PER

U. S. DEPARTMENT OF COMMERCE

Jesse H. Jones, Secretary

COAST AND GEODETIC SURVEY

Leo Otis Colbert, Director

SEISMOLOGICAL BULLETIN

MSI - 113

JANUARY, FEBRUARY, MARCH

1943

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National Oceanic and Atmospheric Administration

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
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SEISMOLOGICAL BULLETIN -- JANUARY 1943

MSI-113

INSTRUMENTAL CONSTANTS -- 1943

BALBOA HEIGHTS (Panama Canal Zone) — G. E. Matthew, Chief Hydrographer in charge.

Position: Log cos 9.99467.
Lat. 8°57'39" N, Long. 79°33'29" W.
Elevation about 36m.

Instruments:
WOOD-ANDERSON torsion seismometers, 2 components, NS and EW. M = 1.3 g, T_0 = 0.8 sec., V = 1370. Damping, about 9:1. Photographic recording, 60 mm per minute. Time signal relayed onto seismograms.

BERMUDA (Meteorological Station, St. George's, in cooperation with the Commission on Continental and Oceanic Structures of the I.U.G.G. and the U. S. Coast and Geodetic Survey) — M.A. Macky of the Meteorological Station in charge.

Position: Log cos 9.92661.
Lat. 32° 22.8' N, Long. 64° 41.0' W.
Elevation 41 m.

Instruments:
MILNE-SHAW, one component installed February 3, 1939, second component December 10, 1939. First component oriented N 43.5° E, second component N 45.5° W. M = 454 g, T_0 = 12 sec., V = 250, ⊢ = 20:1. Paper speed 8 mm/min. A check on the correction is provided by time signals relayed onto the seismograms, the beginning of the signal appearing at the even minute or 30 sec. Impulsive upward displacements on the seismograms correspond to ground motions in directions N 43.5° E and N 45.5° W. The beginning of the time break occurs at 58.8 sec. Time mark omitted at even hour.

BOZEMAN (Montana State College and C. & G.S.) — A.J.M. Johnson, Montana State College, in charge.

Position: Log cos 9.84437.
Lat. 45°40'01" N, Long. 111°02'43" W,
Elevation 1490 m.

Instruments:
McCOMB-ROMBERG horizontal pendulums (2). M = 12.7 kg, T_0 = 12 sec., V about 290 (double reflection). Magnetic damping, ⊢ = 15:1. Photographic recording, 15 mm per minute, synchronous drive. Master clock compared daily with radio signals. Radio time signals relayed onto the seismograms by means of a hand key. The beginning of the time signal appears at 30 sec. radio time. Impulsive upward displacements in the seismograms correspond to northward and eastward ground motions. Use beginnings of time breaks. Hour breaks longer than minute breaks.

BURLINGTON (University of Vermont) — E.C. Jacobs, University of Vermont, in charge.

Position: Log cos 9.85339.
Lat. 44°28.8' N, Long. 73° 11.8' W,
Elevation 100 m.

Instruments:
MILNE-SHAW, NE and NW components. T_0 = 12 sec., V = 250, (- = 20:1. Photographic recording, 8 mm per minute. Time corrections obtained by radio. Impulsive upward motions on the seismograms correspond to southwest and northwest ground motions. Use ends of minute breaks. Hour reference break occurs during the first minute.

BUTTE (Montana School of Mines and C.&G.S.) — Daniel Q. Posin, Montana School of Mines, in charge.

Position: Log cos 9.84167.
Lat. 46°00.8' N, Long. 112°33.4' W,
Elevation 1758 m.

Instruments:
WOOD-ANDERSON (vane type) one component only (NS). M = 2g, T_0 = 6.1 sec., V about 540, (- = 13:1. Photographic recording, 15 mm per minute. Time corrections obtained by radio and relayed onto the seismograms by means of a hand key; the beginning of the time signal appears at 30 sec. radio time. Impulsive upward displacement on the seismograms corresponds to southward ground motion. Use beginnings of minute breaks. Hour reference mark occurs during the first minute. Operation suspended from May 1943 to January 1944.

CHICAGO (University of Chicago, U.S. Weather Bureau, and C.&.G.S.) — A.D. Peterson, U.S. Weather Bureau, in charge.

Position: Log cos 9.87251.
Lat. 41°47.3' N, Long. 87°36.0' W,
Elevation 180 m.

Instruments:
McCOMB-ROMBERG horizontal pendulums (2), M = 2.6 kg, T_0 = 10 sec., V = 335 (double reflection), (- = 15:1 (magnetic). Paper speed 15 mm per minute. Tilt-compensating oil coupling. Time signals are relayed onto the seismogram by means of a telegraph key; the beginning of the signal comes at 30 sec. radio time. Impulsive upward displacements on the seismograms correspond to northward and westward ground motions. Use ends of minute breaks. The 59th minute of each hour is omitted.

COLLEGE (University of Alaska and C.& G.S.) — Charles Malich, University of Alaska, in charge.

Position: Log cos 9.62819.
Lat. 64°51.7' N, Long. 147°49.1' W,
Elevation 159 m.

Instruments:
McCOMB-ROMBERG horizontal pendulums (2). M about 11 kg, T_0 = 12 sec., V = 140. Magnetic damping, (- about 10:1. Photographic recording, about 15 mm per minute. Marking clock compared daily with radio time signals. Radio time signals relayed onto the seismograms by means of a hand key; the beginning of the time signal appears at 30 sec. radio time. Impulsive upward displacements on the seismograms correspond to southward and westward ground motions. Use ends of time breaks. Hour breaks longer than minute breaks.

COLUMBIA (University of South Carolina and C.&.G.S.) — S. Taber, University of South Carolina, in charge. C.F. Mercer, Observer.

Position: Log cos 9.91857
Lat. 34°00' N, Long. 81°02' W,
Elevation 94 m.

Instruments:
McCOMB-ROMBERG horizontal pendulums (2). M = 10 kg, T_o = 12 sec., V = 75. Oil damping, (- about 10:1. Photographic recording, 15 mm per minute. Master clock compared daily with radio signals. Radio time signals relayed onto the seismograms by means of a hand key; the beginning of the time signal appears at 30 sec. radio time. Impulsive upward displacements on the seismograms correspond to southward and eastward ground motions. Use beginnings of minute breaks. Hour breaks longer than minute breaks.

HONOLULU (University of Hawaii and C.&G.S.) R.D. Horne, in charge.

Position: Log cos 9.96927.
Lat. 21°18.1' N, Long. 157°49.3' W,
Elevation 25 m.

Instruments:
MILNE-SHAW horizontal pendulums (2). M = 1 pound, T_o = 12 sec., V = 150. Magnetic damping, (- about 20:1. 1" tilt deflects light spots 27 mm. Photographic recording, 30 mm per minute, synchronous drive. Master marking clock compared daily with Mare Island, and time signals relayed automatically onto the seismograms. Impulsive upward displacements on the seismograms correspond to northward and eastward ground motions. Use middle of time breaks. The beginning of the time signal marks (below trace) occur at the 60th sec. radio time. Time marks are omitted at even hour.

The seismograph is equipped with a low magnification attachment (V = 7.5) for recording local shocks. It operates only in case of strong shocks and employs a paper speed of about 7 mm per second.

HUANCAYO, Peru. (Carnegie Institution of Washington, Department of Terrestrial Magnetism) P.G. Ledig, Carnegie Institution of Washington, in charge.

Position: Log cos 9.99033.
Lat. 12°02.7' S, Long. 75°20.4' W,
Elevation 3350 m.

Instruments:
WENNER horizontal pendulums (2). M = about 500 g. Periods: seismometers 10.5 sec., galvanometers 11.9 sec., systems 10.3 sec. Maximum V about 1400. Electromagnetic damping, (- about 20:1. Photographic recording, 16 mm per minute. Impulsive upward displacements on the seismograms correspond to northward and westward ground motions. Master clock compared daily with radio signals. Use ends of time breaks. Hour break occurs during the first minute.
BENIOFF vertical seismograph. Photographic recording, 60 mm per minute. V about 104. T_o = about 1 sec.

LINCOLN (Nebraska Wesleyan University) E.C. Jensen, Nebraska Wesleyan University, in charge.

Position: Log cos 9.87886.
Lat. 40°50.3' N, Long. 96°39.2' W,
Elevation 366 m.

Instruments;
McCOMB-ROMBERG, one component, oriented E-W. M = 2520 g, T_o = 8 sec., V about 200 (double reflection). Magnetic damping: (- about 10:1. Paper speed 15 mm per minute. Radio time signals are recorded on the seismogram at the end of each day's run. A telegraph key is used to relay this time signal beginning at 30 sec. radio time. Impulsive upward displacement

on the seismogram corresponds to eastward ground motion. Use beginnings of time breaks. No characteristic hour marks. Time counted from reference breaks at start of gram.

LOGAN (Utah State Agricultural College) — J.S. Williams, Utah State Agricultural College, in charge.

Position: Log cos 9.87283.
Lat. 41°44.5' N, Long. 111°48.8' W,
Elevation 1455 m.

Instruments:
WOOD-ANDERSON torsion seismometers, 2 components, The "steady" mass is a vane 3 cm long by 1 cm wide. T_0 = 6.0 sec., V ≐ 700 (double reflection). Magnetic damping, ⊢ = 14:1. Photographic recording, 15 mm per minute, synchronous drive. Time obtained by radio. Impulsive upward displacements on the seismograms correspond to southward and eastward ground motions. Use ends of time breaks. Time mark omitted at even hour.

MONTEZUMA, Chile. (Solar Observatory of the Smithsonian Institution of Washington) — Frederick A. Greeley, Smithsonian Institution, in charge.

Position: Log cos 9.96525.
Lat. 22°37' S, Long. 68°50' W,
Elevation 2850 m.

Instruments:
BOSCH-OMORI 25 kg pendulums (2). T_0 = 16 sec., V = 10. Oil damping, ⊢ about 5:1. Smoked paper recording, 15 mm per minute. Impulsive upward displacements on the seismograms correspond to northward and eastward ground motions, the seismograms reading from right to left. Reference marks with times given at beginnings and ends of all records.

NEW KENSINGTON (private station) — Mr. Fred Keller, Sr. Owner-Operator.

Position: Log cos 9.88066
Lat. 40°33'35" N., Long. 79°45'15" W,
Elevation 251 m.

Instruments:
One long-period horizontal seismometer of special design connected to a long-period galvanometer. Recording is on a smoked paper chart through use of a photo-cell pick-up, electronic amplifier and electrical recorder. Seismometer period, 10 seconds. Galvanometer period, 12 seconds. Damping ratio 0.6. Time scale one inch per minute. Orientation is by telechron clock and mercury switch. Time correction less than one second. Publication of data by the Coast and Geodetic Survey began with January 1943.

PHILADELPHIA (The Franklin Institute) — Wagner Schlesinger, Franklin Institute, in charge.

Position: Log cos 9.88452.
Lat. 39°57'32" N, Long. 75°10'30" W,
Elevation 5 m. Foundation, solid rock.

Instruments:
WENNER horizontal pendulums (2). M = about 500 g. Periods: seismometers 9.0 sec., galvanometers 4.3 sec., systems 7.5 sec. Electromagnetic damping; ratios: about 20:1.

Photographic recording, paper speed 20 mm per minute, synchronous drive. Master clock compared with U.S. Naval radio time signals. Time signals relayed onto the seismograms by means of a telegraph key; the beginning of this signal comes at 30 sec. radio time. Impulsive upward displacements on the seismograms correspond to ground motions in directions S 11° W and S 79° E. Use ends of time marks. Hour reference break occurs during the 59th minute.

RAPID CITY (South Dakota) — Prof. Edward L. Tullis, in charge.

Provisional position: Log cos 9.85637
Lat. 44°04.6' N, Long. 103°12.0' W,
Elevation 1045 m.

Instruments:
WOOD-ANDERSON one component oriented to record east-west motion. T_0 is about 5 sec. V about 580. Damping 20:1. Use beginning of time marks to November 15th 1943 and end of time marks thereafter. Upward motion of the trace corresponds to eastward ground motion.

Station began operating in August 1943.

SALT LAKE CITY (University of Utah) — Andrew M. Anderson, University of Utah, in charge.

Position: Log cos 9.87932.
Lat. 40°45'55" N, Long. 111°50'54" W,
Elevation about 1425 m.

Instruments:
McCOMB-ROMBERG two components. M = 2.6 kg, T_0 = 10 sec., V = 335 (double reflection). Magnetic damping ⊢ = about 15:1. Photographic recording. Paper speed 15 mm per minute. Tilt-compensating oil coupling. Radio time signals are relayed onto the seismograms by means of a telegraph key, the mark beginning at 30 sec. radio time. Impulsive upward displacements on the seismograms correspond to northward and westward ground motion. Use beginnings of time breaks. Time mark omitted at even hour.

SAN JUAN, Puerto Rico. (Coast and Geodetic Survey) — Carl A. Ludy, in charge.

Position: Log cos 9.97726.
Lat. 18°22.9' N, Long. 66°07.1' W,
Elevation 80 m.

Instruments:
WENNER horizontal pendulums NS and EW. M = about 500 g. Periods: seismometers 10 sec., galvanometers 15 sec., systems 10½ sec. Maximum V = about 1000. Electromagnetic damping, nearly critical. Photographic recording, 16 mm per minute. Radio time signals are relayed onto the seismograms by means of a telegraph key, the mark beginning at 30 sec. radio time. Impulsive upward displacements on the seismograms correspond to northward and eastward ground motions. Use the beginnings of the minute marks. Hour breaks are longer than the minute breaks.

SEATTLE (University of Washington) — H.A. Coombs, University of Washington, in charge.

Position: Log cos 9.82844.
Lat. 47°39' N, Long. 122°18.5' W,
Elevation 34 m.

Instruments:
BOSCH-OMORI horizontal pendulums (2). M = 25 kg, T_0 = 17 sec., V = 10. Smoked paper recording, 15 mm per minute. Time kept by a rated Howard watch compared weekly with Western Union signals. Oil damping, ⊢ about 20:1, r about 0.2 mm. Impulsive upward displacements on the seismograms correspond to northward and westward ground motions. Reference marks and times shown at beginning and end of records.

SITKA, Alaska. (Coast and Geodetic Survey) H.W. Pinckney, in charge.

Position: Log cos 9.73544.
Lat. 57°03'25" N, Long. 135°19'28" W,
Elevation 19 m.

Instruments:
WENNER horizontal pendulums (2). M = about 500 g. Periods: seismometers 10.0 sec., galvanometers 3.9 sec., systems 7.0 sec. Maximum V about 1000. Electromagnetic damping, ⊢ about 20:1. Photographic recording, 16 mm per minute. Master clock compared once or twice a day with radio signals. Time signals relayed directly onto the seismograms; this mark begins at 30 sec. radio time. Impulsive upward displacements on the seismograms correspond to northward and westward ground motions. Use beginnings of time breaks. Hour breaks are longer than minute breaks.

TUCSON (Coast and Geodetic Survey) J.H. Nelson, in charge.

Position: Log cos 9.92725.
Lat. 32°14.8' N, Long. 110°50.1' W,
Elevation 770 m.

Instruments:
WOOD-ANDERSON torsion seismometers (2). M = 2.3 g, T_0 = 10 sec., V = 430. Magnetic damping, ⊢ about 30:1. Photographic recording, 30 mm per minute, synchronous drive. Master marking clock compared twice daily with Annapolis. Time signal relayed onto the seismograms by means of a telegraph key; the beginning of this signal appears at 30 sec. radio time. Impulsive upward displacements on the seismograms correspond to southward and eastward ground motions. Use beginnings of minute breaks. Hour breaks are longer than minute breaks.
BENIOFF vertical, maximum magnification about 104. Seismometer: Period = 0.98 sec., damping constant, h = 0.83. Short-period galvanometer: Period = 0.236 sec., damping constant, h = 1.0, time scale = 60 mm per minute. Long-period galvanometer: Period = 74 sec., damping constant, h = 1.0, time scale = 30 mm per minute. Upward motion on the seismograms corresponds to upward ground motion. Use beginnings of minute breaks.

UKIAH (Coast and Geodetic Survey International Latitude Observatory) H.G. Wrocklage, in charge.

Position: Log cos 9.88968.
Lat. 39°08' N, Long. 123°13' W,
Elevation 199 m.

Instruments:
McCOMB-ROMBERG horizontal pendulums (2). M = 10 kg, T_0 = 12 sec., V = 75. Oil damping, ⊢ about 10:1. Photographic recording, 15 mm per minute. Master clock compared daily or oftener with radio signals. Radio time signals are relayed onto the seismograms by means of a telegraph key, the mark beginning at 30 sec. radio time. Impulsive upward displacements on the seismograms correspond to ground motions in the directions N 40° W and N 50° E. Use beginnings of time breaks. Hour breaks occur during the 59th minute.

GREENLAND STATIONS

As a matter of convenience, the Ivigtut and Scoresbysund data have been incorporated with others in the regular reports. The records now on file at the Survey are considered to be on loan, subject to proper disposal at the cessation of hostilities.

IVIGTUT (Geodaetisk Institut, Copenhagen, Denmark) Johannes Nielsen, in charge.

Position: Log cos 9.68282.
Lat. 61°12' N, Long. 48°11' W,
Elevation 20 m.

Instruments:
WIECHERT 1000 kg horizontal and 1300 kg vertical. Smoked paper recording, 15 mm per minute.

Component	T sec.	(-	r mm	V
N	9.0	3.6	0.2	175
E	9.2	4.3	0.3	210
Z	5.4	4.4	0.1	195

The daily time correction, given in the "Stand" column under "Koincidens" in the "Urjournal," is directly applicable, without index correction, to readings referred to the beginnings of the minute marks.

SCORESBYSUND (Geodaetisk Institut, Copenhagen, Denmark) S.K. Espensen, in charge.

Position: Log cos 9.52385.
Lat. 70°29' N, Long. 21°57' W,
Elevation 69 m.

Instruments:
GALITZIN-WILIP photographic recording, 15 mm per minute.

Component	l cm	A_1 cm	T_1	u^2	T sec.	K
N	12.0	100	11.8	0.02	12.0	99
E	12.0	100	11.9	-0.01	11.9	102
Z	14.9	100	10.0	0.1	8	110

Time correction obtained daily by means of Nauen scientific (vernier) time signals. The time correction is entered as "tn-Kn" or "Stand" on the "Rapport" form. The part of the minute break to which the time correction applies depends on the chronometer. Chronometer 2813 starts the minute break at 59 sec. and ends it at 01 sec. so that the middle of the break may be used without index correction. Chronometer 2663 starts the break at 58.5 sec. and ends it at 00.5 sec. so that the middle of the break may be used with index correction -0.5 sec. Impulsive upward motions on the seismograms correspond to upward, northward, and eastward ground motions.

NOTATION USED IN INSTRUMENTAL REPORTS OF THE COAST AND GEODETIC SURVEY

Wave groups or phases:

P — Normal first preliminary tremors; longitudinal waves that have passed below the continental layer.

pP — P wave reflected from the surface in epicentral region.

sP — S wave reflected as P wave at the surface in the epicentral region.

P'	Compressional-rarefactional waves which penetrate the core, with the exception of the P'2 waves.
P'2	The first compressional-rarefactional waves or rays, which traverse the core immediately after grazing. The epicentral distances of their points of emergence decrease as the rays dip lower at the earthquake focus. This reversal of the usual order of emergence stops at about 144°. Thereafter, the epicentral distances increase with increasing dip of the rays at the focus, and the waves are known as P'.
PP or PR_1	Longitudinal waves reflected once at the earth's surface.
pPP	P reflected in epicentral region with another reflection midway between the first reflection point and the station.
PPP or PR_2	Longitudinal waves reflected twice at the earth's surface. (Three reflections may occasionally be found).
PcP	Longitudinal waves reflected from the outer surface of the earth's core.
S	Normal second preliminary tremors; transverse waves that have passed below the continental layer.
sS	S wave reflected once in epicentral region.
PS	Waves transformed from longitudinal to transverse oscillation, or vice versa, through one reflection at the earth's surface, being either PS or SP in true character.
PPS	Waves which have traversed two legs of their twice reflected paths as longitudinal and one leg as transverse waves, being PPS, PSP, or SPP in true character since these all have the same travel time.
SS or SR_1	Normal transverse waves reflected once at the earth's surface.
sSS	S wave reflected once in epicentral region with another reflection midway between the first reflection point and the recording station.
SSS or SR_2	Normal transverse waves reflected twice at the earth's surface. (Three reflections may occasionally be found).
ScS	Normal transverse waves reflected from the outer surface of the earth's core.
SKP or ScPcP	Waves which start with transverse vibration but on refraction into the core are changed to longitudinal, or which start as longitudinal and are refracted out as transverse.
SKS or ScPcS	Waves which traverse the mantle at both ends with transverse vibration but are refracted through the core with longitudinal oscillation.
SKKS or ScPcPcS	Waves which traverse the mantle with transverse vibration, are refracted through the core as longitudinal waves, and are reflected internally on its farther side.
L	See Jeffreys' nomenclature on the following page.

Mohorovicic's Nomenclature

$\overline{P}$ Individual or upper first preliminary tremors whose path lies entirely in the continental or upper layer.

$\overline{S}$ Individual or upper second preliminary tremors whose path lies entirely in the continental or upper layer.

$R_i\overline{S}$ Upper second preliminary tremors reflected from the lower boundary of the continental layer.

$R_S\overline{S}$ Upper second preliminary tremors reflected from the upper surface of the continental layer.

$R_{S2}\overline{S}$ Upper second preliminary tremors reflected two times from the upper surface of the continental layer.

Jeffreys' Nomenclature

Pg Same as $\overline{P}$ of Mohorovicic. The path is entirely in the upper or continental layer.

Sg Same as $\overline{S}$ of Mohorovicic. The path is entirely in the upper or continental layer.

P* Upper first preliminary tremor whose path lies along the top of the intermediate layer except for short distances in the surface layer.

S* Upper second preliminary tremor whose path lies along the top of the intermediate layer except for short distances in the surface layer.

L Long waves, unidentified, at the beginning of the surface phase or "main phase."

Lq Surface shear (Love) waves in which the earth particles oscillate in the horizontal plane normal to the direction of propagation.

Lr Surface (Rayleigh) waves in which the earth particles describe an ellipse in a vertical plane in the line of propagation.

M Waves of maximum amplitude in the main phase.

F End of discernible movement.

Nature of the motion:

i Impulsive and sharply defined beginning of a phase which can be accurately timed.

e Poorly defined emergence of a phase.

A Either (a) amplitude of earth motion measured from the position of equilibrium in microns (1 micron = 1/1000 mm), + toward the north, east, or zenith, - toward the south, west, or nadir; or (b), when so marked, the trace amplitude or half-range of movement of the pen on the record measured from the median line in millimeters.

A_E E-W component of A.

A_N N-S component of A.

A_Z Vertical component of A.

T Period of wave.

Deduced data.

H Time of earthquake at hypocenter — a general designation.

H_{S-P} Time of earthquake at hypocenter determined with S-P data.

H^{80} The superscript indicates the depth curves used.

H_{P-H} Hypocentral time assumed for best arc intersection using P-H data.

Constants of seismograph:

T_0 Free or undamped period of the seismograph pendulum or of the system in case of galvanometric recording.

V Magnification.

ϵ Ratio of successive damped amplitudes.

r Half width of zone within which friction will completely arrest the recording pen.

Travel-time tables:

Travel-time tables by Gutenberg and Richter for depths up to 800 km are used in all teleseismic work done by the U.S. Coast and Geodetic Survey.

The instrumental results of the following stations are tabulated in this report.

**Balboa Heights, C.Z.
(The Panama Canal)
*Bermuda.
(Meteorological Stations, St. George's and International Union, Geodesy and Geophysics)
*Boulder City, Nevada.
(Bureau of Reclamation, National Park Service)
*Bozeman, Montana.
(Montana State College)
**Burlington, Vermont.
(University of Vermont)
*Butte, Montana.
(Montana School of Mines
*Chicago, Illinois.
(University of Chicago and U.S. Weather Bureau)
*College, Alaska.
(University of Alaska)
*Columbia, South Carolina.
(University of South Carolina)
*Honolulu, T. H.
(University of Hawaii)
**Huancayo, Peru.
(Carnegie Institution of Washington)
**Ivigtut, Greenland.
(Geodaetisk Institut, Copenhagen, Denmark)
*Lincoln, Nebraska.
(Nebraska Wesleyan University)
**Logan, Utah.
(Utah State Agricultural College)
**Montezuma, Chile.
(Smithsonian Institution)
**New Kensington, Pennsylvania.
(Private station)
**Philadelphia, Pennsylvania.
(The Franklin Institute)
*Rapid City, South Dakota.
(S.D. State School of Mines)
*Salt Lake City, Utah.
(University of Utah)
San Juan, Puerto Rico.
**Scoresbysund, Greenland.
(Geodaetisk Institut, Copenhagen, Denmark)
**Seattle, Washington.
(University of Washington)
Sitka, Alaska.
Tucson, Arizona.
Ukiah, California.
(International Latitude Observatory)

*Indicates a station maintained by a local institution in cooperation with the Coast and Geodetic Survey.
**Indicates a station operating on an independent basis.
All seismogram interpretations are made or revised at Washington except those for Balboa.
Minor quakes are listed at the end of the month.

NOTES ON STATION RECORDS

Boulder City, Nevada: The results for Boulder City and auxiliary stations at Overton and Pierce Ferry are not published but the data are used in locating epicenters.

Greenland Stations: As a temporary measure and with the full approval of the Greenland authorities and the cooperation of the Greenland Delegation, the Coast and Geodetic Survey aided in the maintenance of these stations and in the interpretation and publication of the data.

PROVISIONAL EPICENTERS

Date 1943	(GCT)	Latitude	Longitude	Region, Focal Depth and Remarks.
Jan.	h m s	° '	° '	
2	14 11 18	33 25 N	116 25 W	By Pasadena, San Jacinto fault near Santa Rosa Mt. Felt in San Diego and Riverside counties. Focal depth normal.
8	0 24 03	32 58 N	116 00 W	By Pasadena. Near Borego Valley. Focal depth normal.
10	9 49.7	19 N	108 W	Off west coast of Mexico.
14	21 32 38	45.3 N	69.6 W	By N.E.S.A. 20 mi. west of Dover-Foxcroft, Maine. Maximum intensity VI (RF) Focal depth normal.
16	11 50 15	37.7 N	113.0 W	Southwestern Utah. Felt at Cedar City.
17	17 02.2	24 N	113 W	Off west coast of lower California.
23	13 30 01	18.8 N	61.0 W	Atlantic Ocean. East of Puerto Rico.
24	9 26 44	14.9 N	91.0 W	Near coast of Guatemala.
24	20 41:8	14½ N	91 W	do
27	2 45.2	51 N	179½ W	Aleutian Islands. Possibly slightly deeper than normal.
30	5 33 05	2.1 S	80.0 W	Damage at Guayaquil, Ecuador. Depth approximately 100 km.
31	8 28 57	17.8 N	93.7 W	Near west coast of Mexico. Depth approximately 100 km.

SEISMOGRAM INTERPRETATIONS

Date and Station	Phase	(GCT) h m s
January 1		
Tucson	iP	18 27 54
	i	29 56
	(e)	37 29
	F	18.7
January 2		
Huancayo	eP	11 37 27
	e	41 24
	eS	41 31
	eL	44 09
	F	13.0
January 2, H_{P-H} = 14h 11m 18s. By Pasadena 33°25' N. 116°25' W. San Jacinto fault near Santa Rosa Mountain. Felt in San Diego and Riverside counties. Depth normal.		
Tucson	eP	14 12 31
	e	12 51
	i	13 36
	e(L)	14 13
	F	14.4
January 3		
Tucson	iP	3 06 44
	F	3.2
San Juan	e	18 34 06
	eL	38 26
	F	19.0
January 5		
Huancayo	eS	13 57 06
	e	14 01 17
	eL	10 02
	F	14.4
January 5		
Balboa Heights	eP	20 05 43
	iS	06 28
	F	20 09
January 6		
Philadelphia	e	2 54 44
	e	3 02 18
	e	05 05
	e	28 48
	eL	31 40
	F	4.3
January 6, Possibly near northwest coast of Peru.		
January 6, continued		
Huancayo	eP	9 53 12
	iP	53 15
	i	53 35
	iS	55 05
	iL	55 43
	F	12.1
San Juan	eP	9 56 51
	iS	10 01 49
	eL	02 45
	F	11.1
Salt Lake City	eL	10 18 20
	F	10.6
Tucson	iP	9 59 38
	e(S)	10 06 38
	eL	14 57
	F	10.6
January 7	eP	4 44 24
	i	45 00
Huancayo	i	45 07
	iL	45 12
	F	5.1
Philadelphia	eL	5 20.8
	F	6.2
January 7		
Philadelphia	e	6 22 14
	eL	26.7
	F	7.2
January 8, H_{P-H} = 0h 24m 03s By Pasadena 32° 58' N. 116°00' W. Near Borego Valley Focal depth normal.		
Tucson	iP	0 25 26
	e	26 30
	eL	27 25
	F	0.6
January 8		
Huancayo	iP	9 35 18
	e	35 43
	iS	38 00
	eL	38 49
	F	9.7
January 8		
Tucson	iP	20 10 57
	e	13 37
	e	14 40
	e(L)	23 44
	F	20.4

Date and Station	Phase	(GCT) h m s
January 8		
Tucson	iP	20 10 55
	e	13 37
	e	14 40
	e(L)	23 44
	F	20.4
January 9		
Tucson	iP	18 45 13
	i	47 18
	e	19 01 25
	F	Lost
January 10		
Logan	eP	2 54 56
	e	55 51
	e	56 27
	eS	58 53
	eL	3 01 01
	F	3.4
January 10		
Logan	eL	8 40 59
	F	9.0
January 10, H_{P-H} = 9h 49.7m. Epicenter in region of 19°N 108°W. Off west coast of Mexico.		
Bozeman	e	10 00 32
	eL	02 34
	F	10.3
Butte	eL	10 05 33
	F	10.3
Chicago	(e)	9 55 34
	e	56 45
	e	10 01 17
	eL	04 51
	F	10.4
Columbia	e	10 01 35
	eL	06 07
	F	10.4
Des Moines	eL	10 03 03
	F	10.2
Huancayo	e	10 04 56
	eL	08 10
	F	10.5
Philadelphia	eL	10 08 44
	F	10.4
Salt Lake City	eP	9 54 30
	e	55 11
	e	57 55

Date and Station	Phase	(GCT) h m s
January 10, continued		
Salt Lake City, continued		
	e(S)	9 58 22
	eL	59 11
	F	10.4
Tucson	iP	9 52 48
	i	52 58
	i	53 01
	i	54 26
	e	55 45
	eL	56 04
	F	10.5
Ukiah	eL	10 03 20
	F	10.2
January 10		
Bozeman	e	15 40 37
	eL	42 27
	F	16.0
Butte	e	15 43 41
	F	16.0
Huancayo	eL	15 38 26
	F	16.0
Salt Lake City	eL	15 39 57
	F	16.1
Tucson	iP	15 30 06
	i	31 17
	e	31 28
	e	31 55
	e	33 48
	eL	35 53
	F	16.0
January 11		
Bozeman	e	20 33 46
	eL	41 39
	F	21.2
College	e	20 19 25
	eL	32 47
	F	21.3
Huancayo	eL	20 54 55
	F	21.7
Philadelphia	e	20 14 33
	e	16 31
	eL	43.0
	F	21.3
Salt Lake City	(e)	19 40 35
	e	42 57
	eL	51 37
	F	20.2

Date and Station	Phase	(GCT) h m s
January 11, continued		
Scoresbysund	e	19 59 48
	e	20 02 50
	e	07 30
	e	09 59
	eL	13 58
	F	21.0
Tucson	e	20 08 53
	i(P')	09 21
	e	12 28
	e	19 56
	eL	49 30
	F	21.4
Ukiah	eL	20 54 20
	F	21.2
January 13		
Huancayo	eL	8 25 24
	F	9.2
January 13		
Balboa Heights	eP	22 54 46
	eS	55 19
	F	22 57
January 13		
Balboa Heights	eP	23 37 41
	eS	38 14
	F	23 42
January 14		
Huancayo	e	9 27 01
	e	30 16
	eL	30 34
	F	9.8
January 14		
Huancayo	eL	14 43 44
	F	15.0
January 14		
Des Moines	e	17 43 13
	e	44 11
	F	17 47
January 14		
College	eL	20 12 07
	F	20.5
January 14		
Huancayo	eL	20 25 20
	F	20.6
January 14, H_{P-H} = 21h 32m 38s. By N.E.S.A. 45.3°N, 69.6°W. 20 miles west of Dover-Foxcroft, Maine. Maximum intensity VI, (Rossi-Forel). Focal depth normal.		

Date and Station	Phase	(GCT) h m s
January 14, continued		
Burlington	iS	21 33 36
	F	21 35
New Kensington	e	21 36.8
	eL	37.7
	F	21.7
Philadelphia	e	21 34 45
	iS	35 24
	e	35 49
	i	36 09
	iL	36 15
	F	21 42
January 16, H_{P-H} = 11h 50m 15s. Epicenter in region 37.7°N, 113.0°W. Southwestern Utah. Felt at Cedar City.		
Tucson	e(P)	11 52 03
	e	53 02
	i	53 19
	iL	53 32
	F	11.9
January 17, H_{P-H} = 17h 02.2m. Epicenter in the region 24°N, 113°W. Off west coast of lower California.		
Bozeman	eL	17 13 16
	F	17.4
Butte	eL	17 15 04
	F	17.4
Chicago	eL	17 16 29
	F	17.4
Logan	eP	17 06 20
	eS	08 58
	eL	11 40
	F	17.4
New Kensington	eL	17 19.2
	F	18.4
Philadelphia	e	17 19 40
	eL	20 35
	F	17.6
Salt Lake City	eP	17 06 09
	e	10 05
	eL	11 21
	F	17.5
Tucson	iP	17 04 13
	i	04 33
	e	05 38
	iS	05 40
	F	17.5

Date and Station	Phase	(GCT) h m s
January 19		
Tucson	eL	5 52 39
	F	6.1
January 20		
Huancayo	eL	7 52 59
	F	8.0
January 20		
Tucson	iP	3 41 01
	i	43 15
	e	44 17
	F	3.8
January 22		
Huancayo	eP	23 50 18
	eS	51 59
	eL	52 34
	F	24.0
January 23		
Huancayo	eL	9 12 36
	F	9.5
January 23, H_{P-H} = 13h 30m 01s. Epicenter in region 18.8°N, 61.0°W. Atlantic Ocean. East of Puerto Rico.		
Bermuda	e(P)	13 33 22
	iS	35 24
	iL	36 58
	F	14.7
Bozeman	eL	13 52 46
	F	14.3
Chicago	e	13 40 36
	eL	45 22
	F	14.2
College	eL	14 04 39
	F	14.4
Huancayo	eP	13 36 48
	e	37 05
	e	37 43
	iS	42 14
	eL	44 48
	F	14.3
Philadelphia	iP	13 35 20
	eS	39 33
	iS	39 39
	eL	42 53
	F	14.1
Salt Lake City	e(P)	13 38 44
	e	42 12
	i	51 41
	eL	56 08
	F	14.3

Date and Station	Phase	(GCT) h m s
January 23, continued		
San Juan	iP	13 31 15
	i	31 25
	i	31 59
	iS	32 08
	iL	32 25
	F	15.0
Sitka	eL	14 02 00
	F	14.4
Tucson	iP	13 38 32
	e	40 18
	e	41 31
	e	44 17
	eL	56 25
	F	14.4
January 24		
Huancayo	eP	4 18 23
	iP	18 25
	e	18 53
	eS	21 36
	eL	23 26
	F	5.3
January 24		
Logan	i	6 57 05
	F	6.59
January 24, H_{P-H} = 9h 26m 44s. Epicenter in region 14.9°N, 91.0°W. Near coast of Guatemala.		
Balboa Heights	e	9 29 44
	F	9 34
Bermuda	e	9 32 48
	e	33 35
	e	37 39
	eL	38 49
	F	10.1
Columbia	eP	9 31 30
	e	32 06
	eS	35 14
	eL	36 23
	F	9.9
Huancayo	eP	9 33 01
	e	33 43
	iS	38 04
	eL	40 30
	F	10.1
Philadelphia	iP	9 32 43
	e	33 27
	eS	37 16
	e	38 45

Date and Station	Phase	(GCT) h m s
January 24, continued		
Philadelphia, continued		
	eL	9 40 34
	F	9.9
San Juan	eP	9 32 02
	e	32 54
	i	33 01
	F	10.3
Tucson	iP	9 32 12
	iPP	32 51
	i	33 12
	e	35 38
	eL	37 33
	F	9.8
January 24, H_{P-H} = 20h 41.8m. Epicenter in the region of 14½°N. 91°W. Near coast of Guatemala.		
Balboa Heights	e	20 44 35
	F	20 51
Bermuda	eP	20 47 57
	e	48 58
	eS	52 57
	L	54 11
	F	21.9
Bozeman	e	20 50 10
	e	51 19
	eS	54 24
	eL	57 27
	F	22.0
Burlington	iP	20 48 43
	e	49 41
	iS	53 56
	L	56 05
	F	21.8
Butte	eP	20 48 55
	e	50 32
	e	55 03
	eL	57 53
	F	21.4
Chicago	eP	20 47 38
	i	47 49
	e	49 33
	e	51 53
	eS	52 15
	e	52 33
	eL	53 38
	F	21.5
College	eL	21 13 24
	F	21.8
Columbia	eP	20 46 42
	e	47 27
	eS	50 45

Date and Station	Phase	(GCT) h m s
January 24, continued		
Columbia, continued		
	eL	20 52 24
	F	21.7
Huancayo	eP	20 47 57
	e	52 41
	eS	53 06
	eL	54 39
	F	22.2
Lincoln	e	20 49 48
	eL	52 26
	F	21.4
Logan	eP	20 48 22
	e	49 33
	e	50 09
	e	53 27
	iS	53 41
	eL	55 29
	F	20.8
New Kensington	eP	20 47.9
	e	48.6
	e	52.3
	e	53.3
	eL	54.4
	F	22.3
Philadelphia	eP	20 48 03
	iP	48 06
	eS	52 41
	iS	52 46
	e	53 30
	eL	54 15
	F	21.8
Salt Lake City	eP	20 48 18
	eS	53 18
	e	54 56
	eL	57 43
	F	21.6
San Juan	eP	20 47 03
	e	47 49
	eS	51 32
	eL	54 37
	F	21.9
Scoresbysund	e	21 02 45
	e	04 32
	e	10 03
	eL	16 03
	F	22.1
Seattle	e	20 49 37
	e	59 07
	e	59 37
	eL	21 03 37
	F	21.6
Sitka	eL	20 12 09
	F	20.5

Date and Station	Phase	(GCT) h m s
January 24, continued		
Tucson	iP	20 47 17
	i	50 24
	iS	51 33
	i	51 46
	eL	52 07
	F	22.2
Ukiah	eP	20 49 04
	e	50 23
	eS	54 54
	eL	57 50
	F	21.6
January 25		
Balboa Heights	iP	4 00 04
	i	00 10
	iS	00 48
	F	4 06
Huancayo	e	4 04 54
	eL	07 50
	F	4.3
January 25		
College	e	17 44 31
	F	17.9
January 25		
Huancayo	e	22 54 27
	eL	56 42
	F	23.0
January 26		
Burlington	eL	15 56 30
	F	16.1
Chicago	e	15 50 41
	eL	51 03
	F	16.0
Logan	eL	15 45 56
	F	15.9
Philadelphia	eL	15 55 20
	F	16.1
Tucson	e	15 39 12
	e	39 33
	i	39 42
	iL	40 27
	F	15.9
January 27		
College	e	1 56 17
	e	56 37
	e(L)	2 00 22
	F	2.7

Date and Station	Phase	(GCT) h m s
January 27, H_{P-H} = 2h 45.2m. Epicenter in the region of 51°N. 179½°W. Aleutian Islands. Possibly slightly deeper than normal.		
Bermuda	eP	2 57 23
	e	3 00 32
	eS	07 14
	e	11 28
	e(SS)	12 32
	e	17 00
	eL	19 12
	F	5.8
Bozeman	eP	2 53 23
	e	55 30
	eS	3 00 03
	iS	00 16
	e	03 22
	eL	04 39
	F	4.8
Burlington	e(P)	2 56 13
	e	3 04 24
	eS	04 39
	e	05 44
	e	09 23
	e	11 46
	eL	13 41
	F	5.2
Butte	e	2 53 27
	e	54 48
	eS	59 39
	eL	3 03 19
	F	4.2
Chicago	eP	2 55 20
	e	55 56
	ePP	57 39
	e(S)	3 03 24
	e	04 50
	eL	10 04
	F	4.8
College	eP	2 50 03
	e	50 12
	eS	53 52
	iS	54 18
	eL	55 14
	F	4.6
Columbia	(e)	2 56 24
	eS	3 05 23
	e	09 37
	eL	17 38
	F	4.8
Honolulu	e(P)	2 52 24
	e	53 35
	iS	57 32
	eL	59 15
	F	5.8

Date and Station	Phase	(GCT) h m s
January 27, continued		
Huancayo	ePP	2 54 27
	e(SKS)	3 00 10
	ePS	03 34
	e	13 20
	eL	18 02
	F	5.8
Ivigtut	e	2 59 15
	eL	3 10 29
	F	4.2
Lincoln	e	2 54 44
	eS	3 02 21
	eL	07 28
	F	4.3
Logan	eP	2 53 37
	i	53 53
	iPP	55 11
	e	56 26
	iS	3 00 21
	e	03 31
	eL	06 27
	F	4.9
New Kensington	e	3 03.7
	e	05.0
	eL	11.6
	F	Lost
Philadelphia	e	2 55 57
	e	56 10
	e	3 04 47
	iS	05 02
	e	07 46
	e	09 48
	eL	12 54
	F	5.5
Salt Lake City	eP	2 53 41
	e	53 59
	ePP	55 35
	eS	3 00 29
	e	03 59
	eL	05 45
	F	5.3
San Juan	eP	2 58 13
	e(SKS)	3 08 36
	e	10 38
	e	14 25
	eL	20 46
	F	5.3
Scoresbysund	e	2 55 05
	e	59 10
	iS	3 03 12
	eL	07 17
	F	4.9
Seattle	e	2 52 44
	e	56 54
	e	58 28
	eL	3 01 31
	F	4.1

Date and Station	Phase	(GCT) h m s
January 27, continued		
Sitka	eP	2 50 48
	e	52 13
	eS	55 18
	iS	55 28
	iL	56 40
	F	5.3
Tucson	iP	2 54 28
	i	55 03
	i	56 14
	eS	3 01 53
	e	05 37
	eL	07 55
	F	5.4
Ukiah	eP	2 53 12
	eS	59 04
	eL	3 02 15
	F	5.2
January 27		
College	e	10 34 47
	eL	39 12
	F	10.9
January 27		
Huancayo	eL	13 44 29
	F	13.9
January 29		
Huancayo	eL	10 03 55
	F	10.4
January 29		
Huancayo	e	11 37 20
	e	38 45
	eL	40 00
	F	11.9
January 30		
Huancayo	iP	5 02 34
	iS	03 28
	eL	03 50
	F	Lost
January 30, H_{P-H} = 5h 33m 05s. Epicenter approximately 2.1°S. 80.0°W. Damage at Guayaquil, Ecuador. Probable depth 100 km.		
Balboa Heights	eP_E	5 35 38
	eP_N	35 41
	iS_E	37 46
	iS_N	37 49
	F	5 50
Bermuda	eP	5 40 10
	i	41 30

Date and Station	Phase	(GCT)
		h m s
January 30, continued		
Bermuda, continued		
	iS	5 45 53
	eL	48 20
	F	7.1
Bozeman	eP	5 42 27
	epP	42 54
	ePP	44 34
	iS	50 06
	eL	55 29
	F	6.8
Burlington	i	5 41 29
	ePP	43 19
	e	46 47
	eS	48 06
	iS	48 16
	e	50 52
	i	51 13
	e	51 41
	eL	54 42
	F	6.8
Butte	eP	5 42 31
	e	44 27
	eS	50 16
	e	50 51
	e	54 49
	eL	58 36
	F	6.4
Chicago	eP	5 41 05
	ePP	42 51
	e	46 29
	eS	47 30
	esS	48 14
	e	50 53
	eL	53 35
	F	6.7
College	eP	5 45 19
	e	48 31
	eS	55 27
	eL	6 07 26
	F	6.8
Columbia	e	5 40 12
	ePP	41 26
	eS	45 26
	eL	48 04
	F	6.4
Des Moines	e	5 41 37
	ePPP	43 57
	e	44 46
	e	45 25
	eS	47 47
	eL	51 22
	F	6.1
Honolulu	eL	6 10 00
	F	6.5

Date and Station	Phase	(GCT)
		h m s
Huancayo	iP	5 35 43
	eS	37 44
	iS	37 46
	eL	38 18
	F	7.8
Logan	eP	5 42 10
	i	44 05
	i	45 04
	iS	49 31
	e	52 56
	e	53 33
	eL	57 09
	F	6.9
Montezuma	e	5 38 03
	eP	38 20
	e	42 10
	e(S)	42 13
	eL	44 02
	F	6.1
New Kensington	(e)	5 40.1
	e	41.8
	eS	46.2
	e	49.8
	eL	51.7
	F	6.4
Philadelphia	iP	5 40 52
	ipP	41 07
	i	42 49
	i	46 35
	iS	46 56
	i	48 00
	eL	50 12
	F	6.7
Salt Lake City	eP	5 42 02
	i	42 25
	e	44 14
	eS	49 21
	e	49 44
	e	53 46
	eL	58 16
	F	6.5
San Juan	iP	5 38 18
	i	38 45
	iS	42 35
	iL	44 03
	F	7.3
Scoresbysund	e	5 45 32
	e	55 22
	e	6 00 21
	eL	07 03
	F	7.0
Sitka	eP	5 44 28
	ePP	47 23
	epPPP	49 22
	iS	54 00
	eSS	58 26
	eL	6 02 18
	F	6.9

Date and Station	Phase	(GCT) h m s
Tucson	iP	5 41 12
	i	41 35
	i	42 15
	iPP	43 02
	i	43 56
	eS	47 47
	esS	48 24
	e	50 14
	iSS	51 05
	eL	53 32
	F	6.6
Ukiah	eP	5 42 37
	e	43 17
	e	45 06
	eS	50 37
	eSS	54 27
	eL	6 01 07
	F	6.5
January 30		
Huancayo	iP	17 57 18
	i	57 39
	i	58 22
	F	18.1
January 30		
Huancayo	eP	20 31 13
	iP	31 17
	i	31 35
	iL	31 40
	F	20.7
January 31, H_{P-H} = 8h 28m 57s. Epicenter approximately 17.8°N. 93.7°W. Near coast of Mexico. Depth possibly 100 km.		
Balboa Heights	e	8 32 44
	i	35 52
	F	8 40
Bermuda	e	8 35 58
	e	40 48
	eL	42 51
	F	9.4
Bozeman	e	8 35 37
	e	36 28
	eS	40 24
	eL	48 03
	F	9.4
Butte	e	8 35 45
	e	36 39
	e(S)	40 37
	eL	50 40
	F	9.0
Chicago	e	8 34 35
	e	38 39

Date and Station	Phase	(GCT) h m s
January 31, continued		
Chicago, continued		
	e	8 39 30
	eL	43 53
	F	9.2
College	e	9 03 15
	F	9.5
Columbia	e	8 33 23
	e	34 04
	eS	37 28
	eL	40 34
	F	9.0
Des Moines	e	8 35 57
	e	36 46
	e	37 21
	iS	38 26
	i	38 55
	F	8 50
Huancayo	iP	8 35 47
	esP	36 24
	e	37 16
	iS	41 07
	eL	43 45
	F	9.4
Lincoln	e	8 34 40
	eL	38 15
	F	9.1
New Kensington	e	8 34.1
	e	38.8
	eL	40.8
	F	9.2
Philadelphia	eP	8 34 40
	eL	40 10
	F	9.2
Salt Lake City	eP	8 34 45
	e	35 07
	esS	39 57
	eL	42 39
	F	9.1
San Juan	eP	8 34 31
	i	35 17
	i	36 54
	esS	39 43
	i	40 55
	eL	43 03
	F	9.3
Scoresbysund	eL	8 57 19
	F	9.3
Tucson	iP	8 33 39
	i	33 54
	i	34 42
	iS	37 35
	i	38 07
	eL	38 26
	F	9.3

Date and Station	Phase	(GCT) h m s
January 31, continued		
Ukiah	e	8 39 06
	eL	46 02
	F	9.1

Local and Minor Quakes of January 1943

day	hour
Bermuda	
2	12.3
13	8.4
College	
8	11.8
18	19.9
Honolulu	
13	0.8
Huancayo	
1	13.8
2	10.7
7	5.8
	11.0
	15.6

day	hour
Huancayo continued	
10	4.9
	15.8
12	13.1
13	4.7
	17.5
16	7.1
	7.2
18	9.9
19	2.1
20	2.0
21	16.4
22	12.1
	13.8
24	7.8
25	14.2
	18.5
Huancayo	
27	3.4
28	13.5
31	4.9

day	hour
Montezuma	
24	8.3
25	14.2
	18.5
29	3.8
30	1.5
	5.1
31	19.1
Salt Lake City	
26	15.8
San Juan	
6	6.8
28	6.1

PROVISIONAL EPICENTERS

February - 1943

Date 1943 Feb.	(GCT) h m s	Latitude ° ′		Longitude ° ′		Region, Focal Depth and Remarks
3	15 16 19	44½	N	111	W	Yellowstone National Park.
5	3 52.3	20	N	115½	W	Lower California.
7	4 24.8	24½	S	176	W	South of Tonga Islands.
8	20 10.6	2½	S	80	W	Ecuador.
16	7 28 34	13.9	S	70.8	W	Southeastern Peru. Depth slightly greater than 100 km.
16	14 38.1	10	S	162	E	Solomon Islands.
22	9 20 46	17 55	N	101 05	W	Near coast of Colima, Mexico. By Collins and Leet.
22	14 20.3	41	N	111½	W	Felt at Salt Lake City, Utah.
24	4 24 02	18	N	101	W	Aftershock of Colima, Mexico quake.
28	16 40 08	45.5	N	75	W	Felt at Alexandria, Hawkesbury and La Chute, Canada according to Ottawa.

SEISMOGRAM INTERPRETATIONS

Date and Station	Phase	(GCT) h m s
February 1		
Tucson	iP	20 18 29
	i	20 40
	F	20.5
February 2		
Huancayo	eP	9 29 00
	i(S)	29 52
	iL	30 10
	F	10.1
February 3, $H_P - H_S$ = 15h 16m 19s. Epicenter in region 44½° N, 111° W. Yellowstone National Park.		
Bozeman	e	15 16 41
	iL	17 06
	F	15.4
Logan	iP	15 17 06
	i	17 47
	eL	18 47
	F	15.4
February 3, continued		
Salt Lake City	iP	15 17 28
	iS	18 21
	eL	18 33
	F	15.4
Tucson	eP	15 19 21
	e	20 06
	eL	22 41
	F	15.5
February 3		
Huancayo	e(S)	18 32 33
	eL	38 59
	F	19.5
Tucson	e	18 27 33
	eL	57 35
	F	19.4
February 3		
College	eL	19 13 29
	F	19.5

Date and Station	Phase	(GCT) h m s
February 4		
Huancayo	e	15 49 02
	eL	49 41
	F	16.1
February 5, H_{P-H} = 3h 52.3m. Epicenter in region 30° N, 115½° W. Lower California.		
Tucson	iP	3 53 29
	i	54 32
	eL	55 24
	F	4.1
February 5	eL	9 [illegible]
Ukiah	eL	9 46 24
	F	10.0
February 6, Possibly Baluchistan, India.		
Bermuda	e	2 54 22
	eSKS	3 00 55
	e	01 51
	e	04 11
	e(SS)	09 23
	eL	32 23
	F	3.7
Bozeman	eL	3 37 28
	F	4.1
Butte	eL	3 44 08
	F	4.0
Chicago	eL	3 37 47
	F	4.2
College	eL	3 25 47
	F	4.0
Columbia	eL	3 40 08
	F	4.4
Huancayo	e	3 07 16
	e	16 34
	eL	29 43
	F	4.9
Salt Lake City	eL	3 41 32
	F	4.1
San Juan	eL	3 43 38
	F	4.2
Scoresbysund	e	3 01 17
	e	04 03
	eL	14 46
	F	4.2
Tucson	iP	2 54 57
	e	55 07
	ePP	56 42
	e	59 09
	i	

Date and Station	Phase	(GCT) h m s
February 6, continued Tucson, continued		
	eL	3 45 25
	F	3.8
February 6		
Salt Lake City	eL	9 51 22
	F	10.2
February 7		
Tucson	iP	0 13 51
	F	0.3
February 7, H_{P-H} = 4h 24.8m. Epicenter in region 24½° S, 176° W. South of Tonga Islands.		
Bermuda	e	4 49 32
	e(PS)	54 32
	e	5 00 40
	eL	5 28 07
	F	Lost.
Chicago	eL	5 35 49
	F	6.3
College	e	4 49 02
	eL	5 06 39
	F	5.7
Honolulu	e	4 40 22
	eS	40 49
	eL	46 09
	F	5.4
Huancayo	e	4 39 28
	eSKS	48 38
	e(S)	49 30
	ePS	50 35
	eL	5 11 40
	F	Lost.
Logan	eP	4 37 39
	eS	48 29
	e	49 42
	eL	5 05 35
	F	Lost.
Salt Lake City	e	4 38 06
	eS	48 15
	eL	5 04 15
	F	5.6
San Juan	e	4 43 14
	eSKS	50 21
	e(PS)	54 06
	e	57 45
	eL	5 26 42
	F	5.8

Date and Station	Phase	(GCT) h m s
February 7, continued		
Tucson	iP	4 37 18
	e	38 03
	e	40 14
	eS	47 48
	eL	5 03 42
	F	Lost.
Ukiah	e	4 48 45
	eL	5 00 06
	F	5.5
February 7, Possibly south of Tonga Islands.		
Bermuda	e	5 51 28
	e	6 00 35
	eL	27 32
	F	7.7
Bozeman	eSKS	5 50 35
	eL	6 06 25
	F	7.0
Chicago	eL	6 17 06
	F	7.4
College	eS	5 50 32
	eL	6 14 48
	F	6.8
Honolulu	e	5 41 21
	eL	49 47
	F	6.6
Huancayo	e	5 39 44
	iSKS	50 28
	e	51 04
	eL	6 09 11
	F	7.4
Logan	eP	5 38 57
	e	39 19
	e	44 08
	e(S)	49 44
	eL	6 15 57
	F	Lost.
Salt Lake City	eS	5 49 50
	eL	6 08 43
	F	7.1
San Juan	e	5 45 52
	e(SKS)	51 49
	e	55 45
	eL	6 27 17
	F	7.0
Tucson	iP	5 38 41
	i	40 34
	e	42 50
	eL	6 05 35
	F	7.6

Date and Station	Phase	(GCT) h m s
February 7, continued		
Ukiah	e	5 49 33
	e	51 33
	eL	6 00 52
	F	6.7
February 7		
Balboa Heights	eP	9 42 45
	iS	43 12
	F	9 46
February 8		
Huancayo	eL	6 56 24
	F	7.2
February 8		
Tucson	eP	10 58 01
	eL	11 02 21
	F	11.3
February 8, $H_{P.H}$ = 20h 10.6m. Epicenter in region $2\frac{1}{2}°$ S, 80° W. Ecuador.		
Huancayo	eP	20 13 08
	i	14 04
	i	14 50
	iL	15 46
	F	20.8
San Juan	eP	20 15 58
	e	16 48
	eL	22 22
	F	20.9
February 10, Caribbean Sea just north of Panama.		
Balboa Heights	e	21 33
	F	21 42
Bermuda	e	21 38 22
	eL	43 16
	F	22.2
Huancayo	eP	21 35 47
	eL	41 37
	F	22.1
San Juan	eP	21 34 27
	e	35 27
	eL	40 14
	F	22.1
Tucson	iP	21 37 32
	e	42 34
	e	45 37
	eL	51 45
	F	22.3

Date and Station	Phase	(GCT) h m s
February 11		
Balboa Heights	eP	8 29 42
	iS	30 05
	F	8 34
February 11		
Salt Lake City	e	15 42 58
	eL	43 59
	F	15.8
Tucson	e	15 40 30
	eL	41 30
	F	15.8
Ukiah	eL	15 38 28
	F	15.8
February 12		
Lincoln	e	19 22 10
	eL	39 49
	F	20.5
February 14		
Huancayo	eL	3 40 06
	F	3.8
February 14		
Huancayo	eL	4 53 01
	F	5.1
February 14		
Bozeman	eL	8 14 11
	F	8.8
Huancayo	eL	8 30 11
	F	8.9
Tucson	e	7 41 56
	e	45 53
	eL	8 25 20
	F	8.7
February 14		
Tucson	e	9 33 47
	eL	38 24
	F	9.8
February 14		
Tucson	e	9 50 44
	e	54 05
	eL	55 06
	F	10.1
February 14		
Tucson	eL	19 12 18
	F	19.4

Date and Station	Phase	(GCT) h m s
February 16		
Lincoln	eL	3 14 34
	F	3.7

February 16, $H_{P.H}$ = 7h 28m 34s. Epicenter approximately 13.9° S, 70.8° W. Southeastern Peru. Depth slightly greater than 100 km.

Balboa Heights	iP	7 33 49
	iS	38 04
	i	44 32
	F	7 50
Bermuda	e	7 37 50
	e(PcP)	38 17
	i(PcS)	42 12
	iS	43 35
	i	45 09
	i	45 52
	eL	51 40
	F	7.9
Bozeman	eP	7 39 34
	ePcP	39 53
	iS	48 34
	e	50 07
	e	52 56
	e(SS)	53 14
	e	54 04
	eL	58 31
	F	8.9
Burlington	iS	7 46 13
	e	47 28
	i(ScS)	47 58
	eSS	50 08
	L	52 23
	F	8.6
College	eSKS	7 52 18
	eS	52 58
	e	54 47
	epPS	54 54
	e	58 12
	eL	8 08 42
	F	8.8
Huancayo	iP	7 29 52
	i	30 31
	i	30 42
	F	9.7
Lincoln	eP	7 38 28
	iS	46 28
	eL	53 22
	F	8.3

Date and Station	Phase	(GCT) h m s
February 16		
Logan	iP	7 39 19
	i	40 15
	e	42 25
	ePPP	43 23
	iS	48 04
	isS	48 42
	e(ScS)	48 52
	e	53 28
	eL	57 02
	F	8.5
Montezuma	e	7 30 27
	e	31 26
	e	31 41
	i	32 04
	F	8.0
New Kensington	iS	8 15.5
	eScS	17.4
	eSS	19.4
	eL	22.1
	F	8.7
Philadelphia	e	7 39 31
	i	44 55
	e	45 00
	eS	47 00
	iS	47 16
	e	48 50
	eL	50 21
	L	50 55
	e	54 24
	F	8.4
Salt Lake City	eP	7 39 15
	e	40 18
	iS	47 58
	e	48 55
	eSS	52 39
	e(sSS)	53 08
	eL	55 22
	F	8.5
San Juan	eP	7 35 00
	iPP	36 06
	i	36 20
	iS	40 01
	L	41 13
	F	9.2
Scoresbysund	iSKS	7 51 48
	iS	52 11
	eL	8 05 12
	F	9.0
Sitka	eP	7 41 17
	iS	51 30
	i	51 48
	eSS	57 52
	eL	58 45
	eL	8 00 52
	F	9.1

Date and Station	Phase	(GCT) h m s
February 16, continued		
Tucson	iP	7 38 32
	i	38 45
	iPP	39 10
	i	40 34
	ePPP	42 06
	eS	46 34
	e	46 56
	e	47 36
	eScS	48 03
	eL	53 40
	F	8.7
Ukiah	eP	7 39 50
	eS	49 04
	e	50 23
	eSS	53 36
	e	57 28
	eL	8 11 10
	F	8.6
February 16		
Bozeman	(e)	14 31 13
	eL	14 55 36
	F	Lost.
Huancayo	iP	14 12 39
	e	13 06
	e	13 24
	iS	15 58
	eL	17 11
	F	16.3
Montezuma	e(P)	14 11 09
	e	12 00
	e	12 23
	F	14.6
San Juan	eL	14 30 00
	F	15.3
February 16, H_{P-H} = 14h 38.1m. Epicenter in region 10° S, 162° E. Solomon Islands.		
Bozeman	i	15 02 34
	eL	23 20
	F	16.1
College	eS	15 00 52
	e(ScS)	01 18
	eL	13 48
	F	15.9
Logan	eL	15 29 01
	F	15.7
Philadelphia	eL	15 39.3
	F	16.3

Date and Station	Phase	(GCT) h m s
February 16, continued		
Salt Lake City	eP	14 51 22
	e(SKS)	15 02 00
	eL	21 54
	F	15.9
Sitka	e	15 00 07
	e(S)	00 38
	eL	17 01
	F	15.7
Tucson	iP	14 51 25
	e	55 23
	ePP	55 32
	eL	15 21 03
	F	15.9
Ukiah	eP	14 51 06
	eS	15 01 19
	eL	17 32
	F	16.0
February 16, Possibly near New Britain.		
College	e(S)	17 14 08
	e	19 09
	eL	25 19
	F	17.8
Huancayo	eP'	17 09 44
	e	13 00
	e	13 54
	e(PS)	23 20
	eSS	29 34
	eL	41 02
	F	18.5
Philadelphia	eL	17 40.6
	F	18.2
Tucson	eP	17 04 17
	ePP	08 21
	e(SKS)	14 41
	e	20 27
	eL	31 16
	F	18.2
February 17		
Bozeman	eL	0 50 39
	F	1.1
Logan	e	0 48 16
	eL	49 37
	F	0.9
Salt Lake City	e	0 47 32
	e	49 03
	F	1.1
Tucson	iP	0 39 08
	i	40 24
	e	41 55
	eL	43 06
	F	1.0

Date and Station	Phase	(GCT) h m s
February 17		
Tucson	iP	2 10 38
	eL	14 58
	F	2.5
February 17		
Bermuda	e(P)	2 34 23
	e	49 25
	eL	3 12 14
	F	4.8
Bozeman	e	2 44 27
	eL	3 09 46
	F	4.4
Burlington	e	2 55 23
	e	3 02 13
	eL	11 28
	F	4.5
Chicago	eL	3 14 38
	F	4.1
College	eL	3 09 17
	F	4.3
Honolulu	(e)	2 34 50
	e	42 30
	eL	49 00
	F	3.6
Huancayo	(e)	2 33 09
	e	39 29
	e	41 04
	eL	42 15
	F	5.0
Logan	eL	3 09 07
	F	3.9
Philadelphia	e	2 54.7
	eL	3 19.4
	F	4.4
Salt Lake City	eL	3 08 37
	F	4.2
San Juan	e	2 51 31
	e	3 11 05
	eL	18 05
	F	4.3
Scoresbysund	e	3 21 06
	eL	33 01
	F	4.6
Sitka	eL	3 07 42
	F	4.2
Tucson	eP	2 32 52
	e	43 42
	e	56 48
	eL	3 04 07
	F	4.2

Date and Station	Phase	(GCT) h m s
February 17, continued		
Ukiah	e	2 43 41
	eL	3 03 44
	F	3.8
February 17		
Bozeman	eL	6 39 28
	F	7.2
Logan	eL	6 37 45
	F	6.8
Salt Lake City	eL	6 37 00
	F	6.9
Sitka	eL	6 44 38
	F	7.1
February 17		
Burlington	e	14 29 30
	eL	52.9
	F	Lost.
February 19		
Tucson	eP	0 42 13
	eL	46 21
	F	0.9
February 19		
Tucson	e(P)	8 39 10
	e	40 43
	eL	9 17 28
	F	9.7
February 20		
Logan	e	16 21 36
	eL	22 04
	F	16.6
February 21		
Bozeman	eL	0 24 20
	F	0.6
Salt Lake City	e	0 21 54
	eL	22 39
	F	0.5
Tucson	iP	0 12 24
	e	13 35
	i(S)	17 30
	iL	18 59
	F	0.6
February 21		
Huancayo	iP	19 20 33
	i	21 18
	iL	21 23
	F	20.6

Date and Station	Phase	(GCT) h m s
February 21, continued		
San Juan	e	19 30 44
	eS	31 42
	e	32 10
	eL	34 31
	F	20.1
Tucson	iP	19 29 27
	e	33 22
	eL	53 09
	F	Lost.
February 22, H_{P-H} = 9h 20m 46s. By Collins and Leet 17°55' N, 101°05' W. Near coast of Colima, Mexico.		
Balboa Heights	eP	9 25 50
	eS	30 24
	F	10 13
Bermuda	iP	9(27 48)
	i	(28 11)
	i	(29 27)
	iPPP	(29 33)
	iS	(33 20)
	e	(35 22)
	F	13.4
Bozeman	eP	9 26 49
	e(PPP)	28 00
	iS	31 50
	iL	33 35
	F	13.2
Burlington	iP	9 27 48
	i	28 00
	iPP	29 10
	e	30 48
	iS	33 28
	i	34 08
	iL	35 37
	F	13.4
Butte	eP	9 26 55
	i	27 10
	e(PPP)	28 06
	i	28 26
	iS	32 18
	iL	35 21
	F	11.7
Chicago	iP	9 26 27
	e(PP)	27 09
	eS	31 19
	eL	32 47
	F	13.0
College	eP	9 30 31
	e(PPP)	34 01
	e	38 10
	iS	38 33
	eSS	42 21
	eL	45 01
	F	12.1

Date and Station	Phase	(GCT) h m s
February 22, continued		
Columbia	eP	9 26 04
	e	27 00
	eS	30 30
	eL	32 35
	F	12.5
Des Moines	iP	9 26 15
	eS	30 25
	iS	31 20
	eL	33 38
	F	10.9
Honolulu	iP	9 30 24
	e(PP)	32 04
	e	37 08
	iS	37 32
	e	41 24
	iL	41 43
	F	12.3
Huancayo	iP	9 28 16
i 29 35	eS	34 18
	eL	37 00
	F	13.3
Ivigtut	eP	9 30 48
	e	39 26
	eL	46 04
	F	11.5
Lincoln	eP	9 25 51
	iP	26 03
	eS	30 13
	eL	31 51
	F	12.9
Montezuma	eP	9 30 42
	e(S)	37 10
	e	38 07
	eL	49 10
	F	10.7
New Kensington	e	9 26.8
	e(S)	32.8
	eL	36.6
	F	11.8
Philadelphia	iP	9 26 47
	iPP	27 00
	i	28 11
	iS	32 26
	i	34 10
	iL	34 56
	F	13.2
Salt Lake City	iP	9 26 08
	e	27 44
	iS	30 36
	iL	32 55
	F	Lost.
San Juan	eP	9 27 24
	iPPP	28 56
	iS	33 02

Date and Station	Phase	(GCT) h m s
February 22, continued		
San Juan, continued		
	iL	9 34 04
	F	13.2
Scoresbysund	eP	9 31 57
	iP	32 02
	e	34 58
	i(S)	41 37
	e	46 40
	iL	49 51
	F	12.7
Seattle	eP	9 27 57
	e(S)	33 24
	eL	36 06
	F	11.5
Sitka	eP	9 29 18
	iP	29 36
	ePP	31 08
	eS	36 09
	iS	36 25
	eL	40 07
	F	12.3
Tucson	iP	9 24 46
	iS	27 40
	eL	28 05
	F	Lost.
Ukiah	eP	9 26 43
	e(PP)	27 46
	e	28 42
	eS	31 42
	eL	33 58
	F	12.6
February 22		
Tucson	eP	9 58 09
	F	Lost.
February 22		
Tucson	eP	10 16 15
	eS	20 04
	eL	21 21
	F	Lost.
February 22		
Tucson	i	10 21 22
	F	Lost.
February 22, H_{P-H} = 10h 54.8m. Possibly aftershock of Colima quake.		
Butte	e	11 01 04
	eL	10 50
	F	11.5
Des Moines	eS	11 05 12
	eL	08 20
	F	11.4

Date and Station	Phase	(GCT) h m s
February 22, continued		
Lincoln	iL	11 07 34
	F	11.5
Salt Lake City	eP	11 00 00
	iL	07 34
	F	12.4
Tucson	eP	10 58 49
	iP	58 52
	e	11 02 11
	eL	03 42
	F	12.1
February 22, H_{P-H} = 14h 20.3m. Epicenter in region 41° N, 111½° W. Felt at Salt Lake City, Utah.		
Salt Lake City	iP	14 20 21
	F	14.5
Tucson	eP	14 22 26
	i	22 56
	iS	24 07
	F	Lost.
February 22		
Bozeman	eL	17 23 50
	F	17.6
Butte	eL	17 26 00
	F	17.6
Salt Lake City	e	17 21 02
	eL	22 05
	F	17.5
Tucson	iP	17 11 58
	eL	16 52
	F	17.5
February 23		
Butte	e	3 05 28
	eL	11 20
	F	3.4
February 23		
Butte	eL	4 41 21
	F	4.9
College	eL	4 55 35
	F	5.3
February 23		
Tucson	eP	12 16 32
	e(S)	21 30
	eL	23 29
	F	12.6

Date and Station	Phase	(GCT) h m s
February 23, Possibly near coast of Colima, Mexico.		
Bozeman	e(S)	23 05 56
	eL	09 12
	F	23.5
Chicago	e	23 06 30
	eL	10 19
	F	23.6
Columbia	e	23 05 17
	eL	11 04
	F	23.6
Des Moines	e	23 07 23
	eL	08 45
	F	23.3
Honolulu	eL	23 16 41
	F	23.4
Lincoln	e	22 59 33
	eS	23 04 29
	eL	07 17
	F	23.6
Logan	eP	23 00 04
	e	00 42
	eS	04 25
	eL	07 33
	F	23.4
Philadelphia	eL	23 12 53
	F	23.6
Salt Lake City	e	22 59 51
	eS	23 04 10
	eL	06 54
	F	23.5
Tucson	iP	22 58 12
	i	58 37
	eS	23 00 35
	iS	00 39
	eL	01 09
	F	22.5
Ukiah	eL	23 08 22
	F	23.4
February 24, H_{P-H} = 4h 24m 02s. 18° N, 101° W. Aftershock of Colima, Mexico quake.		
Bozeman	eS	4 35 19
	eL	39 47
	F	5.1
Columbia	eP	4 29 23
	eS	33 47
	eL	37 46
	F	5.5

Date and Station	Phase	(GCT) h m s
February 24, continued		
Huancayo	e	4 37 47
	eL	40 33
	F	5.1
Lincoln	eS	4 33 20
	eL	35 37
	F	5.0
Logan	e	4 30 09
	e(S)	34 32
	eL	36 33
	F	5.0
Philadelphia	e	4 31 15
	e	35 30
	eL	38 08
	F	5.2
Salt Lake City	e	4 29 44
	eS	33 23
	eL	36 28
	F	5.0
San Juan	e	4 32 20
	e	32 30
	eS	35 55
	eL	39 08
	F	5.4
Sitka	eL	4 50 20
	F	5.2
Tucson	iP	4 28 06
	i	28 42
	eS	31 28
	eL	32 37
	F	5.0
February 24		
Tucson	iP	11 21 43
	eL	27 09
	F	11.6
February 24		
Huancayo	eL	10 00 00
	F	10.2
February 24		
Logan	eL	11 32 16
	F	11.7
February 24		
Philadelphia	eL	24 17.7
	F	24.7
February 26		
Huancayo	eL	16 46 02
	F	17.1

Date and Station	Phase	(GCT) h m s
February 26, continued		
San Juan	e	16 29 15
	e	33 13
	F	17.1
February 28, Possibly Afghanistan		
Bermuda	ePP	13 12 01
	i	14 14
	i(SKS)	18 14
	iS	19 18
	e	22 09
	eSS	25 48
	eL	32 58
	F	14.3
Bozeman	ePP	13 11 37
	e	13 06
	iSKS	18 07
	e	19 38
	e	21 46
	e(SS)	25 41
	eL	31 10
	F	14.7
Burlington	eP	13 07 26
	e(PP)	11 11
	e	17 33
	ePS	19 08
	i	20 56
	eSS	24 26
	eSSS	27 00
	eL	31 25
	F	14.5
Butte	e(PP)	13 12 07
	e(SKS)	18 04
	eS	18 59
	e	34 09
	eL	14 04 44
	F	14.3
Chicago	ePP	13 12 09
	iS	19 11
	e(PS)	20 10
	eL	35 17
	F	14.3
College	eP	13 05 52
	ePP	08 38
	e(PPP)	10 28
	eS	15 11
	e(ScS)	16 05
	eL	24 09
	F	14.4
Huancayo	e	13 13 40
	eP'	17 01
	e	27 52
	e	29 36
	eSS	34 53
	eL	45 17
	F	15.1

Date and Station	Phase	(GCT) h m s
February 28, continued		
Ivigtut	eP	13 05 31
	iS	14 31
	i	15 20
	i	15 58
	F	14.2
Lincoln	e	13 18 22
	eS	19 27
	e	32 27
	F	14.0
Logan	e	13 11 58
	iPP	12 21
	e	14 03
	i(SKS)	18 26
	i	19 05
	iS	19 37
	e	22 25
	eSS	26 48
	eL	34 11
	F	14.1
Philadelphia	e	13 10 53
	iPP	11 22
	ePPP	13 10
	iSKS	17 35
	e	18 55
	eS	19 11
	F	14.2
Salt Lake City	e	13 08 11
	ePP	12 30
	e(SKS)	19 06
	eS	19 48
	e	23 31
	e(L)	31 19
	F	14.5

Date and Station	Phase	(GCT) h m s
February 28, continued		
San Juan	ePP	13 13 32
	eS	20 58
	iPS	23 07
	i	24 10
	eSS	28 50
	eL	40 09
	F	14.7
Sitka	iP	13 06 43
	ePP	10 02
	eS	16 47
	iS	16 48
	e	18 18
	e(SS)	22 37
	eL	27 45
	F	14.4
Scoresbysund	iP	13 04 04
	i	04 21
	i	06 10
	iS	11 46
	i	13 03
	eL	17 32
	F	14.1
Tucson	eP	13 08 50
	i	09 12
	iP	12 48
	i	13 12
	e(PP)	13 25
	e	19 06
	ePS	22 44
	eSS	28 37
	eL	39 10
	F	14.4
Ukiah	e(SKS)	13 18 35
	e	21 57
	e	23 45
	eL	35 32
	F	14.3

Local and Minor Quakes of February 1943

day	hour
Bozeman	
3	15.3
College	
15	2.4
17	10.8
25	8.4
Honolulu	
11	10.0
Huancayo	
2	9.5
4	5.4
	15.8
5	8.3
6	11.9
7	2.5
	4.0
8	6.9
9	1.8
	12.6
10	1.4
	2.1
	10.1
	10.5
11	5.4
	9.2
14	3.7
	4.9
16	11.4
17	6.4
17	7.5
	21.9
18	15.7
	21.2
19	3.7
20	7.0
22	3.5
	8.1
23	19.9
24	10.0
27	1.6
	9.7
Logan	
2	8.4

PROVISIONAL EPICENTERS

March - 1943

Date 1943	(GCT)	Latitude		Longitude		Region, Focal Depth and Remarks
Mar.	h m s	° '		° '		
4	6 32.4	22	S	179	W	Tonga Island region. Depth possibly 600 km.
5	0 31 42	5.1	N	82.6	W	South of Panama.
6	20 14.5	37.4	N	114.1	W	By Pasadena. Near Joseco, Nevada. Focal depth normal.
7	3 01.7	59	N	166	E	Near east coast of Kamchatka.
7	20 56 31	32 58	N	116	W	By Pasadena. Near Borego Valley. Focal depth normal.
9	3 25 26.5	41.6	N	81.3	W	Felt in Cleveland, Ohio and vicinity.
9	9 49.0	60	S	29	W	Near Sandwich Islands.
11	1 13 14	39½	N	123½	W	Northwestern California. Felt at Comptche, Potter Valley, Stonyford, Ukiah.
11	9 34.1	21½	S	170½	E	Near Loyalty Islands.
14	11 59.3	36½	N	140	E	East of Honshu Island, Japan.
14	12 42.8	36½	N	142	E	do
14	17 11.0	22	S	170½	E	Near Loyalty Islands.
14	18 37.8	20½	S	69	W	Northern Chile, Possibly slightly deeper than 200 km.
15	2 24.5	22	S	169	E	Near Loyalty Islands.
15	4 47.9	9½	N	141½	E	Near Caroline Islands.
15	14 09 25	32 58	N	116 00	W	By Pasadena. Near Borego Valley. Focal depth normal.
15	22 59.3	14½	S	176½	W	West of Samoa Islands. Possibly slightly deeper than 300 km.
16	9 47.4	0		81½	W	Off coast of Ecuador.
16	9 51.9	0		81½	W	do
17	0 40 44	32 44	N	115 26	W	By Pasadena. Imperial Fault, Imperial Valley. Felt at El Centro, Brawley and Holtville. Focal depth normal.
17	0 52 20	32 44	N	115 26	W	By Pasadena, Aftershock. Felt at El Centro. Focal depth normal,
17	0 56 34	32 44	N	115 26	W	By Pasadena. Aftershock. Felt at El Centro, Focal depth normal.

Date 1943	(GCT)	Latitude		Longitude		Region, Focal Depth and Remarks
Mar.	h m s	° '		° '		
17	22 57.6	25	S	69½	W	Chile, Possibly slightly deeper than normal.
20	4 50.6	16½	S	175½	E	Near Fiji Islands.
20	20 51.9	29.6	N	113.3	W	By Pasadena. Gulf of California. Focal depth normal.
21	20 35.7	6	S	151½	E	New Britain Island.
25	18 27.4	60	S	31	W	Near Sandwich Islands. Probable epicenter.
26	17 38 12	22.9	S	176.0	W	South of Tonga Islands. Depth approximately 75 km.
29	11 46 00	37.5	N	121.9	W	Near San Francisco, California. Felt.
30	21 07.5	39.0	N	120.5	W	By Pasadena. Lake Tahoe region. Felt at Sacramento, Markleeville, Truckee, Reno. Focal depth normal.

SEISMOGRAM INTERPRETATIONS

Date and Station	Phase	(GCT) h m s
March 2		
Tucson	eP	20 39 37
	eS	45 38
	eL	46 45
	F	20.9
March 4, H_{P-H} = 6h 32.4m. Epicenter in region 22°S, 179°W. Tonga Island region. Depth possibly 600 km.		
Tucson	iP	6 44 02
	epP	46 09
	ePP	47 25
	F	6.9
March 4		
San Juan	e	10 41 14
	eL	43 30
	F	11.3
March 5, H_{P-H} = 0h 31m 42s. Epicenter approximately 5.1°N, 82.6°W. South of Panama.		
Balboa Heights	eP	0 32 45
	i	32 54
	iS	33 48
	F	1 12

Date and Station	Phase	(GCT) h m s
March 5, continued		
Bermuda	e	0 38 37
	o	39 37
	e(S)	43 36
	iS	43 45
	eL	45 16
	F	2.2
Bozeman	eP	0 40 21
	i(PP)	42 18
	iS	47 15
	i	49 33
	iL	50 56
	F	1.7
Burlington	eP	0 39 25
	i	40 47
	eS	45 27
	i	48 16
	iL	48 33
	F	2.0
Butte	eP	0 40 29
	e	42 24
	eS	47 36
	e	51 17
	eL	54 21
	F	1.8
Chicago	eP	0 38 49
	e(PP)	40 03
	eS	44 30
	eL	47 33
	F	2.0

Date and Station	Phase	(GCT) h m s
March 5, continued		
College	eP	0 42 27
	e	45 57
	eS	53 08
	e	56 22
	eL	1 07 10
	F	2.1
Columbia	eP	0 37 40
	e	38 25
	eS	42 28
	eL	45 04
	F	2.0
Honolulu	e	0 48 34
	e	51 07
	iS	53 10
	eSS	57 51
	iL	1 04 35
	F	2.3
Huancayo	iP	0 36 02
	iS	39 31
	iL	40 32
	F	3.2
Ivigtut	eS	0 50 26
	e	56 31
	eL	58 46
	F	2.2
Lincoln	eP	0 39 01
	ePP	40 28
	eS	44 31
	eL	47 48
	F	1.6
Logan	eP	0 39 59
	iP	40 00
	i	40 55
	i(PP)	41 50
	i	42 19
	i	42 49
	eS	46 31
	i	50 03
	eL	53 34
	F	2.1
Montezuma	e	0 38 40
	e	44 10
	eL	48 49
	F	1.2
New Kensington	e	0 39.8
	eS	44.3
	eL	46.8
	F	1.8
Philadelphia	iP	0 38(08)
	e	39(06)
	iPP	39(25)
	iS	43(34)
	e	45(14)
	eL	45(56)
	F	2.0

Date and Station	Phase	(GCT) h m s
March 5, continued		
Salt Lake City	eP	0 39 55
	e(PP)	41 45
	e	42 01
	iS	46 29
	e	50 01
	eL	53 11
	F	2.2
San Juan	iP	0 36 24
	i	37 03
	iS	40 12
	iL	41 25
	F	3.0
Seattle	e	0 42 10
	e	46 54
	eL	55 18
	F	2.0
Scoresbysund	eP	0 43 35
	e	45 23
	eS	53 08
	e	55 16
	e	1 00 10
	e	02 12
	F	2.1
Sitka	eP	0 42 34
	e	44 45
	ePP	45 02
	e	50 23
	iS	51 28
	iSS	55 53
	eL	1 04 05
	F	2.6
Tucson	iP	0 39 02
	iPP	40 26
	e	41 09
	i	41 45
	iS	45 00
	iL	47 48
	F	2.8
Ukiah	eP	0 40 42
	eS	47 50
	e	51 35
	eL	54 28
	F	2.8
March 5		
Tucson	eP	18 26 48
	e	28 06
	eL	31 21
	F	18.7

March 6, H_{P-H} = 20h 14.5m. By Pasadena 37.4°N, 114.1°W. Near Joseco, Nevada. Focal depth normal.

Date and Station	Phase	(GCT) h m s
March 6, continued		
Tucson	i	20 16 21
	i	17 36
	iL	18 00
	F	20.4
March 7, H_{P-H} = 3h 01.7m. Near east coast of Kamchatka. Epicenter in region 59°N, 166°E.		
Bermuda	e(P)	3 14 26
	e	16 42
	eS	24 18
	e	29 43
	eL	35 30
	F	6.0
Bozeman	eP	3 10 31
	iS	17 42
	e	20 24
	eL	22 31
	F	3.6
Burlington	eP	3 12 28
	ePPP	16 29
	eS	21 03
	iS	21 13
	e	22 29
	eL	28 35
	F	5.2
Butte	iP	3 10 28
	eS	17 34
	e	20 26
	eL	21 16
	F	4.5
Chicago	eP	3 12 05
	eS	20 35
	e	22 02
	eL	27 40
	F	4.9
College	eP	3 06 41
	iS	10 41
	eL	12 23
	F	5.3
Columbia	eP	3 13 10
	eS	22 27
	eL	31 08
	F	3.9
Honolulu	iP	3 10 09
	e	11 26
	iS	16 52
	e	20 50
	F	5.0
Huancayo	e	3 21 07
	ePS	26 47
	e	29 09
	e	37 14
	eL	51 20
	F	6.1

Date and Station	Phase	(GCT) h m s
March 7, continued		
Ivigtut	eS	3 19 31
	e	21 26
	eL	27 21
	F	4.3
Lincoln	eP	3 11 49
	eS	19 56
	eL	26 36
	F	4.6
Logan	eP	3 10 52
	iP	10 54
	i	11 44
	ePP	12 49
	ePPP	14 03
	iS	18 20
	i	19 30
	eSS	21 46
	eL	24 27
	F	5.3
New Kensington	e	3 13.3
	eS	21.6
	e	22.6
	eL	28.8
	F	5.2
Philadelphia	e	3 21(23)
	e(S)	22(21)
	e	25(55)
	eL	30(52)
	F	4.8
Salt Lake City	eP	3 10 57
	e(PP)	12 59
	eS	18 18
	e	20 52
	eL	25 40
	F	5.3
San Juan	eP	3 15 14
	e(PP)	18 46
	iS	25 47
	e	27 11
	e	31 34
	eL	48 11
	F	5.3
Seattle	eP	3 09 38
	e	11 50
	e	16 42
	eL	19 25
	F	4.3
Scoresbysund	eP	3 10 39
	e	11 12
	e(PP)	12 48
	iS	18 03
	e	20 37
	e	21 50
	eL	25 04
	F	5.2

Date and Station	Phase	(GCT) h m s
March 7, continued		
Sitka	iP	3 07 57
	ePP	08 55
	i	09 46
	iS	13 00
	i	13 58
	eL	14 31
	F	5.7
Tucson	iP	3 11 47
	i	14 07
	i	15 16
	eS	20 04
	iS	20 07
	eSS	23 49
	e	24 07
	eL	27 31
	F	5.5
Ukiah	eP	3 10 21
	ePP	12 10
	iS	17 30
	e	20 18
	eL	21 36
	F	5.6
March 7, H_{P-H} = 20h 56m 31s. By Pasadena 32° 58'N, 116° 00'W. Near Borego Valley. Focal depth normal.		
Tucson	eP	20 57 53
	e	59 09
	i	59 35
	F	21.1
March 8		
Balboa Heights	e	6 44 20
	e	44 34
	F	6 46
March 8		
Bozeman	eL	9 42 25
	F	10.0
Butte	eL	9 43 30
	F	9.9
Chicago	e	9 39 56
	e	43 09
	eL	43 54
	F	9.9
Lincoln	eL	9 41 15
	F	9.9
Logan	eL	9 40 33
	F	9.9
Philadelphia	eL	9 47 13
	F	10.0

Date and Station	Phase	(GCT) h m s
March 8, continued		
Salt Lake City	(e)	9 34 26
	eL	39 56
	F	10.1
Tucson	eP	9 32 40
	e	33 23
	e	34 24
	eL	35 03
	F	10.0
Ukiah	eL	9 40 15
	F	9.9
March 8		
Balboa Heights	e	22 33 00
	e	33 42
	F	22 36
March 9, H_{P-H} = 3h 25m 26.5s. Epicenter approximately 41.6°N, 81.3°W. Felt in Cleveland and vicinity.		
Chicago	e	3 27 45
	iL	27 54
	F	3.5
Philadelphia	e	3 27 01
	e	27 06
	i	27 23
	eL	27 34
	F	3 29.4
March 9		
Tucson	eP	9 47 19
	i	47 39
	i	51 15
	e	59 53
	F	10.9
March 9, H_{P-H} = 9h 49.0m. Epicenter in the region 60°S, 29°W. Near Sandwich Islands.		
Bermuda	e	10 02 48
	ePP	06 59
	e(SKS)	13 25
	e	15 47
	eL	28 47
	F	14.0
Bozeman	e(PP)	10 09 47
	e	14 35
	e	22 02
	eSS	26 27
	eL	45 21
	F	13.4

Date and Station	Phase	(GCT) h m s
March 9, continued		
Burlington	e(PP)	10 08 13
	e(PPP)	10 41
	eSKS	14 15
	ePS	17 35
	e(SS)	23 32
	eSSS	28 12
	eL	34 19
	F	13.7
Butte	e	10 11(17)
	eSKS	15(06)
	e	22(14)
	eL	47(10)
	F	Lost.
Chicago	e(PP)	10 08 27
	e(SKS)	14 21
	ePS	18 00
	e	24 20
	eSS	24 24
	eL	35 08
	F	Lost.
College	eP'	10 09 04
	e	16 12
	e	20 11
	e(SS)	33 07
	eL	56 42
	F	13.7
Columbia	ePP	10 06 18
	ePS	16 20
	e(SSS)	25 58
	eL	32 09
	F	Lost.
Honolulu	ePP	10 10 26
	e	17 17
	e	20 28
	eL	50 02
	F	11.6
Huancayo	iP	9 59 00
	i	10 01 41
	iPPP	02 43
	i	06 48
	iS	07 11
	i	09 52
	iSS	11 14
	eL	14 37
	F	Lost.
Lincoln	e	10 17 48
	e(SSS)	28 48
	eL	44 14
	F	12.1
Logan	e	10 07 18
	ePP	09 41
	eSKS	14 36
	ePS	19 33
	e	20 38
	eSS	26 27

Date and Station	Phase	(GCT) h m s
March 9, continued		
Logan, continued		
	e	31 17
	eL	42 50
	F	12.0
Montezuma	e	9 57 18
	eS	10 04 40
	e	07 41
	eL	13 10
	F	11.2
Philadelphia	e	10 06 37
	e	07 09
	e	09 29
	e	13 19
	ePS	16 22
	e	20 45
	eSS	22 43
	eSSS	26 51
	e	27 09
	eL	32 44
	F	13.7
Salt Lake City	e	10 09 31
	e(SKS)	14 54
	ePS	19 17
	eSSS	31 07
	eL	49 32
	F	13.4
San Juan	eP	10 01 23
	e	05 00
	ePPP	06 31
	eS	11 50
	e	12 57
	eSS	17 12
	eSSS	20 53
	eL	23 06
	F	13.4
Scoresbysund	eL	10 50 36
	F	12.2
Sitka	eP'	10 08 30
	e	11 41
	e(PP)	12 11
	e	15 27
	e	22 11
	eSS	30 34
	e(SSS)	36 52
	eL	51 12
	F	13.9
Tucson	e(P)	10 03 58
	e	06 26
	eP'	07 36
	i	08 30
	ePP	08 44
	e	13 21
	iPS	18 14
	i	19 32
	i(SS)	25 04
	e	31 06
	eL	41 03
	F	Lost.

Date and Station	Phase	(GCT) h m s
March 9, continued		
Ukiah	e	10 09 16
	ePP	10 12
	e(SKS)	15 11
	e	17 40
	e(PPS)	21 32
	eSS	27 17
	e	32 07
	eL	51 10
	F	Lost.
March 9, Aftershock.		
Chicago	e(SKS)	11 40 02
	e(PS)	43 19
	e	47 14
	F	13.0
Columbia	e	11 35 09
	ePS	42 12
	e	46 31
	eL	12 02 15
	F	13.2
Honolulu	eP'	11 33 54
	eSS	53 48
	eL	12 16 11
	F	12.5
Huancayo	eP	11 24 51
	e	29 32
	eS	33 18
	iS	33 32
	i(SS)	37 14
	eL	43 33
	F	14.2
Tucsón	eP'	11 33 27
	ePP	34 26
	ePS	44 16
	F	11.8
Ukiah	e	11 35 37
	e(SKS)	41 43
	e	43 39
	eL	53 14
	F	13.5
March 9		
Huancayo	eP	15 32 17
	e	33 00
	e	36 05
	eL	37 00
	F	15.8
March 9, Aftershock		
Bozeman	eL	20 46 23
	F	20.5
Chicago	eL	20 39 06
	F	21.2

Date and Station	Phase	(GCT) h m s
March 9, continued		
Huancayo	(e)	19 52 26
	eP	52 54
	e	53 44
	e	55 45
	eS	20 00 50
	eL	06 33
	F	21.8
Philadelphia	ePS	20 10 20
	e	12 28
	e	15 28
	eL	27 38
	F	21.2
Salt Lake City	eL	20 47 08
	F	21.5
San Juan	e	19 55 21
	e	55 39
	e(PPP)	20 00 06
	e(S)	06 46
	eL	22 17
	F	21.5
Tucson	eP'	20 01 23
	e	13 30
	e	15 41
	eL	29 07
	F	Lost.
March 9		
College	eL	21 04 04
	F	21.7
Logan	eP	20 32 11
	eL	45 20
	F	21.3
Sitka	e	20 40 30
	eL	54 22
	F	22.2
Tucson	iP	20 30 35
	i	31 40
	eL	38 22
	F	Lost.
March 10		
Huancayo	e	3 18 40
	e	23 42
	e	29 18
	e	29 54
	eL	34 08
	F	4.5

March 10, H_{P-H} = 8h 15.4m.
Aftershock of quake
near Sandwich Islands.

Date and Station	Phase	(GCT) h m s
March 10, continued		
Bermuda	e	8 35 32
	e(SKS)	39 41
	eL	55 34
	F	10.8
Bozeman	e	8 48 27
	e	56 23
	eL	9 18 35
	F	10.3
Chicago	ePS	8 44 25
	e	45 46
	eL	9 07 07
	F	10.1
Columbia	e	8 35 19
	e(SKS)	39 55
	ePS	42 55
	eL	9 04 18
	F	10.6
Huancayo	eP	8 25 27
	ePPP	29 07
	eS	33 42
	e	40 22
	eL	44 52
	F	11.0
Logan	e(SKS)	8 41 05
	e	44 01
	e	47 31
	eSSS	57 48
	eL	9 19 12
	F	10.3
Montezuma	e	8 34 20
	F	9.0
Philadelphia	e	8 33 33
	ePP	33 48
	e(SKS)	39 46
	eS	40 58
	ePS	42 52
	e	47 14
	e(SSS)	52 31
	eL	9 04 16
	F	10.7
San Juan	e	8 28 06
	e	31 51
	eS	38 07
	ePS	39 11
	e	39 49
	e	45 16
	eL	51 07
	F	10.5
Sitka	eP'	8 35 03
	e	38 41
	eSKS	41 48
	e	49 19
	eSS	57 38
	eL	9 18 05
	F	11.0

Date and Station	Phase	(GCT) h m s
March 10, continued		
Tucson	eP	8 33 52
	ePP	35 17
	ePS	44 38
	e	49 17
	eL	9 11 38
	F	10.4
Ukiah	e	8 39 07
	ePS	46 17
	eSS	54 10
	e	58 43
	eL	9 22 46
	F	10.5
March 11, H_{P-H} = 1h 13m 14s. Epicenter in vicinity of 39½°N, 23½°W. Northwestern California. Felt at Comptche, Potter Valley, Stonyford, Ukiah.		
Bozeman	eL	1 18 25
	F	1.4
Butte	eL	1 18 53
	F	1.4
Salt Lake City	eS	1 17 15
	eL	17 50
	F	1.4
Tucson	e	1 16 17
	eL	19 42
	F	1.5
Ukiah	iP	1 13 23
	iS	13 30
	iL	13 45
	F	1.3
March 11		
Huancayo	eL	5 11 07
	F	5.6
March 11		
Huancayo	e(P)	6 54 07
	e	54 50
	i	55 13
	iL	55 25
	F	7.5
March 11, H_{P-H} = 9h 34.1m. Epicenter in region of 21½°S, 170½°E. Near Loyalty Islands.		
Bozeman	ePS	10 00 30
	eL	15 27
	F	11.2
Chicago	eL	10 30 33
	F	10.9

Date and Station	Phase	(GCT) h m s
March 11, continued		
College	eL	10 13 03
	F	10.7
Columbia	eL	10 32 06
	F	10.9
Honolulu	ePP	9 45 23
	i(S)	51 15
	eSS	54 36
	eL	56 15
	F	10.4
Huancayo	e	9 54 21
	e	10 02 33
	e	03 13
	eL	18 52
	F	11.5
Philadelphia	e	10 03 52
	e	14 22
	eL	24 55
	F	11.5
Salt Lake City	e	9 58 28
	eS	58 42
	eL	10 14 27
	F	11.0
Tucson	iP	9 47 19
	iPP	51 15
	ePPP	53 13
	e	54 29
	eS	58 17
	e(PS)	59 53
	eL	10 16 47
	F	11.4
Ukiah	eL	10 10 20
	F	10.8
March 12		
Tucson	eP	22 40 07
	e	44 41
	eL	23 09 42
	F	23.6
March 14		
Huancayo	eL	9 32 45
	F	10.2
Tucson	e	8 58 20
	eL	9 37 07
	F	10.1
March 14, H_{P-H} = 11h 59.3m. Epicenter in the vicinity 36½°N, 142°E. East of Honshu Island, Japan.		
Bermuda	eL	12 59 12
	F	14.6

Date and Station	Phase	(GCT) h m s
March 14, continued		
Bozeman	eS	12 20 45
	eL	36 14
	F	Lost.
College	e	12 15 20
	eL	23 34
	F	13.0
Honolulu	eL	13 00 24
	F	13.3
Huancayo	eL	13 05 10
	F	15.1
Philadelphia	eL	12 47 38
	F	14.4
Sitka	eS	12 16 45
	eL	22 32
	F	13.0
Tucson	eP	12 11 50
	eL	39 27
	F	13.3
March 14, H_{P-H} = 12h 42.8m. Epicenter in the vicinity 36½°N, 142°E. East of Honshu Island, Japan		
Bozeman	eS	13 04 06
	eL	14 37
	F	14.0
College	eS	12 58 47
	e	13 02 41
	eL	06 10
	F	13.7
Scoresbysund	eL	13 23 32
	F	14.2
Sitka	eS	13 00 28
	e	02 24
	eL	09 51
	F	14.3
Tucson	eP	12 55 18
	iP	55 33
	e	13 06 48
	eL	21 55
	F	14.3
Ukiah	eS	13 03 33
	eL	16 15
	F	13.8
March 14, H_{P-H} = 17h 11.0m. Epicenter in the region 22°S, 170½°E. Near Loyalty Islands.		

March 14, continued

Date and Station	Phase	(GCT) h m s
Bermuda	eP'	17 30 36
	ePP	32 30
	e	33 38
	e	35 33
	eL	43 46
	F	Lost.
Bozeman	e(SKS)	17 35 17
	e(PS)	37 40
	e	41 17
	eL	47 14
	F	Lost.
Burlington	e(PP)	17 31 42
	e(SKS)	37 07
	ePS	41 42
	eSS	48 12
	e	49 12
	e	56 30
	eL	18 09 20
	F	Lost.
Butte	e	17 35 42
	eL	18 00 42
	F	18.9
Chicago	e	17 30 19
	eSKS	37 03
	e	39 46
	eSS	45 59
	eL	55 46
	F	Lost.
College	eSKS	17 34 46
	e	48 51
	eL	51 22
	F	19.0
Columbia	e	17 32 14
	eSKS	37 12
	e(PS)	40 49
	eL	18 07 44
	F	Lost.
Honolulu	eP	17 20 28
	e	22 39
	eS	27 45
	iS	28 08
	eL	32 55
	F	18.7
Huancayo	ePP	17 30 05
	eSKS	36 16
	e(PS)	38 56
	eSS	45 10
	eSSS	49 15
	eL	56 02
	F	Lost.
Ivigtut	e	17 33 53
	eL	18 18 34
	F	Lost.

March 14, continued

Date and Station	Phase	(GCT) h m s
Lincoln	ePS	17 38 57
	e	44 43
	eL	18 05 18
	F	18.8
Logan	e	17 24 48
	ePP	28 33
	e	29 57
	eSKS	35 22
	e	35 35
	e	41 19
	e(SSS)	46 26
	eL	52 47
	F	Lost.
New Kensington	e(PP)	17 31.4
	e	37.3
	e	38.6
	eL	18 12.2
	F	Lost.
Philadelphia	ePP	17 30(58)
	e(SKS)	36(34)
	ePS	40(31)
	e	42(06)
	eSS	47(58)
	eSSS	51(47)
	eL	18 04(26)
	F	Lost.
Salt Lake City	e	17 25 15
	e(SKS)	35 30
	eSSS	46 13
	eL	55 28
	F	Lost.
San Juan	e(PP)	17 31 59
	ePS	42 50
	e	43 45
	eL	18 05 45
	F	Lost.
Seattle	e	17 30 50
	e	35 53
	e(PS)	36 09
	eL	55 05
	F	18.9
Scoresbysund	e	17 33 46
	e	48 41
	eL	18 17 37
	F	Lost.
Sitka	eP	17 24 07
	ePP	27 45
	eSKS	34 44
	e(S)	34 51
	e	36 40
	eSS	40 43
	eL	48 06
	F	Lost.

Date and Station	Phase	(GCT) h m s
March 14, continued		
Tucson	eP	17 24 18
	ePP	28 19
	eScS	35 37
	e	36 45
	eSS	41 16
	eSSS	45 13
	eL	52 27
	F	18.8
Ukiah	eP	17 23 47
	e	27 30
	eS	34 40
	e	35 37
	eSS	40 11
	e	45 32
	eL	47 37
	F	Lost
March 14, H_{P-H} = 18h 37.8m. Epicenter in the region 20½°S, 69°W. Northern Chile. Possibly slightly deeper than 100 km.		
Balboa Heights	iP	18 44 05
	iS	49 00
	i	54 34
	i	55 24
	F	19 00
Bermuda	e	18 47 15
	esP	47 41
	i	53 13
	iScS	56 24
	eL	19 01 33
	F	20.6
Bozeman	eP	18 49 34
	esP	50 08
	eS	59 07
	eL	19 10 29
	F	20.3
Burlington	eP	18 48 23
	esP	49 02
	iS	56 49
	isS	57 36
	i	58 07
	esSS	19 02 00
	eL	18 20
	F	20.6
Butte	eP	18 49 40
	isP	50 19
	e	58 12
	eL	19 11 40
	F	20.0
Chicago	eP	18 48 19
	eS	56 34
	iS	56 38
	esS	57 22

Date and Station	Phase	(GCT) h m s
March 14, continued		
Chicago, continued		
	eSS	19 01 08
	eL	04 24
	F	20.6
College	ePP	18 56 07
	e	19 02 37
	e	03 10
	eL	09 32
	F	20.1
Columbia	e	18 47 19
	eS	54 46
	esS	55 32
	e	57 00
	e(L)	19 04 31
	F	20.0
Huancayo	iP	18 40 18
	i	41 21
	iS	42 10
	F	20.9
Ivigtut	eS	19 00 15
	e	00 28
	eL	13 17
	F	19.7
Lincoln	eP	18 48 30
	esP	49 11
	iS	57 08
	esS	57 50
	eL	19 12 07
	F	19.4
Logan	eP	18 49 19
	e	51 48
	eS	58 31
	iS	58 36
	e(SS)	19 03 51
	eL	13 28
	F	20.3
Montezuma	e	18 38 47
	iL	39 12
	F	19.2
New Kensington	eP	18 48.1
	esP	48.7
	iS	56.1
	i	56.9
	eL	19 02.2
	F	19.8
Philadelphia	iP	18 47(19)
	isP	47(55)
	iS	55(16)
	isS	56(00)
	i	56(57)
	eL	19 02(38)
	F	20.3
Salt Lake City	eP	18 49 15
	iS	58 28
	isS	59 12
	eL	19 33 50
	F	20.3

Date and Station	Phase	(GCT) h m s
March 14, continued		
San Juan	eP	18 45 06
	i	45 40
	e	47 25
	iS	50 47
	eL	53 27
	F	20.3
Scoresbysund	e	18 57 17
	eS	19 02 32
	esS	03 06
	eSS	08 35
	eL	23 04
	F	20.0
Seattle	e	18 51 13
	e	19 00 46
	ePS	01 31
	F	19.4
Sitka	eP	18 51 45
	eP'	55 22
	i	19 01 38
	iSKS	02 27
	e(pPS)	05 30
	eL	35 15
	F	20.3
Tucson	iP	18 48 32
	i	48 51
	e	51 33
	i(PPP)	52 33
	eS	57 07
	eS	57 52
	eScS	58 05
	e	59 09
	eSSS	19 04 49
	eL	11 08
	F	20.3
Ukiah	eP	18 49 43
	eS	59 29
	esS	19 00 05
	eL	13 07
	F	19.5
March 15		
Tucson	eP	1 04 48
	eL	2 11 17
	F	2.3
March 15, H_{P-H} = 2h 24.5m. Epicenter in the region 22°S, 169°E. Near Loyalty Islands.		
Bermuda	e	2 47 11
	e(SKS)	50 39
	e	55 28
	ePS	56 34
	eSS	3 03 54
	eL	18 59
	F	5.0

Date and Station	Phase	(GCT) h m s
March 15, continued		
Bozeman	eSKS	2 48 50
	ePS	51 03
	e	3 14 20
	F	4.2
Burlington	ePS	2 55 15
	eSS	3 02 25
	eSSS	07 00
	eL	21 00
	F	5.2
Butte	e(SKS)	2 48 40
	eL	06 50
	F	3.9
Chicago	e(PP)	2 44 15
	ePS	53 45
	e(SS)	59 44
	eL	3 27 28
	F	4.5
College	eSKS	2 48 12
	e	50 13
	eL	3 13 01
	F	3.9
Columbia	e(PP)	2 45 28
	ePS	54 33
	e	3 09 16
	eL	21 10
	F	3.4
Honolulu	(e)	2 33 06
	e	34 18
	eS	41 16
	iS	41 52
	eL	47 21
	F	3.8
Huancayo	e(PP)	2 43 25
	eSKS	49 40
	e	53 04
	e	53 56
	eSS	58 57
	eL	3 15 06
	F	5.1
Logan	e	2 38 00
	ePP	41 58
	eSKS	48 30
	ePS	50 42
	eSS	55 43
	eL	3 09 16
	F	4.2
New Kensington	eL	3 28.9
	F	4.0
Philadelphia	ePP	2 44 28
	e	51 25
	e	54 20
	e	3 01 00
	eSSS	04 22
	eL	19 52
	F	5.1

Date and Station	Phase	(GCT) h m s
March 15, continued		
Salt Lake City	e	2 38 10
	ePP	42 17
	eSKS	48 37
	e	3 10 14
	F	4.3
San Juan	e(PP)	2 45 39
	e	46 54
	e	55 41
	eL	3 28 18
	F	4.8
Scoresbysund	e	2 47 46
	eL	3 33 51
	F	4.4
Sitka	eP	2 37 35
	e	40 24
	eSKS	48 12
	ePS	49 48
	e(S)	55 20
	eL	3 06 12
	F	4.4
Tucson	iP	2 37 46
	e	41 06
	e(PPP)	43 41
	eSKS	48 25
	e(PS)	50 12
	eSS	55 32
	eL	3 05 20
	F	5.0
Ukiah	eP	2 37 28
	e	45 11
	eS	47 45
	eL	3 04 42
	F	4.3
March 15, H_{P-H} = 4h 47.9m. Epicenter in the region 9½°N, 141½°E. Near Caroline Islands.		
Bermuda	e	5 11 27
	eSS	27 04
	eL	41 04
	F	7.5
Bozeman	e(SKS)	5 12 05
	eS	12 41
	e	31 41
	eL	33 42
	F	6.9
Burlington	eSS	5 24 28
	e	28 27
	L	35 00
	F	7.3
Butte	e(S)	5 12(18)
	eSS	18(33)
	eL	27(32)
	F	6.0

Date and Station	Phase	(GCT) h m s
March 15, continued		
Chicago	eS	5 14 52
	ePS	16 44
	e(SS)	22 19
	eL	32 51
	F	6.5
College	eS	5 08 47
	e(SS)	13 05
	eL	18 34
	F	6.4
Columbia	e(SS)	5 24 40
	eL	44 35
	F	7.1
Honolulu	iP	4 58 05
	eS	06 11
	eL	12 11
	F	6.8
Huancayo	eP'	5 07 38
	e	14 00
	e	21 30
	eSS	30 10
	eL	47 37
	F	7.5
Logan	eP	5 01 28
	eSKS	11 53
	ePS	14 04
	eSS	19 09
	eL	27 40
	F	6.4
Philadelphia	e	5 17(31)
	e(PS)	19(08)
	e	23(28)
	eL	36(37)
	F	7.3
San Juan	e(PP)	5 11 29
	e	14 23
	eSS	29 22
	eL	45 15
	F	7.1
Scoresbysund	eL	5 20 17
	F	6.2
Sitka	(i)	4 59 30
	e	5 03 18
	iS	09 53
	eSS	14 54
	e	19 50
	eL	20 35
	F	6.6
Tucson	eP	5 01 43
	ePP	05 44
	e	08 04
	eSKS	12 25
	eS	13 15
	eL	28 48
	F	6.9

Date and Station	Phase	(GCT) h m s
March 15, continued		
Ukiah	eP	5 00 49
	e	03 55
	eS	11 34
	eL	24 35
	F	6.3
March 15		
Tucson	eL	12 55 27
	F	13.1
March 15, H_{P-H} = 14h 09m 25s. By Pasadena 32° 58'N, 116° 00'W. Near Borego Valley. Focal depth normal.		
Tucson	eP	14 10 35
	e	10 53
	eL	11 56
	F	14.4
March 15		
Tucson	eL	14 56 54
	F	15.3
March 15		
Tucson	eP	15 00 37
	eL	36 22
	F	15.8
March 15, H_{P-H} = 22h 59.3m. Epicenter in vicinity 14½°S, 176½°W. West of Samoa Islands. Possibly slightly deeper than 300 km.		
Bermuda	e	23 18 07
	ePP	18 49
	eSKS	23 54
	e	25 10
	e(pS)	27 43
	eSS	34 15
	e	38 02
	eL	46 02
	F	1.0
Bozeman	eP	23 11 20
	epP	12 38
	ePP	14 38
	iS	21 13
	iSP	22 09
	e	26 21
	eL	34 47
	F	24.3
Butte	eP	23 11(13)
	e	14(09)
	eS	21(09)
	eSS	26(43)
	e(L)	35(20)
	F	23.9

Date and Station	Phase	(GCT) h m s
March 15, continued		
Chicago	ePP	22 16 28
	iSKS	22 35
	eS	23 29
	epS	25 05
	iPS	25 26
	eSS	30 20
	F	24.5
College	eP	23 11 07
	esP	12 47
	e	14 10
	iS	20 56
	eSP	21 46
	e	25 53
	eL	34 28
	F	24.6
Columbia	eSKS	23 22 55
	eSS	31 08
	eL	49 56
	F	24.2
Honolulu	iP	23 06 28
epP 07 29	e	11 53
	iS	12 15
	e	13 15
	iL	15 45
	F	24.4
Huancayo	eP	23 12 24
	eSKS	22 38
	iS	23 30
	i	25 44
	eSS	30 14
	eL	39 13
	F	1.8
Lincoln	e	23 15 57
	i(SKS)	22 00
	iS	22 35
	eSSS	32 55
	F	23.7
Logan	iP	23 11 05
	ePP	14 18
	e	16 31
	iS	20 54
	eSP	21 42
	eL	33 02
	F	24.3
New Kensington	e	23 23.0
	e	26.4
	F	24.3
Philadelphia	ePP	23 17(03)
	eSKS	22(32)
	eS	24(08)
	e	25(53)
	isS	26(24)
	e	27(32)
	eSS	31(48)
	eSSS	36(13)
	eL	37(58)
	F	24.7

Date and Station	Phase	(GCT) h m s
March 15, continued		
Salt Lake City	eP	23 11 02
	epP	12 11
	e	14 03
	e	15 04
	iS	20 49
	eSS	26 06
	eL	32 12
	F	24.4
San Juan	ePP	23 18 22
	iSKS	23 42
	eS	25 34
	e	33 26
	eL	48 23
	F	24.6
Scoresbysund	e	23 18 51
	eSKS	24 16
	e	29 05
	esPS	30 52
	eL	43 41
	F	24.6
Seattle	e	23 12 09
	e	21 53
	F	24.0
Sitka	eP	23 10 51
	ePP	13 55
	i	14 10
	iS	20 28
	esP	21 12
	epS	25 50
	e(pPS)	26 24
	e	32 03
	eSSS	34 30
	eL	40 20
	F	1.2
Tucson	iP	23 10 47
	ipP	11 53
	iPP	13 48
	iS	20 20
	e	22 27
	eL	28 43
	F	1.1
Ukiah	eP	23 10 16
	e	12 52
	iS	19 22
	i	20 06
	e(SS)	23 59
	eL	29 30
	F	24.7
March 16, Off coast of Ecuador.		
Balboa Heights	e	8 50 45
	e	54 06
	e	55 54
	F	9 05
Chicago	eL	9 19 35
	F	10.5

Date and Station	Phase	(GCT) h m s
March 16, continued		
Huancayo	eP	8 50 35
	e	51 25
	eS	53 36
	eL	54 08
	F	9.8
San Juan	eL	8 56 25
	F	9.3
Tucson	iP	8 55 12
	eL	9 10 11
	F	9.5
March 16, H_{P-H} = 9h 47.4m. Epicenter in the region 0°, 81½°W. Off coast of Ecuador.		
Bermuda	e	9 58 36
	eL	10 03 44
	F	10.6
Columbia	e	9 58 32
	eL	10 03 24
	F	10.6
Huancayo	eP	9 50 41
	e	51 46
	e(S)	53 47
	eL	54 38
	F	11.4
San Juan	eP	9 52 37
	eS	56 49
	iL	57 16
	F	Lost.
Tucson	iP	9 55 24
	i(S)	10 01 30
	F	Lost.
March 16, H_{P-H} = 9h 51.9m. Epicenter in the region 0°, 81½°W. Off coast of Ecuador.		
Huancayo	iP	9 55 11
	e	58 36
	e	58 48
	eL	59 28
	F	10.5
Logan	eP	10 00 52
	e	01 25
	eS	08 00
	e	10 28
	eL	17 13
	F	10.8
Philadelphia	e(P)	9 59 10
	eS	10 04 48
	F	10.5

Date and Station	Phase	(GCT) h m s
March 16, continued		
San Juan	eP	9 57 08
	iS	10 01 20
	eL	02 03
	F	10.9
Tucson	iP	9 59 49
	i	10 00 41
	iS	06 18
	eL	10 21
	F	10.7
March 16		
Tucson	iP	23 16 08
	i	19 52
	e	28 27
	F	23.6
March 17, H_{P-H} = 0h 40m 44s. By Pasadena 32° 44'N, 115° 26'W. Imperial Fault, Imperial Valley. Felt at El Centro, Brawley and Holtville. Focal depth normal.		
Tucson	iP	0 41 45
	i	41 51
	i	41 59
	i	42 05
	i	42 49
	F	0.9
March 17, H_{P-H} = 0h 52m 20s. By Pasadena 32° 44'N, 115° 26'W. Aftershock. Felt at El Centro. Focal depth normal.		
Tucson	eP	0 53 27
	e	53 34
	e	53 38
	e	53 41
	eL	54 38
	F	1.0
March 17, H_{P-H} = 0h 56m 34s. By Pasadena 32° 44'N, 115° 26'W. Aftershock. Felt at El Centro. Focal depth normal.		
Tucson	e	0 57 24
	i	57 39
	i	57 48
	i	57 53
	i	58 52
	F	1.1
March 17, H_{P-H} = 22h 57.6m. Epicenter in region 25°S, 69½°W. Chile. Possibly slightly deeper than normal.		

Date and Station	Phase	(GCT) h m s
March 17, continued		
Bermuda	eP	23 07 27
	ePPP	10 49
	eS	15 16
	e	17 17
	e(SS)	18 48
	e	21 23
	F	0.3
Huancayo	eP	23 00 56
	iP	01 02
	e(S)	03 19
	iL	03 40
	F	Lost.
Montezuma	iP	22 58 10
	i	23 58 23
	i(L)	58 35
	F	23.4
Philadelphia	eP	23 06(56)
	eS	15(50)
	i	17(18)
	eL	22(44)
	F	23.8
Salt Lake City	e	23 10 31
	eS	19 03
	eL	32 35
	F	23.5
San Juan	e(P)	23 05 32
	ePP	07 12
	iS	11 43
	e	12 12
	i	15 00
	eL	18 52
	F	24.0
Tucson	iP	23 08 43
	e	10 45
	eS	17 43
	eL	25 50
	F	23.9
March 18		
Balboa Heights	eP	0 17 10
	iS	17 33
	F	0 19
March 18		
Salt Lake City	e	13 11 58
	eL	14 15
	F	13.4
Tucson	iP	13 01 32
	i	03 47
	e	06 57
	i	08 01
	eL	09 59
	F	13.4

Date and Station	Phase	(GCT) h m s
March 18		
Tucson	iP	13 55 59
	e	14 02 27
	eL	04 25
	F	14.2
March 19		
Tucson	eL	9 53 10
	F	10.2
March 19		
College	e	17 31 36
	e	32 38
	eL	33 30
	F	18.0
Sitka	eL	17 31 32
	F	18.2
March 20, H_{P-H} = 4h 50.6m. Epicenter in the region 16½°S, 175½°E. Near Fiji Islands.		
Bermuda	eSKS	5 17 28
	e(PS)	21 02
	eSS	28 38
	eL	48 35
	F	7.4
Bozeman	eSKS	5 14 18
	eS	14 31
	eSS	20 31
	eL	32 50
	F	6.6
Burlington	ePS	5 20 21
	e(SS)	26 45
	eL	46 30
	F	7.0
Butte	e(S)	5 14(40)
	eL	30(25)
	F	5.8
Chicago	e	5 05 36
	eL	40 09
	F	6.6
College	eS	5 14 07
	eL	26 53
	F	6.5
Columbia	ePS	5 19 12
	eL	45 11
	F	6.5
Honolulu	e(PP)	5 01 18
	e	01 57
	iS	06 02
	e	08 37
	eL	10 07
	F	5.9

Date and Station	Phase	(GCT) h m s
March 20, continued		
Huancayo	e	5 12 22
	e(S)	16 53
	ePS	18 32
	eSS	23 58
	iSS	24 00
	e	31 25
	eL	39 10
	F	6.9
Lincoln	eL	5 40 42
	F	6.3
Logan	iP	5 03 37
	ePPP	09 09
	eS	14 10
	e	15 28
	eSS	20 23
	eL	29 37
	F	6.5
Philadelphia	e(PS)	5 19(33)
	eSS	25(30)
	e	29(53)
	eL	42(32)
	F	6.7
Salt Lake City	eP	5 03 32
	eS	14 07
	e	19 17
	eL	31 58
	F	6.5
San Juan	e	5 17 04
	e	30 22
	eL	41 46
	F	7.1
Sitka	e(P)	5 03 52
	ePPP	08 12
	eS	13 34
	e	14 42
	eSS	19 12
	eL	25 06
	F	6.8
Tucson	iP	5 03 18
	e	05 30
	e	12 18
	eS	13 52
	eL	29 09
	F	7.1
Ukiah	e	5 04 20
	e(S)	13 12
	eL	26 28
	F	6.3
March 20		
Huancayo	(e)	7 03 32
	e	09 55
	eL	19 58
	F	7.7

Date and Station	Phase	(GCT) h m s
March 20, H_{P-H} = 20h 51.9m. By Pasadena 29.6°N, 113.3°W. Gulf of California. Focal depth normal.		
Salt Lake City	eL	20 58 00
	F	21.2
Tucson	iP	20 52 47
	i	53 01
	iL	53 53
	F	21.2
March 20		
Philadelphia	e	21 08(34)
	i	09(06)
	F	21 15
March 21, H_{P-H} = 20h 35.7m. Epicenter in the region 6°S, 151½°E. New Britain Island.		
Bermuda	e(PPP)	20 58 16
	e	21 05 28
	eSS	11 50
	e	17 16
	eL	28 31
	F	23.4
Bozeman	ePP	20 53 37
	e(SKS)	21 00 14
	eL	21 04
	F	23.9
Burlington	ePP	20 57 03
	e(PPS)	21 08 17
	eSS	13 43
	eL	28 13
	F	23.8
Butte	eS	21 01(05)
	e	05(10)
	eL	16(45)
	F	22.4
Chicago	ePP	20 55 46
	e	21 03 43
	ePS	05 26
	eSS	11 54
	eL	25 13
	F	23.5
College	eS	20 58 22
	eL	21 10 05
	F	23.9
Columbia	e(PP)	20 57 35
	e	21 02 11
	eL	30 32
	F	Lost.
Des Moines	e	21 13 21
	eL	28 33
	F	22.2

Date and Station	Phase	(GCT) h m s
March 21, continued		
Honolulu	eP	20 45 33
	iS	53 27
	eL	21 00 22
	F	22.8
Huancayo	eP'	20 55 00
	i	58 22
	ePS	21 07 49
	e(PPS)	09 04
	eSS	14 48
	eL	28 40
	F	23.8
Ivigtut	e	21 01 02
	e(SS)	14 29
	eL	25 15
	F	23.1
Lincoln	e	20 54 49
	e(PS)	21 04 45
	eL	28 15
	F	22.4
Logan	e	20 50 10
	e(PP)	53 59
	eSKS	21 00 01
	e(S)	01 21
	ePS	02 29
	e	05 45
	eL	17 03
	F	22.5
New Kensington	ePS	21 06.5
	e(SS)	13.2
	eL	28.9
	F	22.8
Philadelphia	eP	20 56(32)
	e	58(13)
	e	21 04(36)
	e(PPS)	08(52)
	e	13(00)
	e	14(24)
	eL	25(39)
	F	23.5
Salt Lake City	e	20 49 54
	eSKS	21 00 07
	e(PS)	03 00
	eL	21 48
	F	23.8
San Juan	eP'	20 55 11
	ePP	58 30
	e	21 04 01
	e	05 27
	e	10 08
	eSS	17 44
	eL	34 24
	F	23.5

Date and Station	Phase	(GCT) h m s
March 21, continued		
Scoresbysund	ePP	20 55 37
	ePS	21 05 11
	e	15 10
	eL	25 38
	F	23.7
Seattle	e	20 52 42
	e	21 01 47
	eL	15 37
	F	22.2
Sitka	eS	20 58 45
	eL	21 10 40
	F	22.8
Tucson	eP	20 49 32
	iPP	53 30
	e	54 10
	e	59 08
	eSKS	21 00 13
	ePS	02 42
	ePPS	03 13
	e	06 14
	eSS	08 17
	e	12 12
	e	15 03
	eL	17 27
	F	23.9
Ukiah	eP	20 48 45
	e	54 33
	e(SKS)	59 15
	e(PS)	21 00 14
	e	01 23
	eSS	05 49
	eL	13 21
	F	23.6
March 22		
Balboa Heights	e	8 43 51
	F	8 47
March 22, Possibly Mindanao, Philippines.		
Huancayo	eP'	8 44 04
	e	48 00
	e	55 05
	eSS	09 17
	e	13 38
	F	10.8
San Juan	e	8 44 06
	e	47 43
	F	9.5
Tucson	eP'	8 42 42
	e	46 29
	e(PS)	53 03
	eL	9 16 13
	F	9.9

Date and Station	Phase	(GCT) h m s
March 23		
Huancayo	eL	10 47 47
	F	11.2
March 25		
Huancayo	e	11 05 50
	eL	20 15
	F	12.1
Tucson	iP	11 23 23
	i	25 05
	e	33 13
	eL	46 26
	F	12.6
March 25		
Sitka	e	17 53 18
	e	18 01 24
	F	Lost.
March 26		
Scoresbysund	ePP	17 59 16
	e	18 00 36
	e	01 19
	e	06 21
	eSS	16 51
	e	19 16
	eL	41 39
	F	19.4
March 25, H_{P_nH} = 18h 27.4m. Epicenter in the region 60°S, 31°W. Near Sandwich Islands. Probable Epicenter.		
Bermuda	e	18 42 16
	e	45 54
	e(PS)	54 14
	eSS	19 06 47
	eL	15 18
	F	21.5
Bozeman	e	18 53 48
	e	19 02 27
	eL	24 28
	F	21.1
Butte	e	18 55(45)
	eL	19 29(23)
	F	20.5
Chicago	ePS	18 56 43
	eL	19 18 46
	F	20.7
College	ePP	18 51 12
	e	58 28
	e	19 07 27
	eSS	10 19
	eL	34 29
	F	21:1

Date and Station	Phase	(GCT) h m s
March 25, continued		
Columbia	e	18 51 40
	eL	19 12 23
	F	19.5
Honolulu	e	19 17 07
	eL	29 54
	F	20.2
Huancayo	eP	18 37 23
	ePP	39 36
	i	41 28
	iS	45 51
	i	50 54
	eL	52 03
	F	21.8
Ivigtut	ePS	18 57 40
	eL	19 25 39
	F	20.3
Lincoln	e	19 14 10
	eL	25 16
	F	20.2
Logan	e(PP)	18 47 53
	e	55 05
	e	19 07 26
	eL	20 01
	F	21.0
Montezuma	e	18 38 08
	e	42 52
	eL	49 33
	F	19.5
Philadelphia	e(PP)	18 46 08
	e	50 37
	e(PS)	54 52
	ePPS	56 13
	e(SS)	19 01 01
	L	11 00
	F	21.2
Salt Lake City	e	18 48 13
	e	54 23
	e	19 02 15
	e	07 03
	eL	25 30
	F	22.1
San Juan	e	18 42 00
	e	49 27
	ePPS	51 33
	eL	02 02
	F	20.7
Scoresbysund	e	18 48 47
	ePP	49 24
	e	19 01 38
	eSS	06 19
	eL	22 34
	F	21.4

Date and Station	Phase	(GCT) h m s
March 25, continued		
Sitka	e	19 01 20
	eL	36 10
	F	21.2
Tucson	eP'	18 45 55
	e	46 43
	eSKS	53 12
	e(PS)	56 44
	eSS	19 03 10
	eL	21 16
	F	21.3
Ukiah	e	18 57 23
	e	19 09 28
	eL	29 05
	F	20.9
March 26		
Balboa Heights	e	11 39 40
	e	40 33
	F	11 44
March 26		
Huancayo	e	15 59 38
	e	16 03 48
	eL	07 22
	F	16.6
Philadelphia	e	16 05 55
	eL	10 34
	F	16.4
March 26		
Balboa Heights	iP	16 55 41
	iN	56 33
	iE	56 48
	F	17 04
March 26		
Balboa Heights	e	17 41
	F	17 44
March 26, H_{P-H} = 17h 38m 12s. Epicenter in vicinity 22.9°S, 176.0°W. South of Tonga Islands. Depth approximately 75 km.		
Bermuda	e(PP)	17 58 15
	eSKS	18 03 45
	e(PS)	08 07
	esP	07 59
	eL	25 51
	F	19.9
Bozeman	epP	17 51 32
	e	56 33
	iS	18 01 35
	F	18.8

Date and Station	Phase	(GCT) h m s
March 26, continued		
Chicago	eP'	17 56 38
	e(SKS)	18 02 53
	e	03 34
	ePS	05 47
	eL	26 39
	F	19.2
College	eP	17 51 33
	iS	18 01 53
	e(PS)	02 32
	e	08 19
	eL	20 36
	F	18.7
Honolulu	e	17 50 33
	iS	53 33
	e	56 37
	eL	18 00 47
	F	18.4
Huancayo	eP	17 51 37
	iPP	55 25
	iSKS	18 02 07
	iS	02 52
	i	06 13
	e	08 30
	eL	18 30
	F	20.0
Logan	iP	17 50 56
	i	51 22
	i	51 40
	ePP	54 32
	iS	18 01 18
	eSS	06 41
	eL	18 58
	F	19.2
Philadelphia	eP'	17 57(01)
	iSKS	18 02(51)
	e	03(34)
	eS	04(31)
	iPS	06(31)
	eSS	12(12)
	e	16(32)
	eL	27(57)
	F	19.5
Salt Lake City	eP	17 50 52
	e	51 14
	eS	18 01 15
	eL	18 25
	F	19.4
San Juan	ePP	17 57 59
	i(SKS)	18 03 23
	iPS	07 22
	e	08 29
	e(SSS)	18 10
	eL	34 20
	F	19.1
Tucson	iP	17 50 34
	i	50 58
	e	53 32

Date and Station	Phase	(GCT) h m s
March 26, continued		
Tucson, continued		
	eS	18 00 51
	iS	00 54
	e	00 56
	e	01 32
	i	01 58
	e	05 58
	eL	15 20
	iPP'	17 06
	F	19.3
Ukiah	e	17 50 33
	eS	18 00 08
	e(ScS)	00 47
	eL	12 10
	F	19.0
March 28		
San Juan	eL	21 08 32
	F	21.6
March 29		
Huancayo	e	5 43 18
	eL	6 05 18
	F	7.2
Salt Lake City	eL	6 38 11
	F	7.0
Tucson	eP	5 33 57
	e	40 00
	eL	6 42 07
	F	7.4
March 29		
Huancayo	(e)	10 24 05
	eL	37 42
	F	11.3
March 29, H_{P-H} = 11h 46m 00s. Epicenter approximately 37.5°N, 121.9°W. Near San Francisco. California. Felt.		
Salt Lake City	eL	11 50 18
	F	11.9
Tucson	eP	11 48 32
	eL	51 37
	F	12.0
Ukiah	eP	11 46 34
	eL	47 03
	F	11.9
March 30, H_{P-H} = 21h 07.5m. By Pasadena 39.0°N, 120.5°W. Lake Tahoe region. Felt at Reno, Sacramento, Truckee, Markleeville. Focal depth normal.		

Date and Station	Phase	(GCT) h m s
March 30, continued		
Logan	e	21 09 54
	iS	10 59
	iL	11 55
	F	21.3
Salt Lake City	e	21 09 31
	eS	10 33
	eL	11 04
	F	21.3
Tucson	eP	21 10 08
	e	12 58
	e	13 08
	eL	13 52
	F	21.4
March 31, Probably off coast of Ecuador.		
Balboa Heights	iP	21 50 37
	eS	52 27
	F	22 05
Bermuda	e	21 57 01
	e(S)	22 01 16
	eL	04 03
	F	22.8
College	eL	22 20 24
	F	22.8
Columbia	eL	22 01 51
	F	22.5
Honolulu	eL	22 23 05
	e	23 47
	F	22.8

Date and Station	Phase	(GCT) h m s
March 31, continued		
Huancayo	iP	21 52 14
	i	52 50
	iS	55 32
	i	56 32
	F	23.4
Philadelphia	eS	22 01 21
	eL	04 06
	F	22.4
Logan	eL	22 14 32
	F	22.6
Salt Lake City	eS	22 03 27
	eL	13 40
	F	22.6
San Juan	e	21 54 18
	e	58 17
	eL	22 01 21
	F	22.5
Sitka	eL	22 25 12
	F	23.0
Tucson	eP	21 55 47
	ePP	57 19
	eS	22 01 48
	eL	07 44
	F	22.6

Local and Minor Quakes of March 1943

day	hour
Chicago	
20	21.1
Honolulu	
17	20.9
Huancayo	
1	15.7
	19.4
3	23.3
7	20.9
9	4.1
12	11.8
13	18.8
17	2.6
18	17.7
20	2.3
	12.4
21	19.6
	21.8
22	4.7
24	2.9
25	5.7
27	5.8
30	9.4
	14.5
Montezuma	
4	15.6
11	8.0
25	19.8
27	6.9
San Juan	
3	8.7

SEISMOGRAPHIC REPORT OF PEHPEI

December 1943 — Issued by the Division of Geophysics of the National Geological Survey of China, Pehpei, Chungking, China.

Location: λ:106°25.1' E; φ:29°50.2' N; h: 213m.
Instrument: 100-Kg Hori. Pendulum. N-S Component (self-built).
Constants: T = 4.5 sec. ; M = 100 ; ε =
τ = Period of earth movement,
A = Unreduced, double amplitude,
Δ = Distance from the epicenter.

No.	Date	Phase	Time GMT h	m	s	τ sec	A mm	Δ km	Remarks
28	Dec. 2	eP	12	12	37			1770	
		S	12	15	39				
		M_1	12	17	39	3	12		
		M_2	12	18	44	5	23		
		M_3	12	18	58	6	19		
		F	12	45	--				
29	Dec. 24	P	2	10	27			6280	Epicenter in Turkey
		(S)	2	18	17				
		F	2	32	--				
January 1944									
30	Jan. 4	(e_1)	4	31	59				
		e_2	4	32	35				
		$e_?$	4	35	34				
		L	4	36	59				
		M_1	4	38	32	5	6		
		M_2	4	39	20	5	7		
		F	4	55	--				
31	Feb. 2	P	10	23	44			5110	
		$S_?$	10	42	11				
		e	11	00	14				A group of sinusoid
		M	11	03	32	26	3		waves.
		F	12	46	--				
32	Feb. 6	eP	0	23	50			1730	
		eS	0	26	54				
		L	0	27	43				
		M_1	0	29	00	3	60		
		M_2	0	29	26	3	50		
		M_3	0	30	40	3	44		
		M_4	0	31	26	4	58		
		M_5	0	32	07	5	35		
		F	1	03	--				
33	Feb. 6	(e)	2	26	46				
		$S_?$	2	27	15				After shock.
		M	2	28	41	5	3		
		F	2	37	--				
34	Feb. 16	P	3	03	20				Felt in Chengtu.
		S	3	03	55				
		M	3	04	05	1	4		
35	Feb. 29	e_1	23	16	39				
		e_2	23	19	45				A group of sinusoid
		e_3	23	27	45				waves.
		F	23	52	--				

No.	Date	Phase	Time GMT			T	A	Δ	Remarks
			h	m	s	sec	mm	km	
March 1944									
36	Mar. 9	P	19	17	24			2440	
		S	19	21	24				
		eL	19	23	48				
		M_1	19	25	09	5	8		
		M	19	26	27	4	14		
		F	19	51	--				
							2		
37	Mar. 11	e	13	19	04				Felt in Suiyuan.
		M	13	20	49	8	2		
		F	13	29	--				
38	Mar. 22	e	7	43	46				
		F	8	00	--				

S. P. Lee