



CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA CALIFORNIA

SEISMOLOGICAL LABORATORY

BULLETIN

APRIL-JUNE 1941

(PASADENA AND AUXILIARY STATIONS)

Pasadena and auxiliary stations, 1



From the ISC collection scanned by SISMOS

Date	Sta.	Phase	h	m	s	Remarks
Apr. 1	MW	iPZ	02	02	47	Tu e 02 04 56
	R	eZ		06	14	i 04 38
Apr. 1	P	iPNEZ	10	47	35	Normal? Tu iP 10 48 20
		iPPNEZ		48	49	i!
	PX	iSNE		52	54	USCGS: 56.0°N, 153.0°W.,
		iLNE		55	9	O=10:41.1
	MW	iPNEZ		47	34	JSA: 53.7°N, 155.7°W.,
	R	ePNEZ			39	O=10:40:55
	SB	iPZ			26	URSS: 52.1°N, 156.1°W.,
	T	iPNEZ			15	h=60 km.
	H	iPNEZ			21	
Apr. 1	R	iPZ	22	10	33	Tu iP 22 11 16
Apr. 2	P	iPNEZ	15	59	22	Deep. Tu iP 15 59 39
		iZ		16	00	e 16 00 38
	MW	iPZ		15	59	Wellington: 37°03.177' W.,
		iZ		16	00	O=15:46.9, h=40-100 km.
	R	iPZ		15	59	23
		eZ		16	00	21
		iZ			03	03
Apr. 2	T	ePZ	15	59	30	
	P	iPZ	18	16	15	Tu iP 18 16 46
	MW	iPZ			15	
	R	ePZ			17	
	T	iPZ			04	
	H	iPZ			09	
Apr. 3	P	iPNEZ	15	06	32	d Deep. Tu iP 15 05 58 d
		iPZ		07	26	Foreshock of the next
		iSNE		15	55	
		iN		16	25	
	MW	iPNEZ		06	32	d
		eZ		07	24	
	R	iPNEZ		06	28	d
		iZ		07	22	
	SB	ePNZ		06	38	d
		eZ		07	34	
	T	iPEZ		06	43	d
		eZ		07	38	
Apr. 3	H	iPNEZ		06	39	d
	P	iPNEZ	15	32	55	d Deep. Distance=74°; h=220 km.
		iPZ		33	57	Tu iP 15 32 20 d
		iSNEZ		42	17	iP'P' 16 00 30
		iNE!		43	57	ip'P' 16 01 25
		iP'P'Z	16	00	25	Felt in Chile at Taltal,
		ip'P'P'Z		01	28	Vallenar, and Copiapo.
		eSKPP'Z		03	37	USCGS: 25°S, 69°W., h=200 km.
	MW	iPNEZ	15	32	55	d
		iP'P'Z	16	00	25	
		eSKPP'Z		03	37	
	R	iPNEZ	15	32	51	d
		eSNE		42	12	
	SB	iPNEZ	15	33	04	d
		eSNE		42	29	
	T	iPEZ	15	33	06	d
		eSEZ		42	40	
		eP'P'Z	16	00	12	
		eSKPP'Z		03	31	
	H	iPNEZ	15	33	04	d
		eSNEZ		42	33	
Apr. 3	P	eP'P'Z	16	00	11	
		iPZ	16	16	19	Aftershock. Tu iP 16 15 44
	MW	iPZ			18	
	T	ePZ			29	
	H	ePZ			25	

Date	Sta.	Phase	h	m	s	Remarks
Apr. 3	P	ePZ	21	19	33	Tu iP 21 20 12
	MW	iPZ			35	
	R	ePZ			38	
Apr. 3	MW	iPZ	21	43	32	Tu iP 21 42 58 ^h
	R	iPZ			29	Aftershock of 15 ^h ?
Apr. 4	P	ePZ	04	07	02	Tu eP 04 06 39
	MW	iZ			09	
	R	ePZ			09	
Apr. 4	MW	iZ	09	21	15	Tu eP 09 21 26
	R	ePZ			04	
		eZ			15	
Apr. 4	MW	iPZ	11	36	43	Tu iP 11 36 08
	R	iPZ			38	
Apr. 4	P	iPZ	21	07	08	Tu iP 21 07 39 d
	MW	iPZ			09	
	R	iPZ			12	
	T	iPZ			02	
Apr. 6	MW	eZ	08	58	21	Tu iP 23 01 02
	R	eZ			19	Strong in El Salvador.
	T	eZ			22	JSA: 13.3°N. 89.4°W.,
Apr. 6	P	ePZ	23	02	00	O=22:55:00
	PX	eLNE		11	5	
	MW	iPZ		01	58	
	R	iPZ			53	
	T	ePZ		02	12	
Apr. 7	P	iPNEZ	02	51	55 c	Deep. Tu iP 02 52 20
	MW	iPNEZ		53	51	iP 54 14
	R	iPZ		51	57 c	eP'P' 03 18 51
		epPZ		53	50	Tonga region about
	R	iPZ		51	59	20°S. 177°W., h=530 km.
		epPZ		53	53	Apia reports: P=02:42:45,
	SB	ePZ		51	52	i=02:44:12, iS?=02:44:15
	T	iPNEZ		52	04	
		ipPZ		54	01	
	H	iPNEZ		52	03	
		epPZ		53	56	
Apr. 7	P	iPZ	10	59	48	Tu iP 11 00 13 c
	MW	iPZ			49	
	R	ePZ			50	
	T	iPZ			57	
Apr. 7	P	ePNZ	20	20	29	Deep? Tu iP 20 20 01
	MW	iNEZ			41	i 12
		iPZ			30	Probably Andes near 35°S.
	R	iZ			41	
		iPZ			27	
	SB	iPZ			39	
		eZ			35	
		eZ			47	
	LJ	eZ			33	
	T	iPNEZ			42	
		iNEZ			53	
	H	iPZ			39	
		iZ			50	
Apr. 7	P	iPNEZ	23	10	21 d	Tu iP 23 10 48 d
	MW	iPZ			22 d	Near Apia, which reports
	R	iPZ			24	iP=23:00:22, iS=23:01:10
	T	iPZ			31	
	H	ePZ			29	
Apr. 7	P	iPNEZ	23	36	45 c	Normal. Tu iP 23 35 49 c
	PX	iE		37	24	USCGS: 17.6°N. 78.3°W.,
		iPPEZ		38	12	O=23:29.3
		eE		42	32	JSA: 17.7°N. 78.4°W.,
		iSNE		42	51	O=23:29:16
		eLNE		48		Strong in Jamaica
	MW	iPNEZ		36	45 c	Major earthquake (Magnitude 7)

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
						(Continued)
Apr. 7	R	iPNEZ	23	36	40 c	
		iZ			37	50
	SB	iPNEZ			36	59
	LJ	ePNEZ				35
	T	iPNEZ				54
		eSE			43	05
Apr. 7	H	iPNEZ			36	47
	P	iPZ	23	48	51	Involved in preceding.
	MW	ePZ				Aftershock?
	R	iPZ				Tu iP 23 47 57
Apr. 8	P	ePZ	03	54	34	Tu iP 03 53 48
	R	iPZ				e 04 10 25
		eZ			04	10 25
		iPZ			03	54 41
Apr. 8	P	ePNEZ	10	13	56	Tu iP 10 13 02
	MW	ePZ				Aftershock of April 7, 23 ^h
	R	iPZ				JSA: 17.8°N. 79.0°W., O=10:06:21
	SB	ePZ			14	07
	T	iPNEZ				05
	H	eNE				10
Apr. 8	MW	iPZ	22	40	52	Tu eP 22 41 17
	T	ePZ				i 26
Apr. 9	P	ePZ	17	09	51	Normal. Tu eP 17 09 32
		eSN			10	59
	MW	ePZ			09	54
	R	iSNE			11	05
		iPNZ			09	43
		iSN?			10	53
	LJ	ePZ			09	38
	T	eSNEZ			10	22
		ePZ				29
		iEZ				54
		iSNE			12	34
	H	eZ			40	33
		eSNE			11	59
Apr. 10	P	ePNEZ	14	35	41	Deep? Tu iP 14 34 41
		eNEZ				i 51
	MW	iPZ				39
		iZ				51
	R	iPZ				35
		iZ				45
	T	ePZ				59
		iZ			36	10
	H	iPZ			35	51
Apr. 14	T	eZ	12	26	55	Tu e 12 26 51
		eZ			27	04
		eZ				05
Apr. 14	H	ePZ	16	15	22	Tu iP 16 14 46
	P	ePZ				23
	MW	ePZ				16
	R	ePZ				57
	T	ePZ				46
Apr. 15	H	ePZ				46
	P	ePNEZ	03	56	38	Normal. Tu iP 03 57 01
	PX	eLNEZ		04	18	i 08
	MW	iPZ		03	56	Near Apia, which reports:
	R	iPZ				eP=03:46:19; iS=03:47:16
	SB	ePZ				43
	T	ePNEZ				48
	H	ePEZ				46
Apr. 15	P	ePZ	07	07	56	Normal. Tu iP 07 08 19
	PX	eLZ			30	Near Apia, which reports:
	MW	ePZ			07	57
	R	ePZ				59
	T	ePZ				06
	H	iPZ				03

Date	Sta.	Phase	h	m	s	Remarks	
Apr. 15	P	iPZ	16	45	10	c Tu iP 16 44 32 c	
	MW	iPZ			10	c South America	
	R	iPZ			06	c	
	T	ePNEZ			24		
Apr. 15	H	ePZ			16		
	P	iPNEZ	19	14	32	c Normal? Tu iP 19 13 31 c	
	PX	iLNE			18	26 Destructive at Colima, Mexico	
	MW	iPNEZ			14	31 c Tacubaya: 18°17'N.103°19'W.,	
	R	iPNEZ			26	c O=19:09:55	
	SB	eNE			18	13 USCGS: 18.8°N.103.0°W.,	
		ePNEZ			14	44 c O=19:09:53	
		iNE			18	46 JSA: 18.9°N.103.5°W.,	
	LJ	iPNEZ			14	17 c O=19:10:00, h=100 km.	
	T	ePNEZ			54	Major earthquake	
Apr. 15	H	eNE			19	03 (Magnitude 7 or more)	
		iPNEZ			14	47 c	
		eE			18	52	
Apr. 15	P	iPNEZ	19	50	38	Aftershock. Tu iP 19 49 38	
	PX	iNE			54	37	
	MW	iPNEZ			50	38	
	R	ePZ			32		
	SB	iPNEZ			52		
	LJ	ePNEZ			24		
	T	iPNEZ			51	01	
	H	ePNEZ			50	54	
	Apr. 15	MW	ePZ	21	10	23	Aftershock
		R	ePZ			17	
		eZ			35		
P		ePZ	22	41	58	Deep? Aftershock, Mexico	
Apr. 15	MW	iPZ			59	Tu eP 22 40 59	
	R	iZ			42	12 i 41 12	
		iPZ			41	54	
		eZ			07		
	T	ePZ			42	22	
	H	ePZ			16		
	Apr. 15	P	iPNEZ	23	47	42	Deep? Aftershock, Mexico
			iZ			59	Tu iP 23 46 40 d
		PX	eLN			53	4
		MW	iPNEZ			47	40
R		iPNEZ			34		
		iZ			53		
SB		ePZ			54		
LJ		ePZ			27		
T		iPNEZ			48	05	
H		ePZ			47	55	
Apr. 16	P	iPNEZ	01	43	01	Deep? Aftershock, Mexico	
		iZ			18	Tu iP 01 42 01	
	PX	iE			46	58 i 21	
	MW	iPNEZ			43	01	
	R	ePNEZ			42	56	
		iZ			43	14	
	SB	ePZ			42	13	
	LJ	ePZ			42	47	
	T	iPNEZ			43	26	
	H	eZ			18		
Apr. 16	P	iPZ	02	06	02	Deep? Aftershock, Mexico	
		iZ			18	Tu eP 02 05 02	
	MW	iPZ			02	15 i	
		iZ			18		
	R	ePZ			05	57	
		iZ			06	14	
	T	ePZ			23		
	H	ePZ			22		
	Apr. 16	P	ePZ	02	32	03	Aftershock, Mexico
		MW	iPZ			03	Tu eP 02 31 02
R		iPZ			31	58	
T		iPZ			32	28	

Date	Sta.	Phase	h	m	s	Remarks	
Apr. 16	P	ePZ	05	32	53	Tu iP 05 33 40	
	MW	iPZ			56	i 34 07	
	R	ePZ			33	01 Alaska?	
Apr. 16		eZ			28		
	P	ePZ	06	19	22	Aftershock, Mexico	
	MW	ePZ			22	Tu eP 06 18 19	
	R	ePZ			16		
Apr. 16	T	ePZ			46		
	P	iPZ	12	10	24		
	MW	iPZ			24		
	R	iPZ			26		
Apr. 16	T	iPZ			25		
	P	iPNEZ	15	42	14	Deep? Tu iP 15 41 32 d	
	MW	iPZ			14	e 42 22	
	R	iPZ			09		
Apr. 17	T	iPZ			27		
	R	ePZ	15	59	23	Mexico. Tu eP 15 58 25	
Apr. 17	P	iPZ	19	33	23	Mexico. Tu iP 19 32 22	
	MW	iPZ			23		
	R	iPZ			17		
	T	ePZ			47		
Apr. 18	P	iPNEZ	06	28	38	d Deep. Tu iP 06 29 02 d	
		ipPZ			29	05 ipP 30	
	MW	iPZ			28	39 i 47	
		ipPZ			29	08 Wellington: 20°S.171°E.,	
		eZ			48	O=06:15,9, h=100 km	
	R	iPZ			28	41	
		ipPZ			29	09	
		eZ			48		
	SB	ePZ			28	33	
	T	ipPZ			29	01	
Apr. 18		iPNEZ			28	45	
	PX	iZ			29	12	
		eZ	13	48	13	Normal? East Indies	
		eZ			39	35	
Apr. 19		eLZ?	14	20	00		
	P	eZ	08	11	39	Normal? Tu e 08 11 48	
	PX	eNE			26	1 URSS: 38.7°N.97.0°E.	
		eLE			44	4	
Apr. 20	MW	eZ			07	29	
		eZ			11	00	
	P	ePZ	17	52	44	Normal? Tu eP 17 52 56	
		eP ^u NZ			56	14 eP ^u 56 39	
	PX	ePPZ			44	iPP 57 16	
		eSKSN	18	03	01	iPS 18 06 48	
		eSE			04	37 ePKKP 08 04	
	P	ePSN			06	23 Distance=108°, Pamir.	
	PX	ePKKPZ			08	04 URSS: 38.6°N.71.2°E., h=70 km	
	MW	eLNE			27	1 USCGS: 37°N.69°E., O=17:38.3	
Apr. 21		ePZ	17	52	45	JSA: 38.5°N.69.0°E.,	
		eP ^u EZ			56	03 O=17:38:30	
		iZ			57	07	
	R	iPKKPZ	18	08	12		
		ePZ	17	52	43		
		eZ			56	59	
	T	eZ			52		
	H	iPZ			52		
	Apr. 21	P	iPNEZ	03	01	31	Normal. Tu eP 03 02 18
		PX	ePPZ			03	00 i 31
		eSNEZ			07	27 iScP 07 50	
		ePPZ			10	2 USCGS: 53°N.166°W., O=02:54.1	
MW		ePZ			01	30 JSA: 53.0°N.165.5°W.,	
R		ePZ			02	35 O=02:54:08	
		iZ			02	29	
SB		ePZ			04	23	
T		ePZ			15		
H		ePZ			22		

Date	Sta.	Phase	h	m	s	Remarks
Apr. 21	MW	ePZ	03	38	04	Tu eP 03 38 28
	R	ePZ			07	
Apr. 21	P	iZ	08	13	51	Tu e 08 12 28
		eZ		14	30	i 13 04
	MW	eZ		13	50	i 46
	R	iPZ			46	
Apr. 21	P	ePZ	18	39	37	Normal. Tu eP 18 40 23
	PX	eLNEZ		49.0		URSS: 51.5°N.170.0°W.
	MW	ePZ		39	36	
	R	ePZ			41	
	T	iPZ			21	
Apr. 21	P	ePZ	22	40	33	Normal. Tu iP 22 40 57 d
	PX	eLNEZ		23	07.1	Wellington: 20°S.170°E.,
	MW	ePZ		22	40	O=22:27.8
	R	ePZ			36	
Apr. 22	R	ePZ	01	55	59	Tu eP 01 55 07
Apr. 22	P	iPPZ	16	26	57	Tu iP 16 24 45
	MW	iPPZ			58	i 25 18
	R	ePPZ		27	00	
Apr. 22	P	iPZ	20	04	13	Tu iP 20 04 34
	MW	iPZ			14	
	R	ePZ			14	
	T	iPZ			21	
Apr. 23	P	iPNZ	06	59	20	Tu e 06 59 23
		eZ		07	01	i 34
		eZ		02	40	i 07 03 01
		eZ		03	04	Central America
	MW	ePZ		06	59	21
		eZ		07	02	39
	R	ePZ		06	59	20
		iZ		07	02	40
	T	ePZ		06	59	18
		iZ		07	02	30
	H	ePZ		06	59	19
	Pr	ePZ			16	
Apr. 23	MW	iZ	15	18	56	Tu eP 15 19 20
	R	eZ			52	
		eZ		19	00	
Apr. 24	P	iZ	01	11	50	Tu e 01 10 59
	MW	eZ			54	Caribbean
	R	eZ			41	
		iZ			49	
	T	eZ		12	01	
	Pr	eZ		11	38	
		iZ			44	
Apr. 24	P	iPZ	10	54	20	
	MW	iPZ			20	
	R	ePZ			23	
	T	ePZ			26	
	Pr	ePZ			25	
Apr. 24	P	iPZ	21	10	21	Tu iP 21 10 57 c
	MW	iPZ			22	c
	R	iPZ			25	c
	T	iPZ			11	
	H	ePZ			15	
	Pr	iPZ			30	c
Apr. 25	P	ePNEZ	12	13	42	Normal. Tu iP 12 13 26
	PX	eLNZ		15.1		Long period (L) precedes short
		iSE		15	19	period (S) at Pasadena
	MW	ePZ		13	42	JSA: 27°N.115°W., O=12:11:54
	R	ePZ			36	
		iSZ		15	12	
	SB	ePZ		13	54	
	LJ	iPNEZ			20	
	T	iPNEZ		14	23	
		eSNEZ		16	57	
	H	ePNE		14	11	
	Pr	iPZ		13	25	



Date	Sta.	Phase	h	m	s	Remarks
Apr. 26	P	iPNEZ	10	29	00	Mexico. Tu eP 10 27 59
		eZ			17	i 28 16
	MW	ePZ			00	
		eZ			16	
	R	ePZ		28	55	
	LJ	ePZ			51	
	T	ePZ		29	25	
	Pr	iZ		28	55	
		iZ		29	09	
Apr. 26	P	iPZ	18	00	39	Normal. Tu eP 18 01 06
	PX	eLZ		27.3		
	MW	iPZ		00	35	
	R	iPZ			37	
	T	ePZ			39	
	Pr	iPZ			39	
Apr. 27	PX	eLZ	00	17		Normal. URSS: 38°N.70°E.
Apr. 27	P	ePZ	05	41	49	Tu eP 05 40 54
		eZ		43	29	Roughly 18°N.79°W., O=05:34.3,
	MW	ePZ		44	47	using Weston and Florissant.
	R	ePZ			44	Aftershock of April 7, 23 ^h
	T	iPZ			59	
	Pr	iPZ			40	
Apr. 27	P	eZ	11	42	34	Tu i 11 38 31
	MW	eZ			36	i! 41 43 c
Apr. 27	PX	eLZ	13	50		Normal. Tu eP 13 15 22
	MW	eZ		18	56	URSS: 39.5°N.34.0°E.
	Pr	eZ		19	40	
Apr. 28	MW	iPZ	01	53	13	Tu eP 01 53 57
	R	iPZ			19	e 54 59
	T	ePZ		52	55	
Apr. 28	P	iPNEZ	19	48	17	c Normal. Tu iP 19 47 16 c
	PX	eSEZ		52	07	Damage in Mexico
	MW	ePZ		48	17	a
	R	ePNEZ			11	c
	SB	ePNEZ			29	
	LJ	ePZ			03	
	T	ePNEZ			41	
	H	ePZ			32	
	Pr	iPZ			02	c
Apr. 29	P	iP'Z	01	54	53	Normal. Tu eP' 01 54 57
		iZ		55	06	e 58 13
		eZ		57	21	According to Perth, felt
	PX	ePPNEZ			35	throughout S.W. division of
		eSKPNEZ		58	16	Western Australia; after-
		iNE			26	shocks felt for 3 days at
		eSSZ		02	15.5	26°55'S.116°15'E.
		eLN			30.8	Wellington: 27°S.116°E.,
	MW	eP'Z		54	54	O=01:35.7, h 60+km.
		eZ		55	06	
		iPPZ		57	34	
		iSKPZ		58	20	
		iZ			38	
	R	eP'Z		54	58	
		eZ		55	38	
		eZ		56	48	
		iZ		58	22	
		eZ			40	
	SB	eP'Z		54	53	
		eZ		58	34	
	T	eP'NEZ		01	54	
	H	eP'Z			57	
		eZ		58	40	
Apr. 29	MW	iPZ	04	09	32	Tu iP 04 08 47
	R	iPZ			28	
Apr. 29	P	ePZ	15	54	01	Normal. Tu eP 15 54 25
	PX	eLEZ		16	18.2	
	R	ePZ		15	54	03

Date	Sta.	Phase	h	m	s	Remarks	
Apr. 30	P	iPNEZ	09	57	40	Normal. Tu iP 09 58 14	
	PX	eLN	10	19	.2	i 28	
	MW	iPZ	09	57	41	URSS: 33.0°N.143.5°E.	
	SB	iPNEZ			36		
	LJ	ePZ			50		
	T	iPNEZ			33		
	H	iPZ			35		
Apr. 30	Pr	iPZ			49		
	P	iPZ	22	57	13	Tu iP 22 57 48	
		iZ			24	e 58 01	
	MW	iPZ			16	URSS: 35°N.143.5°E.	
	SB	iPZ			09		
		iZ			20		
	LJ	eZ			22		
May 1	T	iPZ		56	56		
		iZ		57	06		
	H	iPZ			10		
		iZ			22		
	Pr	iPZ			22	d	
		iZ			34		
	P	iPNEZ	07	15	17	Normal? Tu iP 07 16 04	
May 1		eZ		17	27	Roughly 53°N.166°W.,	
	PX	eLN		25	.2	O=07:07.8	
	MW	iPZ		15	17	Felt at Unalaska	
	SB	ePZ			09		
	LJ	ePZ			29		
	T	ePNEZ			00		
		eZ			13		
May 1	H	iPZ			08		
	Pr	iPZ			27		
		iZ			41		
	P	iPZ	14	14	29	Tu iP 14 14 54 d	
	T	iPZ			38		
	May 2	MW	iPZ	08	42	54	Tu eP 08 41 50
	T	ePZ			43	12	
May 2	P	iZ	10	08	27	Normal.	
	PX	eE		16	33	Wellington: 60°S.153°E.,	
		eLZ		36	.7	O=09:55.1	
	MW	ePZ		08	11	URSS: 7.5°S.155.5°E.	
		iZ			30		
	T	ePZ			13		
		iZ			34		
May 3	Pr	iZ			32		
	P	ePZ	20	44	40	Normal? Tu iP 20 45 25 c	
	PX	eLZ		21	04	i 45 38	
	MW	iPZ		20	44	39	
	T	iPNEZ			27		
	H	ePNEZ			32		
	P	ePZ	11	34	57		
May 4	MW	ePZ			57		
	T	ePZ			02		
	P	iPZ	22	26	13	Tu eP 22 26 14	
		eZ?			27	27	
	MW	iPZ			26	13	
		eZ?			27	12	
	Pr	eZ?			14		
May 5	MW	iPZ	01	21	16	Tu iP 01 22 01	
	T	iPZ			03		
	P	iPNEZ	15	30	38	c Normal? Tu iP 15 31 06	
		iZ			33	32	
	PX	eSZ			41	23	
		eLZ			55	.8	
	MW	iPNEZ			30	40	
May 5		iZ			33	31	
	R	ePN			30	44	

(Continued)



Date	Sta.	Phase	h	m	s	Remarks	
(Continued)							
May 5	SB	iPZ	15	30	33		
		iZ			33	27	
	LJ	ePZ			30	45	
	T	iPZ				26	
		iZ			33	20	
	H	iPNEZ			30	32	
		iZ			33	24	
May 5	Pr	iPZ			30	44	
		iZ			33	38	
	MW	iPZ	20	28	03	Tu iP 20 27 05	
	T	ePZ				26	
	May 6	P	ePZ	03	12	54	Normal. Tu iP 03 13 10
		eSNEZ			14	10	
	MW	ePZ			12	52	
May 6		eSN			14	06	
	T	ePEZ			12	33	
		iZ				53	
		iSE			13	26	
		iPNEZ			12	43	
	May 7	P	iPNEZ	12	32	15	c Deep. Tu iP 12 32 41 c
		eZ			44	.7	
May 7	PX	ePNEZ			32	17	
	MW	ePNEZ				20	
	R	ePNEZ				18	
	LJ	iPNEZ				24	
	H	iPNEZ				23	
	P	iPZ	19	45	05	Tu iP 19 45 40	
	MW	ePZ				06	
May 7		ePNEZ			44	55	
	T	iPZ				59	
	H	iPZ				59	
	May 8	P	iPNEZ	10	32	47	c Deep Tu iP 10 33 12
		eNEZ			34	47	
		eZ			35	34	
	PX	iPPZ				46	
May 8		eSNEZ			41	54	
		iNE			45	32	
	MW	eLZ			53	.4	
		iPNEZ			32	47	
		eZ			34	48	
		eZ			35	46	
	R	ePNEZ			32	51	
May 8		eSNEZ			41	58	
	SB	iPNEZ			32	42	
	LJ	iPNEZ			32	48	
		eSN			41	55	
	T	iPNEZ			32	56	
		eZ			35	02	
		eZ			36	05	
May 8	H	eSNEZ			42	11	
		iPNEZ			32	55	
		eSNEZ			42	07	
	May 9	PX	eNEZ	05	58	36	Normal. Tu e 05 51 26
		iE			06	06	
		eZ			09	46	
		eLN			16	48	
May 9	P	ePZ	09	44	01	According to Manila: 14°25'N.123°05'E., felt in southeast Luzon	
	PX	eSE			53	48	
	MW	ePZ			44	02	
	SB	iPZ			43	52	
	P	ePZ	09	49	57	Tu iP 09 50 31	
	MW	ePZ				59	
	P	iPZ	12	14	16	URSS: 36°N.143°E.	
May 9	MW	ePZ				16	
	P	iPZ	17	59	40	Tu iP 17 59 55	
	May 10	R	iPZ	05	18	08	Tu iP 05 17 33
	May 11	R	iPZ	05	18	08	JSA: 13.0°S.77.0°W.,
		eZ				26	
						O=05:07:57	

Date	Sta.	Phase	h	m	s	Remarks
May 11	P	ePZ	13	35	22	Tu iP 13 34 23
	PX	eLN		48.2		
	R	ePZ		35	09	
	LJ	ePZ		35	11	
	T	eZ			30	
May 12	PX	eLNE	04	54.6		Tu iP 04 43 30
	R	ePZ		44	17	
May 13	P	ePNEZ	16	03	55 d	Normal. Felt at Eureka, Calif. Tu (from JSA report)
	PX	iSNEZ		05	40	iP 16 05 19
	MW	eLN		06	06	eS. 08 33
	R	iPNEZ		03	55	USCGS: 40.3°N.125.0°W., O=16:01.9
	R	iSNEZ		05	41	
	SB	ePNEZ		04	04	
	SB	eSNE		05	54	
	T	ePZ		03	39	
	T	eSN		05	14	
	T	ePZ		03	34	
	T	eSN		05	13	
May 15	P	iPZ	03	26	22	Tu iP 03 26 43 c
	MW	iPZ			23	
	R	iPZ			23	
May 15	P	iPZ	04	00	10	Tu iP 04 00 29
	MW	iPZ			10	i 02 53
	R	iPZ			13	
May 15	P	iPZ	15	52	28	Tu i 15 52 06
	MW	iPZ			26	i 51
	R	iPZ			29	
May 15	P	iPZ	17	28	44	Tu iP 17 29 10
	MW	ePZ			45	
	R	ePZ			47	
May 16	P	iPNEZ	02	38	40	Tu iP 02 40 05
	P	iSNEZ		40	27	Aftershock of May 13, 16 ^h
	MW	ePZ		38	42	
	R	eSZ		40	27	
	R	ePZ		38	50	
	R	iSZ		40	41	
	T	ePZ		38	21	
May 16	MW	iPZ	04	08	17	Tu iP 04 08 42
	T	ePZ			25	
May 16	P	iZ	04	53	20	Tu eP 04 53 04
	P	iZ		55	42	i 55 27
	P	iZ		56	29	
	MW	eZ		53	27	
	R	eZ		54	16	
	T	eNZ		51	15	
	T	eZ		53	39	
May 16	P	eZ	07	33	43	Tu iP 07 33 22
	PX	eZ		43	21	e 34 29
	P	eLNE?		49.3		URSS: 24.5°N.101.5°E.
	MW	eZ		33	42	
	R	eZ?			13	
	R	eZ		34	00	
May 16	P	iPZ	09	32	01	Tu iP 09 31 49
	MW	ePZ			00	
	R	ePZ			00	
	T	ePZ		31	45	
May 16	P	eZ	13	16	17	Tu iP 13 15 27
	MW	eZ			17	i 17 13
	R	iPZ			12	
	R	iPZ			25	
May 16	P	iPZ	15	43	21	Tu iP 15 43 43
	MW	ePZ			19	
	R	ePZ			23	
	T	ePZ			29	

Date	Sta.	Phase	h	m	s	Remarks
May 17	P	iPNEZ	02	37	19	Normal. Tu eP 02 37 45
	PX	ePPZ		40	42	USCGS: 42.9°S.166.7°E., O=02:24.7
	R	eSNE		47	42	JSA: 41.2°S.165.9°E., O=02:24:53
	R	iPSE		48	51	Wellington: 10°S.166½°E., O=02:24.8
	R	eLN		59.7		Major earthquake (Magnitude 7½)
	MW	iPNEZ		37	19	
	R	iZ			28	
	R	ePNEZ			21	
	SB	ePZ			16	
	LJ	ePZ			24	
	T	ePZ			18	
May 17	MW	eZ	03	02	14	Tu e 03 02 36
	R	iZ		03	13	i 03 33
	R	eZ		02	12	
	R	eZ		03	09	
May 17	P	iPZ	03	32	18	Tu eP 03 32 40
	MW	iPZ			15	
	R	iPZ			17	
May 17	MW	ePZ	03	53	12	Tu eP 03 53 39
	R	eZ			18	e 48
	R	ePZ			15	
May 17	P	ePZ	06	29	34	Tu eP 06 30 00
	MW	ePZ			35	
	R	ePZ			37	
May 17	P	iPZ	07	27	44	Tu iP 07 27 08 d
	MW	iPZ			44 d	e 31
	R	iPZ			40	
	T	iPZ			56	
May 17	MW	eZ	08	10	32	Tu eP 08 10 55
	R	ePZ			29	
	T	ePZ			34	
May 17	P	ePZ	08	56	48	Tu eP 08 57 13
	MW	ePZ			48	
	R	ePZ			50	
	T	ePZ			53	
May 17	MW	ePZ	11	30	55	Tu eP 11 31 27
	R	ePZ		31	05	
	T	ePZ			08	
May 17	P	iPZ	19	20	15	Tu eP 19 19 10
	MW	iPZ			15	
	R	iPZ			09	
May 18	P	ePZ	05	25	38	Tu eP 05 26 02
	MW	ePZ			39	
	R	ePZ			41	
May 18	P	ePZ	11	25	42	Normal. Tu eP 11 26 00
	PX	eLEZ		51.0		
	MW	iPZ		25	42	
	R	ePZ			42	
May 19	R	iPZ	02	21	02 c	Tu iP 02 20 30
May 19	P	ePZ	14	46	51	Tu iP 14 47 08
	R	iPZ			53	
May 19	PX	eLNE	21	43.9		Tu iP 21 40 37
May 20	P	ePZ	05	42	30	
	MW	iPZ			31	
	R	ePZ			34	
May 21	P	iPZ	01	58	56	Tu iP 01 59 22
	PX	eLZ		02	27	
	MW	ePZ		01	58	
	R	ePZ			59	
	T	ePZ			58	
May 21	MW	ePZ	14	00	23	Tu eP 14 00 48
	R	ePZ			27	

Date	Sta.	Phase	h	m	s	Remarks
May 21	P	ePZ	23	44	22	Normal. Tu eP 23 43 39
		iSNEZ		45	32	i 44 35
	MW	eNE		44	29	
		eSNE		45	24	
	R	ePZ		44	09	
		iSZ		45	08	
	LJ	ePNZ		43	59	
		eSNZ		41	42	
		eZ		45	18	
May 23	P	ePZ	07	19	14	Tu iP 07 18 10
	R	iPZ			09	
	T	ePZ			38	
May 23	PX	eLNE	20	48		Strong at Smyrna
May 24	PX	eLZ	06	06	3	Tu eP 05 31 15
	R	ePZ	05	31	27	URSS: 5.5°S.135.5°E.
May 24	P	iNZ	06	51	01	Deep? Tu ePZ 06 51 10
	R	ePZ		50	46	eZ 22
		eZ			58	
	T	ePZ			53	
		eZ		51	07	
May 24	P	iPZ	16	09	26	Tu iP 16 09 48 d
	R	iPZ			28	
	T	iPZ			36	
	H	iPZ			34	
May 25	P	iPZ	01	20	52	Normal. Tu eP 01 21 11
	PX	eLZ		49	7	Near Apia, which reports
	R	iPZ		20	54	very small P at 01h 10m
	T	ePZ			58	
	Pr	iPZ			56	
May 25	P	ePZ	02	08	26	Tu eP 02 07 23
	R	iPZ			21	Mexico
	Pr	ePZ			14	
May 26	P	iPNEZ	14	47	39	Tu iP 14 48 08
	R	iPNEZ			42	URSS: 27.5°N.135.0°E.
	T	iPZ			32	
	Pr	iPZ			45	
May 26	P	ePZ	20	55	13	Tu iP 20 55 35
	PX	eLZ		21	22	7
	R	ePZ		20	55	17
	T	ePZ			22	
May 26	P	iPZ	21	17	26	Tu iP 21 17 49
	R	iPZ			29	
May 27	P	ePZ	00	54	28	Normal. Tu eP 00 54 56
	PX	eLZ		01	23	
	T	iPZ		00	54	42
May 27	R	iPZ	19	30	31	Tu iP 19 29 48
May 29	PX	eNE	11	41	53	Normal.
		eLNE			57	
May 29	P	iPNEZ	12	40	16	Normal. Tu iP 12 39 14
	R	iPNEZ		12	40	11
	SB	eNZ			39	
	LJ	ePZ			39	59
	T	iPNEZ			40	41
	H	iPNEZ				35
May 29	PX	eLZ	13	32		Normal.
May 29	P	iPNZ	14	55	41	Tu iP 14 55 09
	R	iPZ			38	
	T	iPZ			52	
	H	iPZ			48	
May 30	P	ePZ	17	41	40	Normal. Tu eP 17 42 02
	PX	ePPZ		44	17	Roughly 15°S.178°W.,
		eSNZ		51	37	C=17:30.0, using Manila
	R	eLZ		18	06	and Apia (which reports:
	LJ	ePZ		17	41	P=17:31:52, S=17:33:32
	T	ePZ			30	
		ePZ			51	

Date	Sta.	Phase	h	m	s	Remarks
May 30	P	iPNZ	21	39	48	Deep? Tu iP 21 40 12
		eZ		42	47	eSKPP 22 09 23
	PX	iSNE		49	03	Samoa region?
	MW	ePNE		39	50	
	R	iPZ			50	
	SB	ePZ			43	
	LJ	ePZ			49	
	T	iPNEZ			57	
	H	iPNE			55	
	Pr	iPZ			51	
May 31	P	iPNEZ	02	30	07	Deep? Tu iP 02 30 30 c
		eZ			33	09
	PX	eLZ			57	3
	MW	ePNE			30	08
	R	iPNEZ				09 c
		eZ			33	13
	S	iPZ			30	03
	LJ	iPNEZ				07
	T	iPZ				16 c
	H	iPNEZ				13
	Pr	iPZ				10 c
May 31	PX	eLNE	05	30		Normal. Tu e 05 08 07
	R	eZ			07	49
		iZ			08	00
June 1	PX	eLZ	07	14		Apia reports: P=04:58:22
	T	ePZ		06	48	39
June 1	PX	eLZ	18	18		Normal. Tu e(P) 17 49 03
June 2	PX	eLNEZ	02	23	8	Normal. Tu eP 02 20 37
June 2	P	iZ	09	40	10	Tu eP 09 40 29
	R	ePZ				04
		eZ				13
	T	ePZ				05
		eZ				14
June 3	P	iPZ	04	46	35	Tu iP 04 47 08
	R	iPZ				39
	T	iPNEZ				33
June 4	R	ePZ	00	13	50	Tu iP 00 14 28 c
		iZ				16 27
June 4	P	iPZ	07	50	13	
		eSEZ				52 16
	R	iPZ				50 12
	T	ePZ				49 44
		iSZ				50 42
June 4	P	iPNEZ	16	44	06	Normal? Tu iP 16 44 38
	PX	eLZ				17 12
	R	iPNEZ				16 44 08
	SB	ePZ				00
	LJ	ePNEZ				14
	T	iPNEZ				04
	H	iPZ				06
	Pr	iPZ				13
June 6	P	iPNZ	05	33	05	Tu iP 05 33 30 c
	R	iPZ				08
	T	iPNEZ				13
	Pr	iPZ				10
June 6	P	ePZ	19	39	43	Normal. BC gives:
		eSNEZ		40	37	37.1°N.115.7°W., O=19:38:48
	R	ePZ		39	40	BC e 19 39 11
		iSZ		40	35	iS 30
	T	iPNEZ		39	23	Tu iP 19 40 44
		iSNEZ				50
	H	iPZ		39	24	
		iSNE				51
June 6	PX	eLNEZ	21	41		Normal. Tu eP 21 13 14

Date	Sta.	Phase	h	m	s	Remarks
June 8	P	iPZ	22	27	40	Tu iP 22 28 03 d
	R	iPZ			42	
	T	iPZ			49	
June 9	P	ePNEZ	06	13	12	Tu iP 06 12 17 d
	PX	eSNE			17 52	Central America
	R	ePNEZ			13 03	
	T	eZ			13 40	
June 9	P	iPNEZ	06	19	57	Normal. Tu iP 06 21 11
	PX	eLNE			21.8	JSA: 42.5°N.125.0°W.,
	R	iPNEZ			20 02	C=06:17:30
	T	ePNZ			19 29	
		eSN			21 11	
June 9	H	iPNEZ			19 45	
	P	ePNZ	07	59	09	Normal. Tu iP 07 58 16
	PX	eLZ			08 04 14	
	R	iPZ			07 59 04	
June 9	P	ePNEZ	08	46	14	Normal. Tu eP 08 47 30
	PX	eLN			48.1	JSA: 42.5°N.125.0°W.,
	R	iPNEZ			46 23	C=08:43:47
	T	ePNEZ			45 48	
		eNEZ			47 35	
June 9	MW	ePZ	22	10	33	Tu iP 22 10 49 c
	R	iZ			50	i 11 02
		ePZ			34	i 07
		eZ			51	Deep?
	T	ePZ			42	
		eZ			59	
	Pr	iPZ			33	
		iZ			50	
June 10	P	iPZ	10	45	12	Normal. Tu eP 10 44 13
	PX	eSN			49.0	Florissant gives:
		eLNEZ			51.8	17.5°N.104.2°W., C=10:40:32
	MW	iPNEZ			45 14	
	R	iPNEZ			08	
	SB	ePZ			32	
	T	iPZ			40	
	H	iPNZ			30	
	Pr	iPZ			01	
June 10	P	ePZ	11	19	28	
	MW	ePZ			29	
	R	ePZ			32	
	T	ePZ			33	
	Pr	ePZ			34	
June 10	P	ePZ	14	19	32	Tu iP 14 19 54
	MW	iPZ			32	e 22 05
	R	ePZ			35	
	T	iPZ			41	
	Pr	iPZ			35	
		eZ			37	
June 10	R	iPZ	15	37	10	Tu eP 15 37 45
	Pr	iPZ			17	
June 11	P	iPZ	06	34	28	Normal. Tu iP 06 35 55
	PX	eLZ			37.2	
	MW	iPZ			34 36	
	R	iPZ			54	
	T	ePZ			12	
June 11	MW	ePZ	15	50	26	Tu eP 15 50 59
	R	ePZ			29	
	Pr	ePZ			36	
June 11	P	iPZ	19	45	33	Tu iP 19 46 05
	MW	iPZ			34	
	R	iPZ			36	
	Pr	iPZ			41	

Date	Sta.	Phase	h	m	s	Remarks
June 12	P	iPNEZ	02	18	10	Tu iP 02 18 37 d
	MW	iPZ			12	d
	R	iPZ			14	d
	SB	ePZ			06	
	T	iPZ			16	
	H	iPZ			16	
June 12	P	iZ	04	35	17	Very distant? Tu i 04 36 43
	MW	eZ			35 16	
		iZ			36 19	
	R	eZ			35 25	
		iZ			36 21	
	T	iZ			22	
	Pr	iZ			23	
June 12	MW	iPZ	07	52	26	Tu iP 07 53 10 c
	R	ePZ			30	
	T	ePZ			11	
	Pr	iPZ			36	
June 12	P	iPZ	09	50	01	Tu e 09 50 01
	MW	iPZ			02	d
	R	iPZ			05	d
	T	iPZ			49 40	d
	H	iPZ			47	
	Pr	iPZ			50 12	d
June 12	T	ePZ	14	08	25	Felt at Cartuja, Tu iP 14 08 16
June 12	P	iPZ	22	18	16	
	MW	iPZ			18	
	R	iPZ			21	
	T	iPZ			18	
June 13	P	eZ	03	09	35	Tu e 03 08 58?
		eZ			10 22	e 09 18
	MW	eZ			09 41	
June 13	P	ePZ	15	06	02	Deep? Tu iP 15 05 02
		iZ			14	i 13
	PX	eLZ?			13	i 22
	MW	iPZ			06 02	Mexico. Tacubaya gives:
	R	iPZ			05 57	18°18'N.103°33'W.
		iZ			06 09	
	T	iPNEZ			28	
		iZ			26	
		iZ			47	
		iZ			57	
	Pr	iPZ			05 52	
		iZ			06 21	
June 13	P	iPZ	21	02	04	Tu eP 21 02 34
		iNEZ			08	
	MW	iPZ			04	
		iZ			08	
	R	ePZ			06	
		iPZ			10	
	T	iPNEZ			07	
		iZ			11	
	Pr	iPZ			14	
June 13	P	iPZ	22	26	11	Deep? Tu iP 22 26 43 c
		eNEZ			27 03	e 27 34
	MW	iPZ			26 11	Marianne Islands?
	R	iPZ			15	
	T	iPNEZ			09	
	H	iPNEZ			10	
	Pr	iPZ			18	
June 14	P	iPZ	08	07	29	Tu iP 08 07 59
	MW	iPZ			30	
	R	iPZ			31	
	T	iPZ			26	
	Pr	ePZ			35	

Date	Sta.	Phase	h	m	s	Remarks
June 15	P	iPZ	03	08	24	Tu iP 03 08 49
	MW	iPZ			26	d
	R	iPZ			27	
	T	ePZ			34	
June 15	P	iPZ	12	58	10	Tu eP 12 57 25
	MW	ePZ			08	i 33
	R	ePZ			57	
	T	ePZ			58	
June 15	P	iPNEZ	14	34	06	Deep. Tu iP 14 34 24
	MW	iNEZ			23	i 41
	R	iPZ			07	
	T	iZ			23	
	R	ePZ			07	
	T	iZ			25	
	Pr	ePZ			16	
	Pr	eZ			33	
	Pr	iPZ			09	
	Pr	iZ			25	
June 16	MW	iPZ	05	19	37	Tu iP 05 20 01
	R	iPZ			39	Near Apia, which reports:
	T	ePZ			45	iP=05:09:20, iS=05:10:04
June 16	P	ePZ	10	43	45	Deep. Tu iP 10 44 25
	MW	iZ			44	i 43
	MW	ePZ			43	
	R	eZ			54	
	R	iZ			44	10
	R	ePZ			43	43
	R	eZ			55	
	R	eZ			44	11
	T	eZ			40	
	T	ePZ			43	43
	Pr	eZ			59	
	Pr	eZ?			46	
	Pr	eZ			57	
June 16	P	eZ	11	45	19	Normal? Tu e 11 45 39
	P	iZ			46	ePKKP 56 19
	P	eZ			46	i 26
	P	eZ			47	
	P	eZ			48	Felt in N.E. Mindanao,
	P	eZ			48	according to Manila.
	PX	iPKKPZ			56	URSS: 6°N.130°E., h=100 km
	PX	eLZ	12	16		
	MW	eZ	11	45	17	
	MW	ePKKPZ			56	
	R	eZ?			45	
	R	ePKKPZ			56	
	T	eZ			58	
	Pr	eZ			45	
	Pr	eZ			45	
	Pr	iPKKPZ			56	
June 16	PX	eLZ	19	04		Normal. Tu eP 18 40 32
June 16	P	iPZ	20	41	07	
	MW	ePZ			07	
	R	ePZ			04	
June 16	PX	eLZ	21	44		Normal. Tu eP 21 21 40
June 17	P	iPZ	02	35	17	Deep. Tu ip 02 35 39
	P	iZ			56	i 36 19
	MW	iPZ			18	eP'P' 03 02 12
	MW	eZ			57	c
	R	iPZ			19	
	R	eZ			59	
	T	iPNEZ			22	
	T	eZ			36	01
	T	ePZ			35	25
June 18	P	iPZ	01	27	15	Tu eP 01 26 21
	MW	iPZ			15	
	R	ePZ			10	

Date	Sta.	Phase	h	m	s	Remarks
June 18	P	iPNEZ	04	29	52	Tu eP 04 29 16
	MW	iPZ			53	
	R	ePZ			49	
	T	ePZ			30	04
June 18	P	iP"Z	10	33	42	Normal. Tu eP" 10 33 53
	PX	eZ			43	e 35 09
	PX	eLZ	11	06	4	Roughly 0° 127°E., O=10:15.0
	PX	eLZ			4	URSS: 3°N.129°E.
June 18	P	ePZ	11	19	22	Normal Tu iP 11 19 02
	PX	eZ			21	i 11
	PX	eSNE			27	eP'P' 48 22
	PX	eLE			33	
	P	iP'P'Z			48	54
	MW	ePE			19	22
	R	iPNEZ			21	46
	R	iZ			21	46
	R	eP'P'Z			49	03
	SB	ePNEZ			19	27
	T	ePNEZ			19	27
	T	eP'P'Z			49	02
	H	iPNEZ			19	19
June 18	P	iPNEZ	11	32	46	Tu iP 11 31 47
	MW	ePNE			32	46
	R	iPNEZ			32	46
	T	iPNEZ			33	04
	H	ePNEZ			32	59
June 18	P	eP"Z	20	17	33	Normal. TueP" 20 17 47
	PX	eLZ			50	4
	R	iP"Z			17	36
June 19	P	iPZ	10	11	02	Tu iP 10 10 10 c
	MW	iPZ			10	03
	R	ePZ			10	07
	T	iPNEZ			11	16
June 20	P	ePZ	08	53	15	Deep? Tu e 08 53 43
	PX	eLZ			09	26
	MW	ePZ			08	53
	R	ePZ			17	
	T	ePZ			22	
June 20	P	ePZ	09	39	01	Tu eP 09 37 41
	MW	ePZ			02	
	R	ePZ			06	
	T	ePNEZ			38	42
June 20	P	iPZ	22	08	00	Tu iP 22 08 20
	MW	iPZ			02	
	R	ePZ			03	
June 21	P	iPNEZ	00	48	25	Deep? Tu iP 00 48 55
	PX	iSN			58	58
	MW	iPNEZ			48	26
	MW	eSN			59	04
	R	iPZ			48	28
	SB	iPNEZ			48	28
	T	iPNEZ			22	
	H	iPNEZ			23	
	H	iPNEZ			25	
June 21	P	iPZ	05	57	02	Tu iPZ 05 57 23
	MW	iPZ			03	
	MW	eZ			06	03
	R	eZ			04	56
	R	iZ?			05	57
	R	eZ			06	03
	R	eZ			04	16
	T	eZ			04	16
June 21	P	iPZ	07	59	21	Normal. Tu iP 07 59 40
	PX	eLZ			09	20
	MW	iPZ			07	59
	R	ePZ			20	
	SB	ePZ			22	
	T	ePZ			17	
	T	ePZ			29	

Date	Sta.	Phase	h	m	s	Remarks
June 21	P	ePZ	08	52	22	Deep. Tu eP 08 52 43
		iZ		52		i 53 02
	MW	ePZ		24		
	R	ePZ		32		
	T	ePZ		33		
June 21	P	iZ	10	38	32	Tu eP 10 38 49
	MW	eZ		32		
	R	eZ		31		
June 21	P	iPNEZ	17	52	44	Deep. Tu iP 17 53 06
		epPZ		54	46	epP 55 10
		esPZ		55	45	esP 56 50
		iSNE	18	02	01	iPKKP 18 41 20
	MW	iPZ	17	52	45	iP'P' 19 31
		epPZ		54	47	Tonga region, h=550 km.,
		eSNE	18	02	02	22°S, 178°W.
	R	iPNEZ	17	52	46	Apia reports: P=17:43:51,
		epPZ		54	48	S=17:45:25
		eSNEZ	18	02	06	
	SB	eP'P'Z	17	19	39	
		ePNEZ	17	52	38	
		epPZ		54	41	
		eSNEZ	18	01	55	
	LJ	ePNEZ	17	52	44	
		eSN	18	01	59	
	T	iPNEZ	17	52	53	
		ipPZ		54	56	
		esPZ		55	31	
		eSNE	18	02	18	
	H	iPNEZ	17	52	52	
		eSNE	18	02	15	
June 22	P	iPZ	22	22	58	Tu iP 22 23 18
	MW	iPZ			59	
	R	iPZ		23	00	
June 23	PX	eLZ	06	31		Normal. Tu eP 05 59 39
	R	eZ	05	59	39	
June 23	P	iPPNEZ	09	47	28	Normal. Tu iPP 09 47 41
	PX	ePSNE		58	26	URSS: 3.4°S, 119°E.
		eLZ	10	23		Florissant: 3.0°S, 121.5°E.,
	MW	iPPZ	09	47	29	O=09:28:46
	R	iPPZ			29	
June 23	P	iZ?	23	38	18	Tu iZ 23 38 45
	MW	iZ			19	
June 24	PX	eLZ	04	26		Normal. Tu eP 03 55 30
	MW	ePZ	03	55	36	
	R	ePZ			35	
June 25	P	iPZ	22	55	48	Tu iP 22 56 11
	MW	iPZ			49	
	R	ePZ			51	
	T	iPZ			57	
June 26	P	ePZ	12	07	46	Normal? Tu eP 12 08 27
		eP'Z		10	59	ep" 11 09
		iP'NEZ		11	07	iP" 22
		iPPNEZ	13	01		epP 14 30
	PX	iPPZ	15	36		USCGS: 13°N, 95°E., O=11:52.1
		iE	17	18		JSA (revised): 12.8°N, 89.7°E.,
		eSKSNE	18	26		O=11:51:37
	P	ePKKPZ	20	46		Manila: 8°N, 91°E.
	PX	ePSN	22	5		Riverview: 9°N, 91°E.
		ePPSE	24	14		URSS: 15°N, 95°E.
		iSSN	29	45		Pasadena: 12°N, 92.5°E.,
		eGNE	43			O=11:52.0
	MW	ePZ	07	46		Great earthquake
		eP'Z	11	02		(Magnitude about 7 3/4)

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
						(Continued)
June 26	R	ePZ	12	08	10	
		iP'Z		11	04	
	SB	eP'NEZ			02	
	T	ePZ		07	46	
		eP'NEZ		11	05	
		ePKKPZ		20	57	
	H	iP'NEZ		11	04	
		eSKSNE		18	14	
		iPKKPZ		20	53	
June 27	P	eP'Z	08	14	35	Normal. Tu iP" 08 14 46
	PX	eLZ		49		Central Australia,
	MW	iP'Z			36	Wellington: 26°S, 137°E.,
	R	eP'Z			35	O=07:55:48
June 27	P	iZ	08	23	33	Tu i 08 23 44
		iZ		25	17	e 24 53
	MW	iZ		23	33	
		iZ		25	14	
	R	iZ		25	12	
June 27	P	iPZ	08	51	20	Tu iP 08 51 30
	MW	iPZ			20	i 54 49
		iZ			50	URSS: 9°N, 87.5°E.
	R	iPZ			21	
June 27	PX	eLZ	14	19	3	Normal.
June 27	P	iPNEZ	17	17	17	Deep. Distance=290, h=200 km
		ipPNEZ			57	Tu iP 17 16 21
		iZ		18	17	ipP 58
		ipPcPZ		21	17	i 17 21
		iSNE			52	iPcP 19 46
		iScSNE		27	39	i 20 38
	MW	iPNEZ		17	18	eScP 23 20
		iZ			51	i 55
		ipPZ			58	eScS 27 18
		iZ		18	26	USCGS: 16°N, 93°W., O=17:11.3
		iPcPZ		20	01	JSA: 16.0°N, 93.0°W.,
		epPcPZ		21	18	O=17:11:30, h=200 km
		eScSNE		27	40	
	R	iPNEZ		17	11	
		ipPZ			45	
		iZ		18	44	
		iZ		20	23	
		ipPCPZ		21	16	
		eScPZ		23	44	
		eSc'NEZ		27	37	
	SB	eNEZ		18	11	
	T	iPZ		17	32	
		ipPZ		18	12	
		iScSNE		27	50	
June 27	P	iZ	19	23	09	Tu e 19 23 18
	MW	eZ			09	i 26 38
	R	iZ			10	i 30 44
		iZ		27	17	Aftershock of June 26, 12 ^h
June 28	P	iPZ	05	33	07	Deep? Tu iP 05 33 32
	MW	iPZ			09	e 35 35
	R	ePZ			07	
		eZ		35	02	
June 28	P	iPZ	18	14	24	Tu iP 18 14 36
	MW	ePZ			25	Aftershock of June 26, 12 ^h
	R	iPZ			26	
June 29	P	iPZ	05	52	04	Normal? Tu eP 05 52 20
	PX	eLZ	06	29		i 43
	MW	ePZ	05	52	04	
	R	ePZ			03	
	T	ePZ			12	
June 29	P	ePZ	17	03	03	Tu eP 17 03 52
	MW	ePZ			02	
	R	ePZ			03	
	T	ePZ			02	

Pasadena and auxiliary stations, 1941



From the ISC collection scanned by SISMOS

Date	Sta.	Phase	h	m	s	Remarks
June 29	P	ePNEZ	22	19	26c	Normal? Tu iP 22 19 50 c Wellington; 20°S.168°E., C=22:06.6, h=75-100 km
	PX	eLZ		47		
	MW	iPNEZ	19	29	c	
	R	iPZ		31		
June 29	T	ePZ		34		Tu eP 22 45 05
	P	ePNEZ	22	44	15	
	MW	iPNEZ		17		
	R	ePNZ		21		
	SB	ePZ		07		
June 30	T	iPNEZ	43	49		Tu eP 03 32 51 i 33 07
	H	ePNEZ		59		
	MW	eZ?	03	32	56	
June 30	R	eZ		58		Tu iP 09 30 04
	P	iPNEZ	09	29	42	
June 30	MW	iPZ		43		Tu eP? 16 53 54
	R	iPZ		45		
	T	iPNEZ		51		
	P	ePZ	16	53	59	
June 30	MW	ePZ		59		Normal. Tu iP 17 05 52 Roughly 25°N.113°W., O=17:04.6 Numerous foreshocks and aftershocks.
	R	ePZ		54		
	P	ePZ	17	06	33	
	MW	iSEZ		08	22	
	R	eSNE		08	18	
June 30	PX	iPN		06	26	Normal. Tu iP 18 42 46 i 46 04 Aftershock of June 26, 12 ^h
	P	iSNZ		08	04	
June 30	PX	eLZ	17	52		
June 30	P	ePZ	18	42	35	
	MW	ePZ		34		
	R	iPZ		36		
	T	ePZ		27		

Addendum

June 27	P	eZ	07	39	35	Tu iP 07 38 55
	MW	iPZ		43		
	R	iPZ		32		
	T	iPZ		49		

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA CALIFORNIA

SEISMOLOGICAL LABORATORY

BULLETIN

JULY - SEPTEMBER 1941



(PASADENA AND AUXILIARY STATIONS)

Date	Sta	Phase	h	m	s	Remarks				
July 1	P	ePZ	06	38	26	Tu eP 06 38 49 URSS: 50.4°N 104.2°E				
	MW	iPZ			29					
	R	ePZ			37					
	T	ePZ			47					
July 1	P	iPNEZ	07	51	18	Normal. Tu eP 07 52 48 34°20'N 119°35'W, 07:50:56 Felt to distances of about 200 km. Intensities (Mercalli Los Angeles and Pasadena, IV, Ventura, VI, Santa Barbara and Carpinteria, VII, with damage to weak structures. Numerous aftershocks.				
	MW	iSNEZ			33					
		iPNEZ			19					
		iSNE			35					
	R	iPNEZ			27					
	SB	iPNEZ			00					
	T	ePNEZ			43					
	H	iPZ			34					
July 1	Pr	iPZ	08	56	37	Tu e 08 56 22				
	P	ePZ			06					
	MW	ePZ			06					
	R	ePZ			08					
July 1	P	ePZ	11	26	01	Tu eP 11 26 24				
	MW	ePZ			02					
	R	ePZ			03					
July 1	P	ePZ	20	24	44	Normal. Tu iP 20 23 51				
	PX	eLNE			28.8					
	MW	ePZ			24					
	R	iPZ			42					
July 1	PX	eZ	22	31.7	41.8	Normal. Tu iP 22 25 58				
		eLNE			26					
	R	ePZ			48					
July 1	PX	eLZ	23	39		Normal. Tu eP 23 33 27h				
July 1	P	iPNEZ	23	54	04	Normal. Aftershock of 07 Tu eP 23 55 36				
		iSNE			21					
	MW	iPNEZ			06					
	R	iPNEZ			14					
	SB	iPZ			53					
	T	iPNEZ			54					
	H	iPZ			21					
	July 2	P			iPNZ		01	24	19	Deep? Tu iP 01 24 50 e 25 08 e 28 23
		MW			eZ				48	
					iPNEZ				20	
					iZ				34	
		iZ	48							
R		eZ	27							
		iPZ	24							
		iZ	37							
		iZ	54							
SB		iPNEZ	13							
		iZ	29							
	eZ	43								
July 2	T	iPNEZ	03	01	15	Tu eP 03 01 16 i 04 35 URSS: 14°N 97.5°E.				
	H	iZ			44					
	P	iPNEZ			17					
		iPZ			06					
		eZ			04					
July 2	MW	iPZ	04	04	18	Tu eP 04 04 38				
	P	ePZ			09					
	R	iPZ			06					
July 2	PX	eLNEZ	04	09	32	Normal. Tu eP 04 08 59				
	MW	ePZ			21					
July 2	R	ePZ	10	03	32	Tu eP 10 03 14				
	P	ePZ			28					
	MW	ePZ			45					
	R	ePZ			43					
	T	iPZ			56					
July 2	P	iPZ	12	25	29	Tu e? 12 24 19 ep? 51 Also Riverside iZ?=12:24:41				
	MW	iPZ			28					
		iZ			43					
	R	iPZ			24					
		iZ			40					

Date	Sta	Phase	h	m	s	Remarks
July 3	P MW R	iPZ iPZ iPZ	01	02	36 36 39	Tu iP 01 02 57 c
July 3	P PX MW	ePZ eLNE ePZ	01	26	02 29.1 26	Normal. Tu iP 01 25 03 Mexico?
July 3	P	iPZ	05	19	47	
July 3	R	ePZ			50	
July 3	PX	iPNEZ ePPZ eSNEZ eLNEZ	07	24	00 c 27 06 34 11 50.8	Normal? Tu iP 07 23 29 eP ¹ P: 50 50 JSA: 31.0°S.68.7°W., O=07:11:51 USCGS: 33°S.68°W., O=07:11.7 Destructive in Argentina
	MW R SB T	iPZ iPZ iPNEZ iPNEZ eSNE			23 59 c 24 06 24 11 c 34 40 24 07	
July 3	H P MW R SB T	iPNEZ iPNZ iPNZ iPZ iPZ iPNEZ	12	19	45 45 42 51 57	Tu iP 12 19 14
July 5	PX	eLZ	03	09		Normal. South of Australia?
July 6	P PX	iPZ iSNE	00	46	40 c 56 42	Tu iP 00 47 11 URSS: 33°N.142°E.
	MW R SB T	eLZ iPZ iZ iPNZ iZ iPNEZ iPNZ	01	11	46 41 c 47 10 46 43 c 46 34 c 46 22 c	
July 6	PX	iZ	06	28		Normal. Tu eP? 06 07 38
July 6	P PX MW R T P	eLZ ePZ eLZ ePZ ePZ ePZ	21	25	49 50.0 25 46 52 40	Normal. Tu iP 21 26 21
July 6	MW R P	ePZ ePZ ePZ	22	29	53 55 52	Tu iP 22 29 39
July 8	MW R	eZ eZ	17	32	07 27	Tu iP 17 31 47 URSS: 7°S.127°E.
July 9	P PX MW R T H Pr	iPNEZ eLNE iPNEZ iPNEZ iPNZ iPNEZ iPZ	00 01 00	54 02 54	26 20 45 38 15	Normal? Tu eP 00 53 27 Central America?
July 9	MW T	ePZ ePZ	02	26	04 14	Tu eP 02 26 41
July 10	P MW R SB T	iPNEZ ePNEZ iPNZ ePZ iPNZ	03	34	46 46 49 41 49	Tu eP 03 35 16
July 10	MW	iPZ?	03	45	42	Tu eP 03 46 19
July 10	P MW R T	iPNEZ iPPZ iZ iPNEZ iPPZ iPZ iPPZ iZ iPNEZ eZ	09	40	43 d 41 13 26 40 43 41 14 40 40 d 41 10 25 41 55 41 25	Deep. Tu iP 09 40 05 iPP 35 Roughly 18°S.70°W., O=09:28.5, h=120 km, using Cape Girardeau

Date	Sta	Phase	h	m	s	Remarks
July 10	P MW R SB T H	iPNEZ iPNEZ ePNEZ ePZ ePNZ ePNEZ	10	29	23 23 25 17 19 25	Tu iP 10 29 53
July 10	MW	iPZ	21	43	30	Tu iP 21 43 53
July 11	P PX	iPNEZ eSNEZ eLNE	01	24	40 31 15 37	Normal. Tu iP 01 23 50 c USCGS: 5 1/2°N.83°W., O=01:16.6 JSA: 5.6°N.83.1°W., O=01:16:35
	MW R SB T	iPNEZ iPZ ePZ iPNZ			24 41 36 47 55	
July 11	P PX	iPNEZ eSNE? eLEZ	02	07	38 14 14 21	Normal. Tu iP 02 06 48 c Aftershock. O=01:59:35 (JSA)
	MW R SB T	iPNEZ ePZ ePZ iPNZ			07 38 33 48 53	
July 11	P MW	ePZ iPZ	06	34	12 12	Deep? Tu eP 06 33 34 e 45
	R	iZ iPZ			23 08	
July 11	R T	iPZ ePZ	07	37	20 15	Tu iP 07 37 30
July 11	P PX MW R SB	ePNZ eLE ePNZ ePZ ePZ	16	02	24 13.0 02 27 23 36	Normal. Tu eP 16 01 57
July 12	P	iPNEZ	06	27	26	Deep. Tu iP 06 26 51 d i 27 29
	MW	iZ iPZ iZ iZ iZ eZ iZ ePZ			51 28 03 27 26 28 04 27 22 48 59 38 28 05 16 16	South America
July 12	P PX MW R H	ePZ eLZ ePZ ePZ ePN?	14	12	38 17.9 12 38 47 22	Normal? Tu iP 14 13 28
July 12	P	iPNEZ	16	19	15	Normal. Tu eP 16 20 45
	MW R T	iSNE iPNEZ iPZ			30 16 24	Aftershock of July 1, 07 ^H Felt as far as Los Angeles Santa Barbara record lost by failure to change sheets.
July 13	H P PX R	iPNEZ ePZ eSNE ePZ	15	01	52 03 00 01 39 02 59	Normal. Tu eP 15 01 05 eS 02.1 Gulf of California?
July 13	PX	iSNEZ eLNEZ	16	37		Normal. Tu eP? 15 53 24 Zurich gives 38°N.26°E.
July 13	R T	iPZ iPZ	17	30	09 15	

Pasadena and auxiliary stations, 1941

Date	Sta.	Phase	h	m	s	Remarks
July 14	P	iZ	02	21	29	Normal? Tu e(P) 02 21 38 i! 25 00 e 35 22 i 51 47 Surface waves small. Possibly two or three earthquakes; at least one an aftershock of June 26, 11.
		iZ		21	42	
		eZ		35	37	
	MW	iZ		21	31	
		iZ		35	39	
July 14	R	iZ		51	28	Surface waves small. Possibly two or three earthquakes; at least one an aftershock of June 26, 11.
		iZ		21	31	
		eZ		35	38	
July 14	P	iZ	06	43	29	Tu iP 06 44 33
	MW	iPZ		43	44	
	R	iPZ			47	
July 14	T	iPZ			16	
July 14	R	eZ	09	22	08	Tu eP 09 21 32
July 14	P	ePZ	13	01	12	Normal? Tu eP 13 01 54
	PX	eLZ		14		
	MW	ePZ		01	09	
	R	ePZ			18	
	T	ePZ		00	52	
July 14	R	ePZ	18	56	52	Tu eP 18 56 04
July 14	MW	ePZ	21	01	40	
July 14	R	iPZ			42	Tu iP 22 54 17 i 27
	MW	iPZ	22	53	58	
		iZ		54	08	
July 15	R	ePZ		54	00	Normal. Destructive in Nagano prefecture, Japan. URSS: 36°N 139°E.
	T	iPZ		54	08	
	P	iPZ	14	57	36	
		eZ	15	01	00	
	PX	eSN?		07	42	
July 15	MW	eLZ		21		Normal. JSA: 24.9°N 109.0°W., O=03:13:30
		iPZ	14	57	36	
		eZ	15	01	03	
July 16	SB	ePZ	14	57	29	Normal.
	LJ	ePZ			44	
	PX	eLNEZ	02	50.2		
July 16	P	ePNZ	03	14	43	
July 16	MW	ePZ			43	Normal. JSA: 24.9°N 109.0°W., O=03:13:30
	R	iPZ			39	
	P	ePNEZ	03	16	26	
	PX	eZ		19	00	
	MW	ePZ		16	25	
	R	iPNEZ			21	
	SB	ePZ			41	
	LJ	ePNEZ			10	
	T	iPNEZ		17	04	
	H	iPNEZ		16	47	
July 16	P	eZ	03	29	33	May belong to the shock beginning at 03:14
July 16	MW	eZ			21	Normal. Very small
	R	iZ			19	
	T	eZ			25	
July 16	P	ePZ	08	32	00	Tu iP 16 49 17 BC iS 5°S 15°W.
	MW	iPZ			01	
July 16	T	ePNZ			09	Tu eP 15 45 39
	P	ePZ	15	45	50	
	R	ePZ			48	
July 16	PX	eLZ	22	35.7		Normal. Tu iP 22 31 00 e 33 22
	MW	iPZ		31	43	
		iZ		34	43	
July 17	R	ePZ		31	46	Normal. Tu eP 07 55 07 ePP 56 40
	P	ePNEZ	07	55	38	
	PX	ePPZ		57	04	
		eSN	08	01	48	
		eLNZ		07.1		
July 17	SB	ePZ	07	55	44	Normal. Tu eP 09 41 58 i 42 30 URSS: 41°N 157.5°E This appears doubtful. Two shocks, about 30 seconds apart?
	LJ	ePZ			28	
	T	ePZ		56	01	

Pasadena and auxiliary stations, 1941

Date	Sta.	Phase	h	m	s	Remarks
July 17	P	iPZ	22	19	30	Normal. Tu iP 22 19 27 c URSS: 80°N 15°E.
	PX	eLNZ		46	7	
	R	ePZ		19	30	
July 18	T	iPZ			13	Normal. Tu eP 03 56 13 eS! 59 0 Strong at Fallon, Nevada
	P	ePNZ	03	55	15	
	MW	eSNE		56	42	
		iPZ		55	14	
		iSZ		56	39	
July 18	SB	ePZ		55	21	Tu iP 17 26 30 d
		iSNEZ		56	31	
	T	iPZ		54	33	
		iSNE		55	13	
	H	iPNEZ		54	55	
July 18	P	iSZ		55	44	Tu iP 17 26 30 d
	MW	iPNEZ	17	25	54	
		iPZ			53	
	R	iZ		26	37	
	H	ePZ		25	57	
July 19	P	iPZ			45	Tu iP 02 11 26 Mexico!
	SB	iPNEZ	02	12	25	
	LJ	ePZ			37	
July 19	T	iPZ			10	Tu eP 06 10 18 Foreshock of next Tu iP 09 34 49 c i 37 06 URSS: 39°N 37.5°W
	H	ePNE			46	
	P	iPNEZ	06	10	49	
	T	ePNE			40	
	P	iPNEZ	09	35	17	
July 19	PX	eZ		37	36	Tu iP 11 40 20 Tu iP 15 26 27 d URSS: 33°N 135°E.
	LJ	ePZ		35	18	
	T	ePNE			09	
	H	iPNEZ			12	
	P	ePZ	11	39	19	
July 19	P	iPNEZ	15	25	59	Tu iP 11 40 20 Tu iP 15 26 27 d URSS: 33°N 135°E.
	PX	eLEZ		54		
	R	iPZ		26	03	
	SB	iPNEZ		25	55	
	LJ	ePZ		26	07	
July 20	T	ePNE		25	53	Tu eP 06 14 12 Wellington: 22 1/2°S 170°E, O=06:04 2, h=130 km Tu iP 11 05 24
	H	iPNEZ			56	
	PX	eLZ	06	42		
	MW	eZ		13	54	
	P	iPNEZ	11	04	54	
July 20	MW	iPZ			55	
July 21	PX	eLZ	17	23		Normal. Very small
July 21	T	ePZ	19	39	53	Tu iP 16 49 17 BC iS 5°S 15°W.
	P	ePZ	20	38	38	
		ePZ			07	
July 23	P	iPZ			41	Tu eP 01 20 44 d JSA: 18.8°N 106.7°W., O=01:17:26
	PX	ePNZ	01	21	46	
	MW	eSNZ		25	32	
	SB	iPNEZ		21	41	
	T	ePNEZ			52	
July 23	H	ePNE		22	08	Tu eP 09 41 58 i 42 30 URSS: 41°N 157.5°E This appears doubtful. Two shocks, about 30 seconds apart?
	P	iPNEZ		21	57	
		iPZ	09	41	22	
	PX	iZ			50	
	MW	iPZ		52	26	
July 23	SB	iNEZ		41	23	Tu eP 09 41 58 i 42 30 URSS: 41°N 157.5°E This appears doubtful. Two shocks, about 30 seconds apart?
		ePZ			15	
	T	iEZ			46	
		eNE			44	
	H	eNE			50	

Date	Sta	Phase	h	m	s	Remarks		
July 23	P	ePZ	10	34	13	Normal. Tu 10 33 34 Atlantic.		
	PX	eLZ		55	6			
	MW	ePZ		34	15			
	SB	ePZ			42			
July 23	H	ePNE			46	Tu iP 10 38 12 c		
	R	ePZ	18	37	53			
	T	ePZ			58			
July 23	P	ePNEZ	21	10	49	Normal. Tu iP 21 09 56 c JSA: 14.3°N, 93.2°W., O=21:04:10		
	PX	iSNEZ		15	49			
		eLNE		19				
	MW	iPNEZ		10	49			
	R	ePZ		10	43			
	SB	ePZ		10	59			
	T	iPNEZ		11	06			
	H	ePE		10	55			
	July 24	P	iPZ	06	33		01	Normal. Tu eP 06 33 21 Wellington: 22°S, 170°E., O=06:20.1
	PX	eLZ	07	00	5			
July 24	MW	iPZ	06	33	02	Normal. Tu iP 10 36 08		
	R	ePZ		32	59			
July 24	P	iPZ	10	37	02	Deep? Tu iP 14 06 14 URSS: 26°N, 127°E.		
	PX	eLEZ		49	5			
	MW	ePZ		37	02			
	R	ePZ		36	55			
July 24	P	iPNEZ	14	05	45	Deep? Tu iP 14 06 14 URSS: 26°N, 127°E.		
		iEZ		06	00			
	PX	eLZ		34	8			
	MW	iPZ		05	45			
		iZ		06	00			
		eZ		09	22			
	R	iPZ		05	48			
	SB	ePNEZ			41			
		eZ			54			
		ePNE		05	43			
July 25	H	ePNEZ			43	Normal. Tu iP 10 01 45 Wellington: 22°S, 170°E., O=09:48.6		
	P	iPNEZ	10	01	22			
		iPPZ		04	58			
	PX	eLZ		29				
July 26	MW	iPZ		01	23 c	Normal? Tu iP 20 24 35 d URSS: 15°N, 147.5°E.		
		eZ		04	59			
	R	iPZ		01	25			
	H	ePNE			29			
	T	ePNE			30			
	P	iPNEZ	20	24	04			
		iZ			14			
		ePPZ		27	27			
		iSNE		34	40			
		eLZ		49	0			
July 26	PX	ePNE		24	05	Tu iP 23 18 21		
	MW	iPNEZ			07			
	R	iPNEZ		23	58			
	SB	iPNEZ		24	10			
	LJ	ePNEZ		24	02			
	T	ePNE		34	32			
	H	iPNEZ		24	04			
	Pr	iPZ			10			
	P	iPNEZ	23	19	24			
	R	iPNZ			17			
July 28	Pr	ePZ	16	04	15	Normal? Tu iP 16 05 04		
	P	iPNZ			47			
July 29	PX	eLZ		37		Tu eP 10 53 21		
	MW	ePZ		04	46			
July 29	R	ePZ	10	54	24			
	MW	ePZ			19			

Date	Sta	Phase	h	m	s	Remarks
July 29	P	ePZ	13	24	12	Deep? Tu iP 13 23 34
		iZ			37	
	MW	iPZ			11	
	R	iZ			37	
July 30	R	iPZ			07	Deep? Tu iP 01 58 50 c USCGS: 60.9°N, 149.2°W., O=01:51.5 JSA: 60.7°N, 149.5°W., O=01:51:28
	Pr	iZ			32	
		ePZ			03	
		eZ			28	
July 30	P	iPNEZ	01	58	10	Deep? Tu iP 01 58 50 c USCGS: 60.9°N, 149.2°W., O=01:51.5 JSA: 60.7°N, 149.5°W., O=01:51:28
	PX	iZ			21	
		iPPZ		59	35	
		ePcPZ	02	00	36	
		eSE		03	38	
		eLE		05	9	
	MW	iPNEZ	01	58	10	
		iZ			21	
		eSNE	02	03	41	
	R	iPNEZ	01	58	12	
July 30		iZ			22	Tu iP 02 41 12 Aftershock?
		ePPNEZ		59	41	
		iPcPZ	02	00	46	
		eSNEZ		03	59	
	LJ	iPNEZ	01	58	24	
		eSNE	02	04	03	
	T	iPNEZ	01	57	49	
		iPcPZ	02	00	41	
		eSNE		03	17	
	H	iPNEZ	01	57	57	
Aug. 1		iPPZ		59	17	Tu iP 11 42 35 Deep? Tu iP 11 54 19 c i 39 ePKKP 12 12 54 eP'P' 20 07 JSA: 30.3°S, 177.8°W., O=11:41:25 USCGS: 30°S, 178 1/2°W., O=11:41.5, h=100 km. Wellington: 29 1/2°S, 178°W., O=11:41.6, h=100 km Major earthquake (Magnitude 7) Strong (R.F. 8+) on Raoul I., Kermadecs, according to Wellington.
		iPcPZ	02	00	43	
		eSNE		03	27	
	Pr	iPZ	01	58	19	
		iZ			33	
		eSZ	02	04	02	
	MW	ePZ	02	40	30	
	R	iPZ			34	
	Pr	iPZ			41	
	MW	iPZ	11	41	53	
Aug. 2	P	iPNEZ	11	54	00 c	Tu iP 11 42 35 Deep? Tu iP 11 54 19 c i 39 ePKKP 12 12 54 eP'P' 20 07 JSA: 30.3°S, 177.8°W., O=11:41:25 USCGS: 30°S, 178 1/2°W., O=11:41.5, h=100 km. Wellington: 29 1/2°S, 178°W., O=11:41.6, h=100 km Major earthquake (Magnitude 7) Strong (R.F. 8+) on Raoul I., Kermadecs, according to Wellington.
		iZ			18	
	PX	ePPZ		57	25	
		eSKSNE	12	04	19	
		iSNE			34	
		eSSNE		09	16	
		eLNEZ		16	0	
	P	eP'P'Z		20	07	
	MW	iPNEZ	11	54	01 c	
		iPPZ		57	26	
Aug. 2		eP'P'Z	12	20	16	Major earthquake (Magnitude 7) Strong (R.F. 8+) on Raoul I., Kermadecs, according to Wellington.
	R	iPNEZ	11	54	02 c	
		iZ			16	
		iZ			23	
		eP'P'Z	12	20	19	
	SB	iPNEZ	11	53	57	
		ePPZ		57	15	
	LJ	ePNEZ		54	00	
	T	iPNEZ			10	
		eP'P'Z	12	20	14	
Aug. 2	H	iPNEZ	11	54	08	Major earthquake (Magnitude 7) Strong (R.F. 8+) on Raoul I., Kermadecs, according to Wellington.
	Pr	iPZ			02 c	
		iZ			15	
		iZ			24	
	eP'P'Z	12	20	23		

Date	Sta	Phase	h	m	s	Remarks
Aug. 3	P	ePZ	10	56	20	Normal? Tu iP 10 55 50 c South America, about 32°S.
	PX	eLZ	11	24		
	MW	iPZ	10	56	21	
	R	ePZ			18	
	LJ	ePZ			12	
Aug. 3	T	iPNEZ			34	Normal.
	Pr	ePZ			14	
	P	ePZ	12	54	37	
	PX	eLEZ	13	22	6	
	MW	ePZ	12	54	38	
Aug. 4	Pr	iPZ			42	Normal. Tu iP 00 28 02 i 15
	P	ePNZ	00	28	53	
	PX	eSE		32	09	
		eLNE		33	0	
	MW	ePZ		28	53	
Aug. 4	R	eZ			54	(Deep.) Tu iP 11 02 28 c ipP 41 JSA: 54.3°N 179.2°E, h=75 km USCGS: 52°N 176 1/2°W, h=100 km URSS: 50°N 179°E.
	Pr	ePZ			43	
	P	iPNEZ	11	01	44 c	
		ipPZ			57	
		iZ		02	07	
		iZ			24	
		iPcPZ			58	
		iZ		03	25	
		iSNEZ		08	40	
	PX	iScSNE		11	33	
		eSSNE		12	23	
		eLNEZ		14	38	
	MW	iPNEZ		04	45 c	
		iPcPZ		02	59	
		eSNZ		08	42	
	R	iPNEZ		01	48 c	
		eSNEZ		08	49	
	SB	iPNEZ		01	36	
	LJ	iPNEZ			55	
	T	iPNEZ			30 c	
		eScPZ		06	54	
		eSNZ		08	16	
		eScSNZ		11	22	
	H	iPNEZ		01	37	
		eSNE		08	24	
	eScSNE		11	25		
Pr	iPZ		01	54 c		
	eSZ		08	59		
	eScSZ		11	44		
Aug. 4	R	iZ	17	23	48	Tu i 17 23 06
	Pr	eZ			37	e 25 04
Aug. 5	P	ePNEZ	09	11	02	Tu iP 09 10 01
	MW	ePZ			03	
	R	iPZ		10	59	
	T	iPZ		11	32	
	Pr	ePZ		10	47	
Aug. 6	P	iPNEZ	06	22	07 c	Deep. Tu iP 06 22 53 c isP 23 43 i 24 43 i 25 37 iScP 28 18 JSA: 55.2°N 161.1°W, h=150 km USCGS: 55 1/2°N 160°W, h=200 km URSS: 56°N 162 1/2°W. ScP very large, sharp, resembling P of another earthquake
		ipPZ			37	
		ispZ			55	
		ePPZ		23	31	
		iNEZ			42	
		ipPPNZ		24	05	
	PX	eSNE		27	50	
	P	iScPNEZ			55	
		eSSNEZ		30	36	
		iScSNE		32	03	
	PX	eLEZ?			20	
	MW	iPNEZ		22	07 c	
		ipPNEZ			37	
		ispZ			56	
		iScPZ		27	56	
		eScSNEZ		32	03	

(Continued)

Date	Sta	Phase	h	m	s	Remarks
Aug. 6	R	iPNEZ	06	22	12 c	(Continued)
		ipPZ			42	
		ispZ			23 00	
		ipPZ			25	
		iScPZ			27 57	
		eScSNE			32 06	
	SB	iPNEZ		21	59	
		iScPZ		27	54	
		eScSNEZ		32	02	
	LJ	iPNZ		22	20 c	
		ipPNZ			52	
		ispZ		23	09	
		eZ		24	28	
		iScPNZ		28	02	
		eScSN		32	12	
	T	iPNEZ		21	49 c	
		ipPZ		22	20	
		iZ		24	16	
		eSNZ		27	17	
		iScPNEZ			47	
		eScSNE		31	52	
	H	iPNEZ		21	57 c	
		ipPE		22	31	
		isPE			46	
		iZ		24	19	
	iScPNEZ		27	51		
	eScSNE		31	57		
Pr	iPZ		22	18 c		
	ipPZ			49		
	ispZ		23	07		
	iZ			55		
	iZ		24	26		
	iScPZ		28	00		
	eScSZ		32	15		
Aug. 8	P	iPZ	02	25	21	Tu eP 02 25 53
	MW	eZ			31	e 26 01
		ePZ			20	
		eZ			30	
		eZ			43	
Aug. 8	P	ePZ	19	15	54	Tu iP 19 16 23
	MW	ePZ			57	i 41
	R	ePZ		16	00	
	T	iPZ			01	
	Pr	iPZ			01	
Aug. 9	P	ePZ	04	17	03	Tu iP 04 17 21
	MW	iPZ			03	
	R	ePZ			05	
	Pr	ePZ			04	
Aug. 9	P	iZ	22	36	37	Normal. Tu e 22 36 48
		iZ			53	e 39 13
	PX	eLZ	23	42		i 40 08h
	MW	eZ	22	36	38	Aftershock of June 26, 41
		eZ			38 38	
		eZ			36 40	
		eZ			52	
	Pr	eZ			40	
Aug. 10	P	iPNEZ	05	11	10	Normal. Tu iP 05 11 47
	PX	eLZ		20	3	Southeastern Alaska?
	MW	ePNEZ		11	10	
	R	ePZ		11	14	
	T	ePZ		10	50	
	H	iPNEZ			58	
	Pr	ePZ		11	20	
		eP'P'Z		39	44	
Aug. 10	MW	ePZ	05	39	42	Tu iP 05 40 07
	Pr	ePZ			44	

Date	Sta	Phase	h	m	s	Remarks
Aug 10	P	eZf	14	47	28	Normal Tu iP 14 48 35
		eZ			47	
	PX	eIN		57	0	
	MW	eZ		47	49	
	R	eZ			51	
	T	eZ			31	
		iZ			43	
		iZ			59	
Aug 10	Pr	iPNEZ	17	11	57 d	Deep. Tu iP 17 11 28 d
	P	ipPZ		12	19	i 54
		isPZ			28	i 59
	PX	eE		22	6	i 12 06
	MW	iPNEZ		11	57 d	i 35
		ipPZ		12	18	South America.
		isPZ			28	
	R	iPNZ		11	54 d	
		ipPZ		12	15	
		isPZ			25	
	SB	iPZ		12	02 d	
	LJ	iPNEZ		11	49	
	T	iPNEZ		12	08 d	
		ipPZ			31	
		isPZ			40	
	H	iPNEZ			04	
	Pr	iPZ		11	51 d	
		isPZ		12	22	
Aug 10	P	iPNEZ	19	29	18 d	Deep. Tu iP 19 28 44 d
		iZ		30	10	i 29 03
	MW	iPNEZ		29	17 d	
		eZ		30	11	
	R	iPNEZ		29	15 d	
		iZ		30	12	
	SB	ePZ		29	24	
	LJ	ePZ			09	
	T	iPNEZ			30	
	H	ePNE			28	
	Pr	iPZ			11	
Aug 11	P	iPNEZ	23	27	40	Tu iP 23 26 46
	MW	iPZ			39	
	LJ	ePZ			29	
	T	ePZ			53	
	Pr	iPZ			28	
Aug 12	P	iPZ	12	38	09	Tu iP 12 38 32
	MW	iPZ			10	
	T	iPZ		37	50	
	Pr	iPZ		38	11	
Aug 14	P	iPNEZ	01	55	09 d	Tu iP 01 54 36 d
	PX	iSNEZ	02	04	38	eP'P' 02 22 35
	MW	iPNEZ	01	55	10 d	JSA: 21.5°S, 67.8°W, O=04:44:02, h=200 km
	R	iPNEZ			05 d	Pasadena: 24°S, 67°W, O=01:43:43, h=200 km
	SB	ePZ			16	
	LJ	ePNEZ			02	
	T	iPNEZ			21 d	
	H	iPNEZ			17	
	Pr	iPZ			03	
Aug 14	P	iPNEZ	02	02	57	Tu iP 02 02 24 d
	MW	iPNEZ			58	Aftershock?
	R	iPZ			53	
		eZ		03	41	
	LJ	ePZ		02	50	
	T	iPNEZ		03	04	
	H	ePNEZ			04	
	Pr	iPZ		02	52	

Date	Sta	Phase	h	m	s	Remarks
Aug 15	P	iPNEZ	06	21	39	Normal? Tu iP 06 21 10
		iZ			52	eP'P' 06 21 10
		iZ			59	48 32
		iPPZ		24	45	USCGS: 19°N, 27°W, O=06:09.5
	PX	iSNE		31	46	JSA: 20.1°N, 27.8°W, O=06:09:35, h=35 km
		eLNE		42	5	
	P	iP'P'Z		48	14	
	MW	ePNEZ		21	39	
		iZ			52	
		ePPZ		24	44	
		eP'P'Z		48	26	
	R	iPZ		21	37	
		iZ			48	
		iZ			57	
		eP'P'Z		48	29	
	SB	ePNEZ		21	48	
		iZ		22	00	
		iEZ			07	
	LJ	ePZ		21	39	
	T	ePNEZ		21	36	
		iZ			49	
		eSNE		31	44	
	H	iPZ		21	40	
		eSE		31	41	
	Pr	iPZ		21	36	
		iZ			49	
		iZ			57	
		ePPZ		24	37	
		eP'P'Z		48	26	
Aug 15	P	iPZ	16	07	00	Tu eP 16 06 31
	MW	ePZ			00	
	R	iPZ		06	58	
	Pr	iPZ			57	
Aug 15	P	iPZ	23	04	08	Deep. Tu iP 23 00 25 d
	MW	iPZ			08	e 53
		iZ			39	e 04 05
		iZ			52	
	Pr	ePZ		00	59	
		eZ		04	43	
Aug 16	P	iPNEZ	03	51	15	Normal. Tu iP 03 51 34
	PX	eLNE	04	10	5	Kermadec Is.?
	MW	ePZ	03	51	17	
	Pr	iPZ			18	
Aug 16	MW	ePZ	16	10	57	Tu iP 16 11 23
	R	ePZ			59	
	T	iPZ		11	02	
	Pr	iPZ			00	
Aug 16	Pr	iP	18	11	03	Deep. Tu iP 18 11 32
Aug 17	P	iPZ	16	02	27 d	Deep. Tu iP 16 02 52
		iZ			57	e 03 09
	MW	iPZ			27 d	e 23
		iZ		03	04	
	R	ePZ		02	30	
		eZ			44	
		iZ		03	02	
	SB	ePZ			23	
	LJ	ePZ			28	
	T	iPNEZ			38	
	Pr	iPZ		02	30	
		iZ		03	02	
Aug 18	P	ePZ	08	23	10	Tu iP 08 23 29
	MW	ePZ			12	
	Pr	ePZ			13	

Date	Sta.	Phase	h	m	s	Remarks
Aug. 19	P	iPEZ	10	07	30	Tu iP 10 07 53
	MW	iZ			48	
		ePZ			33	
		iZ			52	
	R	ePZ			30	
	T	iPNEZ			42	
	H	iZ			58	
	Pr	ePZ			33	
		eZ			45	
Aug. 19	MW	eZ	16	38	33	Tu e 16 38 46, 1 16 42 13
Aug. 19	MW	iPZ	17	13	02	Tu iP 17 12 05
	Pr	iPZ		12	50	i 34
Aug. 19	P	iPZ	17	53	04	Normal.
	PX	eE	18	04	44	Wellington: 14°S, 166°E., O=17:40.4
		eLE		20	2	
	MW	ePZ	17	53	05	
	R	iPZ			08	
	T	ePZ			09	
	Pr	iPZ			06	
Aug. 19	P	iPZ	19	44	01	Deep. Tu eP 19 43 26
		iZ			27	e 51
	MW	ePZ			00	
		eZ			26	
	R	iPZ		43	58	
		iZ		44	23	
	Pr	eZ		43	41	
Aug. 20	P	ePNEZ	08	32	16	Normal. Tu eP 08 32 39
	PX	eNE		59	1	
		eE	09	09	7	
	Mw	ePZ	08	32	17	
	R	ePEZ			19	
	SB	iPZ			18	
	LJ	ePZ			16	
	T	ePNEZ			26	
	H	ePZ			26	
	Pr	iPZ			19	
Aug. 20	P	iPNEZ	13	34	35	Tu iP 13 34 48
	MW	iPZ			35	e 36 07
		eZ		35	25	URSS: 3°N, 123.5°E.
	R	ePZ		34	35	
	Pr	eZ			50	
Aug. 21	P	iPNEZ	00	02	42	Normal. Tu eP 00 01 52
	PX	eSNE		03	44	iP 02 18
	MW	iPZ		02	43	Roughly: 30°N, 114°W, O=00:01.3
	R	ePZ			19	Aftershocks at 02 ^h 12 ^m and 05 ^h 49 ^m
		iPNEZ			33	
		eSNE		03	27	
	LJ	ePZ		02	13	
	Pr	iPZ			10	
Aug. 22	P	iPZ	16	21	12	Tu eP 16 21 59
	MW	ePZ			11	
	R	iPZ			15	
	T	iPNEZ		20	42	
	Pr	iZ		21	24	
Aug. 22	P	ePZ	16	46	34	Tu e 16 46 40
		iZ			47	Very distant. Readings refer to "P" or "PP"
	MW	eZ			31	
		iZ			41	
	T	eZ			44	
		eZ			52	
	Pr	eZ			36	
		iZ			49	
Aug. 22	PX	eLZ	19	35	8	Normal. Tu e 19 10 04
	MW	ePZ		09	27	
	R	ePZ			21	

Date	Sta.	Phase	h	m	s	Remarks
Aug. 24	P	iPZ	17	22	50	Tu iP 17 23 09
	MW	iPZ			51	
	R	iPZ			53	
	T	ePZ		23	00	
Aug. 24	Pr	iPZ		22	53	
	P	iPZ	23	02	35	c Deep. Tu iP! 23 02 01 d
		ipPZ		03	00	ipP! 26
		isPZ			10	isP 36
	MW	iPZ		02	35	South America, h=100 km
		ipPZ		03	10	
	R	iPZ		02	31	d
		ipPZ			57	
	T	iPNEZ			46	
		ipPZ		03	12	
	H	iPNEZ		02	41	
	Pr	iPZ		02	26	d
		ipPZ			51	
Aug. 25	P	iPNEZ	03	09	15	c Normal? Tu iP 03 08 16
	PX	eNZ		16	5	iL 13 28
	MW	iPZ		09	14	d Mexico, Tacubaya reports:
	R	iPZ			10	d P=03:04:47 L=03:05:26
	LJ	ePNZ			02	JSA: 16.8°N, 99.4°W, O=03:04:01
	T	iPNEZ			35	
	H	iPNEZ			27	
	Pr	iPZ			02	c
Aug. 25	P	iPZ	11	37	59	Tu iP 11 37 17
	R	iPZ			56	
	T	ePZ		38	24	
Aug. 25	R	iPZ	15	44	46	Tu eP 15 43 52
		iZ		45	09	i 44 12
	Pr	iPZ		44	35	
		iZ		45	14	
Aug. 26	P	iPZ	01	34	10	Tu iP 01 34 29
	MW	ePZ			10	
	R	ePZ			17	
	Pr	iPZ			13	
Aug. 26	PX	eLZ	17	53		Normal. Near 5°S, 150°E.?
	MW	eZ		22	21	URSS gives 5°N, 157°E.
	R	eZ			23	
Aug. 26	MW	ePZ	18	56	53	Deep. Tu iP 18 57 18
	R	ePZ		57	00	ipP 34
	Pr	ipPZ			16	
		iPZ			00	
		ipPZ			17	
Aug. 26	P	iPZ	22	49	00	Tu iP 22 49 25
	MW	iPZ			02	
	R	ePZ			03	
	Pr	iPZ			04	
Aug. 27	P	iPZ	02	55	18	Tu eP 02 55 30
	MW	ePZ			21	
Aug. 27	P	ePNZ	18	36	59	Normal. Tu eP 18 36 00
	PX	eSN		41	36	JSA: 14.8°N, 98.1°W, O=18:31:22
		eLNE		45	40	
	MW	ePZ		37	01	
	R	ePZ		36	54	
	LJ	ePZ			52	
Aug. 27	MW	ePZ	23	44	23	Tu eP 23 45 15
	R	ePZ			32	
Aug. 28	R	iPZ	01	08	43	Tu iP 01 07 54
	Pr	ePZ			34	
Aug. 28	P	ePNEZ	03	52	55	Normal. Tu iP 03 52 05 d
	PX	eSZ		56	07	JSA: 19.6°N, 109.1°W, O=03:49:06
		eLNEZ		57	2	
	MW	ePZ		52	52	
	R	ePNEZ			47	
	LJ	ePNEZ			34	
	T	iPNEZ		53	27	
	Pr	ePZ		52	38	

Date	Sta	Phase	h	m	s	Remarks
Aug. 28	P	ePNEZ	06	49	08	Normal. Tu iP 06 48 19 d JSA: 19.6°N.109.1°W. O=06:45:11
	PX	eSNEZ		52	25	
		eLEZ		53	3	
	Mw	ePNEZ		49	10	
	R	ePNEZ			06	
	SB	ePZ			21	
	LJ	ePZ		48	47	
	T	ePNEZ		49	40	
	H	iPNEZ			29	
	Pr	ePZ		48	52	
Aug. 28	PX	eLZ	11	55		Normal. Tu eP 11 26 42
	MW	ePZ	11	27	19	
	R	ePZ			11	
	Pr	ePZ			09	
Aug. 28	P	ePZ	20	38	51	Normal. Tu iP 20 39 15 Wellington: 19 1/2°S. 176°W., O=20:27.2
	PX	eSE		48	32	
		eLZ		24	00.8	
	MW	ePZ		20	38	
Aug. 29	R	ePZ			53	Normal. Tu eP 02 49 01 e 15
	Pr	iPZ			54	
	P	ePZ	02	48	31	
		eZ			43	
	PX	eSNEZ		58	46	
		eLZ		03	14	
	MW	iPZ		02	48	
		eZ			44	
	R	iPZ			32	
	T	ePZ			16	
Aug. 29	Pr	eZ			24	Tu iP 11 34 59 Felt east of Durango, Colorado
	P	eNZ	11	38	06	
	T	eZ		35	18	
		eZ		37	04	
Aug. 29	Pr	eZ			47	Tu iP 12 34 23
	R	ePZ?	12	34	04	
	T	ePZ			10	
	Pr	iPZ?			04	
Aug. 29	P	iPNEZ	13	11	39	Normal. Tu eP 13 12 33 eS 15 39 JSA: 43.0°N.123.8°W., O=13:19:05
		iSNEZ		13	44	
	PX	iLNZ		14	4	
	MW	ePNEZ		11	38	
		iSNZ		13	46	
	R	ePNZ		11	42	
		eSE		13	53	
	SB	iSNEZ			34	
	T	ePZ		10	41	
		iEZ		11	00	
Aug. 29	H	iSNEZ		12	14	Aftershock of preceding.
		iZ		11	41	
	Pr	iSNEZ		12	41	
		ePZ		11	51	
		iSZ		14	03	
	P	ePZ	13	18	53	
		eSE		20	53	
	MW	ePZ		18	49	
		iSZ		20	56	
	T	ePZ		18	11	
Aug. 29	P	iSNEZ	15	17	22	Aftershock. Tu eS 15 22 15
		ePZ		17	47	
		eSNEZ		19	52	
	MW	ePZ		17	48	
		eSZ		19	53	
	T	ePZ		17	06	
	iSNEZ		18	15		

Date	Sta	Phase	h	m	s	Remarks	
Aug. 29	P	ePZ	19	16	02	Normal Aftershock of 13 ^h Tu eP 19 16 53 e 20 01	
	PX	eSNEZ		18	07		
		eLNZ			46		
	MW	ePZ		16	00		
		iSN		18	06		
	R	iPZ		16	15		
	H	eSNE		17	03		
	Pr	eSZ		18	35		
	MW	iPZ	19	55	48		Tu iP 19 55 15
	R	iPZ			44		
Aug. 30	MW	iPZ	07	09	27	Tu iP 07 10 13	
	T	ePZ			15		
	Pr	iPZ			39		
	P	ePZ	09	48	49		
Aug. 30	PX	ePPZ		52	10	Normal. Tu eP 09 49 21 ePP 52 54 URSS: 19.5°N.149.5°E. JSA: 27.0°N.146.2°E., O=09:36:42 Pasadena: 19°N.147°E., O=09:36.23	
		iSNE		59	10		
		eLN	10	10	5		
	MW	iPNEZ		09	48		
		eSNE		59	11		
	R	iPZ		48	52		
		eSNE		59	15		
	SB	iPZ		48	45		
	LJ	ePZ			51		
	T	ePZ			45		
Aug. 30	H	iSN		59	03	Tu eP 10 03 13	
		iPNEZ		48	52		
		eSN		59	06		
	Pr	ePZ		48	56		
	P	ePZ	10	02	41		
	MW	ePZ			41		
	R	ePZ			41		
	T	ePZ			36		
	Pr	ePZ			47		
	MW	iPZ	12	53	16		
Aug. 30	R	ePZ			17	Normal- Tu iP 13 19 55 ePP 23 27 URSS: 16.5°N.146.5°E. JSA: 27.0°N.146.2°E. Pasadena: 17.5°N.146.5°E., O=13:06:56	
	T	ePZ			11		
	P	iPNEZ	13	19	24		
		ePPZ		22	47		
	PX	eSE		29	31		
		eLEZ		44			
	MW	iPNEZ		19	24		
	R	iPNEZ		19	27		
	SB	ePZ			16		
	LJ	ePZ			29		
Aug. 30	T	ePZ			19	Aftershock of Aug. 29, 13 ^h (near 43°N.124°W.) Tu iP 13 31 32 eS 34 43	
		eN		29	38		
	H	iPNEZ		19	23		
	Pr	iPZ			30		
	P	eZ	13	28	07		
		iZ		29	15		
	MW	eZ		28	05		
		iZ		29	15		
	T	ePNZ		28	01		
	P	ePZ	13	30	37		
Aug. 30	MW	eSNEZ		32	46	Aftershock of preceding.	
		iPZ		30	37		
		iSNEZ		32	43		
	R	ePZ		30	47		
		eSZ		32	52		
	T	ePZ		29	50		
		iZ		30	09		
		iSNEZ		31	07		
	H	iNEZ		30	32		
		iSNEZ		31	42		
Pr	eSZ		33	13			

Date	Sta	Phase	h	m	s	Remarks
Aug. 30	P	ePZ	13	39	57	Aftershock? Tu e 13 40 43
		eSZ		42	07	
	MW	ePZ		39	58	
	R	ePZ		40	00	
Aug. 30	T	ePZ		39	53	Tu i 14 19 09
		eZ		42	08	
	P	iPZ	14	18	28	
	MW	iPZ			27	
Aug. 30	R	ePZ			30	Normal. Tu iP 15 32 08 Central America.
	T	ePZ			23	
	P	ePZ	15	33	02	
	PX	eLE?		43		
Aug. 30	MW	iPZ		33	01	Tu iP 17 03 59 Probably an aftershock of June 25, 14 URSS: 13.0°N. 100.5°E.
	R	ePZ		32	55	
	T	ePNEZ		33	17	
	Pr	iPZ		32	51	
Aug. 30	P	iPZ	17	03	50	Tu iP 17 03 59 Probably an aftershock of June 25, 14 URSS: 13.0°N. 100.5°E.
	MW	iPZ			50	
	R	iPZ			50	
	T	ePZ		45		
Aug. 31	H	iPZ		47		Tu iP 01 47 44
	Pr	iPZ		57		
	MW	ePZ	01	46	59	
	R	ePZ		47	02	
Aug. 31	Pr	iPZ			10	Normal? Tu eP 04 25 41 i 26 10 Tonga region. Apia reports: P=04:15:22, eS=04:16:58
	P	ePZ	04	25	21	
		eZ		47	9	
	PX	eLNE		47	9	
Aug. 31	MW	ePZ		25	22	Tu iP 05 53 29 c
	R	ePZ		21		
	T	ePZ		31		
	Pr	iPZ		25		
Aug. 31	P	iPZ	05	53	08	Tu iP 05 53 29 c
	MW	iPZ			09	
	R	ePZ			11	
	T	ePZ			17	
Aug. 31	H	iPZ			16	Tu eP 10 44 31
	Pr	iPZ			13	
	P	ePZ	10	43	52	
		eZ			59	
Aug. 31	MW	eZ		44	01	Deep? Tu iP 17 13 09 i 46 Central America
	R	ePZ		43	49	
	T	eZ		44	18	
	P	iPZ	17	14	04	
Aug. 31	MW	iPZ			04	Deep? Tu iP 20 59 09 i 21 01 13
	R	ePZ			13	
	T	ePZ			14	
	Pr	iPZ			13	
Aug. 31	P	eZ		14	25	Deep? Tu iP 20 59 09 i 21 01 13
	P	ePZ?	20	58	34	
	MW	iZ		21	00	
		ePZ	20	58	32	
Aug. 31	R	eZ		21	00	Tu eP 23 50 07
		ePZ	20	58	36	
		eZ		21	00	
	Pr	ePZ	20	58	44	
Aug. 31	P	ePZ	23	49	35	Tu eP 23 50 07
	MW	ePZ			40	
	R	ePZ			33	

Date	Sta	Phase	h	m	s	Remarks
Sept. 1	P	iPNZ	06	26	32	Normal? Tu iP 06 26 54 d
		eNZ		27	19	
	PX	eLZ?		51	9	
	MW	iPZ		26	32	
Sept. 1	R	iPZ			34	Normal
	LJ	ePZ			31	
	T	iPNEZ			42	
	H	iPNEZ			41	
Sept. 1	Pr	iPZ			34	Tu eP 12 45 08 eS 47 35 Tu iP 13 05 33
	P	ePZ	08	09	13	
	R	ePZ			15	
	Pr	iPZ			13	
Sept. 1	MW	ePZ	12	46	33	Tu eP 12 45 08 eS 47 35 Tu iP 13 05 33
	T	eZ			58	
Sept. 1	MW	iPZ	13	05	01	Normal
	R	ePZ			04	
	T	ePZ			04	
	PX	eLZ	24	01	4	
Sept. 2	R	ePZ?		23	32	Normal
	P	ePZ	05	49	16	
		eZ		50	48	
	MW	ePZ		49	16	
Sept. 2		eZ		50	52	Tu eP 10 10 33
	R	ePZ		49	24	
	T	ePZ		48	54	
	H	iSZ		49	48	
Sept. 2		iPZ		49	00	Tu eP 10 10 33
		iSZ		50	03	
	P	ePZ	10	10	15	
	MW	ePZ			15	
Sept. 3	R	ePZ			17	Tu iP 00 30 09
	T	ePZ			23	
	Pr	ePZ			16	
	R	ePZ	00	29	52	
Sept. 3	Pr	iPZ			53	Tu iP 04 27 13 JSA: 14.8°N. 93.8°W., O=04:21:59
	P	ePNZ	04	28	06	
	PX	eLNE		37	4	
	MW	ePZ		28	06	
Sept. 3	R	ePZ			01	Tu eP 07 29 18 Tu iP 08 36 12 i 40 i 53
	Pr	iPZ			27	
	Pr	iPZ	07	29	59	
	P	iZ	08	35	44	
Sept. 3	MW	iZ			26	Tu eP 07 29 18 Tu iP 08 36 12 i 40 i 53
		eZ			49	
	R	eZ			57	
		eZ			36	
Sept. 3	T	eNEZ			35	Tu eP 18 30 44
	Pr	iZ			37	
		iZ			36	
	P	ePZ	18	30	08	
Sept. 4	MW	ePZ			09	Deep. Tu eP 10 35 11 iP'P: 11 00 09 Felt at Rabaul. Wellington: 6°S. 151 1/2°E., O=10:21.7, h=100 km Major earthquake (Magnitude 7)
	R	ePZ			14	
	Pr	ePZ			18	
	P	iPEZ	10	34	44	
Sept. 4	PX	ePPE			38	Deep. Tu eP 10 35 11 iP'P: 11 00 09 Felt at Rabaul. Wellington: 6°S. 151 1/2°E., O=10:21.7, h=100 km Major earthquake (Magnitude 7)
		eN			45	
		iNE			46	
		eSSN			51	
Sept. 4		eLNE			58	Major earthquake (Magnitude 7)
		eP'P'Z	11	00	17	
	MW	iPNEZ	10	34	45	
		eP'P'Z	11	00	19	
Sept. 4	R	ePZ	10	34	46	Major earthquake (Magnitude 7)
		eP'P'Z	11	00	15	

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
(Continued)						
Sept. 4	SB	ePZ	10	34	34	
	LJ	ePZ			47	
	T	ePNEZ			45	
	H	eP'P'Z	11	00	13	
	Pr	iPNEZ	10	35	09	
		iPZ			34	48
Sept. 5	P	eP'P'Z	11	00	16	Tu iP 07 32 49
	MW	iPZ	07	32	15	
	R	iPZ			15	
	T	ePZ			18	
	Pr	iPNEZ			03	
		iPZ			23	
Sept. 5	P	iPZ	09	14	15	Tu iP 09 15 01 d
	MW	iPZ			16	d
	R	iPZ			19	
	T	iPNEZ			01	
	Pr	iPZ			26	d
Sept. 5	P	iPNEZ	23	31	05	d Normal. Tu iP 23 31 46 d
	PX	eLZ		45.8		JSA: 54.0°N. 172.5°E.,
	MW	iPNEZ		34	05	O=23:22:00
	R	iPZ			08	d
	SB	ePNEZ		30	57	
	LJ	ePNEZ		31	17	
	T	iPNEZ		30	50	
	H	iPNEZ			58	
	Pr	iPZ		31	15	d
Sept. 6	P	ePZ	00	06	18	Deep?
		eZ			49	
	MW	iPZ			17	
	R	iZ			49	
		iPZ			19	
		iZ			52	
	Pr	ePZ			22	
		eZ			52	
Sept. 7	P	iPEZ	01	01	36	Normal? Tu iP 01 01 35 d
	PX	eLZ		26.5		BCIS: 71.5°N. 2.5°W.,
	MW	iPNEZ		01	36	O=00:50.9
		eZ		04	12	
	R	ePZ		01	35	
	SB	ePNZ			39	
	LJ	ePNEZ			42	
	T	ePNEZ			19	
	H	iPNEZ			24	
	Pr	iPZ			40	
Sept. 7	MW	iPZ	07	27	48	
		iZ		28	33	
	R	ePZ		27	50	
Sept. 7	MW	eZ	22	33	58	Tu eP 22 33 20
	R	ePZ			52	Peru?
	Pr	eZ			48	
Sept. 7	MW	iPZ	23	11	00	
		iZ			19	
	R	ePZ			02	
		eZ			28	
	Pr	eZ			29	
Sept. 8	P	iPNE	03	13	06	Normal. Aftershock of July 1,
		iSN			24	07. Felt at Santa Barbara,
	MW	iPNEZ			08	etc.
	R	iPNEZ			16	34°20'N. 119°35'W., O=03:12:45
	SB	iPNEZ		12	49	
		iSNE?			52	
Sept. 8	MW	iPZ	05	17	21	Deep? Tu iP 05 18 07
	R	ePZ			25	i 21
		eZ			40	
	Pr	iPZ			33	
		iZ			48	

Date	Sta.	Phase	h	m	s	Remarks
Sept. 8	R	ePZ	10	53	04	Deep? Tu iP 10 52 15
		eZ			26	i 37
	T	eZ			24	
	Pr	iPZ		52	58	
		eZ		53	20	
Sept. 8	P	iPNEZ	11	28	23	Tu iP 11 27 29
	MW	ePZ			20	
	R	iPZ			14	
	T	ePZ			32	
	Pr	iPZ			10	
Sept. 8	MW	eZ	13	16	28	Tu e 13 15.6
	T	ePZ			59	
Sept. 8	PX	ePZ	16	06	00	Tu iP 16 06 31
	MW	ePZ			00	
	R	ePZ			02	
	SB	ePZ?			00	
		eZ			18	
	Pr	eZ		05	53	
		eZ		06	05	
Sept. 8	PX	iPZ	15	59	07	
	MW	iPZ			07	
	R	ePZ			09	
	Pr	ePZ			09	
Sept. 8	Pr	eZ	18	15	46	Tu iP 18 15 05
		iZ			58	
Sept. 9	P	iPNEZ	07	32	47	c Normal. Tu eP 07 33 14
	PX	iE		43	37	iP'P' 58 09
	P	eZ		45	31	USCGS: 7°S. 153°E., O=07:19.6
	PX	eSSN		49	49	JSA: 5°S. 155.6°E., O=07:19.1
		eLN		56.6		Wellington: 5 1/2°S. 155°E.,
	MW	iPNEZ		32	48	O=07:19.7
	R	iPNEZ			49	
		eP'P'Z			58	18
	SB	ePNEZ			32	42
	LJ	ePZ			49	
	T	ePNEZ			49	
		eP'P'Z			58	17
	H	ePNEZ			32	52
	Pr	iPZ			52	
Sept. 9	MW	eZ	12	10	58	
	R	ePZ			11	01
Sept. 9	MW	ePZ	17	17	28	
	T	ePZ			30	
Sept. 9	MW	iPZ	17	52	00	Tu iP 17 51 28
	T	ePZ			12	
	Pr	ePZ			51	52
Sept. 10	MW	iPZ	14	50	02	
	R	iPZ			04	
	T	ePZ			05	
Sept. 10	P	iPZ	19	12	48	
	MW	ePZ			46	
	R	ePZ			46	
Sept. 10	PX	eLNEZ	22	43.9		Turkey. Tu e 22 12 21
Sept. 12	P	iPZ	07	16	17	Normal. Tu eP 07 16 50
		ePPZ			20	32
	PX	iSKSNE			26	56
		ePSNEZ			29	49
		eSSNEZ			34.8	
		eLNE			46.0	
	MW	ePZ			16	17
		ePPZ			20	33
	R	ePZ			16	16
		iPPZ			20	52
	T	ePZ			16	11
Sept. 13	PX	eLZ	00	49		Normal
Sept. 13	PX	eLZ	04	14		Normal

Date	Sta.	Phase	h	m	s	Remarks	
Sept. 13	P	iPNEZ	18	19	08 d	Deep? Tu iP 18 18 13 USCGS: 18.7°N 106.9°W., O=18:14.9	
	PX	iZ		30			
		iSNEZ		22	52		
		iLZ		23	9		
	MW	iPNEZ		19	09		
		iZ			27		
	R	iPNEZ			04 d		
	SB	iPNEZ			23		
	LJ	iPNEZ		18	52		
	T	iPNEZ		19	37		
Sept. 13	H	eSE		23	47	Tu iP 23 04 08 e 05 41	
		iPNEZ		19	26 d		
	Pr	iPZ		18	54		
	Sept. 13	T	ePZ	23	04 29		
	Pr	iZ		05	08		
	Sept. 13	PX	eLZ	23	43.3		Normal? Tu iP 23 26 07
	MW	eZ?		23	25 06		i 20
		eZ			22		i 30
		iZ			46		
	R	eZ			26		
Sept. 14	T	eZ		38		Normal. East Indies	
		ePZ		06			
	H	eZ		19			
	Pr	eZ?		26			
		eZ?		32			
	Sept. 14	P	iZ	04	27 23		
	PX	eZ			37.3		
		eLEZ			56.5		
	MW	eZ		27	15		
	R	eZ?		26	55		
Sept. 14	T	eZ		27	18	Tu iP 07 50 05 Near Apia, which reports: P=07:39:19, S=07:39:52	
	Sept. 14	MW	ePZ	06	38 29		
	T	ePZ			24		
	Sept. 14	P	iPZ	07	49 39		
	MW	iPZ			40		
	R	ePZ			42		
	T	iPZ			48		
	H	iPZ			47		
	Pr	ePZ			41		
	Sept. 14	P	ePZ	08	04 33		Tu iP 08 05 25
Sept. 14	MW	ePZ		33		Normal? Tu iP 13 52 15 At Pasadena, etc, confused by a preceding small local shock.	
	R	iPZ		39			
	T	ePZ		03	59		
		iZ		04	05		
	H	ePZ			13		
	Pr	ePZ			47		
	Sept. 14	P	ePZ	13	52 56		
	PX	eZ		14	02 54		
		eLZ?			26.5		
	MW	eZ		13	53 04		
Sept. 14	R	eZ?		17		Normal. Tu iP 18 41 17 c Epicenter in upper Owens Valley. Strong in the sierra Nevada; many rock slides. Felt widely in the San Joaquin Valley. Large fore- shocks at 16:44 and 18:22. Many aftershocks. 37°34'N. 118°44'W., O=18:39:12 Magnitude 6	
	T	eZ		04			
	Pr	eZ			12		
	Sept. 14	P	iPNEZ	18	40 08 d		
		iSE			41 00		
	MW	iPNEZ		40	07 d		
		iSE			58		
	R	iPNEZ			12 d		
	SB	iPNEZ			06 d		
	T	iPNEZ		39	25 d		
H	iPNEZ			41 d			
Pr	iPZ		40	23 d			

Date	Sta.	Phase	h	m	s	Remarks		
Sept. 15	P	iPZ	06	54	14	Normal? Tu iP 06 54 39 i 52 i 55 06 Near Apia, which reports: P=06:43:27, S=06:44:01		
	PX	eLZ	07	16.0				
	MW	ePZ	06	54	13			
	R	ePZ			17			
	T	iPZ			24			
	Pr	iPZ			17			
	Sept. 16	R	eZ	21	49		26	Tu e(P) 21 48.4
	Pr	eZ			14		e(S) 50.7	
	Sept. 16	P	iPNEZ	21	51		37 c	Normal. Tu iP 21 51 59
	PX	iSE		22	01		57	iPKKP 22 09 53
P	iPKKPZ			09	53	eP'P' 17 52		
PX	eLE			13.3		USCGS: 28 1/2°S. 178°W., O=21:39.1		
P	eP'P'Z			17	59	Wellington: 28 1/2°S. 177 1/2° O=21:39.1		
MW	iPNEZ			51	38			
	iPKKPZ		22	09	55			
	iP'P'Z			17	59			
R	ePNEZ		21	51	38			
	iPKKPZ		22	09	54			
	iP'P'Z			17	52			
SB	iPNEZ		21	51	34			
LJ	ePNEZ				37			
T	iPNEZ				48			
H	iPNEZ				46			
Pr	iPZ				39			
Sept. 17	P	iPKKPZ	22	09	55 c	Normal? Tu iP" 07 06 28 i 07 43 iPKKP 16 37 e 24 08. Roughly O° 122°E., O=06:48.0		
		eP'P'Z			17 56			
	Sept. 17	P	ePZ	07	02 38			
		iP"Z			06 16			
		eZ			07 13			
		iZ			09 29			
	PX	iSKSNEZ			12 37			
	P	eN			13 47			
	PX	ePKKPZ			16 59			
	PX	iSSN			22 33			
MW	eLN			33.3				
R	iP"Z		06	16				
R	iP"Z			16				
SB	eP"Z			13				
T	eP"Z			14				
H	iP"NEZ			16				
	iZ			09 29				
Pr	iP"Z			06 18				
	iPKKPZ			17 00				
Sept. 17	P	ePZ	15	37 10	Tu eP 15 38 23			
	iZ			17				
MW	ePZ			11				
R	ePZ			17				
T	ePNEZ			36 42				
H	ePNEZ			53				
Pr	ePZ			37 30				
Sept. 17	MW	ePZ	17	36 57	Deep? Tu iP 17 36 02			
R	ePZ			51	i 22			
Pr	iPZ			46	e 36			
Sept. 17	R	iPZ	19	29 05	Deep? Tu eP 19 29 33			
	eZ			16	e 48			
Sept. 18	PX	eLZ	02	23 32	Normal. Tu e 02 24 24			
	eLEZ			53.3				
R	eZ			23 49				
Pr	eZ			43				
Sept. 18	PX	eLZ	06	01.0	Normal. Tu eP 05 41 17			
MW	ePZ		05	41 33				
R	ePZ			38				
T	ePZ			52				
H	ePZ			45				
Pr	ePZ			43				

Date	Sta.	Phase	h	m	s	Remarks
Sept. 18	P	ePZ	07	34	30	Normal. Felt at San Francisco, San Jose, etc. Santa Clara reports: P=07:33:34, S=07:33:35 Tu eP 07 35 54
	MW	iPZ			31	
		iZ			49	
	R	iPNEZ			38	
		iZ			53	
	SB	iPZ			18	
	T	iPNEZ			12	
		iSNE			54	
	H	iPNEZ			19	
		iSNEZ	35	10		
Sept. 18	Pr	ePZ	11	23	50	Tu eP 11 24 20
	P	iPZ			50	
	MW	ePZ			50	
	R	iPZ			52	
Sept. 18	T	ePZ			42	Deep. Tu iP 13 24 03 d ipP 26 c eP'P' 53 47 Peru. USCGS: 13°S, 73°W, O=13:14.3, h=100 km JSA: 12.3°S, 72.5°W, O=13:14:24, h=110 km
	Pr	iPZ	13	24	43	
	P	iPNEZ			25	
		ipPZ			07	
		isPZ			15	
		iSNEZ	33	22		
	PX	iZ			47	
		iNE			57	
		eSSNE	37	8		
		eLNE	41	9		
Sept. 18	P	eP'P'Z	53	32		Deep. Tu iP 01 12 07 c ipP 25 eP'P' 40 23 USCGS: 52°N, 158°E. approx., O=01:01:01 JSA: 50°N, 158.3°E, O=01:01:27, h=100 km
	MW	iZ	24	43	d	
		iPZ	25	07		
		iZ	17			
		eP'P'Z	53	31		
	R	iPNEZ	24	38	d	
		ipPZ	25	02		
		iZ	13			
		eSNE	33	11		
		eP'P'Z	53	32		
Sept. 18	SB	iPEZ	24	49	d	Normal. Tu eP 18 30 11 Near Apia, which reports: P=18:18:57, S=18:19:20
		eP'P'Z	53	40		
	LJ	iPNEZ	13	24	34	
		ipPNEZ			57	
	T	iPNEZ			55	
		ipPNEZ	25	20		
		iP'P'Z	53	27		
	H	iPNEZ	24	49		
		ipPZ	25	12		
	Pr	iPZ	24	34	d	
Sept. 18	P	ipPZ	25	11		Normal. Tu eP 18 30 11 Near Apia, which reports: P=18:18:57, S=18:19:20
		iZ	25	11		
		ip'P'Z	53	36		
		ePZ	18	29	47	
Sept. 19	PX	eLNZ	51	1		Normal. Tu eP 18 30 11 Near Apia, which reports: P=18:18:57, S=18:19:20
	MW	ePZ	29	42		
	R	ePZ			52	
	T	ePZ			58	
Sept. 19	Pr	ePZ	00	28	50	Tu eP 00 28 19
	P	ePZ			53	
	MW	ePZ			50	
	R	ePZ			47	
Sept. 19	P	iPZ	05	42	42	Tu iP 05 43 08
	MW	iPZ			44	
	T	iPZ			53	
	Pr	iPZ			47	
Sept. 19	MW	ePZ?	06	28	52	Tu eP 06 28 32
	R	ePZ			55	
	T	ePZ			57	
	Pr	iPZ			58	

Date	Sta.	Phase	h	m	s	Remarks
Sept. 19	MW	ePZ	09	33	42	Tu eP 09 32 41
	R	ePZ			35	
	T	ePZ			34	
Sept. 19	Pr	iPZ			33	Tu eP 12 49 13
	MW	ePZ?	12	49	52	
Sept. 21	P	iPNEZ	19	53	26	Normal. Tu eP 19 54 55 Slight damage at Gorman, near The epicenter. Magnitude 5. Felt as far as Los Angeles and Pasadena; also widely in The San Joaquin Valley. 34°52'N, 118°56'W, O=19:53:08
		iSNE			39	
	MW	iPNZ			26	
	R	iPNEZ			35	
		iSNE			55	
	SB	iPNEZ			23	
	LJ	ePZ			48	
	T	iPNEZ			47	
		iSE		54	19	
		iPZ		53	36	
Sept. 23	Pr	iPZ			46	Tu iP 19 22 50
	P	ePZ	19	22	25	
	MW	ePZ			26	
	R	ePZ			27	
Sept. 24	T	ePZ			30	Deep. Tu iP 01 12 07 c ipP 25 eP'P' 40 23 USCGS: 52°N, 158°E. approx., O=01:01:01 JSA: 50°N, 158.3°E, O=01:01:27, h=100 km
	Pr	ePZ			29	
	P	iPEZ	01	11	28	
		ipPZ			46	
	PX	eSZ		19	38	
		eLN		26	5	
	P	eP'P'Z		40	48	
		epP'P'Z		41	09	
	MW	iPNEZ		11	28	
		ipPZ			41	
Sept. 24		eP'P'Z		40	48	Deep? Tu iP 09 57 05 i 22
		ipP'P'Z		41	09	
	R	iPNEZ		11	31	
		ipPZ			48	
		eSNE		19	49	
		eP'P'Z		40	48	
		epP'P'Z		41	07	
	SB	iPNEZ		11	21	
	LJ	iZ			35	
	LJ	ePNEZ		11	38	
Sept. 24	T	iPNZ			16	Normal. Tu eP 20 07 32 Approximately 11°S, 152°E., O=18:23:31
		epP'P'Z		40	48	
		iZ			59	
	H	iPNEZ		11	21	
		eSNE		19	29	
		epP'P'Z		40	54	
	Pr	iPZ		11	35	
		iZ			49	
		iZ			53	
		epP'P'Z		40	49	
Sept. 24	P	iPNEZ	09	56	42	Normal. Tu eP 20 07 32 Approximately 11°S, 152°E., O=18:23:31
	MW	iPZ			43	
	R	iPZ			43	
	T	iPNZ			50	
Sept. 24	H	iPNEZ			49	Normal. Tu eP 20 07 32 Approximately 11°S, 152°E., O=18:23:31
	Pr	iPZ			45	
	P	ePZ	18	37	00	
	PX	eLNE	19	12	7	
Sept. 24	MW	ePZ	18	37	00	Normal. Tu eP 20 07 32 Approximately 11°S, 152°E., O=18:23:31
	R	ePZ			02	
	T	ePZ			36	
	PX	eLZ	20	11	2	
Sept. 25	Pr	ePZ	04	09	29	Tu eP 04 09 34

Date	Sta.	Phase	h	m	s	Remarks		
Sept. 25	P	ePNZ	17	55	43	Normal. Tu iP 17 56 33 Strong on Hawaii USCGS: 19°N 155°W approx., O=17:48:37 JSA: 20.3°N 155.1°W, O=17:48:49		
	PX	iSNE	18	04	26			
		eLZ		03	55			
	MW	ePZ	17	55	44			
		eZ	18	04	58			
	R	ePNEZ	17	55	49			
		eZ	18	02	00			
	SB	iPZ	17	55	36			
	LJ	ePNEZ			50			
	T	iPNEZ			53			
Sept. 25	H	ePNEZ			50	Tu e 21 47 03 i 35		
	Pr	iPZ	21	46	46			
	R	eZ		47	13			
Sept. 27	Pr	eZ		46	43	Deep. Tu iP 05 47 53 ipP 48 25		
		eZ		47	12			
	P	iPNEZ	05	48	28			
		ipPZ		49	02			
	MW	iPZ		48	28			
		ipPZ		49	01			
	R	iPZ		48	26			
		ipPZ			59			
	T	iPNEZ		48	40			
		ipPZ		49	14			
Sept. 27	H	ePNEZ		48	36	Deep. Tu iP 22 05 52 epP 07 51 Near Samoa? Apia reports "slight tremor" at 21 ^h 56 ^m		
	Pr	iPZ			20			
	P	iPZ	22	05	29			
		ipPZ		07	25			
	MW	iPZ		05	30			
		epPZ		07	27			
	R	ePZ		05	31			
		epPZ		07	28			
	T	iPZ		05	48			
		iPZ			44			
Sept. 27	P	iPZ	23	48	44	Tu iP 23 49 16		
	MW	iPZ			45			
	R	iPZ			47			
	T	iPZ			37			
	Pr	iPZ			48			
	Sept. 28	P	ePZ	05	40		56	Deep? Tu iP 05 41 42 d i 42 02 e 44 04
			iNEZ!		41		16	
			iZ				29	
			iZ		42		29	
		MW	iPZ		40		58	
		iNEZ!		41	15			
R		ePNEZ			02			
		iNEZ!			20			
		iZ		43	53			
SB		eZ		41	09			
Sept. 28	T	iPNEZ		40	39	Tu iP 10 12 58		
		iNEZ			57			
		iZ		43	46			
	H	iPNEZ		40	46			
		iNEZ		41	04			
	Pr	iPZ		41	09			
		iZ!			28			
	P	iPZ	10	12	31			
	MW	ipZ			33			
	R	ePZ			34			
Sept. 28	T	ePZ			37	Tu iP 12 46 25 d Near Apia which reports: eP=12:35:41, (S?)=12:35:40		
	Pr	iPZ			36			
	P	iPNZ	12	46	00			
	MW	iPZ			01			
	R	ePZ			03			
	T	iPZ			10			
	H	ePNEZ			09			
	Pr	ePZ			03			

Date	Sta.	Phase	h	m	s	Remarks		
Sept. 28	MW	iPZ	16	13	00	Deep? Tu eP 16 12 28 i 49		
		iZ			20			
	R	ePZ		12	57			
		eZ		13	17			
	T	ePZ			13			
		eZ			33			
	Pr	ePZ		12	53			
		eZ		13	13			
	Sept. 29	PX	eLZ	03	37		16	Normal.
	Sept. 29	P	iPNEZ	03	44		16	Tu iP 03 43 39 d
MW		iPZ			17			
R		iPZ			12			
T		ePNEZ			27			
H		ePZ			23			
Pr		iPZ			08			
P		iPEZ	11	14	40	Normal? Tu iP 11 15 10 c		
		iEZ			52			
MW		iPZ			39			
		eZ			53			
Sept. 29	R	iPZ			41	Deep? Tu iP 13 48 27 e 53		
		eZ			52			
	SB	ePZ			33			
	T	iPNEZ			32			
		iNEZ			46			
	H	iPNEZ			36			
	Pr	iPZ			45			
	P	iPZ	13	47	55			
	MW	iPZ			55			
		eZ		48	17			
Sept. 29	R	ePZ		47	57	Normal. Tu iP 16 22 14 c		
		eZ		48	17			
	T	iPZ		47	45			
	H	iPNEZ			49			
	Pr	ePZ		48	03			
	MW	ePZ	16	23	11			
	H	ePZ			22			
	Pr	iPZ		22	59			
	P	iPNEZ	17	20	50			
		iZ		24	06			
Sept. 29	PX	eNEZ		34	31	Deep. Tu eP 17 21 13 Wellington: 22°S 167°E, O=17:08.1, h=100 km		
		eLNE		43	5			
	MW	iPNEZ		20	50			
	R	ePZ			52			
	SB	ePZ			43			
	LJ	ePNEZ			50			
	T	iPNEZ			58			
	H	iPZ			56			
	Pr	iPZ			53			
	P	eZ	17	29	05			
Sept. 29	MW	eZ			06	Tu eP 17 29 42 i 56		
	R	eZ			13			
	T	iZ		28	56			
	Pr	eZ		29	21			
	P	iPNEZ!	08	32	15			
	Px	eZ		35	57			
		iNE		43	00			
		eLNEZ		59	2			
	MW	iPNEZ!		32	16			
	R	iPZ			18			
Sept. 30	SB	ePZ			11	Normal. Tu iP 08 32.42 c Wellington: 40°S 160°E, O=08:19.2		
	LJ	ePNE			18			
	T	iPNEZ			19			
	H	iPNEZ			18			
	Pr	iPZ			20			
	P	ePZ	11	09	22			
	MW	ePZ			26			
	R	ePZ			54			
	T	eLZ	20	08	33			
	PX	eLZ	20	08	33			
Sept. 30	PX	eLZ	20	08	33	Normal. S. of New Zealand?		

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA CALIFORNIA

SEISMOLOGICAL LABORATORY

BULLETIN

OCTOBER - DECEMBER 1941



(PASADENA AND AUXILIARY STATIONS)

Date	Sta.	Phase	h	m	s	Remarks
Oct. 1	MW	ePZ	14	00	23	Normal. Small surface waves at Pasadena
	R	ePZ			20	
Oct. 1	P	iPNEZ	18	52	39	Deep. Tu iP 18 52 59 c
		ipPZ			57	
	MW	ePZ			40	e 53 16 28
		epPZ			58	
	R	iPZ			42	
		ipPZ		53	00	
	T	ePNEZ		52	49	
		ipPZ		53	06	
	H	ePE			49	
Oct. 1	P	ePNEZ	19	53	41	Normal. Tu iP 19 54 35 JSA: 49.2°N, 130.5°W., O=19:49:31
	PX	eLNEZ		58	5	
	MW	iPNEZ		53	41	
	R	ePNEZ			47	
	SB	ePZ			35	
	LJ	ePNEZ			59	
	T	ePNEZ			10	
	H	ePNEZ			22	
	Pr	ePZ			58	
Oct. 3	P	iPNEZ	16	15	11	Normal. Damage at and near Eureka, Humboldt County. USCGS: 40.6°N, 124.6°W., O=16:13.2
	PX	iSNEZ		16	45	
	MW	eLNE		17	0	Large shock (Magnitude 6) Tu iP 16 16 33 c
		eSNE		16	50	
	R	iPNEZ		15	20	
		eLNE		17	4	
	SB	iPNEZ		14	58	
		iSNEZ		16	20	
	LJ	ePNEZ		15	38	
		eLNE		17	7	
	T	ePNEZ		14	45	
		iSNEZ		16	15	
	H	iPNEZ		14	56	
		iSNE		16	40	
	Pr	iPZ		15	31	
Oct. 5	P	eZ	07	25	02	Tu eP 07 24 30 South of Africa. near Prince Edward Is. (using Ksara, Cartuja, and Toledo) Compare Nov. 24, 1041, 16 ^h .
	R	eZ		24	57	
	T	eZ		24	56	
		eZ		25	38	
	Pr	eZ		25	02	
Oct. 5	P	iPNEZ	10	22	38 d	Normal? Tu iP 10 23 04 d
		iZ			51	
	PX	iSNEZ		31	58	USCGS: 15°S, 173°W., O=10:11.2 JSA: 14°S, 173.5°W., O=10:11:22 Wellington: 17°S, 173°W., O=10:11.5, h=200 km
	MW	eLN		40	7	
	R	iPNEZ		22	39 d	Felt at Apia, which reports iP 10 11 41 iS 12 06 and gives: 15.3°S, 173.0°W., O=10:11:17
		eSNE		32	03 d	
	SB	iPNEZ		22	27 d	
	LJ	iPNEZ			38	
	T	iPNEZ			47 d	
		eSNE		32	17	
	H	iPNEZ		22	47	
		eSNE		32	10	
	Pr	iPZ		22	40 d*	
Oct. 6	P	ePZ	06	10	33	Tu eP 06 10 58 Near Apia, which reports P = 05:59:45
	MW	ePZ			35	
	T	iPZ			47	
	Pr	eZ			36	
Oct. 6	MW	iPZ	06	59	44	Tu iP 06 59 47
	T	ePZ			27	
Oct. 6	P	iPNEZ	07	01	00 c	Normal. Tu eP 07 02 20 Aftershock of Oct. 3, 16 ^h
	MW	iPNEZ			00	
	R	ePNE			08	
	SB	ePZ		00	50	
	T	iPNEZ			35	
	H	iPNEZ			45	
	Pr	iPZ		01	15	

Pasadena and auxiliary stations, 1941

Date	Sta.	Phase	h	m	s	Remarks
Oct. 6	P	iPZ	09	33	02	Tu iP 09 33 25
	T	iPZ			41	
	Pr	iPZ			04	
Oct. 6	P	ePZ	16	58	02	Tu e 16 57 10
	MW	ePZ			03	
	R	ePZ			57 58	
	T	ePZ			58 17	
Oct. 7	MW	iPZ	06	43	48	Tu iP 06 44 33
	T	ePZ			33	
	H	ePZ			40	
	Pr	iPZ			58	
Oct. 8	P	iPEZ	00	30	50	Tu iP 00 31 24
	MW	iPZ			52	
	R	ePEZ			54	
	T	ePNEZ			41	
	H	ePZ			46	
Oct. 8	P	iPNEZ	03	42	10	Tu iP 03 41 36
	MW	iPNEZ			10	
	R	iPZ			07	
	LJ	ePZ			02	
Oct. 8	P	iPNEZ	04	29	33	Normal? Tu iP 04 28 40
	PX	ePcPZ			31 50	Roughly 8°N. 83°W. O=04:22 O
		iSE			35 42	
	MW	eLZ			43	
	R	iPNEZ			29 33	
		eZ			35 56	
	R	ePZ			29 58	
	SB	ePcPZ			31 50	
	LJ	ePNEZ			29 46	
	T	ePNZ			21	
		ePNEZ			47	
		iPcPZ			31 58	
	H	ePZ			29 41	
Oct. 8	P	iPNEZ	05	36	33	Normal. Tu iP 05 37 06
	PX	eSNEZ			46 41	Japan?
	MW	eLZ	06	04	0	
	R	ePNEZ	05	36	33	
	SB	ePZ			36	
	LJ	iPNEZ			29	
	T	ePNZ			42	
	H	iPNEZ			27	
Oct. 8	P	ePNEZ	15	55	08	Deep. Tu iP 15 55 29-c
	MW	iPZ			09	
	R	ePZ			09	
	LJ	ePZ			07	
	T	iPZ			17	
Oct. 8	P	ePZ	19	30	24	Tu eP? 19 30 36
	PX	eZ			33 47	
	MW	eN			37 57	
		ePZ			30 26	
	R	eZ			33 48	
		ePZ			30 24	
		eZ			33 47	
Oct. 9	MW	iPZ	04	41	33	
	R	ePZ			35	
	T	ePZ			26	
	H	iPZ			29	
Oct. 9	P	iPZ	06	10	29	Tu iP 06 10 47
	MW	iPZ			29	
	R	ePZ			30	
	T	ePZ			37	
	H	ePZ			36	
	Pr	ePZ			30	

Pasadena and auxiliary stations, 1941

Date	Sta.	Phase	h	m	s	Remarks
Oct. 9	P	eZ	18	13	28	Normal. Tu eP 18 31 54
	MW	ePZ			26	Near Apia, which reports
	R	eZ			29	iS=18:03:38
	T	ePZ			38	
Oct. 10	P	iPZ	01	56	35	Tu iP 01 57 18
	T	iPZ			23	
	H	iPZ			28	
	Pr	ePZ			45	
Oct. 10	P	iPZ	07	22	06	Tu eP 07 22 25
	MW	ePZ			07	
	R	ePZ			10	
	T	ePZ			19	
	H	ePZ			16	
	Pr	ePZ			08	
Oct. 10	MW	iPZ	07	41	56	Tu eP 07 41 25
	R	iZ			42 03	
	T	ePZ			41 53	
	H	ePZ			42 08	
	P	iPNEZ	20	39	59	Tu iP 20 40 23 c
	MW	iPZ			40 00	
	R	iPZ			02	
	T	iPZ			08	
Oct. 11	P	iPNEZ	21	33	39	Tu iP 21 33 38 d
	MW	iPZ			41	
	R	ePZ			40	
		eZ			35 13	
	Pr	ePZ			33 41	
Oct. 13	P	iPNZ	01	08	10	Tu eP 01 07 54?
	R	ePZ			07	
	Pr	iPZ			02	
Oct. 14	P	iPZ	07	17	13	Tu iP 07 16 39
	MW	iPZ			13	
	R	iPZ			09	
Oct. 14	P	iPNEZ	07	47	19	Deep? Tu eP 07 47 47
	MW	iEZ			20	
	R	eNZ			22	
	T	ePZ			46 43	
		iNEZ			47 01	
	H	iNEZ			08	
	Pr	eZ			30	
Oct. 14	P	iPNEZ	10	33	11	Tu iP 10 32 17
	MW	iZ			35 55	
	R	iPEZ			33 12	
	T	ePZ			05	
	Pr	iPNEZ			06	
	P	ePZ			01	
Oct. 14	P	ePZ	16	44	35	Tu iP 16 45 16
	MW	ePEZ			35	
		iZ			45 29	
	R	ePZ			44 41	
	T	iPNEZ			23	
	Pr	iPZ			46	
Oct. 14	P	ePZ	20	52	49	Tu eP 20 53 43
	MW	ePZ			50	
	R	ePZ			56	
Oct. 15	P	iPNEZ	00	17	43	Deep? Tu iP 00 17 01 c
	MW	eZ			18 03	
	R	iPZ			17 42	
	T	iPZ			37	
		eZ			18 23	
		iPZ			17 56	

Date	Sta.	Phase	h	m	s	Remarks	
Oct. 15	P	iPNEZ	09	45	51	Deep. Tu iP 09 45 12 d ipP 38 i 54 i 46 03 JSA: 13.6°S, 73.0°W., O=09:35:30, h=120 km USCGS: 16°S, 73.8°W., O=09:35:15, h=100 km. The latter fits our data better.	
		ipPZ		46	17		
		iZ			31		
	MW	iZ			53		
		eP'P'Z	10	14	55		
		iPEZ	09	45	51		
	R	ipPZ		46	17		
		iZ			31		
		iZ			53		
	T	eP'P'Z	10	14	55		
		ePZ	09	45	45		
		iZ		46	11		
	Pr	eZ			29		
		iZ			36		
		iPNEZ		46	04		
P	ipPNEZ			30			
	iZ			52			
	iPZ		45	40			
Oct. 16	P	ipPZ		46	05	(Deep) Tu iP 04 53 30 ipP 50 isP 54 00	
		iPNEZ	04	53	04 d		
		ipPNEZ			26		
PX	eLEZ	05	43	09 d	h=80 km		
	MW	iPZ	04	53		05 d	
	R	ipPZ				05	
SB	LJ	ePNEZ			04		
	T	ePZ			04		
	H	ipPNEZ			14 d		
Oct. 16	Pr	ipPZ			34	Normal.	
		ipNZ			12		
		ePZ	14	20	08		
P	ePZ		14	20	15	Normal.	
	PX	eLZ		48	20		
	MW	eZ		20	18		
Oct. 16	P	R			17	Tu eP 15 23 36 Roughly 18°S, 168°E., O=15:40.5	
		T			20		
		Pr	ePZ	15	23		16
Oct. 16	PX	eZ		49	9	Tu eP 15 23 36 Roughly 18°S, 168°E., O=15:40.5	
		MW	eLEZ		23		11
		R	ePZ		23		11
Oct. 18	T	eZ			21	Tu eP 08 44 34	
		ePZ			17		
		ipZ			16		
Oct. 18	P	ePZ	08	13	14	(Deep) Tu iP 23 20 23 ipP 40 isP 47 iSKPP 48 46	
		ipPNEZ	23	20	04		
		ipPZ			21		
Oct. 18	PX	eZ			23	Tu eP 08 44 34	
		MW	eLZ		46		33
		R	ipPNEZ		20		05 d
Oct. 18	MW	ipPZ			22	Tu eP 08 44 34	
		isPZ			36		
		R	ipPNEZ		20		07
Oct. 18	SB	iZ			38	Tu eP 08 44 34	
		eZ			36		
		LJ	ipZ		20		02
Oct. 18	T	ipPZ			18	Tu eP 08 44 34	
		ipZ			05		
		ipPNEZ			15		
Oct. 19	PX	ipPZ			31	Tu eP 00 48 38 eS 49.6	
		MW	eNE	00	50		47
		R	eZ		49		28
Oct. 19	MW	ePZ?			50	Tu eP 00 48 38 eS 49.6	
		R	eZ		50		29

Date	Sta.	Phase	h	m	s	Remarks	
Oct. 19	P	iPZ	03	48	12	Deep? Tu iP 03 48 37 i 53	
		MW	ipPZ		14		
		R	iZ				29
Oct. 19	R	ePZ			46	Tu iP 19 18 54 e 25 02 i 17 32 50	
		T	eZ		33		
		H	ipPZ				23
Oct. 19	P	ePZ			21	Tu iP 19 18 54 e 25 02 i 17 32 50	
		MW	eZ	19	25		20
		R	eZ				28
Oct. 20	P	iZ			23	Tu iP 19 18 54 e 25 02 i 17 32 50	
		MW	ipPZ		20		
		R	ePZ				21
Oct. 20	R	ePZ			32	Tu iP 19 18 54 e 25 02 i 17 32 50	
		T	eZ		35		
		H	ipPZ				28
Oct. 21	P	ipPNZ	03	46	28	Tu iP 03 47 11 i 24	
		MW	iZ		39		
		R	ipPNEZ				29
Oct. 21	R	iZ			41	Tu iP 03 47 11 i 24	
		H	ipZ		31		
		Pr	eZ				42
Oct. 21	H	iZ			47	Tu iP 03 47 11 i 24	
		Pr	ipZ		46		
		T	iZ				35
Oct. 22	P	ipPZ			26	Normal. Tu eP 06 58 59 Felt throughout the Los Angeles region. Minor damage near the epicenter. 33°49'N, 118°13'W., O=06:57:19	
		MW	ipPNEZ	06	57		28 c
		R	ipPNEZ				34 c
Oct. 22	R	ipPNEZ			42	Normal. Tu eP 06 58 59 Felt throughout the Los Angeles region. Minor damage near the epicenter. 33°49'N, 118°13'W., O=06:57:19	
		LJ	ipPNEZ		48		
		H	ePNEZ				48
Oct. 23	P	ipZ			43	Deep. Tu iP 15 06 02 ipP 28 South America?	
		MW	ipZ	15	06		36
		R	ipPZ				07 02
Oct. 23	R	ipPZ			06 36	Deep. Tu iP 15 06 02 ipP 28 South America?	
		MW	ipPZ		07 02		
		R	ipPZ		06 33		
Oct. 23	R	ipPZ			59	Tu iP 24 24 52	
		MW	ePZ	24	24		41
		R	ipZ	23	19		34
Oct. 23	R	eZ			48	Tu eP 23 20 21	
		MW	ipZ				48
		R	eZ				48
Oct. 24	P	ipZ			12	Tu iP 40 05 17	
		MW	ipZ	40	06		12
		R	ipZ	00	15		11
Oct. 25	PX	eLZ			41.8	Normal. Tu eP 00 15 27 i 36 e 18 40	
		MW	ePZ		15		05
		R	ipZ				12
Oct. 25	R	ipZ			07	Normal. Tu eP 00 15 27 i 36 e 18 40	
		MW	ipZ		15		05
		R	ipZ				12
Oct. 25	T	eZ			18	Normal. Tu eP 00 15 27 i 36 e 18 40	
		MW	eZ		18		15
		R	ePNE		15		13
Oct. 25	P	eNE			21	Normal. Tu eP 00 15 27 i 36 e 18 40	
		MW	ePZ	09	35		38
		R	ePZ				40
Oct. 25	R	eZ			36	Normal. Tu eP 00 15 27 i 36 e 18 40	
		MW	ePZ		36		02
		R	ePZ		35		37
Oct. 26	MW	ePZ?	15	55	55	Tu iP 15 57 08 i 18 26 i 24 28	
		P	ipPNEZ	07	21		37 c
		R	iZ				44
Oct. 27	P	iZ			59	Tu iP 15 57 08 i 18 26 i 24 28	
		MW	ipZ				38 c
		R	ipZ				41
Oct. 27	LJ	ipPNEZ			51	Tu iP 15 57 08 i 18 26 i 24 28	
		T	ePNE		17		
		H	ipZ				24

Date	Sta.	Phase	h	m	s	Remarks
Oct. 27	P	ePZ	08	18	18	
	MW	eZ?		19		
	R	ePZ		04		
Oct. 27	P	ePZ	08	36	16	Tu eP 08 37 31
	MW	ePZ		16		
	R	ePZ		25		
Oct. 27	P	iPNEZ	12	15	15	Normal. Tu 12 16 27
	PX	eLNEZ		18	2	
	MW	iPNEZ		15	15	
	R	iPNEZ		22		
	T	ePNE		14	47	
Oct. 27	P	iPZ	19	13	53	Tu iP 19 13 17
	MW	iPZ		52		e 14 09
	R	ePZ		48		
		eZ		14	42	
Oct. 28	R	iZ	05	18	22	Tu iP 05 18 31, i 05 21 49
Oct. 28	P	iPNEZ	10	35	54	Normal. Tu iP 10 37 09
	PX	eLEZ		38	9	
	MW	iPNEZ		35	55	
	R	ePNEZ		36	00	
	T	ePNE		35	53	
	H	ePNEZ		35	40	
		eSNEZ		37	47	
Oct. 29	P	iPZ	01	16	46	Tu e? 01 16 46
	MW	eZ?		37		i 59
	H	iPZ		44		
Oct. 29	P	ePZ	08	03	30	Tu iP 08 02 11
	MW	ePZ		28		i 04 05
Oct. 29	P	iPZ	09	20	19	Tu iP 09 20 54
	MW	iPZ		20		
	R	iPZ		23		
	H	iPZ		14		
Oct. 30	P	iPNEZ	07	21	52	Tu eP 07 22 22
	MW	iPZ		52		
	R	iPZ		54		
Oct. 31	P	iPZ	06	30	19	Normal. Very distant?
		iZ		31	34	Two shocks?
		iZ		32	57	Tu iP 06 30 33
		iZ		54	47	e 32 00
	PX	eLEZ	07	07	35	e 34 11
	MW	iPZ	06	30	21	i 55 22
		eZ		31	34	
		iZ		32	57	
		iZ		54	48	
	R	eZ		32	58	
	H	iPZ		30	28	
		iZ		32	58	
Oct. 31	MW	ePZ	11	53	30	Tu eP 11 52 49
	R	ePZ?		42		
Oct. 31	P	iPNEZ	12	43	58	Normal? Tu eP 12 45 10
	PX	eLNE		46	5	i! 12 d
	MW	iPNEZ		43	56	Felt at Portland (Oregon) d
		iZ		44	07	JSA: 43.3°N. 129.3°W.,
	R	iPNEZ		44	05	O=12:40:54
	SB	iPNEZ		43	27	USCGS: 43.9°N. 128.1°W.,
	T	ePNE		40		O=12:40:58
	H	iPNEZ		40		
Oct. 31	P	iPNEZ	17	03	46	Deep? Tu iP 17 04 03
		iZ		59		i 16
	PX	eN		14	13	
		eLNEZ		29	2	
	MW	iPZ		03	45	
		iZ		04	00	
	R	ePZ		03	46	
		iZ		04	01	
	T	ePNE		03	56	
	H	iPZ		04	52	
		iZ		04	05	

Date	Sta.	Phase	h	m	s	Remarks
Nov. 4	P	iPNEZ	02	37	48	d Deep. Tu iP 02 38 12 d
		iPPEZ		39	47	ipP 40 12
		iSPZ		40	51	Wellington: 48 1/2°S. 177 1/2°W
		eSNE		46	56	O=02:26.8, h=550-600 km
	MW	iPNEZ		37	48	d
		iPNEZ		39	48	
		iSPZ		40	45	
	R	iPNEZ		37	49	d
		ePNEZ		39	49	
		eSE		47	12	
	SB	iPNEZ		37	42	
		ePZ		39	41	
	LJ	iPZ		37	48	
		ePZ		39	47	
	T	ePNE		37	56	
	H	iPNEZ		54		d
		iPNEZ		39	54	
	Pr	eP'P'Z	03	04	52	
		iPZ	02	37	52	
		iPPZ		39	52	
Nov. 4	P	ePZ	11	17	23	Tu eP 11 17 59
Nov. 4	P	ePZ	12	34	35	Tu iP 12 35 13
Nov. 4	Pr	iP	12	59	31	Tu iP 12 58 51
Nov. 4	P	iPZ	15	19	21	Tu iP 15 18 45
	MW	iPZ		22		
	R	iPZ		17		
Nov. 5	P	ePZ	04	31	09	Tu eP 04 32 01
	H	ePZ		30	48	
	Pr	ePZ		34	22	
Nov. 5	P	ePZ	11	18	11	Deep. Tu eP 11 18 27
	MW	ePZ		13		Wellington: 25°S. 172 1/2°E.,
	R	ePZ		08		O=11:05.6
Nov. 5	P	ePNEZ	13	18	04	Deep. Tu eP 13 18 23
		ePPZ		21	15	
	PX	eN		28	9	Wellington: 24 1/2°S. 171 1/2°E
		eLNE		34	5	O=13:06.1
	MW	ePZ		18	02	USCGS (and Pasadena):
	R	ePZ		04		23°S. 172 1/2°E.,
	SB	eZ		00		O=13:05.4, h=100 km.
	LJ	ePZ		02		
	Pr	ePZ		05		
Nov. 5	MW	iPZ	16	30	12	Tu iP 16 30 33
	H	iPZ		18		
	Pr	iPZ		13		
Nov. 5	P	ePZ	17	53	01	Normal. Tu i 17 58 04
		eP"Z		57	16	iPKKP 18 08 26
	PX	iSKSNE	18	03	36	Roughly 13°N. 121°E., O=17:38.7
	P	ePKKPZ		08	54	using New Zealand and
	PX	eLEZ		26		Australian stations
	MW	ePZ		17	52	
		eP"Z		57	16	
		ePKKPZ		18	08	
	R	eP"Z		17	57	
	Pr	iP"Z		29		
		ePKKPZ		18	08	
Nov. 6	P	ePZ	00	47	28	Tu eP 00 46 46
	MW	ePZ		27		
	R	iPZ		26		
	Pr	ePZ		19		
Nov. 6	P	ePZ	07	08	35	Tu eP 07 08 17
	MW	ePZ		37		
	H	ePZ		49		
	Pr	ePZ		30		
		iZ		09	19	

Pasadena and auxiliary stations, 1941

Date	Sta.	Phase	h	m	s	Remarks		
Nov. 6	P	iPNEZ	07	19	33	Deep? Tu eP 07 20 02 Very roughly 6°S, 148°E., O=07:06.5, h=100 km?		
	PX	eLN		45.9				
	MW	iPZ		19	34			
	R	iPZ			36			
	SB	ePZ			28			
	T	ePNE			37			
	H	iPNE			35			
	Pr	iPZ			39			
	Nov. 6	P	ePZ	10	34		17	
		MW	ePZ				16	
Nov. 6	R	ePZ			24	Normal? Tu iP 12 37 41 USCGS: 54°N, 163°W, O=12:29.7 JSA: 54.5°N, 157.8°W., O=12:30:03		
	Pr	iPZ			30			
	P	iPNEZ	12	36	55			
	PX	iZ		37	06			
		iPcPZ		38	16			
		eSNZ		42	26			
	P	iNE			36			
	PX	iScPZ		43	03			
		eLN		44	0			
	MW	iE		45	28			
Nov. 6	MW	iPZ		36	55	Tu eP 13 05 10		
	R	eSEZ		42	33			
		iScPZ		43	03			
	R	ePZ		36	59			
	SB	iScPZ		43	04			
		ePZ		36	48			
		iZ		37	05			
		eScPZ		43	01			
	LJ	ePNEZ		37	07			
	T	ePNE		36	40			
Nov. 6	H	iPNEZ			44	Tu iP 17 36 53 d		
		iZ		39	15			
		eSNE		42	12			
	Pr	iPZ		37	05			
		iScPZ		43	08			
	P	iPNEZ	13	04	49			
	MW	iPZ			50			
	R	ePZ			51			
	Pr	iPZ			52			
	Nov. 6	P	iPZ	17	36		01	Tu iP 18 16 16
MW		iPZ			01			
R		ePNEZ			04			
SB		ePNEZ		35	57			
T		ePNE			35			
H		ePNEZ			40			
Pr		iPZ		36	16			
P		ePNEZ	18	15	23			
MW		ePNEZ			23			
R		ePZ			28			
Nov. 6	SB	ePZ			15	Tu eP 24 13 36 Tu eP 23 14 26 e 43		
	T	ePNE		14	50			
	H	ePNEZ		15	04			
	Pr	iPZ			39			
	Nov. 6	Pr	ePZ	21	14		18	
		P	iPZ	23	14		57	
	Nov. 7	MW	iPZ				58	Tu iP 01 02 10
		R	ePZ				54	
		H	ePZ		15		05	
		Pr	ePZ		14		50	
P		ePZ	01	03	04			
MW		iPZ			04			
R		ePZ		02	59			
H		ePZ		03	14			
Pr		iPZ		02	52			

Pasadena and auxiliary stations, 1941

Date	Sta.	Phase	h	m	s	Remarks		
Nov. 7	P	iPNEZ	19	35	33 d	Tu iP 19 36 20 d i 33 e 42 03		
		iZ		41	41			
	MW	iPNEZ		35	34 d			
		iZ			53			
		iZ		41	41			
	R	ePZ		35	38			
	SB	iPZ			27			
	T	iPNEZ			16 d			
		iZ		41	34			
		iPZ		35	23			
Nov. 8	Pr	iPZ			46	Tu eP 00 33 58 Tu e 02 12 18		
	T	ePZ	00	33	41			
Nov. 8	T	eZ?	02	10	49	Tu eP 07 58 51		
	P	eZ		12	37			
Nov. 8	MW	iPZ	07	58	37	Tu iP 12 35 53		
	R	iPZ			38			
	T	ePZ			38			
		ePZ			37			
	Nov. 8	T	ePZ	12	35		41	
	Pr	iPZ			33			
	Nov. 8	P	ePNZ	23	52		21	Normal. Tu eP 23 52 46 eP" 56 15 iP 57 39 iPKKP 24 06 28 ePS 07 40 JSA: 0.7°N, 125.0°E., O=23:37:40, h=120 km Pasadena: 0.5°N, 122°E., O=23:37:22, normal, using all available data. Major earthquake (Magnitude 7)
		PX	iPNEZ		56		03	
			iPPNEZ		57		03	
		P	iPSNEZ	24	06		23	
		iPKKPZ			55			
MW		eLZ		29	2			
		ePZ	23	52	21			
R		ePKKPZ	24	06	54			
		ePZ	23	52	23			
SB		iPKKPZ	24	06	50			
Nov. 9	T	ePZ?	23	52	30	Tu iP 09 25 35 e 27 29 Tu eP 02 09 13 i 12 29 Near Apia, which reports iP 01 57 52 iS 01 58 20		
	H	ePZ	24	06	16			
	Pr	eZ	23	52	58			
		iNEZ	23	52	47			
		ePKKPZ	24	06	22			
	Pr	ePZ?	23	52	32			
		iPKKPZ	24	06	50			
	Nov. 9	T	ePZ	09	25		19	
	Nov. 10	Pr	iPZ				14	Tu iP 04 28 59 Near Apia, which reports iP=04:17:49, iS=04:18:13 Tu iP 09 09 19 e 51
		T	ePZ	02	08		56	
Nov. 10	H	iZ		12	15	Deep. Tu iP 09 55 38 i 56 Roughly 23°S, 67°W., O=09:44.8, h=200 km		
		ePZ		08	53			
	Pr	iZ		12	12			
		ePZ		08	51			
	Nov. 10	MW	iZ	04	12		08	
	T	ePZ		04	28		34	
	Pr	iPZ			43			
	Nov. 10	Pr	ePZ				35	
	Nov. 10	MW	iPZ	09	10		03	Tu iP 09 09 19 e 51
		R	iPZ		09		57	
Nov. 10	T	ePZ		10	16	Deep. Tu iP 09 55 38 i 56 Roughly 23°S, 67°W., O=09:44.8, h=200 km		
	P	iPNEZ	09	56	12 d			
		ipPNEZ		57	01			
		esPZ			38			
	PX	iSNE	10	05	34			
		eNE		06	52			
	MW	iPNEZ	09	56	12 d			
		ipPZ		57	01			
	R	iPNEZ		56	08 d			
		ipPZ			57			
SB	iPNEZ			20				
LJ	iPNEZ			05				

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
(Continued)						
Nov. 10	P	iPNEZ	09	56	23	d
		ipPZ		57	07	
		iZ			46	
		eZ	10	05	34	
		eNEZ			54	
	H	iPNEZ	09	56	15	
		ipPZ			02	
		iZ			42	
		eNE	10	05	49	
	Pr	iPZ	09	56	05	d
		ipPZ			54	
Nov. 10	MW	iPZ	15	18	33	Tu iP 15 19 08
	R	iPZ			36	
	T	iPZ			22	
Nov. 11	R	ePZ	04	15	40	Tu eP 04 16 14
	T	ePZ			14	
	H	ePZ			22	
	Pr	ePZ			47	
Nov. 11	P	ePZ	07	06	24	Tu iP 07 06 58
	MW	iPZ			23	e 10 42
	R	ePZ			25	
	T	ePZ			11	
	Pr	ePZ			31	
Nov. 11	P	iPZ	13	44	29	Tu iP 13 44 51
	MW	iPZ			30	
	T	ePZ			37	
	Pr	iPZ			29	
Nov. 11	P	iPZ	17	04	50	Tu iP 17 05 14
	MW	iPZ			51	
	R	ePZ			53	
	T	ePZ			05 02	
	Pr	iPZ			04 53	
Nov. 11	P	iPZ	18	44	47	Tu iP 18 45 11
	MW	iPZ			49	
	T	iPZ			56	
	H	iPZ			55	
	Pr	iPZ			51	
Nov. 12	P	eP'Z	07	10	08	Normal? Tu eP' 07 10 16
		iNEZ			21	i 21
		eZ			12 23	i 13 40
	PX	eLZ			53	i 57
	MW	eP'Z	10	08		i! 14 24
		iZ			21	Very distant. Indian Ocean?
	SB	iZ			19	
		eZ			12 26	
	T	iP'NEZ	10	17		
		iZ			37	
		eZ			12 20	
	H	iP'NEZ	10	19		
		iZ			38	
	Pr	iP'Z			24	
		iZ			43	
		iZ			12 38	
Nov. 12	P	iPNEZ	09	26	41	Tu iP 09 27 00
	MW	iPZ			41	
	T	iPZ			50	
	Pr	iPZ			43	
Nov. 12	PX	eLE	10	59		Normal. Turkey
	T	eZ		18	46	Tu eP 10 18 57

Date	Sta.	Phase	h	m	s	Remarks
Nov. 12	P	iPNEZ	15	02	23	c Deep? Tu iP 15 03 01 c
		iZ			40	
	MW	iPZ			24	c
	SB	iPZ			17	
	LJ	ePZ		01	50	
	T	iPZ		02	09	c
		iZ			26	
		iZ			58	
	H	iPNEZ		02	15	c
		iZ			33	
		iZ		03	03	
	Pr	iPZ		02	33	c
Nov. 13	R	iPZ	22	06	36	Tu iP 22 06 05
	T	iPZ			51	
Nov. 14	MW	eZ?	01	03	01	Tu eP 01 02 03
	T	eZ?		02	50	e 32
Nov. 14	MW	ePZ	01	28	04	Tu iP 01 28 38
	T	iPZ		27	34	
	H	ePZ			42	
Nov. 14	T	iPZ	02	03	10	Tu eP 02 03 47
Nov. 14	P	ePZ	03	11	04	Tu eP 03 10 53
		eZ		14	17	e 13 51
	MW	ePZ		10	40	
		eZ		11	13	
		eZ		13	18	
		eZ		14	16	
	T	ePZ		10	39	
	H	ePZ			40	
		eZ		13	59	
Nov. 14	P	iPNEZ	07	00	05	c Deep? Tu iP 07 00 40 c
		eZ		00	38	Japan.
		eSN?		09	01	
		eP'P'Z		28	10	
	MW	iPNEZ		00	05	c
		iZ			38	
	R	iPZ			08	c
	SB	iPZ	06	59	59	
	LJ	iPNEZ	07	00	14	
	T	iPZ	06	59	54	
		iZ	07	00	26	
	H	iPNEZ	06	59	59	
		iZ	07	00	27	
	Pr	iPZ			16	
		iZ			48	
Nov. 14	P	iPNEZ	08	41	44	c Normal. Tu eP 08 43 16
	MW	iPNEZ			46	c 33°47'N. 118°15'W., O=OO:41:36
	R	iPNEZ			52	c Much damage near the epicenter
	SB	iPNEZ		42	02	especially at Torrance and
	LJ	iPNEZ			00	Gardena (suburbs of
	T	iPNEZ			29	Los Angeles)
	H	iPNEZ			17	
	Pr	iPZ			00	
Nov. 14	P	iPZ	16	51	57	Tu iP 16 51 23
	MW	iPZ			56	
	R	iPZ			52	
	T	iPZ		52	09	
Nov. 14	P	ePZ	18	24	21	Tu e 18 24 18
	MW	ePZ			20	
	R	ePZ			21	
	T	ePNEZ			18	
	H	ePNEZ			17	
Nov. 14	P	ePZ	19	53	00	
	MW	ePZ		52	55	
	R	iPZ		53	07	
	T	ePZ		52	46	
	H	ePZ			49	
	Pr	ePZ		53	02	

Date	Sta.	Phase	h	m	s	Remarks
Nov. 15	P	iPZ	00	35	40	Tu e 00 35 40
		iNEZ			55	i 00 35 54
	MW	iPZ			41	
	R	iPZ			41	
	SB	ePZ			39	
	T	ePZ			38	
	H	iPNEZ			39	
	Pr	iPZ			44	
Nov. 15	P	iPNEZ	00	38	44	Part of preceding?
	MW	iPZ			45	Tu e 00 38 29
	R	iPNEZ			46	i! 39 08
	SB	ePZ			42	i 53
	LJ	iPNEZ			50	
	T	ePZ			41	
	H	iPNEZ			43	
	Pr	iPZ			50	
Nov. 15	P	iP"NEZ	04	38	41	Deep. Tu eP 04 34 55
		iNEZ			40	iP" 38 32
		iZ			48	ePP 39 27
	PX	eLZ	05	18		iPKKP 49 14
	MW	iP"Z	04	38	42	
		iZ			40	h = 100 km
		iZ			23	USCGS: 59 1/2°S 27 1/2°W
		iZ			48	O = 04:19.9
	R	iPZ			38	
		eZ			40	
		eZ			48	
	SB	iPZ			38	
	T	iPZ			47	
		iNEZ			40	
		iZ			36	
		iZ			48	
	H	iP"NEZ			38	
		eZ			40	
		iNEZ			48	
	Pr	iPZ			38	
		eZ			48	
Nov. 15	P	iPZ	20	53	07	Tu iP 20 53 39
	MW	iPZ			08	
	R	iPZ			09	
	T	iPZ			02	d
	H	iPZ			05	
	Pr	iPZ			13	
Nov. 16	P	iPNEZ	09	46	27	Deep. Tu iP 09 45 33
		iPNEZ			44	iPcP 48 48
		ePPNEZ			47	ipPcP 49 06
		ePcPZ			49	i 32
		epPcPZ			21	iScP 52 22
		iScPNEZ			52	USCGS: 13 1/2°N. 88°W.,
		esScPZ			53	O=09:39.7
		iScSNE			56	Pasadena: 13°N. 89°W.,
	MW	iPZ			46	O=09:39:51, h=75 km
		ipPZ			44	
		iPPZ			47	JSA: 13.2°N. 88.5°W.,
		iPcPZ			49	O=09:39:47, h=100 km.
		ipPcPZ			21	
		iScPZ			52	
	R	iPZ			46	
		ipPZ			39	
		iZ			47	
		iPcPZ			49	
		ipPZ			20	
		eScPZ			52	

(Continued)

Date	Sta.	Phase	h	m	s	Remarks
						(continued)
Nov. 16	LJ	iPNEZ	09	46	17	
	T	ePNEZ			41	
		iPcPZ			49	
		iZ			26	
		iScPNEZ			52	
		eScSEZ			56	
	Pr	iPZ			46	
		ipPZ			34	
		iZ			47	
		iPcPZ			49	
		ipPcPZ			19	
		iScPZ			52	
Nov. 17	P	iPZ	02	49	51	Tu iP 02 50 13
	MW	iPZ			50	
	T	iPZ			50	
	Pr	iPZ			49	
Nov. 17	P	iPZ	20	36	16	Tu iP 20 36 48
	MW	iPZ			17	
	R	ePZ			18	
	T	ePZ			14	
Nov. 18	P	eP"Z	10	33	46	Normal. Tu eP" 10 32 52
	PX	eNEZ			43.0	Pasadena: 60°S. 60°W.,
		eLNEZ			11	O=10:14:40
	MW	eP"Z			10	
Nov. 18	P	ePZ	13	32	30	Tu eP 13 33 19
	MW	iPZ			32	
		iZ			40	
		iZ			34	
	R	ePZ			32	
	T	ePZ			35	
	Pr	iPZ			32	
Nov. 18	P	ePZ	16	59	08	Normal. Destructive in Japan
		iZ			26	Tu iP 16 59 38
	PX	iPPZ	17	02	33	i 52
		eSNEZ			09	iPP 17 03 41
		iSSNZ			15	Approximately 32°N. 132°E.
		iLNE			22.1	O=16:46:22
	MW	ePZ	16	59	09	Major earthquake
		eSN	17	09	43	(Magnitude 7 1/2)
	R	ePZ	16	59	15	
		ePPZ	17	02	46	
	LJ	ePZ	16	59	20	
		eSNE	17	09	58	
	T	iPZ	16	59	05	
	H	iPZ			08	
Nov. 18	P	iPZ	17	21	50	Tu iP 17 22 17
	MW	iPZ			51	
Nov. 18	P	iPZ	22	20	49	Tu iP 22 21 15
	R	iPZ			53	
	Pr	iPZ			53	
Nov. 18	P	iPNEZ	22	52	19	Tu iP 22 51 46 d
	R	iPNEZ			16	d
	SB	ePZ			25	
	T	iPNEZ			31	d
	H	iPNEZ			27	
	Pr	iPZ			12	d
Nov. 18	R	iPZ	23	06	27	Tu iP 23 05 57
	T	iPZ			41	
Nov. 19	P	iPZ	03	40	08	Tu eP 03 41 32
	MW	ePZ			09	
	R	iPZ			16	
	T	ePZ			39	
	H	ePZ			52	
Nov. 19	P	ePZ	08	25	28	Tu iP 08 25 51
	MW	ePZ			31	Near Apia, which reports
	T	ePZ			38	eP=08:15:00, iS=08:15:38

Date	Sta.	Phase	h	m	s	Remarks
Nov. 20	P	eZ	02	27	08	Tu eZ 02 26 44 eZ 27 43
	MW	eZ		26	18	
	H	eZ		27	08	
Nov. 20	PX	eLZ	16	45		Normal. Tu eP 15 36 34 Tu eP 20 14 37 i 45
	P	iPZ	20	14	31	
Nov. 20	MW	iPZ			30	Normal. Tu e 21 30 17
	Pr	iZ			38	
	P	iPZ			34	
	PZ	ePZ	21	29	57	
	MW	eLZ	22	15		
Nov. 22	T	ePZ	21	29	57	Deep. Tu iP 04 53 10 c ipP 54 34 h = 350 km. Near Apia, which reports: iP 04 43 10 iS 44 02
	Pr	iPZ	04	52	44	
	P	iPNEZ		54	08	
	MW	ipPZ		52	45	
	R	epPZ		54	08	
	R	ePZ		52	45	
	T	epPZ		54	10	
	T	iPNEZ		52	53	
	H	epPZ		54	17	
	Pr	iPNEZ		52	50	
Nov. 22	P	iPZ	05	54	13	Tu e 05 31 53 e 32 26
	MW	ePZ		47		
	R	iPZ		41		
	T	epPZ		58		
	H	ePZ		53		
	Pr	iPZ		40		
Nov. 22	P	iZ	07	44	13	Normal. Tu iP 07 44 45 e 48 14
	PX	iPNEZ	08	13		
	MW	eLZ	07	44	11	
	R	eZ		48	05	
	SB	ePZ		44	20	
	T	eZ		44	07	
	T	iPNEZ		48	01	
	H	iZ		44	11	
	P	epPZ		41		
	MW	iPZ	23	53	41	
Nov. 23	R	iPZ		41		Tu iP 23 54 04
	T	iPZ		43		
	Pr	ePZ		49		
	P	iPZ		44		
	MW	iPNEZ	00	04	59	
Nov. 23	P	iPZ		59		Tu iP 00 05 22 d
	R	iPZ		01		
	T	iPZ		08		
	H	iPNEZ		06		
	Pr	iPZ		01		
Nov. 23	P	iPZ	00	48	16	Tu eP? 00 48 29
	R	ePZ		16		
	T	ePZ		15		
Nov. 23	T	eZ	01	53	50	Tu eP 01 55 38
	T	iZ		55		
Nov. 23	P	iPEZ	12	22	25	Tu iP 12 23 02
	MW	iPZ		26		
	R	iPZ		29		
	LJ	ePZ		35		
	T	iPNEZ		11		
	Pr	iPZ		34		

Date	Sta.	Phase	h	m	s	Remarks
Nov. 23	P	iPZ	16	11	37	Normal? Tu iP 16 12 00 Wellington: 24°S.174°E., O=15:59.0, h=70 km
	PX	eLEZ		41		
	MW	iPZ		11	37	
	R	epZ			40	
	T	ePZ			44	
Nov. 23	H	ePZ			43	Tu eP 22 32 19
	Pr	iPZ			40	
	P	iPZ	22	33	10	
Nov. 24	MW	iPZ			09	
	P	iPZ	10	52	57	
	R	iZ		53	14	
	R	iPZ			04	
Nov. 24	T	iZ			13	
	T	ePZ			33	
	P	eZ			03	
	P	epZ	11	46	32	
	R	iZ			49	
Nov. 24	R	eZ			49	Normal. Tu iP' 16 57 49 ePP 17 02 22 South of Africa, near Prince Edward Island. Very similar to Oct. 5, 1941, O ^h Pasadena: 44°S.34°E., O=16:37:41
	P	iP'	16	57	54	
	PX	iPPNEZ	17	02	53	
	R	eLNEZ	18	06	1	
	R	ePZ	16	57	52	
Nov. 24	H	epPZ	17	02	56	Deep. Tu iP 21 59 06 c i! 09 ipP 28 iPKKP 22 16 56 iP'P' 25 06 h = 75 km. USCGS: 28.5°S.178°W., O=21:46.3 JSA: 29.5°S.177.5°W., O=21:46:15 Wellington: 28°S.177.5°W., O=21:46.5, h=150 km.
	Pr	ePZ	16	57	53	
	H	epZ			55	
	Pr	epZ			53	
	P	iPNEZ	21	58	47	
	P	i!NEZ			49	
	PX	ipPZ		59	07	
	PX	iPPZ	22	02	02	
	P	eSKSZ		08	57	
	MW	iSNE		09	07	
Nov. 25	P	iPKKPZ	17	04		Normal. Tu eP 15 32 25
	PX	eLZ		24	0	
	P	eP'P'Z		25	07	
	MW	ePNE	21	58	50	
	R	eSNE	22	09	09	
	R	ePNEZ	21	58	49	
	SB	eSNE	22	09	15	
	LJ	ePNEZ	21	58	45	
	T	ePNEZ			47	
	T	iPEZ			57	
Nov. 25	P	iNEZ!			59	
	PX	eSNE	22	09	24	
	H	iPKKPZ		16	04	
	H	iP'P'Z		25	06	
	H	iPZ	21	58	56	
	P	eSN	22	09	19	
	P	ep'P'Z		25	06	
	Pr	iPZ	21	58	48	
	P	ipPZ		59	10	
	PX	epZ	15	31	58	
Nov. 25	MW	eNEZ		42	33	
	R	eLZ		55	9	
	R	epZ		31	55	
	SB	ePZ		32	07	
	T	ePZ		31	54	
	Pr	iPZ		32	15	

Date	Sta.	Phase	h	m	s	Remarks
Dec. 2	MW	iPZ	01	56	04	Tu iP 01 56 28
	R	ePZ			05	
	Pr	iPZ			07	
Dec. 2	MW	iPZ	12	20	55	Deep? Tu eP 12 20 19
	R	eZ		21	22	
		ePZ		20	52	
		eZ		21	18	
Dec. 2	MW	ePZ	12	56	03	Tu iP 12 56 47
	T	iPZ		55	48	
Dec. 2	PX	eLE	13	56	4	Normal. Tu eP 13 44 51
	MW	ePZ		45	46	
	Pr	iPZ			36	
Dec. 2	MW	eZ	16	33	37	Tu iP 16 34 11
	R	eZ			39	
	T	eZ			18	
	Pr	iPZ			37	
		iZ			43	
Dec. 3	P	iPZ	01	58	16	Tu iP 01 58 31
	R	ePZ			19	
	T	ePZ			16	
Dec. 3	PX	eLZ	09	20	3	Normal. Tu iP 09 16 51
Dec. 3	P	ePZ?	09	36	57	Normal. Tu iP 09 35 42
	PX	eLNEZ		38	9	
	Pr	ePZ		36	22	
		eZ		38	38	
Dec. 4	P	iPZ	18	19	44	Tu iP 18 18 52
	MW	iPZ			44	
	R	iPZ			39	
	T	iPZ			57	
	H	iPZ			56	
	Pr	iPZ			34	
Dec. 5	P	iPZ	06	59	28	Tu iP 07 00 13 c
	MW	iPZ			28	
	T	iPZ			14	
	H	iPZ			19	
	Pr	iPZ			39	
Dec. 5	P	iPNEZ	12	41	16	Tu iP 12 41 35
	MW	iPZ			16	
		iZ			28	
	T	iPNEZ			02	
		iZ			15	
	Pr	iPZ			25	
Dec. 5	MW	iPZ	16	41	57	Tu iP 16 40 59
	T	ePZ		42	23	
	Pr	ePZ		41	40	
Dec. 5	P	iPNEZ	20	54	44 c	Normal. Tu iP 20 53 52 d
	PX	eSE	21	00	51	Damage in Costa Rica and Panama.
		eLNE		05	9	USCGS: 8°N.83°W., O=20:46.9
	MW	iPNEZ	20	54	45 c	JSA: 9.0°N.83.2°W., O=20:47:00
	R	iPNEZ			39 c	Large earthquake
	SB	ePNEZ			54	(Magnitude 7 1/2)
	LJ	ePEZ			29	Small aftershocks recorded at
	T	iPNEZ			57	Pasadena, Tucson, etc. Times of
	H	iPNEZ			53	P at Pasadena: Dec. 5, 21:17:22,
		eSNE	21	01	17	21:41:55, 22:20:20. Dec. 6,
	Pr	iPZ	20	54	33	01:42:50, 01:29:28, 01:38:14,
						01:57:50, 02:58:01, 06:28:37,
						07:20:20, 07:50:16, 09:47:58,
						09:50:42, 10:35:01, 12:02:10,
						13:25:15.
Dec. 6	P	iPNEZ	01	32	24	Normal. Tu iP 01 31 30
	PX	eLZ		44	2	Aftershock of Dec. 5, 20 ^h
	MW	ePZ		32	23	
	R	iPZ			18	
	H	iPZ			36	
	Pr	iPZ			13	

Date	Sta.	Phase	h	m	s	Remarks
Dec. 6	T	ePZ	03	05	00	Tu eP 03 06 47
Dec. 6	P	iPZ	07	42	10	Tu eP 07 42 33
	MW	iPZ			10	
	T	ePZ			19	
	H	iPZ			17	
	Pr	iPZ			12	
Dec. 6	P	ePZ	21	32	19	Normal. Tu eP 21 31 27
	PX	iSNE		38	41	Aftershock of Dec. 5, 20 ^h
		eLZ		43	9	USCGS: 8°N.83°W., O=21:24.6
	MW	ePNEZ		32	20	JSA: 8.7°N.84.3°W., O=21:24:36
	R	ePZ			17	
	SB	ePZ			32	Magnitude 7
	LJ	ePZ			08	
	T	ePZ			31	
		eSNE		39	06	
	Pr	iPZ		32	08	
Dec. 6	P	iPZ	21	57	48	Tu eP 21 58 21
	MW	ePZ			47	
Dec. 6	P	ePZ	22	13	36	Tu eP 22 12 44
	MW	ePZ			35	Aftershock of Dec. 5, 20 ^h
	T	ePZ			47	
	Pr	iPZ			24	
Dec. 7	P	iPNEZ	00	02	23	Normal. Tu iP 00 01 29
	PX	eLZ?		24		Aftershock.
	MW	iPNEZ		02	23	
	R	iPNEZ			18	
	SB	ePNEZ			34	
	LJ	iPZ			12	
	T	iPNEZ			36	
	H	iPNEZ			30	
	Pr	iPZ			12	
Dec. 7	P	iPZ	00	15	18	Tu eP 00 14 43
	R	iPZ			14	South America?
	T	ePZ			29	
	Pr	ePZ			10	
Dec. 7	P	ePNEZ	00	33	01	Tu 00 32 09
	MW	iPEZ			01	Aftershock of Dec. 5, 20 ^h
	R	ePZ		32	56	
	SB	ePNEZ		33	13	
	LJ	ePZ		32	50	
	T	iPNEZ		33	14	
	H	ePNEZ			07	
	Pr	iPZ		32	50	
Dec. 7	P	iPNEZ	04	30	50	Tu iP 04 29 58
		eZ		32	48	Aftershock?
	MW	iPZ		30	50	
	LJ	ePZ			40	
	T	iPNEZ		31	03	
	H	ePNE		30	56	
	Pr	iPZ			40	
Dec. 7	P	ePZ	05	22	34	
	MW	ePZ			34	
	T	ePZ			50	
	Pr	ePZ		21	56	
Dec. 7	P	iPNEZ	11	49	43 c	Normal? Tu iP 11 49 50 c
	PX	eLZ?	12	05		Aftershock of Dec. 5, 20 ^h
	MW	iPNEZ	11	49	42 c	
	R	iPZ			38 c	
	SB	ePZ			54	
	LJ	iPZ			34	
	T	iPZ			57 c	
	H	iPNEZ			52	
	Pr	iPZ			33	
Dec. 8	P	iPZ	00	29	17	Tu iP 00 29 44
	T	iPZ			27	Near Apia, which reports:
	H	ePZ			26	iP=00:18:27, iS=00:18:48
	Pr	iPZ			22	

Date	Sta.	Phase	h	m	s	Remarks		
Dec. 8	P	iPNEZ	07	49	00	Normal? Tu iP 07 48 07 Overlaps the next three shocks. Seismograms resemble those of a single deep focus earthquake, but this does not fit the data. All four are aftershocks of Dec. 5, 20 ^h		
		iPcPZ		50	53			
	PX	eSNE		55	19			
		eLNE	08	00	00			
	MW	iPZ	07	49	00			
	R	iPNEZ		48	55			
	SB	iPNEZ		49	11			
	LJ	iPNEZ		48	48			
	T	iPNZ		49	14			
	H	iPNEZ			08			
Dec. 8	Pr	iPZ		48	51	Tu eP 07 49 13		
	P	iPNEZ	07	50	06			
	PX	eSNE		56	31			
	MW	iPZ		50	06			
	R	iPZ			00			
	LJ	iPZ		49	54			
	T	iPZ		50	19			
	H	ePZ			14			
	Pr	iPZ		49	57			
	P	ePZ	07	54	14			
Dec. 8	T	ePZ		27		Tu eP 07 53 21		
	Pr	ePZ		03				
	P	iPNEZ	07	54	48			
	MW	iPZ		49				
	R	ePZ		42				
	T	iPZ		55	02			
	Pr	iPZ		54	38			
	P	ePZ	10	53	21			
	MW	ePZ?			21			
	T	ePZ?			36			
Dec. 8	Pr	ePZ		13		Tu eP 11 07 40		
	P	ePZ	11	08	32			
	MW	ePZ			32			
	T	ePZ			46			
	Pr	iPZ			24			
	P	ePZ	12	47	50			
	MW	ePZ			51			
	Pr	iPZ			43			
	P	ePZ	13	16	27			
	MW	ePZ			25			
Dec. 8	R	ePZ			22	Tu eP? 16 31 42		
	T	ePZ			40			
	Pr	iPZ			17			
	P	ePNEZ	16	32	45			
	MW	ePZ			46			
	R	ePZ?			36			
	T	ePZ			57			
	Pr	iPZ			36			
	P	iPZ	03	01	49			
	PX	eZ			03			
Dec. 9		eLZ			40	Normal. Tu eP 03 01 58		
	MW	ePZ			01			
	R	ePZ			52			
	T	ePZ			49			
	Pr	eZ			57			
	P	eZ	05	08	29			
	T	eZ			45			
	MW	iPZ	14	27	24			
		eZ			28			
		iPNEZ			27			
Dec. 9	H	ePNE			28	Near Apia, which reports: iP=14:18:08, iS=14:18:55		
	Pr	ePZ			23			
	PX	eLZ	19	46				
	R	eZ			18			
	T	ePZ			01			
	Dec. 9		ePZ				17	Normal. Tu e 19 18 13
							38	

Date	Sta.	Phase	h	m	s	Remarks
Dec. 10	P	iPZ	03	30	00	Tu iP 03 30 03
	MW	iPZ			06	
	T	iPZ?		29	47	
Dec. 13	PX	eSNE	02	50	55	Normal. Tu eP 02 48 46
	R	ePZ		49	39	
		eSZ?		50	39	
Dec. 13	Pr	ePZ		49	25	Tu eP 04 51 41
	P	iPZ	04	51	08	
	R	ePZ			08	
Dec. 13	T	iPZ		50	55	Normal. Tu eP 06 29 53
	PX	eLZ	07	19	00	
	T	ePZ	06	29	48	
Dec. 13	P	iPNEZ	11	11	02	Normal. Tu eP 11 10 11
	PX	eLNZ		25		
	R	ePZ		10	58	
Dec. 13	T	ePZ		11	17	Tu eP 16 14 03
	Pr	iPZ		10	51	
	R	eZ	16	15	43	
Dec. 13	T	eZ		13	54	i 15 01
	Pr	eZ?			45	
		iZ		15	32	
Dec. 14	P	iPZ	05	19	12	Tu eP 05 18 59
	R	ePZ			12	
	T	ePZ			31	
Dec. 14	Pr	iPZ			08	Normal.
	P	iPZ	05	31	33	
	R	ePZ			32	
Dec. 14	T	ePZ			52	Deep. Tu iP 06 25 57
	Pr	ePZ			28	
	P	iPNEZ	06	26	36	
Dec. 14	R	iPPZ		27	03	i 26 43
	T	iPZ		26	33	
	Pr	iPZ		27	15	
Dec. 14	P	iPZ	09	13	22	Tu eP 09 14 11
	R	ePZ			27	
	T	ePZ		12	41	
Dec. 14	P	ePNEZ	09	29	35	Normal. Tu eP 09 28 39 c
	PX	eLNE		38	51	
	R	ePZ		29	30	
Dec. 14	T	ePZ			53	Deep! Tu iP 10 48 58 c
	Pr	iPZ			24	
	P	iPNEZ	10	49	38	
Dec. 14	R	iZ			53	e 49 17
	T	iPZ			34	
		iZ			48	
Dec. 14	Pr	iPZ			51	Deep? Tu eP 12 56 43
	P	iPZ	12	56	26	
	R	iZ		50	05	
Dec. 14	P	iPZ		49	29	c 29 56
	R	iZ			39	
	T	ePZ			44	
Dec. 14	Pr	eZ			41	Tu iP 14 14 10
	T	iPZ			35	
		iZ			48	
Dec. 14	Pr	iPZ			27	Tonga region; Apia reports: eP=14:02:58, iS=14:04:01
	P	iZ	14	13	40	
	T	ePZ			46	
Dec. 14	Pr	ePZ			50	48

Pasadena and auxiliary stations, 1941

Date	Sta.	Phase	h	m	s	Remarks
Dec. 15	P	iPZ	04	43	48	Tu eP 04 43 51
	R	eZ		47	11	e 47 24
	T	ePZ		43	48	
		ePZ			45	
		iZ		47	08	
Dec. 15	P	iPZ	05	48	22	Tu iP 05 49 11
	R	iPZ			31	
	T	ePZ		49	07	
	Pr	iPZ		48	37	
Dec. 15	P	iPZ	08	31	02	Tu e? 08 31 26
	R	ePZ?			01	e 37 06
	T	iPZ		30	49	
Dec. 15	P	ePZ	08	36	49	Tu iP 08 37 13
	R	ePZ			50	i 23
	T	ePZ			52	Tonga region (as on Dec.14,
		iZ		37	01	14 ^h). Abia reports:
	Pr	ePZ		36	51	iP=08:25:56, iS=08:26:58
Dec. 15	P	iPZ	11	13	53	Tu iP 11 14 17
	R	ePZ			58	
	T	iPZ		14	02	
	Pr	iPZ			00	
Dec. 15	T	ePZ	12	15	36	Tu iP 12 14 25
	Pr	iPZ			11	
Dec. 15	P	iPZ	19	18	59	Deep? Tu eP 19 19 16
		iZ		19	13	i 31
	T	eZ			08	
	Pr	iPZ			01	
		iZ			16	
Dec. 15	P	iPZ	21	52	30	Normal. Tu iP 21 51 51
	PX	eLEZ		22	14	
	T	ePZ		21	52	
	Pr	iPZ			26	
Dec. 15	P	iPNEZ	21	55	08	Tu iP 21 54 28
	T	ePZ			08	Part of the preceding?
	Pr	iPZ			00	
Dec. 16	P	ePZ	19	33	26	Normal. Tu eP 19 34 04
		eP"Z			36	i 38 19
		iZ			37	Damage in southern Formosa.
	PX	iPPNE			38	JSA: 22.5°N, 121°E.,
		iSKSNE			44	O=19:19:50
		eSNE			46	
		eLZ		20	00	
	R	ePZ		19	33	
	SB	ePZ			23	
	T	ePEZ			20	
	Pr	ePZ			34	
		eZ			37	
Dec. 17	Pr	iPZ	08	59	03	Tu iP 08 58 33
Dec. 18	P	iPZ	21	17	11	Tu eP 21 17 32
	MW	ePZ			11	
	R	ePZ			17	
	T	ePZ			17	
	Pr	ePZ			11	
Dec. 19	P	iPNEZ	01	14	12	Tu iP 01 14 00
	MW	iPNEZ			12	
	R	iPNEZ			16	
	SB	iPNEZ			12	
	T	iPEZ		13	44	
	H	ePNE			53	
	Pr	iPZ		14	25	
Dec. 20	R	eZ	15	51	43	Tu e 15 52 14
		eZ			59	e 16 00 15
		eZ			51	
	T	eZ			59	

Pasadena and auxiliary stations, 1941

Date	Sta.	Phase	h	m	s	Remarks
Dec. 21	P	iPZ	05	49	35	Tu 05 49 05
	MW	iPZ			34	
	R	iPZ			32	
	T	iPEZ			47	
Dec. 21	P	iPZ	19	55	07	Deep? Tu iP 19 54 38
	MW	iPZ			08	Probably this is shock
	R	iPZ			06	reported felt at Santiago
		iZ			19	de Chile (press).
	T	iPZ			21	
		iZ			34	
	Pr	iPZ			01	
Dec. 24	P	iPZ	03	37	21	Normal. Tu iP 03 36 04
	PX	eLNE			39.8	eS 38.8
	MW	iPZ			37	
	R	ePN			36	
	T	ePNEZ			37	
	H	ePNEZ			28	
Dec. 24	P	iPZ	07	30	54	Normal. Tu eP 07 31 17
		iSNEZ			31	Felt in Imperial Valley
		ePNEZ			30	Roughly 32.6°N, 116.1°W.,
	MW	ePNZ			42	O=07:30.2
	R	ePNZ			38	
	Pr	iPZ			15	
Dec. 24	P	iPZ	12	05	15	Normal. Tu eP 12 03 57
	PX	eSEZ			08.3	eS 06.4
		eLZ			10.2	
	MW	ePZ			05	
	R	eNE			04	
	T	iPNEZ			05	
	H	ePNEZ			25	
Dec. 24	P	ePZ?	15	00	16	Normal?
	PX	eLEZ			31	
Dec. 25	P	iPNEZ	09	43	32	Tu eP 09 44 03
	MW	iPZ			33	
	T	iPNEZ			24	
Dec. 26	P	ePZ	15	07	17	Normal. Tu eP 15 06 55
		iNEZ			17	Southwestern China?
	PX	eNEZ			17	
		eLZ			42	
Dec. 26	T	eZ	20	33	50	Tu e 20 35 12
Dec. 27	T	eZ	13	12	24	Normal. Tu iP 13 11 09
Dec. 27	P	iPNEZ	18	29	50	Deep? Tu iP 18 29 31
		ipPZ			30	i 46
		eLN			58.1	Felt at Lisbon.
	PX	iPNEZ			29	Pasadena: 36°N, 110 1/2°W.,
	MW	iPNEZ			50	O=18:17:27, h=60 km.
	R	ePN			48	
	SB	iPZ			56	
	T	iPNEZ			42	
		iZ			58	
	H	iPNEZ			45	
Dec. 29	T	iPZ	01	44	22	Tu iP 01 45 24
	H	iPZ			30	
Dec. 31	P	iPNEZ	06	49	41	Normal. Owens Valley
		iSN			50	Felt in the Sierra Nevada
		iPZ			49	and in San Joaquin Valley
	MW	iPNEZ			34	37°34'N, 118°44'W., O=06:48:44
	SB	iPNEZ			48	Large aftershock at 18:06
	T	iPNEZ			49	
	H	iSNE			35	
Dec. 31	P	iPNEZ	17	34	29	Deep. Tu iP 17 34 50
	MW	iPNZ			30	epP 37 03
	R	iPNZ			32	iPKKP 53 04
	SB	ePZ			25	iP'P' 18 01 15
	T	iPNEZ			38	Wellington gives: 21°S, 178°W.
		epPZ			36	O=17:23.4, h=700 km
	H	iPNEZ			34	

Pasadena and auxiliary stations, 1941

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Date	Sta.	Phase	h	m	s	Remarks
Dec. 31	P	iPNEZ	17	45	06	Normal. Tu iP 17 44 21 Roughly 3°S, 80°W, O=17:36.1 Overlaps the preceding
	PX	iPPZ		46	24	
		iSNE		52	20	
		eSSZ		56	42	
		eLZ	18	00	8	
	MW	iPNZ	17	45	07	
	R	iPNZ			03	
	SB	iPZ			15	
	T	iPNEZ			21	
	H	iPNEZ			15	
	Dec. 31	P	ePZ	19	42	
PX		eLEZ		39	1	
MW		ePZ		42	39	
R		ePZ			41	

C F Richter

Appendix: Larger shocks of 1941 (deep focus excluded)

Epicenters, origin times, and magnitudes revised from all available data by B. Gutenberg.

	O	Lat.	Long.	Magnitude
Jan. 13	16:27:38	4 1/2 S.	152 1/2 E.	7.0
Apr. 7	23:29:17	17 3/4 N.	78 1/2 W.	7.1
Apr. 15	19:09:56	19 N.	102 3/4 W.	7.6
May 17	02:24:50	10 S.	166 1/4 E.	7.4
Jun. 26	11:52:03	12 3/4 N.	92 3/4 E.	7.7
Aug. 2	11:41:26	28 1/2 S.	178 W.	7.1
Sep. 12	07:02:04	1/2 S.	132 1/2 E.	7.0
Sep. 16	21:39:05	28 3/4 S.	177 1/2 W.	7.0
Nov. 8	23:37:22	1/2 N.	122 E.	7.1
Nov. 18	16:46:22	32 N.	132 E.	7.6
Nov. 25	18:03:55	37 1/2 N.	18 1/2 W.	8 1/4
Dec. 5	20:46:58	8 1/2 N.	83 W.	7.6
Dec. 6	21:24:40	8 1/2 N.	84 W.	7.0

Pasadena, Jan. 10, 1944