HARVARD UNIVERSITY
SEISMOGRAPH STATION

Bulletin Number 30

January 1, 1948, through June 30, 1948

Part A of Paper Number 109, published under the auspices of the Committee on Experimental Geology and Geophysics and of the Division of Geological Sciences at Harvard University.

STATION CONSTANTS

Latitude: 42° 30' 26" North
Longitude: 71° 33' 45" West
Altitude: 180 meters

INSTRUMENTS

Vertical, North-South, and East-West Benioff long- and short-period variable reluctance seismographs with mass of 112.7 kg., galvanometric registration, and magnetic damping.

Three-component L-B Seismograph with displacement type transducer and ink registration.

Normal Operating Constants

Instrument	T_o sec.	T_g sec.	% Critical Damping	Drum Speed	V_s	Displacement for acceleration of 10^{-6} gravity
ZSP	1.0	0.2	.6	60 mm/min.		15 mm
NSP	1.0	0.2	.6	60 mm/min.		15 mm
ESP	1.0	0.2	.6	60 mm/min.		15 mm
ZLP	1.0	14.0	.6	30 mm/min.		12 mm
NLP	1.0	14.0	.6	30 mm/min.		12 mm
ELP	1.0	14.0	.6	30 mm/min.		12 mm
L-B (Z	1.0	0.1	.5	60 mm/min.	200,000	
L-B (N	1.0	0.1	.5	60 mm/min.	200,000	
L-B (E	1.0	0.1	.5	60 mm/min.	200,000	

NOTE

This station has been listed by the International Seismological Summary as Oak Ridge, because it is located at the Oak Ridge Observatory of Harvard College. Since the world-wide advertisement of the place name Oak Ridge, Tennessee, in connection with manufacture of the Atomic Bomb, this nomenclature has led to confusion. The correct designation of this station is the Harvard Station, because it is operated by Harvard University as the direct successor to the original Harvard Station in Cambridge, Mass., and it is the Town of Harvard, Mass.

MAIL ADDRESS

Harvard Seismograph Station
c/o Prof. L. Don Leet
Harvard, Massachusetts, U.S.A.

L. Don Leet
Seismologist in Charge

Date	Phase	Time(GMT)	Remarks
1943			
Jan. 6	eP	17-30-09	USCGS: H = 17-23.4
	ePP	31-43	16.5° N 98° W
	eLR	45 ca	(Oaxaca, Mexico)
			dist.(meas) = 3850 km
			M = 7 (Pasadena)
Jan. 14	eL	02-56.5	USCGS: H = 02-25.4
			10° S 109° W
			(Pacific Ocean, 1200 miles N of Easter Island)
			dist.(meas) = 6900 km
Jan. 17	eLR	02-57	
Jan. 17	ePS	07-40 ca	USCGS: H = 07-11.3
	eLR	08-06.	15° N 147° E
			(Mariana Islands region)
			depth = 100 km
			dist.(meas) = 12,500 km (112°)
			M = 6-1/2 (Pasadena)
Jan. 24	iP'	18-05-37	USCGS: H = 17-46.6
	iPP	07-26	10° N 122° E
	iPKS	09-14	(off SW coast of Panay,P.I.)
	iSKKS	14-33	17 reported dead, $500,000
	iSKSP	17-20	property damage
	iPPS	18-54	dist.(meas) = 14,000 km(126°)
	iSS	24-30	M = 8-1/4 (Pasadena)
	iPSPS	25-07	
	iSSS	28-22	
	iLQ	36.8	
Jan. 28	eP'	04-06-35	USCGS: H = 03-47.2
	ePP	09-00	10° N 122° E
	e(PKS)	09=54	Aftershock of Jan.24, 18-05
Feb. 9	eP	13-09-45	USCGS: H = 12-58.4
	eS	19-11	36.7° N 27.5° E
	e(S_cS)	49	(Aegean Sea)
	e(SSS)	27-25	dist.(calc) = 3080 km (72.7°)
	eLR	34.5	M = 7-1/4 (Pasadena)
Feb. 11	iP	15-50-22.0	USCGS: H = 15-41.9
	ePP	52-13	64° N 147° W
	eSS	16-00-38	(central Alaska)
	iL	05-40	dist.(meas) = 5200 km
Feb. 18	iP	20-38-54	USCGS: H = 20-29.8
	i	39-09	82° N 43° E
	iS	46-12	dist.(meas) = 5700 km
	eL	57 ca	M = 6-3/4 (Pasadena)
	eM	21-00	

Date	Phase	Time(GMT)	Remarks
1943			
Feb. 28	iP	02-05-54	USCGS: H = 01-58.1
	ePP	07-22	53.5° N 133° W
	eS	12-15	(Queen Charlotte Islands region)
	eSS	15-16	dist.(meas) = 4620 km
	eL	18 ca	M = 6-1/2 (Pasadena)
	iL	19-25	
	i	22-36	
Feb. 28	iP_I	10-58-34.7	dist.(calc) = 110 km
	iS_I	46	H_I = 10-58-16.3
	iP_{II}	10-58-36.7	H_{II}= 10-58-17.0
	iS_{II}	43.2	
Mar. 1	eP'	01-31-42	USCGS: H = 01-12.7
	iPP	34.35	3° S 130.5° E
	ePKS	35-25	(off W coast of New Guinea)
	iSKSP	44-52	dist(meas) = 15,370 km (138.3°)
	ePPS	46-50	
	eSS	52-35	
	eSSS	57.5	
	eL	02-22-ca	
Mar. 3	eLR	10-10 ca	USCGS: H = 09-09.9
			18° N 119° E
			(off NW coast of Luzon, P.I.)
			dist.(meas) = 13,400 km
			M = 6-3/4 (Pasadena)
Mar. 13	iP'	20-21-49	USCGS: H = 20-02.5
	iPP	25-10	1° N 126° E
	eLR	21-10 ca	(Molucca Passage)
			dist.(meas)= 16000 km ca (144°)
			M = 6-3/4 (Pasadena)
Mar. 14	iP	22-06-44	USCGS: H = 21-56.7
	eL	29 ca	17° S 75° W
			(off SW coast of Peru)
			dist.(meas) = 550 km
			M = 6-3/4 (Pasadena)
Mar. 22	i	01-15-50	
		16-12	
		26	
		37	
Mar. 22	iP	21-41-10	USCGS: H = 21-34.5
	e(S)	47-00	11.5° N 86.5° W
	eLR	51.5	(near coast of Nicaragua)
			dist.(meas) = 3800 km (34.2°)
Mar. 22	iP	23-47-57	USCGS: H = 23-41.2
	eLR	00-01 ca	Aftershock of preceding quake

Date	Phase	Time(GMT)	Remarks
1943			
Mar. 23	i	13-23-14	USCGS: H = 18-11.6
	i	24-01	51° N 155° E
			(off S. coast of Kamchatka)
			dist.(meas) = 8300 km
Mar. 23	iP	21-24-44.5	Caribbean type
	iS	28-48	H(calc) = 21-19-43.5
	iIII	43-50	dist.(calc) = 2550 km
Mar. 24	iP'	05-39-03	USCGS: H = 05-19.5
	iPP	42-26	6° S 104° E
	eLR	06-35	(off S coast of Sumatra)
			dist. = 16,400 km
Apr. 6	i	02-47-23.0	
Apr. 12	i	06-21-32	USCGS: H = 06-15.3
			14° N 90.5° W
			(near coast of Guatemala)
			dist. = 3600 km
Apr. 12	e	03-00-43	
	eLR	54 ca	
Apr. 12	i	23-23-12	
	i	20	
Apr. 15	eLR	20-42	
Apr. 17	iP	16-25-20	USCGS: H = 16-11.5
	ePP	29-20	33° N 135.5° E
	eSKS	35-57	(off S coast of Honshu)
	eS	36-51	slightly deeper than usual
	e	38.3	dist.(meas) = 11,400 km
	eLQ	17-00.5	felt widely in S. Japan
	eLR	-03	small tsunami reported
Apr. 20	i	02-17-40	USCGS: H = 02-11.0
	eLR	30.0	14° N 92° W
			(off coast of Guatemala)
			dist.(meas) = 3720 km (34°)
Apr. 21	iP	20-27-11	USCGS: H = 20-22.0
	iS	31-20	19° N 69.5° W
	eLR	34-00	(near NE coast of Dominican
	eIII	47-25	Republic)
			dist.(meas) = 2560 km
			M = 7-1/4 (Pasadena)
Apr. 21	iP	22-07-46	Caribbean Type
	iS	11-.5	H(calc) = 22-02.6
	eIII	28-32	

Date	Phase	Time (GMT)	Remarks
1948			
Apr. 22	iP	00-33-28	USCGS: H = 00-28.3
	iS	37-35	Aftershock of April 21, 20-22.0
	e_{III}	54-19	
Apr. 22	eP	02-46.7	Caribbean
	eS	50.6	H(calc) = 02-41.5
			Too small for accurate reading
Apr. 22	eP	04-18.0	Caribbean
	eS	22.1	H(calc) = 04-12.8
			Too small for accurate reading
Apr. 22	eP	04-34.3	Caribbean
	eS	38.5	H(calc) = 04-29.1
			Too small for accurate reading
Apr. 22	iP	10-53-43	Caribbean: H = 10-43.0
	eS	11-02-31	dist.(Calc) = 7335 km
	eLR	14.4	
Apr. 22	iP	13-14-10	Caribbean: H(calc) = 13-09.0
	eS	18-16	
	e_{III}	34.6	
Apr. 22	eP	18-55.2	Caribbean: H(calc) = 18-50
	eS	59.3	Too small for accurate reading
Apr. 22	eP	19-11.2	Caribbean: H(calc) = 19-06.0
	eS	15.3	Too small for accurate reading
Apr. 23	iP	11-55-26	Caribbean: H(calc) = 11-50.3
	iS	59-32	
	e_{III}	12-16.2	
Apr. 23	eP	12-03-53	Caribbean: H(calc) = 12-03.7
	eS	13-00	
	e_{III}	29.8	
Apr. 26	i	03-17-30	
	i	45	
Apr. 26	eP	09-38-01	USCGS: H = 09-32.4
	eS	42-37	51° N 34° W
	eL	46	(north Atlantic Ocean)
			dist.(meas) = 3000 km (27°)
Apr. 26	eP	11-30.5	Caribbean Aftershock
	eS	34.6	H(calc) = 11-25.3
	e_{III}	51.7	

Date	Phase	Time(GMT)	Remarks
1948			
Apr. 28	i	12-08-15	USCGS: H = 12-01.8
	i	35	11° N 63° W
	i	09-15	(off coast of Venequela)
	i	35	dist.(meas) = 3500 km (31.5°)
	eL	17.0	
Apr. 28	iP	20-48-43	Caribbean Aftershock:
	eS	52-52	H(calc) = 20-43.5
	e_{III}	21-10.0	
Apr. 29	eP	21-48.2	Caribbean: H(calc) = 21-43.0
	eS	52.3	
Apr. 30	iP	04-17-00	Caribbean: H(calc) = 04-11.8
	iS	21-00	
	e_{III}	37-56	
May 7	iP_3	12-03-25	H(calc) = 12-02-36
	iP_2	30	dist.(calc) = 350 km
	iP_1	32.5	(Press reports from
	e	47.5	Montreal, Canada)
	iS_2	04-05	
	iS_1	18	
May 8	i	02-59-03	USCGS: H = 02-46.5
	i	24	46.5° N 151° E
	iPP	03-02-20	(Kurile Islands)
	eLR	35.7	dist.(meas) = 9400 km (84.6°)
May 9	ePP	02-27.4	USCGS: H = 02-08.8
	eLR	03-00 ca	30° N 129° E
			(off S coast of Kyushu,Japan
			dist(meas)= 11,700 km (105.3°)
			M = 6-3/4-7 (Pasadena)
May 9	eLR	09-17	
May 11	iP	09-05-44	USCGS: H = 09-55.7
	ipP	06-01	17° S 71° W (southern Peru)
	eS	13-42	dist(meas) = 6600 km (59.5°)
	esS	14-12	M = 7-1/4-7-1/2 (Pasadena)
	$e(S_cS)$	15-27	
	eLQ	20	
	eLR	25	
May 11	iP	09-43-50	Aftershock ?
	i	44-05	
May 12	iP	01-10-16.5	USCGS: H = 00-56.9
	i	39	38° N 142.5° E
	eS	21-22	(off NE coast of Honshu,)
	ePS	22-33	Japan)
	ePPS	23-27	dist.(meas) = 10,500 km
	eLQ	49.2	M = 6-3/4 (Pasadena)
	eLR	59.5	7 = (Strasbourg)

Date	Phase	Time(GMT)	Remarks
1948			
May 12	i(P)	01-53-26.4	
	i(pP)	47.4	
May 14	iP_1	02-23-43	Local, Westerly, R.I.
	iS_1	56.5	H(calc) = 2-23-24.5
May 14	iP	22-41-28	USCGS: H = 22-31.7
	iS	49-17	54.5° N 161° W
	eSS	53.1	(S of Alaska Peninsula)
	e	53.8	dist.(meas) = 6350 km (56.3°)
	eLR	57.0	
May 17	e	07-45	
	eL	08-00 ca	
May 17	iP	17-58-15	USCGS: H = 17-48.6
	eS	18-06-03	55° N 161° W
	eLR	17.2	(S of Alaska Peninsula)
			dist.(Meas)= 6250 km (56.3°)
May 20	iP	15-44-10	
	i	20	
	i	59	
	i	45-19	
May 23	eL	05-11 ca	USCGS: H = 04-12.5
			18° S 169° E (New Hebrides)
			dist.(meas) = 13,800 km
			M = 6
May 25	eP	07-25-59	USCGS: H = 07-11.3
	ePP	30-13	30° N 99.5° E
	eSKS	36-27	(Sikang Province, China)
	eS	37.6	dist.(meas) = 12,000 km
	e	39-29	M = 7-1/4 (Pasadena and
	eLR	08-15	Strasbourg)
May 25	iP	12-34-02	Caribbean: H(calc)= 12-29-06
	iS	38-01	dist(calc) = 2500 km (22.5°)
	e_{III}	55-09	
May 25	eP	15-20-22	USCGS: H = 05-36.2
	ePP	22-19	43.5° N 127° W
			(off coast of Oregon)
			dist(meas) = 4500 km
			M = 5-1/2-6 (Pasadena)
May 26	iP	09-26-05	USCGS: H = 09-16.7 [Peninsula)
			56° N 156° W (South of Alaska
			dist(meas) = 6000 km

Date	Phase	Time(GMT)	Remarks
1948			
June 27	iP	12-54-09	USCGS: H = 12-43.3
	i	37	17° N 85° W
	iPP	55-22	(off N coast of Honduras)
	iS	59-31	slightly deeper than normal
	eLR	13-03	dist.(meas) = 3100 km
			M = 7 (Pasadena)
June 27	iP	21-43-39	USCGS: H = 21-39.2
	eLR	22-10	56° N 153° W
			(S of Alaska Peninsula)
			dist.(meas) = 6050 km
June 28	iP	07-27-03	USCGS: H = 07-13.5
	iPP	31-03	36° N 136.5° E
	eLR	08-00	(near W coast of Honshu,Japan)
	eLR	08-08.5	dist.(meas) = 10,300 km
			M = 7 (Pasadena)
			7-7-1/4 (Strasbourg)
			casualties and severe property damage near Fukui
June 29	eP'	10-46-45	USCGS: H = 10-28.5
	iP'	47-25	16° S 172° W
	ePKS	49-45	(Samoan Islands region)
	ePS	56-37	dist.(meas) = 12,200 km
	eLR	11-19 ca	M = 7-1/4 (Pasadena)
June 29	iP	16-18-30	USCGS: H = 16-06.5
	eLR	51.5	43° N 47° E
			(Caucasus region, near W shore of Caspian Sea)
			dist.(meas) = 3900 km
June 30	i	10-22-45	
June 30	iP	12-32-07	USCGS: H = 12-21.2
	eLR	52.8	38.5° N 20.5° E
			(Ionian Sea near the W coast of Greece)
			dist.(meas) = 7400 km
			Casualties and property damage reported from Island of Levkas and nearby mainland.
June 30	i	14-44-13	

Harvard, Massachusetts

L. Don Leet
Philip R. Berger

H A R V A R D U N I V E R S I T Y

S E I S M O G R A P H S T A T I O N

Bulletin Number 31

July 1, 1943, through December 31, 1943

Part B of Paper Number 109, published under the auspices of the Committee on Experimental Geology and Geophysics and of the Division of Geological Sciences at Harvard University

STATION CONSTANTS

Latitude: 42° 30' 26" North
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Altitude: 180 meters

INSTRUMENTS

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Three-component L-B Seismograph with displacement type transducer and ink registration.

Normal Operating Constants

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NSP	1.0	0.2	.6	60 mm/min.		15 mm
ESP	1.0	0.2	.6	60 mm/min.		15 mm
ZLP	1.0	14.0	.6	30 mm/min.		12 mm
NLP	1.0	14.0	.6	30 mm/min.		12 mm
ELP	1.0	14.0	.6	30 mm/min.		12 mm
L-B (Z	1.0	0.1	.5	60 mm/min.	200,000	
L-B (N	1.0	0.1	.5	60 mm/min.	200,000	
L-B (E	1.0	0.1	.5	60 mm/min.	200,000	

NOTE

This station has been listed by the International Seismological Summary as Oak Ridge, because it is located at the Oak Ridge Observatory of Harvard College. Since the world-wide advertisement of the place name Oak Ridge, Tennessee, in connection with manufacture of the Atomic Bomb, this nomenclature has led to confusion. The correct designation of this station is the Harvard Station, because it is operated by Harvard University as the direct successor to the original Harvard Station in Cambridge, Mass., and it is the Town of Harvard, Mass.

MAIL ADDRESS

Harvard Seismograph Station
c/o Prof. L. Don Leet
Harvard, Massachusetts, U.S.A.

L. Don Leet
Seismologist in Charge

Date	Phase	Time (GMT)	Remarks
1948			
July 5	i	14-06-37	STL: H = 13-53.4
	eLR	46 ca	30° N 56° E
July 6	i	11-53-35	
	i	53	
	(i)	(57-04)	
	i	58-01	
July 14	eL	23-28 ca	USCGS: H = 22-28.9
			4° S 142° E
			(New Guinea)
			dist(meas) = 14,800 km
			M = 6-1/4-6-1/2 (Pasadena)
July 15	iP	11-10-05	USCGS: H = 11-02.0
	ipP	11-52	10° N 104° W
	eS	16-39	(Pacific Ocean, 550 miles
	esS	20.2	off SW coast of Mexico)
	eL	26 ca	dist(meas) = 4750 km
			M = 6 (Pasadena)
July 16	iPI	07-18-54	USCGS: H_I = 07-12.5
	eLi	29 ca	H_{II} = 07-19.7
			14.5° N 92° W
	iP_{II}	26-09	(near coast of Guatemala)
	iS_{II}	31-23	dist(meas) = 3700 km
	eL_{II}	36 ca	M_I = 6-1/4 (Pasadena)
			M_{II} = 6-3/4 (Pasadena)
July 16	i	13-10-24	
July 16	iP_1	19-10-18.1	H = 19-10-00
	iS_1	31.4	dist. = 108.8 km
	iL_1	35	Woods Hole Test?
July 17	iP	09-37-17	STL: H = 09-30-29
	ipP	34	14.3° N 90.7° W
	eL	48 ca	depth = 70 km ca
July 18	iP'	07-02-46	order of 15,000 km
	ePP	05-18	BCIS: H = 06-43.5
	eLR	53 ca	2° N 121.5° E
July 18	i	22-48-46	
	e	50-35	
	eLR	23-33 ca	
July 19	i	22-33-43	USCGS: H = 22-26.3
	eLR	44 ca	15° N 91.5° W
			(near coast of Guatemala)
			possibly deeper than normal
			dist(meas) = 3650 km
July 20	eLR	01-44 ca	

Date	Phase	Time(GMT)	Remarks
1948			
July 20	iP	11-12-14	USCGS: H = 11-02.4
	i	14-24	17° S 74.5° W
	eS	19-50	(off SW coast of Peru)
	eLR	32.7	depth = 100 km
			dist.(meas) = 6550 km
			M = 7-1/4 (Pasadena)
July 24	iP	06-14-32	USCGS: H = 06-03.2
	eS	23-43	35° N 24° E
	e(LR)	44 ca	(near SW coast of Crete)
			dist.(meas) = 7900 km
			M = 6-1/2 (Pasadena)
July 24	iP_2	11-03-54.7	H = 11-03-31.7
	iS_2	04-11.7	dist.(calc) = 140 km
	i_2	14.6	Block Island Sound ?
July 24		11-03 +	Woods Hole Testing ?
		12-10	
		13-03	
		14-04	
		15-04	
		16-04	
		17-12	
		18-03	
July 26	i	03-40-33	
	i	43	
July 26	i	13-04-56	
July 27	eP	13-30-35	
	iS	31-39	
July 28	e	08-30.2	
	i(L)	41-06	
July 29	iP	00-45-44	STL: H = 00-33-03
	iPP	49-32	43° N 150° E
	eLR	01-54 ca	Probably deep
Aug. 3	eP	09-37-20	
	eLR	50 ca	
Aug. 11	iP	11-42-39	USCGS: H = 10-36.2
	ipP	49	17.5° N 95.5° W
	ePP	43-37	(State of Vera Cruz, S.Mexico)
	i	44-27	depth = 50 km ca
	e(S)	47.7	dist.(meas) = 3600 km
			M = 7 (Pasadena)

Date	Phase	Time(GMT)	Remarks
1948			
Aug. 13	iP	11-25-24	STL: H = 11-18-29
	ipP	34	16° 51' N 93° 47' W
			(felt at Tuxtla, Gutierrez, State of Chiapas, Mexico)
Aug. 19	iP	13-59-24	USCGS: H = 13-50.8
	i	46	62° N 151° W
	i	14-00-47	(south central Alaska)
	e	01-18	depth = 100 km ca
	e(S)	04-32	dist.(meas) = 5500 km
	e	10 ca	M = 6-1/4 (Pasadena)
	eLR	14 ca	
Aug. 19	i	20-06-23	USCGS: H = 19-59.0
	i	07-56	5° N 82° W
	e	15 ca	(near Isle de Malpelo, Columbia)
	eLR	19.2	dist.(meas) = 4300 km
			M = 6-1/2 (Pasadena)
Aug. 25	iP	06-20-18	USCGS: H = 06-09.4
	e(S)	29-14	24° S 63° W
	eLR	45 ca	(Salta Province, Argentina)
			possibly slightly deeper than normal
			M = 7-1/2 (Pasadena)
Aug. 27	iP	16-59-24	USCGS: H = 16-48.4
			25° S 68° W (W.Argentina)
			dist.(meas) = 7500 km (67.5°)
Aug. 29	e	17-56-52	USCGS: H = 17-37.8
	eSS	18-11-56	15.5° S 171° W
	eLR	18-28 ca	(Samoan Islands Region)
			dist.(meas) = 12,000 km
			M = 6-3/4 (Pasadena)
Sept. 1	i	00-13-13	
	i	17-19	
Sept. 2	iP'	23-53-50	USCGS: H = 23-34.7
	ePP	55-35	10° N 125° E
	ePPS	00-07-57	(off N coast of Mindanao,P.I.)
	eLR	45 ca	dist.(meas) = 14,000 km
			M = 7 (Strasbourg)
Sept. 3	iP	09-49-48	USCGS: H = 09-39.9
			18° S 72° W
			(off SW coast of Peru)
			depth = 100 km ca.
			dist.(meas) = 6700 km

Date	Phase	Time(GMT)	Remarks
1948			
Sept. 4	e	15-31-10	BCIS: H = 15-09.0
	e	37-09	35° S 55° E
	eLR	16-13 ca	
Sept. 6	iP	08-21-00	USCGS: H = 08-10.2
	eLR	47 ca	24.5° S 63.5° W
			(NE Chile)
			depth = 100 km ca.
			dist.(meas) = 7400 km
Sept. 6	iP	16-41-49	USCGS: H = 16-35.1
	eLR	49	14° N 93.5° W
			(off coast of Guatemala)
			dist.(meas) = 3800 km
Sept. 7	iP	08-28-17	Trieste:
	e	31-00	36.5° N 74° E
	iPP	32-03	(NW Kashmir, India)
	epPP	51	dist(meas) = 10,700 km (96.3°)
	epS	40-25	depth = 200 km
			H(calc) = 08-15-08
Sept. 8	eP	15-24-11	USCGS: H = 15-09.2
	e	27-48	21° S 174° W
	iP'	28-18	(Tonga Islands Region)
	eS	36-25	Reported felt at Apia and on
	ePS	38-03	Niue Island)
	ePPS	39.2	dist.(meas)= 12,650 km (114°)
	eSS	44.2	M = 8 (Pasadena)
	eG	55	
	eLR	16-02-ca	
Sept. 10	iP	14-01-21	USCGS: H = 13-48.5
	eS	11-45	44° N 146.5° E
	iPPS	12-55	(off east coast of Hokkaido,
	eLR	32	Japan)
			dist.(meas) = 9700 km
			M = 7-1/4 (Pasadena)
Sept. 11	iP	09-03-39	BCIS: H = 08-52-41
	i	04-05	37.2° N 23.2° E
			(felt in Gulf of Corinth
			and at Athens)
			dist(calc) = 7555 km (68°)
Sept. 27	i	21-33-19	
	i	22	
	i	36-02	
Sept. 28	e	21-55-23	USCGS: H = 21-36.6
	i	56-17	23° N 94° E (Burma)
	i	43	dist(meas) = 12,600 km (114°)

Date	Phase	Time(GMT)	Remarks
1948			
Oct. 1	iP	11-39-53	USCGS: H = 11-33.1
	ipP	40-14	17° N 99° W
			(near coast of Mexico,
			reported felt in Guerrero)
			depth = 100 km ca
			dist(meas) = 3350 km
			M = 6-1/2 (Pasadena)
Oct. 5	iP	20-25-01	USCGS: H = 20-12.1
	ePP	28-25	38° N 58° E
	eS	35-27	(near Turkman S.S.R. -
	e	36-40	Iran Border. Heavy casualties
	eSS	41.4	and property damage reported
	eLR	21-00.1	from Ashkabad and Meshed.
			dist(meas) = 9,800 km
			M = 7-1/2 ca.(Pasadena)
			6-1/2-7 (Strasbourg)
Oct. 11	iP	15-13-27.0	Blast:
	iS	33.3	dist(calc) = 51 km
	iL	35	H(calc) = 15-13-13.5
Oct. 11	iP	21-13-23.5	Blast
	iS	29.0	dist(meas) = 44 km
			H(calc) = 21-13-16.0
Oct. 21	iP	04-56-50	USCGS: H = 04-50.2
	eLR	05-06-19	12.5° N 83° W
			(off W coast of Nicaragua)
			dist(meas) = 3700 km
			M = 5-3/4 (Pasadena)
Oct. 21	e	05-22.5	USCGS: H = 05-01.8
	e	32.1	8° S 155° E
	eLR	06-01.2	(Solomon Islands region)
			dist(meas) = 14,100 km
			M = 6-1/2 (Pasadena)
Oct. 27	eL	18-50	USCGS: H = 18-37.3
			17° N 61° W (Lesser Antilles)
			dist.(meas) = 2950 km
Oct. 28	eL	21-35	USCGS: H = 20-45.4
			36° N 141° E
			(near coast of Honshu, Japan)
			slightly deeper than normal
			dist.(meas) = 10,700 km
			M = 6-1/4 (Strasbourg)
			7 (Pasadena)

Date	Phase	Time(GMT)	Remarks
1943			
Oct. 29	eL	11-31	USCGS: H = 11-07.4 5° N 101° W (Pacific Ocean, 800 miles south of Mexico) dist.(meas) = 5100 km
Nov. 1	iP	12-17-15	USCGS: H = 12-05.8 57° N 161° E (Kamchatka) dist.(meas) = 3000 km
	eS	26-29	
	eL	43 ca	
Nov. 3	eL	06-19	USCGS: H = 05-18.9 20.5° S 169.5° E (Loyalty Is.) dist.(meas) = 13,900 M = 7 (Pasadena)
Nov. 4	i	13-29-32	
	i	39	
Nov. 19	iP	01-11-07.5	USCGS: H = 01-04.3 9° N 84° W (near coast of W. Costa Rica) depth = 100 km ca dist.(meas) = 4000 km M = 7-7-1/4 (Pasadena)
	eS	16-30	
	eLR	20.5	
Nov. 20	i	10-22-18	
Nov. 22	iP	09-13-05	USCGS: H = 09-06.8 51° N 180° W (Aleutian Islands) dist.(meas) = 7000 km
	eLR	47.5	
Nov. 26	ePP	05-58-13	USCGS: H = 05-36.5 5° S 145° E (New Guinea) dist.(meas) = 14,600 km M = 6-3/4 ca (Pasadena)
	e	59-03	
	eLR	06-37 ca	
Dec. 4	iP	00-29-47	USCGS: H = 00-22.8 21.5° N 106.5° W (off W coast of Mexico) Several casualties, extensive property damage reported on Maxia Madre Island) dist.(meas) = 4000 km M = 7 (Pasadena)
	iP_cP	32-16	
	eS^c	35-24	
	eLQ	41 ca	
	eLR	44	

Date	Phase	Time (GMT)	Remarks
1948			
Dec. 4	iP	23-50-20	USCGS: H = 23-43-15
	e(S)	56.2	33.9° N 116.4° W
	e	53.3	(S. California, felt extensively with damage at Palm Springs)
	eLQ	00-01.1	dist.(meas) = 4000 km
	eLR	04.5	M = 6-1/4 (Pasadena)
Dec. 5	e	06-45-35	USCGS: H = 06-26.4
	i	43	53° S 158° E
	e	47.3	(SE of New Zealand)
	e	48.4	dist.(meas) = 16,200 km(145.7°)
	e	51.2	M = 7 (Pasadena)
	e	07-05.2	
	eLR	33	
Dec. 7	iP	09-20-32	USCGS: H = 09-15.3
	i	59	13° N 69.5° W
	i	21-03	(near S. coast of Dominican Republic)
	i	13	dist.(meas) = 2700 km
	iS	25-01	
	i_{III}	43-53	
Dec. 10	i	09-53-37	USCGS: H = 09-42.5
			57° N 163° E
			(near E coast of Kamchatka)
			dist.(meas) = 7300 km
Dec. 21	iP	20-13-37	USCGS: H = 20-13.4
	iS	22-54	19° N 69.5° W
	i_{III}	40-07	(Caribbean)
			dist.(meas) = 2700 km
Dec. 23	iP	08-52-26	USCGS: H = 08-41.3
	eS	09-01-32	56° N 166° E
	eSS	06-13	(off E coast of Kamchatka)
	eSSS	09-37	depth = 100 km
	eL	18.5 ca	M = 7 (Pasadena)
	eLR	22 ca	dist.(calc) = 3000 km
Dec. 26	iP	07-23-04	USCGS: H = 07-12.5
	ipP	13	22.5° S 69° W (N.Chile)
			depth = 100 km
			dist.(meas) = 7300 km (65.7°)
Dec. 31	eL	00-09-10	USCGS: H Dec. 30 23-49.9
	iM	10-56	51° N 131° W
			(off coast of British Columbia)
			dist.(meas) = 4500 km
			M = 7 (Pasadena)

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