

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

-----

SEISMOLOGICAL BULLETIN NO. 12

REGISTRATION OF EARTHQUAKES AT SEATTLE, 1958

By  
Frank Neumann  
and  
Norman Rasmussen

-----

UNIVERSITY OF WASHINGTON, GEOLOGY DEPARTMENT

April, 1963



-i-

STATION CONSTANTS

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

INSTRUMENTAL CONSTANTS - 1958

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

$$T_s = T_g = 1.4 \text{ sec.}$$

$h_g$  - approx. critical

System approx. critically damped

$V_s$  - 1800 approx.

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

$$T_s = T_g = 1.4 \text{ sec.}$$

$h_g$  - 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 December 31, 1958

$$T_s = 15.0 \text{ sec.} \quad T_g = 5.2 \text{ sec.}$$

$h_g = 1.0$  approx.

System nearly critically damped

Max. V approx. 1200

-ii-

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

January 1 to December 31, 1958

$T_s = 15.0$  sec.

$T_g = 7.9$  sec.

$h_g = 1.0$  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
1958		h. m. s.	
Jan. 4	ePZ eLE	08 09 33 08 22.2	Guerrero, Mexico. Felt. Mag. 5 3/4. 17 N, 99 1/2 W. 3900 km
Jan. 5	ePZ eLE	11 41 20 12 04.8	Stanovoi Mountains region, Siberia 56 1/2 N, 121 E. 7000 km
Jan. 9	iPZ	17 52 05	Sinkiang Province, China 44 1/2 N, 85 E. 9400 km
Jan. 11	iPZ	13 31 34C	Tonga Islands region 23 1/2 S, 177 W 9700 km
Jan. 15	iPZ e Z eSNE	19 26 24cR 36.2 19 26 43	Southern Peru. 21 killed, 90 injured and extensive property damage. h about 100 km. Mag. 7 16 1/2 S, 71 1/2 W 8700 km
Jan. 19	iPZ eSNE	14 17 30C 14 25 45	Near coast of Ecuador. 14 killed, many injured and extensive property damage at Esmeraldos, Palmas and Guayaquil. h about 60 km. Mag. 7 1/2 1 1/2 N, 79 1/2 W. 6600 km
Jan. 19	iPZ	14 53 29R	Ecuador aftershock. Slight damage in northern Ecuador. h about 60 km. Mag. 6 3/4. 1 1/2 N, 79 W. 6600 km Aftershock S wave lost in L waves of main shock.
Jan. 24	eLE	06 19	Near east coast of Kamchatka. Mag. 6 1/2. 56 1/2 N, 163 E. 5300 km.
Jan. 24	iPZ	23 22 14	Kenai Peninsula, Alaska. Felt at Anchorage. h about 60 km Mag. 6 1/4-6 1/2. 60 N, 152 W. 2330 km
Jan. 27	ePZ	07 56 00	Samoa Islands. Mag. 6 3/4 15 S, 174 W. 8700 km

Date	Phase	Time (G.C.T.)	Remarks
1958		h. m. s.	
Feb. 1	iPZ	16 20 19R	Near coast of Ecuador
	eSN	16 28 28	2 N 79 W. Mag. 6 3/4-7
	eSE	16 30 00	6600 km.
Feb. 1	iPZ	18 12 41	See preceding report
Feb. 1	iPZ	20 55 49	Ecuador aftershock.
	eSNE	21 15 45	Mag. 6 3/4
Feb. 2	iPZ	08 21 14	Kurile Islands
	i Z	08 21 26	48 1/2 N 154 1/2 E. Mag. 6 1/2-6 3/4. 5900 km.
Feb. 2	ePZ	08 59 12	Ecuador aftershock
Feb. 7	iPZ	23 36 41	Szechwan Province, China 31 1/2 104 E. 10,100 km.
Feb. 12	iPZ	23 50 46	Andreanof Islands, Aleutian Islands. Mag. 6. 52 N. 175 W. 3100 km.
Feb. 17	iPZ	05 31 45.5	Hindu Kush. Felt in northern Afghanistan and Tadzhik S.S.R. h about 200 km. 35 1/2 N. 70 E. 10,700 km.
Feb. 22	iPZ	10 57 16	Andreanof Islands, Aleutian Islands.
	PPZ	58 16	Mag. 6 3/4 50 1/2 N. 175 W.
	eE	10 58 48	3100 km.
	eSE	11 01 53	
	LNE	11 07 39	
Feb. 23	iPZ	10 59 34.5R	Volcano Islands. 24 N. 141 1/2 E. 8500 km.
Feb. 24	iPZ	12 39 25	Outer Mongolia. 45 N. 99 E. 9000 km.
Feb. 26	ePZ	20 31 22	Local
	eZNE	31 30	
	eZ	20 31 42	



Date	Phase	Time (G.C.T.)	Remarks
1958		h. m. s.	
March 3	iPZ	16 26 23R	Komandorskie Islands. Mag. 6 1/4-6 1/2 55 1/2 N. 166 E. 4800 km.
March 3	ePZ	19 35 21	Local
March 3	eNE	19 35 55	Local
March 3	ePZ	19 36 15	Local
March 11	iPZ	00 38 38	Ryukyu Islands. Several killed, many
	iZ	00 38 44	injured on Okinawa. Felt strongly
	iZ	00 38 54	on Ishigaki and Miyako; also felt at
	ePPZ	00 39 05	Aparri, Bosco and Calayan.
	ePPZ	00 42 04	h about 60 km. Mag. 7
	eSN	00 49 15	25 1/2 N. 125 E. 9400 km.
	iSN	00 49 28	
March 12	eE	00 14 00	About 150 miles off coast of southern Mexico
March 12	ePZ	12 11 07	Nevada- Oregon- California border
	eSE	12 12 17	region. 42 N. 119 1/2 W. 750 km.
March 15	ePZ	04 49 09	Local
March 15	ePZ	08 29 50	Arizona. Mag. 5.
	eLE	08 44 00	32 1/2 N. 113 1/2 W. 1900 km.
March 18	iPZ	22 26 40R	Fox Islands
	iZ	22 26 46	foreshock.
	iN	22 26 50	50 1/2 N. 173 W. 3600 km.
	iZ	22 26 54	
	eZ	22 27 15	
	iZ	22 27 27	
March 20	iPZ	01 44 42C	Fox Islands, Aleutian Islands region.
	eSNE	01 50 05	Mag. 6 1/2. 51 N. 173 W. 3600 km.
	eLE	01 52 50	
March 28	iPZ	08 19 30	?
	iZ	08 19 51	
	iZ	08 20 20	

Date	Phase	Time (G.C.T.)	Remarks
1958		h. m. s.	
April 7	iPZ	15 36 14C	Alaska. Felt throughout central
	eSE	40 51	Alaska. Mag. 7
	eSN	15 40 26	66 1/2 N., 157 W. 3000 km
April 7	iPZ	18 15 54C	Near east coast of Honshu, Japan 38 1/2 N, 143 E 9400 km.
April 7	iPZ	18 41 07	Honshu aftershock 38 1/2 N, 142 1/2 E 9400 km.
April 8	iPZ	00 19 53R	Alaska, felt in central Alaska 66 1/2 N, 155 1/2 W 2800 km.
April 8	ePZ	00 28 01	Local
	eSE	28 11	
	eSN	00 28	
April 10	iPZ	06 18 28C	Gulf of Alaska, felt at Sitka 56 1/2 N, 139 W 1500 km.
	eLE	06 21 30	
April 10	iPZ	23 22 29C	About 1000 miles west of Galapagos Island. Mag. 6 4 1/2 S, 107 W 6300 km.
April 11	ePZ	01 09 00	Off east coast of Honshu, Japan 38 1/2 N, 142 1/2 E 7400 km.
April 11	ePZ	23 20 47	Kurile Islands, h about 100 km. 7 1/2 N, 153 1/2 E. Mag. 6 1/2 5900 km.
April 12	ePZ	11 52 07	Gulf of California. Mag. 6 1/2 26 1/2 N, 111 W 2600 km.
	eSNE	11 56 38	
April 12	iPZ	22 37 39C	Local
	eSNE	22 38 00	
April 13	iPZ	09 12 55	Alaska. Felt in central Alaska. Mag. 6 1/2 66 N, 156 W 2800 km
	eLN	21 1/2	
		09 21 3/4	
April 13	ePZ	12 37 44	Near east coast of Kamchatka. Mag. 6 1/2. 53 N, 161 E 5200 km.
April 14	ePZ	21 42 37	Near coast of Ecuador. One killed 12 injured and minor property damage at Esmeraldo. Felt at Quito and Ibarra Mag. 6 3/4-7. 1 N, 79 1/2 W. 6650 km
	eSNE	21 50 51	



Date	Phase	Time (G.C.T.)	Remarks
1958		h. m. s.	
April 15	ePZ	01 40 58	Ecuador after shock Mag. 6 1/2-6 3/4 1 N, 79 1/2 W 6650
April 15	ePZ	04 01 33	Off west coast of Costa Rica. 9 N, 84 W. Mag. 6 3/4 5550 km.
April 19	ePZ eSE eNE eZ	04 08 46R 13 50 16 34 04 19 07	Gulf of California. Mag. about 6. 26 1/2 N, 110 1/2 W 2650 km.
April 24	iPZ	18 18 48.5R	Pacific Ocean, 5 N, 83 W. 6300 km.
April 27	iPZ	18 50 37C	Jujuy Province, Argentina. Felt at Antofagasta. h about 200 km. 23. S, 66 W. 9800 km.
April 27	ePZ	19:10:07	Fox Island, Aleutian Islands. 52 1/2 N, 169 W 3150 km.
April 28	iPZ	11 59 10C	Peru. Mag. 6 1/2 11 S, 74 W 8200 km.
May 5	iPZ	00 41 44C	New Hebrides Island. H about 200 km. Mag. 6 1/4 13 1/2 S, 167 1/2 E 9800 km.
May 5	iPZ eSNE	23 56 40R 24 00 10	Near coast of south Alaska. Felt in Juneau and Sitka. 57 1/2 N, 136 1/2 W 1350 km.
May 7	eN eE	11 03 42 11 03 54	
May 9	ePZ	04 53 29	Cordoba-La Rioja Provinces, Argentina. h about 100 km. Mag. 6 3/4 31 S, 65 1/2 W 9800 km.
May 10	iPZ LNE	22 59 57R 23 07.5	Central Alaska. Felt at College & Tanana. Mag. 6 1/4- 6 1/2 65 N, 152 1/2 W 2600 km.
May 11	iPZ LNE	05 29 12C 05 36 .8	Central Alaska. Felt at College. Mag. 6 1/4-6 1/2 65 N, 152 1/2 W 2600 km.
May 22	iPZ	20 13 05.9	Local. Felt in vicinity of Diablo Dam- Newhalem.



Date	Phase	Time (G.C.T.)	Remarks
-		h. m. s.	
1958			
May 23	ePZ	06 51 45 06 52 40	Idaho. Felt at Boise, Cascade and Horseshoe Bend 44 1/2 N, 116 W 800 km.
May 24	iPZ eSN eSE	23 06 40R 08 53 23 08 44	Off Cape Mendocino, Calif. Mag. 4 3/4 (Berkeley) 40 1/2 N, 125 W 850 km.
May 25	eSP	15 01 34	Andreanoff Islands, Aleutian Islands. Mag. 5 1/2-5 3/4 3900 km. 51 1/2 N, 177 W.
May 25	iPZ eLN eLE	21 22 13C 50.1 21 50.5	Ecuador-Peru border region. Felt in Ecuador. h about 100 km. Mag. 6 1/2 3 S, 77 W 7100 km.
May 26	iPZ	09:00 16R	Ecuador-Peru after shock. h about 100 km. 3 1/2 S, 78 1/2 W 7100 km.
May 26	iPZ	11 02 48.5C	Fox Islands, Aleutian Islands Mag. 6-6 1/4 53 N, 169 1/2 W 3300 km.
May 26	iPZ	16 29 37R	Fiji Islands, h about 600 km. 17 1/2 S, 178 1/2 W 9200 km.
May 28	ePZ eSN eSE	16 49 13 50 09 16 50 22	Western Montana. Felt at Anaconda, Butte and Philipsburg 46 1/2 N, 113 W 700 km.
May 29	ePZ	07 06 28	Oaxaca, Mexico 16 1/2 N, 97 1/2 W. 4150 km.
May 30	iPZ	16 24 23.5R	Near north coast of Formosa. h about 100 km. Felt in northern Formosa 25 N, 122 E 9750 km.
May 30	iPZ	18 11 01C	Fox Islands, Aleutian Islands. Mag. 6-6 1/4 52 1/2 N, 169 W 3200 km.
May 31	ePZ	19 45 25	New Hebrides Island. Mag. 7.2 155, 169 E 10,000 km.

Date	Phase	Time (G.C.T.)	Remarks
1958		h. m. s.	
June 3	ePZ	19 44 48	New Hebrides. Mag. 6 1/2 15 S, 168 E 9900 km.
June 4	ePZ	14 35 53	Fox Islands, Aleutian Islands. Mag. 6- 6 1/4. 52 1/2 N, 167 W 3200 km.
June 6	iPZ	9 20 22R	Off Costa Rica. Mag. 6 1/2-6 3/4 8 N, 84 1/2 W 5800 km.
June 6	ePZ	19 24 44	South of Costa Rica, Mag. 6 5 1/2 N, 82 1/2 W 5900 km.
June 8	ePZ	00 44 42	Fox Island, Aleutian Islands. Mag. 6 1/2 -6 3/4. 53 N, 167 W 3100 km.
June 12	ePZ	12 03 05	Off coast of Costa Rica. Mag. 6-6 1/4. 7 1/2 N, 84 1/2 W 5800 km.
June 12	ePZ	20 59 03	Fox Islands, Aleutian Islands. Mag. 6 1/2. 53 N, 167 W 3100 km.
June 15	iPZ ePPZ	15 06 07C 15 08 06	Fiji Islands, h about 600 km. Mag. 6 1/4. 18 S, 178 1/2 W 9300 km
June 19	iPZ	5 27 10R	Kurile Islands. Mag. 6 1/2 49 1/2 N, 156 E 5700 km.
June 25	ePZ	09 50 00	Near north coast of New Guinea, Mag. 6 1/2. 3 S, 144 1/2 E 10,400 km
June 26	iPZ eSE eSN	04 46 49C 53 36 04 53 45	Kamchatka h about 150 km. Mag. 6 1/2-6 3/4 54 N, 159 1/2 E 5400 km.
June 29	eLE	3 57.7 3 58.0	Southern Peru, depth about 150 km. Mag. 6 1/2 (Berk) 15 1/2 S, 162 E 8600 km.
June 29	iPZ	9 26 43C	Tonga Island 16 1/2 S, 172 W 8800 km.
July 1	iPZ eSNE	06 00 04C 06 05 37	Andreanof Islands, Aleutian Island. Mag. 6. 51 1/2 N, 176 1/2 W 3900 km
July 3	iPZ eSN	06 41 53R 06 59.9	Kermadac Island Region. h = about Mag. 6 400 km. 29 S, 179 W 10,300 km



Date	Phase	Time (G.C.T.) h.m.s.	Remarks
1958			
July 4	ePZ eSNE	05 56 58 05 57 05	Local
July 6	eLN eLE	16 16 55 16 17 00	Central Alaska 66 N, 155 W 2800 km
July 9	ePZ	15 34 33	Guatemala. h about 100 km. 14 1/2 N, 91 1/2 W 4700 km.
July 10	iPZ	06 19 14 R	Southeastern Alaska. 5 killed and moderate property damage. Extensive fissuring and avalanche activity. Portions of Khantaak Island submerged in Yakutat Bay. Waves estimated as greater than several hundred feet in Lituya Bay. Mag. 7.9 59 1/2 N, 140 1/2 W 1800 km.
July 10	ePZ ePZ iPZ ePZ	08 02 08 08 43 47 09 00 07C 09 32 19	Alaska after shock 59 1/2 N, 141 W " " " "
July 10	iPZ ePZ ePZ ePZ eSE	10 20 20R 10 25 15 11 41 00 11 52 51 11 53 24	Alaska After shock 60 1/2 N, 140 W " " " " " "
July 10	iPZ ePZ ePZ ePZ	12 30 32R 12 35 05 13 23 27 15 10 49	Alaska after shock 59 1/2N 141 1/2 W " " " "
July 11	ePZ	01 28 29	Same as preceding paragraph
July 11	iPZ	19:22 51C	Northern Chile. May. 6 1/2 21 S, 69 W. 9250 km
July 11	eSZ	19 57 11 19 58 10	Alaska aftershock 57 1/2 N, 137 1/2 W 1800 km.
July 12	ePZ eSE eLE	00 58 16 05 45 00 17.2	Pacific Ocean. May 6 5 S, 106 1/2 W 6000 km
July 12	iPZ iSNE	01 42 00 01 42 04.7	Local, felt around Bremerton
July 13	ePZ eSE eSN eSZ	08 13 20 17 07 17 11 08 17 12	Alaska aftershoc. Felt at Sitka Mag. 5 1/2- 5 3/4 (Berk) 58.3 N, 136.9 W 1800 km



Date	Phase	Time (G.C.T.)	Remarks
1958		h. m. s.	
July 14	ePZ	03:03 36	Southeastern Alaska
	eSE	03:03 47	61 N, 143 W 1800 km
July 15	iPZ	06 03 30R	Southeastern Alaska 60 N, 140 1/2 W 1800 km
July 16	ePZ	03 59 39	Andreanoff Islands, Aleutian Islands 51 1/2 N, 176 1/2 W 3700 km
July 16	ePZ	13 06 03	South Pacific Ocean. Mag 6 (Berk) 29 1/2 S, 113 W 8600 km
July 17	ePZ	13 52 08	Southeastern Alaska. Felt at Juneau and Sitka. 57 1/2 N, 137 W 1500 km
	eSE	13 55 37	
July 17	iPZ	19 09 12C	Andreanoff Island. Aleutian Islands Mag. 5 3/4 (Berk) 51 N, 176 W 3700 km
July 17	iPZ	21:06 28R	Andreanoff Island, Aleutian Islands Mag. 6 (Berk) 51 N, 177 1/2 W 4000 km.
July 18	iPZ	17 11 27R	
	e N	17 11 45	
July 19	ePZ	17 30 16	Andreanoff Islands, Aleutian Islands 51 1/2 N, 176 W 3400 km
July 20	eZ	16 06 42	
	eE	16 09 26	
July 21	ePZ	07 35 03	Kurile Islands. Mag. 6-6 1/4 (B) Felt in Japan 44 1/2 N, 147 1/2 E 6500 km
July 21	iPZ	14 44 23C	Andreanoff Island, Aleutian Islands Mag. 6 1/4 (B) 51 1/2 N, 178 W 4000 km
	iSN	50 14	
	iSE	14 50 60	
July 23	ePZ	10 38 16	South Honshu, Japan 31 N, 142 E 8100 km
	eSE	10 47 48	
	eE	11 03 44	
July 24	ePZ	13 14 17	Fox Island, Aleutian Islands 52 1/2 N, 170 W 3400 km.
	eSE	13 19 23	
July 25	eSZ	01 51 22	Southern Alaska 58 1/2 N, 137 W 1500 km
	eSN	51 20	
	eSE	01 51 16	
July 26	iPZ	17 48 04rC	Peru-Bolivia border h about 620 km Mag. 7.5. 13 1/2 S, 69 W 8600 km
	iSZ	17 57 15	



Date	Phase	Time (G.C.T.)	Remarks
1958		h. m. s.	
August 1	iPZ eSNE	05 49 19R 05 58 54	Fiji Island Region. h about 450 km. 16 S, 176 1/2 W 9150 km
August 1	e Z	15 27 57	
August 3	ePZ e Z eSN	01 18 12 20 16 01 28 03	Fiji Island Region. h about 550 km Mag. 6 1/4-6 1/2 21 1/2 S, 179 W 9600 km
August 6	iPZ eSNE	21 21 17R 21 31 14	Tonga Islands. Mag. 6 3/4 17 S, 173 W. 9300 km
August 8	e Z	02 29 09	
August 12	ePZ	16 28 44	Gulf of California 27 N, 110 1/2 W 2500 km.
August 13	ePZ	10 53 52	Andreanoff Islands, Aleutian Islands 51 N, 177 1/2 W. 4000 km
August 13	ePZ	20 20 04	Andreanoff Islands, Aleutian Islands 51 N, 177 1/2 W 4000 km
August 14	ePZ eSN eSE	15 01 58 06 22 15 06 35	Andreanoff Island, Aleutian Islands Mag. 6. 52 N, 175 W 3700 km
August 15	iPZ	06 30 33R	Northern Columbia, felt, h about 200 km 7 N, 73 W 6500 km
August 15	iPZ iSE	20 04 16R 20 11 21	Near east coast of Kamchatka. h about 60 km. Mag. 6 3/4 53 N, 160 1/2 E. 5200 km
August 15	ePZ ePKSZ eSE	22 43 10 47 48 22 54 43	Celebes. h about 170 km. Mag. 7 1 1/2 N, 125 E 11,500 km
August 16	ePZ	13 24 45	Andreanoff Island, Aleutian Islands Mag. 6-6 1/4 51 1/2 N, 176 W. 3900 km
August 17	ePZ	09 15 30	Andreanoff Island, Aleutian Islands Felt on Adak. 51 1/2 N, 176 W. 3900 km
August 17	ePZ	18 14 27	Bismarck Sea. 3 S, 145 1/2 E. 10,500 km
August 18	eE	06 11 48	Gulf of California. Felt in San Diego. Mag. 5 1/4 30 1/2 N, 114 W. 2100 km

Date	Phase	Time (G.C.T.)	Remarks
1958		h. m. s.	
August 18	ePZ e E e E	06 48 42 54 46 06 56 58	Gulf of California. Felt in San Diego. Mag. 5 1/2 30 1/2 N, 114 W 2100 km
August 19	iPZ eSE	22 01 19C 22 11 46	New Ireland. 1 S, 149 1/2 E 9900 km
August 20	ePPZ	03 56 14	New Hebrides Island. Mag. 6 1/4-6 1/2 14 S, 167 E. 10,000 km
August 23	e Z	05 27 17	
August 27	ePZ eSN eSE	15 29 31? 39 57 15 40 06	Near Coast of Greece 38 N, 20 1/2 E 9500 km
August 30	ePZ e Z eSN e Z e E e Z	18 43 15 43 25 47 35 50 44 50 47 18 52 35	Gulf of California 27 1/2 N, 112 W. 2200 km
August 31	e Z	06 02 42	
August 31	ePZ eSN	23 04 52 23 09 07	Central Alaska. Felt at Tanacross. Mag. 5/3/4-6 (B) 63 N, 144 1/2 W 2200 km
Sept. 2	e E	20 29 41	Near coast of Oaxaca, Mexico 15 N, 92 1/2 W. 4500 km
Sept. 3	eSN eSE	04 32 10 04 32 12	Off coast of Guatemala.
Sept. 3	e PZ	08 21 00	Off northeast coast of Honshu, Japan. h about 60 km. 40 1/2 N, 143 E 7500 km.
Sept 4	iPZ eSN eSE	22 04 36C 15 16 27 15 19	Chili-Argentina border, 4 killed and major property damage at San Jose and Volcan. Felt at Rancagua and Santiago Mag. 6.7. 33 1/2 S, 69 1/2 W 10,300 km.
Sept 8	iPZ eSE eSN	05 34 18R 41 13 05 41 15	Near east coast of Kanchatka. Depth slightly greater than normal. 53 1/2 N, 159 E. 5300 km.
Sept 14	iPZ eSE	14 32 14C 14 40 36	Stanavoi Mountains region Siberia. Mag. 6 1/4-6 1/2. 57 N, 121 E. 6800 km.



Date	Phase	Time (G.C.T.) h. m. s.	Remarks
1958			
Sept. 15	e Z e Z	19 58 55 20 03 00	Celebes Sea, h about 600 km. Mag. 6-6 1/4 2 1/2 N, 120 1/2 E 12,000 km
Sept. 19	iPZ iSZ iSN iSE	02 18 39 18 42 18 43 02 18 44	Local
Sept. 24	ePNE eSE	03 40 32 03 51 57	Gulf of Alaska. Mag. 6 1/4 59 1/2 N, 143 1/2 W 1900 km
Oct. 3	iPZ iSNE	00 09 04 00 09 16	Local
Oct. 7	iPZ eSN eSE	05 08 23 08 40 05 08 43	Local. Felt at Aberdeen
Oct. 11	ePZ e Z e E	00 46 37 00 51 34 00 52 09	Yukon Territory, Canada. 65 1/2 N, 132 1/2 W 2000 km
Oct. 11	iPZ	14 50 13R	Jujuy Province, Argentina. h about 200 km. Mag. 6 23 1/2 S, 65 W 9500 km
Oct. 12	ePZ iPPZ	15 30 43 15 30 47	East China Sea, h about 250 km. Mag. 6 3/4. Felt in Japan. 27 1/2 N, 125 1/2 E 9600 km
Oct. 26	iPZ i Z	15 29 38R 15 34 10	Yukon Territory, Canada. 65 1/2 N, 133 W 2000 km
Oct. 27	ePZ	07 42 45	
Oct. 29	ePZ eSNE	07 51 25 07 57 19	Andreanoff Islands, Aleutian Islands Mag. 6 1/2 51 1/2 N, 179 1/2 W 4100 km

Date	Phase	Time (G.C.T.)			Remarks
		h.	m.	s.	
1958					
Nov. 1	iPZ	00	52	10C	Local
Nov. 7	iPZ	23	08	05	Local
	iSE		15	56	
	iSN	23	16	07	
Nov. 13	iPZ	20	33	31	
	eSE		41	34	
	eSN	20	41	38	
Nov. 16	ePZ	17	56	45	Samoa Island region. Felt at Apia Mag. 6 1/4 16 S, 172 W. 8800 km.
Nov. 19	ePZ	9	33	53	Kurile Island aftershock. h about 60 km. 44 N, 149 E 6500 km
Nov. 19	ePZ	15	06	58	Kenai Peninsula, Alaska. Felt. h about 60 km. 60 1/2 N, 150 1/2 W. 2250 km
Dec. 1	ePZ	03	25	13	California-Mexico border. Minor damage at Calexico, El Cernto, San Diego. Felt in southern California and western Arizona 32° 15'N, 115° 30' W 1700 km.
	e E		30	44	
	e N	03	31	06	
Dec. 6	ePZ	07	13	07	
Dec. 10	ePZ	21	54	54	Gulf of California. Mag. 5 3/4 24 1/2 N, 109 W 2900 km
	eNE	22	24	27	
	eNE	22	33	34	
Dec. 18	iPZ	19	35	57C	Tonga Island Region 16 S, 173 W. 8900 km
Dec. 19	ePZ	11	26	24	Southern Peru. h about 100 km 16 S, 72 W 8800 km
Dec. 21	iPZ	05	59	12C	Western Sinkiang Province, China. 44 1/2 N, 81 E. 9500 km
Dec. 30	iPZ	08	50	32C	South Pacific Ocean. Mag. 6 35 1/2 S, 105 1/2 W 9400 km