Tehachapi, Death Valley Junction; Goodsprings and Searchlight, Nevada; Quartzsite, Arizona. Intensity VI in Imperial County and much of San Diego County; Coachella, Indio, Palm Springs, and as far as Riverside and San Bernardino. Aftershocks very numerous. This report lists only those which were of magnitude 4.5 and over, or were reported felt, during the remainder of March. A separate list includes those of smaller magnitude. Earthquakes located in other parts of Southern California in March are reported in the usual manner.
19	09:55:56	33 17	116 11	C	5.0	Aftershock
19	09:57:05	33 17	116 11	C	4.6	Aftershock
19	10:15:22	33 17	116 11	B	4.5	Aftershock. Felt at Borego Springs (CGS)
19	10:19:57	33 17	116 11	B	4.5	Aftershock. Felt, Borego Springs, Mecca (CGS)
19	10:21:17	33 17	116 11	B	5.5	Aftershock. Reported felt generally in Imperial Valley (press); Borego Springs, El Centro, Lakeside, Mecca, Pomona, San Clemente (CGS).

1954 (continued)

Mar.

19	10:32:19	33	17	116	11	C	3.8	Aftershock. Felt at Mecca (CGS)
19	13:08:04	33	16	116	10	C	4.3	Felt at Mecca (CGS)
19	14:00:57	33	17	116	11	B	4.1	Felt at Lakeside and Mecca (CGS)
20	04:19:19	33	17	116	11	B	4.9	Should have been perceptible at many points but reports are inconclusive.
23	04:14:50	33	17	116	11	B	5.1	Felt over a wide area. V-VI at Palm Springs, V at Santa Ysabel, IV as far as Los Angeles (press, CGS).
24	00:35:51	34	37	117	07	C	2.5±	Granite Mts., northeast of Victorville
24	05:17:32	33	17	116	11	B	3.8	IV, Cathedral City; III, Palm Springs (CGS)
24	07:18:31	35	21	118	30	B	2.9	East of Caliente
25	00:59.5	38.2		119.7		D	3.9	Northern Sierra Nevada
25	16:06:42	35	02	119	06	B	3.1	West of Wheeler Ridge
26	03:18:50	35	23	118	47	B	3.0	North of Bena (Kern County)
27	15:43:35	36	25	121	10	C	4.3	Near Pinnacles. V at Pinnacles National Monument; IV at San Benito and Greenfield (CGS).
29	13:41:10	35	21	118	40	B	3.3	Near Bena (Kern County)
31	13:51:28	33	43	117	33	C	3.1	Santa Ana Mountains

C. F. Richter
Elmer Bierwagen
June 10, 1954

SEISMOLOGICAL LABORATORY
California Institute of Technology

Bulletin on Local Shocks



Addenda to issue of January-March, 1954

1954 March 23 15:05:03 32 52 117 42 C 3.0 Off the coast
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Following is a list of shocks originating in the Santa Rosa Mountains near $33^{\circ} 17' N.$ $116^{\circ} 11' W.$, from March 19, 1954, to the end of the month. These are not all from exactly the same epicenter, but the differences between locations found for the best recorded shocks of the group are only a few miles, and data are not adequate for detailed study. The list is probably complete down to magnitude 3.2; a few smaller shocks investigated in the course of cataloguing are also included. Any attempt to push complete listing down even to magnitude 3.0 would involve so many more small and imperfectly recorded shocks as to be unremunerative.

1954	O (G.C.T.)	M	O	M	O	M		
March 19	09:54:29	6.2	March 19	15:19:40	3.3	March 29	07 00 14	3.0
	55 56	5.0		16 04 21	3.9	March 30	15 30 49	3.4
	57 07	4.6		18 24	3.6		17 18 08	3.4
	57 48	4.0		52 36	3.8		21 26 06	3.6±
	58 08	3.7±		17 04 48	3.4	March 31	13 44 20	3.1
	59 36	3.5		08 26	3.2			
10	00 11	3.7		29 22	3.6			
	01 39	4.2		57 15	3.0			
	02 14	3.5		59 15	3.3			
	02 34	3.3	19	04 46	3.1			
	04 41	3.4		08 58	3.0			
	06 12	3.5		21 11	3.2			
	12 51	3.7		39 41	3.1			
	15 22	4.5		20 37 38	3.5			
	17 14	3.9		22 44 54	3.6			
	18 15	3.4	March 20	03 12 55	3.5			
	19 57	4.5		04 12 57	3.2			
	21 17	5.5		19 19	4.9			
	22 51	3.8		49 05	3.4			
	26 10	4.0		06 03 53	4.3			
	27 53	3.0		09 42 40	3.2			
	28 10	3.5		11 59 20	3.4			
	28 35	3.4		12 00 48	3.5			
	29 14	3.1		13 35 35	3.6			
	29 55	3.4		48 00	3.5			
	30 21	3.6		57 16	3.4			
	32 19	3.8		15 43 33	3.2			
	32 35	3.6		19 40 51	3.0			
	34 15	3.4	March 21	22 29 22	2.9			
	38 16	3.4	March 22	07 43 44	3.4			
	39 00	3.5		17 45 36	3.0			
	39 15	3.7	March 23	04 14 50	5.1			
	40 36	3.4		15 57	3.4±			
11	02 01	3.1		18 04	3.4			
	07 27	3.0		23 30	3.9			
	07 40	3.0	March 24	05 17 32	3.8			
	47 26	3.1		11 56 34	3.5			
12	01 16	3.9		19 33 00	3.8			
	15 09	3.3	March 25	02 17 10	3.2			
	29 36	3.4	March 26	06 01 22	3.1			
	43 40	3.3		10 53 07	3.7			
	48 26	3.2		13 17 02	3.1			
13	08 04	4.3		16 55 37	3.4			
14	00 57	4.1		23 07 23	3.5			
	03 11	3.7	March 27	22 52 10	3.2			
	07 35	3.2	March 28	07 15 22	3.5			
	37 50	4.0		18 44 01	3.5			
	50 37	3.5		21 40 19	3.4			

PASADENA LOCAL SHOCKS

No. 2

April, May, June, 1954

Date	G.C.T.	Lat. N	Long. W	Q	M	Remarks
<u>April</u>						
1	12:04:35	36 10	120 20	C	3.3	Near Coalinga
1	13:22:59	35 08	118 57	C	3.3	North of Grapevine Station
3	19:44:37	35 18	118 36	B	3.2	Near Caliente
4	04:29:20	33 17	116 11	B	4.1	Santa Rosa Mts.
6	08:58:27	33 17	116 11	B	3.1	Santa Rosa Mts.
6	13:06:45	34 59	118 50	B	3.8	Tejon Ranch. IV at Tehachapi (CGS).
6	15:09:35	33 17	116 11	B	3.3	Santa Rosa Mts.
7	07:05:	39	120		4.5±	Northern Calif.? IV at Reno (CGS)
8	18:31:16	35 20	118 36	B	3.0	North of Caliente
8	22:19:18	35 01	119 10	B	3.2	West of Wheeler Ridge
9	06:19:16	33 22	116 02	B	3.2	Near Fish Springs
9	12:01:22	35 28	118 42	C	2.0	II at Tehachapi (CGS)
9	17:07:38	35 50	116 38	C	4.2	Owls Head Mts., Mojave Desert
10	05:18:58	35 18	118 32	B	3.9	East of Caliente. Felt sharply at Woodford and Bealville (S.F.R.R. offices). IV at Tehachapi (CGS)
10	08:06:57	33 05	116 16	B	3.3	Vallecito Mts.
10	22:16.9	37.3	122.1	D	4.3	Felt, San Jose and Santa Clara Valley (P); IV at Morgan Hill, Mt. Hamilton, San Martin (CGS)
12	08:29:37.4	33 55	117 28	A	2.9	Near Arlington
13	03:03:58	34 58	119 00	B	3.6	West of Grapevine Station
13	13:25:23	35 29	118 39	B	3.0	Near Democrat Springs
14	08:28:27	34 56	119 04	B	3.0	West of Grapevine Station
15	07:17:58	34 08	117 40	B	2.6	West of Alta Loma
15	08:28:06	33 17	116 11	B	3.2	Santa Rosa Mts.
16	20:24:43	33 17	116 11	B	3.3	Santa Rosa Mts.
16	20:50:37	33 50	118 10	B	1.9	North Long Beach
17	06:37:19	33 17	116 11	B	3.2	Santa Rosa Mts.
17	10:11:26	35 53	116 58	B	3.3	Panamint Range
17	10:11:40	35 53	116 58	B	4.2	Panamint Range
19	01:20.8	31.7	115.0	D	4.0	Near head of Gulf of California
19	03:54:44	34 57	119 00	B	3.0	West of Grapevine Station
19	22:21:32	33 44	118 33	B	2.5±	Santa Monica Bay
20	09:11:30	36 07	117 56	B	2.8	Near Haiwee; Felt at Haiwee.
20	09:18:35	36 07	117 56	B	3.5	Felt at Haiwee (IV, USCGS)
23	16:00:34	35 04	119 04	B	3.0	West of Wheeler Ridge
25	12:38:26	35 19	118 31	B	2.7	East of Caliente
25	18:52:02	35 00	119 03	C	3.4	Near Wheeler Ridge
25	20:33:26.5	36.8	121.8		5.2	Epicenter and origin time by USCGS. (VII) Minor damage at Watsonville, Gilroy, and Hollister. Road cracks near Chittenden (VIII). V at San Francisco. Felt over a wide area in central California.
27	08:14:14	35 22	118 33	B	2.9	Near Caliente
28	08:43:41	36 59	117 32	B	3.1	Argus Range
30	00:36:23	34 02	116 46	B	4.2	Northwest of Whitewater. Banning III, Fawnskin IV (CGS)
<u>May</u>						
1	22:04:39.1	35 26	118 42	A	4.2	Near Kern River Gorge. Felt sharply at Bealville (S.F.R.R.); III at Bakersfield, IV at Kern River power house No. 1 and at Tehachapi (CGS)
3	04:08:33	35 08	119 04	C	3.6	North of Wheeler Ridge
3	05:07:53	35 22	118 37	B	3.2	North of Caliente
3	12:06:08	35 00	119 01	B	2.7	Near Wheeler Ridge
5	01:54:10	35 27	118 41	B	2.6	Near Kern River Gorge
5	01:54:14	35 27	118 41	B	3.1	Near Kern River Gorge
5	22:20:44	35 08	119 00	B	2.8	North of Wheeler Ridge
6	00:23:35	33 16	116 10	B	3.3	Santa Rosa Mts.
6	03:01:07	35 08	119 02	B	3.6	North of Wheeler Ridge
6	05:49:07	35 04	118 26	B	2.7	Near Tehachapi
6	05:53:13	35 19	119 30	B	3.0	East of Caliente
6	15:51:37	35 44	117 59	B	3.0	North of Walker Pass



May

8	19:14:24	35 08	119 00	B	2.8 North of Wheeler Ridge
9	03:41:50	34 27	116 54	B	2.7 Lucerne Valley
9	21:36:35	35 00	119 01	B	3.4 Near Wheeler Ridge
9	22:37:06	35 00	119 01	B	2.9 Near Wheeler Ridge
10	03:48:31	35 32	118 26	B	3.0 Near Havilah
11	02:30:15	35 20	118 32	B	2.9 East of Caliente
11	02:46:38	35 08	118 48	B	2.9 Tejon Ranch
11	04:12:20	35 18	118 32	B	3.8 East of Caliente; IV at Tehachapi (CGS)
11	06:51:55	35 15	118 31	B	3.3 Near Woodford
11	20:00:23	35 25	118 39	B	3.2 Near Breckenridge Mt.
12	13:08:05	35 18	118 32	B	2.8 East of Caliente
12	18:24:33	35 26	118 38	B	2.9 Near Breckenridge Mt.
12	18:47:14	35 26	118 42	B	2.8 Near Kern River Gorge
12	20:38:42	35 26	118 42	B	3.6 Near Kern River Gorge. Felt sharply at Bakersfield (telephone to Pasadena)
13	08:58:54	35 27	118 45	B	3.0 Near Kern River Gorge
13	10:05:26	35 28	118 41	B	3.6 Near Kern River Gorge
13	11:18:10	35 28	118 41	B	3.2 Near Kern River Gorge
13	17:39:02	34 12	118 08	C	2.2±Near Pasadena
16	08:18:26	35 20	118 30	B	3.1 East of Caliente
17	01:46:47	35 04	119 02	B	3.0 Near Wheeler Ridge
17	05:58:03	35 17	118 34	B	3.1 Near Caliente
17	13:16:24	35 03	119 00	B	2.7 Near Wheeler Ridge
18	08:05:01	35 08	118 44	B	2.9 Tejon Ranch
18	19:54:34	33 17	116 11	B	3.2 Santa Rosa Mts.
19	00:48:20	33 42	118 38	B	3.7 San Pedro Channel
19	21:47:04	33 15	115 35	C	3.4 Near Niland
20	17:49:00	33 18	116 10	B	3.3 Santa Rosa Mts.
22	06:24:44	35 19	118 30	B	2.9 East of Caliente
22	15:32:47	35 48	116 59	B	2.9 Panamint Range
22	20:18:22	35 19	118 30	B	3.0 East of Caliente
23	06:20:51	33 17	116 11	B	3.2 Santa Rosa Mts.
23	11:20:57	35 49	117 35	B	2.9 Very near China Lake
23	23:52:43.2	34 59	118 59	A	5.1 Near Wheeler Ridge; Felt southward as far as Los Angeles, north to Kings County. No more than intensity IV reported, including Bakersfield and Wheeler Ridge (CGS)
24	08:57:02	35 04	119 02	B	2.9 Near Wheeler Ridge
25	10:48:23	35 39	118 31	B	3.8 Near Isabella. V at Borel powerhouse (CGS)
28	01:45:06	33 16	115 58	B	3.3 Near Truckhaven
28	08:22:32	36 02	117 42	C	3.1 Near Coso Hot Springs
29	00:23:29	36 02	117 42	C	2.7 Near Coso Hot Springs
29	00:24:04	36 02	117 42	C	2.4 Near Coso Hot Springs
29	01:59:31	33 57	118 29	B	2.6±Off Santa Monica
29	04:20.4				4.2 Northern California IV at Blue Canyon and Norden; II at Lake Spaulding (Emigrant Gap) (CGS)
30	04:58:07	33 17	116 11	B	3.5 Santa Rosa Mts.
31	06:35:59	33 17	116 11	B	3.2 Santa Rosa Mts.
31	08:06.4	31.6	115.2	D	5.2 Lower California

June

1	09:53:20	35 02	119 06	B	3.0 West of Wheeler Ridge
4	21:25:54	35 19	118 30	B	2.9 East of Caliente
5	00:58:33	34 02	117 32	B	2.6 Near Mira Loma
5	20:41:41	34 02	116 40	B	3.3 West of Morongo Valley
5	23:22:55	34 02	117 32	B	2.4 Near Mira Loma
7	10:57:22	37 32	118 45	C	3.6 Northern Owens Valley
7	17:21:02	33 42	116 45	B	3.0 Near Idyllwild
7	20:58:41	35 22	118 40	B	2.9 Northwest of Caliente
8	10:57:34	35 22	118 40	B	3.6 Northwest of Caliente
10	04:23:36	35 22	118 32	B	3.9 Northeast of Caliente
10	04:33:01	35 22	118 32	B	3.1 Northeast of Caliente
10	04:34:14	35 22	118 32	B	3.0 Northeast of Caliente
12	11:46:37	35 22	118 32	B	3.0 Northeast of Caliente
12	15:04:07	35 08	118 52	B	2.9 Southwest of Arvin
14	13:27:29	35 25	118 40	B	2.9 West of Breckenridge Mt.
17	00:24:36	34 08	117 32	B	2.2 Near Alta Loma

1954 (Continued)

June						
17	14:23:30	35 02	118 40	B	3.6	Tejon Ranch
17	16:02:51	35 23	118 29	B	3.1	Northeast of Caliente
19	12:45:47	37 40	118 20	C	3.3	North of Bishop
19	21:37:25	35 23	118 29	C	2.9	Northeast of Caliente
22	10:42:05	34 07	118 29	B	2.3	Near Beverly Hills
22	11:53:37	33 17	116 11	B	3.2	Santa Rosa Mts.
23	22:28:31	33 25	117 59	C	2.7	San Pedro Channel
24	07:16:33	34 08	118 29	C	1.5	Near Beverly Hills. Reported felt at Santa Monica, West Los Angeles, Culver City
24	09:36:56	35 10	118 40	C	2.5±	Near Bear Mt. (Kern Co.)
26	00:25:08	35 18	118 22	C	2.5	Near Twin Oaks
26	04:47:35	35 00	118 43	B	2.8	Tejon Ranch
29	07:26:39	33 57	117 08	B	2.9	North of Moreno
29	12:18:50	33 09	116 01	B	3.3	West of Kane Springs



SEISMOLOGICAL LABORATORY
California Institute of Technology

Bulletin on Local Shocks

July-September, 1954



Date	G.C.T.	Lat. N	Long. W	Q	M	Remarks
<u>July</u>						
2	10 43 13	38.2	116.4			5.2 Central Nye County, Nevada. Epicenter and origin time by U.S.C.G.S. Numerous after-shocks recorded.
4	05 27 20	33 02	116 10	B		3.7 Vallecito Mountains
4	19 13 31	35 19	118 55	B		3.8 Near Bakersfield. Felt sharply in the city, slight at Greenfield (press)
5	10 03 32	34 00	116 28	B		2.5 North of Desert Hot Springs.
5	15 07 42	35 20	118 31	B		3.1 East of Caliente
6	10 09.6					3± Probably a foreshock of the next
6	11 13 20	39.5	118.5			6.8 Epicenter by U.S.C.G.S., which reports intensity IX, with possible fault trace effects, in the Stillwater Mountains about 15 miles southeast of Fallon, Nevada; up to VIII in the area of Fallon and Stillwater; felt at points in Utah and Oregon, and in California as far as San Francisco and Visalia. Of the very numerous aftershocks, only those of magnitude 5.0 and over are included in this report, unless of special interest.
6	11 49 00	39	118.5			5.5 Epicenter and origin time by U.S.C.G.S.
6	13 15 11	39.5	119			5.2 Epicenter and origin time by U.S.C.G.S.
6	17 35 13	33 50	118 35	C		2.9 Santa Monica Bay
6	22 07 40	39.5	118.5			6.4 Epicenter by U.S.C.G.S.
7	06 25 01	34 54	119 00	B		3.0 West of Fort Tejon
8	02 13 56	39.5	118.5			5.0 Epicenter and origin time by U.S.C.G.S.
8	19 31 57	39	118.5			5.4 Epicenter and origin time by U.S.C.G.S.
9	17 22 30	33 58	116 21	B		3.1 Little San Bernardino Mts.
10	06 19 43	35 02	119 08	B		2.7 West of Wheeler Ridge
10	12 28 40	33 02	116 29	B		3.0± Near Julian. IV at Desconso(USCGS)
10	23 40 37	35 02	116 58	C		2.8 North of Barstow
11	17 06 40	35 19	118 30	B		2.8 East of Caliente
12	16 05 25	39.5	118.5	D		5.1
14	07 49 40	33 20	118 00	C		3.3 San Pedro Channel
15	22 33 46	34 55	119 00	B		3.5 Northwest of Fort Tejon
15	23 40 03	35 19	118 36	B		2.8 Near Caliente
16	07 00 20	35 25	118 54	C		2.5± Near Bakersfield
16	21 12 50	35 01	116 53	B		3.3 Northeast of Barstow
17	10 12 32	35 19	118 30	B		2.9 East of Caliente
17	15 36 46	35 02	119 06	B		2.9 West of Wheeler Ridge
17	16 07 33	33 50	118 38	C		3.3 Santa Monica Bay
17	22 02.7	38.2	116.4	D		4.3 Same epicenter as July 2, 10h. Nye Co., Nevada
18	13 58 51	35 19	118 30	B		3.7 East of Caliente, Calif.
19	20 01.9	32.0	116.0	D		4.8 Lower California

PASADENA LOCAL SHOCKS

July, August, September, 1954

Page 2

International
Seismological
Centre

Date	G.C.T.	Lat. N	Long. W	Q	M	Remarks
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July

20	00 11 38	38.2	116.4	D	5.0	Same epicenter as July 2. Nye Co., Nevada
20	22 47 12	35 21	118 36	B	3.2	North of Caliente
22	10 14 15	35 21	118 36	B	2.7	North of Caliente
22	11 29 32	35 21	118 36	B	3.0	North of Caliente
22	14 54 54	34 30	116 28	B	3.1	West of Bullion Mts, Mojave Deser
22	18 17 17	35 13	118 39	C	3.0	Bear Mt., Kern County
22	23 53 02	34 13	117 19	B	2.8	Cajon Pass
23	03 07 44	33 57	117 36	B	2.7	Northwest of Norco
23	11 15 16	35 06	118 53	B	3.1	Northeast of Wheeler Ridge
23	11 28 50	35 06	118 53	B	3.3	Northeast of Wheeler Ridge
23	11 57 19	35 06	118 53	B	2.8	Northeast of Wheeler Ridge
24	00 10 41	34 10	118 39	B	3.2	Near Calabasas. V at Granada Hills
25	21 30 08	35 03	117 17	C	2.9	Northwest of Hinkley (Mojave Desert)
26	12 16 51	35 16	118 36	B	2.9	Southeast of Caliente
26	15 06 37	34 17	116 26	C	3.0	North of Warren's Well (Mojave Desert)
28	18 52 35	33 12	116 00	B	2.7	West of Salton Sea
29	08 51				4.2	Felt at Hollister (press)
30	02 00 10	39.5	118.5		5.2	Felt at Fallon, etc. (press). Epicenter and origin time by U.S.C.G.S.

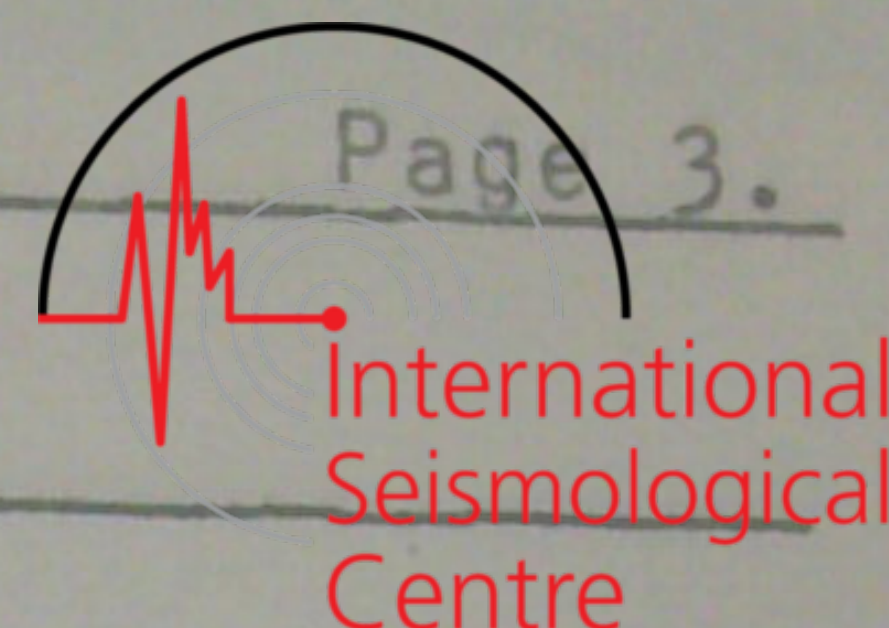
August

1	14 15 47	35 21	118 29	B	2.9	East of Caliente
2	10 18 53	39.5	118.5		5.3	Epicenter and origin time by U.S.C.G.S. Minor damage at Fallon
4	02 56 14	32 28	118 34	C	3.1	South of San Clemente Island.
5	10 28 46	35 33	118 49	B	3.0	South of Woody
5	21 26 43	35 22	118 32	B	2.8	Northeast of Caliente
6	11 59 43	35 22	118 32	B	2.7	Northeast of Caliente
7	12 49 15	35 01	119 04	B	3.0	Near Wheeler Ridge
7	22 33 09	35 51	117 38	B	3.5	West of China Lake
9	11 44 41	33 00	115 28	C	3.3	Near Brawley
9	14 49 56	35 17	118 33	B	3.3	East of Caliente
9	14 56 50	35 17	118 33	B	2.9	East of Caliente
9	15 00 43	35 17	118 33	B	3.0	East of Caliente
11	07 31 46	34 02	116 40	B	3.0	West of Morongo Valley
12	12 50				4.3	Felt at Hollister
13	13 36 44	34 15	120 30	C	3.2	Santa Barbara Channel
13	13 44 28	34 15	120 30	C	3.2	Santa Barbara Channel
16	06 29.7	39	119	D	4.1	Nevada; possibly not from epicenter of July 6
17	19 33.1	38.2	116.4	D	3.8	Northeast of Tonopah, Nevada
17	20 25 58	35 11	118 30	C	2.8	West of Tehachapi
19	11 45 08	34 15	120 30	C	3.2	Santa Barbara Channel
19	11 54 07	35 04	119 06	C	3.0	North of Wheeler Ridge
20	08 01 45	37 40	118 40	C	4.4	Near Bock Creek, northern Owens Valley. U.S.C.G.S: Benton IV, Long Valley Reservoir V
20	11 06 27	37 40	118 40	C	3.6	Aftershock of preceding.
20	21 14 09	33 44	118 00	B	2.6	North of Huntington Beach
21	12 16 19	35 18	118 32	B	2.9	East of Caliente
22	08 34 40	34 20	120 40	C	3.8	Santa Barbara Channel
22	12 36 07	34 20	120 40	C	3.8	Santa Barbara Channel
22	13 51 06	35 20	118 51	B	3.1	Near Edison. IV near Edison (U.S.C.G.S.)
23	19 47 14	35 19	118 30	B	3.2	East of Caliente

PASADENA LOCAL SHOCKS

July, August, September, 1954

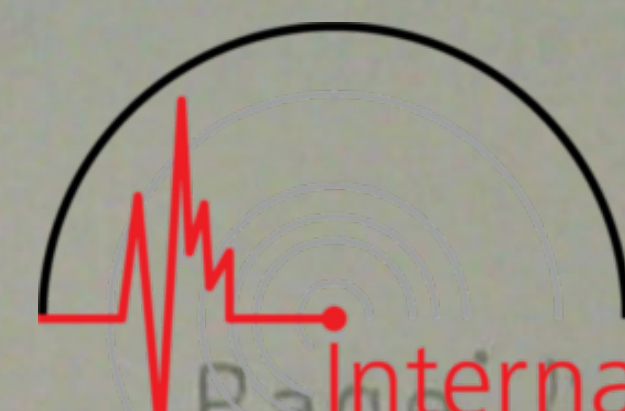
Page 3.



Date	G.C.T.	Lat. N	Long. W	Q	M	Remarks
<u>August</u>						
24	05 51 32	39.5	118.5		6.8	Epicenter by U.S.C.G.S., which reports intensity as follows: VII-VIII in the area of Fallon, Stillwater, and Lovelock, Nevada felt at points in Idaho, Oregon and Utah, and in California as far as San Francisco (IV) and Hanford. Only those aftershocks of magnitude 5.0 and over are included in this report.
24	05 57 46	39.5	118.5		5.2	Aftershock.
25	02 17 10	39.5	118.5		5.0	Aftershock, epicenter by U.S.C.G.S.
25	11 46 28	33 22	118 56	C	3.3	Southeast of Santa Barbara Island.
26	13 48 03	33 55	119 30	B	4.8	Near Anacapa Island. Press and U.S.C.G.S. information: Strong on Santa Rosa Island; felt generally at Santa Barbara (V). Felt by many in the Los Angeles metropolitan area, especially toward the coast.
27	16 37 58	35 01	119 05	B	2.8	Near Wheeler Ridge.
29	03 58 05	39.5	118.5		5.1	Nevada
29	12 48 12	34 03	117 45	B	2.2	Near Pomona
29	22 50 05	34 10	116 07	B	3.2	West of Twenty-nine Palms
30	22 34 01	32 48	117 52	C	3.1	Southeast of San Clemente Island. Peculiar.
31	22 20 35	39.5	118.5		6.3	Epicenter by U.S.C.G.S., which reports intensity VI in the Vicinity of Fallon; felt in Nevada and at a few points in California.
<u>September</u>						
1	05 18 47	39.5	118.5		5.7	Epicenter by U.S.C.G.S.
1	09 40 45	35 03	119 14	B	3.1	East of Maricopa
1	13 45 36	35 06	118 56	B	2.7	Northeast of Wheeler Ridge
1	17 59 47	33 10	115 59	B	2.9	West of Salton Sea
2	16 48 15	34 04	116 34	B	3.0	Morongo Valley
3	04 11 21	35 19	118 30	B	3.1	East of Caliente
3	07 12 10	34 10	118 25	B	2.0	Near Van Nuys. Felt there (telephone report)
3	14 34 14	35 01	118 57	B	2.8	Near Wheeler Ridge post office
3	16 14 17	33 53	118 18	B	3.0	Near Gardena. Felt at Southgate (telephone report).
4	21 24 53	35 22	118 35	B	3.1	Northeast of Caliente
9	09 21 10	39.5	118.5	D	4.9	Nevada. Fallon according to U.S.C.G.S.
10	12 11.3	31.7	115.0	D	4.2	Near the head of Gulf of California.
10	21 33 13	34 02	117 16	B	2.6	Near Loma Linda
12	23 20 40	35 12	118 36	B	3.1	Northeast of Caliente
13	08 23 34	35 02	119 06	B	3.4	Near Wheeler Ridge
16	14 08 32	35 03	118 57	B	3.2	Near Wheeler Ridge post office.
16	16 51 36	35 18	118 36	B	3.1	Near Caliente
20	07 46 11	35 22	118 35	B	3.2	North of Caliente
21	19 05 22	35 03	119 00	C	2.9	Near Wheeler Ridge
22	01 05 19	34 00	118 14	B	2.6±	Near Huntington Park and Southgate
22	07 01 55	37 40	118 40	C	4.1	Near Rock Creek, northern Owens Valley.
22	22 38 44	33 29	116 36	B	3.0	Southeast of Anza
24	14 58 28	33 11	117 56	B	3.0	Southeast of Catalina Island.

PASADENA LOCAL SHOCKS

July, August, September, 1954

International
Seismological
Centre

Date	G.C.T.	Lat. N.	Long. W	Q	M	Remarks
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September

25	07 18 30	35 15	118 37	B	2.9	Near Caliente
26	15 39 01	35 22	118 31	B	3.5	Northeast of Caliente
26	15 44 24	35 22	118 29	B	3.4	Northeast of Caliente
27	13 14 08	35 02	119 08	C	2.9	East of Maricopa
28	08 00 34	35 22	118 37	C	2.8	Near Caliente
29	03 48.0	37.5	115.8	D	4.4	Northwest Lincoln County, Nevada
30	07 46 32	32.2	115.9	D	3.7	Lower California

C. F. Richter
Allan Sanford
Cinna Lomnitz

December 27, 1954

Seismological Laboratory
California Institute of Technology
Bulletin on local shocks
October-November 1954
(Addenda will follow)



This issue is slightly less complete than those immediately preceding it, so far as information about perceptibility of earthquakes is concerned. Certain reports of this kind, usually used in preparing the final form, have not become available, and it has been thought best to release the epicenters and other data at this time. A sheet with addenda and corrections will be issued later.

The addenda will also include listing of certain shocks in Baja California, following the earthquakes there on October 17, October 24 and November 2. The present list shows only those in this group of magnitude 5.0 and over.

The major Nevada earthquake of December 16 was followed by many small aftershocks, which may have interfered with the recognition of small shocks occurring elsewhere in our area. Those of magnitude 5.0 and over are listed, with a few others of special interest.

As previously, special effort has been made to catalogue all shocks of magnitude 3.0 and over within the area of Southern California covered by our stations. The boundaries of this area are indicated on the map which accompanies this issue. This map was prepared in response to a request; the letters and figures on its margin are used for indexing in a column which is now added to the bulletin and will be continued hereafter.

October 1954



Date	G.C.T.	Lat. N	Long. W	Q	M	Index	Remarks
Oct.							
1	02:52:02	33 07	115 34	C	3.3	P3	Near Calipatria
1	20:12:30	33 07	115 34	C	3.1	P3	Near Calipatria
3	16:42:21	35 04	118 52	B	2.9	H7	Northeast of Wheeler Ridge
4	00:09:15	35 09	118 40	B	2.9	H7	Southeast of Arvin
5	02:38:03	35 19	118 39	B	3.9	H7	Near Caliente
5	02:40:20	35 19	118 39	B	2.6	H7	Near Caliente
8	08:26:47	35 18	118 31	B	3.0	H7	East of Caliente
9	14:01:37	32 01	118 06	C	3.5	J1	South of San Clemente Island
10	14:57:15	33 53	116 18	B	2.6	N4	North of Thousand Palms
13	02:20:25	34 17	116 06	C	3.0	N5	North of 29 Palms
14	22:10:01	35 22	118 33	B	3.4	H7	Northeast of Caliente
16	04:32:12	39.5	118.5	D	4.3	J15	East of Fallon, Nevada
16	08:05:18	32.2	115.7	C	4.0	P1	Baja California
17	22:57:18	31.5	116.5		5.7	N0	Baja California. Epicenter and origin by USCGS. Felt at San Diego and in Imperial Valley.
							Immediate aftershocks small.
19	11:50:16	35 18	118 38	B	2.6	H7	Near Kern River Gorge
20	19:53:52	39 ?	119 ?	D	4.4	J15	East of Fallon, Nevada
21	02:45:52	34 00	117 10	B	3.4	L5	Near Redlands
21	22:31:10	35 23	118 44	C	2.9	H7	Near Kern River Gorge
24	09 44 08	31.5	116	D	6.0	N0	Baja California. Epicenter by USCGS. Felt over a wide area in southern California and adjacent Mexico.
24	11:21.4	31.5	116	D	5.4	N0	Baja California

25	04:23:42	35 25	118 42	B	3.8	H7	Near Kern River Gorge
25	16:53:09	35 25	118 35	C	3.3	H7	North of Caliente
25	21:48:38	35 23	118 33	B	3.5	H7	Northeast of Caliente
26	02:48:26	35 23	118 34	B	3.8	H7	Northeast of Caliente
26	05:59:31	33 40	118 15	C	2.4	J4	Off Long Beach
26	08:28:28 Felt at Riverside (press); T. Co.)	33 43	117 28	B	3.3	L4	Near Santiago Peak, felt sharply at Corona (Pacific T. and
26	10:18:41	35 25	118 45	C	2.7	H7	Near Kern River Gorge
26	12:42:42	35 25	118 35	C	2.8	H7	Northeast of Caliente
26	16:22:26 Felt sharply at Riverside (press)	33 44	117 28	B	4.1	L4	Near Santiago Peak.
26	16:34:17	33 44	117 28	B	2.9	L4	Near Santiago Peak
28	01:12:26	35 03	118 49	B	2.6	H7	Northeast of Wheeler Ridge
30	02:02:43	34 02	115 33	C	4.6	P5	East of Dale, Mojave Desert
<u>November</u>							
1	06:43.6	37.2	120.8	D	4.3	D11	Southwest of Merced?
6	13:51:34	35 22	118 26	B	3.0	J7	Walker Basin
7	08:39:31	33 52	118 20	B	3.2	J4	Near Gardena
7	10:11:29	35 07	119 02	B	2.9	G7	North of Wheeler Ridge
8	01:46:55	33 48	118 22	B	2.6	J4	Near Gardena
10	04:51:50	33 50	119 55	C	3.5	F4	South of Santa Cruz Island
11	11:22:34	34 05	118 22	C	2.3	J5	Near Culver City
12	08:16:46	31.5	116	D	3.9	N0	Baja California
12	12:26:47 Epicenter and origin time by USCGS. San Diego region (press)	31.5	116		6.3	N0	Baja California. Felt in Imperial Valley and
12	13:16.7	31.5	116	D	5.0	N0	Baja California
14	05:36:19 Epicenter and origin time by USCGS.	31.5	116		5.4	N0	Baja California.

17	07:23:57	36 28	118 00	C	4.1	J9	South of Lone Pine. Felt sharply there (press).
17	23:03:51	34 30	119 07	B	4.4	G5	Felt sharply at Ventura. Perceptible in the Los Angeles metropolitan area, especially toward the coast. Two reports from Pasadena (press).
20	10:42:42	35 20	118 35	B	2.7	H7	North of Caliente
25	06:49:06	33 59	118 12	B	2.6	J4	Near Huntington Park
25	11:16:36	40.5	126		6.5±	A15	Epicenter and origin time by USCGS. Felt in Humboldt County (press).
26	08:49:21	36 09	117 45	C	3.3	K9	Coso Range, east of Haiwee
26	10:38:35	37.3	118.9	D	3.3	H11	West of Bishop
27	02:33:17	36 09	117 45	C	3.2	K9	Coso Range, east of Haiwee
28	14:51:34	33 38	117 55	C	2.4	K4	Near Newport Beach
30	05:58:24	35 10	118 56	B	2.8	H7	North of Wheeler Ridge
<u>December</u>							
1	03:13:53	35 02	119 03	B	2.7	G7	Near Wheeler Ridge
1	21:27:44	35 13	118 43	B	2.8	H7	Near White Wolf Ranch
2	18:52:26	35 04	119 10	B	3.2	G7	West of Wheeler Ridge
2	19 41 53	34 24	116 45	C	2.9	M5	Near Old Woman Springs
2	20:06:51	34 00	118 26	C	2.1	J4	Culver City. Felt at Inglewood (telephone report to Laboratory).
2	20:26:30	34 24	116 52	C	2.4	M5	Near Old Woman Springs
3	18:42:00	35 24	118 38	C	2.6	H7	North of Caliente
6	05:23:31	35 21	118 35	B	2.8	H7	Northeast of Caliente
6	06:01:50	34 02	117 13	B	2.6	L5	Near Bryn Mawr
7	04:22.6	40.5	126	D	5	A15	West of Eureka
7	05:42:58	33 47	116 56	B	3.1	M4	Near San Jacinto
14	04:24:25	35 20	119 28	B	2.8	G7	East of McKittrick

15 06:30:40 39.5 118 D 4.0 J15 Nevada. Foreshock of the next.

16 11:07:10 39.5 118 7.2± J15 Major Nevada earthquake. Magnitude determination provisional only. Epicenter and origin time by USCGS.

This earthquake is being investigated at Berkeley by Professor Perry Byerly (University of California), with the cooperation of Professor V. P. Gianella (University of Nevada), and many others. Preliminary information here quoted will be superseded by later publications.

A spectacular normal fault dipping to the east with vertical throw of over 20 feet appeared on the east flank of Fairview Peak in the Clan Alpine Range (about 39° 13' N 118° 08' W), extending slightly east of north and west of south for more than 20 miles. Fault features also developed further north on the east flank of the Stillwater Range; the total linear extent of faulting was over 50 miles. There were some reversals of throw and some multiple fault traces.


The region is very thinly populated, especially in December. No persons were injured, and there was relatively little property damage. The earthquake was perceptible in California to persons as far distant as Los Angeles and was also felt in Utah, Idaho, and Oregon.

The epicenter is well to the east of those of the Nevada earthquakes in July and August, 1954.

Of the very numerous aftershocks, this bulletin lists only those of magnitude 5.0 and over (as determined from records at our stations), with a few smaller ones listed by the U. S. Coast and Geodetic Survey.

Magnitude for the main shock from the data of our stations alone is 7.4; there is evidence that relatively smaller amplitudes were recorded in other directions, and the magnitude is tentatively placed at 7.2±.

16	11:11:29	39.5	118	6.9±	J15	Large aftershock; origin time by USCGS.
16	11:50.6	39.5	118	5.0	J15	Aftershock
16	11:57.5	39.5	118	5.0	J15	Aftershock
16	13:15:03	39.5	118	5.0	J15	Aftershock; epicenter and origin time by USCGS.
16	14:16:57	39.5	118	5.8	J15	Aftershock; epicenter and origin time by USCGS.

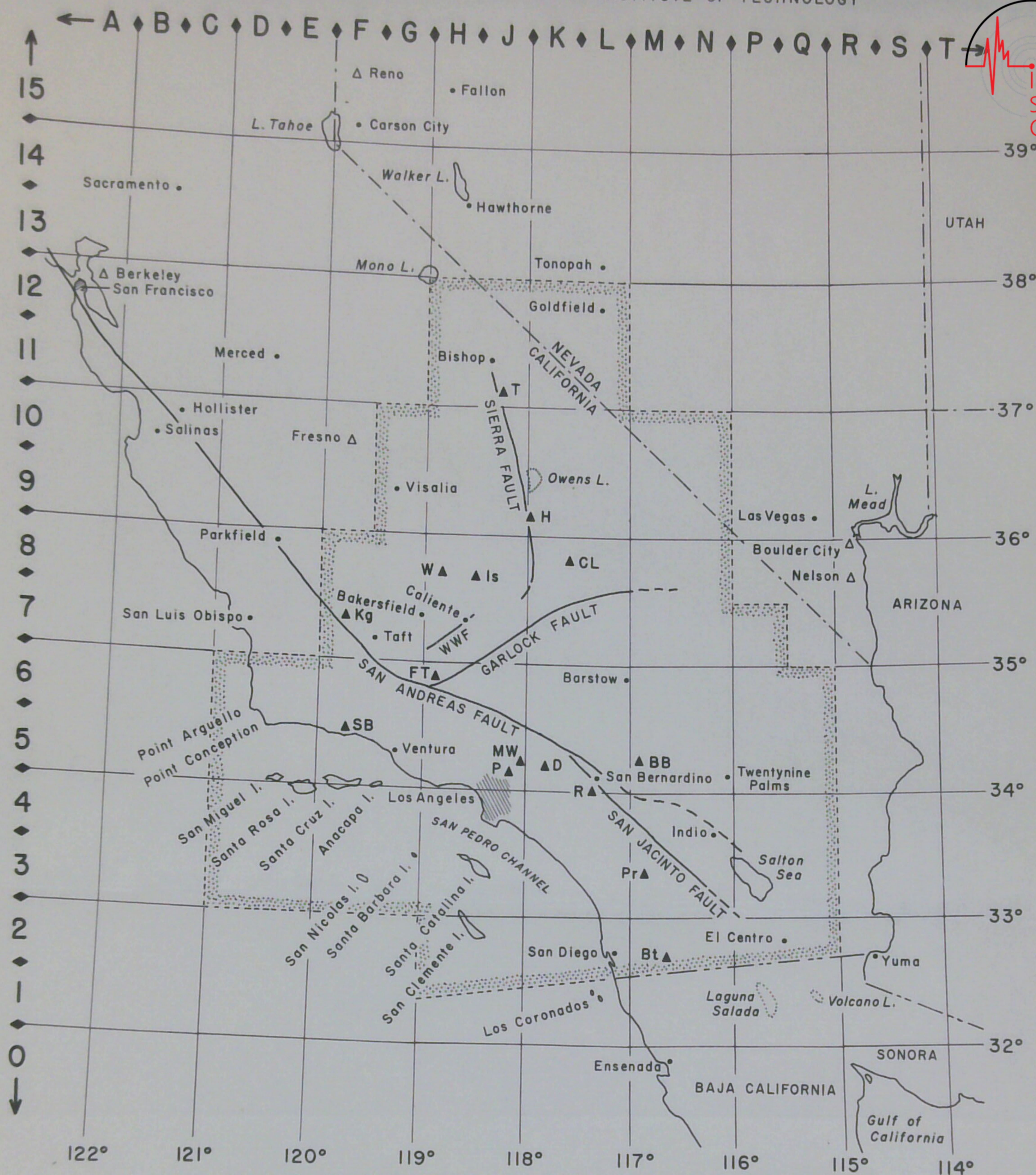


16	14:24.1	39.5	118	5.3	J15	Aftershock
16	15:09:42 and origin time by USCGS.	39.5	118	5.1	J15	Aftershock; epicenter
17	07:09:			4.6	A12	Felt at San Francisco (press)
17	20:16:08	35 30	118 45 B	3.4	H7	Kern River Gorge
17	20:28:0	39.5	118	5.0	J15	Nevada, aftershock
18	01:45:38	39.5	118	4.7	J15	Nevada; origin time by USCGS.
19	14:33:26	35 20	118 33 B	2.6	H7	Northeast of Caliente
20	01:45:38	33 58	118 44 B	2.5	H4	Santa Monica Bay
20	06:53:22	35 20	118 35 B	2.6	H7	Near Caliente
20	10:16:15	35 02	118 52 B	2.6	H7	Near Wheeler Ridge P.O.
20	15:10:53	34 04	116 18 C	2.9	N5	Little San Bernardino Mountains
20	17:36:47 and origin time by USCGS.	40	118	5.0	J15	Nevada; epicenter
21	02:34:43	34 22	116 21 B	3.3	N5	East of Old Woman Springs
21	07:11:12 Reported felt at El Cajon and La Mesa.	32 38	117 07 C	3.5	L2	Near National City.
21	19:56:25 California. Epicenter and origin time by USCGS.	41	124	6.6	A15	Destructive at Eureka,
22	06:32:52	35 17	118 38 B	2.3	H7	Near Caliente
22	21:12:28	36.0	120.6 D	3.8	D9	Northwest of Parkfield
26	05:27:48	35 17	118 35 B	3.1	H7	Near Caliente
26	10:54:50	35 20	118 43 B	2.7	H7	Northwest of Caliente
26	23:20:01	35 22	118 33 C	2.4	H7	Northeast of Caliente
27	19:40:00	35 02	119 03 C	2.8	G7	Near Wheeler Ridge
29	15:03:15	35 18	119 00 C	2.8	G7	South of Bakersfield

30	00:25:26	31.5	116.0	D	3.8	N0	Baja California
30	06:08:25	35 32	118 46	C	2.8	H8	North of Kern River Gorge
30	09:16:08	41	124		5.3	A15	Felt at Eureka.
	Epicenter and origin time by USCGS.						
31	16:56:53	37.6	118.5	D	4.0	H12	Northern Owens Valley. Felt at Bishop (press).

INDEX MAP

TO ACCOMPANY BULLETIN ON LOCAL SHOCKS
SEISMOLOGICAL LABORATORY, CALIFORNIA INSTITUTE OF TECHNOLOGY



STATIONS OF C.I.T. NETWORK

Barrett Bt	Dalton D	Isabella Is	Palomar Pr	Santa Barbara SB
Big Bear BB	Fort Tejon FT	King Ranch Kg	Pasadena P	Tinemaha T
China Lake CL	Haiwee H	Mount Wilson MW	Riverside R	Woody W

WWF = White Wolf Fault (earthquake of July 21, 1952)

Index letters and numbers at top and left side of map are given, for each shock listed, in the Bulletin (beginning with the shocks of Oct. 1, 1954.) Note: A, T, O and 15 extend indefinitely beyond the map.

All shocks of magnitude 3 or over within the boundary are listed so far as practicable. Listing for smaller shocks is incomplete.

Jan. 31, 1955

PASADENA LOCAL SHOCKS

Addenda, October, November, December 1954



Date	G.C.T.	Lat.N.	Long.W.	Q	M	Remarks
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A. Information on perceptibility of shocks previously reported.

<u>Oct.</u>							
1	02:52:02	33 07	115 34	C	3.3	P3	Probably felt at Brawley.
1	20:12:30	33 07	115 34	C	3.1	P3	Felt at Brawley.
5	02:38:03	35 19	118 39	B	3.9	H7	Felt at Bakersfield
21	02:45:52	34 00	117 10	B	3.4	L5	Felt at Redlands and Yucaipa
24	14:06:08	31.5	116	D	4.7	N0	Felt at El Centro
30	02:02:43	34 02	115 33	C	4.6	P5	Felt at Hayfield pumping station (Desert Center), and 29 Palms.
<u>Nov.</u>							
1	06:43.6	37.2	120.8	D	4.3	D11	Felt at Fresno, and in Merced and Madera counties.
7	08:39:31	33 52	118 20	B	3.2	J4	Felt at Long Beach and Lakewood.
12	12:26:47	31.5	116		6.3	N0	Felt definitely as far as San Bernardino and San Pedro. Barely perceptible in Los Angeles. Serious damage at El Alamo, Baja Calif. due to rockslides.
17	07:23:57	36 28	118 00	C	4.1	J9	IV at Cosa Junction; V at Keeler.
17	23:03:51	34 30	119 07	B	4.4	G5	IV at Fillmore and Ojai.
26	08:49:21	36 09	117 45	C	3.3	K9	V at Haiwee
27	02:33:17	36 09	117 45	C	3.2	K9	IV at Haiwee
<u>Dec.</u>							
21	19:56:25	40 47	123 52		6.6	A15	Epicenter as determined at Berkeley.

B. Complete listing, shocks of magnitude 4.0 and over, in Baja California; chiefly near 31.5 N 116 W, with a few near 31.5 N. 116.5 W. Origin times in hours and minutes G.C.T.

Oct. 17	22:57	5.7	Nov. 12	12:26	6.3	Nov. 13	10:19	4.6	Dec. 11	07:33	4.4
Oct. 21	07:51	4.3		12:34	4.9		16:23	4.5	Dec. 13	19:22	4.4
Oct. 24	03:11	4.3		13:07	4.3	Nov. 14	00:57	4.8			
	04:11	4.4		13:16	4.6		02:17	4.3			
	05:31	4.0		13:16	5.0		05:36	5.4			
	09:44	6.0		13:45	4.3		14:10	4.0			
	10:42	4.5		13:56	4.3		16:04	4.2			
	11:21	4.0		14:33	4.3		23:05	4.2			
	11:21	5.4		14:34	4.4	Nov. 17	11:55	4.9			
	11:30	4.3		15:48	4.7		15:46	4.2			
	14:06	4.7		17:24	4.6	Nov. 25	14:06	4.6			
	18:11	4.2		20:19	4.8	Nov. 27	19:38	4.2			
	20:59	4.1		22:21	4.5	Nov. 28	13:50	4.1			
Oct. 25	00:51	4.3		23:38	4.2	Nov. 29	14:07	4.2			
	06:30	4.4		23:51	4.1						