

## Pasadena Preliminary Bulletin No. 22, January, 1941

Unless otherwise noted, readings refer to P or P', and to the Pasadena station.  
 (MW=Mt. Wilson, R=Riverside, T=Tinemaha)

- Jan. 1 01:59:37, 08:38:40, 09:22:44, 10:24:03, 12:41:58?, 20:58:08
- Jan. 2 04:37:40, 08:08:54, 17:03:39 (PP=17:08:05, SKP=17:10:08, PKKP=17:18:25) (MW),  
 21:50:20 (MW), 22:38:03
- Jan. 3 02:32:31c, 06:12:32(T), 09:22:13c, 11:24:35, 12:37:06(MW)
- Jan. 4 02:07:35(MW), 03:31:39, 04:31:00(MW), 23:45:45(T)
- Jan. 5 19:05:39 (PP=19:06:22, PS=19:15:58, PKKP=19:16:26. USCGS: 9°S. 121°E., 0=18:46.7),  
 21:34:13(MW)
- Jan. 6 09:55:38c (PP=09:57:06, PcP=09:58:01, ScP=10:01:48, ScS=10:05:56. Central America)  
 10:16:30 (aftershock)
- Jan. 7 10:56:09
- Jan. 8 05:11:30(MW), 09:29:10
- Jan. 9 10:29:40 (iS=10:30:30. La Jolla: P=10:29:17. Felt at San Diego. 31.7°N. 115.1°W.?)
- Jan. 11 02:59:02 (pP=02:59:36), 08:51:05, 16:47:32
- Jan. 12 13:41:26
- Jan. 13 16:40:46 (PP=16:44:47, SKS=16:51:10, S=16:51:49. Strong at Rabaul.  
 USCGS: 3°S. 144°E., 0=16:27.7)
- Jan. 14 07:28:47, 10:34:46(MW)
- Jan. 15 13:29:43
- Jan. 16 15:50:04(T)
- Jan. 17 12:44:44 (pP?=12:45:02)
- Jan. 18 18:28:41, 19:13:51, 20:05:50 (PcP?=20:09:12)
- Jan. 19 03:31:18 (PKKP?=03:43:02), 08:40:23c, 14:02:00c
- Jan. 20 03:55:37, 09:46:02, 17:15:41(R), 21:12:16.
- Jan. 21 13:00:24 (PP?=13:01:02, PS=13:11:01, PKKP=13:11:15.  $\Delta = 114^\circ$ ?)
- Jan. 22 06:38:25(R), 17:47:40(T), 19:25:33(T)
- Jan. 23 05:27:13
- Jan. 24 05:53:21 (pP=05:53:49, S=06:00:45. Azimuth southeast), 09:49:11
- Jan. 25 05:38:36(MW), 10:58:21, 23:46:15
- Jan. 26 09:20:34, 19:09:03
- Jan. 27 02:49:12, 02:59:32
- Jan. 28 03:31:02, 09:07:17 (PcP?=09:10:38)
- Jan. 29 00:04:36, 05:33:41
- Jan. 30 01:34:52 (33°58'N. 118°03'W, 0=01:34:47. Felt over a wide area, with only trivial  
 damage.), 03:23:55(R), 04:25:29(R), 11:28:52, 15:31:35
- Jan. 31 02:56:50 (S=03:04:54), 13:17:06(MW)

February - important shocks.

- ✓ Feb. 9 09:46:14 (S=09:47:51. Felt at Eureka, California), 19:32:36 (S?=19:44.0)
- ✓ Feb. 11 14:41:28 (S=14:46:18)

February 14, 1941

C. F. Richter



26 APR. 1941

Pasadena Preliminary Bulletin No. 23, February, 1941.

Unless otherwise noted readings refer to P or P' and to the Pasadena station  
 M.=Mt. Wilson, R= Riverside, T= Tinemaha, c= compression, d= dilatation.

- Feb. 1 00:06:53 (MW), 05:32:38 (S=05:34:01), 17:30:25 (MW).
- Feb. 2 02:24:57 (MW), 11:56:10, 19:01:11 (Felt at San Francisco), 23:47:05 d
- Feb. 3 07:39:44, 08:13:39
- Feb. 4 12:37:34, 14:16:30 (P'=14:20:38, SKS=14:26:16, PKKP=14:31:58,  $\Delta=108^\circ$ ?)
- Feb. 5 08:11:07, 13:34:04 (S=13:34:56. Gulf of California?)
- Feb. 7 15:23:08, 16:25:56 (MW), 18:34:24
- Feb. 8 14:27:05c (PcP?=14:29:02), 19:04:46 (S?=19:15:26)
- Feb. 9 04:27:52, 08:22:20, 09:46:13 (S=09:47:51. Felt at Eureka, Calif. USCGS 40. 7°N. 125.4°W., O=09:44.7), 15:27:31 (P'=15:30:31), 19:32:36 (S?=19:43:33)
- Feb. 10 13:53:59, 22:46:53 c.
- Feb. 11 00:45:43, 04:52:44 (S=04:54:49. Afterahock of Feb. 9, 09<sup>h</sup>), 14:41:28c (S=14:46:19. USCGS 14.5°N. 94.0°W. O=14:35.4).
- Feb. 12 08:17:16(T).
- Feb. 13 14:52:36, 16:34:17(T).
- Feb. 14 01:10:31 (S-01:11:30), 04:05:01, 10:18:55 d (pP=10:19:39, sP=10:20:10), 13:27:48, 19:08:10 (S=19:18:58).
- Feb. 15 03:59:49(T), 09:02:49(T), 23:16:18(MW)
- Feb. 16 10:47:25 c (pP?=10:48:03), 16:58:29 (S=17:08:01)
- Feb. 17 10:10:29
- Feb. 18 03:47:41 (MW), 20:57:22
- Feb. 19 10:13:17 (S=10:14:55. Arizona), 14:12:18, 15:21:41
- Feb. 20 17:00:54 (R), 23:37:09
- Feb. 22 19:26:01 (pP=19:27:49, S=19:35:19. Tonga region).
- Feb. 23 11:37:13 (pP=11:37:35, S=11:41:04. Tacubaya gives 18°04'N. 99°55'W., O=11:32:14), 18:36:42 (S=18:37:02; La Jolla P=18:36:31, S-P=11 seconds. Felt at San Diego. 33.5°N. 116.5°W., O=18:36:12), 22:49:51 (R)
- Feb. 24 12:55:33
- Feb. 25 05:56:21 (S?=06:07:18), 06:22:39 (pP?=06:23:08) (MW), 08:17:04
- Feb. 27 03:27:48, 09:58:47 (P'=10:02:40, S?=10:09:11, PKKP=10:14:16), 13:58:19 (R), 15:15:50
- Feb. 28 03:31:24

C. F. Richter

March 13, 1941



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Pasadena Preliminary Bulletin No. 24, March, 1941

Unless otherwise noted readings refer to P or P' and to the Pasadena station  
NW= Mt, Wilson, R= Riverside, T= Tinehama, c= compression, d= dilatation.

- Mar. 3 07:47:01 (e=07:50:21. Very distant).
- Mar. 4 15:37:34 (T), 21:43:26
- Mar. 7 02:30:00 c
- Mar. 8 20:40:01 (R), 21:54:27, 22:19:55
- Mar. 9 16:58:43 (pP=16:59:30)
- Mar. 10 03:55:47 (T), 04:13:44, 06:39:44, 08:53:11 (pP=08:53:37, sP?=08:53:49)
- Mar. 12 00:04:03, 03:02:57, 10:03:36, 14:28:17
- Mar. 14 03:21:21 c, 14:42:24, 16:26:11
- Mar. 15 05:48:06 (S=05:49:31. La Jolla P=05:47:56, S=05:49:10. Felt at San Diego.  
USCGS: 28.1N. 113.6W., 0=05:46.3), 16:47:04 (MW), 19:19:07, 23:40:09  
(S=23:41:35)
- Mar. 16 07:12:48, 07:52:39 (S=08:01:01. Japan?), 09:04:08 c, 16:48:34, 23:01:17
- Mar. 17 05:18:10, 08:17:22
- Mar. 18 07:01:19, 10:03:44, 11:53:21
- Mar. 19 02:56:37 c, 21:30:23 (R), 22:29:06.
- Mar. 20 03:48:05
- Mar. 21 08:10:19 d (USCGS 7.3N. 36.6W., 0=07:58.4)
- Mar. 22 14:43:07 c
- Mar. 23 09:07:24
- Mar. 26 05:00:15, 08:24:46, 14:45:34 (R)
- Mar. 27 00:49:29 (MW), 02:51:33
- Mar. 28 12:33:04, 22:42:54
- Mar. 29 09:04:21 (R)
- Mar. 30 10:17:10 (MW)
- Mar. 31 00:20:58, 01:28:20 (MW), 04:27:05, 07:12:27 (R)

Noteworthy shocks of April

- Apr. 1 10:47:35 (S=10:52:54. Alaska.)
- Apr. 3 15:06:32 (pP=15:07:26, S=15:15:55. Foreshock of next)  
15:32:55 (Dilatation from S.E. pP=15:33:57, S=15:42:17.  $\Delta=74^\circ$ , h=220 km.  
Felt in Chile at Taltal, Vallenar and Copiapo)
- Apr. 7 23:36:45 (S=23:42:51. West Indies)
- Apr. 9 17:09:51 (Felt at San Diego)
- Apr. 15 19:14:31 (S=19:18:26. Destructive in Mexico.)

C. F. Richter

April 17, 1941.



## Pasadena Preliminary Bulletin No. 25, April, 1941.

Unless otherwise noted reading refer to P or P' and to the Pasadena station  
 MW= Mt. Wilson, R= Riverside, T= Tinemaha. c= compression, d= dilatation.

- April 1 02:02:47(MW), 10:47:35 (S=10:52:54; USCGS 56.0°N.153.0°W., 0=10:41.1),  
 22:10:33(R)
- April 2 15:59:22 (pP=16:00:24), 18:16:15
- April 3 15:06:32 d (pP=15:07:26, S=15:15:55. Foreshock), 15:32:55 d (pP=15:33:57,  
 S=15:42:17 Felt in Chile. USCGS 25°S. 69°W. h=200 km.), 16:16:19,  
 21:19:33, 21:43:32(MW)
- April 4 04:07:02, 09:21:04(R), 11:36:43(MW), 21:07:08
- April 6 08:58:21(MW), 23:02:00
- April 7 02:51:55 c (pP=02:53:51. Tonga region), 10:59:48, 20:20:29(South America),  
 23:10:21 d, 23:36:45 c (PP=23:38:12, S=23:42:51. USCGS 17.6°N., 78.3°W.,  
 0:23:29.3) 23:48:51 (aftershock?)
- April 8 03:54:34, 10:13:56, 22:40:52(MW)
- April 9 17:09:51 (S=17:10:59. La Jolla 17:09:38. Felt at San Diego.)
- April 10 14:35:41 (Mexico?)
- April 14 12:26:55(T), 16:15:22
- April 15 03:56:38, 07:07:56, 16:45:10 c, 19:14:32 c (iL=19:18:26. Destructive in  
 Mexico. Tacubaya gives 18°17'N, 103°19'W., 0=19:09:55), 19:50:38,  
 21:10:23(MW), 22:41:58, 23:47:42
- April 16 01:43:01, 02:06:02, 02:32:03, 05:32:53, 06:19:22, 12:10:24, 15:42:14.
- April 17 15:59:23(R), 19:33:23
- April 18 06:28:38 d (pP=06:29:05), 13:48:13?
- April 19 08:11:39
- April 20 17:52:44 (P''=17:56:14, SKS=18:03:01. S=18:04:37, PKKP=18:08:04. Pamir.  
 USCGS 37°N. 69°E., 0=17:38.3)
- April 21 03:01:31 (S=03:07:27. USCGS 53°N. 166°W., 0=02:54.1), 03:38:04(MW),  
 08:13:51, 13:39:37, 22:40:33
- April 22 01:55:59(R), PP=16:26:57, 20:04:13
- April 23 06:59:20 (e=07:01:14, e=07:02:40), 15:18:52(R)
- April 24 01:11:41(R), 10:54:20, 21:10:21 c
- April 25 12:13:42 (L=12:15.1, iS=12:15:19. La Jolla 12:13:20)
- April 26 10:29:00 (Mexico?), 18:00:39
- April 27 05:41:49, PP?=11:42:34, PP?=13:18:56(MW)
- ✓ April 28 19:48:17 c (S=19:52:07. Damage in Mexico)
- \* April 29 01:54:53 (PP=57:35, SKP=58:16. This may be a shock reported in the press  
 as strong at Perth, Australia), 04:09:32(MW), 15:54:01
- April 30 09:57:40, 22:57:13

## Noteworthy shocks of May

- May 1 07:15:17. Felt at Unalaska
- May 5 15:30:38 c (PP=15:33:32, S=15:41:23. Destructive in Manchuria)
- May 8 10:32:47 (pP?=10:34:47, S=10:41:54. Tonga, h=550 km.?)
- May 13 16:03:55 (S=16:05:39. Felt at Eureka, California)

C. F. Richter

May 15, 1941.



3 AUG 1941

Pasadena Preliminary Bulletin No. 26, May, 1941

Unless otherwise noted readings refer to P or P' and to the Pasadena station  
MW = Mt. Wilson, R = Riverside, c = compression, d = dilatation

- May 1 07:15:17 (Felt at Unalaska), 14:14:29  
 May 2 08:42:54, 10:08:11 (S=10:16:33)  
 May 3 20:44:40  
 May 4 11:34:57, 22:26:13  
 May 5 01:21:16 (MW), 15:30:38 c (PP=15:33:32. S=15:41:23; destructive at Suihwa, north of Harbin, Manchukuo, according to the press), 20:28:03 (MW)  
 May 6 03:12:54 (S=03:14:10; 37.3°N. 114.3°W. Felt at Boulder City)  
 May 7 12:32:15 c, 19:45:05  
 May 8 10:32:47 c (pP=10:34:47, sP=10:35:34, S=10:41:54. Tonga region, h=550 km.)  
 May 9 S?=05:58:36, 09:44:01 (S=09:53:48), 09:49:57, 12:14:16  
 May 10 17:59:40 (R)  
 May 11 05:18:08 (R), 13:35:22  
 May 12 04:44:17 (R)  
 May 13 16:03:55 d (S=16:05:40. Tinemaha P=16:03:34, S=16:05:13. Felt at Eureka, California. USCGS 40.3°N. 125.0°W., O=16:01.9  
 May 15 03:26:22, 04:00:10, 15:52:28, 17:28:44  
 May 16 02:38:40 (iS=02:40:27. Tinemaha P=02:38:21), 04:08:17 (MW), 04:53:20, 07:33:43, 09:32:01, 13:16:12 (R), 15:43:21.  
 May 17 02:37:19 (PP=02:40:42, S=02:47:42, PS=02:48:51. USCGS 12.9°S. 166.7°E., O=02:24.7), 03:02:14 (MW), 03:32:18, 03:53:12 (MW), 06:29:34, 07:27:44, 08:10:29 (R), 08:56:48, 11:30:55 (MW), 19:20:15  
 May 18 05:25:38, 11:25:42  
 May 19 02:21:02 c (R), 14:46:51  
 May 20 05:42:30  
 May 21 01:58:56, 14:00:23 (MW), 23:44:22 (S=23:45:32. La Jolla P=23:43:59, S=23:44:42)  
 May 23 07:19:14  
 May 24 05:31:27 (R), 06:50:46 (R), 16:09:26  
 May 25 01:20:52, 02:08:26  
 May 26 14:47:39 d, 20:55:13, 21:17:26  
 May 27 00:54:28, 19:30:31 (R)  
 May 29 s?=11:41:53, 12:40:16, 14:55:41  
 May 30 17:41:40 (S=51:37. Tonga region), 21:39:48 (S=21:49:03. Samoa-Tonga region?)  
 May 31 02:30:07 c, 05:07:49 (R)

Addendum

June 9 06:13:12, 06:19:56 (L=06:21:50)

We wish to acknowledge with thanks receipt of the following bulletins from May 16, 1941 to June 9, 1941:

Alger-Bouzaréah, January-March, 1941, 1-3; Berkeley, January-September, 1939; Bucarest, March, 1941; Bureau International, January-February, 1941, 6-11, 2nd suppl. December, 1940, 85\*; Cartuja, April, 1941, 6-8; Coimbra, April, 1941, 4; J S A, February-April, 1941, 6, 8, 10-12; Ksara, February, 1941; Manila, March, 1941, 10-13; N E S A, April 15-30, 1941, 68; Perth, March, 1941; Phu-Lien, August-December, 1940; Pittsburgh, March-April, 1941; Toledo, March-April, 1941; U R S S prelim., March, 1941; U S C G S, May-June, 1939; Wellington, March, 1941, P 109; Weston, April, 1941, 41.

C. F. Richter

June 9, 1941



23 SEPT. 1941

Unless otherwise noted readings refer to P or P' and to the Pasadena station  
 MW = Mt. Wilson, R=Riverside, T=Tinemaha. c=compression, d=dilatation.

- June 1 06:48:39 (T)
- June 2 09:40:04 (R)
- June 3 04:46:35
- June 4 00:13:50 (R), 07:50:13 (eS=07:52:16; Tinemaha P=07:49:44, S=07:50:42), 16:44:06
- June 6 05:33:05, 19:39:43 (S=19:40:37; Tinemaha P=19:39:23, S=19:39:50, Boulder City gives 37.1°N. 115.7°W., O=19:38:48)
- June 8 22:27:40
- June 9 06:13:12 (S=06:17:52), 06:19:57 (Tinemaha P=06:19:29, S=06:21:11), 07:59:09, 08:46:14, 22:10:33 (pP?=22:10:50) (MW)
- June 10 10:45:12 (S=10:49.0), 11:19:28, 14:19:32, 15:37:10 (R)
- June 11 06:34:28, 15:50:26 (MW), 19:45:33
- June 12 02:18:10 d, 04:35:16 (pP??=04:36:19) (MW), 07:52:26 (MW), 09:50:01 d, 14:08:25 (T), 22:18:16
- June 13 03:09:35, 15:06:02 (pP=15:06:14; Mexico), 21:02:04, 22:26:11 (pP?=22:27:03)
- June 14 08:07:29
- June 15 03:08:24, 12:58:10, 14:34:06 (pP=14:34:23; Kermadec Is., h=70 km.?)
- June 16 05:19:37 (MW), 10:43:45, 11:45:19 (PKKP=11:56:53), 20:41:07
- June 17 02:35:17 c, (pP=02:35:56. Tonga region, h=160 km.)
- June 18 01:27:15, 04:29:52, 10:33:42, 11:19:22 (S=11:27:33, P'P'=11:48:54. USCGS 51.5°N. 32.0°W., O=11:09.0), 11:32:46, 20:17:33
- June 19 10:11:02
- June 20 08:53:15, 09:39:01, 22:08:00
- June 21 00:48:25 c (S=00:58:58), 05:57:02, 07:59:21, 08:52:22, 10:38:32, 17:52:44 (pP=17:54:46, sP=17:55:45, S=18:02:01. Tonga region, h=550 km.)
- June 22 22:22:58
- June 23 05:59:39 (R), 09:47:28 c (S=09:58:26, 23:38:18)
- June 24 03:55:36 (MW)
- June 25 22:55:48
- June 26 12:07:46 (P''=12:10:59, PP=12:13:01, SKS=12:18:26, PKKP=12:20:46, PPS=12:24:14. Δ=123°. Magnitude 7.7? USCGS 13°N. 95°E., O=11:52.1)
- June 27 07:39:35, 08:14:35, 08:23:33, 08:51:20, 17:17:17 (pP=17:17:57, S=17:21:17, ScS=17:27:39. h=200 km. USCGS 16°N. 93°W., O=17:11.3), 19:23:09
- June 28 05:33:07, 18:14:24
- June 29 05:52:04, 17:03:03, 22:19:26 c, 22:44:15
- June 30 03:32:56 (MW), 09:29:42, 16:53:59, 17:06:33 (S=17:08:22), 18:42:35

Noteworthy shocks of July:

- July 1 07:51:18 (S=07:51:33) Santa Barbara P=07:51:00; S-P in aftershocks = 3 sec. 34.3°N. 119.6°W., O=07:50:56. Felt as far as San Bernardino (200 km.) Intensities (Mercalli): Los Angeles and Pasadena, IV. Ventura, VI. Santa Barbara and Carpinteria, VII.
- July 3 07:24:00, eS=07:34:12. Destructive in Argentina
- July 15 14:57:36, S?=15:07:42. This is probably the shock destructive in Japan
- July 16 03:14:44 - Distant. 03:16:26 - Δ=11°?

C. F. Richter

July 17, 1941



## Pasadena Preliminary Bulletin No. 28, July, 1941

Unless otherwise noted readings refer to P or P' and to the Pasadena station  
 MW = Mt. Wilson, R = Riverside, c = compression, d = dilatation.

- July 1 06:38:26, 07:51:18 (S=07:51:33. Santa Barbara  $\bar{P}$ =07:51:00,  $\bar{S}-\bar{P}$  in after-shocks=3 sec. 34°20'N. 119°35'W., O=07:50:56. VII (Mercalli) at Santa Barbara and Carpinteria, with damage to weak structures.), 08:56:06, 11:26:01, 20:24:44, 22:26:48 (R)
- July 2 01:24:19 (pP?=01:24:48), 03:01:06, 04:04:18 (MW), 04:09:32, 10:03:45, 12:25:29
- July 3 01:02:36, 01:26:02, 05:19:47, 07:24:00 c (S=07:34:11. Destructive in Argentina. USCGS 33°S.68°W., O=07:11.7), 12:19:45
- July 6 00:46:40 c (S=00:56:42), 21:25:49, 22:29:53
- July 8 17:32:07 (MW)
- July 9 00:54:26, 02:26:04 (MW)
- July 10 03:34:46, 03:45:42? (MW), 09:40:43 d (pP=09:41:13), 10:29:23, 21:43:30 (MW)
- July 11 01:24:40 (S=01:31:15. USCGS 5 1/2°N. 83°W., O=01:16.6), 02:07:38 (S?=02:14:14. Aftershock), 06:34:12, 07:37:20 (R), 16:02:24.
- July 12 06:27:26 (pP=06:27:51), 14:12:38
- July 13 15:01:52 (S=15:03:00), 17:30:09 (R)
- July 14 02:21:29, 02:35:37, 02:51:28 (MW), 06:43:44, 09:22:08 (R), 13:01:12, 18:56:52 (R), 21:01:40 (MW), 22:53:58 (MW)
- July 15 14:57:36 (S?=15:07:42. Destructive in Japan)
- July 16 03:14:43, 03:16:26, 03:29:33, 08:32:00, 15:45:50, 22:31:43 (MW)
- July 17 07:55:38 (S=08:01:48), 22:19:30
- July 18 03:55:15 (S=03:56:42. Tinemaha P=03:54:33, S=03:55:17. Strong at Fallon, Nevada), 17:25:54
- July 19 02:12:25, 06:10:49, 09:35:17, 11:39:19, 15:25:59
- July 20 06:13:54 (MW), 11:04:54
- July 21 19:39:53 (T), 20:38:38
- July 23 01:21:46 (S=01:25:32. Mexico), 09:41:22 (pP=09:41:50), 10:34:13, 18:37:53 (R), 21:10:49 (S=21:15:49)
- July 24 06:33:01, 10:37:02, 14:05:45
- July 25 10:01:22
- July 26 20:24:04 (S=20:34:40), 23:19:24
- July 28 16:04:47
- July 29 10:54:24 (MW), 13:24:12 (pP=13:24:37)
- July 30 01:58:10 (pP?=01:58:21, PcP=02:00:36, S=02:03:38. Alaska), 02:40:30 (MW)

## Noteworthy shocks of August

- Aug. 2 11:54:00 c (pP?=11:54:18, PP=11:57:25, SKS=12:04:19, S=12:09:16.  $\Delta=86^\circ$ .)
- Aug. 4 11:01:44 c (pP?=11:01:57, PcP=11:02:58, S=11:08:40, ScS?=11:11:33.)
- Aug. 6 06:22:07 c (pP=06:22:37, sP=06:22:55, S=06:27:50, ScP=06:27:55, ScS=06:32:03.  $\Delta=38^\circ$ , h=150 km. Off Alaska.)



Pasadena Preliminary Bulletin No. 29, August, 1941

Unless otherwise noted, readings refer to P or P' and to the Pasadena station.  
 MW = Mt. Wilson, R = Riverside, Pr = Palomar

- Aug. 1 11:41:53 (MW)
- Aug. 2 11:54:00 c (pP?=11:54:18, SKS=12:04:19, S=12:04:34, P'P'=12:20:07.  
USCGS 30°S.178 1/2°W., O=11:41.5, h=100 km.)
- Aug. 3 10:56:20, 12:54:37
- Aug. 4 00:28:53 (S=00:32:09), 11:01:44 c (pP=11:01:57, PcP=11:02:58, S=11:08:40,  
ScS=11:11:33. USCGS 52°N.176 1/2°W., O=10:53.0, h=100 km.), 17:23:48 (R)
- Aug. 5 09:11:02
- Aug. 6 06:22:07 c (pP=06:22:37, sP=06:22:55, S=06:27:50, ScP=06:27:55,  
ScS=06:32:03. USCGS 55 1/2°N.160°W., O=06:15.3, h=200 km.)
- Aug. 8 02:25:21, 19:15:54
- Aug. 9 04:17:02, 22:26:37
- Aug. 10 05:11:10, 14:47:28?, 17:11:57 d (pP=17:12:19, S?=17:22.6. South America?),  
19:29:18 d
- Aug. 11 23:27:40
- Aug. 12 12:38:09
- Aug. 14 01:55:09 d (S=02:04:38. South America), 02:02:57 (Aftershock?)
- Aug. 15 06:21:39 (S=06:31:46. USCGS 19°N.27°W., O=06:09.5),
- Aug. 16 03:51:15, 16:10:57 (MW), 18:11:03 (Pr)
- Aug. 17 16:02:27 d
- Aug. 18 08:23:10
- Aug. 19 10:07:30, 16:38:33 (MW), 17:13:02 (MW), 17:53:04, 19:44:01 (pP=19:44:27)
- Aug. 20 08:32:16, 13:34:35
- Aug. 21 00:02:42 (S=00:03:44. 30°N.114°W., O;00:01.3)
- Aug. 22 16:21:12, 16:46:34, 19:09:27 (MW)
- Aug. 24 17:22:50, 23:02:35 c (pP=23:03:00, sP=23:03:10. South America, h=100 km.)
- Aug. 25 03:09:15 c (Mexico), 11:37:59, 15:44:46 (R)
- Aug. 26 01:34:10, 17:22:21 (MW), 18:56:33 (MW), 22:49:00
- Aug. 27 02:55:18, 18:36:59 (S=18:41:36), 23:44:23 (MW)
- Aug. 28 01:08:43 (R), 03:52:55 (S=03:56:07), 06:49:08 (S=06:52:25), 11:27:19 (MW),  
20:38:51 (S=20:48:32)
- Aug. 29 02:48:31 (S=02:58:46), 12:34:04 (R), 13:11:39 (S=13:13:44), 13:18:53  
(S=13:20:53), 15:17:47 (S=15:19:52), 19:16:02 (S=19:16:02 (S=19:18:07)),  
19:55:48 (MW)
- Aug. 30 07:09:27 (MW), 09:48:49 (S=09:59:10), 10:02:41, 12:53:16 (MW), 13:19:24  
(S=13:29:31), 13:28:07, 13:30:37 (S=13:32:46), 13:39:57 (S=13:42:07),  
14:18:28, 15:33:02, 17:03:50
- Aug. 31 01:46:59 (MW), 04:25:21, 05:53:08, 10:43:52, 17:14:04, 20:58:34, 23:49:35

Noteworthy shocks of September:

- Sept. 4 10:34:44 (PP=10:33:17, S?=10:45:12. Distance 90°?)
- Sept. 9 07:32:47 c (S??=07:43:37)
- Sept. 12 07:16:17 (PP=07:20:32, SKS=07:26:56, PS=07:29:49. Distance 102°. New Guinea?)
- Sept. 13 18:19:08 (Dilatation from Southeast. pP?=18:19:30, S=18:22:52)
- Sept. 14 18:40:08 (S=18:41:00. Felt widely in Owens Valley, the Sierra Nevada, and  
San Joaquin Valley. Some damage to mountain cabins. Many rock slides.  
Epicenter in region of 37.5°N.110.5°W. Large foreshocks at  
16h 44m and 18h 22m.)
- Sept. 16 21:51:37 (S?=22:01:52, 1L=22h32m)

C. F. Richter  
September 16, 1941



Pasadena Preliminary Bulletin No. 30, September, 1941

Unless otherwise noted, readings refer to P or P' and to the Pasadena station  
 MW=Mt. Wilson, R=Riverside, Pr=Palomar, T=Tinemaha. c=compression, d=dilatation

- Sept. 1 06:26:32 d, 08:09:13, 12:46:33 (MW), 13:05:01 (MW).
- Sept. 2 05:49:16 (S?=05:50:48; Tinemaha P=05:48:54, S=05:49:48), 10:10:15.
- Sept. 3 00:29:52 (R), 04:28:06, 07:29:59, 08:35:26 (MW), 18:30:08.
- Sept. 4 10:34:44 c (S?=10:45:12, P'P'=11:00:17).
- Sept. 5 07:32:15, 09:14:15, 23:31:05 d (from northwest).
- Sept. 6 00:06:18 (pP?=00:06:49).
- Sept. 7 01:01:36, 07:27:48 (MW), 22:33:58 (MW), 23:11:00 (MW).
- Sept. 8 05:17:21 (MW), 10:53:04 (R), 11:28:23, 13:16:28 (MW), 15:59:07, 16:06:00, 18:15:46 (Pr).
- Sept. 9 07:32:47 c (S?=07:43:37. USCGS 7°S.153°E., O=07:19.6), 12:10:58 (MW), 17:17:28, 17:52:00 (MW).
- Sept. 10 14:50:02 (MW), 19:12:48, L=22:43:54 (Asia Minor?).
- Sept. 12 07:16:17 (SKS=07:26:56. USCGS 2°N.130°E., O=07:02.0).
- Sept. 13 18:19:08 d (S=18:22:52. Palomar P=18:18:54. USCGS 18.7°N.106.9°W., O=18:14.9), 23:04:29 (T), 23:25:06 (T).
- Sept. 14 04:27:23 (S=04:37:18), 06:38:29 (MW), 07:49:39, 08:04:33, 13:52:56, 18:40:08 d (S=18:41:00. Tinemaha P=18:39:25 d, S-P in aftershocks = 9 sec. Epicenter within 15 kilometers of 37.6°N.118.7°W., O=18:39:11 approx. Magnitude 6. See previous issue, No. 29.).
- Sept. 15 06:54:14.
- Sept. 16 21:49:26 (R), 21:51:37 c (S=22:01:57. USCGS 28.5°S.178°W., O=21:39.1).
- Sept. 17 07:02:38 (P'=07:06:16, SKS=07:12:37. Δ=110°?), 15:37:10, 17:36:57 (MW), 19:29:05 (R).
- Sept. 18 PP?=02:23:32, 05:41:33 (MW), 07:34:30 (Tinemaha P=07:34:12, S=07:34:54. Felt at and near San Francisco), 11:23:50, 13:24:43 d (pP=13:25:07, sP=13:25:15, S=13:33:22. USCGS 13°S.73°W., O=13:14.3, h=100 km.), 18:29:47.
- Sept. 19 00:28:53, 05:42:42, 06:28:55 (R), 09:33:42 (MW), 12:49:52? (MW).
- Sept. 21 19:53:26 d (S=19:53:39. Santa Barbara P=19:53:23 c. Epicenter in San Andreas fault zone, near 33.8°N.118.9°W., O=19:53:07 approx. Slight damage near the epicenter. Felt in the San Joaquin Valley and at Pasadena, Los Angeles, Santa Barbara, etc.
- Sept. 23 19:22:25.
- Sept. 24 01:11:28 c (pP=01:11:46, S=01:19:38, P'P'=01:40:48. Δ=60° to northwest.), 09:56:42, 18:37:00.
- Sept. 25 04:09:29 (Pr), 17:55:43 (S=18:01:26. Strong in Hawaii), 21:46:46 (R).
- Sept. 27 05:48:48 (pP=05:49:02), 22:05:29 (pP=22:07:25; Tonga region, depth about 500 km.), 23:48:44.
- Sept. 28 05:40:56 (pP?=05:41:16), 10:12:31, 12:46:00, 16:13:00 (MW).
- Sept. 29 03:44:16, 11:14:40 (pP?=11:14:52), 13:47:55, 16:23:11 (MW), 17:20:50, 17:29:05.
- Sept. 30 08:32:15 c (S?=08:43:00. West or southwest), 11:09:22 (MW)

Noteworthy shocks of October

- Oct. 3 16:15:11 (S=16:16:45. Tinemaha P=16:14:45, S=16:16:15. Strong, with minor damage in the region of Eureka, California.)
- Oct. 5 10:22:38 (Dilatation from southwest; S=10:31:54.)
- Oct. 6 07:01:00. (Tinemaha P=07:00:35. Aftershock, Eureka.)
- Oct. 8 04:29:33 (S=04:35:42), 05:36:33 (S=05:46:43)
- Oct. 15 09:45:51 (pP?=09:46:17, sP=09:46:31, PP?=09:46:53, P'P'?=10:14:55.)

C. F. Richter

October 17, 1941.