

18 JUN 1945

## Noteworthy shocks, January - March 1945

Unless otherwise noted, readings refer to first motion at Pasadena or Mt. Wilson

- Jan. 1 01:29:09c(S=01:35:50. Baffin Bay. Magnitude 7), 09:02:40(i=09:03:02)  
 Jan. 2 04:17:32, 11:43:51, 19:27:15, 19:46:51c  
 Jan. 3 02:00:29, 06:50:30c (pP=06:51:07) 12:27:41  
 Jan. 4 06:28:44c, 18:39:42  
 Jan. 5 04:42:41, 06:25:38, 08:06:32, 11:08:34c, 19:36:48, 20:55:44, 21:30:21  
 Jan. 6 09:44:56, 21:23:51 (Riverside)  
 Jan. 7 04:26:50, 17:57:11, 22:26:33 (S=22:27:17. Felt in San Francisco)  
 Jan. 8 04:29:14 c, 09:37:20 c  
 Jan. 9 12:25:40, 15:31:21, 16:32:25, 17:06:15, 21:47:18 (very distant) 23:30:13  
 Jan. 10 08:53:47 (pP?=08:54:19)  
 Jan. 11 01:18:29c, 01:55:37, 03:14:14, 06:09:52, 06:34:31, 06:48:49, 20:25:08, 21:16:17  
 Jan. 12 18:45:44, 18:50:44(S=19:01:02. Japan), 22:05:26d (pP22:05:45. Depth 100 km.  
 State of Chiapas, Mexico)  
 Jan. 13 05:14:04, 05:48:44, 08:32:56, 21:12:56  
 Jan. 14 11:29:07, 13:05:10  
 Jan. 15 00:50:22, 07:13:53  
 Jan. 16 13:49:01 (S=14:00:06), 14:00:54 (Riverside), 23:51:57  
 Jan. 17 04:11:38d (pP=04:11:54. Chile?), 15:20:30  
 Jan. 18 03:22:56, 03:55:25, 04:08:46, 04:12:13, 18:12:04d (Strong at Coatzacoalcos,  
 state of Veracruz, Mexico, according to Tacubaya)  
 Jan. 19 06:27:09, 22:29:42, 23:45:48 (Riverside)  
 Jan. 20 16:14:43  
 Jan. 22 07:37:19, 07:56:06  
 Jan. 23 07:44:04, 19:41:37(pP=14:43:38), 23:56:36  
 Jan. 24 09:42:24, 11:03:36 (Riverside), 16:51:42  
 Jan. 25 00:40:19, 01:29:50 (pP=01:30:42) (06:12:48d (pP=06:14:20), 22:14:23, 23:46:21  
 Jan. 26 08:52:31c, 21:18:31  
 Jan. 27 13:05:43d  
 Jan. 28 11:40:19, 19:58:15  
 Jan. 29 21:19:32  
 Jan. 30 00:09:00  
 Jan. 31 02:06:22, 06:52:21c, 09:47:27c (pP=09:47:40. South America?)  
 Feb. 1 07:31:10 (Tinemaha), 10:32:51 (Riverside), 10:37:38, 10:42:02, 10:48:42,  
 11:39:47, 11:50:38, 12:26:33, 16:28:40 (Tinemaha), 23:24:04  
 Feb. 2 02:08:57, 04:58:03, 21:46:39 (Riverside), 23:36:41d  
 Feb. 3 05:46:34, 09:19:36 (Riverside), 15:12:52, 19:14:24  
 Feb. 4 15:58:16, 17:40:34, 20:17:29  
 Feb. 5 05:49:41d, 08:11:24, 11:07:56 (Palomar), 11:46:31  
 Feb. 6 05:19:50, 06:55:40, 19:14:31  
 Feb. 7 00:25:34, 07:39:48  
 Feb. 8 00:01:33, 02:05:36c(pP=02:07:36), 10:35:59 (Riverside), 14:07:50c,  
 14:11:57d, 14:16:44, 14:49:16, 16:29:39, 17:54:26  
 Feb. 9 03:41:19, 06:45:24 (Riverside)  
 Feb. 10 05:09:33(pP?=05:09:51, S=05:19:05, P'P'=05:37:17. Japan), 05:24:03 (aftershock)  
 Feb. 11 01:32:30, 03:48:14c  
 Feb. 12 16:36:48, 22:39:12c (Riverside)  
 Feb. 13 11:37:48, 12:12:31c, 13:06:09, 13:35:44 (S=13:37:49), 20:39:20  
 Feb. 14 03:03:51d (S=03:06:51. Idaho), 23:47:18  
 Feb. 15 00:00:06, 02:01:38  
 Feb. 17 04:50:59, 18:54:40, 20:54:50 (Riverside), 22:47:24

Tables of mathematical symbols, including Greek letters and numbers.

Table 1	01:00:00 to 01:00:01	01:00:00 to 01:00:01
Table 2	02:00:00 to 02:00:01	02:00:00 to 02:00:01
Table 3	03:00:00 to 03:00:01	03:00:00 to 03:00:01
Table 4	04:00:00 to 04:00:01	04:00:00 to 04:00:01
Table 5	05:00:00 to 05:00:01	05:00:00 to 05:00:01
Table 6	06:00:00 to 06:00:01	06:00:00 to 06:00:01
Table 7	07:00:00 to 07:00:01	07:00:00 to 07:00:01
Table 8	08:00:00 to 08:00:01	08:00:00 to 08:00:01
Table 9	09:00:00 to 09:00:01	09:00:00 to 09:00:01
Table 10	10:00:00 to 10:00:01	10:00:00 to 10:00:01
Table 11	11:00:00 to 11:00:01	11:00:00 to 11:00:01
Table 12	12:00:00 to 12:00:01	12:00:00 to 12:00:01
Table 13	13:00:00 to 13:00:01	13:00:00 to 13:00:01
Table 14	14:00:00 to 14:00:01	14:00:00 to 14:00:01
Table 15	15:00:00 to 15:00:01	15:00:00 to 15:00:01
Table 16	16:00:00 to 16:00:01	16:00:00 to 16:00:01
Table 17	17:00:00 to 17:00:01	17:00:00 to 17:00:01
Table 18	18:00:00 to 18:00:01	18:00:00 to 18:00:01
Table 19	19:00:00 to 19:00:01	19:00:00 to 19:00:01
Table 20	20:00:00 to 20:00:01	20:00:00 to 20:00:01
Table 21	21:00:00 to 21:00:01	21:00:00 to 21:00:01
Table 22	22:00:00 to 22:00:01	22:00:00 to 22:00:01
Table 23	23:00:00 to 23:00:01	23:00:00 to 23:00:01
Table 24	24:00:00 to 24:00:01	24:00:00 to 24:00:01
Table 25	25:00:00 to 25:00:01	25:00:00 to 25:00:01
Table 26	26:00:00 to 26:00:01	26:00:00 to 26:00:01
Table 27	27:00:00 to 27:00:01	27:00:00 to 27:00:01
Table 28	28:00:00 to 28:00:01	28:00:00 to 28:00:01
Table 29	29:00:00 to 29:00:01	29:00:00 to 29:00:01
Table 30	30:00:00 to 30:00:01	30:00:00 to 30:00:01
Table 31	31:00:00 to 31:00:01	31:00:00 to 31:00:01
Table 32	32:00:00 to 32:00:01	32:00:00 to 32:00:01
Table 33	33:00:00 to 33:00:01	33:00:00 to 33:00:01
Table 34	34:00:00 to 34:00:01	34:00:00 to 34:00:01
Table 35	35:00:00 to 35:00:01	35:00:00 to 35:00:01
Table 36	36:00:00 to 36:00:01	36:00:00 to 36:00:01
Table 37	37:00:00 to 37:00:01	37:00:00 to 37:00:01
Table 38	38:00:00 to 38:00:01	38:00:00 to 38:00:01
Table 39	39:00:00 to 39:00:01	39:00:00 to 39:00:01
Table 40	40:00:00 to 40:00:01	40:00:00 to 40:00:01
Table 41	41:00:00 to 41:00:01	41:00:00 to 41:00:01
Table 42	42:00:00 to 42:00:01	42:00:00 to 42:00:01
Table 43	43:00:00 to 43:00:01	43:00:00 to 43:00:01
Table 44	44:00:00 to 44:00:01	44:00:00 to 44:00:01
Table 45	45:00:00 to 45:00:01	45:00:00 to 45:00:01
Table 46	46:00:00 to 46:00:01	46:00:00 to 46:00:01
Table 47	47:00:00 to 47:00:01	47:00:00 to 47:00:01
Table 48	48:00:00 to 48:00:01	48:00:00 to 48:00:01
Table 49	49:00:00 to 49:00:01	49:00:00 to 49:00:01
Table 50	50:00:00 to 50:00:01	50:00:00 to 50:00:01

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- Feb. 18 05:01:52, 06:54:22 (PcP=06:56:04), 10:19:38 (PP=10:22:38, S=10:29:14. Japan)  
 13:22:45, 15:49:53 (Tinomaha), 18:25:44c, 23:00:40 (Tinomaha)
- Feb. 20 12:05:03, 12:45:45, 15:49:53, 17:26:57, 18:14:24c
- Feb. 22 17:59:39, 18:23:27, 22:54:58c
- Feb. 23 02:08:57, 04:11:59, 18:26:04
- Feb. 24 04:05:21 (Palomar), 05:16:37
- Feb. 25 10:51:42
- Feb. 26 02:34:20, 15:45:08, 16:12:50, 17:27:46, 20:15:53, 22:26:47d  
 (eS=22:36:58. Japan?) 22:56:27, 23:23:56, 23:26:48
- Feb. 27 03:17:33c, 06:42:48, 07:22:13, 13:17:12, 13:24:15
- Feb. 28 03:08:20c, 13:01:05
- Mar. 1 02:11:40, 22:14:45
- Mar. 2 19:46:03d (pP=19:47:52) 19:54:08d (pP=19:56:02, S=20:03:40. South of Japan)
- Mar. 4 17:34:47
- Mar. 5 00:31:34c (Riverside), 09:31:01 (pP=09:31:59) 10:37:20, 12:28:34
- Mar. 6 03:33:58, 15:45:14
- Mar. 7 01:05:38, 07:56:54, 17:18:52, 19:59:44, 20:03:53
- Mar. 8 14:18:45
- Mar. 9 00:32:49 (Tinomaha), 08:52:03, 14:13:16 (Riverside), 21:13:03 (pP?=21:13:23)
- Mar. 10 01:01:22, 13:49:38
- Mar. 11 05:25:43, 18:03:25, 18:14:48, 20:16:48c, 21:49:41c (S?=22:00:16. Japan)
- Mar. 12 10:33:31, 12:26:45 (Palomar)
- Mar. 13 05:08:34, 09:11:15c (pP?=09:12:52), 12:34:33 (pP?=12:34:56)
- Mar. 14 01:50:40d, 17:15:56 (Tinomaha), 23:11:20 (Riverside)
- Mar. 15 09:16:06c
- Mar. 18 00:06:18d (pP?=00:16:35, S=00:13:02, USCGS 6.9°N. 78.0°W., C=23:57.9)  
 00:34:05c, 05:31:59, 07:37:37, 08:18:38, 13:49:00 (Riverside) 16; 18:53c  
 19:01:26, 23:28:44
- Mar. 19 06:03:15 (Palomar), 13:30:16d, 20:45:27c (pP?=20:46:30)
- Mar. 20 03:01:25d, 08:13:04 (Turkey), 21:55:37c (S=21:55:59)
- Mar. 21 12:25:48, 18:20:06
- Mar. 22 03:42:31, 04:35:29 (pP?=04:35:44)
- Mar. 23 02:26:57, 06:07:40, 08:25:09d, L=24:02:50c (large shock, P lost in microseisms)
- Mar. 24 14:30:50. 18:43:38
- Mar. 26 21:06:21
- Mar. 28 06:43:06d, 10:14:43 (pP?=10:14:58), 12:55:33, 13:16:46d, 16:50:11  
~~xxxxxx 09:04:11, 10:18:16 (Palomar)~~
- Mar. 29 09:04:11, 10:18:16 (Palomar)
- Mar. 30 11:27:09 (Palomar), 21:37:24
- Mar. 31 06:59:42, 07:15:29, 10:00:03, 18:52:02 (Gulf of California)  
 19:28:54 (Gulf of California)
- April 1 23:44:10 (Santa Barbara 23:43:52. Shock of magnitude 5 ± in Santa  
 Barbara Channel)

C. F. Richter  
 April 16, 1945



Unless otherwise noted, readings refer to first motion at Pasadena or Mt. Wilson

- 384
- 15 NOV. 1945
- 71 NOV 1945
- Apr. 1 00 ~~57 02d~~ (pP 00 57 31), 01 14 40, 09 ~~13 54c~~, 22 ~~32 02~~, 23 10 46  
23 ~~44 10c~~ (S 23 44 28, Santa Barbara P23 43 52, Santa Barbara Channel)
- Apr. 2 02 32 55
- Apr. 3 18 40 22, 21 ~~12 00c~~ (pP 21 14 01, sP 21 15 10. Tonga region, h=550 km.)  
21 23 01
- Apr. 4 00 ~~57 22~~, 12 55 10, 14 49 47
- Apr. 5 23 ~~16 55~~ (pP? 23 17 19), 23 20 40
- Apr. 6 12 02 30, 18 ~~39 44~~
- Apr. 7 09 ~~40 00~~, Riverside 10 34 05, 21 ~~37 52~~, 23 03 31
- Apr. 8 01 ~~11 27~~, 01 47 05, 14 25 45
- Apr. 10 01 ~~33 43~~ (Japan?)
- Apr. 11 02 05 26, 06 28 53, Palomar 09 57 32, 11 ~~24 41~~ (S 1126 31, Tinemaha  
P 11 24 22, S 11 26 08) 15 ~~30 14~~
- Apr. 12 00 29 49, 11 ~~39 08~~, 14 58 03
- Apr. 13 21 ~~24 05~~ (pP 21 26 04, Tonga region, h=550 km.)
- Apr. 14 Palomar 02 45 56, 07 09 12
- Apr. 15 02 ~~44 59 d~~ (pP 02 45 30, S 02 52 45. U S C G S 56 N 164 E., O=02:35.2),  
02 59 26, 03 07 02, 03 51 02, 19 54 22d (USCGS 22.5 N 108.0 W. O=19:50.6)
- Apr. 16 Riverside 01 26 57, 07 02 50
- Apr. 17 12 ~~25 43~~ (pP 12 26 06), 20 30 07
- Apr. 18 13 ~~24 42~~, 14 14 05
- Apr. 19 02 ~~15 41~~, 04 04 11, 13 16 49, Riverside 15 ~~44 46~~, 16 ~~05 06~~
- Apr. 20 15 29 40, 22 46 38
- Apr. 21 12 48 22, 13 02 34, 17 19 12 c (pP 17 19 33, S 17 23 49 Mexico)
- Apr. 22 04 02 ~~54~~, 09 46 56 (S 09 48 08. Gulf of California; Numerous foreshocks and  
aftershocks). 10 ~~11 27~~
- Apr. 23 05 ~~51 15~~, 06 35 23 (pP? 06 36 04, S 06 45 45, Japan?),  
07 55 33, ~~12 45 25~~, 22 37 37
- Apr. 24 Palomar 02 52 04, 06 17 27, 14 48 18
- Apr. 25 Riverside 13 ~~13 02~~ (pP 13 13 24)
- Apr. 26 01 37 55, 05 02 12, 08 39 49, 13 ~~52 15~~ (S 14 01 31. Pacific)
- Apr. 27 Palomar 07 02 14, 08 37 17, Riverside 14 56 39
- Apr. 28 Tinemaha 01 07 01, 15 52 16
- Apr. 29 02 46 ~~27~~ (P?? 02 47 35), 07 19 44, 19 ~~57 05~~, 20 19 30 (S? 20 23 36.  
Alaska?), 20 ~~25 47~~ (Central America?), 22 ~~07 54~~ (Central America?)
- Apr. 30 11 25 09 (pP 11 26 55, sP 11 27 41 Deep. Region of Japan); 17 09 05  
(Japan?), 17 38 32 d (pP 17 40 30; S 17 47 47. Tonga Region? h=500 km.)
- May 1 06 ~~08 49~~ (pP=06 09 19, S=06 18 12. South America), 07 08 08, 08 03 ~~35~~,  
16 ~~47 03 d~~ (pP 16 47 34, S 16 57 00. South America), 20 58 26, 23 ~~19 07~~
- May 2 10 43 50, 18 01 13, 19 ~~49 54 c~~ (S 19 52 05. Tinemaha P 19 49 21,  
S 19 50 35. Felt in Northern California).
- May 3 06 19 15, 15 ~~28 12 d~~
- May 4 08 ~~41 49~~, 13 15 21
- May 5 02 ~~41 29~~, Tinemaha 12 ~~17 38~~, 12 42 20 (pP 12 42 36), 13 14 52, 14 ~~04 02~~,  
20 30 ~~43~~
- May 6 08 08 58, 11 54 33
- May 7 17 ~~33 42~~, Palomar 18 25 39
- May 8 Riverside 06 13 59, 15 25 59, 23 31 52
- May 9 03 ~~48 56~~ (pP 03 49 59, SKP 03 51 42 SKS 03 55 02. Distance 117°), 23 58 32 d
- May 10 02 08 27 (pP 02 09 27, 02 27 05, 13 14 07, 18 03 46)
- May 11 06 43 41, 22 ~~04 18~~
- May 12 07 23 55 (S 07 34 47. Near 52°N, 115°W.), 13 51 25

April - June 1945

Unless otherwise noted, readings refer to first motion of Passengers on M.S. Wilson

Apr 1	00 22 00 (Pr 00 27 51), 01 14 40, 04 13 20, 22 22 02, 23 10 46
Apr 2	22 44 10 (Pr 23 44 29, Same as Apr 1, Same as Apr 1)
Apr 3	02 22 22
Apr 4	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 5	21 22 22
Apr 6	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 7	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 8	21 22 22
Apr 9	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 10	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 11	21 22 22
Apr 12	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 13	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 14	21 22 22
Apr 15	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 16	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 17	21 22 22
Apr 18	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 19	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 20	21 22 22
Apr 21	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 22	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 23	21 22 22
Apr 24	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 25	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 26	21 22 22
Apr 27	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 28	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
Apr 29	21 22 22
Apr 30	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)
May 1	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
May 2	21 22 22
May 3	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)
May 4	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
May 5	21 22 22
May 6	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)
May 7	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
May 8	21 22 22
May 9	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)
May 10	12 40 22 (Pr 12 44 21, 21 15 10, 20 22 22, 23 10 46)
May 11	21 22 22
May 12	02 22 22 (Pr 02 27 22, 12 44 21, 21 15 10, 20 22 22, 23 10 46)

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May 13 06 52 03, 09 56 03, 16 48 12, 20 30 46, Palomar 21 15 22  
 May 14 05 16 01  
 May 15 Riverside 03 49 10  
 May 16 06 18 21, Palomar 08 56 30, 11 03 10  
 May 17 08 36 53 (pP 08 37 38), 15 07 44 (S=15 08 27. Santa Barbara P 15 07 31,  
 S 15 08 02 Slight damage at Hollister, which is near 36.8°N. 121.4°W.  
 Felt at San Francisco)  
 May 18 12 36 21, 23 46 43 c  
 May 19 02 41 57, 08 01 16 c (S=08 05 48. USCGS: 16.0°N.98.4°W., 0=07:55.8),  
 08 28 13, 12 24 49, 15 09 14 d (S 15 10 56. Tinemaha P 15 08 53,  
 S 15 10 24. USCGS: 40.2°N. 126.8°W, 0=15:07.0) 19 56 31  
 May 20 04 26 02 c, Palomar 12 02 51, Palomar 16 33 10  
 May 21 14 13 39, 21 31 41  
 May 22 Palomar 00 58 05, 05 40 40  
 May 23 03 36 25, 06 30 02, Palomar 14 14 37, 19 13 22  
 May 24 16 59 10, 20 49 24  
 May 25 00 31 59, 07 28 46  
 May 27 Palomar 13 38 08, Palomar 21 50 41  
 May 28 09 52 01, 10 21 07, Tinemaha 17 54 31, 18 17 43  
 May 29 Riverside 00 33 17, Riverside 03 11 33, 12 09 09 (pP 12 10 57), 17 52 02  
 May 31 00 52 21, 18 23 29, 21 01 05, 23 03 39, 23 24 37  
  
 June 1 06 56 30, 15 21 18 (pP 15 21 35, S 15 27 04. Eastern Aleutian Islands)  
 15 51 26, 16 52 09 (Felt at Helena, Montana), 22 36 24  
 June 2 Palomar 10 23 56, 14 05 27, 18 28 59 (pP 18 29 35)  
 June 3 13 13 23 c (pP 13 13 33, S 13 19 44. USCGS: 8.3 N 82.6 W., 0=13:05.6)  
 17 04 47, Palomar 23 43 35  
 June 4 Palomar 05 04 57, 08 17 20 (ipP? 08 17 33), 12 27 28, 16 01 16  
 June 5 22 01 11  
 June 6 01 05 33, 07 10 22, Tinemaha 07 52 24, 09 28 44 (pP 09 29 00)  
 June 7 11 59 35, 20 07 12, Palomar 20 23 35  
 June 8 Tinemaha 17 55 35  
 June 9 Palomar 03 33 34, 17 08 21  
 June 10 21 28 47, 23 52 06  
 June 12 09 15 50, 16 09 48, 16 22 23  
 June 13 14 13 44  
 June 14 00 03 33, Palomar 02 01 07, 03 32 02 (S 03 32 45. Tinemaha P 03 31 26,  
 S 03 31 35. Haiwee P 03 31 32, S 03 31 44. Magnitude 5. Near 37°N.  
 117°W.), 16 04 17  
 June 15 04 25 53 (pP? 04 26 08) 06 18 14, 17 50 07, 18 59 38 (pP 19 00 05),  
 Palomar 23 31 27  
 June 16 20 05 28, Riverside 20 18 34  
 June 17 16 47 26, Riverside 17 26 51, Palomar 22 52 51  
 June 18 Tinemaha 04 57 20, 09 23 16, 12 48 03  
 June 19 17 42 53, 17 55 20 (pP 17 56 03)  
 June 20 01 34 31 (S 01 43 13), 09 02 34, 11 52 15, 17 45 52 (S 17 54 34  
 Kurile Islands). 20 09 31, 20 30 53  
 June 22 01 18 34, 06 45 21, 09 29 47 (pP 09 30 16, S 09 38 52. Kurile Islands),  
 15 49 23, 18 12 59  
 June 23 01 47 57, 20 44 45 (very distant)  
 June 24 05 17 15, 11 12 26, 17 24 20, 20 10 11, (pP 20 10 36, S 30-20 19,  
 Andes near 28 S). *no to*  
 June 25 Riverside 08 11 56, 15 58 52, 23 52 01 (pP 23 52 20. Japan?)  
 June 26 06 49 55, 16 56 01, 21 33 33  
 June 27 13 10 38 d (L 13 12 32, Gulf of Calif. near 27°N. Felt at Santa Rosalia,  
 according to Tacubaya), 18 10 21 (aftershock), 19 58 20

May 13 08 52 03, 09 56 03, 16 48 13, 20 30 43, Palomar 21 15 23  
 May 14 05 16 01  
 May 15 Riverside 02 49 10  
 May 16 06 18 21, Palomar 08 58 30, 11 03 10  
 May 17 08 28 53 (p. 08 27 28), 15 07 44 (2-15 08 27, Santa Barbara P 15 07 31,  
 2 15 08 08 slight damage at Hollister, which is near 36°N. 121.4°W.  
 Felt at San Francisco)  
 May 18 12 36 21, 23 46 43 c  
 May 19 08 41 27, 08 01 16 c (2-08 05 48, USGS: 16.0°N. 98.4°W., 0-07:52.8),  
 08 28 13, 12 24 49, 15 09 14 d (2 15 10 22, Tinian P 15 09 22,  
 2 15 10 24, USGS: 40.2°N. 128.8°W., 0-15:07.0), 19 22 31  
 May 20 04 22 02 c, Palomar 12 02 21, Palomar 16 23 10  
 May 21 14 12 39, 21 21 41  
 May 22 Palomar 00 28 05, 02 40 40  
 May 23 02 38 25, 06 30 08, Palomar 14 14 37, 19 12 22  
 May 24 16 22 10, 20 42 24  
 May 25 00 21 29, 07 28 46  
 May 27 Palomar 12 28 08, Palomar 21 30 41  
 May 28 09 28 01, 10 21 07, Tinian P 15 07 31, 18 17 43  
 May 29 Riverside 00 22 17, Riverside 03 11 27, 12 09 09 (p. 12 10 27), 14 22 02  
 May 31 00 22 21, 12 22 29, 21 01 05, 23 03 39, 23 24 27  
 June 1 06 28 30, 12 21 18 (p. 12 21 25, 2 12 27 04, Eastern Aleutian Islands)  
 15 21 28, 16 28 09 (Felt at Helena, Montana), 22 26 24  
 June 2 Palomar 10 23 26, 14 28 27, 18 28 29 (p. 18 29 32)  
 June 3 12 12 22 c (p. 12 12 22, 2-12 12 22, USGS: 2.3°N 32.6°W., 0-12:03.6)  
 17 04 47, Palomar 23 42 25  
 June 4 Palomar 02 04 27, 08 17 20 (pp. 08 17 23), 12 27 28, 16 21 16  
 June 5 22 01 11  
 June 6 01 02 25, 07 10 22, Tinian P 07 22 24, 09 22 44 (p. 09 22 00)  
 June 7 11 22 25, 20 04 12, Palomar 20 23 22  
 June 8 Tinian P 17 22 25  
 June 9 Palomar 02 22 24, 17 08 21  
 June 10 21 22 47, 23 22 06  
 June 12 02 12 20, 18 02 48, 18 22 22  
 June 13 14 12 44  
 June 14 00 02 22, Palomar 02 01 07, 03 22 22 (2 03 22 42, Tinian P 03 21 22,  
 2 03 21 22, Hawaii P 03 21 22, 2 03 21 44, Magnitude 5, Near 27°N.  
 117°W.), 16 04 17  
 June 15 02 22 (p. 04 22 08) 06 12 14, 14 20 07, 18 22 22 (p. 19 00 22),  
 Palomar 22 21 27  
 June 16 20 02 22, Riverside 20 12 24  
 June 17 16 42 22, Riverside 17 22 21, Palomar 22 22 21  
 June 18 Tinian P 04 22 20, 09 22 16, 12 42 03  
 June 19 14 42 22, 17 22 20 (p. 17 22 08)  
 June 20 01 24 21 (2 01 24 13), 09 02 24, 11 22 15, 17 42 22 (2 17 24 24  
 Kurile Islands), 20 02 21, 20 22 22  
 June 22 01 12 24, 06 42 21, 09 22 47 (p. 09 20 16, 2 09 22 22, Kurile Islands),  
 12 42 22, 12 22 22  
 June 23 01 42 27, 20 44 45 (very distant)  
 June 24 02 12 12, 11 22 22, 17 22 20, 20 10 11, (p. 20 10 22, 2 20 20 19,  
 Andes near 28°S).  
 June 25 Riverside 08 12 22, 12 22 22, 22 22 01 (p. 22 22 20, Japan?)  
 June 26 02 42 22, 16 22 01, 21 22 22  
 June 27 12 10 22 d (L 12 12 22, GHI of Calif., near 27°N. Felt at Santa Rosalia,  
 according to Tashyev), 12 10 21 (Altoona), 12 22 20



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April - June 1945

(Continued)

June 28 00 05 51 d, 04 49 13, 07 24 50, 19 33 54  
June 29 Riverside 07 00 34  
June 30 04 20 39, 05 35 26 c (S 05 38 56. Roughly 16 N 116 W,  
O=05:31:15 magnitude 7), 05 40 06, 07 39 30, 09 37 28 c  
18 26 58, 18 36 04

Appendix. Noteworthy later shocks

July 2 08 34 43 (S 08 37 56)  
July 9 16 50 55 (pP 16 51 07, S 16 57 58)  
July 11 00 37 18 (pP 00 37 25, S 00 42 38)  
July 15 05 47 36 (pP 05 48 06, S 05 47 41)

C. F. Richter  
July 16, 1945

## PASADENA PRELIMINARY BULLETIN No.46

July - - September 1945

Unless otherwise noted, readings refer to first motion at Pasadena or Mt. Wilson  
 c = compression, d = dilatation

July 2 08 ~~27~~ 20, 08 ~~34~~ 43 (pP? 08 34 54, S 08 37 56), 08 ~~55~~ 48, 09 ~~30~~ 29  
 July 3 04 ~~12~~ 50, 04 ~~57~~ 23, 05 ~~12~~ 32, 14 ~~37~~ 37, 15 ~~17~~ 45, 22 ~~09~~ 21  
 July 4 10 ~~22~~ 43, 11 ~~16~~ 03 c  
 July 5 12 ~~10~~ 24 (Panama)  
 July 6 02 ~~28~~ 25, 12 ~~47~~ 38  
 July 7 11 ~~27~~ 22  
 July 8 18 ~~10~~ 13  
 July 9 12 ~~03~~ 04 (Near Panama), 16 50 ~~55~~ d (pP? 16 51 07 PaP 16 52 13, S 16 57 58  
 USCGS: 1° N. 77° W., O = 16:41.8)  
 July 11 00 ~~37~~ 18 (pP 00 37 32, S 00 42 38), 01 ~~25~~ 55, 13 ~~56~~ 15  
 July 12 09 ~~21~~ 55 (pP? 09 21 32)  
 July 13 Palomar 02 13 08, 15 59 46, 20 38 26, 21 28 43 (S 21 29 45)  
 July 14 Palomar ~~23~~ 43 37  
 July 15 05 ~~47~~ 35 d (pP 05 48 06, PP 05 50 54, S 05 57 41, P'P' 06 13 54; h=140 km.  
 Magnitude 7 1/4. USCGS: 17°N. 145°E., O = 05 35.0), 19 ~~34~~ 43, 22 ~~41~~ 02  
 July 16 04 ~~56~~ 04, 05 ~~01~~ 33, 12 ~~41~~ 18, 23 ~~38~~ 26  
 July 17 06 ~~53~~ 19, 11 ~~02~~ 45  
 July 19 04 ~~59~~ 55, 14 ~~24~~ 59, 14 ~~34~~ 47  
 July 21 Palomar 00 ~~23~~ 19, 14 ~~05~~ 49, Palomar 14 ~~27~~ 45, 22 10 19  
 July 22 06 ~~12~~ 42, 10 ~~59~~ 04, 12 09 18, 20 25 40  
 July 23 04 ~~11~~ 05  
 July 25 06 ~~24~~ 11, 07 ~~48~~ 26 (pP 07 49 55. Tonga-Fiji region, depth about 400 km.)  
 July 27 06 ~~20~~ 41, Palomar 14 ~~02~~ 46, 17 ~~05~~ 51, 21 ~~22~~ 03  
 July 29 00 ~~28~~ 02, 08 ~~07~~ 42, Riverside 08 ~~54~~ 18, 09 ~~41~~ 41 (pP 09 41 58), 18 ~~50~~ 10  
 (S 18 53 08)  
 July 30 Palomar 05 ~~48~~ 55, 15 ~~27~~ 14, 16 13 38  
 July 31 05 ~~07~~ 27, 18 ~~48~~ 45  
 Aug. 1 07 ~~42~~ 37, 11 56 59 (pP? 11 57 28, S 12 04 45), 22 37 00  
 Aug. 2 08 27 58, 08 32 04, 09 22 18, 12 35 42, Tinemaha 13 20 47, 18 06 03,  
 20 49 44 d (pP 20 50 15, sP 20 50 36, S 20 54 00. USCGS 54.2N133.1W.,  
 C=20 44.8)  
 Aug. 3 04 ~~19~~ 36 c (S 04 26 09. USCGS 44 N 82.1 W., O = 04 11.3), 06 ~~42~~ 46,  
 06 52 03, Palomar 07 05 52, 10 02 10, Palomar 10 57 25  
 Aug. 4 06 19 53, 06 48 05, Riverside 15 01 58, 16 25 25, 16 30 28  
 Aug. 6 23 11 41  
 Aug. 7 18 ~~28~~ 14 (pP 18 39 15), 22 19 55  
 Aug. 8 10 ~~12~~ 46 (PP? 10 14 42. Very distant), 11 17 15  
 Aug. 9 03 ~~23~~ 03, 13 09 56, 21 15 15  
 Aug. 10 00 ~~34~~ 28, 04 ~~23~~ 21, 11 ~~23~~ 49 (PaP 11 29 34. USCGS 15.4 N 88.8 W.  
 O = 11 20.3), 14 15 37, 15 15 31, 19 12 21  
 Aug 11 00 ~~41~~ 52 (S 00 48 19. USCGS 4.4 N 82.1 W. O = 00 33.5), 01 22 19,  
 13 44 19, 14 48 53, Palomar 16 01 57  
 Aug. 12 08 45 24 (S? 08 55 33), 15 01 32  
 Aug. 13 03 ~~30~~ 47, Palomar 09 57 50  
 Aug 14 08 13 44 d (pP? 08 15 06. sP? 08 16 18. Very distant?), 12 23 56,  
 19 ~~22~~ 44, 21 17 08  
 Aug. 15 10 31 47, 11 40 34, 14 28 14, 17 56 ~~36~~ c (Palomar P 17 56 38.  
 Felt widely in Southern California. Approximately 35.1°N. 116.1°W.,  
 O=17 36.4)  
 Aug. 16 00 30 13, 01 ~~52~~ 46, 13 13 35, 19 33 53, 23 ~~36~~ 11  
 Aug. 17 00 ~~09~~ 23, 15 10 22, 18 ~~46~~ 29, 19 ~~05~~ 35, 19 ~~12~~ 09, 23 ~~50~~ 33  
 Aug. 18 00 13 06, 11 17 06

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July - September 1945  
(Continued)

Aug.19 04 17 33, 05 40 40, Riverside 07 39 59, 10 32 28, 11 13 14,  
19 34 55, Riverside 19 53 18, 22 03 29

Aug.21 01 03 53, Riverside 04 58 55, 10 18 30 c (pP 10 20 31, sP 10 21 50,  
S 10 27 57), 16 39 38 d (pP 16 40 08, sP 16 40 21, P'P' 17 08 39),  
20 15 15

Aug.22 05 16 28, 05 26 58, 08 52 30

Aug.24 09 22 35, 09 44 07, 13 33 15

Aug.27 Riverside 03 35 15, 04 46 47, 07 47 07 c (pP 07 47 25, sP 07 47 32,  
S 07 56 24), 09 14 10 (S 09 15 01. Tinemaha P 09 13 52. Felt at San Francisco)

Aug.28 13 02 33, 19 32 42, 20 48 41, 23 52 04

Aug.29 10 35 15 c (S 10 45 48), 10 48 31, 13 00 30 (pP? 13 01 30), 13 47 55,  
14 29 44, Riverside 14 46 00, 15 23 00, 16 13 16

Aug.30 02 59 27, Riverside 07 17 11, 08 28 05, 17 05 23, 21 21 27, 23 41 51

Aug.31 06 35 51, 09 56 40 c, 13 38 14, 15 55 27, (pP 15 55 54),  
18 02 40, 23 38 35

Sept.1 09 19 16, 22 58 20 (PP 23 02 39, SKS 23 09 01.  $\Delta = 103^\circ$ . South of  
New Zealand.)

Sept.2 03 08 58 (pP? 03 10 10), Tinemaha 03 19 13, 12 08 02 (PKKP 12 23 45,  
USCGS: 34.0 N 30.0 E., 0=11:53.9, h= 70 km.), 17 56 40

Sept.3 03 15 59, Tinemaha 13 12 55, 16 37 25 (pP 16 37 41, sP 16 37 48),  
19 42 45 c (pP 19 42 59 Andes?)

Sept.4 03 09 10, 07 45 27, 11 14 52 (S 11 15 38, Tinemaha 11 14 00 d,  
S 11 14 02, 0 = 11:13:58), 12 18 19 39

Sept.5 03 15 13, 12 34 07, 15 50 11, 15 56 49, 22 01 53 c (S 22 12 51)

Sept.6 01 39 32, 03 47 50, 11 41 41, 15 02 35

Sept.7 Riverside 02 49 15 (pP 02 49 46), 06 15 05, 06 23 28, 11 02 23,  
Palomar 12 15 33, 14 46 11 (S 14 47 04, Head of Gulf of California.),  
Sept 8? 07 34 45 c (S 07 34 59, Riverside 07 34 34c, S07 34 41), 16 01 36  
(pP 16 02 02)

Sept.9 01 14 41, 04 15 42 (SKS 04 26 07, S 04 26 12, Region of 18S 173E),  
09 15 08, 13 06 45 (pP 13 07 05. Andes? )

Sept.10 01 25 32, 08 12 13 d (pP 08 13 13), 14 11 18 c

Sept.11 18 10 54, 19 22 49 c (pP 19 24 43, sP 19 26 03, S 19 32 26. Tonga  
region, h= 530 km.)

Sept.12 Riverside 01 08 41, 07 55 07, 08 48 19 c, 15 51 16, 20 05 27, 21 28 20

Sept.13 09 12 15, 11 29 19 d (pP 11 29 42, sP 11 29 51, S 11 39 21. USCGS:  
34S 70W, 0 = 11:17.9, h= 90 km., Destructive in Chile), Riverside 21 53 29

Sept.14 02 14 28 (S 02 24 18), Riverside 20 39 29

Sept.15 Palomar 06 37 16, Riverside 14 06 38, Palomar 15 07 30, 16 07 09

Sept.16 04 58 20

Sept.17 Riverside 00 52 37

Sept.18 Palomar 03 17 00 c, Palomar 10 59 12, 11 21 01, 22 40 11 (S 22 41 54,  
Tinemaha 22 39 26, S 22 40 29, Utah?)

Sept.19 12 39 24 (pP 12 39 37, sP 12 39 47, S 12 48 49. Northern Japan.), 18 45 43

Sept.20 02 04 10 c (pP 02 04 43)

Sept.21 01 58 57, 07 54 14

Sept.22 03 30 25 d, 09 25 19 (S 09 33 58), 23 37 48

Sept.23 08 17 06, Riverside 08 28 47, 10 01 12 (Felt in Idaho, Montana,  
Washington.), 15 47 21, Riverside 15 54 03, 17 25 14 d

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July - September 1945 (Continued)

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Sept. 24 12 48 04 d (pP 12 48 28, sP 12 48 38), 18 04 48, Riverside 19 54 26  
Sept. 25 18 48 30, 20 57 24, 22 50 51  
Sept. 26 03 44 50, Palomar 04 17 19, Riverside 08 41 31 (pP 08 41 48),  
09 08 14, 14 35 53, 17 59 05  
Sept. 27 07 27 41, 23 20 25  
Sept. 28 05 48 50, 22 26 34 (S 22 28 30. Off Oregon,), 23 50 16  
Sept. 29 Palomar 03 01 09, 04 37 24, 04 55 36, 14 45 26  
Sept. 30 11 06 03, 22 13 01

Noteworthy shocks during October

Oct. 7 13 30 12 (PcP 13 32 47, S 13 35 40, ScP 13 36 34. Central America)  
Oct. 9 14 47 39 (pP 14 48 05, sP 14 48 16, S 14 56 41, P'P' 14 15 39)  
Oct. 11 16 58 11 (pP 16 58 32, S 17 06 45)

C. F. Richter  
October 15, 1945

1054 / 15. Feb. 1946.

Pasadena Preliminary Bulletin No. 47

October - December 1945

Unless otherwise noted, readings refer to first motion at Pasadena or Mt. Wilson  
c = compression d = dilatation

Oct. 1 05:26:36, 10:52:52  
Oct. 2 00:30:10, 22:41:22  
Oct. 3 06:26:03, 07:56:23  
Oct. 4 Palomar 06:33:24  
Oct. 5 02:41:14, 05:12:13 (pP 03:02:23), Palomar 23:24:07  
Oct. 6 09:26:31, 19:03:10, Palomar 20:05:20, 22:03:04  
Oct. 7 03:42:14, 13:30:12 d (is 13:36:40, USCGS 12.3°N. 89.0°W., O=13:23.4),  
20:00:17  
Oct. 8 01:48:04, 05:55:15, Riverside 23:55:20  
Oct. 9 11:08:25 c (pP 11:08:35), 14:47:39 c (pP 14:48:02, sP 14:40:13,  
is 14:16.4, P'P' 15:15:38; Pasadena: 43°N. 145°E., O=14:36:29, h=100 km.)  
Oct. 10 16:23:58, Tinemaha 18:31:10  
Oct. 11 Riverside 05:27:09, 06:21:24, 09:10:39, 12:14:40, 16:58:11 d (pP 16:58:32,  
USCGS 17°N. 97°W., O=16:52.7), Riverside 20:03:36.  
Oct. 12 20:58:57  
Oct. 13 00:46:03, 03:05:57, 06:25:29, Riverside 06:25:18  
Oct. 14 04:18:30, 04:27:46, Palomar 04:32:45, 14:57:12 d  
Oct. 15 08:07:15, USCGS 59.0°N., 140.0°W., O=08:01.2; felt at Sitka, Alaska),  
18:35:33 (pP 18:55:45), Palomar 18:42:33  
Oct. 16 02:27:51, PP 16:21:36 (SKS 16:28:16, USCGS 0.5°N. 126.0°E., O=16:03.1)  
Oct. 17 06:30:50, 20:59:44, 23:53:53  
Oct. 18 14:02:58, 18:34:21  
Oct. 19 13:31:25, 16:59:02 (S 16:59:51. Gulf of California?)  
Oct. 20 00:36:51 (S 00:40:10), 01:47:40, 07:19:24, 12:39:09, 14:18:49,  
Riverside 14:46:43, Riverside 15:36:50, 22:43:48  
Oct. 21 00:33:51, Riverside 02:24:53, 03:34:56, 07:16:07 c, 07:38:24, 12:56:22,  
Palomar 15:27:36, 16:24:21, 16:41:46  
Oct. 22 08:56:44, Palomar 09:18:43, 11:03:45, Riverside 14:42:44, 19:28:06  
(S19:29:56)  
Oct. 23 08:44:02  
Oct. 24 Palomar 00:33:58, 02:36:03, 05:06:13, 05:27:33, 09:32:05, 12:30:24  
Oct. 25 03:13:37, 08:55:13, 15:08:20 (S 15:16:05, USCGS 56.1° N. 162°E.,  
O=14:53.5), 15:11:43, 15:12:36, 15:30:22, 15:40:54, 16:53:33, 17:49:31  
Oct. 26 02:54:49, 06:41:32, 09:37:16 d (pP 09:37:38), 14:14:44, 14:49:10,  
22:21:57, Palomar 23:38:02  
Oct. 27 01:25:03, 04:13:01 c (pP 04:13:38), 04:25:12 (pP 04:25:29), 06:52:46,  
11:30:39 c (pP 11:33:51, S 11:35:26, ScP 11:36:53, ScS 11:40:52,  
USCGS 15° N. 91°W., O=11:24.5, h=100 km.), Riverside 12:02:24.  
Oct. 28 01:36:32, 05:50:00 (pP 05:50:47), 08:17:07, 09:42:25, 10:33:52,  
20:34:49  
Oct. 29 05:10:56, 06:48:41, 07:00:04, Riverside 09:56:25, 10:15:48, 10:58:50 c  
(L 11:02:36, S 11:02:48, USCGS 52°N. 171° W., O=10:54.3), 11:06:50,  
11:51:33, 15:21:39  
Oct. 30 13:13:59, Riverside 14:22:55  
Oct. 31 07:36:33, 14:21:32, 21:00:20  
X Nov. 1 10:05:03  
Y Nov. 2 17:49:29, 19:17:18, 23:10:27  
p Nov. 3 04:09:41, 03:14:43, 22:15:39 d (pP 22:15:53, PcP 22:18:23, S 22:21:01,  
ScP 22:22:24, ScS 22:26:27, USCGS 59.1°N. 151.0°W., O=22:09.0)  
X Nov. 4 03:59:20, 11:50:21 (pP 11:50:50)  
A Nov. 5 21:16:50

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October - December 1945  
(Continued)

- Nov. 7 20:23:27 (pP 20:23:59), Riverside 23:48:23
- Nov. 8 02:43:50, 09:15:22 (USCGS 81°N. 7°W., C=09:05.5), 10:12:36 (USCGS 81°N. 7°W., C=10:02.5), 10:15:28, 20:10:23 (S 20:11:20, San Francisco Bay region)
- Nov. 9 00:00:32, Palomar 13:07:00
- Nov. 10 00:09:20, 01:50:18, 17:55:11, 19:07:17, 19:11:13, 21:03:57, 22:21:40, 23:03:15
- Nov. 11 09:35:30, 12:19:22
- Nov. 12 06:43:30, 20:09:44, 21:00:12
- Nov. 13 02:56:18 (pP 02:56:31), Riverside 19:49:32, 20:17:41
- Nov. 14 10:16:50
- Nov. 15 Riverside 01:48:01, 16:06:36, 22:00:04, 22:27:57
- Nov. 16 11:15:32, 17:58:50, 18:08:04 (USCGS 57.7° N. 135.8° W., C=18:02.5, felt at Sitka)
- Nov. 17 16:19:33, 20:54:10, 22:10:16, 22:24:51
- Nov. 18 01:09:20 (S 01:11:11)
- Nov. 19 11:16:25, 19:56:09 c (pP 19:56:41)
- Nov. 20 00:02:05, Palomar 06:25:13, Riverside 09:51:24, 12:16:52, 18:12:45
- Nov. 21 04:55:28 (pP 04:55:48)
- Nov. 22 06:45:23, 15:27:39 (pP 15:28:04, sP? 15:28:52), 21:09:39d
- Nov. 23 05:02:35 c (pP 05:02:51), Palomar 07:20:29, 13:02:24, 19:35:09
- Nov. 24 02:26:11, 05:25:23, 21:12:35
- Nov. 25 03:32:36, 08:55:35 (pP 08:56:03), 19:13:58 c (S 19:14:57, La Jolla 19:13:36, S 19:14:16, Gulf of California?)
- Nov. 26 Riverside 00:23:42, 01:13:36, 04:43:01, 05:24:25 c (pP 05:26:29, sP 05:27:31, S 05:33:48, PKKP 05:42:59, USCGS 23° S, 180°, C=05:12.9, Tonga region, h=600 km.)
- Nov. 27 01:19:47, 05:40:37, Palomar 09:00:09, 10:47:25, 10:52:44, 10:52:44 d (pP 10:53:11), 12:09:01, 12:12:48, Palomar 12:26:35, 12:41:54, 12:56:46, 18:17:31, 19:44:23, 22:12:20 (P' 22:15:49, PKKP 22:25:50, PS 22:27:31, USCGS 22°N. 62°E., C=21:56.8; M=8 1/4; destructive sea wave on coast of Arabian Sea)
- Nov. 28 07:02:22, 07:46:18, 08:48:08 c, Palomar 22:59:15
- Nov. 29 05:25:19, 12:32:30, 19:33:05 c (pP 19:33:38)
- Nov. 30 00:33:41, Palomar 21:59:25, 22:35:18
- Dec. 1 05:31:41, 06:00:38
- Dec. 2 00:38:22
- Dec. 3 Riverside 19:27:46, Palomar 19:47:24
- Dec. 5 10:11:42, 22:47:53
- Dec. 6 08:13:50, 09:45:50, 21:08:12
- Dec. 7 20:35:35, Palomar 22:22:18
- Dec. 8 01:17:24 (S 01:28:01, USCGS: 1°S 148°E., C=01:04.0), Palomar 07:14:02
- Dec. 9 06:21:56 (pP 06:22:19, Mediterranean?), 20:52:06 (USCGS: 15°N. 92°W., C=20:45.6), Palomar 23:29:23
- Dec. 10 14:58:40
- Dec. 12 00:59:40, 05:57:10
- Dec. 13 12:54:31, 14:33:09, 15:26:14 c
- Dec. 14 17:36:00 (pP 17:36:27, S 17:43:25, South America?), 18:31:58, Palomar 19:48:15
- Dec. 15 07:23:50, 07:27:56, 10:05:04, 11:02:57, 17:20:19
- Dec. 16 11:51:32, 20:07:46, 15:15:16, 17:52:26
- Dec. 18 02:17:32, 12:20:00, 16:19:05 (pP 16:19:16), 20:52:27, Riverside 23:29:52
- Dec. 20 04:13:24 (PP 04:17:46, SKS 04:23:58)

Pasadena Preliminary Bulletin No. 47

October - December 1945

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Dec. 22 Tinemaha 02 17 20  
Dec. 23 08 19 37 (pP 03 20 04, S 08 27 25)  
Dec. 24 18 47 14  
Dec. 25 00 46 24, 01 34 47, 02 39 46, 04 49 54, 17 36 09  
Dec. 26 Tinemaha 22 21 47  
Dec. 27 04 54 23, 05 38 38, 14 30 16  
Dec. 28 14 11 04, 18 02 10 (PP 18 05 54, SKS 18 12 46, S 18 13 20. Great  
earthquake. M=8 1/4)  
Dec. 29 09 47 52, 10 04 00, 12 40 13, 13 31 31, 14 57 54 (pP 14 58 12),  
15 29 58, 16 47 56, Palomar 18 00 28  
Dec. 30 01 01 58, Riverside 04 09 01, 07 54 36, Palomar 10 41 25, 18 32 21,  
18 44 01  
Dec. 31 09 07 13, 14 38 57, 17 39 23, 18 04 03, 18 06 45

Noteworthy shocks during January 1946

Jan. 4 19 51 11  
Jan. 5 01 21 12 (pP 01 21 54, S 01 26 02), 20 10 03 (S 20 20 27)  
Jan. 7 06 32 43  
Jan. 8 18 54 54 (S 18 55 24. Near 33.1°N. 116.1°W. Felt widely in Southern  
California)  
Jan. 11 01 44 41 (pP 01 46 45, S 01 53 58)  
Jan. 12 20 32 03 (S 20 37 21)  
Jan. 13 17 13 05. Small shock in Los Angeles area.  
Jan. 17 09 53 09 (pP 09 53 39, S 10 03 32)

C. F. Richter  
January 18, 1946

October - December 1945

Unless otherwise noted, readings refer to first motion at Pasadena or Mt. Wilson  
 c = compression                      d = dilatation

- Oct. 1 05:36:36, 10:52:52  
 Oct. 2 00:30:10, 22:51:32  
 Oct. 3 06:26:03, 07:56:23  
 Oct. 4 Palomar 06:33:24  
 Oct. 5 02:41:14, 03:22:13 (pP 03:22:23), Palomar 23:24:07  
 Oct. 6 09:26:31, 19:03:10, Palomar 20:05:20, 22:03:04  
 Oct. 7 03:42:44, 13:30:12 d (is 13:35:40, USCGS 12.3°N. 89.0°W., 0=13:23.4),  
 20:00:17  
 Oct. 8 01:48:04, 05:55:15, Riverside 23:55:29  
 Oct. 9 11:08:25 c (pP 11:08:35), 14:47:39 c (pP 14:48:02, sP 14:42:13,  
 is 14:36:44, P'P' 15:15:38; Pasadena: 43°N. 145°E., 0=14:36:29, h=100 km.)  
 Oct. 10 16:23:58, Tinemaha 18:51:10  
 Oct. 11 Riverside 05:27:09, 06:31:24, 09:10:39, 12:14:40, 16:58:11 d (pP 16:58:3  
 USCGS 17°N. 97°W., 0=16:52.7), Riverside 20:03:36.  
 Oct. 12 20:58:57  
 Oct. 13 00:46:03, 03:05:57, 06:25:29, Riverside 06:25:18  
 Oct. 14 04:18:30, 04:27:46, Palomar 04:32:45, 14:57:12 d  
 Oct. 15 08:07:15, USCGS 59.0°N., 140.0°W., 0=08:01.2; felt at Sitka, Alaska),  
 18:35:33 (pP 18:35:45), Palomar 18:42:33  
 Oct. 16 02:27:51, pP 16:21:36 (SKS 16:28:16, USCGS 0.5°N. 126.0°E., 0=16:03.1)  
 Oct. 17 06:30:50, 20:59:44, 23:53:58  
 Oct. 18 14:02:58, 18:34:21  
 Oct. 19 13:31:25, 16:59:02 (S 16:59:51. Gulf of California?)  
 Oct. 20 00:36:51 (S 00:40:10), 01:47:40, 07:19:24, 12:39:09, 14:18:49,  
 Riverside 14:46:43, Riverside 15:38:50, 22:43:48)  
 Oct. 21 00:33:51, Riverside 02:24:53, 03:34:56, 07:16:07 c, 07:38:24, 12:56:22,  
 Palomar 15:57:36, 16:24:21, 16:41:46  
 Oct. 22 08:56:44, Palomar 09:18:43, 11:03:45, Riverside 14:42:44, 19:28:06  
 (S19:29:36)  
 Oct. 23 08:44:02  
 Oct. 24 Palomar 00:33:58, 02:36:03, 05:06:13, 05:27:33, 09:32:05, 12:30:24  
 Oct. 25 03:13:37, 08:55:13, 15:08:20 (S 15:16:05, USCGS 56.1° N. 162°E.,  
 0=14:58.5), 15:11:43, 15:12:36, 15:30:22, 15:40:34, 16:53:33, 17:49:31  
 Oct. 26 02:54:49, 06:41:32, 09:37:16 d (pP 09:37:38), 14:14:44, 14:49:10,  
 22:21:57, Palomar 23:38:02  
 Oct. 27 01:25:08, 04:13:01 c (pP 04:13:38), 04:25:12 (pP 04:25:29), 06:52:46,  
 11:30:39 c (pP 11:33:31, S 11:35:26, ScP 11:36:53, ScS 11:40:52,  
 USCGS 15° N. 91°W., 0=11:24.5, h=100 km.), Riverside 12:02:24.  
 Oct. 28 01:36:32, 05:50:00 (pP 05:50:47), 08:17:07, 09:42:25, 10:33:52,  
 20:34:49  
 Oct. 29 05:10:56, 06:48:41, 07:00:04, Riverside 09:56:25, 10:15:48, 10:58:50 c  
 (L 11:02:36, S 11:02:48, USCGS 52°N. 131° W., 0=10:54.3), 11:06:50,  
 11:51:33, 15:21:39  
 Oct. 30 13:18:59, Riverside 14:22:55  
 Oct. 31 07:36:33, 14:21:52, 21:00:20  
 Nov. 1 10:03:03  
 Nov. 2 17:49:29, 19:17:18, 23:10:27  
 Nov. 3 04:09:44, 08:14:43, 22:15:39 d (pP 22:15:53, pP 22:18:23, S 22:21:01,  
 ScP 22:22:24, ScS 22:26:27, USCGS 59.1°N. 151.0°W., 0=22:09.0)  
 Nov. 4 03:59:20, 11:50:21 (pP 11:50:50)  
 Nov. 5 21:16:50



October - December 1945

Unless otherwise noted, readings refer to first station at Pasadena or Mt. Wilson  
d = dilatation      c = compression

Nov. 5	21:18:50	
Nov. 4	02:52:50, 11:50:51 (p 11:50:50)	
Nov. 3	04:02:44, 03:14:43, 22:15:39 d (p 22:15:38, 22:18:38, 22:21:01)	
Nov. 2	17:42:33, 19:17:19, 23:10:37	
Nov. 1	10:02:02	
Oct. 31	07:36:38, 14:21:52, 21:00:30	Riverside 14:22:55
Oct. 30	13:18:59, 14:22:55	
Oct. 29	11:51:33, 16:21:39	
Oct. 29	(L 11:02:36, S 11:02:48, USGS 25°N, 151°W, 0-10:54.3) -11:06:50,	
Oct. 29	05:10:56, 06:48:41, 07:00:04, Riverside 09:56:25, 10:15:48, 10:28:50	
Oct. 28	01:36:32, 02:50:00 (p 02:50:47), 08:17:07, 09:42:35, 10:28:25,	
Oct. 28	20:34:49	
Oct. 27	01:25:02, 04:13:01 c (p 04:13:38), 04:25:12 (p 04:25:29), 06:22:46,	
Oct. 27	11:30:39 c (p 11:33:21, S 11:35:26, Sep 11:36:53, Sec 11:40:22)	
Oct. 26	USGS 15°N, 91°W, 0-11:24.5, h=100 km., Riverside 12:02:24,	
Oct. 26	01:36:32, 02:50:00 (p 02:50:47), 08:17:07, 09:42:35, 10:28:25,	
Oct. 26	02:54:49, 06:41:32, 09:37:16 d (p 09:37:38), 14:14:44, 14:49:10,	
Oct. 26	23:21:57, Palomar 23:38:02	
Oct. 25	03:13:27, 08:55:12, 15:08:20 (S 15:16:05, USGS 25°N, 152°E,	
Oct. 25	0-14:38.5), 15:11:48, 15:12:36, 15:30:22, 15:40:34, 16:22:33, 17:49:21	
Oct. 24	Palomar 09:33:58, 09:36:02, 09:38:02, 09:40:15, 09:42:15, 09:44:02,	
Oct. 24	03:13:27, 08:55:12, 15:08:20 (S 15:16:05, USGS 25°N, 152°E,	
Oct. 24	0-14:38.5), 15:11:48, 15:12:36, 15:30:22, 15:40:34, 16:22:33, 17:49:21	
Oct. 23	08:56:44, Palomar 09:18:45, 11:02:42, Riverside 14:42:44, 19:28:08	
Oct. 23	Palomar 15:27:55, 15:24:21, 16:41:46	
Oct. 21	00:33:21, Riverside 02:24:52, 03:34:56, 07:16:07 c, 07:38:24, 12:58:22,	
Oct. 21	Riverside 14:46:43, Riverside 15:23:50, 22:43:13	
Oct. 20	00:36:21 (S 00:40:15), 01:47:40, 07:12:24, 12:39:02, 14:18:42,	
Oct. 19	13:31:25, 15:27:02 (S 16:29:21, Gulf of California)	
Oct. 18	14:02:58, 18:34:21	
Oct. 17	06:30:50, 20:22:44, 23:22:58	
Oct. 16	02:27:21, 12:16:21, USGS 0.5°N, 126.0°E, 0-16:02.1)	
Oct. 16	19:35:38 (p 19:35:45), Palomar 19:42:33	
Oct. 15	08:07:12, USGS 25°N, 140.0°W, 0-08:01.2, left at Sicks, Alaska,	
Oct. 14	04:18:30, 04:27:46, Palomar 04:32:45, 14:27:12 d	
Oct. 13	00:46:02, 03:05:27, 06:25:29, Riverside 06:25:18	
Oct. 12	20:28:27	
Oct. 11	Riverside 05:27:02, 06:21:24, 09:10:22, 12:14:40, 16:28:11 d (p 16:28:23,	
Oct. 10	16:23:58, Timmins 19:21:10	
Oct. 10	12:14:26, P.P. 12:15:38, Pasadena: 43°N, 142°E, 0-14:26.2, h=100 km.	
Oct. 9	11:08:25 c (p 11:08:35), 14:47:39 c (p 14:48:02, 21:14:21),	
Oct. 8	01:48:04, 05:55:15, Riverside 23:55:20	
Oct. 7	02:42:44, 13:50:12 d (S 13:52:10, USGS 12.3°N, 92.0°W, 0-13:22.4),	
Oct. 6	09:26:21, 12:02:10, Palomar 20:05:20, 22:02:04	
Oct. 5	02:41:14, 05:22:12 (P 02:42:23), Palomar 23:24:07	
Oct. 4	Palomar 06:23:24	
Oct. 3	06:28:02, 07:56:28	
Oct. 2	00:20:10, 22:21:22	
Oct. 1	02:28:26, 10:22:52	

October - December 1945

(Continued)

- Nov. 7 20:23:27 (pP 20:23:59), Riverside 23:48:23
- Nov. 8 02:43:50, 09:15:22 (USCGS 81°N, 7°W., 0=09:05.5), 10:12:36 (USCGS 81°N, 7°W., 0=10:02.5), 10:15:28, 20:10:23 (S 20:11:20, San Francisco Bay region)
- Nov. 9 00:00:32, Palomar 13:07:00
- Nov. 10 00:09:20, 01:50:18, 17:55:11, 19:07:17, 19:11:13, 21:03:57, 22:21:40, 23:03:15
- Nov. 11 09:35:30, 12:19:22
- Nov. 12 06:43:30, 20:09:44, 21:00:12
- Nov. 13 02:56:18 (pP 02:56:31), Riverside 19:49:32, 20:17:41
- Nov. 14 10:16:50
- Nov. 15 Riverside 01:48:01, 16:06:36, 22:00:04, 22:27:57
- Nov. 16 11:15:32, 17:58:50, 18:08:04 (USCGS 57.7° N. 135.8° W., 0=18:02.5, felt at Sitka)
- Nov. 17 16:19:33, 20:54:10, 22:10:16, 22:24:51
- Nov. 18 01:09:20 (S 01:11:11)
- Nov. 19 11:16:25, 19:56:09 c (pP 19:56:41)
- Nov. 20 00:02:05, Palomar 06:25:13, Riverside 09:51:24, 12:16:52, 18:12:45
- Nov. 21 04:55:28 (pP 04:55:48)
- Nov. 22 06:45:23, 15:27:39 (pP 15:28:04, sP? 15:28:52), 21:09:39d
- Nov. 23 05:02:35 c (pP 05:02:51), Palomar 07:20:29, 13:02:24, 19:35:09
- Nov. 24 02:26:11, 05:25:23, 21:12:35
- Nov. 25 03:32:36, 08:55:35 (pP 08:56:03), 19:13:58 c (S 19:14:57, La Jolla 19:13:36, S 19:14:16, Gulf of California?)
- Nov. 26 Riverside 00:23:42, 01:13:32, 04:43:01, 05:24:25 c (pP 05:26:29, sP 05:27:31, S 05:33:48, PKKF 05:42:59, USCGS 23° S, 130°, 0=05:12.9, Tonga region, h=600 km.)
- Nov. 27 01:19:47, 05:40:37, Palomar 09:00:09, 10:47:25, 10:52:44, 10:52:44 d (pP 10:53:11), 12:09:01, 12:12:48, Palomar 12:26:35, 12:41:54, 12:56:46, 18:17:31, 19:44:23, 22:12:20 (P'' 22:15:49, PKKF 22:25:50, PS 22:27:31, USCGS 22°N. 62°E., 0=21:56.8; M=8 1/4; destructive sea wave on coast of Arabian Sea)
- Nov. 28 07:02:22, 07:46:18, 08:48:08 c, Palomar 22:59:15
- Nov. 29 05:25:19, 12:32:30, 19:33:05 c (pP 19:33:38)
- Nov. 30 00:33:41, Palomar 21:59:25, 22:35:18
- Dec. 1 05:31:41, 06:00:38
- Dec. 2 00:38:22
- Dec. 3 Riverside 19:27:46, Palomar 19:47:24
- Dec. 5 10:11:42, 22:47:53
- Dec. 6 08:13:50, 09:45:50, 21:08:12
- Dec. 7 20:35:35, Palomar 22:22:18
- Dec. 8 01:17:24 (S 01:28:01, USCGS: 1°3 148 E., 0=01:04.0), Palomar 07:14:02
- Dec. 9 06:21:56 (pP 06:22:19, Mediterranean?), 20:52:06 (USCGS: 15°N. 92°W., 0=20:45.6), Palomar 23:29:23
- Dec. 10 14:58:40
- Dec. 12 00:59:40, 05:57:10
- Dec. 13 12:54:31, 14:33:09, 15:26:14 c
- Dec. 14 17:36:00 (pP 17:36:27, S 17:43:25, South America?), 18:31:58, Palomar 19:48:15
- Dec. 15 07:23:50, 07:27:56, 10:05:04, 11:02:57, 17:20:19
- Dec. 16 11:51:32, 20:07:46, 15:15:16, 17:52:26
- Dec. 18 02:17:32, 12:20:00, 16:19:05 (pP 16:19:16), 20:52:27, Riverside 23:29:52
- Dec. 20 04:13:24 (pP 04:17:46, SKS 04:23:58)

October - December 1945  
(Continued)

Dec. 20	04:13:34 (P 04:17:45, SKS 04:23:58)
Dec. 18	02:17:32, 12:20:00, 16:19:05 (P 16:19:16), 20:52:27, Riverdale 22:29:52
Dec. 16	11:51:32, 20:07:46, 12:12:16, 17:52:26
Dec. 15	07:23:50, 07:27:56, 10:05:04, 11:02:27, 17:20:12
Dec. 14	17:36:00 (P 17:36:37, S 17:43:22, South America?), 16:21:28, Palomar 19:48:12
Dec. 13	12:54:31, 14:28:02, 15:26:14
Dec. 12	00:29:40, 02:27:10
Dec. 10	14:28:40
Dec. 9	02:21:26 (P 02:22:12, Mediterranean?), 20:32:06 (USCGS: 15-N 22-W, 0=20:45:6), Palomar 23:29:25
Dec. 8	01:17:34 (S 01:28:01, USCGS: 1-3 128-E, 0=01:04:0), Palomar 07:14:02
Dec. 7	20:25:25, Palomar 22:22:18
Dec. 6	08:13:50, 09:45:50, 21:09:12
Dec. 5	10:11:42, 22:47:28
Dec. 3	Riverdale 19:27:46, Palomar 19:47:24
Dec. 2	00:28:22
Dec. 1	05:31:41, 06:00:28
Nov. 30	00:23:41, Palomar 21:59:25, 22:25:18
Nov. 29	05:25:19, 12:32:30, 19:23:02 (P 19:23:28)
Nov. 28	07:02:22, 07:46:16, 08:48:08 (Palomar 22:59:12)
Nov. 27	Arabic Sea) USCGS 22-N 62-E, 0=21:26:8, M-8 I-4; destructive sea wave on coast of 16:17:31, 19:44:23, 22:12:20 (P, 22:15:49, PMP 22:22:50, 22:27:31, 18:10:38:11), 19:09:01, 19:12:48, Palomar 12:26:35, 12:41:24, 12:56:46 (P 10:23:11), 19:40:09, 19:12:48, 19:13:48, 19:13:48, 10:52:44, 10:52:44 5
Nov. 27	01:19:47, 05:40:27, Palomar 09:00:02, 10:47:22, 10:52:44, 10:52:44 5
Nov. 26	Tonga region, 1=300 km) 24:05:27:31, S 02:23:42, PMP 02:42:22, USCGS 22-E, 1=0, 0=02:12:9, 24:05:27:31, S 02:23:42, PMP 02:42:22, USCGS 22-E, 1=0, 0=02:12:9, Riverdale 00:23:42, 01:13:38, 04:42:01, 05:24:22 (P 02:26:22, 12:13:36, S 12:14:12, Gulf of California?)
Nov. 25	03:22:36, 08:25:22 (P 02:26:03), 12:13:28 (S 12:14:27), 16:10:11
Nov. 24	02:28:11, 05:25:24, 21:12:22
Nov. 23	02:02:26 (P 02:02:21), Palomar 07:20:22, 13:02:24, 19:28:02
Nov. 22	06:42:28, 15:27:29 (P 12:28:04, 21:12:28), 21:09:29
Nov. 21	04:25:28 (P 04:25:48)
Nov. 20	03:02:02, Palomar 05:25:12, Riverdale 09:21:24, 12:18:22, 18:12:45
Nov. 19	11:16:25, 19:26:02 (P 19:26:41)
Nov. 18	01:09:20 (S 01:11:11)
Nov. 17	16:19:32, 20:24:10, 22:10:16, 22:24:21
Nov. 16	felt at Alaska) 11:15:22, 17:28:20, 18:08:04 (USCGS 27-W, N 122-E, W, 0=18:02:5, Riverdale 01:48:01, 16:06:26, 22:00:04, 22:27:27
Nov. 14	10:16:20
Nov. 13	02:26:18 (P 02:26:21), Riverdale 19:49:22, 20:17:41
Nov. 12	06:42:20, 20:29:44, 21:00:12
Nov. 11	09:28:30, 12:19:22
Nov. 10	00:09:20, 01:20:12, 17:22:11, 19:07:17, 19:11:12, 21:02:27, 22:21:40
Nov. 9	00:00:25, Palomar 12:07:00
Nov. 8	02:42:20 (USCGS 21-N, W, 0=02:02:2), 10:28:26 (USCGS 21-N, W, 0=10:02:2), 10:18:26 (S 10:18:26), 20:10:22 (S 20:10:22), San Francisco Bay
Nov. 7	20:23:27 (P 20:23:29), Riverdale 22:48:22

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(Continued)

Dec. 22 Tinemaha 02 17 20  
 Dec. 23 08 19 37 (pP 00 20 04, S 08 27 25)  
 Dec. 24 18 47 14  
 Dec. 25 00 46 24, 01 34 47, 02 39 46, 04 49 54, 17 36 09  
 Dec. 26 Tinemaha 22 21 47  
 Dec. 27 04 54 23, 05 38 38, 14 30 16  
 Dec. 28 14 11 04, 18 02 10 (PP 18 05 54, SKS 18 12 46, S 18 13 20. Great  
 earthquake. M=8 1/4)  
 Dec. 29 09 47 53, 10 04 00, 12 40 13, 13 31 31, 14 57 54 (pP 14 58 12),  
 15 29 58, 16 47 56, Palomar 18 00 28  
 Dec. 30 01 01 58, Riverside 04 09 01, 07 54 36, Palomar 10 41 25, 18 32 21,  
 18 44 01  
 Dec. 31 09 07 13, 14 38 57, 17 39 23, 18 04 03, 18 06 45

Noteworthy shocks during January 1946

Jan. 4 19 51 11  
 Jan. 5 01 21 12 (pP 01 21 54, S 01 26 02), 20 10 03 (S 20 20 27)  
 Jan. 7 06 32 43  
 Jan. 8 18 54 54 (S 18 55 24. Near 33.1°N. 116.1°W. Felt widely in Southern  
 California)  
 Jan. 11 01 44 41 (pP 01 46 45, S 01 53 58)  
 Jan. 12 20 32 03 (S 20 37 21)  
 Jan. 13 17 13 05. Small shock in Los Angeles area.  
 Jan. 17 09 53 09 (pP 09 53 39, S 10 03 32)

C. F. Richter  
 January 18, 1946

October - December 1945

(Continued)

Dec. 31	09 04 13, 14 38 57, 17 39 23, 18 04 03, 18 06 45
Dec. 30	01 01 58, Riverside 04 03 01, 07 54 36, Palomar 10 41 25, 18 32 21, 18 14 01
Dec. 29	09 47 52, 10 04 00, 12 40 13, 13 31 31, 14 57 54 (P. 14 28 12), 15 29 28, 16 47 26, Palomar 18 00 28
Dec. 28	14 11 04, 16 02 10, 17 18 02 54, SKS 18 12 46, 2 18 13 20, Great
Dec. 27	04 24 23, 05 38 38, 14 30 16
Dec. 26	00 46 24, 01 34 47, 02 39 46, 04 49 24, 14 38 02
Dec. 24	19 47 14
Dec. 23	08 19 37 (P. 00 20 04, 2 08 27 25)
Dec. 22	02 17 20

Noteworthy shocks during January 1946

Jan. 17	09 23 02 (p. 02 23 29, 2 10 03 28)
Jan. 18	12 13 02. Small shock in Los Angeles area.
Jan. 19	20 23 03 (2 20 27-21)
Jan. 21	01 44 41 (p. 01 46 42, 2 01 23 28)
Jan. 23	18 24 24 (2 18 22 24. Near 23.1°N. 116.1°W. felt widely in Southern California)
Jan. 27	06 32 43
Jan. 28	01 21 12 (p. 01 21 24, 2 01 26 02), 20 10 03 (2 20 27)
Jan. 29	19 21 11

C. F. Richter  
January 18, 1946

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

Gentlemen:

We have recorded the following earthquake

1945, Feb. 10 GCT

iP	05:09:33
i(pP)	48
i(sP)	10:02
eS	19:03
e	20.1
eSS	23.6
e(SSS)	27
eG	29
eP'P'	37:17

Surface waves relatively small

Distance about  $73^{\circ}$ , Depth about 60 km. Magnitude about 7.4

Sincerely yours

B. Gutenberg.

15 APR. 1945

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

February 19, 1945

Gentlemen:

We have to report the following readings from Pasadena:

G.C.T. February 18, 1945

eP	10:19:39
i	50
ePP	22.2
i	22:36
eS	29:03
i	11
eSoS	29.9
eSS	33.9
eSSS	37.3
eG	39

distance about 76°

M = 7

normal?

Sincerely  
B. Gutenberg.

15 AVR. 1945

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

February 27, 1945

Gentlemen:

We have to report the following readings from Pasadena:

G.C.T. February 26, 1945

1P	22:26:47
1	27:02
1	08
1PP	30:10
eS	36:58
1	37:15
eSS	42:25
eL	49.0
1P'P'	53:35

distance about 82°

depth roughly 50 km

Magnitude 7 to 7 1/4

Sincerely yours

B. Gutenberg.



15 APR. 1945

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

March 12, 1945

Gentlemen:

We have to report the following readings from Pasadena:

G.C.T. March 11, 1945

iP	21:49:42
i	50:00
i	22
ePP	52:57
e	53:15
e(S)	59.4
e	22:00:18
e(SS)	04.4
eG	09.7
eP'P'	16:53

Surface waves relatively small.

Slightly deeper than normal

Distance about 77°

Magnitude about 7

Sincerely yours,

B. Gutenberg.

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

March 19, 1945

Gentlemen:

We have to report the following readings from Pasadena:

G.C.T. March 18, 1945

iP	00:06:17
i	25
i	30
i	47
iPP	07:55
eS	13:00
eSS	15:45
eL	17.6

Surface waves slightly smaller than usual.  
distance about 44°  
magnitude about 6 3/4

*Beno Gutenberg.*

Sincerely yours,

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

April 16, 1945

Gentlemen:

We have to report the following readings from Pasadena:

GCT April 15, 1945

eP 02 44 59

Dilatation from northwest

i(pP) 45 29

i(PeP) 46 00

iPP 47 10

iPPP 48 24

eS 52 45

eSS 56.6

eL 59.0

eP'P' 02 14 56

Distance about 57°

slightly deep

Magnitude about 7 1/4

iP 03 51 02

e(S) 58 40

Aftershock ?

Magnitude about 7

iP 19 54 20

Dilatation from southeast

iL 57 18

Magnitude about 6 1/4

Sincerely,

*Beno Gutenberg*

18 JUN 1945

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVE April 19, 1945  
PASADENA 2, CALIFORNIA

Gentlemen:

We have to report the following readings from Pasadena:

G.C.T. April 19, 1945

eP or P'	13 :16: 49
i(PP?)	17: 28
e	20: 19
e	24.5
e	27: 21
i (SS?)	33: 21
e	36.9
e	40
eG	44

Probably slightly deeper than normal  
Magnitude about 6 3/4

Sincerely yours,

Beno Gutenberg.

18 JUN 1945

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

Dear Sir:

We have to report the following readings from Pasadena:

G.O.T. April 12, 1945

19: 49	EP or P1
19: 50	1 (277)
20: 19	"
24: 8	"
27: 21	"
32: 21	1 (287)
38: 2	"
40	"
44	28

Probably slightly deeper than normal  
Magnitude about 2 3/4

Sincerely yours,

*Boice*

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

18 JUN. 1945

April 23, 1945

Gentlemen:

We have to report the following readings from Pasadena:

G.C.T. April 20, 1945

iP 22:46:38  
eL 23:10

April 21, 1945

iP 17:19:12

many impulses following iP

i 19:54  
i 19:59  
i 20:13

i(PcP?) 22:16

i 23:07

eG 25.2

Surface waves small

Deep.

April 22, 1945

eP 09:47:07

iS 48:04

Magnitude approximately 5 1/2

April 23, 1945

iP 06:35:24 large

i 36:00

i 24

e 59

i(PP?) 39:36

e(SKS??) 45:43

e(PPS or G?) 49.7

Deep - surface waves very small

Sincerely yours,

Beno Gutenberg.

SEISMOLOGICAL LABORATORY  
 220 NORTH SAN RAFAEL AVENUE  
 PASADENA 2, CALIFORNIA

18 JUL 1945

April 23, 1945

Gentlemen:

We have to report the following readings from Pasadena:

April 23, 1945

IP 08:35:24 large  
 1 38:00  
 1 24  
 e 29  
 1 (EP?) 39:38  
 e (SE?) 42:43  
 e (EP? or G?) 49.7

Deep - surface waves very small

G.C.T. April 20, 1945

IP 22:46:38  
 e 23:10

April 21, 1945

IP 17:19:12

many impulses following IP

1 19:34  
 1 19:52  
 1 20:13  
 1 (EP?) 22:16  
 1 22:07  
 e 22.2

Surface waves small  
 Deep.

April 22, 1945

EP 09:47:07  
 18 42:04

Magnitude approximately 5 1/2

Sincerely yours,

*Paul G. ...*

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

May 19, 1945

Gentlemen:

We have recorded here the following shocks:

~~May 19 P 15:09:15 compression waves~~ May 18 1P 23:46:44 no surface waves

May 19 1P 08:01:16 compression from SE  
i 02:05  
i 45  
e 05:27  
e (S) 05:47  
i 06:10  
i 43 Magnitude about  $6\frac{1}{2}$   
e(L) 07.7  
iL 08.8

May 19 eP 15:09:15 dilatation from NW Superimposed are the following short waves  
e 10:39 possibly ~~probably~~ from a nearer epicenter  
iL 11:24 i 15:09:54  
iM 54 i 59  
Maxima beyond paper on visibly recording instrument i 10:16  
iL 11:56

The ~~two~~ shocks occurred after records were changed. Details follow ~~on~~ Monday, if necessary.

Reports for Jan - March 1943 just arrived. Thanks!

Sincerely yours

B. Gutenberg.

Officer in charge

*Your*



SEISMOLOGICAL LABORATORY  
 520 NORTH SAN RAFAEL AVENUE  
 PASADENA 2, CALIFORNIA

May 19, 1943

Continued:

Se have recorded here the following shocks:

\_\_\_\_\_ IP 23:46:44 No surface waves

May 19 IP 08:01:18 compression from SE  
 08:08 1  
 08:48 1  
 08:57 0  
 08:47 (a) 0  
 08:10 1  
 08:48 1  
 08:40 (L) 0  
 08:38 1  
 Magnitude about 0.5

May 19 IP 13:09:18 dilatation from NW  
 13:39 0  
 11:24 1  
 11:54 1  
 11:56 1  
 10:18 1  
 11:56 1  
 Maximum beyond paper on velocity recording instrument  
 possibly from a nearer epicenter  
 Superimposed are the following short waves

The ~~time~~ (change) occurred after records were changed. Details follow on Monday, if necessary.

Reports for Jan - March 1943 just arrived. Thanks!

Sincerely yours

*R. Gutenberg*

Officer in charge

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

June 4, 1945

Gentlemen:

We have to report the following readings from Pasadena:

1945 June 3

1P 13:13:23

Compression from southeast

1 33

eScP 19:07

eS 19:39

1L 24.5

$\Delta = 4800$

~~Surface~~ Surface waves relatively small. ✓

Slightly deep

Distance about 43°

magnitude about 7

Sincerely yours,

B. Gutenberg.

Officer in Charge

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

June 21

June 21, 1945

Gentlemen:

We have to report the following readings from Pasadena:

1945 June 20

Two shocks from the same region

~~iP 01:34:31  
iS 43:13  
iScS 44:22  
eL 50.7~~

~~eP 17:45:51  
iP 53 dilatation  
iS 54:36  
iScS 55:43  
eG 18:02  
eP'P' 14:35~~

*D = 7000k*

distance about 63°

Surface waves small

somewhat deeper than normal

magnitude 6 3/4 to 7

Sincerely yours,

*B. Gutenberg*  
Officer in Charge

Dear Prof. Rothe: We are very grateful for the Tananarive data which just arrived, together with 2nd + 3rd quarter of your 1943 results. We have mailed you last week 4 packages, 2 containing bulletins, and 2 with reprints. If any are missing now, please, let us know.

*Frances B. Gutenberg*

SEISMOLOGICAL LABORATORY  
 220 NORTH SAN RAFAEL AVENUE  
 PASADENA 2, CALIFORNIA

June 21, 1945

Gentlemen:

We have to report the following readings from Pasadena:

1945 June 20

Two shocks from the same region

01	56.7
02	44:22
03	43:18
04	01:24:21

05	17:27:51
----	----------

distances

06	24:00
07	25:42
08	18:08
09	14:22

*D = 5000 ft*

distances about 25°

Surface waves small

somewhat deeper than normal

magnitude 6 3/4 to 7

Sincerely yours,

Officer in Charge

Dear Prof. Rade: We are very grateful for the  
 transmission data which just arrived together with our  
 and quarter of your 1943 results. We have marked your  
 last week's geographo-centring publications and  
 with reports of any we may receive, please, let  
 us know.  
 Sincerely,  
 B. Gutenberg

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

7<sup>th</sup> A out 65

June 22, 1945

Gentlemen:

We have to report the following readings from Pasadena:

G.C.T. June 22, 1945

1P 09:29:47  
dilatation from west

23.39

1PcP 30:07

1pP 30:15

esP 27

e(PF) 32:16

1S 38:52

1sS 39:39

esS 43:30

esSS 47.1

eL? 48

aP'P' 57:36

3900h

Surface waves very small

Distance about 71°

Depth about 100 km?

Magnitude about 7

Sincerely yours,

*B. Gutenberg*

Officer in Charge

SEISMOLOGICAL LABORATORY  
 520 NORTH SAN RAFAEL AVENUE  
 PASADENA 2, CALIFORNIA

June 22, 1953

Dear Sir:

We have to report the following readings from Pasadena:

U.S.G. June 22, 1953

Discussion Time West

12 08:23:47

13 08:27

14 08:13

15 08

16 08:16 (08)

17 08:22

18 08:23

19 08:30

20 08:1

21 08

22 08:22

Duration wave very small

Duration about 71°

Depth about 100 km?

Location about 7

Sincerely yours,

Office in Charge

*Woods*

*1st A.M. 12*

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

June 27, 1945

Gentlemen:

We have to report the following readings from Pasadena:

1945 June 22

e 18:19:53  
e 20:13  
e 29:42  
e (L) 47.4  
e (L) 19:05.4

1945 June 27

1P 13:10:40  
1L 12:32

*Dilatation from SE*

Distance about 10°

Magnitude 7

*1100k*

*all reports to the end of 1943 have arrived. Many thanks.*

Sincerely yours

*Beno Gutenberg.*

Officer in Charge

*33/* - 5 SEPT. 1945  
BI

SEISMOLOGICAL LABORATORY  
 250 NORTH SAN RAFAEL AVENUE  
 PASADENA 2, CALIFORNIA

June 27, 1945

Continued:

We have to report the following readings from Pasadena:

1945 June 27

- o 18:19:58
- o 20:18
- o 22:42
- o (L) 27.4
- o (L) 13:08.4

1945 June 27

- II 15:10:40
- II 15:32

Distances about 10°

Latitudes 7

*all reports to the end of 1943 were omitted. Many thanks*

SEISMOLOGICAL LABORATORY

Officer in Charge

34 - 8 SEPT 1945  
 RT

*Distances from SE*

*11004*

*George G. ...*



SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

63/47 SEPT. 1945

Gentlemen:

We have the following earthquake report from Pasadena:

June 30, 1945, GCT

iP	5:35:26	compression from South
se	37:42	
i ( S or M )	38:56	
eG	39.4	

Magnitude about 7

Sincerely yours

*Beno Gutenberg*

Officer in Charge

Dear Prof. Rothé:

It would aid greatly in our determination of magnitudes, if you could report ground amplitudes for P, PP, S and maxima with periods of about 20 seconds from one of your stations, when possible.

*M. Peterschmitt  
Bureau de météorologie*

Sincerely yours

*B. Gutenberg*

1<sup>st</sup> A out 45

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

July 16, 1945

Gentlemen:

We have to report the following readings from Pasadena:

1945 July 15

eP	5:47:35
ipP!	48:10
esP	27
ePP	50:54
epPP	51:23
ePPP	53:00
iS!	57:40
ePS	58:44
eSS	06:02.9
eG	09.8
ip'P'	13:54
<del>esKPP'</del>	16:56

distance about 84 degrees  
depth 140 km.

9300 u

magnitude about 7 1/4

Surface waves small

Sincerely

B. Gutenberg.

1<sup>st</sup> Floor 42

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

July 16, 1945

Gentlemen:

We have to report the following readings from Pasadena:

1945 July 15

2:47:35	ep
48:10	lpp!
57	esp
50:54	erp
51:23	epP
53:00	epP
57:40	lsl
58:44	eps
08:02.9	ess
09.8	eg
13:54	lp'p'
16:56	epP'

0100 v

distance about 84 degrees  
depth 140 km.  
magnitude about 7 1/4  
Surface waves small

Sincerely

B. Gutenberg

BI

6/-5 SEPT. 1945

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

August 3, 1945

1945 August 2

1P 20:49:45

1(pP) 50:15

1!(sP) 37

eS 53:56

eL 55.2

56.30

44.30

12.00

56.05

44.30

11.75

05.44

Surface waves small

Intermediate depth

Magnitude about 6 3/4

Distance about 24°

1945 August 3

1P 4:19:36

1 55

1 20:07

ePP 21:29

1S 26:10

eSS 29:41

eL 32.2

23.59

11.74

12.45

Surface waves small

Intermediate depth

Magnitude about 6 1/2

Distance about 46°

Sincerely yours,

Beno Gutenberg

SEISMOLOGICAL LABORATORY  
 250 NORTH SAN RAFAEL AVENUE  
 PASADENA 2, CALIFORNIA

61  
 5 SEPT 1946

August 2, 1946

11.30  
 11.30  
 11.30  
 11.30  
 11.30

1946 August 2  
 12 20:43:45  
 11 (95) 20:45  
 11 (95) 20:45  
 20 20:45  
 20 20:45  
 20 20:45  
 20 20:45  
 Surface waves small  
 Intermediate depth  
 Magnitude about 6 1/4  
 Distance about 24°

1946 August 2  
 12 4:19:26  
 1 20  
 1 20:07  
 20 21:23  
 12 20:10  
 20 20:41  
 20 20:28  
 Surface waves small  
 Intermediate depth  
 Magnitude about 6 1/8  
 Distance about 46°

11.30  
 11.30  
 11.30

Sincerely yours,

Barry Gutenberg

1945 August 11

1945 August 11

iP 00 41 52 GCT

iS 48 19

eL 52.8

Normal depth.

Distance 44°

Bulletin provisoire du Bureau Central,  
Janvier - Mars 1945

has just reached us. We are very grateful  
for these valuable reports.

87 / 11 SEPT 1945

Sincerely yours,

*Charles F. Richter*  
Charles F. Richter

SEISMOLOGICAL LABORATORY  
 220 NORTH SAN RAFAEL AVENUE  
 PASADENA 2. CALIFORNIA

August 22, 1945

Gentlemen:

We have the following readings from Pasadena:

Pasadena	iP	17 56	56.5	August 16	GCT
	iS		57 25.6		
Mt. Wilson	iP		56 56.5		
	iS		57 24.7		
Riverside	iP		56 47.8		
	iS		57 06.1		
La Jolla	iP		56 43.6		

96/14 SEPT 1945

*Palomar iP* 56 33  
 Magnitude about 5 3/4. Felt in the Los Angeles area,  
 Imperial Valley, etc. Roughly <sup>33.7</sup> 36.1° N, 116.1° W.

Origin time 17:56.4

The following readings are all at Pasadena:

iP	10 18	30	August 21	GCT
i		49		
ipP		20 31		
isP		21 50		
iP	16 39	38	August 21	
ipP		40 08		
isP		21		
eP	20 15	18	August 21	
eP	05 26	28	August 22	

Sincerely yours, *Charles F. Richter*

Chas. F. Richter

SEISMOLOGICAL LABORATORY  
 220 NORTH SAN RAFAEL AVENUE  
 PASADENA 2, CALIFORNIA

August 22, 1945

Gentlemen:

We have the following readings from Pasadena:

17 56 56.8	IP	Passadena
18 57 56.8	IS	
19 58 56.8	IP	W. Wilson
20 57 56.7	IS	
21 56 47.8	IP	Riverside
22 57 04.1	IS	
23 56 48.8	IP	La Jolla

Magnitude about 5 3/4. Epic in the Los Angeles area.

Inperial Valley, etc. Roughly 50.1° N. 116.1° W.

Origin time 17:56.4

The following readings are all at Pasadena:

10 18 30	IP	
11 18 48	IS	
12 18 50	IP	
13 18 51	IS	
14 18 58	IP	
15 18 40	IP	
16 18 31	IS	
17 18 18	IP	
18 18 28	IS	

Sincerely yours,

Chas. F. Richter



SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

97/14 SEPT. 1945

August 28, 1945

Gentlemen:

We have to report the following readings at Pasadena:

1P 07 47 07 Aug. 27 GCT  
ipP 25  
isP 32  
IS 56 24  
isS 56

1P 09 14 10 Aug. 27  
i 12  
IS 15 01  
Felt at San Francisco

1P 13 02 33 Aug. 28  
eFP 05 50

1P 19 33 10 Aug. 28  
eFP 36 39

Correction to previous report: Earthquake of August 15, 17h

Latitude of epicenter  $33.1^{\circ}\text{N}$ . (not  $36.1^{\circ}\text{N}$ .)

Epicenter  $33.1^{\circ}\text{N}$ .  $116.1^{\circ}\text{W}$ .;  $\text{O} = 17:56.4$

Palomar 1P 17 56 38

27.77

*Charles F. Richter*  
Charles F. Richter

SEISMOLOGICAL LABORATORY  
 520 NORTH SAN RAFAEL AVENUE  
 PASADENA 5, CALIFORNIA

14 SEPT 1945

August 28, 1945

Continued

We have to report the following readings at Pasadena:

Aug. 27 GDT	07	47	07	12
	28			13
	29			14
	30	58		15
		58		16
Aug. 27	10	14	08	17
	11			18
	12			19
	13	01		20
	14			21
Aug. 28	15	03	10	22
	16	03	10	23
Aug. 28	17	03	10	24
	18	03	10	25

Station 25.1°N. 118.1°W.  $\sigma = 17.88.4$   
 Station 25.1°N. (not 26.1°N.)  
 Correction to previous report: Epochs of August 18, 1945

*Charles F. Richter*  
 Charles F. Richter

11.44

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2. CALIFORNIA

August 29, 1945

Gentlemen:

We have to report the following readings at Pasadena:

iP	10 35 15	compression	August 29	GCT
i		32		
iPP	38 38			Distance 86°?
i		49		Magnitude about 7
e(S)	45 48			Depth normal or
i	47 09			slightly deeper.
eSS	51.3			
eL	57.5			

*Charles F. Richter*  
\_\_\_\_\_  
Charles F. Richter

226/19 OCT. 1945

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2. CALIFORNIA

September 6, 1945

Gentlemen:

We have to report the following readings at Pasadena:

Sept. 5, 1945

1P	22:01:54
eSKE	12:26
eS	12:55
eSS	19:17
eG	26.3

Distance about 92°

Magnitude about 7

Sept. 5, 1945

eP	01:39:32
eG	02:04.8

Sept. 6, 1945

eP	15:02:35
eG	27.2

Thank you very much for the reports January - March 1945.

Sincerely yours,

Beno Gutenberg

Starbong?

L59/24 OCT. 1945

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

September 29, 1945

Gentlemen:

We have to report the following readings from Pasadena

September 22

iP	09:23:19
i	59
e(PP)	26:25
e	27:09
i(s)	33:58
i	35:53
eL	48.8

September 28

eP	22:26:34	
i	27:15	
i(s)	28:28	short periods
eL	28:29	

Magnitude about 6

Sincerely yours

Beno Gutenberg.

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

15 OCT 1948

September 29, 1948

Dear Sir:

We have to report the following readings from Pasadena

September 22

19 09:33:19	19
20	1
25:25	(19)
27:09	2
28:25	(18)
29:25	1
29:25	1
29:25	1

September 23

29 22:55:24	29
29:15	1
29:25	(18)
29:25	1
29:25	1

Magnitude about 0

Sincerely yours

*Blair G. Bergquist*

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

October 8, 1945

Gentlemen:

We have to report the following readings from Pasadena:

1945 Oct. 7

iP 13:30:12 dilatation from S E

i 30

i 36

ePP 31:32

iPcP 32:47

eS 35:40

i(ScP) 36:34

eG 39.1

iScS 40:43

Distance about 35°

Surface waves rather small

Slightly deep

Magnitude - not quite 7

13 24 17

318 / -6 NOV. 1945

Sincerely yours,

Beno Gutenberg.

319 / -6 NOV. 1945

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

October 9, 1945

Gentlemen:

We have to report the following readings from Pasadena:

1945 October 9

iP	14:47:39
ipP	48:03
isP	16
ipPcP	26
e	56:19
iS	41
eSS	01.1
eG	04.5
iP'P'	15:39

H = <sup>14</sup>.36 32

Surface waves small  
distance about 70°  
depth about 100 km  
magnitude about 7

36 49

36 32

Sincerely yours,

B. Gutenberg.



SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

Gentlemen:

October 25, 1945

We have to report the following readings from Pasadena:

1945 October 25

iP 15:08:21 H = 1458~40

Compression from West

i 15:08:40  
i 50  
e(PF) 30:19  
i(PFP) 11:43  
i! 12:36  
IS 16:05  
eSS 20:00  
eG 22.4  
eP'P' 38:26

320 / -6 NOV. 1945

distance about 57°

surface waves small

slightly deep

Magnitude about 7

iP 16:53:33

Sincerely yours,

Beno Gutenberg

SEISMOLOGICAL LABORATORY  
520 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

October 25, 1965

Gentlemen:

We have to report the following readings from Pasadena:

1965 October 25

15:09:21 H = 4.8-4.0

Compression from West

12:08:40	1
20	1
30:19	0 (P)
11:48	1 (P)
12:38	1
16:08	12
20:00	22
22.4	20
28:28	0 (P)

3501  
NOV 1965

distance about 87°  
surface waves small  
slightly deep  
magnitude about 7

15:23:33

Sincerely yours,

*Barro G. ...*

398 / 863  
17 NOV 1945

Gentlemen:

We have to report the following readings from Pasadena

1945, October 27

iP	11:30:39	compression from SE
i	51	
e	31:20	
ePP	44	
iPcP	33:31	
iS	35:30	
iScP	36:35	
eL	38.7	
iScS	40:51	

Surface waves small  
Distance about 29°  
Somewhat deeper than normal  
Magnitude  $6\frac{3}{4}$  to 7

Sincerely yours

*Beno Gutenberg*  
Officer in charge

401 / 19 NOV. 1945

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

October 29, 1945

Gentlemen:

We have to report the following readings from Pasadena:

1945 October 28

e(P?P?) 5:50:01  
i! 46  
e 51:39  
e 50

No other clear phases  
Traces of surface waves

-----  
1945 ~~1945~~ October 29

iP! 10:58:50 Compression from N N W  
i 59:03  
i 19  
iS ) 11:02:39  
oG )

Distance about 20°

Magnitude about 6 3/4

Sincerely yours,

*B. Gutenberg*

Officer in Charge

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

59/ 26 NOV. 1945

November 5, 1945

Gentlemen:

We have to report the following readings from Pasadena:

November 3, 1945 G C T

iP	22 15 40
i	53
iPoP	17 10
iS	21 01
iScP	22 23
eL	23.6
iScS	26 27

H = 12 09: 02

Distance 33°

Slightly deeper than normal?

Magnitude 6 - 6 1/2

Sincerely yours,

Charles F. Richter

SEISMOLOGICAL LABORATORY  
250 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

November 8, 1948

Handwritten notes in red ink, possibly "26 NOV 1948".

Gentlemen:

We have to report the following readings from Pasadena:

November 8, 1948 C O T

Handwritten blue ink notes: "47.50, 07:05"

1P	22 18 40
1	23
1P2P	1V 10
12	21 01
12P	22 22
21	22.8
12P	22 27

Distance 230

Slightly deeper than normal?

Magnitude 6 - 6 1/2

Sincerely yours,

Handwritten signature: "Charles J. Richter"

642 / 27 DEC. 1945

Seismological Laboratory  
220 No. San Rafael Ave.  
Pasadena 2, Calif.

November 27, 1943

Gentlemen:

We have to report the following readings from Pasadena:

1P	19 13 58	Nov. 25	GCT
1!	14 15		
1S	57		

Magnitude 5 1/2 - 5 3/4

1P	05 24 25	Nov. 26	GCT	compression from SW
epP	26 29			
isP	27 36			
1S	33 48			

Tonga region? Depth about 550 km.  
Magnitude nearly 7

Sincerely yours,  
*B. Gutenberg*

Officer in charge

646- / 27 DEC. 1945

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

November 28, 1945

Gentlemen:

We have to report the following readings from Pasadena:

1945 November 27

Revised, using all instruments

eP	22 12 34
eP"	15 49
1	17 16
1FP	24
1	18 42
1PKKP	25 50
1PS	27 31
1SS	35.0
eSSS	38.8

Surface waves very large

Distance about 122°

Magnitude at least 8 1/4

Sincerely,  
*B. Gutenberg*  
Officer in Charge



643/ 27 DEC. 1945

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

November 27, 1945

Gentlemen:

We have to report the following readings from Pasadena:

November 27 - 1945

Preliminary

eP	22	12.7
iP'	15	49
iPP	17	16
e(S)	24	59
iPKKP?	25	51
ePS	26.3	
eL ?	45	

Distance roughly 120°

Great earthquake

Sincerely yours,

*B. Gutenberg*

Officer in charge

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

Gentlemen:

6571-3 JAN 1946

We have to report the following readings from Pasadena:

1945, December 8, GCT

1P	1:27:20	compression	1:17:20
i	26		
ePP	21:14		
e(SKS)	28:18		1:28:16
i(S)	20		
ePS	29:53		
eSS	34:17		
ePKKP	36		
eG	42.3		
eL	47.4		

Distance about  $92^{\circ}$   
Magnitude about  $6\frac{3}{4}$

Sincerely yours

*Beno Gutenberg.*  
Beno Gutenberg

SEISMOLOGICAL LABORATORY  
 220 NORTH SAN RAFAEL AVENUE  
 PASADENA 2, CALIFORNIA

JAN 3 - 1948

Continued:

We have now report the following readings from Pasadena:

1945, December 8, 5:37

1:17:30	1:17:30 compression	1:17:30	1:17:30
1:20:18		1:20:18	1:20:18
		1:20:18	1:20:18
		1:20:18	1:20:18
		1:20:18	1:20:18
		1:20:18	1:20:18
		1:20:18	1:20:18
		1:20:18	1:20:18
		1:20:18	1:20:18
		1:20:18	1:20:18

Duration about 30  
 Magnitude about 3.5

Sincerely yours

H. W. H. H. H.  
 H. W. H. H. H.

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

857/26 JAN. 1946

December 27, 1945

Gentlemen:

We have to report the following readings from Pasadena:

1945 December 23

1P	08:19:37
i	52
1	20:04
1	20:29
1S	27:25
eL	33.6

1945 December 27

eP	04:54:23
ePP	58:11
eSKS	05:05:11
ePS	06:52
eSS	12:18
eSSS	15.9
eG	19.8

# = 04.41.01

Distance about 95°.  
Magnitude about 6 3/4.

Sincerely yours,

*B. Gutenberg*  
B. Gutenberg

BG:js

SEISMOLOGICAL LABORATORY  
220 NORTH SAN RAFAEL AVENUE  
PASADENA 2, CALIFORNIA

ESTD 1891  
28 JAN 1946

December 27, 1945

Gentlemen:

Please report the following readings from instruments:

1945 December 27

1945 December 28

04:24:25  
06:11  
08:09:11  
08:58  
10:18  
11:3  
12:2

08:19:37  
1  
1  
1  
1  
1  
1

# = 01.44.01

Distances about 23"  
Magnitudes about 2.4

Sincerely yours,

B. Gutenberg  
B. Gutenberg

03:12