SEISMOLOGICAL LABORATORY

CARNEGIE INSTITUTION OF WASHINGTON
CALIFORNIA INSTITUTE OF TECHNOLOGY
220 NORTH SAN RAFAEL AVENUE
PASADENA, CALIFORNIA

REVISED
JANUARY 1, 1936

BULLETIN

The SEISMOLOGICAL LABORATORY, Pasadena, California, is maintained and operated by the Carnegie Institution of Washington and the California Institute of Technology as a coöperative undertaking. This laboratory is the **central station** of a coördinated group. Auxiliary stations in southern California are maintained and operated as follows: At the Mount Wilson Observatory on Mount Wilson (a Department of the Carnegie Institution of Washington); at Riverside (in coöperation with the City of Riverside); at Santa Barbara (in coöperation with the Santa Barbara Museum of Natural History); at La Jolla (in coöperation with the Scripps Institution of Oceanography of the University of California); at Tinemaha, and at Haiwee, in the Owens Valley (in coöperation with the Department of Water and Power of the City of Los Angeles).

TIME: At all these stations the minute-marks on the seismograms are coördinated directly by means of auxiliary records written at each station on which the minute-marks are registered closely parallel with recorded dot-and-dash radiotelegraphic signals sent in ordinary course from a powerful transmitting station. This permits direct correlation of the minute-marks at all the stations of the group at practically all times with an accuracy of one second, and usually of one-fifth second.

Standard time is determined at Pasadena by comparing the station clock with automatically recorded radio time signals of the U. S. Naval Observatory, three to five times daily.

The constants of these stations follow.

PASADENA SEISMOLOGICAL LABORATORY Central Station

$\Phi = 34° 08.9'$ N., $\lambda = 118° 10.3'$ W., $h = 295$ m., Deeply weathered granite rock, with inclusions of gneiss and schist.

Apparatus: horizontal-component torsion seismometers with electromagnetic damping and optical recording. (Cf.Bull.Seis.Soc.Am.,XV,1,1925).

Instruments, and Constants (approximate);

	T_o	V	h
N — S	0.8 sec.	2,800	0.8-0.9
E — W	"	"	"
E — W	6 sec.	800	0.8-0.9

Seismometers with electromagnetic damping and galvanometric-optical recording. (Cf.Bull.Seis.Soc.Am.,XXII,156,1932).

Horizontal: inertia-mass 100 kg. T_o=0.5 sec. h=1.
galvanometer: T_1=14 sec. h=1.

Vertical: inertia-mass 100 kg. T_o=1.0 sec. Damping critical.
galvanometers: (1) T_1=0.2 sec. h=4.
(2) T_1=10 sec. h=1.

Horizontal strain seismometer (Cf. Bull. Seis. Soc. Am. XXV, 283, 1935) Axis in N-S line. T_1=28 sec. Damping critical. Equivalent V=100 approx.

The constants of the short-period instruments do not undergo any significant changes. The constants of the instruments of longer period will be given from time to time when deviations from the values given are significant.

Experimental seismographs of various kinds are in process of development from time to time, and are used for intervals of variable duration. Information concerning these will be given when necessary.

AUXILIARY STATIONS

Each of the auxiliary stations has equipment as follows:

Apparatus: two horizontal-component torsion seismometers with magnetic damping and optical recording;

Instruments and Constants (approximate);

	T_o	V	h
N — S	0.8 sec.	2,800	0.8-0.9
E — W	"	"	"

one vertical component seismometer with galvanometric-optical recording;

inertia-mass 100 kg. T_o=1.0 or 0.5 sec. Damping critical or slightly less;

galvanometer: T_1=0.2 sec. h=4.

The Station Constants follow.

Coördinates are geodetic positions referred to the North American Datum.

Mount Wilson Seismologic Station
$\Phi = 34° 13.5' N., \lambda = 118° 03.4' W., h = 1742 m.$, Weathered granite.

Riverside Seismologic Station
$\Phi = 33° 59.6' N., \lambda = 117° 22.5' W., h = 250 m.$ approx., Weathered granite.

Santa Barbara Seismologic Station
$\Phi = 34° 26.5' N., \lambda = 119° 42.9' W., h = 100 m.$ approx., Heavy, boulder-laden alluvium.

La Jolla (Scripps Institution Seismologic Station)
$\Phi = 32° 51.8' N., \lambda = 117° 15.2' W., h = 7.7 m.$ approx., Consolidated detrital material.

Tinemaha Seismologic Station
$\Phi = 37° 05.7' N., \lambda = 118° 15.5' W., h = 1180 m.$ approx., Basalt.

Haiwee Seismologic Station
$\Phi = 36° 08.2' N., \lambda = 117° 57.9' W., h = 1100 m.$ approx., Loosely cemented tuff.

SYMBOLS AND NOTATION: in general the symbols and notation conform with the usual international practice. For the phases of deep-focus earthquakes the notation of F. J. Scrase is adopted. c, d are abbreviations for compression and dilatation.

When measurements referring to **local** earthquakes are included P and S will be used without index or subscript, as no attempt will be made in these bulletins to distinguish between $\overline{P}$, P*, and P_n, although such complications are often clearly indicated and are the subject of study.

SPECIAL SYMBOLS indicating the stations of this coördinated group are as follows:

PASADENA SEISMOLOGICAL LABORATORY

For routine instruments of period 0.8 second . . . . . P
For routine instruments of period 6 seconds . . . . . P_6
For instruments of different period analogous notation will be employed.
For routine instruments, galvanometer period 0.2 second . . . . . P
For routine instruments, galvanometer period 10 to 14 seconds . . . . . PX

Mount Wilson Seismologic Station . . . . . MW
Riverside Seismologic Station . . . . . R
Santa Barbara Seismologic Station . . . . . SB
La Jolla (Scripps Institution Seismologic Station) . . . . . LJ
Tinemaha Seismologic Station . . . . . T
Haiwee Seismologic Station . . . . . H

In general detailed measurements will be given only for the records of the Seismological Laboratory: those for records of the other stations will be given only to supplement the information.

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Jan 1	MW	iPZ	05	10	27		
	R	ePZ			19		
	T	iPNEZ			44		
Jan 1	MW	iPZ	05	58	36		
	T	ePZ			53		
Jan 2	P	iPZ	00	47	26	c	Normal. Maximum amplitudes approx. 4 microns, period 15 sec.
	PX	eLZ	01	08.5			
Jan 2	P	iPZ	07	54	45		
	MW	iPZ			46		
	R	iPZ			39		
	T	iPZ		55	00		
		iZ		57	33		
Jan 2	P	iPNEZ	17	45	37	c	Deep?
		iZ		46	39		
		eZ		47	07		
		iZ			26		
		iZ		49	10		
	MW	iPZ		45	39		
		iZ		46	41		
		iZ		47	05		
		iZ			22		
		iZ		49	13		
		eZ		55	11		
	R	ePZ		45	39		
		eZ		47	05		
	T	ePZ		45	35		
		eZ		47	04		
Jan 2	P	eZ	21	40	23		
	MW	iPZ			24		
	T	ePZ			43		
Jan 2	P	eZ	22	53	26		Depth probably about 100 km. Distance approximately 130°
		iZ			34		
		iP'NEZ			40		
		iZ			49		
		iZ		54	02		
		iZ			46		
		iPPZ		55	49		
		iPKSNEZ		56	59		
		iNEZ		57	20		
		iZ			32		
	PX	eN		58	43		
		eLZ	23	39.3			
	MW	eZ	22	53	26		
		iP'Z			40		
		iPPZ		55	42		
		iPKSZ		57	02		
	R	iP'NEZ		53	40		
		iPKSNEZ		57	01		
	SB	iP'Z		53	42		
	T	iP'NEZ			36		
		iPKSNEZ		56	54		
	H	iP'EZ		53	37		
		iPKSNEZ		56	57		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Jan 4	P	iPNEZ	14	39	47	c	Deep?
	PX	eLZ?		53.9			
	R	iPNEZ		39	42	c	
	LJ	iPNEZ			37		
	T	iPNEZ		40	00	c	
Jan 7	P	iPZ	13	23	18	c	Deep?
	R	iPZ			20		
	T	iPNEZ			26	c	
	H	iPNEZ			24		
Jan 8	P	iPZ	13	51	04		
	T	iPZ		50	59		
Jan 9	P	iZ	01	02	54		Possibly not seismic
Jan 9	PX	eLZ	00	00			Normal. Small surface waves only
Jan 10	P	iPZ	03	02	12		Deep
		iZ			46		
		eZ		04	46		
	MW	iPZ		02	13		
		iZ			47		
		iZ		04	52		
	R	ePZ		02	14		
		eZ			50		
	LJ	iZ			48		
	T	ePZ			22		
		eZ			56		
	H	ePNE			21		
Jan 10	P	eZ	04	16	39		
	MW	iZ			44		
	T	eZ			51		
Jan 13	P	iPZ	10	49	43	d	
	MW	iPZ			44		
	R	iPZ			45		
	T	iPZ			52	d	
	H	iPZ			50		
Jan 13	P	iPEZ	18	29	44		
		iZ		30	29		
	MW	iPNEZ		29	45		
	R	iPZ			46		
Jan 14	P	iPEZ	00	06	45		Normal. Surface waves recorded
		iSEZ		08	50		
	MW	iPNEZ		06	45		
		eSNE		08	52		
	R	ePNZ		06	37		
		iSNEZ		08	43		
	LJ	ePNEZ		06	43		
		eSNE		08	12		
	T	ePNEZ		07	21		
	H	iPNEZ			07		
		eSN		09	53		
Jan 14	P	iPZ	05	55	22		Normal
		eZ		57	06		
		iEZ			21		
	PX	eZ	06	08.3			
		eZ		30.9			
		iLZ		35.6			
	MW	ePZ	05	55	24		
		eZ		56	58		
	R	ePZ		55	18		
	T	ePZ			27		
		eZ		57	12		
	H	ePZ		55	26		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Jan 14	P	iPEZ	12	22	57	c	Deep?
	MW	iPZ			57		
	R	ePZ			57		
	LJ	eNEZ			57		
	T	ePNEZ		23	06	c	
	H	iPNEZ			04		
Jan 14	P	iPNEZ	14	23	38	d	Deep! (h = 600 km.) Δ = 83° 0 = 14:12.1
		ipPNEZ		25	45		32°S 65°W using Halifax and Zürich
		iSNEZ		32	59		USCGS: 28°S 63°W 0 = 14:12.4
		iSPNEZ		34	03		
	PX	eN		36	46		
		eN		37	25		
		iPKKPZ		42	07		
	P	iP'P'Z		50	01		
		iSKPP'Z		52	37		
	MW	iPNEZ		23	37	d	
		ipPZ		25	46		
		iSNE		32	57		
		iSKPP'Z		52	34		
	R	iPNEZ		23	33	d	
		ipPNEZ		25	41		
		iSNE		32	54		
	LJ	iPNZ		23	32		
		ipPNZ		25	41		
		iSN		32	50		
	T	iPNEZ		23	49	d	
		ipPNEZ		25	59		
		iSNEZ		33	13		
		eSPZ		34	28		
		ePKKPZ		41	59		
		eP'P'Z		49	57		
		iSKPP'Z		52	32		
	H	iPNEZ		23	44		
		ipPZ		25	54		
		iSNE		33	07		
Jan 14	P	iPEZ	17	53	52		Normal
		iPNEZ			56		
		iE	18	04	23		
	PX	eN		17	23		
		eLZ		20.5			
	MW	iPZ	17	53	53		
	R	ePZ			53		
		iPEZ			57		
		eE	18	04	25		
	LJ	iPNEZ	17	53	57		
	T	iPNEZ			58		
	H	iPNEZ			59		
Jan 15	P	iPZ	14	56	22		Normal
	PX	eZ	15	08.5			
		eLZ		23.7			
	MW	iPZ	14	56	25		
	R	ePZ			22		
	T	ePZ			29		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Jan 16	P	iPNEZ	09	57	07		
	MW	iPNEZ			06		
	R	iPZ			05		
	LJ	iZ			06		
Jan 18	P	iPZ	01	26	56		
	MW	iPZ			57		
	R	iPZ		27	00		
	H	iPNEZ		26	44		
Jan 19	P	eZ	22	52	40		
	MW	ePZ			37		
	LJ	eZ		53	07		
Jan 20	P	eP'Z	17	14	00		Normal. Δ = 11900 km. (107°)
	PX	iPPZ		15	11		O = 16:56.5
		iZ			40		Maximum amplitudes approx. 10 microns,
		iSKSNE		21	40		period 25 sec.
		eE		22	15		
		eSN			56		
		ePSN		24	10		
		iPPSZ		25	15		
	P	iPKKPZ		26	15		
	PX	iZ		27	06		
		eSSN		30.0			
		eNZ		34.5			
		eLN		39			
	MW	ePZ		10	37		
		eZ			59		
		eP'Z		14	02		
		eSKSE		21	40		
	R	eP'Z		14	10		
	LJ	iZ		26	11		
Jan 21	P	ePZ	04	12	59		Normal
		iZ		13	07		
		iZ		14	18		
	PX	eLZ		21	53		
	MW	ePZ		13	02		
		eZ		14	14		
	R	ePZ		13	03		
Jan 21	P	iPZ	05	00	08		Normal
		iE		02	53		
	PX	eN		05	06		
		eLEZ		08.0			
	MW	ePZ		00	08		
		eE		02	56		
	R	ePZ		00	05		
	LJ	eNZ	04	59	59		
	H	ePZ	05	00	26		
Jan 21	PX	eLNZ	07	42			Normal
Jan 22	P	iPZ	07	36	10		Deep?
	MW	ePZ			10		
	R	iPZ			10		
	H	iPZ			09		
Jan 22	P	eZ	09	44	17		Deep. Possibly two separate shocks
		iZ			23		three minutes apart
		iNEZ			33		
		iZ			48		
		iNEZ		47	53		
		iZ		48	12		
	MW	eZ		44	19		
		iZ			33		
		eZ		46	48		
		iZ		47	53		

Continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
						Continued	
Jan 22	R	iZ		44	32		
		iZ		47	55		
	SB	iNEZ		44	30		
		iNEZ		47	48		
	LJ	iNEZ		44	34		
		iNEZ		47	58		
	H	iZ		44	29		
		iZ		47	49		
Jan 24	P	iPZ	17	06	32		Deep
		iNEZ		09	52		
		iZ		10	22		
	R	iPZ		06	33		
		iZ		09	56		
	SB	iNEZ			49		
Jan 26	P	iPEZ	11	06	35		
	MW	ePZ			35		
	R	iPZ			30		
Jan 27	P	iPEZ	11	56	14	d	Deep?
	MW	iPZ			15		
	R	ePZ			17		
	SB	ePZ			16		
Jan 27	P	ePNEZ	15	16	58		Normal
	PX	eLN		46			
	MW	ePZ		16	50		
		iZ		17	03		
	R	ePZ		17	00		
	LJ	ePZ		16	57		
Jan 27	P	iPEZ	21	33	50		
	MW	iPZ			52		
	R	ePZ		34	06		
Jan 28	P	ePZ	00	26	18		
	MW	ePZ			19		
	R	ePZ			20		
Jan 30	P	iPNEZ	06	47	13		
	MW	iPZ			15		
	R	ePZ			07		
	LJ	ePZ			02		
Jan 30	P	iPZ	16	37	31		Normal. Probably off the coast about 41°N 124°W. Surface waves recorded
		iSNEZ		39	12		
	R	iZ		37	38		
	SB	iPZ			17		
		iSNEZ		38	48		
Jan 31	P	iPNEZ	15	25	40	d	
		eZ		26	44		
	PX	iSNE		35	23		
	MW	iPZ		25	40	d	
Jan 31	P	iPNEZ	19	03	58		Deep
		iZ		04	17		
	MW	iPZ		03	58		
		iZ		05	58		

Harry O. Wood
Research Associate in Charge
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Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Feb 1	P	iPZ	03	42	40		
		iEZ		43	20		
	MW	iPZ		42	40		
		iZ		43	20		
Feb 3	P	iPNEZ	21	02	54		
	MW	iPNEZ			55		
	SB	iPZ			49		
	LJ	iZ		03	03		
		iZ			10		
	H	iPNEZ		02	40		
Feb 4	P	iPZ	09	55	21	d	deep?
		iZ			33		
	MW	iPZ			22	d	
	SB	iPZ			12		
	LJ	iPZ			34		
	H	iPNEZ			12		
Feb 4	P	iPNEZ	12	39	24	c	deep
		iNEZ		41	21		
	MW	iPNEZ		39	25		
		iZ		41	23		
	R	iPZ		39	25		
		iZ		41	23		
	SB	iPZ		39	20		
	LJ	iPZ			24		
		iZ		41	21		
	H	iPNEZ		39	31		
		iZ		41	28		
Feb 6	P	iPNEZ	09	16	35	d	
	MW	iPZ			36		
	R	iPZ			38		
	LJ	ePZ			49		
	H	ePZ			20		
Feb 7	P	iPNEZ	00	59	41	c	normal. Δ = 9100 km. (82°)
	P6	eSE	01	09	27		
	PX	eLN		21	10		
	P	iSKPP'Z		29	33		
Feb 7	P	eZ	09	10	23		normal
		eZ		14	24		
		iZ			52		
		iZ		15	01		
		eZ		20	25		
	P6	eLN		43.5			
	MW	iZ		10	20		
		iZ		14	19		
		iZ		20	29		
		eZ		26	50		
Feb 8	P	eZ	03	16	51		
	MW	eZ			45		
	R	eZ			53		
Feb 8	P	iPZ	06	36	29		
	MW	iPZ			30		
	R	ePZ			49		
Feb 8	P	ePZ	12	24	43		deep?
		iNEZ		25	05		
		eZ		28.9			
	MW	iPZ		24	45		
		iZ		25	06		
	R	ePZ		24	46		
		eZ		25	08		

Date	Station	Phase	G. C. T. h	m	s	cd	Remarks
Feb 10	P	iPEZ	00	50	36		
	MW	iPZ			33		
	T	ePZ			16		
Feb 10	P	iPNEZ	01	03	23		deep?
		eZ		06	50		
	MW	iPZ		03	24		
	R	iPZ			25		
	SB	iPZ			20		
	T	iPNEZ			33		
Feb 10	P	iPNEZ	04	55	37		
	MW	iPZ			38		
	R	ePZ			40		
	T	iPZ			46		
Feb 10	P	iPEZ	10	31	48		
	MW	iPZ			47		
Feb 10	P	iPNEZ	18	16	38	c	deep. Identification of phases doubtful;
		ipPEZ		18	30		assumed $\Delta = 80°$, h = 0.08
		isPZ		19	37		
		iSNE		25	47		
		iE		26	03		
	PX	iNZ			32		
		iZ		27	16		
		eP'P'Z		43	47		
		epP'P'Z		45	56		
	MW	iPZ		16	40		
		ipPZ		18	32		
		eSE		25	51		
		eP'P'Z		43	26		
	R	iPZ		16	41		
		ipPZ		18	32		
		eZ		25	41		
		iSNE			52		
	T	iPNEZ		16	47		
		ipPZ		18	30		
		iSNEZ		26	03		
Feb 12	P	iPNEZ	09	52	28	c	deep
		iZ		54	40		
		iZ		55	10		
	MW	iPNEZ		52	28		
		iZ		54	17		
	R	iPZ		52	58		
		iZ		54	18		
	T	iPZ		52	27		
Feb 14	P	iZ	07	27	04		
	MW	iZ		26	56		
		iZ		27	01		
	R	eZ		26	59		
		eZ		27	06		
	T	eZ		26	40		
Feb 15	PX	eP'Z	13	05	29		normal. Distance approximately 10900 km.
		ePPZ			52		(107°) J.S.A: vicinity of 4.5°S
		eSKSZ		12	12		133.0°E 0 = 12:46:56
		iSN		13	25		
		iPPSZ		18	08		
		iSSN		21	04		
		eLN		31	17		

continued

Date	Station	Phase	G. C. T. h	m	s	e d	Remarks
						continued	
Feb 15	MW	iPZ	13	01	28		
		iP'Z		05	31		
	R	ePZ		01	24		
		eSN		13	23		
	H	eP'Z		05	23		
Feb 16	P	iPZ	03	21	02	c	
		iZ			11		
	MW	iPZ			02	c	
		iZ			11		
	R	iPNEZ		20	58	c	
	T	iPNE		21	15		
Feb 16	P	iPNEZ	14	29	32		deep?
		iZ		30	13		
	P6	eE		41	08		
	MW	iPZ		29	32	c	
		iZ		30	13		
	R	iPNEZ		29	34	c	
		eZ		30	16		
	T	ePNE		29	39		
	H	ePNEZ			38		
Feb 18	P	ePEZ	02	26	04		
	MW	ePZ		25	58		
		iZ		26	03		
	R	ePZ			04		
	T	eZ		25	39		
		iNEZ			43		
	H	ePZ			53		
Feb 19	P	iPEZ	14	34	26		
	MW	iPZ			26		
	R	ePZ			21		
Feb 21	P	iPEZ	01	20	23	c	
	MW	iPZ			23		
		iZ		23	33		
	R	iPNEZ		20	25	c	
	T	iPNEZ			14		
	H	iPNEZ			17		
Feb 21	P	iPNEZ	16	50	02		
	MW	iPZ			01		
	R	iPZ			04		
	T	iPZ		49	41		
Feb 21	P	ePZ	17	10	54		normal
		iE		11	11		
		iNEZ			20		
	PX	iZ		24	09		
	P6	iE		25	08		
	PX	eLN		38.7			
	MW	iPZ		10	50		
		iZ		11	20		
	R	ePZ		10	55		
		eZ		11	23		
		eZ		14	36		
	T	eZ		10	52		
		iZ		11	21		
		eN		15	18		
Feb 21	P	iPNEZ	22	22	53		
	MW	iPZ			53		
		eZ		26	12		
	R	iPZ		22	45		
	T	ePZ		23	01		
	H	ePZ			02		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Feb 22	P	iPZ	07	16	00		
	MW	iPZ			00		
	R	iPZ			05		
Feb 22	P	iPNEZ	12	11	39	c	deep?
	MW	iPZ			40	c	
	R	iPZ			40	c	
	T	iPZ			39	c	
	H	iPZ			39	c	
Feb 22	P	ePZ	15	47	33		normal. Phase identification doubtful.
		eP'Z		50	04		Δ = 108°?
		iPPZ			49		
		iSKSZ		56	42		
	P6	iE		57	02		
		iE		58	25		
	PX	iPSZ		59	14		
		iScSPN	16	00	17		
		iPPSN			50		
	P	iPKPKZ		01	57		
	PX	eSSN		05	38		
		eLN		31			
	R	eZ	15	55	36		
Feb 22	PX	iZ	19	49	06		normal
		iZ		50	06		
		eLNZ	20	18.4			
Feb 24	P	iPNEZ	05	47	30	c	deep?
	MW	iPZ			30		
	R	iPZ			31		
	T	iPNEZ			37	c	
Feb 26	P	iPZ	09	13	19		
	MW	iPZ			23		
	R	ePZ			22		
	T	iPZ			23		
Feb 27	P	ePZ	00	41	43		normal
		iSNEZ		43	16		
	MW	iPZ		41	44		
		iZ		42	07		
		iSZ		43	16		
	T	iPZ		41	02		
		iNEZ			10		
		iSNE			46		
	H	eZ			26		
		eSNEZ		42	20		
Feb 27	P	ePZ	10	18	44		deep. Approximately h = 200 km, Δ = 114°
		iP'NEZ		22	33		Banda Sea, using Chiufeng
		iPPE		23	21		
		ipP'Z			28		
		ipPPZ		24	37		
		iSKSNEZ		29	08		
	PX	eSNZ		31	03		
		esSEZ		32	44		
	P	iPKKPZ		33	13		
		iZ			20		
		iZ		37	08		
	MW	iPZ		18	45		
		iP'Z		22	33		
		ipP'Z		23	29		
		iSKSZ		29	12		
		iZ		33	21		

continued

Date	Station	Phase	G. C. T. h	m	s	cd	Remarks
						continued	
Feb 27	R	ePZ	10	18	45		
		iP'Z		22	35		
		ipP'Z		23	33		
		eSKSNE		29	11		
	SB	iP'Z		22	32		
		eZ		23	53		
	LJ	iP'Z		22	34		
		ipP'Z		23	35		
	T	ePZ		18	46		
		iP'NEZ		22	33		
		eSKSNEZ		29	07		
		ePKKPZ		33	16		
	H	iP'NEZ		22	32		
Feb 27	P	ePZ	11	55	15		
	MW	iPZ			15		
	T	ePZ			23		
Feb 27	P	iPNZ	17	02	56		
		iNZ		03	05		
	MW	iPZ		02	55		
		iZ		03	05		
		iZ			22		
	R	ePZ		02	59		
	T	ePZ			40		
Feb 27	P	ePZ	18	34	55		
	MW	eZ			36		
	T	ePZ			19		
Feb 28	P	ePZ	03	10	42		normal
		iZ			50		
	PX	eN		17	27		
		iLN		20.0			
	R	ePZ		10	46		
	SB	ePZ			39		
	LJ	eNEZ		11	10		
	T	ePEZ		10	22		
		eNE		15	58		
	H	ePZ		10	33		
Feb 28	P	iPNEZ	16	34	27		
	MW	ePZ			29		
	R	ePZ			32		
	T	ePZ			26		
Feb 29	P	iPNEZ	16	16	41		deep?
	MW	iPZ			42	d	
	T	iPNEZ			50	d	
Feb 29	P	iPNZ	20	48	27		deep?
		iZ			46		
	MW	iPZ			28		
		iZ			47		
	T	iPZ			26		
		iZ			45		

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Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Mar 1	P	iPZ	05	49	27		
	MW	iPZ			26		
	T	iPZ			39		
		eZ		50	14		
Mar 1	P	iPNEZ	10	32	18		Deep
		iZ		33	53		
	PX	iNZ		40	46		
	MW	iPZ		32	18		
		iZ		33	52		
	R	iPNEZ		32	20		
	LJ	iPNZ			27		
	T	iPNEZ			06		
		iZ			32		
	H	iPNEZ			12		
Mar 1	P	iPNZ	10	47	16		Normal
	PX	eLNZ	11	40.5			
	MW	iPNEZ	10	47	17		
		iZ		51	20		
	R	eZ		47	10		
		iNEZ			17		
	LJ	eZ			13		
	T	eZ			18		
	H	eE			23		
Mar 2	P	iPZ	03	30	35		Normal
		iEZ			46		
		iNZ		34	33		
		iSNE		40	00		
	PX	iN		40	46		
		eLN		48.2			
	MW	iPZ		30	36		
	R	ePEZ			39		
		eN		40	44		
	SB	ePE		30	30		
	LJ	ePZ			44		
		eE		40	20		
	T	ePNZ		30	21		
		eN		34	12		
		eN		39	40		
	H	iPNEZ		30	29		
		eE		39	48		
Mar 3	MW	iPZ	11	38	54		
	R	ePZ			54		
Mar 4	P	iPZ	04	49	26		
	MW	ePZ			25		
	T	ePZ		59	00		
Mar 4	P	iPZ	15	49	11	c	
	MW	iPZ			12		
	T	iPZ			01		
Mar 4	P	ePZ	18	21	42		
	MW	ePZ			42		
	R	ePZ			48		
	T	ePZ			04		
		iZ			14		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Mar 5	P	ePZ	06	14	05		Normal
		eZ		15	48		
	P6	eLNE		24.8			
	MW	ePZ		14	03		
	R	ePNEZ			01		
	LJ	eN?		13	29		
	T	ePZ		14	26		
Mar 5	P	iPNEZ	18	20	25		Normal
	PX	eLN		32.9			
	MW	iPZ		20	25		
	R	ePZ			21		
	T	ePNEZ			47		
Mar 6	MW	ePZ	01	48	29		
	R	ePZ			24		
	T	ePZ			56		
Mar 6	P	iPZ	04	25	05		
	MW	ePZ			09		
	T	ePZ			00		
Mar 6	P	iPNEZ	14	37	27		Normal
	PX	eSN		47	15		
		eLNZ	15	03.3			
	MW	iPZ	14	37	26		
	R	ePZ			28		
	SB	ePZ			21		
	LJ	ePZ			25		
	T	ePNEZ			36		
		eSN		47	30		
	H	ePNEZ		37	35		
Mar 7	P	iZ	18	21	08		
		iZ			13		
	MW	eZ			09		
		iZ			13		
	R	eZ			15		
	T	eZ			10		
		eZ			14		
Mar 7	P	iPNEZ	20	42	59	d	Deep?
		iZ		45	15		
	MW	iPZ		43	00	d	
		iZ		45	15		
	R	iPZ		42	54		
		iZ		45	13		
	LJ	iPZ		42	48		
		iZ		45	10		
	T	iPNEZ		43	13	d	
		iZ		45	20		
Mar 8	P	eZ	10	00	54		
	MW	eZ			56		
		eZ		01	00		
	T	eZ		00	55		
Mar 8	P	iPNEZ	13	16	04	d	Deep?
		iZ			30		
	MW	iPZ			04		
		iZ			34		
		iZ		17	15		
	R	ePZ		15	58		
		eZ		16	27		
	LJ	iPNEZ		15	53		
	T	iPNEZ		16	20	d	
		iZ			48		
Mar 8	P	iPNEZ	15	26	06		Deep?
		iZ			36		
	MW	iPZ			07		
					38		

Continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
							Continued
Mar 8	R	iPZ	15	26	03		
		eZ			34		
	T	iPNEZ			19		
Mar 8	P	iPNEZ	15	41	28	d	Deep?
		iZ		42	46		
		iZ		44	41		
	MW	iPZ		41	28		
		iZ		44	44		
	R	ePZ		41	28		
	T	iZ			45		
Mar 9	P	iPZ	10	17	37		
	MW	iPZ			39		
Mar 9	P	ePZ	22	50	00		
	MW	iZ		49	59		
	R	eZ			52		
	T	iNEZ		50	09		
Mar 10	P	iPNEZ	12	12	50	c	Deep? Seismograms complicated by numerous small impulses.
	MW	iPNEZ			50	c	
	LJ	ePNE		13	03		
	T	iPZ		12	03	c	
Mar 10	P	iPEZ	20	47	28		Normal? No surface waves.
		iNEZ			36		
	MW	iPZ			24		
	LJ	eNZ			38		
	T	ePNEZ			11		
		iZ			25		
		eZ			25		
Mar 11	P	iPEZ	00	55	34	d	Normal? No surface waves.
		iNEZ			42		
	MW	eNE			40		
	LJ	eN			53		
	T	iPNEZ			23		
	H	ePNZ			25		
Mar 11	P	iPZ	17	08	30		
	MW	iPZ			30		
Mar 12	P	iPZ	20	09	09		
	MW	iPZ			10		
	T	ePZ		08	55		
Mar 13	P	iZ	10	31	30		Possibly not seismic.
Mar 14	P	iPNEZ	09	10	43		Normal? Surface waves small.
	PX	eLZ		34.9			
	MW	iPZ		10	43		
	LJ	ePNE			42		
	T	ePNEZ			51		
Mar 14	P	iPZ	16	23	36		
	MW	iPZ			37		
	T	iPZ			45		
Mar 16	T	eZ	17	47	44		
Mar 17	P	iPZ	12	45	18		
	MW	iPZ			20	d	
	T	iPZ			31	d	
	H	ePZ			25		
Mar 17	P	ePZ	20	08	43		
		eZ		11	58		
	T	ePZ		08	39		
		eZ		11	52		
Mar 18	P	iPZ	10	27	32		
		eZ		28	32		
	MW	iPZ		27	33		
	T	ePZ			30		
	H	ePZ			32		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Mar 18	P	ePEZ	12	01	07		Normal? Surface waves small.
		eZ		03	59		
	PX	eLZ		27			
	MW	iPZ		01	07		
		eZ		04	01		
	SB	ePZ		01	10		
	LJ	ePZ		01	07		
	T	ePZ		01	12		
		iZ		04	07		
	H	ePZ		01	09		
		eZ		04	10		
Mar 18	P	eZ	13	54	48		
	MW	eZ			50		
		eZ		58	17		
Mar 18	P	eZ	10	03	47		
	MW	eZ			46		
Mar 18	P	iZ	22	42	53		
	T	eZ			43		
Mar 19	P	iPZ	09	21	53		
	MW	ePZ			54		
	T	iPZ			50		
	H	ePZ			53		
Mar 19	P	iPZ	12	35	57		
		iZ		36	04		
	MW	iPZ		35	58		
	T	iPZ			29		
		iZ			36		
	H	ePZ		35	41		
Mar 20	P	iPNEZ	17	57	44	d	Deep?
	MW	iPNEZ			44	d	
	R	iPNEZ			39	d	
	LJ	iPNEZ			38	d	
	T	iPNEZ			46	d	
	H	iPNEZ			43		
Mar 20	P	ePNEZ	18	53	49		Normal
	PX	eLNZ	19	06			
	MW	iPZ	18	53	54		
	R	ePZ			46		
	T	ePZ		54	04		
	H	ePZ		53	59		
Mar 21	P	iPNEZ	00	04	28	d	Normal
	PX	eLNEZ		26			
	MW	ePNE		04	29		
	R	iPZ			30		
	SB	iPNEZ			24		
	LJ	iPZ			28		
	T	iPNEZ			38		
	H	iPNZ			39		
Mar 21	P	ePZ	02	12	12		
	R	ePZ			11		
	T	ePZ			10		
		eZ		16	29		
	H	ePZ		12	14		
Mar 21	P	iPNEZ	17	40	21		
	MW	iPZ			22		
	R	ePZ			14		
		iNEZ			18		
	SB	ePZ			26		
	T	iPZ			49		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Mar 22	P	iPZ	12	29	01		Normal
		iEZ			10		
	PX	eLNZ		57			
	MW	iPZ		28	59		
	R	eZ		29	10		
	T	iPZ			11		
Mar 22	P	eZ	23	05	28		
	MW	iZ			11		
		iZ			30		
		iZ		07	02		
	R	eZ		05	25		
	T	iZ			03		
		iZ		06	54		
Mar 25	R	eZ	01	30	58		
		eZ		31	06		
	T	iPZ			10		
		iZ			56		
Mar 25	PX	eLZ	09	28			
		iLZ		38			
	T	ePZ		08	39		Normal
Mar 25	P	iPZ	18	13	59		
	R	ePZ			54		
Mar 28	MW	ePZ	17	42	22		
	T	ePZ		41	45		
Mar 29	P	iNEZ	02	57	07		
	MW	eZ		56	55		
		iZ		57	02		
		iZ		58	05		
	R	eZ		56	51		
	LJ	eZ			50		
	T	iZ		57	21		
Mar 30	P	iPZ	20	10	58		
	R	iPZ			54		
	T	iPZ		11	10		
Mar 31	P	iPEZ	03	45	14		
	MW	iPZ			15		
	R	iPZ			17		
	LJ	iPZ			21		
	T	iPZ			08		
		iZ		46	25		
	H	iPNZ		45	13		

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Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Apr 1	P	iPZ	02	23	56		Normal. △ = 11900 km.
		iP'NZ		28	00		J.S.A: 2.5°N. 123.5°E. 0 = 02:09:16
		iPPZ			18		USCGS: 03°N. 124°E. 0 = 02:09.4
		iSKSNZ		34	30		
	PX	iSN		35	51		
		iPSN		37	36		
		iPPSNZ		38	41		
	P	iPKKPZ		39	22		
	P6	iSSN		43	57		
	P	iP'P'Z		47	05		
	P6	eLN		53.6			
	MW	ePZ		23	50		
		iP'Z		27	59		
		eSKSNE		34	30		
	R	ePZ		23	55		
		iSKSE		34	33		
	LJ	iSKSNE		34	28		
	T	ePZ		23	39		
		iZ		28	12		
		iSKSNEZ		34	25		
		iPKKPZ		39	15		
		iP'P'Z		47	06		
	H	eZ		27	33		
		eSKSN		34	23		
		eP'P'Z		47	03		
Apr 1	P	eZ	20	29	26		Normal. May be more than one shock.
	PX	iZ		39	05		
		eZ		45.5			
		iZ		49	16		
		iLZ		58.9			
	MW	iZ		29	25		
	R	eZ		29	48		
	T	eZ		25	14		
		eZ		29	01		
		eZ		40	41		
Apr 1	P	eZ	21	25	19		
		iZ			36		
	MW	iZ			17		
	R	eZ			17		
	T	eZ			19		
Apr 2	P	iPEZ	06	30	06		Normal. S doubtful.
	P30	iSN		40	49		
	PX	eLN		55			
	MW	iPZ		30	03		
		iZ		33	50		
	R	iPZ		30	07		
		iZ		36	11		
		eSE		40	51		
	LJ	ePZ		30	10		
	T	iPZ			05		
Apr 2	P	iPZ	06	48	12		
	MW	iPZ			14		
	R	ePZ			13		
	T	ePZ			11		
Apr 3	P	ePZ	11	19	37		Normal.
	PX	eLZ		34.2			
	MW	iPZ		19	31		
	R	ePZ			28		
	T	eZ			53		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Apr 5	P	iPZ	06	15	29		
	MW	iPZ			30		
	T	iPNEZ			23		
Apr 5	P	iPZ	14	39	59		
	MW	iPZ		40	00		
		iZ			23		
	R	iPZ			01		
	T	iPZ		39	51		
		iZ		40	14		
Apr 6	MW	iZ	03	55	01		
	T	eZ			13		
Apr 7	P	iPZ	00	51	00		
	T	iPZ			04		
Apr 7	P	iPNEZ	01	49	42	c	Deep. Tinemaha reading at 02:16:31 may refer to a separate shock.
		eZ		52	37		
		eSE		59	55		
	MW	ePNE		49	42		
	R	iPNEZ			45		
	SB	iPNEZ			32		
	LJ	ePNEZ			41		
	T	iPNEZ			51	c	
		iZ		50	18		
		iZ		52	32		
		eSNEZ	02	00	01		
		eZ		16	31		
	H	iPZ	01	49	47		
Apr 7	P	iPZ	07	00	25		Deep.
	MW	ePEZ			27		
	R	ePNEZ			27		
	LJ	iPNEZ			37		
	T	iPNEZ			11		
		iZ			39		
		iZ		01	39		
Apr 7	P	iPEZ	09	01	55		
	T	iPZ		02	00		
Apr 7	P	iPEZ	11	38	07		
	R	iPEZ			10		
	LJ	ePZ			09		
	T	iPNEZ			14		
	H	ePZ			13		
Apr 7	P	eZ	12	42.5			
	T	eZ		42	28		
Apr 7	P	iPNEZ	13	47	12		
	MW	ePN			13		
	LJ	iPZ			24		
	T	iPNEZ		46	58		
Apr 9	P	ePZ	07	23	29		Normal.
	PX	eLZ		49.2			
	R	eZ		23	34		
	T	eZ			39		
Apr 9	P	eZ	16	14	41		Normal.
	PX	eLZ		41.0			
	MW	eZ		14	43		
	R	eZ			52		
	T	eZ			49		
Apr 9	P	iPZ	16	36	16		
	MW	iPZ			17		
		iZ			44		
	R	eZ			20		
	T	ePZ			17		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Apr 9	P	iPEZ	20	09	38		
	R	eZ			40		
	T	ePZ			39		
Apr 10	P	iPZ	01	47	02		
	R	ePZ			04		
	T	iPZ			04		
Apr 10	P	iPZ	12	08	43		Deep.
		iZ		10	53		
		iZ		12	05		
	R	iPNEZ		08	46		
	LJ	iPZ			45		
	T	iPNEZ			48		
		iZ		09	02		
		iZ		11	00		
	H	ePZ		08	49		
Apr 10	P	eZ	12	45	39		
	T	iZ			28		
		eZ		46	07		
Apr 10	P	iPEZ	16	21	46		
	R	iPZ			49		
	T	iPEZ			52		
Apr 10	P	ePZ	20	14	14		
	MW	iPZ			14		
	T	iPNEZ			03		
Apr 12	PX	eLZ	00	26.4			Normal.
Apr 12	P	ePZ	21	04	34		Normal. Surface waves recorded with indefinite beginning. Readings 21^h35^m may be P of a second shock.
	PX	eZ		08	17		
		eN		16	00		
	P	iZ		35	45		
	MW	ePZ		04	35		
		iZ		08	47		
		iZ		35	42		
	R	eZ		04	42		
	T	iPNEZ			31		
		eZ		07	51		
		iZ		35	26		
Apr 13	P	iPNEZ	07	32	00		Deep?
	MW	iPZ			01		
		eZ		34	02		
	T	iPZ		32	09		
		iZ		34	08		
Apr 13	P	ePZ	21	17	46		Normal.
	PX	eLZ		21	42		
	MW	ePZ		17	47		
	R	ePZ			48		
	T	ePNEZ			52		
Apr 14	P	iPZ	15	55	38		Normal? L may be belong to another shock.
	PX	eLZ	16	59.5			
	T	ePZ	15	55	37		
Apr 15	P	iPNEZ	06	24	51	d	Deep?
		eZ		26	59		
		eZ		28	07		
	MW	iPZ		24	55		
Apr 15	P	iPZ	15	25	20		
	T	iPZ			22		
Apr 15	P	ePZ	19	30	35		
	MW	oPZ			35		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Apr 15	P	ePNEZ	21	17	19		
	MW	iPZ			19		
	R	ePNEZ			14		
	T	ePNE			51		
	H	ePN			35		
Apr 15	P	ePZ	22	43	11		
	MW	iPZ			12		
Apr 16	P	ePZ	05	49	31		
	MW	ePZ			31		
	R	ePZ			35		
Apr 16	P	iPZ	07	11	43		
	MW	iPZ			44		
Apr 16	P	ePZ	08	57	06		
	MW	iPZ			07		
	T	ePNE			18		
Apr 17	P	iPZ	14	50	43		
	R	iPZ			38		
	T	iPZ			57		
Apr 17	P	iPNEZ	15	15	04	c	Deep.
	MW	ePNE			03		
	R	iPZ			00	c	
		eZ		17	08		
	LJ	iPZ		14	56		
	T	iPNEZ		15	14	c	
		iZ		17	30		
Apr 18	P	iPNEZ	05	34	58	d	
	MW	iPZ			58		
	R	ePZ		35	00		
	T	ePNE		34	59		
Apr 19	P	iPNEZ	05	20	18	c	Normal. △ = 10400 km. (94°)
		iPPE		24	16		J.S.A: 09.0°S 156.0°E 0 = 05:07:12
	PX	iPPPN		26	03		USCGS: 08°S 156°E 0 = 05:07:14
	P6	eSKSE		30.9			
		eE		31	19		
	PX	iSNZ			28		
	P6	ePSE		32	24		
		eLE		38.4			
	MW	iPNEZ		20	19	c	
		iZ		22	31		
		eE		31	15		
	R	iPNEZ		20	21		
		eE		30	46		
		eN		31	31		
	LJ	ePEZ		20	19		
	T	iPNEZ		20	20		
		iZ		23	09		
		eN		24	42		
	H	ePN		20	23		
		eN		31	15		
Apr 19	P	iPEZ	05	49	39		Possibly part of preceding.
	MW	iPZ			41		
	R	iPZ			43		
	T	iPZ			41		
Apr 19	P	iPZ	06	03	06		Possibly part of preceding.
	MW	iPZ			07		
	R	ePZ			10		
	T	iPZ			10		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Apr 19	P	ePZ	07	18	14		
	MW	iPZ			16		
	T	ePZ			18		
Apr 19	P	ePEZ	07	33	46		
	MW	iPZ			45		
	R	ePZ			49		
	T	ePEZ			47		
Apr 19	P	iPZ	07	42	22		
	MW	iPZ			22		
		iZ			37		
	R	ePZ			23		
	T	ePZ			23		
Apr 19	P	iPEZ	07	56	46		
	MW	iPZ			48		
	T	iPZ			49		
Apr 19	P	ePEZ	09	23	04		
		iZ			11		
		iE		25	26		
	MW	iPZ		23	05		
	R	ePZ			06		
	T	ePZ			00		
Apr 19	MW	iPZ	09	30	08		
	R	ePZ			10		
	T	ePZ			10		
Apr 19	P	ePZ	19	48	36		
	R	ePZ			39		
Apr 20	P	iPZ	03	41	46		
	MW	ePZ			46		
	R	ePZ			49		
Apr 20	P	iPZ	04	03	08		
	MW	iPZ			12		
Apr 20	P	iPEZ	08	09	13		
	MW	iPZ			14		
	R	ePZ			16		
Apr 20	P	ePZ	10	45	20		
	MW	ePZ			21		
Apr 20	P	iPEZ	13	48	45		
	MW	iPZ			46		
		iZ		49	05		
	R	iPZ		48	48		
	T	iPZ			47		
Apr 22	P	iPZ	02	09	13		
	MW	iPZ			13		
	R	iPZ			02		
Apr 23	P	iPNEZ	23	23	01	d	Normal.
		iSNEZ		29	58		J.S.A: 50.5°N 178°E 0 = 23:14:34
	PX	eLN		35	27		USCGS: 48°N 178°E 0 = 23:14.4
	MW	iPNEZ		23	01	d	
		iSNEZ		30	01		
	R	iPNEZ		23	05	d	
		eSE		29	55		
	SB	iPNZ		22	52	d	
	LJ	iPNEZ		23	11	d	
		eSNE		30	20		
	T	iPNEZ		22	47	d	
		eSNE		29	30		
	H	ePZ		22	51		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Apr 24	P	iPZ	13	00	49		
		iZ		04	23		
	MW	iPZ		00	50		
		iZ		04	24		
	T	iPZ		00	49		
		iZ		04	23		
Apr 24	P	iPEZ	13	26	02		
	MW	iPZ			02		
	R	ePZ		25	55		
	T	iPNEZ		26	32		
Apr 24	P	ePZ	14	41	49		Normal?
		iZ		44	48		
	PX	eLZ		55			
	MW	ePZ		41	50		
		iZ		42	09		
		eZ		44	44		
	T	iPNEZ		42	06		
		iZ		44	50		
Apr 25	P	iPZ	22	48	00		
	T	iPZ			13		
Apr 26	P	iPZ	05	15	37		
		iZ		16	08		
	MW	iPZ		15	36		
		iZ		16	10		
Apr 26	P	iPEZ	08	57	09		
	MW	iPZ			10		
Apr 27	P	eZ	00	16	58		Normal
		iZ		17	54		
	P6	eLE		58.3			
	MW	eZ		17	06		
		iZ			49		
Apr 27	P	ePZ	06	37	40		Normal.
	P6	eLE		48.3			J.S.A: 16.3°N 87.7°W 0 = 06:31:06
	MW	eZ		37	44		USCGS: 16°N 87°W 0 = 06:30:50
	T	eNE			52		
Apr 27	P	iPZ	13	03	14		
	MW	iPZ			14		
	T	iPZ		02	56		
Apr 28	P	iPNEZ	05	51	51	c	Normal.
		eSE	06	02	53		
	PX	eLZ	06	21.1			
	MW	iPZ	05	51	52	c	
	SB	ePEZ			54		
	LJ	ePNEZ			56		
	T	ePNE			54		
Apr 28	P	iPZ	10	00	50		
	MW	iPZ			50	c	
	T	iPZ		01	02		
Apr 28	P	iPZ	11	56	25	c	
	MW	iPZ			26	c	
	SB	ePZ			22		
	T	iPNEZ			36	c	
Apr 28	P	iPEZ	13	54	04		
	MW	ePZ			04		
	T	ePZ			04		
		eZ		55	40		
Apr 28	P	iPZ	14	05	00		
	T	ePZ		04	54		

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Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Apr 29	P	ePZ	08	28	22		Normal.
	PX	eLZ	09	09	.1		
	MW	iPZ	08	28	20		
	LJ	ePZ		28	19		
	T	ePZ			24		
Apr 29	P	ePNEZ	19	19	58		Normal. Small surface waves recorded.
	MW	ePZ		19	00		
	LJ	ePZ			18		
	T	ePNEZ		18	31		
	H	ePNE			43		
Apr 30	P	iPNEZ	10	58	42		Normal. Small surface waves recorded.
	PX	iNZ	11	01	40		
	MW	iPZ	10	58	41		
	LJ	ePEZ		59	03		
	T	ePZ		58	15		
	H	ePNEZ			24		
Apr 30	P	iPZ	17	18	17	d	Deep.
		iZ		19	03		
		iZ			23		
	MW	ePZ		18	17		
		iZ		19	03		
		iZ		19	24		
	SB	ePZ		18	25		
	LJ	ePZ			11		
	T	ePZ			30		
		eZ		19	13		
	H	ePNE		18	25		
Apr 30	P	iPZ	21	56	51		
	MW	iPZ			52		
	T	iPZ		57	00		
	H	ePZ		56	59		

Harry O. Wood
Research Associate in Charge
C. F. Richter
Assistant

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
May 1	MW	eZ	10	18	12		
May 1	P	iPZ	10	46	55		
	MW	ePZ			57		
May 1	MW	ePZ	15	46	38		
	T	eZ			40		
May 1	P	iPZ	16	59	50		
	MW	iPZ			51		
	T	ePZ			55		
	H	ePE	17	00	01		
May 3	P	ePZ	04	17	17		
May 4	P	ePEZ	08	22	35		
	MW	ePZ			33		
	T	ePZ			26		
May 4	MW	eZ	10	01	21		
	T	ePZ			06		
May 4	MW	ePZ	12	08	04		
	T	ePZ		07	46		
May 4	T	iPZ	12	46	44		
May 4	MW	iPZ	22	36	04		
	R	ePZ			07		
	T	iPZ			09		
May 4	P	iPZ	23	12	40		
	MW	iPZ			43		
	R	ePZ			45		
May 5	MW	iPZ	11	05	35		
May 5	P	iPZ	17	59	56		
	MW	iZ			55		
		iZ	18	00	39		
May 5	P	ePZ	19	56	31		
	MW	ePZ			35		
May 6	P	iPNEZ	03	48	43		Deep?
		iNZ		49	20		
		iZ		50	11		
	MW	iPNEZ		48	42		
		iZ		49	18		
	R	ePZ		48	34		
		iNZ		49	11		
	LJ	iPNEZ		48	34		
	T	iPNEZ			45		
		iZ		49	25		
	H	ePNEZ		48	48		
May 6	MW	iPZ	14	16	40		
	R	ePZ			39		
May 6	P	eZ	14	56	32		
	MW	eZ			41		
	R	eZ			38		
May 7	P	iPNEZ	10	07	00		Normal.
	PX	eLNZ		14.0			
	MW	iPZ		06	59		
	R	ePNEZ			53		
	SB	iPZ		07	14		
	LJ	ePNE		06	34		
	T	ePN		07	28		
May 8	P	iZ	01	11	11		
	MW	ePZ		10	58		
	T	ePZ			59		

Date	Station	Phase	G. C. T. h	m	s	cd	Remarks
May 8	P	ePZ	04	33	29		
		iZ			34		
	MW	iZ			35		
	R	eZ			37		
	T	iPZ			38		
May 8	P	eZ	09	29	14		Deep. Rough solution, using reports of several stations: 5°S. 115°E. h = 600 km. 0 = 09:11.6 Δ = 123°
		iP'NEZ			31		
		iZ		31	00		
		iPPEZ			39		
		iZ			50		
		iZ			58		
		iZ		32	11		
		eZ		42	49		
		iZ		45	16		
	MW	eZ		29	18		
		iP'NEZ			32		
	R	iP'NZ			35		
		eZ		31	30		
	SB	iP'NEZ		29	28		
	LJ	iP'NEZ			36		
	T	iP'NEZ			30		
		iZ		30	53		
		eZ		31	20		
		iZ			48		
	H	iP'NEZ	09	29	31		
		iZ		31	35		
May 8	P	iPNEZ	17	28	56		Deep?
		iEZ		29	30		
		iZ			52		
	MW	iPZ		28	56		
		iZ		29	45		
	R	iPZ			01		
		iZ			35		
	SB	iPNEZ		28	51		
	LJ	iPZ		29	11		
		iZ			44		
	T	iPNEZ		28	36		
		iZ		29	41		
	H	ePZ		28	44		
May 9	MW	ePZ	02	20	02		
May 9	P	eZ	06	14	24		
	MW	ePZ			19		
		eZ			23		
	T	ePZ			21		
May 9	P	eZ	06	55	20		
		eZ			59		
	MW	eZ			28		
	R	eZ			34		
	T	eZ			08		
		eZ			38		
May 10	P	eZ	06	00	52		
	MW	iZ			55		
	R	eZ			48		
	T	iPNEZ		01	22		
May 10	P	iPEZ	09	11	39		
	MW	iPZ			41		
	R	iPZ			44		
	T	iPNEZ			13		
	H	ePZ			22		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
May 10	P	iPZ	11	32	05		
	MW	iPZ			05		
	R	ePZ			07		
	T	ePZ			09		
May 10	P	iPZ	15	19	37		
	R	ePZ			32		
	T	ePZ			56		
May 10	P	iPZ	15	40	30		
	T	ePZ			38		
May 10	P	iPNZ	17	41	07		37°30'N 118°32'W
		iSZ			59		0 = 17:40:13
	MV	iPNZ			06		Using data of Berkeley, Fresno, etc.
		eSNE			57		Felt at Bishop, etc.
	R	iPNZ			10		
		iSEZ		42	06		
	SB	iPNEZ		41	05		
		iSN			49		
	LJ	iPZ			28		
		eSNEZ		42	42		
	T	iPNEZ		40	24		
		iSNE			31		
	H	iPNEZ		40	40		
		iSNEZ		41	00		
May 11	P	iPEZ	17	40	34		Normal.
	PX	eLNE	18	10.2			
	MV	ePZ	17	40	31		
	R	iPZ			37		
	T	iPNEZ			35		
May 11	P	iPZ	20	37	49		
	MW	iPZ			49		
	T	iPZ			50		
May 12	P	iPEZ	12	54	23	c	Deep?
	MW	iPZ			25	c	
	R	iPZ			25	c	
	LJ	iPZ			23	c	
	T	iPZ			32		
May 13	P	iPZ	22	08	50		
	MW	iPZ			51		
		iZ		09	16		
	T	ePZ			20		
May 13	P	iPZ	01	27	28	c	Deep?
	MV	iPZ			30	c	
		iZ			49		
	R	ePZ			31		
	T	iPZ			38		
	H	iPZ			36		
May 13	P	iPZ	10	48	03		
	MV	iPZ			03		
	R	ePZ			05		
	T	iPZ			12		
	H	ePZ			10		
May 14	P	iPNEZ	05	11	03	c	Deep? Very small surface waves (?)
		iZ			20		recorded.
		iZ			34		
		eZ		14	31		
	MW	iPZ		09	03		
		iZ			19		
		iZ		14	33		
	R	iPNEZ		11	04		
		iZ			21		
	T	iPNEZ			12	c	

continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
							continued
May 14	T	iZ			28		
		iZ			49		
		iZ		12	27		
	H	iPNEZ		11	11	c	
May 15	P	ePZ	20	32	21		
	T	ePZ			16		
May 15	MW	ePZ	21	33	30		
		eZ		34	00		
	R	ePZ		33	31		
May 16	P	iPZ	02	34	50		
	MW	iPZ			50		
	R	ePZ			48		
	T	iPZ			55		
May 16	P	eZ	07	24	14		Normal.
		iZ			24		
	P30	eLN		52			
	MW	iZ		24	24		
	R	eZ			10		
	T	iPZ			05		
		eN		30	28		
May 19	P	iPNEZ	07	40	25	d	Deep. Aftershock of May 8, 9h
		iZ		42	20		
		iZ			42		
		iZ			45		
		iZ			45		
		iZ			50		
		iZ		43	06		
	MW	iPZ		40	25	d	
		iZ		42	20		
		iZ			45		
		iZ		43	05		
	R	iPZ		40	26	d	
		eZ		42	18		
		eZ			42		
		iZ		43	07		
	SB	iPZ		40	22		
	LJ	iPZ			27		
	T	iPNEZ			23		
		iNEZ		42	13		
	H	ePNEZ		40	24		
		eNEZ		42	19		
May 19	P	iPNEZ	21	08	50		Deep? Surface waves small. Apparently distant between 115° and 120°; East Indies. Phase indentifications doubtful. See following entries.
		iEZ		09	55		
		eSKSNE		15	38		
	PX	eL		45			
	MW	iP'Z		08	50		
		eSKSZ		15	33		
		ePKKPZ		19	09		
	R	iP'Z		08	51		
		ePKKPZ		19	10		
	LJ	eP'Z		08	51		
	T	iP'Z			49		
	H	iP'Z			46		
May 19	P	iPNEZ	21	12	18		Deep? Possibly this is a phase of the preceding; or some phases referred to in the preceding may belong here.
	MW	iPZ			17		
	R	iPZ			19		
	T	iPZ			17		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
May 19	P	iPZ	21	49	40		This may be part of one of the two preceding shocks.
		eZ		52	00		
		iNEZ		53	18		
	MW	ePZ		49	37		
		eZ		51	59		
		eZ		53	18		
	R	ePZ		49	39		
	T	iZ		52	57		
May 20	P	iPNEZ	02	59	09	c	Deep?
	MW	iPNEZ			09	c	
	R	iPZ			11		
	T	iPNEZ			12		
	H	iPZ			12		
May 20	P	cPZ	03	18	05		Normal. △ = 10000 km. (90°)
		ePPZ		21	26		U.S.C.G.S: 8°5S. 160°E. 0 = 03:05.2
	P6	eSKS		28	35		J. S. A: 7.7°S 159°E. 0 = 03.05:21
	PX	iSNEZ		29	01		
		iPSZ		30	07		
		eSSSZ		38.3			
	P6	eLE		44.3			
	MW	iPEZ		18	06		
		iZ		19	13		
		eSNEZ		29	01		
	R	iPZ		18	08		
		iNEZ			11		
		ePPZ		21	25		
		eSKSE		28	41		
		eSNZ		29	21		
	SB	ePZ		18	02		
	LJ	iPNEZ			12		
		eSN		28	43		
	T	iPNEZ		18	09		
		iPPZ		21	28		
		eE		28	51		
		eN		29	09		
	H	iPNEZ		18	10		
		ePPE		21	46		
		eNE		28	42		
May 20	P	iPZ	05	39	15		
		eZ		43	38		
	MW	iPZ		39	13		
	R	iPZ			17		
	T	iPZ			18		
May 20	P	ePZ	06	20	23		
	MW	iPZ			24		
	T	iPZ			27		
May 20	P	iPZ	07	19	54		
	MW	ePZ			55		
	R	ePZ			55		
May 20	P	iPZ	14	28	37		
	R	eZ			40		
	T	iPZ			23		
May 21	P	iPNEZ	03	03	14		Normal? Surface waves small.
	PX	eLZ		35.2			
	MW	iPZ		03	15		
	R	ePZ			18		
	T	iPZ			15		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
May 22	P	ePZ	00	28	20		Normal?
		iNEZ			26		
	PX	eLN		56.7			
	MW	iPZ		28	19		
		iZ			25		
		iZ		30	10		
		eZ		34	40		
	R	ePZ		28	17		
	SB	iZ			31		
	LJ	eZ			19		
	T	iPNEZ			31		
	H	ePNEZ			26		
May 22	P	ePZ	07	12	54		
	MW	iPZ			55		
	R	ePZ			57		
May 22	P	eZ	23	33	57		Normal.
		iZ		34	14		
	PX	eLZ	24	05			
	MW	eZ		33	56		
		iZ		34	07		
		iZ			15		
		eZ		36	25		
	R	eZ		34	00		
		eZ			17		
	T	eE			01		
	H	eZ			16		
May 24	PX	eLNEZ	16	48.8			Normal.
May 24	P	eZ	16	49	50		Superposed on the preceding.
	MW	eZ		46	26		
		eZ		49	04		
May 24	P	iPZ	19	50	26		
	MW	iPZ			20		
		eZ		51	28		
May 24	P	iPZ	21	44	08	c	
	MW	iPZ			08		
May 25	P	ePZ	03	16	10		Normal.
	PX	eLZ		46.2			
	MW	ePZ		16	08		
May 25	P	eZ	07	33	33		
		iZ		34	11		
	MW	eZ		33	33		
		iZ		34	00		
		iZ			11		
May 26	P	iNEZ	13	02	43		
		eZ		05	53		
	MW	iZ		02	45		
		eZ		06	11		
	LJ	eZ		02	44		
May 27	P	ePZ	06	37	54		Normal. Strong in India.
	PX	ePPZ		38	34		Δ = 12900 km. (116°)
		iPPZ			54		U.S.C.G.S: 29°N 84°E 0 = 06:19.2
	P	eZ		39	44		J. S. A: 24.2°N 85.3°E 0 = 06:19:27
	PX	iPPPZ		41	18		
		eSKSZ		44	26		
		eSKKSN		45	50		
		iPSZ		48	31		
	P	ePKKPZ			52		
	PX	ePPSZ		49	40		
	P	eZ		52	31		
	PX	eSSZ		59	25		

Continued

Date	Station	Phase	G. C. T. h	m	s	cd	Remarks
							Continued
May 27	PX	eLZ	07	08	15		
		eLZ		14.6			
	MW	eZ	06	37	30		
		iP'Z			56		
		iPPZ		38	39		
	R	eP'Z		37	54		
		iPPZ		38	43		
		ePKKPZ			43		
		eZ		52	28		
	T	eP'N		37	53		
		ePPN		38	29		
	H	eP'NZ		37	52		
May 27	P	iPZ	07	04	23		Possibly associated with preceding.
	MW	iPZ			23		
May 28	P	iPZ	09	32	30		Deep?
		iZ		34	38		
	MW	iPZ		32	30		
		iZ		34	36		
	R	ePZ		32	32		
	T	iPNEZ			38		
	H	iPZ			37		
May 28	P	iPNEZ	18	54	43		Normal?
	P30	eSN		59	30		U.S.C.G.S: 10°N 104°W 0 = 18:49.1
	P6	eLE	19	01	21		J. S. A: 9.0°N 103.5°W 0 = 18:49:11
		iLE		03	41		
	MW	iPNEZ	18	54	42		
		iNE		58	53		
	R	ePZ		54	35		
		iNEZ			38		
	SB	ePZ			51		
	LJ	ePNE			30		
		eLNE		59	50		
	T	iPNEZ		55	06		
		eN		57	51		
	H	ePNZ		54	55		
May 28	P	iPZ	22	24	25		
	MW	iPZ			25		
	R	ePZ			26		
May 29	P	iPZ	14	48	11		
	MW	iPZ			08		
	R	ePZ			08		
	T	iPNEZ		47	40		
	H	ePNZ			50		
May 30	P	iPZ	06	12	41		
	MW	iPZ			42		

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Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
June 1	P	ePZ	07	13	06		
		eSNZ		15	03		
	MW	ePZ		13	07		
		iSNZ		15	05		
	R	ePZ		13	02		
		eSNZ		14	52		
	T	iPZ		13	01		
		eSNE		14	10		
	H	ePZ		13	04		
June 1	P	iPNEZ	11	33	08	d	Deep.
		iZ		35	22		
		iSN		42	25		
	MW	iPZ		33	09		
		iZ		35	24		
	R	iPZ		33	11		
		eZ		35	23		
	LJ	ePZ		33	07		
	T	iPNEZ			16		
		iSNE		42	41		
	H	iPNZ		33	14		
		eNZ		35	28		
June 3	P	ePZ	03	07	12		Deep? Surface waves small.
		iNEZ			32		
	PX	eLZ		29.8			
	MW	iPZ		07	14		
		iZ			31		
	R	ePZ			15		
		iZ			36		
	LJ	iNEZ			38		
	T	ePNE			05		
		eSN		16.4			
	H	ePEZ		07	07		
June 3	P	ePZ	09	17	19		Normal. Surface waves large. Beginning uncertain. Felt in Humboldt County, California.
		iNEZ			25		
		iSZ		18	56		
		iSZ		19	02		
	MW	iPZ		17	21		U.S.C.G.S: 40.1°N 126.5°W 0 = 09:15:15
		iSZ		19	00		J. S. A: 40.7°N 125.5°W 0 = 09:15:20
	R	ePZ		17	24		
		iZ			30		
	LJ	ePZ			36		
	T	iPNEZ		16	55		
		iSN		17	38		
	H	iPEZ			05		
June 3	MW	eZ	10	34	51		
	R	eZ			55		
June 3	P	iPNEZ	18	06	27	d	Deep?
	MW	iPZ			28	d	
	R	iPNEZ			24		
	T	iPNEZ			40		
	H	ePNZ			35		
June 5	P	eZ	14	55	52		
		eZ		56	38		
	MW	eZ		55	55		
June 6	PX	eLZ	10	13			Normal.
June 6	PX	eLZ	16	52.2			Normal.

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
June 6	MW	eZ	20	45	51		
	R	eZ			58		
	T	eN			38		
June 6	P	iPZ	21	58	05		
	MW	iPZ			06		
	R	iPZ			06		
June 7	P	ePZ	04	09	33		Normal?
		eZ		11	24		
		eLZ		39			
	MW	iPZ		09	33		
		iZ		11	30		
		eZ		13	30		
	R	ePZ		09	33		
	T	iPNEZ			14		
June 7	P	ePZ	04	23	54		
June 7	P	iPZ	04	49	10		Normal.
	PX	eLZ	05	11.0			
	R	ePZ	04	49	09		
	T	ePN		48	42		
	H	ePNE			54		
June 7	P	ePZ	06	49	50		
	MW	ePZ			48		
June 7	P	ePZ	11	33	14		
	MW	iPZ			11		
June 7	P	iPZ	18	08	34		
	MW	ePZ			33		
June 8	MW	iPZ	04	33	23		
June 8	P	iPZ	09	11	40		Deep?
	MW	iPZ			41		
		iZ		12	06		
		iZ			39		
June 8	P	iPZ	09	24	40		
	MW	iPZ			40		
June 8	P	iPZ	10	27	41		
	MW	iPZ			38		
June 9	P	iPZ	16	55	42		Deep? Surface waves small.
		iZ			56		
		iEZ		59	01		
		iZ			18		
	PX	eLZ	17	41			
	MW	iPZ	16	55	41		
	LJ	ePZ			45		
	T	ePE			31		
		eZ		58	54		
	H	ePE		55	42		
		eNE		59	00		
June 10	P	iPNEZ	08	36	36	c	Normal? △ = 10400 km. (94°)
		iEZ		37	21		USCGS: 15°S 145°E 0 = 08:22.4
		iZ		38	10		J.S.A: 5.4°S 147.0°E 0 = 08:23:20
	PX	iPPZ		40	30		
	P	iPPE		41	01		
		iSKSE		46	54		
	PX	eSN		47	56		
		ePPSZ		49	29		
		iE		50	01		
		iLZ	09	02	53		

Continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
						Continued	
June 10	MW	iPZ	08	30	37	c	
	R	iPZ		36	39	c	
		ePPZ		41	08		
	LJ	ePZ		36	40		
		eSKSE		47	01		
	T	iPNEZ		36	36		
		iZ		37	33		
		eN		42	08		
	H	ePNZ		35	39		
		eSKSN		46	58		
June 10	P	eZ	19	03	47		
	MW	eZ			38		
	T	eZ			33		
	H	eZ			37		
June 10	MW	ePZ	22	05	18		
	R	ePZ			20		
	T	eZ		04	55		
		eZ		05	00		
June 11	P	ePZ	03	34	25		
	MW	iPZ			27		
	R	iPZ			41		
June 12	P	iPZ	13	58	39	d	Deep?
		iZ		59	13		
	MW	iPZ		58	40		
		iZ		59	14		
		iZ	14	02	06		
	R	iPZ	13	58	42		
	LJ	ePZ			39		
	T	iPNEZ			46	d	
	H	ePNEZ			44		
June 12	P	ePNEZ	15	55	48		Normal.
	P30	eLN	16	02.5			
	MW	iPZ	15	55	47		
	R	ePZ			40		
	SB	ePZ		56	00		
	LJ	ePNEZ		55	31		
	T	iPNEZ		56	11		
	H	ePNE			04		
June 12	P	ePZ	16	05	04		
	MW	iPZ			06		
	R	ePZ			07		
	LJ	ePZ			18		
	T	ePZ			16		
June 12	P	iPZ	18	11	08		
		iZ			34		
	MW	iPZ			09		
		iZ			36		
	R	ePZ			04		
June 13	MW	iPZ	20	28	18		
June 14	P	ePZ	00	22	03		
	MW	ePZ			03		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
June 14	P	iPEZ	02	27	32		
		eSNEZ		45	27		
	MW	iPZ		37	33		
	SB	ePZ			23		
	LJ	ePZ			44		
	T	iPNEZ			16		
	H	ePE			23		
June 14	P	eZ	10	15	14		
	MW	ePZ			10		
June 14	P	eZ	17	19	54		
		iEZ		20	02		
	MW	eZ		19	38		
		iZ		20	02		
June 15	P	iZ	07	42	35		
	MW	eZ			15		
		iZ			35		
June 15	P	iPEZ	09	30	35		
	MW	iPZ			35		
	H	ePNE			42		
June 16	P	iPZ	00	45	04		Normal.
		iNEZ			10		
	PX	eN		54	36		
		eLN		03.2			
	MW	iPZ		45	05		
		iZ			11		
	LJ	iPZ			09		
	SB	iPZ			05		
	T	eZ			06		
		iNEZ			20		
	H	eNEZ			16		
June 16	P	iPZ	03	43	04		
	MW	iPZ			05		
June 20	P	iPZ	03	19	58		
	MW	iPZ			59		
June 20	P	ePZ	07	13	39		
	MW	iPZ			39		
	T	ePNEZ			48		
	H	ePNEZ			35		
June 20	P	eZ	11	00	06		
	MW	iZ			08		
	T	iNEZ			22		
June 20	P	iPZ	12	16	28		
	MW	iPZ			29	c	
		iZ			40		
June 20	P	ePZ	14	15	14		
	MW	iPZ			13		
June 21	P	iPZ	22	02	01	c	
	MW	iPZ			02	c	
	T	ePZ		01	59		
June 21	P	iPEZ	23	36	12	d	
	MW	iPZ			13	d	
	T	iPZ			20		
June 22	P	iPEZ	05	42	40	d	
	MW	iPZ			41	d	
	R	iPNEZ			44	d	
	T	iPZ			19		
	H	iPEZ			28		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
June 22	P	iPEZ	10	39	34	d	
		iEZ			59		
		iZ		40	10		
	MW	iPZ		39	35	d	
		iZ		40	01		
		iZ			11		
	R	iPZ		39	31		
		iZ			56		
		iZ		40	06		
	LJ	ePZ		39	26		
		eZ			49		
		iZ		40	01		
	T	iPNEZ		39	47		
		iNEZ		40	12		
	H	ePZ		39	42		
		iZ		40	08		
		iNEZ			18		
June 22	P	iPZ	19	38	08		Normal.
		iPPEZ		40	43		
	PX	eLNZ	20	00.2			
	MW	iPZ		38	08		
		iPPZ		40	44		
	R	ePZ		38	04		
		ePPNEZ		40	40		
	SB	ePZ		38	17		
		iPPZ		40	57		
	T	ePEZ		38	10		
		ePPZ		40	42		
	H	ePZ		38	08		
		iPPZ		40	48		
June 25	P	iPNEZ	17	03	36	c	Deep.
		eZ		05	04		
		eZ		06	50		
	MW	iPNEZ		03	36	c	
		iZ		06	59		
	R	iPZ		03	38		
	T	ePNE			28		
	H	iPNEZ			31		
June 27	PX	eLZ	03	57.9			Normal.
June 27	P	ePZ	21	24	44		Normal?
	PX	eLZ		46.4			
	MW	ePZ		24	45		
		iZ			54		
	R	ePZ			49		
	H	ePE			50		
June 28	P	ePZ	08	22	35		Normal.
	P30	eLN		46			
	MW	ePZ		22	35		
	R	ePZ			38		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
June 29	P	eZ	14	48	34		Deep? Surface waves doubtful.
	PX	iZ			53		
		iZ		49	58		
		iZ		58	57		
		iZ		59	28		
	MW	eZ		48	27		
		iZ		54	19		
	R	eZ		48	29		
		eZ		50	03		
	LJ	eZ		48	52		
June 30	MW	ePZ	02	04	35		
	R	ePZ			37		
June 30	P	ePZ	10	28	59		Normal. Northern California,
		iSEZ		30	44		possibly near Mt. Lassen.
	MW	ePZ		29	03		
		iSZ		30	45		
	T	iPZ		28	35		
		iSZ		29	27		
	H	ePZ		28	49		
		iSEZ		29	53		
June 30	P	iPZ	10	32	16		
	MW	iPZ			17		
June 30	P	ePZ	11	49	46		
	MW	iPZ			46		
	R	ePZ			42		
	T	iPNEZ			58		
June 30	P	ePZ	12	48	35		Normal. Northern California,
		iSE		50	15		possibly near Mt. Lassen.
	MW	ePZ		48	37		
		iSZ		50	19		
	R	ePZ		48	41		
		iSZ			50	34	
	T	iPZ		48	08		
		iSNEZ		49	06		
	H	ePZ		48	24		
		iEZ		49	32		
June 30	P	iPNEZ	15	16	40	c	Depth somewhat greater than normal.
		iSNEZ		24	47		Surface waves recorded. Δ = 6900 km.(62°)
		iSSN		28	33		USCGS: 51.5°N 160°E 0 = 15:06:41
		eP'P'Z		45	51		J.S.A: 51.0°N 161.1°E 0 = 15:06:48
		iP'P'NZ		46	21		
	MW	iPNEZ		16	41	c	
		eSNE		24	48		
	R	iPNZ		16	44		
		eSN		24	46		
		iP'P'Z		45	47		
	LJ	iPNEZ		16	50	c	
		eSN		25	03		
		eP'P'NE		46	20		

Continued

Date	Station	Phase	G. C. T. h m s	c d	Remarks
					Continued
June 30	T	iPNEZ	15 16 28	c	
		eSEZ	24 25		
		iP'P'EZ	46 25		
	H	iPNEZ	16 33		
		iSNE	24 28		
June 30	P	iP'Z	15 24 54		Aftershock of the preceding.
		iSE	33 04		
		iP'P'Z	54 36		
	MW	iPZ	24 54		
		eP'P'Z	54 37		
	R	iPNZ	24 57		
	LJ	iPNZ	25 04		
	T	iPNEZ	24 41		
	H	iPNEZ	47		
June 30	PX	eLZ	20 25		Normal. Possibly two separate shocks.
	MW	iPZ	19 12		
June 30	P	eE	20 38 49		Northern California?
	MW	eZ	37 28		
	H	eN	09		
		eN	38 10		

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Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
July 1	P	ePZ	12	02	25		Normal. Probably northern California.
		eSZ		04	15		
	T	iZ		02	00		
		iSZ			54		
	H	ePZ			14		
		eSZ		03	20		
July 1	P	eSZ	12	06	21		Normal. Overlaps preceding.
		iSNEZ		05	10		Probably from same source.
	H	iZ			32		
July 1	P	ePZ	12	58	48		Normal. Same region as preceding.
	PX	iSNE	13	00	28		
	MW	ePZ	12	58	51		
	R	eZ	13	00	50		
	T	iPEZ	12	58	17		
		iSNE		59	14		
	H	iSNE			44		
July 2	P	ePZ	06	22	50		Normal. Probably same as preceding.
		eSZ		24	24		
	T	iPNEZ		22	23		
		iSNEZ		23	16		
	H	ePE		22	35		
		eSE		23	41		
July 2	P	eZ	07	13	16		Same as preceding?
	MW	eZ		12	01		
		eZ		13	12		
	T	iZ		11	10		
		eZ		12	07		
July 2	P	iPZ	14	36	22		
	MW	iPZ			23		
	R	ePZ			27		
	T	ePE			37		
July 2	P	ePZ	16	30	39		Normal. Nevada, about 39.2°N. 117.5°W,
		iZ			58		using data of Berkeley, Fresno, etc.
		iEZ		31	11		
		iSNEZ			58		
	MW	iZ		30	41		
	R	iPZ			43		
	T	iPNEZ			01		
		iSNE			27		
	H	ePNE			16		
		iSNE			54		
July 2	P	iZ	20	01	34		
	MW	eZ		00	49		
		iZ		01	33		
		iZ		04	15		
	R	eZ		01	34		
July 3	P	ePEZ	03	11	32		Normal. Δ = 9800 km. (88°)
		iNEZ			41		
		iPPZ		15	23		
		iSKSE		22	01		
		iSNEZ			19		
	PX	eSSZ		28	26		
		eSSSZ		31	46		
		eLZ		38	34		

Continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
							Continued
July 3	MW	iPZ	03	11	34		
		eSNEZ		22	17		
	R	iPZ		11	33		
		eSNZ		22	21		
	LJ	iPNEZ		11	43		
	T	iPEZ			37		
		eE		22	06		
		eNE		22	25		
	H	ePE		11	40		
		eNE		22	25		
July 3	P	ePZ	04	05	06		
	MW	ePZ			02		
July 3	P	iPNEZ	18	44	39	c	Deep?
	MW	iPNEZ			39	c	
	R	ePZ			34		
	T	iPNEZ			51		
July 4	P	iPNEZ	09	03	36	d	Deep. Readings at 15m and 18m may
		iZ		04	12		refer to a separate shock or shocks.
		eZ		15	58		
		iZ		18	58		
	MW	iPNEZ		03	36	d	
		iZ		04	15		
		iZ		18	57		
	R	iPNZ		03	33	d	
		iZ		19	00		
	LJ	iPNEZ		03	27		
		iZ		19	02		
	T	iPNEZ		03	48		
		iZ		04	28		
		eNE		13	04		
		iZ		18	51		
	H	iPNEZ		03	42		
		iNEZ		18	54		
July 5	PX	eLZ	10	15.8			Normal.
July 5	P	ePZ	12	13	41		
	MW	iPZ			42		
	R	ePZ			44		
July 5	P	eZ	14	43	41		
July 5	P	ePZ	19	09	22		Normal. Δ = 11900 km. (107°)
		ePP'Z		12	52		J.S.A: 4.0°N, 124.9°E. 0 = 19:55:04
		iPPZ		13	53		USCGS: 2°N, 123°E. 0 = 18:54.7
		eSKSEZ		20	28		
		iSKKSE			37		
		eSE?		21	11		
	PX	iPSZ		23	20		
		iPPSZ		24	11		
	P	iPKKPZ		25	12		
	PX	iSSSZ		32	52		
	P30	iLN		39.1			
	MW	ePZ		09	27		
		eP'Z		12	33		
		iPPZ		13	55		
		iPKKPZ		25	29		
	R	ePZ		09	37		
		eP'Z		12	43		
		eSKSNE		20	30		
							Continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
							Continued
July 5	T	eN	19	12	37		
		ePPN		13	48		
		eSKSNE		20	33		
	H	eP'Z		12	46		
		eSKSNE		20	34		
July 5	P	eZ	20	42	09		
	R	eZ			08		
July 6	MW	iPZ?	01	34	07		Possibly not seismic.
July 7	P	iPZ	09	59	10		
	MW	iPZ			10		
July 8	MW	iPZ?	00	54	02		Possibly not seismic.
July 9	P	ePZ	10	33	28		
	MW	iPZ			27		
	R	iPZ			26		
July 11	P	iPZ	18	11	07		
	MW	iPZ			07		
	R	ePZ			12		
	T	iPNEZ		10	54		
July 12	MW	iPZ?	02	41	30		Possibly not seismic.
July 12	P	iPZ	02	53	57		
	P6	eE	03	04	18		
	PX	eLZ		18	03		
	MW	iPZ	02	53	57		
	R	ePZ			58		
	LJ	ePNEZ			57		
	T	iPNEZ		54	07		
	H	iPNEZ			04		
July 13	P	eZ	09	39	30		Deep? Very peculiar shock.
		eZ			58		
		iZ		40	23		
		iZ		41	18		
	MW	eZ		39	29		
		iZ		40	23		
		iZ		41	16		
	R	eZ		39	21		
		eZ			31		
		eZ		40	14		
	T	eZ		39	24		
		eNZ		40	12		
		eZ		41	07		
	H	iZ		39	23		
		iZ		40	06		
July 13	P	iPNEZ	11	23	51	c	Slightly deeper than normal.
		iSNEZ		33	28		Δ = 8400 km. (76°)
		iSSNE		38	29		Destructive at Taltal, Chile.
	P6	eLE		43	48		J.S.A: 23.0°S, 70.2°W. 0 = 11:12:29
		iP'P'Z		51	29		USCGS: 24°S, 70±°W. 0 = 11:12.3
	MW	iPNEZ		23	50	c	
		eSN		33	14		
		iSEZ			29		
	R	iPNZ		23	47		
		eSN		33	13		
		iZ		49	58		
	LJ	ePNEZ		23	41		
		eSNE		33	04		
		iP'P'Z		51	29		

Continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
July 13	T	iPNEZ	11	24	03		Continued
		eSN		33	48		
		eZ		44	11		
		iP'P'NEZ		50	14		
	H	iPNEZ		23	58		
		iSN		33	42		
		eZ		50	07		
		iP'P'Z		51	27		
July 13	P	iPZ	19	27	40		
	MW	iPZ			41		
	R	iPZ			47		
	T	ePNE			53		
July 13	P	eZ	21	46	53		
	MW	eZ			57		
July 14	P	iPZ	09	57	45		Normal.
	PX	eLZ	10	23			
	MW	iPZ	09	57	46		
	R	iPZ			47		
	LJ	ePZ			42		
	T	iPNEZ			55		
July 14	P	eZ	22	29	54		
	PX	eLZ		33.0			
	MW	eZ		29	52		
		iZ		34	19		
	T	ePNE		30	22		
		eN		35	06		
July 15	P	ePZ	02	06	55		Normal.
	PX	eLZ		31			
	MW	iPZ		06	55		
	R	ePZ		07	00		
July 15	P	eZ	10	55	44		Normal.
	PX	eLZ	11	21			
	MW	eZ	10	55	45		
		iZ			53		
	R	eZ			52		
	T	eZ			59		
July 15	P	iPEZ	12	02	32	d	Normal?
	PX	eLZ		33			
	MW	iPZ		02	32	d	
	R	iPZ			36	d	
		iZ		03	05		
	T	ePNE		02	25		
July 16	P	iPNEZ	07	10	41		Normal. Near Walla Walla, State of Washington. Minor damage at scattered points.
		iLZ		14	11		
	MW	iPNEZ		10	40		
	R	iPNZ			43		
	LJ	ePNZ			56		J. S. A: 46.0°N, 118.1°W. 0 = 07:07:50
	T	ePNEZ			00		USCGS: 46.2°N, 118.2°W. 0 = 07:07.9
		iNEZ		12	32		
July 17	P	iZ	22	00	31		
		iZ			41		
	MW	eZ			28		
		iZ			41		
	T	iZ			39		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
July 17	P	ePZ	17	38	07		
	MW	ePZ			04		
	T	iPNEZ			17		
July 19	MW	iPZ	02	45	56		
	T	iPNEZ		46	10		
July 19	MW	iPZ	11	34	40		
	R	iPZ			37		
	T	ePZ			55		
July 20	MW	iPZ	01	48	26		
	R	ePZ			26		
	T	iPZ			36		
July 21	P	iPNEZ	00	12	22	c	Deep?
		eZ			55		
	R	iPZ			25		
	T	iPNEZ			28		
		iZ		13	02		
July 22	P	iPZ	03	34	41		
	MW	iPZ			41		
	R	iPZ			37		
	T	iPZ			53		
July 22	P	iPZ	06	30	30		Normal.
	PX	eLZ		54.8			
	MW	ePZ		30	29		
	R	ePZ			31		
	T	ePNEZ			39		
July 23	P	ePEZ	06	31	55		Normal.
	PX	eLZ		54.8			
	MW	iPZ		31	57		
	R	ePZ			57		
	T	iPZ		32	07		
	H	ePNE			07		
July 23	P	ePZ	07	17	39		
	MW	ePZ			40		
	R	ePZ			40		
	T	ePZ			29		
July 23	P	ePZ	09	35	13		
	MW	ePZ			14		
	R	ePZ			15		
	T	ePZ			23		
	H	ePNE			21		
July 23	P	iPZ	14	35	37		
	MW	iPZ			37		
July 23	P	iPZ	17	03	07		
	MW	iPZ			07		
July 23	P	ePZ	18	07	42		Normal.
	PX	eLZ		24.8			
	MW	iZ		07	57		
	T	eZ			58		
July 23	P	eZ	19	01	12		Uncertain whether L belongs to this shock or the following.
	PX	eLX		07.8			
	MW	eZ		01	08		
	T	eNEZ			49		
	H	eN			32		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
July 23	P	eZ	19	04	52		Possibly part of preceding.
	MW	eZ			52		
	R	eZ			48		
	T	eZ		05	27		
	H	eN			15		
July 23	P	eZ	19	09	09		Possibly part of preceding.
	MW	eZ			02		
	R	eZ		10	38		
	T	eZ		09	50		
	H	eN			24		
		eN		10	29		
July 24	P	iPZ	09	02	12		
	MW	iPZ			14		
		iZ			56		
	R	ePZ			15		
July 25	PX	eLZ	01	33.8			Normal.
July 25	PX	eLZ	02	18.7			Normal.
July 25	MW	iPZ?	03	02	24		Possibly not seismic.
July 25	P	iPZ	18	46	03		
	MW	iPZ			04		
July 26	P	ePNEZ	07	48	27		Surface waves small. Possibly somewhat deeper than normal. After shock of July 13, 11h
		eSE		58	00		
		iPSE			34		
	P30	eLN	08	11.10			J.S.A: 22.8°S, 70.8°W. 0 = 07:37:08
	MW	iPNEZ	07	48	27		USCGS: 24.0°S, 71°W. 0 = 07:36.9
	R	iPZ			22		
		eSN		57	52		
	LJ	iPNEZ		48	19		
	T	iPNEZ			40		
		eSNE		58	23		
	H	iPNEZ		48	36		
		eSNE		58	10		
July 26	P	iPZ	21	36	00		
	MW	iPZ			00		
	R	iPZ		35	57		
	T	iPNEZ		36	11		
July 27	P	iPZ	03	11	32		
	MW	iPZ			32	d	
	R	iPZ			29		
	T	iPNEZ			45		
July 27	P	eZ	09	17	56		
July 27	P	iPZ	10	01	38		
		iZ		02	12		
	R	iPZ		01	32		
	T	iPZ			48		
		eZ		02	29		
July 27	P	iPZ	20	20	12		
	MW	iPZ			11		
July 28	P	iZ	05	32	13		Normal.
	PX	eLZ	06	05			
	MW	eZ	05	32	05		
	R	eZ			10		
		eZ		36	16		
	T	eZ		32	10		
		eZ		36	35		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
July 28	P	iPEZ	08	06	22	c	Normal.
		eZ		10	18		
	PX	eLZ		40			
	MW	iPZ		06	20	c	
		eZ		10	12	c	
	R	iPZ		06	23		
		eZ		09	58		
	T	ePZ		06	20		
		eZ		10	18		
July 29	P	iPZ	23	07	02		
	MW	iPZ			01		
	T	iPZ			17		
July 30	P	ePZ	09	28	06		
	MW	ePZ			09		
July 30	P	ePZ	14	14	51		Normal.
	PX	eLZ		43.2			
	MW	ePZ		14	52		
	R	ePZ			59		
	T	ePEZ		15	08		
	H	ePE			03		
July 30	P	ePZ	21	54	05		
		iZ			21		
	MW	iPZ			06		
	T	ePZ			18		
		iZ			33		
July 31	P	ePNEZ	17	44	07	d	Normal.
	P30	eLN			21		J.S.A: 22.7°N, 110.7°W.
	MW	iPNEZ			08		0 = 17:41:00
	R	ePN		43	59		
	SB	ePEZ		44	46		
	T	iPEZ			41		
	H	iPNE			28		

Harry O. Wood
Research Associate in Charge
Charles F. Richter
Assistant

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Aug. 1	P	ePZ	08	08	43		Normal. Aftershock of July 31 at 17h
	P30	eLN		11.6			
	MW	ePZ			49		
	R	ePZ			46		
	SB	eZ		09	11		
	LJ	ePN		08	26		
	T	ePNEZ		09	21		
	H	eE			07		
Aug. 1	P	eZ	14	53	01		Normal. Same as preceding?
	P30	eLN		56			
	MW	eZ		53	32		
	H	eN			52		
Aug. 4	P	ePZ	01	43	57		
	MW	iPZ			55		
	R	ePZ			52		
Aug. 4	P	ePZ	02	35	15		
		iSZ?		37	22		
	MW	ePZ		33	54		
		iPZ		35	13		
	R	ePZ		33	51		
		iSZ		34	58		
	LJ	ePZ		33	35		
		eSNEZ		34	29		
Aug. 4	P	ePNEZ	03	56	50		
	MW	iPZ			47		
	R	iPZ		56	43		
	LJ	ePN			38		
	T	iPNEZ		57	07		
		eNEZ	04	06	12		
	H	ePN	03	57	04		
Aug. 4	PX	eLNEZ	06	17			Normal.
	MW	iPZ		12	04		
	T	iPNEZ			56		
	H	ePNEZ			29		
Aug. 4	P	iPNZ	11	40	20		
		iZ		41	07		
	MW	iPZ		40	19		
	R	iPZ			15		
		iZ		41	02		
	T	iPNEZ		40	31		
Aug. 4	P	ePZ	12	29	48		
	MW	iPZ			47		
	R	ePZ			44		
	T	iPZ			57		
Aug. 6	MW	eZ	12	05	48		
		iZ		06	01		
		eZ		07	00		
Aug. 7	P	iZ	21	58	16		
	MW	iZ			16		
Aug. 11	MW	iPZ	10	21	35		
	R	ePZ			35		
	T	ePZ			33		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Aug. 11	P	iPZ	13	30	34		
	MW	iPZ			34		
	R	eZ			22		
		iZ			37		
	T	eZ			48		
Aug. 12	P	iPZ	21	16	06		
	MW	iPZ			07		
	T	iPZ			15		
Aug. 12	P	iPNEZ	23	33	59	d	Deep?
	MW	iPZ		34	00		
		iZ			23		
		iZ			34		
	R	iPZ			02		
		eZ			24		
	T	iPZ			01		
Aug. 13	P	iZ	14	07	05		
		iZ			16		
	MW	eZ		06	42		
		iZ		07	06		
		iZ			16		
	R	iZ			01		
		iZ			12		
	T	iZ			17		
Aug. 13	P	eZ	20	21	00		Normal. Small surface waves recorded.
	MW	eZ		17	00		According to USCGS 0 = 20:02.3 and
		iZ		21	04		epicenter by Manila. 8°N, 127°E.
	T	eZ		16	50		
		eZ		20	49		
Aug. 14	P	iPZ	10	59	01		Deep?
		iZ			23		
	MW	iPZ		58	59		
	R	iPZ		59	03		
		eZ			27		
	T	iPZ		58	40		
Aug. 40	P	iPZ	12	35	01		
	MW	iPZ			01		
	T	iPZ		34	46		
Aug. 15	P	ePZ	02	36	11		Normal. Small surface waves recorded.
	T	ePZ			23		
Aug. 15	MW	eZ	15	14	08		
Aug. 16	PX	eLN	14	11.3			Normal.
Aug. 17	P	iPNZ	06	26	18		Normal? Surface waves small.
	R	iPZ			19		
	T	iPNEZ			27		
Aug. 17	P	iPNEZ	14	13	00		Normal.
		iZ			11		
		iZ			32		
	P6	eLE		39.6			
	MW	iPZ		12	59		
	R	iPZ		13	02		
		iZ			13		
		iZ			33		
	LJ	ePNEZ			02		
		eZ			32		
	T	ePZ			02		
		iZ			12		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Aug. 17	P	iPNEZ	17	07	12		
	MW	iPZ			14		
	R	ePZ			16		
	T	ePNEZ			14		
Aug. 18	P	iPNEZ	07	11	40	d	Normal.
	PX	eSNE		15	32		JSA: 17.0°N, 104.5°W.
		eLNEZ		17.1			0 = 07:07:04
	MW	ePNE		11	42		
	R	ePNZ			35		
		eSN		15	22		
	SB	ePNEZ		11	53		
	LJ	iPNEZ			25	d	
	T	ePNEZ		12	06		
		eSN		16	17		
	H	ePNEZ		11	58		
		eSE		15	58		
Aug. 16	P	iZ	12	17	48		
	MW	eZ			37		
		iZ			49		
	T	eZ		18	06		
Aug. 20	P	iPZ	23	08	35		
	MW	ePZ			35		
	R	ePZ			38		
	T	ePZ			34		
Aug. 21	P	iZ	05	32	09		
	MW	eZ			02		
	T	eZ			09		
Aug. 21	P	iPZ	22	44	06		
	MW	ePZ			05		
	T	ePZ			12		
Aug. 22	P	iPZ	07	05	21	d	Normal. Damage in southern Formosa.
	PX	iZ		08	28		Δ = 101° (11200 km.); 0 = 06:51.5
		iPPZ		09	23		USCGS: 22.2°N, 121.3°E. 0 = 06:51.5
		iZ			58		J.S.A: 22.3°N, 121.5°E. 0 = 06:51:38
	P	iSKSNEZ		15	59		Taihoku gives 22.2°N, 121.2°E.
		eSKKSE		16	43		
	PX	iSZ			59		
		ePSZ		18	17		
		iScSPZ			43		
	P	iP'P'Z		29	51		
	P30	eLN		37.4			
	R	ePZ		05	23		
		eZ		08	29		
	SB	ePZ		05	19		
		eZ		07	42		
	LJ	ePZ		05	29		
		ePPZ		09	37		
		iSKSNE		16	06		
	T	ePZ		05	11		
		eZ		08	19		
		eSKSNE		15	51		
	H	ePNEZ		05	19		
		eNEZ		08	21		
		eSKSNE		15	54		
Aug. 22	P	iPZ	13	22	30		
	MW	ePZ			31		
	R	ePZ			26		
	LJ	ePZ			18		
	T	ePZ			50		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Aug. 23	P	iPZ	10	04	19		
	MW	iPZ			22		
	R	iPZ			25		
	T	eZ		03	52		
		eZ		04	17		
		eZ		05	44		
Aug. 23	P	iPZ	21	05	49		Deep?
		iZ		09	19		
	MW	iPZ		05	48		
		iZ		09	14		
	R	ePZ		05	48		
	SB	ePEZ			50		
	LJ	ePZ			52		
	T	iPNEZ			43		
		eN		07	15		
	H	iPNEZ		05	46		
Aug. 23	P	iP'Z	21	31	16		Normal. $\Delta = 126°$ (1400 km.) approx.
		iEZ!			20		
	PX	ePPZ		33	05		
		iZ			34		
		eZ		34	12		
		iPKSEZ			35		
		iE			44		
	P30	eLN	22	09			
	MW	iP'Z	21	31	11		
		iZ			16		
		eZ		33	27		
		iPKSZ		34	35		
		iZ		44	29		
	R	eP'Z		31	16		
		iNZ			22		
		eZ		33	34		
		iPKSNZ		34	36		
		eZ		44	25		
	SB	iP'NEZ		31	19		
		iZ		33	27		
		iZ		35	22		
	LJ	eP'Z		31	18		
		eNEZ		33	41		
		iPKSNEZ		34	41		
	T	iP'NEZ		31	16		
		eZ		32	13		
		iNEZ		33	22		
	H	iP'NEZ		31	18		
		eNEZ		33	26		
		iPKSZ		34	31		
Aug. 24	MW	iZ	22	40	53		
	T	eZ			43		
		eZ			58		
Aug. 25	P	ePNEZ	06	01	24		Normal. Surface waves recorded.
		eE		04	19		
	MW	ePE		01	24		
	T	iPNEZ			58		
	H	ePNEZ			45		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Aug. 25	P	iPEZ	16	32	11		
	MW	iPZ			11		
	R	iPZ			14		
	T	iPZ			11		
Aug. 25	P	iPZ	18	54	56		
	MW	iPZ			57		
	R	ePZ			58		
	LJ	ePZ			53		
	T	iPNEZ		55	06		
	H	ePNE			05		
Aug. 26	P	iPZ	03	03	16		
	MW	iPZ			16		
	R	iPZ			18		
	T	iPZ			16		
Aug. 26	P	iPEZ	11	45	35		
	MW	iPZ			35		
	R	iPZ			37		
	T	iPZ			24		
Aug. 26	P	iPNEZ	21	27	12	d	Normal.
	PX	eSN		33.	24		
		eLNE		38	27		
	MW	iPNEZ		27	12		
	R	iPNZ			08	d	
	SB	iPNEZ			17		
	LJ	ePN		26	59		
	T	iPNEZ		27	34		
	H	ePNE			28		
Aug. 26	P	iPZ	22	08	10		
		iZ		09	00		
	MW	iPZ		08	10		
	R	ePZ			10		
		eZ		09	00		
	T	iPZ		08	14		
Aug. 26	P	iPZ	22	16	21		
	MW	iPZ			23		
	T	iPZ			30		
Aug. 27	MW	ePZ	02	11	11		
	R	ePZ			05		
Aug. 27	P	iPZ	03	23	56		
		iZ		27	12		
	MW	ePZ		23	58		
		eZ		27	13		
	T	ePZ		23	52		
Aug. 27	P	iPEZ	07	48	59		Deep?
	MW	iPZ		49	00	c	
	R	iPZ		48	56		
	LJ	ePZ			51		
	T	iPZ		49	11		
Aug. 27	P	iPZ	08	33	56		
	MW	iPZ			57		
		iZ		34	17		
	R	iPZ			00		
		iZ			19		
	T	iPZ		33	37		
	H	iPNEZ			44		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Aug. 28	P	iPNEZ	06	51	51	c	Deep?
	MW	iPNEZ			53	c	
	R	iPZ			54		
	LJ	ePZ			54		
	T	iPNEZ			54		
Aug. 29	P	iPNEZ	09	33	31	c	Deep
		iZ		34	10		
		iZ		35	47		
	MW	iPZ		33	31		
	R	iPZ			25		
	LJ	iPNEZ			21		
	T	iPNEZ			45		
	H	iPZ			39		
Aug. 29	P	iPEZ	19	39	33		
	R	ePZ			36		
	T	iPZ			19		
Aug. 30	P	iPZ	09	13	16		
	MW	iPZ			16	c	
	R	ePZ			14		
	T	iPZ			36		
Aug. 30	P	iZ	21	40	42		
	MW	eZ			38		
		iZ			43		
	R	eZ			43		
		iZ			47		
	T	eZ			10		
		iZ			51		
	H	eNEZ			50		
Aug. 31	P	iPEZ	05	53	24		
		iZ			39		
		iZ			17		
	MW	iPZ			26		
	R	eZ			29		
		eZ			43		
	T	iZ			09		
		iZ			22		
	H	eZ			30		
Aug. 31	P	iPZ	15	55	26		
	MW	iPZ			28		
	R	iPZ			30		
	LJ	iPZ			32		
	T	iPZ			23		
Aug. 31	P	iPZ	21	27	34		
	MW	iPZ			35		
	R	iPZ			37		
	T	iPZ			40		

Harry O. Wood
Research Associate in Charge
Charles F. Richter
Assistant

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Sept 1	P	iPZ	03	13	06	d	Deep?
	MW	iPZ			08		
	R	iPZ			09		
	T	iPNEZ			16	d	
Sept 2	P	iPNEZ	09	26	21	d	Deep?
	MW	iPZ			22		
		iZ			51		
		iZ			59		
		iZ		27	32		
		iZ		28	32		
	R	iPZ		26	23		
	LJ	iPZ			30		
		eZ		27	23		
	T	iPZ		26	09		
	H	iPZ			14		
Sept 3	P	iPZ	05	12	14		Normal.
	PX	eLN		20.6			
	MW	iPZ		12	13		
	T	iPZ			31		
Sept 3	P	iSNE	22	59	55		
	MW	ePZ		58	19		
		eSZ		59	54		
	LJ	ePNEZ		58	04		
		iSE		59	08		
Sept 4	P	iPZ	08	21	50		Normal.
		eE		31.6			
	PX	eLN		44.9			
	MW	iPZ		21	51		
	T	ePZ			42		
		eZ		22	12		
	H	ePEZ		21	46		
Sept 5	P	iPEZ	17	36	38		
	MW	iPZ			37		
	T	iPNEZ			48		
	H	ePNE			47		
Sept 5	P	iPEZ	22	52	05		
	MW	iPZ			06		
	T	iPZ			10		
	H	ePZ			10		
Sept 6	P	iPEZ	07	09	33		
	MW	iPZ			33		
	T	iPNEZ			05		
Sept 6	P	ePEZ	17	51	26		Normal.
		eEZ		54	42		
	PX	eN	18	10	42		
		eLN		12			
	SB	ePZ	17	51	22		
	LJ	ePZ			26		
	T	ePNEZ			33		
	H	ePNEZ			34		
Sept 6	P	iPZ	22	18	55		
		iPZ			57		
	T	ePZ		19	07		

Date	Station	Phase	G. C. T. h m s	c d	Remarks
Sept 7	P	iPNEZ	06 57 22	d	Deep.
		eZ	07 00 11		
	MW	iPZ	06 57 23	d	
		iZ	07 00 16		
	LJ	iPNEZ	06 57 19		
	T	ePNE	33		
	H	iPNEZ	30		
Sept 7	P	iPZ	11 49 41		Normal. Probably northwestern Arizona.
		iPNEZ:	50		Timing failed at Riverside.
		iSNEZ	50 36		
	MW	iPZ	49 39		
		iPZ	50		
		iSNEZ	50 32		
	SB	ePZ	49 53		
		iPZ	50 08		
		iSNEZ	51 08		
	LJ	iPNEZ	49 44		
		eSNEZ	50 46		
	T	ePEZ	49 35		
		iPNEZ	41		
		eSEZ	50 25		
		iSN	30		
		iSE	35		
	H	ePZ	49 29		
		iPNEZ	34		
		iSNEZ	50 10		
Sept 7	P	iPZ	12 12 39		
	MW	iPZ	40		
	T	iPZ	51		
Sept 7	P	iPZ	12 35 53		Peculiar.
		iSE	37 28		
	MW	iPZ	35 55		
	T	iPZ	57		
		eSNEZ	37 50		
Sept 7	P	iPZ	16 16 58		
	MW	iPZ	58		
Sept 8	MW	eZ	12 38 14		
		eZ	29		
	T	ePZ	37 56		
		iNEZ	38 05		
Sept 8	P	iPZ	15 33 37		
	MW	ePZ	37		
	T	ePZ	55		
Sept 8	P	eZ	16 09 45		
		iZ	57		
	PX	eLN	32.4		
	MW	eZ	09 33		
		eZ	44		
	T	eNEZ	56		
		iZ	10 02		
Sept 8	P	iPZ	20 15 57		
	MW	ePZ	56		
		iZ	16 09		
		iZ	20 43		
	T	ePZ	16 21		
Sept 9	P	iPZ	07 52 34		
		iZ	51		
	MW	iPZ	36		
		iZ	53		
	T	ePZ	44		
		eZ	57		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Sept 9	P	iPZ	09	33	42		
	MW	ePZ			41		
	T	ePZ			31		
Sept 12	P	iPZ	21	24	26		
	MW	iPZ			25		
	R	iPZ			23		
	T	iPZ			38		
Sept 14	P	iPZ	03	41	03		
	MW	iPZ			05		
Sept 15	P	iPZ	12	44	54		
	MW	iPZ			54		
	T	iPZ		45	00		
Sept 15	P	iPZ	22	01	33		
		iZ			44		
	MW	iPZ			34		
	T	ePZ			45		
		eZ			57		
Sept 16	P	iPNEZ	09	34	16		
	MW	iPZ			17		
	LJ	eN			11		
	T	iPNEZ			26		
	H	ePZ			25		
Sept 16	P	iPZ	14	05	05		
	MW	ePZ			05		
	T	ePZ			19		
Sept 16	P	ePZ	14	38	31		
	MW	ePZ			35		
	T	ePZ			48		
		eZ		39	02		
Sept 16	P	iPZ	17	54	51		
		iZ		55	20		
	MW	iPZ		54	48		
	LJ	ePZ			40		
	T	iPZ		55	01		
		eZ			32		
Sept 16	P	iPZ	21	06	55		
	MW	iPZ			56		
	T	eZ		07	03		
Sept 17	P	iPZ	03	39	47		
	MW	iPZ			48		
Sept 17	P	iPZ	07	47	42		
		iZ			51		
	MW	ePZ			43		
		eZ			52		
	T	eZ			27		
Sept 17	P	iPZ	11	54	19		
	MW	iPZ			20		
Sept 17	P	iPNEZ	17	27	55		
	MW	iPZ			53		
		eZ		31	33		
	R	ePZ		27	55		
	LJ	ePZ			54		
	T	ePZ			59		
Sept 18	P	ePZ	07	42	08		
	MW	ePZ			09		
	T	ePZ			18		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Sept 18	P	ePZ	11	49	06		
	MW	iPZ			07		
	T	ePZ			09		
Sept 18	P	iPZ	11	53	02		
	MW	iPZ			03		
	T	ePZ			11		
Sept 18	P	iE	14	40	36		
		iEZ			44		
	MW	eZ			39		
Sept 18	P	iPZ	17	53	36		
		eE			46		
	MW	iPZ			36		
	LJ	ePZ			35		
	T	ePZ			43		
Sept 18	P	iPZ	18	14	58		
	MW	iPZ			59		
Sept 18	P	ePZ	18	50	43		Normal.
	PX	eLN	19				
	MW	iPZ	18	50	41		
		iZ		51	06		
		eZ		54	25		
	T	ePZ		50	32		
Sept 19	P	iP'EZ	01	20	57	d	Normal.
		iPPZ		22	38		
		iSKPZ		24	15		
	PX	eLZ		54.0			
	MW	iP'Z		20	56		
	LJ	iP'Z			59		
		iSKPZ		24	20		
	T	eP'NE		20	51		
	H	iP'NEZ			53		
Sept 19	P	iPZ	06	03	45		
	MW	ePZ			45		
	T	iPZ			40		
Sept 19	P	iPZ	06	49	35		
		iZ		52	48		
	T	ePZ		49	31		
Sept 19	P	ePZ	11	35	53		
	MW	iPZ			55		
Sept 19	P	iPNEZ	14	45	39		
		iE		46	05		
	P30	eLN		50.5			
	MW	iPZ		43	38		
	SB	ePZ			50		
	LJ	iPEZ			21		
	T	iPNZ		44	04		
		eZ		51	10		
	H	ePNEZ		43	56		
Sept 20	MW	eZ	06	48	04		
Sept 20	P	iZ	09	10	33		
	MW	eZ			29		
	T	eZ			35		
		eZ			51		
Sept 20	MW	ePZ	10	32	30		
	T	ePZ			22		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Sept 21	P	eSZ	06	24	09		Nevada?
	MW	iSZ			17		
	T	iPZ		21	58		
		iSZ		22	46		
	H	iSZ		23	18		
Sept 21	MW	iPZ	06	23	39		Nevada?
		iSZ		25	23		
	T	iPZ		23	03		
		iSZ			48		
	H	iSZ		24	19		
Sept 21	P	ePZ	07	33	47		Normal. Nevada.
		iPEZ		34	04		
		iSEZ		35	29		
	MW	ePZ		33	46		
		iPZ		34	04		
		iSNEZ		35	30		
	SB	eZ		34	06		
		iZ			22		
		iSEZ		35	25		
	LJ	ePN		34	28		
		iSN		36	07		
	T	iPZ		33	00		
		iPNZ			10		
		iSNZ		33	58		
	H	ePZ			26		
		iSZ		34	25		
Sept 21	P	iZ	10	46	06		
	MW	iZ			04		
Sept 21	P	iPZ	15	19	27		
	MW	iPZ			27		
		iZ		20	03		
	T	ePZ		19	29		
Sept 21	P	iPZ	16	41	33		
	MW	iPZ			34		
	T	ePZ			41		
Sept 21	P	iPZ	17	11	12		
	MW	iPZ			13		
	LJ	ePZ		10	56		
	T	eZ		11	39		
Sept 21	P	eE	23	54	04		
	MW	iZ		51	52		
		eZ		53	02		
		iNEZ		54	07		
	LJ	eZ		52	34		
		eNEZ		53	22		
Sept 22	P	ePZ	10	41	53		Normal. Nevada?
		iZ		42	09		
		iSNEZ		43	39		
	MW	iPZ		41	53		
		iZ		42	10		
		iZ		43	07		
		iSZ			32		
		iSNEZ			37		
	SB	eZ		42	21		
		eSZ		43	31		
	LJ	eSNEZ		44	19		
	T	iPNZ		41	09		
		iNZ			18		
		iSNZ		42	04		

Continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Sept 26	P	ePZ	03	15	45		
		eSN?		26	17		
	R	ePZ		15	53		
	T	ePZ			41		
Sept 26	P	ePZ	06	48	35		
	MW	ePZ			38		
	T	ePZ			30		
Sept 27	P	iPZ	16	33	48		
	MW	iPZ			48		
	T	ePZ			45		
Sept 28	P	iPEZ	13	05	07		
	MW	iPZ			08		
	R	ePZ			11		
	T	iPZ		04	44		
	H	ePZ			54		
Sept 28	P	iPNEZ	17	07	17		Deep?
	MW	iPZ			18	d	
	T	iPNZ			04		
	H	ePNEZ			09		
Sept 29	P	iPEZ	16	48	42		Deep?
		iEZ		49	16		
	MW	iPZ		48	44		
		iZ		49	03		
		iZ			17		
		eZ		52	27		
	R	iPZ		48	45		
	T	ePZ			49		
Sept 29	P	iPZ	18	36	01	d	Deep?
		iZ			25		
	MW	iPZ			02	d	
		eZ			28		
	R	iPZ			05		
	SB	iPZ			55		
	LJ	iPZ			16		
	T	iPZ		35	41		
	H	ePN			50		
Sept 29	P	iPZ	18	42	07		May be part of preceding.
		iPZ			07		
	T	ePZ		41	59		

Harry O. Wood
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Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Oct 1	P	iPNEZ	15	49	41	c	Deep?
	MW	iPZ			41		
		iZ		50	14		
	R	ePZ		49	45		
	T	iPZ			29		
Oct 1	P	iPNEZ	06	11	32		Deep?
		iE			56		
		iNEZ		12	10		
	MW	iPNEZ		11	31		
	R	iPNEZ			38		
	T	ePZ			00		
	H	iPNEZ			14		
Oct 3	P	iPZ	22	08	47		Normal.
		eZ		16	42		
	PX	iSNE?		19	09		
		iLN		24.9			
	MW	ePZ		08	46		
	T	ePZ			50		
		iEZ		09	36		
		eZ		19	46		
Oct 5	P	ePZ	00	06	09		Normal. Δ = 88° (9800 km)
		iPNEZ			12		
		iPPNZ		09	44		
	PX	ePPPZ		11	28		
		eSKSNE		16	33		
		iSN			49		
		eLN		32.0			
	MW	ePZ		06	08		
		iPPZ		09	47		
	R	ePE		06	13		
		eSKSNE		16	38		
	SB	iPZ		06	09		
	LJ	iPNEZ			12		
		ePPE		09	54		
		eSKSNE		16	35		
	T	ePZ		06	19		
		eN		17	04		
Oct 5	P	eZ	07	22	29		
	MW	iZ			27		
	T	iZ			19		
Oct 5	PX	iPNEZ	09	58	52		Normal. Δ = 109° (12100 km)
		iP'NEZ	10	02	54		USCGS: 1° N, 127° E. 0 = 09:44.3
		iPPEZ		03	23		J.S.A: 3.0° N, 126.4° E. 0 = 09:44:34
		iPPPEZ		06	09		
		iSKKSE?		10	23		
		iSN		11	01		
		iPSEZ		12	48		
		iScSPZ?		13	09		
		iPKKPZ		14	09		
		iSKKPZ		18	04		
		iP'P'Z		21	50		
		iLN		29.7			
	MW	ePZ	09	58	52		
		iP'Z	10	02	55		
		iPPZ		03	17		
		iPKKPZ		14	09		
		iSKKPZ		18	03		
		iP'P'Z		21	51		

Continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Oct 5	R	ePNE	09	58	55		Continued
		ePPNE	10	03	28		
	LJ	ePZ	09	58	58		
		iP'Z	10	02	57		
		iPPNEZ		03	33		
		ePKKPZ		13	52		
	T	iPNZ	09	58	49		
		eP'Z	10	02	54		
		ePPNZ		03	21		
		iPKKPZ		14	13		
		eZ		16	34		
Oct 7	P	iPZ	04	27	44		Deep?
		iZ		28	09		
	MW	iPZ		27	44	c	
		iZ		28	08		
	T	ePZ		27	31		
Oct 7	P	iPZ	21	43	42		Deep?
	MW	iPZ			44		
		iZ		44	04		
	T	ePZ		43	45		
Oct 8	P	iPZ	17	07	18		
		iZ		08	11		
	MW	iPZ		07	18		
		iZ		08	13		
Oct 8	P	iPZ	21	18	07		
	MW	iPZ			08		
Oct 9	P	eZ	18	38	48		
		eZ		39	08		
	MW	iZ		38	48		
Oct 10	P	iPEZ	01	27	34		Normal. Off Northern California.
		iSEZ		29	21		
	PX	eLN		30.	11		
	MW	iPZ		27	37		
		iSZ		29	27		
	T	ePN		27	14		
		iSN		28	23		
		iN		29	07		
	H	ePNE		27	31		
Oct 12	P	iPEZ	07	04	34		Deep?
	MW	iPZ			36	d	
		eZ		07	23		
	T	iPZ		04	45		
	H	ePNE			38		
Oct 12	P	eZ	07	58	25		
	MW	eZ			31		
	T	eZ			12		
		iZ			20		
Oct 12	P	iPEZ	09	38	06	c	Deep?
	MW	iPZ			08	c	
		iZ		39	11		
	T	iPZ		38	17		
	H	ePNE			12		
Oct 12	P	iPZ	10	18	45		
	MW	ePZ			46		
Oct 13	P	eZ	06	50	51		
	MW	eZ		51	00		
Oct 13	P	eZ	19	22	26		
	MW	iZ			21		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Oct 14	P	iPEZ	22	28	14		Deep?
	PX	eLN		55			
	MW	iPZ		28	13		
		eZ		31	42		
		iZ		51	40		
	T	ePZ		28	18		
		eZ		32	24		
Oct 15	P	iPZ	03	42	46		Deep
		iZ		43	52		
	MW	iPZ		42	47		
		iZ		43	54		
	SB	ePZ		42	40		
	H	ePNE			54		
Oct 15	P	ePZ	21	21	03		Normal. Felt in Chile.
		iZ		22	02		
	PX	eSN?		29	52		
		iSN?		30	49		
		iLN		49.1			
	MW	ePZ		21	02		
		eZ		22	04		
Oct 15	P	iPZ	21	33	19		Deep.
		iZ			46		
		iZ		34	01		
	MW	iPZ		33	18		
Oct 16	P	ePZ	12	09	36		Normal.
		eZ			49		
	PX	eSN?		30.6			
		eLN		36.5			
	MW	iPZ		09	35		
		iZ			55		
		iZ		11	39		
	R	eN		10	56		
		eZ		09	55		
	SB	eZ			42		
	T	eN		10	07		
Oct 16	P	iPZ	22	29	54		
	MW	iPZ			55		
	R	iPZ			57		
Oct 18	P	iPZ	11	30	13		Deep?
	MW	iPZ			13		
		iZ			40		
Oct 18	P	iPZ	16	41	22		Deep?
	MW	iPZ			23	d	
	SB	iPZ			17		
	LJ	iPNEZ			31		
	T	ePN			03		
Oct 19	P	ePZ	06	52	25		
	MW	ePZ			28		
	R	ePZ			26		
Oct 19	P	ePZ	07	29	14		
	MW	ePZ			13		
	R	ePZ			10		
Oct 19	P	ePZ	12	19	14		Normal. $\angle$ = 135°?
		iPPZ?		23	00		
		iPKSZ?			31		
	PX	eN		31	30		
		eLN		44.3			
	MW	ePZ		19	12		
		eZ		22	56		
		iZ		23	32		
		eZ		34	03		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Oct 19	P	iPZ	20	07	39		Deep?
		iZ		09	01		
	MW	iPZ		07	39		
Oct 21	P	iPZ	02	49	30		
	MW	iPZ			30		
Oct 21	P	iPEZ	13	41	30		Normal.
	PX	eLN	14	02.0			
	MW	iPZ	13	41	30		
	LJ	ePZ			18		
	T	ePN			48		
Oct 21	P	iPNEZ	23	14	54		
	MW	iPZ			55		
	R	iPZ			56		
Oct 22	P	ePZ	08	02	22		
	MW	iPZ			21		
Oct 22	P	ePZ	08	18	04		
	MW	iPZ			02		
Oct 22	P	iPNEZ	10	10	06		
	MW	iPZ			07		
	T	ePN			10		
Oct 22	P	iPNEZ	16	19	38		Deep?
		iNEZ		20	17		
	MW	iPZ		19	39		
		iZ		20	16		
	SB	ePE		19	41		
Oct 22	P	iPZ	18	46	43		
		iZ		47	09		
	MW	iPZ		46	44		
Oct 23	MW	iPZ	00	00	00		
		eZ		02	18		
Oct 23	MW	iPZ	00	10	50		
		iZ		13	05		
Oct 23	P	eZ	03	51	00		
		eZ			19		
	R	eZ			11		
Oct 23	P	iPNEZ	06	31	05		Normal. Alaska.
	PX	eSN		36	21		USCGS: 61.1° N, 149.2° W. 0 = 06:24:21
		iSN			40		J.S.A: 60.8° N, 149.4° W. 0 = 06:24:27
	P6	eLE		41	37		
	MW	iPNEZ		31	06		
	R	iPNEZ			08		
		eNE		36	39		
	SB	iPEZ		36	58		
		eE		36	40		
	LJ	iPNEZ		31	18		
		iNE		37	04		
	T	ePN		36	43		
		iN		36	03		
	H	ePNE		36	51		
		eNE		36	11		
Oct 23	P	iPZ	06	53	42		
	MW	iPZ			44		
	R	iPZ			46		
Oct 23	P	iPZ	08	27	12		
	MW	iPZ			12		
	R	iPZ			14		
	T	eN		26	53		
Oct 23	P	iPZ	11	56	31		
		iZ			39		
	MW	ePZ			32		
		iZ			40		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Oct 23	P	iPNEZ	12	44	34	d	
		eZ			48		
	MW	iPZ			35	d	
		iZ			51		
Oct 23	P	iPZ	15	34	36		
	MW	iPZ			37		
	LJ	eZ			57		
	T	ePN			18		
Oct 23	MW	iPZ	16	32	01		
		iZ			11		
	R	iPNE			34		
	LJ	ePNZ			33		
	T	ePN		31	50		
	H	ePNE			57		
Oct 23	P	iPZ	19	49	16		
	MW	ePZ			17		
		iZ			24		
Oct 24	P	eZ	12	57	29		
		eNEZ			39		
	MW	eZ			25		
Oct 24	P	ePZ	16	14	48		
	MW	ePZ			49		
Oct 25	P	iPNEZ	15	42	25	d	Deep.
	MW	iPNEZ			26	d	
	R	ePNE			27		
	SB	iPEZ			19		
	LJ	iPNZ			32		
	T	ePN			16		
	H	ePNE			21		
Oct 26	P	iPZ	09	45	14	c	Deep. P unusually long period.
	MW	iPZ			15	c	
		eZ		48	28		
	SB	ePEZ		45	08		
	T	ePN			06		
	H	ePN			21		
Oct 26	P	ePZ	19	51	17		Normal.
		eZ		54	36		
	PX	eLN	20	45			
	MW	iPZ	19	51	20		
		eZ		54	36		
Oct 26	P	ePZ	23	16	13		Normal.
		eZ		18	30		
	PX	iLN		32	16		
	MW	iPZ		16	14		
		iZ		18	28		
	R	iPZ		16	24		
	SB	ePEZ			16		
	LJ	ePN			17		
	T	ePN		15	58		
		eN		17	39		
	H	ePNE		16	03		
Oct 28	P	iPZ	11	11	18		
	MW	iPZ			19		
Oct 28	P	iPZ	22	58	19		
	MW	iPZ			20		
Oct 29	P	iPNEZ	06	01	01	c	Normal? Surface waves small.
		iZ			43		
		iNZ		02	42		

Continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Oct 29	PX	iSN	06	07	39		Continued
		eLN		15.1			
	MW	iPNZ		01	00	c	
		eZ			40		
	R	ePNE		00	56		
	SB	ePZ		01	10		
		eZ		03	00		
	LJ	iPNEZ		00	51		
		eZ		02	31		
	H	ePNE		01	08		
Oct 29	P	iPNEZ	18	51	38	c	Normal. Damage in Guam.
	PX	eN	19	02	19		USCGS: 12° N, 146° E. 0 = 18:38.6
		iN		03	15		
		eLN		15.1			
	MW	iPZ	18	51	39	c	
	R	ePNE			41		
		eNE	19	02	30		
	LJ	iPNEZ	18	51	43		
	H	ePNE			37		
		eE	19	02	16		
Oct 29	P	iPZ	22	19	53		
	MW	iPZ			54		
Oct 29	P	iPZ	22	31	05		
	MW	ePZ			06		
Oct 29	P	iPZ	22	45	26		
	MW	ePZ			27		
Oct 30	P	iPZ	07	27	08		
	MW	iPZ			08		
Oct 30	P	ePZ	08	00	36		
	MW	iPZ			38		
Oct 30	P	iPZ	09	12	08		
	MW	iPZ			09		
Oct 30	P	iPZ	10	59	01		
	MW	iPZ			02		
	SB	iPZ		58	56		
	LJ	iPZ		59	06		
Oct 30	P	iPEZ	17	27	11		
	MW	iPZ			12		
	SB	ePZ			11		
	LJ	iPZ			16		
	H	ePE			09		
Oct 30	P	iPZ	18	22	23		
	MW	iPZ			22		
Oct 31	P	iPZ	15	13	12		
	MW	iPZ			12		
	T	ePN			22		
	H	ePNE			20		

Addendum to previous report:

Sept 19	MW	iPZ	09	07	47	d	
	T	iPZ			59		

Harry O. Wood
Research Associate in Charge
C. F. Richter
Assistant

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Nov 1	P	iPZ	00	23	01		
	MW	iPZ			03		
Nov 1	P	ePZ	16	22	38		Normal.
	PX	eLN		54.0			
	MW	iPZ		22	39		
	T	ePNE			51		
Nov 1	P	iZ	17	23	53		
	MW	iPZ		22	12		
		iZ		23	53		
Nov 2	P	iPNEZ	15	08	25		Normal. Δ = 65° (7200 km.)
		iSNE		17	01		0 = 14:57:41
	P30	eLN		27.3			Kamchatka.
	P	eP'P'		37	09		
	MW	ePNE		08	24		
		eSE		16	59		
	R	ePNE		08	30		
		eSE		17	08		
	SB	ePEZ		08	19		
	LJ	iPZ			36		
	T	ePE			12		
		eSE		16	44		
	H	ePE		08	17		
		eSE		16	47		
Nov 2	P	ePZ	20	57	43		Normal. Δ = 75° (8300 km.)
		iPZ			49		Off Japan.
		iSNE	21	07	25		USCGS: 37.5° N., 142° E.
	P30	eLN		17.2			0 = 20:45.9
	MW	iPZ	20	57	45		
		eSNE	21	07	25		
	R	ePNE	20	57	50		
		eSN	21	07	41		
	SB	ePZ	20	57	42		
		eSE	21	07	14		
	LJ	ePEZ	20	57	55		
		eSE	21	07	40		
	T	ePNE	20	57	39		
		eSE	21	07	09		
	H	ePNE	20	57	40		
		eSNE	21	07	13		
Nov 3	P	iPZ	03	20	22		
	MW	iPZ			23		
Nov 3	P	ePZ	04	53	35		
		iPZ			42		
	MW	iPZ			36		
	SB	iPZ			29		
Nov 3	P	iPZ	06	03	25		
	MW	iPZ			26		
	R	ePN			17		
Nov 4	P	iPZ	05	57	15		
	MW	iPZ			15		
Nov 4	P	iPZ	06	33	17		
	MW	iPZ			20		
Nov 4	P	iPZ	19	56	50		
	MW	iPZ			51		
		iZ		57	06		
Nov 5	P	ePZ	07	49	39		
		iZ			51		
	MW	ePZ			40		
	SB	ePZ			33		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Nov 5	P	iPNEZ	20	49	31		Deep?
	MW	iPNEZ			30		
	R	ePN			36		
	SB	ePZ			20		
	LJ	iPZ		50	02		
	T	ePNE		49	03		
	H	ePNE			11		
Nov 6	P	iPZ	06	22	58		
	MW	iPZ		23	00		
Nov 6	P	ePZ	11	41	27		Normal.
	PX	eLNE		46	23		
	MW	ePZ		41	26		
	T	ePNE		42	01		
Nov 6	P	eZ	17	34	38		
		iZ			56		
	MW	eZ			42		
		iZ			58		
Nov 6	P	ePZ	22	01	31		
		iZ			43		
	MW	iPZ			30		
Nov 7	P	iPNEZ	05	19	01	d	Deep?
	MW	iPNEZ			01	d	
	R	ePNE		18	56		
	SB	iPZ		19	07		
	LJ	iPNEZ		18	52		
	T	ePNE		19	12		
	H	ePNE			08		
Nov 7	P	ePZ	06	44	09		
		iZ		45	10		
	MW	iPZ		44	13		
		iZ		45	09		
Nov 7	P	iPZ	13	21	51		
		iZ		22	40		
	MW	iPZ		21	52		
		iZ		22	41		
Nov 7	P	iPZ	19	54	53		
	MW	iPZ			55		
Nov 8	P	iPZ	12	34	09		
	MW	iPZ			10		
	LJ	iPZ			25		
Nov 9	P	ePZ	08	15	15		
	MW	ePZ			16		
Nov 9	P	ePZ	09	16	50		
	MW	ePZ			50		
Nov 9	P	ePZ	14	25	11		
	MW	ePZ			05		
	T	ePE			12		
Nov 10	P	eZ	03	30	36		
	MW	ePZ			30		
	T	ePNE			33		
Nov 10	P	ePZ	12	55	36		
	MW	ePZ			36		
	T	eE			24		
Nov 10	P	iPZ	13	25	27		
	MW	iPZ			27		
Nov 10	P	ePZ	13	57	42		
	MW	ePZ			44		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Nov 10	P	ePZ	16	37	39		
	MW	ePZ			40		
Nov 10	P	iPZ	17	14	08		
		iNEZ			21		
	MW	iPZ			08		
	T	eE		13	56		
		eN		14	06		
	H	eN			19		
Nov 10	P	eZ	18	11	50		
	MW	ePZ			47		
	T	ePNE			42		
Nov 10	P	eZ	20	12	13		
	MW	eZ			13		
Nov 10	P	eZ	20	17	53		Possibly part of preceding shock.
	MW	eZ		18	05		
Nov 10	P	eZ	21	38	11		
	MW	ePZ			07		
Nov 10	P	ePZ	23	41	05		
	MW	ePZ			08		
Nov 11	P	iPZ	00	52	44		
	MW	iPZ			45		
	T	ePE			33		
Nov 11	P	ePZ	10	31	29		
	MW	ePZ			30		
Nov 11	P	iPZ	22	52	18		
	MW	iPZ			20		
Nov 12	P	iPNEZ	02	28	10	c	Deep.
	PX	eE		38	27		
	P	iP'P'Z		54	21		
		eZ		57.7			
	MW	iPZ		28	11		
		eZ		38	26		
		ePP'Z		53	28		
	R	ePNE		28	13		
	LJ	iPNEZ			17		
	T	ePNE			06		
		eE		38	24		
	H	ePN		28	09		
		eN		38	29		
Nov 12	P	ePNZ	04	32	07		Normal.
	PX	eLE		38.6			
	MW	iPZ		32	09		
	R	ePN			11		
	LJ	ePNZ		31	51		
	T	ePNE		32	33		
Nov 12	P	eZ	08	36	31		This may be the true P for the following.
	MW	eZ			26		
Nov 12	P	iPNEZ?	08	41	09		Deep? Surface waves small. First
	PX	eE?		48	10		phase may be P' or PP. eZ at 51:54 is
		eE		51	52		short period.
	P	eZ			54		
	PX	eLE?	09	07.6			
	MW	iPNEZ?	08	41	07		
		eZ		51	53		
	R	ePNE?		41	12		
		eE		51	58		
	LJ	ePEZ?		41	14		

Continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
							Continued
Nov 12	T	ePNE?	08	41	05		
	H	ePN?			12		
		eN		51	48		
Nov 12	P	ePZ	15	06	41		
	MW	ePZ			42		
Nov 12	P	iPNEZ	20	15	37	c	Depth probably about 100 km. No surface waves recorded. Kurile Islands.
		iSEZ		24	30		
		eP'P'Z		43	45		Δ = 68° (7500 km.)
		eZ		44	35		
	MW	iPNEZ		15	38	c	
		iP'P'Z		43	44		
		iZ		44	48		
	R	iPNE		15	40		
	LJ	iPNEZ			46		
	T	iPNEZ			27		
		iN		16	53		
		eSNE		24	07		
	H	iPN		15	31		
		iSN		24	18		
Nov 13	P	iPNEZ	12	41	11		Normal. Δ = 56° (6200 km.) O = 12:31:30
		ePPPNZ		44	40		USCGS: 57°N., 163°E. O = 12:31.5
		eSNE		49	00		J.S.A: 56.7°N., 162.3°E. O = 13:31:37
	P30	eSN		52	12		
		iLN		55	24		
		iP'P'Z	13	11	10		
	MW	iPNEZ	12	41	11		
		eSN		48	50		
		iP'P'Z	13	11	15		
	R	ePNE	12	41	16		
		eSN		49	10		
	LJ	ePNEZ		41	20		
	T	ePNEZ		40	56		
		eSE		48	37		
	H	ePN		41	03		
		eSN		48	57		
Nov 13	P	iPEZ	12	50	39		Aftershock.
	MW	iPZ			38		
	T	ePNE			23		
Nov 13	P	iPZ	13	00	50		Aftershock?
	MW	iPZ			51		
Nov 13	P	iPZ	13	02	20		Aftershock?
	MW	iPZ			21		
	LJ	iPZ			33		
	T	ePNE			08		
	H	ePN			18		
Nov 13	P	iPZ	13	05	51		Aftershock?
	MW	iPZ			52		
Nov 13	P	ePZ	13	28	05		Aftershock?
		iZ			11		
	MW	ePZ			06		
Nov 13	P	ePZ	13	36	57		Aftershock?
	MW	iPZ		37	02		
Nov 13	P	ePZ	14	26	12		Aftershock?
	MW	iPZ			18		
Nov 13	MW	ePZ	16	27	20		Aftershock?
Nov 13	P	ePZ	17	06	06		Aftershock?
	MW	ePZ			08		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Nov 13	P	ePZ	20	32	50		
	MW	iPZ			49		
Nov 13	P	ePZ	22	11	44		
	MW	iPZ			44		
Nov 14	P	ePZ	01	09	44		
	MW	iPZ			54		
Nov 14	P	ePZ	01	43	21		Normal. Possibly more than one shock.
		eEZ		46	24		
	PX	eLNE		52.8			
	MW	ePZ		43	22		
		iZ		46	55		
		iZ		48	55		
	T	ePNE		43	40		
Nov 14	P	ePZ	03	55	08		
	MW	iPZ			16		
Nov 14	P	ePZ	04	49	17		
	MW	ePZ			16		
Nov 14	P	ePZ	05	00	03		
	MW	ePZ			03		
Nov 14	P	iPEZ	09	38	48	c	Deep?
	MW	iPZ			48		
	LJ	ePNE		39	00		
	T	ePNE		38	33		
	H	ePN			40		
Nov 14	P	ePZ	14	39	26		Deep?
		iZ			32		
	MW	ePZ			25		
		iZ			32		
	LJ	eNEZ			42		
	T	ePNE			16		
	H	eN			21		
Nov 14	P	ePZ	19	38	09		Deep?
	MW	iPNEZ			11		
	LJ	ePNEZ			23		
	T	ePNE		37	56		
	H	ePN		38	04		
Nov 15	P	iPEZ	21	10	03		
	MW	iPZ			04		
Nov 15	P	iPNEZ	22	01	28	d	Deep? Identification of pP and sP
		ipPEZ		03	21		somewhat doubtful.
		isPZ		04	34		Probably h = 500 km. Δ = 80°
		eSE		10	46		Tonga region.
		eP'P'Z?		28	30		
	MW	ePNE		01	30		
	R	ePNE			30		
	SB	iPNEZ		01	26		
		epPZ		03	16		
	T	ePNE		01	38		
		eSE		11	04		
	H	ePN		01	38		
Nov 15	P	iPEZ	22	30	05		Normal.
	PX	eSE		37	34		
		eLE		47.8			
	MW	ePE		30	06		
	SB	ePZ			02		
	T	ePNE		29	52		
	H	ePN		30	02		

Date	Station	Phase	G. C. T. h	m	s	cd	Remarks
Nov 16	P	iZ	01	00	50		
	R	eZ			39		
		iZ			52		
Nov 16	P	ePZ	09	22	21		
		iZ			30		
	MW	ePZ			21		
	H	ePN			17		
Nov 17	P	eZ	02	13	12		
		iZ			19		
	MW	eZ			17		
	R	eZ			23		
Nov 18	P	iPNEZ	17	01	02		Peculiar. Appears like a local shock.
		iE		02	44		
		eE		03	24		
	MW	iPZ		01	01		
		iZ		02	41		
		eZ		03	23		
	T	ePN		00	40		
		eN		01	17		
		iE		02	38		
	H	ePN		00	47		
Nov 19	P	iPNEZ	13	05	53		Normal.
		iEZ		07	01		
	PX	eLE		10.5			
	MW	ePZ		05	48		
		eZ			54		
		iZ		06	54		
	R	ePN		05	45		
	T	ePN		06	25		
	H	eN			27		
Nov 19	P	iPNEZ	21	16	47	c	Normal. Reflected waves unusually
		iPcPZ		19	35		well recorded. Guatemala.
		iSNEZ		22	01		Δ = 33° (3700 km.) 0 = 21:10:15
		iScPEZ		23	21		USCGS: 14°N., 91°W. 0 = 21:10.3
	P30	eLN		24.8			J.S.A: 14.3°N., 90.7°W. 0 = 21:10:30
	P	iScSNE		27	16		
		iP'P'Z		50	42		
		eZ		52	28		
		eSKPP'Z		53	25		
	MW	iPNEZ		16	46		
		iPcPZ		19	38		
	R	ePNE		16	40		
		eSN		21	44		
		eScSNE		27	15		
	SB	iPNEZ		16	55		
		iPcPZ		19	41		
		iSNEZ		22	24		
	T	ePNE		17	01		
		iPcPE		19	40		
		eSNE		22	27		
		iScSNE		27	29		
	H	iPNZ		16	53		
		iPcPZ		19	37		
		eSN		22	18		
Nov 21	P	ePZ	22	00	01		
	MW	ePZ	21	59	58		
	T	eE			45		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Nov 22	P	ePZ	12	11	06		
	MW	iPZ			07		
Nov 22	P	iPNEZ	14	56	21	c	Surface waves small. Probably slightly deeper than normal.
	PX	eLN	15	06.8			
	MW	iPZ	14	56	22		
	R	ePNE			23		
	SB	eN			40		
	T	ePNE			30		
	H	ePN			32		
Nov 22	P	iPNEZ	16	50	19	c	Deep?
	MW	iPZ			19		
	R	ePNE			12		
	SB	iPZ			27		
	T	ePNE			35		
Nov 22	P	eZ	18	05	59		
	MW	ePZ			55		
		iZ		06	00		
Nov 22	P	iPNEZ	18	25	45	c	Normal. $\Delta = 33°$ (3700 km.)
		iSNE		31	02		USCGS: 14.5°N., 90.5°W. 0 = 18:19.3
	P30	eLN		34.6			J.S.A: 13.7°N., 90.7°W. 0 = 18:19:25
	MW	iPNZ		25	45	c	
		iSZ		31	03		
	R	ePNE		25	38		
		eSN		30	45		
	SB	eSZ			21		
	T	ePNE		26	03		
		eSE		31	07		
	H	ePN		25	55		
Nov 22	P	iPZ	18	55	36		
	MW	iPZ			36		
Nov 23	P	eZ	00	44	20		
		iZ		46	00		
	MW	eZ		44	19		
	T	iZ		46	04		
Nov 23	P	iPZ	01	40	04	c	Deep.
		eZ		41	27		
	MW	iPZ		40	05		
	T	iPZ			03		
		iZ			45		
Nov 23	P	eZ	02	14	36		Small and indefinite.
	MW	eZ			23		
	T	iPZ			07		
		iZ			36		
Nov 23	P	ePZ	20	15	04		
	MW	ePZ			03		
	SB	eZ			28		
	T	ePNE			23		
Nov 23	P	iPZ	21	10	06	c	
	MW	iPZ			08		
Nov 24	P	ePZ	09	47	07		
	MW	ePZ			06		
Nov 24	P	iPZ	12	32	34		
	MW	iPZ			34		
		iZ			55		
Nov 24	P	iPZ	13	30	42		
		iNEZ			54		
	MW	iPZ			42		
	LJ	eNEZ			59		
	T	ePNE			29		

Date	Station	Phase	G. C. P. h	m	s	c d	Remarks
Nov 29	P	iPNEZ	06	34	23		Normal.
		iZ		37	33		
	PX	eLN		41	.3		
	MW	iPZ		34	22		
		eZ		37	32		
	LJ	ePZ		34	07		
Nov 29	P	iPZ	08	01	32		Normal.
	PX	eLN		09	.3		
	MW	iPZ		01	32		
Nov 29	P	iPZ	08	38	48		Normal? Small surface waves recorded.
	MW	iPZ			48		
Nov 29	P	iPNEZ	15	06	31	d	Deep. South America.
	PX	iSN		16	22		
	MW	iPNEZ		06	31	d	
	R	ePNE			26		
	SB	iPNEZ			37		
	LJ	iPNEZ			21		
	H	ePN			37		
Nov 29	P	iPZ	23	22	32		
	MW	iPZ			33		
Nov 29	P	ePZ	23	40	07		
		iZ			16		
	MW	iZ			17		
Nov 30	P	iPZ	00	02	39		
	MW	iPZ			40		
Nov 30	P	iPZ	17	16	46		
	MW	iPZ			45		
Nov 30	P	eZ	17	27	09		
	MW	iZ			11		
Nov 30	MW	eZ	20	44	49		
Nov 30	P	iZ	22	44	06		Normal.
	PX	eLN	23	03	39		
	MW	ePZ	22	43	42		
		iZ		44	05		
Nov 30	P	eZ	23	03	36		Overlaps the preceding shock.
		eE		06	35		
	MW	ePZ?		01	37		
		iZ		03	44		
		eZ		06	50		
	R	eE		03	28		
	LJ	eNEZ		02	56		

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Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Dec 1	P	ePZ	00	00	34		Normal? Surface waves small.
		iP'Z		04	23		△ = approx. 105°
		ePPZ		05	08		
		ePKKPZ		15	23		
	PX	eLN?		20			
	MW	iPZ		00	37		
		iP'Z		04	23		
		iPPZ		05	09		
		ePKKPZ		15	26		
Dec 1	P	iPZ	03	39	22		
	MW	iPZ			22		
Dec 1	P	iPEZ	06	21	44	d	Depth 200-300 km. △ = about 90°
	P6	eSKSNE		31	47		
	PX	eSN		32	09		
		iSNEZ			12		
		iSPNEZ		33	21		
	MW	iPZ		21	44	d	
		iSKSZ		31	49		
		eSPZ		33	19		
	R	ePNE		21	46		
	SB	iPNZ			39		
	LJ	iPNZ			49	d	
		iSKSNE		31	55	d	
Dec 1	P	iPEZ	13	37	53		
Dec 4	P	eZ	22	38	56		Normal? Surface waves very small.
	MW	eZ			55		
		eZ		39	11		
		iZ			44		
Dec 5	P	iPNEZ	00	49	09	d	Deep.
		iZ			34		
		iZ			44		
	MW	iPNZ			10	d	
		iZ			34		
	R	ePNE			08		
	T	iPNEZ			22		
		iZ			45		
	H	iPNEZ			17		
Dec 5	P	iPZ	04	30	55		Deep?
		iZ		31	26		
	MW	iPZ		30	55		
	T	iPNEZ		31	07		
		iZ		32	15		
Dec 5	P	eZ	19	10	49		Normal.
	PX	eLN		35.5			
	MW	iPZ		10	48		
Dec 5	P	ePZ	22	42	28		
	MW	iPZ			28		
Dec 5	P	ePZ	23	24	54		Normal?
	PX	eLN?		44.5			
	MW	iPZ		24	53		
Dec 6	P	iZ	02	40	38		
	MW	iZ			31		
		iZ			39		
	T	eZ			47		
Dec 6	P	eZ	03	03	02		
	MW	eZ		02	54		
	T	eZ		03	09		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Dec 8	P	eZ	06	35	41		
		iZ			54		
	T	iZ			08		
Dec 8	P	eZ	09	44	39		
	MW	iZ			30		
	T	iZ			42		
Dec 8	P	eZ	09	53	42		Normal.
		eZ			50		
	PX	eLN	10	29			
	T	eZ	09	53	51		
		iZ		54	26		
Dec 8	P	ePZ	17	54	46		
	MW	ePZ			45		
	T	iPEZ			40		
	H	iPNEZ			44		
Dec 10	P	eZ	12	37	43		
	T	eZ			43		
Dec 12	P	iPZ	01	34	41		
	T	iPZ			45		
Dec 12	P	ePZ	02	27	57		
	MW	iPZ			57		
	T	iPZ		28	01		
Dec 12	P	iPZ	17	52	43		Deep?
	MW	iPZ			43	c	
	H	iPZ			50		
Dec 13	P	ePZ	12	58	40		
	MW	ePZ			42		
	T	iPZ			38		
Dec 13	P	ePZ	16	29	40		
	MW	iPZ			41		
	T	iPZ			39		
Dec 13	P	iPNEZ	21	43	39	d	Deep? No surface waves. Damage at
	PX	iSNE		54	21		Guam. $\Delta = 88°$ (9800 km.)
	MW	iPNEZ		43	40	d	
	R	ePNE			43		
	SB	ePNE			34		
	LJ	iPNEZ			45		
	T	iPNEZ			36		
	H	iPNZ			38		
Dec 14	P	iPNEZ	02	02	40		Deep? No surface waves. P very sharp.
	MW	iPZ			40		
	T	iPNEZ			52		
	H	iPZ			48		
Dec 14	P	iPNEZ	04	45	02		Deep?
		iZ		47	10		
	MW	iPZ		45	02		
	T	iPNEZ			10		
		iZ		47	16		
	H	iPNZ		45	09		
Dec 14	P	iPZ	04	49	34		Deep? May be part of preceding.
	MW	iPZ			35		
	T	iPZ			47		
Dec 14	MW	iPZ	06	58	46		
	T	iPZ		59	04		
Dec 14	P	iPZ	20	43	32		
	MW	iPZ			34		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Dec 16	P	iPZ	07	42	19		Deep?
	MW	iPZ			21		
	T	iPZ			30		
		iZ			37		
		iZ			57		
Dec 18	P	iPNEZ	10	20	39	c	Deep.
		iEZ		22	33		
	MW	iPZ		20	41	c	
		iZ		22	32		
	R	iPNEZ		20	42		
		iZ		22	35		
	T	iPNEZ		20	48	c	
		iZ		22	43		
	H	iPNZ		20	46		
		eZ		22	42		
Dec 19	P	ePZ	03	09	23		
		eZ		10	03		
	MW	iPZ		09	23		
		eZ		10	04		
	T	iPZ		09	34		
		iZ		10	18		
Dec 20	P	iPNEZ	02	50	04		Normal. USCGS: 13.4°N., 88.0°W.
	PX	eSZ		56	49		0 = 02:43.4
	P30	eLN		58.0			J.S.A: 14.2°N., 88.6°W.
	MW	iPZ		50	04		0 = 02:43:29
	R	iPEZ		49	57		
	SB	ePNZ		50	18		
	T	iPNEZ			23		
		iNEZ		51	44		
Dec 20	P	iPNEZ	03	18	39		
		iZ			54		
	MW	iPZ		18	39	c	
	R	iPZ			41		
	T	iPNEZ			42		
		iZ		19	21		
Dec 20	P	ePZ	07	13	42		
	MW	iPZ			43		
	R	iPZ			38		
	LJ	ePNEZ			29		
	T	iPZ		14	01		
Dec 20	P	ePZ	13	30	02		Normal.
	P30	eLN		39.5			
	MW	ePZ		29	59		
	R	iPZ		30	00		
	T	ePZ			16		
Dec 20	P	ePZ	13	39	14		
	MW	iPZ			15		
Dec 20	P	eP'Z	18	48	41		Normal? No surface waves.
		ePPZ		51	01		△ roughly 130°, region of Sumatra.
		eSKPZ		52	06		
		iNEZ			10		
	MW	iP'Z		48	43		
		ePPZ		50	52		
		iZ		52	05		
	R	iP'Z		48	44		
		iZ		52	28		
	T	iP'Z		48	40		
		iZ		52	03		
		iZ			18		

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Dec 20	P	iPNEZ	19	53	42		Deep?
		iZ		54	18		
	MW	iPZ		53	42		
		iZ		54	20		
		iZ			42		
	R	iPZ		53	38		
		iZ		54	15		
	T	iPZ		53	55		
Dec 21	P	iPZ	06	13	12		
	MW	iPZ			14		
Dec 21	P	iPZ	08	14	12		
	MW	iPZ			13	c	
Dec 21	P	ePZ	12	45	28		
	MW	ePZ			28		
Dec 21	P	iPZ	14	17	57		
	MW	iPZ			58		
Dec 21	P	eZ	17	30	59		
		iNEZ		31	49		
	MW	iZ			01		
		iZ			51		
	R	iZ			02		
		iNEZ			51		
	SB	iNEZ			44		
	LJ	eNE			54		
	T	eNE			56		
Dec 21	P	iPNEZ	19	07	57	c	Normal. Surface waves large.
		iPcPZ		11	24		USCGS: 53.1°N., 132.2°W. 0 = 19:03.1
		iSNE			58		J.S.A: 53.2°N., 131.3°W. 0 = 19:03:09
	MW	iPNEZ		07	58	c	
		iPcPZ		11	24		
	R	iPNEZ		08	01	c	
		iPcPZ		11	29		
	SB	iPNZ		07	52		
		eSN		11	52		
	LJ	iPEZ		08	15		
		eSN		12	27		
	T	ePNE		07	29		
		eSE		11	06		
	H	iPZ		07	41		
		eSN		11	31		
Dec 21	P	iPNZ	19	13	55		Probably an aftershock of the
	MW	ePZ			49		preceding.
		iPZ			55		
	R	ePZ			53		
	SB	ePZ			47		
	H	iPNZ			38		
Dec 21	P	iPNEZ	19	32	37		Normal. Same source as shock at
		iPcPZ		36	01		19:07 USCGS: 53°N., 132°W.
	P6	iSE			42		0 = 19:27.9
	MW	iPNEZ		32	37		
		eSN		36	34		
	R	iPNEZ		32	42		
		iPcPZ		36	01		
		eSNE			40		
	SB	ePNZ		32	30		
		eSN		36	30		
	LJ	ePNZ		32	54		
		eSNE		37	04		

Continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
							continued
Dec 21	T	ePNE	19	32	10		
	H	iPNZ			20		
		eSNZ		36	11		
Dec 21	P	ePZ	19	51	01		Probably an aftershock of the preceding.
		iEZ			09		
	MW	iPZ			02		
	R	ePZ			03		
	H	eZ		50	49		
Dec 21	P	iZ	20	51	20		
	MW	iZ			19		
Dec 21	P	ePZ	20	53	10		
	MW	iPZ			10		
	R	ePZ			16		
Dec 22	P	iPZ	06	11	44		
	MW	iPZ			43		
	T	iPZ			17		
Dec 22	P	eZ	07	05	03		
	MW	eZ			03		
Dec 22	P	eZ	07	04	10		
	MW	eZ			09		
Dec 22	P	eZ	07	49	51		
	MW	eZ			48		
Dec 22	P	eZ	07	51	56		
	MW	eZ			54		
Dec 22	MW	eZ	08	36	28		
	T	eZ			08		
Dec 22	P	iPZ	08	44	40		
	MW	iPZ			41		
	T	iPZ			42		
Dec 22	P	iPZ	09	13	35		
	MW	iPZ			35		
	T	iPZ			43		
Dec 23	P	iPZ	12	26	01		
	MW	iPZ			02		
		iZ			13		
	SB	iPZ			08		
	T	iPZ		25	54		
Dec 23	P	iPZ	14	21	41		
	MW	iPZ			42		
	T	ePZ			27		
Dec 24	P	eZ	06	45	37		
	MW	eZ			37		
	T	iZ			54		
Dec 25	P	iPNEZ	20	08	38		Normal.
		eSNE		12	23		
	PX	iLZ		13	57		
	MW	iPZ		08	36		
	R	iPZ			29		
	SB	iPEZ			48		
	LJ	iPEZ			21		
	T	iPNEZ		09	03		
	H	iPNZ		08	53		
Dec 26	P	iPNEZ	23	05	11	c	Normal. $\Delta = 85°$ (9500 km.) Kermadec Islands.
		iPPNZ		08	41		
	P6	iSE		15	36		
	P	iP'P'Z		31	21		
	PX	eLZ		30.8			

Continued

Date	Station	Phase	G. C. T. h	m	s	c d	Remarks
Dec 26	MW	iPNZ	23	05	12	c	Continued
	R	iPNEZ			13	c	
		eSNE		15	36		
	SB	iPZ		05	08		
	LJ	ePNE			02		
		eSN		15	29		
	T	iPNEZ		05	42		
		eSE		15	49		
		eN		16	08		
	H	iPNZ		05	19		
		eSN		15	45		
Dec 27	P	iPNEZ	00	26	57	d	Normal. Damage on Nishima Island, Japan.
	PX	ePPZ		29	38		
		eLZ		50			
	MW	ePZ		26	56		
		iPZ			58	d	
		iZ		28	24		
	R	iPZ		26	56		
	SB	iPZ			51		
	LJ	ePNZ		27	06		
	T	iPZ		26	47		
		iZ		28	19		
	H	ePZ		26	50		
Dec 27	P	ePZ	02	24	37		
	MW	ePZ			34		
Dec 27	P	eZ	08	56	25		
Dec 29	P	eZ	14	06	07		
	T	iPNEZ			28		
	H	eZ			22		
Dec 29	P	eZ	14	28	19		
	T	ePZ			22		
Dec 29	P	ePZ	15	00	49		Normal. Distant about 90° (10,000 km.)
	PX	iSN		11	41		
	P30	eLN		29.0			
	R	ePZ		00	53		
	SB	ePZ			49		
	LJ	ePE			31		
		eE		10	49		
	T	ePNEZ		00	53		
	H	ePZ			52		
Dec 29	P	iZ	17	09	43		Normal. Surface waves recorded.
	PX	eN		13	53		

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