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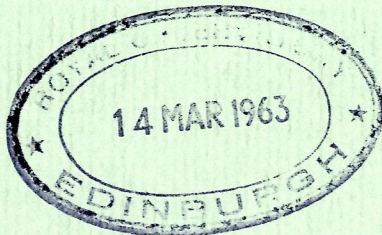
REGISTRATION OF EARTHQUAKES AT SEATTLE, 1957

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UNIVERSITY OF WASHINGTON, GEOLOGY DEPARTMENT

October, 1962





STATION CONSTANTS

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

INSTRUMENTAL CONSTANTS - 1957

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, 1957

$T_s = 15.0$  sec.       $T_g = 1.4$  sec. to February 22, 1957;  $T_g = 5.2$  sec. thereafter.  
 $h_g = 1.0$  approx.  
System nearly critically damped  
Max. V approx. 1200



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

January 1 to December 31, 1957

$T_s = 15.0$  sec.  $T_g = 1.4$  sec. to February 22, 1957;  $T_g = 7.9$  sec. thereafter

$h_g = 1.0$  approx.

System nearly critically damped

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
		h.	m.	s.	
1957					
Jan. 2	ePZ eS,LNE LE	0	45	41 50.6 0 53.0	Fox Islands 53 N., 168 W., 3200 km. Mag. $6\frac{1}{2}+$ (P) In all Aleutian Is. shocks S and L are indistinguishable.
Jan. 2	ePZ iNZ eS,LE	2	23	49 24 12 2 28.8	Fox Islands 53 N., 168 W., 3200 km. Mag. $6\frac{3}{4} +$ (P) In all Aleutian Is. shocks S and L are indistinguishable.
Jan. 2	ePZ iN eS,LNE LE LE	3	19	09 19 17 23.2 23.6 3 28.0	Fox Islands 53 N., 168 W., 3200 km. Mag. 7 (P) In all Aleutian Is. shocks S and L are indistinguishable.
Jan. 2	ePZ eN eS,LE LE	3	54	58 55 08 3 59.3 4 00.1	Fox Islands 53 N., 168 W., 3200 km. Mag. 7+ (P) In all Aleutian Is. shocks S and L are indistinguishable.
Jan. 2	ePZ	4	09	42	Fox Islands Other phases lost in end portion of preceding shock.
Jan. 2	ePZ eN eLE eLE	10	55	46 55.9 11 01.6 11 04.3	Fox Islands 53 N., 168 W., 3200 km. Mag. $6\frac{1}{2}$ (P) In all Aleutian Is. shocks S and L are indistinguishable.
Jan. 3	iPZNE iSE	12	58	38 C 13 07 00	Southern Manchuria 44 N., 130 E. h-600 km. 7500 km. Mag. 7 (P)
Jan. 3	iPZ	13	53	41 C	Aftershock



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
Jan. 8	iPZ iSNE	13 46 22.8 13 46 31.6	Port Townsend, 15 mi. S. 47 53 N., 122 47 W. Trace Ampl. 2.5 mm.
Jan. 9	ePZ eN LE	7 59 08 8 04 26 8 07 30	Fox Islands 53 N., 167 $\frac{1}{2}$ W., 3200 km. Mag. 6 $\frac{1}{4}$ + (P,B)
Jan. 17	iPZ	22 37 42 C	South of Honshu, Japan 33 N., 137 $\frac{1}{2}$ E, 8000 km.
Jan. 19	PZ	5 28 15	Fiji Islands. 20 $\frac{1}{2}$ S., 179 W. h-600 km. 9700 km. Mag 6 $\frac{1}{2}$ (B)
Jan. 21	iPZ iSN?	8 21 48.8 8 21 54.8	Regional?
Jan. 22	eZ eLNEZ	23 39 42.5 23 40 38	Regional?
Jan. 24	eLE	7 55.3	Near Coast of Peru? 12 $\frac{1}{2}$ S. 78 W. 8000 km.
Jan. 24	PZ eNE	17 05 19 17 05.5	Gulf of California 25 $\frac{1}{2}$ N., 109 $\frac{1}{2}$ W.
Jan. 24	eLE	15 13.2	Southern Gulf of California. 25 $\frac{1}{2}$ N. 109 $\frac{1}{2}$ W. 2800 km.
Jan. 24	eLE	16 44.3	See preceding report.
Jan. 24	eLE	17 13.3	See preceding report.
Jan. 25	iPZ iSE LE	3 43 46.0 R 49 08 4 01.5	Andreanof Island. 51 $\frac{1}{2}$ N. 177 W. 3800 km. 6 $\frac{1}{2}$ P.
Jan. 26	iPZNE iSNE	1 16 21.7 1 16 32.8	Seattle, Washington, MM-4 75 km.+ Skagit Bay 48 20 N., 122 31 W.
Jan. 27	iZ iSNE eLZ	6 33 14.0 33 21.9 6 33 27.0	Regional



Date	Phase	Time (G.C.T.)			Remarks
		h.	m.	s.	
1957					
Jan. 28	eLNE	3	30		Short-period waves.
Jan. 28	iPZ	8	28	20	Samoa Is. region
	eZ		28	29	
Feb. 3	iPN	17	33	32	Kamchatka 53½ N., 159 E. 5300 km. Mag. 6½+ P
	eSE	17	40	30	
Feb. 3	eZ	23	07	05	Aftershock
	eSE	23	14.	6	
Feb. 5	eZ	5	02	27	Mid Atlantic Ocean 25½ N., 45½ W. 6850 km.
	eLE	5	25		
Feb. 6	eN	13	16.	8	Galapagos Is. 2 N., 91 W. 5950 km. Mag. 6 P Weak preliminaries.
	eLE	13	29	30	
Feb. 6	iPZ	20	46	44	Lake Baikal Region USSR 50 N. 106 E. 8100 km.
Feb. 7	ePZ	18	15	44	Off Vancouver Island 50 N. 130 W. 500 km. No S wave
	eN		17	34	
	LE	18	18	27	
Feb. 9.	ePZ	16	39	54	Near N. California Coast 41½ N.; 126 W. 800 km. Mag. 6¼+ P 5¼ B
	eSN		41	10	
	eNE		41.	4	
	eLN		41	41	
	eLE	16	42	10	
Feb. 10	L	23	--	--	L Waves only. Heavy microseisms mask preliminaries. P. I.?
Feb. 11	L	1	--	--	See preceding report
Feb. 11	iPZ	17	05	04	Mt. Si near North Bend. MM-5 47°32'N., 121° 44 W. 45 km.
	iN			07	
	iSNE	17	05	10	
Feb. 13	iPZ	12	49	53	New Hebrides Is. 18 S., 170 E. 10,000 km.



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
Feb. 17	iPZ eNE eLE	15 54 04 16 07.2 16 07.7	Oaxaca, Mexico 16 N. $96\frac{1}{2}$ W h-60 km 4300 km Mag. $5\frac{3}{4}$ +P
Feb. 18	e	1 16 10	
Feb. 18	ePZ?	15 00 01	Mid Atlantic Ocean $25\frac{1}{2}$ N, $45\frac{1}{2}$ W 6800 km. Mag $6\frac{1}{4}$ +P
Feb. 18	eZ iZ	16 22 03 16 22 10	
Feb. 19	iPZ	0 01 04	Peru?
Feb. 21	iPZ eSE	14 36 24 14 41.4	Fox Islands, Aleutians 53 N., 171 W. h 100 km 3300 km. Heavy micros
Feb. 23	eZ iPZ eSE eLE LE	13 18 06 18 11 19 07 19 23 13 20 41	Off Vancouver Islands 49 N. 129 W. 500 km.
Feb. 23	iPZ iZ iZ SNE	20 39 07 39 13 39 40 20 49 36	Formosa. 24 N. 122 E. 9700 km. Mag. 7+P 11 killed
March 2	e	0 36 --	Jamaica. $18\frac{1}{2}$ N. 78W. Heavy microseisms. 3 killed.
March 2	e	8 23	Near New Britain 6 S. 151 E. 10,300 km.
March 3	e	3 26	Off Mexico. $8\frac{1}{2}$ W. 103 W Mag. $5\frac{3}{4}$ P
March 8	e	12 26	Eastern Greece. $39\frac{1}{2}$ N. 23 E. 3 killed
March 9	ePZ iZ eSE	14 29 24 29 33 14 34.7	Andreanof Islands, Aleutians 51 N. 175 W. 3750 km. Mag. 8+P Seismic Sea wave damaged Hawaii



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
March 9	ePZ	19 44 16	Andreanof Islands
	eZ	44 25	51 $\frac{1}{2}$ N. 173 W
	eSE?	19 50 47	3600 km.
March 9	iPZ	20 45 38	Fox Islands
	eZ	45 48	52 $\frac{1}{2}$ N, 169 $\frac{1}{2}$ W.
	iSE	20 50 35	3350 km. Mag. 6 $\frac{3}{4}$ +P
March 10	PZ	3 12 58	Andreanof Islands
	iSE	3 18 18	52 N. 176 W. 3950 km. Mag. 6 $\frac{1}{2}$ +P
March 11	ePZ	3 19 42	Andreanof Islands
	eZ	20 03	51 N. 177 W.
	iSNE	3 25 28	3850 km. Mag. 6 $\frac{3}{4}$ +P
March 11	PZ	4 12 12	Andreanof Islands
			51 N. 177 W. 3850 km.
March 11	iPZ	10 05 00	Fox Islands
	iSE	10 10 02	53 N., 164 $\frac{1}{2}$ W. 3000 km.
March 11	iPZ	15 02 27	Andreanof Islands
	iSNE	15 08 08	51 $\frac{1}{2}$ N. 178 $\frac{1}{2}$ W. 4000 km.
March 11	PZ	15 43 03 (R)	Andreanof Islands
	iSE	15 48 46	51 $\frac{1}{2}$ N. 178W. 3950 km. Mag. 6 $\frac{1}{2}$ P
March 12	iPZ	7 35 31 (C)	Andreanof Islands
	eSNE	7 40 50	51 $\frac{1}{2}$ N., 173 $\frac{1}{2}$ W 3600 km. Mag. 6 $\frac{1}{4}$ +P
March 12	iPZ	7 46 22 (R)	Andreanof Islands
	eSNE	7 51.3	52 N. 178 W 3900 km. Mag. 6 $\frac{1}{4}$ P
March 12	iPZ	8 10 18	Andreanof Islands
	eSN?	8 15.8	51 $\frac{1}{2}$ N. 178 W. 3900 km.
March 12	ePZ	11 51 51	Andreanof Islands
	iZ	51 53	51 N. 177 W.
	iSNE	11 57 40	3900 km. Mag. 7 P
March 13	ePZ	2 55 25	Andreanof Islands
	LE	3 05.3	52 N. 171 $\frac{1}{2}$ W. 3500 km.



Date 1957	Phase	Time (G.C.T.)			Remarks
		h.	m.	s.	
March 13	ePZ	3	40	05	Andreanof Islands 52 N., 175 W. 3700 km.
March 13	iPZ iSNE	15 15	49 54	14 (C) 54	Andreanof Islands 51 1/2 N, 179 W 4000 km. Mag. 6 3/4 P
March 13	iPZ eSN eE	20 20 20	05 11.0 11	17 0 48	Unimak Island region 54 N. 165 W.
March 14	iPZ iSN	14 15	54 00	42 30	Andreanof Islands 51 1/2 N., 177 W. 4500 km. Mag. 7 1/2 P
March 15	ePZ eSE	2 3	58 03	18 05	Fox Islands 53 N. 167 W. 3200 km. Mag. 6 3/4 P
March 15	ePZ	4	20	03	S lost in waves of preceding earthquake
March 15	iPZ	12	04	04	Andreanof Islands 51 N, 173 W. Weak No. S Waves
March 16	ePZ	0	37	53	Northern Iran 55 N. 53 E.
March 16	iPZ SNE	2 2	41 47	21 05	Andreanof Islands 52 N. 179 W. 4000 km. Mag. 6 3/4 P
March 17	iPZ	7	10	52	Fox Islands 52 1/2 N. 169 W. 3300 km
March 17	iPZ eSE	8 8	01 06	03 47	Andreanof Islands 51 N. 179 W. 4000 km
March 17	ePZ	9	59	05	
March 17	iPZ eLE	16 16	23 30	12 (C) 05	Fox Islands 52 1/2 N. 166 W. 3100 km.
March 17	iPZ eSN eSE	22 22 22	50 55 55.3	37 27 3	Fox Island 54 N. 166 W. 3100 km. Mag. 6 1/2 P
March 17	iPZ	23	01	42 (C)	Weak



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
March 18	ePZ	0 19 23	Andreanof Islands 51 N. 179 1/2 W. 4000 km
March 18	PZ eSE iSE	2 31 52 37.0 2 37 12	Fox Island 52 1/2 N. 171 W. 3500 km
March 18	iPZ	2 38 24	
March 18	iPZ eLE	5 15 43 5 27.0	Andreanof Island 51 1/2 N. 179 W 4000 km
March 18	PZ	19 00 00	
March 18	ePZ	20 11 00	
March 19	ePZ	8 20 18	Fox Islands 52 N. 169 W. 3300 km.
March 19	iPZ	11 35 48	Andreanof Islands 51 1/2 N., 176 1/4 W. 3900 km
March 19	iPZ eE eSN eSE	12 57 41 (R) 58 12 13 02 16 13 02.4	Andreanof Island 51 1/2 N. 175 W 3700 km. Mag. 6 1/4+P
March 19	iPZ	15 53 58	Fox Island 52 N. 172 1/2 W. 3500 km.
March 19	PZ	17 11 07 (R)	Fox Island 52 1/2 N. 171 W. 3500 km.
March 20	ePZ	2 28 34	
March 20	eSE?	11 18 20	Andreanof Island 52 N. 172 W. 3600 km.
March 20	iPZ	13 08 15 (C)	
March 20	ePZ	19 46 30	
March 21	eSE?	11 08.5	
March 22	iPZ iSE	14 27 03 14 31 48	Fox Island 52 1/2 N. 171 W. 3500 km.
March 22	PZ	17 16 15	Same as preceding report



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
March 22	iPnZ iSnN iLN iLE	19 46 49 (C) 48 37 49 38 19 50 20	Northern California San Francisco, 37.9 N. 122.6 W MM-7 1120 km. Mag. 5 1/4+P
March 23	iPZ eZ eE eSEZ	5 26 39 29 50 31.9 5 37 10	Banda Sea region 5 1/2 S, 131 E. h-100 km. 9800 km. Mag. 7 P
March 23	1PZ?	13 01 32 (R)	
March 23	1PZ	13 47 07 R	Andreanof Islands 51 N 179 1/2 W 4000 km.
March 24	1PZ iSE? eSE LE iLN	8 24 01 C 25 21 25 28 25 50 8 26.1	Near No. Coast of Vancouver Island. 51 N. 130 W. 650 km. Mag. 6 3/4+P
March 25	ePZ?	1 11.0	Andreanof Island 52 N. 176 W. Heavy microseisms
March 25	1PZ	14 19 27 (C)	Fox Island, Aleution Islands 54 N. 165 1/2 W.
March 26	ePZ eSNE	3 11 48 3 16.7	Fox Island 51 1/2 N. 170 W. 3400 km
March 28	eZ	20 15.0	
March 29	iPZ eZ iSE	5 16 30 (C) 17 05 5 21 22	Fox Island 53 1/2 N. 167 W. 3200 km
March 29	ePN? SE? LE	23 56.3 24 01.0 24 05.0	Very heavy microseisms
March 30	ePZ	6 44 14	Andreanof Island
March 30	iPZ	9 23 48	Andreanof Island 52 N. 175 W.
March 31	ePZ eSE? LE	2 24 33 2 25 55 2 26 33	Off coast of Oregon 43 1/2 N., 127 1/2 W. 750 km.



Date	Phase	Time (G.C.T.)	Remarks
		h. m. s.	
1957			
April 1	ePZ LE	11 42 10 11 51.0	Andreanof Island 51 N, 173 W. 3700 km.
April 2	iPZ LE	0 46 22 0 55	Same as preceding report
April 2	ePNE LNE	20 24.0 20 33	Andreanof Island 51 1/2 N., 173 W. 3700 km Z record lost
April 2	ePNE LNE	21 34.7 21.43	Andreanof Island 51 N. 173 W. 3700 km. Z record lost
April 4	iPZ iZ iSN	0 17 56 18 18 0 22 45	Near Coast of Alaska Peninsula 58 N., 155 1/2 W. h-150 km. 2400 km.
April 5	ePNE eSE? eLE	2 56.3 3 01.3 3 04.5	Fox Island 52 N. 172 1/2 W. 3200 km. Mag. 6 1/2P PZ lost in heavy microseisms
April 5	iPZ	7 43 38	Kermadec Island 22 1/2 S., 177 W. h-100 km 10,000 km. Mag. 6 3/4 P
April 5	ePZ	16 30 25	Near Coast of Nicaragua 12 1/2 N., 88 W. h-100 km. 5100 km.
April 8	eZ	20 27.3	Panama Costa Rica Border 8 1/2 N., 83 W. 5900 km. Mag. 6 1/2P Felt
April 9	iPZ iSEZ	0 35 33 R 0 44 33	Off S. Coast of Honshu Island, Japan 30 1/2 N., 138 1/2 E. h-450 km. 8200 km. Mag 6 3/4 P
April 9	iPZ	2 28 55 R	Marianas Islands 22 1/2 N., 144 1/2 E. 8400 km.
April 9	iPZ eSE eLE	11 09 20 C 51.1 11 17.7	Andreanof Island 51 1/2 N., 178 1/2 W 3900 km. 3900 km.
April 9	eZ eZ	12 59.5 13 00 29	



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
April 9	PZ	17 47 21	Andreanof Islands 51 1/2 N., 179 1/2 W 4000 km
April 9	PZ eSE eLE	20 30 18 35 24 20 38.1	Fox Islands 52 1/2 N. 169 W 3300 km
April 9	iPZ	22 56 45	Andreanof Islands 51 1/2 N., 177 W 3800 km
April 10	iPZ	3 31 26 C	Andreanof Islands 53 N, 168 W 3200 km
April 10	iPZ eSNE LNEZ	5 19 28 RC 25 37 33.0	Near coast of Oaxaco, Mexico 15 1/2 N, 98 W 4300 km Mag 6 3/4 P r indicates an amplitude so small that it is questionable
April 10	iPZ	9 16 18 R	Andreanof Islands 51 N., 177 W. 3800 km
April 10	ePZ iN iSE iLE	11 34 47 R 35 23 37 35 11 38 31	Kodiak Islands 56 N, 154 W 2300 km. Mag. 7 P
April 11	eZ	1 22.4	
April 11	PZ	7 04 25	Samoa Islands 8600 km
April 11	ePZ eLE	17 46 50 18 25	Fox Islands 52 N. 168 1/2 W. 3200 km
April 12	iPZ	4 24 52 C	Andreanof Islands 52 N. 178 1/2 W 3900 km
April 13	iPZ? eNE eLN	2 37 52 38 40 2 39.8	
April 13	iPZ eE iSN iZ eLNE	3 45 08 C 45 50 46 02 46 17 3 46.7	Off Vancouver Island 48 1/2 N. 128 W. 400 km
April 14	iPZ iSNE LgNE	19 30 03 39 53 19 53.5	Soemoa Islands 15 1/2 S., 173 W. 8600 km Mag. 8 P P badly obscured by microseisms



Date	Phase	Time		Remarks
		(G.C.T.)		
1957		h.	m. s.	
April 15	PZ	21	39 08 C	Fox Islands
	eE		45.7	52 1/2 N., 167 W. 3200 km
	LE	21	47.3	
April 16	iPZ	4	21 55 R	Western Java Sea
	ipPZ		24 11	4 1/2 So, 107 1/2 E. h-600 km
	eN		25 25	13,200 km. Mag. 7 1/2 P
	SN?		29 28	
	eN		32.3	
	eN		35.0	
	eN	4	38.8	
April 17	ePZ	4	40.7	Kodiak Island region 56 N, 154 W 2300 km
April 17	iPZ	8	20 10	Tonga Island
	iN		20 23	20 S, 176 W h-200 km.
	iZ	8	20 55	9400 km
April 17	PZ?	13	31 11	Fox Islands
	iPZ		31 17	52 1/2 N, 169 W
	iN		34 17	3300 km.
	eSNE		36 10	
	eLE	13	39.3	
April 17	iPZ	18	17 15 C	Mexico-Guatemala border
	eSE		24 25	14 1/2 N, 92 W 4500 km
	eLE	18	33.3	
April 18	PZ	0	22 49	Fox Islands 52 No, 171 W 3400 km
April 18	iPZ	7	06 57	Andreanof Islands
	iNE		07 22	51 1/2 N, 176 W 3800 km
	eSNE	7	12 22	
April 19	iPZ	15	51 05 R.	Fox Islands
	eN		56.6	51 1/2 N, 168 1/2 W. 3300 km
	eN		58.7	
	eLNE	15	59.2	
April 19	iPZ	22	25 29 R	Fox Islands
	iSE?		29 13	52 1/2 N, 166 1/2 W
	eE		30.3	3000 km Mag. 7 P
	eLZ		33.3	
	eLNE	22	34.4	
April 20	PZ	12	44 06	Near coast of New Guinea
	eLE	13	19.0	6 S, 147 1/2 E 10,600 km



Date	Phase	Time			Remarks
		(G.C.T.)			
1957		h.	m.	s.	
April 21	ePZ	21	22	25	Columbia-Venezuela border
	iPZ		22	33	7 N 72 W
	eSE		29	30	6600 km Mag 6 1/2 P
	eE		31.0		
	eE	21	38.3		
April 24	iPZ	19	23	27 C	Turkey foreshock
	SE?		33	44	36 N., 28 1/2 E.
	SN	19	33	52	10,200 km Mag 6 3/4 P
	LNE	19	58		
April 25	iPZ	2	38	48 C	Near south coast of Turkey
	SNE		49	19	36 1/2 N 29 E
	iSZ		49	33	10,000 km Mag 7 P
	LEN	3	08		
April 25	ePZ?	7	22	03	Andreanof Islands 52 N 173 1/3 W 3500 km
April 25	iPZ	14	12	17 C	Near south coast of Alaska
	eSE		16	04	60 1/2 N 145 W 2000 km
	eN		19	34	
	eLE	14	20	05	
April 25	ePZ?	17	52	29	Andreanof Islands 51 1/2 N 180 W 4000 km
April 25	ePZ	22	01	26	Imperial County, California
	iLN		06	10	33 N 115 1/2 W
	LZE	22	06.5		1700 km Mag 5.4 P
April 25	PZ	22	27	56	Imperial County, California.
	eSE?		30.8		33 1/2 N., 115 1/2 W.
	eN		31.2		1700 km Mag. 5.3 P
	iLNZ		32	40	
	LEZ	22	33.0		
April 26	PZ	10	27	43 C	Near south coast of Alaska
	eSNE		31.4		60 N 147 W 2000 km
	eNZ		34	38	
	eLNE	10	35	33	
April 26	iPZ	15	18	26 C	Kurile Islands 45 N 148 E 6500 km
April 28	ePZ	14	55	14	Fox Islands
	eSE?	15	00.2		52 1/2 N 168 1/2 W 3300 km
	LE	15	04.3		
April 29	PZ	4	36	17	Fox Islands
	eSN		41.2		52 1/2 N 168 1/2 W
	LE	4	45.5		3300 km P Weak



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
May 1	iPZ	23 34 34 C	Fox Islands 52 1/2 N 171 W      3400 km
May 2	iPZ iPPZ eSN? eIZN eLNEZ	4 02 25 rC 03 22 08 15 10 32 4 13.5	Bakkin Bay 72 N 67 1/2 W 3700 km r indicates an amplitude so small that it is questionable
May 2	iPZ eSE iLEN	11 35 29 C 40 20 11 45 21	Fox Islands 52 1/2 N 169 W      3300 km
May 2	eNE iSKSNE eE	21 54.1 22 00 00 22 01 11	Flores Sea 7 1/2 S 120 E      h-600 km. 12,700 km. Z record lost
May 3	iPZ	7 17 43	Andreanof Islands 51 N 179 1/2 W      3900 km
May 3	pZ?	12 27 54	
May 4	iPZ iSNE	21 09 36.0 R 21 09 42.5	Puget Sound near Tacoma      MM-5 47° 21' N 122° 24' W U. W. epicenter
May 6	ePZ	11 24.9	Andreanof Islands 52 N 173 W      3600 km
May 6	PZ	11 26 26	Andreanof Islands 52 N 173 W      3600 km
May 7	iPZ	5 43 50 R	Andreanof Islands 51 1/2 N 179 1/2 W      4000 km
May 8	ePZ	20 21 38	Fiji Islands 15 1/2 S 179 E      9200 km
May 11	iPZ eN	7 37 31 C 37 39	Andreanof Islands 51 1/2 N 179 1/2 W      3900 km
May 12	PZ PPZNE	5 07 04 5 10 39	Sandwich Islands region 14,500 km PP has characteristics of short-period L waves
May 12	eP iSNE? LNE	7 32 47.3 32 49.8 7 32 57.0	Local, not felt S trace amplitude 4 mm
May 15	eP?Z	2 20.5	Chiapas, Mexico 17 1/2 N 95 1/2 W      h-100 km 4300 km



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
May 17	eZ	17 45.0	Chiapas, Mexico 4300 km 17 1/2 N., 93 1/2 W h-100 km.
May 17	eLNE	21 01.0	Revilla Gigedo Island region 3500 km
May 18	iPZ eLE iLE	5 30 32 rC 38.0 5 39.6	Fox Islands 51 N 171 W 3500 km r indicates an amplitude so small that it is questionable
May 20	ePZ eSE? eLE	1 58	Andreanof Islands 51 N 180 W 4100 km Vertical record lost
May 21	iPZ iZ iSNE eSZ	1 23 46 R 24 12 33 24 1 33.5	Marianas Islands 21 1/2 N 144 E 8500 km
May 21	ePZ LE LE	7 45 39.0 7 45 44 7 45 50	Local, trace a 3 mm. interpretation doubtful. P could be S wave
May 22	ePZ iPZ eSNE eLE eLE	13 36 46 36 50 42.5 45.1 13 47.0	Andreanof Islands 50 N 177 W 3900 km Mag 6 1/2 P
May 24	iPE eSN	2 47 42 2 55 45	Colombia 3 N 76 1/2 W 6800 km Mag 6 3/4 P Vertical record lost
May 24	ePE eSE eLNE	3 42.8 47 33 3 50.7	Fox Islands 53 N 167 1/2 W 3300 km Mag 6 B
May 26	ePZ eSE eZ LNE	6 46 35 57.1 57 32 7 17	Turkey, Bolu province, 53 deaths 41 N 31 E 9700 km
May 26	iPZ	9 49 36 R	Aftershock
May 29	iPE iSNE	9 35 11.0 9 35 21.5	Local, Near Cushman Lake 47° 31' N. 123° 10' W iP very sharp Z lost
May 30	iPZ	2 31 23	



Date	Phase	Time			Remarks
		(G.C.T.)			
		h.	m.	s.	
1957					
May 31	iPZ	2	28	39	Argentina
	eZ		30	44	27 1/2 S 63 W h-600 km
	eSE	2	38	39	10,300 km Mag 6 1/4 P
May 31	iPZ	22	07	41	Near Coast of Colombia
	eZ		08	13	3 1/2 N 77 W. h-100 km.
	eSE	22	15	46	6700 km.
May 31	iPZ	22	24	20	Andreanof Islands, Alaska
	eSNE	22	30	.1	51 N., 179 W. 4000 km.
June 1	eZ?	1	26	55	
	iZ		27	03	
	iZ		30	50	
	LE?	2	01	.1	
June 1	iPZ	16	08	30	Kenai Peninsula, Alaska
					59 1/2 N 150 W. 2500 km.
June 2	eZNE	12	01	.5	
June 4	iPZ	11	27	34 C	Santa Cruz Islands
					10 1/2 S., 166 1/2 E 9600 km.
June 4	iPZ	17	16	36 R	Fiji Islands
	iZ		18	40	17 1/2 S., 178 W. h-550 km.
	iSE	16	26	05	9300 km. Mag. 6 1/2+ P
June 5	ePE ?	1	37	24	
June 5	ePZ	8	31	40	Southern Alaska
					2500 km.
June 5	eLE	6	38		
June 5	iPZ	14	06	12 C	Off east coast of Kamachatka
	eZ		07	44	52 N., 162 1/2 E. 5200 km.
June 6	P?Z	5	45	08	Fox Islands, Alaska
	eZ	5	45	25	52 N., 171 1/2 W 3500 km.
June 7	ePZ	2	53	54	Andreanof Islands, Alaska
					51 1/2 N., 179 W. 4000 km.1
June 8	iSN	2	21	05.5	Regional shock.
					P not registered
June 8	iPZ	17	24	11 C	Tonga Islands
					16 1/2 S., 173 1/2 W. 8900 km.



Date	Phase	Time (G.C.T.)	Remarks
1957			
June 10	eZ	1 19.6	Sumbawa Island, East Indies
	iPN	19 57	9 S., 117 E. 1300 km
	iSKSE	25 27	Heavy microseisms obscure
	iSE	1 26 40	
June 10	iPZNE	3 25 29 R	Marianas Islands 13 1/2 N., 143 1/2 E. 9300 km. Mag. 6 3/4+ P
June 11	ePZ?	4 10 40	Unimak Island region 54 N., 165 W. 3000 km.
June 11	ePZ	15 02 54	Kermadec Islands
	eZ	03 17	30 S. 178 W. h-100 km
	eE	13 31	10,400 km. Mag. 6 3/4+ P
	eN	15 14 09	
June 12	eSE	0 06 20	Andreanof Islands
	LE	0 09	52 N., 176 W. 3800 km Short period records obscured by microseisms
June 12	iPZ	8 39 09	Near coast of Hokkaido 41 1/2 N., 142 1/4 E. 7050 km.
June 12	eE	19 17 20	Near coast of Luzon, P.I. 18 N., 120 1/2 E. 10,400 km. Short period records obscured by microseisms
June 13	ePZ	10 47 28	Andreanof Islands
	iZ	48 55	51 1/2 N., 176 W.
	iSE	52 56	3800 km Mag. 7 P
	iLE	10 55.4	
June 14	e?Z	6 31 12	Andreanof Islands
	iPZ	31 23	52 N., 175 W.
	iSEN	36 41	3800 km. Mag 6 1/4 B
	LE	6 39.4	
June 15	ePZ	1 04 35	Indian Ocean
	eZ	05.0	34 S., 56 E. 18,000 km. 6 P Heavy microseisms almost obscure P.
June 15	PZ	18 24 47 C	Fox Islands, Alaska
	eNE	18 25.0	52 N., 171 W. 3400 km.
June 17	iPZ	6 28 43 rC	Samoa Islands 55 S., 173 1/2 W. 8700 km. Mag 5 3/4 B



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
June 18	ePZ ePPZ	18 09 39 13 16	Loyalty Island region 25 S. 170 E. 10,600 km.
June 18	eZ iSNE LN	20 30 11 30 12.5 20 30 20	Regional
June 19	P?Z iPZ	1 42 37 1 42 43	Tonga Island 24 S., 175 1/2 W. 9700 km.
June 19	ePZ eZ eSN	8 14 02 19 8 24 37	Fiji Islands 16 1/2 S., 176 1/2 E. 9400 km. Mag. 6 1/2 P
June 20	iPZNE iSN	1 18 26 R 1 28 08	Marianas Islands 20 N., 145 1/2 E. 8500 km.
June 22	ePZ iZ eSN eSE LE	6 26 40 27 08 32 40 33.1 6 41	Near Coast of Chiapas, Mexico 16 N., 94 W 4400 km. Mag. 6 1/2 P
June 23	ePZ ePPZ eN ePPPZ eSKSE SE PSE	0 04 14 08 11 09 54 09.2 14.9 15 20 0 17 08	Near north Coast of New Guinea 1 1/2 S., 137 E. 10,900 km. Mag. 7 1/4 P
June 23	iPZ eN eLE iLN	3 30 22 C 33.7 34.1 3 34 38	Near Coast of S.E. Alaska 58 1/2 N., 137 W. 1600 km. Mag 5 1/2 B
June 27	iPZ iSE eLE	0 20 16 R 29 10 0 44.5	N.E. of Lake Baikal, Siberia 56 1/2 N., 116 E 7200 km. Mag. 7 1/2 P
June 29	iPZ eSE LE	7 54 19 59 25 8 02.0	Fox Island Region 51 1/2 N., 166 W. 3700 km
July 1	iP?Z iSN	5 41 58.1 5 41 01.3	Local
July 1	PZ ePPNEZ SKSNE eSE SSE	19 44 32 48.6 55 23 19 56 26 20 03.4	India-Burma border 25 N., 94 E 11,200 km



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
July 2	PZ iZ iSKSN? ePSN LE	0 55 55 56 12 1 06 37 08.8 1 27	Northern Iran 36 N., 53 E. 10,600 km. Mag. 7 1/4+ P
July 3	eLZE	9 17.3	Near coast of S.E. Alaska 58 N., 137 W. 1500 km.
July 3	iPZ eLE	12 31 51 C 12 40.5	Andreanof Islands 50 1/2 N., 179 W. 4000 km. Mag. 6+ P
July 4	iPZ	19 31 32	Marianas Islands 20 N., 146 E. 8500 km.
July 4	eP?Z eNE eN eNZ eE eN LNEZ LE	22 29 47 29.9 31.7 32.2 34.0 34.6 35.2 22 36.3	Arizona-Mexico Foreshock 32 N., 113 W. 2200 km Microseisms bad
July 4	LNEZ	23 37.2	Arizona-Mexico 31 N., 114 W. 2300 km
July 4	eE eN LEZ LNE	0 03.3 03.7 07.5 0 07.9	Arizona-Mexico 32 N., 114 W. 2200 km
July 5	eZ	12 49 11	Kermadec Islands 28 1/2 S., 179 W. 10,250 km
July 7	iPZ eSE eLE	16 24 18 16 35.3 16 54	Solomon Islands 6 1/2 S., 156 E. 10,000 km
July 8	iPZ iSN	5 25 05.9 5 25 13.0	Felt by Ranger in North Bend 50 km
July 9	PZ	15 38 15	Guatamala 14 1/2 N., 91 W. Mag 6 B Well defined P wave
July 9	eP'Z eZ	10 17 05 10 17 20	Sumatra. 6 S., 104 E. 13,600 km 4700 km



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
July 10	iPZ eSE eLNE	9 13 22 C 20 58 9 33.8	Panama 8 N., 82 1/2 W. 5800 km. Mag. 6 3/4 B
July 12	eLNE	11 31.4	
July 13	ePZ eSE LNE	1 05 50 10 52 1 15.4	Fox Island 52 N., 169 1/2 W 3400 km
July 13	iSNE	8 48 25.4	Local
July 13	PZ	9 44 06 C	Samoa Islands 15 S., 173 W. 8700 km
July 13	PZ	14 10 52	Samoa Islands 14 1/2 S., 173 1/2 W. 8700 km
July 14	iPZ PPE iSKSNE iSNE iPSE eLE	6 36 39 R 40 18 46 53 47 21 48 02 7 00.0	Tonga Islands 27 1/2 S., 177 W. 10,000 km. Mag. 7+ P
July 14	iPZ SKSNE SNE iZ ePSNE LE LNE	8 23 59C 34 35 35 09 35 24 35 42 54.6 8 59.9	Kermadec Island 30 S., 177 W 10,300 km. Mag. 6 3/4 P
July 14	PZ? iPZ	9 54 52 55 05	Tonga Islands 20 S., 174 1/2 W. 9200 km
July 15	LE	23 28.0	Very clear. Preliminaries lost in wind microseisms.
July 17	iPZ iZ eE? eSNE	11 22 54 23 25 33 10 33.3	Santa Cruz Islands 11 S., 167 E. 9500 km. Mag. 6 1/4+ P iZ is a major phase
July 18	eLNE	1 30	Fox Islands?
July 19	ePZ SE eE	13 14 55 25 18 13 25 33	Near North Coast of Formosa 25 N., 122 1/2 E.
July 19	PN	22 28 07	Regional?



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
July 20	PZ?	10 15 28	
July 20	iPZ	15 51 12 cR	Tonga Islands 19 1/2 S., 174 W. 9100 km. cR - Very small c, large
July 21	PZ eSNE eLNE	16 11 58 18 35 16 28.4	Near coast of Guatamala. 14 1/2 N., 92 W. h-100 km. 4600 km. Mag. 5 3/4+ B
July 22	eLE	14 13.5	Kermadec Islands?
July 23	iPZ iSN LE	0 52 10 0 57 45 0 00.5	Andreanof Islands 52 N., 177 W. 3900 km. Mag. 6 1/4+ P
July 23	iPZ	6 33 57	Loyalty Islands 20 1/3 S. 70 1/2 W. 10,200 km
July 24	ePZ SKSN SE	2 10 38 21 03 2 21 24	Central Chile-Argentine Border 30 S., 70 1/2 W. 10,100 km Mag. 6 1/2 P
July 24	PZ	10 10 10 C	New Hebrides Islands 18 S., 169 1/2 E. 10,000 km
July 24	PZ	11 00 32	Santiago del Estro Prov., Argentina 27 S., 65 W. 10,000 km.
July 24	ePZ SE PSN eLE	11 15 33 26 17 26 33 11 45	New Hebrides Islands 20 S., 169 E. 10,200 km. Mag 6 1/2 P
July 25	PZ SNE eN LE	7 49 25 55 00 55.4 7 57.8	Andreanof Islands 51 N., 177 W. 3900 km Mag. 6 1/4 B
July 25	iPZ iSNE	13 14 48.3 C 13 15 00.3	Local. trace amplitude 4mm
July 26	iPZ eZ iSE iLNE	4 51 56 C 51 02 54 06 4 54.8	Loyalty Islands 20 1/3 S. 70 1/2 W. 10,200 km Central Chile-Argentine Border 30 S., 70 1/2 W. 10,100 km Mag. 6 1/2 P
July 26	PZ	10 10 10 C	New Hebrides Islands 18 S., 169 1/2 E. 10,000 km
July 26	PZ	11 00 32	Santiago del Estro Prov., Argentina 27 S., 65 W. 10,000 km.



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
July 28	PZ	8 47 09	Guerrero, Mexico
	iPZ	47 11	17 N., 99 W.
	eN	53.9	4100 km. Mag 7 1/2 P
	eN	58.5	Traces too complex to discern
	eE	59.4	S. 68 killed.
	LNE	00.1	
July 28	ePZ?	10 05.7	Mexico Aftershock
July 28	iPZ	13 41 22	Mexico
	eE	53 10	Aftershock
	LE	13 53.8	
July 29	eLNE	0 31.2	Mexico Aftershock?
July 29	iPZ	17 27 52	Near Coast of Chile.
	iSNE	38 18	23 1/2 S., 71 1/2 W.
	eE	51.5	9600 km. Mag 7+ P
	eLNE	59.7	
August 1	iSNE	8 06.56.3	Local. Trace A, 4 mm
August 1	ePZ	16 25 16	Fox Islands
	eLNE	16 33.5	52 N. 170 W. 3300 km
August 1	ePZ	22 21 10	Near coast of Mexico
	eLNE	34.2	16 N. 97 W. 4300 km
	eLNE	22 35.4	
August 4	ePZ	6 13 47	Mexico aftershock
	SNE	19 49	17 N., 100 W.
	eNEZ	26.5	4000 km. Mag 6 1/4 P
	eLZ	6 30.5	
August 4	eLE	11 48.0	Mexico aftershock
	eLNE	11 48.9	17 N., 99 1/2 W. 4000 km
August 4	ePZ	14 22 28	Mexico aftershock
	eLNE	34.9	17 N., 99 1/2 W.
	iLN	14 36 25	4000 km. Mag 6 1/4 P
August 5	eLNE	17 56.8	Near coast of Oaxaca, Mexico
August 8	eLNE	5 01.0	Revilla Gigedo Island
August 11	PZ	21 51 05	New Hebrides Islands
	SE	22 01.8	17 1/2 S., 169 E.
	eLE	22 22	10,000 km. Mag 6 3/4 P
August 12	iPZ	0 24 47.0	Local
	iZ?	0 24 47.7	



Date	Phase	Time (G.C.T.)	Remarks
-		(G.C.T.)	
1957		h. m. s.	
August 12	iPZ	11 30 33 C	S. of Honshu Island, Japan 33 N., 140 E. h-300 km 7900 km.
August 13	PZ eSNE eE	12 04 35 08 21 12 10 13	Southern Alaska 61 N., 148 W. 2200 km
August 13	PZ iSNE eLE	14 37 45.0 38 53.0 14 40.3	Near coast of Oregon 43 N., 125 W. 550 km
August 14	PZN	1 12 50	Seismic?
August 15	iPZ	8 42 06	Near N. coast of Panama 10 N., 80 W. 5700 km
August 15	ePZ	19 32 15	Seismic?
August 15	PZ SE	20 59 17 21 07 11	Solomon Islands region 4 1/2 S., 155 E. h-500 km 9800 km
August 16	eLE	3 49.6	New Britain region 5 S., 154 E.
August 16	eLE	12 20.7	New Britain region 5 S., 155 E.
August 16	iPZ eSNE LE iLN	23 39 37 45.8 49 57 23 55 23	Pacific Ocean 10 1/2 N., 104 W. 4400 km Mag. 6 1/2+ P
August 17	iPZ	12 50 57 C	Bonin Islands 29 N., 141 E. 8200 km
August 18	eLN	7 26	South Pacific Ocean
August 18	ePZ eE eSE LE	8 50 44 9 00.6 9 01 24 9 08.5	Philippine Islands 12 N., 124 E. 10,900 km.
August 18	PZ LE	10 49 18 10 58.3	Hawaiian Islands 21 1/2 N., 156 W. 4100 km
August 18	iPZ eE SNE? eLE LE	21 19 22 R 21.8 25.7 29.0 21 30.7	Mexico aftershock 16 1/2 N., 99 W. 4200 km



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
August 18	iPZ	21 51 36	North Kurile Islands
	SN	21 58.9	50 N. 157 E. 5600 km
August 19	SKSE	11 58.1	Solomon Islands foreshock
	SE	11 59.3	10 S., 161 E. 10,000 km. Mag. 6 1/2 P
August 19	PZ	21 38 21	Fox Islands
	eSE?	43.7	51 1/2 N., 171 W.
	LE	47.4	3400 km
	eLE	21 51.1	
August 19	eNEZ	22 23.0	Regional?
	iNE	25.5	
	iNE	22 31.2	
August 20	ePZ	12 14 54	Solomon Islands
	SE	25.4	10 S., 161 E.
	eE	27.4	10,000 km Mag. 6 1/2 P
	LE	12 44.8	
August 20	ePZ	22 23 57	Andreanof Islands 52 N., 173 W. 3600 km
August 21	PZ	17 50 36	Samoa Islands 15 S., 173 1/2 W. 8700 km
August 21	PZ	19 38 32	Fox Islands
	LE	19 46.7	51 1/2 N., 171 W. 3400 km
August 22	eZ	12 54 31	P type waves
	eLE	12 54 58	
August 23	PZ	2 13 22	New Britain aftershock
	SKSE?	23.4	6 S., 154 1/2 E.
	SN?	24.7	10,000 km. Mag. 6 1/2 P
	PSE?	25.7	
	SSE	30.2	
	LE	2 42.1	
August 23	iPZ	11 55 31 C	Off E. coast of Formosa 24 N., 122 E. 9700 km
August 23	eSE	13 57.5	Solomon Islands 6 S., 154 E. 10,100 km.
August 23	eLE	15 29.7	Revilla Ggedo Island 1100 km
August 26	iPZ	11 41 28	Southern Bolivia
	iSNE	11 52 03	19 S., 63 W.
	LE	12 19.6	9400 km. Mag. 6 1/4+ P



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
August 26	PZ	14 09 07	Near coast of Ecuador 12 S., 81 W. 7800 km. Mag. 6 P
	iZ	09 12	
	iZ	09 31	
	SNE	17.4	
	eE	29.4	
	LNE	14 35.5	
August 27	P?ZNE	10 40 30.5	
August 27	PZNE	17 48 59.0	Regional?
	LNE	17 51.2	
August 27	iPN	20 43 51.7	Regional?
	LNE	20 46.2	
August 28	iPN	23 34 19.0	Marianas Islands 21 N., 145 E. 8500 km
	eSE	23 44.3	
August 29	iPZ	0 02 12	Same as preceding report
	iZ	0 02 19	
August 29	iPZ	1 09 46	Same as preceding report.
August 29	PZ	16 52 24?	Same as preceding report.
August 31	PZ	12 13 11	Outer Mongolia 49 N., 100 E. 8600 km
September 2	PZ	0 11 54 R	Marianas Islands 18 N., 147 1/2 E. 8600 km.
	eSNE	21.7	
	eLE	0 37.7	
September 2	PZ	9 58 29	Samoa Islands 15 S., 173 1/2 W. 8600 km Mag. 6+ B
	SNE	10 08 18	
	eLE	10 21.2	
September 2	iPZ	14 26 21 C	Fox Island 51 1/2 N., 168 W. 3300 km
	PPZ	27 15	
	eSNE	31.3	
	LE	14 34.5	
September 2	ePZ	18 16 03	
	eLE	18 19.5	
September 3	eLE	8 04.5	Fox Islands
September 3	ePZ?	16 40 20	
	PZ	40 25	
	eZ	40 22	
	SE	42 34	
	LE	16 43 20	



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
September 5	ePZ? SNE?	1 36 25 1 36 29.5	Weak. Regional?
September 6	iPZ	0 30 12 C	Chili-Bolivia Border 20 S., 68 W. h-100 km 9300 km
September 7	PZ	6 57 41	Northern Kurile Islands 50 N., 156 E. 5700 km
September 7	iPZ iSNE LNE	10 13 52 19 34 10 24.5	Andreanof Islands 51 1/2 N., 173 1/2 W. 3900 km
September 9	eP'Z eP'2Z eLEN eLEN	0 33 31 0 34 02 1 30.3 1 35.3	Southern Indian Ocean 45 S, 100 E. 1700 km Microseisms heavy but phase clear
September 9	iPZ eE eLE	9 12 44 C 9 23.8 9 35.0	Fiji Island region 15 S., 176 1/2 W. 9450 km
September 9	eLE	17 53	
September 11	ePZ	16 19 58	Seismic?
September 11	iPZ iZ eE iS?NE	23 34 09 34 34 44.6 23 45 45	Samoa Island Region 16 S., 172 W. 8700 km
September 12	iPZ eZ eLEN	0 36 03 37 55 0 52.0	100 mi. N. of Honduras 17 1/2 N., 85 W. 4700 km
September 12	iPZ iSNE	23 03 43.2 R 23 04 04.9	Regional. Trace A 18mm
September 14	iPZ iSNE	3 21 13.5 3 21 29.8	Regional. Trace A 40mm
September 14	ePZ	17 17 07	Near coast of Ecuador 1 1/2 S., 80 1/2 W. 6750 km.
September 15	iPZ	4 40 56	Near coast of Java 5 1/2 S., 108 E. h-300 km. 13,400 km
September 15	ePZ eLNE	22 14.7 22 24	Andreanof Islands 51 N., 174 1/2 W. 3600 km



Date	Phase	Time (G.C.T.) h. m. s.	Record
1957			
September 17	eP?Z	6 39.2	
September 18	eP?Z	4 47 03	
September 19	ePZ eLNE	13 48 12 13 56.4	Fox Islands 52 N., 168 W. 3300 km
September 20	eZ eE	7 52.5 7 53.0	
September 21	eZ	0 13 56	
September 21	iPZ	4 44 41	
September 24	iPZ iZ ePPZ iSNE PPSNE eSSE eLgE LrE	8 34 55 35 06 38.7 46 05 48.3 53.2 9 01.5 9 07.6	Near S. coast of Mindanao, P.I. 51 1/2 N., 127 1/2 E. 11,200 km. Mag 7 3/4 P
September 24	eZ iZ iSE	18 36 51 37 02 18 37 08	Regional. Trace a 2 mm
September 25	SE LE LE	6 10.3 6 21.5 6 25.7	Near Azores Islands 34 N., 38 1/2 W. 6800 km. Mag. 6 1/4+ P
September 25	eZ iZ eN	16 32 26 33 20 16 29.5	Regional? Weak
September 26	eE LE	8 27.6 8 28.7	Near Coast of Chiapas, Mexico. Z not operating
September 27	ePNE eLNE	5 05.9 5 18.5	Eastern Siberia 64 N., 178 E. 3950 km Z not operating
September 28	iPZ iSN iSN	0 38 23.2 27.5 0 38 28.8	Regional. Heavy microseisms.
September 28	iPZ iSE	14 31 37 R 14 41 07	Fiji Islands 20 1/2 S., 178 W. h-650 9500 km. Mag 7 1/2 P
September 29	iPZ eSE	8 25 27 8 35.5	Fiji Islands 25 S., 178 1/2 W. h-600 km 10,100 km. Mag. 6 1/4 B



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
October 2	ePZ eSN LN LN	12 38 20 46.9 12 58.1 13 01.5	Venezuela foreshock 11 N. 63 W. 6800 km. Mag. 6 1/2 P heavy microseisms
October 4	ePZ? iZ eN eSNE LE LN	5 36 21 36 26 43.8 44 46 51.7 5 56.4	North coast of Venezuela 11 N 63 W h-60 km 6800 km Mag. 6 3/4 P
October 4	iZ LNE	19 37 22 19 37.5	resembles P wave
October 7	iZ eE	14 28 38 14 29 43	Regional ? weak
October 10	eZ eLE? LE	18 59.8 19 04.5 19 14.4	Fiji Island region? 23 S, 179 W. h-400 km
October 11	eZNE	12 57 49	Regional?
October 16	iZ iZ	17 12 06 17 12 17	Regional?
October 19	iPZ iZ iSE LgE LrE	18 41 50 C 42 01 18 52 37 19 18.0 19 22.5	Near coast of Formosa 23 1/2 N., 122 E. 9800 km Mag. 6 1/2 P
October 19	iPZN	21 51 56 C	Off N.E. coast of Hakkaido, 44 1/2 N., 146 E. Japan h-150 km 6600 km. Mag. 6 1/2 P
October 20	ePZ eSE eLNE	12 16 27 26.0 12 41.7	Atlantic Ocean 11 1/2 N. 42 W. 8300 km.
October 24	iPZ	9 19 12 C	Fiji Islands 20 1/2 S., 179 W. h-550 km 9700 km.
October 25	eE eLE	0 59.5 1 06.0	
October 24	ePZ iSN LgE LrN	21 50 00 54 43 57.0 21 58.2	Gulf of California 25 N., 109 1/2 W. 2700 km Mag 6 P



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
October 25	eP?Z iSE	10 42 30 10 49 52	
October 26	iPZ	8 37 54	Fiji Islands 20 1/2 S., 178 W. h-600 km 9600 km Mag. 6 1/2 P
October 27	iPZ iSNE LNE	22 40 52 R 47 27 22 51.0	Kamchatka 56 N., 161 E. 5100 km. Mag. 6 1/2 P
October 28	eLNE	14 39.7	Off coast of Oaxaca, Mexico
October 29	ePZ iSNE	15 30 19 15 30 34	Regional, weak Felt at Elbe
October 30	eLE	6 27.2	
October 31	ePZ	2 50 33	Honshu Islands 39 N. 140 E. 7300 km
October 31	iPZ iSE LNE	10 17 17 R 24 51 10 36.5	Off coast of Panama 6 1/2 N., 83 W. 6000 km. Mag. 6 1/2 P
November 1	iPZ iSNE iLNE	10 12 21.7 R 12 38.0 10 12 46.5	Packwood, S. of Mt. Rainier MM-6 Felt at Longmire and Randle, very light at Seattle and Granite Falls. Trace A 50mm
November 1	ePZ iSNE	10 32 48.3 10 33 04.0	Aftershock, Felt Trace A 5 mm
November 1	ePZ iSNE	11 06 53.0 11 07 09.8	Aftershock, Trace A 3 mm
November 2	iZ	7 30 32	Near coast of Chiapas, Mexico 15 N., 93 1/2 W. h-100 km 4550 km Heavy microseisms
November 4	iPNE iSNE	6 59 53.5 6 59 58.3	No PZ recorded. Possibly shallow local tremor. Trace A 4 mm. Duration 60 sec. SWW P impulse
November 7	iPZ	19 58 24 C	Andreanof Islands 51 N. 178 1/2 W. 3900 km
November 7	ePZ eZ	13 10 22 11 08	South Pacific Ocean 24 S. 112 1/2 W. 8100 km



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
November 10	eSE eLE	3 00.1 3 19.1	Solomon Islands 7 S., 155 1/2 E. 10,000 km. Micros. obscure P
November 10	eZ	5 41.0	Tonga Island region 24 1/2 S., 175 1/2 W. 9600 km
November 10	PZ	19 31 06 R	Near coast of Honshu Islands 34 N., 139 1/2 E. 7700 km
November 11	eZ eNE	7 54.2 7 54.9	Montana 46 1/2 N., 112 W.
November 16	PZ	1 55 45	Andreanof Islands 51 1/2 N., 177 W. 3800 km.
November 16	eLE	23 56.6	
November 17	iPZ iZ iSNE	6 01 14.1 C 15.9 6 02 00.0	Probably off coast of Oregon MM-5 at Corvallis, Oregon Weak C
November 17	eLE	6 54.1	Baja California 4300 km Mag. 5 P
November 18	ePZ	10 19.2	Andreanof Islands 51 1/2 N., 179 1/2 W. 4000 km
November 20	eP?Z PZ iEZ eE	12 46 14 46 25 46 29 12 50.8	Unimak Island 54 N., 165 W. 3000 km. Mag. 6 1/4 B No clear S wave
November 23	eZ	1 04.7	Fox Island 52 1/2 N., 168 W.
November 25	iPZ iN iZN	9 17 57.8 18 05.6 9 18 12.2	Local
November 25	iPZ eE eSEN eLE LE	18 56 49 R 57.02 57.8 58.26 18 59 12	Off coast of Oregon 44 N., 130 W. 700 km No clear S weak R
November 25	ePZ eE LNE	20 34.0 35 14 20 36.0	Oregon aftershock 44 1/2 N., 129 1/2 W. Heavy microseisms



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
November 25	eLNE	22 21.0	Oregon aftershock 45 N., 130 W. Heavy microseisms
November 26	ePZ	11 42 47	Andreanof Islands 51 1/2 N., 176 W. 3750 km Heavy microseisms
November 29	iPZ iZ eEN iSNE iE	22 31 54 R? 31 59 R 32 04 42 08 22 43 58	Southern Bolivia-Chile 22 S., 66 W. h-200 km 9700 km. Mag. 7 3/4 P First R extremely small followed by large C
December 3	iPZ	1 53 12 C	Andreanof Islands 51 1/2 N., 178 W. 3900 km
December 4	e?Z iPZ iZ eNE iSE	3 49 56 50 05 C 50 09 3 50 13 4 00 26	Outer Mongolia 45 1/2 N., 99 1/2 E. 8800 km. Mag 7.9 P Doubtful if first movement is weak P or a microseisms Press reports 150 mile fault
December 9	iPZ SE LN iLE	22 12 05 C 16 11 17.7 22 18 04	Yukon 65 1/2 N. 133 W 2100 km
December 10	ePZ eSE eSSE eLE	14 49 18 15 00 00 15 06.3 15 16.5	Solomon Islands 6 S., 154 1/2 W. 10,000 km. Mag. 6 3/4 P
December 13	iPZ	1 41 33 C	Colombia, S. A. 7 N., 76 W. 6300 km. Mag. 6 3/4 P No S waves
December 13	PZ SKSN SN PSN	1 58 40 R? 2 09 22 2 09 58 2 10 54	Iran. 1,062 killed 34 1/2 N., 48 E. 10,700 km. Mag. 7 1/4 P
December 13	ePZ eSE	20 32 44 20 37 43	Fox Islands 52 1/2 N., 170 W. 3300 km
December 16	iPZ iZ iSE iE LN	17 28 47.5 C 29 28 29 53 30 01 17 30 06	Vancouver Island 50 N., 127 W. 450 km



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
December 17	ePZ eSE?	5 19.5 5 25.5	Near east coast Kamchatka 43 1/2 N., 162 E. 5200 km. Mag. 6 3/4 P
December 17	ePZ SE eE	14 02 52 13 08 14 13 35	Santa Cruz Islands 12 S., 167 E. 9700 km. Mag. 7 3/4 P
			Heavy microseisms throughout remainder of the month.

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? ref.

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

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SEISMOLOGICAL BULLETIN NO. 11

REGISTRATION OF EARTHQUAKES AT SEATTLE, 1957

By  
Frank Neumann  
and  
Norman Rasmussen

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UNIVERSITY OF WASHINGTON, GEOLOGY DEPARTMENT

October, 1962





STATION CONSTANTS

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

INSTRUMENTAL CONSTANTS - 1957

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, 1957

$T_s = 15.0$  sec.      $T_g = 1.4$  sec. to February 22, 1957;  $T_g = 5.2$  sec. thereafter.  
 $h_g = 1.0$  approx.  
System nearly critically damped  
Max. V approx. 1200



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

January 1 to December 31, 1957

$T_s = 15.0$  sec.  $T_g = 1.4$  sec. to February 22, 1957;  $T_g = 7.9$  sec. thereafter

$h_g = 1.0$  approx.

System nearly critically damped

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
		h.	m.	s.	
1957					
Jan. 2	ePZ eS,LNE LE	0	45	41 50.6 0 53.0	Fox Islands 53 N., 168 W., 3200 km. Mag. $6\frac{1}{2}+$ (P) In all Aleutian Is. shocks S and L are indistinguishable.
Jan. 2	ePZ iNZ eS,LE	2	23	49 24 12 2 28.8	Fox Islands 53 N., 168 W., 3200 km. Mag. $6\frac{3}{4} +$ (P) In all Aleutian Is. shocks S and L are indistinguishable.
Jan. 2	ePZ iN eS,LNE LE LE	3	19	09 19 17 23.2 23.6 3 28.0	Fox Islands 53 N., 168 W., 3200 km. Mag. 7 (P) In all Aleutian Is. shocks S and L are indistinguishable.
Jan. 2	ePZ eN eS,LE LE	3	54	58 55 08 3 59.3 4 00.1	Fox Islands 53 N., 168 W., 3200 km. Mag. 7+ (P) In all Aleutian Is. shocks S and L are indistinguishable.
Jan. 2	ePZ	4	09	42	Fox Islands Other phases lost in end portion of preceding shock.
Jan. 2	ePZ eN eLE eLE	10	55	46 55.9 11 01.6 11 04.3	Fox Islands 53 N., 168 W., 3200 km. Mag. $6\frac{1}{2}$ (P) In all Aleutian Is. shocks S and L are indistinguishable.
Jan. 3	iPZNE iSE	12	58	38 C 13 07 00	Southern Manchuria 44 N., 130 E. h-600 km. 7500 km. Mag. 7 (P)
Jan. 3	iPZ	13	53	41 C	Aftershock



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
Jan. 8	iPZ iSNE	13 46 22.8 13 46 31.6	Port Townsend, 15 mi. S. 47 53 N., 122 47 W. Trace Ampl. 2.5 mm.
Jan. 9	ePZ eN LE	7 59 08 8 04 26 8 07 30	Fox Islands 53 N., 167 $\frac{1}{2}$ W., 3200 km. Mag. 6 $\frac{1}{4}$ + (P,B)
Jan. 17	iPZ	22 37 42 C	South of Honshu, Japan 33 N., 137 $\frac{1}{2}$ E, 8000 km.
Jan. 19	PZ	5 28 15	Fiji Islands. 20 $\frac{1}{2}$ S., 179 W. h-600 km. 9700 km. Mag 6 $\frac{1}{2}$ (B)
Jan. 21	iPZ iSN?	8 21 48.8 8 21 54.8	Regional?
Jan. 22	eZ eLNEZ	23 39 42.5 23 40 38	Regional?
Jan. 24	eLE	7 55.3	Near Coast of Peru? 12 $\frac{1}{2}$ S. 78 W. 8000 km.
Jan. 24	PZ eNE	17 05 19 17 05.5	Gulf of California 25 $\frac{1}{2}$ N., 109 $\frac{1}{2}$ W.
Jan. 24	eLE	15 13.2	Southern Gulf of California. 25 $\frac{1}{2}$ N. 109 $\frac{1}{2}$ W. 2800 km.
Jan. 24	eLE	16 44.3	See preceding report.
Jan. 24	eLE	17 13.3	See preceding report.
Jan. 25	iPZ iSE LE	3 43 46.0 R 49 08 4 01.5	Andreanof Island. 51 $\frac{1}{2}$ N. 177 W. 3800 km. 6 $\frac{1}{2}$ P.
Jan. 26	iPZNE iSNE	1 16 21.7 1 16 32.8	Seattle, Washington, MM-4 75 km.+ Skagit Bay 48 20 N., 122 31 W.
Jan. 27	iZ iSNE eLZ	6 33 14.0 33 21.9 6 33 27.0	Regional



Date	Phase	Time (G.C.T.)			Remarks
		h.	m.	s.	
1957					
Jan. 28	eLNE	3	30		Short-period waves.
Jan. 28	iPZ	8	28	20	Samoa Is. region
	eZ		28	29	
Feb. 3	iPN	17	33	32	Kamchatka 53½ N., 159 E. 5300 km. Mag. 6½+ P
	eSE	17	40	30	
Feb. 3	eZ	23	07	05	Aftershock
	eSE	23	14.	6	
Feb. 5	eZ	5	02	27	Mid Atlantic Ocean 25½ N., 45½ W. 6850 km.
	eLE	5	25		
Feb. 6	eN	13	16.	8	Galapagos Is. 2 N., 91 W. 5950 km. Mag. 6 P Weak preliminaries.
	eLE	13	29	30	
Feb. 6	iPZ	20	46	44	Lake Baikal Region USSR 50 N. 106 E. 8100 km.
Feb. 7	ePZ	18	15	44	Off Vancouver Island 50 N. 130 W. 500 km. No S wave
	eN		17	34	
	LE	18	18	27	
Feb. 9.	ePZ	16	39	54	Near N. California Coast 41½ N.; 126 W. 800 km. Mag. 6¼+ P 5¼ B
	eSN		41	10	
	eNE		41.	4	
	eLN		41	41	
	eLE	16	42	10	
Feb. 10	L	23	--	--	L Waves only. Heavy microseisms mask preliminaries. P. I.?
Feb. 11	L	1	--	--	See preceding report
Feb. 11	iPZ	17	05	04	Mt. Si near North Bend. MM-5 47°32'N., 121° 44 W. 45 km.
	iN			07	
	iSNE	17	05	10	
Feb. 13	iPZ	12	49	53	New Hebrides Is. 18 S., 170 E. 10,000 km.



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
Feb. 17	iPZ eNE eLE	15 54 04 16 07.2 16 07.7	Oaxaca, Mexico 16 N. $96\frac{1}{2}$ W h-60 km 4300 km Mag. $5\frac{3}{4}$ +P
Feb. 18	e	1 16 10	
Feb. 18	ePZ?	15 00 01	Mid Atlantic Ocean $25\frac{1}{2}$ N, $45\frac{1}{2}$ W 6800 km. Mag $6\frac{1}{4}$ +P
Feb. 18	eZ iZ	16 22 03 16 22 10	
Feb. 19	iPZ	0 01 04	Peru?
Feb. 21	iPZ eSE	14 36 24 14 41.4	Fox Islands, Aleutians 53 N., 171 W. h 100 km 3300 km. Heavy micros
Feb. 23	eZ iPZ eSE eLE LE	13 18 06 18 11 19 07 19 23 13 20 41	Off Vancouver Islands 49 N. 129 W. 500 km.
Feb. 23	iPZ iZ iZ SNE	20 39 07 39 13 39 40 20 49 36	Formosa. 24 N. 122 E. 9700 km. Mag. 7+P 11 killed
March 2	e	0 36 --	Jamaica. $18\frac{1}{2}$ N. 78W. Heavy microseisms. 3 killed.
March 2	e	8 23	Near New Britain 6 S. 151 E. 10,300 km.
March 3	e	3 26	Off Mexico. $8\frac{1}{2}$ W. 103 W Mag. $5\frac{3}{4}$ P
March 8	e	12 26	Eastern Greece. $39\frac{1}{2}$ N. 23 E. 3 killed
March 9	ePZ iZ eSE	14 29 24 29 33 14 34.7	Andreanof Islands, Aleutians 51 N. 175 W. 3750 km. Mag. 8+P Seismic Sea wave damaged Hawaii



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
March 9	ePZ	19 44 16	Andreanof Islands
	eZ	44 25	51 $\frac{1}{2}$ N. 173 W
	eSE?	19 50 47	3600 km.
March 9	iPZ	20 45 38	Fox Islands
	eZ	45 48	52 $\frac{1}{2}$ N, 169 $\frac{1}{2}$ W.
	iSE	20 50 35	3350 km. Mag. 6 $\frac{3}{4}$ +P
March 10	PZ	3 12 58	Andreanof Islands
	iSE	3 18 18	52 N. 176 W. 3950 km. Mag. 6 $\frac{1}{2}$ +P
March 11	ePZ	3 19 42	Andreanof Islands
	eZ	20 03	51 N. 177 W.
	iSNE	3 25 28	3850 km. Mag. 6 $\frac{3}{4}$ +P
March 11	PZ	4 12 12	Andreanof Islands
			51 N. 177 W. 3850 km.
March 11	iPZ	10 05 00	Fox Islands
	iSE	10 10 02	53 N., 164 $\frac{1}{2}$ W. 3000 km.
March 11	iPZ	15 02 27	Andreanof Islands
	iSNE	15 08 08	51 $\frac{1}{2}$ N. 178 $\frac{1}{2}$ W. 4000 km.
March 11	PZ	15 43 03 (R)	Andreanof Islands
	iSE	15 48 46	51 $\frac{1}{2}$ N. 178W. 3950 km. Mag. 6 $\frac{1}{2}$ P
March 12	iPZ	7 35 31 (C)	Andreanof Islands
	eSNE	7 40 50	51 $\frac{1}{2}$ N., 173 $\frac{1}{2}$ W 3600 km. Mag. 6 $\frac{1}{4}$ +P
March 12	iPZ	7 46 22 (R)	Andreanof Islands
	eSNE	7 51.3	52 N. 178 W 3900 km. Mag. 6 $\frac{1}{4}$ P
March 12	iPZ	8 10 18	Andreanof Islands
	eSN?	8 15.8	51 $\frac{1}{2}$ N. 178 W. 3900 km.
March 12	ePZ	11 51 51	Andreanof Islands
	iZ	51 53	51 N. 177 W.
	iSNE	11 57 40	3900 km. Mag. 7 P
March 13	ePZ	2 55 25	Andreanof Islands
	LE	3 05.3	52 N. 171 $\frac{1}{2}$ W. 3500 km.



Date	Phase	Time (G.C.T.)			Remarks
		h.	m.	s.	
1957					
March 13	ePZ	3	40	05	Andreanof Islands 52 N., 175 W. 3700 km.
March 13	iPZ iSNE	15 15	49 54	14 (C) 54	Andreanof Islands 51 1/2 N, 179 W 4000 km. Mag. 6 3/4 P
March 13	iPZ eSN eE	20 20 20	05 11.0 11	17 0 48	Unimak Island region 54 N. 165 W.
March 14	iPZ iSN	14 15	54 00	42 30	Andreanof Islands 51 1/2 N., 177 W. 4500 km. Mag. 7 1/2 P
March 15	ePZ eSE	2 3	58 03	18 05	Fox Islands 53 N. 167 W. 3200 km. Mag. 6 3/4 P
March 15	ePZ	4	20	03	S lost in waves of preceding earthquake
March 15	iPZ	12	04	04	Andreanof Islands 51 N, 173 W. Weak No. S Waves
March 16	ePZ	0	37	53	Northern Iran 55 N. 53 E.
March 16	iPZ SNE	2 2	41 47	21 05	Andreanof Islands 52 N. 179 W. 4000 km. Mag. 6 3/4 P
March 17	iPZ	7	10	52	Fox Islands 52 1/2 N. 169 W. 3300 km
March 17	iPZ eSE	8 8	01 06	03 47	Andreanof Islands 51 N. 179 W. 4000 km
March 17	ePZ	9	59	05	
March 17	iPZ eLE	16 16	23 30	12 (C) 05	Fox Islands 52 1/2 N. 166 W. 3100 km.
March 17	iPZ eSN eSE	22 22 22	50 55 55.3	37 27 3	Fox Island 54 N. 166 W. 3100 km. Mag. 6 1/2 P
March 17	iPZ	23	01	42 (C)	Weak



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
March 18	ePZ	0 19 23	Andreanof Islands 51 N. 179 1/2 W. 4000 km
March 18	PZ eSE iSE	2 31 52 37.0 2 37 12	Fox Island 52 1/2 N. 171 W. 3500 km
March 18	iPZ	2 38 24	
March 18	iPZ eLE	5 15 43 5 27.0	Andreanof Island 51 1/2 N. 179 W. 4000 km
March 18	PZ	19 00 00	
March 18	ePZ	20 11 00	
March 19	ePZ	8 20 18	Fox Islands 52 N. 169 W. 3300 km.
March 19	iPZ	11 35 48	Andreanof Islands 51 1/2 N., 176 1/4 W. 3900 km
March 19	iPZ eE eSN eSE	12 57 41 (R) 58 12 13 02 16 13 02.4	Andreanof Island 51 1/2 N. 175 W 3700 km. Mag. 6 1/4+P
March 19	iPZ	15 53 58	Fox Island 52 N. 172 1/2 W. 3500 km.
March 19	PZ	17 11 07 (R)	Fox Island 52 1/2 N. 171 W. 3500 km.
March 20	ePZ	2 28 34	
March 20	eSE?	11 18 20	Andreanof Island 52 N. 172 W. 3600 km.
March 20	iPZ	13 08 15 (C)	
March 20	ePZ	19 46 30	
March 21	eSE?	11 08.5	
March 22	iPZ iSE	14 27 03 14 31 48	Fox Island 52 1/2 N. 171 W. 3500 km.
March 22	PZ	17 16 15	Same as preceding report



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
March 22	iPnZ iSnN iLN iLE	19 46 49 (C) 48 37 49 38 19 50 20	Northern California San Francisco, 37.9 N. 122.6 W MM-7 1120 km. Mag. 5 1/4+P
March 23	iPZ eZ eE eSEZ	5 26 39 29 50 31.9 5 37 10	Banda Sea region 5 1/2 S, 131 E. h-100 km. 9800 km. Mag. 7 P
March 23	1PZ?	13 01 32 (R)	
March 23	1PZ	13 47 07 R	Andreanof Islands 51 N 179 1/2 W 4000 km.
March 24	1PZ iSE? eSE LE iLN	8 24 01 C 25 21 25 28 25 50 8 26.1	Near No. Coast of Vancouver Island. 51 N. 130 W. 650 km. Mag. 6 3/4+P
March 25	ePZ?	1 11.0	Andreanof Island 52 N. 176 W. Heavy microseisms
March 25	1PZ	14 19 27 (C)	Fox Island, Aleution Islands 54 N. 165 1/2 W.
March 26	ePZ eSNE	3 11 48 3 16.7	Fox Island 51 1/2 N. 170 W. 3400 km
March 28	eZ	20 15.0	
March 29	iPZ eZ iSE	5 16 30 (C) 17 05 5 21 22	Fox Island 53 1/2 N. 167 W. 3200 km
March 29	ePN? SE? LE	23 56.3 24 01.0 24 05.0	Very heavy microseisms
March 30	ePZ	6 44 14	Andreanof Island
March 30	iPZ	9 23 48	Andreanof Island 52 N. 175 W.
March 31	ePZ eSE? LE	2 24 33 2 25 55 2 26 33	Off coast of Oregon 43 1/2 N., 127 1/2 W. 750 km.



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
April 1	ePZ LE	11 42 10 11 51.0	Andreanof Island 51 N, 173 W. 3700 km.
April 2	iPZ LE	0 46 22 0 55	Same as preceding report
April 2	ePNE LNE	20 24.0 20 33	Andreanof Island 51 1/2 N., 173 W. 3700 km Z record lost
April 2	ePNE LNE	21 34.7 21.43	Andreanof Island 51 N. 173 W. 3700 km. Z record lost
April 4	iPZ iZ iSN	0 17 56 18 18 0 22 45	Near Coast of Alaska Peninsula 58 N., 155 1/2 W. h-150 km. 2400 km.
April 5	ePNE eSE? eLE	2 56.3 3 01.3 3 04.5	Fox Island 52 N. 172 1/2 W. 3200 km. Mag. 6 1/2P PZ lost in heavy microseisms
April 5	iPZ	7 43 38	Kermadec Island 22 1/2 S., 177 W. h-100 km 10,000 km. Mag. 6 3/4 P
April 5	ePZ	16 30 25	Near Coast of Nicaragua 12 1/2 N., 88 W. h-100 km. 5100 km.
April 8	eZ	20 27.3	Panama Costa Rica Border 8 1/2 N., 83 W. 5900 km. Mag. 6 1/2P Felt
April 9	iPZ iSEZ	0 35 33 R 0 44 33	Off S. Coast of Honshu Island, Japan 30 1/2 N., 138 1/2 E. h-450 km. 8200 km. Mag 6 3/4 P
April 9	iPZ	2 28 55 R	Marianas Islands 22 1/2 N., 144 1/2 E. 8400 km.
April 9	iPZ eSE eLE	11 09 20 C 51.1 11 17.7	Andreanof Island 51 1/2 N., 178 1/2 W 3900 km. 3900 km.
April 9	eZ eZ	12 59.5 13 00 29	



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
April 9	PZ	17 47 21	Andreanof Islands 51 1/2 N., 179 1/2 W 4000 km
April 9	PZ eSE eLE	20 30 18 35 24 20 38.1	Fox Islands 52 1/2 N. 169 W 3300 km
April 9	iPZ	22 56 45	Andreanof Islands 51 1/2 N., 177 W 3800 km
April 10	iPZ	3 31 26 C	Andreanof Islands 53 N, 168 W 3200 km
April 10	iPZ eSNE LNEZ	5 19 28 RC 25 37 33.0	Near coast of Oaxaco, Mexico 15 1/2 N, 98 W 4300 km Mag 6 3/4 P r indicates an amplitude so small that it is questionable
April 10	iPZ	9 16 18 R	Andreanof Islands 51 N., 177 W. 3800 km
April 10	ePZ iN iSE iLE	11 34 47 R 35 23 37 35 11 38 31	Kodiak Islands 56 N, 154 W 2300 km. Mag. 7 P
April 11	eZ	1 22.4	
April 11	PZ	7 04 25	Samoa Islands 8600 km
April 11	ePZ eLE	17 46 50 18 25	Fox Islands 52 N. 168 1/2 W. 3200 km
April 12	iPZ	4 24 52 C	Andreanof Islands 52 N. 178 1/2 W 3900 km
April 13	iPZ? eNE eLN	2 37 52 38 40 2 39.8	
April 13	iPZ eE iSN iZ eLNE	3 45 08 C 45 50 46 02 46 17 3 46.7	Off Vancouver Island 48 1/2 N. 128 W. 400 km
April 14	iPZ iSNE LgNE	19 30 03 39 53 19 53.5	Soemoa Islands 15 1/2 S., 173 W. 8600 km Mag. 8 P P badly obscured by microseisms



Date	Phase	Time		Remarks
		(G.C.T.)		
1957		h.	m. s.	
April 15	PZ	21	39 08 C	Fox Islands
	eE		45.7	52 1/2 N., 167 W. 3200 km
	LE	21	47.3	
April 16	iPZ	4	21 55 R	Western Java Sea
	ipPZ		24 11	4 1/2 So, 107 1/2 E. h-600 km
	eN		25 25	13,200 km. Mag. 7 1/2 P
	SN?		29 28	
	eN		32.3	
	eN		35.0	
	eN	4	38.8	
April 17	ePZ	4	40.7	Kodiak Island region 56 N, 154 W 2300 km
April 17	iPZ	8	20 10	Tonga Island
	iN		20 23	20 S, 176 W h-200 km.
	iZ	8	20 55	9400 km
April 17	PZ?	13	31 11	Fox Islands
	iPZ		31 17	52 1/2 N, 169 W
	iN		34 17	3300 km.
	eSNE		36 10	
	eLE	13	39.3	
April 17	iPZ	18	17 15 C	Mexico-Guatemala border
	eSE		24 25	14 1/2 N, 92 W 4500 km
	eLE	18	33.3	
April 18	PZ	0	22 49	Fox Islands 52 No, 171 W 3400 km
April 18	iPZ	7	06 57	Andreanof Islands
	iNE		07 22	51 1/2 N, 176 W 3800 km
	eSNE	7	12 22	
April 19	iPZ	15	51 05 R.	Fox Islands
	eN		56.6	51 1/2 N, 168 1/2 W. 3300 km
	eN		58.7	
	eLNE	15	59.2	
April 19	iPZ	22	25 29 R	Fox Islands
	iSE?		29 13	52 1/2 N, 166 1/2 W
	eE		30.3	3000 km Mag. 7 P
	eLZ		33.3	
	eLNE	22	34.4	
April 20	PZ	12	44 06	Near coast of New Guinea
	eLE	13	19.0	6 S, 147 1/2 E 10,600 km



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
April 21	ePZ iPZ eSE eE eE	21 22 25 22 33 29 30 31.0 21 38.3	Columbia-Venezuela border 7 N 72 W 6600 km Mag 6 1/2 P
April 24	iPZ SE? SN LNE	19 23 27 C 33 44 19 33 52 19 58	Turkey foreshock 36 N., 28 1/2 E. 10,200 km Mag 6 3/4 P
April 25	iPZ SNE iSZ LEN	2 38 48 C 49 19 49 33 3 08	Near south coast of Turkey 36 1/2 N 29 E 10,000 km Mag 7 P
April 25	ePZ?	7 22 03	Andreanof Islands 52 N 173 1/3 W 3500 km
April 25	iPZ eSE eN eLE	14 12 17 C 16 04 19 34 14 20 05	Near south coast of Alaska 60 1/2 N 145 W 2000 km
April 25	ePZ?	17 52 29	Andreanof Islands 51 1/2 N 180 W 4000 km
April 25	ePZ iLN LZE	22 01 26 06 10 22 06.5	Imperial County, California 33 N 115 1/2 W 1700 km Mag 5.4 P
April 25	PZ eSE? eN iLNZ LEZ	22 27 56 30.8 31.2 32 40 22 33.0	Imperial County, California. 33 1/2 N., 115 1/2 W. 1700 km Mag. 5.3 P
April 26	PZ eSNE eNZ eLNE	10 27 43 C 31.4 34 38 10 35 33	Near south coast of Alaska 60 N 147 W 2000 km
April 26	iPZ	15 18 26 C	Kurile Islands 45 N 148 E 6500 km
April 28	ePZ eSE? LE	14 55 14 15 00.2 15 04.3	Fox Islands 52 1/2 N 168 1/2 W 3300 km
April 29	PZ eSN LE	4 36 17 41.2 4 45.5	Fox Islands 52 1/2 N 168 1/2 W 3300 km P Weak



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
May 1	iPZ	23 34 34 C	Fox Islands 52 1/2 N 171 W      3400 km
May 2	iPZ iPPZ eSN? eIZN eLNEZ	4 02 25 rC 03 22 08 15 10 32 4 13.5	Bakkin Bay 72 N 67 1/2 W 3700 km r indicates an amplitude so small that it is questionable
May 2	iPZ eSE iLEN	11 35 29 C 40 20 11 45 21	Fox Islands 52 1/2 N 169 W      3300 km
May 2	eNE .iSKSNE eE	21 54.1 22 00 00 22 01 11	Flores Sea 7 1/2 S 120 E      h-600 km. 12,700 km. Z record lost
May 3	iPZ	7 17 43	Andreanof Islands 51 N 179 1/2 W      3900 km
May 3	pZ?	12 27 54	
May 4	iPZ iSNE	21 09 36.0 R 21 09 42.5	Puget Sound near Tacoma      MM-5 47° 21' N 122° 24' W U. W. epicenter
May 6	ePZ	11 24.9	Andreanof Islands 52 N 173 W      3600 km
May 6	PZ	11 26 26	Andreanof Islands 52 N 173 W      3600 km
May 7	iPZ	5 43 50 R	Andreanof Islands 51 1/2 N 179 1/2 W      4000 km
May 8	ePZ	20 21 38	Fiji Islands 15 1/2 S 179 E      9200 km
May 11	iPZ eN	7 37 31 C 37 39	Andreanof Islands 51 1/2 N 179 1/2 W      3900 km
May 12	PZ PPZNE	5 07 04 5 10 39	Sandwich Islands region 14,500 km PP has characteristics of short-period L waves
May 12	eP iSNE? LNE	7 32 47.3 32 49.8 7 32 57.0	Local, not felt S trace amplitude 4 mm
May 15	eP?Z	2 20.5	Chiapas, Mexico 17 1/2 N 95 1/2 W      h-100 km 4300 km



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
May 17	eZ	17 45.0	Chiapas, Mexico 4300 km 17 1/2 N., 93 1/2 W h-100 km.
May 17	eLNE	21 01.0	Revilla Gigedo Island region 3500 km
May 18	iPZ eLE iLE	5 30 32 rC 38.0 5 39.6	Fox Islands 51 N 171 W 3500 km r indicates an amplitude so small that it is questionable
May 20	ePZ eSE? eLE	1 58	Andreanof Islands 51 N 180 W 4100 km Vertical record lost
May 21	iPZ iZ iSNE eSZ	1 23 46 R 24 12 33 24 1 33.5	Marianas Islands 21 1/2 N 144 E 8500 km
May 21	ePZ LE LE	7 45 39.0 7 45 44 7 45 50	Local, trace a 3 mm. interpretation doubtful. P could be S wave
May 22	ePZ iPZ eSNE eLE eLE	13 36 46 36 50 42.5 45.1 13 47.0	Andreanof Islands 50 N 177 W 3900 km Mag 6 1/2 P
May 24	iPE eSN	2 47 42 2 55 45	Colombia 3 N 76 1/2 W 6800 km Mag 6 3/4 P Vertical record lost
May 24	ePE eSE eLNE	3 42.8 47 33 3 50.7	Fox Islands 53 N 167 1/2 W 3300 km Mag 6 B
May 26	ePZ eSE eZ LNE	6 46 35 57.1 57 32 7 17	Turkey, Bolu province, 53 deaths 41 N 31 E 9700 km
May 26	iPZ	9 49 36 R	Aftershock
May 29	iPE iSNE	9 35 11.0 9 35 21.5	Local, Near Cushman Lake 47° 31' N. 123° 10' W iP very sharp Z lost
May 30	iPZ	2 31 23	



Date	Phase	Time			Remarks
		(G.C.T.)			
		h.	m.	s.	
1957					
May 31	iPZ	2 28	39		Argentina
	eZ	30	44		27 1/2 S 63 W h-600 km
	eSE	2 38	39		10,300 km Mag 6 1/4 P
May 31	iPZ	22 07	41		Near Coast of Colombia
	eZ	08	13		3 1/2 N 77 W. h-100 km.
	eSE	22 15	46		6700 km.
May 31	iPZ	22 24	20		Andreanof Islands, Alaska
	eSNE	22 30.	1		51 N., 179 W. 4000 km.
June 1	eZ?	1 26	55		
	iZ	27	03		
	iZ	30	50		
	LE?	2 01.	1		
June 1	iPZ	16 08	30		Kenai Peninsula, Alaska
					59 1/2 N 150 W. 2500 km.
June 2	eZNE	12 01.	5		
June 4	iPZ	11 27	34 C		Santa Cruz Islands
					10 1/2 S., 166 1/2 E 9600 km.
June 4	iPZ	17 16	36 R		Fiji Islands
	iZ	18	40		17 1/2 S., 178 W. h-550 km.
	iSE	16 26	05		9300 km. Mag. 6 1/2+ P
June 5	ePE ?	1 37	24		
June 5	ePZ	8 31	40		Southern Alaska
					2500 km.
June 5	eLE	6 38			
June 5	iPZ	14 06	12 C		Off east coast of Kamachatka
	eZ	07	44		52 N., 162 1/2 E. 5200 km.
June 6	P?Z	5 45	08		Fox Islands, Alaska
	eZ	5 45	25		52 N., 171 1/2 W 3500 km.
June 7	ePZ	2 53	54		Andreanof Islands, Alaska
					51 1/2 N., 179 W. 4000 km.1
June 8	iSN	2 21	05.5		Regional shock.
					P not registered
June 8	iPZ	17 24	11 C		Tonga Islands
					16 1/2 S., 173 1/2 W. 8900 km.



Date	Phase	Time (G.C.T.)	Remarks
1957			
June 10	eZ	1 19.6	Sumbawa Island, East Indies
	iPN	19 57	9 S., 117 E. 1300 km
	iSKSE	25 27	Heavy microseisms obscure
	iSE	1 26 40	
June 10	iPZNE	3 25 29 R	Marianas Islands 13 1/2 N., 143 1/2 E. 9300 km. Mag. 6 3/4+ P
June 11	ePZ?	4 10 40	Unimak Island region 54 N., 165 W. 3000 km.
June 11	ePZ	15 02 54	Kermadec Islands
	eZ	03 17	30 S. 178 W. h-100 km
	eE	13 31	10,400 km. Mag. 6 3/4+ P
	eN	15 14 09	
June 12	eSE	0 06 20	Andreanof Islands
	LE	0 09	52 N., 176 W. 3800 km Short period records obscured by microseisms
June 12	iPZ	8 39 09	Near coast of Hokkaido 41 1/2 N., 142 1/4 E. 7050 km.
June 12	eE	19 17 20	Near coast of Luzon, P.I. 18 N., 120 1/2 E. 10,400 km. Short period records obscured by microseisms
June 13	ePZ	10 47 28	Andreanof Islands
	iZ	48 55	51 1/2 N., 176 W.
	iSE	52 56	3800 km Mag. 7 P
	iLE	10 55.4	
June 14	e?Z	6 31 12	Andreanof Islands
	iPZ	31 23	52 N., 175 W.
	iSEN	36 41	3800 km. Mag 6 1/4 B
	LE	6 39.4	
June 15	ePZ	1 04 35	Indian Ocean
	eZ	05.0	34 S., 56 E. 18,000 km. 6 P Heavy microseisms almost obscure P.
June 15	PZ	18 24 47 C	Fox Islands, Alaska
	eNE	18 25.0	52 N., 171 W. 3400 km.
June 17	iPZ	6 28 43 rC	Samoa Islands 55 S., 173 1/2 W. 8700 km. Mag 5 3/4 B



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
June 18	ePZ ePPZ	18 09 39 13 16	Loyalty Island region 25 S. 170 E. 10,600 km.
June 18	eZ iSNE LN	20 30 11 30 12.5 20 30 20	Regional
June 19	P?Z iPZ	1 42 37 1 42 43	Tonga Island 24 S., 175 1/2 W. 9700 km.
June 19	ePZ eZ eSN	8 14 02 19 8 24 37	Fiji Islands 16 1/2 S., 176 1/2 E. 9400 km. Mag. 6 1/2 P
June 20	iPZNE iSN	1 18 26 R 1 28 08	Marianas Islands 20 N., 145 1/2 E. 8500 km.
June 22	ePZ iZ eSN eSE LE	6 26 40 27 08 32 40 33.1 6 41	Near Coast of Chiapas, Mexico 16 N., 94 W 4400 km. Mag. 6 1/2 P
June 23	ePZ ePPZ eN ePPPZ eSKSE SE PSE	0 04 14 08 11 09 54 09.2 14.9 15 20 0 17 08	Near north Coast of New Guinea 1 1/2 S., 137 E. 10,900 km. Mag. 7 1/4 P
June 23	iPZ eN eLE iLN	3 30 22 C 33.7 34.1 3 34 38	Near Coast of S.E. Alaska 58 1/2 N., 137 W. 1600 km. Mag 5 1/2 B
June 27	iPZ iSE eLE	0 20 16 R 29 10 0 44.5	N.E. of Lake Baikal, Siberia 56 1/2 N., 116 E 7200 km. Mag. 7 1/2 P
June 29	iPZ eSE LE	7 54 19 59 25 8 02.0	Fox Island Region 51 1/2 N., 166 W. 3700 km
July 1	iP?Z iSN	5 41 58.1 5 41 01.3	Local
July 1	PZ ePPNEZ SKSNE eSE SSE	19 44 32 48.6 55 23 19 56 26 20 03.4	India-Burma border 25 N., 94 E 11,200 km



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
July 2	PZ iZ iSKSN? ePSN LE	0 55 55 56 12 1 06 37 08.8 1 27	Northern Iran 36 N., 53 E. 10,600 km. Mag. 7 1/4+ P
July 3	eLZE	9 17.3	Near coast of S.E. Alaska 58 N., 137 W. 1500 km.
July 3	iPZ eLE	12 31 51 C 12 40.5	Andreanof Islands 50 1/2 N., 179 W. 4000 km. Mag. 6+ P
July 4	iPZ	19 31 32	Marianas Islands 20 N., 146 E. 8500 km.
July 4	eP?Z eNE eN eNZ eE eN LNEZ LE	22 29 47 29.9 31.7 32.2 34.0 34.6 35.2 22 36.3	Arizona-Mexico Foreshock 32 N., 113 W. 2200 km Microseisms bad
July 4	LNEZ	23 37.2	Arizona-Mexico 31 N., 114 W. 2300 km
July 4	eE eN LEZ LNE	0 03.3 03.7 07.5 0 07.9	Arizona-Mexico 32 N., 114 W. 2200 km
July 5	eZ	12 49 11	Kermadec Islands 28 1/2 S., 179 W. 10,250 km
July 7	iPZ eSE eLE	16 24 18 16 35.3 16 54	Solomon Islands 6 1/2 S., 156 E. 10,000 km
July 8	iPZ iSN	5 25 05.9 5 25 13.0	Felt by Ranger in North Bend 50 km
July 9	PZ	15 38 15	Guatamala 14 1/2 N., 91 W. Mag 6 B Well defined P wave
July 9	eP'Z eZ	10 17 05 10 17 20	Sumatra. 6 S., 104 E. 13,600 km 4700 km



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
July 10	iPZ eSE eLNE	9 13 22 C 20 58 9 33.8	Panama 8 N., 82 1/2 W. 5800 km. Mag. 6 3/4 B
July 12	eLNE	11 31.4	
July 13	ePZ eSE LNE	1 05 50 10 52 1 15.4	Fox Island 52 N., 169 1/2 W 3400 km
July 13	iSNE	8 48 25.4	Local
July 13	PZ	9 44 06 C	Samoa Islands 15 S., 173 W. 8700 km
July 13	PZ	14 10 52	Samoa Islands 14 1/2 S., 173 1/2 W. 8700 km
July 14	iPZ PPE iSKSNE iSNE iPSE eLE	6 36 39 R 40 18 46 53 47 21 48 02 7 00.0	Tonga Islands 27 1/2 S., 177 W. 10,000 km. Mag. 7+ P
July 14	iPZ SKSNE SNE iZ ePSNE LE LNE	8 23 59C 34 35 35 09 35 24 35 42 54.6 8 59.9	Kermadec Island 30 S., 177 W 10,300 km. Mag. 6 3/4 P
July 14	PZ? iPZ	9 54 52 55 05	Tonga Islands 20 S., 174 1/2 W. 9200 km
July 15	LE	23 28.0	Very clear. Preliminaries lost in wind microseisms.
July 17	iPZ iZ eE? eSNE	11 22 54 23 25 33 10 33.3	Santa Cruz Islands 11 S., 167 E. 9500 km. Mag. 6 1/4+ P iZ is a major phase
July 18	eLNE	1 30	Fox Islands?
July 19	ePZ SE eE	13 14 55 25 18 13 25 33	Near North Coast of Formosa 25 N., 122 1/2 E.
July 19	PN	22 28 07	Regional?



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
July 20	PZ?	10 15 28	
July 20	iPZ	15 51 12 cR	Tonga Islands 19 1/2 S., 174 W. 9100 km. cR - Very small c, large
July 21	PZ eSNE eLNE	16 11 58 18 35 16 28.4	Near coast of Guatamala. 14 1/2 N., 92 W. h-100 km. 4600 km. Mag. 5 3/4+ B
July 22	eLE	14 13.5	Kermadec Islands?
July 23	iPZ iSN LE	0 52 10 0 57 45 0 00.5	Andreanof Islands 52 N., 177 W. 3900 km. Mag. 6 1/4+ P
July 23	iPZ	6 33 57	Loyalty Islands 20 1/3 S. 70 1/2 W. 10,200 km
July 24	ePZ SKSN SE	2 10 38 21 03 2 21 24	Central Chile-Argentine Border 30 S., 70 1/2 W. 10,100 km Mag. 6 1/2 P
July 24	PZ	10 10 10 C	New Hebrides Islands 18 S., 169 1/2 E. 10,000 km
July 24	PZ	11 00 32	Santiago del Estro Prov., Argentina 27 S., 65 W. 10,000 km.
July 24	ePZ SE PSN eLE	11 15 33 26 17 26 33 11 45	New Hebrides Islands 20 S., 169 E. 10,200 km. Mag 6 1/2 P
July 25	PZ SNE eN LE	7 49 25 55 00 55.4 7 57.8	Andreanof Islands 51 N., 177 W. 3900 km Mag. 6 1/4 B
July 25	iPZ iSNE	13 14 48.3 C 13 15 00.3	Local. trace amplitude 4mm
July 26	iPZ eZ iSE iLNE	4 51 56 C 51 02 54 06 4 54.8	Loyalty Islands 20 1/3 S. 70 1/2 W. 10,200 km Central Chile-Argentine Border 30 S., 70 1/2 W. 10,100 km Mag. 6 1/2 P
July 26	PZ	10 10 10 C	New Hebrides Islands 18 S., 169 1/2 E. 10,000 km
July 26	PZ	11 00 32	Santiago del Estro Prov., Argentina 27 S., 65 W. 10,000 km.



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
July 28	PZ	8 47 09	Guerrero, Mexico
	iPZ	47 11	17 N., 99 W.
	eN	53.9	4100 km. Mag 7 1/2 P
	eN	58.5	Traces too complex to discern
	eE	59.4	S. 68 killed.
	LNE	00.1	
July 28	ePZ?	10 05.7	Mexico Aftershock
July 28	iPZ	13 41 22	Mexico
	eE	53 10	Aftershock
	LE	13 53.8	
July 29	eLNE	0 31.2	Mexico Aftershock?
July 29	iPZ	17 27 52	Near Coast of Chile.
	iSNE	38 18	23 1/2 S., 71 1/2 W.
	eE	51.5	9600 km. Mag 7+ P
	eLNE	59.7	
August 1	iSNE	8 06.56.3	Local. Trace A, 4 mm
August 1	ePZ	16 25 16	Fox Islands
	eLNE	16 33.5	52 N. 170 W. 3300 km
August 1	ePZ	22 21 10	Near coast of Mexico
	eLNE	34.2	16 N. 97 W. 4300 km
	eLNE	22 35.4	
August 4	ePZ	6 13 47	Mexico aftershock
	SNE	19 49	17 N., 100 W.
	eNEZ	26.5	4000 km. Mag 6 1/4 P
	eLZ	6 30.5	
August 4	eLE	11 48.0	Mexico aftershock
	eLNE	11 48.9	17 N., 99 1/2 W. 4000 km
August 4	ePZ	14 22 28	Mexico aftershock
	eLNE	34.9	17 N., 99 1/2 W.
	iLN	14 36 25	4000 km. Mag 6 1/4 P
August 5	eLNE	17 56.8	Near coast of Oaxaca, Mexico
August 8	eLNE	5 01.0	Revilla Gigedo Island
August 11	PZ	21 51 05	New Hebrides Islands
	SE	22 01.8	17 1/2 S., 169 E.
	eLE	22 22	10,000 km. Mag 6 3/4 P
August 12	iPZ	0 24 47.0	Local
	iZ?	0 24 47.7	



Date	Phase	Time (G.C.T.)	Remarks
-		(G.C.T.)	
1957		h. m. s.	
August 12	iPZ	11 30 33 C	S. of Honshu Island, Japan 33 N., 140 E. h-300 km 7900 km.
August 13	PZ eSNE eE	12 04 35 08 21 12 10 13	Southern Alaska 61 N., 148 W. 2200 km
August 13	PZ iSNE eLE	14 37 45.0 38 53.0 14 40.3	Near coast of Oregon 43 N., 125 W. 550 km
August 14	PZN	1 12 50	Seismic?
August 15	iPZ	8 42 06	Near N. coast of Panama 10 N., 80 W. 5700 km
August 15	ePZ	19 32 15	Seismic?
August 15	PZ SE	20 59 17 21 07 11	Solomon Islands region 4 1/2 S., 155 E. h-500 km 9800 km
August 16	eLE	3 49.6	New Britain region 5 S., 154 E.
August 16	eLE	12 20.7	New Britain region 5 S., 155 E.
August 16	iPZ eSNE LE iLN	23 39 37 45.8 49 57 23 55 23	Pacific Ocean 10 1/2 N., 104 W. 4400 km Mag. 6 1/2+ P
August 17	iPZ	12 50 57 C	Bonin Islands 29 N., 141 E. 8200 km
August 18	eLN	7 26	South Pacific Ocean
August 18	ePZ eE eSE LE	8 50 44 9 00.6 9 01 24 9 08.5	Philippine Islands 12 N., 124 E. 10,900 km.
August 18	PZ LE	10 49 18 10 58.3	Hawaiian Islands 21 1/2 N., 156 W. 4100 km
August 18	iPZ eE SNE? eLE LE	21 19 22 R 21.8 25.7 29.0 21 30.7	Mexico aftershock 16 1/2 N., 99 W. 4200 km



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
August 18	iPZ SN	21 51 36 21 58.9	North Kurile Islands 50 N. 157 E. 5600 km
August 19	SKSE SE	11 58.1 11 59.3	Solomon Islands foreshock 10 S., 161 E. 10,000 km. Mag. 6 1/2 P
August 19	PZ eSE? LE eLE	21 38 21 43.7 47.4 21 51.1	Fox Islands 51 1/2 N., 171 W. 3400 km
August 19	eNEZ iNE iNE	22 23.0 25.5 22 31.2	Regional?
August 20	ePZ SE eE LE	12 14 54 25.4 27.4 12 44.8	Solomon Islands 10 S., 161 E. 10,000 km Mag. 6 1/2 P
August 20	ePZ	22 23 57	Andreanof Islands 52 N., 173 W. 3600 km
August 21	PZ	17 50 36	Samoa Islands 15 S., 173 1/2 W. 8700 km
August 21	PZ LE	19 38 32 19 46.7	Fox Islands 51 1/2 N., 171 W. 3400 km
August 22	eZ eLE	12 54 31 12 54 58	P type waves
August 23	PZ SKSE? SN? PSE? SSE LE	2 13 22 23.4 24.7 25.7 30.2 2 42.1	New Britain aftershock 6 S., 154 1/2 E. 10,000 km. Mag. 6 1/2 P
August 23	iPZ	11 55 31 C	Off E. coast of Formosa 24 N., 122 E. 9700 km
August 23	eSE	13 57.5	Solomon Islands 6 S., 154 E. 10,100 km.
August 23	eLE	15 29.7	Revilla Ggedo Island 1100 km
August 26	iPZ iSNE LE	11 41 28 11 52 03 12 19.6	Southern Bolivia 19 S., 63 W. 9400 km. Mag. 6 1/4+ P



Date	Phase	Time (G.C.T.)	Remarks
1957		h. m. s.	
August 26	PZ	14 09 07	Near coast of Ecuador 12 S., 81 W. 7800 km. Mag. 6 P
	iZ	09 12	
	iZ	09 31	
	SNE	17.4	
	eE	29.4	
	LNE	14 35.5	
August 27	P?ZNE	10 40 30.5	
August 27	PZNE	17 48 59.0	Regional?
	LNE	17 51.2	
August 27	iPN	20 43 51.7	Regional?
	LNE	20 46.2	
August 28	iPN	23 34 19.0	Marianas Islands 21 N., 145 E. 8500 km
	eSE	23 44.3	
August 29	iPZ	0 02 12	Same as preceding report
	iZ	0 02 19	
August 29	iPZ	1 09 46	Same as preceding report.
August 29	PZ	16 52 24?	Same as preceding report.
August 31	PZ	12 13 11	Outer Mongolia 49 N., 100 E. 8600 km
September 2	PZ	0 11 54 R	Marianas Islands 18 N., 147 1/2 E. 8600 km.
	eSNE	21.7	
	eLE	0 37.7	
September 2	PZ	9 58 29	Samoa Islands 15 S., 173 1/2 W. 8600 km Mag. 6+ B
	SNE	10 08 18	
	eLE	10 21.2	
September 2	iPZ	14 26 21 C	Fox Island 51 1/2 N., 168 W. 3300 km
	PPZ	27 15	
	eSNE	31.3	
	LE	14 34.5	
September 2	ePZ	18 16 03	
	eLE	18 19.5	
September 3	eLE	8 04.5	Fox Islands
September 3	ePZ?	16 40 20	
	PZ	40 25	
	eZ	40 22	
	SE	42 34	
	LE	16 43 20	



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
September 5	ePZ? SNE?	1 36 25 1 36 29.5	Weak. Regional?
September 6	iPZ	0 30 12 C	Chili-Bolivia Border 20 S., 68 W. h-100 km 9300 km
September 7	PZ	6 57 41	Northern Kurile Islands 50 N., 156 E. 5700 km
September 7	iPZ iSNE LNE	10 13 52 19 34 10 24.5	Andreanof Islands 51 1/2 N., 173 1/2 W. 3900 km
September 9	eP'Z eP'2Z eLEN eLEN	0 33 31 0 34 02 1 30.3 1 35.3	Southern Indian Ocean 45 S, 100 E. 1700 km Microseisms heavy but phase clear
September 9	iPZ eE eLE	9 12 44 C 9 23.8 9 35.0	Fiji Island region 15 S., 176 1/2 W. 9450 km
September 9	eLE	17 53	
September 11	ePZ	16 19 58	Seismic?
September 11	iPZ iZ eE iS?NE	23 34 09 34 34 44.6 23 45 45	Samoa Island Region 16 S., 172 W. 8700 km
September 12	iPZ eZ eLEN	0 36 03 37 55 0 52.0	100 mi. N. of Honduras 17 1/2 N., 85 W. 4700 km
September 12	iPZ iSNE	23 03 43.2 R 23 04 04.9	Regional. Trace A 18mm
September 14	iPZ iSNE	3 21 13.5 3 21 29.8	Regional. Trace A 40mm
September 14	ePZ	17 17 07	Near coast of Ecuador 1 1/2 S., 80 1/2 W. 6750 km.
September 15	iPZ	4 40 56	Near coast of Java 5 1/2 S., 108 E. h-300 km. 13,400 km
September 15	ePZ eLNE	22 14.7 22 24	Andreanof Islands 51 N., 174 1/2 W. 3600 km



Date	Phase	Time (G.C.T.) h. m. s.	Record
1957			
September 17	eP?Z	6 39.2	
September 18	eP?Z	4 47 03	
September 19	ePZ eLNE	13 48 12 13 56.4	Fox Islands 52 N., 168 W. 3300 km
September 20	eZ eE	7 52.5 7 53.0	
September 21	eZ	0 13 56	
September 21	iPZ	4 44 41	
September 24	iPZ iZ ePPZ iSNE PPSNE eSSE eLgE LrE	8 34 55 35 06 38.7 46 05 48.3 53.2 9 01.5 9 07.6	Near S. coast of Mindanao, P.I. 51 1/2 N., 127 1/2 E. 11,200 km. Mag 7 3/4 P
September 24	eZ iZ iSE	18 36 51 37 02 18 37 08	Regional. Trace a 2 mm
September 25	SE LE LE	6 10.3 6 21.5 6 25.7	Near Azores Islands 34 N., 38 1/2 W. 6800 km. Mag. 6 1/4+ P
September 25	eZ iZ eN	16 32 26 33 20 16 29.5	Regional? Weak
September 26	eE LE	8 27.6 8 28.7	Near Coast of Chiapas, Mexico. Z not operating
September 27	ePNE eLNE	5 05.9 5 18.5	Eastern Siberia 64 N., 178 E. 3950 km Z not operating
September 28	iPZ iSN iSN	0 38 23.2 27.5 0 38 28.8	Regional. Heavy microseisms.
September 28	iPZ iSE	14 31 37 R 14 41 07	Fiji Islands 20 1/2 S., 178 W. h-650 9500 km. Mag 7 1/2 P
September 29	iPZ eSE	8 25 27 8 35.5	Fiji Islands 25 S., 178 1/2 W. h-600 km 10,100 km. Mag. 6 1/4 B



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
October 2	ePZ eSN LN LN	12 38 20 46.9 12 58.1 13 01.5	Venezuela foreshock 11 N. 63 W. 6800 km. Mag. 6 1/2 P heavy microseisms
October 4	ePZ? iZ eN eSNE LE LN	5 36 21 36 26 43.8 44 46 51.7 5 56.4	North coast of Venezuela 11 N 63 W h-60 km 6800 km Mag. 6 3/4 P
October 4	iZ LNE	19 37 22 19 37.5	resembles P wave
October 7	iZ eE	14 28 38 14 29 43	Regional ? weak
October 10	eZ eLE? LE	18 59.8 19 04.5 19 14.4	Fiji Island region? 23 S, 179 W. h-400 km
October 11	eZNE	12 57 49	Regional?
October 16	iZ iZ	17 12 06 17 12 17	Regional?
October 19	iPZ iZ iSE LgE LrE	18 41 50 C 42 01 18 52 37 19 18.0 19 22.5	Near coast of Formosa 23 1/2 N., 122 E. 9800 km Mag. 6 1/2 P
October 19	iPZN	21 51 56 C	Off N.E. coast of Hakkaido, 44 1/2 N., 146 E. Japan h-150 km 6600 km. Mag. 6 1/2 P
October 20	ePZ eSE eLNE	12 16 27 26.0 12 41.7	Atlantic Ocean 11 1/2 N. 42 W. 8300 km.
October 24	iPZ	9 19 12 C	Fiji Islands 20 1/2 S., 179 W. h-550 km 9700 km.
October 25	eE eLE	0 59.5 1 06.0	
October 24	ePZ iSN LgE LrN	21 50 00 54 43 57.0 21 58.2	Gulf of California 25 N., 109 1/2 W. 2700 km Mag 6 P



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
October 25	eP?Z iSE	10 42 30 10 49 52	
October 26	iPZ	8 37 54	Fiji Islands 20 1/2 S., 178 W. h-600 km 9600 km Mag. 6 1/2 P
October 27	iPZ iSNE LNE	22 40 52 R 47 27 22 51.0	Kamchatka 56 N., 161 E. 5100 km. Mag. 6 1/2 P
October 28	eLNE	14 39.7	Off coast of Oaxaca, Mexico
October 29	ePZ iSNE	15 30 19 15 30 34	Regional, weak Felt at Elbe
October 30	eLE	6 27.2	
October 31	ePZ	2 50 33	Honshu Islands 39 N. 140 E. 7300 km
October 31	iPZ iSE LNE	10 17 17 R 24 51 10 36.5	Off coast of Panama 6 1/2 N., 83 W. 6000 km. Mag. 6 1/2 P
November 1	iPZ iSNE iLNE	10 12 21.7 R 12 38.0 10 12 46.5	Packwood, S. of Mt. Rainier MM-6 Felt at Longmire and Randle, very light at Seattle and Granite Falls. Trace A 50mm
November 1	ePZ iSNE	10 32 48.3 10 33 04.0	Aftershock, Felt Trace A 5 mm
November 1	ePZ iSNE	11 06 53.0 11 07 09.8	Aftershock, Trace A 3 mm
November 2	iZ	7 30 32	Near coast of Chiapas, Mexico 15 N., 93 1/2 W. h-100 km 4550 km Heavy microseisms
November 4	iPNE iSNE	6 59 53.5 6 59 58.3	No PZ recorded. Possibly shallow local tremor. Trace A 4 mm. Duration 60 sec. SWW P impulse
November 7	iPZ	19 58 24 C	Andreanof Islands 51 N. 178 1/2 W. 3900 km
November 7	ePZ eZ	13 10 22 11 08	South Pacific Ocean 24 S. 112 1/2 W. 8100 km



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
November 10	eSE eLE	3 00.1 3 19.1	Solomon Islands 7 S., 155 1/2 E. 10,000 km. Micros. obscure P
November 10	eZ	5 41.0	Tonga Island region 24 1/2 S., 175 1/2 W. 9600 km
November 10	PZ	19 31 06 R	Near coast of Honshu Islands 34 N., 139 1/2 E. 7700 km
November 11	eZ eNE	7 54.2 7 54.9	Montana 46 1/2 N., 112 W.
November 16	PZ	1 55 45	Andreanof Islands 51 1/2 N., 177 W. 3800 km.
November 16	eLE	23 56.6	
November 17	iPZ iZ iSNE	6 01 14.1 C 15.9 6 02 00.0	Probably off coast of Oregon MM-5 at Corvallis, Oregon Weak C
November 17	eLE	6 54.1	Baja California 4300 km Mag. 5 P
November 18	ePZ	10 19.2	Andreanof Islands 51 1/2 N., 179 1/2 W. 4000 km
November 20	eP?Z PZ iEZ eE	12 46 14 46 25 46 29 12 50.8	Unimak Island 54 N., 165 W. 3000 km. Mag. 6 1/4 B No clear S wave
November 23	eZ	1 04.7	Fox Island 52 1/2 N., 168 W.
November 25	iPZ iN iZN	9 17 57.8 18 05.6 9 18 12.2	Local
November 25	iPZ eE eSEN eLE LE	18 56 49 R 57.02 57.8 58.26 18 59 12	Off coast of Oregon 44 N., 130 W. 700 km No clear S weak R
November 25	ePZ eE LNE	20 34.0 35 14 20 36.0	Oregon aftershock 44 1/2 N., 129 1/2 W. Heavy microseisms



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
November 25	eLNE	22 21.0	Oregon aftershock 45 N., 130 W. Heavy microseisms
November 26	ePZ	11 42 47	Andreanof Islands 51 1/2 N., 176 W. 3750 km Heavy microseisms
November 29	iPZ iZ eEN iSNE iE	22 31 54 R? 31 59 R 32 04 42 08 22 43 58	Southern Bolivia-Chile 22 S., 66 W. h-200 km 9700 km. Mag. 7 3/4 P First R extremely small followed by large C
December 3	iPZ	1 53 12 C	Andreanof Islands 51 1/2 N., 178 W. 3900 km
December 4	e?Z iPZ iZ eNE iSE	3 49 56 50 05 C 50 09 3 50 13 4 00 26	Outer Mongolia 45 1/2 N., 99 1/2 E. 8800 km. Mag 7.9 P Doubtful if first movement is weak P or a microseisms Press reports 150 mile fault
December 9	iPZ SE LN iLE	22 12 05 C 16 11 17.7 22 18 04	Yukon 65 1/2 N. 133 W 2100 km
December 10	ePZ eSE eSSE eLE	14 49 18 15 00 00 15 06.3 15 16.5	Solomon Islands 6 S., 154 1/2 W. 10,000 km. Mag. 6 3/4 P
December 13	iPZ	1 41 33 C	Colombia, S. A. 7 N., 76 W. 6300 km. Mag. 6 3/4 P No S waves
December 13	PZ SKSN SN PSN	1 58 40 R? 2 09 22 2 09 58 2 10 54	Iran. 1,062 killed 34 1/2 N., 48 E. 10,700 km. Mag. 7 1/4 P
December 13	ePZ eSE	20 32 44 20 37 43	Fox Islands 52 1/2 N., 170 W. 3300 km
December 16	iPZ iZ iSE iE LN	17 28 47.5 C 29 28 29 53 30 01 17 30 06	Vancouver Island 50 N., 127 W. 450 km



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1957			
December 17	ePZ eSE?	5 19.5 5 25.5	Near east coast Kamchatka 43 1/2 N., 162 E. 5200 km. Mag. 6 3/4 P
December 17	ePZ SE eE	14 02 52 13 08 14 13 35	Santa Cruz Islands 12 S., 167 E. 9700 km. Mag. 7 3/4 P
			Heavy microseisms throughout remainder of the month.

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