CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENA CALIFORNIA

SEISMOLOGICAL LABORATORY

BULLETIN

JANUARY–MARCH 1943

(PASADENA AND AUXILIARY STATIONS)

STATION COORDINATES

				Symbol
Pasadena	34°08.9' N.,	118°10.3' W.,	h=295 m.	P, PX
Mt. Wilson	34°13.5' N.,	118°03.4' W.,	h=1742 m.	MW
Riverside	33°59.6' N.,	117°22.5' W.,	h=250 m.	R
Santa Barbara	34°26.5' N.,	119°42.9' W.,	h=100 m.	SB
La Jolla	32°51.8' N.,	117°15.2' W.,	h=7.7 m.	LJ
Tinemaha	37°05.7' N.,	118°15.5' W.,	h=1180 m.	T
Haiwee	36°08.2' N.,	117°57.9' W.,	h=1100 m.	H
Palomar	33°21.0' N.,	116°51.5' W.,	h=1700 m.	Pr

In the columns headed "Sta.," P denotes readings for short-period instruments, and PX for long-period instruments, all at Pasadena.

c = compression

d = dilatation

When surface waves are not reported no such waves are observed at Pasadena.

Times given for Tucson (Tu) are read from original records lent by courtesy of the U.S.Coast and Geodetic Survey.

All times are G.C.T.

All communications should be addressed to the central station, as follows:

Seismological Laboratory,
220 North San Rafael Avenue,
Pasadena 2, California.

Date	Sta.	Phase	h	m	s	Remarks
Jan. 1	P	iPNEZ	02	37	49 d	Tu ip 02 38 25
	MW	iPZ			49 d	
	R	ePZ			52	
	T	iPNEZ			34 d	
	H	ePZ			40	
	Pr	iiPZ			58 d	
Jan. 1	P	iPNEZ	18	27	30 c	Deep: Tu iP 18 27 54 c
		epPZ		29	30	epP 29 55
	MW	iPZ		27	31 c	
		ipPZ		29	31	
		iZ		30	31	
	R	iPZ		27	33 c	
		epPZ		29	34	
	T	iPNEZ		27	39 c	
		eZ		29	41	
	H	iPZ		27	37	
		epPZ		29	38	
	Pr	iPZ		27	33 c	
		epPZ		29	34	
Jan. 2	MW	ePZ	02	20	59	Tu eP 02 21 46
	R	ePZ		21	02	
	T	ePZ			30	
	Pr	ePZ			18	
Jan. 2	MW	ePZ	03	33	39	Tu iP 03 33 58
		eZ			47	i 34 06
Jan. 2	MW	ePZ	05	11	51	Tu iP 05 10 58
	T	ePZ		12	08	
Jan. 2	P	eZ	11	42	06	Tu eP 11 42 00
	MW	eZ			23	
	R	eZ			21	
	T	eZ			36	
	H	eZ			32	
	Pr	ePZ			16	
Jan. 2	P	iPZ	17	22	20	Tu eP 17 22 44
	MW	ePZ			20	
		eZ			28	
	T	ePZ			22	
		eZ			29	
	H	eZ			27	
Jan. 2	P	ePZ	19	39	15	Tu iP 19 39 38
	MW	iPZ			16	e 59
	R	ePZ			17	
	T	ePZ			24	
	H	iPZ			20	
		eZ			47	
Jan. 3	P	iPNEZ	03	06	25	Tu iP 03 06 44 d
	MW	iPZ			27	
	R	iPZ			28	
	T	iPZ			35 d	
	H	iPZ			33	
	Pr	iPZ			28	
Jan. 3	P	ePZ	09	34	17	Tu eP 09 33 45
		eZ			33	e 59
	MW	iPZ			17	
		eZ			32	
	T	ePZ			30	
		eZ			43	
	H	ePZ			25	
	Pr	ePZ			11	
Jan. 4	P	ePZ	23	26	41	Normal. Tu e? 23 27 13
		iNEZ			55	i 16
	PX	eLZ		48		i 28
	MW	ePZ		26	39	
		iZ			53	
	R	ePZ			44	
		iZ			57	
	SB	eZ			47	
	T	ePZ			30	
		iZ			43	
	H	eZ			44	

Date	Sta.	Phase	h	m	s		Remarks
Jan. 5	P	eZ?	13	45	23		Tu e 13 46 38
		eZ			48		e 47 56
		iZ		47	56		i 56 02
		iZ		56	30		
	MW	eZ		42	36		
		eZ		45	37		
		iZ		47	55		
		eZ		56	29		
	R	eZ?		41	26		
		eZ		45	11		
		iZ		47	56		
	T	eZ		45	11		
		iZ		46	19		
Jan. 5	MW	ePZ	23	07	03		Tu iP 23 06 05
		iZ			07		i 16
		iZ			19		
	R	ePZ			01		
		eZ			09		
Jan. 6	P	iPZ	06	56	31		Tu eP 06 55 38
	MW	iPZ			30		
	T	iPNEZ			36	c	
Jan. 6	P	ePZ	10	00	17		Normal Tu iP 09 59 38
		iNZ			29		i 45
		iZ		01	37		
	PX	iSN		07	53		
		eLNEZ		18			
	MW	iZ		00	29		
	R	ePZ			16		
	T	iPZ			36		
Jan. 7	P	iPNEZ	03	41	19		Tu eP 03 41 45
	MW	iPZ			18		
	SB	iPZ			14		
	T	iPZ			11		
Jan. 8	P	iPNEZ!	09	42	58	c	Tu iP 09 42 23
		iZ		43	13		
	R	iPNEZ		42	54	c	
	SB	ePZ		43	04		
	LJ	ePNE		42	52		
	T	iPNEZ		43	07	c	
Jan. 8	P	iPNEZ!	20	10	26	c	Deep Tu iP 20 10 58
		ipPZ!		11	39		ipP 12 13
	PX	iSNE		20	18		e 14 39
	MW	iPNZ		10	27		Japan
		eZ		13	51		
	SB	iPNEZ		10	21	c	
	LJ	ePNEZ			33		
	T	iPNEZ			21	c	
		ipPZ		11	41		
		eSZ		20	10		
		iSN			18		
	H	iPNEZ		10	26		
Jan. 9	P	iPNEZ	06	10	09		Deep? Tu iP 06 10 21
		iZ		12	46		
	R	ePZ		10	11		
	T	iPZ			08		
Jan. 9	P	ePZ	18	44	52		Tu iP 18 45 14
		eZ		46	53		i 47 18
	MW	iPZ		44	52		
		iZ		46	57		
	R	ePZ		44	54		
		eZ		46	57		
	T	ePZ		45	00		
		eZ		47	07		
	H	ePZ		45	00		

Date	Sta.	Phase	h	m	s	Remarks
Jan.10	P	iPNEZ	09	53	43	Normal Tu eP 09 52 49
	PX	eSNE		56	34	i 59
		eLNEZ		58.1		Revillagigedo Islands?
	MW	iPNEZ		53	41	
	R	ePNZ			37	
	LJ	ePN			22	
	T	iPZ		54	12	
	H	iPZ			04	
Jan.10	P	ePNEZ	15	31	03	Normal Tu iP 15 30 05
	PX	eLNE		39.5		
	MW	iPZ		31	03	
	R	ePZ		30	58	
	LJ	ePN			53	
	T	iPZ		31	22	
	H	ePZ			16	
Jan.10	P	ePZ	17	39	06	Tu eP 17 39 37
	MW	ePZ			04	
	R	ePZ			06	
	T	ePZ			34	
Jan.10	P	iPZ	20	19	16	Tu iP 20 19 47
	MW	iPZ			17	
	R	ePZ			19	
	T	iPZ			06	c
	H	iPZ			12	
Jan.10	P	iPZ	21	13	51	Tu iP 21 14 11
	MW	ePZ			51	
	R	ePZ			52	
	T	ePZ		14	00	
Jan.11	P	ePZ	10	45	26	
	MW	ePZ			26	
	R	ePZ			31	
	T	ePZ			30	
Jan.11	P	eZ	20	08	04	Normal Tu e? 20 07 57
		iZ		09	04	e 08 53
	PX	eLNEZ		50		i 09 20
	MW	ePZ		04	55	
		eZ		08	03	
	R	eZ		09	09	
	T	ePZ		04	30	
		eZ		08	28	
Jan.11	P	iPZ	23	08	14	Tu iP 23 08 38
	MW	iPZ			15	
	R	ePZ			16	
	T	iPZ			22	
	H	ePZ			22	
Jan.12	P	eZ	09	23	31	Tu e 09 23 02
		eZ			45	e 47
	MW	eZ?			15	
		eZ			38	
		eZ			50	
	R	eZ?		22	55	
	T	eZ		23	43	
Jan.12	P	eZ	09	34	46	Tu i 09 34 40
		iZ			51	Part of preceding?
	MW	eZ			48	
Jan.13	P	ePNEZ	02	14	20	Tu e 02 15 36
	MW	ePZ			21	
	R	ePZ			30	
		eZ			38	
	T	ePZ		13	55	
		eZ		15	46	
Jan.14	P	iPZ	09	32	34	Tu iP 09 31 47 d
	MW	iPZ			35	
	R	ePZ			30	
	T	ePZ			49	

Date	Sta.	Phase	h	m	s	Remarks
Jan.14	P	ePZ	12	18	16	Tu eP 12 17 31
	MW	ePZ			18	
	R	ePZ			14	
	T	ePZ			33	
Jan.14	MW	eZ	19	29	04	Tu e 19 29 14
		eZ		43	20	e 32 06
	R	eZ		29	14	e 43 29
	T	eZ			03	i 46 28
		eZ		30	45	Two shocks?
		eZ		32	21	
		iZ		46	15	
Jan.14	P	iPZ	20	27	21	Tu iP 20 26 34
	MW	iPZ			22	e 54
		iZ			44	
	R	iPZ			17	
	T	ePZ			35	
Jan.15	MW	ePZ	02	24	52	Tu eP 02 25 24
	R	ePZ			56	
	T	ePZ			45	
	H	ePZ			48	
Jan.15	P	iPZ	03	00	35	Tu iP 03 01 19
	MW	iPZ			36	
	R	ePZ			41	
	T	iPZ			22	
	H	iPZ			27	
Jan.15	P	ePZ	04	48	39	Tu eP 04 49 12
	MW	iPZ			40	
	R	ePZ			42	
	T	ePZ			32	
	H	ePZ			36	
Jan.16	MW	iPZ	04	51	48	Tu e 04 52 11
		iZ			59	
	R	ePZ			44	
	T	ePZ			54	
		eZ		52	21	
Jan.16	MW	iPZ	07	33	49	Tu eP 07 34 12
		iZ		34	02	
	R	ePZ		33	52	
	T	ePZ			22	
		eZ			34	
Jan.16	P	iPZ	11	51	38	Tu, iP 11 52 03
		iSNE		53	03	Felt at Cedar City, Utah
	MW	iPZ		51	37	
		iSNEZ		53	02	
	R	iPZ		51	32	
		iSZ		52	55	
	T	ePZ		51	20	
		iNEZ			34	
		iSZ		52	20	
	H	iPZ		51	33	
		iSEZ		52	29	
Jan.17	MW	ePZ	04	59	14	Tu eP 05 00 11
	R	ePZ			27	
		eZ			37	
	T	ePZ		58	55	
		eZ		59	02	
	H	iPZ		59	00	
Jan.17	P	iPNEZ	05	17	03	Tu iP 05 17 34
	MW	iPZ			03	
	R	ePZ			05	
	SB	iPZ		16	57	
	LJ	ePEZ		17	08	
	T	iPZ		16	59	
	H	iPZ		17	01	

Date	Sta.	Phase	h	m	s	Remarks
Jan.17	P	iPNEZ	17	04	53	Normal Tu iP 17 04 13
	PX	iLE		07.7		
	MW	iPNEZ		04	53	
	R	iPZ			48	
	SB	iPNZ		05	05	
	LJ	eE			04	
	T	iPNEZ			30 d	
		eN		09	45	
	H	iPNEZ		05	17	
		iZ			24	
		iZ		06	10	
Jan.18	MW	ePZ	01	52	28	Tu iP 01 51 53
	R	ePZ			24	
Jan.18	P	iPZ	01	52	52	Tu iP 01 53 37
	MW	iPZ			54	
	R	iPZ			54	
Jan.18	R	ePZ	11	30	14	Tu e 11 30 44
	T	iPZ			11	
Jan.18	MW	iPZ	12	59	54	Tu iP 13 00 16
	R	ePZ			57	
	T	iPZ	13	00	02	
Jan.19	MW	ePZ	05	18	07	Tu iP 05 18 39
	R	ePZ			09	
	T	iPZ		17	59	
		eZ		18	16	
	H	ePZ		18	03	
Jan.19	MW	iPZ	07	16	22	Tu iP 07 16 45
	R	ePZ			23	
	T	iPZ			30	
	H	iPZ			26	
Jan.19	P	iPNEZ	20	17	45	
	MW	iPZ			47	
	R	ePZ			43	
		iZ			48	
	T	iPZ			46	
	H	iPZ			47	
Jan.19	MW	ePZ	21	36	08	Tu iP 21 36 38
		iZ			26	i 57
	R	ePZ			10	
	T	ePZ		35	57	
Jan.20	P	iPNEZ	03	40	36 c	Deep? Tu iP 03 41 01 c
		eZ		42	49	i 43 16
	MW	iPZ		40	38	
		iZ		42	51	
	R	iPZ		40	39 c	
		iZ		42	51	
		eZ		43	49	
	SB	iPZ		40	33	
		eZ		42	44	
	LJ	ePE		40	39	
		eE		42	52	
	T	iPNZ		40	46	
		eZ		41	03	
		iZ			13	
		eZ		42	59	
	H	iPZ		40	44	
		eZ		42	56	
Jan.20	MW	iPZ	08	01	05	Tu iP 08 00 28
	R	ePZ			00	
	T	ePZ			28	
Jan.20	MW	eZ?	19	01	37	Tu eP 19 01 55
		eZ			52	
	R	ePZ		01	28	
Jan.20	P	ePZ	19	41	58	Tu eP 19 42 35
	MW	iPZ			59	
		eZ		42	12	
	R	ePZ			02	
		eZ			15	
	T	ePZ		41	45	
		iZ		42	00	

Date	Sta.	Phase	h	m	s	Remarks
Jan. 21	P	iPZ	05	01	32	Tu e 05 01 54
	MW	ePZ			31	e 02 08
	R	ePZ			36	
	T	ePZ			21	
		eZ			56	
Jan. 22	PX	eLZ	07	28		Normal. Tu eP 06 58 22
	R	ePZ?	06	58	30	
Jan. 23	T	iPEZ	13	39	20	Tu iP 13 38 32
	H	iPEZ			20	i 39 00
Jan. 24	P	iPZ	04	26	31	Tu iP 04 25 56
	MW	iPZ			32	
	T	iPNEZ			40	
	H	iPEZ			38	
Jan. 24	T	iPZ	05	00	40	
Jan. 24	P	iPZ	09	33	04	Tu iPZ 09 32 10
	MW	iPZ			06	iZ 50
	T	ePZ			21	iZ 33 13
		eNE		33	59	iZ 34 04
		eZ		35	58	iZ 38 59
		iZ		39	22	Central America
Jan. 24	P	iPNEZ	20	48	11	Normal? Tu iP 20 47 17
		iNE			24	USCGS: 15°N. 91°W.,
		iZ			35	O=20:42.1
	PX	iSEZ		53	24	
		eLNE		56		
	MW	iPNEZ		48	11	
		iZ			23	
		iPcPZ		51	17	
	R	iPNEZ		48	06	
		iZ		51	03	
		iZ			13	
		iSEZ		53	04	
	SB	ePZ		48	22	
		iZ			34	
		iSE		53	13	
	LJ	ePE		48	04	
	T	iPZ			22	
		iEZ			38	
		ePPN		49	48	
		iPcPZ		51	09	
		iZ			20	
		eSE		53	52	
		eScPZ		54	53	
		eZ		55	15	
		eScSN		58	52	
	H	iPNEZ		48	22	
		iZ			33	
		iZ		51	01	
		iSNE		53	40	
		eScSNE		58	50	
Jan. 25	T	ePZ	04	07	29	Tu iP 04 06 24
Jan. 25	P	iPZ	06	45	48 c	Tu iP 06 46 11 c
	MW	iPZ			50 c	
	R	iPZ			54 c	
	T	iPZ			56 c	
Jan. 25	P	iPZ	14	18	02	Tu iP 14 17 26
		iZ			33	
	MW	iPZ			02	
		iZ			34	
	R	iPZ		17	59	
		iZ		18	31	
	SB	eZ			39	
	T	iPZ			14	
		iZ			46	
Jan. 25	MW	iPZ	15	45	57	Tu iP 15 45 12
	T	iPZ		46	08	

Date	Sta.	Phase	h	m	s	Remarks
Jan. 25	R	eZ	17	46	27	Tu iP 17 47 10
	T	ePZ			06	
Jan. 25	P	iPZ	18	20	57	Tu iP 18 20 40
	MW	iPZ			56	
	R	iPZ			51	
	T	iPZ		21	01	
Jan. 25	P	iPNEZ	18	39	30 d	Deep? Tu iP 18 38 53
		iZ			57	i 39 20
		eZ		40	22	i 38
	MW	iPNZ		39	31 d	South America?
		iZ			58	
		iZ		40	13	
	R	iPZ		39	26 d	
		iZ			42	
		iZ			54	
	T	iPNEZ		39	42 d	
		iZ		40	10	
		eZ			34	
Jan. 25	R	ePZ	21	59	15	Tu eP 21 58 43
	T	ePZ			29	
Jan. 25	P	iPZ	23	57	29	Tu iP 23 58 01
	MW	iPZ			31	
	R	ePZ			31	
Jan. 26	MW	iPZ	00	06	30	Tu iP 00 05 57
	R	ePZ			27	
	T	ePZ			41	
Jan. 26	T	iPZ	19	46	40	Tu iP 19 46 54
Jan. 27	T	iPZ	00	42	43	Tu iP 00 43 41
		eZ		44	46	
Jan. 27	P	eZ	01	59	52	Tu iP 02 00 33
	MW	iPZ			48	Foreshock of next
		iZ	02	01	07	
	R	ePZ	01	59	52	
	T	iPNEZ			34	
Jan. 27	P	iPZ	02	53	43	Normal? Tu iP 02 54 28 c
		iZ		54	01	i 35
		iZ			18	i 03 02 01
		iZ		56	23	USCGS: 52°N. 180°W.,
	PX	eSEZ	03	00	29	O=02:45.2
		eLN		03		
	MW	iPNEZ	02	53	43	
		iSZ	03	00	37	
	R	iPNEZ	02	53	47	
		iNEZ		54	13	
		iZ		56	42	
		eSNZ	03	00	48	
	SB	ePZ	02	53	39	
		iSE	03	00	20	
	LJ	ePE	02	54	06	
	T	iPNEZ		53	29	
		iZ			37	
		iZ			47	
		eSNE	03	00	12	
Jan. 27	P	iPNEZ	03	05	39	Tu iP 03 06 23 c
	MW	iPZ			39	Aftershock
	R	ePZ			43	
	SB	ePZ			31	
	T	iPEZ			26	
Jan. 27	P	ePZ	03	16	06	Tu iP 03 16 49 c
	MW	iPZ			04	Aftershock
	R	ePZ			10	
	T	iPNEZ		15	51	
Jan. 27	MW	ePZ	03	21	36	Tu iP 03 22 20
	T	iPZ			22	Aftershock
Jan. 27	P	ePZ	03	22	58	Tu iP 03 23 44
	MW	iPZ			58	Aftershock
	R	iPZ		23	03	
	T	iPZ		22	45	

Date	Sta.	Phase	h	m	s	Remarks
Jan. 27	MW	eZ?	03	24	53	Tu i 03 25 41
	T	iZ			26	Aftershock?
		iZ			41	
Jan. 27	MW	iPZ	03	29	49	Tu iP 03 30 34
	R	ePZ			54	Aftershock
	T	iPZ			34	
		eZ			48	
Jan. 27	T	ePZ	03	55	33	Tu iP 03 56 33
						Aftershock?
Jan. 27	T	eZ	04	27	42	Tu eP 04 28 38
						Aftershock?
Jan. 27	MW	iPZ	04	39	55	Tu iP 04 40 39
	R	ePZ			59	
	T	iPZ			40	
Jan. 27	T	ePZ	05	24	53	Tu eP 05 25 53
						Aftershock?
Jan. 27	T	ePZ	07	42	03	Tu e 07 43 02
						Aftershock?
Jan. 29	MW	iPZ	02	31	50	Tu iP 02 32 13d
	T	ePZ			57	(For other shocks, Jan.27-28,
	H	iPZ			55	see Addenda, page 34)
Jan. 29	P	iPZ	03	57	23	Tu iP 03 56 47
	MW	iPZ			23	
	R	iPZ			19	
		eZ			48	
	T	ePZ			34	
	H	ePZ			30	
Jan. 29	P	iPZ	08	57	12	Tu eP 08 56 33
	MW	iPZ			10	
	R	ePZ			04	
	T	ePZ		56	58	
		eZ		57	23	
		iZ			38	
Jan. 29	P	ePZ	13	03	58	Tu eP 13 04 33
	MW	iPZ			57	
	R	ePZ			57	
	T	ePZ			42	
Jan. 30	T	ePZ	02	15	47	Tu eP 02 16 45
Jan. 30	P	iPZ	05	12	06	Tu eP? 05 10 07
	MW	iPZ			06	iP 11 26
	R	ePZ			00	e 12 10
	T	iPZ			18	Two shocks at Tucson?
Jan. 30	P	iPNEZ!	05	41	58 d	Deep. Tu iP 05 41 13 d
		ipPZ		42	20	i 35
		iZ		43	15	USCGS: 2.0°S. 80.0°W.,
	PX	iSNEZ		49	12	O=05:33.0, h=100 km
		eNEZ		51	42	
		eLN		53.2		
	MW	iPNEZ		41	58 d	
		ipPZ		42	20	
		iZ		43	14	
		eSN		49	12	
	R	iPNEZ		41	54	
		ipPZ		42	16	
		eSN		49	15	
	SB	iPNZ		42	09	
	LJ	ePE		41	49	
	T	iPNEZ			11 d	
		eSN		49	38	
Jan. 30	R	eZ?	12	27	41	Tu eP 12 27 39
		eZ			50	i 28 02
	T	ePZ		27	14	
		iZ			36	
		iZ			41	
Jan. 30	R	eZ?	12	33	07	Tu eP 12 33 27
	T	ePZ			10	

Date	Sta.	Phase	h	m	s	Remarks
Jan. 30	T	ePZ	13	21	27	Tu eP 13 21 40 c
Jan. 30	T	iPZ	18	07	21	Tu eP 18 06 26
Jan. 31	P	iPNEZ	08	34	36	Normal? Tu iP! 08 33 39 d
		iZ			45	i 55
		iZ			59	i 34 11
	PX	iN		35	40	i 37 48
	P	iZ		36	02	JSA 18.8°N.94.7°W.,
		iZ		37	20	O=08:29:12, h=100 km
	PX	e(S)NE		39	47	
		eLNE		41.4		
	MW	iPEZ		34	36	
		iNZ			44	
	R	iPZ			30	
		iZ			40	
		iZ		34	56	
		iZ		35	05	
	SB	eNZ			11	
	LJ	eE		34	29	
		eE		35	09	
	T	iPNZ		34	52	
		iZ		35	17	
		eN		39	01	
Jan. 31	R	iPZ	19	11	23	Tu iP 19 10 54 c
Jan. 31	P	iPZ	20	03	18	Tu iP 20 03 43
	R	ePZ			20	
Feb. 1	R	iPZ	00	05	13	Tu eP 00 05 54
Feb. 1	P	iPZ	20	18	06	Deep. Tu iP 20 18 29 c
		ipPZ		20	15	ipP 20 39
	MW	iPZ		18	07 c	
		ipPZ		20	17	
	R	iPZ		18	08	
		epPZ		20	18	
Feb. 3	P	iPZ	15	19	11	Tu eP 15 19 19
		iZ			23	e 20 04
	R	ePZ			10	e 22 41
		eZ			24	
	T	ePNEZ			06	
		iZ			18	
Feb. 3	PX	eLZ	18	56.8		Normal. Tu e 18 27 32
	MW	iPZ		27	56	
Feb. 3	P	ePZ	23	16	18	Tu iP 23 15 24
	MW	ePZ			16	
	R	ePZ			07	
Feb. 4	MW	iPZ	04	26	16	Tu eP 04 25 01
	R	ePZ		25	56	
	T	ePZ		26	26	
Feb. 4	P	ePZ	07	47	40	Tu iP 07 48 05
	MW	iPZ			41 c	
	R	iPZ			44	
	T	iPZ			47	
Feb. 5	P	iPNEZ	03	53	36	Tu iP 03 53 28
		eSNEZ		54	42	iS 54 40
	MW	iPZ		53	37	Baja California
		eSNE		54	36	
	R	ePZ		53	33	
		iSNEZ		54	24	
	LJ	iPZ		53	19	
		iSN			51	
	T	ePZ		54	25	
		iSNEZ		56	07	
Feb. 6	P	ePZ	02	54	52	Normal? Tu iP 02 54 58
		iNZ		56	17	i 55 07
	PX	eN	03	06	15	e 56 28
		eLZ		42		India?
	MW	ePZ	02	54	54	First motion probably P:
		iZ		56	14	
		eZ	03	08	08	

(Continued)

Date	Sta.	Phase	h	m	s		Remarks
				(Continued)			
Feb. 6	R	ePZ	02	54	55		
		eZ		56	21		
	T	ePZ		54	45		
		eZ		55	59		
Feb. 6	P	iPNEZ	04	35	32		Tu iP 04 35 58
	MW	iPZ			32	c	
	R	iPZ			35		
		iPNEZ			38		
Feb. 6	P	iZ	05	22	30		Tu eP 05 23 34
	MW	eZ			25		
	T	ePZ		21	56		
Feb. 6	P	iPZ	09	46	44		Tu eP 09 47 58
		iNEZ			50		i 49 02
	PX	eNE		49.9			e 55 22
	P	iZ		55	29		
	MW	iPZ		46	44		
		eZ		55	09		
		eZ			18		
	R	ePZ		46	56		
	T	iPEZ			20		
Feb. 6	P	iPZ	10	42	03		Tu iP 10 42 22
	MW	iPZ			05		
	R	ePZ			04		
Feb. 6	P	iPZ	12	04	04		Tu iP 12 03 22
	MW	iPZ			05		
	R	iPZ			00		
	T	ePZ			14		
Feb. 6	MW	iPZ	20	21	58		Tu iP? 20 22 24
		eZ		22	15		
	R	iPZ		22	00		
	T	ePZ		21	56		
Feb. 7	P	iPNEZ	00	13	27	d	Deep. Tu iP 00 13 51 d
		iZ		14	21		e 14 35
	MW	iPNEZ		13	27	d	i 47
		iZ		14	22		
	R	iPEZ		13	29	d	
		iZ		14	23		
	SB	iPNEZ		13	23		
		eZ			45		
	LJ	ePE			29		
	T	iPNEZ			32		
		iZ		14	27		
Feb. 7	P	iPZ	04	36	57		Normal. Tu iP 04 37 18
		eZ		39	03		Near Sunday Island,
	PX	eLZ	05	03			according to Apia,
	MW	iPZ	04	36	59		which reports:
	R	iPZ			59		P 04 27 24
	SB	ePZ			53		S 30 05
	LJ	ePZ		37	01		
	T	iPEZ			06		
Feb. 7	P	eZ	05	38	22		Normal. Tu eP 05 38 41
	PX	eZ		40	43		
		iE		48	57		Kermadec Islands
		eLZ	06	03	-		
	MW	ePZ	05	38	16		
		eZ			25		
	R	ePZ			25		
	SB	ePZ			20		
	LJ	ePE			35		
	T	ePZ			33		
		iNEZ			43		
Feb. 7	P	iPZ	22	13	20		Tu iP 22 13 38
	MW	iPZ			20		
	R	iPZ			22		
	Pr	ePZ			22		
Feb. 8	R	iPZ	09	31	07		Tu e 09 32 31

Date	Sta.	Phase	h	m	s		Remarks
Feb. 8	P	iPNEZ	12	55	45		Tu iP! 12 56 30 c
	MW	iPNEZ			46		i 39
	R	iPZ			50		i 57 44
		eZ		56	02		Aleutian Islands?
		eZ			19		
		eZ		57	25		
		iZ	13	00	54		
	SB	ePZ	12	55	37		
	T	iPNEZ		55	31	c	
		iZ		57	17		
		iZ	13	00	54		
	Pr	iPZ!	12	55	52	c	
		iZ!			59		
Feb. 8	P	iPNZ	20	19	40		Tu iP 20 18 56 d
		iZ		21	06		
	MW	iPZ		19	41	d	
	R	iPZ		19	36		
		iZ			53		
	T	iPNEZ			54		
		iZ		20	13		
	Pr	iPZ		19	32		
		eZ			44		
		iZ			53		
Feb. 8	P	iPZ	20	58	33		Tu iP 20 58 58
	MW	iPZ			34		
Feb. 9	Pr	iPZ	12	45	03		Tu iP 12 44 33
Feb. 10	P	iPNEZ	21	38	23		Normal? Tu eP 21 37 31
		iZ			30		
		eZ			46		
		eZ		39	50		
		eZ		40	46		
	PX	eLZ		52.1			
	MW	iPZ		38	23		
	R	ePZ			17		
		iZ			25		
		eZ		40	45		
	T	iPNEZ		38	38		
		iZ			46		
		eZ		40	51		
	Pr	iPZ		38	13		
		iZ			19		
		eZ		39	27		
Feb. 11	P	iPZ	00	39	42		Tu iP 00 40 07
	MW	iPZ			48	c	
	R	iPZ			45		
	T	ePZ			48		
	Pr	iPZ			46		
Feb. 11	MW	ePZ	11	30	51		Tu iP 11 30 36
	T	ePZ			16		
	Pr	ePZ		31	04		
Feb. 11	MW	ePZ	15	39	10		Tu iP 15 40 30
	R	ePZ			08		
	T	ePZ		38	47		
Feb. 11	P	iPZ	20	16	24		Tu iP 20 16 51
	MW	iPZ			26		
	T	iPZ			31		
	Pr	iPZ			29		
Feb. 12	P	iPZ	19	18	58		Tu iP 19 19 22
	MW	iPZ			58		
Feb. 14	P	eZ	07	42	14		Tu e? 07 41 44
		eZ		46	01		e 57
	PX	eE	08	24			Mediterranean
	T	eZ	07	42	03		
Feb. 14	P	ePZ	09	35	01		Tu eP 09 33 56
	MW	ePZ			02		
	R	ePZ		34	56		
	T	ePZ		35	25		

Date	Sta.	Phase	h	m	s	Remarks
Feb.15	P	ePZ	08	05	15	Tu eP 08 05 19
	MW	ePZ			16	
	R	ePZ?			01	
	Pr	ePZ			16	
Feb.15	MW	ePZ	15	46	52	Tu iP 15 47 39 c
	T	iPZ			44	ipP 49 28
	Pr	iPZ		47	04	
Feb.15	MW	ePZ	23	54	23	Tu eP 23 55 03
	T	ePZ		53	59	
	H	ePZ		54	06	
	Pr	ePZ			27	
Feb.16	P	iPNEZ!	07	39	10 d	Deep? Tu iP 07 38 32 d
		iZ			26	i 41
		eZ		40	26	e 46 53
		iSN		47	49	eP'P' 08 07 42
	PX	eLE		56		i 08 04
	P	iP'P'Z	08	07	46	JSA: 15.2°S. 68.5°W.,
		iZ		08	33	O=07:28:41, h=300 km.
	MW	iPNEZ	07	39	11 d	
		iZ		40	30	
		eSN		47	51	
		iP'P'Z	08	07	41	
	R	iPNEZ	07	39	07 d	
		iSN		47	38	
		eE		48	47	
	SB	iPNZ		39	17 d	
		eZ		40	33	
		eSN		47	57	
	LJ	iPZ		39	01	
	T	iPNEZ			22	
		eSNE		48	11	
		eP'P'Z	08	09	37	
	H	iPNEZ	07	39	18 d	
		eSNE		48	04	
		eP'P'Z	08	07	40	
	Pr	iPZ!	07	39	02 d	
		iZ			35	
		eSZ		47	31	
		eP'P'Z	08	07	45	
		epP'P'Z	--	08	39	
Feb. 16	P	ePZ	14	20	19	
	PX	e(S)NE		30	08	
	R	ePZ		20	15	
	T	ePZ			32	
		iZ			49	
	H	ePZ			30	
		iZ			47	
	Pr	ePZ			12	
Feb. 16	P	iPZ	14	50	57 c	Normal? Tu iP 14 51 25
		iZ		51	11	i 37
		iZ		54	34	e 55 19
	PX	eZ		57	00	Approximately 11°S.164°E.,
		eSKSE	15	01	38	O=14:38:20
		iSE		02	00	
		eLNEZ		18:1		
	MW	iPEZ	14	50	57 c	
		iZ		51	11	
		iZ		54	35	
	R	iPZ		51	00 c	
		iZ			14	
		eSE	15	01	29	
	SB	iPZ	14	50	53	
		iZ		51	02	
	LJ	ePE			04	
	T	iPEZ			00	
		iEZ			14	
		iZ		54	38	

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
				(Continued)		
Feb.16	H	ePEZ	14	51	01	
		iZ			14	
		eZ		54	40	
	Pr	iPZ		51	02 c	
		iZ!			16	
		iZ		54	42	
		iZ			50	
Feb.16	P	iPNEZ	17	03	46	Deep? Tu i 17 08 21
		iNEZ		04	31	Wellington gives:
	PX	iNE		14	06	6°S.145°E.,
		eN		21.2		O=16:50.6, h=250-300 km.
		eLN		27.9		
	MW	iPNEZ		03	47	
		iZ		04	31	
	R	iPN		03	49	
		iZ		04	35	
		iZ		07	46	
	SB	iPNEZ		03	42	
	LJ	ePE			57	
	T	iPNEZ			46	
	H	ePN			45	
	Pr	iPZ			51	
		iZ			59	
Feb.16	P	iPNEZ	18	23	20	Deep? Tu iP 18 23 57 c
		eZ		24	00	
	MW	iPZ		23	21	
		iZ		24	01	
	R	ePZ		23	24	
	T	iPNEZ			06	
	H	iPZ			12	
		eZ			24	
	Pr	iPZ			29 c	
		eZ		24	10	
Feb.17	P	iPNEZ	00	40	14	Tu iP 00 39 08
	PX	eLZ?		46.4		i 40 24
	MW	iPZ		40	14	
	R	iPZ			08	
	T	iPNEZ			38	
	H	ePNEZ			28	
	Pr	ePZ			00	
Feb.17	MW	ePZ	02	11	45	Tu eP 02 10 37
	R	ePZ			35	e 14.5
	T	iPZ		12	08	
	H	ePZ		11	57	
	Pr	ePZ			31	
Feb.17	P	ePZ	02	33	27	Normal. Tu eP 02 32 32
	PX	eLE		58.4		
	MW	iPZ		33	25	
	H	ePZ			34	
	Pr	ePZ			21	
Feb.17	PX	eLZ	06	28		Normal. Tu e 05 51 51
Feb.17	MW	eZ	06	55	42	Tu e? 06 55 49
	H	eZ			47	
		eZ		56	00	
	Pr	eZ			08	
Feb.17	Pr	ePZ	07	30	24	Tu iP 07 29 44
		eZ			41	
Feb.18	P	iZ	05	38	30 d	Tu iP 05 36 43
	MW	iZ			31	i! 38 47 d
	R	iZ			31	Two shocks?
	T	iZ		37	54	
		iZ		38	39	
	H	iNEZ			36	
	Pr	iPZ		37	27	
		iZ!		38	32 d	
Feb.18	MW	iPZ	06	49	37	Tu iP 06 49 59
	T	ePZ			44	
	H	iPZ			42	
	Pr	iPZ			39 d	

Date	Sta.	Phase	h	m	s		Remarks
Feb.18	MW	iZ	15	51	16		Tu e 15 50 26
	R	iPZ			02		
		iZ			13		
	T	iZ			31		
	H	eZ			13		
	Pr	iPZ			11		
Feb.19	MW	iPZ	00	43	13		Tu eP 00 42 07
	R	ePZ			06		
	T	ePZ			34		
	H	ePZ			28		
	Pr	iPZ			04		
Feb.19	P	iPNEZ	08	38	52		Tu iP 08 39 09
	MW	iPZ			54		
	R	ePZ			51		
	T	ePZ		39	03		
	H	ePEZ		38	59		
	Pr	ePZ			53		
		iZ		39	06		
Feb.20	MW	iZ	05	23	48		Tu iP 05 22 52
		eZ?		24	19		i 23 18
	R	eZ		24	14		i 38
	T	eZ			34		
	H	eZ			28		
	Pr	iPZ		23	36		
		iZ		24	06		
		iZ			27		
Feb.20	Pr	ePZ	13	01	35		Tu iP 13 00 56
Feb.20	R	iPZ	18	46	09		Tu iP 18 46 25
	T	ePZ			17		i 47 46
	H	ePZ			15		
	Pr	iPZ!			10		
Feb.21	P	iPNEZ	00	13	22	c	Normal Tu iP 00 12 24
	PX	eLE		19			
	MW	iPZ		13	22		
	R	iPNEZ			17	c	
	T	ePNEZ			41		
	H	iPNEZ			34	c	
	Pr	iPZ			10		
Feb.21	H	iPZ	11	43	26		Tu iP 11 43 44
	Pr	iPZ			23		
Feb.21	P	iPZ	12	57	32		Tu iP 12 57 54
	R	ePZ			36		
	H	ePZ			38		
	Pr	iPZ			35	c	
Feb.21	R	iPZ	16	43	30		Tu iP 16 43 45
	T	ePZ			37		e 44 04
	Pr	iPZ			30		i 47 58
		iZ			50		
Feb.21	PX	eLZ	19	06			Normal. Tu iP 18 29 12
	MW	ePZ?	18	29	30		
Feb.21	P	ePZ	19	30	06		Tu iP 19 29 27
		iZ			23		i 42
	MW	iPZ			06		
		iZ			21		
	R	iPZ			01		
		iZ			17		
	T	iPZ			19	c	
	Pr	iPZ?		29	56		
		iZ		30	05		
Feb.22	R	ePZ	08	13	22		Tu iP 08 12 48 c
	T	iPZ			41		
	Pr	iPZ			19		
Feb.22	P	iPNEZ	09	25	45	c	Normal? Surface waves large
	PX	iSEZ		29	46		Tu iP 09 24 45 c
	MW	iPNEZ		25	47	c	USCGS: 17.6°N.101.3°W.,
	R	iPNEZ			39	c	O=09:20.8
		eNE		29	52		Initial compressions at

(Continued)

Date	Sta.	Phase	h	m	s		Remarks
Feb. 22	SB	iPNEZ	09	25	58	c	Pasadena, etc., possibly
	LJ	ePEZ			32		preceded by small dilatations
	T	iPNZ		26	08	c	Major earthquake
	Pr	iPZ!		25	32		(magnitude 7 1/2)
Feb. 22	R	iPZ	09	43	30		Aftershock
	T	ePZ			58		
	Pr	iPZ			27		
Feb. 22	R	iPZ	09	45	47		Tu iP 09 44 55
	T	iPZ		46	16		Aftershock?
	Pr	iPZ		45	46		
Feb. 22	R	ePZ	09	50	09		Tu iP 09 49 18
	LJ	ePE			02		Aftershock.
	T	iPNEZ			38		
	Pr	iPZ			04		
Feb. 22	R	ePZ	09	59	00		Aftershock
	T	ePZ			31		
	Pr	ePZ		58	54		
Feb. 22	P	iPNEZ	10	17	16		Tu iP 10 16 14
	R	iPNEZ			07		Aftershock
	SB	ePZ			12		
	LJ	ePE			06		
	T	iPNEZ			35		
	Pr	ePZ		16	59		
Feb. 22	P	iPNEZ	10	59	49	c	Tu iP 10 58 48
	MW	iPNEZ			49		Aftershock
	R	iPNEZ			43		
	SB	ePN			57		
	LJ	ePE			37		
	T	iPNEZ	11	00	12		
	Pr	iPZ	10	59	35	c	
Feb. 22	R	iPZ	11	49	45		Tu iP 11 50 07
		eZ			59		i 20
	Pr	iPZ			46		Tonga region?
		iZ		50	00		
Feb. 22	P	iNE	14	22	53		Tu eP 14 22 26
		iNEZ		24	35		Normal. Felt in Utah
	R	ePZ		22	18		
	T	iPZ		21	52		
		iZ		22	11		
		iSNEZ		23	28		
	H	eNEZ		22	23		
		iSNEZ		23	43		
	Pr	iPZ		22	15		
		iSZ		24	38		
Feb. 22	MW	iPZ	17	12	57		Tu iP 17 11 58
	R	iPZ			50		Mexico (aftershock of 09 h)
	T	iPNZ		13	18		
	H	ePZ			11		
	Pr	iPZ		12	44		
Feb. 23	MW	iZ	12	17	35		Tu iP 12 16 32
	R	ePZ			28		e 17 13
	T	ePZ			54		e 21 28
	H	ePZ			46		
Feb. 23	P	iPNEZ	22	59	12		Normal. Tu iP 22 58 12
	PX	eLNEZ	23	04.0			Mexico.
	MW	iPNZ	22	59	13		
	R	ePNEZ			03		
	SB	ePZ			16		
	T	ePZ			36		
	H	ePNEZ			26		
	Pr	iPZ			00		
		iZ			22		

Date	Sta.	Phase	h	m	s		Remarks
Feb.24	P	iPZ	04	29	06		Normal. Tu iP 04 28 06
	PX	eNE		33	23		Mexico
		eLNE		35			
	MW	iPZ		29	05		
	R	iPNEZ		28	58		
	SB	ePNZ		29	17		
	LJ	ePE		28	52		
	T	iPNEZ		29	27		
	H	iPNZ			18		
	Pr	ePZ		28	50		
Feb.24	MW	ePZ	11	22	43		Tu eP 11 21 43
	R	ePZ			34		
	T	ePZ		23	02		
	H	ePZ		22	54		
	Pr	ePZ			30		
Feb.24	MW	iZ	19	54	28		Tu eP 19 54 46
	R	ePZ			16		
	T	eZ			16		
	H	eZ			06		
Feb.25	P	iPZ	04	05	07		Tu eP 04 05 37
	MW	ePZ			08		
	R	ePZ			11		
	LJ	ePE			23		
	T	ePZ			03		
	H	ePZ			07		
	Pr	ePZ			13		
Feb.25	P	iPNEZ	05	17	45	c	Tu iP! 05 18 05 c
		iZ		18	02		i 13
	MW	iPZ		17	45	c	
		iZ		18	00		
		iZ			09		
	R	iPZ		17	47		
	SB	iPZ			42		
	LJ	ePE			46		
	T	iPNEZ			54		
	H	iPZ			52		
	Pr	iPZ			47	c	
		eZ		19	43		
Feb.25	R	ePZ	07	24	46		Tu eP 07 25 19
	Pr	iPZ			54		
Feb.25	MW	ePZ	14	46	54		Tu e 14 47 16
		eZ		47	06		
	T	eZ		47	10		
	H	ePZ			00		
		eZ			11		
	Pr	ePZ		46	31		
Feb.25	P	iPNEZ	22	18	24	c	Deep. Tu iP 22 18 48
		eZ		21	32		Tonga region?
	MW	iPZ		18	26	c	
		iZ		21	34		
	R	ePZ		18	26	c	
		eZ		21	37		
	SB	iPZ		18	20		
	T	iPZ			32	c	
	H	iPZ			31	c	
	Pr	iPZ			27	c	
		eZ		20	42		
		eZ		21	37		
Feb.26	P	iPZ	07	08	09		Tu iP 07 08 46 d
	MW	iPZ			09		
	R	ePZ			12		
	T	iPZ		07	54		
	H	iPZ		08	02		
	Pr	iPZ			17		
Feb.26	Pr	eZ?	15	44	37		Tu eP 15 45 04

Date	Sta.	Phase	h	m	s	Remarks
Feb.27	P	iPZ	13	53	26	Tu iP 13 53 47
	MW	iPZ			26	
	R	ePZ			28	
	T	iPZ			34	
	H	iPZ			32	
	Pr	iPZ			28	
Feb.28	P	ePZ	13	08	38	Deep.
		eP"Z		12	07	Tu eP 13 08 50
		eZ			34	eP" 12 05
	PX	iPPNEZ		13	11	i 46
		iSKSN		19	00	iPP 13 04
		iNE			53	i 34
		ePSZ		22	12	iPKKP 23 41
	P	ePKKPZ		23	46	iSKKP 27 02
		eSKKPZ		27	08	e 34 12
		iNEZ		34	16	Strong at Kabul, Afghanistan.
		eZ		35	23	36.5°N. 70.5°E. (Hindu Kush)
	PX	eLZ		39		O=12:54:33, h=210 km.
	MW	ePZ		08	43	
		eP"Z		11	51	
		eZ		12	35	
		iPPZ		13	10	
		eZ		17	23	
		ePSZ		22	13	
		iPKKPZ		24	09	
		iSKKPZ		27	09	
		iZ		32	11	
		eZ		35	26	
	R	eZ		12	40	
		eZ		13	16	
		ePKKPZ		23	16	
		iZ		23	56	
		iZ		24	31	
	LJ	ePPE		13	08	
	T	ePZ		08	26	
		iZ		12	38	
	H	iPZ		08	31	
		ePNZ		12	08	
		iZ			39	
	Pr	ePZ		08	41	
		eZ		09	26	
		eZ		11	51	
		iZ		12	36	
		iPPZ		13	16	
		ePSZ		22	34	
		iPKKPZ		23	44	
		iZ			57	
		iSKKPZ		27	05	
		eZ		32	42	
		eZ		34	54	
Feb.28	P	ePZ	21	40	37	Tu iP 21 41 05
	MW	ePZ			33	
		eZ			59	
	T	ePZ			25	
	H	ePZ			30	
	Pr	ePZ			40	
		eZ		41	12	
March 1	MW	ePZ	06	15	30	Tu iP 06 16 16
	R	ePZ			46	
	T	ePZ			15	
	H	iPZ			21	
	Pr	iPZ			41	
		iZ		16	00	
March 1	R	ePZ	09	49	03	Tu eP 09 48 02
	T	ePZ			14	
	H	ePZ			14	
March 2	Pr	eZ?	20	40	21	Tu eP 20 39 48

Date	Sta.	Phase	h	m	s		Remarks
March 4	P	iPNEZ	06	43	39		Deep. Tu iP 06 44 02 c
	MW	iPZ			40	c	i 19
	R	iPZ			41	c	e? 46 08
	SB	iPZ			36		Wellington gives:
	LJ	ePE			39		22°S. 179°W.,
	T	iPNEZ			47	c	O=06:32.4, h=600 km.
		ipPZ		45	56		
	H	iPZ		43	46	c	
		epPZ		45	52		
	Pr	iPZ		43	42		
March 4	R	ePZ	10	43	07		Tu eP 10 42 38
	T	iPZ			05		
	H	ePZ			07		
March 4	P	ePZ	20	02	40		Tu eP 20 02 46
	PX	eLEZ		30			
	R	ePZ		02	41		
		iZ			50		
	T	ePZ			27		
	H	iPZ			33		
March 5	P	iPEZ	00	39	51		Normal. Tu iP 00 39 01
	PX	ePPEZ		41	34		i 23
		iSE		46	21		i 40.32
		iLEZ		50.0			USCGS: 5.8°N.82.8°W.,
	MW	iPZ		39	50		O=00:31:47
	R	ePZ			44		
		eZ		41	33		
		iSE		46	19		
	SB	iPEZ		39	59		
	LJ	ePE			44		
	T	iPNEZ		40	05		
		iZ		41	43		
		eSZ		46	51		
	H	iPZ		39	59		
		eZ		41	16		
	Pr	iPZ		39	39		
		iZ		41	23		
March 5	MW	iPZ	04	30	38	d	Tu iP 04 31 12
	R	iPZ			41	d	
	T	iPZ			28		
	H	iPZ			33		
March 5	R	ePZ	18	27	22		Tu eP 18 26 49
	T	ePZ			23		
March 6	P	ePZ	12	15	48		Normal. Tu i 12 16 04
		iEZ		16	00		i(S) 17 35
		iSNZ		17	05		Nevada
	MW	iPZ		15	46		37.4°N.114.1°W.,
		iSNE		16	59		O=12:14.5
	R	iPNEZ		15	41		
		iNZ			55		
		iSE		16	51		
	T	ePZ		15	26		
		iNEZ			38		
		iSZ		16	23		
	H	eZ		15	37		
		eSEZ		16	22		
	Pr	iPZ		15	45		
March 7	P	iPNZ	03	11	09	c	Tu iP 03 11 47 c
	PX	iPPZ		13	12		eP'P' 41 04
		iPcSZ		16	18		USCGS: 57°N.164°E.,
		eSZ		18	31		O=03:01.5
		iSNE			50		
		iScSN		21	08		
		eLNE		25			
	P	eP'P'Z		41	03		
	MW	iPNEZ		11	10	c	
		eP'P'Z		41	04		

(Continued)

Date	Sta.	Phase	h	m	s		Remarks
				(Continued)			
March 7	R	ePNEZ	03	11	13	c	
		iZ		12	11		
		eP'P'Z		41	22		
	SB	iPNZ		11	02		
		iPPEZ		13	01		
		eSE		18	33		
	LJ	iPNEZ		11	20		
		iPPZ		12	03		
		eSE		19	10		
	T	iPNEZ		10	53		
		eSNZ		18	31		
		eP'P'Z		41	19		
	H	iPNZ		11	00		
		iPPZ		12	06		
		eSE		18	33		
March 7	MW	iPZ	03	53	33		Tu eP 03 52 41
	R	ePZ			23		
	T	iPZ			43		
March 7	P	iPZ	11	48	53		Tu iP 11 49 20
	MW	iPZ			53		
	R	iPZ			52		
	LJ	iPZ			55		
	T	iPZ			56		
March 7	P	iPZ	16	22	49		
	MW	iPZ			49	c	
	R	iPZ			50		
	T	iPZ			52		
	H	ePZ			51		
March 7	PX	eLZ	24	01.2			Normal. Tu eP 23 33 59
	MW	ePZ	23	34	13		
	R	ePZ			07		
	T	ePZ			24		
March 8	PX	eLZ	09	36.4			Normal. Tu eP 09 32 38
	MW	ePZ		33	48		e 35 10
	R	ePZ			40		
	T	ePZ		34	17		
	Pr	ePZ		33	17		
March 9	P	ePZ	03	19	25		Tu eP 03 20 01
	MW	ePZ			24		Kurile Is.?
	T	ePZ			16		
	Pr	ePZ			51		
March 9	PX	ePZ	10	04	09		Normal Tu eZ 10 06 28
	P	eP"Z		07	34		iP"Z 07 33
	PX	iPPNEZ		09	06		ePPZ 08 46
	P	iSKPZ		11	18		iSKPZ 11 09
	PX	eSKSNE		14	47		eZ 18 17
	P	iPKKPZ		17	57		USCGS: 56°S.22°W.,
	PX	eSPE		18	53		O=09:48:37
		iPPSNE		20	17		Pasadena: 60°S.27°W.,
	P	eSKKPZ		21	24		O=09:48:55
	PX	eSSNZ		26	08		
		eLE		40			
	MW	iP"Z		07	35		
		ePPZ		09	01		
		ePKKPZ		17	35		
	R	eP"Z		07	24		
		iP"Z			43		
		iSKPZ		11	18		
		ePKKPZ		17	53		
	SB	eP"Z		07	48		
	LJ	eZ		09	14		
	Pr	iP"Z		07	11		
		iZ			44		
		ePPZ		08	56		
		iSKPZ		11	17		
		eZ		18	17		

Date	Sta.	Phase	h	m	s		Remarks
March 9	P	ePZ	11	33	35		Tu eP 11 33 26
		eZ		34	57		e 37 01
		eZ		37	10		
	MW	ePZ		33	36		
		eZ		37	10		
	R	ePZ		33	35		
		eZ		34	54		
		eZ		37	08		
	T	ePZ		33	40		
		eZ		35	16		
		eZ		37	11		
	Pr	ePZ		33	34		
		eZ		34	46		
March 9	P	iPNEZ	15	39	43	d	Tu iP 15 39 14
		eZ		40	14		South America
	MW	iPZ		39	44	d	
		iZ		40	14		
	R	ePNE		39	41		
	SB	ePZ			50		
	LJ	iPZ			35		
	T	iPZ		39	55	d	
		eZ		40	27		
	H	iPZ		39	53		
	Pr	iPZ			37	d	
		eZ		40	07		
March 9	P	eZ	20	02	45		Normal. Tu e 20 01 54
	PX	eLNE		32.4			
	MW	eZ		02	32		
	R	eZ			32		
March 9	P	iPNEZ	20	30	10	d	Deep. Tu iP! 20 30 35 d
		eZ		31	24		i 31 51
	MW	iPNEZ		30	12	d	Tonga region?
		iZ		30	43		
		iZ		31	30		
		eZ		33	10		
	R	iPNEZ		30	14	d	
		eZ		31	28		
	SB	iPNEZ		30	06		
		iZ		31	21		
	LJ	iPEZ		30	10		
	T	iPNEZ			19		
		iZ			45		
		iZ			58		
		iZ		31	38		
	H	iPNZ		30	18	d	
		iZ		31	37		
	Pr	iPZ		30	15	d	
		iZ		31	30		
March 10	P	eP"Z	08	34	07		Normal. Tu eP" 08 33 56
		ePPZ		35	48		e 34 57
		eSKPZ		37	41		60°S.27°W.,
	PX	eSKSNE		41	09		O=08:15.5
		eSSNE		52.8			Aftershock of March 9, 10 h
		eLNZ	09	13.3			
	R	eP"Z	08	34	08		
March 11	P	iPZ	01	14	53		Normal. Tu eP 01 16 16
	PX	eSE		16	53		Northwestern California
	MW	iPZ		14	57		Felt in Mendocino and
		iEZ		16	18		Colusa Counties (USCGS).
	R	ePZ		15	00		
	SB	iPZ			06		
	T	iPNEZ		14	25		
		iSNEZ		15	35		
	H	iPZ		14	38		
		iSNZ		15	49		
	Pr	ePZ		15	09		

Date	Sta.	Phase	h	m	s	Remarks
March 11	P	iPZ	03	55	00	Deep? Tu iP 03 55 41
		iNZ			16	i 53
		iZ			22	
	MW	iPZ			00	
	R	ePZ		54	59	
	T	iPZ			48	
	H	ePZ			52	
	Pr	ePZ		55	01	
		iZ			15	
March 11	P	ePZ	07	02	20	Tu iP 07 01 39
		eZ		03	29	
	MW	iPZ		02	20	
	R	iPZ			16	
	Pr	iPZ			11	
March 11	P	iPZ	08	08	41	Deep. Tu eP 08 08 04
		iZ			55	e 19
	MW	iPZ			40	
		iZ			55	
	R	iPZ			37	
		eZ			52	
		iZ			58	
	Pr	eZ			36	
		iZ			47	
March 11	P	ePZ	09	46	57	Tu eP 09 47 19
		iZ		47	18	eZ 37
		iPPZ		50	36	iZ 51 14
	PX	eNE		57.5		(Deep)
		eLNE	10	10.2		Wellington gives:
	MW	ePZ	09	46	57	22°S.171°E.,
		iZ		47	22	O=09:34.2
	R	iPZ		46	59	h=80 km.
		iZ		47	22	
	SB	eZ			06	
	T	iPZ			03	
		iZ			23	
	Pr	ePZ		46	59	
		eZ		47	17	
		iZ			25	
		ePPZ		50	45	
March 12	P	iPZ	22	39	43	Normal. Tu eP 22 40 07
		iZ		44	18	e 44 40
	PX	iZ			58	
		eEZ	23	04		
	MW	iPZ	22	39	44	
		eZ		44	18	
	R	ePZ		39	46	
		eZ		44	21	
	T	iPZ		39	33	
		eZ		44	10	
	H	iPZ		39	38	
		eZ		44	14	
March 13	MW	eZ	06	16	18	Tu eP 06 15 24
	Pr	iZ			10	
		eZ			25	
March 13	MW	iPZ	09	59	29	Tu eP 09 59 02
	Pr	ePZ			19	
March 13	P	eZ	12	45	47	Tu iP 12 46 07
		iZ		47	13	
	R	ePZ		45	49	
March 13	MW	ePZ	15	00	38	Tu iP 15 00 54
	R	ePZ			39	
	Pr	iPZ			38	
March 14	MW	ePZ	04	14	24	Tu iP 04 14 44
	T	iPZ			26	
	Pr	iPZ			26	

Date	Sta.	Phase	h	m	s		Remarks
March 14	P	iPNEZ	05	43	34		Deep. Tu iP 05 43 55 c
		iZ			52		i 44 13
	MW	iPZ			34		
		eZ			56		
	R	iPZ			36		
	T	iPZ			44		
	Pr	iPZ			36	c	
		iZ			53		
March 14	PX	eLNEZ	09	36.6			Tu eP 08 58 20
	Pr	e(P)Z	08	59	03		South of Australia?
March 14	P	iPZ	12	11	19		Tu eP 12 11 50
	PX	eE		21	06		i 12 01
		eLN		30.6			i 17
	MW	ePZ		11	18		
	R	ePZ			22		
	SB	iPZ			13		
	LJ	iPZ			33		
	T	iPZ			11		
	H	iPEZ			15		
	Pr	ePZ			27		
March 14	P	iPZ	12	54	51		Normal. Tu eP 12 55 18
		iZ		55	21		
	PX	eNE		59	23		
		eE	13	01	16		
		iE		04	36		
		eLZ		15			
	MW	ePZ	12	54	51		
	R	iPZ			50		
	SB	ePZ			45		
	LJ	ePZ		55	02		
	T	ePZ		54	38		
	H	iPZ			42		
	Pr	iPZ		55	02		
March 14	P	iPEZ	17	23	54	c	Normal? Tu iP 17 24 18
	PX	eE		34	21		USCGS: 22°S.170°E.,
		eLZ		47.1			O=17:11.0
	MW	iPZ		23	56		Wellington: 22 1/2°S.
	R	iPZ			58		171 1/2°E.
	SB	iPZ			50		O=17:11.1
	LJ	ePZ			54		
	T	iPNZ		24	01		
	H	iPEZ			01		
	Pr	iPZ		23	58		
March 14	P	iPNEZ	18	49	06	d	Deep. Tu iP 18 48 32 d
	PX	iZ			37		iP'P' 19 17 21
		iNEZ!			47		i 49
		iSNE		58	18		USCGS: 21°S.71°W.,
		iEZ			58		O=18:37:8
		iZ		59	05		JSA: 18.5°S.68.3°W.,
	P	eP'P'Z	19	17	02		O=18:38:08, h=120 km.
	MW	iPNZ	18	49	08	d	
		iZ			37		
		iSE		58	18		
		iNE		59	03		
	R	iP'P'Z	19	17	10		
		iPNEZ	18	49	05	d	
		iZ			26		
		iZ			33		
		eSNE		58	11		
		eNE		59	00		
		eP'P'Z	19	17	05		
		iZ			31		
	SB	iPZ	18	49	15		

(Continued)

Date	Sta.	Phase	h	m	s		Remarks
				(Continued)			
March 14	LJ	iPNEZ	18	49	00		
		eSNE		58	03		
		eNE			46		
		eP'P'Z	19	17	12		
	T	iPNEZ	18	49	21	d	
		eSNE		58	42		
		iZ		59	04		
		eP'P'Z	19	16	59		
	H	iPEZ	18	49	17		
	Pr	iPZ			01	d	
		eZ		58	50		
		eP'P'Z	19	17	04		
March 15	P	ePZ	01	04	15		Tu iP 01 04 48
	MW	iPZ			15		
	R	iPZ			18		
	SB	ePZ			09		
	LJ	iPZ			19		
	Pr	iPZ			22		
		eZ			36		
March 15	P	ePZ	01	35	21		Tu eP 01 35 41
	MW	ePZ			19		
		eZ			31		
	R	ePZ			23		
		eZ			34		
	Pr	ePZ			22		
		eZ			35		
March 15	P	iPNEZ	02	37	23	d	Normal? Tu iP 02 37 46 d
	PX	iE			54		e 41 20
		eZ		40	44		i 48 47
		iSE		47	53		USCGS: 21°S.169°E.,
		eZ		48	19		O=02:24.6
		eE		49	20		Wellington: 21°S.170°E.,
		iPPSZ			40		O=02:24.4
		eSSNE		52.9			
		eLEZ	03	05.1			
	MW	iPZ	02	37	22		
		iEZ			37		
		eZ		40	56		
	R	iPZ		37	26	d	
	SB	ePZ			18		
	LJ	ePZ			17		
	T	iPNEZ			29		
	H	ePZ			29		
	Pr	iPZ			26	d	
March 15	P	eZ	02	54	49		Tu eP 02 55 01
	MW	iPZ			39		
	R	iPZ			41		
	SB	ePZ			46		
	T	iPZ			58		
	Pr	iPZ			41		
March 15	P	iPNEZ	05	01	12		Normal? Tu iP 05 01 43
	PX	eE		11	05		i 05 45
		eE			40		USCGS: 10°N.142°E.,
		eNZ		12	14		O=04:47.9
		eLNE		25.6			
	MW	iPZ		01	13		
	R	iPZ			15	c	
	LJ	ePZ			17		
	T	iPNEZ			11		
	H	iPEZ			13		
	Pr	iPZ			18		
March 15	R	ePZ?	07	38	17		Tu iP 07 38 39
	Pr	iPZ			05		

Date	Sta.	Phase	h	m	s		Remarks
March 15	PX	eLZ	12	53			Normal?
	R	ePZ		19	02		
		eZ			21		
	LJ	ePZ?			13		
	T	ePZ			12		
	Pr	ePZ			10		
		iZ			22		
March 15	P	iPZ	14	23	23		Normal? Wellington:
	PX	eLZ		54			20.5°S.169.5°E.,
	MW	iPZ		23	23		O=14:10.5
		eZ			36		
	R	iPZ			25		
		eZ			36		
	SB	ePZ?			22		
	LJ	ePZ?			17		
	T	iPZ			29		
	Pr	iPZ			26		
March 15	P	ePZ	15	00	23		Tu eP 15 00 38
	MW	ePZ			21		
	R	ePZ			26		
	T	iPZ			29		
	Pr	iPZ			26		
March 15	P	iPNEZ!	23	10	20	c	Deep!
		ipPNEZ		11	28		Tu iP! 23 10 47 c
	PX	iPPZ		13	08		ipP 11 56
	P	iZ		14	42		eS 20 19
	PX	iSNEZ		19	30		iP'P' 37 51
		eLN		30.0			epP'P' 39 16
	P	eP'P'Z		37	53		eSKPP' 40 56
		eSKPP'Z		41	10		Felt at Wallis I.
	MW	iPNZ		10	20	c	according to Apia
		ipPEZ		11	31		USCGS: 14°S.174°W.,
		eSNEZ		19	29		O=22:59.2, h=300 km
		eP'P'Z		37	52		Pasadena:14.5°S.177°W.,
		eZ		41	10		O=22:59:15, h=300 km
	R	iPNEZ		10	23	c	
		ipPNZ		11	31		
		ePPZ		13	00		
		eSNEZ		19	33		
		eP'P'Z		37	51		
		eZ		41	05		
	SB	iPNZ		10	15		
		ipPZ		11	24		
		iSNE		19	20		
	LJ	iPZ		10	20		
		ipPZ		11	30		
		eSNE		19	29		
	T	iPNEZ		10	30		
		ipPZ		11	39		
		eSNE		19	47		
	H	iPEZ		10	28		
		ipPEZ		11	37		
		eSE		19	40		
	Pr	iPZ!		10	24		
		ipPZ		11	31		
		iSZ		19	36		
		eP'P'Z		37	52		
		eZ		41	07		
March 16	P	iPNEZ!	04	34	07	c	Deep Tu iP! 04 34 32 c
		iZ		37	09		i 47
	MW	iPNEZ		34	07	c	Tonga region, depth about
		eZ		37	08		600 km.?
	R	iPZ		34	09		
		eZ		37	15		
	SB	iPZ		34	03		
	LJ	iPZ			06		
	T	iPNEZ			15		
	H	iPEZ			13	c	

(Continued)

Date	Sta.	Phase	h	m	s		Remarks
				(Continued)			
March 16	Pr	iPZ	04	34	10	c	
		iZ			30		
		eZ		36	36		
		eZ		37	04		
March 16	MW	ePZ	05	47	43		Tu iP 05 47 24
	R	ePZ			42		
		iZ			51		
	H	ePZ			34		
		eZ			43		
	Pr	iPZ			45		
		iZ			54		
March 16	P	ePZ	08	56	00		Tu eP 08 55 12
	PX	eLZ?	09	11.4			
	MW	iPZ	08	56	00		
	R	ePZ		55	55		
	Pr	iPZ			51		
March 16	P	ePZ	09	56	15		Normal? Tu eP 09 55 25
	PX	eSEZ	10	02	34		i 32
		eLZ		11.4			
	MW	ePZ	09	56	11		
		iZ			18		
	R	iPZ			09		
		iZ			16		
	LJ	eZ			11		
	T	iZ			29		
	H	ePZ			18		
		eZ			28		
	Pr	ePZ			01		
March 16	P	iPNZ	10	00	37		Normal? Tu iP 09 59 50
	PX	eSE		07	22		Overlaps the preceding
		eLZ		16.0			
	MW	iPNEZ		00	37		
		iEZ			46		
	R	iPZ			31		
		iZ			37		
		iZ			42		
	LJ	iZ			24		
	T	iPZ			50		
		iZ			56		
	H	ePZ			45		
	Pr	iPZ			28		
March 16	P	iPNEZ	23	15	44		Deep? Tu iP 23 16 08
		iNEZ!			47		i 25
		eZ		19	08		i 19 51
	MW	iPZ		15	46		New Hebrides?
		iNEZ!			48		
		iZ		19	10		
	R	iPZ		15	46		
		iZ!			49		
		eZ		19	26		
	SB	iPZ		15	36		
		iZ			43		
	LJ	ePZ			44		
		iNEZ			47		
	T	iPZ			50		
		iNEZ			54		
		iZ		16	01		
	H	iEZ		15	52		
	Pr	iPZ			49	c	
		iZ			52		

Date	Sta.	Phase	h	m	s		Remarks
March 17	P	ePZ	00	41	32		Normal. Felt in Imperial Valley. Several aftershocks
		iZ			34		
		iSNZ		42	08		
	MW	ePZ		41	29		Tu iP 00 41 45
		iNEZ			34		32°44'N. 115°26'W.,
		iSNE		42	09		O=00:40:44
	R	iPNZ		41	19		
		iNEZ			26		
		iSNE			49		
	SB	ePZ		42	00		
		iSNEZ			43		
	LJ	iPNEZ		41	12	c	
		iSNE			32		
	T	ePZ		42	12		
		iN		43	28		
	H	iZ		42	03		
	Pr	iPZ!		41	09	c	
March 17	Pr	ePZ	13	03	27		Tu eP 13 04 02
March 17	P	iPNEZ	23	09	17		Normal? Tu iP 23 08 42
		eZ			29		i 09 00
	PX	iSNZ		18	48		i 09
		iE		19	11		eP:P: 37 02
		eLZ		33.3			Chile, near 26°S. 70°W.,
	MW	iPNEZ		09	17		O=22:57:40
		iZ			31		h=50 km?
	R	iPNEZ			12		
		iNEZ			28		
	SB	ePZ			29		
	LJ	iPZ			08		
	T	iPNEZ			30		
		iEZ			47		
		iSNE		19	08		
	H	iPZ		09	25		
		iZ			39		
	Pr	iPZ			09		
		iZ			23		
		iZ			38		
		eSZ		18	34		
		eP P Z		36	48		
March 18	P	iPZ	03	51	21		Tu eP 03 51 52
	MW	iPZ			22		
	R	iPZ			24	c	
	LJ	iPZ			22		
	H	iPZ			18		
	Pr	iPZ			30	c	
March 18	P	iPZ	13	02	29		Normal. Tu iP 13 01 32 c
	PX	eLNE		10.0			
	MW	iPZ		02	28		
	R	ePZ			21		
	Pr	iZ			24		
March 18	MW	ePZ	13	56	50		Tu iP 13 55 59 c
	R	ePZ			50		
March 19	PX	eLZ	09	49			Normal
March 19	MW	ePZ	17	33	14		Tu iP 17 34 02
	R	iPZ			18		
	T	iPZ			02		
	H	iPZ			02		
	Pr	iPZ			26		
March 19	P	ePZ	19	52	29		Tu ip 19 52 04
	MW	ePZ			27		
	R	ePZ			24		
	T	iPZ			39		
	H	iPZ			35		
	Pr	iPZ			20		
March 19	R	ePZ	20	47	17		Tu eP 20 46 48
	H	iPZ			19		
	Pr	ePZ			16		

Date	Sta.	Phase	h	m	s	Remarks
March 20	P	ePZ	05	02	52	Normal. Tu iP 05 03 18
	PX	eSE		13	08	
		eLNEZ		27	2	Wellington gives:
	MW	iPZ		02	53	16 5°S. 175°E.,
	R	ePZ			55	O=04:50.5
	T	iPZ			59	
	H	iPZ		03	00	
	Pr	iPZ		02	56	
March 20	MW	ePZ	07	07	37	Tu iP 07 07 07
	R	ePZ			35	
	Pr	iPZ			33	
March 20	P	ePZ	20	05	05	
	R	ePZ			09	
March 20	P	eZ	10	53	30	Normal. Tu iP 20 52 47
		eZ			50	i 53 00
	PX	eSNE		55	02	(S) 53 8
	P	eSNZ			19	Possibly two shocks
	MW	ePZ?		53	06	
		iZ			55	
		iSZ		55	22	
	R	eZ		53	28	
		eNEZ			44	
		iSZ		55	06	
	LJ	ePNEZ		53	26	
		iSNEZ		54	38	
	H	eZ		53	50	
		eSEZ		56	16	
	Pr	ePZ		53	17	
		iPZ			27	
		iSZ		54	38	
March 21	MW	ePZ	06	09	38	Tu iP 06 08 49
	R	ePZ			32	
	LJ	ePZ			34	
	T	ePZ		10	05	
	Pr	ePZ		09	24	
March 21	P	ePZ	07	35	46	
	MW	ePZ			47	
	R	ePZ			51	
	T	ePZ			51	
	H	ePZ			54	
	Pr	ePZ			47	
March 21	P	ePZ	20	48	57	Normal.
		iZ		49	01	Tu eP 20 49 32
	PX	eSKSE		59	10	ePP 53 22
		iZ	21	00	48	ePKKP 21 06 14
		eLN		14.3		eP P 13 55
	MW	iPZ	20	48	59	USGGS: 6°S. 146°E.,
	R	ePZ		49	01	O=20:35.4
	SB	iPZ		48	56	Wellington: 6.5°S. 151.5°E.,
	LJ	ePZ		49	05	O=20:35.8
	T	ePZ			01	Pasadena: 5.7°S. 152.2°E.,
		iNZ			06	O=20:35.43
	H	eN			07	
	Pr	ePZ			02	
		eZ	21	06	21	
March 22	P	iPZ	02	05	26	Tu iP 02 06 04
	MW	iPZ			26	
	R	iPZ			31	
		iZ			45	
	T	ePZ			14	
	Pr	iPZ			35	
March 22	P	iZ	08	42	29	Normal. Tu eZ 08 42 41
	PX	iNE		49	00	eZ 43 30
		eLZ	09	12.8		Philippines?
	MW	eZ	08	42	15	
		iZ			30	

(Continued)

Date	Sta	Phase	h	m	s	Remarks
				(Continued)		
Mar.22	R	eZ?	08	42	00	
		eZ			29	
		eZ			59	
	LJ	eZ		43	10	
	T	eZ		42	23	
		eZ			37	
	Pr	eZ			32	
Mar.22	P	iPZ	23	30	50	Tu eP 23 31 30
	MW	ePZ			50	
	R	iPZ			59	
Mar.23	R	ePZ	09	06	50	Tu eP 09 07 12
	Pr	ePZ?			52	Wellington: 19°S.173°E., O=08:45.0
Mar.24	PX	eLZ	08	00.0		Normal. Tu e 07 25 38
Mar.24	P	iPZ	09	02	44	Normal? Tu iP 09 03 07
	PX	eLZ		27		i 17
	MW	iPZ		02	43	Near Apia, which reports
		iZ		03	05	P =08 52 06
	R	ePZ		02	44	S = 08 52 39
		iZ			55	
	T	iPZ			52	
		iZ		03	02	
	H	ePZ		02	49	
		eZ		03	00	
	Pr	ePZ		02	47	
Mar.24	P	iPZ	11	23	00	Deep.Tu iP 11 23 23 d
		iNEZ			04	iPP 25 05
		ipPZ		24	37	Using data from Wellington
	MW	iPZ		23	02	and Riverview:
		iNEZ!			05	23°S.179°W.,
		ipPZ		24	38	O=11:11;27
	R	iPZ		23	06	h=430 km
		iZ			10	
		iNEZ			36	
		iZ		24	41	
		iZ			44	
		eSNE		32	49	
	SB	iPZ		22	57	
		iZ		24	30	
	LJ	iPZ		23	02	
	T	iPZ			10	
		iNEZ			14	
		iPPNZ		24	53	
		eSN		32	50	
	H	iPZ		23	08	
		epPZ		24	46	
	Pr	iPZ		23	04	
		iZ!			07	
		ipPZ		24	42	
Mar.24	P	iPNEZ	11	41	22	Normal. Tu eP 11 41 54
	PX	eLZ	12	11		
	MW	iPZ	11	41	23	
	R	iPZ			26	
	T	iPZ			20	
	H	ePZ			21	
	Pr	iPZ			30	
Mar.25	P	eP"Z	18	46	06	Normal.
	PX	iPPZ		47	55	Tu eP" 18 45 55
		ePSZ		57	06	ePKKP 56 37
		eSSNEZ	19	04.2		South Atlantic
		eLE		17		Distant about 120°
	MW	eP"Z	18	46	05	
		ePKKPZ		56	15	
	R	iP"Z		46	01	
	T	iP"Z			08	
		ePKKPZ		56	09	
	Pr	iP"Z		46	02	
		ePPZ		47	29	

Date	Sta	Phase	h	m	s	Remarks
Mar.25	MW	ePZ	20	00	04	Tu eP 19 59 26
	R	iPZ	19	59	56	e 38
	T	iPZ	20	00	12	
	H	ePZ			11	
Mar 26	T	eZ	10	52	49	Not at other stations
		iZ		54	11	May not be distant
		iNZ			30	
	H	eZ		53	17	
		eZ		54	30	
		eEZ			57	
Mar.26	P	iPZ	14	31	19	Tu iP 14 31 42 d
	MW	iPZ			19	
	R	ePZ			22	
	T	ePZ			28	
	H	ePZ			26	
	Pr	iPZ			22 d	
Mar.26	P	ePZ	16	02	09	Tu eP 16 01 17
		iNEZ			16	
	MW	iPZ			09	
	R	ePZ			03	
	T	ePZ			22	
	H	ePZ			17	
	Pr	iPZ		01	59	
Mar.26	P	iPNEZ	17	50	13 c	Deep.
	PX	ipPNZ			36	Tu eP 17 50 34 c
		iZ			59	ipP 59
		iPPZ		53	06	ePKKP 18 08 56
		eSNEZ	18	00	06	iP'P' 17 07
	P	eZ		10	27	eSKPP' 20 19
	PX	eLNEZ		13.1		Wellington: 23°S.176.5°W.,
	P	iP'P'Z		17	16	O=17:38.2
		iSKPP'Z		20	34	h=100 km
	MW	iPNEZ	17	50	13	Felt at Nukualofa, according
		ipPNEZ			40	to Apia.
		eZ		52	39	
		iPPZ		53	06	
		eSNZ	18	00	06	
		iP'P'Z		17	14	
		iSKPP'Z		20	37	
	R	iPNEZ	17	50	14	
		ipPZ			40	
		iZ		51	17	
		eSNE	18	00	12	
		eP'P'Z		17	09	
		eSKPP'Z		20	36	
	SB	iPNEZ	17	50	08	
		ipPNZ			35	
		eSNE		59	59	
	LJ	ePNE		50	12	
		ipPNEZ			38	
		iSN	18	00	08	
	T	iPNEZ	17	50	22	
		ipPNZ			46	
		iZ			49	
		eSNEZ	18	00	25	
		eP'P'Z		17	10	
		eSKPP'Z		20	31	
	H	iPEZ	17	50	21	
		ipPZ			46	
		eSEZ	18	00	24	
		eP'P'Z		17	09	
		eSKPP'Z		20	26	
	Pr	iPZ	17	50	14 c	
		ipPZ			40	
		eZ		52	48	
		eSZ	18	00	04	
		iP'P'Z		17	15	
		eSKPP'Z		20	37	

Date	Sta.	Phase	h	m	s		Remarks
March27	P	iPZ	00	58	55		Tu iP 00 59 16 c
	MW	iPZ			55		
	R	iPZ			56		
	T	iPZ		59	02		
	Pr	iPZ		58	57		
Mar.27	P	iZ	05	56	25		Tu iP 05 55 31
	MW	ePZ			13		e 42
		eZ			23		
	T	iZ			26		
	H	eZ			21		
	Pr	eZ			03		
Mar.27	P	iPZ	07	01	18		Deep Tu iP 07 00 43 d
		iZ			48		
	MW	iPZ			18	d	South America?
		iZ			50		
	R	iPZ			13	d	
		iZ			44		
	T	iPZ			28	d	
		eZ		02	01		
	H	ePZ		01	24		
		eZ			38		
		eZ			57		
	Pr	ePZ			10		
Mar.27	P	iPZ	18	24	32		Tu iP 18 25 04
	MW	iPZ			33		
	R	ePZ			35		
	SB	iPZ			26		
	T	iPZ			24		
	H	iPZ			28		
	Pr	iPZ			39		
Mar.28	P	ePZ	00	35	12		Tu eP? 00 35 45
	MW	ePZ			13		
	R	ePZ			17		
	T	iPZ			04		
	Pr	iPZ			20		
Mar.28	P	eZ	21	11	56		Tu eP 21 09 45
	MW	eZ			57		i 12 19
	R	eZ		10	21		Phases near
		eZ		11	59		12 m show long periods
	Pr	eZ		10	20		
		eZ			45		
		eZ		12	02		
Mar.28	P	ePZ	21	24	34		Tu e 21 24 56
	R	ePZ			36		
	Pr	ePZ			37		
Mar.29	P	iPNEZ	05	34	04		Tu iP 05 33 57
		iZ			14		Phases given as P are
	PX	eLNEZ	06	33			more probably P'
	MW	iPZ	05	34	04		
		iZ			15		
	R	iPZ			05		
		iZ			20		
	LJ	ePZ?			04		
	T	ePNE			20		
	H	iPZ			01		
		iEZ			12		
	Pr	ePZ			03		
Mar.29	P	ePZ	10	06	20		Normal Tu eP 10 06 34
	PX	eLZ		40			
	MW	ePZ		06	20		
	R	ePZ			19		
	H	ePZ			26		
	Pr	ePZ			21		

Date	Sta.	Phase	h	m	s	Remarks
Mar.29	P	iPZ	11	47	04	Normal. Tu eP 11 48 31
		iSNE			56	Minor shock, first of a
	MW	iPZ			04	series near Livermore, Calif.
	R	ePZ			11	
	T	ePNE		46	44	
		iSNE		47	23	
	H	ePEZ		46	48	
	Pr	iPZ		47	22	
Mar.29	P	ePZ	23	41	19	
	MW	ePZ?			14	
	Pr	ePZ			22	
Mar.30	P	iPZ	21	08	50	Normal. Tu eP 21 10 09
		iSNE		10	07	
	MW	ePZ		08	50	Felt at Reno, Lake Tahoe
	R	ePZ		08	55	and Sacramento
		iSE		10	22	
	SB	iPNZ		08	45	
		iSNEZ		09	57	
	T	iPNE		08	18	
		iSN			56	
	H	iPZ			33	
		iSEZ		09	22	
	Pr	iPZ		09	06	
Mar.31	P	iPZ	03	54	55	Tu iP 03 55 03
	MW	ePZ			57	
	R	iPZ			57	
		eZ		55	09	
	H	ePZ		54	52	
Mar.31	P	ePZ	05	53	30	Tu iP 05 53 37
	MW	iPZ			31	
	R	ePZ			32	
	T	ePN			25	
	H	ePZ			27	
	Pr	ePZ			36	
Mar.31	P	iPZ	06	03	37	Tu eP 06 03 43
	MW	ePZ			32	
		iZ			39	
	R	ePZ			34	
		eZ			41	
	T	ePNE			32	
	H	ePZ			31	
	Pr	ePZ			43	
Mar.31	H	ePZ	06	08	43	Tu eP 06 09 23
Mar.31	P	ePZ	06	14	41	Tu iP 06 14 47
	MW	ePZ			41	
	R	ePZ			41	
	T	ePN			42	
	H	iPZ			35	
	Pr	ePZ			45	
Mar.31	MW	ePZ	09	55	51	Tu eP 09 55 07
	H	ePZ			59	
Mar.31	MW	ePZ	11	52	12	Tu eP 11 52 24
	R	ePZ			19	e 55 40
		eZ?		54	43	
	H	ePZ		52	11	
Mar.31	P	ePZ	21	56	36	Normal. Tu iP 21 55 47
	PX	eSNE	22	03	12	
		eLNEZ		i0.0		
	MW	iPZ	21	56	36	
	R	iPZ			30	
	T	eN			58	
	H	ePZ			45	
		eZ			55	
	Pr	iPZ			25	

Date	Sta.	Phase	h	m	s	Remarks
			Addenda			
Jan. 27	T	ePZ	00	14	22	Aftershock?
						Tu e 08 15 21
Jan. 27	T	ePZ	08	29	12	Tu iP 08 29 24
Jan. 27	R	ePZ	09	08	36	Tu eP 09 08 21
	T	ePZ			44	
Jan. 27	R	eZ	10	38	47	Tu iP 10 39 20
	T	ePZ			16	
Jan. 27	R	ePZ	21	01	32	
Jan. 27	T	ePZ	23	10	02	Tu iP 23 11 02
Jan. 28	P	iPZ	01	59	14	Tu iP 01 59 36
	MW	iPZ			15	
	T	iPZ			23	
	H	ePZ			21	
Jan. 28	R	ePZ	10	12	16	Tu iP 10 11 46
		eZ			23	i 53
	T	iPZ			31	
		iZ			38	
Jan. 28	P	iPZ	10	24	18	Tu iP 10 24 42
	MW	iPZ			18	
	T	ePZ			26	
Jan. 28	MW	iPZ	22	14	33	Tu iP 22 15 09
		iZ			43	i 26
	T	ePZ			11	
		iZ			28	
		iZ			39	
		eZ			52	
	H	ePZ			21	
		eZ			40	

The above readings were omitted from page 10.

C. F. Richter

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA CALIFORNIA

SEISMOLOGICAL LABORATORY

BULLETIN

APRIL-JUNE 1943

(PASADENA AND AUXILIARY STATIONS)

Date	Sta.	Phase	h	m	s	Remarks
Apr. 1	P	iPZ	04	14	06	Normal? Tu iP 04 14 47
		iZ			13	
	MW	iPZ			06	
		iZ			13	
	R	ePZ			09	
		iZ			16	
	H	ePEZ		13	57	
	Pr	ePZ		14	17	
Apr. 1	P	eP"Z	14	37	25	Normal. Tu eP" 14 37 34
		iSKPNEZ		40	46	e 40 19
		eSKKPZ		50	13	Pasadena distant 130°
	PX	eLN	15	12	1	Probably Java.
	MW	iP"Z	14	37	25	
		eZ		39	45	
		iSKPZ		40	45	
		eSKKPZ		49	58	
	R	ePZ		37	25	
		iSKPNEZ		40	50	
	SB	eP"Z		37	21	
		eZ		39	44	
		eSKPZ		40	34	
	LJ	eEZ		40	57	
	T	iP"Z		37	24	
		iSKPZ		40	30	
	H	eP"Z		37	21	
		eSKPZ		40	40	
	Pr	eP"Z		37	32	
		eSKPZ		40	55	
Apr. 1	P	iPZ	18	49	31	Tu iP 18 49 57
	MW	iPZ			33	
	R	ePZ			34	
	T	iPZ			42	
	H	iPZ			40	
Apr. 1	P	iPZ	18	53	48	Tu eP 18 54 11
	T	iPZ			58	Near Apia, which reports
	H	ePZ			56	P=18:43:25, S=18:43:54
Apr. 2	P	iPZ	22	24	42	
	MW	ePZ			42	
	R	ePZ			44	
Apr. 2	Pr	eZ	23	57	17	Tu e 23 59 15
Apr. 3	P	iPZ	00	15	05	Tu iP 00 15 26
	R	ePZ			06	
	Pr	iPZ			15	
Apr. 3	MW	eZ	13	29	27	
	R	eZ			26	
Apr. 3	PX	iLZ	15	33	9	Normal. Tu eP 15 04 53
	MW	eZ	15	05	17	
	H	ePZ			15	
Apr. 4	P	iPZ	05	54	02	Deep? Tu iP 05 54 25
	MW	iPZ			04	i 38
		iZ			17	
	R	ePZ			06	
	H	iPZ			09	
		eZ			22	
Apr. 4	P	iPZ	12	28	31	Tu eP 12 28 02
	MW	ePZ			32	
	R	ePZ			27	
Apr. 4	MW	eZ	13	04	39	Tu e 13 04 08
	R	eZ			45	
Apr. 4	R	eZ	17	21	13	Tu iP 17 20 46
Apr. 4	P	iZ?	22	30	14	Tu e 22 30 43
		iZ			47	i 31 12
	R	ePZ			42	i 40
		eZ		31	07	Apia reports
	Pr	eZ			24	P=22:20:36, S=22:21:27

Date	Sta.	Phase	h	m	s	Remarks
Apr. 5	MW	iPZ	01	23	19	
	R	iPZ			14	
Apr. 5	P	ePZ	01	44	52	Tu eP 01 45 24
		iNEZ		45	06	i 40
	MW	iPZ		44	51	
		iZ		45	07	
	R	ePZ		44	40	
		iPZ		45	09	
	SB	eZ?		45	00	
	H	iZ		44	57	
		iZ		45	06	
Apr. 5	P	eZ	02	14	46	Normal. Tu e 02 13 45
	PX	eLE		44	6	e 14 38
	MW	ePZ		13	52	e 15 06
		eZ		14	46	e 25 47
	R	eZ		14	39	Central Asia?
Apr. 5	P	iPNEZ	03	18	31 d	Deep. Tu iP 03 17 48 d
		ipPNZ		19	03	i 18 15
		iZ			41	ipP 20
	MW	iPZ		18	32 d	South America?
		ipPZ		19	04	
	R	iPZ		18	27 d	
		ipPZ			59	
	T	ePN		18	45	
		epPN		19	19	
	H	ePZ		18	37	
		ipPZ		19	11	
	Pr	ePZ		18	23	
		epPZ			54	
Apr. 5	P	iPZ	07	58	27	Tu iP 07 58 45
	PX	eLNE	08	30	0	L may belong to a
	MW	iPZ	07	58	28	following shock
	R	iPZ			30	
	Pr	ePZ			29	
Apr. 5	P	iPNEZ	08	27	39	Tu iP 08 26 34
		eSNE		31	15	i 27 15
	MW	ePZ		27	40	iS? 28 34
		eSZ		31	05	Normal.
	R	ePZ		27	33	Mexico
		eSZ?		30	49	
	SB	iPZ		27	54	
	LJ	ePNEZ			22	
	T	iPN		28	13	
	H	iPZ			00	
	Pr	ePZ		27	24	
Apr. 5	P	iPNEZ	20	58	36	Normal. Tu e 21 02 49
	PX	eLEZ	21	29	4	e 23 23
	MW	iPZ	20	58	38	Southwest Pacific
	R	iPZ			38	
Apr. 6	MW	iPZ	15	47	55	Tu iP 15 47 07
		iZ		48	03	i 15
	R	iPZ		47	50	
Apr. 6	P	iPNEZ	16	19	15 c	Normal? Tu iP! 16 18 46 c
		iNE			32	i 19 00
		iSNE		29	13	iP:P: 46 35
	PX	iSSE		34	26	USCGS: 32°S.70°W.,
		iLEZ		40	5	O=16:07 1
	P	iP:P:Z		46	10	JSA: 29.8°S.71.0°W.,
	MW	iPNEZ		19	16 c	O=16:07:28, h=80 km.
		iSNE		29	14	Pasadena: 30 3/4°S. 72°W.,
		iP:P:Z		46	25	O=16:07:15
	R	iPNEZ		19	11 c	Great earthquake
		iSNE		29	07	(magnitude 8)
		iP:P:Z		46	24	Violent in Chile at

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
			(Continued)			
Apr. 6	SB	iPNEZ	16	19	21	Salamanca, Ovalle, La Serena,
		iSNE		29	24	etc.
	LJ	ePEZ		19	05	
		iSN		28	58	
	T	iPNE		19	28	
		iSN		29	35	
	H	iPEZ		19	24 c	
		iSEZ		29	29	
		ePPEZ		46	09	
Apr. 6	P	iZ	18	30	02	Tu iP 18 29 05
	MW	ePZ	18	29	35	Aftershock
		iZ		29	42	
		iZ		30	03	
	R	ePZ		29	33	
		eZ			40	
	H	iPZ			43	
Apr. 6	MW	iPZ	20	15	37	
	R	iPZ			33	
	H	iPZ			44	
Apr. 6	MW	iPZ	20	31	23	Tu iP 20 30 54
	R	iPZ			20	Aftershock
	H	iPZ			32	
Apr. 7	P	iPZ	06	25	39	Tu iP 06 25 09
	MW	iPZ			39	Aftershock
	R	ePZ			36	
	T	iPZ			49	
	H	iPZ			47	
Apr. 7	MW	iPZ	08	22	07	Tu iP 08 21 37
	R	iPZ			03	Aftershock
	T	ePZ			18	
	H	ePZ			15	
Apr. 7	P	iPZ	08	59	32	Tu eP? 09 00 01
	MW	iPZ			31	e 03 57
	R	ePZ			33	
	H	iPZ			28	
Apr. 7	P	ePZ	13	19	02	Tu iP 13 18 33
	PX	iSN		29	00	Aftershock, Chile
		eLZ		44.7		
	MW	iPZ		19	02	
	R	iPZ			00	
	SB	ePZ			15	
	T	iPZ			16	
	H	iPEZ			12	
Apr. 7	MW	iPZ	14	09	27	Tu iP 14 08 56
	R	iPZ			23	Aftershock
	T	ePZ			40	
Apr. 7	P	iPZ	18	12	46	Tu iP 18 12 17
	MW	iPZ			47	i 45
	R	ePZ			44	
	T	iPZ			59	
		iZ		13	20	
	H	iPZ		12	55	
Apr. 7	P	iZ	20	32	05	Tu iP 20 31 46
	MW	iPZ		31	23	i 32 28
		iZ		32	06	Aftershock
	R	ePZ		31	25	
		eZ		32	08	
	T	iPZ		31	33	
		iZ		32	15	
Apr. 7	P	iPNEZ	22	46	19 c	Tu iP 22 46 48
		iZ			34	i 47 15
	PX	eLZ	23	15.8		e 50 32
	MW	iPNEZ	22	46	20 c	e 23 03 26
		iZ			41	
		iZ		47	03	

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
			(Continued)			
Apr. 7	R	iPZ	22	46	22 c	
	SB	iPZ			14	
	LJ	ePN			18	
	T	iPNE			20	
	H	iPEZ			20	
	Pr	iPZ			23 c	
Apr. 7	P	ePNEZ	23	29	55	Tu iP 23 29 29
	PX	iSNE		39	53	Aftershock
		eLE		50		
	MW	iPZ		29	54	
	R	iPZ			52	
	SB	iPNZ		30	00	
	T	iPNE			09	
		eSNE		40	15	
	H	iPZ		30	04	
		eSE		40	07	
	Pr	iPZ		29	47	
Apr. 8	P	ePZ	05	52	01	Tu eZ 05 51 43
		iZ			13	
	MW	ePZ			02	
		iZ			14	
	R	ePZ			00	
		eZ			11	
	H	iZ			21	
	Pr	iPZ			06	
Apr. 8	P	iPZ	15	25	30	Tu iP 15 26 07
	MW	iPZ			31	
Apr. 8	P	ePZ	18	41	54	Tu iP 18 41 26
	MW	iPZ			56	
	R	ePZ			53	
	Pr	eZ			48	
Apr. 8	P	iPZ	23	13	36	Tu eP 23 13 07
		iZ			47	i 19
	PX	eLZ		34.4		i 32
	MW	iPZ		13	36	Aftershock, Chile?
	R	iPZ			33	
		eZ			45	
	T	ePNE			51	
	H	iPZ			40	
	Pr	ePZ			30	
Apr. 9	P	iPEZ!	09	01	14 d	Deep. Tu iP 09 01 45
	PX	iZ			55	i 02 22
		iZ		02	09	iPP 05 23
		iSNE		11	19	USCGS: 19°N. 145°E.,
		iE		12	24	O=08:48.8, h=100 km.
		eLNE		23.1		Pasadena 19°N. 146°E.,
	MW	iPNEZ		01	15 d	O=08:48:59, h=170
		iPPZ		04	31	km.
	R	ePZ		01	15	
		iZ		02	22	
		eSNE		11	23	
	SB	iPNZ		01	08	
		eSNEZ		11	15	
	LJ	ePE		01	21	
	T	iPNEZ		01	10	
		iSN		11	17	
	H	iPEZ		01	12	
		eSE		11	15	
	Pr	iPZ		01	21	
		iPPZ		04	41	
Apr. 10	P	iPZ	20	45	08	Tu iP 20 44 16
	MW	iPZ			07	i 31
	R	iPZ			04	
	Pr	iPZ		44	56 c	

Date	Sta.	Phase	h	m	s	Remarks
Apr. 11	MW	eZ	08	26	30	Tu iP 08 25 58
	R	eZ			15	
		eZ			32	
	T	iZ			48	
	Pr	eZ			22	
Apr. 11	MW	eZ	09	49	20	Tu iP 09 48 45
		eZ			41	i 56
	R	ePZ			21	i 49 11
	T	eZ			38	
	Pr	eZ			16	
Apr. 11	P	iPZ	14	57	59	Normal? Tu 14 58 32
		iZ		58	07	Off Japan, near
	PX	iSNEZ	15	07	48	38°N. 142°E.,
		eNE		12.5		O=14:56.1
		eLZ		18.9		
	MW	iPZ	14	57	59	
		iZ		58	08	
	R	ePZ		58	03	
	SB	iPZ			02	
	LJ	iPZ			10	
	T	iPZ		57	48	
		iZ		58	05	
	H	eNE			09	
	Pr	iPZ			06	
Apr. 12	PX	eLZ	05	05		Normal. Tu eP 04 28 08
	MW	ePZ	04	27	47	
	R	ePZ			42	
	T	iPZ			34	
Apr. 12	P	ePZ	09	14	20	Tu eP 09 14 51
	MW	ePZ			21	
	R	ePZ			36	
	T	iPZ			14	
	Pr	ePZ			41	
Apr. 12	P	ePZ	19	55	21	Normal? Tu e 19 55 52
		iNEZ			31	i 56 04
	PX	eNE	20	05	2	
		eLEZ		19	4	Formosa, according to
	MW	ePZ	19	55	17	Zurich
		iZ			32	
	SB	eZ			18	
	T	iZ			19	
	H	iZ			26	
	Pr	ePZ			29	
		iZ			39	
Apr. 12	P	eZ	20	03	15	Tu i 20 03 38
		iZ			39	
	MW	eZ			08	
		eZ			39	
	R	eZ			44	
	Pr	eZ			46	
Apr. 13	P	iPZ	06	49	28	Normal. Tu eP 06 49 50
	PX	eLZ	07	16		
	MW	ePZ	06	49	30	
	R	ePZ			36	
	T	ePZ			14	
	H	ePZ			28	
	Pr	ePZ			40	
Apr. 13	P	iPNEZ!	09	08	27 d	Tu iP 09 07 50 d
		iZ			43	i 08 08
		iP·P·Z		36	39	e 16 16
	MW	iPNEZ		08	27 d	eP·P· 36 55
		iZ			42	Peru
	R	iPNEZ			23 d	
		iZ			44	
		iZ			54	
		eP·P·Z		37	04	
	LJ	iPNEZ		08	19	

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
				(Continued)		
Apr. 13	T	iPNEZ	09	08	40 d	
		eP·P·Z		36	34	
	H	iPZ		08	34	
	Pr	iPZ			19 d	
Apr. 13	P	ePZ	12	43	57	Tu e 12 48 53
		eZ		48	23	
	PZ	eLEZ	13	19.4		
	MW	eZ	12	48	08	
	R	ePZ		44	01	
		eZ		48	12	
	T	eZ			05	
	PX	eZ			11	
Apr. 14	MW	ePZ	01	18	09	Tu e? 01 17 42
	R	ePZ			23	e 20 04
Apr. 14	MW	iPZ	06	28	23	Tu iP 06 27 54
	R	ePZ			21	
	T	iPZ			36	
	H	iPZ			31	
	Pr	ePZ			16	
Apr. 14	MW	iZ	08	05	03	Tu e 08 03 33
	R	eZ		03	57	i 04 17
		iZ		04	57	
	T	eZ		05	18	
Apr. 14	P	iPZ	11	20	53	Tu iP 11 21 13 c
	MW	iPZ			53	i 31
	R	ePZ			54	
	T	iPZ		21	03	
	H	iPZ			00	
	Pr	iPZ		20	54	
Apr. 14	MW	eZ	11	48	23	Tu iP 11 48 57
	R	eZ			11	i 49 08
	T	eZ			10	
	Pr	eZ			21	
Apr. 14	MW	iPZ	13	48	09	Tu iP 13 47 59
	R	iPZ			08	
	T	iPZ			13	
	Pr	iPZ			06	
Apr. 14	R	ePZ	20	02	48	Tu eP 20 02 06
		iZ		03	04	i 22
Apr. 15	P	ePZ	10	56	19	Tu iP 10 57 12
	MW	iPZ	10	56	21	
		iZ			59	
	T	ePZ		55	49	
		iNEZ			54	
	H	ePZ		56	02	
	Pr	ePZ			36	
Apr. 15	P	ePZ	11	46	47	Normal. Tu iP 11 46 15
		iSNE		56	47	e 51 55
		eLZ	12	12.4		
	MW	iPZ	11	46	47	Chile
	LJ	iPZ			47	
	T	ePZ			59	
		eSN		57	15	
	H	iPZ		46	55	
	Pr	ePZ			41	
Apr. 15	P	iPNEZ	14	42	06	Normal. Tu iP 14 41 18
	PX	eLZ		57.4		
	MW	iPZ		42	04	
	T	ePZ			19	
Apr. 15	P	iPNEZ	15	32	12	Normal. Tu eP 15 33 37
		eSE		33	05	Region of Livermore and
	MW	iPZ		32	13	Pleasanton, east of San
	T	iPEZ		31	51	Francisco Bay. Minor
		iSN		32	29	damage only. Smaller sho
	H	iPEZ		31	58	8 minutes earlier. Numer
		iSN		32	45	aftershocks during the
	Pr	iPZ		32	30	remainder of April.

Date	Sta.	Phase	h	m	s	Remarks
Apr. 15	P	iPZ	17	34	26	Tu iP 17 35 05
		iZ			51	
	MW	iPZ			26	
	R	iPZ			30	
	T	iPZ			07	
	H	iPNEZ			15	
Apr. 15	P	iPNEZ	21	28	15	Tu iP 21 28 53
	MW	iPZ			15	
	R	iPZ			18	
	T	iPZ		27	51	
	H	iPZ			59	
Apr. 15	MW	iPZ	21	58	47	
	R	ePZ			50	
	T	ePZ			40	
	H	ePZ			38	
Apr. 16	MW	ePZ	00	47	03	Tu eP 00 47 53
		eZ			36	
		eZ		48	33	
	R	iPZ		47	07	
	T	iPZ		46	30	
	H	ePZ			40	
Apr. 16	MW	iPZ	01	22	18	Tu iP 01 21 30 c
	R	iPZ			12	
	T	ePZ			27	
Apr. 16	P	ePZ	11	56	16	Normal. Tu eP 11 56 07
	PX	eLZ	12	33		e 25
	MW	ePZ	11	56	21	
	R	ePZ			26	
	T	ePZ			14	
Apr. 16	P	ePZ	16	53	15	Normal. Tu eP 16 53 35
	PX	eLZ	17	26		e 50
	MW	ePZ	16	53	15	
	R	ePZ			16	
	T	iPZ			21	
		iZ			32	
Apr. 17	T	ePZ	00	41	48	Tu eP 00 43 16
Apr. 17	P	ePZ	00	49	46	Tu iP 00 50 58
	MW	ePZ			46	
	R	ePZ			51	
	T	ePZ			20	
	H	ePZ			31	
Apr. 17	P	iPZ	02	42	37	Tu iP 02 42 58
	R	ePZ			39	
	T	iPZ			45	
Apr. 17	P	iPNEZ	02	51	59 d	Normal? Tu iP 02 52 28
	PX	eLEZ	03	25.1		e 56 49
	MW	iPZ	02	51	59	
		iZ		52	09	
		eZ			33	
	R	iPZ		52	00 d	
	T	ePZ		51	58	
Apr. 17	P	ePZ	11	26	46	Normal?
	PX	eLZ	12	02.1		
	MW	ePZ	11	26	47	
Apr. 18	T	eZ	00	48	27	Tu e 00 48 17
		eZ			34	
		eZ			55	
Apr. 18	MW	ePZ	05	27	46	Tu eP 05 28 09
	R	ePZ			47	
	T	ePZ			51	
Apr. 18	R	ePZ	09	14	00	Tu i 09 14 52
		iZ			15	
	T	ePZ		13	48	
		iZ		14	02	
Apr. 18	T	eZ	11	19	04	Tu e 11 18 40
						e 19 51

Date	Sta.	Phase	h	m	s	Remarks
Apr. 19	P	ePZ	01	26	25	Tu eP 01 25 26
	MW	ePZ			25	Mexico.
	R	iPZ			20	
	T	ePZ			32	
		eZ		28	03	
Apr. 19	T	ePZ	05	21	43	Tu eP 05 20 33
Apr. 19	PX	ePZ	11	30	52	Tu iP 11 29 52
	MW	iPZ			50	
	R	iPNEZ			45	
	T	iPNEZ		31	16	
	H	ePZ			06	
Apr. 19	T	ePZ	23	34	25	
Apr. 20	P	iPZ	00	26	19	Tu iP 00 25 34
	MW	iPZ			18	
	R	iPZ			14	
	T	iPZ			31	
Apr. 20	R	iPZ	00	48	38	Tu iP 00 47 46
	T	ePZ		49	04	
Apr. 20	MW	iPZ	04	19	49	Tu iP 04 20 27
		iZ			58	i 39
	R	eZ		20	04	
	T	ePZ		19	30	
		iZ			44	
	H	eZ			47	
Apr. 20	T	ePZ	06	17	15	Tu eP 06 16 32
		eZ			26	e 41
Apr. 21	P	iPZ	16	29	05 d	Tu iP! 16 29 29 d
	MW	iPZ			07 d	
	R	ePZ			08	
	T	iPZ			14 d	
	H	iPZ			12	
Apr. 21	MW	ePZ	18	22	46	Tu iP 18 23 31
		eZ			57	i 43
	T	ePZ			27	
		eZ			41	
Apr. 22	MW	iPZ	05	20	07	Tu iP 05 19 20
	T	ePZ			19	i 32
Apr. 22	MW	iPZ	05	44	21	Tu eP 05 43 29
	R	iPZ			16	
	T	iPZ			46	
	H	ePZ			39	
Apr. 22	P	ePZ	07	14	02	Tu iP 07 14 49 d
	MW	ePZ			04	i 16 43
	R	ePZ			07	
	T	iPNEZ		13	46	
	H	ePZ			52	
		eZ		14	06	
Apr. 22	P	iPZ	10	57	26	Tu iP 10 57 50
	MW	iPZ			27	
	T	ePZ			35	
Apr. 22	P	iPZ	14	07	02	Tu iP 14 07 33
	MW	iPZ			04	
	R	iPZ			06	
	SB	iPZ		06	57	
	T	iPZ		07	00	
	H	iPZ			01	
Apr. 22	P	iPZ	20	32	30	
	MW	iPZ			31	
	R	iPZ			32	
	T	ePZ			32	
Apr. 23	MW	eZ?	06	34	16	Tu iP 06 32 22
Apr. 23	P	iPNEZ	18	19	14 d	Tu iP 18 18 37 d
		iZ			25	eP P 47 21
	PX	eSN		28	31	South America
	MW	iPNEZ		19	13 d	
		iZ			24	
	R	ePN			09	

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
		(Continued)				
Apr 23	LJ	ePNZ	18	19	05	
		eE			17	
	T	iPNEZ			27 d	
		eSNE		28	56	
	H	iPNEZ		19	20	
Apr 24	MW	iPZ	02	11	38	Tu iP 02 12 21
	T	iPZ			34	
	H	ePZ			39	
Apr 24	MW	eZ	21	57	25	Tu i 21 56 51
		eZ			48	
	T	eZ		56	54	
Apr 25	P	iPZ	05	13	02	Deep? Tu iP 05 13 27 d
		iZ		14	47	i 15 08
	MW	iPZ		13	02	Near Apia, which reports
	T	iPZ			11	P=05 02, (S)=03 46
Apr 26	T	iPZ	05	16	08	Tu iP 05 16 21
Apr 26	MW	iPZ	09	01	59	Tu iP 09 02 20
	R	ePZ		02	00	
	T	ePZ			08	
Apr 26	P	iPNZ	12	32	28	Normal? Tu iP 12 33 00
		iZ			36	e 09
	MW	iPZ			30	
	R	iPNEZ			32	
	SB	ePZ			23	
	LJ	iPZ			35	
	T	iPZ			27	
	H	iPNZ			30	
Apr 26	MW	iPZ	13	30	51	Tu iP 13 31 14
	R	ePZ			55	
	T	ePZ		31	01	
Apr 26	T	ePZ	19	37	35	Tu iP 19 37 22
		eZ			42	i 30
Apr 26	MW	eZ	23	33	03	Tu iP 23 33 19
		eZ			26	
	T	eZ			24	
		eZ			52	
Apr 27	P	iPEZ	05	00	41	Tu iP 05 01 29 d
	MW	iPZ			42 d	
	R	iPZ			46	
	SB	ePZ			30	
	T	iPZ			28 d	
Apr 27	P	iPZ	06	37	24	Tu iP 06 38 02
	MW	ePZ			24	
	R	iPZ			28	
	T	iPZ			04	
Apr 27	P	iPZ	20	56	07	Tu iP 20 55 58
	MW	ePZ			08	i 56 07
	R	ePZ			05	
	T	ePZ			22	
Apr 28	P	iZ	00	35	02	Tu iP 00 35 29
	MW	iPZ		34	56	i 35
		iZ		35	03	
	R	ePZ		34	59	
		eZ		35	05	
	T	ePZ		34	46	
		iZ			52	
Apr 28	T	eZ?	12	15	50	Tu iP 12 16 25
Apr 28	R	ePZ	16	03	19	Deep? Tu iP 16 02 49
		eZ			48	i 03 17
		eZ			57	
	T	iPZ			33	
		eZ		04	02	
		eZ			14	

Date	Sta.	Phase	h	m	s	Remarks
Apr. 28	P	iPZ	17	32	29	Tu iP 17 31 43
	PX	eZ		33	00	
	MW	iPZ		32	30	
	R	iPZ			26	
	LJ	iPZ			19	
	T	ePZ			45	
Apr. 28	P	iPNEZ	23	54	51 c	Deep. Tu iP 23 55 12
		ipPZ		56	46	ipP 57 07
		isPZ		58	08	e 24 13 03
	PX	eSE	24	04	25	Pasadena: 24.5°S. 180°,
	MW	iPZ	23	54	52 c	O=23:43:18
		ipPZ		56	48	h=530 km.
		isPZ		58	10	Using data of New Zealand
		eSN	24	04	24	stations, Apia, Brisbane,
	R	iPNEZ	23	54	53 c	and Riverview.
		ipPZ		56	48	
	SB	iPZ		54	47	
	LJ	iPEZ		54	50 c	
	T	iPNEZ		55	00	
		ipPZ		56	58	
		iSNE	24	04	51	
	H	iPZ	23	54	58	
		ipPZ		56	57	
Apr. 29	P	ePZ	15	35	59	Normal? Tu iP 15 36 36 d
	PX	iSNE		45	07	Kurile Islands near
		eLZ		57		45°N. 147°E.,
	MW	iPZ		36	00	O=15:24.9
		iZ		37	05	
	R	iPNEZ		36	03	
		iZ			29	
		iZ		37	19	
	T	iPNEZ		35	49	
		eSNE		44	49	
	H	ePZ		35	53	
Apr. 29	MW	eZ	16	44	19	Tu eP 16 42 39
	T	eZ			21	
Apr. 29	P	iPZ	20	01	05	Tu iP 20 01 24 d
	MW	iPZ			06 d	
	T	iPZ			15	
	H	ePZ			22	
Apr. 29	T	ePZ	21	03	13	Tu iP 21 03 19
		eZ			36	e 05 22
		eZ		05	11	
Apr. 30	P	iPZ	01	27	05	Tu eP 01 27 18
	MW	iZ			11	e 29 18
		eZ			28	Southeast Pacific
		iZ		28	37	
	R	ePZ		27	06	
		eZ		28	41	
	T	eZ		27	09	
		eZ		28	32	
Apr. 30	P	iPZ	05	54	56	Deep? Tu iP 05 54 26 c
		iZ		55	11	i 40
		iZ			22	
	MW	iPZ		54	56	
		iZ		55	11	
	R	iPZ		54	52	
		iZ		55	08	
		eZ			18	
	T	iPZ			09 c	
		iZ			24	
	H	iPZ			03	
Apr. 30	T	ePZ	08	09	21	Tu eP 08 09 39
Apr. 30	P	iPZ	12	05	55	Tu iP 12 06 35
	R	ePZ			59	
	T	ePZ			34	

Date	Sta.	Phase	h	m	s	Remarks
Apr. 30	T	ePZ	13	03	05	
Apr. 30	P	ePZ	19	17	13	Normal. Tu iP 19 16 49
	PX	eLNZ		29.7		
	MW	ePZ		17	15	
	R	ePZ			13	
Apr. 30	R	ePZ	20	25	14	Tu iP 20 24 25
Apr. 30	R	ePZ	20	58	42	Tu eP 20 58 02
May 1	MW	ePZ	04	37	00	Tu eP 04 35 55
	R	ePZ		36	45	
	T	ePZ		37	13	
May 1	P	iPEZ	12	20	18	Tu iP 12 20 57 c
	MW	iPZ			18	
	R	ePZ			21	
	LJ	ePZ			31	
	T	iPZ			04 d	
May 1	P	iPZ	16	51	25	Tu eP 16 51 14
		iZ			49	e 52 24
	MW	ePZ			23	
		eZ		52	58	
	R	iPZ		51	22	
May 1	P	iPZ	17	10	20	Deep? Tu iP 17 10 53
		iZ			33	i 11 05
		iZ			39	
	MW	iPZ			21	
		iZ			33	
	R	iPZ			22	
		eZ			34	
	T	iPEZ			12	
		iNEZ			24	
May 1	P	iPEZ	21	08	48	Deep? Tu iP 21 09 13
		iZ		09	13	i 38
	MW	iPZ		08	50	Near Apia, which reports:
	R	ePZ			51	P=20:58:24
	T	iPZ			59	S= 59:05
		iZ		09	24	
	H	iPZ		08	57	
		eZ		09	19	
May 2	P	iPZ	06	35	47	Normal Tu iP 06 34 34
		eSZ		37	52	
	PX	eLE		38	07	
	MW	ePZ		35	41	
		iSZ		38	01	
	R	eSZ		37	38	
	LJ	eSNEZ			32	
	T	ePZ		36	09	
		eSZ		39	24	
May 2	P	iPZ	09	05	19	Deep? T iP 09 04 48
		iZ			32	i 05 02
		iZ			41	
	MW	iPZ			18	
		iZ			33	
	R	iPZ			15	
	T	iPZ			31	
		iZ			45	
May 2	P	iPNEZ	17	26	18 c	Normal? Tu iP 17 25 26 c
	PX	iNEZ			30	iPP 27 05
		ePPZ		28	12	USCGS: 6.4°N. 80.1°W.,
		iSNEZ		32	56	O=17:18.2
		eSSE		36.3		h=50-100 km.
		eLNE		37.6		Major earthquake
	MW	iPNEZ		26	17 c	(magnitude 7)
		iZ			29	
		eSE		32	41	
	R	iPNEZ		26	12	
		eSNE		32	47	
	SB	iPNEZ		26	19	

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
May 2	LJ	iPNEZ	17	26	09	(Continued)
	T	iPNEZ			30 c	
		eSN		33	13	
	H	ePNEZ		26	25	
		eSE		33	07	
May 2	P	ePZ	18	32	00	Normal? Tu eP 18 32 32
		iZ			06	i 39
	MW	ePZ			01	
	R	ePZ			03	
	T	ePZ		31	50	
May 3	P	ePZ	02	18	14	Tu eP 02 18 35
	PX	ePPNEZ		17.6		iPKKP 28 40
		eSKSE		23	47	Pasadena: 12.5° N 125.5°E.,
		iPSE		26	43	O=01:59:12
	P	iPKKPZ		29	27	Major earthquake
	PX	eLE		45.8		(magnitude 7 1/4)
	MW	ePZ		13	14	
		eZ		15	16	
		iZ		16	08	
		iZ			46	
		ePKKPZ		29	18	
		eZ		37	31	
	R	ePZ		13	26	
		ePKKPZ		29	00	
	T	ePZ		13	08	
		iZ		16	55	
		iPPE		17	26	
		ePKKPZ		29	03	
	H	ePZ		13	22	
		ePKKPZ		29	14	
May 3	MW	eZ	03	22	44	Tu eP 03 23 08
	T	ePZ			29	e 28
May 3	P	iPZ	05	07	27	Tu iP 05 06 33
		iZ		10	35	i 07 13
	MW	iPZ		07	27	i 10 20
		eZ			44	e 13 34
	R	ePZ			21	
		eZ		10	13	
		eZ			33	
	T	ePZ		07	41	
		eZ		10	19	
		iZ			40	
		eZ		14	00	
May 3	P	iPNEZ	10	22	46 d	Deep? Tu iP 10 21 48 d
		iZ		23	14	Central America?
		iZ		24	14	
		iZ		26	07	
		iZ			43	
	MW	iPNEZ		22	45 d	
		iZ		23	30	
		eZ		26	06	
	R	iPNEZ		22	39 d	
		iZ		23	15	
		iZ			29	
		iZ		26	05	
	LJ	iPNZ		22	34	
	T	iPNEZ		23	01	
		eZ			32	
		iZ		26	11	
		eZ		29	40	
		eNZ		32	33	
May 3	P	ePZ	12	58	05	Normal. Tu eP 12 58 56
	PX	eLZ	13	27		
	MW	ePZ	12	58	12	
	T	ePZ			03	

Date	Sta	Phase	h	m	s	Remarks
May 3	P	iPZ	16	50	28	Tu eP 16 50 56
	PX	eLE	17	16		
	MW	iPZ	16	50	27	
		ePPZ		54	06	
	R	iPZ		50	30	
	LJ	iPNEZ			36	
	T	iPZ			27	
May 3	MW	ePZ	19	13	57	Tu eP 19 13 02
	R	ePZ			51	
	T	ePZ		14	14	
May 4	T	iPZ	02	44	44	Tu eP 02 45 37
		iZ		45	21	i 46 14
May 4	P	iPZ	06	47	39	Tu iP 06 46 40
	MW	iPZ			38	i 47 12
		eZ		48	21	e 50 25
	R	iPZ		47	29	e 53 26
		eZ		48	05	
		iZ			15	
		iZ		50	56	
	T	iPZ		47	54	
		eZ		48	33	
		iZ		51	03	
May 4	MW	ePZ	07	34	59	
	R	ePZ		35	10	
	T	ePZ			10	
May 4	P	iPZ	17	52	20	Tu iP 17 51 29
	MW	iPZ			20	e 52 13
	R	ePZ			13	
		iZ?		55	59	
	T	ePZ?		52	35	
		eZ		53	24	
May 4	P	iPNEZ!	18	30	17 c	Tu iP! 18 31 01 c
	MW	iPNEZ			18 c	i 11
		iZ			26	i 32
		iPcPZ		31	43	i 49
		iScPZ		35	25	iPcP 32 05
	R	iPNZ		30	20 c	iScP 35 50
		iPcPZ		31	44	Alaska?
		iScPZ		35	27	
	SB	iPNEZ		30	11	
	LJ	iPNEZ			29	
	T	iPNEZ			03 c	
		iPcPZ		31	38	
		iScPZ		35	17	
	H	iPNEZ		30	08 c	
		iPcPNEZ		31	39	
		iScPZ		35	22	
May 5	MW	ePZ	14	32	13	Tu iP 14 31 26
	R	iPZ			08	
	T	iPZ			28	
May 5	P	ePZ?	15	21	40	Normal. Tu eP 15 22 50
		eZ			50	i 57
	PX	eLZ		24.7		i 23 01
	MW	iZ		21	52	
	R	ePZ			48	
	T	ePZ			08	
		eNEZ			12	
	H	eNE			24	
May 6	P	iPNEZ	08	56	20	Tu iP 08 55 34
	MW	iPNEZ			20	
	R	iPZ			15	
	LJ	ePNZ			09	
	T	iPZ			35	
May 6	R	iPZ	09	12	42	Tu iP 09 12 15
May 6	P	iPEZ	10	19	13	Tu iP 10 19 45
	MW	iPZ			13	i 51
		iZ			19	
	R	iPZ			16	
	T	iPZ			03	

Date	Sta	Phase	h	m	s	Remarks
May 6	P	ePZ	11	34	41	
		iZ			55	
	R	ePZ?			45	
	T	eNZ?			08	
May 7	MW	iPZ	01	42	56	Tu iP 01 42 15
		iZ		43	29	e 42
	R	ePZ		42	51	i 47
		iZ		43	25	i 43 19
May 7	P	iPZ	08	20	14	Tu iP 08 20 39
	PX	eLZ		49		
	MW	iPZ		20	13	
	R	iPZ			16	
	T	iPZ			20	
May 7	P	iPNEZ	20	34	44 c	Normal? Tu iP 20 35 17 c
	MW	iPNEZ			43 c	i 23
		iZ			50	Japan?
	R	iPZ			46 c	
		eZ			52	
	T	iPNZ			33 c	
		iZ			41	
	H	iPNZ			37 c	
		eZ			44	
May 7	MW	iPZ	22	19	58	Tu iP 22 20 23
	T	iPZ		20	07	
May 7	P	iPZ	23	58	01	Tu iP 23 57 19
	MW	iPZ		57	59	
	R	iPZ			55	
	T	ePZ		58	14	
May 8	P	iPZ	05	51	49	Tu eP 05 52 14
	MW	ePZ			52	
	R	ePZ			55	
May 8	P	iPZ	09	03	07	Tu eP 09 02 19
	MW	ePZ			02	
	R	ePZ		02	57	
May 9	P	iPNEZ	23	15	23 d	Deep? Tu iP 23 15 55 d
	MW	iPNEZ			23 d	
		iZ			38	
		iZ			51	
	R	iPNEZ			26 d	
	T	iPNEZ			17 d	
	H	iPNEZ			19	
May 10	P	iPZ	00	07	57 d	Tu iP 00 07 23 d
	MW	iPZ			57 d	
	R	iPZ			54 d	
	T	iPNEZ		08	08 d	
	H	iPNEZ			03	
May 10	P	iPZ	00	20	47	Tu eP 00 19 52
	R	ePZ			42	
	T	ePNZ		21	02	
May 10	R	ePZ	05	54	18	Tu eP 05 55 07
	T	ePZ			45	
May 10	MW	iPZ	08	15	06	Tu iP 08 15 51
	T	ePZ		14	51	
May 10	P	ePZ	10	15	55	Normal? Tu eP 10 16 28
	PX	eLZ		43.6		Southwest Pacific
	MW	ePZ		15	54	
		iZ			59	
		iZ		16	04	
	R	ePZ		15	56	
	LJ	ePEZ		16	00	
	T	ePZ		15	57	
May 10	R	ePZ	15	27	29	Tu eP 15 26 41
	T	ePNZ			47	
May 10	P	ePZ	18	01	51	Tu iP 18 02 14
	MW	iPNZ			52	
	R	iPZ			52	
	T	iPZ			56	

Date	Sta.	Phase	h	m	s		Remarks
May 11	P	iPZ	11	03	33		Tu iP 11 03 57
	MW	iPZ			34		
	T	ePZ			43		
May 11	MW	ePZ	23	14	23		Tu iP 23 13 50
		iZ			29		
	R	ePZ			18		
		eZ			26		
	T	ePNZ			32		
	Pr	ePZ			14		
May 12	T	ePZ	04	58	22		Tu eP 04 59 20
		eZ			35		e 32
May 12	P	iPNEZ	08	34	42	d	Deep. Tu iP! 0835 04 d
		epPZ		35	46		e 36 37
	MW	iPZ		34	41	d	Felt at Nukualofa,
		ipPZ		35	43		according to Apia, which
	R	iPZ		34	43		reports: P=08 24 54
		eZ		35	47		S= 26 03
	LJ	ePZ		34	40		Pasadena: 20°S.175°W.,
	T	iPNEZ			51	d	O=08:23:15, h=270 km.
	Pr	iPZ			45	d	
		epPZ		35	48		
May 12	P	ePZ	08	45	15		Tu iP 08 45 04
	MW	ePZ			15		
	R	iPZ			13		
	T	iPEZ			20		
	Pr	iPZ			13		
May 12	T	ePZ	08	55	26		
May 12	T	eZ	14	50	45		Tu eP 14 50 29
May 13	T	iPZ	00	44	17		Tu iP 00 44 30
May 13	P	iPNZ	23	23	28		Tu iP 23 24 07
	MW	iPNEZ			27		i 17.
	R	iPZ			32		i 26 16
	LJ	ePZ			42		
	T	iPNEZ			06		
		iZ		25	56		
	H	ePNE		23	14		
	Pr	iPZ		23	39		
May 14	T	iPZ	20	54	27		Tu iP 20 55 59
May 15	P	iPNZ	02	29	08		Deep? Tu iP 02 28 33 d
		iZ			43		i 29 11
	MW	iPNEZ			07		South America.
		iZ			45		
	R	iPZ			04	d	
		eZ			34		
		iZ			42		
	T	iPNEZ			19	d	
		iZ			58		
	H	iPZ			14		
		iZ			52		
	Pr	iPZ			00	d	
		iZ			37		
May 16	P	iPZ	03	07	34		Tu iP 03 07 54
	MW	iPZ			36		Second entry after this
	R	iPZ			38		may be P'P'P'
	T	iPNZ			42		
	Pr	iPZ			34		
May 16	Pr	iZ	03	45	33		Tu i 03 44 58
May 16	R	eZ	03	56	10		Tu e 03 55 31
	Pr	eZ			10		P'P'P'? or part of next?
May 16	P	iPZ	03	57	07		Tu iP 03 57 31
	MW	iPZ			07		
	R	iPZ			10		
	T	iPZ			16		
	Pr	iPZ			11		
May 16	P	iPZ	14	30	45		Tu eP 14 31 13
	MW	iPZ			47		
	R	iPZ			48		
	T	iPZ			50		
	Pr	iPZ			49		

Date	Sta.	Phase	h	m	s	Remarks
May 17	P	iPZ	01	26	31	Tu iP 01 26 21
	MW	ePZ			31	e 39
	R	iPZ			30	
		eZ			47	
	T	iPNZ			36	
	Pr	ePZ			29	
May 17	P	ePZ	07	56	09	Tu eP 07 55 20
	MW	ePZ			09	
	R	ePZ			08	
	T	ePZ			21	
May 17	P	iPZ	08	09	28	Deep? Tu iP 08 09 55
	MW	iPZ			30	e 10 44
	R	iPZ			30	
		eZ		10	24	
	T	iPZ		09	30	
		eZ		10	26	
	Pr	ePZ		09	39	
May 17	P	iPZ	17	35	49	Tu iP 17 35 04 c
	PX	eLZ		57		Normal.
	MW	ePZ		35	41	
	R	iPZ			39	
	T	ePZ			33	
	Pr	iPZ			38	
May 17	MW	eZ?	18	17	13	Tu e 18 16 17
May 17	Pr	iPZ?	21	45	25	Tu iP 21 45 04
May 17	R	ePZ	21	50	20	Tu iP 21 49 44
	Pr	iPZ			19	i 52
May 18	P	eP"Z	06	22	04	Normal Tu eP" 06 22 20
	PX	ePSZ		31.7		ePKKP 33 08
		eSSZ		37.2		East Indies?
		eLZ		53.2		
	T	eP"Z		22	03	
May 19	MW	ePZ	05	41	47	Tu eP 05 41 18
	T	ePZ			53	
	Pr	ePZ			33	
May 20	MW	iPZ	11	18	14	Tu iP 11 17 19 c
	Pr	iPZ			02	
May 20	MW	iPZ	17	12	23	Tu iP 17 12 51
	R	iPZ			26	
	T	iPZ			28	
	Pr	iPZ			28	
May 21	PX	eLZ	07	53		Normal. Tu eP 07 38 18
	R	ePZ		39	00	
	T	ePZ			16	
May 21	T	ePZ	09	38	02	Tu eP 09 36 39
May 21	P	iPZ	23	32	28	Tu iP 23 33 03
	MW	iPZ			28	
	R	ePZ			31	
	T	ePZ			19	
	H	ePZ			24	
May 22	P	iPNEZ	09	13	58	Normal? Tu iP 09 13 27
		ipPZ		14	07	ipP 38
		iSNE		23	52	iP'P' 41 02
		eLZ		39.0		e 12
		eP'P'Z		41	39	Chile; Aftershock of
	MW	iPZ		13	57	April 6, 16h.
	R	ePZ		13	54	30 3/4°S.72°W.,
		ipPZ		14	05	O=09:01:57
		eP'P'Z		41	28	
		eZ			37	
	SB	ePZ		14	07	
	LJ	iNEZ		13	52	
	T	ePNEZ		14	10	
		iPPZ			21	
		iP'P'Z		41	45	
		iZ			56	
	Pr	ePZ		13	51	

Date	Sta	Phase	h	m	s	Remarks
May 22	R	ePZ	12	43	41	Tu iP 12 42 53
	T	iPZ		44	03	e 49 47
		eZ		46	02	
May 22	P	iPZ	19	12	50	Tu iP 19 11 55
	MW	iPZ			48	
	T	iPNZ		13	04	
May 23	P	iPZ	06	59	57	Tu eP 06 59 51
	MW	iPZ			37	eS 07 00 47
	T	ePZ	07	00	05	Not same?
May 23	P	ePNZ	07	29	52	Normal. Tu iP 07 28 58
	PX	eLZ		34.9		i 29 06
	MW	ePNZ		29	52	
	R	ePZ			46	
	T	ePZ		30	20	
May 23	MW	ePZ	11	13	51	Tu eP 11 12 51
	R	ePZ			45	
	T	ePZ		14	15	
May 23	P	eZ	16	01	20	Tu e 16 00 35
	MW	ePZ			26	
	R	ePZ			21	
	T	eZ?			06	
		eZ?			50	
May 24	R	ePZ?	06	49	07	Tu eP 06 49 34
May 24	P	iPZ	08	46	40	Tu iP 08 47 04
	MW	iPZ			40	
	T	ePZ			48	
May 24	P	ePZ	18	39	09	Tu iP 18 39 53
	MW	ePZ			07	i 40 06
		eZ			23	
	R	ePZ?			11	
		eZ			21	
	T	ePZ		38	53	
		iNZ		39	03	
	Pr	eZ			19	
May 25	P	ePZ	10	55	47	Tu iP 10 55 32
	MW	ePZ			48	
	R	ePZ			41	
	T	ePZ		56	04	
May 25	P	iPZ	23	21	49	Normal
	PX	eEZ		25	05	Tu iP 23 22 17
		iPPEZ			58	i 26 15
		iPPPZ		28	20	iPKKP 37 16
		iSKSE		32	28	iP"P" 44 58
		iPSZ		35	19	eP'P'P' 24 07 07
	P	ePKKPZ		37	52	USCGS: 7.5°N. 126.5°E.,
		iP"P"Z		45	36	O=23:07.6
	PX	iLE		50.7		
	MW	iPNZ		21	48	
		iZ			57	Major earthquake
		ePKKPZ		37	39	(magnitude 7 1/2)
		iZ		39	52	
		eSKKPZ		41	47	
		iP"P"Z		45	36	
		eP'P'P'Z	24	07	24	
	R	ePZ	23	21	46	
		eZ		37	24	
		iP"P"Z		45	33	
	SB	ePZ		21	46	
		ePKKPZ		37	49	
	T	iPEZ		21	42	
		iZ		25	10	
		eZ		33	30	
		eZ		37	33	
		iZ			46	
		iPKKPZ		38	12	
	Pr	ePZ		21	54	
		eZ		26	49	
		ePKKPZ		37	36	
		eSKKPZ		41	41	
		eP"P"Z		45	27	

Date	Sta.	Phase	h	m	s	Remarks
May 26	MW	iPZ	02	00	41	Tu iP 02 00 57
	R	ePZ			42	
	T	ePZ			48	
May 26	P	iPZ	02	16	34	Tu iP 02 16 57
	MW	iPZ			35	
	R	ePZ			36	
	T	iPZ			43	
May 26	R	iPZ	02	21	26	Tu iP 02 20 55
	T	iPZ			40	
May 26	P	iPNEZ	10	35	58 d	Deep? Tu iP 10 35 02 d
		iZ		36	35	i 24
		iZ			50	USCGS: 17.5°N 106.5°W.,
	PX	iSNEZ		39	50	O=10:31.4
		eLNEZ		40.9		
	MW	iPNEZ		35	58 d	
	R	iPNEZ		35	52 d	
		eSNE		39	46	
	SB	iPNZ		36	09	
		eSN		40	11	
	LJ	iPNEZ		35	41 d	
	T	iPNEZ		36	24 d	
		iZ			35	
		eSE		40	40	
	Pr	iPZ		35	44 d	
May 26	MW	ePZ	18	12	49	
	R	ePZ			54	
	T	ePNZ			20	
May 26	MW	ePZ	18	43	39	Tu iP 18 42 41
	R	ePZ			39	
May 26	MW	ePZ	23	24	19	Tu eP 23 23 20
	R	ePZ			13	
	T	ePZ			36	
May 27	P	iPNEZ	05	35	37 d	Deep. Tu iP 05 36 01 d
		eZ?		36	49	i 38 07
		epPZ		37	36	
	MW	iPNEZ		35	38 d	
	R	iPZ			40 d	
		epPZ		37	39	
	SB	iPZ		35	33	
	LJ	iPZ			37	
	T	iPNEZ			47 d	
		epPZ		37	47	
May 27	P	ePZ	11	01	05	Normal. Tu eP 11 00 10
	PX	eLZ		07.4		Central America?
	MW	ePNZ		01	06	
	R	ePZ			01	
	T	ePNZ			31	
May 27	P	ePNEZ	15	11	33	Normal. Tu iP 15 10 37
	PX	eLZ		18.0		Central America?
	MW	iPNEZ		11	35	
	R	ePZ			26	
	SB	ePNZ			44	
	LJ	ePNE			18	
	T	ePZ			57	
	Pr	ePZ			21	
May 27	P	iPZ	18	51	21	Tu iP 18 51 40
	MW	iPZ			20	
	R	ePZ			21	
	T	iPZ			30	
	Pr	ePZ			23	
May 28	MW	eZ	07	29	37	Tu e 07 29 20
	T	ePZ			52	
May 28	MW	eZ	11	13	08	Tu eP 11 13 23
	R	ePZ		12	56	
	T	eZ		13	16	

Date	Sta.	Phase	h	m	s		Remarks
May 28	P	iPNEZ	20	12	39	d	Deep. Tu iP 20 13 01 d
		ipPZ		14	50		ipP 15 13
	MW	iPNEZ		12	39	d	Initial dilatations probably
		epPZ		14	47		preceded by small
	R	iPZ		12	41	d	compressions.
		epPZ		14	56		Approximately 21°S.179.5°W.,
	T	iPZ		12	47	d	O=20:01:30, h=680 km
	Pr	iPZ			42	d	
May 29	MW	eZ	03	44	17		Tu e03 44 34
	R	eZ		43	59		i 45 40
	T	iZ		44	01		
May 31	R	ePZ	02	36	38		Tu eP 02 35 56
May 31	R	ePZ?	09	29	10		Tu eP 09 28 21
June 1	P	iPNEZ	04	19	04		Normal. Tu eP 04 18 11
		eLNE		22	15		
	MW	iPNEZ		19	05		
	R	ePZ		18	59		
	T	iPNEZ		19	36		
	Pr	ePZ		18	48		
June 1	P	iPNEZ	16	16	13	c	Tu iP 16 15 15
	MW	iPZ			12		i 38
	R	iPNZ			05		e 17 05
		eZ		19	55		e 19 39
	LJ	ePNZ		15	55		e 21 15
	T	iPNEZ		16	33	d	
	H	iPEZ			32		
	Pr	ePZ		15	58		
June 1	P	iPZ	22	09	06		Tu iP 22 09 30
	MW	iPNZ			06		
	R	ePZ			09		
	T	iPNEZ			13		
	Pr	iPZ			10		
June 2	P	ePEZ	05	30	49		Normal. Tu eP 05 29 51
	PX	eLNZ		36.1			i 30 08
	MW	ePZ		30	47		i 30
	R	ePEZ			41		Central America
	T	iPNEZ			59		
	Pr	ePZ			38		
June 2	MW	ePZ	11	50	14		Tu eP 11 50 35
	T	iPZ			26		
June 3	P	iPNEZ	12	24	33	d	Deep. Tu iP 12 24 56
		ipPZ		26	41		epP 26 58
	PX	eSNE		34	02		i 27 08
	MW	iPNEZ		24	34	d	ePKKP 42 43
		ipPZ		26	42		Tonga region; depth about
		iPKKPZ		42	55		600 km.
	R	iPNEZ		24	36	d	
		ipPZ		26	41		
		ePKKPZ		42	54		
	SB	iPZ		24	37		
	T	iPNEZ		24	42	d	
		ipPNEZ		26	51		
		eSN		34	21		
	Pr	iPZ		24	36		
		ipPZ		26	53		
		ePKKPZ		42	53		
June 3	P	iPNEZ	20	05	09		Normal. Tu iP 20 05 34
	PX	eLNE		23.4			
	MW	iPNZ		05	09		Felt at Apia, which reports:
	R	ePNEZ			12		P=19:54:22, S=19:55:05.
	SB	iPZ			06		Pasadena: 16°S.173°W.,
	LJ	ePNEZ			10		O=20:48:03
	T	iPNEZ			20		
	H	iPNEZ			19		
	Pr	ePZ			11		

Date	Sta.	Phase	h	m	s	Remarks
June 3	P	iPNEZ	20	59	30	Normal. Tu iP 20 59 54.
	PX	eLNE	21	17.8		Felt at Apia, which reports
	MW	iPNEZ	20	59	29	P=20:48:47, S=20:49:12
	R	ePZ			30	Aftershock of preceding.
	SB	ePZ			26	
	LJ	ePEZ			36	
	T	iPNZ			39	
	H	iPNEZ			39	
	Pr	iPZ			32	
June 3	MW	ePZ	21	47	03	Tu iP 21 47 28
	R	ePZ			04	
	Pr	ePZ			05	
June 4	P	ePZ	23	19	22	Tu iP 23 18 29 d
	MW	ePZ			22	
	R	ePZ			17	
	T	iPNEZ			38	
	Pr	ePZ			11	
June 4	P	iPEZ	23	54	50	Tu iP 23 55 03
	MW	iPNEZ			50	
	T	iPZ			49	
June 5	P	iPNEZ	20	39	31	Deep Tu iP 20 39 55
		iZ			58	e 40 52
		iZ		40	28	
	MW	iPNEZ		39	32	Near Apia, which reports:
	R	iPZ			33	P=20:29:38
		eZ		40	29	S=20:30:42
	SB	ePZ		39	27	
		eZ		40	26	
	T	iPNEZ		39	41	
		iZ		40	08	
		iEZ			40	
	Pr	iPZ		39	32	
		iZ		40	00	
		eZ			30	
June 6	MW	ePZ	01	15	20	Tu eP 01 16 25
	R	ePZ			19	
	T	ePZ		14	47	
June 7	P	iPNEZ	19	00	15	Normal? Tu iP 18 59 15
	PX	eLNEZ		08.6		i 22
	MW	iPNZ		00	14	i 33
	R	iPZ			05	
	SB	ePZ			25	
	LJ	ePNEZ			00	
	T	iPNEZ			34 d	
		iNZ			55	
	H	ePN			31	
	Pr	iPZ			02	
June 7	P	iPZ	19	15	36	Tu iP 19 15 58
	MW	iPZ			36	
	R	ePZ			34	
	T	iPZ			45	
	Pr	ePZ			38	
June 7	PX	ePZ	23	35	42	Tu iP 23 34 49
	MW	ePZ			42	Central America?
	R	ePZ			35	Overlaps the next.
	T	ePZ		36	12	
June 7	P	iP"Z	23	39	24	Normal Sumatra
		ePPZ		41	46	Tu eP" 23 39 35
		iSKPNEZ		42	53	eSKP 43 08
	PX	eSSZ		57.6		e 50 43
		eLZ	24	20.5		
	MW	eP"Z	23	39	15	
		iP"Z			30	
		iSKPZ		43	03	
	R	iP"Z		39	28	
		iSKPZ		42	46	
	T	eP"Z		39	20	
		iSKPNZ		42	47	

Date	Sta.	Phase	h	m	s	Remarks
June 8	P	eZ	01	26	20	Normal? Tu eP 01 25 45
		iNEZ			33	i 26 03
	PX	e(S)Z		35.2		Atlantic?
		eLZ		47.5		
	MW	ePZ		26	15	
		iZ			27	
		iNEZ			32	
	R	ePZ			20	
	T	ePZ			04	
		iEZ			26	
June 8	P	iPNEZ	18	46	50	Deep Tu iP 18 46 11 c
		iZ		47	47	South America?
	MW	iPNEZ		46	50 c	
		iZ		47	47	
	R	iPNZ		46	45 c	
		iZ		47	42	
	T	iPNEZ		47	02 c	
		iZ		48	01	
	Pr	iPZ		46	42	
		eZ		47	39	
June 8	P	iP"Z	21	01	53	Normal. Tu eP" 21 01 58
	PX	ePPZ		04	19	iSKP 05 33
		iSKPZ		05	20	USCGS: 3°S. 102 1/2°E.,
		eZ		14	28	O=20:42.7
		eLZ		40		Readings at 14 m probably
	MW	eP"Z		01	52	SKKP
		iSKPZ		05	19	Major earthquake
		eZ		14	28	(magnitude 7.4)
	R	eP"Z		01	52	
		eZ		14	21	
	SB	eP"NZ		01	50	
	T	iPNZ			50	
		eZ		14	40	
	Pr	eP"Z		01	56	
		eZ		14	38	
June 9	P	iP"Z	03	25	29	Normal. Tu eP" 03 25 32
		iSKPZ		28	47	i 26 23
	PX	eLE		58.5		iSKP 28 54
	MW	eP"Z		25	29	USCGS: 3°S. 102 1/2°E.,
		iZ			49	O=03:06.3
		iPPZ		27	51	Major earthquake
		iSKPZ		28	53	(magnitude 7.6)
		eSKKPZ?		38	10	
	R	eP"Z		25	28	
		iSKPEZ		28	49	
	SB	eP"Z		25	31	
		iSKPEZ		28	52	
	LJ	eP"NZ		25	35	
		iSKPNEZ		28	56	
	T	eP"Z		25	27	
		eSKPEZ		28	48	
June 9	P	iPNEZ	04	15	02 d	Deep. Tu iP 04 15 24
		eZ		17	10	i 41
	MW	iPNEZ		15	01 d	i 16 13
		iZ			48	i 17 36
		eZ		17	08	e 24 53
	R	iPNEZ		15	04	iPKKP 33 49
		iEZ		17	10	iP'P' 41 49
	SB	iPNZ		14	57	Probably Tonga region,
	LJ	ePNEZ		15	01	with depth about 600 km.
	T	iPNEZ			11 d	
		iZ			36	
		eZ		17	25	
	Pr	iPZ		15	05 d	

Date	Sta.	Phase	h	m	s	Remarks
June 9	MW	ePZ	12	53	10	Tu eP 12 53 30
		eZ			19	e 40
	R	eZ			08	
	T	ePZ			18	
		eZ			29	
	Pr	eZ			22	
June 9	MW	ePZ	18	35	27	Tu eP 18 34 20
	T	ePZ			31	
June 9	P	ePNEZ	18	46	54	Normal. Tu iP 18 46 41
	PX	eLZ	19	05.9		
	MW	iPZ	18	46	55	
	R	ePZ			56	
	T	iPZ		47	14	
	Pr	ePZ		46	50	
June 9	P	ePZ	21	00	58	Tu eP 21 00 35
	MW	ePZ			56	
	R	ePZ			55	
	T	ePNZ		01	11	
June 10	PX	eLZ	00	59.5		Normal. Tu iP 00 45 19
June 10	MW	ePZ?		46	12	
June 10	MW	iPZ	10	50	39	Tu iP 10 49 52
	R	ePZ			35	
June 11	PX	eLZ	08	51		Normal. Tu eP 08 25 34
	MW	ePZ		25	12	
	R	ePZ			14	
	T	iPNEZ			23	
June 12	P	ePZ	16	19	50	Tu eP 16 20 40
	MW	ePZ			51	i 21 01
	R	ePZ			55	
	T	ePNZ			16	
	Pr	ePZ		20	04	
June 13	MW	ePZ	04	29	16	Tu eP 04 29 04
	R	ePZ			16	
	T	ePZ			40	
June 13	P	iPNEZ	05	23	17 c	Deep? Tu iP 05 23 49 c
		iZ			39	i 24 08
	PX	eSNE		32	47	i 17
		eSSN		37.3		Initial compressions probably
		eLEZ		45.7		preceded by small dilatations.
	MW	iPZ		23	17 c	Kurile Islands
		iZ			33	USGGS 43°N 142°E.,
		iZ		25	55	O=05:11:44
		eSNE		32	55	Major earthquake
	R	iPZ		23	19	(Magnitude 7.3)
		iNEZ			36	
	SB	iPZ			12	
		iNZ			23	
	LJ	iPZ			25	
		iZ			35	
		iNEZ			45	
	T	iPEZ			06 c	
		iNZ			23	
		eSE		32	32	
	H	iPNEZ		23	11	
		iEZ			27	
		iNE			36	
	Pr	ePZ		23	25	
		iZ			42	
June 13	P	ePZ	06	09	49	Normal. Tu eP 06 10 22
		iNEZ			56	i 10 30
	MW	iPZ			48	Aftershock
	R	ePZ			50	
	SB	iZ			51	
	T	iPEZ			38	
		iNEZ			46	
	H	iPE			42	
	Pr	ePZ			56	

Date	Sta.	Phase	h	m	s	Remarks
June 13	R	ePZ	06	17	08	Tu iP 06 17 39
	T	ePZ		16	55	Aftershock?
	Pr	ePZ?		17	24	
June 13	P	eZ	08	27	46	Tu eP 08 28 16
	MW	iZ			47	Aftershock.
	R	ePZ			42	
		iZ			51	
	T	ePZ			27	
		eNZ			36	
	H	eNEZ			42	
	Pr	eZ			48	
June 13	P	iPZ	08	48	34	Normal? Tu eP 08 49 08
		iEZ			47	i 21
	PX	iSEZ		58	05	Aftershock.
		eLNZ	09	07	8	
	MW	iPNEZ	08	48	34	
		iNEZ			46	
	R	iPZ			37	
		iNEZ			50	
	SB	ePZ			30	
		iNEZ			41	
		iNZ			53	
	LJ	iPNEZ			45	
		iNEZ			54	
	T	iPNEZ			24	
		iNZ			36	
	H	iPNEZ			28	
		iNEZ			41	
	Pr	iPZ			42	
		iZ			54	
June 13	P	iZ	09	03	12	Normal? Tu eP 09 03 29
	MW	iPZ			00	i 45
		iZ			11	Aftershock
	R	iZ			14	
	T	iZ			01	
	Pr	iZ			19	
June 13	P	eZ	16	35	07	Normal. Tu i 16 35 43
	PX	eLZ		59.5		Aftershock.
	MW	eZ		35	08	
	T	iZ		34	57	
June 13	P	iPZ	17	50	51	Normal? Tu eP 17 51 25
		iNEZ		51	03	i 37
	PX	eSNEZ	18	00	22	Aftershock
		eLZ		12		
	R	iPZ	17	50	55	
		iZ		51	06	
	SB	iZ		51	00	
	T	ePZ		50	43	
		iZ			54	
	H	iNEZ			58	
	Pr	ePZ		51	03	
June 13	MW	ePZ	21	24	22	Tu eP 21 23 32
	T	iPZ			36	
June 14	P	ePZ	02	36	07	Tu eP 02 35 37
	MW	ePZ			06	
	R	ePZ			03	
	T	iPZ			19	
		iZ			28	
	Pr	ePZ			01	
		iZ			09	
June 14	P	iPZ	03	20	07	Normal. Tu iP 03 20 05
		eZ		21	00	e 21 24
		iP2Z			45	ePP 25 23
		iZ		22	27	Pasadena distant about 173°
		ePPZ		25	33	
		iPcPPZ		29	04	
	PX	eE		34.5		
		eLZ	04	23		

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
				(Continued)		
June 14	MW	eP Z	03	20	05	
		eP2 Z		21	46	
		iPPZ		25	33	
		ePcPP Z		29	08	
	R	eP NZ		20	05	
		ePcPP Z		28	40	
	T	iP Z		20	06	
		iP2 Z		21	42	
		ePPEZ		25	28	
	H	iP NEZ		20	08	
		iP2 Z		21	41	
		ePPZ		25	29	
	Pr	eP Z		20	07	
		eP2 Z		21	53	
		ePPZ		25	38	
		ePcPP Z		28	58	
June 14	T	iPZ	06	39	19	Tu iP 06 39 41
June 14	LJ	ePNE?	09	01	39	Tu eP 09 01 00
	Pr	ePZ			43	
June 14	P	iZ	16	34	15	Normal? Tu eP 16 34 28
	PX	eLZ		56		i 48
	MW	ePZ		34	00	
		iZ			14	Kurile Islands
	R	ePZ			06	
		eZ			17	
	LJ	eNEZ			22	
	T	ePZ		33	51	
		iNZ		34	04	
	H	iNEZ			08	
	Pr	eZ			22	
June 14	P	iPZ	17	21	11	Normal. Tu eP 17 20 06
		eSNEZ		22	36	iP 12
	MW	ePZ		21	07	Foreshock of next.
		eSNEZ		22	39	
	R	ePNZ		21	00	
		iSNEZ		22	25	
	LJ	ePE		20	43	
		iSNE		21	53	
	T	eNEZ		24	13	
	H	iSNE		23	46	
June 14	P	ePZ	17	25	13	Normal. Tu eP 17 24 32
		iN			31	i 47
		iSNZ		27	00	USCGS: 28 1/2°N. 112°W.,
	MW	ePZ		25	15	O=17:23:34
		iNZ			32	
		iSNZ		27	02	
	R	ePZ		25	09	Numerous aftershocks, the
		iNEZ			24	largest at 22 h 08 m June 14
		eSN		26	43	and 00 h 08 m June 15
	SB	eZ		25	37	
		iSEZ		27	31	
	LJ	iPZ		25	04	
		iSN		26	15	
	T	ePZ		25	50	
		iSNZ		28	21	
	H	iPZ		25	07	
		iSN		27	40	
	Pr	ePZ		25	00	
		iZ			10	
		iSZ		26	23	
June 14	P	iPZ	17	43	32	Tu iP 17 44 07 c
	MW	iPZ			33 c	
	R	iPZ			38	
	T	iPNEZ			22	
	H	iPNEZ			26	
	Pr	iPZ			41	

Date	Sta.	Phase	h	m	s		Remarks
June 14	P	ePZ	20	20	15		Tu iP 20 20 39 c
	MW	iPZ			16		
	R	ePZ			19		
	T	iPNEZ			25	c	
	Pr	iPZ			19		
June 14	P	iPZ	20	29	45		Tu iP 20 30 08 d
	MW	iPZ			46		
	R	ePZ			49		
	T	iPNZ			55		
	H	iPZ			53		
	Pr	iPZ			48		
June 14	P	iPNZ	23	05	53		Tu eP 23 06 16
		eZ		06	38		e 59
	PX	iSN		15	36		Deep.
	MW	ePNZ		05	53		
		iZ			55		Tonga region. Apia
		iZ		06	40		reports a tremor at
	R	iPNEZ		05	59		22h 57m
		iEZ		06	43		
	SB	iPNEZ		05	52		
	T	iPNEZ		06	03		
		iZ			51		
		eSNZ		15	56		
	H	iPNEZ		06	02		
		iEZ			49		
		eSN		15	53		
	Pr	iPZ		05	56		
		eZ		06	40		
June 15	P	iPZ	11	22	24		Normal? Tu eP 11 22 56
		iNE			36		i 23 17
	PX	iSNEZ		31	55		
		eLZ		44.6			Kurile Islands.
	MW	ePZ		22	25		
		eZ			31		
	R	ePZ			27		
		iNEZ			35		
	SB	iNEZ			32		
	LJ	ePEZ			33		
		iZ			44		
	T	iPZ			13		
		iNEZ			26		
		eSN		30	56		
	Pr	ePZ		22	29		
		eZ			42		
June 15	T	iPZ	17	57	01		Tu iP 17 55 51
	Pr	ePZ		56	41		
June 15	P	iPNEZ!	18	27	52	c	Normal. Tu eP 18 26 58
	PX	ePPNEZ		28	54		i! 27 00
	P	iPcPZ		30	54		USCGS: 14 1/2°N.93°W.,
	PX	iSNE		32	54		O=18:21.7
		iZ		33	38		
		eLNE		35.5			
	MW	iPNEZ		27	52	c	
		iPPZ		28	46		
	R	ePEZ		27	48		
		iPcPZ		30	56		
		eZ		32	08		
	SB	ePNE		28	03		
	LJ	ePNEZ		27	39		
	T	ePEZ		28	09		
		iPPNEZ		29	20		
		iPcPZ		31	03		
	Pr	ePZ		27	40		
June 15	P	iPZ	18	38	18		Tu iP 18 37 28
	MW	iPZ			16		Aftershock
	R	iPZ			12		
	T	iPZ			35		
	Pr	iPZ			08		
June 15	Pr	iPZ	18	54	26		Tu iP 18 53 44

Date	Sta.	Phase	h	m	s		Remarks
June 15	T	ePZ	19	48	42		Tu iP 19 47 33
	Pr	ePZ			14		
June 15	P	iPNEZ	19	51	32	c	Normal. Tu iP 19 50 39 c
		iPcPZ		54	35		i 48
	PX	eLNE		59			Aftershock of 18 h
	MW	iPNZ		51	32		
		iZ			41		
	R	ePNEZ			28		
		ePcPZ		54	35		
	T	iPNEZ		51	49	c	
		ePcPZ		54	41		
	H	iPNEZ		51	42		
	Pr	iPZ			21		
June 15	Pr	ePZ	20	04	19		Tu eP 20 03 34
June 15	P	iPNEZ	20	31	49		Tu iP 20 30 54
		ePcPZ		34	50		Aftershock
	PX	eSNE		36	47		
		eLNEZ		40	O		
	MW	iPNZ		31	48		
		ePcPZ		34	50		
	R	iPNZ		31	42		
		iPcPZ		34	49		
	T	iPNEZ		32	05		
		ePcPZ		34	56		
June 15	T	ePZ	21	37	55		Tu eP 21 36 16
		iZ		38	02		eS? 38 50
June 15	P	iPNEZ	22	12	35	d	Deep? Tu iP 22 11 41 d
	MW	iPEZ			34		ipP 12 19
	R	ePZ			30		iScP 18 35
		ePcPZ		15	28		Phase identification
	T	iPZ		12	50		uncertain.
		ipPZ		13	32		
		iScPZ		19	01		
	H	iPEZ		12	43		
June 15	P	iPZ	23	46	41		Tu iP 23 47 13
	MW	iPZ			41		e 36
		eZ		47	03		
	T	iPNZ		46	34		
	H	iPZ			37		
	Pr	ePZ			48		
June 16	P	eP'Z	06	57	04		Normal. Tu eP' 06 56 52
	PX	eLZ	07	57			Very distant
	MW	eP'Z	06	57	02		
		eZ?	07	02	33		
	T	eP'Z	06	56	59		
June 17	MW	ePZ?	10	49	28		Tu iP 10 48 36
		eZ			37		
June 17	P	iZ	15	03	36		Tu eP ? 15 03 56
	MW	ePZ			23		e 04 10
		iZ			38		
	R	eZ			41		
June 17	MW	ePZ	15	49	41		Tu eP 15 50 16
June 17	P	iPZ	17	08	38		Tu eP 17 08 51
		iZ			47		e 12 04
		eZ		10	35		
	MW	ePZ		08	38		
	R	ePZ			38		
	T	ePZ			38		
June 18	MW	iPZ	05	09	07		Tu eP 05 09 30
	R	ePZ			09		
June 18	P	iZ	09	20	52		Tu eP 09 21 32
	MW	eZ			54		i 44
	R	eZ			59		
June 18	P	ePZ	11	13	44		Tu eP 11 13 07
		iZ			51		e 14
	MW	iZ			51		
	R	ePZ			41		
		iZ			52		
	T	eZ		14	02		

Date	Sta.	Phase	h	m	s	Remarks
June 18	P	ePNEZ	14	16	02	Normal. Tu iP 14 15 08
	PX	eLNEZ		25		
	MW	iPZ		16	00	
	R	ePZ		15	54	
	T	ePZ			46	
June 18	P	ePZ	16	38	50	Tu iP 16 39 42
	MW	ePZ			51	
	R	ePZ		39	04	
	T	iPZ		38	21	
June 18	P	iPNEZ	17	03	59	Tu iP 17 04 12
		iZ		04	09	e 06 18
	MW	iPZ		03	59	Very distant?
		eZ		05	51	First motions may
	R	iPZ		03	58	be P
	SB	ePEZ			56	
	T	iPZ			58	
June 18	P	iPNEZ	19	35	00	Normal. Tu eP 19 35 25
		iZ			07	i 27
	PX	eSNEZ		44.9		i 34
		eLEZ		56.2		Near Apia, which reports
	MW	iPZ		35	02	P=19:24:18
		iZ			09	
	R	ePZ		34	58	
	SB	ePZ			55	
	LJ	ePNE			51	
	T	ePNEZ		35	09	
	H	ePN			04	
	Pr	ePZ			03	
June 19	P	iPZ	09	18	24	Normal. Tu iP 09 18 51
		iZ			28	Felt at Apia, which reports
	PX	eSNEZ		27.9		P=09:07:41
		eLEZ		39.6		S?=09:08:21
	MW	ePZ		18	24	
		eZ		22	22	
	R	ePZ		18	26	
	SB	ePZ			22	
	LJ	ePZ			22	
	T	ePN			38	
	Pr	ePZ			31	
June 19	MW	eZ	15	51	53	Tu e 15 51 44
	H	eE			42	
June 20	P	ePPZ	15	50	55	Normal. Tu eP 15 46 35
	PX	eE		58	28	Destructive at Adabazar, Turkey
		eLEZ	16	12:6		
	MW	ePZ	15	46	41	
		iPPZ		50	41	
	T	ePEZ		46	29	
	H	ePEZ			34	
June 20	PX	eZ	17	58	13	Normal. Tu eP? 17 54 16
		eZ	18	01	15	e 57 43
		eZ?		04.7		Central Atlantic
		eSZ		06.9		
		eLN		25		
	H	eNE	17	57	12	
June 21	MW	iPZ	09	18	26	Tu iP 09 18 45
	R	ePZ			27	
June 21	P	ePZ	10	23	39	Normal? Tu eP 10 24 12
	PX	eLZ		48		
	MW	iPZ		23	38	
	R	ePZ			42	
	T	iPZ			29	
	H	iPZ			31	
June 21	PX	eZ	16	07		Normal? Tu iP 16 00 11
June 22	MW	eZ	01	57	29	Tu e 01 58 00
	R	eZ?		58	07	
		eZ			34	

Date	Sta.	Phase	h	m	s		Remarks
June 22	P	iPZ	07	27	03		Tu eP 07 27 10
	MW	iPZ			04		
	R	ePZ			03		
June 22	P	iPNEZ	20	01	25		Normal? Tu iP 20 00 23
		iZ			37		i 59
		ePcPZ		04	11		Central America
	PX	eLN		14			
	MW	iPZ		01	26		
		iZ			36		
		iPcPZ		04	11		
	R	ePZ		01	21		
		iZ			31		
		iPcPZ		04	10		
	T	iPNEZ		01	41		
		iZ			52		
		iPcPZ		04	18		
	H	iPNEZ		01	36		
	Pr	ePZ			14		
June 23	P	iPNEZ	17	29	49	c	Deep. Tu iP 17 29 18 c
		iZ		30	03		i 31
		iZ			21		i 46
	MW	iPNEZ		29	49	c	South America
		iNZ		30	04		
		iZ			21		
	R	iPNEZ		29	46	c	
		eZ		30	01		
	SB	iPNZ		29	55		
	LJ	ePNEZ			41		
	T	iPNZ		30	01		
		iZ			17		
	H	iPNEZ		29	57		
		iZ		30	11		
		eNE			16		
	Pr	ePZ		29	41		
June 24	MW	iPZ	01	10	44		Tu eP 01 11 05
	R	ePZ			45		
	T	ePZ			52		
June 24	MW	iPZ	06	55	27		Tu iP 06 55 51
	R	ePZ			28		
	T	ePZ			35		
June 24	P	iPNEZ	12	26	49	d	Tu iP 12 26 15 d
		eZ		28	06		e 33
	MW	iPNEZ		26	49	d	e 39
		iZ			58		Atlantic?
	R	iPNEZ			45		
		eZ			55		
		eZ		27	05		
	T	iPZ			00		
		eZ		28	21		
	H	ePNEZ		26	56		
June 24	P	ePZ	15	39	56		Tu eP 15 39 14
	MW	ePZ			57		
	R	ePZ			52		
	H	ePZ?		40	16		
June 24	P	ePZ	18	14	17		
	MW	ePZ			18		
	R	ePZ			19		
June 24	P	iPNEZ	20	34	04		Deep. Tu iP 20 34 29
		iNEZ			48		i 35 14
		iZ		37	29		i 38 09
	PX	iSNE		44	26		Approximately 15°S. 168°E.,
		eLN		57.2			O=20.21.6.
	MW	iPNZ		34	04		h= 180 km.
		iZ			08		Using Australian and
		iZ		37	28		New Zealand stations.

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
			(Continued)			
June 24	R	ePNEZ	20	34	06	
		iNEZ			50	
		eEZ		27	31	
	SB	ePZ		34	06	
	LJ	ePZ			04	
		eZ			47	
	T	iPZ			11	
		iNEZ			54	
June 25	P	ePZ	04	29	28	Tu eP 04 29 20
	MW	iPZ			26	Felt in northeastern
	R	ePZ			25	Montana.
	T	iPNEZ			02	
June 25	R	ePZ	12	11	12	Tu eP 12 11 26
	T	iPZ			17	
June 25	P	iPZ	17	02	04	Tu e 17 05 16
	MW	ePZ			04	May be shock felt at
		iZ		04	08	Miranda, Humboldt Co.,
	T	eNZ		02	03	California.
		eZ		03	03	
	H	iZ		02	04	
		iZ		03	31	
June 25	P	iPNEZ	19	24	29	Deep. Tu iP 19 24 54 c
		ipPNEZ		26	24 c	ipP 26 52
	PX	eSN		33	36	eP P 54 07
		iE			52	Approximately 18°S. 178°W.,
		eN		37	01	O=19:13:28
	MW	iPNEZ		24	30	h=550 km
		iZ			43	Using all available data.
		ipPNEZ		26	25	
	R	ePZ		24	31	
		ipPZ		26	27	
	SB	iPZ		24	25	
		ipPZ		26	20	
	LJ	iPNEZ		24	31	
		epPNE		26	25	
	T	iPNEZ		24	38	
		ipPZ		26	33	
	H	iPNZ		24	36	
		ipPEZ		26	33	
	Pr	ePZ		24	33	
		epPZ		26	29	
June 26	P	ePZ	20	45	20	Tu iP 20 45 36
		iZ			36	i 54
	MW	ePZ			19	
		iZ			37	
	R	ePZ			20	
		iZ			32	
June 27	P	ePZ?	17	17	16	Normal. Tu iP 17 17 34
	PX	eLZ		58.1		
	R	ePZ		17	18	
June 27	P	ePZ	20	01	47	Normal. Tu eP 20 00 50
		iNZ		02	04	
	PX	eLNE		10		
	R	ePZ		01	42	
	T	iPZ		02	09	
	H	ePNEZ			06	
June 27	R	ePZ	23	30	06	Tu eP 23 29 08
June 28	P	iPNEZ	01	15	33	Deep. Tu iP 01 16 05
		iNEZ			57	i 30
	MW	iPEZ			35	Region of Japan
		iNZ		16	02	
	R	iPZ		15	37	
	SB	ePNZ			27	
		iZ			48	
	LJ	ePNZ			40	
		iE		16	00	

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
			(Continued)			
June 28	T	iPNEZ	01	15	28	
		iZ			50	
		iNEZ			55	
	H	iPNEZ			29	
		iNZ			57	
		eNE		16	00	
June 28	P	iPZ	02	54	29	Normal? Tu iP 02 54 47
	PX	eLZ	03	24.3		i 55 08
	MW	iPZ	02	54	31	
	R	iPZ			32	
	T	iPZ			40	
	H	iPNEZ			38	
June 28	P	iZ?	13	08	16	Deep? Tu eP 13 08 09
	MW	ePZ		07	44	e 41
		eZ		08	11	
	T	iPZ		07	52	
		eZ		08	24	
June 28	P	iPEZ	15	13	49	Normal? Tu iP 15 14 35 c
		iZ			58	i 41
		iZ		14	18	Aleutian Islands
		iScPZ		19	14	
		iSNEZ		20	38	
	PX	eLZ		24.1		
	MW	iPNZ		13	51 c	
		iNEZ			59	
		iScPZ		19	15	
		eSNEZ		20	39	
	R	ePNEZ		13	55	
	SB	ePNEZ			42	
	LJ	ePZ		14	01	
	T	iPEZ		13	35 c	
		iZ			53	
		iPcPZ		15	17	
		eScPZ		19	06	
		eSNEZ		20	14	
	H	iPNEZ		13	42	
		iPcPNEZ		15	20	
		iScPZ		19	10	
		eSE		20	21	
	Pr	ePZ		14	00	
June 29	P	iPNZ	04	29	10 d	Deep? Tu iP 04 28 35 d
	MW	iPNEZ			10 d	e 29 20
		iZ			40	
	R	iPNEZ			06 d	
		iZ			38	
		iNEZ			51	
	T	iPNEZ			20 d	
	H	iPZ			16	
June 29	P	iPNEZ!	04	43	20 c	Deep? Tu iP 04 43 45 c
	MW	iPNZ			22 c	
		iZ			44	
	R	iPNEZ			22 c	
	LJ	iPZ			20	
	T	iPNEZ			28	
		iZ			53	
	H	iPNEZ			26	
June 29	P	e(P)Z	09	19	29	Deep. Tu e(P) 09 20 25
		iP"NZ		23	22	iP" 23 34
	PX	iE		24	36	i 54
		iZ		26	42	e 24 19
		iSKSN		29	49	ePKKP 34 02
		iN		31	19	Approximately 2°N. 125°E.,
		eSPZ		33	07	O=09:05:06. h=180 km.
		eLN		49		Using Australian and New
	MW	ePZ		19	21	Zealand stations, Helwan
		iP"Z		23	22	and Ksara.

(Continued)

Date	Sta	Phase	h	m	s	Remarks
				(Continued)		
June 29	R	ePZ	09	19	23	
		eP"Z		23	23	
	T	ePZ		19	17	
		eP"Z		23	13	
June 29	R	iPZ?	22	26	51	Tu iP 22 26 20
June 30	P	ePZ	11	03	06	Deep.
		iP"NEZ		06	42 d	Tu e 11 06 38
	PX	ePPE		07	57	iP" 55
		iPPZ		08	04	e 08 58
		iZ			27	i 09 10
	P	ipP"NEZ		09	20	iPKKP 16 43
	PX	iSKSNE		12	42	Roughly 7°S 121°E.
		eNE		14	03	O=10:49:02
	P	iPKKPZ		17	10	h=700 km
	MW	ePZ		03	08	Using Brisbane, Riverview
		iP"NEZ		06	42	and Kaara.
		iPPNEZ		08	05	
		ipP"NEZ		09	20	
		eSKSNE		12	41	
		iPKKPZ		17	09	
	R	iPZ		03	14	
		iP"NEZ		06	42	
		iPPNEZ		08	07	
		ipP"Z		09	22	
		iPKKPZ		17	04	
	SB	iP"Z		06	39	
		iZ		07	55	
		ipP"Z		09	16	
	LJ	ePZ		03	42	
		iP"NEZ		06	42	
		iPPNEZ		08	07	
		ipP"Z		09	22	
	T	ePZ		03	10	
		iP"NEZ		06	40	
		iPPNZ		07	59	
		ipP"Z		09	20	
		ePKKPZ		17	11	
	H	iP"NEZ		06	41	
		iPPEZ		07	59	
		ipP"Z		09	19	
		eSKSE		12	38	
	Pr	eP"Z		06	44	
June 30	P	iPNEZ	20	23	36 d	Deep. Tu iP 20 22 57 d
		iZ		24	03	i 23 15
		iZ			20	i 27
	MW	iPZ		23	36 d	eP:P: 52 37
		iZ		24	02	USCGS: 14.5°S. 74°W.
		eZ			16	O=20:13.0
	R	iPNEZ		23	31 d	JSA: 13.9°S. 72.6°W.
		iZ			58	O=20:13:10
	LJ	iPZ			26	
		eZ			51	
	T	iPNEZ		23	50	
		iZ		24	15	
	Pr	ePZ		23	27	

C. F. Richter

Oct. 9, 1944

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA CALIFORNIA

SEISMOLOGICAL LABORATORY

BULLETIN

JULY – SEPTEMBER 1943

(PASADENA AND AUXILIARY STATIONS)

Date	Sta.	Phase	h	m	s		Remarks
July1	P	iPNEZ	04	51	42	c	Deep? Tu iP 04 52 15c
	MW	iPNEZ			43	c	Surface waves very small
	R	iPNEZ			45		Japan?
	SB	ePNZ			35		
	LJ	iPNEZ			50		
	T	iPNEZ			33		
	H	iPNEZ			36		
July 1	P	iPZ	05	59	18		Deep? Tu iP 05 59 51
	MW	iPZ			18		Japan?
		iZ			33		
	R	ePZ			20		
		eZ			35		
	T	iPNZ			10		
July 1	P	iPZ	07	31	25		Tu iP 07 31 57
	MW	ePZ			26		
	R	iPZ			27		
	T	iPZ			11		
July 1	MW	ePZ	10	27	39		Tu eP 10 28 25
July 2	MW	ePZ	21	42	03		Tu iP 21 41 13
	R	ePZ			01		
July 3	P	iPZ	14	34	04		Tu iP 14 34 14
	MW	iPZ			02		
July 4	P	iPNEZ	09	59	31		Tu eP 09 58 39
		iPPZ	10	01	42		Normal
	PX	iSNE		05	39		USCGS: 9°N.84.5°W.
		iSSNE		09	42		O=09:52.1
		eLZ		13.8			
	MW	iPNZ	09	59	31		
	R	ePZ			25		
	SB	ePNZ			41		
	LJ	ePNZ			20		
	T	ePEZ			46		
	Pr	ePZ			21		
July 4	P	ePZ	11	30	23		Tu eP 11 29 29
	MW	iPZ			23		
	R	ePZ			15		
July 4	PX	eLZ	14	00			Normal. Tu i 13:23:39
							e 13:28:02
July 4	P	ePZ	18	13	32		Tu eP 18 12 54
	MW	iPZ			34		i 13 03
	R	ePZ			30		
July 4	P	ePZ	19	58	22		Tu iP 19 57 48
	MW	iPZ			22		
	R	iPZ			18		
	T	iPZ			34		
July 4	P	iPZ	22	06	59		Tu eP 22 06 05
	MW	iPNEZ			59		
	T	iPZ		07	13		
July 4	P	ePZ	22	33	41		Normal? Tu e 22 33 42
		iZ		34	02		
	PX	eLZ	23	06			
	MW	eZ	22	33	53		
	T	eZ		34	06		
July 5	P	ePZ	13	58	37		Normal? Tu iP 13 58 54
	PX	eLZ	14	27			
	MW	iPNZ	13	58	35		
	R	ePZ			36		
July 5	P	iPNEZ	21	18	32	c	Tu iP 21 17 54 c
	PX	iSNE		27	22		i 20 09
		eLNEZ		40			e 22 25
	P	eP'P'Z		47	19		eP'P' 47 29
	MW	iPNEZ		18	32		USCGS: 17.5°S.73°W.,
		iZ		19	50		O=21:07.6
		eSN		27	23		
	R	iPNEZ		18	28		
		eSN		27	12		
	SB	ePNZ		18	40		
	LJ	ePNZ			22		
	T	ePNEZ			45		
July 5	R	ePZ	19	28	07		Tu eP 19 27 23

Date	Sta.	Phase	h	m	s		Remarks
July 6	MW	ePZ	03	35	29		Tu eP 03 36 05
	T	iPZ			14		
July 6	P	iPNEZ	09	50	53	d	Tu iP 09 50 16
		ipPNEZ		51	34		ipP 55
	MW	iPNEZ		50	53	d	Andes, about 18°S.
		ipPNEZ		51	33		Depth about 160 km.
	R	iPZ		50	49		
		ipPZ		51	29		
	LJ	ePZ		50	44		
		epPNZ		51	24		
	T	iPNEZ		51	04	d	
		ipPEZ			45		
July 6	P	iPZ	11	38	10		Tu iP 11 37 21
	MW	ePZ			09		
	R	iPZ			05		
	T	ePZ			24		
July 6	P	iPZ	13	24	18		Normal? Tu eP 13 23 45
	PX	eLZ		46			i 51
	MW	iPNZ		24	18		Atlantic
		iZ			24		
	R	ePZ			15		
	LJ	ePN			18		
	T	ePZ			12		
July 7	P	iPZ	10	41	46		Tu eP 10 42 23
	MW	iPZ			45		
	R	ePZ			49		
	LJ	ePZ			57		
July 7	PX	eLZ	12	37			Tu eP 11 53 58
July 7	P	iPZ	12	58	31	c	Normal. Tu eP 12 59 02
		iZ			38		Solomon Islands
	PX	eLN	13	24			
	MW	iPZ	12	58	32	c	
	R	iPNEZ			34	c	
	SB	ePNEZ			27		
	LJ	eNEZ			36		
	T	ePEZ			32		
July 7	P	iPZ	13	33	48	c	Tu eP? 13 34 11
	MW	iPZ			49	c	
	R	iPZ			51	c	
	LJ	ePZ			52		
	T	ePNEZ			50		
July 7	P	iPZ	13	40	17		
		iZ			48		
	MW	iPEZ			17		
	R	ePZ			19		
	T	ePNEZ			19		
July 7	P	iPNEZ	17	32	43		
	MW	iPNEZ			44		
		iZ		33	05		
	R	iPZ		32	46		
	T	ePNEZ			46		
July 8	T	eZ?	13	48	56		Tu eP 13 47 41
		eZ		49	07		i 49
July 8	P	iPZ	14	28	06		Normal. Tu eP 14 28 36
	PX	eLEZ	15	26			
	MW	iPNEZ	14	28	05		
	R	ePZ			08		
	T	ePNEZ		27	59		
July 8	MW	eZ	14	54	12		Tu e 14 54 26
		eZ			27		e 55 40
	T	eZ			14		
July 8	T	ePZ	15	05	42		Tu eP 15 05 11
July 8	MW	ePZ	19	25	30		Tu eP 19 24 25
	R	ePZ			24		
	T	ePZ			45		

Date	Sta	Phase	h	m	s		Remarks
July 9	P	iZ	02	34	08		
	MW	iPZ		33	59		
		iZ		34	10		
		ePZ		34	31		
		eZ			42		
	T	ePZ			00		
July 9	P	iPNEZ	23	35	58		Normal Tu eP 23 36 46
		iZ		36	19		i! 48
	PX	eLN		44.9			i! 37 02
	MW	iPNEZ		35	59		i 38 07
	R	iPNEZ		36	04		Alaska
		iZ			21		
	SB	iPNZ		35	51		
	LJ	iZ		36	11		
	T	ePZ		35	41		
	Pr	ePZ		36	10		
July 10	P	iPNEZ	00	10	36	d	Tu iP 00 10 56 d
	MW	iPNEZ			37	d	i 13 05
	R	iPNEZ			38	d	e 28 37
		eZ		11	46		
	SB	ePZ		10	40		
	T	iPNEZ			45		
		eZ		12	55		
	Pr	ePZ		10	39		
July 10	P	iPZ	02	03	54	c	Tu iP 02 04 18 c
	MW	iPNEZ			54	c	
	R	iPZ			57		
	T	iPNEZ		04	03		
July 10	P	iPZ	16	32	08		Tu eP 16 31 20
	MW	ePEZ			06		
	R	ePZ			00		
July 11	P	iPNEZ	02	23	00	d	Tu iP 02 23 16 d
		ipPNEZ			45		ipP 24 00
		iPPZ		26	29		ePKKP 40 46
		ipPPZ		27	19		e 55
	PX	eNE		33	47		ipPKKP 41 33
		iE		38	44		e 40
		eLNE		46.3			e 49 44
	P	eZ		49	52		eSKPP 52 57
	MW	iPNEZ	23	00	00	d	Pasadena:
		ipPNZ			44		33°S.178.5°W.,
		iPPNZ	26	21			O=02:10:25
		ipPPZ	27	10			h=180 km.
		ePKKPZ	40	55			
		iZ	41	41			
		eZ	49	43			
	R	iPNEZ	23	01	01	d	
		iNEZ			45		
		iZ			57		
		iPKKPZ	41	10			
		iZ			55		
	SB	ePNEZ	22	55			
		ipPNZ	23	40			
	LJ	iPNEZ	22	58			
		ipPNEZ	23	43			
	T	iPNEZ			08	d	
		ipPNEZ			54		
		eZ	41	07			
		iZ			35		
	H	ePNEZ	23	06			
		ipPNEZ			52		
	Pr	ePZ			02		
		epPZ			44		

Date	Sta.	Phase	h	m	s	Remarks
July11	P	iPZ	02	30	01	Deep? Tu iP 02 30 18
		iZ			16	i 31
	PX	iE		41	40	Overlapped by the
		iZ			18	Preceeding. Same region?
	MW	iPZ		30	01	
	R	ePZ			01	
		iZ			18	
	T	iPZ			11	
		iZ			26	
	H	ePZ			09	
July 11	MW	iPZ	03	15	59	Tu iP 03 16 15
		eZ		16	12	i 28
	R	ePZ		16	00	Resembles the preceeding
		iZ			12	
	T	ePZ		16	07	
July 11	P	iPZ	10	31	46	Tu iP 10 30 59
	MW	iPZ			45	
	R	ePZ			38	
	T	ePZ			58	
July 11	P	iPZ	16	15	13	Deep? Tu iP 16 15 29
		iZ			26	e 43
	MW	iPNEZ			12	
		eZ			26	
	R	ePZ			13	
		eZ			28	
	T	ePZ			22	
		eZ			36	
	H	ePZ			19	
July12	P	ePZ	08	13	09	Normal. Tu eP 08 13 26
	PX	eLZ		46		
	MW	ePZ		13	05	
	R	ePZ			09	
	T	ePZ			20	
July 12	P	iPZ	16	18	13	Tu iP 16 18 38
	MW	iPZ			15	e 19 33
	R	ePZ			14	
	T	iPZ			22	
July 12	P	iPZ	19	36	11	Tu iP 19 36 31
	R	iPZ			13	
	T	ePZ			19	
July 12	P	iPZ	22	18	33	Tu eP 22 19 01
	MW	iPNZ			35	
	R	ePZ			38	
	T	ePZ			40	
July 13	P	iPZ?	03	12	45	Tu iP 03 12 57
		iZ?			59	i 13 10
	T	ePZ			41	
		eZ			55	
July 14	MW	eZ	09	43	10	Tu iP 09 43 36
	T	ePZ			34	
July 14	P	iPNEZ	10	48	08	Tu iP 10 49 10
	MW	ePNZ			08	
	R	ePZ			06	
	LJ	ePNZ			17	
	T	ePZ		47	33	
July 14	P	ePZ	16	26	41	Tu iP 16 26 55
	MW	iPZ			38	
	R	ePZ			39	
	T	ePZ			48	
July 14	P	ePZ	19	54	40	Normal. Tu iP 19 54 57
		iZ		57	47	i 58 04
	PX	eLZ	20	26		
	MW	iPNZ	19	54	39	Two shocks?
		iZ		57	48	
	R	ePZ		54	40	
		iZ		57	48	

(Continued)

Date	Sta.	Phase	h	m	s		Remarks
				(Continued)			
July 14	SB	ePZ	19	54	37		
		eZ?		57	46		
	LJ	ePN		54	46		
	T	ePZ			49		
		iZ		57	56		
	H	ePZ?		54	33		
		eZ		57	55		
July 14	PX	eLZ	24	20			Normal. Tu eP 23 47 55
	MW	ePZ	23	47	39		
	R	ePZ			43		
July 15	P	iPZ	07	41	38		Tu iP 07 42 45
		eZ		43	04		
	MW	iPNZ		41	38		
		eZ		43	03		
	R	ePZ		41	40		
		eZ		43	07		
	T	iPEZ		41	26		
		iZ		42	50		
July 15	P	eZ	12	30	53		Tu eP 12 29 55
	R	eZ			52		
	T	ePZ			57		
July 15	P	iPZ	20	36	59		Tu iP 20 36 21
	MW	iPZ			58		
	R	ePZ			54		
	T	iPZ		37	11		
	Pr	ePZ		36	49		
July 15	P	iPZ	20	51	33		
	MW	iPNZ			33		
	R	ePZ			35		
	LJ	ePEZ			35		
	T	ePZ			26		
	Pr	iPZ			40		
July 15	MW	eNZ	20	55	10		Tu e 20 56 08
	T	eZ			10		Part of preceding?
	Pr	eZ			26		
July 16	P	ePZ	01	31	42		Tu eP 01 32 12
		iZ			56		e 31
	MW	iPNZ			40		Japan?
		iZ			54		
	R	ePZ			49		
		eZ			59		
	T	ePZ			28		
		eZ			44		
	Pr	eZ		32	03		
July 16	Pr	iPZ?	06	21	22		
July 16	P	iPNEZ	08	21	20	c	Deep? Tu iP 08 22 06 c
		eZ			35		i 23
	MW	iPNZ			21	c	i 32
		iNZ			32		Alaska?
	R	iPZ			25	c	
		iZ			38		
	LJ	iPNEZ			32		
	T	iPNEZ			06	c	
		eEZ			21		
	H	ePNEZ			09		
	Pr	iPZ			31	c	
		iZ			47		
July 16	P	iPZ	16	04	12		Deep? Tu eP 16 03 18
		iZ		05	04		i 24
	MW	iPZ		04	12		i 04 04
		iZ			57		Central America?
	R	iPZ			07		
		eZ			59		
	T	ePZ			26		
		eZ		05	17		
	Pr	iPZ		04	00		
		iZ			45		
		iZ			53		

Date	Sta.	Phase	h	m	s		Remarks
July 18	P	iPNEZ	08	06	36		Tu iP 08 06 02 c
		iZ			47		i 14
	MW	iPNZ			36		e(P'P') 34 30
		iNZ			48		Normal?
	R	iPNEZ			33		Overlaps the next.
		iZ			44		South America
	SB	ePNZ			44		
		eNZ			54		
	LJ	ePZ			28		
		eNEZ			39		
	T	ePNEZ			49		
		eZ			59		
	Pr	iPZ			28		
		iZ			38		
July 18	P	iPNEZ	08	13	23		Normal? Tu e(PP) 08 17 34
		iZ		16	16		e 18 24
	MW	iPZ		13	33	d	iP exceptionally large
		iZ			45		at Pasadena and Mt.Wilson;
		eZ		14	00		lacking at Tuscon.
	R	ePZ		13	36		Solomon Islands?
		eZ		14	03		
	LJ	ePNZ		13	29		
	T	ePZ			33		
	Pr	iPZ			38		
July18	P	iPNEZ	22	01	40		Tu eP 22 01 04
		iZ			54		e 18
		iZ			58		South America
	MW	iPZ			41		
		iZ		02	00		
	R	ePZ		01	36		
		iZ			55		
	T	ePZ			53		
		eZ		02	06		
	Pr	ePZ		01	33		
		eZ			47		
		eZ			53		
July 18	Pr	ePZ?	23	47	09		Tu eP 23 46 27
July 19	P	iPNEZ	11	16	26		Deep? Tu iP 11 15 33
		iPcPNEZ		18	57		iPcP 18 42
		iZ		19	14		i 59
	MW	iPNZ		16	26		Central America
		eZ			41		
		iPcPNZ		18	57		
		eZ		19	11		
	R	ePZ		16	21		
		e			41		
		iPcPZ		18	56		
		iZ		19	13		
	T	ePZ		16	40		
		iZ		19	03		
		iZ			20		
	Pr	ePZ		16	15		
		eZ			31		
		iPcPZ		18	54		
		eZ		19	11		
July 20	P	ePZ	01	25	39		Ty eP 01 26 06
	MW	iPZ			40		
	R	ePZ			42		
	T	ePZ			49		
	Pr	iPZ			48		
July 20	P	iPZ	06	19	32		Tu iP 06 19 55 c
	MW	iPZ			31		
	R	ePZ			30		
	T	ePZ			40		
	Pr	iPZ			35		

Pasadena and auxiliary stations, 1943

Date	Sta	Phase	h	m	s		Remarks
July 20	P	iPZ	06	55	34		Tu eP 06 55 46
	MW	iPZ			34		ePP 59 12
	R	ePZ			34		
	T	ePZ			31		
July 20	P	iPZ	10	56	16		Tu iP 10 56 44
	MW	iPZ			16		
	R	iPZ			19		
	T	iPZ			21		
	Pr	iPZ			20		
July 21	P	iPNZ	04	24	59		Normal? Tu eP 04 24 40
		iZ		25	16		i 47
	PX	eNEZ		34.2			i 55
		eLNZ		46.2			South of Easter Island
	MW	iPNZ		24	59		
	R	ePZ			53		
		eNEZ		25	03		
	SB	ePNZ			02		
	LJ	eZ			06		
	T	ePZ			13		
		eNEZ			22		
	H	ePEZ			13		
	Pr	ePZ		24	49		
July 21	P	iPZ	06	41	34		Tu iP 06 42 01
	MW	iPZ			35		Near Apia, which reports
	R	ePZ			36		P=06:30:45
	T	ePZ			45		S=06:31:02
July 21	P	ePZ	10	40	11		Tu eP 10 39 44
	MW	ePZ			10		
	T	ePZ			25		
July 21	P	iPZ	22	51	49	d	Tu iP 22 51 03 d
	MW	iPZ			48		Ecuador
	R	iPNE			46		
	SB	iPZ		52	00		
	T	ePZ			05		
	Pr	iPZ		51	40		
July 22	P	iPZ	00	12	25		Tu eP 00 13 56
		eSZ		13	56		e 17 13
	MW	iPZ		12	28		Northern California.
		eSN		13	55		Felt in Mendocino Co.
	R	ePZ		12	32		
	T	ePZ		11	57		
		iSNEZ		13	03		
	H	ePNZ		12	09		
		eSE		13	20		
	Pr	ePZ		12	46		
		eZ		13	49		
July 22	P	iPNEZ	02	18	07	d	Tu iP 02 17 20 d
	PX	iSNE		25	46		Ecuador
		eLZ		32.6			
	MW	iPNZ		18	06	d	
		iNZ			17		
	R	iPNEZ		18	01		
		iNEZ			12		
	LJ	iPNEZ		17	57		
	H	ePNEZ		18	17		
	Pr	ePZ		17	56		
		iZ		18	07		
July 22	T	iPZ	05	34	43		
July 22	Pr	ePZ?	07	22	15		Tu eP 07 22 59
July 22	P	iPZ	12	41	46		Tu eP 12 42 20
	MW	iPZ			47		
	R	iPZ			50		
	T	ePEZ			43		
	Pr	ePZ			51		
July 23	T	eZ	10	17	14		Tu e 10 18 53

Date	Sta.	Phase	h	m	s		Remarks
July 23	P	iPZ	12	27	03	d	Deep?
		iZ			13		
	MW	iPNZ			03		
		iZ			13		
	R	ePZ			05		
		eZ			16		
	T	iPZ			04		
		iZ			15		
	Pr	iPZ			06		
		eZ			16		
July 23	P	iPNEZ	14	32	12		Tu iP 14 31 37 d
		iZ			40		
	MW	iPNZ			13		
		iZ			39		
	R	ePNEZ			09		
		iZ			36		
	T	iPEZ			24	d	
	H	ePNEZ			17		
	Pr	iPZ			05		
		iZ			24		
July 23	P	eP"Z	15	12	02		Deep. Tu eP" 15 12 11
		iP"Z			11		iP" 24
		ipP"Z			35		i 15 50
	PX	ePPEZ		14	13		iSKKP 24 38
		isPPEZ			54		Large earthquake
		eSKSE		19	21		USCGS: 10 1/2°S. 117 1/2°E.
	P	iSKKPZ		25	17		O=14:52.9
	PX	eLNE		46			JSZ: 7°S. 111.3°E.
	MW	eP"Z		11	57		O=14:53:23
		iP"Z		12	11		h=120 km.
		iNZ			13		
		ipP"NZ			34		
	R	eP"Z			00		
		iP"NEZ			12		
		ipP"Z			37		
		eSKKPZ		25	11		
	SB	iP"NE		12	11		
		iNZ			33		
	LJ	eP"NEZ			14		
	T	eP"Z			09		
		iP"NZ			12		
		ipP"Z			35		
		iZ		15	24		
	H	iP"NEZ	15	12	12		
		ipP"Z			40		
	Pr	iP"Z			13		
		iZ			24		
		ipP"Z			37		
		iZ		15	33		
		iSKKPZ		25	10		
July 24	T	ePZ	06	15	40		
July 24	P	iPZ	11	54	32		Tu iP 11 54 43
	MW	iPZ			32		
	R	iPZ			28		
	T	iPZ			43		
July 24	PX	eLZ	21	56			Normal. Tu eP 21 27 14
July 24	PX	eLZ	23	46			Normal. Tu iP 23 34 57 d
	MW	ePZ		35	53		
	R	ePZ		36	05		
	T	iPZ			12		
	Pr	ePZ		35	47		
July 25	MW	ePZ	01	34	41		Tu eP? 01 34 43
	R	iPZ			41		e 35 49
	T	ePZ			47		
	Pr	iPZ			40		

Date	Sta.	Phase	h	m	s	Remarks
July 25	P	iPNZ	07	40	47	Tu iP 07 40 30
	MW	iPZ			48	
	R	iPZ			46	
	T	iPZ		41	10	
	Pr	iPZ		40	40	
July 26	P	iPZ	13	58	31 d	Tu iP 13 58 53 d
	MW	iPNZ			30.d	Possibly eP 5 sec.
	R	iPNZ			32	earlier at several
	T	iPEZ			38 d	stations
	H	ePNE			37	
	Pr	iPZ			33 d	
July 27	R	ePZ	11	41	03	Tu eP 11 40 37
	Pr	ePZ			02	
July 28	P	iPNEZ	04	11	18 d	Normal? Tu iP 04 11 58 d
		iZ			27	i 12 07
		iZ			30	i 10
	PX	eLNEZ		50.5		Aleutian Islands?
	MW	iPNZ		11	17 d	
		iNZ			26	
	R	iPNZ			21	
		iEZ			29	
	SB	ePZ			09	
	T	ePNEZ		10	56	
		iNEZ		11	06	
	H	ePEZ			04	
		iEZ			15	
	Pr	iPZ			28 d	
		iZ			40	
July 28	MW	iPZ	07	01	18	Tu iP 07 01 42
	T	ePZ			30	
	Pr	iPZ			20	
July 29	P	iPNEZ	03	10	52	Normal. Tu iP 03 10 02 c
		iZ!			55	i! 07
		iPPEZ		12	53	Great earthquake
		iSNE		17	51	(magnitude 7 3/4)
	PX	e(L)E		21.4		Off Puerto Rico.
		iNZ		21.6		USCGS: 18.9°N. 67.0°W.,
	MW	iPZ		10	52 c	O=03:02:16
		iNEZ			56	
	R	iPNEZ		10	47 c	
	SB	ePZ		11	00	
	T	iPEZ		10	56 c	
		iS_N		17	59	
	H	iPNEZ		10	52	
	Pr	iPZ		10	43 c	
		iZ!			50	
July 29	P	iPNEZ	04	16	25	Tu iP 04 15 34
	MW	iPNZ			25	Aftershock
	R	ePNEZ			19	
	T	iPNEZ			28	
	H	ePNEZ			24	
	Pr	iPZ			16	
July 29	R	ePZ	05	28	16	Tu eP 05 27 30
	T	ePZ			22	Aftershock
	Pr	ePZ			12	
July 29	MW	ePNZ	06	28	43	Tu eP 06 27 53
	R	ePZ			38	Aftershock
	T	ePZ			46	
	Pr	ePZ			35	
July 29	P	iPZ	06	46	57	Tu eP 06 46 04
	MW	ePZ			55	Aftershock
	R	ePZ			50	
	T	iPZ			59	
	Pr	ePZ			48	
July 29	Pr	ePZ	07	33	48	Tu e? 07 34 12
						e(P) 34 18
July 29	Pr	ePZ	07	45	29	Tu eP 07 45 02

Date	Sta.	Phase	h	m	s		Remarks
July 29	P	iPZ	08	18	19		Tu eP 08 17 32
	MW	iPZ			17		Aftershock, Puerto Rico
	R	ePZ			11		
	T	ePZ			20		
	Pr	ePZ			07		
July 29	P	iPZ	08	45	51		Tu e 08 45 11
	T	ePZ			54		Aftershock
	Pr	iPZ			41		
July 29	P	iPZ	09	34	00		Tu eP 09 33 09
	MW	iPZ			00		Aftershock
	R	ePZ		33	54		
	T	ePZ		34	03		
	Pr	iPZ		33	51		
July 29	P	iPNEZ	11	51	23		Normal. Tu iP 11 50 32
	PX	eLN	12	08.3			Aftershock
	MW	iPNZ	11	51	22		
	R	ePZ			16		
	SB	ePZ			31		
	T	iPNEZ			25		
	H	iPNEZ			24		
	Pr	ePZ			14		
July 30	P	iPNEZ	01	11	10	c	Normal? Tu iP 01 10 19 c
	PX	iSN		18	07		i 37
		eLNE		22.1			Aftershock
	MW	iPNZ		11	09	c	USCGS: 18.9°N.67.0°W.;
	R	iPEZ			04	c	O=01:02:32
		iZ			22		
	SB	ePNZ			19		
	T	iPNEZ			12	c	
	H	iPNEZ			11	c	
	Pr	iPZ			02	c	
		iZ			20		
July 30	P	iPZ	02	20	45		Tu iP 02 20 02 c
	MW	iPZ			44		20 15
	R	ePZ			39		South America
	T	iPNEZ			59		
	Pr	iPZ			35		
July 30	MW	ePZ	04	31	53		Tu eP 04 31 02
	R	ePZ			48		Off Puerto Rico;
	T	ePZ			56		Aftershock
	Pr	iPZ			42		
July 30	P	eZ	18	23	25		Normal. Tu eP 18 22 28
	MW	ePZ			07		i 35
		eSNZ		24	44		iS 23 23
	R	ePZ		23	05		Foreshock at 16 h 51m
	Pr	ePZ		22	43		
		iZ			58		
		eSZ		24	10		
July 30	PX	eLZ	21	37.6			Normal. Tu eP 21 26 06
July 31	Pr	iPZ	00	57	23		Tu iP 00 57 41
July 31	P	iPEZ	03	30	45	c	Normal? Tu eP 03 29 53
	PX	eLN		47.5			i 55
	MW	iPZ		30	44		e 30 09
		iZ		31	00		i 16
	R	ePZ		30	39		Off Puerto Rico;
		iZ			55		Aftershock
	SB	ePZ			55		
	T	iPNEZ			48		
		eZ		31	05		
	Pr	iPZ		30	37		
		eZ			52		
July 31	MW	iPZ	17	40	02		Tu iP 17 40 57
	T	ePNEZ		39	48		
	Pr	iPZ		40	13		
July 31	T	ePZ?	19	19	14		Tu eP 19 18 07
	Pr	ePZ		18	47		

ate	Sta.	Phase	h	m	s		Remarks
uly 31	P	iPNEZ	20	11	24	d	Normal? Tu iP 20 10 33
	MW	iPZ			22		i 43
	R	iPNEZ			19	d	Surface waves small.
		iZ			27		
	SB	iPZ			32		
		iZ			46		
	T	iPNEZ			27		
		eZ			37		
	Pr	iPZ			14		
		iZ			27		
uly 31	MW	ePZ	23	00	31		Tu iP 23 01 03 c
	R	ePZ			46		
	T	ePZ			54		
	Pr	iPZ			46		
ug. 1	P	iPZ	01	20	50		Tu iP 01 20 01
	MW	iPNZ			49		e 15
	R	ePZ			45		e 21 41
		eZ			58		Aftershock,
	T	iPNEZ			53		Puerto Rico
	Pr	iPZ			42		
		eZ			57		
ug. 1	P	iPZ	06	57	59		Tu iP 06 58 29
	MW	iPNZ			58		
	R	iPZ		58	00		
	T	iPNEZ		57	51		
	H	iPZ			54		
	Pr	iPZ		58	05		
ug. 1	P	iPNEZ	14	28	23	c	Normal? Tu iP 14 29 02
	PX	eLZ		46			i 11
	MW	iPNZ		28	23	c	i 25
	R	ePNEZ			25	c	Surface waves small.
	SB	ePZ			15		Kamchatka?
	T	iPNEZ			08	c	
	H	iPNEZ			14		
	Pr	iPZ			31	c	
ug. 1	P	iPNEZ	16	31	07	c	Deep. Tu iP 16 31 30 c
		ipPZ		32	01		ipP 32 29
	PX	iSNE		41	31		i 44
	MW	iPNZ		31	07	c	i 34 17
		epPZ		32	02		Pasadena:
		iSNZ		41	32		20°S. 170°E.,
	R	iPNEZ		31	08	c	O=16:18:41
		ipPZ		32	04		h=230 km.
		eSZ		41	32		
		iSNEZ			35		
	SB	iPNEZ		31	00		
		iSNZ		41	22		
	T	iPNEZ		31	12	c	
		ipPZ		32	11		
		iSNEZ		41	44		
	H	iPNZ		31	11	c	
		iSNE		41	41		
	Pr	iPZ		31	09	c	
		ipPZ		32	07		
Aug. 1	Pr	ePZ	18	27	16		Tu iP 18 26 37
Aug. 2	PX	ePZ	01	00	41		Normal. Tu eP 01 04 17
		ePPZ		04	57		ePP 05 16
		eSKSNE		11.0			iPKKP 16 32
		ePSNE		13.9			New Zealand (South Island).
		eSSNEZ		19.2			Wellington gives:
		eSSSZ		23			45.5°S 166.8°E.,
		eLNE		29.9			O=00:46.5.
	MW	ePPZ		04	55		h=50-80 km.
	T	ePPZ		05	03		Magnitude 6-6 1/2
		ePKKPZ		16	37		
	Pr	ePZ		00	46		
		ePPZ		04	55		

Date	Sta.	Phase	h	m	s	Remarks
Aug. 2	P	ipPZ	02	27	16	Deep. Tu iP 02 27 21
	MW	iPZ		26	45	epP 48
		ipPZ		27	16	i 53
	R	iPZ		26	48	Japan?
		ipPZ		27	16	
		eZ			36	
	T	iPZ		26	33	
		ipPZ		27	03	
	Pr	ePZ		26	52	
		eZ		27	14	
		ipPZ			24	
Aug. 2	T	e(P)Z	04	33	43	Tu eP 04 32 41
	Pr	e(P)Z			31	e 33 14
Aug. 2	P	iPZ	05	45	00	Deep. Tu iP 05 44 26 d
		ipPZ			28	ipP 54
	MW	iPZ		44	59	South America
		ipPZ		45	27	
	R	iPZ		44	56	d
		ipPZ		45	24	
	T	iPNZ			11	
		ipPNEZ			40	
	Pr	ePZ		44	52	
		ipPZ		45	21	
Aug. 2	P	iPZ	08	49	45	Normal? Tu eP 08 50 11
	PX	eLZ	09	15		i 14
	MW	iPZ	08	49	45	Near Suva, which reports:
	R	iPZ			48	P 08 39 15
		iZ			52	S 40 30
	T	iPZ			51	
	Pr	iPZ			48	
Aug. 2	P	iPNEZ	12	10	12	Tu iP 12 09 21
	MW	iPZ			10	
	R	ePZ			06	
	T	iPZ			14	
	H	iPZ			11	
	Pr	iPZ			03	c
Aug. 2	P	iPZ	12	29	50	Tu iP 23 40 10
	MW	iPZ			49	e 32 22
	R	ePZ			51	
	T	iPZ			57	
	Pr	iPZ			52	
Aug. 2	R	ePZ	20	28	31	Tu eP 20 27 45
	T	iPZ			40	i 54
Aug. 3	T	ePZ	06	48	33	Tu iP 06 49 22
	Pr	iPZ			59	
Aug. 3	Pr	iPZ	19	04	44	Tu iP 19 05 02
Aug. 4	P	ePZ	01	03	12	Tu eP 01 02 21
	MW	ePZ			12	West Indies?
	R	ePZ			07	
	T	iPZ			15	
	Pr	ePZ			04	
Aug. 4	P	iPZ	06	19	14	Tu i 06 20 26
		iZ			50	
	MW	iPZ			06	
		iZ			49	
	Pr	eZ			58	
Aug. 4	P	iPZ	22	25	49	
	MW	iPZ			49	
	R	iPNEZ			47	
	Pr	iPZ			45	
Aug. 5	R	iPZ	10	20	46	
	T	iPZ		21	02	
Aug. 5	P	ePZ	17	26	10	Tu eP 17 26 44
	MW	ePZ			08	
	T	ePZ			04	
	Pr	ePZ			19	
Aug. 6	Pr	ePZ?	10	46	17	Tu iP 10 46 39

Date	Sta.	Phase	h	m	s		Remarks
Aug. 6	P	iP"NEZ	12	14	54	c	Deep? Tu eP" 12 15 05
		iZ		15	19		i 08
		eZ		16	50		e 17 29
	PX	eLZ			59		i(SKP) 18 32
	MW	iP"NZ		14	55	c	e 20 24
		iZ		16	54		East Indies?
	T	iP"NEZ		14	52		
		iZ		16	56		
	H	iP"NEZ		14	54		
		iNZ		16	52		
	Pr	iP"Z		14	57		
		eZ		16	58		
Aug. 7	P	ePZ	11	13	36		Tu eP 11 14 29
	MW	ePZ			37		
	T	ePZ?			04		
Aug. 7	P	iPNEZ	16	05	07	d	Tu iP 16 04 12 d
		ipPZ			47		i! 14 c
		iZ		06	13		i 26
	MW	iPNEZ		05	07	d	e 34
		ipPZ			48		ipP? 51
		eZ		06	14		iScP 11 15
	T	iPNEZ		05	22	d	ScP small but clear.
		epPZ		06	04		Central America
		iZ			25		Depth 200 km.
		iScPZ		11	38		
	H	ePE		05	17		
	Pr	iPZ!		04	56	d	
		ipPZ!		05	36		
		iZ			58		
Aug. 8	P	iPNEZ	00	47	19		Normal. Tu iP 00 46 28 c
		iZ!			28		i 34
	PX	eLN	01	05			Off Puerto Rico.
	MW	ePNZ	00	47	18		Pasadena: 19°N.68°W.,
		iZ			25		O=00:38:43
	SB	ePNEZ			28		
	T	iPNEZ			22		
		iNEZ			31		
	H	ePE			20		
	Pr	ePZ			10		
		iZ			17		
		iZ			19		
Aug. 8	P	ePZ	07	06	38		Normal? Tu eP 07 07 10
	PX	eLZ		20			i 09 21
	MW	ePZ		06	39		e 17 34
		eZ		10	17		Two shocks?
	T	iPZ		06	34		
		iZ		10	33		
	Pr	ePZ		06	46		
		iZ		10	04		
Aug. 8	P	iPNEZ	08	37	49		Normal. Tu iP 08 36 40 d
	PX	eLNE		43			Mexico?
	MW	iPZ		37	49		
	T	iPNEZ		38	05		
	H	ePZ		37	59		
	Pr	iPZ			36		
Aug. 8	P	ePZ	15	19	34		Tu iP 15 18 33
	MW	iPZ			35		
	T	iPZ		20	01		
	Pr	ePZ		19	19		
Aug. 8	P	iPZ!	15	40	48		Tu iP 15 40 13
		ipPZ		41	33		epP 59
	MW	iPZ		40	47		Deep.
		ipPZ		41	37		Andes
	T	iPNEZ		40	58		
		iZ		41	08		
		epPZ			46		
	H	iPZ		40	54		
	Pr	iPZ			40		
		iZ			56		
		epPZ		41	27		

Date	Sta.	Phase	h	m	s		Remarks
Aug. 9	MW	iPZ	03	52	15		Tu iP 03 52 35
	T	iPZ			24		
	Pr	iPZ			16		
Aug. 9	P	iPNEZ	05	31	07	c	Normal. Tu eP 05 32 08
		iSNE		32	06		i 45
	MW	iPNZ		31	06	c	eS 34.3
		iSNEZ		32	07		Felt widely in Nevada and
	SB	iPZ		31	10		Eastern California.
		iSNZ		32	05		Cracked plaster, etc, near
	T	iPNEZ!		30	24	c	the epicenter.
		iSN			34		38°12'N.118°12'W.,
	H	iPNEZ			38	c	O=05:30:04
		iSNZ		31	08		
	Pr	iPZ			18	c	
Aug. 9	P	eZ	17	16	17		Normal. Tu e 17 16 29
	PX	eZ		27.4			e 17 05
		eLZ		45.6			e 27 37
	MW	eZ		16	17		First motion small and
	R	eZ			09		emergent at all these stations
	T	eZ			10		but slightly clearer at
	Pr	eZ			14		Tinemaha.
Aug. 10	P	iPNEZ	04	00	16	d	Deep. Tu iP 04 00 38 d
		epPZ		02	26		i 48
	PX	eSNE		09	34		epP 02 49
	MW	iPNZ		00	16	d	Depth about 600 km
		epPZ		02	28		Tonga region?
		eSN		09	33		
	R	iPZ		00	17	d	
		epPZ		02	28		
	SB	ePZ		00	04		
	T	iPNEZ			24	d	
		epPZ		02	35		
		eSN		09	52		
	H	iPNEZ		00	23		
	Pr	iPZ		00	19	d	
		epPZ		02	27		
Aug. 10	P	iPZ	05	42	30		Tu iP 05 42 48
Aug. 10	P	iPZ	12	26	20		Tu eP 12 27 09
		iZ		27	11		e 58
	PX	eSNEZ		28	36		e 30 35
		eNZ		29	16		Northern California?
	MW	ePZ		26	19		
		eSZ		28	36		Seismograms peculiar
	R	ePZ?		26	22		in appearance.
		eZ			57		
		eSEZ		28	46		
	SB	eSNZ			27		
	T	ePZ		25	39		
		iNEZ			57		
		iSEZ		27	02		
	H	eNEZ		26	21		
		iSNEZ		27	37		
	Pr	ePZ		26	32		
		eZ		27	04		
		eZ		29	16		
Aug. 10	P	ePZ	14	03	10		Normal? Surface waves small
		eZ			23		at Pasadena.
		iP"Z		07	00		Tu eP" 14 07 11
		ePPZ			47		iPP 08 32
		eSKPZ		10	12		eSKP 10 27
	PX	iSKSNE		13	26		East Indies?
		iNE		14	25		
		eSN		15	12		
		ePSZ		16	56		
		ePPSZ		18	30		
		eSSNZ		23.2			
		eSSSN		27.3			

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
				(Continued)		
Aug. 10	MW	ePZ	14	03	08	
		eZ			24	
		eP"Z		07	01	
		iPP"Z			48	
		eSKPZ		10	17	
	R	ePZ		03	11	
		iPPZ		07	45	
	T	ePZ		03	10	
		eP"Z		06	57	
		iPPZ		07	42	
		iSKPZ		10	15	
	Pr	ePZ?		02	58	
		eZ		03	17	
		iPPZ		07	54	
		eSKPZ		10	15	
Aug. 10	P	iPEZ!	15	23	08 d	Normal. Tu iP 15 23 45 c
		iZ			17	i 24 43
		iSNEZ		31	06	
	PX	eLZ		37	7	Dilatations at Pasadena, etc.
		eP'P'Z		52	59	possibly preceded by very
	MW	iPNZ		23	08	small compressions.
		eSN		31	05	USCGS: 54°N.161°E.
	R	iPNEZ		23	11d	O=15 13 3
		eSNE		31	11	Pasadena: 56°N.162.5°E.,
	SB	iPNEZ		23	01 d	O=15 13 23
		eSNE		31	14	
	T	iPNEZ		22	53	
		iNEZ			56	
		eSN		30	38	
	H	iPNEZ		22	59	
		eSNE		30	50	
	Pr	iPZ!		23	18 d	
		iZ			26	
		eP'P'Z		52	51	
Aug. 10	P	ePZ	15	32	10	Tu iP 15 32 48
	MW	iPZ			09	Aftershock
	R	ePZ			13	
	T	iPNEZ		31	55	
	H	iPZ		32	00	
	Pr	iPZ			19	
Aug. 10	MW	iPZ	15	34	13	Tu iP 15 34 52
	R	iPZ			16	Aftershock
	T	iPZ		33	59	
	Pr	iPZ		34	22	
Aug. 10	P	ePZ	15	46	20	Normal. Tu iP 15 46 57
		iNEZ			22	i 47 01
		iSNE		54	22	Aftershock
		eP'P'Z	16	16	12	
	MW	ePZ	15	46	19	
		iNZ			22	
	R	iPNZ			24	
	SB	iPNEZ			15	
	T	ePZ			05	
		iNEZ			08	
	H	ePNEZ			14	
	Pr	iPZ			32	
		eP'P'Z	16	15	17	
Aug. 10	P	iPZ	15	54	05	Tu iP 15 54 42
	MW	iPNZ			04	Aftershock
	R	ePZ			08	
	T	iPNEZ		53	50	
	H	ePZ			56	
	Pr	iPZ		54	19	
Aug. 10	R	iPZ	16	01	12	
	T	ePZ			06	
		eZ			19	
	Pr	ePZ?		00	50	
		eZ		01	08	

Date	Sta.	Phase	h	m	s	Remarks
Aug. 10	P	iPZ	18	25	34	Tu iP 18 26 01
	MW	iPZ			35	
	R	iPZ			39	
	T	ePZ			31	
	Pr	iPZ			39	
Aug. 11	T	ePZ	03	03	27	Tu eP 03 04 28
	Pr	ePZ			49	
Aug. 11	P	iPZ	05	33	11 d	Normal. Tu iP 05 33 43 d
	PX	eLN		57		
	MW	iPZ		33	11 d	
	R	ePZ			13	
	T	ePZ			04 d	
	H	iPZ			08	
	Pr	iPZ			18	
		iZ			30	
Aug. 11	P	iPZ	12	55	55	Normal? Tu eP 12 55 05
	PX	eLZ	13	20		e 18
	MW	iPNZ	12	55	54	
	R	iPZ			50	
		iZ		56	04	
	SB	iZ			16	
	T	iPNEZ		55	59	
		iZ		56	13	
	H	iEZ			10	
	Pr	ePZ		55	47	
		iZ		56	00	
Aug. 12	T	ePZ	03	29	24	Tu iP 03 29 37
	Pr	iPZ			18	
Aug. 12	P	iPNEZ	05	02	40 c	Normal. Tu iP 05 03 12 c
	PX	eSN		11	38	Japan?
	MW.	iPZ		02	40 c	
	R	ePNZ			42 c	
	SB	ePZ			34	
	T	iPNEZ			31 c	
	H	iPNEZ			35 c	
	Pr	iPZ			47 c	
Aug. 12	T	ePZ	05	34	49	Tu eP 05 35 38
	Pr	ePZ?		35	07	
Aug. 12	P	eSNZ	05	40	07	Tu eP 05 37 41
	MW	eSZ?		39	47	iS 40 30
	R	eSZ			57	
	T	ePZ		36	30	
		eSEZ		38	36	
	Pr	ePZ		37	01	
Aug. 12	MW	iPZ	05	42	55	Deep? Tu iP 05 42 20
	R	iPZ			52	
		iZ		43	21	
	T	iPZ			07	
		iZ			36	
Aug. 12	MW	iPZ	07	09	59	Tu eP 07 10 19
	R	iPZ		10	07	
Aug. 12	P	ePZ	08	30	12	Tu eP 08 31 05
	MW	ePNZ			13	
	R	ePZ			17	
	T	ePZ		29	35	
	Pr	ePZ		30	24	
Aug. 12	P	iPNZ	11	26	02	Deep? Tu iP 11 25 10
		eNE			16	i 24
	MW	ePNZ			01	Off Puerto Rico?
		iNZ			14	
		iZ			25	
	R	iZ		25	55	
		iNZ		26	09	
		iZ			20	
	SB	iPNZ			11	
		iZ			25	
		eNEZ			35	

(Continued)

Date	Sta.	Phase	h	m	s		Remarks
			(Continued)				
Aug. 12	T	iPNEZ	11	26	03	c	
		iZ			19		
		iZ			47		
	H	iNZ			16		
	Pr	iPZ		25	53		
		iZ		26	06		
		eZ			17		
Aug. 13	R	iPZ	00	14	16		Tu eP 00 13 30
	T	ePZ			32		
	Pr	iPZ			11		
Aug. 13	P	ePZ	07	50	06		Normal. Tu iP 07 49 34
		ePPZ		53	38		Atlantic?
	PX	eLNZ	08	19.5			
	MW	ePZ	07	50	06		
	R	ePZ			04		
		ePPZ		53	38		
	LJ	ePZ		50	04		
	T	ePZ			08		
	H	ePZ			08		
	Pr	ePZ			02		
Aug. 13	P	iPNEZ	07	50	20		Overlapped by the preceding
	MW	iPZ			20		
	R	iPZ			22		
	T	iPZ			13		
	Pr	iPZ			26		
Aug. 13	P	iPZ	15	00	29		Tu iP 15 00 54 d
	MW	iPZ			30		
	R	ePZ			33		
	T	iPZ			38		
	Pr	iPZ			30		
Aug. 13	MW	iPZ	18	22	16		Tu iP 18 22 37
	T	iPZ			21		
	Pr	iPZ			15		
Aug. 14	PX	eLZ	02	55.4			Normal Tu eP 02 45 06
	MW	ePZ		46	00		
	R	ePZ		45	55		
	T	ePZ		46	17		
	Pr	iPZ		45	50		
Aug. 14	P	iPNEZ	08	20	33	c	Normal. Tu iP 08 20 49 c
		ipPZ			43		ipP 21 00
		ePPZ		24	03		i 08
	PX	eSZ		32	48		Kermadec Islands
		eLZ		47.2			
	MW	iPZ		20	33	c	
		ipPZ			44		
		iZ			50		
	R	iPNEZ			34	c	
		ipPZ			45		
		eZ		21	02		
	SB	ePNEZ		20	28		
	LJ	ePNEZ			31		
	T	iPNEZ			42	c	
		ipPZ			53		
		eZ		21	09		
	H	ePNEZ		20	41		
	Pr	iPZ			34	c	
		ipPZ			45		
		eZ		21	11		
Aug. 15	P	iPNEZ	00	21	47	c	Normal. Tu iP 00 20 57 c
		iZ		22	03		i 21 11
	PX	iEZ		23	42		i 22 37
		iSN		28	42		Off Puerto Rico
		eLZ		37			Pasadena: 19°N.68°W.,
	MW	iPNZ		21	48	c	O=00:13:15
	R	iPNEZ			42	c	
	SB	ePNEZ			58		
	LJ	iPNEZ			41	c	
	T	iPNEZ			51	c	
	Pr	iPZ			40	c	
		iZ			50		

Date	Sta.	Phase	h	m	s		Remarks
Aug.15	P	iPNEZ	02	42	24		Normal. Tu eP 02 42 55
	PX	iSNE		53	03		
		eLN	03	05			South of Japan?
	MW	iPZ	02	42	24		
	R	iPNZ			26		
	SB	ePNEZ			18		
	LJ	ePZ			29		
	T	iPEZ			21		
	Pr	iPZ			31		
Aug.15	P	iPNEZ	10	05	41	c	Deep? Tu iP 10 05 08 c
	PX	iSN		14	52		e? 07 12
	MW	iPZ		05	41	c	Tonga region
	R	iPZ			36	c	depth about 600 km?
		eZ		07	40		
	T	iPEZ		05	51	c	
		eZ		07	55		
	Pr	iPZ		05	34	c	
		eZ		07	44		
Aug.15	P	iPNEZ	13	12	40		Tu iP 13 13 36
	R	iPZ			45		
	T	ePZ			35		
	Pr	ePZ			51		
Aug.15	P	iPZ	14	56	52		
	MW	ePZ			51		
	T	ePZ			51		
Aug.16	T	ePZ	06	20	03		Tu eP 06 21 43
	Pr	ePZ			49		
Aug.16	P	iPZ	08	23	54		Deep? Tu eP 08 24 21
		eZ		24	24		
	MW	iPZ		23	55		
		iZ		24	26		
	R	ePZ		23	56		
		eZ		24	24		
		eZ			33		
	LJ	ePZ		23	56		
	T	ePZ			58		
	Pr	iPZ			59	d	
		eZ		24	24		
		eZ			34		
Aug.16	MW	ePZ	15	50	06		Tu eP 15 50 51
	R	ePZ			10		
	T	ePZ		49	50		
	Pr	ePZ		50	16		
Aug.16	T	iPNEZ	21	49	04		Tu eP 21 50 48
Aug.17	P	iPZ	01	17	01		Tu iP 01 17 39 c
	MW	iPZ			01		i 18 13
	R	ePNEZ			04		
	H	iPNEZ		16	53		
	Pr	iPZ		17	10		
Aug.17	P	iPZ	03	22	32		Tu iP 03 21 40
	MW	iPZ			32	c	i 55
	R	iPZ			27	c	Puerto Rico?
	T	iPNZ			34		
	Pr	iPZ			24	c	
		iZ			29		
Aug.17	P	iP"NEZ	09	22	31		Tu eP" 09 22 43
		eZ		23	24		e 23 54
	MW	eP"Z		22	31		ePKKP 32 48
		eZ		23	20		eSKKP 36 15
	R	eP"Z		22	32		East Indies?
		eZ		23	31		
	LJ	eP"Z		22	33		
	T	eP"Z			29		
		eZ		23	16		
		ePKKPZ		23	26		
		eZ		22	34		
		iPKKPZ		33	17		

Date	Sta	Phase	h	m	s		Remarks
Aug. 17	PX	eLZ	14	09			Normal. Tu eP 13 25 17
	R	iPZ	13	25	48		New Hebrides?
	T	iPZ		26	04		
Aug. 17	PX	eLZ	16	07	6		Normal. Tu eP 15 31 53
	MW	ePZ	15	31	46		
		eZ		32	26		
	T	ePZ		31	44		
		eZ		32	24		
	Pr	ePZ		31	47		
		eZ		32	35		
Aug. 18	T	ePZ	06	59	10		Tu eP 06 59 33
	Pr	eZ			14		
Aug. 18	T	eZ	15	11	01		Tu e 15 04 17
		eZ		13	08		e? 09 41
	Pr	iZ		10	33		e 52
Aug. 18	P	iPNEZ	16	39	05	d	Deep. Tu iP 16 38 29 d
		esPZ			46		epP 59
	MW	iPNZ			04	d	isP 39 11
		ipPZ			33		Andes
		isPZ			46		
	R	iPNEZ			01	d	
		iZ			19		
		ipPZ			31		
		isPZ			43		
	SB	ePZ			11		
	LJ	ePZ		38	57		
	T	iPNZ		39	15		
		epPZ			46		
	H	iPNEZ			12		
		ipPZ			41		
	Pr	iPZ		38	57		
		iZ		39	16		
		ipPZ			25		
		esPZ			39		
Aug. 19	P	iPZ	02	09	31		Tu eP 02 09 44
	MW	iPZ			31		
	R	ePZ			32		
	T	ePZ			28		
Aug. 19	P	iZ	05	18	17		Tu e 05 15 16
	PX	eNEZ		27			e 18 18
	MW	eZ		15	45		e 21 35
		iZ		18	17		Very distant?
	R	eZ		15	45		
		iNZ		18	17		
	T	eZ		16	12		
		iZ		18	22		
	Pr	eZ		15	35		
		iZ		18	16		
Aug. 19	P	ePZ	10	51	49		Tu iP 10 52 26 c
	MW	iPZ			48		i 43
	R	ePZ			51		
	T	ePZ			36		
		eZ		52	04		
	H	iPZ		51	41		
	Pr	iPZ			57		
Aug. 19	R	ePZ	12	02	49		Tu eP 12 03 07
	T	ePZ			55		
Aug. 19	P	iPZ	23	43	00		Normal? Tu iP 23 41 57 c
	MW	iPNZ		42	59		i 42 00
	R	iPNZ			52		i 16
	T	iPZ		43	18		Mexico. Tacubaya reports:
	Pr	iPZ		42	48		P 23:38:35
		eZ		47	01		L 56
Aug. 20	MW	iPZ	01	06	39		Tu eP 01 07 10
	R	iPZ			41		
	T	iPZ			30		
	Pr	iPZ			45		

Date	Sta	Phase	h	m	s		Remarks
Aug. 20	P	eZ	01	40	04		Normal. Tu e 01 40 41
		eZ			32		i 41 19
	PX	eZ		49	42		e 43 17
		eLE		59	4		e 44 11
	MW	eZ		40	25		e 51 35
	R	eZ			09		Very distant?
	T	e(P)Z		36	08		
		eZ		40	17		
	Pr	e(P)Z		36	17		
		eZ		39	39		
Aug. 20	P	iPZ	03	10	30		Tu iP 03 10 54 d
	MW	iPZ			29	d	
	R	iPZ			31		
	T	iPZ			37		
	Pr	iPZ			32	d	
Aug. 20	Pr	iPZ	05	09	49		Tu eP 05 09 06
Aug. 20	P	iPZ	21	07	44		Tu iP 21 08 21
	MW	iPZ			46		
	T	iPZ			32		
	Pr	iPZ			53		
Aug. 21	P	iPNZ	09	20	39	d	Normal? Tu iP 09 20 26
	PX	eLE		36			e 21 41
	MW	iPNZ		20	38		
	R	ePNZ			37		
	T	ePNZ			58		
	H	ePZ			51		
	Pr	iPZ			33		
Aug. 22	P	iPZ	01	36	29		Normal? Tu iP 01 37 01
		iZ			43		i 15
	MW	iPZ			28		i 30
		iZ			42		e 40 27
	R	eZ			45		Japan?
		eZ		39	42		
	LJ	ePEZ		36	50		
	T	ePZ		36	20		
		iNZ			34		
	Pr	ePZ			37		
		iZ			51		
		iZ		39	48		
Aug. 22	P	iPNEZ	11	11	44		Normal? Tu iP 11 12 30 c
		iZ			58		i 38
	PX	eZ		13	36		i 44
		eLZ		22	8		Aleutian Islands?
	MW	ePZ		11	44		
		iZ			59		
		iZ		12	02		
	R	ePZ		11	47		
		eZ		12	01		
		iZ			06		
	LJ	eNZ			09		
	T	ePNEZ		11	29		
		iZ			39		
		iZ		13	20		
	H	iNEZ		11	45		
	Pr	iPZ			54		
		iZ		12	08		
		iZ			17		
Aug. 23	P	iPNEZ	07	17	06	c	Tu iP 07 17 30 c
	PX	eLNZ		55			i 46
	MW	iPNZ		17	05	c	Southwest Pacific
	SB	iPZ			01		
	LJ	ePNZ			06		
	T	iPNEZ			14	c	
	H	iPZ			14		
	Pr	iPZ			08	c	
Aug. 24	P	iPZ	17	36	49		Tu iP 17 37 15
	R	iPZ			50		Near Suva, which reports:
	T	iPZ			55		P 17 25 18
	Pr	iPZ			52		S 50

Date	Sta	Phase	h	m	s	Remarks
Aug. 24	R	ePZ	18	31	38	Tu iP 18 32 03
	T	ePZ			44	
Aug.25	T	iPZ	00	34	36	Tu iP 00 33 40
		eZ		35	07	i 34 11
Aug.25	MW	iPZ	05	40	39	Tu iP 05 41 13
	R	iPZ			42	e 47
	T	iPZ			26	
	Pr	iPZ			46	
Aug.25	P	iPZ	06	23	54	Deep?
	MW	iPZ			55	
		eZ		24	20	
	R	ePZ		23	56	
		iZ		24	22	
	T	eZ		23	56	
		iZ		24	16	
Aug.25	MW	iPZ	10	24	51	Deep? Tu iP 10 24 17
		iZ		25	09	i 34
	R	ePNZ		24	51	South America
		iNZ		25	05	
		iZ			14	
	T	iPZ			03	
		eZ			20	
	Pr	ePZ		24	40	
Aug.26	T	ePZ	07	03	25	Tu eP 07 03 38
	Pr	ePZ			17	
Aug.26	P	iPZ	10	05	10	Tu eP 10 04 38
	MW	iPZ			09	e 56
	T	iPZ			21	
Aug.26	T	ePZ	11	50	18	Tu iP 50 22
Aug.26	T	ePZ	15	44	40	Tu eP 15 44 45
Aug.27	P	ePZ	00	53	39	Normal. Tu eP 00 53 56
	PX	eLN	01	26		
	MW	ePZ	00	53	40	
	R	ePZ			35	
	T	ePZ			47	
	Pr	ePZ			41	
Aug.27	R	eZ	04	16	40	Tu eP 04 16 57
	T	ePZ			47	
Aug.27	T	ePZ	06	19	25	Tu eP 06 19 28
Aug.27	P	iPZ	09	06	42 c	Tu iP 09 07 21 c
	MW	iPZ			42	
	R	ePZ			45	
	T	iPZ			27	
	Pr	ePZ			53	
Aug.27	P	iPZ	10	32	56	Normal. Tu eP 10 33 44
	PX	eLEZ		36.6		
	MW	iPZ		32	55	
	R	iPNZ			59	
	LJ	ePZ		33	11	
	T	ePZ		32	25	
		iNEZ			28	
	H	ePNZ			37	
	Pr	ePZ		33	10	
Aug.27	P	iPZ	11	28	02	Tu iP 28 24 c
	MW	iPZ			03	
	R	ePZ			02	
	T	ePNEZ			09	
	H	ePNEZ			08	
	Pr	iPZ			05	
Aug.28	P	iPZ	10	24	31	Normal? Tu eP 10 24 57
		iNEZ			38	Near Apia, which reports:
	MW	ePNZ			30	P 10:14:03
	R	ePZ			33	S 24
	LJ	ePNEZ			35	
	T	ePNZ			40	
		iEZ			48	
	H	eNZ			46	
	Pr	ePZ			33	
		iZ			40	

Date	Sta.	Phase	h	m	s	Remarks
Aug. 28	T	iPZ	11	10	31	Tu iP 11 10 45
Aug. 29	P	ePZ	02	51	15	Normal. Tu iP 02 50 15
	PX	eLNE		58	04	iL 55 22
	MW	iPNZ		51	15	Mexico. Tacubaya reports:
	R	iPZ			08	P = 02:46:59
	LJ	ePNEZ			00	L = 47:39
	T	iPNEZ			36	
	Pr	ePZ			00	
Aug. 29	P	iPNEZ!	03	45	33 c	Normal. Magnitude 5.5.
		iSNE!			45	Felt widely in Southern
	MW	iPNEZ			31 c	Calif. Minor damage at
		iSNE			43	resorts in the San
	R	iPNZ!			22 c	Bernardino Mts.
	SB	iPNZ			52 c	34° 16' N.116° 58' W.,
	LJ	iPNEZ			39 d	O=03:45:13
		iSNEZ			56	Foreshock with
	T	iPNEZ		46	03 d	O=03:43:09
		iSNE			51	Numerous small after-
	Pr	iPZ!		45	31 d	shocks in following 3 hours.
Aug. 29	MW	iPZ	04	29	27	Tu eP? 04 29 57
	T	iPZ			20	Very small
Aug. 30	PX	eLZ	24	27		Normal. Tu eP 23 56 20
	T	ePZ	23	56	07	
Aug. 31	P	iPZ	06	59	32	Tu iP 06 59 50 c
	MW	iPZ			31	e 07 10 18
	R	iPZ			32	
	T	iPZ			39	
	Pr	iPZ			33	
Aug. 31	MW	ePZ?	07	38	42	
	R	ePZ			53	
	T	ePZ			30	
	Pr	iPZ		39	02	
Aug. 31	MW	iPZ	07	41	03	Tu iP 07 41 27
	R	ePZ			06	
	T	iPZ			09	
	Pr	iPZ			06	
Aug. 31	PX	eLZ	16	06		Normal. Tu eP 15 43 50
	MW	ePZ	15	44	26	Readings may refer to PP.
	T	ePZ			20	
	Pr	ePZ			20	
Aug. 31	P	iPNEZ	16	17	00 d	(Deep) Tu iP 16 16 05
		ipPZ			18	i 15
		iPcPNEZ		19	52	iPcP 19 37
		ipPcPZ		20	12	iScP 23 16
		esPcPZ			26	iL 24 04
		iSNE		22	08	USCGS: 16:10.5
		iScPZ		23	31	13 1/2°N. 91 1/2°W.
		ipScSZ		24	06	Pasadena: 14.2°N.91.5°W.,
	PX	eLNE		25.0		O=16:10:40, h=80 km.
		eLZ		27.0		
		iScSNE		27	29	
		isScSNE		28	d	
	MW	iPNEZ		16	58 d	
		ipPZ		17	17	
		iZ			26	
		iPcPZ		19	50	
		ipPcPZ		20	11	
	R	iPNEZ		16	53 d	
		iZ		17	20	
		iPcPZ		19	51	
		ipPcPZ		20	10	
		iScPZ		23	29	
		ePcSZ		24	04	
		eScSNE		27	26	
		esScSE		28	01	
	SB	iPZ		17	11	
		iPcPZ		19	55	
		eZ		24	11	
		eE		28	12	

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
				(Continued)		
Aug. 31	LJ	iPNEZ	16	16	47	
		iPcPZ		19	51	
		eScSNE		27	24	
		esScSE			58	
	T	iPNEZ		17	15 d	
		iZ			24	
		iZ			39	
		iPcPZ		19	59	
		iScPZ		23	39	
		iPcSZ		24	14	
		iScSNEZ		27	41	
		esScSE		28	18	
	Pr	iPZ		16	48	
		iZ		17	14	
		iPcPZ		19	50	
		ipPcPZ		20	09	
		iZ		21	49	
		eZ		22	18	
		eScPZ		23	28	
		iPcSZ		24	03	
Sept. 1	P	iPZ	00	45	56	Tu iP 00 46 16 c
		iZ		46	27	e 25
	MW	iPZ		45	56	i 47
		eZ		46	23	Southwest Pacific
	R	iPZ		45	59	Deep
		eZ		46	29	
	T	ePZ			06	
		eZ			34	
	Pr	iPZ		45	58	
		iZ		46	29	
Sept. 1	P	iPZ	12	12	19	Deep? Tu eP 12 11 26
	MW	ePZ			20	i 12 09
	T	ePZ			36	e 15 17
		eZ			53	Central America
		e(PcP)Z		15	16	
		eZ			35	
	Pr	iPZ		12	08	
		iZ			25	
Sept. 1	MW	iZ	16	16	53	Tu eP 16 15 58
	Pr	iPZ			41	
		iZ			56	
Sept. 2	P	iPNEZ	09	13	54	Tu eP 09 13 12 d
	MW	ePNZ			53	
	R	ePZ			49	
	T	iPNEZ		14	06	
	Pr	iPZ		13	46 d	
Sept. 2	P	iPNEZ	13	46	28	Tu iP 13 45 52
		iNZ			57	i 46 22
	MW	iPNZ			29	Readings in 52 m
		iNZ			58	May refer to a second
		eZ		52	18	shock.
	R	iPZ		46	25	
		iZ			53	
	T	iPNEZ			41	
		iZ		47	04	
		iZ		52	09	
	P	iPZ		46	22	
		iZ			51	
		iZ		52	25	
Sept. 2	P	ePZ	14	07	56	Tu eP 14 07 04
	MW	ePZ			56	
	R	iPZ			54	
	T	iPZ		08	10	
	Pr	iPZ		07	45	

Date	Sta.	Phase	h	m	s	Remarks
Sept. 2	P	iPNEZ	23	17	59	Deep? Tu iP 23 16 59 c
		iZ		18	13	i 17 17
	MW	ePNZ		17	59	Mexico: Tacubaya reports
		iZ		18	14	P 23 13 42
	R	iPNEZ		17	52	L 14 22
		iZ		18	08	
	SB	ePZ		18	10	
	T	ePNEZ			19	
		iZ			39	
	Pr	iPZ		17	45	
		iZ		18	00	
Sept. 3	PX	eLZ	04	08		Normal. Tu eP 03 51 24
	Pr	ePZ	03	51	57	
Sept. 3	T	ePZ?	15	53	47	Tu eP 15 55 23
	Pr	ePZ		54	32	
Sept. 3	P	iPZ	19	45	31	Tu iP 19 45 57
	T	ePZ			45	
Sept. 4	P	ePZ	07	37	17	Normal. Tu 07 38 20
	Px	eLZ		40.8		
	MW	ePZ		37	17	
	R	ePZ			24	
	T	ePZ		36	42	
	Pr	ePZ		37	28	
Sept. 4	T	iZ	12	45	10	Tu eP 12 44 46
	Pr	eZ			29	i 45 02
		iZ			44	
Sept. 5	PX	ePZ	08	49	33	Normal. Tu eP" 08 53 26
	P	eP"Z		53	14	i 54 52
		ePPZ		54	16	ePKKP 09 03 35
	PX	eSKSNEZ	09	00	02	eSKKP 06 46
		ePSNEZ		03	29	USCGS: 0° 125°E. O=08:34.8
	P	ePKKPZ			58	Pasadena: 4°N. 123°E.
	PX	iSSN		09	54	O=08:34:17
		eLN		19.5		
	MW	iP"Z	08	53	14	
		ePKKPZ	09	04	05	
	R	eP"Z	08	53	15	
		ePKKPZ	09	03	56	
	T	eP"Z	08	53	14	
		ePKKPZ	09	04	09	
	Pr	eP"Z	08	53	14	
		iPKKPZ	09	03	59	
Sept. 6	PX	ePZ	03	56	14	Normal. Tu eP 03 56 32
		eZ		59	23	eP" 04 00 11
		eP"Z	04	00	06	iPKKP 10 52
		iPPNEZ			57	ePiPi 18 23
		iZ		02	34	USCGS: 53.2°S.159.4°E.,
		eSKSNE		06.8		O=03:41:15
		eSZ		09	08	Pasadena: 53°S.159°E.,
		iPSNEZ!		10	43	O=03:41:31
	P	ePKKPZ		11	02	Great earthquake (Magnitude
	PX	iSSNEZ		16	18	7 3/4)
		iZ		17	08	Pasadena distant 113°
		iNEZ		20	43	
		iGNE		27.5		
		iLNZ		32.1		
		eG2N	05	39.8		
	MW	eP"Z	04	00	06	
		iPPNZ			55	
		iZ		01	45	
		iPKKPZ		11	01	
	R	eP"Z		00	06	
		iPPNEZ			58	
		ePSNE		10	41	
		ePKKPZ			59	

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
			(Continued)			
Sept.6	SB	eP"EZ	03	00	05	
		ePPNEZ			54	
		ePSNZ		11	08	
	LJ	eP"Z		00	06	
		iPPNEZ			51	
		ePSNE		10	30	
	T	eP"Z		00	11	
		iPPNEZ		01	16	
		ePKKPZ		10	37	
		ePSNE			58	
	Pr	ePZ	03	56	06	
		eZ		59	17	
		iP"Z	04	00	04	
		iPPZ			56	
Sept.6	P	ePZ	14	59	07	Tu eP 14 58 49
		iSZ	15	02	58	iS 15 02 07
	MW	ePZ	14	59	05	Probably this is the shock
		eSZ	15	02	47	reported felt (USCGS) in
	R	ePZ	14	59	00	northern Wyoming about 9:00
	T	ePZ	14	58	39	MWT (15:00 GCT).
		iSZ	15	01	44	
Sept.7	MW	iPZ	05	25	43	Tu eP 05 25 51
		eZ		26	08	i 26 12
	R	ePZ		25	43	
		iZ		26	11	
	T	eZ		25	40	
		iZ		26	02	
Sept.7	T	ePZ	09	00	22	
		iZ			45	
Sept.7	P	ePZ	17	27	42	Normal? Tu ep 17 28 15
	PX	eLZ		54		
	MW	iZ		28	05	
	R	ePZ		27	46	
		eZ		28	07	
Sept.7	P	iPZ	19	33	30	Normal. Tu iP 19 33 58 d
		eLNE		44.3		e 36 43
	MW	ePNZ		33	30	e(P'P') 52 50
	R	ePZ			31	
	T	ePNZ			06	
		eZ			34	
Sept.8	MW	iPZ	17	11	50	Tu eP 17 10 56
	T	iPZ			52	Near Haiti
	Pr	iPZ			42	
Sept.8	P	ePNZ	18	48	59	Tu eP 18 48 45
	MW	ePZ		49	00	
	R	ePZ		48	56	
	Pr	ePZ			56	
Sept.9	P	eP"Z	04	24	16	Deep? Tu eP 04 20 32
		iPPZ			55	eP" 24 29
		ipPPZ		25	38	ipP" 25 59
	PX	eSPZ		33	58	iPKKP 35 22
	P	iPKKPZ		35	29	i 33
	MW	ePZ		24	17	Probably Hindu Kush, with
		iPPZ			54	h=220 km., O=04:06.3
		epPPNZ		25	38	
		iPKKPZ		35	32	
	R	ePPZ		24	56	
		ipPPZ		25	39	
	SB	eP"EZ		24	18	
	T	ePZ		20	12	
		eZ		23	27	
		iPPZ		24	37	
		iPKKPZ		35	40	
	Pr	ePPZ		25	14	
		epPPZ			50	
		ePKKPZ		35	32	

Date	Sta.	Phase	h	m	s	Remarks
Sept. 10	P	iNEZ	02	40	17	Normal. Tu eP 02 39 25
	PX	eSN		47	15	USCGS: 18.9°N, 67.0°W.,
		eLZ			56	O=02:31.6
	MW	ePZ		40	14	
	R	ePNEZ		56	11	
	SB	ePZ			17	
		eNZ			33	
	LJ	ePZ			06	
		eN			25	
	T	ePEZ			18	
		iZ			52	
	Pr	ePZ			11	
Sept. 10	P	iPZ	08	49	23	Normal. Tu eP 08 49 53
		iZ			36	Destructive at Tottori, Japa
	PX	eSNZ		59	46	USCGS: 35.1°N, 133.3°E.,
		eLNE	09	11.1		O=08:36.9
	MW	iPZ	08	49	24	Pasadena: 35°N 134°E.,
	R	ePZ			26	O=08:36:56
	SB	ePNZ			18	Major earthquake
	LJ	ePNEZ			30	(Magnitude 7 1/2)
	T	ePNZ			14	
		eSNE		59	31	
	Pr	ePZ		49	34	
		iZ			46	
		iZ		50	11	
Sept. 10	P	ePZ	09	17	23	Tu e 09 17 58
	MW	ePZ			23	Aftershock
	R	ePZ			24	
	T	ePZ			14	
	Pr	iPZ			39	
Sept. 10	P	ePZ	13	48	33	Normal. Tu eP 13 48 02
	PX	eLZ	14	17		
	MW	ePZ	13	48	33	
	R	ePZ			35	
	T	ePZ			22	
Sept. 10	R	ePZ	18	18	27	Tu iP 18 18 43
	T	ePZ			33	
	Pr	iPZ			29	
Sept. 10	MW	eZ?	22	52	41	Tu eP 22 53 13
		ePZ		53	07	
	T	ePZ			08	
		eZ			15	
	Pr	iPZ			00	
Sept. 11	P	iPZ	01	29	08	Normal. Tu eP 01 29 35
		iZ			28	
	PX	eLN		53.3		
	MW	ePZ		29	08	
	R	ePZ?			03	
		eZ			24	
	T	ePZ		28	59	
		eZ		29	33	
Sept. 11	P	ePZ	05	59	42	Tu eP 06 00 05
	MW	ePZ			43	Probably 17°S. 165°W.,
	R	ePZ			44	O=05:48:45
	T	iPZ			58	Apia reports:
	Pr	iPZ			47	P=05:50:36, S=05:52:08
Sept. 11	P	ePZ	06	01	42	Tu iP 06 02 07
	MW	ePZ			43	Near the preceding, but
	R	iPZ			45	larger.
	SB	iPZ			39	
	LJ	iPZ			43	
	T	ePZ			51	
	Pr	iPZ			46	
Sept. 11	Pr	ePZ	09	40	23	Tu eP 09 39 37
Sept. 11	MW	ePZ	11	59	20	Tu eP 11 58 45
	R	ePZ			15	
	T	iPZ			33	

Date	Sta.	Phase	h	m	s		Remarks
Sept. 11	P	iPZ	19	45	31		Normal. Tu iP 19 45 57 d
		iNE			34		USCGS: 16 1/2 S. 173°W.,
	PX	eSNEZ		55	10		O=19:34:51
		eLNEZ	20	06.6			Apia reports P=19:34:51
	MW	ePZ	19	45	32		S=19:35:47
		ePPZ		48	16		and gives
	R	ePZ		45	34		15°S.177°W., O=19:33:37
		iNEZ			37		
	SB	ePNZ			29		
	LJ	ePZ			32		
	T	ePZ			40		
		iEZ			43		
	Pr	ePZ			35		
		iZ			38		
Sept. 11	P	iPZ	22	11	07		Tu iP 22 11 30
	MW	iPZ			09		
	T	iPZ			18		
	Pr	ePZ			09		
Sept. 12	P	iZ	01	16	25		Tu iP 01 15 15
	MW	ePZ			10		i 33
		iZ			25		i 50
		eZ			35		iPcP 19 05
		ePcPZ		19	22		Central America
	R	eZ		16	19		
		ePcPz		19	19		
	T	ePZ		16	24		
		iEZ			40		
		eZ		19	05		
		ePcPZ			24		
	Pr	iPZ		15	58		
		iZ		16	14		
		eZ			26		
		ePcPZ		18	58		
Sept. 12	PX	ePSZ	02	00	00		Deep? Tu eP" 01 49 50
		eLN		18			i 50 10
	MW	eP"Z	01	49	39		ePKKP 59 59
		eZ		50	11		East Indies
	T	eP"Z		49	04		
		eZ			38		
		iPKKPZ	02	00	34		
	Pr	iPKKPZ			26		
Sept. 13	MW	iPZ	05	36	19		Tu eP 05 37 08
	R	iPZ			24		
		eZ			41		
	T	iPZ			00		
	Pr	iPZ			31		
		eZ			45		
Sept. 13	P	iPNEZ	06	28	25	c	Deep? Tu iP 06 28 41 c
		iZ			42		i 59
	PX	eLZ	07	00			
	MW	iPZ	06	28	26	c	
		iZ			43		
	R	ePNZ			28		
	T	iPNZ			36		
		iZ			54		
	H	ePNEZ			32		
	Pr	iPZ			28	c	
		iZ			45		
Sept. 13	P	iZ	23	35	43		Tu eP 23 33 44
	MW	ePZ		34	04		
		eZ		35	42		
	R	ePZ		33	53		
	T	ePZ		34	04		
Sept. 14	MW	eZ	00	27	47		Tu eP 00 27 44
	R	eZ			25		
	T	eZ			17		
		eZ			31		

Date	Sta.	Phase	h	m	s		Remarks
Sept. 14	P	ePZ	02	14	04		(Normal) Tu iP 02 14 25
	PX	ePPZ		17	31		Pasadena (using all avail-
		iSNE		24	38		able data)
		iPSNE		26	03		22°S.171°E.,
		eSSSNE		34.2			O=02:01:12;
		eLNE		38.0			depth about 50 km.
	MW	ePZ		14	03		Major earthquake (magnitude 7)
	R	ePZ			04		
	SB	ePZ			00		
	T	ePNEZ			13		
	H	ePZ			11		
	Pr	iPZ			07		
Sept. 14	P	ePZ	04	00	05		(Normal) Tu eP 04 00 24
	PX	ePPZ		03	27		eP'P' 25 55
		iPSNE		11	53		Pasadena: 22°S.170°E.,
		eLNEZ		23.3			O=03:47:15;
	MW	iPNZ		00	06		depth about 50 km.
	R	ePNEZ			07		Major earthquake (magnitude 7.2
	SB	ePZ			06		
	LJ	ePNEZ			05		
	T	ePZ			13		
		iNEZ			15		
	H	ePEZ			11		
	Pr	iPZ			09		
Sept. 14	T	ePZ	04	27	50		Tu eP 04 28 02
Sept. 14	P	iPNEZ	07	30	41	c	Normal. Tu iP 07 30 57 c
		iPPZ		33	54		i 31 18
	PX	iSNEZ		41	06		ePKKP 48 42
		iLN		52.7			eP'P' 56 48
	P	eP'P'Z		56	58		eP'P'P' 08 17 45
	MW	ePNZ		30	41		Pasadena: 30°S.177°W.,
		iZ			49		O=07:18:08.
		ePKKPZ		48	49		Depth about 60 km.
		iP'P'Z		57	04		Major earthquake (magnitude 7½)
		eP'P'P Z	08	17	35		
	R	ePZ	07	30	43		
		iNEZ			49		
		iNZ		31	05		
		ePKKPZ		48	50		
		iP'P'Z		57	03		
		eP'P'P'Z	08	17	37		
	SB	iPZ	07	30	39		
		iNEZ			44		
		iNEZ			59		
	LJ	ePNEZ			40		
		iNEZ			58		
	T	ePZ			51		
		iEZ		31	13		
		eP'P'Z		56	57		
		eP'P'P'Z	08	17	43		
	H	iPZ	07	30	49		
		iZ		31	03		
		iZ			11		
		ePKKPZ		48	52		
		eP'P'Z		58	00		
	Pr	ePZ		30	43		
		iZ			50		
		iZ		31	04		
		eP'P'Z		57	03		
		eP'P'P'Z	08	17	39		
Sept. 14	P	iPZ	09	52	28		Tu iP 09 52 45
	MW	iPZ			29		Aftershock
	R	ePZ			29		
	T	ePZ			38		
	H	ePZ			36		
	Pr	iPZ			30		

Date	Sta.	Phase	h	m	s		Remarks
Sept. 14	MW	ePZ	09	58	09		Tu iP 09 58 25
	R	ePZ			09		Aftershock?
	T	iPZ			19		
	Pr	iPZ			10		
Sept. 14	T	ePZ	11	23	07		Tu eP 11 24 06
	Pr	ePZ			37		
Sept. 14	P	ePZ	11	53	15		Tu e 11 53 27
	MW	ePZ			15		
	Pr	eZ			21		
Sept. 14	PX	eLNEZ	14	40			Normal.
Sept. 14	P	iZ	15	06	18		Tu eP 14 04 49
	MW	iZ			19		e 06 21
	T	eZ		04	49		Two shocks?
		eZ		06	36		
	Pr	eZ		04	25		
		iZ		06	21		
Sept. 14	MW	eZ	15	57	10		Tu eP 15 57 15
	T	eZ			09		
	Pr	eZ		56	58		
Sept. 14	Pr	ePZ	17	48	31		Tu eP 17 48 31
Sept. 14	P	iPZ	20	28	54		Deep? Tu eP 20 29 12
		iZ		29	11		e 31
	MW	ePZ		28	55		
		eZ		29	09		
	Pr	ePZ		28	56		
		eZ		29	14		
Sept. 15	MW	eZ	02	41	41		Tu e 02 41 52
	Pr	eZ			31		
Sept. 15	Pr	ePZ	08	15	01		Tu eP 08 15 46
		iZ			19		i 16 05
Sept. 15	MW	ePZ	09	17	27		Tu iP 09 17 44
	H	ePZ			34		
Sept. 15	Pr	iPZ	10	44	26		Tu iP 10 45 17
Sept. 15	Pr	eZ?	18	06	10		Tu eP 18 06 02
	T	ePZ			58		
Sept. 15	T	iPZ	18	17	47		
	Pr	iZ			24		
Sept. 15	MW	ePZ	18	41	55		Tu iP 18 42 44
		eZ		42	01		e 53
	T	ePZ		41	37		
		eZ			46		
	Pr	ePZ			34		
		eZ			42		
Sept. 15	P	ePZ	23	37	51		Normal. Tu eP 23 38 11
	PX	eLZ	24	05			
	MW	ePZ	23	37	50		
	T	ePZ			53		
	Pr	ePZ			52		
Sept. 16	P	ePNEZ	00	27	01		Normal. Tu eP 00 27 19
	PX	eZ		37			e 36 45
		eLZ		59			
	MW	ePZ		27	02		
	R	ePN			04		
	T	iPNEZ			06		
	Pr	ePZ			01		
Sept. 16	P	iPZ	03	29	44		Tu eP 03 30 22
	MW	iPZ			45		
	Pr	iPZ			54		
Sept. 16	P	iPNEZ	07	52	55		Normal. Tu iP 07 54 04
		iSN		53	19		i 11
	MW	iPNZ		52	54		i(S) 55 47
	R	ePZ			56		36°01' N. 117°56' W.
	SB	ePZ		53	00		0=07:52:22
	T	iPNEZ!		52	43	c	Near Haiwee. Felt over a
		iSNEZ			58		wide area-
	H	iPNZ!			26	c	The largest of a numerous
		iSNZ			29		swarm from the same source.
	Pr	iPZ		53	07		
		iZ			13		
		iSZ			49		

Pasadena and auxiliary stations, 1943

Date	Sta.	Phase	h	m	s		Remarks
Sept. 16	P	iPZ	10	45	44		Tu iP 10 46 02
	MW	ePZ			45		
	T	ePZ			52		
	Pr	ePZ			42		
Sept. 16	P	ePZ	13	00	21		Normal. Tu eP 13 00 38
		eZ		03	32		e 03 54
	PX	eLZ		27			Two shocks?
	MW	ePZ		00	21		
		eZ		03	34		
	T	ePZ		00	29		
		eZ		03	43		
	H	ePZ		00	27		
		eZ		03	51		
	Pr	ePZ		00	22		
		eZ		03	36		
Sept. 17	P	ePZ	01	32	22		Tu eP 01 32 46
	MW	ePNZ			23		
	R	ePZ			23		
	T	ePZ			31		
	Pr	ePZ			23		
Sept. 17	P	iZ	04	35	33		Normal. Tu e 04 35 58
		iZ		36	46		e 37 08
	PX	eLZ	05	04.7			Second phase shorter period
	MW	eZ	04	35	34		than first at all these
		iZ		36	47		stations.
		iZ		54	32		Suva P = 04:15:45
	T	eZ		35	41		
		eZ		36	54		
	Pr	iZ		35	35		
		iZ		36	49		
Sept. 17	Pr	ePZ	06	20	18		Tu iP 06 19 37
Sept. 17	P	iPZ	10	22	00	c	Normal? Tu iP 10 22 26 c
		iZ			10		i 23 29
		eZ			35		iPKKP 39 53
		iZ		25	23		eP'P' 47 53
		iZ			57		Approximately 16°S. 170°E.,
	PX	eSNEZ		31.9			O=10:09:35
		eLN		44.9			
		eP'P'Z		48	08		
	MW	iPZ		22	00	c	
		iZ		23	06		
		eZ		25	23		
		iPKKPZ		40	03		
		eP'P'Z		48	08		
	R	ePZ		22	03		
		iZ		23	08		
		iPKKPZ		40	02		
		eP'P'Z		48	00		
	SB	ePEZ		21	56		
	LJ	ePNEZ		22	02		
	T	iPNEZ			05		
		iPKKPZ		40	01		
	H	ePZ		22	06		
		ePKKPZ		40	00		
	Pr	iPZ		22	14	c	
		eZ		25	59		
		eP'P'Z		48	08		
Sept. 18	T	ePZ	14	23	02		Tu eP 14 23 23
Sept. 18	T	ePZ	15	37	32		Tu iP 15 36 25
	Pr	iPZ			05		
		eZ			20		
Sept. 19	P	iPZ	00	31	28		Tu iP 00 31 51 c
	MW	iPZ			29		e 34 05
		eZ		34	06		
	R	ePZ		31	30		
		eZ		33	53		
	T	iPZ		31	37		
	H	ePZ			35		
	Pr	iPZ			31		
		eZ		33	40		

Date	Sta.	Phase	h	m	s		Remarks
Sept. 19	P	ePZ	04	58	15		Normal. Tu eP 04 58 02
	PX	eSNZ	05	06	56		Region of Easter Island
		eLE		14.6			
	MW	ePZ	04	58	14		
	R	ePZ			12		
	LJ	ePZ			13		
	T	ePZ			34		
	H	ePZ			28		
	Pr	ePZ			09		
Sept. 19	P	iPZ	06	10	50	c	Normal? Tu iP 06 11 08
		iNEZ		11	07		i 25
	PX	eLZ		36.4			i 37
	MW	iPNZ		10	49	c	
		iZ		11	03		
		iNZ			07		
	R	iPNEZ		10	51		
		iNEZ		11	05		
	LJ	ePNEZ		10	48		
		iNEZ		11	06		
	T	ePNEZ		10	50	c	
		iZ		11	12		
		iZ			17		
		eZ		14	25		
	H	ePNEZ		10	56		
	Pr	iPZ		10	50	c	
		eZ			59		
		iZ		11	03		
		iZ!			08		
		iZ			30		
Sept. 19	P	iPNEZ	09	11	41	c	Deep? Tu iP 09 12 05 c
	MW	iPNZ			42	c	i 21
	R	iPNEZ			43	c	e 54
	LJ	ePNEZ			41		
	T	iPNEZ			47	c	
	H	iPZ			47		
	Pr	iPZ!			44	c	
Sept. 19	P	iZ	15	01	57		Normal. Tu eP 15 01 55
		iZ		02	19		
	PX	eLNZ		21.5			
	MW	ePZ		01	52		
		eZ		02	02		
	T	eZ		02	03		
	Pr	eZ		01	56		
Sept. 20	P	iPNEZ	00	57	35	d	Normal. Tu iP 00 56 45 d
		iZ			44		USCGS: 19.5°N. 109°W.,
	PX	eLNE	01	00	48		O=00:53.7
	MW	ePNZ	00	57	36		
	R	ePNZ			29		
	SB	ePNEZ			48		
	LJ	ePZ			15		
	T	iPNZ		58	06	c	
	H	ePZ		57	56		
	Pr	ePZ		57	18	c	
		iZ			24		
		iZ			34		
Sept. 20	MW	ePZ	01	10	22		Tu iP 01 09 28
	R	ePZ			18		Aftershock
	Pr	ePZ			02		
Sept. 20	P	iPZ	03	44	48		Deep? iP 03 45 11 c
		iZ		45	59		i 46 22
		iZ		46	41		i 47 02
	MW	iPZ		44	49	c	Possibly three shocks
		iZ		46	00		
		iZ			41		
	T	iPZ		44	57		
		iZ		46	07		
		iZ			48		

(Continued)

Date	Sta.	Phase	h	m	s		Remarks
				(Continued)			
Sept. 20	H	iPZ	03	44	54		
	Pr	iPZ			51		
		iZ		46	02		
		iZ			42		
Sept. 20	P	i(P)Z	04	20	32		Tu iP 04 19 38 c
	MW	eZ?		19	52		
		eZ		20	31		
	Pr	iZ			16		
Sept. 20	P	iPZ	08	43	55		Tu iP 08 44 31
	MW	iPZ			54		
	R	ePZ			57		
	T	ePZ			43		
	Pr	ePZ		44	03		
Sept. 20	MW	ePZ	10	20	49		Tu eP 10 20 50
	Pr	ePZ			33		
Sept. 21	P	iPZ	03	55	03		Normal. Tu eP 03 55 21
	PX	eLNEZ	04	31.6			i 59 56
	MW	ePZ	03	55	02		Two shocks?
		iZ		59	26		
	R	iZ			26		
	T	ePZ		55	12		
		iZ		59	19		
	H	ePZ		55	10		
		eZ		59	21		
	Pr	iPZ		55	05		
		iZ		59	31		
Sept. 21	P	ePZ	04	21	05		Tu iP 04 21 31
		eNZ		22	14		Part of preceding?
	MW	ePZ		21	06		
		eZ		22	15		
	R	iZ		22	09		
	T	ePZ		21	19		
		eZ		22	46		
	Pr	ePZ		21	07		
		eZ		22	00		
Sept. 22	P	iPNEZ	12	17	00	c	Deep? Tu iP 12 16 35 c
		iZ			15		
		iZ			22		
	MW	iPNZ		17	01	c	
		iZ			17		
	R	iPZ		16	59	c	
	SB	iPZ		17	07		
	LJ	iPNEZ		16	53		
	T	iPNEZ		17	14	c	
		iZ			29		
	H	iPNEZ			09		
	Pr	iPZ		16	55	c	
Sept. 22	P	iZ	23	14	20		Tu iP 23 14 46
	MW	ePZ			15		i 50
		iZ			18		
	R	ePZ			18		
	T	ePZ		13	52		
		iZ			58		
	H	eZ		14	03		
	Pr	iPZ			26		
		iZ			31		
Sept. 22	P	iPNEZ	23	31	13	d	Tu iP 23 31 30
		ePPZ		34	38		i 43
	PX	iPPZ			45		ePKKP 48 42
		eSKSNE		41	48		i 49 21
		eGNE		54	46		Wellington gives:
	MW	ePNZ		31	14		36°S. 177°W.,
	R	iPNEZ			15		O=23:18:1, magnjtude 6½.
	SB	ePZ			13		Pasadena, using all available
	LJ	ePNEZ			12		reports: 34°S. 179°W.,
							O=23:18:15, magnitude 6¾.

(Continued)

Date	Sta.	Phase	h	m	s		Remarks
			(Continued)				
Sept.22	T	ePNZ	23	31	22		
		ePPZ		34	56		
	H	ePNEZ		31	21		
	Pr	iPZ			16		
		iZ			29		
Sept.23	P	iNZ	12	39	40		Normal. Tu eP 12 28 08
		eSN		40	48		Gulf of California?
	MW	ePZ		39	22		
		iSZ		40	59		
	R	ePEZ		39	10		
		iSNEZ		40	37		
	LJ	ePZ		38	50		
		eNEZ		39	03		
		iSNEZ		40	07		
	T	ePZ		39	29		
		eSZ		42	16		
	Pr	ePZ		38	34		
		iSZ		40	14		
Sept.23	P	iPNEZ	15	06	52	c	Normal. Tu iP 15 05 17
		iPcPZ		09	48		i 06 12
	PX	iSNE		11	52		i 19
		iSSNE		12	32		iPcP 09 34
		iScPZ		13	23		eS 11 02
		eLNE		13.8			iScP 13 05
	P	iScSNE		17	18		All phases unusually sharp,
	MW	iPNZ		06	52	c	especially the reflections
		iPcPZ		09	49		from the core.
		iScPZ		13	23		Pasadena distant 29°.
	R	iPNEZ		06	45		USCGS: 15°N.92°W.,
		iPcPEZ		09	46		O=15:00.5
		eSNEZ		11	42		
		iScPZ		13	20		
	SB	iPNEZ		07	01		
		iPcPZ		09	52		
		eSE		12	09		
		iScPZ		13	27		
		eScSNZ		17	26		
		eNZ		18	20		
	LJ	iPNEZ		06	38		
		iPcPZ		09	46		
		eSNE		11	27		
		iScPZ		13	29		
	T	iPNEZ		07	06	c	
		iPPZ		08	42		
		iPcPZ		09	53	d	
		iScPNEZ		13	27	c	
		eNZ		17	00		
		eScSNEZ			10		
	H	iPNEZ		17	00		
		iPcPZ		09	50		
		iScPZ		13	25		
	Pr	iPZ		06	39	c	
		iZ		07	03		
		iPcPZ		09	44		
		iScPZ		13	18		
Sept.23	P	ePZ	15	38	54		Tu iP 15 38 05
	MW	ePZ			54		i 15
		iNZ		39	05		
	R	eZ?		38	43		
		iZ			50		
		iZ		39	01		
	T	ePNEZ		39	03		
		iZ			10		
	H	iPZ			46		
		iZ			57		

Date	Sta.	Phase	h	m	s		Remarks
Sept. 23	P	eZ	16	54	37		Tu eP 16 54 46
	MW	ePZ			30		i 54
		iZ			39		
	R	ePZ			31		
		iZ			41		
	T	ePZ			12		
		eZ			20		
	Pr	ePZ			38		
		iZ			45		
Sept.24	P	iPZ	02	53	53		Normal. Tu iP 02 54 18
		iZ		54	08		
	PX	eLZ		03	23		
	MW	ePZ	02	53	53		
		iZ		54	15		
		ePPZ		57	13		
	R	ePZ		53	57		
		eZ		54	05		
		eZ			12		
		ePPZ		57	18		
	SB	ePZ		53	40		
	T	iPZ			57		
		iZ		54	22		
	H	iPZ		53	57		
Sept. 24	P	ePNZ	06	53	34		Normal. Tu iP 06 53 44
		ePPZ		57	10		
	PX	eLZ	07	14			
	MW	ePZ	06	53	33		
		iZ			41		
		ePPZ		57	11		
	R	ePZ		53	38		
	T	ePNZ			15		
	H	ePEZ			22		
Sept.24	MW	eZ	11	11	51		
Sept.24	P	iPNEZ	11	20	33	c	(Deep) Tu iP 11 20 57 c
		ipPZ		21	02		ipP 21 26
		isPZ			14		isP 35
		eZ		23	12		h=80 km.
	MW	iPNZ		20	34	c	Near Apia, which reports
		iZ			47		P=11:10:23
		ipPZ		21	02		S=11:11:26
		isPZ			15		
	R	iPNEZ		20	36	c	
		epPZ		21	05		
	SB	ePNEZ		20	29	c	
		ipPNEZ			58		
	LJ	ePNZ			33		
	T	iPNEZ			43	c	
		ipPZ		21	14		
	H	iPNEZ		20	41	c	
		ipPZ		21	09		
	Pr	iPZ		20	36	c	
		ipPZ		21	04		
		esPZ			37		
Sept.24	P	eZ	11	49	56		Deep? Tu eZ 11 48 56
		eZ		52	46		iPKKPZ 12 01 54
		iPKKPZ	12	01	03		iZ 02 04
	PX	eLZ		26			eP'P'Z 09 20
	MW	ePZ	11	45	51		Cartuja gives h=200 km.
		eZ		49	16		Northern India
		ePKKPZ	12	01	04		
		eP'P'Z		09	26		
	R	eZ	11	49	57		
		ePKKPZ	12	01	02		
	T	ePZ	11	45	37		
		eZ		49	22		
		eZ		50	00		
	H	eZ		49	54		
	Pr	ePZ		45	57		
		eZ		48	39		

Date	Sta	Phase	h	m	s	Remarks
Sept. 24	P	ePZ	14	24	02	Normal. Tu eP 14 24 30
	PX	eNE		33.8		Near Apia, which reports:
		eLZ		45		P=14:13:04
	MW	ePZ		24	02	S=14:13:23
	Pr	ePZ			05	
Sept.25	R	ePZ	08	22	57	Tu iP 08 22 33
	T	iPZ		23	17	
	Pr	iPZ		22	29	
Sept.26	R	eZ	00	46	42	Tu eP 00 47 15
	T	eZ?			39	
		eZ		47	00	
	Pr	eZ		46	45	
Sept.26	P	eP'Z	02	28	26	Normal. Tu eP' 02 28 22
		iP'NEZ			28	eP2' 29 13
		iP2'Z		29	41	ePP 32 58
		iPPNEZ		33	32	Pasadena distant about 165°
		ePPPZ		37	30	Indian Ocean south of
	MW	iP'NZ		28	29	Madagascar
		eP2'Z		29	42	
		iPPNZ		33	32	
	R	iP'Z		28	28	
		ePPZ		33	27	
	SB	eP'Z		28	31	
		ePPZ		33	39	
	LJ	eP'NZ		28	26	
		ePPZ		33	24	
	R	eP'EZ		28	29	
		ePPNZ		33	37	
	H	eP'Z		28	27	
		eP2'NZ		29	40	
		ePPNZ		33	34	
	Pr	iP'Z		28	27	
		iP2'Z		29	34	
		iPPZ		33	24	
Sept.26	P	iPZ	08	14	16	Deep? Tu iP 08 14 35 c
		eNEZ			50	
	MW	iPNZ		14	17	
		eZ			53	
	R	iPZ			18 c	
		eZ			52	
	SB	ePNZ			17	
	T	iPZ			25 c	
	H	ePZ			23	
	Pr	iPZ			18 c	
		eZ			51	
Sept.26	P	ePZ	13	21	21	Normal? Tu eP 13 21 38
		iZ			41	e 52
	PX	eLZ	14	00		
	MW	ePZ	13	21	24	
		eZ			39	
Sept.26	P	iZ	15	00	36	Tu iP 15 00 36
	R	ePZ			15	
	T	ePZ			19	
Sept.26	P	iPNEZ	18	19	40	Normal. Tu eP 18 20 23
	PX	eLZ		33.5		i 44
	MW	iPNZ		19	42	Aleutian Islands
	R	ePZ			45	
	LJ	ePNZ			53	
	T	iPZ			27	
	H	ePZ			33	
	Pr	iPZ			52	
Sept.26	T	iPEZ	22	32	28	Tu e 22 34 12
		iSNEZ		33	58	
Sept.26	P	ePZ	22	46	21	Normal. Tu iP 22 45 28
	PX	eLZ	23	00.0		Central America
	MW	ePZ	22	46	19	
	R	ePZ			13	
	SB	ePZ			30	

(Continued)

Date	Sta	Phase	h	m	s	Remarks
Sept.26	LJ	ePNZ	22	46	05	
	T	ePZ			33	
	Pr	iPZ			08	
Sept.27	P	iPNEZ	04	52	22 d	Deep? Tu iP 04 52 51 d
		iZ			46	e 53 40
		iZ		53	46	ePP 56 23
		iPPZ		55	35	No surface waves recorded
		iSNE	05	02	08	Bonin Islands?
	MW	ePN	04	52	22	
	R	iPNEZ			23 d	
	SB	iPNEZ			17	
	LJ	iPNEZ			28	
	T	iPNEZ			13 d	
	H	iPNEZ			16 d	
	Pr	iPZ			28 d	
		iZ			48	
Sept.27	P	iPZ	17	21	22	Normal? Tu eP 17 22 05
		iZ			40	e 21
	R	ePZ			26	
		iZ			42	
	Pr	ePZ			35	
		iZ			50	
Sept.27	P	iPNEZ	22	16	15	Normal? Tu iP 22 16 34
		ipPZ			30	ipP 48
		iZ		17	23	i! 54
	PX	ePPZ		19	48	i 17 09
		iSNE		26	41	ePKKP 33 57
		iPSZ		27	41	i 34 15
		eSSNE		32	25	h=70 km. (New Zealand sta ion
		eGNE		38	24	Epicenter near 30°S.176°W.,
	MW	ePN		16	16	O=22:03.8
	R	iPNEZ			18	
		iNEZ			36	
	SB	iPNEZ			12	
		iNEZ			31	
	LJ	ePNEZ			13	
	T	ePZ			24	
		iNEZ			26	
		eSN		27	07	
	H	iPNEZ		16	23	
		eSN		26	49	
	Pr	iPZ		16	18 c	
		epPZ			33	
		iZ			38	
		ePPZ		19	51	
Sept.28	P	iPZ	08	26	48	Tu eP 08 27 27
	MW	ePZ			47	e 49
	R	ePZ			51	
	T	ePZ			25	
	Pr	iPZ			58	
Sept.28	P	ePZ	09	29	11	Tu eP 09 29 36
	MW	ePZ			12	Near Apia, which reports:
	R	ePZ			18	P=09:18:14
	T	ePZ			19	S=09:18:35
	Pr	ePZ			19	
Sept.28	P	iPNEZ	10	58	00 d	Normal? Tu iP 10 58 33 d
		iZ			14	i 46
	PX	iZ			22	ePP 11 02 03
		eN	11	08	35	Japan?
		eLN		25.5		
	MW	iPNZ	10	58	01 d	
		iZ			15	
		iPPZ	11	01	14	
	R	ePNEZ	10	58	03 d	
		eZ			16	

(Continued)

Date	Sta.	Phase	h	m	s		Remarks				
				(Continued)							
Sept.28	SB	ePNZ	10	57	55						
		iNEZ		58	08						
	LJ	ePNEZ			05						
	T	iPNEZ		57	56						
		iNZ		58	09						
	H	ePNEZ		57	59						
	Pr	iPZ		58	07	d					
		iZ			23						
Sept.28	R	ePZ	12	21	05		Tu	eP	12	21	22
		eZ			21			e			36
	Pr	ePZ			05						
		iZ			21						
Sept.28	P	ePZ	13	51	18		Tu	iP	13	51	51
		iZ			20			i			53
		iZ		52	30						
	MW	ePZ		51	19						
		eZ		52	31						
	R	ePZ		51	21						
		eZ			23						
		eZ		52	33						
	SB	ePZ		51	15						
	T	ePZ			14						
		eZ		52	28						
	H	ePEZ		51	18						
	Pr	iPZ			27						
		iZ			33						
Sept.28	P	iPZ	16	05	19		Deep?	Tu	eP	16	04 44
		iZ		06	07				e		05 16
	MW	iPZ		05	20						
	R	iPZ			16						
	T	iPZ			32						
		eZ		06	01						
	Pr	ePZ		05	13						
Sept.29	MW	iPZ	04	29	48		Tu eP 04 30 30				
	R	iPZ			52						
	T	iPZ			28						
	Pr	iPZ			58						
Sept.29	P	iPZ	05	20	55		Tu iP 05 21 35 c				
	MW	iPZ			54		e 44				
	R	iPZ			58	c	i 56				
	T	iPZ			32						
	Pr	iPZ		21	05	c					
Sept.29	P	iPNEZ	07	15	48		Deep? Tu iP 07 15 06				
		iZ		16	04				i		23
	MW	ePZ		15	48				i		36
		eZ		16	04						
	R	ePZ		15	40						
		eZ		16	04						
	T	ePZ		15	57						
		eZ		16	14						
	Pr	iPZ		15	50						
		iZ		16	06						
Sept.29	P	iZ	08	07	31		Tu eP 08 07 48				
	MW	ePZ			27						
		eZ			31						
	R	ePZ			27						
	Pr	ePZ			32						
Sept.29	P	ePZ	09	29	05		Normal? Tu eP 09 29 29				
	PX	eLZ		50					i		34
	MW	ePZ		29	04				i		43
	R	ePZ			06		Near Apia, which reports:				
	T	ePZ			16		P 09 18 10				
	Pr	ePZ			10		S 09 18 30				
		iZ			12						
		iZ			33						
Sept.29	MW	iPZ	20	43	18		Tu iP 20 42 50				
	R	ePZ			15						
	T	iPZ			31						

Date	Sta.	Phase	h	m	s	Remarks
Sept.29	P	iPZ	23	18	01	Deep?
		iZ		20	04	
	MW	ePZ		18	00	
		iZ			15	
		iZ		20	05	
	R	ePZ		18	04	
		eZ		20	07	
	T	iPZ		18	02	
		iZ		20	06	
	Pr	iPZ		18	06	
		iZ		20	08	
Sept.30	P	ePZ	07	29	52	
	PX	eLZ	08	00		Normal. Southwest Pacific?
	MW	ePZ	07	29	53	
	R	ePZ			55	
Sept.30	P	iPNEZ	12	06	37	
	PX	eLZ		37		Normal.Southwest Pacific.
	MW	iPNZ		06	37	
	R	iPZ			48	
	T	iPNZ			38	
	Pr	iPZ			41	

C. F. Richter
November 22, 1944

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA CALIFORNIA

SEISMOLOGICAL LABORATORY

BULLETIN

OCTOBER - DECEMBER 1943

(PASADENA AND AUXILIARY STATIONS)

Date	Sta	Phase	h	m	s	Remarks
Oct 1	P	iPNZ	12	33	38	Normal? Tu iP 12 32 44 d
	PX	eLNE		37.9		i 50
	MW	ePZ		33	38	Central America?
	R	ePZ			36	
	T	iPZ		34	08	
	H	ePZ		33	55	
	Pr	ePZ			19	
Oct 1	P	iPZ	18	04	59	Normal. Tu iP 18 04 23
	PX	eLN		28		Atlantic
	MW	ePZ		04	59	Very roughly
	R	iPZ			55	7°N. 37°W.,
	T	ePZ			58	O=17 53 O
	H	ePZ			57	
	Pr	iPZ			54	
Oct 1	P	ePZ	18	22	41	Tu eP 18 23 19
	MW	iZ			58	
	R	ePZ			44	
	T	ePZ			25	
	H	ePZ			37	
	Pr	iPZ			50	
Oct 1	P	iPZ	19	44	44	Tu eP 19 45 16
	MW	iPZ			43	
	R	iPZ			47	
	T	iPZ			34	
Oct 2	P	iPZ	05	30	53	Normal. Tu iP 05 30 59
	PX	eLZ		55		
	MW	ePZ		30	51	
	R	ePZ			52	
	T	ePZ			32	
Oct 2	P	iPZ	06	58	43	Normal. Tu eP 07 00 05
		iZ			50	Felt at Ferndale,
	PX	eNE	07	00	21	Humboldt County, Calif.
	MW	iPNZ	06	58	44	
	R	ePZ			48	
	T	iPEZ			17	
		iZ			27	
		eSEZ		59	58	
	H	ePNEZ		58	24	
		eSNZ		59	56	
Oct 2	MW	ePNZ	09	32	04	Tu iP 09 31 19
		iZ			12	
	R	ePZ			01	
		iZ			07	
	Pr	ePZ		31	55	
		iZ		32	01	
Oct 2	P	iPZ	10	18	48	Tu iP 10 19 12
	MW	iPZ			49	
	R	iPZ			51	
	Pr	iPZ			52	
Oct 2	P	ePZ	11	28	48	Normal. Tu iP 11 27 54
	PX	eLN		37.4		Central America
	MW	iPZ		28	48	
	R	ePZ			42	
	T	iPEZ		29	04 c	
	H	iPNZ		28	56	
	Pr	iPZ			36 c	
Oct 2	P	iPNEZ	17	32	08 d	Deep? Tu iP 17 31 37 d
		eZ			43	
		iZ			57	
		eN		37	53	
	MW	iPNEZ		32	07 d	
		eZ			42	
		iZ			56	
	R	iPNEZ			04 d	
		iZ			43	

(Continued)

Date	Sta	Phase	h	m	s	Remarks
				(Continued)		
Oct 2	SB	ePZ	17	32	14	
		eZ			45	
	T	ePNE			19	
	H	iPNEZ			14 d	
	Pr	iPZ			00 d	
		eZ			34	
		iZ			50	
Oct 2	P	iPZ	20	54	51	Tu iP 20 55 29
	MW	iPZ			52	
	R	ePZ			57	
	Pr	iPZ		55	00	
Oct 3	P	iPZ	00	24	17	Normal? Tu iP 00 24 35
		eZ			24	e 44
		iZ			32	i 50
	MW	iPZ			18	North Atlantic
		iZ			28	
	R	iPZ			19	
		iZ			34	
	Pr	iPZ			19 c	
		iZ			28	
		iZ			34	
Oct 3	P	ePZ	01	03	46	Normal. Tu iP 01 03 46
		iZ		04	11	i 04 04
	PX	eLN		28		North Atlantic?
	MW	ePZ		03	46	
		iZ		04	10	
	R	iPZ?		03	42	
		eZ		04	02	
	Pr	eZ		04	06	
Oct 3	PX	eLZ	09	21		Normal Tu iP 08 41 27
	MW	eZ	08	41	42	i 50
	Pr	eZ			35	
Oct 3	PX	eLNEZ	19	46		Normal Tu e 19 15 49
	MW	eZ		15	38	Roughly 51°S 165°E.,
	T	eZ			50	O=18 56.4
Oct 3	T	iPZ	20	08	59	Tu eP 20 08 06
		iZ		09	28	e 32
	Pr	iPZ		08	46	
		iZ		09	12	
Oct 4	P	iPZ	07	15	58	Deep? Tu iP 07 16 43
		iZ		16	21	i 17 07
	MW	iPZ			00	
		iZ			22	
	R	ePZ			03	
	T	iPZ		15	45	
		eZ		16	07	
	Pr	iPZ			09	
		iZ			32	
Oct 4	P	ePZ	10	16	20	Deep? Tu eP 10 16 58
		iZ			41	i 17 19
	MW	iPZ			20	
		eZ			38	
	R	ePZ			24	
		eZ			39	
	T	iPZ		15	57	
		eZ		16	16	
	H	ePN		16	06	
	Pr	iPZ			30	
Oct 4	P	iPNZ	10	52	22	Normal. Tu eP 10 52 46 c
		iPPZ		55	51	Roughly 15 1/2°S 168°E.,
	PX	eSNEZ	11	02.8		O=10 39.1
		eLN		14.9		
	MW	iPNZ	10	52	23 c	
	R	iPNEZ			26	
	SB	ePNZ			18	

(Continued)

Date	Sta	Phase	h	m	s		Remarks
				(Continued)			
Oct.4	LJ	iPNEZ	10	52	24		
	T	iPNEZ			28		
	H	ePN			27		
	Pr	iPZ			25		
		iZ			32		
Oct.4	P	iPZ	12	40	38		Tu eP 12 39 47
		iZ		41	16		e 41 35
	MW	iPZ		40	38		
	R	iPZ			33		
	T	iPZ			41		
	Pr	iPZ			29		
Oct.4	P	iZ	13	40	20		Tu eP 13 40 34
	MW	iPZ			14		e 41 15
	R	ePZ			07		
	T	ePZ			19		
		eZ			33		
	Pr	iPZ			14		
		iZ			23		
Oct.4	P	iPZ	14	16	30		Tu eP 14 16 53
	MW	iPZ			29		
	R	ePZ			31		
	T	ePZ			34		
	Pr	iPZ			32		
Oct.4	P	iPNEZ	16	20	59		Deep? Tu iP 16 21 22 d
		eZ		22	42		e 23 07
	MW	iPNEZ		21	00		
	R	ePZ		21	01		
		eZ		22	46		
	T	ePZ		21	07		
	Pr	iPZ			01		
		eZ		22	41		
Oct.5	P	eZ	11	42	29		South Pacific?
		iZ			44		
	MW	eZ			14		
		iZ			27		
	R	eZ			29		
	T	eZ			37		
Oct.5	MW	eZ	16	36	09		Tu eP 16 37 03
	R	ePZ			17		i 09
		iZ			24		
	T	ePZ		35	55		
		iZ		36	09		
	Pr	iZ			26		
		iZ			36		
Oct.5	P	iPZ	19	32	06		Tu iP 19 32 53
	MW	iPZ			06		
	R	iPZ			10		
	T	ePZ		31	51		
	Pr	iPZ		32	19		
Oct.6	P	iPNEZ	17	45	02	d	Deep? Tu iP 17 44 33 d
		iZ			38		e 45 06
	MW	iPNZ			03	d	e 22
		iZ			38		
	R	iPZ		44	59	d	
		eZ		45	38		
	T	iPNEZ		45	14	d	
	H	iPNEZ			10		
	Pr	iPZ			01		
		eZ			36		
Oct.7	P	iPNEZ	10	56	37		Normal. Tu eP 10 57 03
	PX	eLEZ	11	24			
	MW	iPNZ	10	56	38	d	New Hebrides
	R	iPZ			39	d	
	T	iPNEZ			41		
	H	ePEZ			41		
	Pr	iPZ			46	d	

Date	Sta	Phase	h	m	s		Remarks
Oct.7	MW	eZ	15	44	56		Tu eP 15 44 31
	T	eZ		45	39		
	Pr	eZ			13		
Oct.8	P	ePZ	10	44	17		Tu iP 10 44 41
	MW	ePZ			17		
	R	ePZ			19		
	T	ePZ			24		
	Pr	iPZ			20		
Oct.10	P	iPNZ	04	16	22		Tu iP 04 16 44
	MW	iPZ			23		
	R	ePZ			26		
	T	iPNEZ			32		
	H	iPNEZ			29		
	Pr	iPZ			24		
Oct.10	P	iPZ	09	49	54		Tu eP 09 50 09
	MW	iPZ			54		
	R	ePZ			56		
	T	iPNZ			36		
	Pr	ePZ?		50	00		
Oct.11	P	iPZ	06	36	16	c	Deep? Tu iP 06 36 41 c
		eZ		37	02		e 37 23
	MW	iPNZ		36	17	c	
		iZ		37	02		
	R	iPZ		36	18	c	
		eZ			56		
	T	iPNZ			22	c	
		eZ		37	08		
	Pr	iPZ		36	21	c	
		iZ		37	08		
Oct.11	P	iPZ	17	10	40		Tu iP 17 09 54
	MW	iPZ			40		
	R	iPZ			34		
	T	iPZ			54		
	Pr	iPZ			24		
Oct.12	R	ePZ	11	15	17		Tu eP 11 14 51
	T	ePZ			42		
	Pr	ePZ			10		
Oct.13	P	iPZ	01	42	45		Tu iP 01 43 17
	MW	iPZ			49		
	R	iPZ			31		
	Pr	iPZ			57		
Oct.13	P	iPNEZ	04	47	22	c	Normal. Tu iP 04 46 17 d
	PX	iLNE		49	38		Near 26°N 108°W.,
	MW	iPNZ		47	21	c	O=04 44.6
	R	ePNZ			15		
	SB	ePNEZ			38		
	LJ	ePNZ			02		
	T	iPNEZ			55	d	
	H	iPNEZ			42	d	
	Pr	iPZ			04	c	
Oct.13	P	iPNEZ	05	55	09		Tu iP 05 55 40 c
	MW	iPNZ			09		
	R	ePZ			11		
	T	iPNEZ			00		
	H	ePNEZ			04		
	Pr	iPZ			16		
Oct.14	P	iPZ	06	28	26		Tu eP 06 28 45
	MW	ePZ			25		
	T	ePZ			34		
	H	ePZ			34		
	Pr	ePZ			21		
Oct.14	P	iPZ	11	13	25		Tu iP 11 13 48
	MW	iPZ			25		
	T	ePZ			34		
	Pr	iPZ			27		

Date	Sta	Phase	h	m	s		Remarks
Oct 14	P	iPNEZ	12	11	34	c	Deep? Tu iP 12 11 58 c
	MW	iPZ			34		
	SB	ePZ			30		
	LJ	iPZ			35		
	T	iPNEZ			41	c	
	H	ePZ			39		
	Pr	iPZ			38	c	
Oct 14	P	iPNEZ	14	29	05	c	Normal. Tu iP 14 30 06
		iSNE			20		San Bernardino Mts.
	MW	iPNEZ			03	c	34°20 N 116°53 W.,
		iSN			17		O=14:28:44
	R	iPNEZ		28	55	c	
		iSN		29	05		
	SB	iPNZ			24	c	
	LJ	iPNEZ			12		
		iSNE			32		
	T	iPNEZ			32		
		iSEZ		30	21		
	H	iPNEZ		29	18		
		iSZ			48		
	Pr	iPZ			03		
Oct 14	P	iPZ	16	26	45		Tu iP 16 27 10
	T	iPZ			55		
	Pr	iPZ			48		
Oct 14	P	iPZ	14	27	57		Normal. Tu eP 22 29 39
		iSE		29	28		eS 32 39
	MW	ePZ		27	58		Colusa County, Calif.
	T	ePEZ		27	31		Foreshock at 05 h 50 m.
		iSN		28	18		
Oct 15	P	eZ	06	49	54		Tu eP 06 49 11
	MW	ePZ			48		
	T	ePZ		50	16		
	Pr	ePZ		49	44		
Oct 15	P	ePZ	08	33	40		Normal. Tu eP 08 32 55
	MW	ePZ			36		Felt at Ciudad Obregon,
	T	ePZ			55		Sonora, Mexico
	Pr	ePZ			21		
Oct 15	P	iPNEZ	16	50	22	c	Normal. Tu eP 16 51 23
		iSNEZ			37		San Bernardino Mts.
	MW	iPNEZ			21		34°21 N 116°52 W.,
		iSNE			34		O=16:50:01
	R	iPNEZ			12	c	
		iSN			20		
	SB	iPZ			43		
	LJ	iPNEZ			29		
		iSNE			50		
	T	ePNZ			50		
		iSNEZ		51	39		
	H	iPNEZ		50	36		
		iSNE		51	06		
	Pr	iPZ			21		
Oct 15	P	iZ	17	34	03		Tu eP 17 34 48
	MW	ePZ		33	59		
	T	ePZ			26		
		iZ			32		
	Pr	ePZ		34	14		
Oct 15	PX	eLNZ	21	19			Normal
Oct 15	P	iPNEZ	22	20	37		Normal. Tu iP 22 20 05
		iZ			47		eP P 48 04
	PX	eLZ		45			
	MW	iPZ		20	37		
		iZ			46		
	SB	ePZ			44		
	T	iPZ			51		
		iZ		21	01		
		eZ		50	27		
	H	ePNEZ		20	46		
	Pr	iPZ			29		
		iZ			40		

Date	Sta	Phase	h	m	s	Remarks
Oct 16	P	ePZ	00	40	43	Normal.
		eZ		41	08	
	PX	eLZ	01	10		
	T	ePZ	00	40	49	
		eZ		41	03	
Oct 16	P	iPZ	05	10	05	Tu eP 05 09 12
	MW	iPZ			04	i 38
	T	ePZ			18	
	H	ePZ			13	
	Pr	iPZ		09	59	
Oct 16	P	ePZ	10	09	44	Tu eP 10 08 53
	MW	ePZ			44	South America
	T	ePNEZ			50	
	H	ePZ			46	
	Pr	ePZ			36	
Oct 16	P	ePZ	13	22	45	Deep? Tu iP 13 22 39
		eZ		26	44	e 33 11
	PX	ePPZ		27	01	ePKKP 38 47
		iSKSNEZ		33	19	e 39 07
	P	iPKKPZ		39	02	Approximately 36.5°N. 27°E.,
	MW	ePZ		22	44	O=13:08:48
		eZ		27	00	
		eZ		33	19	
		iPKKPZ		38	42	
		iZ		39	02	
	T	ePZ		22	35	
		ePKKPZ		39	15	
	H	ePZ		22	37	
	Pr	ePPZ		27	04	
		iPKKPZ		38	41	
		eZ		39	03	
Oct 16	P	iPNEZ	15	09	44	Tu eP 15 10 33
	MW	iPNZ			44	i 36
	T	ePZ			10	
		iNEZ			15	
	H	ePNEZ			25	
	Pr	iPZ			57	
Oct 16	T	eZ	20	27	10	Tu iP 20 26 25
Oct 17	MW	ePZ	01	00	53	Tu eP 00 59 57
	Pr	iPZ			42	
Oct 17	P	iPZ	01	16	05	Tu iP 01 15 30
	T	iPZ			16	
	H	ePZ			12	
	Pr	iPZ		15	52	
Oct 17	P	ePZ	09	26	27	Tu iP 09 27 14 c
	MW	ePZ			28	
	T	iPZ			12	
	H	ePZ			18	
	Pr	iPZ			39	c
Oct 17	P	ePZ	10	26	54	Tu eP 10 26 24
	MW	iPZ			55	
	T	iPZ		27	06	
	Pr	iPZ		26	48	
Oct 17	P	iPEZ	17	31	19	Tu iP 17 31 53
	MW	iPZ			19	
	T	iPZ			08	
	H	ePZ			12	
	Pr	iPZ			27	
		iZ		32	06	
Oct 17	P	iPNEZ	22	50	13	Normal.
	PX	eLZ	23	18		
	MW	ePNZ	22	50	11	
	T	ePZ			10	
	Pr	iPZ			18	
Oct 18	T	ePZ	05	04	00	Tu eP 05 03 11
	Pr	ePZ		03	53	

Date	Sta	Phase	h	m	s	Remarks
Oct 18	P	iPZ	06	46	59	Tu eP 06 47 23
	MW	iPZ		47	01	
	T	iPZ			08	
	Pr	iPZ			02	
Oct 18	P	iPZ	09	28	34	Tu iP 09 28 50 d
	MW	ePZ			34	e 29 21
	T	ePZ			43	
	Pr	iPZ			35	
Oct 19	P	iPZ?	01	25	17	Normal. Tu iP 01 25 47
	PX	eLZ		49		
	Pr	iPZ		25	26	
Oct 19	P	iPZ	17	43	29	Tu iP 17 42 29
	PX	eLZ		50		Mexico
	MW	iPNZ		43	28	
	R	iPNZ			23	
	T	iPNEZ			53	
	H	ePNE			45	
	Pr	ePZ			18	
Oct 19	P	iPZ	19	26	01	
	MW	iPZ			03	
	R	iPZ			10	
Oct 20	MW	ePZ	00	11	32	Tu eP 00 11 52
		eZ			41	i 12 06
	R	ePZ			32	
		eZ			44	
	T	ePZ			29	
		eZ			39	
Oct 20	PX	eLNEZ	04	47.0		Normal. Tu iP 04 11 56
	MW	ePZ		12	48	
	R	ePZ			48	
	T	ePZ		13	24	
	H	ePZ			09	
Oct 20	P	ePNZ	12	47	01	Normal. Tu iP 12 46 06 c
	PX	eLNEZ		51.1		
	MW	ePZ		47	00	
	R	ePZ			00	
	T	ePNEZ			33	
Oct 21	P	iPNZ	14	00	32	Deep. Tu iP 13 59 57 d
		iZ		01	05	
	MW	iPZ		00	35	
		iZ		01	07	
	R	iPZ		00	30 d	
		iZ		01	01	
	T	iPZ		00	45	
		eZ		01	19	
Oct 21	P	ePZ	15	11	11	Tu eP 15 10 22
	MW	ePZ			14	e 29
	R	ePZ			11	
	T	ePZ			44	
Oct 21	P	iPNEZ	23	19	50	Normal. Tu eP 23 20 14
		iZ		20	29	i 19
	PX	eSNEZ		29	35	USCGS: 16.5°S.178°E.,
		iNEZ		30	02	O=23:07.7
		eLNE		38.5		JSA: 16.5°S.177.4°W.,
	MW	ePZ		19	49	O=23:08:08
	R	ePNEZ			53	Pasadena: 15°S.177.5°W.,
	SB	ePZ			47	O=23:08:13
	LJ	ePEZ			50	Major earthquake (magnitude7)
	T	ePNZ			59	Apia reports:
	H	ePNE		20	00	P 23 09 31
	Pr	ePZ		19	54	S 10 45
Oct 21	MW	ePZ	00	05	25	Tu eP 00 05 50
	R	ePZ			27	
	T	ePZ			34	
Oct 22	P	ePZ	00	42	37	Tu eP 00 43 09
	MW	ePZ			35	e 19
	R	ePZ			39	
	T	ePZ			34	

Date	Sta	Phase	h	m	s	Remarks
Oct 22	P	ePZ	16	14	55	Normal. Tu eP 16 15 26
	PX	eLZ		50.4		ePP 19 37
	MW	ePZ		14	56	
		ePPZ		18	57	
	T	iPNEZ		14	50	
Oct 23	P	iPNEZ	17	19	46 d	Tu iP 17 19 17 d
	MW	iPNZ			46 d	South America?
	R	iPZ			43 d	
	T	ePE			59	
	H	ePNE			55	
Oct 23	P	ePZ	17	38.1		Tu eP 17 38 48
		ePZ		41	55	iP 42 05
	PX	ePPNE		42.8		iPKKP 52 30
		eSKSNE		48	24	USCGS: 25°N.92.5°E.,
		iPSNEZ		52	06	O=17:23.3
	P	iPKKPZ			46	Major earthquake
		eSKKPZ		56	50	(magnitude 7)
		ePPZ	18	01	13	
		eSKPPZ		03	44	
	PX	eLNEZ		09		
	MW	ePZ	17	38	04	
		ePZ		41	56	
		iPKKPNZ		52	46	
		eSKKPZ		56	51	
		ePPNZ	18	00	31	
	R	iPZ	17	41	58	
		iPKKPZ		52	44	
		eSKKPZ		56	48	
	SB	iPEZ		41	56	
	T	ePE		37	58	
		eE		41	59	
Oct 24	P	ePZ	10	39	25	Tu eP 10 38 49
	MW	ePZ			25	
	R	ePZ			21	
	T	iPZ			29	
Oct 24	P	iPNEZ	13	50	49	Tu eP 13 51 26
	PX	eSNEZ		59	26	Roughly 50°N.154°E.
		eLNZ	14	06.8		O=13:40:18
	P	ePPZ		19	51	
	MW	iPNZ	13	50	48	
		ePPZ	14	19	53	
	R	iPNZ	13	50	53	
		ePPZ	14	19	54	
	SB	ePZ	13	50	44	
	LJ	ePZ		51	01	
	T	ePE		50	40	
	H	ePNE			43	
Oct 24	P	iPNEZ	16	16	34 d	Tu iP 16 16 55 d
		iPPZ		19	28	eP 43 29
	PX	iSNE		26	28	
		eLN		36.0		Pasadena: 22°S.174°W.,
	P	ePPZ		43	43	O=16:04:36
	MW	iPNZ		16	35 d	Major earthquake
		ePPZ		43	47	(magnitude 7)
	R	iPNEZ		16	36 d	
	SB	iPNEZ			29 d	
	LJ	iPNEZ			32 d	
	T	ePE			40	
	H	ePNE			43	
	Pr	ePZ			36	
Oct 24	P	iPNEZ	23	32	48	Normal? Tu eP 23 33 27 c
		eSNE		40	49	eP 24 02 20
	PX	eLZ		50.3		Roughly 55°N.160°E.,
	P	iPPZ	24	02	35	O=23:22.8
	MW	iPNZ	23	32	49	
		iPPZ	24	02	36	
	R	iPNEZ	23	32	52	
		iZ		33	40	
		ePPZ	24	02	29	

(Continued)

Date	Sta	Phase	h	m	s	Remarks
				(Continued)		
Oct 24	SB	ePNEZ	23	32	42	
	LJ	ePNEZ			56	
	T	iPNEZ			35	
		iZ		33	01	
	H	ePNE		32	40	
Oct 25	P	iPZ	11	13	02	Tu ip 11 13 34
	MW	iPZ			03	
	R	iPZ			04	
	T	iPZ		12	59	
		iZ		13	56	
Oct 25	P	iPZ	11	54	49	Tu iP 11 53 54
	MW	ePZ			48	
	R	iPZ			44	
	T	ePZ?		55	02	
Oct 25	P	ePZ	13	17	28	Tu eP 13 17 41
	MW	ePZ			29	
Oct 25	P	ePZ	14	18	00	Tu eP 14 17 07
	MW	ePZ		18	02	
	R	iPNZ		17	56	
Oct 25	P	iPZ	15	17	55	Tu iP 15 18 27
	MW	iPZ			57	e 20 27
Oct 26	P	eSNZ	02	12	36	Normal Tu iP 02 09 20
	MW	eSZ			39	eS 10.9
	R	ePZ		10	05	
		eSNEZ		12	21	
	T	iPZ		10	48	
		eNZ		14	10	
Oct 26	P	iPZ	04	51	39	Normal. Tu eP 04 53 02
		iNEZ			42	
		iSE		52	39	Felt extensively in the
	MW	iPNEZ		51	40	region of San Francisco, Bay
	R	iPNEZ			46	Minor damage at San José
	SB	iPNEZ			28	
	T	iPNZ			21	
		iSNZ			50	
	H	ePNE			26	
	Pr	ePZ			57	
Oct 26	P	iPZ	10	16	14	Tu iP 10 16 34
	R	ePZ			15	
	T	iPZ			24	
Oct 26	P	iPZ	12	00	30	Normal. Felt in the region
	PX	eSE		01	58	of Clear Lake, northern
	MW	ePZ		00	33	California.
		eSZ		01	54	
	R	ePZ		00	37	
	T	iPZ			08	
	H	ePNE			21	
Oct 27	P	ePNEZ	06	46	28	Tu eP 06 46 37
	MW	ePNZ			29	i 57
	R	ePZ			28	
	LJ	ePZ			33	
Oct 27	P	ePZ	16	24	47	Normal. Tu e 16 29 38
		eZ		29	00	
	PX	eLZ		57		
	MW	ePZ		24	46	
		eZ		28	50	
	R	ePZ		24	51	
	T	ePZ			38	
Oct 28	P	iPZ	00	47	55	Tu iP 00 48 20
	R	ePZ			58	
	T	iPZ		48	04	
Oct 28	P	ePZ	09	53	30	Tu e 09 54 34
		iZ		57	50	
	MW	ePZ		53	28	
	R	ePZ			27	
		eZ			41	
	T	ePZ		52	58	

Date	Sta.	Phase	h	m	s	Remarks
Oct.29	P	iPNEZ	08	39	40	Tu iP 08 40 18
		iZ		40	05	
	MW	iPZ		39	41	
	R	ePZ			43	
	T	iPNZ			27	
		iZ			52	
Oct.29	PX	eLNEZ	17	43.2		Normal. Tu eP 17 39 50
						iS? 41 13
						Foreshock 20 m earlier.
Oct.30	T	ePZ	23	13	53	Tu eP 23 12 42
		iZ		14	05	
	Pr	eZ?		13	26	
		i(P)Z			40	
Oct.31	P	iPZ	04	23	09	Tu iP 04 23 36
	MW	iPZ			10	e 24 08
	T	iPZ			20	
Oct.31	P	iPZ	13	12	39	Normal. Tu eP 13 13 20
		iSNEZ		13	03	33°47'N.116°12'W.,
	MW	ePZ		12	39	O=13:12:10
	R	iPZ			30	Felt at Indio and Thermal.
		iSZ			43	
	LJ	iPNZ			34	
		iSNZ			51	
	H	ePNE		13	02	
	Pr	iPZ			25	
Oct.31	R	iPZ	15	49	04	Tu eP 15 49 23
Nov. 2	MW	ePZ	00	31	52	Tu iP 00 30 57
	R	ePZ			48	
	Pr	iPZ			40	
Nov. 2	P	iPZ	00	58	34	
	MW	iPZ			35	
	R	ePZ			37	
	Pr	ePZ			38	
Nov. 2	P	ePZ	17	51	20	Normal. Tu eP 17 51 54
		iEZ			22	Felt in San Diego and
		iSNE			48	Imperial Counties.
	MW	iPZ			20	Aftershock of Oct.21,1942
	R	iPNEZ			09	32°58'N.116°00'W.,
		iSNEZ			32	O=17:50:41
	LJ	iPNEZ			02	Preceded and followed by
		iSNEZ			14	smaller shocks from the
	H	iPNE			50	same epicenter.
	Pr	iPZ		50	58	
Nov. 2	P	eP"Z	18	27	06	Normal. Tu eP" 18 27 03
		iP"Z			12	Pasadena distant 119°.
	PX	ePPEZ		28	38	We find:
		eSKSNE		34	13	58 1/4°S.25°W.,
		ePSEZ		38	13	O=18:08:24
		iSSNE		45	29	Major earthquake (magnitude 7
		eGNE		59.0		
	MW	eP"Z		27	08	
	R	iP"Z			02	
		iP"Z			20	
	Pr	iP"Z		26	40	
Nov.2	P	eP"Z	19	07	24	Tu iP 19 07 14
		ePPZ		08	52	ePP 08 21
	MW	eP"Z		07	23	Aftershock?
	R	iP"Z			24	
Nov. 2	R	iPZ	23	01	38	Tu eP 23 02 19
	LJ	ePZ			48	
	Pr	iPZ			46	
Nov. 3	P	iPZ	02	03	06	
	MW	ePZ			07	

Date	Sta.	Phase	h	m	s	Remarks
Nov. 3	P	eZ	08	31	13	Tu i(P) 08 31 49
	MW	eZ		30	11	Two shocks?
		iZ		31	13	
	R	eZ		30	22	
		iZ		31	16	
		eZ			41	
	Pr	eZ			21	
Nov. 3	P	iPNEZ	14	39	09 d	Normal. Tu iP 14 39 48
		iPPZ		40	33	Alaska
	PX	eSN		44	15	Major earthquake (mag 7.4)
		iNZ			29	USCGS: 62°N.151°W.,
	P	iScPZ		45	28	O=14:32.3
	PX	iLNE		47.2		
	MW	iPNZ		39	09	
		iZ			47	
		iPPZ		40	31	
		eN		44	42	
		iScPZ		45	31	
	R	iPNEZ		39	13	
		eN		44	45	
		iScPZ		45	25	
	LJ	ePEZ		39	23	
		eN		45	06	
	T	ePNE		38	49	
		eN		44	01	
	H	iPNE		38	57	
		eN		44	08	
	Pr	iPZ		39	18	
Nov. 3	P	iPZ	15	14	15	
	MW	iPZ			14	
	R	iPZ			17	
Nov. 3	P	iPNEZ	22	12	14	Tu eP 22 11 32
		iNZ			22	i 42
	MW	ePZ			13	i 51
		iNZ			22	
	R	iPZ			08	
		iZ			17	
	T	ePNE			30	
	Pr	ePZ			03	
		iZ			12	
Nov. 4	P	iPZ	06	03	22	Tu iP 06 03 45
	MW	iPZ			23	
	R	ePZ			25	
	T	ePNE			29	
	Pr	iPZ			25	
Nov. 4	P	iPEZ	06	19	23	Normal. Tu eP 06 20 00
	PX	eSNEZ		27.2		i 09
		eLZ		36.2		Kurile Islands
	MW	iPZ		19	24	
		iNZ			31	
	R	iPZ			27	
	LJ	iPZ			41	
	T	ePNE			09	
	H	ePNE			17	
	Pr	ePZ			33	
		iZ			40	
Nov. 4	P	eZ	07	04	32	Normal. Tu e 07 04 23
	PX	eZ		05	51	e 05 21
		eNEZ		06	04	Very distant?
		eZ		15.8		
		eNEZ		22.7		
		eLZ		46		
	MW	eZ		04	31	
		eZ		05	58	
	R	eZ		04	30	
	Pr	ePZ			28	
		eZ		05	52	

Date	Sta.	Phase	h	m	s	Remarks
Nov. 5	P	iPZ	04	09	24	Deep? Tu eP 04 09 42
		eZ			40	
		iZ			47	
	MW	ePZ			24	
		eZ			40	
	R	eZ			43	
	Pr	iPZ			25	
		eZ			42	
Nov. 5	P	iPZ	08	47	35	Tu eP 08 47 04
		iNEZ			51	i 19
		iZ			59	i 29
	MW	ePZ			36	
		iZ			52	
	R	ePZ			32	
		iZ			48	
		iZ			57	
	T	eZ		48	05	
	H	eNE			04	
Nov. 5	P	ePZ	09	29	10	Tu eP 09 29 48
		iZ			32	
	MW	iPZ			10	
	R	ePZ			11	
	Pr	ePZ			19	
Nov. 5	P	iPZ	10	43	08	Tu iP 10 43 07
		eZ		45	35	i 16
	PX	eLZ	11	04.7		i 45 28
	MW	iPZ	10	43	07	
		eZ		45	30	
	R	ePZ		43	06	
	LJ	ePZ			12	
	T	ePNE		42	53	
	H	iPNE			57	
	Pr	iPZ		43	11	
		iZ			20	
Nov. 5	P	ePZ	11	02	42	Tu eP 11 03 15
	MW	iPZ			43	
		iZ		03	05	
	R	ePZ		02	44	
	Pr	ePZ			49	
Nov. 6	P	iPZ	06	34	07	Normal?
		iZ			18	Region of 16°S.176°E.,
	PX	eLN		54.7		O=06:21.8
	MW	ePZ		34	08	
	R	ePZ			09	
	Pr	iPZ			09	
Nov. 6	P	iPZ	07	48	50	
	MW	iPZ			51	
	R	iPZ			46	
	Pr	iPZ			45	
Nov. 6	P	ePZ	08	45	58	Normal.
		iP"Z		49	36	Pasadena distant 108°
	PX	ePPZ		50.6		Major earthquake
		eZ		57	00	(magnitude 7.6)
		eNE			10	USCGS: 5.5°S.134°E.,
		iSN		58.6		O=08:31.6
		iPSE		59	03	
		iPPSEZ	09	00	18	
		iSSN		06.2		
	P	eP:P:Z		09	42	
	PX	iGN		16.4		
	MW	iPZ	08	45	59	
		iP"NZ		49	35	
		eP:P:Z	09	09	40	

(continued)

Date	Sta.	Phase	h	m	s		Remarks
				(Continued)			
Nov. 6	R	iPZ	08	46	05		
		iPPZ		50	48		
		eP'P'Z	09	09	25		
	LJ	eNEZ	08	46	19		
	T	eNE		46	19		
	H	iPNE			15		
	Pr	ePZ			08		
		eP'P'Z	09	09	55		
Nov.6	P	iZ	20	59	42		Tu eP 20 58 39
	MW	ePNZ			29		
		iZ			42		
	T	eN			45		
	Pr	ePZ			21		
		iZ			35		
Nov.7	P	iPNEZ!	06	47	02	c	Deep? Tu iP 06 47 25
	MW	iPNZ			03	c	i 30
	R	iPNZ			04	c	i 48 14
	LJ	iPNEZ			02		Near Apia which reports:
	T	iPNE			11		P 06 38 18
	H	iPNE			11		S? 39 29
	Pr	iPZ!			05	c	
Nov.7	PX	eLZ	09	18			Normal. Tu eP 08 44 33
Nov.8	P	iPNEZ	06	30	14	c	Deep? Tu eP 06 30 32
		iZ			19		ePP 34 28
		iZ			34		Northern Solomon
		iZ			41		Islands?
		ePPZ		33	53		
	PX	eLZ		59			
	MW	iPNZ		30	15	c	
	R	iPZ			17	c	
		iZ			36		
		iZ			43		
	LJ	ePZ			19		
	T	iPNEZ			16		
		iZ			24		
		eZ			30		
		iZ			36		
	Pr	iPZ			19	c	
		iZ			34		
		iZ			38		
		iZ			43		
Nov.8	P	iPZ	07	09	39		Normal. Tu iP 07 09 43
		eZ			43		i 52
	PX	eLE		28			
	MW	iPNZ		09	38		Pasadena: 81°N.2.5°E.,
	R	ePZ			38		O=06:59:18
	T	iPZ			17		
	H	iPZ			24		
	Pr	ePZ			41		
Nov 8	P	iPZ	21	52	56		Tu iP 21 53 22
	MW	iPZ			58		
	R	ePZ		53	01		Near Apia which reports::
	T	iPZ			07		P 21 42 20.5
	Pr	iPZ			00		S 54.6
Nov.8	P	ePZ	22	42	41		Normal.
	PX	eLZ	23	13.2			Southwest Pacific
	MW	iPZ	22	42	42		
	R	ePZ			44		
	Pr	eZ		43	00		
Nov.9	P	iPNEZ	11	57	39	d	Deep? Tu iP 11 58 13 d
		iZ			48		i 22
		iZ			56		i 34
		iSNEZ	12	06	42		i 42
		iE		07	16		Approximately 44°N.148°E.,
		eE			32		O=11:46:30
	PX	eLEZ		18.4			
	P	eP'P'Z		25	52		

(Continued)

Date	Sta.	Phase	h	m	s		Remarks
				(Continued)			
Nov.9	MW	iPZ	11	57	39	d	
		eSN	12	06	43		
		eP'P'Z		25	43		
	R	iPNEZ	11	57	43	d	
		iZ		58	04		
		eP'P'Z	12	25	33		
	LJ	iPZ	11	57	48	d	
		eZ		58	08		
	T	iPNEZ		57	28	d	
		eP'P'Z	12	25	55		
	H	iPNEZ	11	57	32	d	
	Pr	iPZ!			47		
Nov.11	P	iPNEZ	01	03	52	c	Deep? Tu iP 01 04 12 c
		ipPZ		05	53		epP 06 18
		isPZ		07	15		eP'P 30 16
		eSKP'P'Z		32	47		North of New Zealand;
	MW	iPZ		03	52	c	depth about 550 km.
		eSKP'P'Z		32	45		
	R	iPNZ		03	54	c	
		epPZ		05	55		
	LJ	iPZ		03	53	c	
	T	iPZ		04	01	c	
	H	iPNEZ		03	59	c	
	Pr	iPZ!			55	c	
		ipPZ		06	00		
Nov.11	Pr	ePZ	02	43	55		Tu iP 02 44 12
Nov.11	P	ePZ	02	57	04		Tu eP 02 57 51
	MW	iPZ			05		i 55
	R	iPZ			08		Hawaii?
	T	iPZ			11		
	Pr	iPZ			13		
Nov.11	Pr	iPZ	03	25	33		Tu iP 03 25 52
Nov.11	P	iPNEZ	04	57	58	c	Tu iP 04 58 25
	MW	iPZ			58	c	Southwest Pacific
	R	iPZ		58	01	c	
	LJ	ePZ			00		
	T	iPZ			02	c	
	H	iPNEZ			02	c	
	Pr	iPZ!			02	c	
Nov.11	P	iPZ	17	37	03		
	MW	iPZ			05		
	R	ePZ			08		
	T	ePZ			07		
	Pr	iPZ			09		
Nov 11	P	iPNEZ	18	56	35		Tu e(P) 18 55 22
		eZ		57	12		iP 57 02
	MW	iPZ		56	35		Two shocks?
		eZ		57	12		
	R	iPZ		56	38		
		eZ			58		
	T	iPZ			27		
		eZ		57	02		
	H	iPZ		56	30		
	Pr	iPZ			42		
		eZ		57	06		
Nov.12	P	iPNEZ	02	27	15		Tu iP 02 27 40
	MW	iPNZ			16	c	i 55
		eZ			32		
	R	iPZ			19		Southwest Pacific
	LJ	ePZ			15		Suva reports
	T	iPNEZ			26	c	e 02 17 47
	H	iPNEZ			23	c	
		eZ			34		
	Pr	iPZ			19	c	

Date	Sta.	Phase	h	m	s	Remarks
Nov.12	P	iPNEZ	05	22	48 c	Deep? Tu iP 05 23 18 c
		eZ		24	24	i 24 10
	MW	iPNZ		22	49 c	iPP 26 55
		eZ		26	06	Northern Japanese region
	R	iPZ		22	50	
		eZ		24	33	
	LJ	iPZ		22	55	
	T	iPNEZ			41 c	
		iZ		24	19	
	H	iPNEZ		22	44 c	
	Pr	iPZ!			55 c	
		iZ		24	37	
		eZ		25	21	
Nov.12	P	iPNEZ	07	29	37	Tu eP 07 30 06
	MW	iPNZ			37	New Britain?
	R	iPZ			39	
	LJ	ePZ			41	
	T	iPZ			36	
	H	ePZ			37	
	Pr	iPZ			42	
Nov.12	P	iPZ	12	17	06 d	Tu iP 12 17 30 d
	MW	iPZ			06 d	Tonga region?
	R	iPZ			09	
	T	ePZ			15	
	Pr	iPZ			09 d	
Nov.13	PX	eLZ	11	36	5	Normal. Tu eP 11 07 08
	MW	eZ?		06	14	
Nov.13	PX	eLZ	15	58	5	Normal. Tu eP 15 29 30
	Pr	ePZ		29	32	
Nov.13	P	iZ	16	56	38	Normal. Tu eP 16 56 30
	Px	eLZ	17	24	2	
	MW	ePZ	16	56	30	
	R	ePZ			28	
	Pr	ePZ			27	
Nov.13	P	iPEZ	18	56	42	Normal. Tu eP 18 57 05
		iZ			47	i 12
		iPPNEZ	19	00	03	ePP 19 00 45
	PX	iSE		07	12	
		eSSZ		13	1	Pasadena: 20°S 170°E,
		eLZ		23	0	O=18:43:59
		eLZ	20	54		
	MW	ePZ	18	56	42	
		iZ			50	
	R	ePZ			44	
	SB	ePZ			38	
	LJ	eNEZ			46	
	T	iPZ			51	
	H	ePNEZ			49	
	Pr	ePZ			45	
		iZ			52	
Nov.14	P	ePZ	04	04	01	Deep? Tu eP 04 04 26
		iNEZ			32	i 57
		ePPZ		07	20	Southwest Pacific
	MW	iPZ		04	00	
		iNZ			34	
	R	ePZ			02	
		iZ			36	
	LJ	eZ			34	
	T	ePZ			02	
		eZ			37	
	H	eZ			38	
	Pr	iPZ			05	
		iZ			37	
Nov.14	P	ePNEZ	04	29	28	Tu eP 04 28 55
	MW	ePZ			28	
	R	e(P)Z			27	
	T	ePZ			39	
	Pr	ePZ			16	

Date	Sta.	Phase	h	m	s	Remarks
Nov.14	P	iPZ	10	02	22	Normal? Tu eP 10 01 34
		iZ			29	i 41
	MW	ePZ			22	
	R	iPZ			16	
	LJ	eZ			19	
	T	eZ			43	
	Pr	ePZ			11	
		iZ			19	
Nov.14	P	iPZ	12	59	42	Tu iP 13 00 25
	MW	ePZ			43	
	R	iPZ			46	
		eZ			58	
	H	ePZ			28	
	Pr	iPZ			53	
Nov.14	MW	ePZ	18	50	52	Tu iP 18 51 39
	R	iPZ			57	
	Pr	iPZ		51	04	
Nov.15	P	ePZ	00	02	11	Part of following?
	MW	ePZ			13	
	R	iPZ			14	
	Pr	ePZ			16	
Nov.15	P	iPNEZ	00	05	55 c	Tu eP 00 06 08
		eZ		06	38	e 07 17
		eZ		07	44	Very distant?
	MW	iPZ		05	55 c	
		eZ		06	29	
		eZ			41	
	R	iPZ		05	56	
		iZ		06	55	
	LJ	ePZ		05	58	
		iNZ		06	46	
	T	iPZ		05	54	
		eNZ		06	37	
	H	iPZ		05	55 c	
	Pr	iPZ		05	57	
		iZ		06	36	
		iZ		07	03	
Nov.15	P	eZ	06	01	07	Tu eP 06 00 19
		iZ			12	i 29
	MW	eZ		00	58	
		iZ		01	08	
	R	ePZ		00	54	
		eZ		01	07	
	Pr	eZ		00	57	
Nov.15	P	ePZ	21	05	58	Tu eP 21 06 24
	PX	eLZ		32		Southwest Pacific
	MW	ePZ		05	57	
	R	ePZ		06	01	
	T	iPZ			06	
	Pr	iPZ			02	
Nov.16	P	ePZ	05	35	53	Normal? Tu eP 05 35 32
	PX	eLZ		58		Southwest Pacific?
	MW	ePZ		35	54	
	R	ePZ			53	
	T	ePZ		36	08	
	H	eZ			06	
	Pr	ePZ		35	45	
Nov.16	P	iPNEZ	11	48	32 c	Deep? Tu iP 11 47 55 c
		iE			47	i 48 14
		iNZ			52	i 55
		iSNEZ		57	16	eP:P: 12 17 15
	PX	eLZ	12	09		Pasadena: 15°S 74°W,
	P	eP:P:Z		17	22	O=11:37:55
	MW	iPNEZ	11	48	33 c	h= 70 km?
		iPPZ		50	54	
		eP:P:Z	12	17	21	

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
						(Continued)
Nov. 16	R	iPZ	11	48	30 c	
		iZ			47	
	SB	ePNEZ			40	
	LJ	iPNZ			25 c	
	T	iPNEZ			47 c	
	H	iPNEZ			41 c	
	Pr	iPZ!			25 c	
		iZ			44	
		ePPZ	12	17	32	
Nov. 16	PX	eLZ	17	30		
Nov. 17	R	ePZ	08	31	33	Tu eP 08 32 13
	H	ePZ		31	07	i 23
	Pr	ePZ			38	
Nov.17	P	iPNEZ	11	29	04 c	Normal Tu eP 11 29 57
		iSNE			20	Felt in and about San
	MW	iPNEZ			03 c	Gorgonio Pass
		iSNEZ			19	33°55'N.116°42'W.,
	R	iPNEZ		28	53 c	O=11:28:41.
		iSNE		29	01	Magnitude 4.5
	SB	iPNZ			23	
	LJ	iPNEZ			03 d	
		iSNEZ			18	
	T	iPNEZ			34	
	H	iPZ			20	
	Pr	iPZ		28	55 d	
Nov 17	P	iPEZ	15	09	08 c	Deep Tu eP 15 09 38 d
		iZ		10	09	i 39 c
		iZ		11	05	iPP 13 11
		iPPZ		12	22	eSKPP 38 14
		iSNE		18	54	Japan 34°N.138°E.
	MW	iPNZ		09	09 c	O=14 57.3
		eSN		18	55	
	R	iPNZ		09	12 c	
		eZ		10	27	
		eSKPP'Z		38	22	
	SB	iPNEZ		09	03 c	
		eSE		18	42	
	LJ	iPNEZ		09	16 c	
		eZ		10	44	
		eSNE		19	05	
	T	iPNEZ		09	00 c	
		ePPZ		11	45	
		eSE		18	37	
	H	iPNEZ		09	04 c	
		iZ		10	42	
		eSNE		18	44	
		eSKPP'Z		38	34	
	Pr	iPZ		09	16 c	
		iZ		11	08	
		eZ		12	17	
		iSKPP'Z		38	26	
Nov.17	P	iPZ	18	51	05 d	
		iZ			16	
	MW	iPZ			07 d	
	R	iPZ			09 d	
	T	iPZ			08	
	Pr	iPZ			10 d	
Nov.18	T	iPZ	07	24	26	Tu iP 07 25 03
Nov.18	P	iPZ	18	32	25	Tu iP 18 32 51
	MW	ePZ			24	Near Apia, which reports:
	R	iPZ			25	P 18 21 31
	T	iPZ			35	S 51
	H	ePZ			34	
	Pr	iPZ			28	

Date	Sta	Phase	h	m	s	Remarks
Nov. 18	P	iPZ	18	50	01	Normal Tu iP 18 50 26
		eZ		53	24	e 54 13
	PX	eLZ	19	16		New Britain?
	MW	iPZ	18	50	01	
	R	iPZ			04 c	
	T	iPZ			06 c	
	H	iPZ			05	
	Pr	iPZ			05 c	
Nov 18	P	iPNEZ!	22	01	57 d	Deep. Tu iP 22 01 23 d
		eZ		03	12	i 43
		eZ			42	South America
	PX	iSN		13	22	
	MW	iPNZ		01	58 d	
		eZ		03	16	
	R	iPEZ		01	55	
		eZ		03	19	
	SB	ePNEZ		02	05	
	LJ	iPNEZ		01	50	
	T	iPNEZ		02	09 d	
		iZ		03	19	
		eSN		13	44	
	H	iPNEZ		02	05 d	
		eSN		13	38	
	Pr	iPZ		01	51 d	
		iZ		03	09	
Nov.19	MW	iPZ	00	38	44	Tu eP 00 37 58
	R	eZ?			36	
	Pr	ePZ			35	
Nov 19	MW	iPZ	00	45	03	Tu eP 00 44 17
	R	ePZ		44	58	
Nov.19	P	iPZ	02	03	06	Tu iP 02 03 26 c
	MW	iPZ			07 c	
	R	ePZ			09	
	T	ePZ			16	
	Pr	iPZ			08	
Nov.19	P	ePNEZ	05	17	22	Deep? Tu iP 05 16 52
		eZ			51	i 17 22
		eZ		18	04	
	MW	iPZ		17	23	
		iZ			52	
		iZ		18	04	
	R	iPZ		17	20	
		iZ			49	
		iZ		18	03	
	T	iPZ		17	34	
		iZ		18	04	
		iZ			17	
		eZ		18	40	
	H	iPZ		17	30	
		iZ		18	00	
	Pr	iPZ		17	16 d	
		eZ			34	
		iZ			45	
		iZ			58	
Nov.19	MW	ePZ	20	40	26	Tu eP 20 40 56
	R	ePZ			27	
	Pr	ePZ			31	
Nov.19	P	iPZ	23	53	01 c	Deep? Two shocks?
		eZ			25	Tu eP 23 53 31
	PX	eLZ	24	20		i 54
	MW	iZ	23	53	28	e 57 23
	R	eZ		53	32	e 24 13 51
	T	iPZ		52	54	Some readings may pertain
		iZ		53	35	to a shock reported by
		iZ		54	09	Apia as follows:

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
				(continued)		
Nov.19	H	eZ	23	53	35	(Apia) P 23 42 34
	Pr	iPZ			07	S 50
		iZ			32	
Nov.20	P	iPNZ	07	18	45	Normal? Tu eP 07 19 10
		iZ			59	i 19
		eLZ		43		Near Apia, which reports
	MW	iPZ		18	44	P 07 07 52
	R	ePZ			48	S 08 12
	T	iPZ			54	
	H	ePNEZ			54	
	Pr	iPZ			48	
Nov.20	P	iPNEZ	08	30	07	Normal? Tu eP 08 29 11
	PX	eLZ		35.4		i 24
	MW	iPZ		30	08	
	R	ePZ		29	59	
	SB	ePZ		30	23	
	T	ePNEZ			33	
	H	ePNEZ			23	
	Pr	iPZ		29	53	
Nov.20	P	ePNZ	19	04	37	Normal. Tu eP 19 04 10
	PX	iSN		10	57	Southeast Pacific?
		iLNE		14	30	
	MW	iPEZ		04	39	
	R	iPNZ			35	
	SB	ePZ			45	
	T	ePZ		05	02	
	H	ePEZ		04	53	
	Pr	iPZ			28	
Nov.20	P	ePZ	20	09	34	Normal? Tu eP 20 09 05
		iZ			49	Southeast Pacific?
	PX	eLZ		19		
	MW	iPZ		09	35	
	R	ePZ			30	
	T	ePZ			50	
	Pr	iZ			38	
Nov.21	P	iPNEZ	19	47	15	Normal. Tu iP 46 16
	PX	eSNE		51.8		Mexico
		eLZ		54.8		
	R	iPNEZ		47	11	
		iZ			21	
	SB	ePZ?			18	
		eZ			34	
	LJ	ePNZ			03	
	T	ePNZ			33	
	H	iPNEZ			25	
	Pr	iPZ			05	
		iZ			13	
Nov.21	R	iPZ	21	12	08	Tu iP 21 11 14
Nov.23	MW	iPZ	01	15	01	Tu iP 01 15 24
	R	iPZ			04	
	T	ePZ			08	
	Pr	iPZ			07	
Nov.23	MW	iPZ	07	48	20	Tu eP 07 47 26
	Pr	iPZ			09	
Nov.24	PX	eLNE	07	38		Normal
Nov.24	P	ePZ	13	30	58	Normal. Tu e 13 34 19
		eZ		33	45	ePP 35 40
		eZ		34	44	
		iPPZ			58	Formosa?
		iZ		37	39	Pasadena distant about 99°
	PX	eSSNE		49.4		Origin time about 13:17.3
		eLNE		56.4		
	T	ePZ		30	58	

Date	Sta.	Phase	h	m	s	Remarks
Nov.24	P	iPZ	16	42	04	Tu iP 16 42 28
	R	ePZ			07	
	Pr	iPZ			07	
Nov.25	P	iZ	07	08	06	
	MW	iZ		07	58	
		iZ		08	07	
	R	eZ		07	52	
		iZ		08	09	
	T	eZ?		07	54	
		iZ		08	12	
	Pr	eZ		07	51	
		iZ		08	11	
Nov.25	P	iZ	22	27	30	Tu eP 22 26 50
		iZ			37	i 27 02
	MW	eZ			27	
	Pr	eZ			22	
		iZ			29	
Nov.26	P	eP"Z	21	44	15	Deep? Tu eP" 21 44 23
		iP"Z			23	i 34
		iPPZ		46	37	i 47 15
		iSKPNEZ!		47	34	iSKP! 55
		iZ		48	32	e 48 55
		iZ		49	17	eSKKP 56 49
	MW	eP"Z		44	14	Sumatra? Pasadena distant
		iP"NZ			23	about 130°
		iPPZ		46	38	O - 21: 25.4
		iSKPNZ!		47	34	No surface waves
	R	eP"Z		44	17	
		iP"NZ			23	
		iSKPNEZ		47	35	
	SB	iP"NZ		44	21	
		iZ		46	31	
		iSKPNZ		47	30	
	LJ	eP"NEZ		44	27	
		iSKPNEZ		47	40	
	T	iP"NEZ		44	19	
		iSKPNEZ		47	27	
	H	iP"NEZ		44	20	
		iSKPNEZ		47	30	
	Pr	iP"Z		44	25	
		iSKPZ!		47	38	
Nov.26	P	ePZ	22	34	39	Normal. Tu eP 22 34 27
		ePPZ		38	45	i 36
	PX	iZ		39	04	Destructive in Turkey
		eNE		45.2		USCGS: 41°N 36°E, O=22:20.7
		ePSN		47.6		Kew: 41°N 35°E, O=22:20.5
	P	ePKKPZ		51	16	Major earthquake (magnitude
	PX	eSSN		54.6		7.5)
	P	eP'P'Z		59	05	
	PX	eGN	23	00.9		
		iLN		02	45	
		eL2N	24	07		
	MW	ePZ	22	34	31	
		iZ			39	
	R	ePZ			39	
	H	iZ			29	
	Pr	iPZ			42	
Nov.27	P	ePZ	19	56	24	Tu eP 19 56 48
		iZ			28	e 53
	MW	iPZ			25	Near Apia, which reports:
	R	ePZ			25	P 19 46.0
	T	ePZ			34	S 47.0
	H	eZ			35	
	Pr	iPZ			28	
Nov.28	PX	eLZ	07	04.0		Normal Tu i 06 39 08
	MW	eZ	06	38	14	East Indies?
	T	i(P)Z		34	02	Philippines?

Date	Sta.	Phase	h	m	s		Remarks
Nov.28	P	ePZ	17	21	20		Normal. Tu eP 17 21 57
	PX	eNE		29.5			Kamchatka
		eLZ		39.4			53°N.157°E.,
		eP P Z		50	53		O=17:11:09
	MW	ePNZ		21	21		
		eP P Z		50	49		
	R	ePZ		21	27		
	LJ	ePNEZ			33		
	T	ePZ			10		
	H	ePE			17		
	Pr	ePZ			31		
Nov.28	P	iPNEZ	21	54	45	d	Deep? Tu iP 21 55 04 d
		iZ		55	37		i 22
		eZ		58	05		Kermadec Islands
	MW	iPNZ		54	46	d	
		iZ		55	03		
		iZ			21		
	R	iPZ		54	47		
	SB	ePZ			43		
	LJ	ePNZ			46		
	T	iPNEZ			55		
	H	iPNEZ			54		
	Pr	iPZ			47		
Nov.28	MW	iPZ	22	50	00		Tu iP 22 50 18
	R	iPZ			02		Aftershock?
	Pr	iPZ			02		
Nov.28	P	iPZ	23	30	01		
	MW	iPZ			02		
	R	iPZ			04		
Nov.29	P	iZ	00	45	51		Tu eP 00 46 33
	R	iPZ			55		i 38
		eZ		46	00		
	Pr	ePZ?		45	59		
		iZ		46	03		
Nov.29	P	iPZ	10	18	51		Tu iP 10 18 18 d
	MW	iPZ			51	d	
	R	iPZ			50	d	
	T	iPZ		19	03		
	Pr	iPZ		18	44		
Nov.29	P	iPNEZ	19	49	04	c	Deep? Tu iP 19 48 32
		iZ			10		i 39
		iSNE		59	00		i 49 12
	PX	eLNEZ	20	15?			
	MW	iPNZ	19	49	04	c	Approximately
	R	iPNZ			00	c	29°S.68°W.,
	SB	ePZ			11		O=19:37.1
	LJ	iPNEZ		48	56		h=100 km
	T	iPNEZ		49	15	c	
		eSN		59	25		
	H	iPNEZ		49	07	c	
Nov.29	P	eZ	21	28	56		Normal? Tu eP 21 29 25
	PX	e(L)N		45.3			
	MW	ePZ		28	47		
		eZ			56		
	R	eZ			59		
	T	ePZ			35		
		eZ			47		
	Pr	eZ		29	03		
Nov.30	P	ePZ	14	27	55		Tu iP 14 28 20
	MW	iPZ			57		e 29 13
	R	ePZ			58		Southwest Pacific
	T	ePZ		28	12		Recorded at Suva
	H	ePZ			05		
	Pr	iPZ		27	58		

Date	Sta.	Phase	h	m	s		Remarks
Dec. 1	P	iPNEZ	06	18	26	c	Deep Tu eP 06 18 54
		iEZ			56		iPP 23 16
	PX	iPPEZ		22	27		e(PKKP) 34 53
		iSKSE		28	54		
		iSE		29	50		New Guinea
		eSSE		36.7			Pasadena: 4 3/4°S.144°E.,
		eLZ		49,8			O=06:04:55,
	MW	iPZ		18	27		h=120 km.,
		iZ		19	00		magnitude 7.2
		iPPZ		22	30		
	R	ePZ		18	28		
		eZ		19	01		
	LJ	ePN		18	30		
	T	ePEZ			28		
	H	ePNEZ			27		
	Pr	iPZ			33		
		iZ		19	05		
		iPKKPZ		35	46		
		iSKKPZ		39	40		
Dec 1	P	iPNEZ	10	46	01	d	Deep? Tu iP 10 45 24 d
		iZ			29		ePP 11 13 59
	PX	iSNEZ		55	20		i 14 41
		eLNE	11	03.4			USCGS: 20 2°S 68.1°W.
	MW	iPNEZ	10	46	01	d	O=10:34.7
		ePPZ	11	14	18		h=about 100 km
	R	iPNEZ	10	45	58	d	Pasadena: 19 5°S 69 8°W.
		eSNE		55	00		O=10:34:46
	SB	ePNZ		46	09		h=80 km
	LJ	ePNEZ		45	52		Magnitude about 7
		eSNE		55	01		
	T	iPNEZ		46	13	d	
		eSNE		55	38		
		ePPZ	11	13	51		
	H	iPNEZ	10	46	08		
		eSNE		55	29		
	Pr	iPZ		45	52	d	
Dec.1	P	iZ	14	05	08		Normal. Tu eP 14 04 53
		iSEZ		06	28		i 05 06
	MW	iPZ		04	44		iS 06 27
		iSZ		06	23		Nevada?
	R	iPZ?		04	39		
		iZ			59		
		iSZ		06	18		
	T	iPNEZ		04	39		
		iSNZ		05	43		
	H	iPZ		04	42		
		eSE		05	47		
	Pr	iPZ		04	55		
		iZ		05	05		
		iSZ		06	30		
Dec 1	MW	iPZ	14	49	47		Tu eP 14 49 14
		iZ			54		
	R	iPZ			42		
	T	ePZ		50	00		
Dec.2	P	iPNEZ	02	06	40	c	Normal? Tu iP 02 06 58
		iZ			46		i 07 05
		iZ			51		i 21
		iNZ			59		e 10 58
		eZ		10	21		ePKKP 24 35
	PX	iSNE		17	11		Very roughly 30°S.178°W.,
		eZ		26.4			O=01:54.1
		eLNE		29.3			
	MW	ePZ		06	41	c	
		iZ			48		
		iZ		07	01		
		ePKKPZ		24	43		

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
					(Continued)	
Dec. 2	R	iPNEZ	02	06	42 c	
		iNEZ			49	
		iZ			58	
		eZ		09	57	
		ePKKPZ		24	47	
	SB	ePZ		06	39	
		iZ			43	
		iZ			57	
	LJ	eNEZ		06	42	
	T	ePZ			47	
		eNE			53	
		iZ		07	12	
		eSN		17	39	
	H	eZ		06	49	
		iZ		07	05	
		eSN		18	17	
	Pr	iPZ		06	42 c	
		iZ			48	
		iZ		07	03	
		iPKKPZ		24	47	
Dec. 2	P	iPZ	02	31	18	Tu iP 02 31 42
	MW	iPZ			21	i 50
	T	ePZ			28	e 33 23
	Pr	iPZ			22	
Dec. 2	P	ePZ	05	22	44	Normal. Tu eP 05 23 06
		iZ		23	23	i 27 05
		eZ		25	52	i 32
		ePPEZ		26	41	Off Formosa
	PX	eLN		50		Pasadena: 24°N.122°E.
	MW	ePZ		22	40	O=05:08:55
		iZ		26	49	
	R	eZ			47	
	T	ePZ		22	37	
		eZ		26	29	
	Pr	ePZ		22	50	
		eZ		26	51	
		iZ			57	
Dec. 2	P	iPZ	15	37	17	Tu iP 15 38 27
		iZ			21	i 39
		iZ			33	
	MW	ePZ			17	
		iZ			23	
	R	ePZ			25	
		iZ			29	
	T	ePZ			23	
	H	iZ			32	
	Pr	eZ			30	
Dec. 3	P	iPZ	04	51	56	Normal. Tu eP 04 52 16
		ePPZ		55	28	ePP 56 13
	PX	eE		56	09	e 57 13
		iSNE	05	02	34	ePKKP 05 08 04
		eEZ		05.0		New Guinea
		eLN		19.3		Pasadena: 3°S.141°E.
		eLEZ		22		O=04:38:0
	MW	ePZ	04	51	55	
		iZ		52	09	
		ePPZ		55	24	
		eZ		57	10	
	R	ePZ		51	58	
		ePPZ		55	30	
	SB	ePZ		51	49	
	LJ	ePZ		52	10	
	T	ePZ		51	52	
		iZ		52	11	
		ePPZ		55	47	
		eZ		57	28	
	Pr	ePZ	04	52	01	
		ePPZ		56	17	

Date	Sta.	Phase	h	m	s	Remarks
Dec. 3	P	iPNEZ	07	04	15 c	Deep. Tu iP 07 04 48
		ipPZ			32	isP 05 14
		isPZ			41	Northern Japan.
		iSNEZ		13	38	Roughly 42°N.143°E.,
	PX	eLZ		26.1		O=06:52:50
	MW	ePNZ		04	14 c	h=60 km.
		ipPZ			30	
		isPZ			40	
		eSNZ		13	35	
	R	ePZ		04	17 c	
		isPZ			43	
		eSNE		13	42	
	SB	iPNEZ		04	08	
		eSN		13	23	
	LJ	iPNZ		04	23	
		eSN		13	52	
	T	ePNEZ		04	04	
		isPNEZ			29	
		eSNE		13	24	
	H	iPNEZ		04	10	
		ipPZ			25	
		iSNE		13	25	
	Pr	iPZ		04	23	
		ipPZ			39	
		isPZ			49	
Dec. 4	P	iPNEZ	20	15	13	Normal. Tu eP 20 16 54
		iSN		16	39	Felt at Colusa and
	MW	iPNZ		15	15	Sacremento
		iNZ		16	33	
	R	ePZ		15	21	
	T	iPNEZ		14	41	
		iSNEZ		15	39	
	H	iPZ		15	03	
		iSNEZ		16	08	
	Pr	iPZ		15	31	
Dec. 5	P	eEZ	03	34	39	Tu eP 03 34 27
	MW	ePZ			33	i 35 18
		iZ		35	03	
	R	eZ			02	
	T	ePZ		34	21	
	Pr	eZ		35	08	
Dec. 6	R	iPZ	06	28	59	Tu iP 06 29 10
	T	iPZ			57	i 32
	H	iPZ			57	e 32 22
Dec. 7	P	ePZ	01	13	14	Deep. Tu iP 01 12 19
		e(pP)Z			30	i 35
	PX	eLNE		21.8		i 16 31
		iScSN		23	46	Southern Mexico
	MW	iPZ		13	15	Tacubaya reports:
		iZ			32	eP 01 08 54
	R	ePZ			09	iS 10 26
		iZ			27	
	SB	eZ			50	
	LJ	ePN			03	
		eZ			18	
	T	ePZ			31	
		eScSN		23	36	
	H	eE		13	44	
		eScSNE		23	31	
	Pr	iPZ		13	02	
		iZ			20	
Dec. 7	P	iPZ	16	40	50	Tu iP 16 41 28
	MW	iPZ			51	
	R	iPZ			54	
	Pr	iPZ		41	00	

Date	Sta.	Phase	h	m	s		Remarks
Dec.8	P	iPNZ	09	24	29		Normal. Tu iP 09 23 34 d
	PX	eLZ		29.3			
	MW	iPZ		24	30		
	R	iPZ			28		
	SB	ePZ			43		
	H	ePZ			50		
	T	ePZ		25	00		
	Pr	ePZ		24	10		
Dec.8	P	iPNEZ	19	44	54	c	Normal? Tu iP 19 43 59
	PX	eSE		50	00		Mexico Tacubaya reports:
		eLNE		52.7			eP 19 40 32
	MW	ePZ		44	52	c	iS 42 07
	R	iPZ			48		
	LJ	ePNEZ			41		
	T	ePNEZ		45	11		
	H	ePZ			03		
	Pr	iPZ		44	41	c	
		iZ			52		
Dec.9	P	iPZ	03	28	25		Tu iP 03 29 04
		iZ			52		
	MW	ePNZ			24		
	R	ePZ			28		
	H	ePZ			12		
	Pr	iPZ			36		
Dec.11	R	iPZ	01	01	50		Deep? Tu iP 01 01 28
	T	iPZ		02	14		e 44
		eZ			34		e 50
Dec.11	Pr	iPZ	16	35	48		Tu 16 35 20
Dec.12	R	ePZ	11	07	47		Tu iP 11 07 03
	Pr	iPZ			43		
Dec.12	MW	eZ	16	12	10		Tu e 16 13 14
		eZ		13	03		
		eZ			50		
	R	eZ		12	24		
		eZ		13	51		
	T	eZ		12	31		
	Pr	eZ			23		
Dec.13	P	iPZ	06	21	53		Deep? Tu iP 06 21 18
	MW	ePZ			52		e 44
	R	iPZ			49		e 22 13
	T	iPZ		22	04		
	Pr	iPZ		21	45		
Dec.13	PX	eZ	16	21	49		Normal.
		eZ		28.1			
		eLN		37.0			
		eLZ		42.6			
	MW	iPZ		11	41		
		eZ		12	45		
		eZ		13	35		
	R	eZ		12	31		
	T	ePZ		11	41		
	Pr	eZ			54		
		eZ		12	40		
Dec.14	P	ePZ	16	08.0			Normal. Tu iP 16 07 28
	PX	eLZ		37.8			
	MW	iPZ		07	59		
		eZ		14	52		
	R	iPZ		07	56		
	SB	eZ		08	32		
	LJ	ePZ		07	53		
	T	ePNEZ		08	12		
	H	ePNEZ			07		
	Pr	iPZ		07	52		

Date	Sta.	Phase	h	m	s		Remarks
Dec.14	P	iPNEZ	20	01	31		Tu iP 20 01 55
	R	iPZ			34		1 02 11
	SB	ePZ			26		
	LJ	ePZ			33		
	T	iPNEZ			38		
	H	ePEZ			36		
	Pr	iPZ			35		
Dec.15	MW	iPZ?	00	02	00		Tu iP 00 01 04
	R	ePZ		01	47		e 05 56
		eZ			55		
	T	ePZ		02	17		
	H	ePZ			19		
	Pr	ePZ		01	38		
Dec.15	P	iPZ	02	59	20		Tu iP 02 58 45
	MW	iPZ			20		i 55
	R	iPZ			16		
		iZ			26		
	T	iPZ			32		
	H	ePZ			28		
	Pr	iPZ			12		
Dec 16	P	iNEZ	18	09	11		Perhaps not seismic
		iNEZ		13	43		
Dec 16	P	iPZ	23	48	19		Tu iP 23 48 43
	MW	iPZ			21	d	
	T	iPZ			28		
	Pr	iPZ			23	d	
Dec.17	P	ePZ	14	06	47		Normal. Tu iP 14 07 15
	PX	eLN		31.3			i 23
	MW	ePZ		06	46		
		eZ			55		
	R	ePZ			49		
	Pr	ePZ			49		
		iZ		07	08		
Dec.17	MW	iPZ	15	08	53		Tu iP 15 09 10
	R	iPZ			54	d	
	H	iPZ?			36		
	Pr	iPZ			58	d	
Dec.17	P	iPZ	17	36	04		Tu iP 17 36 27
	MW	iPZ			04		
	R	iPZ			06		
	H	iPZ?		35	30		
	Pr	iPZ		36	08		
Dec.18	P	ePZ	07	57	43		Tu iP 07 58 13 d
	MW	ePZ			42	d	
	R	ePZ			44		
	Pr	ePZ			50		
Dec.18	P	iZ	12	53	20		Tu eP 12 52 44
	MW	ePZ		52	51		
		iZ		53	22		
	R	ePZ		52	47		
		iZ		53	18		
Dec.18	P	iZ	15	19	47		Tu i 15 20 16
	MW	iZ			44		
	R	e(P)Z			34		
		iZ			46		
	H	eZ			37		
Dec.18	R	eZ	16	42	13		Tu eP 16 42 44
		iZ			44		
	H	eZ			03		
Dec.18	P	ePZ	19	26	05		Normal. Tu eP 19 26 20
	PX	eLZ		59			
	MW	eZ		26	19		
	Pr	ePZ			05		
		eZ			17		
		eZ			28		
Dec.19	R	eZ	07	32	10		Tu eP 07 30 22

Date	Sta.	Phase	h	m	s		Remarks
Dec.20	P	iPZ	10	40	12		Tu iP 10 40 42
	MW	iPZ			11		i 44 28
	R	iPZ			14		e 59 42
	T	iPEZ			07	d	Two shocks?
	H	iPNEZ			10		
	Pr	iPZ			18		
		eZ		42	32		
		eZ		43	35		
		eZ		53	12		
		iZ		59	01		
Dec.20	P	iPNEZ	13	36	07	c	Deep. Tu iP 13 36 29 c
		eZ		37	30		i 46
	MW	iPNZ		36	08	c	e 38 38
	R	iPNEZ			09	c	Tonga region? Suva reports:
	LJ	ePNEZ			08		i 13 26 27
	T	iPNEZ			16		
		eZ			41		
		eZ		38	36		
	H	iPNEZ		36	13	c	
	Pr	iPZ			10		
		eZ		38	17		
		iZ			30		
		eZ		39	19		
Dec.21	P	iPNEZ	13	54	58		Normal? Tu iP 13 54 06
		eNEZ		56	59		i 29
	PX	iSNE	14	01	56		i 55 40
		eLNEZ		10			Off Venezuela
	MW	iPNZ	13	54	59		USCGS: 13°N.70.5°W.,
		iZ		55	08		O=13:46.4
		iNZ		56	58		
		eSN	14	01	53		
	R	iPNEZ	13	54	52		
		eZ		56	47		
		eSZ	14	01	44		
	SB	iPZ	13	55	08		
		eSN	14	02	06		
	LJ	iPNZ	13	54	50		
	T	iPEZ		55	05		
		eSNE	14	02	07		
	H	iPZ	13	55	01		
		eSN	14	02	03		
	Pr	iPZ	13	54	48		
		iZ		55	07		
		eZ		56	52		
Dec.21	MW	iPZ	14	04	33		Aftershock
	R	ePZ			29		Tu iP 14 03 43
	T	ePZ			43		
	Pr	iPZ			28		
Dec.21	MW	iZ	20	04	23		Tu iP 20 04 58
		iZ			39		e 05 12
	R	iPZ			27		
		iZ			41		
Dec.21	P	ePEZ	22	14	43		Normal? Tu iP 22 13 55
		iZ			50		
	PX	eLZ		30.0			
	MW	ePZ		14	44		
		iZ			49		
	R	ePZ			37		
	T	ePN		15	11		
	H	ePN		14	59		
	Pr	iPZ		14	32		

Date	Sta.	Phase	h	m	s		Remarks
Dec.22	P	iPNEZ	07	11	02	d	Deep. Tu iP 07 10 17
		ipPZ			33		ipP 47
		isPZ			42		South America
		iZ		12	06		Approximately 8°S.77°W.,
	PX	iSEZ		18	29		O=07:01:50, h=130 km.
		eLZ		28.2			
	MW	iPNEZ		11	02	d	
		ipPZ			31		
		isPZ			41		
	R	iPZ		10	57	d	
		ipPZ		11	27		
		isPZ			38		
	SB	iPZ		11	13		
	LJ	ePNE		10	54		
	T	iPNE		11	15		
		ipPZ			47		
		isPZ		12	02		
	H	iPEZ		11	11		
		ipPZ			41		
		isPZ			54		
	Pr	iPZ	07	10	53	d	
		ipPZ		11	24		
		isPZ			39		
Dec.22	P	iPNEZ	13	01	45	c	Normal? Tu iP 13 00 53
		iPPEZ		03	36		iPP 02 33
	PX	eZ		08	29		Colombia or Ecuador
		iSN			43		
		eLZ		16			
	MW	iPZ		01	45		
		iPPZ		03	39		
	R	ePZ		01	39		
		ePPZ		03	34		
	SB	ePZ		01	55		
	LJ	ePNE			44		
	T	iPZ			53		
	H	ePEZ			49		
	Pr	iPZ			33	c	
		ePPZ		03	28		
Dec.22	P	iPZ	15	51	01	c	Normal. Tu iP 15 51 38 c
		iSNE			29		34°20'N.115°48'W.,
	MW	iPZ			00	c	O=15:50:28
		iSNEZ			28		Bullion Mountains,
	R	iPNE		50	53	c	Mojave Desert.
		iSNE		51	10		Felt as far as Los Angeles;
	SB	ePZ			21		magnitude 5.3
		iZ			28		
		iSNZ		52	13		
	LJ	ePNEZ		51	01		
		iSNE			23		
	T	iPNZ			22	c	
		iSE		52	13		
	H	iPNZ		51	09	c	
		iSNE			47		
	Pr	iPZ		50	53		
Dec.23	P	iPZ	09	25	58	d	Tu iP 09 25 10
		iZ		26	24		i 27 01
		iZ		27	23		
	MW	iPZ		25	57	d	
		iZ		26	23		
		eZ		27	21		
	R	iPZ		25	52	d	
		iZ		26	08		
		iZ		27	07		
	T	iPZ		26	12		
		eZ		27	30		
	Pr	iPZ		25	48		
		iZ		26	13		

Date	Sta.	Phase	h	m	s		Remarks
Dec.23	P	iPZ	11	25	35		Tu eP 11 25 11
	MW	ePZ			36		
	R	ePZ			34		
	Pr	ePZ			30		
Dec.23	Pf	ePZ	14	53	53		Tu eP 14 53 25
Dec.23	P	iPEZ	16	04	42	c	Normal? Tu iP 16 03 49
		iPcPZ		06	12		iPcP 05 27
		iPPEZ			38		iZ 08 55
		iZ		08	25		USCGS: 13.3°N.70.4°W.,
	PX	eSNE		11	52		O=15:56.0
		eE		13	54		
		eLZ		18			
	MW	ePZ		04	41		
		iPcPZ		06	12		
		iZ		09	46		
	R	ePNE		04	39		
	SB	iPNEZ			53		
	LJ	iPNEZ			33		
	T	iPNEZ			49		
	H	iPNEZ			44		
		iPcPZ		06	13		
	Pr	iPZ		04	32		
		eZ		06	00		
		iZ			23		
		iZ		09	32		
		iZ		13	05		
Dec.23	P	iPZ	16	11	37		Tu iP 16 10 46
	T	ePZ			44		Aftershock
	Pr	iPZ			29		
Dec.23	P	iPZ	16	12	11		Tu iP 16 11 19
	MW	iPZ			10		Aftershock
	Pr	iZ			01		
Dec.23	MW	ePZ	16	30	32		Tu iP 16 29 43
	T	iPZ			40		Aftershock?
	Pr	iPZ			24		
Dec.23	P	ePZ	19	13	14		(Normal?) Tu eP 19 13 46
	PX	eSKSE		23	14		e 38 33
		iSZ		24.2			USCGS: 6°S.152°E.,
		ePSZ		25	05		O=19:00.1
		eGZ		37.4			JSA: 6.1°S.,154.6°E.,
	P	eP:P:Z		38	50		O=19:00:14
	MW	ePZ		13	15		Pasadena: 5.5°S.153.5°E.,
		eP:P:Z		39	05		O=19:00:10
	R	ePZ		13	18		h=50 km
	SB	ePZ			10		Major earthquake
	LJ	ePEZ			20		(Magnitude 7.4)
	T	ePZ			17		
		eP:P:Z		38	48		
	H	ePZ		13	21		
	Pr	iPZ			22		
		eP:P:Z		38	43		
Dec.23	P	ePZ	19	50	44		Aftershock
	MW	ePZ			42		
	R	ePZ			44		
	T	ePZ			43		
	Pr	ePZ			47		
Dec.23	P	iPNEZ	20	40	49	c	Tu eP 20 41 18
	MW	iPZ			50	c	
	R	iPZ			52		
	T	iPZ			50		
	Pr	iPZ			54	c	
Dec.24	P	ePZ	01	01	10		
	MW	ePZ			16		
	R	ePZ			19		
	T	ePZ			26		

Date	Sta.	Phase	h	m	s		Remarks
Dec.24	P	iPNEZ	01	08	53		Normal. Tu iP 01 08 01
		ePPZ		10	23		e(PP) 09 51
	PX	iSN		15	49		
		eLNE		25			13°N.71°W.,
	MW	ePZ		08	52		O=01:00.2
	R	ePZ			48		
		eZ		10	20		
	LJ	ePZ		08	43		
	T	ePZ		09	00		
		eSN		16	07		
	H	ePZ		08	57		
	Pr	iPZ			43	c	
Dec.24	P	ePNZ	02	01	04		Normal. Tu eP 02 01 37
		iNEZ			07		Pasadena: 6°S.156°E.,
	PX	eZ		17.2			O=01:48:09
		eZ		21.8			
		eLNZ		25.2			
	MW	ePZ		01	05		
	R	ePZ			11		
	SB	ePNEZ			01		
	LJ	iPNEZ			12		
	T	ePNE			09		
	H	ePZ			08		
	Pr	ePZ			09		
		iZ			13		
Dec.24	MW	ePZ	02	09	27		
	Pr	iPZ			27		
Dec.24	MW	ePZ	02	18	19		Tu eP 02 18 15
Dec.24	MW	ePZ	02	26	41		
	T	ePZ			43		
Dec.24	P	iPZ	03	30	49		
	MW	iPZ			49		
	R	ePZ			51		
	T	ePZ			50		
Dec.24	MW	ePZ	04	32	33		Tu eP 04 32 52
		eZ		34	52		
	T	ePZ?		32	42		
		eZ		34	55		
Dec.24	P	iPNEZ	05	10	55		Normal. Tu eP 05 11 24
	PX	eLZ		39			
	MW	iPZ		10	35		
	R	ePZ			57		
	T	ePZ			57		
Dec.24	MW	ePZ	06	09	48		
	T	ePZ			43		
Dec.24	MW	ePZ	09	01	02		Tu eP 09 02 56
Dec.24	P	iPNEZ	11	57	38		Normal. Tu eP 11 58 07
	PX	eLEZ	12	25			e 12 02 01
	MW	iPZ	11	57	39	c	
	R	ePZ			41		Pasadena: 5°S.155°E.,
	SB	ePZ			35		O=11:44:30
	LJ	ePZ			42		
	T	ePZ			41		
	H	ePZ			41		
Dec.24	P	ePZ	12	31	19		Tu iP 12 30 27
	MW	ePZ			20		
	R	ePZ			16		
	T	ePZ			29		
Dec.24	MW	ePZ	14	52	23		
	R	ePZ			32		
Dec.24	MW	ePZ	17	15	09		
Dec.24	P	ePZ	18	06	29		Normal. Tu eP 18 06 16
	PX	eLNZ		34.7			
	MW	ePZ		06	25		
	R	ePZ			24		
	H	ePZ			40		

Date	Sta	Phase	h	m	s		Remarks
Dec 24	MW	eZ	19	50	05		
Dec 24	P	iPZ	21	53	19		
	MW	ePZ			20		
	R	ePZ			23		
		iZ			27		
	Pr	ePZ			23		
		iZ			27		
Dec 25	P	iZ	00	47	06		
	MW	ePZ			02		
		iZ			07		
	R	ePZ			04		
		iZ			09		
	T	eZ			09		
	Pr	iZ			10		
Dec 25	P	iPNEZ	04	45	15		Normal. Tu eP 04 45 44
	PX	eLN	05	09			
	MW	iPZ	04	45	16		
	R	iPZ			20		
	T	ePZ			17		
		iZ			20		
	H	iZ			21		
	Pr	iPZ			20		
		iZ			49		
Dec 25	P	iPNEZ	08	20	12	c	Normal Tu iP 08 19 13
	PX	eLNEZ		22.2			Roughly 22°N 109°W.,
	MW	ePZ		20	13		O=08:17 5
	R	ePNZ			07		
		eZ		22	54		
	SB	ePZ		20	27		
	LJ	ePNZ		19	54		
		iZ		22	24		
	T	ePZ		20	46		
	H	iPNEZ			34		
	Pr	ePZ		19	54		
		iZ		22	36		
Dec 25	P	ePNZ	10	42	45		Normal. Tu eP 10 41 40
	PX	eLNE		45.2			Aftershock
	MW	ePZ		42	49		
	R	ePZ			45		
	H	ePZ		43	06		
Dec.25	PX	eLZ	12	43.2			Normal. Tu eP 12 15 45
Dec.25	MW	ePZ	19	54	31		Tu eP 19 55 02
	R	ePZ			30		
Dec.26	P	iPNEZ	05	02	02		Normal. Tu iP 05 01 00
	PX	iSE		05	46		Mexico
		eLNZ		08.6			
	MW	ePNZ		02	03		
	R	ePZ		01	53		
		eSNE		05	45		
	LJ	ePNEZ		01	44		
	T	iPNEZ		02	25		
	Pr	ePZ		01	50		
Dec.27	P	iPZ	04	08	01		Normal. Tu iP 04 08 18
	PX	eSNE		18	33		Near 36°S.175°W.,
		eLNEZ		31			according to Wellington
	MW	iPZ		08	03		
	R	iPZ			03		
	Pr	iPZ		07	59		
Dec 28	P	iPZ	12	05	03		Tu iP 12 05 29 d
	R	ePZ			06		Felt at Api , which reports
	T	ePZ			12		P=11:54:13, S=11:54:34
	Pr	iPZ			06		

Date	Sta	Phase	h	m	s		Remarks
Dec.29	P	eSNEZ	18	10	15		
	MW	eSZ			15		
	R	ePZ		08	56		
		eSZ		11	04		
	LJ	eSE		09	33		
	Pr	iPZ		08	23		
		iSZ		09	36		
Dec.29	P	iSNEZ	20	12	21		
	MW	eSZ			22		
	R	ePZ		11	11		
		iSZ		12	10		
	Pr	iZ		11	01		
		iSZ			43		
Dec.29	R	eZ	21	06	27		
	Pr	ePZ			08		
		i(S)Z		07	02		
Dec.29	P	iPZ	21	23	40		
	MW	iPZ			40		
	R	ePZ			44		
Dec.30	P	iPNEZ	06	37	27	c	Tu eP 06 37 59
		iZ		41	39		i 41 56
	PX	eLZ		07	06		Solomon Islands?
	MW	iPZ	06	37	27		
		iZ		41	40		
	R	ePZ		37	30	c	
		eZ		41	37		
		iZ			45		
	T	ePZ		37	29		
		eZ		41	49		
	Pr	iPZ		37	32		
		iZ		41	41		
		iZ			46		
Dec.30	P	iPNZ	06	49	43		Part of preceding?
	MW	iPZ			44		
	R	iPZ			48		
	T	iPZ			44		
	Pr	iPZ			48		
Dec.30	P	ePNZ	07	48	58		Normal. Tu eP 07 49 14
	PX	eLZ	08	17			Near 35°S ,175°W ,
	MW	ePZ	07	48	59		O=07:36.0
	R	iPZ		49	01		
	T	ePZ			07		
	H	ePZ			06		
	Pr	iPZ		48	58		
Dec.30	P	ePZ	10	32	01		Tu eP 10 32 19
	MW	ePZ			02		
	R	ePZ			04		
	T	ePZ			11		
	Pr	iPZ			02		
		iZ			13		
Dec.30	P	ePZ	22	15	58		Normal. Tu eP 22 16 20
	PX	eLEZ		28.2			New Britain?
	MW	iPZ		15	59		
	R	ePZ		16	00		
	Pr	ePZ			05		
		eZ			37		
Dec.31	Pr	iZ	09	34	46		Tu iP 09 34 03
		iZ		35	56		

C. F. Richter

Jan 1,1945

Appendix

Larger shocks of 1943

Epicenters, origin times, depths and magnitudes revised by B. Gutenber

	O	Lat.	Long.	Depth	Magnitud
Feb.22	09 20 45	17 3/4 N.	101 1/2 W.	Normal	7.5
Feb.28	12 54 33	36 1/2 N.	70 1/2 E.	210 km.	7
Mar. 9	09 48 55	60 S.	27 W.	normal	7.2
Mar.14	18 37 55	20 S.	69 1/2 W.	150 km.	7.2
Mar.21	20 35 43	5 3/4 S.	152 1/4 E.	normal	7.3
Mar.26	17 38 14	23 S.	176 1/2 W.	100 km.	6.9
Apr 6	16 07 15	30 3/4 S.	72 W.	60 km.	8
Apr 9	08 48 59	19 N.	146 E.	170 km.	7 0
May 2	17 18 09	6 1/2 N.	80 W.	normal	7.1
May 3	01 59 12	12 1/2 N.	125 1/2 E.	normal	7.3
May 25	23 07 36	7 N.	127 E.	normal	7.7
June 8	20 42 43	4 S.	102 1/2 E.	normal	7.4
June 9	03 06 19	2 1/2 S.	100 E.	normal	7.7
June13	05 11 49	42 3/4 N.	143 1/4 E.	60 km.	7.3
July11	02 10 25	32 1/2 S.	178 1/2 W.	180 km	7
July23	14 53 04	10 S.	109 E.	70 km.	7.2
July29	03 02 16	19 1/4 N.	67 1/2 W.	Normal	7 3/4
Aug. 1	16 18 41	20 S.	170 E.	230 km	7
Sept 6	03 41 30	53 S.	159 E.	normal	7 3/4
Sept10	08 36 56	35 N.	134 E.	normal	7 4
Sept14	02 01 12	22 S.	171 E.	60 km.	7.4
Sept14	03 47 15	22 S.	170 E.	60 km.	7.2
Sept14	07 18 08	30 S.	177 W.	60 km.	7.4
Oct 21	23 08 13	15 S.	177 1/2 W.	normal	7.0
Oct 23	17 23 16	26 N.	93 E.	normal	7.0
Oct 24	16 04 36	22 S.	174 W.	normal	7.0
Nov. 2	18 08 24	58 1/4 S.	25 W.	60 km.	7.0
Nov. 3	14 32 17	61 3/4 N.	151 W.	normal	7.4
Nov. 6	08 31 37	6 S.	134 1/2 E.	normal	7.6
Nov.26	22 20 36	41 N.	34 E.	normal	7.5
Dec. 1	06 04 55	4 3/4 S.	144 E.	120 km.	7.2
Dec. 1	10 34 46	19 1/2 S.	69 3/4 W.	80 km.	7
Dec.23	19 00 10	5 1/2 S.	153 1/2 E.	50 km.	7.4