

Ricard Observatory
University of Santa Clara
Santa Clara, Calif.



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January 1948.

4.	GW	ePz o EZ	9:10:14 9:17:08	Near Tonga Isls. USCGS 21°S 180°
14.	GW	ePz ME	2:34:16 2:47:38	Pacific Ocean. USCGS 10°S 109°W
14.	GW	ePz iSN	4:57:50 4:57:59	D(S-P) 0.7° 80km 50mi.
16.	GW	iPz eSE ME	11:17:01 11:24:11 11:30:44	Aleutian Isls. USCGS 52°N 172°E D(S-P) 49.1° 5455km 3390m
17.	GW	ePz eSENZ ME	7:23:32 7:33:40 7:49:55	Near Marianna Isls. USCGS 15°N 147°E D(S-P) 80.4° 8935km 3550m
20.	GW	ePz MEN	9:56:56 10:23:26	Near Kernadec Isls. USCGS 33°S 179°E D(P-H) 89.6° 9955km 6180m
22.	GW	ePz epPz eSE esSE	14:07:12 14:07:51 14:17:06 14:18:08	Near Tonga Isls. USCGS 22°S 175°W D(S-P) 77.4° 8600km 5340m
24.	GW	ePz o E o I eLE	18:00:45 18:11:25 18:19:38 18:34:52	Philippines. Destructive. USCGS 10°N 122°E D(P-H) 104.9° 11655km 7240m
26.	GW	ME	15:00:20	
26.	GW	MEENZ	19:03:00	
27.	GW	ePz iSEZ	12:09:10 12:18:23	Near Tonga Isls. USCGS 20°S 178°W
28.	GW	ePz ME	4:06:02 4:22:50	
30.	GW	MEIN	9:56:30	

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February 1948.

6.	GW	ePN eSN	13:15:41 13:16:03	D(S-P) 1.6° 185km 115mi.
9.	GW	ePZ e E e E eLE	13:12:14 13:16:23 13:22:56 13:50:51	Aegean Sea. USCGS 37°N 26°E
11.	GW	e E MENZ	15:55:26 16:00:11	Alaska. USCGS 64°N 147°W
17.	GW	e EN	6:04:30	
18.	GW	ePNZ eSN eLN	20:39:56 20:48:18 20:05:12	Arctic region. USCGS 82°N 43°E D(S-P) 60.5° 6720km 4175m
19.	GW	ePNZ e N	8:26:44 8:27:17	
24.	GW	ePE eSE eLE	8:17:04 8:18:20 8:18:54	D(S-P) 6.5° 720km 450mi.
25.	GW	ePZ eSN	19:19:05 19:19:16	D(S-P) 0.8° 95km 59mi.
27.	GW	e EN eLN	6:24:26 6:25:03	
28.	GW	ePZ eSNZ MENZ	2:08:17 2:08:44 2:08:24	D(S-P) 18.2° 2020km 1255mi

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March 1948.

1.	GW	oPz iPPNZ oSKSEZ iPSEZ oSSE oLEN	01:26:54 01:31:28 01:37:25 01:40:46 01:47:03 02:03:17	Near New Guinea. USCGS 3°S 130½°E D(P-H) 105.5° 11720km. 7280a
3.	GW	o EZ MEZ MEZ	09:34:28 09:59:52 10:45:20	Near Luzon, Philippines. USCGS 18°N 119°E
8.	GW	MEZ	13:50:03	
9.	GW	o Z PR, o SE PS oSSE oLE	19:04:59 19:13:52 19:19:08 19:30:42	Near New Guinea. USCGS 3S 147E
10.	GW	oPz oPSEN oLENZ	11:38:08 11:49:47 12:04:51	Kermadec isls. USCGS 29S 177E D 82D 9110km. 5660km
15.	GW	o Z o Z MEZ	20:31:20 20:36:32 20:57:10	Molucca Passage. USCGS 1N 126E
16.	GW	MEZ	17:38:47	
22.	GW	oPz oSE	09:15:43 09P15:47	D(S-P) 0.5D 50km. 31mi.
22.	GW	oPz MEN	21:42:12 21:59:06	Off Nicaragua. USCGS 11½N 86½W
28.	GW	oPz	22:36:34	Local.
28.	GW	iPENZ iSEnz	22:38:15 22:38:24	Local. D(S-P) 0.7D 80km 50mi.
28.	GW	iPENZ iSEnz	23:48:09 23:48:19	Local.

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April 1948.

17.	GW	iPEZ oSEZ oLE	16:23:37 16:33:40 16:48:03	Japan. USCGS 33°N 135½°E D(S-P) 79.2° 8300km 5465mi
18.	GW	o N ^{5/10 S} o N oLE	12:44:17 12:55:19 13:00:32	Near New Guinea. USCGS 3°S 137°E
18.	GW	oPZ	21:25:29	Felt in San Francisco.
21.	GW	MENZ	16:01:00	
21.	GW	iPEMZ iSEZ i E o E o EZ MEZ	20:30:37 20:38:19 20:42:14 20:48:43 20:50:33 20:55:00	Dominican Republic USCGS 19°N 69¼°W D(S-P) 49.6° 5510km 3420mi.
22.	GW	oPEZ o E o E oLE	00:37:13 00:44:30 00:48:44 00:55:12	Dominican Republic. as above.
22.	GW	oLE	11:31:39	
25.	GW	oPZ oSENZ oLE	11:59:09 12:05:23 12:10:16	Dominican Republic. as above.
27.	GW	oPZ oSENZ	16:41:22 16:41:56	No. 1. Felt near Monterey. D(S-P) 1.0° 100km 66mi.
27.	GW	SEZ iSEZ	20:22:40 20:22:51	No. 2.
27.	GW	iPEZ iSEZ	20:52:49 20:55:01	No. 3.
27.	GW	o i oSENZ	21:00:30 21:00:40	No. 4. lost in minut mark.
27.	GW	iPEZ iSENZ	22:43:12 22:43:34	No. 5
28.	GW	oPZ oSEZ	7:24:41 7:25:06	No. 6.
28.	GW	oPZ oSEZ	7:31:57 7:32:09	No. 7.

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May 1948.				
11.	GW	iPNZ opPZ iSENZ isSZ	09:07:11 09:07:25 09:16:58 09:17:09	Peru. USCGS 17°S 71 W D(S-P) 74.0 8220km 5105mi. depth abt 100km
12.	GW	cPZ cSE cZ cLN	01:08:28 01:17:48 01:18:13 01:27:11	Near Japan. USCGS 38 N 142½ E. D(S-P) 71.0 7890km 4900mi.
14.	GW	iPZ iSE cLN	22:38:14 22:45:24 22:45:53	Near Alaskan Peninsula. USCGS 54½ N 161 W D(S-P) 30.6 3400km 2110mi
17.	GW	cPNZ cSENZ cLEN	17:55:02 18:00:15 18:05:26	Near Alaska Peninsula. USCGS 55 N 161 W D(S-P) 31.1 3455km 2145mi.
20.	GW	iPZ cSE MENE	19:43:29 19:54:08 19:09:22	
23.	GW	cPZ cpPZ cZ cSE cSE	04:24:49 04:25:51 04:38:06 04:55:03 04:36:14	
25.	GW	cPZ cpPZ cPFSN cN cSSN cSSSN cLN	07:25:59 07:29:40 07:36:20 07:45:08 07:45:31 07:49:52 07:57:09	China. USCGS 30 N 99½ E D 104 11555km 7175mi.
25.	GW	cPZ cPNZ iZ	15:44:57 15:47:12 15:48:21	D(S-P) 11.1 1235km 765mi.
26.	GW	cPZ cSN cLN	09:22:55 09:27:43 09:29:52	D(L-P) 21.2 2355km 1460mi.
21.	GW	cZ MENE	03:16:34 03:19:07	

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June 1948.				
2.	GW	c N oLEN	13:21:22 13:27:28	
11.	GW	cPZ oSEN	08:28:29 08:28:42	D(S-P) 1.0 ^o 110km 69mi.
15.	GW	cFZ oSEN MEN	11:56:48 12:06:49 12:20:20	Japan. USCGS 33 ¹ / ₂ ON 136E D(S-P) 78.8 8755km 5435mi.
18.	GW	cPZ cPPZ cPSN o N	01:06:45 01:10:10 01:17:22 01:29:58	Solomon Islands. USCGS 6S 155E D 78D 8665km 5380mi.
18.	GW	cPEZ o N i N	10:36:01 10:36:14 10:36:27	
18.	GW	oIE	17:21:40	
20.	GW	cFZ oEN	20:34:47 20:34:56	D(S-P) 0.7D 80km 50mi.
21.	GW	cPZ o LZ i LZ	12:23:53 12:33:14 12:55:46	Celebes Sea. USCGS 5E 126E
27.	GW	cPZ oSEN oLEN	12:55:44 13:01:40 13:10:20	Near Honduras. USCGS 17N 85W D(S-P) 37.2D 4135km 2570mi.
27.	GW	cPEN oSEN oLE	21:45:42 21:50:22 21:52:15	Near Alaska. USCGS 56N 158W D(S-P) 26.6D 2955km 1835mi.
28.	GW	iPZ ipPZ oSEN oSEN oLE	07:25:25 07:25:29 07:35:29 07:38:51 07P45:32	Destructive. Japan. USCGS 36N 176 ¹ / ₂ E D 76D 8445km 5245mi.
29.	GW	iPEZ oSE oLE	10:39:54 10:40:12 11:00:07	Near Samoan Isls. USCGS 16S 172W D(S-P) 70.7D 7655km 4875mi.
29.	GW	LEN	17:07:36	
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30.	GW	c LZ	09:56:40	
30.	GW	MEN	13:42:19	

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July 1948.				
5.	GV	MEN	15:54:12	
7.	GV	ePEZ eSN eLN	02:31:25 12:41:14 02:53:14	Japan. USCGS 33N 136E D(S-P) 76.4D 8450km 5270mi.
8.	GV	ePN eSN	02:56:59 02:54:46	D(S-P) 0.5D 60km 38mi.
8.	GV	eSE eLN	13:10:40 15:13:12	
9.	GV	ePZ iSZ	18:00:45 18:00:55	D(S-P) 0.2D 20km 12.5mi. 0.5D 70km 44mi.
11.	GV	iPZ iSE	19:58:49 19:58:52	D(S-P) 0.2D 20km 12.5mi.
14.	GV	e E eSE eLE	22:47:25 22:55:48 25:11:58	New Guinea. USCGS 4S 142#
15.	GV	eSLM eLN	11:15:40 11:17:20	PACIFIC OCEAN. USCGS 10N 104W
16.	GV	iPE iSN e N eLN	07:26:30 07:32:11 07:35:59 07:38:00	Near Guatemala. USCGS 14N 92W D(S-P) 34.1D 3790km 2355mi.
17.	GVWA	ePE iSE	15:07:59 15:08:00	D(S-P) 0.7D 85km 53mi.
18.	GV	ME	23:14:13	
20.	GV	ME	01:25:22	
20.	GV	ePEZ iSENE	08:11:45 08:11:48	D(S-P) 0.2D 25km 15mi.
20.	GV	ePEM eSEN eLN	11:13:31 11:22:40 11:50:12	Near Peru. USCGS 17S 74W D(S-P) 68.9D 7655km 4755mi.

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July, 1948, contd.

22.	GV	cPEN eSEN oLEN	20:08:53 20:11:31 20:12:48	Near Vancouver Isl. USCGS 49N 130W D(S-P) 15.3D 1480km 220mi.
22.	GV	ePEN eSEN oLEN	20:56:28 20:58:46 21:00:27	Same as above.
23.	GV	o LEN M	12:45:07 12:50:20	
24.	GV	e E e EN e E M	06:21:32 06:27:42 06:35:28 06:49:46	Near Crete. USCGS 35n 24#
26.	VA	iPN iSN	03:23:53 03:23:56	D(S-P) 0.4D 40km 25mi.
26.	GV	eSE oLE	17:39:28 17:42:26	
26.	GV	oSEWZ	17:52:00	local.

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August 1948.				
1.	GV	MN	04:05:12	
3.	GV	ePZ iSLNZ	16:40:15 16:40:26	D(S-P) 018D 95km 59mi.
7.	GV	ePNZ eSN	00:11:08 00:11:19	D(S-P) 0.8D 95km 59mi.
7.	GV	e en eLEN MEN	15:01:27 15:11:22 15:15:30	near Japan. USCGS 34N 142E
9.	GV	ePNZ e E e NZ	07:03:05 07:03:08 07:03:15	
11.	GV	iPZ eSEN eLE	10:42:27 10:47:27 10:52:40	Southern Mexico. USCGS 17 $\frac{1}{2}$ N 95 $\frac{1}{2}$ W D(S-P) 29.2D 3245km 2015mi.
17.	GV	ME	17:44:19	
18.	GV	iPZ iSE	19:13:02 19:13:45	D(S-P) 3.5D 395km 247mi.
19.	GV	ePZ eSE eLE	13:57:09 14:02:16 14:04:51	Alaska. USCGS 62N 151W D(S-P) 30.2D 3355km 2085mi.
20.	GV	ePZ eSE eLE	20:07:45 20:14:46 20:23:54	near Panama. USCGS 5N 82W D(S-P) 47.6D 5290km 3285mi.
25.	GV	ePZ eSEN ME	06:21:45 06:32:02 06:50:27	Argentina. USCGS 24S 63W D(S-P) 82.6D 9180km 5700mi.
28.	GV	eLN	02:54:13	Kamchatka. USCGS 57N 161E
29.	GV	ePZ eSEN e EN eLEN	17:49:05 17:58:57 18:07:28 18:10:06	Samoan Isls region. USCGS 15 $\frac{1}{2}$ S 171W D(S-P) 77.7D 8655km 5360mi.
31.	GV	ePZ iSEZ	16:51:19 16:51:28	D(S-P) 0.7D 80km 50mi.

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September 1948.

1.	GW	eSE eLE	19:24:42 19:25:26	
1.	GW	ePE eSE eLE	19:57:24 20:00:25 20:01:15	D(S-P) 16.3D 1810km 1125mi.
1.	GW	eLE	20:44:24	
2.	GW	e E e E e E ME ME	23:59:26 24:06:28 24:18:24 24:22:59 24:48:10	near Philippines. USCGS 10N 125E
6.	GW	MN	08:57:47	Chile. JSA 23.4S 71.3W
8.	GW	ePZ iSNE eLEN	15:21:03 15:30:40 15:40:24	Tonga Isl. Region. JSA 21.0S 174.2W D(S-P) 74.9D 8320km 5165mi.
9.	GW	ePZ e EN	06:21:02 06:38:20	
9.	GW	MEH- MEN	14:44:36	
10.	GW	ePENZ eSEN eLEN	13:59:25 14:08:08 14:20:22	near Japan. JSA 45.3N 146.6E D(S-P) 65.3D 7255km 4505mi.
10.	GW	MEN	23:56:41	
13.	GW	e EN eLEN	21:20:18 21:26:30	Near Guatemala. JSA 14.0N 92.9W
19.	GW	ePZ eSEN eLEN	06:21:55 06:28:13 06:33:52	Aleutian Isls. JSA 49.3N 179.5W D(S-P) 41.8D 4645km 2885mi.
24.	GW	ME	21:26:23	
27.	GW	ePZ iSEnz	05:28:19 05:28:21	Felt in east hills of San Jose. D(S-P) 0.1D 15km 10mi.

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October 1948.

2.	GW	LEN	15:08:08	
5.-	GW	ePPZ	20:30:45	Turkman-Iran Border.
		eSKSN	30:37:00	USCGS 38N 58E
		ePSN	20:39:42	
		ePPPSN	20:40:57	
		ePPSSN	20:46:10	
		ePP'N	20:49:14	
		eLEN	21:02:22	
8.	GW-MA	ePE	01:26:28	D(S-P) 0.1 10km 6mi.
		iSE	01:26:29.9	
21.	GW	e E	05:25:37	Solomon Is. Region
		eLE	05:47:18	USCGS 8S 155E
23.	GW-MA	ePZ	23:21:38	Felt thru San Jose, Santa
		iSEZ	23:21:41	D(S-P) 0.2 25km 16mi, Clara
28.	GW	ePE	20:57:19	
		eSE	21:06:33	
		ME	21:21:43	D(S-P) 70.7 7855km 4875mi.

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November 1948.

5.	GW	ePE eLE	05:32:11 05:59:10	Loyalty Isls. SUCGS 20 $\frac{1}{2}$ S 169 $\frac{1}{2}$ E
9.	GV	e E e E ME	20:43:31 20:44:14 20:46:14	
13.	GV	e E eLE	07:21:21 07:33:08	
13.	GV	eLE	23:21:33	
19.	GV	ePE eSE ME	01:12:28 01:19:11 01:29:30	near Costa Rica. USCGS 9N 84W D(S-P) 45.6D 5065km 3145mi.
21.	GV	ePZ epPZ e Z eLZ	19:22:40 19:23:27 20:34:57 20:51:07	
22.	GV	eLEZ	09:28:40	
26.	GW	IPZ ^{IPZ 2} eLEZ	05:55:51 06:20:20	

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Date	Location	Station	Time	Description
December 1948.				
4.	GW	iPZ ePEN eSEN esSE eLEN	00:27:30 00:27:59 00:31:30 00:32:12 00:33:04	West of Mexico. USCGS 21 ¹ N 106 ¹ W D(S-P) 22.2D 2465km 1530mi.
4.	GW, VA, Vi.	ePENZ iSENZ	23:44:56 23:46:22	Southern Calif. USCGS 33.9N 116.4W d(S-P) 7.4D 820km 512mi.
5.	GW	ePZ ME	06:51:20 07:18:07	near New Zealand. USCGS 53S 158E
12.	GW	iPZ eSEZ MEZ	13:25:43 13:32:12 13:42:10	Aleutains Isls. USCGS 52N 178W D(S-P) 45.5D 4835km 3005mi.
15.	GW	e N e N e N	18:01:26 18:01:32 18:01:39	
15.	GW	i E	19:53:18	Near Bonin Isls. USCGS 22N 143E
16.	GW	ePZ eLE	07:50:17 07:40:23	Near Fiji Isls. USCGS 20S 179W
20.	GW, VA	ePenz e NZ e E	04:43:18 04:43:40 04:43:44	Damage at Palm Springs, Calif
25.	GW	ME	07:50:07	
25.	GW	iPZ ePcSE eSRSE eLE	08:49:59 08:54:10 09:02:04 09:04:12	Near Kanchatka. USCGS 56N 166E D 50D 5555km 3450mi.
28.	GW, Vi.	ePEN eSN	02:26:58 02:27:30	Near Reno, Nev. D(S-P) 2.5D 285km 178mi.
28.	GW, wi.	ePV eSV	05:27:12 05:27:46	Near Reno, Nev. D(S-P) 2.7D 305km 190mi.
29.	GW	MEZ	06:29:12	
29.	GW, Vi	ePZ ePenw iSEZ	12:54:13 12:54:18 12:54:50	D(S-P) 2.5D 285km 178mi.

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December 1948.
30. G

iPEZ 23:53:28
opPEZ 23:53:47
eSEZ 23:56:31
esSE 23:56:55
eLEN 23:58:03

D(S-P) 16.5D 1835km 1140mi.

31. GV

ePN 14:18:07
iSN 14:18:27

D(S-P) 1.6D 180km 112mi.

31. G, Vi.

ePVI 14:36:22
iSVi 14:36:42

D(S-P) 1.5D 170km 106mi.

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