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# Bulletin of the Seismographic Stations

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BERKELEY—MOUNT HAMILTON—PALO ALTO  
SAN FRANCISCO—FERNDALE—FRESNO  
MINERAL—ARCATA—RENO—CORVALLIS—SHASTA  
MANZANITA LAKE

Earthquakes and the Registration of Earthquakes

From January 1, 1958, to March 31, 1958

BY  
DON TOCHER  
AND  
JOHN B. CAMERON

UNIVERSITY OF CALIFORNIA PRESS  
BERKELEY AND LOS ANGELES  
1959

SEISMOGRAPHIC STATIONS OF THE UNIVERSITY OF CALIFORNIA

Perry Byerly, Director

EARTHQUAKES IN NORTHERN CALIFORNIA, NEVADA, AND OREGON

and

REGISTRATION OF EARTHQUAKES AT: BERKELEY, MOUNT HAMILTON,  
PALO ALTO, SAN FRANCISCO, FERNDALE, FRESNO, MINERAL, ARCATA,

RENO, CORVALLIS, SHASTA, AND MANZANITA LAKE

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EARTHQUAKES IN NORTHERN CALIFORNIA, NEVADA, AND OREGON

The list following this page gives the latitude and longitude of the epicenters for earthquakes which were well enough recorded to permit such a determination.

Map No. for each epicenter corresponds to a number plotted on the map which follows the list of epicenters.

Date and Origin Time are given in Greenwich Civil Time. Subtract eight (8) hours to convert to Pacific Standard Time (P.S.T.). This will change the date for some of the earthquakes.

M is the Richter Magnitude of the earthquakes as determined from the maximum trace amplitudes recorded for the shock by the standard Wood-Anderson Torsion Seismographs. In routine practice, the nomogram given by Nordquist in the "Bulletin of the Seismological Society of America", 32:164, is used for magnitude determinations.

Q indicates the excellence with which the epicenter has been located; "a" indicates excellent, "b" good, "c" fair, and "d" poor. Under Remarks will be found a short descriptive location of each epicenter, usually with reference to a point named on the map. Information on small foreshocks and aftershocks is sometimes included in the Remarks. When numerous foreshocks or aftershocks accompany a large earthquake, a separate table is generally included following the main list of local shocks, giving origin times, Richter Magnitudes, and, where significant differences in location can be determined, the geographic coordinates. The larger earthquakes of after-shock series are also included in the main list of local shocks.

Information on the intensities of shocks reported felt is also included under Remarks. Reports on felt earthquakes are chiefly those collected by the Seismological Field Survey of the United States Coast and Geodetic Survey, which publishes a more complete summary of such reports in "Abstracts of Earthquake Reports for the Pacific Coast and Western Mountain Region". This is a quarterly publication, and may be obtained from the District Officer, San Francisco District, Coast and Geodetic Survey, 121 Customhouse, San Francisco 26, California, or from the Director, U.S. Coast and Geodetic Survey, Washington 25, D.C.

Intensities are given by Roman numerals when sufficient information on the effects of the shock is available. These intensity numbers assigned by the Coast and Geodetic Survey are based on the Modified Mercalli Intensity Scale of 1931 (Harry O. Wood and Frank Neumann, "Bulletin of the Seismological Society of America", 21:277-283, 1931), the criteria of which follow in an abridged form.

Original seismograms from the short-period Wilson-Lamson vertical-component instrument at Ukiah, California, are available routinely for use in locating epicenters of local earthquakes through the courtesy of the Director, U.S. Coast and Geodetic Survey.

MODIFIED MERCALLI INTENSITY SCALE OF 1931

(Abridged)

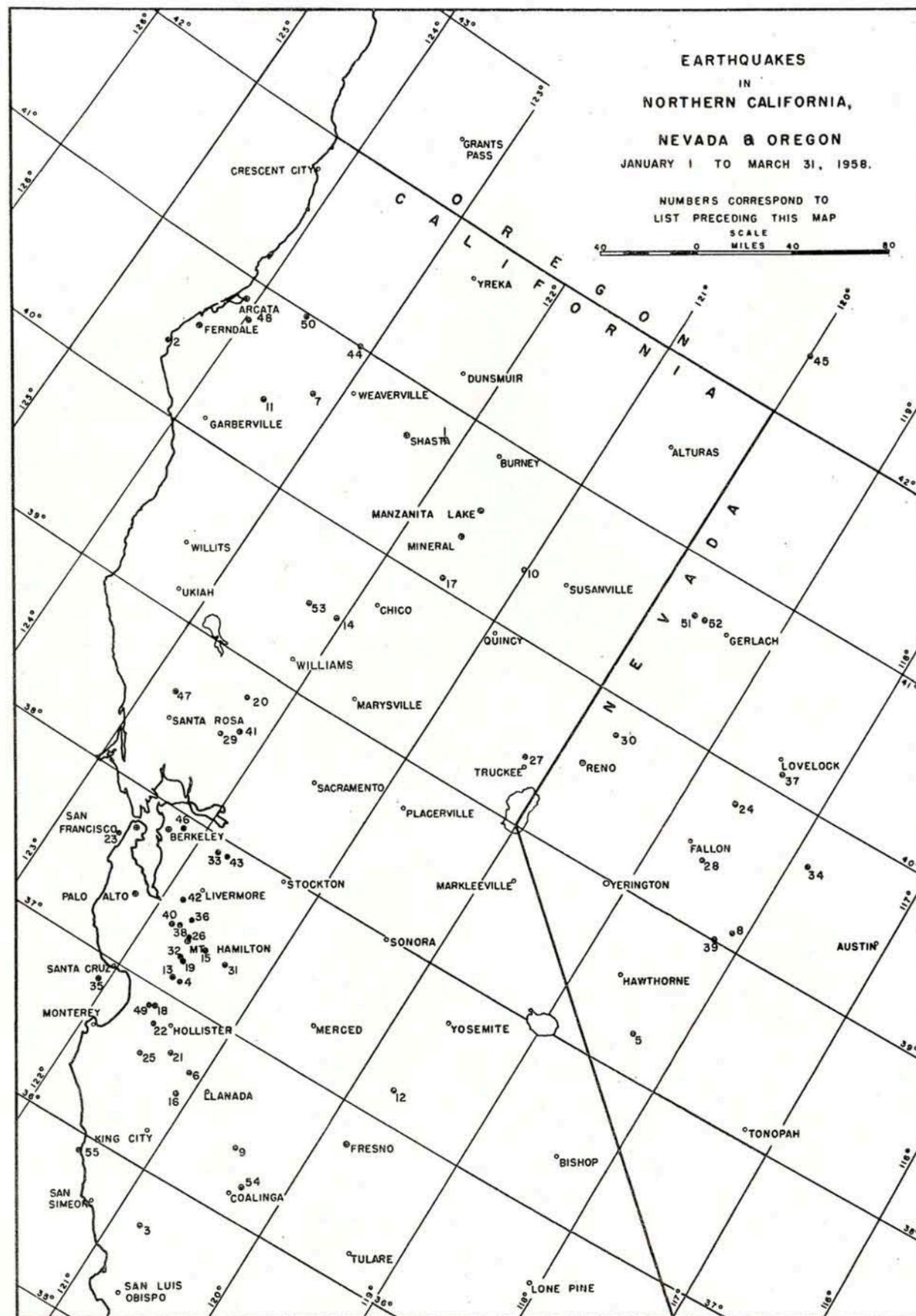
- I. Not felt except by a very few under especially favorable circumstances.
- II. Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
- III. Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration like passing truck. Duration estimated.
- IV. During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls made creaking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
- V. Felt by nearly everyone; many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
- VI. Felt by all; many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.
- VII. Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
- VIII. Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Disturbed persons driving motor cars.
- IX. Damage considerable in specially designed structures; well designed frame structures thrown out of plumb; great in substantial buildings with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
- X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
- XI. Few, if any (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipe lines completely out of service. Earth slips and land slips in soft ground. Rails bent greatly.
- XII. Damage total. Waves seen on ground surfaces. Lines of sight and level distorted. Objects thrown upward into the air.

EARTHQUAKES IN NORTHERN CALIFORNIA, NEVADA, AND OREGON

Map No.	Date 1958	Origin Time (G.C.T.)	Latitude North	Longitude West	Q	M	Remarks
1	Jan. 1	04-14-44	40.8°	122.1°	d	3.4	Northeast of Shasta.
-	Jan. 4	17-27-34	38.9°	115.5°	d	4.5	Southeast of Eureka, Nevada.
2	Jan. 7	09-05-37	40° 23'	124° 24'	b	3.4	Southeast of Ferndale.
3	Jan. 7	17-13-16	35.7°	120.8°	d	3.0	North of San Luis Obispo.
4	Jan. 11	19-46-47	37° 06'	121° 32'	c	2.6	South of Mt. Hamilton.
5	Jan. 13	04-17-27	38° 15'	118° 22'	c	4.2	Southeast of Hawthorne, Nevada.
6	Jan. 18	02-17-28	36° 39'	121° 06'	c	2.9	Northwest of Llanada.
7	Jan. 18	11-48-02	40.6°	123.2°	d	3.3	Southwest of Weaverville.
8	Jan. 18	16-33-35	39.1°	118.1°	d	4.4	Southeast of Fallon, Nevada. Felt at Frenchman's Station, Nevada.
9	Jan. 21	21-22-08	36.4°	120.5°	d	2.9	Northwest of Coalinga.
-	Jan. 22	12-59-31	44.5°	124.2°	d	3	Near the coast of Oregon.
10	Jan. 25	03-39-54	40° 22'	121° 01'	c	3.5	East of Mineral. IV at Caribou (NW Plumas County). Also felt at Hamilton Branch Camp, near Hamilton Branch Powerhouse (Plumas County).
11	Jan. 26	20-05-56	40.4°	123.5°	d	2.9	Northeast of Garberville.
12	Jan. 26	20-22-33	37.2°	119.7°	d	3.4	North of Fresno.
13	Jan. 27	02-24-09	37.1°	121.6°	d	2.4	South of Mt. Hamilton.
14	Jan. 27	15-22-02	39° 30'	122° 03'	c	2.9	Southwest of Chico.
15	Jan. 28	02-51-23	37° 21'	121° 30'	b	2.3	East of Mt. Hamilton.
15	Jan. 28	03-01-01	37° 21'	121° 30'	c	1.7	Aftershock.
16	Jan. 28	07-12-54	36.5°	121.1°	d	2.2	Southwest of Llanada.
17	Jan. 28	09-46-04	40° 04'	121° 31'	c	3.2	South of Mineral.
18	Jan. 29	17-53-18	36.9°	121.6°	d	2.3	West of Hollister.
19	Jan. 31	16-10-32	37° 13'	121° 36'	c	1.7	South of Mt. Hamilton.
20	Feb. 1	07-08-44	38.8°	122.3°	d	3.4	Northeast of Santa Rosa. IV at Calistoga, Hoberg's and Lower Lake.
21	Feb. 4	19-33-46	36.7	121.3	d	3.2	Southeast of Hollister.
22	Feb. 6	00-30-33	36° 48'	121° 32'	c	3.2	Southwest of Hollister. IV at Hollister.
-	Feb. 6	00-56-06	40.5°	126.7°	d	3.9	125 miles west of Ferndale.
23	Feb. 7	03-58-13	37° 41'	122° 33'	b	2.2	Aftershock of Mar. 22, 1957. Felt in San Francisco.
24	Feb. 8	05-04-45	39.8°	118.6°	d	3.5	Northeast of Fallon, Nevada.
25	Feb. 8	23-50-58	36.6°	121.5°	d	2.7	East of Monterey.

Map No.	Date 1958	Origin Time (G.C.T.)	Latitude North	Longitude West	Q	M	Remarks
26	Feb. 11	13-58-29	37° 22'	121° 40'	c	2.4	Near Mt. Hamilton.
27	Feb. 12	02-25-44	39° 23'	120° 13'	c	2.7	Northwest of Truckee. IV at Donner Summit and Norden.
28	Feb. 16	03-20-20	39.4°	118.6°	d	3.4	Southeast of Fallon, Nevada.
29	Feb. 16	07-56-36	38° 32'	122° 19'	c	2.7	East of Santa Rosa.
29	Feb. 16	08-26-53	38.5°	122.3°	d	2.3	Aftershock.
29	Feb. 16	08-54-46	38.5°	122.2°	d	2.6	Aftershock.
30	Feb. 17	10-11-10	39.8°	119.7°	d	2.3	Northeast of Reno.
30	Feb. 18	12-03-43	39.8°	119.7°	d	2.9	Northeast of Reno.
23	Feb. 18	21-34-24	37° 42'	122° 32'	b	1.7	Aftershock of Mar. 22, 1957.
31	Feb. 20	06-20-05	37° 20'	121° 19'	b	2.8	East of Mt. Hamilton.
32	Feb. 21	14-08-50	37° 14'	121° 38'	c	2.0	South of Mt. Hamilton.
33	Feb. 22	18-55-45	37° 55'	121° 49'	b	2.6	East of Berkeley.
34	Feb. 23	02-25-01	39° 41'	117° 52'	c	3.8	Northwest of Austin, Nevada.
23	Feb. 23	21-15-12	37° 43'	122° 33'	b	1.7	Aftershock of Mar. 22, 1957. Felt in Ingleside District of San Francisco.
35	Feb. 26	23-03-27	36° 52'	122° 04'	c	1.6	South of Santa Cruz.
36	Feb. 28	11-47-25	37° 28'	121° 43'	b	2.4	Northwest of Mt. Hamilton.
37	Mar. 1	11-29-41	40.1°	118.4°	d	3.3	Near Lovelock, Nevada.
38	Mar. 4	05-19-15	37° 24'	121° 46'	a	2.8	Northwest of Mt. Hamilton.
39	Mar. 5	05-11-56	39.0°	118.2°	d	3.8	Southeast of Fallon, Nevada.
40	Mar. 5	05-31-16	37° 23'	121° 49'	b	2.1	Northwest of Mt. Hamilton.
41	Mar. 5	05-53-32	38.6°	122.2°	d	2.3	Foreshock.
41	Mar. 5	17-10-08	38.6°	122.2°	d	2.6	Northeast of Santa Rosa.
42	Mar. 6	14-58-38	37° 33'	121° 52'	a	2.8	Southwest of Livermore. IV at Mission San Jose.
23	Mar. 6	21-42-52	37° 40'	122° 30'	b	2.4	Aftershock of Mar. 22, 1957.
43	Mar. 9	18-26-09	37° 55'	121° 45'	c	2.9	West of Stockton.
44	Mar. 11	10-48-20	41.0°	123.1°	d	2.7	Northwest of Weaverville.
45	Mar. 12	12-09-16	42.4°	120.0°	d	4.5	South-central Oregon.
46	Mar. 12	22-54-09	37° 55'	122° 09'	b	2.4	Northeast of Berkeley. Felt in Orinda.
47	Mar. 14	06-30-35	38.6°	122.8°	d	2.5	Northwest of Santa Rosa. Aftershock, magnitude 2, at 06-32-48.
48	Mar. 14	14-01-36	40° 46'	123° 58'	c	3.0	Southeast of Arcata. IV at Eureka.
49	Mar. 19	03-46-15	36° 53'	121° 38'	c	2.4	Northwest of Hollister.

Map No.	Date 1958	Origin Time (G.C.T.)	Latitude North	Longitude West	Q	M	Remarks
23	Mar. 19	11-58-51	37° 42'	122° 33'	a	2.0	Aftershock of Mar. 22, 1957 IV in San Francisco Peninsula area.
50	Mar. 21	11-33-24	40° 59'	123° 36'	c	3.6	Northeast of Arcata.
51	Mar. 24	00-22-10	40° 40'	119° 39'	c	3.6	Foreshock.
52	Mar. 24	03-10-28	40° 40'	119° 34'	c	3.9	West of Gerlach, Nevada.
53	Mar. 25	02-58-23	39.5°	122.3°	d	3.4	Southwest of Chico. IV at Storrie (Plumas County).
54	Mar. 26	13-12-30	36.2°	120.3°	d	2.4	Near Coalinga.
55	Mar. 27	20-26-14	35.9°	121.5°	d	2.8	Northwest of San Simeon.
52	Mar. 28	07-22-22	40.7°	119.6°	d	3.4	Aftershock of Mar. 24 at 0310.
23	Mar. 28	14-05-39	37° 40'	122° 31'	a	2.3	Aftershock of Mar. 22, 1957. Felt in San Francisco and Daly City.
38	Mar. 29	22-30-26	37° 22'	121° 46'	b	2.2	Northwest of Mt. Hamilton.
38	Mar. 29	22-47-24	37° 22'	121° 46'	b	2.1	Aftershock.
16	Mar. 31	17-38-23	36.5°	121.1°	d	2.7	Southwest of Llanada.



THE REGISTRATION OF EARTHQUAKES

<u>Station</u>	<u>North Latitude</u>	<u>West Longitude</u>	<u>Altitude Meters</u>	<u>Station Symbol</u>	<u>Present Auspices and Date</u>
Berkeley	37° 52.3'	122° 15.6'	81	B, BG*	University of California - 1887
Mt. Hamilton	37° 20.4'	121° 38.6'	1282	MH	Lick Observatory - 1887
Palo Alto	37° 25.1'	122° 10.8'	83	PA	Stanford University - 1927
San Francisco	37° 46.4'	122° 27.2'	100	SF	University of San Francisco - 1931
Ferndale	40° 34.6'	124° 15.7'	15	Fe	City of Ferndale - 1933
Fresno	36° 46.1'	119° 47.8'	88	F	Fresno State College - 1935
Mineral	40° 20.8'	121° 36.1'	1495	M	National Park Service, Lassen Volcanic National Park - 1938
Arcata	40° 52.6'	124° 04.5'	59	A	Humboldt State College - 1948
Reno	39° 32.3'	119° 48.8'	1386	R	University of Nevada - 1948
Corvallis	44° 35.1'	123° 18.2'	123	C	Oregon State College - 1950
Shasta	40° 41.7'	122° 23.3'	312	SH	Bureau of Reclamation - 1942
Manzanita Lake	40° 32.2'	121° 33.7'	1800	ML	National Park Service, Lassen Volcanic National Park - 1956

\*B denotes readings of short period instruments, BG of long period instruments (12 sec. Galitzin-Wilip).

Earthquakes in the Northern California, Nevada, and Oregon region are included in the following list only if of magnitude 4.5 or greater, or if of special interest. Times are usually not reported for PA, SF, Fe, or ML unless of special interest or in case of defective records at other stations.

Measurement and interpretation of seismograms from all the above listed stations is done at Berkeley; requests for special data or for copies of seismograms should be addressed to Seismographic Station, University of California, Berkeley 4, California.

STATION EQUIPMENT

Type and Component	Station
Short-period Benioff Z	B, MH, PA, M, SH
Short-period Benioff N, E	SH
Short-period Wood-Anderson, N, E	B, MH, PA, SF, M, A
Short-period Sprengnether N, E, Z	F, R
Short-period Slichter N, E, Z	C
Short-period Wilson-Lamson Z	C
Long-period Galitzin-Wilip N, E, Z	B
100 kg Bosch-Omori N, E	B
25 kg Bosch-Omori N, E	Fe
80 kg Wiechert Z	B
Loucks-Omori N, E	ML

The three components are indicated by N, E, Z in the "phase" column of the following tabulation of readings. When no letter appears, the phase is read from the vertical component (Z) only. "i" (impetus) preceding a phase designates sudden beginning of the motion; "e" (emersio) designates gradual beginning.

In the column headed "Ground Motion", "c" or "d" indicates initial compression or dilatation of the ground as read from the vertical component instrument. N, S, E, or W indicates that the initial ground motion was north, south, east, or west, respectively.

Maximum amplitude of earth displacement in microns ( $\mu$ ) and periods in seconds (sec) of the indicated phases are given for the Berkeley station in the column headed "Time (GCT)". Combined horizontal amplitude of N and E components are designated by H.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Jan. 1	MH	iP	02 34 02.3		
	M	eP	25		
		e(P)	38 39		
	R	eP	24 17		
	SH	eP	27		
Jan. 1	B	e(P)	10 22 25		BCIS: South of Tonga Islands. 0 = 10 10.0.
	MH	iP	21.8		
	M	iP	32.3		
	R	eP	34		
	SH	eP	31		
Jan. 1	MH	iP	14 34 51		
	F	eP	55		
	M	eP	59		
Jan. 1	B	eP	15 13 21		USCGS: 52°N, 171½°W, 0 = 15 06 08. Fox Islands, Aleutian Islands.
	MH	iP	28.5		
	F	eP	41		
	M	iP	13		
	R	eP	27		
	SH	eP	06		
Jan. 2	MH	iP	00 34 25		USCGS: 5°S, 152°E, 0 = 00 21 22. New Britain. Felt at Kokopo, Rabaul, and Wonakgoi.
	F	eP	31		
	M	iP	28		
	R	eP	35		
	SH	eP	25		
Jan. 2	M	eP	21 22 22		USCGS: 45°N, 151°E, h = 60 km., 0 = 21 12 07. Kurile Islands.
	R	eP	35		
	SH	iP	17.8		
Jan. 2	MH	eP	22 45 40		USCGS: 11½°N, 60½°W, 0 = 22 35 29. Northeast of Trinidad. Felt: Tobago.
	M	eP	46 01		
	B	iP	45 44		
Jan. 3	MH	iP	02 07 07.5	c	USCGS: 29½°N, 141°E, 0 = 01 55 10. South of Honshu, Japan.
	F	eP	11.2	d	
	M	iP	20		
	R	iP	02.8	c	
	SH	eP	14.7	c	
Jan. 3	F	eP	06 34 58		USCGS: 32°N, 41½°W, 0 = 06 24 31. North Atlantic Ocean
	M	iP	35 04		
	R	eP	34 58		
Jan. 3	M	e	06 49 31		
Jan. 3	MH	i(P)	07 00 47		USCGS: 31°N, 40½°W, 0 = 06 49 56. North Atlantic Ocean.
	M	e(P)	34		
	R	e(P)	29		
	SH	e(P)	33		
Jan. 3	F	e(P)	07 12 41		USCGS: 31°N, 40½°W, 0 = 07 02 07. North Atlantic Ocean.
	M	eP	45.6	c	
	R	e	50		
Jan. 3	M	eP	07 26 20.0	d	BCIS: 0 = 07 15 40. North Atlantic Ocean.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Jan. 3	M	eP	08 06 15.1		USCGS: 31½°N, 41°W, 0 = 07 55 40. North Atlantic Ocean.
Jan. 3	M	eP	08 44 07.0		USCGS: 32½°N, 41°W, 0 = 08 33 31. North Atlantic Ocean.
Jan. 3	M	eP	09 03 22.3		BCIS: 0 = 08 52.4 North Atlantic Ocean.
Jan. 3	M	iP	10 23 08.5	c	USCGS: 31½°N, 41°W, 0 = 10 12 33. North Atlantic Ocean.
Jan. 3	B	eP	18 08 08.3	d	USCGS: 22°S, 65°E, 0 = 17 47 12. Mascarene Islands Region.
	M	eP	07 57.5		
	R	eP	08 04		
	S	eP	07 56		
Jan. 4	B	eL	07 15.0		USCGS: 31½°N, 40½°W, 0 = 06 39 45. North Atlantic Ocean.
	F	eP	06 50 21		
	M	eP	19.6	c	
	R	e(P)	04		
Jan. 4	B	eP	08 08 22		USCGS: 17°N, 99½°W, 0 = 08 02 20. Guerrero Mexico, Felt.
		eLNE	16.6		
	MH	iP	08 15.4	c	Pas. Magnitude 5 3/4.
		e	17.9		
	F	iP	08 00.5	c	
	M	eP	34		
		e	18.7		
	R	eP	08 21		
		e	17 39		
	C	e(P)	09 07		
Jan. 4	B	e(P)	17 28 53.9		38.9°N, 115.5°W, 0 = 17 27 34 Southeast of Eureka, Nevada. Magnitude 4.5.
		eNE	30 17.5		
	MH	iP	28 51.2		
		eN	30 09.2		
		i	11.7		
	F	e	28 52.5		
		i	54.8		
	M	iP	50.9		
		iS	29 45.9		
	R	eP	28 25.4		
		iSNE	29 06.4		
	C	e	29 21		
	S	eP	29 02		
		eSNE	30 04		
		e	29 00		
Jan. 5	B	eP	11 42 10.0	d	USCGS: 56½°N, 121°E, 0 = 11 30 44. Stanovoi Mountains Region, Siberia.
	MH	iP	14.1	d	
	F	eP	21		
	M	eP	41 57.9	d	
	R	eP	42 10		
	C	eP	41 31		
Jan. 5	B	eP	12 41 09		USCGS: 6°S, 155°E, 0 = 12 28 20. Solomon Islands, Felt: Rabaul and Karoola. h about 100 kms.
	MH	iP	10.9	d	
	M	e(P)	11.7		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Jan. 6	M	e	02 11 38.1		
Jan. 6	MH	iP	04 07 32.4	d	
	M	e	24.8		
		e	42		
	S	eP	08 43		
Jan. 6	MH	e	05 26 08.7		
	M	e	25 41.8		
		i	26 15.5		
		i	28 01.7		
	S	eP	25 33		
Jan. 6	MH	eP	09 08 22.2		
		e	10 26.4		
		e	14 09.3		
	M	eP	07 57.3		
		i	09 55.8		
		e	13 45.6		
	R	e	09 35		
	S	eP	07 48		
Jan. 6	MH	iP	10 10 47.7	d	BCIS: 34½°N, 48°E, 0 = 09 54 12. West Central Iran.
	M	e(P)	44.7	d	
Jan. 6	MH	i(P)	12 24 42.2	d	
	M	e	25.8		
		i	25 10.9		
	S	e(P)	24 20		
Jan. 7	MH	iP	03 45 12.5	c	
		i	23.6	c	
	F	iP	17.0	c	
	M	e	23.6		
	R	eP	46 26		
Jan. 7	MH	iP	08 33 19.1	d	USCGS: 0 = 08 20 54. Tonga Islands Region.
	M	eP	28.0	d	
Jan. 7	MH	iP	08 51 44.0	c	
Jan. 9	B	eP	11 27 02		USCGS: 5½°S, 147°E. h = 150 km, 0 = 11 13 56. Near North Coast of New Guinea. Felt: Lae, Wau, and Port Moresby.
	MH	iP	04.3	c	
	F	e(P)	09		
	M	iP	04.5	c	
	R	eP	11		
	S	iP	02.4	d	
Jan. 9	F	e(P)	17 52 55		USCGS: 44½°N, 85°E. 0 = 17 39 24. Sinkiang Province, China.
	M	iP	41.3	c	
		i	46.2	c	
	A	eP	20.6		
	R	eP	44		
	C	iP	18.3	d	
	S	iP	35.0	c	
Jan. 10	B	i(P)	13 44 25.5	c	USCGS: 52°N, 171°W. 0 = 13 37 14. Fox Islands, Aleutian Islands.
	MH	iP	31.9	c	
		i	46 50.3		
	F	eP	44 43		
	M	i(P)	48.4	d	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Jan. 10	R	eP	30		
cont'd	S	eP	11		
Jan. 11	MH	iP	04 57 01.0	d	USCGS: 55°N, 161°E. 0 = 04 47 35.
	M	iP	56 44.7	d	Kamchatka.
	R	e	55		
	S	iP	40.5	d	
Jan. 11	B	iP	13 31 01.8	c	USCGS: 23½°S, 177°W. 0 = 13 18 47.
		e	56		Tonga Islands Region.
	MH	iP	02.5	c	
	F	iP	05.5		
	M	iP	11.0	c	
	R	iP	15.3	c	
	C	eN	22		
	S	iP	11.0	c	
Jan. 11	M	e	13 57 48.1	d	
		e	14 01 03.9		
Jan. 12	M	iP	01 12 55.3	c	USCGS: 31½°N, 41°W. 0 = 14 55 09.
Jan. 12	B	eP	15 05 54	d	Atlantic Ocean.
	MH	iP	52.2		
	F	eP	43		
	M	iP	43.4	d	
	R	eP	35		
	C	eP	41		
	S	eP	46		
Jan. 13	B	iP	00 10 24.7	c	USCGS: 52½°N, 177°E. h = 100 km,
		e	12 08		0 = 00 02 24. Rat Islands,
	MH	iP	00 10 31.0	c	Aleutian Islands.
		i	59.0	c	
		i	12 11.1		
	F	iP	10 42.7	c	
	M	iP	15.4	c	
	R	eP	28		
	C	eP	09 45		
	S	iP	10 11.0		
Jan. 13	B	eP	03 06 57	c	USCGS: 11°S, 166°E, h = 100 km,
	MH	iP	59.3		0 = 02 54 37. Santa Cruz
	F	eP	07 04		Islands.
	M	eP	03.0	c	
	R	eP	09		
	SH	iP	02.2	c	
Jan. 13	M	iP"	20 33 21	c	USCGS: 11½°N, 92½°E, 0 = 20 14 27.
		ePP	34 40		Andaman Islands.
	R	eP"	33 24		
	SH	iP"	20	c	
Jan. 14	M	iP	01 41 45		USCGS: 51½°N, 178½°E, h = 100 km.,
	R	eP	55		0 = 01 33 55. Rat Islands,
	SH	eP	38		Aleutian Islands.
Jan. 14	B	iP	06 06 51.1	c	USCGS: 22°S, 175°W, 0 = 05 54 48.
	F	eP	54		Tonga Islands.
	M	eP	59.4	c	
	R	eP	07 04		
	SH	eP	00		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Jan. 14	M	iP	07 32 40		USCGS: 29°S, 179°W, h = 350 km.,
		ipP	33 59		0 = 07 20 25. Kermadec
	SH	epP	34 00		Islands.
Jan. 15	MH	iP	07 44 53		USCGS: Near Coast of El Salvador.
	M	e(P)	45 07		0 = 07 37 40. Felt: San
					Salvador and western El Salvador.
Jan. 15	B	iPNEZ	19 25 46.5	NWC	USCGS: 16½°S, 71½°W, h = 100 km.,
		ipP	26 05.1	c	0 = 19 14 29. Southern Peru.
		ePP	28 55		Extensive Property Damage,
	BG	iSNE	35 03	NE	21 killed, 90 injured.
		i(sS)N	40		PAS: Magnitude 7.
		eSS	39.8		
			mu sec		
		PZ	5.1 5		
		PH	1.7 6		
		pPZ	6.5 7		
		pPH	5.0 7½		
		SH	14 8		
		SH	60 20		
		(sS)H	22 9		
	MH	iP	19 25 42.4	c	
		i	26 09.9		
	F	iP	25 31.7	c	
	M	iP	52.2	c	
	A	e(P)N	26 02		
	R	iP	25 44.6	c	
	C	iP	26 15.6	c	
	SH	iP	25 55.7	c	
Jan. 15	MH	i(P)	19 53 33		
	F	i(P)	39		
	M	e(P)	29		
	R	e(P)	33		
Jan. 15	B	eP	22 28 24		USCGS: 13½°S, 167°E, 0 = 22 15 44.
		e	40		New Hebrides Islands.
		e(PP)	32 08		
	MH	iP	28 24		
	F	e	47		
	M	eP	30		
	R	e	52		
	SH	eP	26		
Jan. 16	B	eP	04 27 52		USCGS: 16°S, 175°W, h = 250 km.,
	MH	iP	54		0 = 04 16 46. Tonga Islands
	F	iP	58		Region.
	M	iP	28 03		
		e(PP)	31 40		
	R	eP	28 07		
Jan. 17	M	e	04 33 06		USCGS: 1°S, 127°E, 0 = 04 14 02.
					Spice Islands.
Jan. 17	M	eP"	07 34 41		USCGS: 52°S, 139½°E, 0 = 07 15 38.
		i	54		Antarctic Ocean.
	R	e(P")	46		
	SH	eP"	41		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks	
1958			h. m. s.			
Jan. 18	B	e(P)	16 34 38.6	d	39.1°N, 118.1°W, 0 = 16 33 35. Southeast of Fallon, Nevada. Felt at Frenchman's Station. Magnitude 4.4.	
		eSN	35 28.3			
	F	iP	34 30.2			
		iSNE	35 08.9			
	M	iP	34 25.5			
		eE	35 06.9			
Jan. 19	SH	eP	34 35	c	USCGS: 1½°N, 79½°W, h = 60 km., 0 = 14 07 27. Near coast of Ecuador. 14 killed, many injured, extensive property damage at Las Esmeraldas, Las Palmas, and Guayaquil. Seismic Sea wave damage at Las Esmeraldas and Guayaquil. PAS: Magnitude 7½.	
		eNE	35 31			
	B	eP	14 16 47			
		eNEZ	51			
	BG	iSN	24 22			
		eQNE	34.5			
Jan. 19	MH	PZ	13 5	SEd	USCGS: 1½°N, 79°W, 0 = 14 43 24. Near coast of Ecuador. Slight Damage in Northern Ecuador. PAS: Magnitude 6-3/4.	
		PH	9.4 4			
		SH	140 14			
		MaxH	330 19			
		eP	14 16 43.4			
		eSE	24 18			
	F	eP	16 30			d
		i	54			
	R	eP	44			
		eP	17 18			
	SH	eP	16 57			
		iP	14 52 47.9			
Jan. 19	B	i	53 10.6	c	USCGS: 30½°S, 71½°W, 0 = 02 19 53. Northern Chile.	
		iP	52 42.2			
	MH	eP	31			
		iP	54			
	R	eP	43			
		eP	53 19			
Jan. 20	SH	eP	52 56	c	USCGS: 30½°S, 71½°W, 0 = 09 55 44. Northern Chile.	
		eP	02 32 22			
	B	e	32			
		eSNE	42 40			
	BG	eLN	03 00			
		eP	02 32 18			
Jan. 20	MH	i	29	d	USCGS: 56½°N, 163°E, 0 = 05 53 58. Near east coast of Kamchatka. PAS: Magnitude 6½.	
		eP	09			
	F	eP	28			
		eP	21			
	R	eP	49			
		eP	31			
Jan. 20	SH	eP	10 08 14	d	USCGS: 56½°N, 163°E, 0 = 06 11 03. Near east coast of Kamchatka.	
		eP	11			
	MH	iP	22			
		i	22			
	F	e	13			
		e	31			
R	e(P)	14				
	eP	23				

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Jan. 20	M	eP	12 16 16		
		eP	19 41 35		
Jan. 20	SH	eP	33		
		eP	08 19 09		
Jan. 21	MH	eP	19		USCGS: 29°S, 73°W, 0 = 08 06 56. Near coast of Chile.
		eP	13		
	R	eP	23		
		eP	18 42 11		
Jan. 22	M	eP	11		USCGS: 23°N, 121½°E, h = 200 km Near east coast of Formosa. Felt: Taipei
		eP	07		
Jan. 22	M	iP	23 40 13		USCGS: 54°N, 170°E, 0 = 23 31 43. Komandorskie Islands.
		eP	26		
	SH	eP	08		
		iP	02 44 43.2		
Jan. 23	B	iP	47.5	c	USCGS: 44½°N, 146½°E, h = 150 km., 0 = 02 34 09. Kurile Islands.
		eP	57		
	MH	eP	36.0		
		eP	46		
	F	eP	15		
		iP	31.7		
Jan. 23	SH	iP	09 04 44.7	c	USCGS: 18½°S, 170°E, h = 150 km., 0 = 08 52 23. New Hebrides Islands.
		iP	47.0		
	MH	ipP	05 21.2		
		iP	04 50.4		
	F	eP	52.1		
		eP	56		
Jan. 23	R	eP	56	c	USCGS: 65°N, 6½°E, 0 = 13 35 03. off west coast of Norway. Felt in Central Norway.
		eP	05 19.7		
	SH	eP	13 46 18.4		
		iP	20.9		
	MH	eP	21		
		iP	01.9		
Jan. 24	M	i	12.8	c	USCGS: 56½°N, 115½°E, 0 = 04 35 55. Northeast of Lake Baikal, U.S.S.R.
		eP	04		
	SH	eP	01		
		eP	04 47 43		
	F	eP	22.6		
		iP	29		
Jan. 24	R	eP	19.1	d	USCGS: 56½°N, 163°E, 0 = 05 53 58. Near east coast of Kamchatka. PAS: Magnitude 6½.
		iP	06 03 09		
	SH	e(P)	10 27		
		e(S)NE	15.9		
	MH	eNE	19.7		
		eREZ	19.7		
Jan. 24	BG	iP	03 04		USCGS: 56½°N, 163°E, 0 = 06 11 03. Near east coast of Kamchatka.
		eP	20		
	MH	eP	02 54		
		eP	03 06		
	F	eN	02 21		
		eP	50		
Jan. 24	SH	eP	06 19 57		USCGS: 56½°N, 163°E, 0 = 06 11 03. Near east coast of Kamchatka.
		e(P)	20 12		
	M	eP	19 55		
		eP			

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Jan. 24	M	eP'	07 08 07		USCGS: 49°S, 32°E, 0 = 06 48 06. About 300 miles Southwest of Prince Edward Islands.
Jan. 24	F	eP	18 12 30		USCGS: 54°N, 170°E, 0 = 18 03 32. Komandorskie Islands Region.
	M	iP	04		
	R	eP	18		
	C	iP	11 36		
	SH	eP	12 00		
Jan. 24	B	iP	23 23 28.7	C	USCGS: 60°N, 152°W, h = 60 km., 0 = 23 17 29. Kenai Peninsula, Alaska. Felt:
		i	45.7	d	
	BG	eLN	30.1		Anchorage. PAS: Magnitude 6 $\frac{1}{4}$ - 6 $\frac{1}{2}$ .
	MH	iP	23 34.9		
	F	iP	45.8	c	
	M	iP	12.4	c	
		i	33.2	c	
	R	iP	25.7	c	
	C	iP	22 34.8	c	
	SH	iP	23 07.2	d	
Jan. 24	B	iP	24 04 28.6	c	USCGS: 17 $\frac{1}{2}$ °S, 178 $\frac{1}{2}$ °W, h = 550 km., 0 = 23 53 29. Fiji Islands.
	M	eP	33.2	c	
	R	eP	43		
	C	e(P)	47		
	SH	i(P)	37.0	c	
Jan. 26	MH	i	04 08 59		USCGS: 47 $\frac{1}{2}$ °N, 154 $\frac{1}{2}$ °E, 0 = 06 42 13. Kurile Islands.
Jan. 26	F	e	06 52 37		
	M	e(P)	02		
	R	e	30		
	SH	e	07		
Jan. 26	M	eP	07 38 19		USCGS: 49 $\frac{1}{2}$ °N, 155°E, 0 = 07 28 33. Kurile Islands.
	R	eP	31		
	SH	eP	15		
Jan. 26	M	e(P)	12 41 31		
	SH	e(P)	33		
Jan. 27	B	eP	07 55 27		USCGS: 15°S, 174°W, 0 = 07 43 58. Samoa Islands. PAS: Magnitude 6-3/4.
	BG	eSE	08 04 47		
		eNE	05 14		
		eRNEZ	16.6		
			R from SW		
			mu sec		
		PZ	1.9 8		
		SH	13 15		
		MaxH	22 20		
	MH	iP	07 55 26		
	F	eP	30		
	M	eP	35		
	R	eP	41		
	C	eP	50		
	SH	eP	35		
Jan. 27	M	e	08 43 33		USCGS: 19°S, 172 $\frac{1}{2}$ °W, 0 = 04 58 01. Tonga Islands.
Jan. 30	M	eP	05 09 50		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Jan. 30	F	e	06 25 25		USCGS: 7 $\frac{1}{2}$ °S, 155 $\frac{1}{2}$ °E, 0 = 06 13 24. Solomon Islands.
	M	e	23		
	R	e	22		
Jan. 30	B	eP	22 52 52		USCGS: Tonga Islands Region. h = 600 km., 0 = 22 41 27.
	MH	iP	52		
	M	iP	53 01		
Jan. 31	MH	iP	21 11 31	d	BCIS: 23°S, 175°W, 0 = 20 59.5. South of the Tonga Islands.
	F	eP	44		
	M	eP	51	d	
	R	eP	54		
Feb. 1	M	eP	02 47 16		USCGS: 60 $\frac{1}{2}$ °N, 140 $\frac{1}{2}$ °W, 0 = 02 42 07. Southern Alaska.
Feb. 1	B	eP	16 19 39	d	USCGS: 2°N, 79°W, 0 = 16 10 15. Near coast of Ecuador. Felt: Esmeraldas. PAS: Magnitude 6-3/4 - 7.
	BG	iSN	27 12	N	
			mu sec		
		PZ	6.2 9		
		PH	4.2 8		
		SH	45 12		
	MH	iP	16 19 32.5	d	
	F	eP	16	d	
	M	iP	41.5	d	
	R	eP	32	d	
	C	eP	20 05	d	
	SH	eP	19 49		
Feb. 1	B	eP	18 12 02.9	d	USCGS: 2°N, 79°W, 0 = 18 02 39. Ecuador Aftershock. Felt: Esmeraldas. PAS: Magnitude 6-3/4 - 7.
	BG	iSN	19 37	N	
		eLE	27		
			mu sec		
		PZ	2.3 8		
		SH	13 8		
	MH	iP	18 11 57.9	d	
	F	eP	44	d	
	M	iP	12 05.0	d	
	R	iP	11 58.6	d	
	C	eP	12 34		
	SH	eP	12		
Feb. 1	B	eP	20 55 10		USCGS: 1 $\frac{1}{2}$ °N, 79°W, 0 = 20 45 45. Ecuador Aftershock. PAS: Magnitude 6-3/4.
	BG	iSN	21 02 46	N	
			mu sec		
		PZ	2.6 6		
		SH	11 8		
	MH	iP	20 55 04.6	c	
	F	eP	54 52	c	
	M	iP	55 15.2	c	
	R	eP	04	c	
	C	iP	39.3	c	
	SH	eP	26		
Feb. 2	B	iP	08 21 55.0	d	USCGS: 48 $\frac{1}{2}$ °N, 154 $\frac{1}{2}$ °E, 0 = 08 11 53. Kurile Islands PAS: Magnitude 6 $\frac{1}{2}$ - 6 3/4.
		ipP	22 08.0	c	
	MH	iP	00.1	d	
		ipP	13.8		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Feb. 2 (Con't)	F	iP	09.3	d	
		ipP	22.7	e	
	M	iP	21 46.4	d	
	R	iP	58.5	d	
	C	eP	22		
	SH	eP	41		
Feb. 2	MH	iP	08 58 33		USCGS: 2°N, 79°W, 0 = 08 49 13. Equador Aftershock.
	F	eP	24		
	R	eP	34		
Feb. 3	MH	iP	08 37 12		USCGS: 21°S, 174°W, 0 = 08 25 19. Tonga Islands.
	F	eP	19		
	M	eP	31		
	R	eP	30		
Feb. 3	MH	i(P)	11 33 04		
	M	e(P)	31		
Feb. 4	M	eP	19 51 57		USCGS: 54°N, 164°W, 0 = 19 45 27. Unimak Island, Aleutian Islands.
	R	eP	52 17		
Feb. 5	R	e	08 18 30		USCGS: 47°N, 153°E, 0 = 08 08 10. Kurile Islands.
Feb. 5	MH	iP	20 56 35		BCIS: 36°S, 101°W, 0 = 20 44 44. About 1, 200 km. southeast of Easter Island.
	M	eP	52		
Feb. 6	MH	iP	11 17 18		PAS: 32° 03'N, 116° 10'W, 0 = 11 15 30. Sierra Juarez, Baja California Magnitude 4.5.
		i	18 22		
	F	eP	16 58		
	M	eP	17 55		
		i	18 41		
		e	20 18		
	R	e	18 32		
		i	19 46		
Feb. 6	B	iP	16 12 17		USCGS: 27½°S, 178°W, h = 250 km., 0 = 16 00 12. Kermadec Islands Region.
		ipP	13 16		
	MH	iP	12 17		
		ipP	13 16		
	M	eP	12 27		
		i	13 26		
Feb. 7	B	eP	01 23 20		USCGS: 31°S, 179°W, 0 = 01 10 31. Kermadec Islands.
		e	24 17		
	MH	iP	23 21		
		i	24 18		
	F	iP	23 23		
	M	iP	30		
	R	eP	31		
Feb. 7	MH	eP	23 37 06		USCGS: 31½°N, 104°E, 0 = 23 23 30. Szechwan Province, China.
		ePP	41 02		
Feb. 8	MH	iP	10 35 21		
	M	eP	52		
	R	eP	33		
Feb. 9	MH	iP	04 23 52		USCGS: 8°N, 79½°W, 0 = 04 15 05. South of Panama. Felt: Balboa Heights.
		i	24 02		
	F	eP	23 37		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Feb. 9 (Con't)	M	e	24 13		
	R	eP	23 51		
Feb. 9	MH	e(P)	11 34 26		BCIS: Near the coast of Costa Rica. 0 = 11 27 30. BCIS: Aleutians.
Feb. 11	MH	eP	07 51 38.9		
	M	iP	25.5		
	R	e	41		
Feb. 11	M	eP	12 53 40		USCGS: Near coast of Guatemala. 0 = 12 46 20.
Feb. 12	B	eP	02 46 36		USCGS: 13½°N, 144°E, h = 150 km., 0 = 02 34 14. Mariana Islands. Felt: Guam.
	MH	iP	39		
	M	iP	45		
Feb. 12	F	e(P)	07 34 43		USCGS: 5½°S, 151½°E, h = 60 km., 0 = 07 21 37. New Britain. Felt: Rabaul.
	M	e(P)	48		
Feb. 12	B	eP	23 51 18		USCGS: 52°N, 175°W, 0 = 23 43 45. Andreanof Islands, Aleutian Islands.
	BG	eSNE	57 20		
		PZ	1.4 7		PAS: Magnitude 6.
		SH	3 12		
		MaxH	18 20		
	MH	iP	23 51 23.4	c	
		i	52 00.5		
	F	eP	51 35	c	
	M	e	21		
	R	eP	22	c	
	C	e(P)N	50 43		
	SH	eP	51 03		
Feb. 13	M	eP	09 43 17	c	USCGS: 43°N, 136°E, 0 = 09 31 46. Sea of Japan, Near coast of Siberia.
	R	eP	18	c	
Feb. 13	M	i(S)	22 56 15.1		USCGS: 40½°N, 111½°W, 0 = 22 52 00. North-Central Utah. Felt over an area of 1,200 square miles. Max. Int. VI at Provo and Wallsburg, Utah.
	R	e(P)	53 48		
		iSN	55 24		
Feb. 15	B	iP	01 57 25.8	d	USCGS: 44°N, 147°E, 0 = 01 46 40. Kurile Islands. PAS: Magnitude 6 - 6¼.
	BG	eSNE	02 06 05		
		eN	14		
	F	eP	01 57 40		
		i	28		
	M	eP	21		
Feb. 16	B	eP	06 15 26		USCGS: 39°N, 142°E, 0 = 06 04 05. Near coast of Honshu, Japan. PAS: Magnitude 6 - 6¼.
		i	39		
	MH	iP	31.0	d	
		i	46.9		
	F	eP	40		
	M	iP	21.1	d	
	R	eP	33		
	SH	eP	15		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Feb. 16	B MH M R SH	eP iP eP eP eP	07 54 11.2 14.6 09.8 20 07	d d d	USCGS: 17°N, 146°E, h = 200 km., 0 = 07 42 11. Mariana Islands.
Feb. 16	MH M	i i	10 24 40 23 43		BCIS: 62½°N, 159°W, 0 = 10 18.0. Alaska.
Feb. 16	MH R	eP e	14 20 47 21 00		
Feb. 16	B M R	eP iP eP	24 07 40.6 46.3 51	c c	USCGS: 6°S, 155°E, 0 = 23 54 45. Solomon Islands.
Feb. 17	MH M R	iP iP e	02 35 25 10 46	c c	USCGS: 52°N, 159½°E, 0 = 02 25 46. Near east coast of Kamchatka.
Feb. 17	B BG MH F M R	e e(SKS)N (SKS)H i i(PP) e e(P) e i(PP) e(P) e	05 36 13 43 42 49 mu sec 3 10 05 36 03 50 00 32 16 35 29 36 23 32 23 35 57		USCGS: 35½°N, 70°E, h = 200 km., 0 = 05 18 35. Hindu Kush. Felt: Northern Afghanistan and Tadzhik S.S.R.
Feb. 18	MH F M R	iP eP eP eP	07 46 00.3 04 46 10 14	c c	USCGS: 21°S, 173½°W, 0 = 07 34 07. Tonga Islands.
Feb. 18	BG	eP e(S)N	13 34 08 44 38		USCGS: 31°S, 178½°W, 0 = 13 21 20. Kermadec Islands.
Feb. 18	M	eP	13 42 49.1	d	0 = 23 44 59.8
Feb. 18	M F	i e	23 46 47.5 44 49		Corona Blast, Southern California.
Feb. 19	F M R	e(P) e(P) e(P)	01 31 58 01 32 20 01 32 17		USCGS: 37½°S, 111°W, 0 = 01 20 20. South Pacific Ocean.
Feb. 19	MH F M R	iP" eP" e(P)" e(P)"	19 44 29.2 33 26.0 30	c	USCGS: 8°S, 108°E, 0 = 19 25 21. Near south coast of Java, moderate damage in Priangan.
Feb. 21	B MH M R	i iP i iP eP	03 29 55.3 35.1 50.5 30 00.5 29 53	c c	USCGS: 16°S, 74½°W, 0 = 03 18 25. Off coast of Peru.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Feb. 21	M	e	10 59 36.3	d	BCIS: Aleutians - Kamchatka.
Feb. 21	MH F M R	iP e(P) e(P) eP	13 56 24.5 21 34 24	d	USCGS: 1½°N, 80°W, 0 = 13 47 10. Off coast of Ecuador.
Feb. 22	B MH M R	eP iP iP e	08 24 50.4 52.2 53.5 25 00	c c c	USCGS: 6°S, 147°E, 0 = 08 11 50. h about 200 kms. Near north coast of New Guinea.
Feb. 22	B BG	iP eSNE eQNE eR	10 57 56.9 11 04 03 07.5 09.2	d NW	USCGS: 50½°N, 175°W, 0 = 10 50 23. Andreanof Islands, Aleutian Islands. PAS: Magnitude 6-3/4.
			mu sec		
		PZ	5.3 8		
		PH	4.8 8		
		SH	28 13		
		Max.H	75 9		
	MH	iP	10 58 02.8	d	
		i	08.4	d	
		eS	11 04 12.0		
	F	iP	10 58 15.7	d	
	M	iP	57 49.3	d	
		i	58 06.5	d	
		e	11 04 09.6		
	A	eLNE	07 51		
	R	iP	10 58 03.1	d	
	C	iP	57 22.6	d	
		i	30.6	d	
	PA	iP	58 00.2	d	
Feb. 22	B	eP	13 29 21.0	d	USCGS: 50½°N, 175°W, 0 = 13 21 48. Andreanof Islands, Aleutian Islands.
	MH	eP	26.8	d	
		e	31 30.5		
	F	eP	29 39		
	M	iP	12.7	d	
	R	eP	26	d	
Feb. 22	M	eP	15 20 15.3	d	
Feb. 22	M	e	15 55 00.6	c	BCIS: 0 = 15 47 35. Andreanof Islands, Aleutian Islands.
Feb. 22	B	e	17 12 35		USCGS: 51½°N, 174½°W, 0 = 17 05 00. Andreanof Islands, Aleutian Islands.
	MH	i(P)	45.1	d	
	F	eP	55	d	
	M	iP	33.2	d	
	R	e(P)	46		
Feb. 23	B	eP	00 43 23		BCIS: 0 = 00 <sup>h</sup> . 36.0 <sup>m</sup> . Andreanof Islands, Aleutian Islands.
	MH	eP	25.9	c	
	M	eP	15.0	c	
Feb. 23	MH M	i e	01 30 45.5 22.8	d	USCGS: 52°N, 175°W, 0 = 01 22 49. Andreanof Islands, Aleutian Islands.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Feb. 23	MH	iP	08 26 25.7	c	USCGS: 27½°S, 63°W, 0 = 08 14 48. h about 600 kms. Santiago Del Estero Province, Argentina.
		ipP	28 28.6		
	F	epP	19		
	M	eP	26 34.2	d	
		epP	28 36.8		
Feb. 23	R	e(P)	26 28		
Feb. 23	MH	iP	09 23 48.3	d	USCGS: 28½°N, 139½°E, 0 = 09 12 20. h about 400 kms. Bonin Islands region.
		ipP	25 25.5		
	F	eP	23 56		
	M	iP	41.1	d	
		epP	25 17.9		
	R	e(P)	23 50		
Feb. 23	C	e(P)	26		
Feb. 23	M	eP	10 19 54.2		USCGS: 20½°N, 120½°E, 0 = 10 06 23. Batan Islands aftershock.
Feb. 23	MH	iP	10 59 56.3	d	
		i	11 00 02.8	d	
	F	iP	04.3	d	
	M	iP	10 59 49.9	d	
	R	iP	59	d	
	C	iP	36.3	d	
	SH	e(P)	46		
Feb. 24	MH	iP	08 06 39.7	d	USCGS: 51½°N, 173°W, 0 = 07 58 59. Andreanof Islands, Aleutian Islands.
	M	iP	05 23.1		
	R	eP	06 36		
Feb. 24	B	e	12 40 12		USCGS: 45°N, 99°E, 0 = 12 27 06. Outer Mongolia.
	MH	iP	09.1	c	
	F	eP	16		
	M	iP	39 55.7	c	
	R	eP	40 03.3		
Feb. 26	M	iP	17 00 23.5	c	USCGS: 50°N, 155½°E, 0 = 16 50 46. Kurile Islands.
Feb. 26	M	eP	17 29 58		
	R	eP	30 06		
Feb. 27	MH	i	10 54 53.2	d	
	M	e	55 12.6		
Feb. 27	B	eP	23 41 29		USCGS: 21°N, 120°E, 0 = 23 27 49. Batan Islands region.
	M	eP	20.4	c	
	R	eP	35		
	C	eP	10		
Feb. 28	F	e	03 24 30		
	M	i	31.0		
	R	e	30		
Feb. 28	B	e(P)	10 05 40		USCGS: 27°N, 44°W, 0 = 09 54 53. Mid-Atlantic Ocean.
	BG	e(S)E	14 33		
		eQNE	28.6		
	MH	iP	05 34.4	c	
		i	39.8	d	
	F	eP	23		
	M	eP	27.2	d	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Feb. 28	R	eP	20		(con't)
	C	e(P)	34		
Feb. 28	M	e	10 31 10.1		
Mar. 1	B	eP	09 16 35		USCGS: 13½°S, 76½°W, 0 = 09 05 40. Near coast of Peru. Felt at Lima.
	MH	iP	31.7	c	
	F	eP	21		
	M	iP	44.3	c	
		i	17 38.6	d	
	R	eP	16 34		
Mar. 1	C	eP	17 07		
Mar. 1	MH	iP	16 27 25.0	c	USCGS: 17°S, 173°W, 0 = 16 16 01 h about 100 kms. Tonga Islands Region. Felt at Apia.
	F	e(P)	29		
	M	iP	35.9	c	
Mar. 1	R	e	39		(d)
	B	iP	17 28 45.7	d	
	MH	iP	39.9	c	
	M	iP	53.7	d	USCGS: 14°N, 89½°W, 0 = 17 21 33. h about 60 kms. El Salvador. Felt.
Mar. 2	R	e(P)	41		
Mar. 2	M	i	03 50 02.6	c	
	R	e	09		
Mar. 3	B	eP	04 18 49.1	d	USCGS: 11½°S, 168½°E, 0 = 04 06 16. New Hebrides Islands.
	MH	iP	50.6	d	
	F	eP	55		
	R	eP	19 00		
Mar. 3	MH	eP	07 36 10		USCGS: 23½°N, 122°E, 0 = 07 22 42. Near east coast of Formosa.
	R	eP	11		
Mar. 3	B	eP	16 27 12		USCGS: 55½°N, 166½°E, 0 = 16 18 17. Komandorskie Islands. PAS: Magnitude 6¼ - 6½.
		ePcP	28 31		
	BG	eN	44.3		
	MH	iP	27 18.0	d	
	F	eP	29		
	M	eP	00		
		iPcP	28 28		
	R	eP	27 14		
	C	eP	26 33		
Mar. 3	SH	iP	56	d	
Mar. 3	M	iP	17 19 40		USCGS: 55½°N, 166½°E, 0 = 17 10 55. Komandorskie Islands.
Mar. 3	F	iP	17 41 58.5	c	
	M	iP	31.7	c	USCGS: 55½°N, 166°E, 0 = 17 32 47. Komandorskie Islands.
	R	iP	44.1		
	C	eP	01		
Mar. 4	SH	eP	25		
Mar. 4	M	eP	01 59 43		USCGS: ½°S, 81°W, 0 = 01 50 09. Near coast of Ecuador.
Mar. 5	MH	iP	05 49 38.9	c	
	M	eP	48.2	c	Wellington: 35.3°S, 178.9°E, h = 260 km., 0 = 05 36 58. Near north coast of North Island, New Zealand. Magnitude 5.9
Mar. 7	M	iP	17 42 50.9	d	
	SH	iP	47		USCGS: 20°S, 176°W, 0 = 17 30 38. Tonga Islands.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
			h. m. s.		
1958					
Mar. 8	B	iP	20 22 58.7	d	USCGS: 33 $\frac{1}{2}$ °S, 70°W, h = 100 kms., 0 = 20 10 23. Central Chile. Felt at Santiago.
	MH	epP	23 22	d	
		iP	22 55.1	d	
	F	ipP	23 29.6	d	
	M	eP	22 46	d	
	R	iP	23 05.0	d	
	R	eP	22 59		
Mar. 9	MH	iP	03 45 20		BCIS: El Salvador aftershock. 0 = 03 36 43.
Mar. 9	B	iP	08 15 19.5	d	USCGS: 51 $\frac{1}{2}$ °N, 178 $\frac{1}{2}$ °W, 0 = 08 07 30. Andreanof Islands, Aleutian Islands.
	MH	iP	25.2	d	
	F	eP	38	c	
	M	eP	10.0	c	
	R	eP	24	c	
	SH	iP	04	d	
Mar. 9	B	eP	10 35 21.8	d	USCGS: 34°S, 178 $\frac{1}{2}$ °W, h = 60 km., 0 = 10 22 25. Kermadec Islands Region. PAS: Magnitude 6 $\frac{1}{2}$ - 6-3/4.
	MH	ipP	36.6	d	
		iP	21.1	d	
	F	ipP	36.5	d	
	M	iP	24.0	d	
	R	eP	30.3		
	R	iP	34		
	SH	eP	28		
Mar. 10	B	iP	08 05 18.3	c	USCGS: 52 $\frac{1}{2}$ °N, 171 $\frac{1}{2}$ °W, 0 = 07 58 04, Fox Islands, Aleutian Islands.
		e	06 13.3		
	MH	iP	05 24.6	c	
		i	06 19.6		
	F	eP	05 37		
	M	iP	08.5	c	
		i	06 05.2		
	R	eP	05 23		
	SH	iP	02	c	
Mar. 10	B	i(P)	08 11 07.0	c	
	MH	i(P)	07.9		
	M	i(P)	01.8		
	SH	e(P)	10 58		
Mar. 10	M	e(P)	21 43 31		USCGS: 20°S, 176°W, h = 200 km., 0 = 21 31 48. Tonga Islands.
Mar. 11	B	e(pP)	00 39 14		USCGS: 25 $\frac{1}{2}$ °N, 125°E, h = 60 km., 0 = 00 25 56. Ryukyu Islands. Several killed and many injured on Okinawa. Felt strongly on Miyako and Ishigaki. Also felt at Aparri, Basco, and Calayan. PAS: Magnitude 7.
		e(SKS)NE	49 48		
	MH	iP	00 39 05.7	d	
		ipP	20.8		
		i(PP)	43 04		
	F	eP	39 12		
	M	eP	38 57		
		ipP	39 13		
		i(PP)	42 41		
	R	eP	39 05		
	C	eP	38 42		
		ipP	58		
	SH	eP	53		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
			h. m. s.		
1958					
Mar. 11	MH	i(P)	01 24 37		USCGS: 14 $\frac{1}{2}$ °N, 90 $\frac{1}{2}$ °W, h = 200 km., 0 = 08 47 23. Guatemala. USCGS: 13°S, 167°E, 0 = 13 59 00. New Hebrides Islands.
(con't)	MH	iP	08 54 10		
Mar. 11	M	iP	24		
Mar. 11	B	e	14 11 51		
	BG	eRNEZ	38		
			R from SW		
	MH	e	14 11 51		
		i	59		
	F	e	58		
	M	e(P)	41		
	R	e	12 02		
	SH	e(P)	11 43		
Mar. 11	BG	eN	24 07 03		USCGS: 17°N, 98 $\frac{1}{2}$ °W, 0 = 23 53 00. Guerrero, Mexico.
		eRNZ	10.6		
	M	e	00 13		
	R	e	14		
Mar. 12	B	e	12 10 43.0		42.4°N, 120.0°W, 0 = 12 09 16. South Central Oregon. Magnitude 4.5.
		e(S)NE	11 42	d	
	MH	iP	10 32.8		
		iS	11 53.6		
	PA	i	10 46.7		
	F	ePNEZ	40		
		iN	12 05.4		
	M	iP	09 54.7	d	
		eNEZ	58.1		
		iNEZ	10 33		
	A	eE	25		
	R	iP	02.7		
		i	44.7		
	C	i	19.5		
		iN	11 05.5		
	SH	eP	09 56		
		eNEZ	59		
Mar. 12	M	iP	14 48 39		USCGS: 20 $\frac{1}{2}$ °N, 146°E, 0 = 14 36 33. Mariana Islands.
Mar. 12	SH	eP	34		USCGS: 27°N, 139 $\frac{1}{2}$ °E, h = 500 km., 0 = 18 16 50. Bonin Islands Region.
Mar. 12	M	iP	18 28 07		
	SH	eP	03		
Mar. 13	M	eP	21 41 27		USCGS: New Hebrides Islands. 0 = 21 28 40.
Mar. 13	M	e(P)	24 03.2		USCGS: 12 $\frac{1}{2}$ °N, 123 $\frac{1}{2}$ °E, 0 = 23 49 23. Masbate Island, P.I. Felt in Central Philippines.
		e	11 37		
Mar. 15	M	e(P)	00 37 32		USCGS: 23°N, 121 $\frac{1}{2}$ °E, 0 = 00 24 01. Near East Coast of Formosa.
	SH	e(P)	21		
Mar. 15	M	eP	06 40 25		USCGS: 40°N, 20 $\frac{1}{2}$ °E, 0 = 06 27 00. Albania-Greece Border.
Mar. 15	BG	eRNEZ	08 39.0		USCGS: 32 $\frac{1}{2}$ °N, 113 $\frac{1}{2}$ °W, 0 = 08 34 04. Arizona. PAS: Magnitude 4.9.
			R from SE		
			mu sec		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Mar. 15 (Con't)	MH	MaxH	20 14		
		iP	08 36 04.9	d	
	F	e	38 46		
	M	e	36 20		
		e	33		
	R	e	39 48		
		e	35 56		
Mar. 15	B	eP	15 46 34		USCGS: 17½°S, 169°E, 0 = 15 33 57. New Hebrides Islands.
	MH	iP	35.7	d	
	SH	iP	40	d	
Mar. 15	B	eP	19 19 14		USCGS: 5°S, 152°E, 0 = 19 06 10. New Britain. Felt: Rabaul.
	MH	iP	15.5	c	
	M	eP	15.9	c	
	R	eP	23		
	SH	eP	12		
Mar. 17	MH	iP	24 01 22.3	c	Trinidad: 12.2°N, 59.3°W, 0 = 23 51 16. South of Lesser Antilles.
	M	iP	23.7	c	
Mar. 18	B	iP	22 27 20.3	d	USCGS: 50½°N, 173°W, 0 = 22 20 02. Fox Islands foreshock.
	BG	eLN	36.1		
	MH	iP	27 26.5	d	
	F	eP	40		
	M	iP	11.7	d	
		ePcP	29 31.9		
	R	iP	27 26.3	d	
	C	eP	26 46		
	SH	iP	27 06	d	
Mar. 19	MH	iP	14 57 19.1	c	BCIS: 51°N, 177°W, 0 = 14 49.4. Andreanof Islands, Aleutian Islands.
	M	iP	04.0	c	
	R	eP	18		
	SH	iP	56 59	c	
Mar. 20	B	iP	01 45 21.9	c	USCGS: 51°N, 173°W, 0 = 01 38 04. Fox Islands, Aleutian Islands.
	BG	eSNE	51 18	SE	PAS: Magnitude 6½.
		eQNE	54.1		
		eR	55.6		
			mu sec		
		SH	6.9 9		
		MaxH	80 10		
	MH	iP	01 45 27.9		
	F	eP	40		
	M	iP	13.6	c	
	R	eP	28		
	C	eP	44 47		
	SH	iP	45 08		
Mar. 22	M	e	10 28 53		USCGS: 23½°N, 94½°E, 0 = 10 11 27. Burma-Pakistan Border.
Mar. 23	M	e(P)	10 28 23		USCGS: 18°N, 120°E, 0 = 10 14 42. Near northwest coast of Luzon, P.I.
	R	i	33		
		e	43		
	SH	e	30		
Mar. 23	M	eP	20 20 51		USCGS: Andreanof Islands, Aleutian Islands. 0 = 20 13 07.
	R	e	21 16		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Mar. 25	MH	iP	18 51 47.4	c	USCGS: 18°N, 64½°W, 0 = 18 42 27. Virgin Islands. Felt.
		i	55.5		
	F	eP	35		
	M	iP	47.9	c	
	C	e(P)N	52 09		
	SH	eP	51 51		
Mar. 25	B	eP	21 47 50		BCIS: Argentina, North of Mendoza. 0 = 21 35.4.
	MH	iP	47.5	c	
		i	48 19		
	M	iP	56	c	
	R	eP	51		
	SH	eP	58		
Mar. 27	MH	iP	01 16 46.3	d	BCIS: New Hebrides Region. 0 = 01 04.1.
	M	iP	52.1	d	USCGS: 14½°N, 93°W, h = 150 km., 0 = 06 05 51. Near coast of Chiapas, Mexico.
Mar. 27	M	eP	06 12 42		USCGS: 53°N, 160°E, 0 = 06 35 07. Near southeast coast of Kamchatka.
Mar. 27	M	eP	06 44 20		USCGS: 37°N, 71°E, h = 200 km., 0 = 12 06 24. Hindu Kush.
	SH	eP	15		
Mar. 28	B	e	12 24 25		
	MH	i(PP)	23 52		
		i	24 24		
	F	e	29		
	M	eP	20 01		
		i(PP)	23 28		
	R	e	11		
	SH	e(PP)	28		
Mar. 28	MH	i	13 12 51		BCIS: 12°N, 95½°W, 0 = 13 06.5. Off Chiapas, Mexico.
	M	i(P)	43		
	R	e	51		
Mar. 28	MH	iP	14 57 14.4	c	USCGS: 20½°S, 174°W, 0 = 14 45 22. Tonga Islands.
	F	eP	20		
	M	iP	24.9	c	
	R	eP	31		
	SH	eP	22		
Mar. 28	M	iP	20 31 16.5	c	JMA: 41.2°N, 142.8°W, h = 60 km., 0 = 20 20 15. Near south coast of Hokkaido, Japan. Felt.
Mar. 30	MH	iP	17 44 30.0	d	USCGS: 23°S, 179½°E, h = 550 km., 0 = 17 33 01. Fiji Islands Region.
	SH	eP	35		
Mar. 30	MH	iP	22 48 57.4	c	USCGS: 22°S, 176°W, 0 = 22 36 53. Tonga Islands.
	M	iP	49 09.5	c	
Mar. 31	MH	iP	01 03 01		
	M	iP	10		
Mar. 31	MH	iP	10 37 18.9	d	USCGS: 17°N, 93½°W, h = 100 km., 0 = 10 30 56. Chiapas, Mexico.
		i	42.7		
		i	59.3		
	F	eP	05		
	M	iP	33.2	c	
	R	eP	21	c	



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BERKELEY—MOUNT HAMILTON—PALO ALTO  
SAN FRANCISCO—FERNDALE—FRESNO  
MINERAL—ARCATA—RENO—CORVALLIS—SHASTA  
MANZANITA LAKE

Earthquakes and the Registration of Earthquakes

From April 1, 1958 to June 30, 1958

BY  
DON TOCHER  
and  
WILLIAM L. BAKER

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Perry Byerly, Director

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and

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The list following this page gives the latitude and longitude of the epicenters for earthquakes which were well enough recorded to permit such a determination.

Map No. for each epicenter corresponds to a number plotted on the map which follows the list of epicenters.

Date and Origin Time are given in Greenwich Civil Time. Subtract eight (8) hours to convert to Pacific Standard Time (P.S.T.) or seven (7) hours to convert to Pacific Daylight Time (P.D.T.). This will change the date for some of the earthquakes. Pacific Daylight Time was legally in effect throughout California from April 27 to September 28, 1958.

M is the Richter Magnitude of the earthquakes as determined from the maximum trace amplitudes recorded for the shock by the standard Wood-Anderson Torsion Seismographs. In routine practice, the nomogram given by Nordquist in the "Bulletin of the Seismological Society of America," 32:164, is used for magnitude determinations.

Q indicates the excellence with which the epicenter has been located; "a" indicates excellent, "b" good, "c" fair, and "d" poor. Under Remarks will be found a short descriptive location of each epicenter, usually with reference to a point named on the map. Information on small foreshocks and aftershocks is sometimes included in the Remarks. When numerous foreshocks or aftershocks accompany a large earthquake, a separate table is generally included following the main list of local shocks, giving origin times, Richter Magnitudes, and, where significant differences in location can be determined, the geographic coordinates. The larger earthquakes of after-shock series are also included in the main list of local shocks.

Information on the intensities of shocks reported felt is also included under Remarks. Reports on felt earthquakes are chiefly those collected by the Seismological Field Survey of the United States Coast and Geodetic Survey, which publishes a more complete summary of such reports in "Abstracts of Earthquake Reports for the Pacific Coast and Western Mountain Region." This is a quarterly publication, and may be obtained from the District Officer, San Francisco District, Coast and Geodetic Survey, 121 Customhouse, San Francisco 26, California, or from the Director, U.S. Coast and Geodetic Survey, Washington 25, D.C.

Intensities are given by Roman numerals when sufficient information on the effects of the shock is available. These intensity numbers assigned by the Coast and Geodetic Survey are based on the Modified Mercalli Intensity Scale of 1931 (Harry O. Wood and Frank Neumann, "Bulletin of the Seismological Society of America," 21:277-283, 1931), the criteria of which follow in an abridged form.

Original seismograms from the short-period Wilson-Lamison vertical-component instrument at Ukiah, California, are available routinely for use in locating epicenters of local earthquakes through the courtesy of the Director, U.S. Coast and Geodetic Survey.

MODIFIED MERCALLI INTENSITY SCALE OF 1931

(Abridged)

- I. Not felt except by a very few under especially favorable circumstances.
- II. Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
- III. Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration like passing truck. Duration estimated.
- IV. During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls made creaking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
- V. Felt by nearly everyone; many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
- VI. Felt by all; many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.
- VII. Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
- VIII. Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Disturbed persons driving motor cars.
- IX. Damage considerable in specially designed structures; well designed frame structures thrown out of plumb; great in substantial buildings with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
- X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
- XI. Few, if any (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipe lines completely out of service. Earth slips and land slips in soft ground. Rails bent greatly.
- XII. Damage total. Waves seen on ground surfaces. Lines of sight and level distorted. Objects thrown upward into the air.

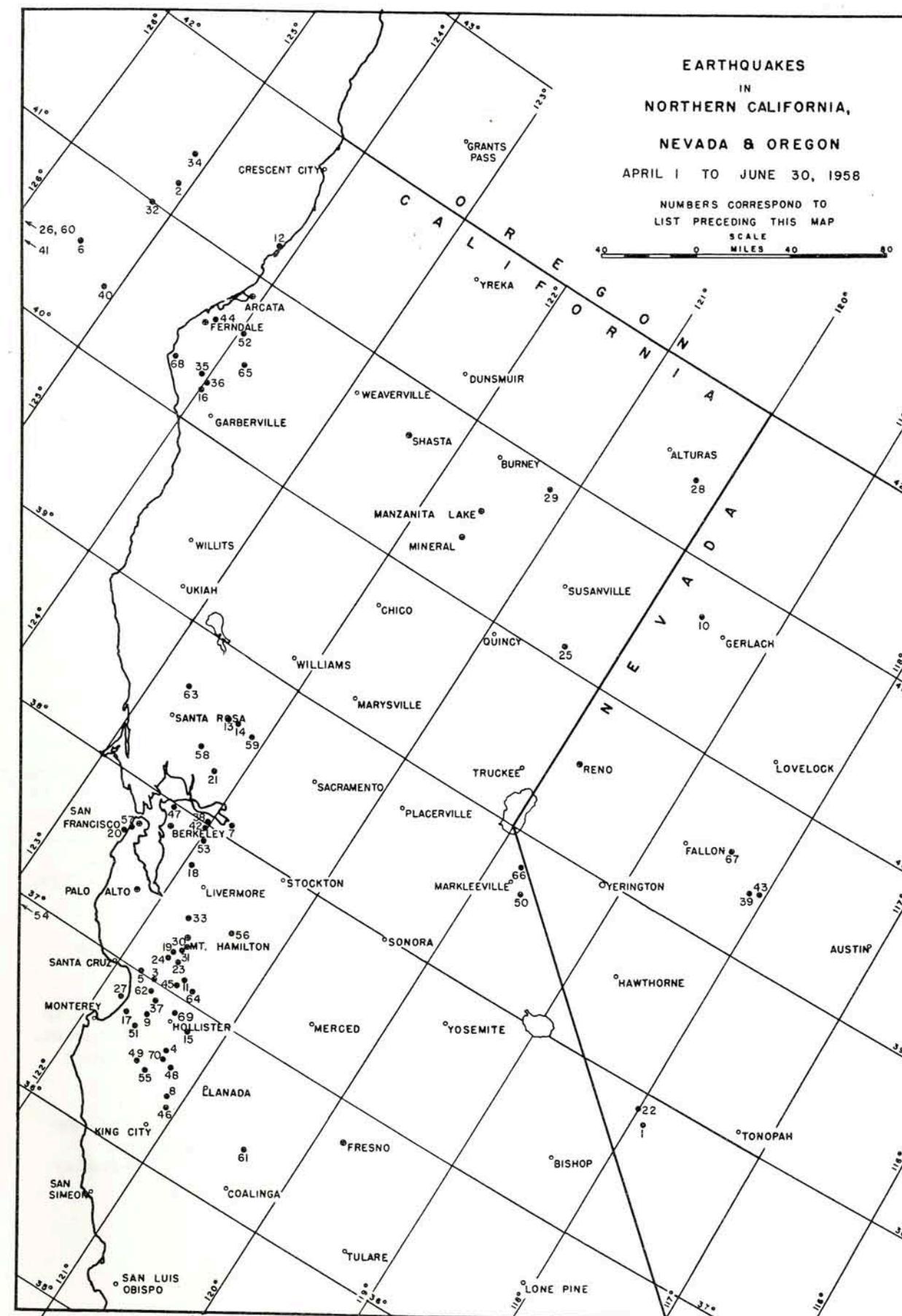
EARTHQUAKES IN NORTHERN CALIFORNIA, NEVADA, AND OREGON

Map No.	Date 1958	Origin Time (G.C.T.)	Latitude		Q	M	Remarks
			North	West			
1	Apr. 2	21-54-43	37.8°	117.9°	d	4.3	Southwest of Tonopah, Nevada.
2	Apr. 3	00-07-01	41.2°	125.1°	d	3.5	West of Arcata.
3	Apr. 4	01-45-12	37° 00'	121° 41'	c	3.2	Northwest of Hollister.
4	Apr. 4	17-05-48	36° 40'	121° 20'	c	3.9	Southeast of Hollister. IV 7 miles south of Hollister.
5	Apr. 5	04-50-33	37° 00'	121° 49'	c	2.2	East of Santa Cruz.
6	Apr. 8	10-22-13	40° 32'	125° 29'	c	4.4	West of Ferndale.
7	Apr. 10	07-39-14	38.1°	121.9°	d	1.8	Foreshock.
7	Apr. 10	08-28-52	38° 05'	121° 52'	b	2.4	Northeast of Berkeley.
8	Apr. 10	08-32-33	36° 27'	121° 07'	c	2.9	Southwest of Llanada.
9	Apr. 10	12-26-15	36° 49'	121° 35'	c	2.6	West of Hollister.
10	Apr. 10	18-17-53	40.7°	119.6°	d	3.8	West of Gerlach, Nevada.
11	Apr. 15	03-19-05	37.1°	121.5°	d	2.1	Northwest of Hollister.
12	Apr. 16	02-54-03	41.2°	124.1°	d	2.4	North of Arcata.
13	Apr. 20	21-06-58	38° 37'	122° 21'	b	4.0	25 miles northeast of Santa Rosa. Felt at Monticello Dam, west of Winters.
14	Apr. 20	21-16-27	38° 37'	122° 16'	c	2.7	Aftershock. Felt at Monticello Dam.
15	Apr. 21	06-40-26	36° 52'	121° 18'	c	3.6	East of Hollister.
16	Apr. 24	07-24-55	40.2°	124.0°	d	3.5	Northwest of Garberville.
17	Apr. 30	06-36-15	36° 44'	121° 45'	c	3.0	Northeast of Monterey.
18	May 1	03-06-27	37° 45'	121° 57'	b	2.5	Foreshock.
18	May 1	03-13-42	37° 45'	121° 57'	b	2.5	Northwest of Livermore.
19	May 1	03-30-56	37.2°	121.7°	d	2.0	South of Mt. Hamilton.
20	May 2	13-10-47	37° 41'	122° 31'	c	2.1	Aftershock of March 22, 1957. IV in Daly City.
21	May 2	20-49-08	38.3°	122.2°	d	2.2	North of Berkeley.
18	May 3	00-22-00	37° 45'	121° 57'	c	1.4	Aftershock of May 1 at 0313.
22	May 3	17-35-57	37.9°	118.0°	d	4.1	Southwest of Tonopah, Nevada.
20	May 4	07-52-44	37° 40'	122° 30'	a	2.7	Aftershock of Mar. 22, 1957. IV at Daly City.
23	May 4	15-21-58	37° 11'	121° 36'	b	3.6	South of Mt. Hamilton.
24	May 5	01-46-53	37° 12'	121° 41'	c	1.8	South of Mt. Hamilton.

Map No.	Date 1958	Origin Time (G.C.T.)	Latitude North	Longitude West	Q	M	Remarks
25	May 5	22-18-20	40.1°	120.4°	d	2.9	Southeast of Susanville.
26	May 5	22-57-39	40.4°	127.8°	d	4.0	Off Cape Mendocino.
27	May 7	04-27-32	36° 48'	121° 50'	c	2.6	Southeast of Santa Cruz.
28	May 7	07-18-53	41.4°	120.2°	d	3.2	East of Alturas.
29	May 7	15-31-43	40.9°	121.2°	d	3.0	East of Burney.
30	May 7	16-20-12	37° 17'	121° 36'	b	3.0	Near Mt. Hamilton.
-	May 7	17-28-01	45.1°	122.0°	d	3.4	Southeast of Portland, Oregon.
20	May 8	23-31-20	37° 41'	122° 32'	a	1.5	Aftershock of Mar. 22, 1957.
31	May 16	21-26-39	37° 15'	121° 38'	b	2.2	South of Mt. Hamilton.
32	May 18	04-58-44	41.0°	125.2°	d	2.8	West of Arcata.
33	May 19	02-13-32	37° 27'	121° 43'	a	2.6	Northwest of Mt. Hamilton. Aftershock (M = 1.6) at 04-32-41.
34	May 24	18-43-02	41.4°	125.1°	d	3.2	Northwest of Arcata.
35	May 24	23-04-47	40° 18'	124° 03'	a	4.9	Southeast of Ferndale. Felt over a land area of approximately 3,500 square miles of northwestern California, principally in Humboldt County. VI at Briceland, Carlotta, Ferndale, Garberville, Honeydew, Miranda, and Petrolia.
35	May 24	23-08-20				3.7	Aftershock.
35	May 24	23-18-14				2.0	Aftershock.
35	May 24	23-23-10				2.3	Aftershock.
35	May 24	23-35-10				2.0	Aftershock.
35	May 25	03-12-48				2.7	Aftershock.
36	May 25	05-06-32	40° 17'	123° 59'	b	3.9	Aftershock. III at Eureka. Also felt at Hydesville and Scotia.
36	May 25	07-18-42				3.1	Aftershock.
36	May 25	12-31-29				2.8	Aftershock.
36	May 25	12-47-27				2.5	Aftershock.
37	May 27	23-09-32	36.9°	121.6°	d	3.8	Northwest of Hollister. Felt over an area of approximately 150 square miles of the region east of Santa Cruz, from Aptos to San Martin. V at San Martin.
37	May 28	03-59-10	36.9°	121.6°	d	3.0	Aftershock.
38	May 28	05-45-29	38° 00'	122° 01'	c	2.8	Northeast of Berkeley.
39	May 28	15-16-50	39.4°	118.1°	d	4.1	East of Fallon, Nevada.
40	May 31	02-49-03	40.4°	125.1°	d	2.5	Southwest of Ferndale.
41	May 31	15-55-59	40.3°	126.6°	d	3.9	Off Cape Mendocino.

Map No.	Date 1958	Origin Time (G.C.T.)	Latitude North	Longitude West	Q	M	Remarks
42	May 31	22-07-11	37° 58'	122° 00'	a	4.1	Northeast of Berkeley, near Concord. Felt over a land area of 1,500 square miles of the San Francisco Bay region, principally in Contra Costa County. V at Danville, Orinda, Port Costa, Rodeo, and Walnut Creek.
42	May 31	22-17-59	37° 58'	122° 00'	b	2.3	Aftershock.
42	May 31	22-25-55	37° 58'	122° 00'	c	1.9	Aftershock.
42	May 31	23-20-53	37° 58'	122° 00'	b	3.0	Aftershock.
42	June 1	05-11-39	37° 59'	122° 01'	b	3.0	Aftershock. Felt at Canyon.
42	June 1	09-37-56	37° 59'	122° 01'	c	2.0	Aftershock.
43	June 1	16-40-24	39.4°	118.0°	d	3.7	Foreshock.
43	June 1	16-50-25	39° 25'	118° 03'	c	3.9	East of Fallon, Nevada.
44	June 3	09-15-42	40.6°	124.2°	d	2.8	Near Ferndale.
45	June 3	14-43-59	37° 03'	121° 31'	b	3.3	Northwest of Hollister.
-	June 5	11-05-04	42.8°	126.5°	d		Off Cape Blanco, Oregon.
46	June 5	17-12-50	36.4°	121.1°	d	3.1	North of King City.
47	June 6	14-40-29	37° 58'	122° 18'	c	2.0	North of Berkeley.
48	June 7	19-35-32	36.6°	121.2°	d	2.7	Southeast of Hollister.
49	June 8	16-15-45	36° 31'	121° 28'	c	3.0	South of Hollister.
50	June 9	10-59-25	38° 40'	119° 40'	c	3.4	Foreshock.
50	June 9	11-59-56	38° 40'	119° 40'	b	3.9	Near Markleeville.
51	June 10	21-09-42	36° 43'	121° 38'	c	3.1	Northeast of Monterey. III at Moss Landing.
43	June 11	06-06-05	39° 26'	118° 01'	c	3.4	East of Fallon, Nevada.
52	June 11	16-25-36	40° 39'	123° 59'	c	3.6	Northeast of Ferndale. III in north section of Eureka.
53	June 15	11-49-56	37° 55'	121° 59'	b	2.3	East of Berkeley.
54	June 17	19-16-56	36° 58'	123° 04'	c	2.4	West of Santa Cruz.
55	June 18	07-02-58	36° 30'	121° 23'	c	2.9	Foreshock.
55	June 18	07-05-34	36° 30'	121° 23'	c	3.3	South of Hollister.
56	June 18	20-42-22	37° 31'	121° 24'	c	2.4	Northeast of Mt. Hamilton.
57	June 18	22-54-03	37° 43'	122° 30'	b	1.4	Near Lake Merced, San Francisco. Felt in Portola District of San Francisco.
58	June 19	18-43-20	38.4°	122.4°	d	2.0	East of Santa Rosa.
59	June 20	16-59-35	38.6°	122.1°	d	2.4	West of Sacramento.
60	June 20	17-39-50	40.5°	126.4°	d	3.4	Off Cape Mendocino.

Map No.	Date 1958	Origin Time (G.C.T.)	Latitude North	Longitude West	Q	M	Remarks
61	June 21	01-03-31	36.4°	120.4°	d	2.1	Southwest of Fresno.
62	June 21	14-34-57	36° 56'	121° 40'	b	2.6	Northwest of Hollister.
63	June 22	06-21-02	38° 39'	122° 44'	c	3.2	North of Santa Rosa. Felt sharply at Healdsburg. Also felt at Rio Nido.
64	June 24	21-11-01	37° 03'	121° 23'	c	2.5	North of Hollister.
65	June 27	05-51-59	40.5°	123.8°	d	2.8	East of Ferndale.
66	June 29	01-25-18	38° 49'	119° 46'	b	3.3	North of Markleeville.
67	June 29	08-37-12	39° 33'	118° 25'	c	3.7	East of Fallon, Nevada.
68	June 29	15-29-24	40.3°	124.3°	d	2.6	South of Ferndale.
69	June 29	21-14-01	36° 53'	121° 25'	b	3.1	Near Hollister. IV at Hollister.
69	June 29	21-50-32	36° 53'	121° 25'	c	3.0	Aftershock.
70	June 30	01-48-41	36° 36'	121° 17'	c	3.0	Southeast of Hollister.



THE REGISTRATION OF EARTHQUAKES

Station	North Latitude	West Longitude	Altitude Meters	Station Symbol	Present Auspices and Date
Berkeley	37° 52.3'	122° 15.6'	81	B, BG*	University of California - 1887
Mt. Hamilton	37° 20.4'	121° 38.6'	1282	MH	Lick Observatory - 1887
Palo Alto	37° 25.1'	122° 10.8'	83	PA	Stanford University - 1927
San Francisco	37° 46.4'	122° 27.2'	100	SF	University of San Francisco - 1931
Ferndale	40° 34.6'	124° 15.7'	15	Fe	City of Ferndale - 1933
Fresno	36° 46.1'	119° 47.8'	88	F	Fresno State College - 1935
Mineral	40° 20.8'	121° 36.1'	1495	M	National Park Service, Lassen Volcanic National Park - 1938
Arcata	40° 52.6'	124° 04.5'	59	A	Humboldt State College - 1948
Reno	39° 32.3'	119° 48.8'	1386	R	University of Nevada - 1948
Corvallis	44° 35.1'	123° 18.2'	123	C	Oregon State College - 1950
Shasta	40° 41.7'	122° 23.3'	312	SH	Bureau of Reclamation - 1942
Manzanita Lake	40° 32.2'	121° 33.7'	1800	ML	National Park Service, Lassen Volcanic National Park - 1956

\*B denotes readings of short period instruments, BG of long period instruments (12 sec. Galitzin-Wilip).

Earthquakes in the Northern California, Nevada, and Oregon region are included in the following list only if of magnitude 4.5 or greater, or if of special interest. Times are usually not reported for PA, SF, Fe, or ML unless of special interest or in case of defective records at other stations.

Measurement and interpretation of seismograms from all the above listed stations is done at Berkeley; requests for special data or for copies of seismograms should be addressed to Seismographic Station, University of California, Berkeley 4, California.

STATION EQUIPMENT

Type and Component	Station
Short-period Benioff Z	B, MH, PA, M, SH
Short-period Benioff N, E	SH
Short-period Wood-Anderson N, E	B, MH, PA, SF, M, A
Short-period Sprengnether N, E, Z	F, R
Short-period Slichter N, E, Z	C
Short-period Wilson-Lamison Z	C
Long-period Galitzin-Wilip N, E, Z	B
100 kg Bosch-Omori N, E	B
25 kg Bosch-Omori N, E	Fe
80 kg Wiechert Z	B
Loucks-Omori N, E	ML
Short-period 100X Torsion	B

The three components are indicated by N, E, Z in the "phase" column of the following tabulation of readings. When no letter appears, the phase is read from the vertical component (Z) only. "i" (impetus) preceding a phase designates sudden beginning of the motion; "e" (emersio) designates gradual beginning.

In the column headed "Ground Motion", "c" or "d" indicates initial compression or dilatation of the ground as read from the vertical component instrument. N, S, E, or W indicates that the initial ground motion was north, south, east, or west, respectively.

Maximum amplitude of earth displacement in microns ( $\mu$ ) and periods in seconds (sec) of the indicated phases are given for the Berkeley station in the column headed "Time (GCT)". Combined horizontal amplitude of N and E components are designated by H.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Apr. 1	M	iP	14 18 28		USCGS: 39½°N, 141½°E, 0 = 14 07 12. Northern Honshu, Japan.
	R	eP	39		
	SH	eP	24		
Apr. 2	B	iP	21 55 40.4		37.8°N, 117.9°W, 0 = 21 54 43. Southwest of Tonopah, Nevada. Magnitude 4.3.
		i	51.7		
		iS	56 22.6		
	MH	iP	55 33.3		
		iSN	56 11.2		
	PA	ePN	55 40.7		
		iSE	56 20.4		
	F	iP	55 16.2		
		iSEZ	39.1		
	M	iP	47.0		
	R	iP	23.8		
		eSN	51.1		
		i	54.5		
Apr. 3	M	e(P)	02 36 52		USCGS: 41°N, 20½°E, 0 = 02-23-43. Albania. Felt in Albania and on Corfu Island.
Apr. 3	MH	eP	08 35 04		USCGS: 1½°N, 79°W, 0 = 08 25 43. Near Coast of Ecuador.
	F	eP	34 55		
	M	eP	35 15		
	R	eP	04		
Apr. 4	R	eP	15 51 11		USCGS: 5½°S, 152°E, 0 = 15 38 03. New Britain, Felt: Rabaul.
Apr. 5	R	eP	05 19 04		USCGS: 51½°N, 180°, 0 = 05 10 59. Andreanof Islands, Aleutian Islands.
Apr. 7	B	iP'	03 47 47.8		USCGS: Sandwich Islands. 0 = 03 28 52.
	MH	iP'	47.3		
	M	eP'	49.8		
Apr. 7	B	iP	15 37 29.2	c	USCGS: 66½°N, 157°W, 0 = 15 30 38. Alaska. Felt throughout central Alaska.
	BG	iNEZ	36	NWd	
		iSNE	43 00		Magnitude 7¼ - 7½. PAS: Magnitude 7.
		mu	sec		
		PZ	12 5		
		PH	12.5 5		
		SH	77 10		
		MaxH	960 12		
	MH	iP	15 37 34.8		
		eSNE	43 09		
		eNE	46.0		
	F	iP	37 44.3		
	M	iP	11.5	d	
	A	e(P)E	08		
		eSNE	42 13		
	R	eP	37 23		
	SH	eP	25	c	
	PA	eP	33	c	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Apr. 7	B	eP	16 45 21		BCIS: Alaska Aftershock.
	MH	iP	25.6	c	0 = 16 38 32.
	M	iP	03.0	c	
Apr. 7	B	eP	18 16 25		USCGS: 38½°N, 143°E, 0 = 18 05 02. Near east coast of Honshu, Japan.
	MH	iP	30.1	c	
	F	eP	34		
	M	eP	16		
	R	e(P)	31	c	
	SH	e	21		
Apr. 7	B	e(P)	18 41 50		USCGS: 38½°N, 142½°E, 0 = 18 30 12. Honshu Aftershock.
	MH	i(P)	59		
	M	e(P)	32		
	R	e(P)	41		
Apr. 7	B	eP	18 49 41		USCGS: 38°N, 143°E, 0 = 18 38 18. Honshu Aftershock.
	MH	iP	45.8	d	
	F	eP	55		
	M	eP	34		
	R	eP	48		
Apr. 7	M	eP	19 26 14		USCGS: 45°N, 98°E, 0 = 19 13 20. Outer Mongolia.
	R	eP	23		
Apr. 8	B	eP	00 21 05.2		USCGS: 66½°N, 155½°W, 0 = 00 14 20. Alaska. Felt: Central Alaska.
	MH	iP	09.3	d	
	F	iP	23.3	d	
	M	iP	20 47.2	d	
	R	iP	21 03	d	
Apr. 8	M	iP	04 07 57		BCIS: Alaska Aftershock.
		e	09 56		0 = 04 01 26.
Apr. 8	R	eP	04 44 37		USCGS: 7°N, 73°W, 0 = 04 35 21. Colombia.
Apr. 8	B	iP	10 23 09.4		40° 32'N, 125° 29'W, 0 = 10 22 13. Off Cape Mendocino. Magnitude 4.4.
		eS	52.9		
	MH	iP	19.3	c	
		i	26.6		
		eSNE	24 07.9		
	PA	iP	23 14.8	c	
		eSE	24 03.5		
	F	eP	23 42		
	M	iPNEZ	00.6		
		iSE	34.3		
	A	iPE	22 33.7	d	
		iSN	48.7		
	Fe	iPNE	31		
	R	eP	23 23	c	
		i	27		
	SH	eP	22 51		
Apr. 8	B	eP	13 32 56		USCGS: 19°S, 176°W, h = 250 km., 0 = 13 21 33. Tonga Islands.
	MH	iP	56		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Apr. 8 (con't)	M	i	33 07		
	R	iP	07		
	B	eP	10		
Apr. 9	BG	eP	06 20 04	c	USCGS: 56½°N, 139°W, 0 = 06 15 12.
	MH	eSNE	24 12	N	Gulf of Alaska. Felt: Sitka.
	MH	iP	20 11.2	c	
		i	21 07.3		
	F	iP	20 23.7	c	
	M	iP	19 43.9	c	
	A	e(P)E	29		
	R	iP	59	c	
	SH	eP	38		
Apr. 9	MH	iP	16 22 34		BCIS: 12½°N, 90°W, 0 = 16 15 20.
	M	eP	46		Near coast of El Salvador.
					Felt: San Salvador.
Apr. 10	MH	iP	01 54 06.5	d	USCGS: 53°N, 160½°E, 0 = 01 44 34.
	F	eP	15		Near east coast of Kamchatka.
	M	iP	53 46.0	d	
	R	eP	54 03		
	SH	eP	53 36		
Apr. 10	M	e(P)	04 49 18		BCIS: Alaska Aftershock. 0 = 10 08.6.
Apr. 10	M	eP	10 16 15		USCGS: 51½°N, 99°E, 0 = 10 55 31.
Apr. 10	M	eP	11 07 50		Outer Mongolia.
Apr. 10	B	e(P)	12 01 34		USCGS: 38½°N, 143°E, 0 = 11 50 05.
	M	eP	19		Off east coast of Honshu, Japan.
	R	e(P)	32		
	SH	eP	16		
Apr. 10	B	epP	13 31 15		USCGS: 24°S, 69°W, h = 150 km.,
		esP	33		0 = 13 18 47. Northern Chile.
	MH	iP	30 39		
		ipP	31 12		
		isP	29		
	F	e(pP)	30 59		
	M	eP	51		
		ipP	31 21		
		esP	37		
	R	eP	30 44		
		epP	31 14		
	SH	eP	30 54		
Apr. 10	B	eP	19 21 34.3	c	USCGS: 18°S, 174½°W, h = 200 km.,
	MH	iP	35.4	c	0 = 19 10 13. Tonga Islands.
	F	eP	39	c	
	M	eP	44.6	c	
	R	iP	50	c	
	SH	eP	45		
Apr. 10	MH	iP	23 15 37.2		BCIS: 66°N, 151°W, 0 = 23 08.8.
	M	iP	03.3		Alaska.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Apr. 10	BG	eP	23 21 11		
		iSN	27 58	S	USCGS: 4½°S, 107°W, 0 = 23 12 47.
		eR	34		About 1,000 miles west of Galapagos Islands.
					PAS: Magnitude 6.
					R from S
			mu sec		
		PZ	1.3 7		
		SH	5.7 10		
		MaxH	20 19		
	MH	iP	23 21 07		
	F	eP	20 59		
	M	e(P)	21 28		
	R	e(P)	22		
	SH	e(P)	25		
Apr. 11	B	eP	01 09 32		USCGS: 38½°N, 142½°E, 0 = 00 58 13.
	BG	eSNE	18 47		Off east coast of Honshu, Japan.
		eN	28.1		
			mu sec		
		SH	2.6 9		
	MH	i	01 09 42.7		
	F	e(P)	47		
	M	iP	27		
	R	eP	39		
	SH	eP	26		
Apr. 11	B	eP	23 21 29	d	USCGS: 47½°N, 153½°E, h = 100 km.,
		epP	22 02		0 = 23 11 26. Kurile Islands.
	BG	iSNE	29 36	NE	PAS: Magnitude 6½.
			mu sec		
		SH	10 11		
	MH	eP	23 21 34	d	
		epP	22 08		
	F	eP	21 43		
		ipP	22 19		
	M	iP	21 21	d	
	R	iP	33		
	SH	iP	16.8	d	
		i	26		
		epP	52		
Apr. 12	B	e(P)	10 28 33		USCGS: Gulf of California.
	BG	e(S)NE	31.6		0 = 10 24 55.
		eQNE	32.1		PAS: Magnitude 5½.
		eR	33.2		
			mu sec		
		MaxH	20 17		
	MH	eP	10 28 19		
	F	eP	01		
	M	iP	52		
	R	iP	33		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks	
1958			h. m. s.			
Apr. 12	BG	ePNEZ	11 50 33	SEd	USCGS: 26½°N, 111°W, 0 = 11 46 58. Gulf of California. PAS: Magnitude 6½.	
		eSN	53 24			
			mu sec			
		PZ	4.7 7			
		PH	6.7 8			
		MaxH	450 20			
	MH	iP	11 50 23.7	c		
		i	35.7			
		eNE	53.8			
	F	iP	50 03.6	d		
M		iP	54.3	d		
A		ePE	51 19			
Apr. 12	R	iP	50 35.7	d	USCGS: 25°N, 126°E, 0 = 13 25 22. Ryukyu Islands.	
		B	eP	13 38 27		c
			e	44		
	MH	eP	31.2	c		
		i	47			
		F	eP	39		
	M	eP	23	c		
		i	40			
		R	eP	31		
	Apr. 12	MH	eP	15 33 45		
Apr. 12	M	iP	22		BCIS: 48°N, 118°W, 0 = 22 37.1. State of Washington.	
	M	eP	22 39 06		USCGS: Felt over an area of approx- imately 8,000 square miles of north-central Washington. Maximum intensity VI.	
Apr. 12	R	e	40 13		USCGS: 66½°N, 155½°W, 0 = 01 48 43. Alaska.	
	B	eP	01 55 29			
Apr. 13	MH	iP	34			
		M	eP	10		
		SH	eP	06		
Apr. 13	M	eP	04 21 42		USCGS: 46°N, 98°E, 0 = 04 08 56. Outer Mongolia.	
Apr. 13	B	eP	08 36 35.5	d	USCGS: 17°S, 177½°W, h = 450 km., 0 = .08 25 37. Fiji Islands.	
		MH	iP	36.1		d
			ipP	38 10.5		
Apr. 13	M	eP	36 45.3	d	USCGS: 66°N, 156°W, 0 = 09 07 24. Alaska. Felt: Central Alaska. PAS: Magnitude 6-3/4.	
		B	iP	09 14 11.4		c
		BG	iSN	19 40		
		iLE	28 13			
			mu sec			
		PZ	2.0 2			
		PH	2.2 3			
		SH	2.3 8			
	MH	iP	09 14 17.1	c		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks		
1958			h. m. s.				
Apr. 13	F	eP	26.2	c			
	(con't)	M	iP	13 53.5		c	
	SH	iP	48.5	c			
Apr. 13	B	eP	12 38 31		USCGS: 53°N, 161°E, 0 = 12 29 07. Near east coast of Kamchatka. PAS: Magnitude 6½.		
		BG	eSNE	46 03			
				mu sec			
			PZ	2.4 8			
			SH	28 18			
	MH	iP	12 38 35.9	d			
		F	eP	48			
		M	eP	20		d	
	Apr. 13	SH	eP	17			BCIS: Near east coast of Kamchatka. 0 = 13 00 21.
			MH	iP		13 09 51	
M			iP	36			
Apr. 14	MH	eP	03 00 10		USCGS: 47°N, 152°E, 0 = 02 49 41. Kurile Islands.		
		M	e	02			
Apr. 14	SH	eP	02 59 40		USCGS: 66°N, 155°W, 0 = 03 12 25. Alaska.		
		M	eP	03 18 50			
Apr. 14	MH	eP	13 29 51		BCIS: 11½°N, 102½°W, 0 = 13 23.5. Near south coast of Mexico.		
		M	eP	30 14			
		R	eP	04			
Apr. 14	M	iP	18 17 53		USCGS: 53°N, 161°E, 0 = 18 08 40. Near east coast of Kamchatka.		
		R	eP	18 06			
		SH	eP	17 48			
Apr. 14	B	iP	21 41 55.3	d	USCGS: 1°N, 79½°W, 0 = 21 32 28. Near coast of Ecuador. 1 killed, 12 injured, and minor property damage at Esmeraldas. Felt at Ibarra and Quito. PAS: Magnitude 6-3/4 - 7.		
		BG	eNEZ	42 04		NWc	
			ePcP	43 08			
		iSNE	49 33	NE			
		eSSNE	53.5				
		eR	22 00				
			mu sec				
			PZ	2.9 4½			
			PH	1.1 3½			
			SH	66 15			
Apr. 14	MH	MaxH	125 22		USCGS: 1°N, 79½°W, 0 = 22 48 33. Ecuador Aftershock. PAS: Magnitude 6½ - 6-3/4.		
		MaxZ	33 22				
			iP	21 41 50.7		c	
	F	e(P)N	45				
		eSN	49 03				
		iP	42 02.5	d			
	M	e(P)E	26.4	E			
		iP	41 52.0	d			
		SH	eP	42 05			
	Apr. 14	PA	eP	41 52.9		d	
B			eP	22 57 59			
MH			iP	52.8	d		
M		e(P)	58 06				
		R	eP	57 56			
		SH	eP	58 06			

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Apr. 15	B BG	eP eNEZ ePcP iSNE eNE	01 40 13.5 18 41 17 47 47 50.0	c NWc NE	USCGS: 1°N, 79½°W, 0 = 01 30 43. Ecuador Aftershock. PAS: Magnitude 6½ - 6-3/4.
			mu sec		
		PZ SH MaxH	2.5 4½ 8.2 9 30 23		
	MH	iP	01 40 04.6	c	
		i	11.0		
	F	e(P)	39 57		
	M	eP	40 16.4		
		i	22.6		
	A	ePNE	39.2	SE	
	R	eP	05.4		
	SH	eP	20		
Apr. 15	B BG	eP eNEZ iSNE eSSNE eGNE	04 00 55.6 57 07 44 11.4 13.4	c NWc NE	USCGS: 9°N, 84°W, 0 = 03 52 39. Off west coast of Costa Rica. PAS: Magnitude 6-3/4.
			mu sec		
		PZ SH SZ	2.0 5 4.2 15 5.0 10		
	MH	iP	04 00 50.2	c	
	F	eP	35		
	M	eP	01 01.6	c	
	A	ePE	22		
	R	iP	00 50.2	c	
	SH	eP	01 06		
Apr. 15	MH	iP	11 06 49.7	d	USCGS: 53°N, 167½°W, 0 = 10 59 59. Fox Islands, Aleutian Islands.
	M	eP	40.1	d	
	SH	eP	35		
Apr. 15	B	iP	13 00 36		BCIS: Aleutians.
	MH	iP	41.8		
	M	eP	25		
	R	eP	40		
	SH	eP	20		
Apr. 15	M	i(P)	16 17 31		
	R	e(P)	04		
Apr. 17	MH	iP	06 34 41		USCGS: 6°S, 155°E, 0 = 06 21 43. Solomon Islands.
	M	eP	41		
	R	eP	50		
	SH	eP	41		
Apr. 17	BG	eRNEZ	10 49.8		USCGS: 5½°S, 152°E, 0 = 10 04 46. New Britain. Felt: Rabaul.
		R from SW			
Apr. 17	B MH	i(pP) i(pP)	11 44 34.4 38.5	c c	USCGS: 37°N, 140½°E, 0 = 11 32 48. Near east coast of Honshu, Japan.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Apr. 17 (con't)	F M R	eP e(pP) eP i(pP) eP e(pP)	33 46 15.0 28.1 24 37		
				c	
	SH	eP	10		
Apr. 17	MH	iP	17 04 38		
	M	eP	58		
Apr. 18	M	iP	03 21 45		USCGS: 48½°N, 154½°E, 0 = 03 11 55. Kurile Islands.
	R	e	57		
	SH	eP	41		
Apr. 18	B	iP	07 43 10.5	c	USCGS: 20°S, 178°W, h = 600 km., 0 = 07 32 06. Fiji Islands.
	MH	iP	10.1	c	
		i	21.9	d	
	F	eP	14		
	M	iP	19.0	c	
	R	e	21		
	SH	iP	17.4		
Apr. 19	B	iP	01 11 04.4	d	BCIS: 33°S, 68°W, 0 = 00 - 58.0. Vicinity of Mendoza, Argentina.
	MH	iP	01.3	d	
Apr. 19	B BG	eP eSNE eQNE eRZ	04 07 06.6 10 04 10.7 11.8	NWC	USCGS: 26½°N, 110½°W, 0 = 04 03 26. Gulf of California. PAS: Magnitude = 6.
			mu sec		
		PZ SH MaxH	.9 5 2.2 10 65 19		
	MH	iP	04 06 57.8		
	F	eP	35		
	M	iP	07 23.6	c	
		i	18 07.5		
	R	iP	07 06.1	d	
			49.1		
	SH	ep	31		
Apr. 19	B	eP	14 26 30.6	c	USCGS: 22½°N, 143°E, h = 200 km., 0 = 14 14 38. Volcano - Mariana Islands.
	MH	iP	33.9	c	
	M	iP	28.1	c	
		i	27 12.6		
	R	i	26 37.7	d	
	SH	eP	25		
Apr. 20	B	iP	21 07 13.9	Nd	38° 37'N, 122° 21' W, 0 = 21 06 58. 25 miles NE of Santa Rosa, Magnitude 4.6. Felt at Monticello Dam, west of Winters (Napa County).
		iSNE	25.2	SW	
	MH	eP	22.3	c	
		iN	32.4		
		iSE	42.0		
	SH	eP	33		
		eN	44		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks	
1958			h. m. s.			
Apr. 20 (con't)	M	iP	29.5	c		
		iNE	38.2			
		iSNE	58.2			
	F	eP	43			
		iNE	55.6			
		iZ	08 18.2			
	PA	iP	07 20.6	d		
		iSN	38.1			
	SF	iP	14.9	d		
		iEZ	28.1			
R	iP	35.6	d			
	i	42.6				
	iE	08 12.1				
A	eN	07 50				
	eN	08 05				
	iP	21 34 00.4	d	BCIS: 60°S, 25°W, 0 = 21 15 02. Sandwich Islands.		
Apr. 20	MH	iP	33 59.1	d		
		eP	34 02.5	d		
	M	e	01			
Apr. 21	SH	eP	03			
		eP	05 45 25	c	USCGS: 24½°N, 122°E, 0 = 05 32 00. Near east coast of Formosa.	
	M	eP	15	c		
R	e	24				
	eP	05 45 05				
	e	12				
Apr. 21	B	eP	20 26 22	c	USCGS: 15°S, 174½°W, 0 = 20 14 47. Samoa Islands region.	
		eSNE	35 48		PAS: Magnitude 6½.	
	BG		mu sec			
Apr. 21	MH	SH	9.5 16			
		S	22.5 20			
	MH	iP	20 26 18.9	d		
		i	23.5			
	F	iP	12.8	d		
		eP	26.2	d		
	M	i	32.9			
		iP	38.1	d		
	Apr. 21	SH	eP	27		
			iP	22 56 24.2	c	USCGS: 4½°S, 104°E, 0 = 22 37 18. Sumatra.
B		i	25.3		PAS: Magnitude 6½.	
MH	iP	23.4	c			
	i	25.6				
	iPP	59 44.3				
F	eP	56 27				
	iP	20.5	d			
	i	21.9				
Apr. 22	R	iP	26.5	d		
		eP	24			
	SH	e(P)	22 12 07			

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks	
1958			h. m. s.			
Apr. 23	BG	eSNE	03 16 32		USCGS: 45°N, 152°E, 0 = 02 57 40. Kurile Islands.	
		eLN	23.7			
	MH	eP	08 11	c		
		F	eP	20		
		M	eP	07 58.6	c	
Apr. 23	R	e	08 10			
		SH	eP	07 54		
	MH	iP	15 23 19		USCGS: 15½°S, 176°W, 0 = 15 11 39. Fiji Islands region.	
		F	eP	23		
		M	iP	26	c	
Apr. 24	R	e	49			
		SH	eP	27		
	F	eP	13 22 37		USCGS: 22°S, 170½°E, 0 = 13 09 41. Loyalty Islands.	
Apr. 24	M	eP	39			
		eP	18 18 04		USCGS: 5°N, 83°W, 0 = 18 09 14. Pacific Ocean.	
	B	iP	17 59.1	c		
Apr. 25	MH	eP	46			
		F	eP	18 10.8	c	
	M	e	18 10.8	c		
		R	iP	00	c	
		SH	eP	15		
R	e(P)	08 42 26		USCGS: 51½°N, 117½°W, 0 = 08 35 06. Fox Islands, Aleutian Islands.		
Apr. 26	M	e	05 06 38		BCIS: 0 = 05 02 12. Gulf of California.	
					USCGS: 15°S, 168°E, 0 = 09 25 54. New Hebrides Islands.	
Apr. 26	MH	iP	09 38 23.3			
		i	45.8			
	F	e	44			
		eP	29			
	R	e	34			
		SH	eP	27		
	Apr. 27	M	e	08 25 05		USCGS: 22°S, 176°W, h = 100 km., 0 = 08 12 58. Tonga Islands region.
			R	e	37	
		SH	eP	04		
	Apr. 27	M	eP	17 28 26		USCGS: 42½°N, 143½°E, h = 100 km., 0 = 17 17 39. Near east coast of Hokkaido.
R			e	37		
SH		eP	23			
Apr. 27	B	eP	18 50 04		USCGS: 23°S, 66°W, h = 200 km., 0 = 18 38 10. Jujuy Province Argentina. Felt at Antofagasta.	
		MH	eP	01.1	d	
	F	eE	49 46			
	M	eP	50 10	d		
		R	iP	03.5	d	
Apr. 27	SH	iP	12.8	d		
		B	eP	19 11 00		USCGS: 52½°N, 169°W, 0 = 19 03 50. Fox Islands, Aleutian Islands.
	BG	eE	16 25			
		MH	iP	11 07		
	F	i	30			
		eE	21			
	M	eP	10 41			
		R	eP	11 03		
		SH	eP	10 34		
			e	58		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks	Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.			1958			h. m. s.		
Apr. 28	BG MH F M R	eLNE e eP e e eP e	08 05.8 05 10.3 02 40 05 03 03 43 06 29 02 53 56 06 05		USCGS: 29½°N, 114°W, 0 = 08 00 09. Northern Gulf of California.	May 1	B BG B BG	iPEZ ipP ePP eSE eNE eGN eP'P' eRNEZ	00 41 24.5 42 14.4 44 40 51 16 53.9 01 04.1 07 47 11	Ec	USCGS: 13½°S, 167½°E, h = 200 km., 0 = 00 29 15. New Hebrides Islands. PAS: Magnitude 6¼.
Apr. 28	B BG	iP eSNE eGNE	11 58 31.1 12 07 25 15.2	c SW	USCGS: 11°S, 74°W, 0 = 11 47 40. Peru. PAS: Magnitude 6½.			PZ PH pPZ pPH SH MaxH	2.3 8 1.0 8 3.0 10 2.0 10 4.1 13 10 17		
	MH F M R C	iP i eP eP iP i	11 58 27.0 12 02 35.4 11 58 15 37 29.1 59 00.9 32.4 40.2	c c c c c			MH F M R	iP ipP iP'P' eP epP eP'P' epP eP'P' iP ipP iP ipP	00 41 25.9 42 16.6 01 07 42 00 41 31.4 42 23 01 07 41 00 42 21.2 01 07 40 00 41 37 42 27 41 34.2 42 27.7 42 19.5	c d c c c c c	
Apr. 28	M	iP eP	12 40 14	c		May 1	M SH	e eP	02 27 18 10		BCIS: 53°N, 155°E, 0 = 02 17 48. Near southwest coast of Kamchatka.
Apr. 28	BG M	eLNE eP	19 28.8 14 09		USCGS: 60°N, 141°W, 0 = 13 35 00. Southeastern Alaska.	May 1	MH M	i i	09 08 47 09 17 08 47		
Apr. 29	M SH	eP eP	13 40 11 04		USCGS: 38°N, 103½°E, 0 = 13 54 44. Kansu Province, China.	May 1	MH M SH	iP eP eP	10 38 57.8 39 00 03		Trinidad: 10.2°N, 63.0°W, 0 = 10 28 59. Near coast of Venezuela.
Apr. 30	M SH	eP eP	14 07 53 50		USCGS: 37½°N, 14°W, 0 = 14 08 00. Off coast of Portugal.	May 1	B MH M R C SH	eP'P' e i i i e(P) eP	01 07 42 02 27 18 16 09 08 47 09 17 08 47 10 38 57.8 39 00 03		USCGS: 25½°N, 141°E, h = 400 km., 0 = 12 33 28. Volcano Islands.
Apr. 30	MH M	iP iP	14 20 13 01		Felt: Lisbon.	May 2	B BG	eP e	20 35 25 26	d	USCGS: 16½°N, 99°W, 0 = 20 29 18. Near coast of Guerrero, Mexico. PAS: Magnitude 6¼ - 6½.
	R C	e e	19 52 20 01								
Apr. 30	B MH F M R C SH	iP ipP iP ipP eP iP ipP iP iP ipP ipP iP	19 39 19.6 49.1 14.9 44.5 38 05 39 23.5 53.9 16.9 45 40 15.5 39 27.0 56.7 22 30 51.3	d d d d d d d d d d d d	USCGS: 21°S, 67½°W, h = 150 km., 0 = 19 27 32. Southern Bolivia.			PZ PH	0.5 5 0.6 5		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
May 2 (con't)	MH	SH	3.5 10		
	F	iP	20 35 18.2	d	
	R	eP	03		
	C	iP	23.8	d	
	SH	eP	36 09		
May 3	B	eP	35 49		
	MH	iP	23 15 16.2	c	BCIS: 20°S, 178°W, 0 = 23 - 03.3. Fiji Islands Region.
	F	iP	16.4	c	
	R	eP	20		
	SH	eP	28		
May 5	M	iP	24.2	c	
May 5	B	e(P)	00 49 03		USCGS: 9½°S, 27½°E, 0 = 06 31 39. Belgian Congo.
		eP'	06 51 14		
		e	24		
	MH	iP'	12.6		
		e(PP)	53 33		
	F	eP'	51 12		
	M	eP'	50 59		
		i	51 10		
	R	eP'	10		
	C	eP'	07		
	SH	eP'	01		
May 5	MH	iP	13 40 12.8	c	USCGS: 52°N, 172½°W, h = 60 km., 0 = 13 32 53. Andreanof Islands. Aleutian Islands.
		ipP	28		
	F	e(P)	36		
	M	eP	39 56.2	c	
		ipP	40 11		
	R	eP	10		
	SH	eP	39 51		
		ipP	40 04		
May 5	BG	eP	23 58 22		USCGS: 57½°N, 136½°W, 0 = 23 53 29. Near coast of southern Alaska. Felt: Sitka and Juneau.
		eNE	24 00 41		
		mu sec	16 16		
	MH	MaxH	23 58 31		
	F	iP	40		
	M	eP	01.5		
	R	iP	15		
	SH	eP	57 58		
May 7	F	eP	07 40 43		BCIS: Near 55°N, 26°E.
	M	iP	32		
	R	eP	32		
	SH	eP	32		
May 7	M	e(P)	11 30 40		
	R	e(P)	22		
May 7	M	eP	22 06 32		USCGS: 50°N, 158½°E, 0 = 21 57 03. Kamchatka Region.
	R	eP	45		
	SH	eP	28		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
May 8	MH	i	02 58 11		USCGS: 45½°N, 28°W, 0 = 02 47 14. North Atlantic Ocean.
	F	eP	04		
	M	eP	57 56		
	R	eP	53		
	SH	eP	57		
May 8	B	iP	12 52 43.2	c	USCGS: 24°S, 67°W, h = 200 km., 0 = 12 40 46. Salta Province, Argentina. Felt: Antofagasta, Chile. PAS: Magnitude 6¼ - 6½.
	BG	epP	53 26		
		eSE	13 02 38		
		esS	03 52		
		mu sec	0.8 7		
		PZ	2.6 9		
		SSH	5.4 12		
	MH	iP	12 52 40	d	
	F	iP	30	d	
		i(pP)	53 18		
	M	eP	52 48.2	c	
		i	49.0	d	
	R	iP	42.3	c	
	C	iP	53 09.1	d	
	SH	eP	52 51		
		epP	53 37		
May 8	SH	eP	13 29 06		
May 9	B	eP	00 52 27		USCGS: 1½°N, 94½°W, 0 = 00 44 12. Galapagos Islands Region. PAS: Magnitude 6.
	BG	eSN	59 09	S	
		mu sec	3.3 12		
	MH	iP	00 52 21	c	
	F	eP	11		
	R	iP	28	c	
	C	eP	53 11		
	SH	eP	52 46		
May 9	B	iPNEZ	04 52 56.9	SEd	USCGS: 31°S, 65½°W, h = 100 km., 0 = 04 40 20. Cordoba - La Roja Provinces, Argentina. PAS: Magnitude 6-3/4.
		i	55 00.4		
	BG	e(S)N	05 03 13		
	MH	iP	04 52 54	d	
		i	53 08	d	
	F	iP	52 44.6	d	
	R	iPNEZ	56.5	SEd	
	C	iP	53 21.8	d	
	SH	iP	04.8	d	
		i	15.1		
May 10	B	ePNEZ	23 01 12.7	Nwd	USCGS: 65°N, 152½°W, 0 = 22 54 40. Central Alaska. Felt: College and Tanana. PAS: Magnitude 6¼ - 6½.
	BG	ePcP	03 38		
		eSN	06 28		
		eQN	12.5		
		eR	14		
		R from W	mu sec		
		MaxH	29 11		
	MH	iP	23 01 19	d	
	F	eP	28	d	
	M	iP	00 45.5	d	



Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
May 16	B	iP	01 41 25.8		USCGS: 12½°N, 161°E, 0 = 01 30 00. Marshall Islands Region. BCIS: Atomic Explosion.
	MH	e	55	c	
		eiP	27.3	d	
	F	i	55.7		
		eP	38		
		e	42 07		
	M	eiP	41 28.2	c	
	R	iP	37.9		
	SH	eP	26		
May 16	B	eP	02 11 33	d	
	MH	iP	38.1		
		i	59.5		
	F	eP	52		
	M	eP	20.0	d	
		i	33.1	d	
	R	eP	37		
	SH	eP	15		
		e	27		
May 16	MH	eP	15 27 23		BCIS: 22°S, 68°W, h = 200 km., 0 = 15 - 15.8. Southern Bolivia.
May 16	MH	iP	20 30 12		USCGS: 18°N, 68½°W, 0 = 20 21 09. Mona Passage. Felt: Ciudad Trujillo, Dominican Republic.
	F	eP	29 58		
	M	eP	30 14		
	SH	eP	18		
May 16	MH	iP	22 43 03		USCGS: 3°S, 147½°E, 0 = 07 02 25. Bismark Sea.
	M	eP	12		
	SH	eP	11		
May 17	BG	eLE	07 44.7		
	MH	eP	15 47		BCIS: Near west coast of Mexico. 0 = 09 - 10.4.
	F	eP	53		
May 17	B	eP	09 15 27		
	MH	eP	16		
	F	eP	01		USCGS: 51°N, 179°W, 0 = 15 38 20. Andreanof Islands, Aleutian Islands.
	M	i	50		
	R	eP	22		
May 17	B	e	15 46 25		
	MH	eP	22		
		i	37		
	F	eP	32		
	M	eP	06		
	R	eP	19		
	C	eP	45 40		
	SH	eP	46 01		USCGS: 18½°S, 174½°W, 0 = 17 43 45.
May 17	F	eP	17 55 32		
	M	iP	39		
	R	eP	43		
	SH	eP	38		USCGS: 13°S, 167°E, 0 = 02 32 52. New Hebrides Islands. PAS: Magnitude 6¼ - 6½.
May 18	B	iP	02 45 27		
		e	56 24		
	BG	eNE	42		
		eLNE	03 11.1		
			mu sec		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
May 18 (con't)	MH	MaxH	70 20		USCGS: 13°S, 167°E, 0 = 03 31 18. New Hebrides Islands.
		iP	02 45 26		
		i	43		
	F	eP	31		
		e	54		
	M	eP	32		
	R	eP	37		
	C	eP	37		
	SH	eP	30		
May 18	MH	iP	03 43 53		
	F	e	44 13		USCGS: 13°S, 167°E, 0 = 12 21 18. New Hebrides Aftershock. PAS: Magnitude 6 - 6¼. A small local shock makes identification of P uncertain at B, and completely obscures P at MH and PA.
	M	eP	43 58		
	R	eP	44 02		
	SH	eP	43 57		
May 18	B	e(P)	12 33 54		
	BG	eNE	44 57		
		eLE	59.4		
			mu sec		
		MaxH	47 20		
	F	eP	12 33 59		
	R	eP	34 09		
	SH	eP	33 59		
May 21	MH	i(P)	04 43 46		
May 21	MH	iP	14 17 37.6	c	USCGS: 17½°N, 63°W, h = 150 km., 0 = 14 08 18. Leeward Islands.
		ipP	18 03.6		
	SH	eP	17 44		
		ipP	18 09		
May 22	B	e	02 33 50		USCGS: 59½°N, 151°W, 0 = 02 27 45. Kenai Peninsula, Alaska.
	MH	iP	43.9	c	
		i	56.9	c	
	F	eP	54		
	R	eP	47		
	SH	eP	29		
May 22	MH	iP	04 58 48		
May 22	B	iP	11 40 21.6	d	USCGS: 50½°N, 175°W, 0 = 11 32 50. Andreanof Islands, Aleutian Islands.
		e	32		
	MH	iP	27.6	d	
		i	53.9		
	F	eP	39		
	R	iP	27.6	d	
	C	e(P)N	39 58		
	SH	iP	40 07.2	d	
May 22	MH	iP	13 51 40		BCIS: 23°S, 177°W, 0 = 13 39 31. Tonga Islands Region. USCGS: 3°S, 146°E, 0 = 15 08 00. Bismark Sea.
May 22	MH	iP	15 21 24		
	F	eP	36		
	SH	eP	32		
May 22	B	iP	22 16 42.5	c	USCGS: 52½°N, 167°W, 0 = 22 09 56. Fox Islands, Aleutian Islands.
	MH	iP	48	c	
	F	eP	17 00		
	R	iP	16 47.7	c	
	SH	eP	28		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
May 23	MH	eP	06 51 55.8		USCGS: 44½°N, 116°W, O = 06 49 47. Idaho. Felt at Boise, Cascade, and Horseshoe Bend. Magnitude 4-3/4 - 5.
		i	52 17.4		
		i	54 06.2		
	F	e	52 28		
	M	eNE	51 34		
		eN	52 59		
	R	eP	51 26		
	C	eN	12		
	SH	eP	35		
		eNEZ	39		
May 23	B	iP	16 00 43.5	c	BCIS: 23°S, 177°W, O = 15 48 30. South of Tonga Islands.
	MH	iP	44.6	c	
	SH	iP	48.4	c	
May 23	MH	iP	23 51 20.7	d	BCIS: Mariana Islands Region. O = 23 - 38.8.
	SH	iP	12.1	d	
May 24	MH	eP	16 46 29		USCGS: 6°S, 146°E, O = 16 33 01. New Guinea.
	SH	eP	27		
May 24	B	iPNEZ	23 05 31.7	NWd	40°18'N, 124°03'W, O = 23 04 47. Humboldt County, California. Felt. Magnitude 4.9.
		eNE	06 00.0		
		i(S)NE	05 05.0		
	MH	iP	05 41.9	d	
		eNE	42.3	NW	
		i(S)N	06 23.7		
	PA	iP	05 37.2	d	
		eNE	06 12.4		
	SF	e(S)NE	16.5		
		iP	05 31.5	d	
		iE	40.9		
	F	e(S)E	06 06		
		iP	05 59.8		
		i	06 06.9		
		i	07 24.6		
		i	33.7		
	M	iPNEZ	05 20.0	c	
		iSN	41.6		
	R	iP	41.0	c	
		i	45.0		
	A	iPNE	04 58.9	SW	
	Fe	iPE	57		
	C	iP	05 52.6	d	
		i	06 18.1		
	SH	iP	05 11.8	c	
May 25	B	e(P)	00 43 13		USCGS: 51°N, 177°W, O = 00 35 23. Andreanof Islands, Aleutian Islands PAS: Magnitude 5½ - 5-3/4.
	BG	eSE	49 09		
	MH	eP	43 13		
		i	21		
	F	eP	26		
	R	eP	13		
	C	eP	42 30		
	SH	eP	42 51		
May 25	MH	e	01 35 57		
	F	e	36 31		
1958			h. m. s.		
May 25	R	e	05		USCGS: 51½°N, 177°W, O = 14 54 30. Andreanof Islands, Aleutian Islands.
(con't)	SH	e	32		
May 25	MH	iP	06 27 02		
	SH	eP	15		
May 25	MH	i(P)	10 50 06		
May 25	B	eP	15 02 11		
	BG	eS	08 17		
	MH	iP	02 17.7	d	
		i	50.6		
	F	eP	29		
	R	eP	16		
	C	eP	01 46		
	SH	eP	58		
		e	02 07		
May 25	MH	i	16 15 26		
	C	e	14 25		
May 25	B	eP	17 05 53		USCGS: 14½°S, 174°W, O = 16 54 26. Samoa Islands Region.
	MH	eP	53		
	F	eP	56		
	R	eP	06 12		
May 25	B	eP	17 53 21	d	USCGS: 31°N, 129½°E, O = 17 40 47. Near west coast of Kyushu, Japan.
	MH	iP	24.6	d	
	F	eP	30		
	SH	iP	12.1	d	
May 25	B	eP	21 21 33.1	c	USCGS: 3°S, 77°W, h = 100 km., O = 21 11 45. Ecuador - Peru Border Region. Felt: Ecuador. PAS: Magnitude 6½.
	BG	ePP	23 46		
		eSNE	29 36		
	B	eP'P'	51 31		
		mu	sec		
		PZ	2.0 6		
		SH	3.1 8		
		MaxH	30 22		
	MH	eP	21 21 27.6	c	
		i	29.5	d	
		ipP	51.8		
		eP'P'	51 11		
	F	iP	21 15.4	d	
	M	eNE	43		
	A	eE	54		
	R	eP	29		
	C	iP	22 05.0	d	
	SH	iP	21 43.6	d	
		i	53.5		
May 26	B	eP	08 59 35.2	c	USCGS: 3°S, 77°W, h = 100 km., O = 08 49 47. Ecuador - Peru Aftershock.
		i	42.6		
		i	09 00 27.0		
		i	34.7		
	MH	iP	08 59 30.7	c	
	F	iP	16.8	c	
	R	iP	31.2	c	
	C	eP	09 00 06	c	
	SH	iP	08 59 44.8	c	
May 26	MH	iP	09 16 39	c	
	R	e(P)	41		
					USCGS: 3½°S, 78½°W, O = 09 06 51. Ecuador - Peru border.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
May 26	B	eP	11 03 33.9	d	USCGS: 53°N, 169½°W, 0 = 10 56 30. Fox Islands, Aleutian Islands. PAS: Magnitude 6 - 6¼.
		e	04 11		
		ePcP	05 59		
	BG	eSNE	09 06		
	B	eScP	33		
	BG	e(G)N	11.7		
			mu sec		
		PZ	0.6 6		
		SH	1.3 9		
	MH	iP	11 03 40.0	d	
		iPcP	06 01.7		
		iScP	09 35.8		
	F	iP	03 51.5	d	
		e	04 13		
	M	e(P)NE	03 26		
	A	e(P)E	11		
	R	iP	37	d	
	C	eP	02 55		
	SH	iP	03 19.0	d	
		e	47		
		iPcP	05 54.2		
May 26	B	eP	16 29 05	c	USCGS: 17½°S, 178½°W, h = 600 km., 0 = 16 18 10. Fiji Islands.
	MH	iP	06.5	c	
	F	iP	09.3	c	
	R	eP	19		
	C	e(P)N	02		
May 27	SH	iP	14.0	c	BCIS: Fiji Islands Region. 0 = 04 - 00.7.
	B	iP	04 11 55.9	c	
	MH	iP	55.3	c	
May 27	SH	iP	12 02.9		BCIS: 6°N, 87°W, 0 = 08 - 13.2. Well off the south coast of Panama.
	MH	eP	08 22 00		
May 27	B	eP	23 46 06		USCGS: 5½°S, 146°E, 0 = 23 32 43. North coast of New Guinea.
	SH	iP	09		
May 28	C	e(P)	16 47 42		USCGS: 46½°N, 113°W, 0 = 16 45 54. Western Nevada. Felt: Anaconda, Butte, and Philipsburg.
	SH	e	48 17		
May 28	SH	eP	18 23 21		USCGS: 27½°N, 139½°E, h = 450 km., 0 = 05 21 29. Bonin Islands region.
May 29	B	iP	05 32 52.8	d	
	MH	iP	55.6	d	
	C	iP	34.6	d	
	SH	iP	45.6	d	
May 29	BG	eLE	07 14		USCGS: 16½°N, 97½°W, 0 = 06 59 11. Oaxaca, Mexico.
	MH	iP	05 23	d	
		i	30		
		e	15 37		
		e	14 22		
		e	15 49		
	C	iP	06 12	d	
	SH	iP	05 44	c	
May 29	B	e(P)	11 15 43		
	SH	i(P)	35		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
May 30	SH	iP	05 08 45		BCIS: 15°S, 176½°W, 0 = 04 57.0. Fiji Islands region.
May 30	MH	e(P)	05 28 44		
	F	e(P)	48		
	R	e	59		
	SH	e	54		
May 30	F	eP	06 03 30		USCGS: 7°S, 154½°E, 0 = 05 50 26. Solomon Islands.
	R	eP	34		
	SH	eP	26		
May 30	B	eP	16 24 47.3	c	USCGS: 25°N, 122°E, h = 100 km., 0 = 16 11 40. Near north coast of Formosa. Felt: Northern Formosa.
	MH	eP	50.4	c	
	F	eP	55	c	
	R	iP	50.6	c	
	C	iP	27.8	c	
	SH	iP	40.0	c	
May 30	B	eP	18 11 45		USCGS: 52½°N, 169°W, 0 = 18 04 50. Fox Islands, Aleutian Islands. PAS: Magnitude 6 - 6¼.
	BG	eSNE	17 21		
		eSSNE	20.0		
		eQN	22.4		
			mu sec		
		PZ	0.8 4		
		PH	0.9 4		
		SH	9.1 13		
		MaxH	29 10		
	MH	iP	18 11 51.3	c	
		i	12 12.8		
		i	39.8		
	F	iP	06	c	
	R	eP	11 52		
	C	eP	08		
	SH	iP	32.9	c	
		e	52		
May 30	F	eP	19 16 26		USCGS: 52½°N, 168½°W, 0 = 19 09 09. Fox Islands, Aleutian Islands.
	R	eP	13		
	SH	eP	15 49		
May 31	B	eP	07 37 33		48°N, 129°W, 0 = 07 34 52. Off coast of Washington. Magnitude 4.8.
	MH	iP	43.9		
	F	iP	59		
	R	eP	26		
	C	eP	36 10.0		
		iSNEZ	37 05.7		
	SH	eP	02		
May 31	B	iP	08 13 38.7	d	USCGS: 21½°S, 64°W, 0 = 08 01 27. Southern Bolivia.
	MH	iP	34.9	d	
	R	eP	37		
	SH	iP	47.0	d	
May 31	MH	iP	14 26 00		Wellington: 34-3/4°S, 179½°W, 0 = 14 13 06. Well south of Kermadec Islands. Magnitude 5.3.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks		
1958			h. m. s.				
May 31	B	eP	19 45 03.4	c	USCGS: 15°S, 169°E, 0 = 19 32 30. New Hebrides Islands. PAS: Magnitude 7½.		
		ePP	48 17				
	BG	eSNE	55 36				
		eSSN	20 01.1				
		eGN	07.0				
		eRNEZ	10				
						R from SW	
						mu sec	
						12 12	
						11 13	
						8 9	
						85 17	
						210 27	
	MH	iP	19 45 04.8			c	
iPP		48 23.5					
F	i	53 17.4	c				
	eP	45 09					
A	eP	04	c				
	iP	15.8					
R	eP	14	c				
	iP	09.1					
C	e(PP)	48 40	c				
	eP	21 36 37					
May 31	B	eP	46	Wc	37°52'N, 122°00'W, 0 = 22 07 11. Contra Costa county, California. Magnitude 4.1. Felt in San Francisco Bay region.		
		eP	37 02				
SH	eP	36 04	d				
	iPNEZ	22 07 15.8					
MH	iSNE	19.1	c				
	iPNEZ	24.8					
SF	iNE	35.3	c				
	iP	19.0					
F	eSE	25	c				
	ePE	46					
R	eN	08 12	c				
	iP	07 51.3					
SH	eP	54.6	c				
	iP	02 38 48.0					
June 1	MH	eP	39 02	c	BCIS: Near coast of Vancouver Island. 0 = 02--35.9.		
		eP	38 35				
R	eP	37 12	c				
	eP	38 10					
C	e(S)	39 04	c				
	i	04 09 31					
June 1	B	eP	38	c	USCGS: 52½°N, 160°E, 0 = 04 00 06. Near east coast of Kamchatka.		
		iP	48				
MH	eP	36	c				
	eP	19					

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks			
1958			h. m. s.					
June 1	B	eP	10 51 44.8	d	USCGS: 18°S, 69°W, h = 150 km., 0 = 10 40 17. Bolivia - Chile border region.			
		i(pP)	52 32.1					
	MH	iP	51 41.4					
		i	52 44.7					
	F	eP	51 30					
		eP	43					
	C	iP	52 12.5					
		iP	51 54.0					
	June 1	B	eP			18 26 56.7	d	USCGS: 60½°N, 143½°W, 0 = 18 21 17. Alaska.
			iP			27 03.3		
MH	eP	06	d					
	eP	26 51						
R	eP	25 54	d					
	eP	26 33						
June 1	B	iP	19 59 07.3	d	USCGS: 19°S, 64½°W, 0 = 19 47 05. Southern Bolivia.			
		iP	04.9					
MH	eP	58 54	d					
	iP	59 05.9						
C	iP	32.8	d					
	iP	15.3						
June 2	B	iT	16 59 26.5	d				
		iT	33.7					
SF	eT	24	c					
	iP	01 57 31.5						
June 3	MH	eP	43	c	USCGS: 51½°N, 178½°W, 0 = 01 49 36. Andreanof Islands, Aleutian Islands.			
		eP	30					
R	eP	56 48	c					
	eP	57 12.3						
C	iP	57 12.3	c					
	iP	19 44 26						
SH	ePNEZ	54 52	c	USCGS: 15°S, 168°E, 0 = 19 31 52. New Hebrides Islands. PAS: Magnitude 6½.				
	eSNE	20 00.5						
June 3	BG	eSSN	10	c				
		eRNEZ	10					
			R from SW					
			mu sec					
			PZ	5.8 9				
			PH	2.4 9				
			SH	8 14				
			MaxH	17 23				
MH	iP	19 44 27.4	c					
	iP	32						
F	eP	38.7	c					
	eP	37						
C	iP	33.9	c					
	iP	03 44 51						
June 4	MH	eP	44	c	BCIS: Aleutian Islands.			
		iP	14 36 39.4					
SH	eP	42 04	d					
	iP	44.7						
June 4	B	eSNE	44.7	d	USCGS: 52½°N, 167°W, 0 = 14 29 50. Fox Islands, Aleutian Islands. PAS: Magnitude 6 - 6½.			
		eNE	44.7					
			mu sec					

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
June 4 (con't)		PZ	0.8 6		
		PH	0.8 6		
		SH	5.5 12		
	MH	iP	14 36 45.5	d	
June 5	F	eP	58		
	R	iP	44.2	d	
	C	iP	00.3	d	
	MH	iP	02 06 15		BCIS: Aleutian Islands. BCIS: 13¼°N, 89½°W, O = 04 29 51. Near coast of El Salvador. Felt: San Salvador.
June 5	MH	eP	04 37 06		USCGS: 10½°S, 166°E, O = 08 21 07. Santa Cruz Islands.
June 5	B	eP	08 33 36	c	
	MH	iP	38.7	c	
	F	eP	44		
	R	iP	49.1	c	
June 5	SH	eP	41		
	MH	iP	11 06 41		42.8°N, 126.5°W, O = 11 05 04. Off coast of Oregon.
	C	iP	05 51.1	d	
		iSN	06 25.3		
June 6	SH	eP	02		
	B	eP	00 22 22		BCIS: New Britain Region. O = 00 - 08.9.
	MH	iP	27.9	d	
		i	33.9		
June 6	SH	eP	13		
	B	iP	09 19 36.7	c	USCGS: 8°N, 84½°W, O = 09 11 14. Off coast of Costa Rica.
	BG	iSE	26 27		PAS: Magnitude 6½ - 6-3/4.
	MH	iP	19 30.9	c	
June 6	F	eP	18		
	M	eP	42.4	c	
		i	58.7		
	A	ePE	59		
June 6	R	iP	31.3	c	
	C	iP	20 10		
	SH	eP	19 49		
		i	20 02		
June 6	B	eP	12 35 34.7	d	USCGS: 21°S, 69°W, O = 12 23 54. Northern Chile.
	MH	iP	30.5	d	
		i	36 04.5		
	F	eP	35 21		
June 6	R	eP	33		
	SH	eP	44		
	MH	iP	16 00 27		USCGS: Costa Rica aftershock. O = 15 52 10.
	F	eP	13		
June 6	R	e(P)	30		
	B	eP	19 24 12.3	c	USCGS: 5½°N, 82½°W, O = 19 15 28. South of Costa Rica.
	BG	eSNE	31 28		PAS: Magnitude 6.
		mu sec			
June 6	SH		3.5 9		
	MH	iP	19 24 06.9	c	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
June 6 (con't)	F	eP	23 54		
	R	eP	24 08		
	C	eP	47		
June 6	SH	eP	23		
	B	iP	22 51 05.3	c	USCGS: Revilla Gigedo Islands. O = 22 46 20.
		e	52 34		
		es	55 22		
June 6	MH	iP	50 57.0	c	
		i	52 27.4		
	F	eP	50 44		
	M	eP	51 24		
June 6	R	iP	10.6	c	
	SH	e	46		
	MH	iP	03 38 03		USCGS: 5°S, 150½°E, h = 150 km., O = 03 23 42. New Britain.
	R	eP	06		
June 7	MH	eP	10 39 27		BCIS: Probably in the Gulf of California.
June 8	B	eP	00 45 36		USCGS: 53°N, 167°W, O = 00 38 52. Fox Islands, Aleutian Islands.
		e	51		
		i	48 15.4		
	BG	eSNE	51 38		PAS: Magnitude 6½ - 6-3/4.
June 8		eN	53.7		
		eREZ	55		
		R from W			
		mu sec			
June 8	MH	MaxH	20 17		
		iP	00 45 45.3		
		i	48 17.5		
	F	eP	45 58		
June 8	M	iP	29		
	R	iP	44		
	C	iP	00		
	SH	iP	24		
June 8		i	48 11		
	B	eP	16 03 40		USCGS: 16°S, 75°W, O = 15 52 23. Near coast of southern Peru.
	MH	iP	35		
	F	e	33		
June 8	SH	eP	49		
	MH	eP	21 21 55.2		USCGS: 7°N, 34½°W, O = 21 09 23. Atlantic Ocean.
June 9	MH	eP	06 09 19		BCIS: Probably well off the coast of Oregon.
	F	eP	34		
	C	eP	08 27.0		
	SH	eP	45		
June 9	MH	iP	16 06 02		USCGS: 52½°N, 168°W, O = 15 59 00. Fox Islands, Aleutian Islands.
	F	eP	16		
	M	eP	05 45		
	R	eP	06 01		
June 9	SH	eP	05 40		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
June 9	B MH M R	eP iP iP iP	21 26 21 26 11 23		USCGS: 54½°N, 160½°E, 0 = 21 16 58. Near east coast of Kamchatka.
June 10	MH F M R C SH	iP eP eP eP eP eP	00 17 25 39 09 22 16 44 17 03		USCGS: 53°N, 167°W, 0 = 00 10 30. Fox Islands, Aleutian Islands.
June 10	M SH	eP eP	00 32 51 46		BCIS: Fox Islands, Aleutian Islands, 0 = 00 26 13.
June 10	MH F M R SH	iP eP eP eP eP	04 12 47 50 57 59 56		USCGS: 30½°S, 177°W, 0 = 04 00 04. Kermadec Islands
June 10	B MH F M R SH C SH	iP epP iP i(pP) eP epP iP epP eP iP epP iP	05 04 53.8 06 32 04 57.0 06 41.5 05 06 06 47 04 49.8 06 30 04 58.5 06 41 04 36 06 33 06 46.4		USCGS: 27½°N, 140°E, h = 500 km., 0 = 04 53 35. Bonin Islands region.
June 11	MH	i(P)	03 56 12		BCIS: Kermadec Islands, 0 = 03 43 30.
June 12	B BG	iP eSNE	12 02 34.4 09 16	d	USCGS: 7½°N, 84½°W, 0 = 11 54 04. Off coast of Costa Rica. PAS: Magnitude 6 - 6¼.
			mu sec		
	MH	SH	4.6 15		
	MH	iP	12 02 25.6	d	
	F	eP	10		
	M	eP	36	c	
	R	eP	22		
	C	eP	03 03		
	SH	eP	02 42		
June 12	B BG	eP eSE i(SS)N	20 59 49.1 21 05 17 07 44	c	USCGS: 53°N, 167°W, 0 = 20 52 57. Fox Islands, Aleutian Islands. PAS: Magnitude 6½.
			mu sec		
		PZ	0.9 8		
		SH	29 16		
		(SS)H	82 16		
	MH	iP	20 59 55.8	c	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
June 12 (con't)	F M R C SH	eP eP eP eP eP	21 00 07 20 59 36 50 07 31	c c	
June 12	MH F M R C SH	i eP eP eP eP eP	21 06 04 21 40 33 31 05 19 39 34 40 00		USCGS: 53°N, 167°W, 0 = 21 33 25. Fox Islands, Aleutian Islands.
June 13	SH	eP	10 23 05		BCIS: 46°N, 138½°E, 0 = 10 13 31. Sea of Japan.
June 13	MH F M R SH	iP eP iP eP e	15 25 06 24 46 25 35 15 11 12 41		BCIS: 31½°N, 116½°W, 0 = 15 - 22.3. Baja California
June 14	SH	e	11 12 41		
June 14	MH F	eP eP	18 41 26.6 35	c	U.S. Atomic Energy Commission: Nuclear Explosion "Walnut." 11°39'37"N, 162°13'31"E, 0 = 18 30 00.1.
June 15	MH	i i	01 41 48 42 49		
June 15	M R SH	i e e	01 45 55 42 51		
June 15	B MH	iP iP	02 52 14.5 15.2	c c	USCGS: 20°S, 178°W, h = 550 km., 0 = 02 41 10. Fiji Islands.
		e	54 48		
	F	iP	52 19.0	c	
	M	eP	23.6	c	
	R	iP	27.7	c	
	SH	iP	23.3	c	
June 15	B MH	eP iP	07 29 42 42.9		USCGS: 22°S, 178°W, 0 = 07 17 29. Fiji Islands region.
	M	iP	51.9	d	
	SH	iP	51.0	d	
June 15	MH M R SH	i(P) e e(P) e(P)	11 46 03 11 11 04		USCGS: 9°S, 150°E, 0 = 11 32 38. Near coast of New Guinea.
June 15	B BG	iP epP ePP iSNE eN	15 05 35.7 07 31 08 39 14 40 18 44	c c	USCGS: 18°S, 178½°W, h = 600 km., 0 = 14 54 37. Fiji Islands. PAS: Magnitude 6¼.
			mu sec		
		pPZ	3.8 4½		
		pPH	1.3 4		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
June 15 (con't)	MH	SH	3.8 8		
		iP	15 05 35.8	c	
	F	ipP	07 33.4	d	
		iP	05 40.8		
		epP	07 37		
	M	eS	14 52		
		iP	05 45.0	c	
	R	ipP	07 43.5		
		iP'P'	32 44		
		iP	05 49.3	c	
ipPNE		07 50			
C	eP'P'	32 42			
	iP	05 53.4	d		
SH	epP	07 47			
	iP	05 43.8	c		
	e(pP)	07 44			
June 15	B	eP	17 34 22		USCGS: 9½°S, 150°E, 0 = 17 20 56. Near coast of New Guinea.
	MH	iP	27		
June 16	M	eP	24		
	MH	iP	07 26 13		USCGS: 15°S, 169°E, 0 = 07 13 39. New Hebrides Islands.
	F	eP	19		
	M	iP	19		
June 16	R	eP	24		
	SH	eP	18		
	B	e(P)	08 24 57		USCGS: 14½°S, 177½°W, 0 = 08 13 07. Fiji Islands region.
June 16	BG	eSN	34 26		
		eLNE	43.8		
	MH	iP	24 54		
	F	eP	52		
	M	iP	25 06		
	R	eP	02		
	SH	e	36		
June 16	MH	iP	14 39 17		USCGS: 13°N, 88½°W, h = 100 km., 0 = 14 31 59. Near coast of El Salvador. Felt: Southern El Salvador.
	M	eP	31		
June 16	MH	iP	19 03 52		BCIS: 20°S, 178°W, 0 = 18 51 45. Fiji Islands region.
	F	eP	57		
	R	eP	04 05		
June 17	SH	eP	00		
	B	eP	00 38 09		USCGS: 43°N, 141°E, 0 = 00 27 00. Hokkaido, Japan.
	MH	iP	14.1	c	
	F	eP	23		
	M	iP	03	c	
	R	eP	12		
	C	eP	37 41	c	
SH	eP	38 00			

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
June 17	MH	e(P)	13 11 32		BCIS: Well off coast of Guatemala. 0 = 13 04 20.
June 17	B	eP	15 19 51		USCGS: 27°N, 141°E, 0 = 15 07 30. Bonin Islands region.
	MH	iP	54		
June 17	SH	eP	26		
	B	eP	19 18 48.3	c	USCGS: 25°N, 142½°E, h = 60 km., 0 = 19 06 43. Volcano Islands.
	MH	iP	52.6	c	
		i	19 00		
June 18		i	14		
	F	iP	00.7		
	M	iP	18 45	c	
		i	58		
	R	iP	55	c	
	C	eP	32		
	SH	iP	42.7	c	
	B	eP	01 25 16		USCGS: 68½°N, 16°W, 0 = 01 15 02. Off north coast of Iceland.
		e	27 12		
		BG	eQNE	46	
June 18	MH	iP	25 16		
	F	eP	17		
	M	eP	24 56		
	R	eP	58		
June 18	SH	eP	58		
	MH	i	03 33 46		USCGS: 69°N, 16°W, 0 = 02 23 27. Iceland aftershock.
	M	e	16		
June 18	SH	e	25		
	MH	iP	04 44 16		USCGS: 69°N, 16°W, 0 = 04 34 04. Iceland aftershock.
	M	eP	43 55		
June 18	R	eP	58		
	MH	eP	06 46 27		USCGS: 14½°N, 94°W, 0 = 06 40 40. Off south coast of Mexico.
		i	47 23		
June 18	M	eP	46 18		
		e	47 45		
June 18	MH	iP	07 55 26		BCIS: Well off south coast of Mexico. 0 = 07 48.7.
June 19	M	eP	40		
	M	eP	03 26 40		USCGS: 59°N, 136°W, 0 = 03 21 56. Alaska - Yukon border.
June 19	MH	eP	04 07 49	c	USCGS: 15½°N, 92°W, h = 100 km., 0 = 04 01 08. Mexico-Guatemala border.
		ePcP	10 24		
	N	eP	08 03	c	
June 19	B	eP	05 27 52		USCGS: 49½°N, 156°E, 0 = 05 18 00. Kurile Islands.
	BG	eSNE	35 49		
		eREZ	44.5		PAS: Magnitude 6½.
			R from W		
		mu	sec		
		PZ	1.1 7		
		SH	2.9 9		
		MaxH	13 22		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
June 19 (con't)	MH	iP	05 27 55.6	c	
	F	eP	28 07		
	M	iP	27 43.6	c	
	C	eP	17		
June 19	SH	eP	38		
	MH	iP	07 58 11		
	M	iP	16		
June 19	SH	eP	14		USCGS: Near coast of Guerrero, Mexico. O = 09 48 50.
	MH	iP	09 54 53		
	F	eP	38		
June 19	M	eP	55 10		
	MH	e	13 56 03		
	M	e	13		
June 20	SH	e	12		USCGS: 16°S, 173°W, O = 00 47 58. Samoa Islands region.
	B	iP	00 59 26.2	c	
	MH	iP	25.0	c	
June 20	F	eP	30		
	M	eP	36.2	c	
	R	eP	41		
	B	eP	01 29 19		
June 20	MH	iP	25		BCIS: New Hebrides region. O = 01 - 16.7.
	F	eP	30		
	B	iP	17 43 44.9		
June 20	MH	iP	45.5	c	USCGS: 20½°S, 179°W, h = 600 km., O = 17 32 36. Fiji Islands.
	M	iP	53.2		
	R	eP	58		
	MH	iP	03 35 38		
June 21	SH	eP	32		USCGS: 33°N, 42°W, O = 03 25 09. North Atlantic Ocean.
	MH	iP	13 11 55		
	M	iP	26		
June 21	C	eP	10 50		Off coast of Oregon. O = 13 09 54.
		iSN	11 30		
	MH	i	23 49 15		
	M	eP	48 52		
June 21	R	eP	49 00		USCGS: Near southeast coast of Kamchatka. O = 23 39 30.
	SH	eP	48 45		
	B	eP	05 08 24.1	c	
	MH	iP	28.9	c	
June 22	F	eP	39		USCGS: 44°N, 147°E, O = 04 57 38. Southern Kurile Islands.
	M	eP	17	c	
	R	eP	28		
	SH	iP	13.1	c	
June 22	B	iP	05 40 45.9	c	USCGS: 37°N, 135°E, h = 350 km., O = 05 29 29. Sea of Japan.
	MH	iP	50.1	c	
	M	eP	39.2	c	
	R	eP	48		
	SH	iP	36.3	c	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks	
1958			h. m. s.			
June 22	MH	iP	16 26 28		BCIS: 52°N, 170°W, O = 16 - 19.0 Fox Islands, Aleutian Islands.	
	M	eP	12			
	R	eP	26			
June 23	SH	eP	07		USCGS: 49°N, 102°E, O = 05 10 03. Outer Mongolia.	
	B	eP	05 22 39			
	MH	iP	45			
	F	eP	51			
June 23	M	iP	31		USCGS: 15½°S, 168½°E, O = 07 19 02. New Hebrides Islands.	
	R	eP	39			
	SH	eP	28			
	B	eP	07 32 19.4	c		
June 23	MH	iP	20.7	c		
	F	eP	27			
	M	eP	26.4			
June 24	R	eP	32		USCGS: 8½°S, 112°E, h = 200 km., O = 00 09 18. Near south coast of Java.	
	SH	eP	25			
	MH	iP"	00 28 01			
June 24	M	e(PP)	29 52			
	SH	iP"	27 59			
	SH	eP"	58			
June 24	SH	e	04 02 13		BCIS: 15½°S, 175°W, O = 02 23 48. Fiji Islands region.	
June 25	MH	eP	02 35 18			
	F	eP	29			
	M	eP	27			
June 25	R	eP	39		BCIS: 23°S, 178°E, h = 600 km., O = 09 28 56. Fiji Islands.	
	SH	eP	26			
	B	iP	09 40 15.1	d		
	MH	iP	16.5	d		
June 25	F	eP	20			
	M	iP	24.0	d		
	R	eP	26			
	SH	iP	22.9	d		
	B	i(P)	09 50 02.7	d		
June 25	BG	ePP	53 30		USCGS: 3°S, 144½°E, O = 09 36 30. Near north coast of New Guinea. PAS: Magnitude 6¼ - 6½.	
		eSE	10 00 27			
		eE	07 28			
		eREZ	19.3			
			R from W			
			mu sec			
		SH	2.4 9			
		MaxH	35 22			
		MH	eP	09 50 00		
		F	e	25		
	M	eP	00			
	R	eP	07			
	C	eP	02			
	SH	eP	49 59			

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
June 25	B	eP	12 57 00		USCGS: 5°S, 152°E, 0 = 12 43 55. New Britain. Felt: Rabaul.
	MH	eP	01		
	F	eP	09		
	M	eP	02	c	
	R	iP	10	c	
	C	eP	01		
	SH	iP	00	c	
June 25	B	iP	23 33 18.1	c	USCGS: 52°N, 152½°W, h = 450 km., 0 = 23 24 03. Sea of Okhotsk.
	MH	iP	23.3	c	
	F	eP	33		
	R	iP	19.9	c	
	SH	iP	04.7	c	
June 25	F	eP	23 55 15		BCIS: 51°N, 176½°W, 0 = 23 47 06. Andreanof Islands, Aleutian Islands.
	R	eP	54 53		
	SH	eP	35		
June 26	B	iPNEZ	04 47 37.1	SEc	USCGS: 54½°N, 159½°E, slightly deeper than normal. 0 = 04 38 12. Kamchatka. PAS: Magnitude 6½ - 6-3/4.
	BG	ISE	55 06	W	
			mu sec		
		PZ	1.5 4		
		PH	1.2 4		
		SH	2.3 9		
	MH	iP	04 47 42.3	c	
		eS	55 14		
	F	iP	47 52.8	c	
	M	iP	27.3	c	
	R	iP	39.1	c	
	C	iP	46 59.5	c	
	SH	iP	47 22.7	c	
June 26	M	eP	07 52 23		USCGS: 14°N, 125½°E, 0 = 07 39 21. Ryukyu Islands.
June 26	SH	eP	18 12 30		BCIS: Aleutians.
June 26	SH	eP	20 04 10		BCIS: 52½°N, 167½°W, 0 = 19 57 28. Fox Islands, Aleutian Islands.
June 26	R	eP	23 41 29		USCGS: 31°N, 141½°E, 0 = 23 29 32. South of Honshu, Japan.
June 27	B	eP	05 52 13		USCGS: 13°N, 88½°W, h = 60 km., 0 = 05 44 28. Near coast of El Salvador. Slight damage in southern El Salvador. PAS: Magnitude 6.
	BG	ePcP	54 22		
		eSNE	57 54		
			mu sec		
		MaxH	11 20		
	MH	iP	05 52 04.6		
		iPcP	54 14.7		
	F	eP	51 48		
	M	eP	52 01.7		
	R	eP	51 50		
June 28	SH	ePcP	54 26		BCIS: 28°S, 175°W, 0 = 08 32.0. Kermadec Islands Region.
	BG	eRNEZ	09 12		
	F	eP	R from SW 08 44 47		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks	
1958			h. m. s.			
June 28	M	eP	49		U.S. Atomic Energy Commission: Nuclear Explosion "Oak." 11°36'28"N, 162°06'28"E, 0 = 19 30 00.1.	
(con't)	SH	eP	47			
June 28	B	iP	19 41 24.3	c	USCGS: 15½°S, 70½°W, h = 150 km., 0 = 03 25 42. Southern Peru.	
	MH	iP	27.4	c		
	F	eP	36.1	c		
	M	iP	27.3	c		
	R	iP	36.1	c		
	C	e(P)	21			
	SH	iP	24.0	c		
June 29	B	iP	03 36 52.3	d		
	BG	eSNE	46 01			
		eLE	52.1			
			mu sec			
		SH	2.5 8			
	MH	iP	03 36 48.3	d		
	F	iP	37.3	d		
	M	iP	57.5	d		
	R	iP	49.8	d		
	SH	iP	37 00.7	d		
June 29	B	eP	09 26 04		USCGS: 16½°S, 172°W, 0 = 09 14 37. Tonga Islands.	
	MH	eP	06			
	F	eP	11			
	M	eP	16			
	R	eP	20			
	SH	eP	14			
June 29	B	eP	12 52 09		USCGS: 15½°S, 173°W, 0 = 12 40 48. Samoa Islands region.	
	BG	eLNE	13 16.4			
	MH	iP	12 52 10			
	F	eP	14			
	M	eP	20			
	R	eP	24			
	SH	eP	19			
June 29	MH	iP	19 08 46.9	d		BCIS: 48½°N, 128°W, 0 = 19 - 05.3. Well off Vancouver Island.
	F	eP	52			
	M	iP	00.7	d		
	R	eP	21			
	C	eP	07 00			
	SH	eP	53			
June 30	MH	ePP	09 00 24		USCGS: 36½°N, 27½°E, 0 = 08 42 33. Dodecanese Islands. Felt.	
	M	iP	08 56 10.8	c		
		iPP	09 00 12.9	c		
	R	ePP	14			
		iSKS	06 41			
		ePP	00 12			
June 30	B	eP	18 38 08			USCGS: 31°N, 141½°E, 0 = 18 26 20. South of Honshu, Japan. PAS: Magnitude 6-3/4.
	BG	eSNE	47 50			
		eLNE	58.0			
			mu sec			
		PZ	0.7 4			

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
June 30 (con't)	MH F M R C SH	SH iP eP eP eP eP iP	1.9 5 18 38 11    37 51 38 00		



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BERKELEY—MOUNT HAMILTON—PALO ALTO  
SAN FRANCISCO—FERNDALE—FRESNO  
MINERAL—ARCATA—RENO—CORVALLIS—SHASTA  
MANZANITA LAKE

Earthquakes and the Registration of Earthquakes

From July 1, 1958 to September 30, 1958

BY  
DON TOCHER

UNIVERSITY OF CALIFORNIA PRESS  
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Perry Byerly, Director

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and

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The list following this page gives the latitude and longitude of the epicenters for earthquakes which were well enough recorded to permit such a determination.

Map No. for each epicenter corresponds to a number plotted on the map which follows the list of epicenters.

Date and Origin Time are given in Greenwich Civil Time. Subtract eight (8) hours to convert to Pacific Standard Time (P.S.T.) or seven (7) hours to convert to Pacific Daylight Time (P.D.T.). This will change the date for some of the earthquakes. Pacific Daylight Time was legally in effect throughout California from April 27 to September 28, 1958.

M is the Richter Magnitude of the earthquakes as determined from the maximum trace amplitudes recorded for the shock by the standard Wood-Anderson Torsion Seismographs. In routine practice, the nomogram given by Nordquist in the "Bulletin of the Seismological Society of America", 32:164, is used for magnitude determinations.

Q indicates the excellence with which the epicenter has been located; "a" indicates excellent, "b" good, "c" fair, and "d" poor. Under Remarks will be found a short descriptive location of each epicenter, usually with reference to a point named on the map. Information on small foreshocks and aftershocks is sometimes included in the Remarks. When numerous foreshocks or aftershocks accompany a large earthquake, a separate table is generally included following the main list of local shocks, giving origin times, Richter Magnitudes, and, where significant differences in location can be determined, the geographic coordinates. The larger earthquakes of after-shock series are also included in the main list of local shocks.

Information on the intensities of shocks reported felt is also included under Remarks. Reports on felt earthquakes are chiefly those collected by the Seismological Field Survey of the United States Coast and Geodetic Survey, which publishes a more complete summary of such reports in "Abstracts of Earthquake Reports for the Pacific Coast and Western Mountain Region". This is a quarterly publication, and may be obtained from the District Officer, San Francisco District, Coast and Geodetic Survey, 121 Customhouse, San Francisco 26, California, or from the Director, U.S. Coast and Geodetic Survey, Washington 25, D.C.

Intensities are given by Roman numerals when sufficient information on the effects of the shock is available. These intensity numbers assigned by the Coast and Geodetic Survey are based on the Modified Mercalli Intensity Scale of 1931 (Harry O. Wood and Frank Neumann, "Bulletin of the Seismological Society of America", 21:277-283, 1931), the criteria of which follow in an abridged form.

Original seismograms from the short-period Wilson-Lamison vertical-component instrument at Ukiah, California, are available routinely for use in locating epicenters of local earthquakes through the courtesy of the Director, U.S. Coast and Geodetic Survey.

## MODIFIED MERCALLI INTENSITY SCALE OF 1931

(Abridged)

- I. Not felt except by a very few under especially favorable circumstances.
- II. Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
- III. Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration like passing truck. Duration estimated.
- IV. During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls made creaking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
- V. Felt by nearly everyone; many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
- VI. Felt by all; many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.
- VII. Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
- VIII. Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Disturbed persons driving motor cars.
- IX. Damage considerable in specially designed structures; well designed frame structures thrown out of plumb; great in substantial buildings with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
- X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
- XI. Few, if any (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipe lines completely out of service. Earth slips and land slips in soft ground. Rails bent greatly.
- XII. Damage total. Waves seen on ground surfaces. Lines of sight and level distorted. Objects thrown upward into the air.

## EARTHQUAKES IN NORTHERN CALIFORNIA, NEVADA, AND OREGON

Map No.	Date 1958	Origin Time (G.C.T.)	Latitude North	Longitude West	Q	M	Remarks
1	July 2	17-54-26	36.5°	121.3°	d	2.8	Southwest of Llanada.
2	July 2	18-30-56	38.4°	122.3°	d	2.1	East of Santa Rosa.
3	July 2	20-01-31	37° 42'	122° 33'	c	1.9	Aftershock of March 22, 1957.
4	July 3	00-08-00	38.4°	122.4°	d	2.5	East of Santa Rosa.
5	July 4	07-49-54	39.6°	118.0°	d	3.6	East of Fallon, Nevada.
6	July 6	18-25-17	38.4°	119.3°	d	2.9	Southeast of Markleeville.
7	July 7	09-00-49	37° 10'	121° 39'	c	3.2	South of Mt. Hamilton. Felt at Morgan Hill.
8	July 8	11-00-52	36° 51'	121° 26'	b	2.7	Near Hollister.
9	July 9	04-37-43	36.8°	121.5°	d	3.0	South of Hollister. IV at Hollister, San Juan Bautista, and 7½ miles south of Hollister.
10	July 9	05-23-40	37° 15'	121° 40'	b	4.1	South of Mt. Hamilton. Reported felt in scattered localities of the coastal region of westcentral California from San Rafael to Carmel and inland to a distance of about 30 miles, comprising an area of approximately 3,000 square miles. No damage reported. Maximum intensity V, at Coyote, Holy City, Morgan Hill, Milpitas, and Santa Cruz.
10	July 9	06-07-40	37° 16'	121° 42'	c	2.6	Aftershock. Smaller aftershocks at 06-07-10 and 06-07-26.
10	July 9	06-12-37	37° 16'	121° 42'	c	2.2	Aftershock.
11	July 13	20-56-24	37° 23'	121° 45'	b	2.0	Northwest of Mt. Hamilton.
12	July 14	00-41-33	37° 38'	121° 45'	a	1.9	Southeast of Livermore.
13	July 14	21-43-00	40° 17'	124° 23'	c	3.5	Southwest of Ferndale.
14	July 15	19-18-59	37° 53'	121° 59'	a	2.1	East of Berkeley. Aftershock of magnitude 1.4 at 19-52-29.
15	July 18	05-46-54	37° 09'	121° 36'	b	2.5	South of Mt. Hamilton.
16	July 19	09-46-03	37° 14'	121° 33'	c	1.8	Southeast of Mt. Hamilton.
17	July 19	20-47-24	40° 27'	121° 40'	c	2.1	Northwest of Mineral.
18	July 21	16-12-17	40° 23'	124° 48'	c	3.8	Southwest of Ferndale.
19	July 22	19-02-29	38° 05'	122° 29'	c	1.9	Northwest of Berkeley. Blast?
20	July 24	22-49-34	37° 45'	122° 36'	b	1.8	West of San Francisco.

Map No.	Date 1958	Origin Time (G.C.T.)	Latitude North	Longitude West	Q	M	Remarks
21	July 26	11-51-57	37.7°	124.9°	d	3.1	130 miles west of San Francisco.
22	July 27	18-29-42	36.7°	121.7°	d	2.7	Northeast of Monterey.
23	July 29	08-27-01	37° 02'	121° 31'	c	2.5	Northwest of Hollister.
24	July 30	07-34-17	40.3°	123.6°	d	3.1	Northeast of Garberville.
25	July 30	19-01-20	37° 26'	121° 43'	c	2.5	Northwest of Mt. Hamilton.
26	July 31	17-47-50	38° 23'	122° 09'	c	1.8	East of Santa Rosa.
9	Aug. 3	07-17-44	36.8°	121.5°	d	2.2	Southwest of Hollister.
27	Aug. 3	14-16-36	40° 34'	121° 34'	b	2.2	Near Manzanita Lake.
28	Aug. 8	13-43-01	36.3°	121.2°	d	2.7	Foreshock. Records mixed.
28	Aug. 8	13-43-15	36.3°	121.2°	d	3.9	Northwest of King City. IV at Big Sur.
29	Aug. 10	02-13-04	36° 46'	121° 16'	c	2.5	Southeast of Hollister.
30	Aug. 10	20-23-04	39.3°	118.1°	d	3.6	Southeast of Fallon, Nevada.
31	Aug. 11	18-43-43	36.6°	121.2°	d	2.3	West of Llanada.
32	Aug. 13	17-18-26	37° 25'	121° 40'	a	3.1	North of Mt. Hamilton.
32	Aug. 13	17-27-17	37° 25'	121° 40'	b	2.4	Aftershock.
32	Aug. 13	17-46-53	37° 25'	121° 40'	a	2.8	Aftershock.
33	Aug. 15	10-52-35	40.6°	123.8°	d	3.3	Southeast of Arcata.
34	Aug. 18	05-30-42	35.6°	121.3°	d	3.4	Near San Simeon.
35	Aug. 18	18-01-39	36° 52'	121° 31'	b	2.8	West of Hollister.
36	Aug. 20	12-03-19	38° 33'	122° 07'	c	2.3	West of Sacramento.
37	Aug. 26	16-29-04	36.7°	121.2°	d	2.9	Southeast of Hollister.
38	Aug. 29	06-23-15	38.5°	122.0°	d	2.1	West of Sacramento.
39	Aug. 30	16-13-53				1.6	Foreshock.
39	Aug. 30	16-15-07				1.6	Foreshock.
39	Aug. 30	16-15-19				1.6	Foreshock.
39	Aug. 30	16-15-30				1.6	Foreshock.
39	Aug. 30	16-16-13				1.2	Foreshock.
39	Aug. 30	16-16-35				1.8	Foreshock.
39	Aug. 30	16-16-37				2.0	Foreshock.
39	Aug. 30	16-17-11				1.6	Foreshock.
39	Aug. 30	16-19-42				1.2	Foreshock.
39	Aug. 30	16-20-38				2.1	Foreshock.
39	Aug. 30	16-21-09				2.6	Foreshock.
39	Aug. 30	16-21-49				1.4	Foreshock.

Map No.	Date 1958	Origin Time (G.C.T.)	Latitude North	Longitude West	Q	M	Remarks
39	Aug. 30	16-22-00				2.1	Foreshock.
39	Aug. 30	16-27-53				1.5	Foreshock.
39	Aug. 30	16-28-28				2.9	Foreshock.
39	Aug. 30	16-31-16				1.8	Foreshock.
39	Aug. 30	16-32-18				1.7	Foreshock.
39	Aug. 30	16-37-56				1.0	Foreshock.
39	Aug. 30	16-40-27				2.2	Foreshock.
39	Aug. 30	16-43-54.9	37° 34'	122° 30'	a	3.2	South of San Francisco. Felt (IV) in San Mateo County and parts of western San Francisco.
39	Aug. 30	16-47-53				2.5	Aftershock.
19	Aug. 30	18-41-48	38° 04'	122° 29'	a	2.1	North of San Francisco. Blast?
40	Aug. 31	09-52-40	37° 51'	121° 47'	b	2.3	North of Livermore.
41	Aug. 31	21-49-22	40° 18'	121° 24'	c	2.8	East of Mineral. II at Storie.
42	Sept. 1	10-09-01	39° 28'	122° 48'	c	2.1	Foreshock.
42	Sept. 1	11-01-52	39° 28'	122° 48'	b	3.8	Northeast of Ukiah.
43	Sept. 1	11-31-42	36.1°	120.8°	d	3.2	Southeast of King City.
44	Sept. 1	19-45-48	40.2°	121.4°	d	2.7	Southeast of Mineral.
42	Sept. 1	20-06-49	39.5°	122.8°	d	2.1	Aftershock of 1101.
45	Sept. 4	19-16-30	37° 44'	122° 33'	b	1.6	Aftershock of March 22, 1957
31	Sept. 5	18-29-32	36° 36'	121° 13'	b	3.3	West of Llanada. IV 7½ miles south of Hollister.
46	Sept. 8	07-31-11	39.0°	118.2°	d	3.6	Southeast of Fallon, Nevada.
31	Sept. 10	05-28-02	36.6°	121.2°	d	2.5	West of Llanada.
47	Sept. 11	05-59-48	37° 00'	121° 45'	c	2.6	East of Santa Cruz.
48	Sept. 11	20-46-03	36° 37'	121° 19'	b	2.8	West of Llanada.
48	Sept. 11	21-51-26	36.6°	121.3°	d	2.4	Aftershock.
10	Sept. 11	23-49-16	37° 13'	121° 38'	a	2.0	South of Mt. Hamilton.
49	Sept. 12	21-29-39	38.0°	121.9°	d	2.1	North of Berkeley.
50	Sept. 13	19-04-00	37° 11'	122° 09'	b	2.8	South of Palo Alto.
5	Sept. 16	23-26-37	39.6°	118.0°	d	3.5	East of Fallon, Nevada.
51	Sept. 17	20-34-52	36° 45'	121° 29'	b	2.5	Southwest of Hollister.
52	Sept. 18	22-56-54	37° 41'	122° 28'	b	1.3	South of San Francisco.



THE REGISTRATION OF EARTHQUAKES

Station	North Latitude	West Longitude	Altitude Meters	Station Symbol	Present Auspices and Date
Berkeley	37° 52.3'	122° 15.6'	81	B, BG*	University of California - 1887
Mt. Hamilton	37° 20.4'	121° 38.6'	1282	MH	Lick Observatory - 1887
Palo Alto	37° 25.1'	122° 10.8'	83	PA	Stanford University - 1927
San Francisco	37° 46.4'	122° 27.2'	100	SF	University of San Francisco - 1931
Ferndale	40° 34.6'	124° 15.7'	15	Fe	City of Ferndale - 1933
Fresno	36° 46.1'	119° 47.8'	88	F	Fresno State College - 1935
Mineral	40° 20.8'	121° 36.1'	1495	M	National Park Service, Lassen Volcanic National Park - 1938
Arcata	40° 52.6'	124° 04.5'	59	A	Humboldt State College - 1948
Reno	39° 32.3'	119° 48.8'	1386	R	University of Nevada - 1948
Corvallis	44° 35.1'	123° 18.2'	123	C	Oregon State College - 1950
Shasta	40° 41.7'	122° 23.3'	312	SH	Bureau of Reclamation - 1942
Manzanita Lake	40° 32.2'	121° 33.7'	1800	ML	National Park Service, Lassen Volcanic National Park - 1956

\*B denotes readings of short period instruments, BG of long period instruments (12 sec. Galitzin-Wilip).

Earthquakes in the Northern California, Nevada, and Oregon region are included in the following list only if of magnitude 4.5 or greater, or if of special interest. Times are usually not reported for PA, SF, Fe, or ML unless of special interest or in case of defective records at other stations.

Measurement and interpretation of seismograms from all the above listed stations is done at Berkeley; requests for special data or for copies of seismograms should be addressed to Seismographic Station, University of California, Berkeley 4, California.

STATION EQUIPMENT

Type and Component	Station
Short-period Benioff Z	B, MH, PA, M, SH
Short-period Benioff N, E	SH
Short-period Wood-Anderson N, E	B, MH, PA, SF, M, A
Short-period Sprengnether N, E, Z	F, R
Short-period Slichter N, E, Z	C
Short-period Wilson-Lamison Z	C
Long-period Galitzin-Wilip N, E, Z	B
100 kg Bosch-Omori N, E	B
25 kg Bosch-Omori N, E	Fe
80 kg Wiechert Z	B
Loucks-Omori N, E	ML
Short-period 100X Torsion	B

The three components are indicated by N, E, Z in the "phase" column of the following tabulation of readings. When no letter appears, the phase is read from the vertical component (Z) only. "i" (impetus) preceding a phase designates sudden beginning of the motion; "e" (emersio) designates gradual beginning.

In the column headed "Ground Motion", "c" or "d" indicates initial compression or dilatation of the ground as read from the vertical component instrument. N, S, E, or W indicates that the initial ground motion was north, south, east, or west, respectively.

Maximum amplitude of earth displacement in microns ( $\mu$ ) and periods in seconds (sec) of the indicated phases are given for the Berkeley station in the column headed "Time (GCT)". Combined horizontal amplitude of N and E components are designated by H.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 1	B	eP	06 00 46	c	USCGS: 51½°N, 176½°W, 0 = 05 53 07. Andreanof Islands, Aleutian Islands. PAS: Magnitude 6.
	BG	eSN eLN	06 53 10.1		
			mu sec		
		SH	3.6 15		
	MH	iP	06 00 52.6	c	
	F	iP	01 04.5	c	
	M	iP	00 37.2	c	
	R	eP	51	c	
	C	eP	10	c	
	SH	iP	32.6	c	
July 2	M	iP	00 53 56		USCGS: 52½°N, 158°E, h = 60 km., 0 = 00 44 38. Near east coast of Kamchatka.
	R	iP	54 09		
	SH	eP	53 52		
July 2	B	eP	04 59 20.1	d	USCGS: 18°S, 177°W, h = 350 km., 0 = 04 48 03. Fiji Islands
	MH	epP	04 59 20.3		
		epP	05 00 41		
	F	eP	04 59 25		
		epP	05 00 46		
	M	eP	04 59 30		
		epP	05 00 51		
	R	eP	04 59 34		
	SH	eP	30		
		ipP	05 00 52		
July 2	SH	eP	13 15 39		
July 3	MH	eP'	06 05 28		USCGS: 18°S, 66°E, 0 = 05 45 07. Mascarene Islands Region.
	F	eP'	23		
	M	eP'	22		
	R	eP'	25		
	C	eP'	21		
	SH	eP'	20		
July 3	B	iP	06 39 44.5	d	USCGS: 29°S, 179°W, h = 400 km., 0 = 06 27 44. Kermadec Islands. PAS: Magnitude 6.
		e	47		
		ipP	41 18.4	c	
	BG	esP	42 02		
		eSNEZ	49 52	SE	
			mu sec		
		PZ	1.1 6		
		sPH	1.0 8		
		SH	5.0 8		
	MH	eP	06 39 43.5	d	
		i	47.0	d	
		ipP	41 18.5		
	F	eP	39 46		
		epP	41 20		
	M	iP	39 56.0	c	
		epP	41 28		
	R	iP	39 58.5	d	
	C	iP	40 05.8	d	
	SH	eP	39 52		
		i	55.7		
		epP	41 24		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 3	BG	e(SS)N eLN	10 54 13 11 06		USCGS: 55°S, 126°W, 0 = 10 23 02. Pacific Ocean.
	F	eP	10 36 34		
July 3	B	iP	12 57 51.9	d	USCGS: 48°N, 147°E, h = 400 km., 0 = 12 48 00. Sea of Okhotsk.
	MH	iP	56.7		
	F	iP	58 04.8	d	
	M	iP	57 43.4	d	
	R	iP	55.0	d	
	C	iP	20.8	d	
	SH	iP	40.1	d	
July 3	B	eP	19 07 59		USCGS: 12°N, 89½°W, h = 100 km., 0 = 19 00 36. Off coast of El Salvador. Felt: Western El Salvador.
	MH	eP	52.7		
	F	eP	37		
	M	eP	08 05		
	R	eP	07 53		
	SH	eP	08 09		
July 4	F	eP	00 31 12		USCGS: 19°S, 173½°W, 0 = 00 19 28. Tonga Islands.
	R	eP	23		
	SH	eP	19		
July 5	B	eP	14 04 16		BCIS: 25°S, 180°, h = 600 km., 0 = 13 52 52. South of Fiji Islands.
	MH	iP	17		
	F	eP	19		
	M	iP	26		
	R	eP	29		
	SH	iP	24		
July 6	B	eP	16 09 59		USCGS: 66°N, 155°W, 0 = 16 03 14. Central Alaska.
	MH	iP	10 05		
	F	eP	16		
	M	eP	09 41		
	R	eP	54		
	SH	eP	37		
July 6	BG	eLNEZ	18 36		USCGS: Gulf of California. 0 = 18 31 00.
	F	e	33 22		
	R	e	30		
July 6	R	e	19 32 53		
July 6	SH	eP	23 45 56		USCGS: 31°N, 142°E, 0 = 23 34 11. South of Honshu, Japan.
July 7	B	eP	05 23 59		USCGS: 50½°N, 180°, 0 = 05 16 04. Andreanof Islands, Aleutian Islands.
		e	25 53		
	MH	eP	24 06		
		e	25 56		
	F	eP	24 17		
	M	eP	23 52		
	R	eP	24 06		
	SH	iP	23 47		
July 7	B	iP	13 45 55.9	d	USCGS: 50½°N, 179½°E, 0 = 13 38 00. Andreanof Islands, Aleutian Islands.
	BG	eLN	57.5		
	MH	iP	46 01.8	d	
	F	eP	13		
	M	iP	45 47.7	d	
	R	eP	46 01		
	SH	iP	45 39.9	d	
July 8	BG	eLNE	06 39.2		USCGS: 21½°S, 174°W, 0 = 06 06 28. Tonga Islands.
	MH	eP	18 23		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 8 (cont.)	F	eP	29		
	M	eP	35		
	R	eP	39		
	SH	eP	35		
July 8	SH	eP	08 50 08		
July 8	BG	eLINE	10 50.5		BCIS: Probably well off Cape Mendocino.
	C	e(P)	48 24		
	SH	e	47		
July 8	R	eP	17 21 26		BCIS: 31°N, 142°E, 0 = 17 - 09.5. Well south of Honshu.
	SH	eP	12		
July 8	R	eP'	23 08 46		USCGS: 43°S, 41½°E, 0 = 22 48 36. Indian Ocean, Northeast of Prince Edward Islands.
		e(PP)	13 37		
July 9	B	iP	05 23 55.0		37° 15'N, 121° 40'W, 0 = 05 23 40. South of Mt. Hamilton. Magnitude 4.1. Felt in coastal region of west central California. Maximum intensity V.
	MH	iSNE	24 05.7		
	PA	iPNEZ	23 42.7	NWc	
	SF	iP	49.0	c	
		iSNE	55.5		
	F	iP	24 05.9	c	
		eSN	07.6		
	M	eP	29		
	R	iP	29.0	d	
	SH	eP	27.6		
			34		
July 9	B	iP	14 05 35		USCGS: 20½°S, 178½°W, h = 600 km., 0 = 13 54 27. Fiji Islands.
	MH	eP	35		
	F	eP	39		
	M	eP	44		
	R	eP	48		
	SH	eP	43		
July 9	MH	eP	14 30 10		USCGS: 5½°S, 151½°E, 0 = 14 16 49. New Britain.
	F	eP	17		
	M	eP	11		
	R	eP	18		
	SH	eP	09		
July 9	MH	e	15 25 09		USCGS: 14½°N, 91½°W, h = 100 km., 0 = 15 18 20. Guatemala.
	F	eP	24 40		
	R	iP	25 12		
	C	iP	56		
	SH	e	27 45		
July 10	MH	e(P)	01 22 50		
	M	e(P)	23 11		
	R	e(P)	07		
	SH	e(P)	10		
July 10	B	iPNEZ	06 20 55.3	NWd	USCGS: 58.6°N, 137.1°W, 0 = 06 15 51. Southeastern Alaska. Five killed and moderate property damage. PAS: Magnitude 8.
		eNEZ	22 00	NWd	
		eSNE	25 08		
		eN	26.8		
			mu sec		
		PH	32 3½		
		SH	1500 18		
		MaxH	3700 18		
	MH	iP	06 21 01.2	c	
		iNEZ	02.5	NWd	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 10 (cont.)		eSNE	25 20		
	F	iP	21 13.0	d	
	M	iP	20 33.6	d	
		eSNE	24 29	NE	
	A	ePNE	20 21	NW	
		eSE	24 01	E	
		iN	07	N	
	R	eP	20 46.1	c	
		i	47.1	c	
		eNEZ	48	NWd	
	C	ePNEZ	19 42	NWd	
		eSN	23 05	S	
	SH	eP	20 27.0	c	
		i	32.2		
		eE	24 25		
	PA	iPNEZ	21 00.1	NWd	
	Fe	ePNE	20 25	NW	
July 10	M	iP	06 42 41	d	
		e	45 47		
July 10	M	iP	07 15 52	d	
July 10	M	eP	07 16 59		
July 10	M	iP	07 18 03	d	
July 10	M	eP	07 39 19	c	
July 10	B	eP	07 50 21		BCIS: 60½°N, 140°W, 0 = 07 44 56. Southeast Alaska.
	MH	iP	29.3		
	F	eP	37		
	M	iP	01.1	d	
	C	iP	49 15.1	c	
	SH	eP	55		
July 10	M	iP	07 59 23		
July 10	B	eP	08 03 38		BCIS: 60½°N, 140°W, 0 = 07 58 13. Southeast Alaska.
	F	eP	56		
	M	iP	19.2	d	
	C	iP	02 32.6	d	
	SH	iP	03 11.4		
July 10	M	iP	08 25 42	d	
July 10	M	iP	08 32 48	c	
July 10	MH	eP	08 41 12.5		BCIS: Southeast Alaska aftershock. 0 = 08 - 36.1.
	F	eP	24		
	M	eP	40 43		
	SH	eP	38		
July 10	MH	iP	08 44 35.1	d	BCIS: Southeast Alaska aftershock. 0 = 08 - 39.0.
	F	eP	45		
	M	iP	06.1	d	
	R	eP	20		
	C	eP	43 12		
	SH	eP	44 01		
July 10	M	e(P)	08 52 16		
July 10	B	eP	09 01 37		USCGS: Alaska aftershock. 0 = 08 56 06.
	MH	eP	43.5		
	F	eP	54		
	M	eP	10	d	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 10	C	eP	00 29		
(cont.)	SH	e(P)	01 12		
July 10	M	iP	09 07 28.8	d	BCIS: Southeast Alaska aftershock.
July 10	M	iP	09 28 24.7	d	BCIS: Southeast Alaska aftershock. O = 09 - 23.2.
July 10	MH	iP	09 30 27.2	d	BCIS: Southeast Alaska aftershock. O = 09 - 24.9.
	F	eP	38		
	M	iP	29 58.3	d	
	R	eP	30 11		
	C	eP	29 11	d	
	SH	eP	51		
July 10	M	eP	09 53 38	d	BCIS: Southeast Alaska aftershock. O = 09 - 48.6.
July 10	M	eP	10 06 36.8	d	BCIS: Southeast Alaska aftershock. O = 10 - 01.5.
July 10	MH	iP	10 10 21.4	d	BCIS: Southeast Alaska aftershock. O = 10 - 04.6.
	M	iP	09 52.5	d	
July 10	F	eP	10 18 50		BCIS: Southeast Alaska aftershock. O = 10 - 13.1.
	M	iP	09.5	d	
	SH	eP	04		
July 10	B	eP	10 22 03		BCIS: 61°N, 139½°W, O = 10 16 34. Southeast Alaska.
	MH	eP	05.2		
	F	eP	20		
	M	eP	21 39		
	R	eP	56		
	C	eP	20 56		
	SH	eP	21 33		
July 10	M	e(P)	10 50 41		
July 10	F	eP	11 42 21		BCIS: Southeast Alaska aftershock. O = 11 - 36.9.
	M	eP	41 39		
	SH	eP	34		
July 10	M	eP	11 49 55		
July 10	B	eP	12 32 04		BCIS: 60½°N, 139°W, O = 12 26 39. Southeast Alaska.
	MH	iP	12.5		
	F	eP	24		
	M	eP	31 46		
	R	eP	32 00		
	C	iP	31 01.3		
	SH	iP	41.4	c	
July 10	M	iP	12 47 47.2		
July 10	M	eP	12 53 23		
July 10	MH	eP	13 21 32		BCIS: 58½°N, 137°W, O = 13 16 23. Southeast Alaska aftershock.
	F	eP	42		
	M	iP	05.8	c	
	R	e	23		
	SH	e	10		
July 10	M	eP	13 25 37		
July 10	M	iP	13 26 09.9		
July 10	MH	eP	14 42 46		BCIS: Southeast Alaska aftershock. O = 14 - 37.2.
	M	iP	18.5	d	
	SH	eP	12		
July 10	MH	e(P)	15 07 40		USCGS: 60°N, 141°W, O = 15 02 02. Southeast Alaska.
	F	e(P)	57		
	SH	e(P)	12		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 11	M	eP	03 36 49		BCIS: Southeast Alaska aftershock. O = 03 - 31.8.
July 11	MH	eP	07 50 43		USCGS: 51°N, 175°W, O = 07 43 05. Andreanof Islands, Aleutian Islands.
	M	iP	30.0	d	
	R	eP	39		
	C	eP	03		
	SH	iP	24.4	d	
July 11	SH	eP	10 45 01		
July 11	M	eP	11 05 33		
July 11	B	iP	19 22 15.9	c	USCGS: 21°S, 69°W, O = 19 10 20. Northern Chile.
		i	29.9	c	
	BG	iSN	32 03	N	PAS: Magnitude 6½.
			mu sec		
		PZ	0.9 6		
		SH	2.7 9		
	MH	iP	19 22 12.0	c	
		i	26.0	c	
	F	eP	02		
	M	eP	22	c	
	R	iP	14.9	c	
		i	28.4	c	
	C	eP	43	c	
		e	57		
	SH	iP	24.8	c	
July 12	B	eP	00 56 50		USCGS: 5°S, 106½°W, O = 00 48 30. Pacific Ocean.
	BG	iSN	01 03 36	S	PAS: Magnitude 6.
		eRNZ	09		
			R from S		
			mu sec		
		PZ	0.8 5		
		SH	3.6 11		
		MaxH	32 20		
	MH	eP	00 56 44		
	F	eP	34		
	M	eP	57 06		
	R	eP	56 58		
	C	eP	57 44		
July 12	SH	eP	09		
	BG	eSN	02 47 03		USCGS: 4½°S, 105½°W, O = 02 31 55. Pacific Ocean.
		eLN	53.1		
	MH	eP	40 14		
	F	eP	08		
	M	eP	32		
	R	eP	22		
	SH	eP	38		
July 12	B	iP	03 41 08.5	c	U.S. Atomic Energy Commission: 11° 41' 17"N, 165° 15' 52" E, O = 03 30 00.1. Nuclear explosion "Poplar."
	MH	iP	11.9	c	
	F	eP	20		
	M	iP	12.4	c	
	R	iP	21.5	c	
	C	eP	07		
	SH	iP	09.1	c	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 13	B BG	eP eSE eLNE	08 15 03 19 18 21.0		USCGS: 58.3°N, 136.9°W, 0 = 08 10 02. Southeastern Alaska. Felt: Sitka. Magnitude 5½ - 5 ¾.
			mu sec		
		PZ	0.8 5		
		SH	1.8 9		
	MH	eP	08 15 08.4	d	
	F	eP	21		
	M	iP	14 40	d	
	R	eP	54	d	
	C	eP	13 47		
	SH	eP	14 33		
July 13	MH	eP	11 29 01		BCIS: Southeast Alaska aftershock.
	F	eP	12		
	M	iP	28 32.6	d	
	R	eP	48		
July 13	B	eP	12 16 22.8	d	USCGS: 10°S, 161½°E, h = 100 km., 0 = 12 03 50. Solomon Islands.
	MH	iP	24.7	d	
	F	eP	31		
	M	iP	28.5	d	
	R	iP	34.9	d	
	SH	iP	26.6	d	
July 13	F	e	23 13 32		USCGS: 55°N, 168°E, 0 = 23 04 28. Komandorskie Islands.
	SH	e	12 38		
		e	59		
July 14	B	eP	05 26 56.2	c	PAS: 34° 21'N, 119° 29'W, 0 = 05 25 55. Off Carpinteria, California. Minor damage at Carpinteria. Magnitude 4.7.
		e(S)N	27 44		
		eNE	52		
		eNE	28 15.8		
	MH	iP	26 47.4	c	
		eNE	27 02.2		
		eN	10.3		
		iNE	28 02.9		
	PA	iP	26 50.7	c	
		eE	27 09.6		
		e(S)N	29.8		
		iN	50.9		
	SF	eP	26 58		
		eE	28 18		
	F	iP	26 33.7	c	
	M	eP	27 28.2	d	
	R	eP	13		
		eNE	33		
		iP	38.4	c	
July 15	MH	iP	06 05 07.2	d	USCGS: 60°N, 140½°W, 0 = 05 59 34. Southeastern Alaska.
	C	eP	03 55		
	SH	ePNZ	04 35		
July 15	MH	iP	15 13 17		BCIS: 8°N, 83°W, 0 = 15 - 05.0. Near coast of Costa Rica.
July 16	MH	eP	00 36 36		BCIS: Andreanof Islands foreshock. 0 = 00 28 46.
	R	eP	36		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 16	SH	eP	11		
(cont.)		i	18		
July 16	MH	iP	01 55 10		USCGS: 51½°N, 176½°W, 0 = 01 47 20. Andreanof Islands, Aleutian Islands.
	F	eP	28		
	R	e	25		
	SH	eP	54 44		
July 16	MH	iP	04 00 25		USCGS: 51½°N, 176½°W, 0 = 03 52 39. Andreanof Islands, Aleutian Islands.
		i	01 07		
	F	eP	00 37		
	M	eP	10		
	R	eP	24		
	C	e	03 59 56		
	SH	eP	04 00 05		
July 16	B	iP	06 22 25.4	c	BCIS: 63°N, 145°W, 0 = 06 - 16.5. Alaska.
	MH	iP	31.6	c	
		e(PcP)	25 31.5		
	M	iP	22 08	d	
	SH	iP	02.5	c	
July 16	B	eP	13 05 19	c	USCGS: 29½°S, 113°W, 0 = 12 54 18. South Pacific Ocean. Magnitude 6.
	BG	eSN	14 15		
		eRNEZ	26.3		
			R from S		
			mu sec		
		SH	0.8 10		
		MaxH	14 22		
	MH	iP	13 05 16.0	c	
	F	eP	11		
	M	eP	34		
	R	eP	29		
	C	eP	06 00		
	SH	iPNZ	05 35.5	Nc	
July 16	B	eP	13 21 54		BCIS: Pacific Ocean, Easter Island Region. (Aftershock of 12-54-18) 0 = 13 10 50.
	MH	iP	49.4	c	
	F	e(P)	47		
	R	e(P)	22 05		
	SH	eP	05		
July 16	MH	iP	14 29 05		BCIS: Near coast of Guatemala. Deep. Felt at San Salvador.
July 16	BG	eRNEZ	17 33		USCGS: 12°S, 166½°E, 0 = 16 54 17. Santa Cruz Islands.
			R from SW		
			mu sec		
		MaxH	6 20		
	MH	e	17 06 57		
	SH	e	59		
July 16	BG	eRNEZ	19 19.6		USCGS: 12°S, 166½°E, 0 = 18 40 21. Santa Cruz Islands.
			R from SW		
			mu sec		
		MaxH	4 20		
July 17	SH	iP	06 43 51		BCIS: Well off east coast of Luzon, P.R. 0 = 06 - 29.9.
July 17	B	eP	13 53 44		USCGS: 57½°N, 137°W, 0 = 13 48 45. Southeastern Alaska.
	MH	iP	49.7	d	
		i	54 27.2		
	F	eP	02		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 17 (cont.)	M	iP	53 21.5	d	
	R	eP	36		
	C	eP	52 34		
	SH	iP	53 14.2	d	
July 17	B	eP	19 09 55		USCGS: 51°N, 176°W, O = 19 02 10.
	BG	eSE	15 54		Andreanof Islands, Aleutian Islands.
		eREZ	21.1		Magnitude 5 3/4.
			R from W		
			mu sec		
		PZ	0.9 5		
		SH	2.2 15		
		MaxH	6 20		
	MH	i(P)	19 09 57.5		
		i	10 10.6		
	F	eP	11		
	M	eP	09 44		
	R	eP	58		
	C	eP	22		
	SH	eP	37		
July 17	B	eP	19 37 13		USCGS: 51°N, 177°W, O = 19 29 36.
	MH	eP	21		Andreanof Islands, Aleutian Islands.
	F	eP	34		
	M	eP	07		
	R	i	31		
	SH	eP	01		
July 17	MH	eP	20 35 56		BCIS: 51°N, 178°W, Andreanof Islands.
	F	e	36 12		
	R	e	00		
	SH	eP	35 35		
July 17	B	eP	21 07 01		USCGS: 51°N, 177½°W, O = 20 59 17.
		i	11		Andreanof Islands, Aleutian Islands.
	BG	e	09 26	E	Magnitude 6.
		iSE	13 09		
		eREZ	18.3		
			R from W		
			mu sec		
		PZ	0.9 5		
		SH	4.8 15		
		MaxH	9 18		
	MH	iP	21 07 07.2	d	
		i	28.3		
	F	eP	20		
	M	i	03		
	R	eP	07		
	C	eP	06 26		
	SH	iP	46.3	c	
		iNEZ	59.4		
July 17	MH	iP	21 18 02		BCIS: Andreanof Islands, Aleutian Islands. O = 21 10 11.
	SH	eP	17 41		
July 18	MH	iP	00 29 13		
	F	eP	05		
	SH	eP	32		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 18	B	e(P)	00 47 07		USCGS: 51°N, 176½°W, O = 00 39 18.
	BG	eSE	53 04		Andreanof Islands, Aleutian Islands.
		eE	56.7		Magnitude 5 3/4.
		eREZ	58		
			R from W		
			mu sec		
		PZ	0.8 6		
		SH	3.6 14		
		MaxH	12 20		
	MH	iP	00 47 04		
		i	26		
	F	eP	15		
		e	48 03		
	M	e	47 03		
	R	e(P)	05		
	C	eP	46 24		
	SH	eP	45		
July 18	B	iP	01 57 06.5	d	USCGS: 4°S, 78°W, h = 100 km., O = 01 47 21. Ecuador - Peru border.
		e	58 00		
	MH	iP	57 01.6	d	
		i	13.3		
	F	eP	56 49		
	M	iP	57 14	d	
	R	iP	03.8	d	
	C	eP	38		
	SH	iP	16.8	d	
July 18	B	eP	17 09 08		USCGS: 58½°N, 138½°W, O = 17 03 58.
	MH	iP	13.3	c	Southeastern Alaska.
	F	eP	24		
	M	iP	08 45.9	c	
	R	eP	58		
	C	eP	07 57		
	SH	eP	08 39		
July 18	F	eP	21 52 01		USCGS: 25½°N, 124°E, O = 21 38 05.
	C	eP	50 50		Ryukyu Islands Region.
	SH	eP	51 06		
July 19	MH	iP	01 32 23		BCIS: 20°S, 175°E, O = 01 - 20.1.
	M	eP	27		Fiji Islands Region.
	SH	eP	24		
July 19	B	eP	06 43 52.9	c	USCGS: 4°S, 138½°E, h = 150 km., O = 06 30 19. New Guinea.
		e	44 53		
	BG	e	48 51		
		eSKSE	54 18		
		eSE	55 34		
			mu sec		
		SKSH	0.9 7		
		SH	0.9 8		
	MH	iP	06 43 55.6	c	
		i	44 06.6		
		i	48 57.8		
	F	eP	44 02		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 19 (cont.)	M	iP	43 54.4	c	
		e(PP)	47 59.8		
	R	eP	44 01		
	SH	iPEZ	43 51.4	Wd	
		e	59		
		e(PP)	47 41		
July 19	B	iP	09 14 47.9	d	BCIS: 17°S, 169½°E, 0 = 09 - 02.1.
	MH	iP	48.9	d	New Hebrides.
	F	eP	54		
	M	eP	54.0	c	
	R	eP	59		
	SH	iP	53.1	c	
July 19	MH	iP	15 08 37.2	d	USCGS: 41°N, 143½°E, 0 = 14 57 24.
	F	e(P)	54		Near south coast of Hokkaido, Japan.
	M	iP	27.3	d	
	R	eP	36.5		
	SH	eP	22	d	
July 19	B	e	17 31 07		USCGS: 51½°N, 176°W, 0 = 17 23 20.
	MH	eP	04		Andreanof Islands, Aleutian Islands.
		i	12.6		
	F	eP	19		
	M	eP	30 52		
	R	eP	31 06		
	C	eP	30 23		
	SH	eP	44		
July 19	B	e(PP)	18 35 16		USCGS: 0°, 129½°E, 0 = 18 16 52.
	BG	eQNE	19 00.6		Spice Islands.
		eREZ	05.1		
		R from WNW			
		mu sec			
		QH	40 24		
	MH	i	18 31 26		
		i(PP)	35 28		
	F	e(PP)	38		
	M	e(PP)	24		
	R	e	34 21		
	C	e(PP)	35 07		
	SH	e(P)	31 00		
		e(PP)	35 13		
July 19	B	e(P)	19 00 53		BCIS: 16°S, 179½°W, 0 = 18 48 58.
	MH	iP	46.1	d	Fiji Islands.
	SH	iP	53.0	d	
July 19	MH	iP	19 51 22		BCIS: Probably in the Aleutian Islands.
	F	eP	33		
	SH	eP	05		
		i	15		
July 20	MH	i	03 49 13		BCIS: Aleutian Islands.
	M	e	48 24		
	R	e	49 49		
	SH	e	06		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 20	B	eP	11 56 19		USCGS: 31½°S, 71°W, 0 = 11 43 57.
	F	eP	08		Central Chile. Felt: Santiago, Valparaiso, San Antonio, and La Serena.
	M	eP	27		
	R	eP	20		
	SH	iP	29		
July 20	B	eP	16 06 58		BCIS: Well off coast of Oregon.
	MH	iP	07 07.4	d	0 = 16 - 05.2.
	F	eP	29		
	M	eP	06 41		
	C	iP	03.4	d	
	SH	eP	32		
July 21	B	eP	07 35 39		USCGS: 44½°N, 147½°E, 0 = 07 24 58.
	BG	eSE	44 17		Kurile Islands.
		eREZ	54.6		Magnitude 6-6¼.
		R from W			
		mu sec			
		PZ	1.0 5½		
		SH	1.2 8		
		MaxH	8 24		
	MH	eP	07 35 43.2		
	F	iP	53.4		
	M	iP	32		
		i	48		
	R	eP	42		
	C	eP	10		
	SH	iP	27.7		
July 21	B	iP	14 45 05.7	c	USCGS: 51½°N, 178°W, 0 = 14 37 18.
	BG	ePcP	46 58		Andreanof Islands, Aleutian Islands.
		eSNE	51 19		Magnitude 6¼.
		eQN	54.5		
		eR	56.4		
		R from WNW			
		mu sec			
		PZ	2.6 7		
		PH	1.6 6½		
		SH	7.2 12		
		MaxH	22 24		
	MH	iP	14 45 11.6	c	
		i	18.4		
		e(S)	51 34		
	F	eP	45 23		
	M	iP	44 57	c	
	R	iP	45 10.7	c	
	C	iPNEZ	44 29.7	SEc	
		eSNE	50 15		
	SH	iPNEZ	44 51.7	SEc	
		eSEZ	50 54		
July 22	MH	i(P)	04 00 48		USCGS: 58½°N, 138°W, 0 = 03 55 35.
	M	i(P)	18		Southeastern Alaska.
	R	e(P)	35		
	SH	e(P)	17		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 22	B	e	05 16 30		USCGS: 51°N, 176°W, 0 = 05 08 40. Andreanof Islands, Aleutian Islands.
	MH	iP	29.4		
	F	eP	50		
	M	eP	17		
	R	e(P)	31		
	SH	eP	13		
July 22	MH	eP	07 34 32		BCIS: 59°N, 138°W, 0 = 10 - 38.0. Southeast Alaska.
July 22	MH	iP	10 43 16		
	M	iP	42 47		USCGS: 22°S, 180°, h = 600 km., 0 = 14 54 00. Fiji Islands Region.
July 22	B	eP	15 05 15		
	MH	iP	16.0	c	
	F	eP	20		
	SH	iP	23.9	c	
July 22	MH	iP	22 52 01.0	d	USCGS: 53°N, 160°W, h = 100 km., 0 = 22 45 51. Gulf of Alaska.
	F	eP	15		
	R	iP	51 59.2		
	C	iP	14	d	
	SH	iP	38.2	d	
July 23	B	eP	10 39 09		USCGS: 31°N, 142°E, 0 = 10 27 19. South of Honshu, Japan.
		e	40 11		
	BG	eSE	48 54		
		eE	53.9		
		eE	11 00		
	MH	iP	10 39 12.7	d	
	F	eP	22		
	M	iP	06.0	d	
	R	eP	13.5		
	SH	eP	00		
July 23	MH	iP	13 40 21.7	c	
	M	iP	19.0	c	
	SH	eP	15		USCGS: 52½°N, 170°W, 0 = 13 08 05. Fox Islands, Aleutian Islands.
July 24	B	iP	13 15 14.9	d	
	BG	e(S)E	20 49		
		eE	25 51		
	MH	eP	15 19		
	F	iP	39.9	d	
	M	e	02		
	R	e	21		
	SH	eP	14 51		
July 25	MH	iP	14 27 27		
July 26	B	ePP	06 39 22		USCGS: 40°S, 45½°E, 0 = 06 13 50. South Indian Ocean.
			mu sec		
		PPZ	1.4 6		
	MH	iP'	06 34 06.6		
		ePP	39 12		
	F	eP'	34 04		
		ePP	39 01		
	M	eP'	34 04.5		
	R	e(P')	19		
	SH	eP'	04		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks	
1958			h. m. s.			
July 26	B	iP	17 47 31.1	d	USCGS: 13½°S, 69°W, h = 650 km., 0 = 17 37 09. Peru - Bolivia Border. PAS: Magnitude 7 - 7¼.	
		ipP	49 32.3			
	BG	iSNE	56 04	SW		
		iSSNE	18 00 03	NE		
		iSSE	01 08			
		eGNE	07.3			
	B	eP'P'	14 35			
		i	15 02.6	d		
		eSKPP'	17 44			
			mu sec			
		PZ	31 5			
		PH	7 4½			
		SH	90 10			
		GH	235 22			
		SKPP'Z	19 9			
	MH	iP	17 47 27.2	d		
		eSNE	55 56			
	F	iP	47 16.2	d		
	M	iP	36.0	d		
		eSN	56 13			
		i	18 15 21			
	A	ePNE	17 47 50			
		eSNE	56 35			
	R	iP	47 28.5	d		
	C	iPNEZ	56.7	SEd		
		eSNE	56 52	S		
	SH	iP	47 39.4	d		
		eSN	56 20			
	PA	iP	47 29.2	d		
July 26	B	eP	20 41 23		U.S. Atomic Energy Commission: 11° 39' 22"N, 162° 13' 11"E, 0 = 20 30 00.2. Nuclear Explosion "Pine".	
	MH	iP	25			
	F	eP	36			
	M	eP	27.0	c		
	R	eP	36			
	SH	eP	24			
July 27	B	eP	00 33 40.4	d	USCGS: 20½°S, 178½°W, h = 600 km., 0 = 00 22 32. Fiji Islands Region.	
	MH	iP	41.7	d		
	F	eP	46			
	M	eP	50	d		
	R	iP	53.9	d		
	SH	iP	49.4	d		
July 27	B	e(P)	03 32 32		USCGS: 45½°N, 148°E, 0 = 03 21 56. Kurile Islands.	
	MH	eP	34.2	c		
	F	eP	45			
	M	eP	23.0	c		
	R	eP	34			
	C	eP	01			
	SH	eP	19			
July 27	MH	iP	18 40 32.9			USCGS: 55°N, 34½°W, 0 = 18 30 33. North Atlantic Ocean.
	F	eP	32			
	M	eP	17			
	R	eP	16			
	SH	eP	17			

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 28	B	eP	01 35 50		USCGS: 5°S, 151½°E, h = 200 km., O = 01 23 05. New Britain.
	MH	iP	53.2	d	
	F	eP	59		
	M	iP	53.0	d	
July 28	R	eP	36 00		BCIS: 55½°N, 37½°W, O = 15 57 24. North Atlantic.
	SH	eP	35 51		
	MH	iP	16 07 23		
July 28	B	eP	17 35 49.7	d	USCGS: 20°S, 177½°W, h = 500 km., O = 17 24 40. Fiji Islands Region.
	MH	iP	50.1	d	
July 28		ipP	37 34.1		USCGS: 26½°S, 115½°W, O = 18 33 45. South Pacific Ocean, west of Easter Island.
	F	eP	35 54		
	R	eP	36 04		
	SH	iP	35 58.3	d	
	B	eP	18 44 26	d	
	MH	iP	23.8	d	
	F	eP	17		
July 28	R	iP	36.8	d	USCGS: 20°S, 178½°W, h = 650 km., O = 21 23 25. Fiji Islands.
	C	eP	45 08	d	
	SH	iP	44 43.7	c	
	B	eP	21 34 28		
	MH	iP	28.9	c	
		epP	36 37		
July 28		i	37 38.7		BCIS: Tonga Islands foreshock. O = 03 59 02.
	F	iP	34 34.2	d	
	R	iP	42.2		
	C	eP	46	d	
	SH	eP	37		
	MH	iP	23 29 44.7	d	
	C	eP	20		
July 29	MH	eP	04 10 38.3	d	USCGS: 20½°S, 175½°W, O = 10 49 27. Tonga Islands.
	SH	iP	46.8	d	
July 29	B	e(P)	11 01 24		USCGS: 4°N, 26½°W, O = 21 37 25. Atlantic Ocean.
	MH	eP	23		
	F	eP	36		
	M	eP	37		
	R	eP	46		
	C	eP	02 02		
	SH	eP	01 35		
July 29	MH	iP	21 50 35		USCGS: 44½°N, 148½°E, O = 02 47 17. Kurile Islands.
		ePP	54 03		
	F	eP	50 27		
	R	eP	28		
July 30	C	eP	36		USCGS: 19°S, 177½°W, h = 500 km., O = 14 27 31. Fiji Islands.
	SH	eP	33		
	B	e	02 58 07		
	MH	iP	57 57.6	c	
	F	eP	58 07		
	M	iP	57 45.3	c	
July 30	R	eP	56.5		USCGS: Off coast of Oaxaca, Mexico. O = 04 45 25.
	SH	iP	41.7	c	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
July 30	B	eP	04 58 33		USCGS: 2½°S, 140°E, O = 04 44 53. New Guinea.
	MH	eP	35		
	M	eP	35		
	SH	eP	32		
July 30	B	iP	07 44 23.3	c	USCGS: 30°N, 141°E, O = 07 32 28. South of Honshu, Japan.
	MH	iP	27.1	c	
	F	iP	35.5	c	
	M	iP	13.8	c	
	R	iP	28.5		
	C	eP	03		
	SH	iP	15.7		
July 30	M	iP	10 05 13.3	d	BCIS: Andreanof Islands Region. O = 09 - 57.8.
	SH	iP	09.4	d	
July 31	MH	eP	02 11 29		USCGS: 51½°N, 174½°W, O = 02 03 45. Andreanof Islands, Aleutian Islands.
	F	eP	44		
	M	eP	07		
	R	eP	25		
	SH	eP	00		
	MH	iP	02 33 58		
July 31	F	e	34 16		USCGS: 51½°N, 174½°W, O = 02 26 23. Andreanof Islands, Aleutian Islands.
	M	eP	33 44		
	R	e	34 11		
	SH	eP	33 37		
	MH	eP	07 43 43		
	M	eP	19		
July 31	MH	iP	09 29 57		BCIS: 60¼°N, 138°W, O = 07 38 20. Southeast Alaska.
	M	iP	30 05		
	SH	eP	04		
July 31	B	eP	15 54 39		USCGS: 61½°N, 151°W, O = 15 48 32. Southern Alaska. Felt: Anchorage.
	MH	eP	45		
	F	eP	56		
	SH	eP	16		
Aug. 1	B	eP	05 48 46.6		USCGS: 16°S, 176½°W, h = 450 km., O = 05 37 50. Fiji Islands Region.
	BG	e	50 48		
		eSN	57 50	N	
		eN	06 00 17		
			01 00		
			mu sec		
			1.8 3½		
Aug. 1		PZ	1.6 10		USCGS: 19°S, 177½°W, h = 500 km., O = 14 27 31. Fiji Islands.
	MH	SH	05 48 44.2		
		eP	50 18.8		
	F	ipP	48 51		
	M	eP	54		
	R	eP	49 00		
Aug. 1	C	eP	05		USCGS: Off coast of Oaxaca, Mexico. O = 04 45 25.
	SH	eP	48 53		
	MH	iP	14 38 45		
Aug. 2	MH	iP	04 51 56.5		USCGS: Off coast of Oaxaca, Mexico. O = 04 45 25.
	F	eP	49		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks	
1958			h. m. s.			
Aug. 3	B	iP	01 17 40.7	c	USCGS: 21½°S, 179°W, h = 550 km., O = 01 06 24. Fiji Islands Region. PAS: Magnitude 6¼ - 6½.	
	BG	epP	19 40			
		iSNE	27 02	SE		
		eNE	24			
		eNE	30 36			
			mu sec			
		PZ	1.3 3			
		pPZ	1.4 4			
		SH	2.7 8			
	MH	iP	01 17 41.6	c		
		ipP	19 43.8	c		
	F	iP	17 44.4	c		
		epP	19 47			
	M	iP	17 50.2	c		
		epP	19 53.0			
	R	iP	17 48.0	c		
		epP	19 56			
		eSNE	27 29	SE		
	C	iP	17 59	c		
		epP	20 02			
	SH	iP	17 49.2	c		
Aug. 3	M	e	04 57 24		USCGS: 6°S, 130°E, h = 150 km., O = 04 13 19. Banda Sea.	
Aug. 4	BG	eQN	04 58			
		eREZ	05 05			
			R from W			
	MH	eP	04 27 32			
		iPP	31 35			
	F	e	28 30			
		e	32 08			
	M	ePP	31 35			
	R	e	32 09			
	SH	eP	27 31			
		e	30 57			
Aug. 4	MH	eP	08 56 44			USCGS: Fiji Islands Region. O = 08 44 27.
	M	eP	54			
	SH	eP	52			
Aug. 6	B	iP	10 02 57.8	c	USCGS: 24½°S, 63°W, h = 550 km., O = 09 51 24. Salta Province, Argentina.	
	MH	iP	54.8	c		
	F	iP	46.6	c		
	M	iP	03 02.6	c		
	R	iP	02 56.4	c		
	C	iP	03 21.0	c		
	SH	iP	05.3	c		
Aug. 6	B	iP	21 20 38.9	c		USCGS: 17°S, 173°W, O = 21 09 09. Tonga Islands. PAS: Magnitude 6 3/4.
	BG	eSNEZ	30 02			
		eQN	39.2			
		eR	42.2			
			R from SW			
			mu sec			
		PZ	1.7 6			
		SH	7.3 17			
		MaxH	22 20			

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks	
1958			h. m. s.			
Aug. 6	MH	iP	21 20 39.7	c	USCGS: 12°S, 167°E, h = 150 km., O = 21 51 00. Santa Cruz Islands.	
(cont.)		i	58.4			
	F	iP	45.2	c		
	R	iP	54.8	c		
	C	iP	21 02.6	c		
	SH	iP	20 48.4	c		
Aug. 6	B	ipP	22 03 50.6	c		
	MH	iP	16.9	d		
		ipP	52.1	c		
	F	eP	23			
		epP	55			
	M	iP	21.5	d		
		ipP	57.6	c		
	R	eP	27			
		epP	04 03			
	C	eP	03 23			
	SH	eP	20			
		epP	55			
Aug. 8	MH	iP	00 45 15.4	c	USCGS: 55°N, 166°E, O = 00 36 13. Komandorskie Islands.	
	M	eP	44 59			
	R	eP	45 12			
	SH	iP	44 54.7	c		
Aug. 9	B	iP''	13 07 13.3	c		USCGS: South Atlantic Ocean, about 750 miles northeast of Sandwich Islands. O = 12 47 55.
	MH	iP''	11.7	d		
	F	eP''	09			
	M	eP''	11.5			
	R	e	13			
	SH	eP''	14			
Aug. 9	MH	iP	13 44 35		JMA: 42.4°N, 144.9°E, h = 60 km., O = 13 33 34. Well of southeast coast of Hokkaido. Felt: Kushiro. Trinidad: 11.7°N, 59.0°W, O = 14 25 46. South of the Lesser Antilles. Trinidad: 12.4°N, 59.4°W, h = 75 km., O = 06 00 31. South of the Lesser Antilles. BCIS: 30°N, 115°W, O = 07 - 02.7. Lower California.	
	M	iP	24			
	SH	eP	20			
Aug. 9	MH	iP	14 36 02			
	SH	eP	06			
Aug. 10	MH	e	06 10 46			
	M	e(P)	40			
Aug. 10	MH	e	07 04 54			
	F	e	05 10			
	M	e	09 00			
	R	e	08 19			
Aug. 10	F	eP	18 19 04		USCGS: 3½°S, 151½°E, O = 18 05 54. New Britain Region. Felt: Rabaul. BCIS: Probably well off Oregon.	
	R	e(P)	18			
	SH	eP	02			
Aug. 10	B	e	20 08 25			
	MH	i	09 27			
	F	e	08 31			
	R	e	24			
	SH	i	17.0	c		
Aug. 10	B	eP	23 53 33			USCGS: 21½°N, 144°E, h = 150 km., O = 23 41 37. Mariana Islands region.
	MH	iP	37.4	d		
	F	eP	45			

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Aug. 10 (cont.)	C	eP	20		
	SH	iP	28.3	d	
Aug. 11	B	iP	08 05 55	c	USCGS: 18°S, 168½°E, 0 = 07 53 12. New Hebrides Islands.
	MH	iP	56.4	c	
	F	eP	06 01		
	R	eP	08		
	SH	iP	00.8	c	
Aug. 12	M	eP	07 33 09		BCIS: 23°S, 178°W, 0 = 07 - 20.8. South of Fiji Islands.
Aug. 12	B	e	08 23 46		USCGS: 51½°N, 175°W, 0 = 08 15 59. Andreanof Islands, Aleutian Islands.
	MH	e	47		
	F	eP	55		
	M	eP	22		
		i	39		
	R	eP	43		
	SH	eP	17		
Aug. 12	MH	eP	15 42 05		USCGS: Off coast of Oaxaca, Mexico. h = 100 km., 0 = 15 35 40.
	F	eP	41 52		
	R	eP	42 10		
	SH	eP	28		
Aug. 12	B	e(P)	16 27 19		USCGS: 27°N, 110½°W, 0 = 16 23 42. Gulf of California.
	BG	eNE	30 12	NE	
		eGNE	30.8		
		eR	31.7		
			mu sec		
		MaxH	28 21		
	MH	eP	16 27 03		
	F	eP	26 45		
	R	eP	27 15		
	SH	eP	41		
Aug. 12	B	e(PP)	19 43 46		USCGS: 0°, 126½°E, 0 = 19 25 05. Molucca Passage.
	BG	eSKSE	49 07		
			mu sec		
		SKSH	1.2 7½		
	MH	e(P)	19 39 14		
		e(PP)	43 46		
	F	e(P)	39 37		
		e(PP)	43 59		
	M	e(P)	39 38		
		e(PP)	43 52		
	R	e(P)	39 38		
		e(PP)	43 52		
	C	e(P)	39 19		
		e(PP)	43 29		
	SH	e(P)	39 25		
		e	42 34		
Aug. 12	R	eP	23 25 23		USCGS: 6°S, 152°E, h = 100 km., 0 = 23 12 17. Near coast of New Britain. Felt: Rabaul.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Aug. 13	BG	eREZ	04 53		USCGS: ½°N, 126°E, 0 = 03 50 35. Molucca Passage.
			R from W		
	F	e(PP)	04 09 36		
	M	e(PP)	14		
	R	e(PP)	28		
Aug. 13	MH	iP	10 54 48		USCGS: Andreanof Islands, Aleutian Islands. 0 = 10 46 47.
	F	eP	54		
	M	iP	26		
	R	eP	40		
	C	eP	53 59		
	SH	eP	54 21		
Aug. 13	B	iP	17 03 21.5	c	USCGS: 23½°S, 180°, h = 550 km., 0 = 16 51 55. South of Fiji Islands.
	MH	iP	21.7	c	
	F	eP	26		
	M	iP	31.3	c	
	R	eP	35		
	SH	iP	29.9	c	
Aug. 13	B	iP	20 20 45.0	d	USCGS: 51°N, 177½°W, 0 = 20 13 00. Andreanof Islands, Aleutian Islands.
		e	58.1		
			mu sec		
		PZ	1.0 4		
	MH	iP	20 20 51.0	d	
		i	21 05.6		
		i(PcP)	22 47.2		
	F	iP	21 03.3	d	
	M	eP	20 36.5	d	
	R	iP	50.5	d	
	C	iP	11.6	d	
	SH	iP	31.5	d	
Aug. 14	F	eP	02 40 49		USCGS: 19½°N, 146½°E, 0 = 02 28 25. Mariana Islands.
	M	iP	36.8		
	R	eP	47		
	SH	eP	34		
Aug. 14	MH	iP	09 57 25.3		USCGS: 23½°S, 175½°W, 0 = 09 45 14. Tonga Islands Region.
	F	eP	29		
	M	eP	38		
	R	eP	43		
	SH	eP	34		
Aug. 14	M	eP	12 15 05		BCIS: 50°N, 156½°E, 0 = 12 - 05.4. Well off south coast of Kamchatka.
	R	eP	17		
	SH	eP	01		
Aug. 14	B	iP	15 02 42.9	c	USCGS: 52°N, 175°W, 0 = 14 55 10. Andreanof Islands, Aleutian Islands.
	BG	iPP	04 25		
		iSNE	08 45	NE	
		e(SS)NEZ	11.9		PAS: Magnitude 6-1/2.
		eREZ	13.7		
			R from W		
			mu sec		
		PZ	3.4 6		
		PH	1.6 6		
		PPZ	3.5 7½		
		SH	19 14		
		MaxH	57 20		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Aug. 14 (cont.)	MH	iP	15 02 48.7	c	
	F	iP	03 01.3		
	M	eP	02 34	c	
	R	iP	47.5	c	
	C		05		
Aug. 14	SH	iP	28.7	c	
	B	e(P)	15 08 37		
	MH	e(P)	38.6		
	F	e(P)	09 01		
	R	e(P)N	08 56		
Aug. 14	C	i(P)	20.7		
	SH	i(P)	29.7		
	F	e(P)	15 25 57		USCGS: 51°N, 175½°W, 0 = 15 18 05.
	R	e	46		
	C	e	12		
Aug. 15	SH	e(P)	27		
	B	iP	06 30 03.5	c	USCGS: 7°N, 73°W, h = 200 km., 0 = 06 20 53. Northern Colombia. Felt.
		e	39		
	MH	iP	29 58.3	c	
	F	eP	46		
Aug. 15	M	iP	30 05.6	c	
	R	iP	29 55.5	c	
	SH	iP	30 09.5	c	
	B	eP	20 05 04.3		USCGS: 53°N, 160½°E, h = 60 km., 0 = 19 55 39. Near east coast of Kamchatka. PAS: Magnitude 6 3/4.
	BG	eSNE	12 36		
		eSSE	16 30		
		eQN	18.4		
		eREZ	21.1		
			mu sec		
		PZ	4.6 5½		
	PH	2.5 5			
	SH	16 10			
	MaxH	105 24			
Aug. 15	MH	iP	20 05 06.1	c	
		e(S)E	12 59		
	F	eP	05 18		
	M	iP	04 44.0	c	
	R	eP	05 05		
	C	eP	04 25		
		eSE	11 36		
	SH	i	04 47		
		eNE	13 07		
	B	eP	22 43 24		USCGS: 1½°N, 125°E, h = 200 km., 0 = 22 29 17. Celebes. PAS: Magnitude 6 3/4 - 7.
Aug. 15	BG	ePP	47 33		
		eSE	54 54		
		ePSN	56 28		
		eGNE	13.1		
		eR	17.1		
			R from W		
			mu sec		
		PPZ	1.0 4½		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Aug. 15 (cont.)		SH	12 11		
		PSH	12 14		
		SSH	55 20		
		GH	230 32		
	MH	eP	22 43 20		
		iPP	47 32		
	F	e(P)	43 34		
		i	48 08		
		e	57 14		
		e(P)	43 35		
Aug. 16	C	eP	15		
		ePP	47 22		
	SH	eP	43 13		
		e(PS)	56 20		
	B	eP	11 25 57.1	d	BCIS: 24½°S, 175°W, 0 = 11 13 47. Tonga Islands Region. Magnitude: 6 - 6¼.
	BG	eSN	36 01		
		eLNE	49		
			mu sec		
		PZ	0.8 7		
		SH	1.6 8		
	MaxH	7 17			
Aug. 16	MH	eP	11 25 56	c	
	F	eP	26 01		
	M	iP	07.4	d	
	R	iP	10	d	
	C	eP	18		
	SH	iP	06.8	d	
	B	eP	13 25 28		USCGS: 51½°N, 176°W, 0 = 13 17 52. Andreanof Islands, Aleutian Islands. PAS: Magnitude 6 - 6¼.
	BG	eSE	31 34		
		eQN	34.6		
		eREZ	36.5		
Aug. 16			R from W		
			mu sec		
		PZ	1.4 6		
		PH	0.8 5		
		SH	10 16		
		MaxH	30 18		
	MH	iP	13 25 33.6	c	
	F	eP	46		
	M	eP	18.0	c	
	R	e(P)	37		
C	iP	24 51.7	d		
SH	iP	25 13.9	d		
Aug. 16	BG	ePP	19 32 37		USCGS: 34½°N, 48°E, 0 = 19 13 45. Iran. Many killed. Extensive property damage in western Iran.
		eSKSN	38 48		
		eN	41 57		
		eLN	55		
			mu sec		
		MaxH	45 24		
	MH	e(P'')	19 32 09		
		e	43 30		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Aug. 16 (cont.)	F	e	31 35		
		ePP	32 41		
	M	e	30 39		
		ePP	32 16		
	SH	ePP	16		
Aug. 17	MH	iP	02 13 58.7	c	
	F	iP	14 08.0	c	
	M	eP	14.5	c	
	R	iP	18.0	c	
	SH	iP	14.3	c	
Aug. 17	B	eP	09 16 15		USCGS: 51½°N, 176°W, O = 09 08 35. Andreanof Islands, Aleutian Islands. Felt at Adak.
	BG	eSNE	22 21		
		eREZ	27.4		
			R from W		
			mu sec		
		PZ	0.6 5		
		SH	4.7 16		
	MH	iP	09 16 20.4	c	
	F	eP	34		
	M	eP	03.0	c	
	R	e	27		
	SH	eP	15 59		
Aug. 17	B	eP	10 58 22		USCGS: 51°N, 176°W, O = 10 50 40. Andreanof Islands, Aleutian Islands.
	MH	eP	26		
	F	eP	42		
	M	eP	08		
	R	e(P)	29		
	SH	e(P)	06		
Aug. 17	B	e	11 24 01		USCGS: 51½°N, 176°W, O = 11 16 13. Andreanof Islands, Aleutian Islands.
	MH	eP	23 57		
	F	eP	24 08		
	M	eP	23 41		
	R	e	24 04		
	SH	e	23 44		
Aug. 17	MH	eP	12 28 00		BCIS: Aleutians.
		e	34 42		
	F	eP	28 15		
	M	eP	27 52		
	SH	eP	46		
Aug. 17	B	eP	18 14 30		USCGS: 3°S, 145½°E, O = 18 01 05. Bismark Sea.
	BG	eSKSN	24 46		
		eSN	25 35		
		eSSE	32.1		
		eREZ	43.6		
			R from W		
			mu sec		
		MaxH	34 21		
	MH	eP	18 14 33		
	F	eP	37		
	M	eP	33		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Aug. 17 (cont.)	R	eP	41		
	SH	eP	32		
Aug. 17	B	eP	21 24 15.2	d	USCGS: 35½°S, 179½°W, O = 21 11 09. Kermadec Islands Region.
	BG	eNE	35 19		
	MH	iP	24 15.0	d	
	F	iP	17.5	d	
	M	iP	24.6	c	
	R	iP	26.9	d	
	SH	iP	23.9		
Aug. 18	BG	e	06 06.2		USCGS: Upper Gulf of California. O = 06 00 52. PAS: Magnitude 4.8.
		eLE	06.4		
	MH	e	06 05		
	F	e	03 36		
		eN	05 18		
	M	e	04 24		
		e	07 02		
Aug. 18	B	e(P)	06 46 40		USCGS: 30½°N, 114°W, O = 06 44 14. Gulf of California. PAS: Magnitude 5.3.
	BG	eLE	49.2		
		eNZ	49.5		
	MH	e(P)	46 31		
		e	48 21		
	PA	e(P)	46 37		
	F	e(P)	23		
		e	55		
		eNZ	48 34		
	M	e(P)	47 14		
		e	50 35		
	SH	e(P)	47 19		
Aug. 18	MH	e(P)	10 25 37		USCGS: 7½°N, 78°W, O = 10 16 40. Panama - Colombia Border.
	M	i	26 02		
	R	e(P)	25 34		
Aug. 18	SH	eP	15 29 11		USCGS: 48°N, 155°E, O = 15 19 20. Kurile Islands.
Aug. 19	BG	eRNEZ	05 23.3		USCGS: 19°S, 175°E, O = 04 45 45. Fiji Islands Region.
			R from SW		
			mu sec		
		MaxH	4 20		
	MH	iP	04 58 06.6	c	
	F	eP	13		
	M	eP	15	c	
	R	eP	19		
Aug. 19	MH	i(P)	16 13 58		USCGS: 51½°N, 175½°W, O = 16 06 18. Andreanof Islands, Aleutian Islands.
		i	14 07		
	F	e(P)	19		
	M	e	05		
	R	e	17		
Aug. 19	MH	iP	16 39 06.4	d	USCGS: 53°N, 160°E, h = 100 km., O = 16 29 44.
	F	eP	17		
	M	iP	38 51.2	d	
	R	e	39 16		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Aug. 19	B BG	eP eSNE eQN eREZ	22 01 11 11 41 25 29		USCGS: 1°S, 149½°E, 0 = 21 48 07. New Ireland Island.
			R from W mu sec		
		SH MaxH	1.8 8 8.5 24		
	MH	iP	22 01 17		
	F	eP	22		
	R	eP	23		
Aug. 19	R SH	eP e	23 08 28 09 14		USCGS: 1°S, 149°E, h = 100 km., 0 = 22 55 18. New Ireland Island Region.
Aug. 20	B	e	01 08 05		
Aug. 20	B	iP	01 19 43.9	c	
	MH	iP	44.8	d	
	F	iP	48.7	c	
	M	iP	53.8	c	
	R	eP	56		
	SH	iP	51.9	d	
Aug. 20	BG	eP eS eREZ	03 52 45 04 03 05 18.4	d	USCGS: 14°S, 167°E, 0 = 03 40 07. New Hebrides Islands. PAS: Magnitude 6¼ - 6½.
			R from W mu sec		
		PZ SH MaxH	2.7 8½ 2.2 10 30 24		
	MH	iP	03 52 48		
	F	eP	53 01		
	M	eP	52 52		
	R	eP	59		
	SH	eP	51		
Aug. 20	MH	i	08 59 43		USCGS: 24°N, 122°E, 0 = 08 46 04. Near east coast of Formosa.
	M	eP	19		
	R	e	45		
	SH	eP	17		
Aug. 20	MH	iP	09 29 42.2	d	USCGS: 53½°N, 159½°E, 0 = 09 20 10. Kamchatka.
	M	eP	26.7	d	
	R	iP	39.6	d	
	SH	eP	23		
Aug. 20	MH	iP	10 09 16.3	d	USCGS: New Hebrides Islands. 0 = 09 48 38.
	M	eP	24.5	d	
Aug. 20	F	eP	17 52 21		USCGS: 19°S, 170°E, 0 = 17 39 38. New Hebrides Islands.
	R	eP	29		
Aug. 20	MH	iP	21 52 03.3	c	USCGS: 52°N, 158°E, 0 = 21 42 21. Kamchatka.
	SH	iP	51 43.9	c	
Aug. 21	B	eP	00 24 27.7	c	USCGS: 20°S, 65°W, h = 300 km., 0 = 00 12 53. Southern Bolivia.
		e	25 51		
	MH	iP	24 24.5	c	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Aug. 21 (cont.)	F	i eP	25 47.7 24 16		
	M	eP	33		
	R	iP	25.4	c	
	SH	iP	35.5	c	
Aug. 21	B	eP	01 21 11		USCGS: 24°S, 176°W, 0 = 01 09 00. Tonga Islands Region.
	BG	eSN eRNEZ	31 16 50		
			R from SW mu sec		
		PZ SH MaxH	0.6 4 1.0 8 4.5 18		
	MH	iP	01 21 12		
	F	eP	15		
	M	eP	22		
	R	iP	24		
	SH	eP	21		
Aug. 21	MH	iP	04 15 43		USCGS: 24°S, 176°W, 0 = 04 03 26. Tonga Islands Region.
	F	eP	43		
	M	eP	50		
	R	eP	51		
	SH	eP	51		
Aug. 21	MH	iP	08 39 15		USCGS: 26½°S, 62°W, h = 550 km., 0 = 08 27 35. Santiago Del Estero Province, Argentina.
	M	eP	23		
	R	eP	15		
	SH	eP	27		
Aug. 21	MH	iP	12 06 02		USCGS: 28½°N, 139½°E, 0 = 11 53 55. Bonin Islands Region.
	M	iP	05 55		
	SH	eP	52		
Aug. 21	B	eP	12 25 52.5		USCGS: 53°N, 163°W, 0 = 12 19 00. Fox Islands, Aleutian Islands.
	MH	iP	58.4	c	
	F	eP	26 14		
	M	iP	25 42.9	c	
	R	eP	57		
	SH	iP	37.3		
Aug. 21	B	eP	21 10 26		USCGS: 18°S, 176°W, h = 250 km., 0 = 20 59 10. Fiji Islands Region.
		epP	11 19		
	MH	iP	10 27.4		
		ipP	11 20.4		
		iPP	13 09.8		
	F	iP	10 31.8		
		epP	11 24		
	M	iP	10 37.1		
		ipP	11 31.2		
	R	eP	10 41		
	SH	iP	35.4		
		epP	11 29		
Aug. 22	MH	iP	10 09 10		USCGS: 15°S, 167°E, h = 100 km., 0 = 09 56 40. New Hebrides Islands.
	M	eP	16		
	SH	eP	14		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Aug. 22	MH SH	e(P) eP	20 41 43 20		USCGS: 51°N, 179½°W, 0 = 20 33 40. Andreanof Islands, Aleutian Islands.
Aug. 22	B MH F M R SH	iP iP eP eP eP iP	23 29 16.1 12.3 06.5 31 26 32.9	d	USCGS: 26½°S, 115°W, 0 = 23 18 33. Pacific Ocean.
Aug. 23	B MH	e iP	08 11 50 41.8	d	USCGS: 12°S, 167°E, 0 = 07 59 09. Santa Cruz Islands.
Aug. 23	M MH M R SH	e iP eP eP eP	22 04 20.6 05 20 01	d d	USCGS: 52°N, 173°W, 0 = 21 56 53. Andreanof Islands, Aleutian Islands.
Aug. 24	B MH M R SH	eP iP eP eP iP	04 36 57 53.4 37 02.5 36 57 37 05.8	c c c	BCIS: Southwest of Easter Island.
Aug. 24	MH M R	iPP ePP ePP	17 12 22 12 28		USCGS: 14°N, 121°E, h = 150 km., 0 = 16 54 25. Near coast of Luzon, P.I. Felt: Manila.
Aug. 25	MH F M R	iP eP eP eP	06 39 24 27 34 38		USCGS: 24°S, 175½°W, 0 = 06 27 12. Tonga Islands Region.
Aug. 25	MH	iP	08 39 06		USCGS: 23°S, 173°E, 0 = 08 26 35. Loyalty Islands Region.
Aug. 26	MH M SH	iP eP iP	01 06 27 36 39		BCIS: 24°S, 68½°W, h = 100 km., 0 = 00 54 32. Northern Chile.
Aug. 26	M SH	eP eP	05 11 50 47		USCGS: 37½°N, 142°E, 0 = 05 00 29. Near east coast of Honshu, Japan.
Aug. 26	BG	eE eLE	13 00.8 24.3		USCGS: 14°S, 167°E, 0 = 12 45 02. New Hebrides Islands foreshock.
Aug. 26	MH M SH B BG	i e e eP eLNE	12 57 42 57 49 18 08 13 35.0		USCGS: 14°S, 167°E, 0 = 17 55 34. New Hebrides Islands.
Aug. 26	MH F M R SH B MH	MaxH iP eP eP eP e i	mu sec 6 22 18 08 13 20 17 23 15 18 25 13 21		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Aug. 26	BG	eLNE	24 11.0		USCGS: 14°S, 167°E, 0 = 23 31 38. New Hebrides Islands.
Aug. 27	MH F R SH BG	MaxH e(P) e(P) e(P) eP eLNE	11 20 23 44 16 11 25 19 02 45.7		USCGS: 4½°S, 104½°W, 0 = 02 25 32. About 1,000 miles southwest of Galapagos Islands.
Aug. 27	MH F M R SH	iP eP e iP eP	17 21 02 33 52 42 34 25 05 12		USCGS: 53½°N, 159½°E, 0 = 13 09 03. Kamchatka.
Aug. 27	MH F R C SH	iP eP eP eP eP	13 18 33 43 18 30 14		USCGS: 38°N, 20½°E, 0 = 15 16 35. Near west coast of Greece. Felt.
Aug. 27	MH	eP ePP	15 30 11 34 15		
Aug. 28	F R C SH	eP eP eP eP	30 11 03 29 45 58		
Aug. 28	SH	eP	04 17 22		JMA: 36.0°N, 139.9°E, h = 50 km., 0 = 04 05 57. Central Honshu. Felt: Kakioka.
Aug. 28	B MH F M R SH	eP iP iP iP iP	09 48 52 47.8 38.9 57.1 51.4 59.7	d d d d d	USCGS: 23½°S, 69½°W, 0 = 09 36 06. Chile - Argentina Border. Minor damage at Las Melosas, Chile.
Aug. 28	MH	i(P)	17 30 23		BCIS: 8°N, 71¼°W, 0 = 17 20 55. Venezuela - Colombia Border Region.
Aug. 28	R	e(P)	19		
Aug. 28	R	e	18 22 59		USCGS: 53°N, 170½°W, 0 = 18 15 49. Fox Islands, Aleutian Islands.
Aug. 28	SH	iP	40		
Aug. 28	SH	e(P)	18 28 55		
Aug. 28	SH	e(P)	18 35 27		
Aug. 29	BG	eLNE	13 02.8		USCGS: 14½°S, 167°E, 0 = 12 24 23. New Hebrides Islands. PAS: Magnitude 5 3/4 - 6.
Aug. 29	MH F M R SH SH	MaxH i e e e eP eP	mu sec 11 30 12 37 06 15 29 18 06 18 27 00		BCIS: 52½°N, 167°W, Fox Islands region, Aleutians.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Aug. 30	F	e(P)	13 45 13		
Aug. 30	M	eP	13 47 18		
	R	eP	32		
	SH	iP	14		
Aug. 30	B	eP	18 41 36	c	USCGS: 27½°N, 112°W, 0 = 18 38 18. Gulf of California.
	BG	eNEZ	37	NWc	PAS: Magnitude 5 3/4 - 6.
	B	e	42 38		
	BG	eQNE	44 24		
		eRN	46.6		
			mu sec		
		PZ	3.1 10		
		PH	1.1 5		
		MaxH	220 16		
	MH	iP	18 41 27	d	
	F	iP	09	c	
	M	ePNEZ	42 00		
		e	46 42		
	R	eP	41 39		
	C	eP	42 55		
	SH	eP	06		
		e	43 35		
Aug. 31	MH	iP	06 47 10		USCGS: Off southeast coast of Kamchatka. 0 = 06 37 39.
	M	iP	46 55		
	R	eP	47 07		
	SH	iP	46 51		
Aug. 31	MH	i	16 32 51		USCGS: 11°S, 166½°E, 0 = 16 19 57. Santa Cruz Islands.
Aug. 31	B	eP	23 06 15	c	USCGS: 63°N, 144½°W, 0 = 23 00 16. Central Alaska.
	BG	e	48		Magnitude 5 3/4 - 6.
		eSN	11 36		
		eLN	17.6		
			mu sec		
		PZ	1.5 6		
		SH	3.4 10		
	MH	iP	23 06 21.3	c	
		i	09 29		
	F	eP	06 30		
	M	iP	05 56.2		
	R	eP	06 08		
	C	iP	05 15.1	c	
	SH	iP	50.9	c	
Aug. 31	B	iP	23 39 21.1	d	BCIS: 23 3/4°S, 175°W, 0 = 23 27 15. Tonga Islands Region.
	MH	iP	22.7	d	
	F	iP	25.2	d	
	M	eP	30		
	R	eP	34		
Sept. 1	MH	iP	01 09 28		USCGS: 24°S, 175½°W, 0 = 00 57 10. Tonga Islands Region.
		iPP	13 02		
	F	iP	09 26		
	M	eP	32		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Sept. 1 (cont.)	R	iPP	13 11		
	SH	eP	09 36		
		eP	32		
		i	13 11		
Sept. 1	B	iP	15 40 43.3	c	USCGS: 38°N, 134½°E, h = 400 km., 0 = 15 29 31. Sea of Japan.
	MH	iP	47.4	c	
		epP	42 20		
	F	eP	40 56		
	M	eP	36	c	
	R	eP	46	c	
	SH	iP	33.9	c	
Sept. 1	MH	iP	18 40 55		
Sept. 2	MH	i(P)	02 40 14		USCGS: 10½°S, 164½°E, 0 = 02 27 41. Santa Cruz Islands Region.
	M	e(P)	16		
	R	e(P)	24		
	SH	e(P)	09		
Sept. 2	MH	e	03 09 43		USCGS: 6½°S, 155°E, h = 100 km., 0 = 02 56 34. Solomon Islands.
	M	e	11		
	R	e	33		
Sept. 2	BG	eQN	20 23.7		USCGS: 15°N, 92½°W, 0 = 20 07 04. Near coast of Oaxaca, Mexico.
			mu sec		
		MaxH	20 22		
	MH	iP	20 13 49		
	F	eP	34		
	R	iP	51		
	SH	eP	57		
		e	16 30		
Sept. 2	BG	eSKSNE	04 09 00		USCGS: 0°, 18°W, 0 = 03 44 24. Atlantic Ocean.
		e(PS)E	11 32		
		e(SS)NE	17 06		
		eLN	33.2		
			mu sec		
		(SS)H	4.3 20		
		MaxH	23 23		
	MH	i(P)	03 58 17		
	F	e	19		
	M	e	19		
	R	e	35		
		e(PP)	04 02 00		
Sept. 3	SH	e(P)	03 58 02		
	MH	iP	04 24 49		USCGS: Off coast of Guatemala. 0 = 04 17 50.
	F	eP	34		
	M	eP	25 03		
	R	iP	24 51		
Sept. 3	M	e	06 26 14		
Sept. 3	B	eP	08 21 34	c	USCGS: 40½°N, 143°E, h = 60 km., 0 = 08 10 26. Off northeast coast of Honshu, Japan.
	BG	eSE	30 41		
		eLE	43.7		
			mu sec		
		SH	1.0 10		
	MH	iP	08 21 39.3		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Sept. 3 (cont.)	F	i	48.1		
	M	eP	47	c	
	R	iP	27	c	
	SH	iP	38.6	c	
Sept. 4	MH	iP	07 07 06		USCGS: 51½°N, 177½°E, O = 06 58 52. Rat Islands, Aleutian Islands.
	M	eP	06 51		
	R	e	07 13		
	SH	iP	06 46		
Sept. 4	B	iP	22 03 54.0	d	USCGS: 33½°S, 69½°W, O = 21 51 08. Chile - Argentina Border. 3 killed and major property damage at San Jose and Volcan. Felt at Rancaqua and Santiago.
	BG	i	05 12.9		
		e(PP)	07 55		
		eSE	14 25		
		eR	33.7		PAS: Magnitude 6 3/4 - 7.
			mu sec		
		PZ	9.6 10		
		PPZ	4.5 10		
		SH	22 15		
		MaxH	64 20		
	MH	iP	22 03 51.3	c	
		i	05 10.0	d	
		i(PP)	07 55.5		
	F	eP	03 43		
	M	i(P)	04 04		
		e(PP)	08 03		
	A	e(P)E	04 19		
	R	eP	03 55		
	SH	eP	04 03		
		i	05 23.1	c	
		e(PP)	08 03		
		e	15 44		
Sept. 5	M	eP	03 54 13		USCGS: Chile - Argentina Border. O = 03 41 22.
Sept. 5	SH	iP	17		
	B	eP	06 25 43		USCGS: 34°S, 70°W, O = 06 12 58. Chile - Argentina Border.
	MH	eP	41		
	F	eP	33		
	M	eP	49		
	R	eP	43		
	SH	eP	52		
Sept. 5	B	eP	11 09 45		USCGS: Kurile Islands. O = 10 59 03.
	MH	iP	49.5		
	F	iP	58.6		
	M	iP	36		
	R	eP	47		
Sept. 7	MH	iP	02 57 23		USCGS: 7°N, 73°W, h = 150 km., O = 02 48 14. Northern Colombia.
	M	eP	30		
	R	iP	20		
	SH	eP	34		
Sept. 7	MH	iP	04 54 22		USCGS: 10°S, 153°E, O = 04 40 57. Solomon Sea.
	M	eP	21		
	R	eP	30		
	SH	eP	22		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Sept. 7	MH	iP	04 57 00		USCGS: 9½°S, 152½°E, O = 04 43 37. Solomon Sea.
	M	eP	00		
	R	eP	07		
	SH	eP	56 57		
Sept. 7	M	i(P)	12 53 07		
Sept. 7	BG	eLNE	16 20.1		BCIS: 27°N, 112°W, O = 16 - 14.1. Gulf of California.
	F	e	17 50		
	R	e(P)	16 39		
Sept. 8	B	eP	05 35 03.8	c	USCGS: 53½°N, 159°E, Depth slightly greater than normal. O = 05 25 37. Near east coast of Kamchatka.
		e	18.2		
	BG	eSE	42 40	E	
		eN	43 03		
		eQN	48.8		
		eRE	51		
			mu sec		
		SH	2.8 9		
		MaxH	6 25		
	MH	iP	05 35 09.3	c	
	F	iP	19.4	c	
	M	iP	34 54	c	
	R	iP	35 06.6	c	
	C	ePN	34 27		
	SH	iP	49.7	c	
Sept. 8	B	eP	08 42 41		BCIS: 17°S, 178°E, O = 08 - 30.7. Fiji Islands.
	MH	iP	43		
	F	eP	48		
	SH	eP	50		
Sept. 8	MH	iP	13 45 40.4	c	BCIS: South Pacific.
	SH	iP	42.4	c	
Sept. 8	B	eP	15 05 26.2		USCGS: 33½°N, 131½°E, h = 60 km., O = 14 53 13. Northern Kyushu, Japan.
		e	46		
	MH	iP	30.2		
	F	eP	39		
	R	eP	30		
	C	eP	02		
	SH	eP	17		
Sept. 8	MH	eP	15 40 01		
	M	eP	39 57		
	SH	eP	53		
Sept. 8	B	iP	22 37 41.9	c	USCGS: 34°S, 70°W, O = 22 24 55. Chile - Argentina Border.
	MH	iP	38.6	c	
	F	eP	30		
	R	eP	42		
	SH	iP	50.5	c	
Sept. 9	B	iP	11 42 25.5	c	USCGS: 46°N, 151°E, O = 11 32 05. Kurile Islands.
	MH	iP	30.2	c	
		i	39.9	d	
	F	iP	39.8	c	
		e	55		
	M	iP	16.5	c	
		i	35.5	d	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Sept. 9 (cont.)	R	iP	29.3	c	
	C	iP	41 55	c	
	SH	iP	42 13.2	c	
Sept. 9	MH	iP	19 58 47.1	c	
	SH	iP	27.2	c	
Sept. 9	B	eP	22 32 12	c	USCGS: 54°N, 171°E, 0 = 22 23 37. Near Islands Region, Aleutian Islands.
	MH	iP	17.6	c	
		i	18.3	d	
		i(PcP)	33 45		
	F	iP	32 29	c	
	M	iP	02	c	
	C	eP	31 34	c	
Sept. 10	SH	iP	57.7	c	
	MH	eP	08 43 38		BCIS: Salta Region, Argentina. h = 150 km., 0 = 08 - 31.3.
	R	eP	40		
Sept. 11	SH	eP	51		BCIS: Probably in the Gulf of California.
	B	eP	00 06 06.1	c	
	MH	iP	05 58.4	c	
	R	eP	50		
Sept. 11		e	06 09		BCIS: Argentina.
	B	e(P)	01 12 25		
	MH	iP	24		
	M	eP	33		
	R	eP	27		
Sept. 11	SH	iP	37		USCGS: 7½°N, 126½°E, 0 = 18 01 44. Near coast of Minanao, P. I. Felt on Davao and Surigao.
	SH	e(P)	18 15 36		USCGS: 21°S, 170½°E, 0 = 23 37 33. Loyalty Islands.
Sept. 11	B	eP	23 50 19	d	
	MH	i	43	d	
	F	eP	28		
	M	eP	28	c	
	R	eP	32		
Sept. 12	SH	iP	25.9	d	
	MH	iP	18 49 33.8		
		i	42.4		
		e	32.8		
	M	e	26		
Sept. 14	SH	eP	14 33 03.6	d	USCGS: 57°N, 121°E, 0 = 14 21 37. Stanovoi Mountains Region, Siberia.
	B	iP	35 48		PAS: Magnitude 6¼ - 6½.
	BG	e	42 26		
		eSN	55		
		eE			
			mu sec		
		PZ	1.6 4½		
		PH	0.8 4½		
		SH	2.4 5½		
	MH	iP	14 33 07.6	d	
	F	iP	15.2		
	M	iP	32 52.0	d	
	R	eP	33 01	d	
	SH	iP	32 48.5		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Sept. 14	F	e	19 55 01		USCGS: 31°N, 133°E, 0 = 19 42 13. Off east coast of Kyushu, Japan.
	M	i	54 43		
	R	e	52		
	SH	iP	25		
		e	40		
Sept. 14	B	eP'	21 51 43.4	d	USCGS: 7°S, 68°E, 0 = 21 31 55. Chagos Archipelago Region.
	MH	iP'	45.3	d	
		i(PP)	55 15.7		
	F	eP'	51 47		
	M	eP'	36.4	d	
	R	eP'	41		
		e(PP)	55 09		
	SH	iP'	51 34.0	d	
Sept. 14	M	eP	22 03 56		
		i	57		
		i	04 03		
	SH	eP	03 55		
Sept. 15	MH	iP	05 42 51		USCGS: 8½°N, 103½°W, h = 100 km., 0 = 05 36 18. Pacific Ocean.
	F	eP	42		
	M	eP	43 12		
	R	eP	00		
	SH	iP	14		
Sept. 15	B	eP	17 01 04.5	c	USCGS: 33°S, 179°W, 0 = 16 48 10. Kermadec Islands Region.
	MH	iP	04.5	c	
		i	15.1		
	F	eP	08		
	M	eP	14		
	R	eP	17	c	
	SH	iP	14	d	
Sept. 15	B	eP	19 59 12		USCGS: 2½°N, 120½°E, h = 600 km., 0 = 19 45 40. Celebes Sea. PAS: Magnitude 6 - 6¼.
		iP''	20 03 07.4	d	
		iPP	50.1	c	
	BG	eEZ	06 59		
		e(SP)EZ	12 09		
		eNE	16.2		
		e(SS)E	18.5		
			mu sec		
		PPZ	0.7 5		
		(SP)H	2.2 8		
	MH	iP	19 59 15.7	c	
		iP''	20 03 08.6	d	
		iPP	54.2	c	
	F	eP	19 59 19		
		iP''	20 03 11.6		
		e(PP)	04 06		
	M	iP	19 59 07.0	c	
		iP''	20 03 06.0	d	
		iPP	51.7		
	R	eP	19 59 16		
		eP''	20 03 11		
		ePP	59		



Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Sept. 22 (cont.)		i	46.6	d	
		i	56.3		
	R	eP	47.8		
	C	iP	57.0	c	
	SH	iP	45.0	c	
Sept. 22	M	iP	20 19 42		USCGS: 42°N, 142°E, 0 = 20 08 40. Hokkaido, Japan.
	SH	iP	39		
Sept. 22	B	eP	23 04 22		USCGS: 16½°S, 168½°E, 0 = 22 51 44. New Hebrides Islands.
	MH	iP	22.6	c	
	F	eP	28		
	M	iP	28.5	c	
	R	eP	34		
	SH	iP	27.0	c	
Sept. 23	B	iP	03 51 02.4	d	40° 16'N, 124° 35'W, 0 = 03 50 15. West of Punta Gorda, California. Magnitude 4.4. Felt in Humboldt County.
		eSNE	37.3		
	MH	iP	12.5	d	
		iN	57.1		
	PA	iP	07.4	c	
		i(S)E	48.8		
	SF	eP	02		
		e	25		
	F	iP	34.3		
	M	iPNEZ	50 53.2		
		iE	51 01.1		
		iN	14.3		
	R	eP	17.3		
		eNEZ	40.6		
		i	52 05.2		
	A	iPE	50 28.9		
		iSE	38.9		
	Fe	iPNE	25		
		iNE	35		
	C	iP	51 21.3		
	SH	iP	50 45.5	c	
Sept. 24	B	e(P)	03 49 47		USCGS: 59½°N, 143½°W, 0 = 03 44 14. Gulf of Alaska. PAS: Magnitude 6¼.
	BG	eSNE	54 30		
			mu sec		
		PZ	3.2 8		
		PH	3.2 8		
		SH	14 10		
		MaxH	22 11		
	MH	iP	03 49 48		
		i	50 10		
	F	eP	06		
	M	eP	49 28		
		i	39		
	R	eP	42		
	C	iP	48 45		
	SH	eP	49 25		
Sept. 24	M	eP	14 05 55		USCGS: Central Chile. 0 = 13 53 05. Felt: Santiago.
	SH	iP	58		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Sept. 25	B	eP	07 32 13		USCGS: 9°N, 39½°W, 0 = 07 20 01. Atlantic Ocean. PAS: Magnitude 6½.
	BG	ePP	35 23		
		eSN	42 16		
		eQN	53		
		eREZ	57		
			R from E		
			mu sec		
		PZ	1.7 5		
		PH	1.1 6		
		PPZ	1.0 6		
		SH	2.2 7		
		MaxH	30 33		
	MH	iP	07 32 08.2	c	
		i	16.7		
	M	eP	06.5	c	
		i	16.1		
	R	eP	00		
	C	iP	15.3	c	
	SH	iP	08.6	c	
Sept. 25	MH	iP	15 28 29		USCGS: 32½°S, 178°W, 0 = 15 15 37. Kermadec Islands Region.
	M	e(P)	46		
	SH	eP	41		
Sept. 25	B	eP	20 36 39	c	USCGS: 36°S, 98°W, 0 = 20 24 44. Pacific Ocean, Southeast of Easter Island.
	MH	iP	35.9	c	
	F	eP	28		
	M	eP	51		
	R	iP	45.3	c	
	SH	iP	53.4	c	
Sept. 26	MH	iP	18 18 05.6	d	USCGS: 50½°N, 175°W, 0 = 18 10 28. Andreanof Islands, Aleutian Islands.
	F	eP	19		
	M	eP	17 51.5	d	
	R	iP	18 05.5	d	
Sept. 27	MH	iP"	07 55 16.7	d	USCGS: 9°S, 106°E, 0 = 07 36 07. Off south coast of Java.
	M	iP"	13.7	d	
Sept. 27	B	e(P)	12 48 45		USCGS: 37°N, 141½°E, 0 = 12 37 07. Near coast of Honshu, Japan.
	MH	iP	41.3	c	
	F	eP	48		
	M	eP	30.1	c	
	R	eP	49		
Sept. 27	B	eP	14 06 14.9		USCGS: 15°S, 174°W, h = 150 km., 0 = 13 55 02. Samoa Islands Region.
		epP	52.1		
	MH	iP	15.5		
		ipP	51.8		
	F	iP	21.4	c	
	M	iP	26.5	c	
		ipP	07 01.1		
	R	eP	06 31	c	
	SH	eP	25		
Sept. 27	MH	iP	22 40 48		Tacubaya: 17° 26'N, 94° 27'W, 0 = 22 34 20. Isthmus of Tehuantepec, Mexico.
	M	eP	41 12		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Sept. 28	MH	iP	21 05 21		USCGS: 36½°N, 139½°E, 0 = 20 53 40. Honshu, Japan.
	M	i	11		
Sept. 29	MH	i	00 15 25		USCGS: 16½°S, 173°W, 0 = 00 03 46. Tonga Islands Region.
	F	eP	17		
	M	eP	24		
	R	eP	25		
	SH	eP	23		
Sept. 29	MH	iP	14 06 19.3	c	U. S. Atomic Energy Commission: 37° 05.2'N, 116° 01.4'W, 0 = 14 05 00.1. Nuclear explosion "Mora".
		i(s)	07 29.0		
	F	eP	05 54		
		e(S)N	06 43		
		i	27 16.2		
Sept. 29	B	eP	14 28 24		USCGS: 39½°N, 143½°E, 0 = 14 17 11. Off northeast coast of Honshu, Japan.
	MH	eP	28.6	c	
		i	39.7		
	M	iP	18.4	c	
		i	28.1		
	R	e	39		
	SH	iP	15.4	c	
		i	25.2		
Sept. 30	MH	i(P)	08 58 07		USCGS: 47°N, 10°E, 0 = 08 45 28. Switzerland - Austria border. Slight damage at Landeck.
		i	59 52		
	M	i(P)	57 53		



# Bulletin of the Seismographic Stations

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BERKELEY—MOUNT HAMILTON—PALO ALTO  
SAN FRANCISCO—FERNDALE—FRESNO  
MINERAL—ARCATA—RENO—CORVALLIS—SHASTA  
MANZANITA LAKE

Earthquakes and the Registration of Earthquakes

From October 1, 1958 to December 31, 1958

BY  
DON TOCHER  
and  
WILLIAM L. BAKER

UNIVERSITY OF CALIFORNIA PRESS  
BERKELEY AND LOS ANGELES  
1960

SEISMOGRAPHIC STATIONS OF THE UNIVERSITY OF CALIFORNIA

Perry Byerly, Director

EARTHQUAKES IN NORTHERN CALIFORNIA, NEVADA, AND OREGON

and

REGISTRATION OF EARTHQUAKES AT: BERKELEY, MOUNT HAMILTON,  
PALO ALTO, SAN FRANCISCO, FERNDALE, FRESNO, MINERAL, ARCATA,

RENO, CORVALLIS, SHASTA, AND MANZANITA LAKE,

FROM OCTOBER 1, 1958 TO DECEMBER 31, 1958

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CAMBRIDGE UNIVERSITY PRESS

LONDON, ENGLAND

The list following this page gives the latitude and longitude of the epicenters for earthquakes which were well enough recorded to permit such a determination.

Map No. for each epicenter corresponds to a number plotted on the map which follows the list of epicenters.

Date and Origin Time are given in Greenwich Civil Time. Subtract eight (8) hours to convert to Pacific Standard Time (P.S.T.). This will change the date for some of the earthquakes.

M is the Richter Magnitude of the earthquakes as determined from the maximum trace amplitudes recorded for the shock by the standard Wood-Anderson Torsion Seismographs. In routine practice, the nomogram given by Nordquist in the "Bulletin of the Seismological Society of America," 32:164, is used for magnitude determinations.

Q indicates the excellence with which the epicenter has been located; "a" indicates excellent, "b" good, "c" fair, and "d" poor. Under Remarks will be found a short descriptive location of each epicenter, usually with reference to a point named on the map. Information on small foreshocks and aftershocks is sometimes included in the Remarks. When numerous foreshocks or aftershocks accompany a large earthquake, a separate table is generally included following the main list of local shocks, giving origin times, Richter Magnitudes, and, where significant differences in location can be determined, the geographic coordinates. The larger earthquakes of aftershock series are also included in the main list of local shocks.

Information on the intensities of shocks reported felt is also included under Remarks. Reports on felt earthquakes are chiefly those collected by the Seismological Field Survey of the United States Coast and Geodetic Survey, which publishes a more complete summary of such reports in "Abstracts of Earthquake Reports for the Pacific Coast and Western Mountain Region." This is a quarterly publication, and may be obtained from the District Officer, San Francisco District, Coast and Geodetic Survey, 121 Customhouse, San Francisco 26, California, or from the Director, U.S. Coast and Geodetic Survey, Washington 25, D.C.

Intensities are given by Roman numerals when sufficient information on the effects of the shock is available. These intensity numbers assigned by the Coast and Geodetic Survey are based on the Modified Mercalli Intensity Scale of 1931 (Harry O. Wood and Frank Neumann, Bulletin of the Seismological Society of America, 21:277-283, 1931), the criteria of which follow in an abridged form.

Original seismograms from the short-period Wilson-Lamison vertical-component instrument at Ukiah, California, are available routinely for use in locating epicenters of local earthquakes through the courtesy of the Director, U.S. Coast and Geodetic Survey.

Issued September 12, 1960

Price 75 Cents

MADE IN THE UNITED STATES OF AMERICA

MODIFIED MERCALLI INTENSITY SCALE OF 1931

(Abridged)

- I. Not felt except by a very few under especially favorable circumstances.
- II. Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
- III. Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration like passing truck. Duration estimated.
- IV. During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls made creaking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
- V. Felt by nearly everyone; many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
- VI. Felt by all; many frightened and run outdoors. Some heavy furniture mobed; a few instances of fallen plaster or damaged chimneys. Damage slight.
- VII. Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
- VIII. Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Disturbed persons driving motor cars.
- IX. Damage considerable in specially designed structures; well designed frame structures thrown out of plumb; great in substantial buildings with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
- X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
- XI. Few, if any (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipe lines completely out of service. Earth slips and land slips in soft ground. Rails bent greatly.
- XII. Damage total. Waves seen on ground surfaces. Lines of sight and level distorted. Objects thrown upward into the air.

EARTHQUAKES IN NORTHERN CALIFORNIA, NEVADA, AND OREGON

Map No.	Date 1958	Origin Time (G.C.T.)	Latitude		Longitude		Q	M	Remarks
			North	West	West	West			
1	Oct. 1	21-42-11	39° 34'	120° 18'	b	4.6		West of Reno. Felt over an area of approximately 5,000 square miles of north-eastern California and western Nevada. Maximum intensity VI at Hallelujah Junction (20 miles northwest of Reno), where chimneys were reported cracked. V at Blue Canyon, Chilcoot, Grouse Ridge Lookout, Sierraville, and Vinton, California, and at Reno, Nevada.	
2	Oct. 4	03-16-11	36.6°	121.6°	d	2.4		Southwest of Hollister.	
	Oct. 7	16-09-41	44°	127½°	d			Off coast of Oregon.	
	Oct. 7	20-11-06						Aftershock.	
3	Oct. 10	13-05-16	35° 56'	120° 30'	b	4.5		Southwest of Coalinga. Felt over an area of approximately 3,500 square miles of the southwest-central region of California. Appears to have been more strongly felt at Parkfield than elsewhere. V at Adelaida, Camp Roberts, Coalinga, Harmony, Lone Pine Inn, Oilfield, Parkfield, Paso Robles, and San Ardo.	
4	Oct. 14	10-48-08	37° 15'	122° 18'	c	2.2		Southwest of Palo Alto.	
5	Oct. 15	02-30-40	37° 27'	121° 48'	c	2.1		Northwest of Mt. Hamilton.	
6	Oct. 15	16-16-44	35.6°	121.2°	d	3.2		Near San Simeon.	
7	Oct. 16	13-22-18	36° 39'	121° 15'	c	2.4		Southeast of Hollister.	
8	Oct. 17	00-33-17	38° 00'	122° 27'	b	2.5		Northwest of Berkeley. Blast?	
9	Oct. 17	06-31-53	39.2°	118.1°	d	3.0		Southeast of Fallon, Nevada.	
10	Oct. 18	17-57-23	38° 08'	122° 27'	b	2.2		Northwest of Berkeley. Blast?	
11	Oct. 22	00-58-59	37° 44'	122° 06'	b	1.9		Foreshock.	
11	Oct. 22	02-04-04	37° 44'	122° 06'	a	2.1		Southeast of Berkeley.	
12	Oct. 23	05-01-42	40.8°	125.8°	d	3.5		West of Arcata.	
13	Oct. 23	07-26-41	40° 17'	124° 18'	c	2.9		South of Ferndale.	
11	Oct. 23	13-48-10	37° 44'	122° 06'	b	1.5		Aftershock of Oct. 22 at 0204.	

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Map No.	Date 1958	Origin Time (G.C.T.)	Latitude North	Longitude West	Q	M	Remarks
14	Oct. 24	02-59-24	40.4°	121.6°	d	3.0	North of Mineral.
15	Oct. 29	00-19-08	36.7°	121.4°	d	2.2	South of Hollister.
16	Oct. 29	12-17-02	40° 22'	124° 12'	c	2.5	South of Ferndale.
17	Oct. 29	14-10-59	37° 44'	121° 47'	c	2.2	Near Livermore.
18	Oct. 31	00-26-14	37° 29'	121° 47'	a	4.2	Southwest of Livermore. Reported felt in scattered localities over a land area of approximately 1,500 square miles, principally in southwest Alameda County and along the east shore areas of the San Francisco peninsula. Maximum intensity VI at Milpitas, where a water main was reported cracked. V at Berkeley, Brisbane, Moffett Field, Mount Eden, Niles and San Carlos.
18	Oct. 31	17-53-30	37° 28'	121° 48'	c	2.5	Aftershock.
19	Oct. 31	23-55-02	38.4°	122.2°	d	2.3	East of Santa Rosa.
20	Nov. 3	00-32-14	40.6°	122.0°	d	2.5	Between Mineral and Shasta.
21	Nov. 6	20-11-57	36° 05'	120° 53'	c	3.1	Southeast of King City.
22	Nov. 7	03-21-20	40.6°	124.1°	d	2.4	East of Ferndale.
23	Nov. 7	21-33-24	36° 52'	121° 53'	b	4.3	Monterey Bay, southeast of Santa Cruz. IV at Moss Landing, San Jose, and Santa Cruz.
24	Nov. 8	07-43-51	36° 59'	121° 47'	b	2.4	East of Santa Cruz.
25	Nov. 8	07-50-28	36° 57'	121° 43'	c	2.5	East of Santa Cruz.
26	Nov. 8	13-17-39	37° 20'	122° 17'	a	2.7	Southwest of Palo Alto.
27	Nov. 8	20-23-12	37° 00'	121° 51'	b	2.4	East of Santa Cruz.
28	Nov. 9	08-09-58	37° 23'	121° 42'	b	2.9	Northwest of Mt. Hamilton.
29	Nov. 9	21-40-05	39.3°	118.6°	d	3.3	Southeast of Fallon, Nevada.
30	Nov. 9	23-09-06	36.8°	121.7°	d	2.0	Northeast of Monterey.
31	Nov. 10	16-44-11	38.4°	118.4°	d	3.8	Southeast of Hawthorne, Nevada.
32	Nov. 10	19-18-41	36.9°	121.5°	d	2.5	Near Hollister.
33	Nov. 11	02-35-27	37° 37'	121° 40'	b	1.8	Southeast of Livermore.
34	Nov. 11	14-11-47	36° 40'	121° 31'	b	3.1	West of Hollister.
35	Nov. 12	04-05-22	40° 16'	125° 30'	c	3.9	Southwest of Ferndale.
36	Nov. 16	05-56-33	37.4°	121.8°	d	2.4	Northwest of Mt. Hamilton.

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Map No.	Date 1958	Origin Time (G.C.T.)	Latitude North	Longitude West	Q	M	Remarks
37	Nov. 16	12-24-30	37.0°	121.8°	d	2.6	East of Santa Cruz.
38	Nov. 16	16-07-35	39° 05'	123° 01'	b	2.8	Southeast of Ukiah.
39	Nov. 19	11-14-57	37° 43'	122° 36'	c	1.4	Southwest of San Francisco.
40	Nov. 24	07-43-56	37° 20'	121° 40'	b	2.5	Near Mt. Hamilton.
41	Nov. 24	15-21-48	40° 22'	125° 17'	c	3.5	Off Cape Mendocino.
42	Nov. 25	13-19-16	40° 35'	123° 26'	c	2.9	East of Ferndale.
43	Nov. 26	03-30-27	37° 03'	121° 30'	c	2.1	Northwest of Hollister.
44	Nov. 26	22-23-26	39.5°	118.1°	d	3.4	East of Fallon, Nevada.
45	Nov. 27	06-04-26	36° 22'	121° 09'	c	3.9	West of Llanada. Felt slightly at Carmel.
46	Nov. 27	06-37-21	41.1°	124.3°	d	3.5	Northwest of Arcata.
47	Nov. 27	13-39-01	36.2°	120.8°	d	3.1	East of King City.
48	Nov. 29	11-40-54	40.4°	123.1°	d	3.1	Southwest of Weaverville.
49	Nov. 30	10-30-47	40.5°	122.0°	d	2.2	West of Manzanita Lake.
50	Dec. 2	00-10-19	38° 03'	122° 11'	c	1.8	Northeast of Berkeley.
51	Dec. 2	05-06-15	40.5°	121.6°	d	3.1	North of Mineral.
52	Dec. 2	17-43-33	40° 15'	124° 41'	c	4.3	Southwest of Ferndale. Felt over a land area of approximately 2,000 square miles. No damage reported. V at Briceland, Carlotta, Ferndale, Fields Landing, Loleta, Pepperwood, and Petrolia.
53	Dec. 3	13-01-46	40.1°	123.2°	d	2.6	East of Garberville.
54	Dec. 3	19-44-37	40.6°	122.2°	d	2.3	Southeast of Shasta.
55	Dec. 8	02-40-56	36.8	121.3°	d	2.4	Southeast of Hollister.
56	Dec. 9	14-55-31	37° 42'	122° 33'	a	2.5	Foreshock of Dec. 11 at 0952. Felt in San Francisco and Daly City.
57	Dec. 10	00-28-04	36.7°	121.1°	d	2.7	Northwest of Llanada.
56	Dec. 10	12-41-03	37° 42'	122° 34'	b	2.2	Foreshock. Felt in Daly City.
56	Dec. 11	09-52-27	37° 42'	122° 34'	a	4.7	Southwest of San Francisco. Felt over a land area of approximately 6,500 square miles. Slight damage occurred, consisting of some cracked plaster, few broken dishes and windows, and slight loss of fallen merchandise. Minor slide occurred

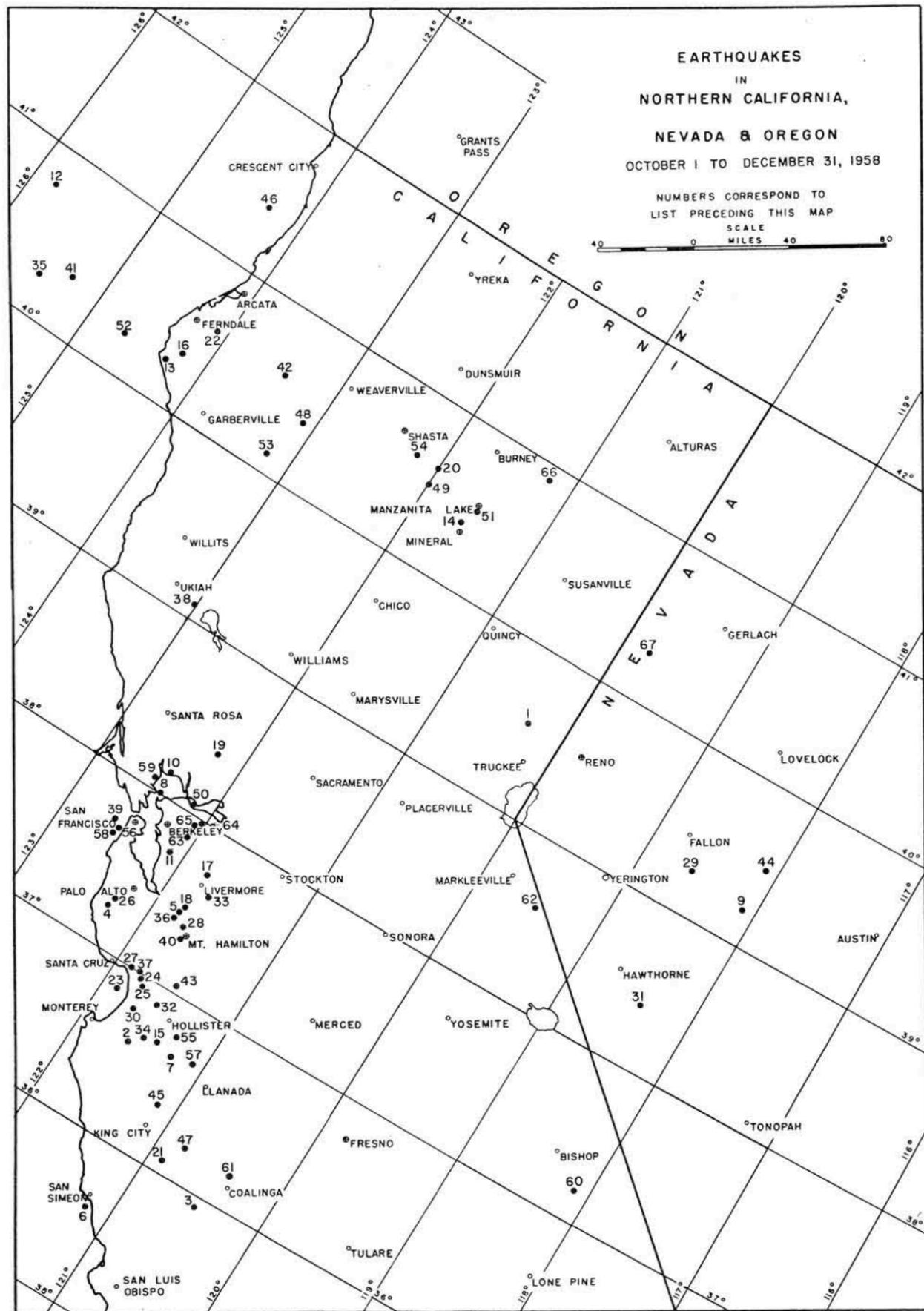
Map No.	Date 1958	Origin Time (G.C.T.)	Latitude		Longitude		Q	M	Remarks
			North	West	North	West			
									on State Highway 1 which runs along the coast. VI at Daly City, Colma, Lafayette, Moffett Field, Rodeo, San Bruno, and San Francisco.
									Aftershocks have been included in this regional list only if of magnitude 2.5 or above. A separate tabulation of all identifiable shocks of this series follows this list.
58	Dec. 11	09-58-50	37° 39'	122° 33'	b	2.8			Aftershock.
58	Dec. 11	09-59-46	37° 39'	122° 33'	b	2.8			Aftershock.
59	Dec. 11	19-57-51	38° 05'	122° 31'	c	1.5			Northwest of Berkeley. Blast?
58	Dec. 11	21-40-08	37° 39'	122° 33'	b	3.3			Aftershock of 0952. IV at San Francisco. Also felt at Brentwood.
58	Dec. 13	01-53-24	37° 40'	122° 33'	b	2.8			Aftershock of Dec. 11 at 0952.
60	Dec. 13	14-48-54	37.2°	118.1°	d	3.4			Southwest of Bishop.
61	Dec. 15	14-58-49	36.2°	120.4°	d	3.0			Near Coalinga.
61	Dec. 15	15-24-01	36.2°	120.4°	d	3.0			Near Coalinga. IV at Coalinga.
62	Dec. 17	08-12-45	38.6°	119.5°	d	3.1			East of Markleeville.
63	Dec. 17	10-22-50	37° 53'	122° 04'	b	2.0			East of Berkeley.
58	Dec. 17	17-41-13	37° 40'	122° 33'	b	2.7			Aftershock of Dec. 11 at 0952.
64	Dec. 18	22-43-39	37° 59'	122° 01'	c	1.6			Northeast of Berkeley.
65	Dec. 19	10-43-13	37° 56'	122° 02'	b	2.1			Northeast of Berkeley.
66	Dec. 22	10-41-50	40.9°	121.2°	d	2.5			East of Burney.
55	Dec. 26	16-32-27	36.8°	121.3°	d	2.4			Southeast of Hollister.
58	Dec. 28	11-51-15	37° 40'	122° 32'	a	2.6			Aftershock of Dec. 11 at 0952.
67	Dec. 30	06-15-40	40.3°	119.8°	d	3.0			Southwest of Gerlach, Nevada.

THE SAN FRANCISCO EARTHQUAKE OF DECEMBER 11, 1958

Foreshocks and Aftershocks

The following list tabulates the foreshocks and aftershocks of the earthquake near San Francisco at 09<sup>h</sup>52<sup>m</sup>27.2<sup>s</sup> G.C.T., December 11, 1958 (Map No. 56). The list contains 13 shocks of magnitude at least 2.0 through December 31, 1958, and is complete for such shocks with the possible exception of the first two minutes after the main shock. The preceding regional list of earthquakes includes only those aftershocks of magnitude at least 2.5.

Date 1958	Origin Time (G.C.T.)	Latitude		Longitude		Magnitude	Remarks
		North	West	North	West		
Dec. 9	14-55-31	37° 42'	122° 33'			2.5	Felt: San Francisco and Daly City.
Dec. 10	12-41-03	37° 42'	122° 34'			2.2	Felt: Daly City.
Dec. 11	09-52-27.2	37° 42'	122° 34'			4.7	Main shock. Felt over a land area of approximately 6,500 square miles. Slight damage. Maximum intensity VI.
Dec. 11	09-57-00					1.8	
	09-57-04					1.7	
	09-58-50	37° 39'	122° 33'			2.8	
	09-59-46	37° 39'	122° 33'			2.8	
	10-19-45					1.5	
	10-32-03					2.1	
	11-22-06					1.5	
	12-21-32					1.2	
	12-43-15	37° 40'	122° 33'			1.9	
	13-27-11					1.3	
	16-05-31	37° 42'	122° 34'			2.0	
	21-40-08	37° 39'	122° 33'			3.3	IV at San Francisco. Also felt at Brentwood.
	23-27-35	37° 42'	122° 34'			2.1	
Dec. 13	01-53-24	37° 40'	122° 33'			2.8	
Dec. 14	03-56-03	37° 42'	122° 33'			1.5	Felt: Stonestown District, S.F.
Dec. 16	03-38-14					1.8	
Dec. 17	17-41-13	37° 40'	122° 33'			2.7	
Dec. 18	23-47-28	37° 43'	122° 34'			2.3	
Dec. 28	11-51-15	37° 40'	122° 32'			2.6	



THE REGISTRATION OF EARTHQUAKES

Station	North Latitude	West Longitude	Altitude Meters	Station Symbol	Present Auspices and Date
Berkeley	37° 52.3'	122° 15.6'	81	B, BG*	University of California - 1887
Mt. Hamilton	37° 20.4'	121° 38.6'	1282	MH	Lick Observatory - 1887
Palo Alto	37° 25.1'	122° 10.8'	83	PA	Stanford University - 1927
San Francisco	37° 46.4'	122° 27.2'	100	SF	University of San Francisco - 1931
Ferndale	40° 34.6'	124° 15.7'	15	Fe	City of Ferndale - 1933
Fresno	36° 46.1'	119° 47.8'	88	F	Fresno State College - 1935
Mineral	40° 20.8'	121° 36.1'	1495	M	National Park Service, Lassen Volcanic National Park - 1938
Arcata	40° 52.6'	124° 04.5'	59	A	Humboldt State College - 1948
Reno	39° 32.3'	119° 48.8'	1386	R	University of Nevada - 1948
Corvallis	44° 35.1'	123° 18.2'	123	C	Oregon State College - 1950
Shasta	40° 41.7'	122° 23.3'	312	SH	Bureau of Reclamation - 1942
Manzanita Lake	40° 32.2'	121° 33.7'	1800	ML	National Park Service, Lassen Volcanic National Park - 1956

\*B denotes readings of short period instruments, BG of long period instruments (12 sec. Galitzin-Wilip).

Earthquakes in the Northern California, Nevada, and Oregon region are included in the following list only if of magnitude 4.5 or greater, or if of special interest. Times are usually not reported for PA, SF, Fe, or ML unless of special interest or in case of defective records at other stations.

Measurement and interpretation of seismograms from all the above listed stations is done at Berkeley; requests for special data or for copies of seismograms should be addressed to Seismographic Station, University of California, Berkeley 4, California.

STATION EQUIPMENT

Type and Component	Station
Short-period Benioff Z	B, MH, PA, M, SH
Short-period Benioff N, E	SH
Short-period Wood-Anderson N, E	B, MH, PA, SF, M, A
Short-period Sprengnether N, E, Z	F, R
Short-period Slichter N, E, Z	C
Short-period Wilson-Lamison Z	C
Long-period Galitzin-Wilip N, E, Z	B
100 kg Bosch-Omori N, E	B
25 kg Bosch-Omori N, E	Fe
80 kg Wiechert Z	B
Loucks-Omori N, E	ML
Short-period 100X Torsion	B

The three components are indicated by N, E, Z in the "phase" column of the following tabulation of readings. When no letter appears, the phase is read from the vertical component (Z) only. "i" (impetus) preceding a phase designates sudden beginning of the motion; "e" (emersio) designates gradual beginning.

In the column headed "Ground Motion", "c" or "d" indicates initial compression or dilatation of the ground as read from the vertical component instrument. N, S, E, or W indicates that the initial ground motion was north, south, east, or west, respectively.

Maximum amplitude of earth displacement in microns ( $\mu$ ) and periods in seconds (sec) of the indicated phases are given for the Berkeley station in the column headed "Time(GCT)". Combined horizontal amplitude of N and E components are designated by H.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Oct. 1	MH	i(P)	06 44 02		USCGS: 11°S, 166-1/2°E, 0 = 06 31 33.
	M	e(P)	05		Santa Cruz Islands.
Oct. 1	BG	e(SS)N	10 06 47		USCGS: 57°S, 147°E, 0 = 09 29 43.
		eRNEZ	28.5		Antarctic Ocean, southwest of Macquarie Islands.
			R from SW		PAS: Magnitude 6-1/4
	MH	iP'	09 48 38		
	M	eP'	42		
	R	eP'	44		
Oct. 1	B	iP	17 53 55.6	d	USCGS: 53°N, 165-1/2°W, 0 = 17 47 15.
		e	54 08		Fox Islands, Aleutian Islands.
	BG	eLN	18 01.6		PAS: Magnitude 6-1/4
	MH	iP	17 54 02.1	d	
		i	14.6		
	F	iP	15.4	d	
	R	iP	01.0	d	
	SH	iP	53 40.4	d	
		i	53.5		
Oct. 1	B	iP	21 42 48.4	d	39°34'N, 120°18'W, 0 = 21 42 11.
		iSNE	43 17.1		Sierra Valley, California.
	MH	iP	42 51.4	c	Magnitude 4.6. Minor damage at Hallelujah Junction, California.
		iSNE	43 19.0		
	PA	iP	42 53.1	d	
		iSE	43 23.9		
	SF	iP	42 51.6		
		iSNE	43 20.5		
	F	eP	42 58		
		iSNE	43 37		
	M	iPNEZ	42 33.9	c	
		iSN	50.8		
	R	iPNEZ	18.9	SEc	
	A	ePNE	43 10.2		
		eNE	40		
		iN	57		
	SH	iP	42 44.7	c	
Oct. 2	B	i	04 44 54		USCGS: 58°S, 9-1/2°W, 0 = 04 25 27.
	MH	eP''	41.8		Sandwich Islands region.
		i	53.5		
	F	e	52		
	R	e	57		
	SH	eP''	48		
Oct. 4	B	iP	01 02 58.0	c	USCGS: 4-1/2°S, 143-1/2°E, h = 100 km.,
		e	03 33		0 = 00 49 36. New Guinea.
	MH	iP	00.7	c	
	F	eP	07		
	M	eP	00.5	c	
	SH	iP	02 58.3	c	
Oct. 4	F	3	03 41 17		
	M	eP	40 21		
	R	e	42		
	SH	eP	15		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Oct. 4	B MH M	eP iP eP	10 03 32 35.3 29		USCGS: 22-1/2°N, 144-1/2°E, 0 = 09 51 26. Mariana Islands region.
	R SH	i eP iP	42 41 27.3		
Oct. 4	B MH F M R SH	eP eP eP i(P) eP iP	11 45 14 16 27 17 22 09.6		USCGS: 22-1/2°N, 144-1/2°E, 0 = 11 33 07. Mariana Islands region.
Oct. 4	M	eP	13 04 25		USCGS: Central Alaska. 0 = 12 58 24. Felt: College.
Oct. 4	MH M R SH	iP eP eP iP	14 30 43 51 46 56		USCGS: 22-1/2°S, 67°W, h = 100 km., 0 = 14 18 47. Jujuy Province, Argentina.
Oct. 4	MH F M SH	iP eP iP iP	15 20 35.9 46 30.6 27.7	c c c	USCGS: 22-1/2°N, 145°E, 0 = 15 08 27. Mariana Islands region.
Oct. 4	SH	eP	18 51 03		
Oct. 5	F M SH	e(pP) e(P) e(P)	06 20 14 19 14 12		USCGS: 18-1/2°N, 145-1/2°E, h = 200 km., 0 = 06 07 19. Mariana Islands.
		e(pP)	20 03		
Oct. 6	MH F M	iP eP eP	00 59 48.4 52 01 00 01		USCGS: 32°S, 179-1/2°E, h = 250 km., 0 = 00 47 20. Kermadec Islands.
	SH	iP	00 59 56.8		
Oct. 6	MH M	i(P) i(P)	01 17 31 24		
Oct. 6	BG	eRNEZ	07 52		
			R from SSW		
Oct. 6	B MH	eP iP	19 01 53.0 58.5	c c	USCGS: 56°N, 163°E, 0 = 18 52 43. Near east coast of Kamchatka.
		i	03 10		
	F	eP	02 09.5	c	
	R	eP	01 55.5	c	
	SH	iP	37.7	c	
Oct. 7	M C	i iPN	05 09 30 08 26.2		Seattle: 46°43'N, 124°02'W, 0 = 05 07 52. North end of Willapa Bay, Washington. Felt.
		iN	33.7		
		iN	09 13.6		
Oct. 7	B	eP	12 45 43.4		USCGS: 5°S, 151-1/2°E, 0 = 12 32 40. New Britain. Felt at Karoola, Pomio, and Rabaul.
	BG	ePP eSKS eSNEZ ePS	49 19 56 14 39 57 41		PAS: Magnitude 6-1/2 - 6-3/4.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Oct. 7 (Cont.)		eSSE eQN eREZ	13 02.7 10 14.1		
			R from WSW		
			mu sec		
		PZ	0.6 5-1/2		
		PH	0.3 6		
		SKSH	2.2 8		
		SH	3.1 7		
		MaxH	30 22		
	MH	eP	12 45 45.4	c	
		i(PP)	49 26		
	F	eP	45 53		
	M	eP	46.2	c	
	R	eP	52		
	C	eP	43		
	SH	eP	45		
Oct. 7	B	iP	15 35 42.0	c	USCGS: 16°S, 69°W, h = 200 km., 0 = 15 24 27. Bolivia-Peru Border.
	MH	iP	38.1	c	
	F	eP	28		
	M	eP	47		
	R	eP	38		
	C	e(P)N	36 12		
	SH	iP	35 50.4	c	
Oct. 7	MH	iP	16 11 33.7	c	44°N, 127-1/2°W, 0 = 16 09 41. Off coast of Oregon.
	F	eP	55		
	C	iP	10 31	c	
		eSNE	11 07		
	SH	eP	00		
Oct. 7	MH	iP	20 13 54.9		Coast of Oregon aftershock. 0 = 20 11 06.
	C	iP	12 54.7	d	
		eSNE	13 30		
Oct. 8	F	eP	11 25 28		USCGS: 29°S, 177-1/2°W, 0 = 11 12 50. Kermadec Islands. Felt: Raoul Island.
	M	eP	32		
	SH	eP	31		
Oct. 8	MH	iP	22 01 14.3	c	U.S. Atomic Energy Commission: 37°11.7'N, 116°12.0'W, 0 = 22 00 00. Nuclear explosion "Tamalpais."
		i	02 20.9		USCGS: 14°N, 145-1/2°E, 0 = 10 22 08. Mariana Islands.
Oct. 9	B	iP	10 34 39.9		
	MH	iP	41.9		
	M	iP	38.3		
	SH	eP	36		
Oct. 9	MH	iP''	11 39 14.5		USCGS: 55-1/2°S, 27-1/2°W, 0 = 11 20 17. Sandwich Islands region.
		i	21.4		
	F	eP''	10		
	M	iP''	16.8		
	R	eP''	16		
		e	40 38		
	SH	iP''	39 19.1		
		i	32.3		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Oct. 10	B	iP	08 39 43.0	c	USCGS: 53-1/2°N, 160-1/2°E, h = 100 km., 0 = 08 30 26. Near east coast of Kamchatka.
		i	40 48.9		
	BG	eSE	47 17		
		mu sec			
		MaxH	5.2 20		
	MH	iP	08 39 48.1	c	
	F	iP	58.7	c	
	M	iP	33.6	c	
		i	52.4		
		iP	45.1	c	
Oct. 10	C	ePN	05		35°56'N, 120°30'W, 0 = 13 05 13. Southeastern Monterey County. Magnitude 4.5. Felt.
	SH	iP	29.1	c	
	B	iP	13 05 55.7	d	
		eSN	06 25.3		
	MH	iP	05 45.8		
		iSN	06 05.4		
	PA	iP	05 50.4	d	
		iN	55.9		
		iSE	06 09.2		
		eP	05 56.1		
Oct. 10		i	06 04.1		USCGS: Near Islands, Aleutian Islands. 0 = 21 05 51.
		iNE	36.0		
	F	iPNEZ	05 35.8	SWd	
		iSNE	50.1	SE	
	M	iP	06 28.2	c	
		i	35.7		
		i(S)E	07 22.2		
	R	iP	06 20.0		
		i(S)	07 11.3		
		eP	06 36		
SH	eP	21 14 02		USCGS: 65-1/2°N, 132-1/2°W, 0 = 00 41 35. Yukon Territory.	
SH	eP	21 14 02			
Oct. 11	BG	eLE	00 58.1		
		mu sec			
		Max H	9 13		
Oct. 11	MH	iP	02 10 11.4	c	USCGS: 53°N, 159-1/2°E, 0 = 02 00 40. Near east coast of Kamchatka.
	F	eP	22		
	M	eP	09 56.0	c	
	R	eP	10 08.1	c	
	SH	iP	09 52.0	c	
Oct. 11	MH	iP	08 14 49		
	M	eP	57		
Oct. 11	M	eP	09 17 46		USCGS: 42-1/2°N, 144-1/2°E, 0 = 09 06 53. Near east coast of Hokkaido.
		i	59		
	SH	eP	42		
		i	55		
Oct. 11	B	iP	14 49 40.8	d	USCGS: 23-1/2°S, 65°W, h = 200 km., 0 = 14 37 42. Jujuy Province, Argentina. PAS: Magnitude 6.
	MH	iP	37.3	d	
	F	iP	27.7	d	
	M	iP	45.6	d	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Oct. 11 (Cont.)	R	iP	39.9	d	
	C	iPN	50 05.3	S	
	SH	iP	49 49.6	d	
Oct. 12	MH	iP	01 45 34		USCGS: 6°S, 75°W, 0 = 01 35 14. Peru.
	M	iP	45		
Oct. 12	B	eP	09 56 07		USCGS: 17°S, 175-1/2°W, h = 250 km., 0 = 09 44 50. Tonga Islands region.
	MH	iP	08	c	
	F	eP	12	c	
	M	iP	18.0	c	
	R	eP	21		
	SH	eP	16		
Oct. 12	B	iP	15 31 12.4	d	USCGS: 27-1/2°N, 125-1/2°E, h = 250 km., 0 = 15 18 42. East China Sea. PAS: Magnitude 6-3/4.
		ipP	32 14.8		
	BG	eSNE	41 35	NW	
		mu sec			
		SH	7.6 9		
	MH	iP	15 31 15.8	d	
		i	27.7		
		ipP	32 18.5		
		iP	31 22.4		
		iP	07.7	d	
Oct. 13		i	31.8		USCGS: 14°S, 173-1/2°E, 0 = 05 26 56. Northwest of Fiji Islands.
	A	iPNE	30 59.7		
	R	iP	31 16.0	d	
		epP	32 18.9		
		eSNEZ	41 44		
		iP	30 51.5	d	
		iP	31 05.0	d	
		iP	05 39 12.7	d	
		iP	18		
		eP	18.9	d	
Oct. 13	R	iP	24.5	d	
	SH	iP	17.6	d	
	MH	iP	11 04 39		
Oct. 13	MH	e	13 21 24.2	c	U.S. Atomic Energy Commission: 37°05.2'N, 116°01.4'W, 0 = 13 30 00. Nuclear explosion "Lea."
	i	22 28.8			
	e(P)	20 54			
	e(A)	42 28			
	i	58			
Oct. 14		e	21 47		USCGS: 52-1/2°N, 159°E, 0 = 09 06 24. Near east coast of Kamchatka.
		e	14.0		
	B	eP	09 15 56		
	MH	iP	16 00.9		
	F	eP	11		
	M	eP	15 45.8		
Oct. 14	R	eP	58		Nuclear explosion "Neptune."
	SH	iP	41.1		
		e	53		
		i	18 01 21.8	c	
		i	02 21.5		



Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Oct. 20 (Cont.)	R	eP	03 10		
	SH	iP	02 50.2		
Oct. 20	B	eP"	01 31 32		USCGS: 9-1/2°S, 112-1/2°E,
		ePP	33 07		0 = 01 12 30. Off south coast
	MH	iP"	31 33.1		of Java. 7 killed at Blitar.
		i	58.5		1,856 injured. 95 houses
	F	iP"	35.6		destroyed, 206 heavily damaged.
		e	58		Felt at Jogjakarta, Malang, and
	M	iP"	30.9		Surabaya.
		i	55.1		
	R	iP"	34.8		
		e	55		
		e(PP)	33 17		
	SH	iP"	31 30.9		
		ePP	33 03		
Oct. 21	B	eP	06 28 11		USCGS: 5-1/2°S, 147°E, 0 = 06 14 50.
	MH	iP	13.0		Near northeast coast of
	M	iP	14.4		New Guinea.
	R	eP	19.8		
	SH	iP	11.3		
Oct. 21	SH	iP	07 29 35.4	d	BCIS: 25°N, 122°E, 0 = 07 16 27.
					Near northeast coast of Formosa.
Oct. 22	M	iP	09 12 23.2		BCIS: 45°N, 150°E, 0 = 09 02.0.
	SH	iP	19.2		Kurile Islands.
Oct. 22	MH	i	13 31 24.2	c	U.S. Atomic Energy Commission:
		i	28.3		37°05.2'N, 116°01.4'W,
		i	32 29.2		0 = 13 30 00.1. Nuclear
	F	eP	30 52		explosion "Socorro."
		e	31 43		
	M	e	44.5	d	
Oct. 22	B	eP	23 55 21	c	USCGS: 14-1/2°S, 168°E,
	MH	iP	22.8	d	0 = 23 42 57. New Hebrides
	F	iP	27.8	c	Islands.
	M	iP	28.5	c	
	R	eP	33	c	
	SH	iP	21.0	c	
Oct. 25	MH	iP	01 03 03		
	F	eP	07		
	SH	iP	11		
Oct. 25	MH	iP	04 53 49		
		i	54 44		
	M	iP	43		
	SH	iP	39		
Oct. 26	MH	i(PP)	02 36 11.2	c	USCGS: 5-1/2°N, 117°E, 0 = 02 17 32.
	M	e(PP)	09.7	c	Northern Borneo.
	SH	e	28		
Oct. 26	MH	i(P)	10 21 21.3	c	U.S. Atomic Energy Commission:
		i	28.4		36°47.9'N, 115°55.7'W,
		i	22 29.9		0 = 10 20 00.1. Nuclear explos-
	F	e(P)	20 58		ion "Sanford."

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Oct. 26 (Cont.)	M	e(P)	21 35		
	R	e(P)	23		
		iE	22 41.7		
Oct. 26	MH	iP	15 30 14		USCGS: 65-1/2°N, 133°W, 0 = 15 24 13.
	SH	eP	02		Yukon Territory.
Oct. 26	MH	iP	16 01 23.4	c	U.S. Atomic Energy Commission:
		i	02 29.1		37°05.2'N, 116°01.4'W,
	F	eP	00 53		0 = 16 00 00.1. Nuclear
		eE	01 43		explosion "DeBaca."
	R	e	20		
Oct. 27	MH	iP	15 16 51		USCGS: 23-1/2°S, 175-1/2°W,
	F	eP	56		0 = 15 04 44. Tonga Islands
	M	eP	17 01		region.
Oct. 27	SH	e(P)	16 21 06		
Oct. 27	B	eP	18 27 33.6	c	USCGS: 44-1/2°N, 147-1/2°E,
	MH	iP	38.4	c	0 = 18 16 53. Kurile Islands.
	M	iP	27.6	c	
	R	eP	38		
	SH	iP	22.8	c	
Oct. 27	F	eP	19 30 25		USCGS: 56°N, 162°E, 0 = 19 20 55.
	SH	eP	29 53		East coast of Kamchatka.
Oct. 28	M	iP	04 52 50		
Oct. 28	M	e	11 00 48		USCGS: 30-1/2°N, 85°E, 0 = 10 46 27.
		i(PP)	04 33		Southern Tibet.
	SH	e	05 01		
Oct. 28	M	i	15 33 00.7		
	SH	e(P)	32 50		
Oct. 28	B	e	23 58 14		USCGS: 52°N, 179-1/2°E, 0 = 23 50 08.
	MH	iP	12		Andreanof Islands, Aleutian
	F	eP	24		Islands.
	R	eP	10		
	SH	iP	57 52		
Oct. 29	MH	iP	03 37 37		BCIS: 16°S, 173-1/2°W, 0 = 03 26 08.
	M	iP	48		Samoa Islands region.
	SH	eP	47		
Oct. 29	B	e(P)	06 15 39		USCGS: 51°N, 179°E, 0 = 06 07 34.
	MH	iP	41		Andreanof Islands, Aleutian
	M	iP	27		Islands.
	SH	eP	22		
Oct. 29	B	eP	07 52 08.0	c	USCGS: 51-1/2°W, 179-1/2°E,
	BG	eSNE	58 35		0 = 07 44 10. Andreanof Islands,
		eREZ	08 03.8		Aleutian Islands.
			R from W		PAS: Magnitude 6-1/4.
			mu sec		
		SH	20 14		
		MaxH	50 21		
	MH	iP	07 52 14.3	c	
		i	36.4		
		i	57 44.2		
	F	iP	52 27.6	c	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Oct. 29 (Cont.)	M	iP	00.0	d	
		i	12.8	d	
	R	eP	13	c	
	C	iP	51 31.3	c	
	SH	iP	54.9	d	
Oct. 29		i	53 12.1		
	B	iP	08 03 14.2	d	USCGS: 51-1/2°N, 179°E, 0 = 07 55 14. Andreanof Islands, Aleutian Islands.
		e	05 05		
	MH	iP	03 20.3	d	
		i	05 07.9		
	F	iP	03 32.0	d	
	M	iP	05.6	d	
	R	eP	19	d	
	C	iP	02 41.1	c	
	SH	iP	59.9	d	
Oct. 29	B	eP	08 14 17		USCGS: 51°N, 179°E, 0 = 08 06 15. Andreanof Islands, Aleutian Islands.
	MH	iP	23.0	c	
	F	eP	35		
	M	iP	08.7	d	
	R	eP	21		
Oct. 29	SH	iP	03.6	d	
	M	iP	15 26 05		USCGS: 55°N, 161°E, 0 = 15 17 00. Near east coast of Kamchatka.
Oct. 29	SH	eP	01		
	MH	eP	19 33 38		USCGS: 51°N, 179-1/2°E, 0 = 19 25 30. Andreanof Islands, Aleutian Islands.
Oct. 30		i	44		
	F	eP	46		
	M	iP	20.4		
	SH	iP	14.7		
	F	eP'	02 45 25		BCIS: 1°S, 50°E, 0 = 02 26.2. Indian Ocean, northwest of the Seychelles.
Oct. 30	M	eP'	15	d	
	SH	iP'	13.6	d	
Oct. 30	MH	iP	03 01 23.5	c	U.S. Atomic Energy Commission: 37°05.2'N, 116°01.4'W, 0 = 03 00 00.1. Nuclear explosion "Santa Fe."
	F	eP	02 29.7		
Oct. 30		eP	00 54		
	MH	iP	03 52 39		USCGS: 51-1/2°N, 179°E, 0 = 03 44 32. Andreanof Islands, Aleutian Islands.
	M	iP	25		
	R	eP	39		
	SH	iP	20		
Oct. 30	B	eP	10 17 37		USCGS: 20-1/2°S, 176°W, 0 = 10 05 00. Tonga Islands.
	MH	iP	37.6	c	
	F	iP	41.6	c	
	M	iP	47.8	c	
	SH	eP	47		
Oct. 30	B	iP	15 01 14.7		U.S. Atomic Energy Commission: 37°11.1'N, 116°12.1'W, 0 = 15 00 00.1. Nuclear explosion "Blanca."
		i	25.1	d	
	MH	iP	08.1	c	
		i	15.3	c	
		iN	02 15.3		
	PA	eP	01 12		
	i	25.0	d		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Oct. 30 (Cont.)		iE	40.1		
		iE	48.7		
		iE	02 42.7		
	SF	e(P)	01 23		
		e	02 39		
	F	iP	00 48.3	c	
		iN	56.2		
	M	eN	01 21.5		
		i	22.0		
	R	eP	00 58.5	c	
		i	01 05.1		
		i	09.5		
		iNE	15.1		
		iNE	47.9		
	Oct. 31	C	i(P)	02 21	c
SH		iP	01 30.8		
		iNZ	52.8		
		i	02 48.9		
B		iPNZ	00 26 25.2	Sd	37°29'N, 121°47'W, 0 = 00 26 14. Northeast of San Jose, California. Magnitude 4.2. Felt in San Francisco Bay area.
		iSNE	33.1		
MH		iPNEZ	18.4	NWd	
		iSNE	22.1		
PA		iPNEZ	20.8	NW	
		iSNE	25.3		
Oct. 31	SF	iPNEZ	26.4	NWc	
		iSNE	34.7		
	F	iP	43.4	c	
		i	45.8		
		eNZ	27 05		
	SH	eP	08		
		e	29		
		eE	47		
	B	eP	07 14 40		USCGS: 22°N, 109°W, 0 = 07 10 00. Gulf of California.
	MH	eP	32		
Oct. 31	F	eP	12		
	M	eP	56		
	SH	eP	15 04		
	MH	iP	07 53 16		BCIS: 54°N, 163°W, 0 = 07 46 46. Southeast of Unimak Island.
	F	eP	28		
	M	eP	12		
	SH	eP	06		
	M	i(P)	12 52 15		
	B	eP	23 52 34.1	c	USCGS: 25°N, 122-1/2°E, h = 100 km., 0 = 23 39 27. Near north coast of Formosa.
	MH	iP	37.9	c	
Nov. 1	F	eP	44		
	M	iP	30.3	c	
	R	iP	37.8	c	
	C	iPN	14.5	S	
	SH	iP	26.5	c	
	B	eP	03 51 44		USCGS: 3°S, 150°E, 0 = 03 38 35. Bismark Sea. Felt at Kavieng, New Ireland.
	BG	e(S)N	04 02 39		
		eQN	15.5		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Nov. 1 (Cont.)		eREZ	24.9		
			R from W		
	MH	iP	03 51 44.0		
		iPP	55 29		
	F	eP	51 51		
	M	iP	44.5		
		ePP	55 27		
	R	eP	51 51		
	SH	eP	41		
Nov. 1	MH	i(P)	12 21 06		USCGS: 17-1/2°S, 168°E, 0 = 12 08 21. New Hebrides Islands foreshock.
	F	e	30		
	M	e(P)	16		
Nov. 1	MH	i	12 28 26		USCGS: 17-1/2°S, 169°E, 0 = 12 15 43. New Hebrides Islands foreshock.
	F	e	28		
	M	e	37		
	SH	i	18		
Nov. 1	B	eP	12 29 18		USCGS: 17-1/2°S, 168°E, 0 = 12 16 36. New Hebrides Islands.
	MH	iP	19		
	F	eP	25		PAS: Magnitude 6 - 6-1/4.
	M	i(P)	26		
	R	eP	23		
	SH	iP	24		
Nov. 1	MH	iP	15 49 18		
	M	iP	09		
	SH	iP	06		
Nov. 1	F	iP	16 03 01		USCGS: 17-1/2°S, 168°E, 0 = 15 50 10. New Hebrides Islands aftershock.
	R	eP	07		
	SH	iP	01		
Nov. 1	MH	i(P)	19 51 11		
	F	i(P)	15		
	SH	i(P)	20		
Nov. 2	SH	e(P)	00 17 00		BCIS: 18°S, 178°W, 0 = 09 34.2. Fiji Islands region.
Nov. 2	MH	iP	09 46 12		
	M	iP	22		
	SH	iP	20		
Nov. 2	B	eP	10 52 18		USCGS: 51-1/2°N, 175°W, 0 = 10 44 47. Andreanof Islands, Aleutian Islands.
		e	29		
	BG	eE	11 04 30		
	MH	iP	10 52 24		
	F	eP	38		
	M	eP	10		
	SH	iP	04		
Nov. 2	MH	iP	16 02 57		
	M	eP	03 03		
Nov. 2	B	e(P)	19 05 57		USCGS: 16°N, 99°W, 0 = 18 59 49. Near coast of Guerrero, Mexico.
					USCGS: 31°S, 177-1/2°W, 0 = 04 00 30. Kermadec Islands.
Nov. 3	MH	iP	04 13 12.7	c	
	M	eP	23		
	SH	eP	22		
Nov. 4	B	eP	08 40 31.1		USCGS: 28°N, 140-1/2°E, 0 = 08 28 28. Bonin Islands region.
	MH	iP	35.4		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Nov. 4 (Cont.)	F	iP	44.3		
	M	iP	27.9	c	
	R	iP	37.9		
	SH	iP	25.2	c	
Nov. 4	B	eP	08 43 03		USCGS: 28°N, 141°E, 0 = 08 31 00. Bonin Islands region.
	MH	iP	07.5		
	F	iP	15.6		
	M	iP	42 59.6		
	R	eP	43 09		
	SH	iP	42 54.1		
Nov. 4	B	iP	09 25 58.2	c	USCGS: 7°N, 73°W, h = 150 km., 0 = 09 16 44. Colombia.
	MH	iP	53.4	c	
	F	eP	40		
	M	iP	26 00.8	c	
	R	eP	25 50	c	
	SH	eP	26 04		
Nov. 4	MH	iP	20 07 40		USCGS: 11°S, 166°E, 0 = 19 55 11. Santa Cruz Islands.
	F	e(P)	54		
	M	eP	44		
	SH	eP	42		
Nov. 4	BG	eRNEZ	23 36		USCGS: 50°S, 118°W, 0 = 22 54 46. South Pacific Ocean.
			R from SSW		
Nov. 4	MH	i(P)	23 47 46		USCGS: 17-1/2°S, 168°E, 0 = 23 34 50. New Hebrides Islands aftershock.
Nov. 5	MH	iP	08 11 31		USCGS: 19-1/2°S, 69°W, h = 150 km., 0 = 08 00 11. Northern Chile.
		i	12 11		
	M	eP	11 49		
Nov. 5	M	eP	12 57 04		BCIS: Probably northern Kurile Islands. 0 = 12 47.2.
Nov. 5	SH	iP	56 59		USCGS: 14-1/2°S, 175-1/2°W, 0 = 12 59 39. Samoa Islands region.
	MH	iP	13 11 11		
	F	eP	17		
	M	iP	21		
	SH	iP	20		
Nov. 5	MH	iP	15 53 49		USCGS: 58°N, 154°W, h = 60 km., 0 = 15 47 25. Kodiak Island.
	F	eP	57		
	M	eP	06		
		i	26		
	R	e	54 00		
	SH	eP	53 01		
		i	18		
Nov. 6	MH	iP	08 21 37		BCIS: 15-1/2°S, 179°W, 0 = 08 09.8. Fiji Islands region.
	M	iP	46		
Nov. 6	MH	iP	10 09 24		BCIS: 35°S, 110°W, 0 = 09 57.8. South of Easter Island.
	M	eP	37		
Nov. 6	B	iP	10 14 24.4		BCIS: Kurile Islands. 0 = 10 03.8.
	MH	iP	28.2		
	M	eP	18.5		
	SH	iP	15.6		
Nov. 6	B	iPNEZ	23 08 41.3	SEc	USCGS: 44-1/2°N, 148-1/2°E, h = 60 km., 0 = 22 58 06. Kurile Islands. Minor seismic
		eSNE	17 16	SE	
		eGNE	24.8		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Nov. 6 (Cont.)		eRNEZ	27.6		sea wave.
		eP'P'	37 23		PAS: Magnitude 8 - 8-1/4.
			mu sec		
		PZ	160 11		
		PH	185 13		
		SH	105 9		
	MH	iP	23 08 46.3	c	
		eSNE	17 26		
	F	iP	08 55.1	c	
	M	iP	33.8	c	
Nov. 6	A	ePNE	23.0	SE	
		eSE	16 43	E	
		eGNE	23.7		
	R	iPNEZ	08 45.2	SEc	
		iSE	17 25	E	
	C	iP	08 12	c	
	SH	iP	29.5	c	
	B	i(P)	23 24 53		BCIS: Kuriles aftershock.
	MH	i	25 05		0 = 23 14 19.
	F	i	36		
Nov. 6	M	i	24 47		
	SH	e(P)	40		
	M	e(P)	23 45 12		JMA: 44-1/4°N, 148-1/2°E, h = 100 km., 0 = 23 34 52. Kuriles aftershock.
Nov. 6	SH	e(P)	08		BCIS: Kuriles aftershock.
	SH	e(P)	23 56 56		0 = 23 46.6.
Nov. 6		e	57 12		BCIS: Kuriles aftershock.
	SH	e(P)	24 03 38		0 = 23 53.5.
Nov. 7	B	iP	00 46 55.8	c	USCGS: 44°N, 149°E, 0 = 00 36 12.
	MH	iP	47 00.6	c	Kurile Islands aftershock.
	F	iP	10.1	c	
	M	iP	46 48.6	c	
	R	iP	59.8	c	
	C	ePN	16.8		
	SH	iP	44.5	c	
Nov. 7	B	e	01 12 52		USCGS: 44°N, 148-1/2°E, 0 = 01 01 58.
	MH	iP	43	c	Kurile Islands aftershock.
	M	iP	29.5	c	
	R	eP	46		
Nov. 7	SH	iP	25.8	c	
	B	iP	01 24 35.0	c	USCGS: 45°N, 149°E, h = 60 km., 0 = 01 13 52. Kurile Islands
	MH	iP	39.2	d	aftershock.
	F	iP	50.3	c	
	R	eP	40	c	
Nov. 7	C	eN	07		
	B	eP	01 53 32		USCGS: 44-1/2°N, 149-1/2°E, 0 = 01 42 56. Kurile Islands
	MH	iP	35.7		aftershock.
	F	eP	48		
		e	54 03		
	M	iP	53 26.5		
	R	eP	36		
C	eN	22			
SH	eP	23			

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Nov. 7	B	e(P)	02 06 10		USCGS: 44-1/2°N, 149°E, 0 = 01 55 33. Kurile Islands
		i	24.6		aftershock.
	MH	i	20.0		
	F	e(P)	26		
		i	39		
	M	eP	03.8		
	R	e(P)	19		
		i	28		
	C	eN	05 51		
	SH	eP	06 00		
Nov. 7		e	14		
	M	e(P)	02 19 51		JMA: 43-1/2°N, 149°E, h = 100 km., 0 = 02 09 26. Kuriles aftershock.
Nov. 7	SH	e(P)	46		BCIS: Kuriles aftershock.
	MH	i	02 21 03		0 = 02 10 20.
Nov. 7	F	e	21		
	M	i	20 45		
	R	e	58		
		i	21 11		
	MH	iP	02 48 51		BCIS: Kuriles aftershock.
	F	eP	59		0 = 02 38 11.
	M	iP	39		
Nov. 7	R	eP	50		
	SH	iP	35		
	MH	i	03 01 44		USCGS: 44-1/2°N, 149-1/2°E, h = 60 km., 0 = 02 50 54.
	F	e(P)	37		Kurile Islands aftershock.
	M	e	39		
	R	e(P)	27		
	SH	e(P)	12		
Nov. 7		e	29		
	MH	iP	05 10 33.5		USCGS: 44-1/2°N, 149°E, 0 = 04 59 56.
	F	eP	43		Kurile Islands aftershock.
		e	58		
	M	iP	21.7		
	R	iP	32.0		
		i	45.8		
	C	eN	04		
	SH	iP	16.9		
	M	iP	05 57 42.4		JMA: 44-1/4°N, 149°E, h = 100 km., 0 = 05 47 19. Kuriles aftershock.
Nov. 7	SH	iP	38.3		BCIS: Kuriles aftershock.
	M	iP	06 35 58.5		0 = 06 25.5.
Nov. 7	SH	iP	53.9		USCGS: 44-1/2°N, 149°E, 0 = 07 40 36.
	B	iP	07 51 14.0		Kurile Islands aftershock.
	MH	iP	18.7	c	
	F	iP	28.2	c	
	M	iP	02.0	c	
	R	iP	17.3	c	
	C	ePN	50 44		
	SH	i(P)	51 03.0		
	MH	iP	07 58 00.4	c	BCIS: 17°S, 179°W, h = 600 km., 0 = 07 47 09. Fiji Islands
	F	iP	05.4		region.
Nov. 7	M	eP	09.8		
	SH	iP	08.4		



Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Nov. 9	B MH F M R SH	eP iP eP iP iP iP	03 25 28 32.6 42 20.6 31.6 17.1	d d d d d	USCGS: 44°N, 148-1/2°E, 0 = 03 14 47. Kurile Islands aftershock.
Nov. 9	M SH	i(P) e	10 27 24 53		USCGS: 44-1/2°N, 150°E, 0 = 10 17 30. Kurile Islands aftershock.
Nov. 9	MH M SH	i(P) e(P) i(P)	10 29 49 38 35		BCIS: Kuriles aftershock. 0 = 10 19 06.
Nov. 9	MH M SH	i i e(P)	11 41 42 31 18		
Nov. 9	MH F M SH	iP e(P) eP eP	14 44 09 25 43 52 49 44 00		USCGS: 44°N, 148°E, 0 = 14 33 17. Kurile Islands aftershock.
Nov. 9	B MH F M R SH	eP iP eP eP eP iP	18 03 34.5 39.1 49 26.9 38.5 23.5	d d d d d	USCGS: 44°N, 148°E, 0 = 17 52 52. Kurile Islands aftershock.
Nov. 9	MH F M SH	e(P) e(P) e e(P)	21 15 40 51 26 17		USCGS: 44°N, 148°E, 0 = 21 04 46. Kurile Islands aftershock.
Nov. 10	MH F SH	iP eP e(P)	07 06 41 30 07 08		USCGS: Pacific Ocean foreshock. 0 = 06 58 00.
Nov. 10	MH F M R SH	iP e(P) e e i(P)	11 21 47 40 22 14 11 10		USCGS: 9°S, 110°W, 0 = 11 13 05. Pacific Ocean.
Nov. 11	MH M R	iP eP e(P)	11 26 07 23 11		Tacubaya: 17°59'N, 106°35'W, 0 = 11 20 57. Well off coast of Colima, Mexico.
Nov. 11	M SH	eP eP	22 49 59 50 03		USCGS: 22°S, 69°W, 0 = 22 37 46. Near coast of northern Chile
Nov. 12	MH M R C SH	eP eP eP ePN eP	06 18 42 45 35 19 08 18 52		USCGS: 9-1/2°N, 70°W, 0 = 06 09 10. Venezuela.
Nov. 12	MH M SH	iP iP eP	10 52 40 37 35		USCGS: 7°S, 156°E, h = 100 km., 0 = 10 39 47. Solomon Islands.
Nov. 12	SH	iP	15 28 58		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Nov. 12	SH	eP e	17 54 42 54		USCGS: 44°N, 148-1/2°E, 0 = 17 44 11. Kurile Islands aftershock.
Nov. 12	B BG	iP e iSNE eGNE eR	20 34 04.4 16.8 42 42 50.3 53		USCGS: 44-1/2°N, 148-1/2°E, 0 = 20 23 26. Kurile Islands aftershock. Felt: Hokkaido and northern Honshu, Japan. PAS: Magnitude 6-3/4 - 7.
			mu sec		
		PZ PH SH	10 11 8.1 11 28 13		
	MH	iP	20 34 09.1	c	
		i	20.9		
	F	iP	18.7	c	
		eP'P'	21 02 50		
	M	iP	20 33 57.1	c	
	R	iP	34 08.1	c	
		eP'P'	21 02 59		
	C	eP	20 33 36		
	SH	iP	52.9	c	
		e(S)	42 24		
		eP'P'	21 02 39		
Nov. 12	SH	eP	21 33 46		USCGS: 44°N, 148-1/2°E, 0 = 21 23 20. Kurile Islands aftershock.
Nov. 13	B MH F M R C SH	eP iP eP eP eP ePN eP	03 07 08 12 20 06 59 07 10 06 40 55		USCGS: 44°N, 148-1/2°E, 0 = 02 56 26. Kurile Islands aftershock.
Nov. 13	B	eP	04 15 18		USCGS: 44-1/2°N, 148°E, 0 = 04 04 37. Kurile Islands aftershock.
		e	18 08		
	MH	iP	15 22		
	F	iP	33		
	M	iP	11		
		i	21		
	R	iP	22		
		i	34		
	C	eN	03		
	SH	iP	07		
		e	17		
Nov. 13	MH	iP	05 20 33		USCGS: Kurile Islands aftershock. 0 = 05 09 35.
	M	iP	20		
	SH	iP	16		
Nov. 13	F	eP	06 11 30		USCGS: 43-1/2°N, 139°E, 0 = 05 59 53. Off west coast of Hokkaido.
	M	eP	12		
	SH	eP	05		
Nov. 13	MH	iP	09 15 52		USCGS: 9-1/2°N, 70°W, 0 = 09 06 18. Venezuela.
	M	eP	53		
	R	eP	44		
	SH	e(P)	16 02		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Nov. 13	SH	iP	18 44 52		USCGS: 44°N, 148°E, 0 = 18 34 22. Kurile Islands aftershock.
Nov. 14	B	eP	05 16 16		USCGS: 36°S, 102°W, 0 = 05 04 25. South Pacific Ocean.
	MH	iP	13		
	F	eP	07		
	M	e	28		
	R	eP	23		
	SH	eP	27		
Nov. 14	B	eP	05 45 31		USCGS: 44°N, 149°E, 0 = 05 34 53. Kurile Islands aftershock.
		e	42		
	MH	iP	35.5	d	
		i	47.4	c	
	F	iP	45.1	d	
		i	57.1	c	
	M	iP	23.4	d	
		i	35.2	c	
	R	iP	34.3	d	
		i	45.5	c	
	SH	iP	19.8	d	
		i	32.3		
Nov. 14	B	eP	05 53 24		USCGS: 14-1/2°N, 91-1/2°W, h = 150 km. 0 = 05 46 34. Guatemala. Felt at San Salvador.
		e	41		
		ePcP	55 50		
		e	56 08		
	MH	iP	53 19.5	d	
		i	35.5		
		iPcP	55 48.3		
	F	iP	53 05.1	d	
	M	iP	33.0	d	
	R	iP	20.5	d	
		i	37.0		
	SH	iP	37.3	d	
		iPcP	55 54.6		
Nov. 14	F	e(PP)	14 06 52		USCGS: 6°S, 131°E, 0 = 13 48 20. Banda Sea.
Nov. 14	MH	i(P)	15 29 46		USCGS: 13°N, 86°W, h = 100 km., 0 = 15 22 16. Nicaragua. Felt: Managua.
	M	i	30 29		
Nov. 15	B	eP	09 11 24		USCGS: 44°N, 149°E, 0 = 09 00 45. Kurile Islands aftershock.
		i	47		
	MH	eP	29.0	d	PAS: Magnitude 6-1/2 - 6-3/4.
	F	iP	39.7	d	
	M	iP	17.2	d	
	R	iP	27.6	d	
	C	ePN	10 56		
	SH	iP	11 13.3	d	
Nov. 15	SH	eP	23 30 48		USCGS: 44°N, 148°E, 0 = 23 20 18. Kurile Islands aftershock.
Nov. 16	MH	i(P)	04 58 30		USCGS: 44-1/2°N, 149°E, 0 = 04 47 31. Kurile Islands aftershock.
	M	i	07		
		i	14		
	SH	e(P)	57 57		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Nov. 16	SH	eP	06 25 55		USCGS: 44°N, 148-1/2°E, h = 60 km., 0 = 06 15 36. Kurile Islands aftershock.
Nov. 16	B	eP	17 56 08		USCGS: 16°S, 172°W, 0 = 17 44 48. Samoa Islands region.
	BG	eRNEZ	18 17.2		Felt at Apia. PAS: Magnitude 6-1/4.
		MaxH	mu sec 12 28		
	MH	iP	17 56 09.2	c	
	F	eP	13		
	M	iP	20.2	c	
	R	iP	24.9	c	
	SH	iP	19.0	c	
Nov. 16	MH	iP	18 15 15		USCGS: 20°S, 169°E, 0 = 18 02 25. Loyalty Islands.
	F	e	27		
	M	eP	20		
	SH	eP	19		
Nov. 16	MH	ipP	21 59 19.7		USCGS: 28°N, 139-1/2°E, h = 500 km., 0 = 21 46 00. Bonin Islands.
	M	iP	57 15.9		
		ipP	59 11.5		
	R	ipP	21.1		
	SH	ipP	02.1		
Nov. 17	B	eP	09 59 11	c	USCGS: 10-1/2°S, 162-1/2°E, 0 = 09 46 30. Solomon Islands.
	MH	iP	13.6	c	
	F	iP	19.3	c	
	M	eP	16.6	c	
	R	iP	23.1	c	
	SH		16.3	c	
Nov. 17	MH	iP	15 45 05		USCGS: 44-1/2°N, 148-1/2°E, 0 = 15 34 23. Kurile Islands aftershock.
	M	iP	54		
	SH	iP	50		
Nov. 17	SH	e(P)	16 07 16		USCGS: 20-1/2°S, 169°E, 0 = 18 44 49. Loyalty Islands.
Nov. 17	MH	iP	18 57 38		
	F	e	58 19		
	M	eP	57 43		
	SH	iP	43		
Nov. 18	B	eP	07 53 21		USCGS: 50-1/2°N, 179°E, 0 = 07 45 20. Andreanof Islands, Aleutian Islands.
	BG	e(S)E	08 00 11		
		eREZ	06.1		
		mu sec	3.1 18		
		MaxH	5 24		
	MH	iP	07 53 25		
	F	eP	38		
	M	iP	12		
	R	eP	24		
	SH	eP	06		
Nov. 18	M	eP	08 02 52		BCIS: Andreanof Islands aftershock. 0 = 07 54 57.
Nov. 18	B	e(P)	08 04 35		USCGS: 51-1/2°N, 178-1/2°E, 0 = 07 56 31. Andreanof Islands aftershock.
	MH	iP	37		
	F	e	05 03		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Nov. 18 (Cont.)	M	eP	04 26		
	R	eP	41		
	SH	e	13		
Nov. 19	B	iP	01 46 46.0	d	USCGS: 27-1/2°S, 63-1/2°W, h = 600 km., O = 01 35 06. Santiago del Estero Province, Argentina.
	MH	iP	42.7	d	
	F	iP	33.9	d	
	M	eP	49.5	d	
	R	iP	38.8	d	
	C	ePN	47 08		
Nov. 19	B	eP	04 06 45		USCGS: 31°S, 179°W, O = 03 53 56.
	MH	iP	44		
	F	eP	47		
	M	iP	50		
	SH	i	55		
Nov. 19	M	iP	05 29 29		USCGS: 43-1/2°N, 148-1/2°E, O = 05 18 52. Kurile Islands aftershock.
	SH	iP	26		
Nov. 19	B	iP	09 34 25.6	c	USCGS: 44°N, 149°E, h = 60 km., O = 09 23 51. Kurile Islands aftershock.
		ipP	38.0	d	
	MH	iP	29.3	c	
		ipP	42.7	d	
	F	eP	36		
		ipP	52	d	
	M	iP	17.7	c	
		ipP	31.2	c	
	R	iP	27.9	c	
		ipP	40.8	d	
	C	i	08.4	c	
	SH	iP	13.8	c	
		ipP	27.7	c	
Nov. 19	B	iP	15 08 13.1	c	USCGS: 60-1/2°N, 150-1/2°W, h = 60 km., O = 15 02 15. Kenai Peninsula, Alaska.
		ipP	27.1	d	
		ePcP	11 20		
	MH	iP	08 19.4	c	
		ipP	33.1	d	
		iPcP	11 22		
	F	eP	08 30		
	M	eP	07 55.0	d	
		ipP	08 09.4	d	
		i	13.0		
		iPcP	11 15		
	R	eP	08 09		
	C	eP	07 30		
	SH	iP	51.3	c	
		ipP	08 04.9		
Nov. 19	SH	i(P)	18 42 14		USCGS: Fiji Islands. O = 19 30 18.
Nov. 19	M	iP	19 42 21		USCGS: 52°N, 159-1/2°E, O = 05 36 33. Off east coast of Kamchatka.
Nov. 20	B	e(P)	05 46 15		
	MH	e(P)	18		
	F	e(P)	31		
	M	e(P)	08		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Nov. 20 (Cont.)	R	e(P)	18		
	SH	e(P)	45 55		
Nov. 20	M	eP	06 45 01		USCGS: 44°N, 149°E, O = 06 31 20. Kurile Islands aftershock.
Nov. 20	M	e	10 53 17		BCIS: Kurile Islands. O = 10 42.6.
Nov. 20	B	eP	14 28 31.0	c	USCGS: 45°N, 149-1/2°E, h = 60 km., O = 14 18 04. Kurile Islands aftershock.
		epP	43.5	c	
	MH	iP	35.4	c	
		epP	47.5	c	
	F	eP	45.1	c	
		epP	57.7	c	
	M	iP	23.2	c	
		epP	35.8	c	
	R	eP	34.9	c	
		epP	47.4	c	
	SH	eP	19	c	
		ipP	33		
Nov. 20	M	e(P)	17 51 55		BCIS: 49°N, 148-1/2°E, O = 17 41.3. Kurile Islands aftershock.
Nov. 20	M	eP	23 11 10		USCGS: 52°N, 177°W, O = 23 03 40. Andreanof Islands, Aleutian Islands.
	SH	eP	05		
Nov. 21	M	iP	01 25 25		USCGS: 48-1/2°N, 146-1/2°E, h = 400 km., O = 01 41 43. Off coast of Sakhalin.
	SH	iP	22		
Nov. 21	M	eP	08 28 02		BCIS: Fiji Islands region. O = 08 16.2.
Nov. 22	MH	iP''	00 23 26		USCGS: 10-1/2°S, 112-1/2°E, O = 00 04 20. South of Java.
		iPP	25 11		
	M	iP''	23 24		
	R	iP''	27		
	SH	eP''	22		
Nov. 22	F	e(PP)	02 15 41		USCGS: 4°S, 131-1/2°E, O = 01 56 56. Ceram Islands region.
Nov. 22	M	e	09 00 52		
Nov. 23	M	e	18 11 13		
Nov. 23	M	e(P)	18 32 52		
Nov. 23	MH	i(P)	22 27 11		USCGS: 51°N, 175-1/2°W, O = 22 19 23. Andreanof Islands, Aleutian Islands.
	F	e(P)	25		
	R	i(P)	11		
Nov. 23	B	iP	23 45 12.9	c	USCGS: 51-1/2°N, 174-1/2°W, O = 23 37 30. Andreanof Islands, Aleutian Islands.
		e	46 02		
	MH	iP	45 19.5	c	
	F	eP	32		
	R	eP	15		
	SH	eP	45		
Nov. 24	M	e(P)	07 18 52		
Nov. 24	B	iP	22 36 42.9	c	USCGS: 17-1/2°N, 61°W, O = 22 26 56. Leeward Islands. Felt: St. Johns and Antigua.
		e	58		
	MH	iP	39.7	c	
		i	56.3		

Date	Sta.	Phase	Time (GCT) h. m. s.	Ground motion	Remarks
1958					
Nov. 24 (Cont.)	F	eP	37		
	M	iP	40.0	c	
	SH	iP	43.3	c	
Nov. 25	MH	iP	02 36 30.1	c	USCGS: 43°N, 1/2°W, 0 = 02 23 57. Southwestern France. Slight damage in Pyrenees region.
	M	iP	17.0	c	BCIS: 44-1/2°N, 148-1/2°E, 0 = 02 40 38. Kurile Islands aftershock.
Nov. 25	M	eP	02 51 11		
Nov. 25	MH	i(P)	08 37 41		USCGS: 36-1/2°N, 141-1/2°E, 0 = 09 12 54. Near east coast of Honshu, Japan.
Nov. 25	B	e	09 24 39		
	MH	eP	31		
	M	iP	21		
		i	29		
	R	eP	30		
	SH	iP	17		
Nov. 25	SH	i(P)	09 30 20		USCGS: 16-1/2°S, 173°W, 0 = 13 14 10. Tonga Islands region.
Nov. 25	MH	iP	13 25 36		
	M	eP	47		
	SH	eP	46		USCGS: 10-1/2°S, 113°E, 0 = 13 14 40. South of Java.
Nov. 25	MH	iP''	13 33 45		BCIS: Gulf of Alaska. 0 = 14 07.1
	M	eP''	43		
Nov. 25	M	iP	14 12 54		
Nov. 26	M	e(P)	00 20 19		USCGS: 10-1/2°S, 112-1/2°E, 0 = 00 17 09. South of Java.
Nov. 26	MH	iP''	00 36 14		BCIS: Kurile Islands. 0 = 01 47.6.
	M	eP''	13		
Nov. 26	M	eP	01 58 04		
Nov. 26	M	e(P)	03 18 48		USCGS: 45°N, 149°E, 0 = 09 13 37. Kurile Islands aftershock.
Nov. 26	MH	eP	09 24 19		
	F	eP	28		
	M	eP	06		
	R	e(P)	27		
	SH	eP	01		
		e	14		
Nov. 26	MH	e(P'')	11 13 41		BCIS: 2.0°N, 66.5°E, 0 = 10 54 00. Indian Ocean.
	M	e(P'')	30		
	SH	e(P'')	27		
Nov. 26	MH	iP	14 20 17		BCIS: 7-1/4°N, 73-1/2°W, 0 = 14 11 00. Colombia.
	M	iP	24		
	R	eP	13		
	SH	eP	28		
Nov. 26	M	e(P)	22 15 03		BCIS: Probably Arctic Ocean.
Nov. 27	MH	e	07 49 17		BCIS: Probably north Atlantic Ocean.
	F	e(P)	10		
	M	e(P)	48 49		
Nov. 27	B	eP	15 10 30		BCIS: 19°S, 65°W, 0 = 14 58 52. Sucre region, Bolivia.
		e	57		
	MH	iP	25.6		
	M	iP	27.0		
	SH	e	38		
Nov. 28	MH	e	02 26 46		BCIS: Probably Aleutians.
	M	eP	23		

Date	Sta.	Phase	Time (GCT) h. m. s.	Ground motion	Remarks
1958					
Nov. 28	MH	iP	02 36 03		BCIS: Komandorskie Islands.
	M	eP	35 49		0 = 02 27.1.
Nov. 29	MH	e	01 33 51		
	M	eP	15		
Nov. 29	MH	iP	04 59 12		USCGS: 28°S, 177-1/2°W, 0 = 04 46 36. Kermadec Islands region.
		i	59		
	F	e	05 00 00		
	M	e	09		
Nov. 29	MH	iP	13 57 15		BCIS: Well off coast of southern Alaska. 0 = 13 51.1.
	M	iP	56 47		
Nov. 29	MH	iP	14 41 29		
	M	eP	15		
Nov. 29	MH	iP	23 24 40		Tacubaya: 16°33'N, 100°09'W, 0 = 23 18 50. Near coast of southern Mexico.
Nov. 30	B	iP	01 44 25.0	d	USCGS: 32°N, 137-1/2°E, 0 = 01 32 41. South of Honshu, Japan.
	MH	iP	28.8	d	
	F	eP	38	d	
	R	iP	29.8	d	
	C	eN	04		
	SH	iP	16.8	d	
Nov. 30	B	eP	02 07 12		USCGS: 32°N, 137-1/2°E, 0 = 01 55 28. Honshu aftershock.
		e	26		
	MH	iP	16		
	F	eP	26		
	M	eP	08		
	R	iP	18		
	SH	eP	04		
Dec. 1	B	iP	03 23 11.9		PAS: 32°15'N, 115°45'W, 0 = 03 21 18. Sierra Juarez, west of Laguna Salada, Baja California. Magnitude 5.8. Minor damage at Calexico.
		e	19.1		
		eNE	25 04		
		e	21		
		eN	43		
	MH	iP	23 02.1	d	
		i	17.1		
	PA	iP	08.5	d	
	SF	e(P)	15		
		iE	24 50.8		
		i	25 23.5		
	F	iP	22 42.2	d	
		iNZ	23 03.7		
		iNE	11.7		
	M	i(P)	37.9	c	
		i	24 46.5		
	R	i(P)	23 21.0	c	
		i	49.5		
		i	25 36.5		
	C	eN	24 39		
	SH	e(P)	23 48		
		e	26 32		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Dec. 1	B	e	03 52 36		USCGS: 32-1/2°N, 115-1/2°W, 0 = 03 50 06. California-Mexico border aftershock. Felt. PAS: Magnitude 5.0.
	MH	iP	51 52.7		
	F	e	46		
Dec. 1	M	iNEZ	53 02.7		USCGS: Pacific Ocean, about 700 miles southeast of Easter Island. 0 = 04 45 28.
	R	e	52 27		
		i	54 26		
Dec. 1	B	eP	04 57 15.4	d	USCGS: 32-1/2°N, 115-1/2°W, 0 = 06 02 30. California-Mexico border aftershock. Felt. PAS: Magnitude 5.5.
	MH	iP	12.9	c	
	F	iP	06.2	c	
Dec. 1	M	eP	27.4	c	USCGS: 44°N, 149°E, 0 = 01 12 22. Kurile Islands.
	R	iP	22.1	c	
	SH	eP	29		
Dec. 1	B	iP	06 04 26.0		BCIS: 15°S, 174°W, 0 = 07 11 28. Samoa Islands region.
		i	36.2		
		e	44.4		
Dec. 1	MH	iP	14.6	c	40°15'N, 124°41'W, 0 = 17 43 33. Off Punta Gorda, California. Magnitude 4.3. Felt: Humboldt County.
		i	18.9		
	PA	iP	20.1	c	
Dec. 1	F	iP	03 57.7		USCGS: 14°N, 91-1/2°W, h = 100 km., 0 = 12 34 34. Near coast of Guatemala. Felt in western El Salvador.
		iNE	05 24.2		
	M	i	04 58.0	c	
Dec. 1	R	i	06 18.1		USCGS: 11-1/2°N, 86-1/2°W, h = 100 km., 0 = 19 19 23. Near coast of Nicaragua.
		eP	04 34		
	SH	e	06 50		
Dec. 2	B	eP	01 23 18		BCIS: 21-1/2°S, 175-3/4°W, 0 = 06 21 00. Tonga Islands region.
	MH	eP	22		
	F	iP	32		
Dec. 2	M	eP	10		USCGS: 6-1/2°N, 83°W, 0 = 09 33 45. South of Panama. PAS: Magnitude 6 - 6-1/4.
	R	eP	20		
	B	eP	07 22 58		
Dec. 2	MH	iP	23 01		USCGS: 54°N, 169°E, 0 = 00 06 07. Komandorskie Islands region.
	F	eP	02		
	M	eP	07		
Dec. 2	B	iP	17 44 20.5	d	USCGS: 19°N, 121-1/2°E, 0 = 09 48 26. Near coast of Luzon, P.I. Felt at Aparri and Tuguegarao.
		iE	41.0		
		iSE	53.9		
Dec. 2	MH	iP	30.7	d	USCGS: 29°N, 138-1/2°E, h = 550 km., 0 = 16 00 58. South of Honshu, Japan.
		iN	53.3		
	PA	iP	25.9		
Dec. 2		iE	45 07.8		USCGS: 14°N, 91-1/2°W, h = 100 km., 0 = 12 34 34. Near coast of Guatemala. Felt in western El Salvador.
		iN	16.2		
	SF	iP	44 21.3		
Dec. 2		iN	38.7		USCGS: 11-1/2°N, 86-1/2°W, h = 100 km., 0 = 19 19 23. Near coast of Nicaragua.
		iSE	54.5		
	F	iP	52.2		
Dec. 2	M	iPNEZ	11.6		BCIS: 6-1/2°N, 83°W, 0 = 09 33 45. South of Panama. PAS: Magnitude 6 - 6-1/4.
		iN	23.4		
		iSE	39.0		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Dec. 2 (Cont.)	R	eP	32.7		USCGS: 19°N, 121-1/2°E, 0 = 09 48 26. Near coast of Luzon, P.I. Felt at Aparri and Tuguegarao.
		i	59.6		
		iN	45 18.6		
Dec. 2	A	iPNE	43 47.7	NE	USCGS: 14°N, 91-1/2°W, h = 100 km., 0 = 12 34 34. Near coast of Guatemala. Felt in western El Salvador.
		i(S)N	55.9		
	Fe	iPE	44		
Dec. 3	C	iSNE	52		USCGS: 11-1/2°N, 86-1/2°W, h = 100 km., 0 = 19 19 23. Near coast of Nicaragua.
		e(P)N	44 48.5		
	SH	i(S)N	45 41.5	NEc	
Dec. 3	MH	iPNEZ	44 03.2		USCGS: 6-1/2°N, 83°W, 0 = 09 33 45. South of Panama. PAS: Magnitude 6 - 6-1/4.
		iP	10 02 08		
	M	iP	00		
Dec. 3	R	eP	07		USCGS: 14°N, 91-1/2°W, h = 100 km., 0 = 12 34 34. Near coast of Guatemala. Felt in western El Salvador.
	SH	eP	01 56		
	B	eP	16 12 15		
Dec. 3	MH	iP	18		USCGS: 11-1/2°N, 86-1/2°W, h = 100 km., 0 = 19 19 23. Near coast of Nicaragua.
	M	iP	11		
	SH	iP	07		
Dec. 4	B	e(PcP)	12 44 16		BCIS: 21-1/2°S, 175-3/4°W, 0 = 06 21 00. Tonga Islands region.
	MH	eP	41 30		
		i(pP)	44		
Dec. 4	F	e(P)	18		USCGS: 6-1/2°N, 83°W, 0 = 09 33 45. South of Panama. PAS: Magnitude 6 - 6-1/4.
	M	eP	43		
		e(PcP)	44 19		
Dec. 4	R	iP	31		USCGS: 54°N, 169°E, 0 = 00 06 07. Komandorskie Islands region.
	MH	iP	19 27 03		
	F	e	28 23		
Dec. 4	M	eP	27 16		USCGS: 14-1/2°N, 90-1/2°W, 0 = 09 46 10. Guatemala.
	R	eP	01		
	MH	iP	06 33 01		
Dec. 6	F	eP	04		USCGS: 54°N, 169°E, 0 = 00 06 07. Komandorskie Islands region.
	M	eP	11		
	SH	eP	09		
Dec. 6	B	eP	09 42 25	c	USCGS: 14-1/2°N, 90-1/2°W, 0 = 09 46 10. Guatemala.
	BG	eSNE	49 26		
	MH	eLNE	58		
Dec. 6		iP	42 20.0	c	USCGS: 54°N, 169°E, 0 = 00 06 07. Komandorskie Islands region.
		iPP	44 06.6		
	F	iP	42 06.2	c	
Dec. 6	M	eP	31.0	c	USCGS: 14-1/2°N, 90-1/2°W, 0 = 09 46 10. Guatemala.
		i(PP)	44 25		
	R	iP	42 19.5	c	
Dec. 6	SH	eP	35	c	USCGS: 54°N, 169°E, 0 = 00 06 07. Komandorskie Islands region.
	MH	eP	09 53 14		
	F	eP	02		
Dec. 7	M	eP	29		USCGS: 54°N, 169°E, 0 = 00 06 07. Komandorskie Islands region.
	MH	iP	00 15 05		
	F	eNEZ	27		
Dec. 7	M	eP	14 44		USCGS: 54°N, 169°E, 0 = 00 06 07. Komandorskie Islands region.
	SH	eP	39		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Dec. 7	MH	iP	01 22 53		USCGS: 21-1/2°N, 121°E, 0 = 01 09 18. Off south coast of Formosa.
	M	eP	45		
	SH	iP	42		
Dec. 7	MH	iP	01 57 26		USCGS: 21-1/2°N, 121-1/2°E, 0 = 01 43 51. Off south coast of Formosa.
	M	eP	18		
	SH	iP	15		
Dec. 7	MH	e(P)	03 00 03		USCGS: 4°N, 127°E, 0 = 02 45 49. Talaud Islands.
	M	e(P)	04		
	SH	e(P)	02 59 57		
Dec. 7	MH	iP	04 48 48		
	M	eP	58		
	SH	eP	49 00		
Dec. 7	MH	iP	17 47 17	c	USCGS: 18-1/2 N, 105-1/2 W, 0 = 17 42 00. Off coast of Mexico
	F	iP	46 57	c	
	M	eP	31	c	
	R	eP	19		
Dec. 7	B	eP	18 03 24.7		USCGS: 18°N, 105°W, h = 100 km., 0 = 17 58 08. Off coast of Mexico
	BG	eSNE	08 02		Magnitude 5-3/4 - 6.
		eRNZ	10.7		
			R from SSE		
			mu sec		
		PZ	1.0 5		
		SH	4.0 8		
		MaxH	24 20		
	MH	iP	18 03 17.8	c	
	F	iP	04.3	c	
	M	eP	39.1	c	
	R	iP	26.5		
	SH	iP	43.3	c	
Dec. 8	B	eP	03 22 26		USCGS: 13°S, 167°E, h = 200 km., 0 = 03 10 17. New Hebrides Islands.
		epP	23 19		
	MH	iP	22 27.5	c	
		ipP	23 21.8	c	
	F	eP	22 28.4		
	M	eP	32.3	c	
		epP	23 26.8		
	R	eP	22 37.9	c	
		ipP	23 31.5	c	
	SH	eP	22 30.5	c	
Dec. 8	M	eP	11 52 44		USCGS: 44°N, 149°E, 0 = 11 42 10. Kurile Islands.
	SH	eP	39		
Dec. 8	B	eP	12 18 59		USCGS: 44°N, 149-1/2°E, 0 = 12 08 23 Kurile Islands.
	MH	iP	19 04		
	F	eP	13		
	M	eP	18 51		
	R	eP	19 01		
	SH	eP	18 46		
Dec. 9	B	eP	12 30 24		USCGS: 14-1/2°S, 167°E, 0 = 12 17 47 New Hebrides Islands. Felt at Luganville.
	MH	iP	25		
	M	eP	31		
	SH	eP	28		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Dec. 9	MH	e(P)	15 45 07		
	M	e(P)	13		
	SH	e(P)	02		
Dec. 9	B	eP	19 11 34		USCGS: 8-1/2°N, 83°W, 0 = 19 03 05. Costa Rica-Panama border.
	MH	eP	29		
	F	iP	16		
	M	eP	40		
	R	iP	28		
	SH	eP	43		
Dec. 9	B	eP	19 31 07		BCIS: 22°S, 68-1/2°W, h = 200 km., 0 = 19 19 20. Bolivia-Chile border region.
	MH	iP	04		
	F	iP	30 55		
	M	eP	31 14		
	R	eP	06		
	SH	iP	16		
Dec. 10	B	iP	07 15 44.1	c	USCGS: 37°S, 176-1/2°E, h = 300 km., 0 = 07 02 59. Off North Island, New Zealand. Felt.
		epP	17 00		
		ePP	19 24		
	BG	eSNE	26 30	NW	PAS: Magnitude 6-3/4.
		eN	59		
		e(SP)E	27 45		
		e(sS)NE	28 23		
			mu sec		
		PZ	2.4 6		
		PH	1.8 4		
		PPZ	1.8 8		
		PPH	3.1 10		
		SH	8.7 9		
	MH	iP	07 15 44.1	c	
		ipP	17 00.5		
	F	iP	15 49.0		
	M	iP	54.7	c	
		i	16 11.6		
		ipP	17 10.4		
	R	iP	15 56.5	c	
		i	19 54		
	SH	eP	15 52.4	c	
Dec. 10	MH	i(P)	07 32 53		USCGS: 33°N, 139°E, h = 300 km., 0 = 07 21 56. South of Honshu, Japan.
		e(pP)	33 29		
	F	i(pP)	28		
	M	iP	32 47		
		ipP	33 21		
	R	e(P)	32 45		
		i(pP)	33 19		
	SH	e(pP)	20		
Dec. 10	B	e(P)	09 23 05		
	MH	i(P)	09		
	M	i(P)	03		
	SH	i(P)	00		
Dec. 10	SH	eP	14 52 42		USCGS: 5°N, 126°E, h = 200 km., 0 = 14 39 00. Off south coast of Mindanao, P.I.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Dec. 10	B	e(P)	21 18 16		BCIS: Gulf of California foreshock.
	F	e(P)	17 49		0 = 21 13 55.
	R	e(P)	18 23		
	SH	e(P)	41		
Dec. 10	B	eP	21 53 28	c	USCGS: 24-1/2°N, 109°W, 0 = 21 49 20.
	BG	eSNE	56 50		Gulf of California.
		eQNE	57.6		PAS: Magnitude 5-3/4.
			mu sec		
		PZ	1.7 5-1/2		
		PH	1.9 6		
		SH	20 14		
		MaxH	125 19		
	MH	iP	21 53 22.2	c	
	F	eP	01	c	
	M	eP	48	c	
	R	eP	31		
	SH	eP	53	c	
Dec. 10	B	eP	22 14 06		Tacubaya: 24-1/2°N, 109°W,
	MH	eP	00	c	0 = 22 09 54. Gulf of California
	F	eP	13 42		aftershock.
	M	eP	14 24	c	
	R	eP	10		
	SH	eP	28		
Dec. 10	B	eP	22 44 50		BCIS: 24-1/2°N, 109°W, 0 = 22 40 38.
	MH	i	50		Gulf of California aftershock.
	F	eP	27		
	M	eP	45 10		
	R	iP	44 51		
	SH	eP	45 13		
Dec. 10	MH	eP	23 18 39		BCIS: Gulf of California aftershock.
					0 = 23 14 40.
Dec. 10	B	eP	23 18 52		Tacubaya: Gulf of California after-
	MH	iP	47		shock. 0 = 23 14 51.
	F	eP	27		
	M	e(P)	19 10		
	R	iP	18 51		
	SH	eP	19 12		
Dec. 11	MH	eP	06 10 03		BCIS: 45°N, 147-1/2°E, 0 = 05 59 19.
	M	eP	09 47		Kurile Islands.
		i	10 01		
	SH	iP	09 44		
Dec. 11	B	eP	08 26 35		USCGS: 23-1/2°N, 109°W, 0 = 08 22 20.
	BG	eLNE	31.0		Gulf of California.
	MH	iP	26 26		
	F	eP	08		
	M	eP	55		
	R	iP	38		
	SH	eP	27 00		
Dec. 11	B	iPNEZ	09 52 33.2	NEc	37°42'N, 122°34'W, 0 = 09 52 27.
		iSNE	37.4		Near San Francisco. Slight damage
	MH	iP	41.7		in the San Francisco region.
		iSNE	52.5		Magnitude 4.7.

Date	Sta.	Phase	Time(GCT)	Ground motion	Remarks
1958			h. m. s.		
Dec. 11	PA	iPNEZ	35.0	SEc	
(Cont.)	SF	iPNEZ	30.3	NEc	
	F	iP	53 04.5	c	
		i	08.6	c	
		iSN	31.9		
		iE	46.0		
	M	iP	09.9	d	
		iNE	12.4		
		iE	47.0		
	R	iP	12.1	d	
		i	13.4	c	
		iNE	50.7		
	A	e(P)N	33.0		
		e(S)N	54 30.3		
	SH	iP	53 12.3	d	
		i	16.0		
Dec. 11	MH	e(P)	12 47 09		
	M	e(P)	14		
	R	i(P)	10		
	SH	e(P)	15		
Dec. 11	B	eP	15 45 24		USCGS: 30-1/2°N, 140°E, 0 = 15 33 25.
	MH	iP	28		South of Honshu, Japan.
	M	eP	20		
	R	eP	29		
	SH	iP	17		
Dec. 11	B	eP	18 50 10		USCGS: 30°N, 140°E, 0 = 18 38 12.
	MH	iP	15		South of Honshu, Japan.
	F	eP	25		
	M	iP	07		
	R	iP	16		
	SH	iP	03		
Dec. 12	MH	e(P)	02 23 19		BCIS: Probably Samoa Islands.
	M	e(P)	36		
Dec. 13	B	eP''	09 26 37		USCGS: 55-1/2°S, 22°W, 0 = 09 07 30.
	MH	iP''	37		Sandwich Islands region.
	F	eP''	34		
	M	iP''	40		
	R	eP''	38		
Dec. 14	B	eP	07 23 04		USCGS: 35°S, 108-1/2°W, 0 = 07 11 28.
	BG	eSE	32 39		South Pacific Ocean.
		eLE	42.8		PAS: Magnitude 6.
	MH	iP	22 59.6	c	
	F	eP	54	c	
	M	eP	23 16		
	R	iP	10	c	
	SH	iP	17.9	c	
Dec. 14	MH	eP	07 36 52	c	BCIS: South Pacific Ocean aftershock.
	F	eP	47		0 = 07 25.3.
	M	eP	37 09		
	R	iP	04	c	
	SH	iP	12	c	

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Dec. 14	B MH F M R SH	e(P) iP eP eP eP eP	13 31 20 07 30 49 31 35 18 41		USCGS: 23°N, 108°W, 0 = 13 26 51. Gulf of California.
Dec. 15	MH M	iP eP	07 59 28 40		USCGS: 5-1/2°N, 82-1/2°W, 0 = 07 50 48 South of Panama.
Dec. 15	M R SH	i e(P) e(P) i	11 57 08 11 56 47 57 21		USCGS: 44-1/2°N, 149°E, h = 60 km., 0 = 11 46 25. Kurile Islands.
Dec. 15	B MH F M SH	eP iP eP eP iP	12 53 13 13 17 23 22		USCGS: 31°S, 177-1/2°W, 0 = 12 40 27. Kermadec Islands.
Dec. 15	M	i	13 11 09		
Dec. 16	MH M SH	e(P) eP eP	02 43 06 42 53 50		USCGS: 44-1/2°N, 148-1/2°E, 0 = 02 32 24. Kurile Islands.
Dec. 16	B MH F M SH	eP iP iP eP eP	03 31 06 06 11 16 15		USCGS: About 450 miles south of Fiji Islands. 0 = 03 18 38.
Dec. 17	MH F M R SH	eP e eP eP eP	02 32 28 52 14 30 09		USCGS: 55°N, 162°W, Depth slightly greater than normal. 0 = 02 25 55 Off coast of Alaska Peninsula.
Dec. 17	B MH F M R SH	iP iP eP iP iP iP	09 08 31.5 35.2 43 26.4 35.1 22.8	c c c c c c	USCGS: 33°N, 137°E, h = 400 km., 0 = 08 57 10. South of Honshu, Japan. Felt at Tokyo.
Dec. 17	B MH F M R SH	eP iP eP iP iP iP	15 47 05 08.8 16 00.2 08.3 46 56.9	c c c c c c	USCGS: 28-1/2°N, 127-1/2°E, 0 = 15 34 15. Ryukyu Islands region.
Dec. 18	M	eP	01 52 17		USCGS: Loyalty Islands region. h = 100 km., 0 = 01 39 26.
Dec. 18	M SH	eP'' e eP'' i	07 37 03 39 56 37 02 39 53		USCGS: 11°S, 117-1/2°E, 0 = 07 18 05. South of Sumbawa Island.
Dec. 18	B MH F	eP iP eP	19 35 19 20 23	d	USCGS: 16°S, 173°W, 0 = 19 23 53. Tonga Islands region.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Dec. 18 (Cont.)	M R SH	eP eP iP	30 34 29	d d d	
Dec. 19	B MH F M R SH	eP iP e i(P) e eP	10 01 18 17 25 33 42 32		BCIS: 36°S, 102°W, 0 = 09 49 25. About 1,400 km. SSE of Easter Island.
Dec. 19	B MH F M R SH	eP e(pP) iP i(pP) eP eP	11 25 55 26 11 25 51 26 07 25 43 26 02	c c c c c c	USCGS: 16°S, 72°W, h = 100 km., 0 = 11 14 40. Southern Peru.
Dec. 19	MH F M R SH	iP eP eP iP iP	13 23 33 14 56 42 26 05		
Dec. 19	MH F M R	e(P) e(P) e(P) iP	13 23 33 14 56 42		
Dec. 19	MH M R	iP eP e(P)	14 25 29 39 42		USCGS: 5°N, 83°W, 0 = 14 36 46. South of Panama
Dec. 19	B BG	eP eSE eRNEZ	18 44 16 50 13 56		USCGS: 51-1/2°N, 177-1/2°W, 0 = 18 36 23. Andreanof Islands, Aleutian Islands.
			R from WNW		
Dec. 20	MH F M R SH B MH M R SH	iP eP eP eP iP eP iP eP iP eP	18 44 20 26 43 58 44 12 43 54 19 33 34 37 28 37 25		USCGS: 28-1/2°N, 127-1/2°E, 0 = 19 20 43. Ryukyu Islands region.
Dec. 21	B MH F M	eP eP eP iP	05 59 54 56 06 00 02 05 59 43		USCGS: 44-1/2°N, 81°E, 0 = 05 46 26. Western Sinkiang Province, China.
			56 49 40		
Dec. 21	R SH B MH F M SH	eP iP iP iP eP iP iP	13 15 39.1 39.7 44 49.2 47.7	d d c d	USCGS: Fiji Islands region. 0 = 13 03 30.
Dec. 22	B M R SH	eP eP eP eP	02 30 12 16 22 15		USCGS: 6°S, 155°E, 0 = 02 17 14. Solomon Islands.

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Dec. 22	M	iP	02 47 37		USCGS: 66°N, 147°E, 0 = 02 41 29. Central Alaska. Felt: Fairbanks.
Dec. 22	B	iP	08 08 30		USCGS: Tonga Islands region.
	MH	iP	31	d	0 = 07 56 06.
	F	iP	34	d	
	M	eP	41	d	
	SH	iP	39	d	
Dec. 22	M	e	14 47 51		
Dec. 23	MH	iP	03 41 50		USCGS: Tonga Islands region.
	F	iP	54		0 = 03 30 18.
	M	iP	42 01	c	
	SH	iP	41 59	c	
Dec. 23	B	eP	06 36 37	d	USCGS: 2°N, 79°W, 0 = 06 27 15. Near west coast of Colombia.
	MH	iP	33	d	
	F	eP	20		
	M	iP	44		
	R	iP	32	d	
	SH	eP	47		
Dec. 24	MH	iP	20 48 08		USCGS: 18°S, 169°E, 0 = 20 35 20. New Hebrides Islands. Slight damage at Port-Villa. Felt at Epi, Nguna, and Vate.
	F	e(P)	23		
	M	iP	15		
	SH	eP	14		
Dec. 25	MH	iP	06 43 15		BCIS: New Hebrides region.
	F	eP	20		0 = 06 31 04.
	SH	iP	20		
Dec. 25	B	eP	08 18 40	c	USCGS: 5-1/2°S, 151°E, h = 60 km., 0 = 08 05 38. New Britain.
		epP	52		Felt: Rabaul and Pomio.
	BG	eSКСN	29 10		PAS: Magnitude 6-3/4.
		eSNE	27		
		eREZ	47.2		
			R from W		
			mu sec		
		MaxH	25 22		
	MH	iP	08 18 42.6	c	
		ipP	54.6		
		iPP	22 22		
	F	iP	18 48.8	c	
	M	iP	43.4	c	
	R	iP	49.5	c	
		ipP	19 00		
		iS	29 44		
	SH	iP	18 41.0	c	
Dec. 26	SH	e(P)	02 47 43		
		i	48 07		
Dec. 26	MH	iP	06 02 23		USCGS: South of Fiji Islands. h = 600 km., 0 = 05 51 04.
	F	eP	26		
	M	iP	32		
	SH	iP	31		
Dec. 27	M	i(P)	13 40 48		BCIS: Southern Alaska. 0 = 13 35.8.
Dec. 28	MH	iP	05 22 46		USCGS: 9-1/2°N, 70°W, 0 = 05 13 15. Northwestern Venezuela.
	M	eP	47		
	R	eP	40		
	SH	eP	55		

Date	Sta.	Phase	Time (GCT)	Ground motion	Remarks
1958			h. m. s.		
Dec. 28	MH	iP	06 55 57		USCGS: 18-1/2°S, 178°W, h = 550 km., 0 = 06 44 55. Fiji Islands.
	M	iP	56 06		
Dec. 28	M	e(P)	11 57 00		USCGS: 71-1/2°N, 7-1/2°W, 0 = 11 46 56. Jan Mayen Island.
	SH	i	05		
Dec. 29	MH	iP	10 49 52		USCGS: Off coast of Jalisco, Mexico. h = 100 km., 0 = 10 44 50.
	F	eP	37		
	M	eP	50 15		
	R	eP	49 59		
Dec. 30	B	eP	08 49 36		USCGS: 35-1/2°S, 105-1/2°W, 0 = 08 37 56. South Pacific Ocean.
	MH	iP	34.4	c	
	F	iP	28.2	c	PAS: Magnitude 6.
	M	i(P)	54		
	R	iP	44.8	c	
	SH	eP	52		
Dec. 31	B	iP	01 57 27.2	c	USCGS: 23°S, 178-1/2°W, h = 400 km., 0 = 01 45 52. Tonga Islands region.
		epP	58 52		
	MH	iP	57 27.2	d	
		ipP	58 54.0		
	F	eP	57 31		
		epP	58 58		
	M	iP	57 35.5	d	
		ipP	59 02		
	R	iP	57 39.4	d	
		epP	59 05		
	C	iP	57 46	d	
	SH	iP	35.2	d	
		epP	59 03		
Dec. 31	B	eP	10 40 49		USCGS: 46-1/2°N, 154°E, h = 100 km., 0 = 10 30 49. Kurile Islands.
	MH	iP	54		
	F	eP	41 05		
	R	iP	40 53		
	SH	iP	37		