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E.M.H.*

UNIVERSITY OF WASHINGTON
SEATTLE 5, WASHINGTON
U. S. A.

SEISMOLOGICAL BULLETIN NO. 10

REGISTRATION OF EARTHQUAKES AT SEATTLE, 1956

By
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STATION CONSTANTS

Latitude: 47° 39.3' North
Longitude: 122° 18.5' West
Elevation: 30 meters
Foundation: Compact glacial till

INSTRUMENTAL CONSTANTS - 1956

VERTICAL component: Sprengnether short-period with Leeds and Northrup Galvanometers.

$T_s = T_g = 1.4$ sec.
 h_g - approx. critical
system approx. critically damped
 V_s - 1800 approx.

NORTH-SOUTH AND EAST-WEST components, short-period Sprengnethers with Leeds and Northrup galvanometers.

$T_s = T_g = 1.4$ sec.
 h_g - approx. critical
System approx. critically damped
 V_s - 1800 approx.

LONG PERIOD NORTH-SOUTH component, Sprengnether seismometer with Leeds and Northrup galvanometers.

January 1 to November 22, 1956

$T_s = 15.0$ sec. $T_g = 1.4$ sec.
 $h_g = 1.0$ approx.
System nearly critically damped
No long period NS operating until February 22, 1957 when a 5.2 sec. period galvanometer was installed in place of the 1.4 sec. galvanometer.
Max. V approx. 1200

LONG PERIOD EAST-WEST component, Sprengnether seismometer with Leeds and Northrup galvanometer.

January 1 to December 31, 1956

$T_s = 15.0$ sec. $T_g = 1.4$ sec.

$h_g = 1.0$ approx.

System nearly critically damped

On February 22, 1957 a 7.9 sec. galvanometer was substituted for the 1.4 sec. galvanometer

Max. V approx. 1200.

NOTE: At Seattle it is necessary to reduce the sensitivity of all instruments during the winter months because of the excessive microseism amplitudes registered on the glacial till foundation.

REGISTRATION OF EARTHQUAKES AT

UNIVERSITY OF WASHINGTON

Seattle, Washington

Unless otherwise stated, all epicenter locations are quoted from U.S. Coast and Geodetic Survey Preliminary Epicenter Cards. Local epicenters are determined at University of Washington. Distances are approximations only. P. and B. indicate Pasadena and Berkeley magnitudes respectively.

Date	Phase	Time (G.C.T.)	Remarks
1956		h. m. s.	
Jan. ✓ 6	eL	23 54.0	Japan
Jan. ✓ 7	iPZ iSNE	4 29 45.9 54.2	Vashon Is., near Burton. MM-4 47 22 N, 122 28 W, h-65 km. 40 km.
Jan. ✓ 7	iPZ iZ SE LZE	16 45 28 46 19 49 33 51.2	Yukon, Alaska 65 1/2 N., 133 1/2 W. 3000 km
Jan. ✓ 8	PZ eN eE LgNE	17 18 31 27 23 29 30 31.0	Guerrero, Mexico 17 N. 199 1/2 W. 4100 km. Mag. 6 1/2 P
Jan. ✓ 8	iPZ iSNE iZ eLN eLE	21 06 35 R 16 41 16 50 40 42.5	Northern Chile Damage 17 S., 70 W. 9000 km. Mag. 7 1/4 P
Jan. ✓ 9	iPZ iSEZ eN	12 17 44 27 18 27 40	Fiji Islands region 23 S., 179 E. h-650 km 2700 km. Mag. 6 1/2 P
Jan. ✓ 9	eLNE	13 37	
Jan. ✓ 10	ePZ eSKSN eSNE eN eLE	9 05 30 16.3 16.7 21.5 30	Tonga Islands region 25 S., 176 W. 9800 km. Mag. 7 3/4 P
Jan. ✓ 10	iPZ iSN eN LE LN	12 33 39 34 44 34 52 35.4 35.8	Off coast of Oregon 43 1/2 N., 127 W. 600 km

Date	Phase	Time (G.C.T.)	Remarks
1956		h. m. s.	
Jan. 12	ePZ e	5 28 09 ✓ 28 21 ✓	Northern Hungary; damage 47 1/2 N., 20 E.
Jan. 14	ePZ eZ SNE LE	14 15 35 ✓ 18 17 ✓ 20 49 ✓ 24 45 ✓	Aleutian Islands 51 1/2 n., 173 W. 3900 km. Mag. 6 P
Jan. 16	PZ SN EN LN	23 47 54 ✓ 56 11 ✓ 56 28 ✓ 24 13.2 ✓	Ecuador; damage 1/2 S., 80 1/2 W. Mag. 7 1/4-7 1/2 P
Jan. 22	eZNE	0 51.7	Kodiak Island
Jan. 22	eZ eNE	3 55.7 56.9	Kodiak Island
Jan. 25	eP?Z iS?N iLN	9 55 40.1 55 47.6 9 55 52.1	Weak local shock
Jan. 31	iPZE eSNE	9 29 32 ✓ 9 39 53 ✓	New Ireland 4 S., 152 E., h-400 km. 9700 km. Mag. 7-7 1/4 P
Feb. 1	iPZNE ePZ iSNE eLNE	13 53 13 R 54 38 14 02 37 14 14	Marianas Islands 19 N., 145 1/2 E. h-300 km. 9600 km. Mag. 6 3/4-7 P.
Feb. 1	iPZNE	15 23 08 R	Straits of Messina, Italy 38 1/2 N., 15 1/2 E.
Feb. 2	eZ eNE eLNE	15 01.6 15 02.2 15 15.4	Off coast of Guerrero, Mexico
Feb. 2	eZ eNE eLNE	17 01 50 02.2 17 15.7	Off coast of Guerrero, Mexico
Feb. 7	eZ eLZN	16 56 38 17 03.4	Felt in Los Angeles area.
Feb. 9	iPZ iSNE	0 57 27.3 0 57 39.8	Skagit Bay, near Whidbey Is., MM-4 48 23 N., 122 35 W. h-60 km 100 km

Date	Phase	Time (G.C.T.)	Remarks
1956		h. m. s.	
Feb. 9	iPZ iSNE	1 28 51.7 29 04.1	Aftershock felt in Coupeville 48 21 N. 122 35 W. h-55 km 100 km
Feb. 9	eP?Z eS?NE	8 33 20 35.0	Queen Charlotte Islands 900 km
Feb. 9	ePZ eS?N eN eE eLN iLE	14 36 37 39.6 40.0 40.2 41.7 42.27	Baja, (Lower California) 31 45 N, 115 55 W. 1500 km. Mag. 6 3/4-7 P.
Feb. 9	iPZ eS?NE eLE	15 28 27 33.4 33.8	Aftershock
Feb. 9	ePZ eLE	16 34 00 39.5	Weak Aftershock
Feb. 9	iPZ eE eLE	17 03 55 09.0 09.6	Aftershock
Feb. 9	iPZ iNE eLNE	18 52 45 50 18 50.4	Aftershock
Feb. 10	ePZ eE eZ eLE	18 16 56 22.0 22 17 22.6	Aftershock
Feb. 12	iPZ	12 02 44.	Off Coast NW of Luzon, P.I. 19 N., 119 1/2 E. Mag. 6 1/4-6 1/2 P.
Feb. 14	iPZ iSNE	13 50 35.9 50 46.1	Local Shock Felt in Coupeville and Port Townsend
Feb. 14	eLE	14 55.4	Lower Calif. Aftershock. Mag. 5.3 P.
Feb. 14	iPZ eNE eN eLE eLN	18 37 42. 41.3 41.9 42.8 43.2	Lower Calif. Aftershock

Date	Phase	Time (G.C.T.)	Remarks
1956			
		h. m. s.	
Feb. 15	iPZ eNE eN eLE	1 24 48 R 28.4 29.3 30.1	Lower Calif. After shock
Feb. 19	PZ eE eN LNE LNE	2 19 52 20 08 20 21 21 35 22.0	Queen Charlotte Islands 52 N. 131 1/2 W. Mag. 6 3/4 P
Feb. 19	iPZ eS?NE	4 18 11 22 39	Alaska Peninsula 58 1/2 N., 154 W. 2400 km
Feb. 17	eLE	9 34.7	Lower Calif.
Feb. 18	iPZ eNE iZ PEZ eSZ iSNE eZ	7 45 16 C 45.20 47 02 48 09 54 07 54 13 59 36	South of Honshu, Japan 30 N., 137 1/2 E. h-450 km 8200 km. Mag. 7 1/4 P
Feb. 19	e	2 19	See Preceding report
Feb. 19	e	7 45	" " "
Feb. 23	ePZ eN	1 31.3 1 31.8	North Atlantic Ocean 31 N., 42 W. 6700 km
Feb. 27	eLE	5 51.6	
March 2	ePZ eN eN eN LE eLZN LN	12 01 45 04 56 05 28 07 10 08.3 08.8 09.7	Central Alaska 63 1/2 N., 149 1/2 W. 2300 km
March 3	iPZ eNE eZE	00 17 30C 17.7 18 35	Samoa Islands 15 S., 173 W. 8800 km Mag. 6 3/4 P
March 4	P?Z iSN	1 11 59.1 1 11 06.6	Local P doubtful
March 4	iPZ iSNE	7 22 33.5 22 38.0	Local

Date	Phase	Time (G.C.T.)	Remarks
1956			
		h. m. s.	
March 5	PZ	23 40 02	N. of Hokkaido Is., Japan 44 1/2 N., 144 E. 6600 km. Mag. 6 1/2-6 3/4 P
March 7	iPZ iSNE	1 27 59.7 28 05.0	Local
March 10	eN eLNE eLN	6 00 10 00.5 01.5	Northern Calif. 40 1/2 S., 125 W. Mag. 4-4 1/2 B
March 10	ePZ eNE	19 45 59 46.2	Tonga Island 22 1/2 S., 176 W. h-200 km
March 13	iPZ iNE PcPZ iPPZ eZ eN eN eS?N eN eLN eLE eLN	13 22 35 R 22 42 23.7 24 11 25 53 26 20 29 11 30.0 31 39 38.5 45.2 13 46.5	Off South Coast of Panama 7 N., 82 W. 5900 km
March 22	iPZ eZ iZ eNE iZ eE	6 44 22 C 44 35 45 08 C 45 30 45 09 6 53.5	Ecuador 3 1/2 S., 79 W. h 100 ca. 7000 km. Mag. 6 3/4 P
March 27	ePZ iSN	15 35 32.7 35 56.0	Felt in Vancouver, B. C. Amplitudes smaller than prevailing microseisms
March 30	eLN LZ	7 20.8 21 14	Wyoming, near Yellowstone Park
April 3	eZ eNE	22 19 05 19 09	
April 6	iSNE	00 34 24.7	Local tremor. not felt
April 6	iPZ ePNE eZ iZ	7 24 41 C 24 45 28 28 28 39	Hindu Kush. 36 1/2 N., 71 E. h-200 km 10,500 km

Date	Phase	Time (G.C.T.)	Remarks
1956		h. m. s.	
April 8	iPZ iSNE	22 28 30.0 23 43.8	Gonzales Pt. S.E. of Victoria 48 23 N., 123 19 W. 110 km MM-4
April 17	ePZE eZN	22 00 15.7 00 30.0	Feeble regional tremor
April 18	iPZ e?E eSN	11 07 18C 13.0 13.40	Adreanof Island, Aleutians Is. 52 N., 173 W. 3700 km Mag. 6 B, 6 3/4 P
April 22	eZ eZE eN eSE eLNE	17 27 25 27 50 28 10 31 10 32.1	South of Alaska Peninsula 54 N., 162 W. 2600 km Mag. 6 P&B
April 22	iN iE	19 57 05 57 10	Feeble regional tremor
April 23	ePZ iZ	3 43 04 43 13	Off east Coast of Hokkaido, Japan 42 1/2 N., 144 1/2 E. 6700 km. Mag. 6 3/4 P
April 26	P?Z	7 54 35	
April 26	iPZ iZ iSNEZ	16 48 25.9C 48 26.8 48 29.0	Seattle, southeast section 47 34 N., 122 17 W. h-18 km
April 26	iPZ iSNE	19 20 34.1 20 36.9	Local aftershock?
May 3	eLN	3 07.3	Gulf of Alaska
May 4	eLNE	14 10.7	Near Coast of Guerrero, Mexico
May 5	iPZ eNE	3 34 21C 3 34 30	Samoa Is. region 15 1/2 S., 173 W. h-100 km 8800 km. Mag. 6 P
May 6	eZ	00 55.0	
May 6	ePZ eZ eE eLNE	21 03 04 03 08 03.3 21 07.4	Unimak Island, Alaska S lost in microseisms 54 1/2 N., 162 1/2 W. 2800 km. Mag. 5 3/4 P; 5 1/2 B.

Date	Phase	Time (G.C.T.)	Remarks
1956		h.m.s.	
May 7	P'1Z P'2Z PPSE	11 18 40 19 34 11 34.10	S. Indian Ocean 46 1/2 S., 96 E. 17,000 km. Mag. 6 1/4 P.
May 8	iSNE eLNE	8 23 33.6 8 23 40.0	Regional
May 14	iSENZ iLE iLNZ	17 06 52.2 07 05.0 17 07 08	Regional
May 15	iPZ eE eN	8 24 30 24 46 8 25 03	Near Coast of Peru 13 1/2 S., 77 W. h-100 km. 8200 km.
May 17	iPZ eNE	6 11 55 6 12 12	Near coast of S. Peru 16 1/2 S., 72 W. h-60 km. 8700 km
May 18	eZ iNE LNZE	3 42 14 42 18 3 42 38	Regional?
May 18	iPZ eN eE eLN LRE LRE	9 59 51 10 00 07 00 37 04 44 05 54 10 07 20	Southern Alaska 62 N., 145 1/2 W. h-100 km 2200 km
May 19	eLE eLN	2 14.0 2 17.0	Solomon Islands Te = 20 sec.
May 19	P'Z eZ eSKKKS eSKKKS LNE	20 22 50 23 35 34.1 20 34.7 21 36	Indian Ocean 40 S., 43 E. h-100 km 18,500 km
May 23	iPZ ePP'Z iSNE eNE eN eNE eN eN SKPP'Z	20 59 59C 21 00 59 09 32 10.0 11.0 12.4 15.0 16.8 29 33	Fiji Islands 21 1/2 S., 179 W. h-450 km 10,000 km. Mag. 7 1/2 P&B

Date	Phase	Time (G.C.T.)	Remarks
1956			
		h. m. s.	
May 24 ✓	eSN eLNE LNE LNE eZ	2 37 15 40.5 41.0 42.4 43 27	Gulf of California
May 24 ✓	iSNE	16 25 13.7	Regional
May 25 ✓	P'Z	2 38 54	About 700 mi. NE of Mascarene Is. 16000 km
May 26 ✓	iSNE eZ	19 10 27 19 10 31	Regional
May 26 ✓	ePZ iSNE eSN	20 32 49 42 18 42 27	Fiji Islands 19 S., 178 1/2 W. h-550 km ca 9300 km Mag. 6 1/2 P
May 30 ✓	iPZ eN	15 54 07C 54 20	Tonga Is. 23 S., 178 1/2 W. h-350 km 9800 km
June 3 ✓	eP?E eN eZ eZ eLE eLE LZE iZ eLN eLN	5 26 07 26 20 26 39 27 52 33.0 35.8 36.3 37 28 37.7 40.0	Arctic Ocean 79 1/2 N., 118 1/2 W. 3550 km
June 4 ✓	PZ eE eE eSNE iLN eLN	7 15 47 19.4 30.4 20 52 21 23 23.2	Fox Islands, Aleutians 52 N., 170 1/2 E. 3400 km Mag. 6 1/4 P&B
June 5 ✓	eLN eLE	7 47 7 50	Pacific Ocean 51 S., 112 1/2 W. 11,100 km.
June 9 ✓	LZ LN	2 39 30 2 39 35	Central Alaska 54 N., 148 W. 2350 km

Date	Phase	Time (G.C.T.)	Remarks
1956			
		h. m. s.	
June 9 ✓	ePZ eS?NE eLN eLNE	10 21.7 32.2 53.5 56.0	Central Chile 30 1/2 S., 70 1/2 W. h-150 km 10,100 km Mag 6 3/4 P Heavy microseisms
June 9 ✓	iPZ PPZ PPZN eN SKSNZ eNZ SNZE PSN PPSN eN eLNE eLN	23 27 27 C 31.1 31.5 33 48 37.7 38.3 39.0 39.9 40 18 40.5 54.0 59.7	Afghanistan 35 1/2 N., 67 1/2 E. 10,700 km Mag 7 1/2 P&B
June 12 ✓	P?Z iPZ eSNE eLNE eLNE	9 04 03 04 16 12 00 20.5 25.5	Eastern Pacific Ocean 9 S., 110 W 6500 km Mag. 6 1/2 P
June 17 ✓	iZNE	23 28 34.7	Local seismic tremor?
June 23 ✓	ePZ iZ iP?Z e?N SNE eLNE	2 26 18 26 28 26 31 28 04 33.3 36.3	Near East Coast of Kamchatka 56 1/2 N. 163 1/2 E. 5000 km Mag 6 1/2 P S phase weak. Strong microseisms Long period records lost
June 24 ✓	iSNE iE	7 37 59.0 38 05.3	Local P not discernible
June 24 ✓	ePZ PZ eSNE eLNE	21 11 40 11 46 22.5 42.2	Solomon Islands 7 S. 155 E. 10,100 km Mag. 6 1/4 P
June 26 ✓	iPZ	00 13 12C	
June 28 ✓	iPZ iSN eE iLNE iLN LNZ iLZ	23 00 07R 01 14 01 20 01 48 02 06 02 40 03 28	Queen Charlotte Sound area 49 N. 129 1/2 W. 640 km Mag. 6 1/4-6 1/2 P P & S wave periods unusually long

Date	Phase	Time (G.C.T.)	Remarks
1956		h. m. s.	
✓ July 3	ePZ eLNE	15 54 41 16 11.4	Near coast of Guatemala 13 1/2 N., 91 W. 4300 km. P very weak
✓ July 3	iPZ	23 39 19	Hindu Kush. 35 1/2 N., 71 E. h-250 km 12,00 km
✓ July 4	PZ eN	0 51 36 0 51 50	Fiji Islands 18 S., 178 1/2 W. h-450 km 9500 km
July 5	eLN	13 13.6	Alaska. 63 1/2 N. 151 1/2 W. 2400 km. P wave onset too weak to read.
July 7	ePZ iZ eE iSNZ iLN iLZE eLN iLN	2 23 25 24 00 24 36 24 40 24 43 24 48 25 6 2 25 58	Off Oregon Coast 42 1/2 N., 126 W. 650 km
July 8	eENZ eLN eLE	2 04 10 05.0 2 05.7	
July 9	PZ SPSNE iSNE eSZ eN FSNE PPSNE	3 24 52 R 35 22 35 32 35 40 35.8 36 43 3 37 16	Aegean Sea. Destructive 37 N., 26 E. 9900 km Mag. 7 1/2 P
July 9	PZ eZ eNE eS?E eSS?N eE eLN	10 04 51 R 06 17 07 35 12 13 15.5 16.2 10 21.1	Near coast of Haiti 20 N., 73 W. h-100 km 5300 km Mag. 6 1/2+ P
July 15	ePZ iNZ iZ iS?EZ eLE eLN	1 56 39 56 43 R 57 14 57 45 58.5 1 59.0	Off coast of Oregon 44 N., 127 1/2 W. 550 km is resembles short period L waves

Date	Phase	Time (G.C.T.)	Remarks
1956		h. m. s.	
July 15	iPZ	13 03 15	Bonin Islands 28 N., 139 E. h-500 km 8300 km
July 16	ePZ eZ PPZN PPPZN SE ePSN eN LN	15 20 52 21.2 25 23 27 09 32 20 34 32 16 01.8	Central Bruma. 30 killed 23 1/2 N., 96 E. 11,200 km
July 16	iPZ iZ eSNE	21 41 07 R 41 18 46 40	Adreanof Island, Aleutian Is. 3650 km
July 17	iPZ iZ	4 48 15 48 29	Marianas 200 miles NW of Guam 8800 km
July 17	ePZ eZ PPZ iZ iZ eN iSE iZ SSNE	7 47 55 48 13 49.5 51 54 52 30 53 16 57 50 8 02 12 02.4	Banda Sea 7 S., 126 1/2 E. h-450 km 12,000 km
July 17	iPZ eZ	17 17 20 17 34	Marianas Island. After shock 8800 km
July 18	PZ iZ iP'Z ePPNE iZ eE iSKSEZ SKKSN eSE ePS?E eN LN Le	6 33 35 34 48 37 50 38.2 38 56 43 58 44.05 44.6 45.2 46 15 51.2 7 03.5 08.5	Banda Sea 5 S., 130 E. 11,800 km Mag. 7 1/4 P
July 19	ePZ eZ PPE PPPZ	23 34 58 35 42 36 46 37 28	Near Coast of Costa Rica 9 1/2 N., 84 1/2 W. 5500 km Mag. 6 B

Date	Phase	Time (G.C.T.)			Remarks
		h.	m.	s.	
1956					
July 20	iPZ iSNE	13 39	37.6		Local shock, not felt S traced amplitude 26 mm
July 20	iPZ	17 57	12		Marshall Islands
July 21	iPZ	14 59	51 R		Sea of Okhotsk 50 1/2 N, 147 1/2 E. 6150 km
July 21	iFFZ ePSNE ePPSE LNE	15 51	24 C		Western India. Destructive 23 N., 70 E. 12,000 km. Mag. 6 1/2 P
July 22	ePZ eSNE	9 37	20		Northern Chile 19 S., 69 W. h-100 km 8900 km Mag 6+ P
July 22	iPZ iSNE	20 52	29.1		Puget Sound off Steilacoom S amplitude 6 mm
July 23	ePZ eN eN iSNE eE LNE	19 37	32		Easter Island region 24 S. 102 W 8400 km. Mag. 6 3/4 P, 6 1/4 B.
July 26	iPZ eZ eNE iLEZ LE LN	9 55	35		Fallon, Nevada 39 1/2 N. 118 1/2 W. 950 km. Mag 5 P&B
July 28	iPZ eZ	11 21	16		Marianas Island aftershock 15 1/2 N. 147 1/2 E.
August 3	eZ	17 57	08		Short period waves
August 4	ePZ eE eLE	10 01	49		New Britain 5 1/2 S. 150 1/2 E. h-200 km Mag. 6 1/4+ P
August 7	eLNEZ	4 09	20		Western Idaho; 44 1/2 N. 115 W.

Date	Phase	Time (G.C.T.)			Remarks
		h.	m.	s.	
1956					
August 9	PZ iPZ iNE PPZ eN iSNE eNE esSE	23 12	11		Samoa Island Region 15 S. 176 W. h-250 km 8900 km
August 12	iPZ eZ	0 37	46		Tonga Island region 19 S. 176 W. h-200 km 9300 km
August 12	ePZ iPZ eNE iZ es?N eLN	17 10	57		Near south coast of Honshu, Japan 34 N. 138 E. 7900 km. Mag. 6 1/2+ P
August 14	ePZ EZ	3 10	36		Indian Ocean Prince Edward Island region, 18500 km
August 15	iPZ ePPZ iZ iSKSE eN PSE	11 05	26		Northern Celebes 1/2 S. 123 E. h-150 km 11,900 km
August 15	iPZ	12 15	22		Near coast of Yugoslavia 43 1/2 N. 16 1/2 E. 9000 km.
August 15	ePZ ePcPZ eSE eN	13 21	58		Kurile Islands 46 N. 151 E. 6200 km
August 16	ePZ	22 01	10		
August 17	iPZ eL?NE	9 06	03		
August 17	iPZ eNE eSN eSE LNE	9 16	39		About 300 miles off Oregon coast 580 km

Date	Phase	Time (G.C.T.)	Remarks
1956		h. m. s.	
August 18	iLNEZ iZ	0 55 43 0 56 07	Idaho 44 N. 115 1/2 W. 640 km
August 18	eZ eZ	11 23 48 11 24 30	Short Period waves
August 19	ePZ	5 30 17	Fiji Island region 21 1/2 S. 179 W. h-150 km 9600 km
August 20	ePZ eZ eZ iN	5 43 15 43 31 44 25 5 46 07	Near south coast of Panama 7 1/2 N. 80 W. Felt in Balboa Heights 6000 km
August 22	iPZ eNE	11 39 05 11 39 10	New Hebrides 10,000 km
August 23	ePZ S?E	14 00 36 14 10.3	Bolivia 15 S. 68 W. h-100 km 8800 km
August 24	ePZ iN eSN eLE	4 35 18 35 40	Near Aleutians 53 N. 172 1/2 W. 3500 km. Mag. 6 1/2 P&B
August 25	eLZNE	1 07.5	Lower Calif. Felt in San Francisco 30 1/2 N. 115 1/2 W. 2100 km. Mag. 4.9 P
August 27	eZNE eLNE	18 06.3 18 14	Central Alaska 64 N. 150 W. h-60 km 2400 km.
August 30	ePZ eZ eS?N eLN	4 30 15 30 54 34.9 4 36.0	Unimak Island Aleutians 54 N. 164 W. 2900 km ca. Mag. 6 P
August 30	iPZNE iZ eSLE eLE LE	5 26 44 26 50 28.1 28.3 5 29.0	Off coast Northern California 41 N. 126 1/2 W. 750 km. Mag 5 1/2 B
September 1	iPZ iSNE iLN	19 35 20.7 23.7 19 35 25.0	Small local shock. Tacoma reported disturbance thought to be due to railroad activities

Date	Phase	Time (G.C.T.)	Remarks
1956		h. m. s.	
September 4	eLNEZ	8 38.1	Central Idaho. 500 km
September 10	eLNE	14 57	Pacific Ocean south of Mexico 4400 km
September 11	iPZ iZ	2 45 00 2 45 05	Fiji Islands 16 1/2 S. 178 E. 9400 km. Mag. 6 P
September 11	eP?Z eP?Z PZ eZ eSNE eLNE	10 02 35 02 42 03 08 03 35 10 09.3 10 19.5	Guatemala 14 N. 91 W. h-100 km 4730 km. Mag. 6 1/4 P
September 11	PZ eZN eNN	15 57 12 57 43 15 58 08	New Hebrides Islands 17 S. 169 E. 10,000 km. Mag. 6 P
September 11	PZ eNE eZ eZ eSE eE eE	21 13 10 13.4 13 40 15 36 20 30 23.2 21 25.0	Northern Kurile Islands 50 1/2 N. 155 E. 5700 km. Mag. 6 1/4 P
September 12	eLNE	21 06	Kurile Islands ?
September 14	eLE	9 27	Near Coast of Northern Calif. Mag. 4 B
September 15	iPZ eNEZ iE eE iSE iSSN ePSN	7 51 23 51.5 52 17 7 52 51 8 01 38 02 19 7 02 42	Northern Chile 20 S. 69 W. h-100 km 9200 km. Mag. 6 3/4 P
September 16	PZ PPZ eZ SN LE	8 51 03 54 54 55 45 9 01 43 9 31.2	Afghanistan 34 N. 69 1/2 E. 10,800 km. Mag. 6 1/2 P
September 16	PZ iSNE iSE	9 32 05.7 30.7 9 32 31.5	Light regional shock 220 km

Date	Phase	Time (G.C.T.)	Remarks
		h. m. s.	
1956			
September 16	eNEZ	18 58.7	Possibly Aegean Sea 36 1/2 N. 26 E.
September 21	LNE	9 37	Microseisms heavy
September 24	eZ	6 16 40	Samoa Islands 15 1/2 S. 173 1/2 W. Mag. 6 P
September 24	eZ	7 15 24	
September 25	iSNE	9 04 41.7	Small regional tremor PZ obscured by microseisms
October 2	iPZ eZ	15 05 05 15 07 15	Near S.E. coast of Kamchatka 59 N. 159 E. h-60 km 5400 km. Mag. 6 1/4 P
October 3	iPZ eN	8 31 02 8 32 00	Northern Chile 20 S. 69 1/2 E. h-100 km 9200 km. Mag. 6 1/2 P
October 4	iSNE	7 30 21.8	Regional Shock
October 11	eP?Z iPZ eSNE iS?E iLZ	2 34 11 34 14 43 00 43 53 2 44 16	Kurile Islands. Felt in Japan 46 N. 150 1/2 E. h-100 km 6200 km. Mag. 7 1/2 P
October 11	iPZ iE eSE eE iLE LZ	16 50 42 51 54 52.3 53.0 53 40 56 05	Off Cape Mendocino 40 1/2 N. 126 1/2 W. 870 km. Mag. 6 P&B
October 12	ePZ eE eSNE eLN eLNE	2 49 33 49.7 59 10 3 16.0 3 20.5	Near coast of central Peru 15 S. 74 1/2 W. 8400 km. Mag. 6 1/2 P&B
October 12	eZE eL?NE	9 45.8 9 46.1	Regional shock?
October 12	ePZ eZ	12 33 18 12 34 27	Near East coast of Hokkaido, Japan 42 1/2 N. 144 1/2 E. 6800 km. mag. 6 1/2+ P

Date	Phase	Time (G.C.T.)	Remarks
		h. m. s.	
1956			
October 12	iPZ eNE iSE iLE	15 32 25.3 32 29 32 39.1 15 32 45	Regional shock
October 18	eLNZ	7 18.2	Heavy Microseisms obscure preliminaries
October 19	eNE	21	Heavy Microseisms obsc. Prelim. Alaska
October 20	eZ	0 01.3	Heavy Microseisms Obs. Prelim.
October 24	iPZ eZ SE eLNE LE	14 50 46 R 53.1 57.5 15 00 54 15 09.0	Near coast of Nicaragua 12 N. 87 W. 5200 km. Mag. 7 1/2 P SE resembles 3 sec. period train of L waves
October 28	eP?Z eZ	3 42.5 3 46.5	Kermadec Islands. No L. Waves 32 S. 179 W. Mag. 6 3/4 - 7 P
October 29	iPZ	15 53 13	Central Peru. 8 1/2 S. 17 W. h-60 km. Microseisms heavy
November 3	ePZ eLNE	5 29 45 5 35.0	Southern Yukon, Canada 61 N. 139 W. 1800 km.
November 4	eNEZ	4 44 41	Regional shock?
November 4	iPZ	5 48 20 C.	Near east coast of Honshu, Japan 35 1/2 N. 140 E. h-100 km 7600 km
November 4	iPZ iN	7 18 18 C 7 18 30	Tonga Island 20 1/2 S. 176 1/2 W. h-100 km 9300 km Mag. 6 1/2+ P
November 6	eLZ	23 32.0	Adreanoff Island 52 N. 176 W. 3800 km.
November 8	iPZ eNE	7 01 59 7 02.0	Fiji Islands 18 S. 178 W. h-500 km 9200 km
November 8	iPZ iZ eE iSNE	23 13 09.9 14.3 16.0 23 13 17.0	Mt. Si Fault near North Bend 47°35' N. 121°40' W. h-25 km Trace Ampl. 6 mm

Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1956			
November 9	iPZ eZ eNEZ	13 13 24 R 13 40 13 13 55	Southern Mexico 17 N. 94 W. h-150 km 4200 km
November 16	eZ eZ LNE LZ LN	8 28 44 29.5 30.4 30.9 8 31.5	Northwestern Nevada 41 N. 116 W. 900 km
November 17	PZ eN SE eLN LNE	20 29 45 30.3 31 42 31.9 20 32.4	Queen Charlotte Is. Felt in Ketchikan 54 1/2 N. 134 W. Ketchikan 1050 km. Mag. 6 1/2 P&B
November 18	iPZ iSNE	3 57 07.5 3 57 12.6	Snohomish 2 Mi. N.W. 47 55 N. 122 06 W. h-10 km Trace ampl. 7 mm
November 18	iSN iLN	14 43 14.9 14 43 21.5	Regional tremor No P waves
November 19	iPZ eN	12 14 42 12 14.8	Marianas Islands 12 1/2 N. 143 1/2 E. 9400 km
November 20	PZ SNE	8 08 57.8 8 09 22.5	Feeble regional tremor Phases weak
November 21	PZ eNEZ	7 44 16 7 44 22	Honshu, Japan 38 N. 142 E. h-60 km 7400 km.
November 22	PZ eZ eN iSNE eLN	0 24 00.4 24 06 24 13.2 24 18.2 0 24 25.2	Bellingham, seven miles NE. 48 51 N. 122 23 W. h-45 km Trace ampl. 1 mm
November 23	eZ	2 54.3	Off coast of Oregon
November 24	PZ eZ eNE	20 55 10 55 30 20 55.5	Tonga Islands region 20 S. 176 W.
November 25	eP?Z eNE	18 20 27 18 20.7	New Hebrides Islands 14 1/2 S. 168 E. 9800 km.

Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1956			
November 26	PZ eIE iE iSNE	0 00 03.7 00.13.3 00 15.0 00 17.0	Shelton, 15 mi. S.W. 47 09 N., 123 27 W. h-60 km
November 26	eZNE	21 02.5	
November 27	iPZ eZ	1 42 57 1 43 39	Probably P
November 27	eZNE eZ	3 05 02 3 05 10	Trace ampl. 2 mm
November 28	iPZ eNE	19 36 26 R. 19 36.5	Northern Kurile Islands 49 1/2 N. 155 E. Mag. 6 3/4 P.
November 29	PZ eNE	9 27 07 9 27.2	Bonin Island 27 N. 141 E. Mag. 7 P
November 30	P?Z S?N LE LN	16 43 25 45 22 45.7 16 46 35	Near north coast of Vancouver Isl.
December 1	iP?Z iSNE	0 08 41.8 0 09 01.8	Regional tremor
December 1	P?Z	21 37 03	Weak
December 2	eZ eN	3 06 09 3 07.0	
December 3	iPZ eNE eSE LE	7 26 26 26.7 31.5 7 35.6	Fox Islands 53 1/2 N. 169 W. 3300 km. Mag. 6 1/2 P
December 4	ePZ	23 09 40	Guatemala. 15 N. 92 W. h-150 km. 4600 km. Mag. 6 P
December 8	eP?Z iSE LE LE	16 17 43 16 23 19 16 27.5 16 35	Andreanof Island 51 N. 179 1/2 W. 3700 km. Mag. 6 1/2 B
December 13	eZ SN LNE LE	13 20 06 23 17 25 37 13 25 49	Lower California 31 N. 115 W. 2000 km. Mag. 5 1/4 P

Date	Phase	Time (G.C.T.)		Remarks
		h.	m. s.	
1956				
✓ December 18	iPZ	2	44 04	Chile-Argentine border 25 1/2 S. 68 1/2 W. 10,000 km. Mag. 7 P&B
	SKSNE	2	54 18	
	S	2	54 58	
	LE	3	10.5	
	LE	3	16.5	
✓ December 21	iPZ	9	00 36	Queen Charlotte Islands 51 N. 131 W. Mag. 6 1/2 P&B
	eE		01 15	
	LNE		02.3	
	LNE	9	02.6	
+ December 21	eZ	20	55 07	
	iE		55 11	
	eZ	20	56 30	
+ December 23	iPZ	9	49 13	Marianas Islands 22 N. 144 1/2 E. h-100 km 8500 km ca
	iZ		49 15	
	eE	9	49.3	
December 25	eZ	10	43 39	Seismic?
✓ December 27	iPZ	0	26 33	Tonga Island region 24 S. 177 W. h-300 km 9800 km. Mag. 7 P No L waves
	eNE		26.7	
	eZ		26 57	
	iN		27 10	
	iZE		27 32	
	iN		28 08	
	iSNEZ	0	36 55	
+ December 29	eLE	19	37.7	
✓ December 29	ePZ	20	34 46	Tonga Islands
+ December 31	ePZ	17	40 17	Western Nevada. Damage 39 N. 119 W. Mag. 5.4 B