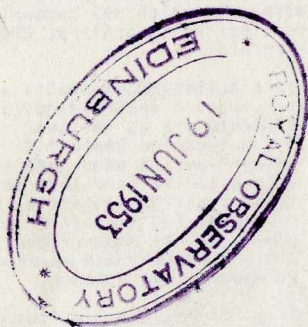


CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENA, CALIFORNIA

SEISMOLOGICAL LABORATORY
BULLETIN

1952



(Pasadena and Auxiliary Stations)

Pasadena and auxiliary stations, 1952

Pasadena and auxiliary stations, 1952				Page 4			
Date	Sta.	Phase	h m s	Date	Sta.	Phase	h m s
6	January	MW	04 09 06	8	January	H	06 35 09
		R	04			T	22
		Pr	15			BB	38 c
		CL	08 50			iP!	
		eP	48			Magnitude 4.4	
		T	04:02:27			34°00'N, 116°21'W,	
6	BCIS: 61½N, 148W,	eP	04 45 56			06:34:28. Felt to distances	
		epP	46 11			of about 80 km.	
		R	45 59	8	P	eP	23 19 35
		epP	46 11		R	eP	37
		Pr	00		CL	iP	34
		epP	12		T	eP	29
		eP	01	9	PX	eLNE	23 00 14
		epP	10			iNEZ	25
		e	14		MW	eP	22 58 10
		T	04		R	e	23 00 24
		epP	14			e	05
		BCIS: 20½S, 168½E, 04:33:04			Pr	eP	22 57 54
6	P	eP	11 40 10			i	59 51
	CL	iP	14		CL	e	58 24
6	P	ePNEZ	14 36 18			e	23 01 06
	PX	eLNEZ	45		T	e	02 02
	R	eP	36 09			Coast of Sonora, Mexico	
	Pr	iP	07			USCGS: 22:56:20	
		e	14	10	CL	eP	02 37 49
		e	25			e	41 01
		T	24		T	eP	37 44
		epP	34			e	57
		USCGS: 16N, 95W, 14:30:33		10	MW	iP	05 21 47
6	P	eP	15 56 14		R	iP	45
		ePcP	57 54		CL	eP	51
	R	eP	56 11		T	eP	59
	Pr	eP	05	10	MW	eP	08 36 52
		e	29		R	eP	47
		ePcP	57 55		Pr	eP	48
		eP	56 12		CL	eP	37 01
		ePcP	58 01	10	P	eP	11 46 55
		eP	56 19		R	eP	47 02
6	BCIS: 18.7N, 71.5W, 15:48:03	MW	23 00 07		Pr	eP	47 08
		R	22 58 00			e	19
		CL	23 00 03		CL	eP	46 50
		e	22 58 02			i	47 14
		T	23 00 03		T	eP	12
6	P	eP	23 33 41	10	USCGS: 53N, 167W, 11:39:23	P	12 23 38
		e(pP)	46		R	eP	33
		epP	41		Pr	eP	27
		CL	44		CL	eP	41
		T	50	10	P	iP	21 35 06
		e(pP)	55		R	iP	09
7	R	e	03 24 26		Pr	iP	10 c
	Pr	e	27		CL	iP	12 c
	CL	i	29		T	iP	16
	T	e	31			USCGS: 18½S, 180,	
7	CL	eP	13 00 13			21:24:03, 600 km.	
	T	eP	13	10	P	iPNEZ	23 23 12 d
8	CL	iP	03 21 47			i	28
		i	55		R	iP	15 d
	T	eP	42			e	41
8	P	iPNEZ	06 34 53 c		Pr	iP	15 d
		iSN	35 13			i	33
	R	iPNEZ	34 43 c			e	44
		iSN	54		CL	iP	17 d
	Pr	iP!	41			i	46
	CL	iP	35 02 d		T	iP	19 d
		(continued)				e	49
						USCGS: 20S, 169½E, 23:10:23	

Pasadena and auxiliary stations, 1952

Pasadena and auxiliary stations, 1952				Page 5			
Date	Sta.	Phase	h m s	Date	Sta.	Phase	h m s
11	January	P	00 17 52	11	January	P	13 51 02
		PX	59			R	05
		e(pP)	41.4			Pr	11
		eLEZ	17 57			CL	50 57 c
		R	56			T	49
		Pr	18 04			CMO: 35.9N, 137.6E, 10 km.	
		CL	17 58	12	P	eP"	06 18 39
		T	18 05			i	19 07
		BCIS: 13S, 175E, 00:05:8				BCIS: 10S, 117E, 05:59:36	
11	CL	i(pP)	00	12	P	iPNEZ	20 19 09
		i(pP)	06			i	22
		T	00			i	28
		Aftershock			PX	iS	25 17
11	P	eP	00 51 16			eLNE	27.9
	R	eP	19			A	T
	Pr	eP	22			PZ	0.4 1
	CL	eP	21			MH	50 17
		Aftershock				MZ	25 17
11	P	iPNEZ	04 14 15 d		R	iP	20 19 13
		i	31		Pr	iP	19
		e	54			iNZ	32
		ePP	18 10			ISE	25 32
		iSKSNEZ	24 37		CL	iP	19 00
		iPKKP	31 09			iPcP	21 18
	PX	eLE	42.8		T	iP	18 52
		A	1½			iS	24 44
		T	1½			Magnitude 6½±	
		PH	1			USCGS: 53N, 167W, 20:11:38	
		PPZ	0.1	13	PX	eLN	04 42.2
		SKSH	1½			A	T
		MH	2½			MH	20 20
		Note short period of SKS				Heavy microseisms	
	R	iP	04 14 17 d		R	e	04 17 30
		e	17 07		CL	eP	18
		iPP	18 07			i	35
		iPKKP	31 06			i	58
	Pr	iPNEZ	14 20			ePP	21 21
		i	33		T	eP	07 15
		iSKSNE	24 44			USCGS: 22N, 124½E, 04:03:37	
		iPKKP	31 06			Pasadena: 23N, 124½E,	
	CL	iP	14 16 d			04:03:37, magnitude 6.9	
		i	39	13	CL	eP?	07 19 57
		ePKKP	31 05			i	20 18
	T	iP	14 15 d	13	MW	e	08 16 38
		i	31		R	e	38
		Magnitude 6½±. Depth 40 km?			CL	e(P)	59
		USCGS: 7S, 145½E, 04:00:35				T	17 15
11	P	eP	07 13 58	13	R	e(P)	16 15 24
		epP	14 17		P	iP	00 10 14
		iSPNZ	21	14	R	eP	21
	R	eP	14 02		CL	eP	04
		epP	19			i	11
		iSP	26		T	eP	09 59
	Pr	iP	07			Kamchatka	
	CL	iP	13 54	15	Pr	eP	05 13 32
		i	14 01			CL	eP
		i(PcP)	06			Atlantic	
		iPcP	13	15	MW	eP	07 10 04
		iSP	20			i(pP)	13
	T	iP	13 48		R	eP	00
		iSP	14 11			i(pP)	08
		CMO: 42.6N, 148.3E, 80 km.			Pr	eP	09 55
		BCIS: 45.3N, 148.5E, 07:03:01,				i(pP)	10 05
		80 km.			CL	eP	08
						i(pP)	16
					T	i(pP)	27
						USCGS: 4S, 81W, 07:00:53	

Pasadena and auxiliary stations, 1952				Page 6			
Date	Sta.	Phase	h m s	Date	Sta.	Phase	h m s
January				January			
16	CL	iP	05 17 08	20	P	e	10 11 20
16	R	iP	21 03 53		R	e	13
	CL	iP	58		Pr	e	20
	T	eP	04 01		CL	i	16
Kermadec Islands							
17	MW	iP	03 49 52 d	20	P	iP	18 16 55
	R	iP	48 d		R	eP	57
	Pr	iP	44		CL	eP	54
	CL	iP	56			e	59
	T	iP	50 01	21	P	iPNEZ	03 50 28
18	BCIS:	32½S, 68¾W,	03:37:35		i		33
	PX	eLN	10 35.3		i		41
	CL	eP	23 23		e		53
	USCGS: North of Easter Island, 10:14:58				PX	iSNEZ	54 32
18	R	e	11 48 24		eLNE		56 28
	CL	iP	35				59 45
		e	48		PZ		A 2 3
		e	54		PH		2 2 3
		e	51 49		SH		5 5 4
18	BCIS:	13½N, 92W,	11:42:19		MH		30 14
	MW	iP	12 52 19		R	eP	03 50 32
	R	iP	14		Pr	iPNEZ	40
	Pr	iP	09		i		45
	CL	iP	27		i		56
	T	eP	38		iSE		51 03
	USCGS: ½S, 92W, 12:44:18				CL	iPNZ	56 50
18	P	eP	19 15 12		i		50 21
	R	eP	14		i(PcP)		52 35
	CL	eP	07		e(S)NE		55 48
		i	24		eN		04 00 29
Kermadec Islands					T	iPEZ	03 50 12
18	P	e	23 02 03		iNZ		18
	CL	e	07		i		26
	T	e	11		i		37
	USCGS: 3½N, 78W, 22:53:17				Magnitude 6½±		
19	P	eP	07 23 03		USCGS: 53N, 166½W, 03:43:04, 60 km.		
		i	22	21	R	e	17 32 44
	PX	eLN	32.6		CL	iP	27
	R	iP	23 08		T	eP	19
		e	14	21	P	iP	20 26 33
	Pr	iP	15		R	eP	31
		i	29		Pr	iP	27
		i	38		CL	eP	40
	CL	iP	22 57		T	iP	45
		i	23 19	22	MW	e	00 20 12
		i	34		R	eP	07
	T	iP	22 47		CL	eP	15
	USCGS: 52½N, 166W, 07:15:38				T	eP	23
19	MW	e	21 19 06	22	Pr	iP	12 03 59
	CL	eP	01		CL	iP	04 03
	T	eP	02		T	iP	05
		e	25	22	Pr	eP?	13 45 45
	BCIS: 29N, 43¾W, 21:08:26			22	P	iPNZ	15 54 04 d
19	MW	e	23 22 47		R	iP	07
	CL	eP	35		Pr	iP	06 d
		e	41		CL	iP	12 d
	T	e(P)	35		T	iP	15
		e	42		BCIS: 31½S, 178¾E, 15:41:13		
20	USCGS: 31½N, 41W, 23:12:12						
	R	e	05:58:46				
	CL	e	57 09				
	CM0: 35.2N, 140.3E, 100 km.						

Pasadena and auxiliary stations, 1952				Page 7			
Date	Sta.	Phase	h m s	Date	Sta.	Phase	h m s
January				January			
22	MW	eP	22 34 44	26	P	eP	13 59 22
	Pr	iP	45		i		31
	CL	eP	50		R	eP	22
	T	eP	50			e	31
23	P	iP	03 43 13		Pr	eP	23
		iPP	47 20			e	33
	PX	eLE	04 28			i	40
	R	ePP	03 47 21		CL	eP	26
	Pr	iP	43 20			e	31
		ePP	47 27			i	38
	CL	iP	43 07			e	51
		ePP	47 09		BCIS: Kermadec Islands, 13:46.8		
	T	iP	43 01	26	P	iP	14 16 09
		ePP	46 58		R	eP	11
23	BCIS:	41½N, 95½E,	03:29:27		Pr	eP	10
	P	iP	08 18 16		CL	eP	20
	R	eP	21		BCIS: 56S, 146W, 14:02.9		
	Pr	eP	26	27	Pr	eP	01 55 45
	CL	iP	12			e	56 19
	T	eP	04			e	35
23	Pr	e	11 10 27			e	18
	CL	eP	34	28	CL	eP	06 36 36
24	P	eP	09 21 37			e	43
		e	22 12		R	e	35
		e	23 30		Pr	e	37
	R	eP	21 41		CL	iP	28
	Pr	iP	49 c		BCIS: 51N, 31W, 06:25.9		
	CL	iP	31	29	R	eP	08 31 15
		i	46			e	31
		e	23 42		Pr	eP	16
	T	iP	21 21			e	32
	USCGS: 53 N, 166½W, 09:14:08				CL	iP	21
24	Pr	eP	11 30 59		i		32
	CL	eP	40	29	MW	eP	11 26 48
	USCGS: 11:23:19					e	27 49
24	P	eP	17 14 35		R	eP	26 51
	MW	eP	36		i		27 50
25	P	iP	04 52 59		Pr	iP	26 53
	R	eP	54			i	27 51
	BCIS: 04:44.4				CL	iP	26 53
25	P	iP	06 22 59			i	27 52
		iPP	25 00	29	P	eP	22 13 12
	R	eP	23 01			e	14
		ePP	25 02		R	iP	07 c
	Pr	iP	23 01		Pr	eP	12 59
		iPP	25 03			i	13 02
	T	iP	23 07		CL	eP	20
	BCIS: 06:11.6, 550 km,					i	22
	Fiji Islands				T	iP	13 34 d
25	CL	e	19 27 58		BCIS: 17N, 101½W, 22:08:12		
	Mexico			29	P	e(P)	23 48 30
26	P	iPEZ	04 59 20		R	e	40
	R	eP	23			e	58
	Pr	iP	30 c		Pr	e	49 10
	CL	iP	13 c		CL	iP	48 22
		i	05 00 55			e	38
		i	04 59 05		USCGS: 43½N, 127W, 23:45:45		
	T	iP	04 59 05				
		i	22				
		i	05 00 54				
	BCIS: 52½N, 178½W, 04:50:50						

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
January											
30	P	eP	07	13	30	31	R	iPNEZ	20	22	38
	e			14	19		i	(sP)		23	08
	R	iP		13	33		iPcP			26	13
	Pr	iP			38	Pr	iP			22	32 d
	e				45		i			23	02 d
	CL	iP			26 d	CL	eP			22	48 d
	e				52		iPNEZ			22	49 c
	i				14		i(pP)NEZ			23	09
	T	eP			13		i(sP)NEZ			23	18
	e				27		iEZ			31	
	e				48		iPcP			26	16
	CMO: 44½N, 149E						eSNE			27	35
	USCGS: 07:02:20					T	iP			22	59
30	P	e	09:	40:	01		i			23	28
	R	eP			37		iPcP			26	19
	e				39		eS			27	59
	Pr	eP			37		Magnitude 5¼				
	e				39		h = 100 km?				
	CL	eP			37		USCGS: 15½N, 93½W,				
	e				40		20:16:43, 60 km.				
	T	e(S)			41	31	PX	eLN	21	52	
	MW	e	10	26	39		MW	eP"	21	14	55
	R	eP			41		R	eP"		52	
	Pr	eP			42		CL	eP"		39	
	CL	iP			43		ePP			17	28
	USCGS: 10:13:40						eSKP			18	55
31	P	eP	08	18	31		eP"			14	35
	R	eP			32		Magnitude 6¼				
	Pr	eP			37		USCGS: 4S, 30½E, 20:55:12				
	CL	eP			17	31	CL	eP	21	34	05
	i(pP)				18		H	eP		01	
	T	eP			17		T	eP		33	55
	i(pP)				18		eS			34	29
	h = 120 km?						iSNE			32	
	BCIS: 23N, 144E, 08:05.4						Roughly 36.3N, 121.8E,				
	CMO: 23N, 142½E, 300 km.						21:33.2 magnitude 3.9				
31	P	iP	08	32	46 c	31	Pr	iP?	21	38	05
	R	iP			48 c		i			25	
	i				51		Mexico. Recording at our				
	e				36		other stations obscured by				
	Pr	iP!			32		preceding local shock.				
	i				51						
	i				33						
	CL	iP!			32						
	e				34						
	e(PKKP)				51						
	e(P'P')				59						
	T	iP			32						
	P unusually sharp and short-										
	period at these stations.										
	USCGS: 22S, 179E, 08:20:26										
31	P	iP	20	22	43						
	PX	e(pP)			23						
	e(SP)				09						
	i				14						
	iPcP				26						
	iS				27						
	eL				30.4						
	A										
	PZ				1½						
	PH				0.2						
	SH				2½						
	MH				10						
	(continued)										

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
February											
2	CL	iP	10	28	22	5	CL	e(P)	17	05	09
	i				27		ePP			09	15
	i				31		BCIS: 9½N, 124½E, 16:50:44				
	i				37	5	P	eP	17	33	32
	iNE				42		R	iP		35	
	eScP				33		Pr	iP		38	
	eSNE				35		CL	iP		31	
	T	iP			28	6	MW	eP	01	03	16
	i				20		e(pP)			23	
	i				24		e			35	
	i				33		R	eP		17	
	i				40		e(pP)			25	
	Magnitude 5¼ - 6						e			37	
	USCGS: 51½N, 179W,						Pr	eP		18	
	10:20:06, 100 km.						e(pP)			26	
2	P	eP	12	32	44		CL	eP		22	
	R	eP			39		e(pP)			30	
	CL	eP			42		e			42	
	BCIS: 17N, 65W,						Wellington: 35S, 179W,				
	12:24.0, 100 km.						00:50.1				
2	PX	eL	23	38.1		6	Pr	e	05	41	05
	R	eP			12		CL	iP		40	54
	e(pP)				31		China				
	e				38		BCIS: 05:27:13				
	Pr	iP			20	6	P	eP	07	06	52
	i(pP)				34		e			07	14
	i				40		PX	e		07	25
	CL	eP			20		eLNEZ			31.4	
	i(pP)				33		R	eP		07	18
	i				41		Pr	eP		19	
	T	eP			29		e			29	
	i(pP)				41		CL	eP		24	
	h = 50 km?						e			37	
	USCGS: 11S, 165E,						T	eP		28	
	22:59:45, 100 km.						BCIS: 30S, 179W, 06:54.8				
3	CL	eP	04	00	01		Kermadec Islands				
	Near Apia					6	MW	iP	09	41	05
4	Pr	e(P)	05	36	04		R	iP		08	
	i				23		Pr	iP		12	
	Mexico						CL	iP		03	c
4	MW	eP	15	07	16	6	MW	iP	15	12	28
	epP				27		Pr	iP		31	
	R	eP			18		CL	iP		35	
	epP				29	6	P	eP	16	45	25
	Pr	iP			19		iP			37	
	T	eP			22		R	iP		26	
	P	ePEZ	19	12	22		iP			38	
	PX	eLNE	13.9				Pr	iP		14	
	A						iP			26	
	MH				15		CL	iNE		41	
	R	eP			12		USCGS: 13N, 88W, 16:38:49,				
	Pr	eP			11		100 km.				
	i				12		7	MW	e	01	04
	CL	eP			33		e			05	06
	T	eP			49		Pr	e		04	30
	Gulf of California						e			05	00
	USCGS: 19:09:30						Pr	e(PP)	14	59	05
5	Pr	e	00	38	12		Southwest Pacific?				
	CL	e			10		8	P	eP	00	58
	e				15		epP			58	
	USCGS: 00:25:27						R	eP		38	
	Kermadec Islands						epP			59	
5	MW	e	05	14	39		Pr	eP		39	
	Pr	e			38		epP			59	02
	CL	e			37		IP			58	39
	e				41		iP			59	01
	e				19						

Date	Sta. Phase	h	m	s	Date	Sta. Phase	h	m	s
16	February				17	February			
	P eP	07	31	04		T eP	17	39	50
	i			16		i		40	02
	PX eLNE	39.9				i			22
	R eP	30	53			BCIS: 23.6N, 107.6W,			
	e	31	00			17:36:01			
	Pr eP	30	46		18	P iP	00	44	38
	i	31	00			R eP		41	
	e	39				CL iP		46	d
	CL eP	06				T eP		48	
	i	14				USCGS: 00:33:25, Samoa			
	T e	27				Islands region			
	BCIS: 16N, 98.8W, 07:25:32				18	PX eLEZ	02	07	
16	P e(P)	12	56	45		BCIS: 50S, 165E, 01:13.0			
	Pr e(P)	32				Wellington: 49S, 164E			
	CL e(P)	50			18	R eP	07	35	23
16	P eP	15	07	25		CL eP		17	
	Pr eP	25				Bonin Islands (CMO)			
	CL eP	33			19	MW e	05	08	47
	T eP	40				R e		33	
16	P iP	17	41	55		Pr e		47	
	R eP	57		c		CL e		25	
	Pr iP	58		c		T e		15	
	CL iP	42	02		20	P eP	02	07	32
	T iP	04				e		40	
	Kermadec Islands					R e		42	
	USCGS: 17:29:11					Pr e		39	
16	MW e	21	28	43		CL eP		31	
	CL e(P)	23	40			e		40	
	e	29	44			Near Guam			
17	P iPNEZ!	12	37	12		USCGS: 01:54:40			
	iSNE!	23		c	20	P iPNEZ	09	20	36
	MW IP!	12		c		epP		58	d
	R iPNEZ!	01				esP		21	06
	iSN!	04				R iP		20	32
	Pr iP!	12				epP		53	
	Magnitude 4.5					iSP		21	02
	34°01'N, 117°14'W,					Pr iPNEZ		20	28
	12:36:58					iP		49	
17	P eP	17	32	18		iSP		58	
	PX eLNE	35.0				CL iP		20	40
	A T	10				iPP		21	02
	R MH	32	03			iSP		10	
	e(P)	10				eP'P'		49	20
	e	10				e		42	
	Pr eP	31	55			T iP		20	49
	CL ePNE	32	26			USCGS: 16S, 74W, 09:10:06,			
	T eP	44				150 km.			
	Foreshock of next.				20	P e(P)	13	32	04
	USCGS: 17:28:40					CL e		02	
17	P eP	17	39	18		CL eP	08	34	11
	e	25			21	MW eP	16	15	50
	PX eLNE	42.1				CL eP		37	
	A T	30			21	P eP	20	18	07
	R MH	39	13			R eP		13	
	i	20				CL eP		07	
	Pr iP	03				T eP		03	
	i	07			21	P eP	23	48	08
	i	15				e		18	
	CL iPNE	35				PX eLNE		50.6	
	i	40	05			A T		16	7
	(continued)					MH			
						(continued)			

Date	Sta. Phase	h	m	s	Date	Sta. Phase	h	m	s
21	February (continued)				24	February			
	R eP	23	47	57		PX eLEZ	12	48.1	
	Pr eP	38				MW iP		42	58
	e	48	04			Pr eP			37
	CL eP	48	15			CL iP			43
	i	29				e			09
	i	44				USCGS: 12:39:55, Mexico			
	T e(P)	38			24	P eP	19	06	28
	e	51				PX eLNEZ			17.9
	USCGS: 23½N, 109W, 23:44:49					R eP			06
	P eP	11	46	10		Pr eP			17
	R eP	13				CL eP			36
	Pr eP	14				BCIS: 2.5N, 95.0W, 18:59:11			
	CL eP	45	59	d	24	P eP	23	08	15
	e	48	39			iPP			50
	T eP	45	48			R eP			18
	USCGS: 61½N, 151W, 11:39:20					i			27
	P ePZ	11	55	06		iPP			53
	e	18				Pr eP			24
	PX eLE	12	24.2			epP			57
	A T	4				CL iP			14
	MH	20				iPP			50
	R eP	11	55	09		e			09
	Pr eP	11				T iP			08
	CL iP	15		c		iPP			47
	T eP	11				USCGS: 17½N, 144½E,			
	USCGS: 11½S, 166E, 11:42:28				25	P ePNZ	01	28	34
	P ePZ	20	35	39		iPNEZ			36
	R iP	42				i			40
	Pr iP	42		c		iNZ			52
	CL iP	47		c		ePP			31
	e	37	29			eS			37
	T e	35	49			eSE			58
	BCIS: Tonga Islands,					iSN			38
	20:23.9					iNE			23
23	P iPZ	00	39	30		eL			49.9
	R eP	33				eLNE			50.1
	Pr eP	31				A T			
	CL eP	36				PZ	0.4		1
	BCIS: Samoa Islands,					PZ	1½		4
	00:28.0					PH	0.4		1
23	MW eP	12	26	41		SH	4		8
	e	28	16			MH	40		20
	R iP	26	35			MZ	25		20
	CL iP	44				R eP	01	28	37
23	P ePZ	15	51	08		iNEZ			39
	R e	11				e			54
	CL eP	17				Pr eP			37
	e	35				iNEZ			39
	T e	16				i			47
23	R e	21	45	40		iNEZ			53
	T e	38				eSN			38
	USCGS: 29N, 43W, 21:35:15					CL iPNEZ			28
	CL e	03	43	24		i			54
24	P iPZ	06	50	05		eSN			38
	R iP	11				eP			28
	Pr iP	18		d		T eP			28
	CL iP	49	58	d		iNEZ			47
	USCGS: 56N, 154W, 06:43:30					i			29
						eSN			38
						USCGS: 17S, 173½W, 01:17:00			

Pasadena and auxiliary stations, 1952				Page 14			
Date	Sta.	Phase	h m s	Date	Sta.	Phase	h m s
25	P	IP	02 07 06	26	R	TSP	11 42 59
	R	iP	07 09 c			i	43 35
	Pr	iP	09			iPP	44 00
	CL	iP	15 c			e	45 35
	e		26			eSE	49 53
	T	eP	17			eSNZ	49 56
	e		32			i(ScS)	50 55
	USCGS: 17S, 173½W, 01:55:33					e	12 09 58
25	P	eP	02 14 52	Pr	iPNEZ	11 41 20	
	R	iP	56		i(PcP)	59	
	CL	iP	58		i	42 07	
	i		15 06		i(pP)	35	
	i		10		i(pPcP)	43 03	
	USCGS: 11S, 165½E, 02:02:16					i	43 21
25	P	eP	04 22 48			i	44 35
	R	eP	51			iSNE	49 44
	e		23 03		iN	50 12	
	Pr	iP	22 52		iNE	49	
	CL	iP	56		e(P'P')Z	12 09 54	
	T	eP	58		iN	11 00	
	i		23 12		iZ	10	
	Tonga region				eZ	13 13	
	BCIS: 04:11.2			CL	iP	11 41 32 c	
25	MW	eP	18 53 20		i	43 26	
	CL	iP	16		eS	49 58	
	T	eP	10		eP'P'	12 09 42	
	USCGS: 18:41:08				i	55	
	CMO: 36.2N, 141.3E, 40 km.±				epP'P'	10 51	
26	P	eP'	11 23 39		e	13 03	
	R	eP'	37		e	32 18	
	Pr	eP'	38	T	iPNEZ	11 41 42 c	
	CL	eP'	35		iPcP	42 07	
	i		40		i	42 20	
	T	eP'	38		iP	39	
	BCIS: 17.5S, 35.5E, 11:03:45				isP	43 06	
26	P	iPNEZ	11 41 29 c		ipPcP	12	
		iPcPZ	55		e	46 22	
		ipPZ	42 34		iSNEZ	50 24	
	PX	isPZ	53		i(ScS)	51 17	
		iSNEZ	50 02		eP'P'	12 09 55	
		i(ScS)	53		epP'P'	11 03	
		iNEZ	59		e	12 59	
		i(sS)N	51 41		Pasadena 14S, 70½W, 11:31:0		
		iE	48		260 km., magnitude 7±		
		iZ	52 09	26	P	eP	13 41 22
		iN	53 56		R	e	19
		eN	55 25		CL	eP	32
		iE	35		e	43	
	P	eP'P'Z	12 09 47		T	e	47
		iZ	58		e	56	
		epP'P'Z	10 50	26	P	iPNZ	15 46 29
		eZ	13 00		ePPN	47 58	
		eZ	32 11		iPcPZ	48 51	
		iZ	19	PX	eS	52 08	
		T	19		e	19	
		A	4		e	38	
		PZ	10 4		eLNE	55.0	
		PH	6 4		e(sScS)	57 05	
		SH	30 10		A	T	
	R	iP	11 41 24 c		PZ	0.2 1	
		iNE	27		PH	0.2 1½	
		iPcP	52		MH	15 20	
		ipP	42 23		(continued)		
		i	27				
		i	30				

(continued)

Pasadena and auxiliary stations, 1952				Page 15				
Date	Sta.	Phase	h m s	Date	Sta.	Phase	h m s	
26	R	IP	15 46 23	28	February			
		i	29		P	eP	00 39 53	
		iPcP	48 47		R	eP	56	
	Pr	iPNEZ	46 18		Pr	eP	40 02	
		iZ	24		CL	iP	39 48 c	
		iZ	43		T	eP	43	
		iZ	47 07		BCIS: 46N, 144E, 00:28.7			
		iPcPZ	48 46	28	MW	ePP	00 58 17	
		i(sScS)N	56 59		Pr	ePP	21	
	CL	iP	46 30		CL	e(P')	54 03	
		i	33			e(P2')	30	
		i	47			ePP	58 09	
		iPcP	48 51			e	17	
		e	50 04		T	e(P')	54 16	
		eScP	52 37			e(P2')	26	
	T	iPNEZ	46 42			ePP	58 03	
		iPcP	48 54		BCIS: 15S, 69E, 00:33:46			
		eScP	52 42	28	MW	e	08 48 27	
		e(ScS)NZ	56 51		R	e(P)	47	
		e(sScS)NZ	57 13		Pr	e(P)	36	
		Magnitude 6			CL	e(P)	48 05	
		60 km.±, 15:39:25			T	e	24	
		USCGS: 11½N, 86½W, 15:39:23,		28	P	iP	18 56 10	
		100 km.			R	eP	14	
26	MW	eP	21 19 34		Pr	iP	19 d	
		e	50		CL	iP	04 d	
	R	eP	31			e	18	
		e	51			i	32	
	Pr	eP	33		T	iP	55 58	
		e	37			e	56 03	
		e	53			e	22	
	CL	eP	34		BCIS: 54N, 163E, 18:46:22			
		e	45	29	Pr	e	08 02 59	
	USCGS: 12½S, 166E, 21:06:49					e	03 36	
27	P	eP	06 14 27		CL	e(P)	02 43	
	R	eP	21			e	03 19	
		ePcP	17 03		T	e	02 36	
	Pr	iP	14 16		March			
	CL	eP	14 30	1	CL	eP	03 44 46	
		iPcP	17 07			e	50	
	T	eP	14 57		BCIS: 37N, 33W, 03:39.9			
27	P	eP	06 38 56	1	MW	e(PP)	06 23 14	
		e	39 11			e(PP)	18	
	R	eP	38 59		CL	e(PP)	22 53	
	Pr	eP	39 02 d			e(PP)	23 12	
	CL	eP	38 59			e	27	
	T	e(P)	50		T	e	23 00	
		e	39 21			e(PP)	08	
	P	e	11 47 30		USCGS: 06:04:05			
	R	e	44	1	P	eP	15 42 34	
	Pr	eP	41			epP	44	
		e	48			e	43 05	
	CL	eP	12		R	eP	42 37	
	T	eP	02			epP	47	
	P	iP	17 05 40		CL	eP	29	
	R	iP	43 d			ipP	39	
		e	06 00		T	eP	23	
	Pr	iP	05 d			i	29	
		e	55		USCGS: Near east coast of Hokkaido, 15:31:02			
	CL	iP	28 d	1	CL	iP	17 50 24	
		i	35			T	iP	15
		e	45			eP	23 22 53	
	T	eP	16	1	CL	e	23 11	
						T	e	23 16

Pasadena and auxiliary stations, 1952				Page 16			
Date	Sta.	Phase	h m s	Date	Sta.	Phase	h m s
2	March	IP	15 17 15	4	March (continued)	A	T
	CL	eP	11		PZ	PH	10 11
	T	eP	03		PH	8	11
2	P	eP	19 00 04		SH	60	5
		iP	05		MH	900	20
		epP	14		MZ	300	20
		e	02 33	R	eP	01 34	20
	PX	eLN	19 11.3		INZ		32
	R	eP	18 59 58		INEZ		49
		i	59		i	35	10
		ipP	19 00 08		e(S)	44	11
		e	02 21		i		52
	Pr	iP	18 59 53		eP'P'	02 01	53
		ipP	19 00 03		e	02	23
	CL	iP	09	Pr	eP	01 34	25
		ipP	19		i		32
		e	02 26		i		52
	T	iP	00 20		ISE	44	08
		ipP	31	CL	eP	01 34	12
		e(PcP)	02 29		i!		25
		e(ScS)	10 47		eSN	43	46
	USCGS: 11N, 86½W, 18:52:56,				i		56
	100 km.			T	eP	34	06
2	CL	eP	21 23 47		iNZ		19
3	P	eP	07 24 36		iEZ		34
	PX	eL	49 41		i		45
	R	eP	24 37		iSN	43	31
		e	49		INZ		46
	Pr	e(P)	39		eP'P'	02 02	31
	CL	eP	43		e		55
	T	eP	49		Off Hokkaido		
		e	56		Magnitude 8.3		
3	Pr	e	13 32 56		USCGS: 42½N, 143½E,		
	CL	iP	59		01:22:41		
	T	eP	57		*Probably a complex shock		
3	P	ePNEZ	17 49 13	4	CL	iP	01 50 41
		i	25	4	P	e	01 51 15
		ePcP	51 34		e		39
	PX	eL	18 02.3		i		43
	R	eP	17 49 07		CL	i	20
		ePcP	51 31		i(P)		38
	Pr	iP	49 02		i		48
		i	31	T	e		31
		ipP	51 30	4	P	iP	02 03 23
	CL	iP	49 17		CL	iP	20
		i	26	4	CL	iP	02 19 50
		ipP	51 36	4	P	e	02 51 24
	T	eP	49 27		i		28
		ipP	51 39	Pr	eP		19
	USCGS: 11N, 82½W, 17:42:07,				e		37
	100 km.			CL	eP		11
4	P	eP	01 34 18		e		21
		i	29	4	MW	eP	03 13 10
		i!	38		Pr	eP	17
		i	46		CL	eP	04
		i	58	4	MW	eP	03 19 51
	PX	eS	43.8		Pr	eP	55
		eSE	43 59		CL	iP	47
		iSN	44 10		*Shocks reported from this		
		eLN	56.8		time until March 5, 16h, are		
	P	eP'P'	02 02 19		taken to be aftershocks unless		
		i	32		otherwise noted.		

Pasadena and auxiliary stations, 1952				Page 17			
Date	Sta.	Phase	h m s	Date	Sta.	Phase	h m s
4	March	eP	03 23 31	4	March	eP	13 16 15
	Pr	eP	38	4	CL	e(P)	13 36 14
		e	50		MW	eP	07
	CL	iP	27		e		14
		i	37	4	MW	eP	14 01 38
4	CL	eP	04 01 55		CL	eP	34
4	P	eP	04 04 59	4	MW	eP	14 31 10
		e	05 11		e		20
	Pr	iP	08		e		25
		i	18		Pr	e	17
	CL	iP	04 56		CL	iP	06
		i	05 01		e		17
		i	06	4	MW	e	14 52 23
4	MW	iP	04 22 43		CL	eP	20
		i	54	4	CL	e	27
	Pr	iP	52		e		16 38 37
		i	57		e		42
	CL	iP	40 d		e		47
4	CL	iP	05 16 01	4	P	eP	16 42 24
		i	11		e		32
4	P	e	05 23 10	PX	eL	17 03.3	
4	CL	eP	06	Pr	iP	16 42 32	
4	MW	eP	05 34 46		i	39	
		e	55		i	46	
		e	35 05	CL	iP	19	
	CL	iP	34 44		i	27	
		e	35 00	4	MW	eP	17 29 26
4	CL	eP	05 42 15	CL	eP	21	
		e	29		i	28	
4	CL	eP	06 41 38	4	CL	iP	17 31 14
		e	45	4	CL	e(P)	18 02 20
		e	49		e		30
4	CL	e	06 59 40		Not an aftershock?		
4	CL	eP	07 05 31	4	P	eP	18 38 00
4	CL	eP	07 12 57		e		20
4	P	e(P'')	07 22 27	Pr	eP	08	
		i	32		e	28	
		e	40	CL	iP	37 57	
		eNEZ	25 53		i	38 06	
		e	26 10		e	17	
	R	e(P'')	22 25	4	Aftershock, off Hokkaido		
	Pr	e(SKP)	25 56	P	iPNEZ	19 43 19 c	
		i	58		i	27	
		i	26 14		ePP	46 43	
	CL	eP''	22 31		e	47 05	
		e(PP)	24 45	PX	eLEZ	20 10.2	
		i(SKP)	25 52		A	T	
		i	26 08		i	½	
	T	e(P'')	22 44		PH	1	
		e(SKP)	25 50		MZ	7	
	BCIS: 9S, 117E, 07:02:3			R	iP	19 43 21 c	
4	CL	eP	08 10 44		i	27	
		e	54		i	35	
4	CL	eP	08 15 30	Pr	iPNEZ	23 c	
		e	16 06		i	35	
4	CL	eP	09 37 55	CL	iP	43 24 c	
		e	38 05		i	32	
4	MW	eP	09 56 54		ePP	46 51	
	CL	eP	51	T	iPNEZ	43 22	
		i	57 04		i	28	
4	CL	eP	10 08 56		i	34	
		e	09 08		Magnitude 6½		
4	MW	eP	10 18 54		USCGS: 10S, 161½E, 19:30:28		
	CL	eP	48	4	P	iP	20 07 43
		i	59		e	52	

(continued)

Pasadena and auxiliary stations, 1952

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Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
8	March	CL e(P)	11	43	19	9	March (continued)				
	Near Jan Mayen Island						USCGS: 42N, 143 $\frac{1}{2}$ E, 17:03:43				
8	CL e(P)	11	47	00	9	P eP	18	55	07		
	Near Jan Mayen Island					R e(P)			03		
8	R e	18	51	35		e			08		
	Pr eP			22		Pr eP			08		
	i			32		T eP			16		
	CL eP			39		9	P ePNEZ	20	06	08	
	T e			51		PX eL			14.4		
8	Mexico						A T				
	MW e	19	00	12		PZ	$\frac{1}{4}$ $\frac{1}{2}$				
	R e			13		MH	20	20			
	Pr e			17		MZ	15	20			
	CL eP"	18	56	50		R eP	20	06	11		
	e			09		Pr eP			19		
	BCIS: 3N, 96 $\frac{1}{2}$ E, 18:37:38					T eP			05 45		
8	CL eP	19	35	57		iSNZ			10 23		
	e			36 15		Magnitude 6 \pm					
	T e			36 07		USCGS: 59 $\frac{1}{2}$ N, 136W, 20:00:17					
	USCGS: 11N, 88 $\frac{1}{2}$ W, 19:28:50				9	P iP	22	05	53		
8	MW iP	21	55	41		R iP			50		
	R iP			44		Pr iP			46		
	CL iP			35 c		T iP			06 05		
	T eP			27		Chile-Argentina					
9	R e	04	13	36		USCGS: 21:54:30, 200 km.					
	Pr e			31	10	MW iP	18	12	27		
	i			38		i			36		
9	MW e	04	16	44		CL iP			23		
	R e			31		i			32		
	e			44		Off Hokkaido					
	Pr i			53	11	CL e	00	44	03		
	CL eP			23		Off Hokkaido					
	i			36	11	CL eP	03	22	38		
	T e			30		e			49		
	Off Hokkaido				11	MW eP	20	48	54		
9	CL e	05	54	43		e			49 04		
	Near Jan Mayen Island					Pr p			01		
9	MW e	08	13	31		i			10		
	CL eP			22		CL eP			48 47		
	i			38		i			57		
	Off Hokkaido				12	Off Hokkaido					
9	P iP	16	47	49		P iP	08	09	23		
	R iP			53 d		R iP			26		
	Pr iP			59 d		Pr iP			27		
	T iP			38		CL iP			31 d		
	Near Kamchatka					T eP			33 d		
	USCGS: 16:37:30					Tonga region					
9	P iP	17	15	21		CL iP	09	25	01		
	i			34		Off Hokkaido					
	iSNE!			24 49		MW eP	12	23	35		
	eNZ			25 32		CL eP			25		
	eLNE			34.1		USCGS: 64N, 22W, 12:13:10					
	A T				12	MW eP	13	48	49		
	PZ	1		1 $\frac{1}{2}$		e			49 03		
	PH	1		2		R eP			48 44		
	SH	30		18		Pr eP			38		
	SH	3		3		CL eP			54		
	MH	40		28		e			49 01		
	MZ	10		20		e			08		
	R iPN7	17	15	24		BCIS: 11N, 86W, 13:40.3					
	i			39		Pr eP			01 51 21		
	T eP			21		CL iP			28		
	iSNZ			24 31							
	Off Hokkaido										
	Magnitude 7.1 (continued)										

Pasadena and auxiliary stations, 1952

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Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
13	March	IPNZ	14	10	18	15	March	MW e	05	24	33
	iN				37		CL e			25	23
	i(sP)NZ				11 25		T e				34
	e				12 40		BCIS: 5S, 121E, 05:07:2				
	e				13 23	15	Pr i			06	54 57
	eSKSN				20 25		CL e(P)				53 37
	e(pS)NZ				22 01	15	MW e			11	35 00
PX	eLEZ				42.7		e				07
R	iP				10 19		R e				06
	e(sP)				11 27		T e				02
	e(PP)				14 02		T e				19
Pr	iP				10 25		USCGS: 5 $\frac{1}{2}$ S, 100 $\frac{1}{2}$ E, 11:15:46				
	i				40	15	Pr iP			15	13 40
	i(sP)				11 32		CL iP				21
	iPP				14 10		T iP				12
	eSKS				20 10	15	CL eP			18	23 56
CL	iP				10 10		T eP				51
	i(sP)				11 23	16	MW iP			09	53 55
	i				41		R iP				53
	i				12 50		Pr eP				49
	i				13 50		CL iP				54 01
	i				15 52		T iP				07
T	ePZ				10 11		BCIS: 09:41.2, Argentine- Chile frontier				
	eSKSEZ				20 17	16	P eP			22	11 53
	eSN				41		iN				56
	e				22 37		iS				12 35
	230 km. \pm						R iP				11 41
	CMO: 28.5 N 127.0E, 240 km.						iSNE				12 18
	USCGS: 28 $\frac{1}{2}$ N, 127E, 13:57:26,						Pr iP!				11 32 d
	200 km.					13	LJ iP				42
							iSNE				12 07
13	R eP	19	02	54			Bt iP!				11 25
	CL eP			52			i!				26
	T eP			48			iS				42
	Felt at Guam					13	R eP			19	18 20
							CL eP				21
13	P e	21	44	32			e				57
	e			57			eP				57
	R eP			49			iP				49
	CL e			45		16	P eP			22	20 55
	T eP			44 59			i				21 04
14	CL eP	14	39	43			CL iP				20 50
14	R iP	15	03	21			i				21 00
	Pr eP			37			Off Hokkaido				
	CL eP			01		17	CL e			06	43 20
	T eP			02 49		18	P iP			04	04 45 c
	USCGS: 48.7N, 123.1W, 14:59:37						i				53
							R eP				50
14	P iP	21	06	46			e				05 01
	Pr eP			07 00			Pr iP				04 52
	CL iP			06 40			CL iP				53
	i			49			T eP				52
	Off Hokkaido						USCGS: 19N, 155 $\frac{1}{2}$ W, 03:57:35				
15	Pr eP	01	31	48		18	CL eP			05	13 17
15	MW iP	04	27	33			e				36
	R eP			36			Off Hokkaido				
	Pr iP			43		18	P iPNZ			11	09 00 c
	i			46			iZ				12
	e			28 10			iPNZ				10 08
	e			30			iNZ				10 22
	CL iP			27 39			A T				$\frac{1}{4}$ $\frac{1}{2}$
	i			56			R iPNZ			11	09 03 c
	T eP			39			iPPZ				10 11
	e			46			eZ				11 48

(continued)

Pasadena and auxiliary stations, 1952				Page 24			
Date	Sta.	Phase	h m s	Date	Sta.	Phase	h m s
23	March	CL eP	09 20 50	24	March	P e	23 35 59
		T e(P)	21 07			Pr e e	36 08
23	MW eP		13 24 48		CL e e		35 55
	R eP		49		P iP		36 06
	Pr eP		25 00	25	Pr e e		00 50 04
	CL eP		24 52		CL e e		13
	T eP		52		CL e e		49 48
	New Hebrides				CL e e		56
	USCGS: 13:12:10			25	MW iP		01 13 40
23	P eP		13 25 59		Pr e		42
	R iP		26 01		CL eP		47
	Pr iP		11		CL eP		14 27
	CL iP		03		Near Apia		
	T eP		03	25	P iPNEZ		04 19 30
	USCGS: 11S, 165E, 13:13:25, 60 km.				iP		20 29
23	MW e(P)		14 22 09		PX iSN		28 57
	R e		49		iE		29 33
	CL eP		21 49				A T
			57		R iP		04 19 32
23	P ePP		15 39 55		iP		20 31
	e		40 04		Pr iP		19 32
	Pr ePP		39 58		iP		20 33
	e		40 47		CL iSN		28 54
	CL eP		35 50		CL iPNEZ		19 36
	e		36 03		iPNEZ		20 36
	ePP		39 52		iSNEZ		29 02
	BCIS: 11N, 125E, 15:21:50				T iPNEZ		19 39
23	P eP		16 58 28		epP		20 39
	R e		32		USCGS: 16½S, 176W, 04:08:26, 250 km.		
	Pr eP		45	25	P iP		09 43 06 c
	e		54		i		17
	CL eP		35		PX eL		10 13.0
	T e(P)		37		PZ		1
	e		43		MH		5 20
23	MW eP		20 27 30		R iP		09 43 08 c
	R eP		34		Pr iP		11 c
	Pr eP		35		i		23
	CL eP		35		CL iP		07 c
	T eP		35		T iP		07 d
24	P eP		10 06 43		e		19
	R iP		39		USCGS: 5½S, 150E, 09:29:42		
	Pr iP		34	25	P e		10 36 37
	CL eP		46		R e		40
	T eP		57		Pr eP		44
	USCGS: 09:57:24, Central Ecuador				CL eP		44
24	P eP		12 09 15	25	MW eP		16 34 35
	R eP		20		CL eP		43
	Pr i		25	25	MW e		17 10 41
	CL eP		22		Pr e		41
	T eP		24		e		50
24	P iP		18 23 39	25	P iP		19 23 54
	R iP		35 d		PX eLNE		34
	i		24 01		R eP		23 59
	e		13		Pr eP		59
	CL eP		23 44		i		24 02
	e		24 01		CL eP		09
	e		10		T eP		01
	T eP		23 52		USCGS: 19:16:42, Hawaii		
	e		24 18	26	P eP		03 50 26
	e		28		R eP		18
24	P e		21 36 04		e		21
	R e		25		Pr eP		13
	Pr eP		03		CL eP		27
	e		11		T e(P)		39
	CL eP		14		e		41
	e		17				
	e		22				

Pasadena and auxiliary stations, 1952				Page 25			
Date	Sta.	Phase	h m s	Date	Sta.	Phase	h m s
26	March	R e	11 11 52	29	March	P eP	12 49 07
		Pr e?	10 51			R e(P)	12
	CL e		11 52			Pr eP	14
	East Indies					CL e	48 59
26	P iP		11 22 21			e	49 15
	R iP		18 d	30	MW eP		08 05 36
	e		49		R eP		39
	e		23 03		Pr eP		45
	Pr eP		22 14		CL ePNE		31
	CL iP		25		T eP		21
	T eP		33		e		59
	South America			30	P eP		08 08 46
26	MW eP		18 40 10		Pr e(P)		49
	e		19		i(P)		56
	R e		22	30	MW iP		08 49 47
	CL e(P)		02		R eP		49
	e		14		Pr e(P)		42
26	MW eP		22 35 58		iP		50
	e		36 09	30	MW e		15 45 28
	Pr eP		09		e		32
	e		18		CL e(P)		40
	CL eP		35 50		T e		45
	e		36 01	30	MW e		19 14 34
	T eP		35 54		R e		39
	e		57		CL eP		32
27	MW e(P)		14 38 03		e		46
	Pr e(P)		10		T eP		29
28	P iP"		06 03 49		e		40
	i(SKP)		06 48	31	P e(P)		00 00 10
	eP"		03 50		R e		19
	i(SKP)		06 52		Pr eP		22
	eP"		03 49		CL e		28
	i(SKP)		06 49	31	MW eP		01 00 12
	T eP"		03 48		R e		07
	BCIS: 6S, 105E, 05:44:31				CL e		12
28	MW e		07 44 58		e		23
	e(P)		45 17		USCGS: 6S, 79½W, 00:50:40		
	Pr eP		19	31	P eP"		06 36 12
	CL eP		24		e		17
28	MW eP		08 50 31		e		37 08
	R eP		35		R eP"		36 12
	Pr eP		38		e		19
	CL eP		38		e		39 35
28	P eP		02 24 22		Pr eP"		36 13
	R eP		29		e		39 46
	Pr eP		31		CL eP"		36 10
	e		55		e		16
	CL eP		30		e		38 19
29	MW e		03 18 08		e		39 29
	e		15		T eP"		36 07
	e		04		e		13
	R e		17 58		BCIS: 4.7N, 94.9E, 06:16:57		
	Pr e		18 02	31	CL eP		23 03 57
	e		21		e		04 12
	CL eP		39		USCGS: 55½N, 160E, 22:54:15		
	T e		54				
	Mexico				April		
	BCIS: 03:14.6			1	MW eP		00 41 10
29	Pr eP		10 32 37		e		45 15
	e		51		R eP		41 18
	CL e		21		e		45 21
					Pr eP		41 20
					e		45 38

(continued)

Pasadena and auxiliary stations, 1952

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Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
April (continued)						April (continued)					
1	CL	eP	00	40	48	2	R	iP	18	40	05
		e		44	19			i		40	19
	T	eP		40	34			i (PP)		32	
	USCGS: 48.0N, 113.8W, 00:37:41.5							i		59	
1	P	iPNEZ	01	15	19 c			e (ScP)		47	44
	R	iP		21	c			e		59	
	Pr	iP		22		Pr		iPNE		39	57
	CL	iP		24	c			e (S)E		44	10
	T	iP		25		CL		iP		40	18 d
	USCGS: 17S, 169E, 01:02:36							i		24	
1	MW	iP	03	52	44			i		33	
	Pr	iP		55				i (PP)		50	
	CL	eP		38				i		41	31
	T	iP		30				e		48	17
	BCIS: 51½N, 177W, 03:44:25							i		26	
1	MW	eP	08	06	39			i		49	11
	Pr	e		50		T		eP		40	30
	CL	e		45				iPNEZ		32	
	T	e		51				i		44	
1	P	iPNEZ	14	20	21 d			i		41	42
		i		27				e		42	10
		i		36				Magnitude 6¼-6½			
	IPP		23	02				USCGS: 16½N, 99W, 18:34:50			
	eSNE		30.2			2	R	iP	19	14	10
	eREZ		41.9				CL	iP		13	
		A				3	P	iP	02	17	31
	PZ	0.5	2					i		37	
	MH	6	20			R		eP		35	
	R	iP	14	20	23			e		40	
		i		34		Pr		eP		42	
	Pr	iP		29	d			e		44	
		i		42		CL		eP		16	
	CL	iP		28	d			e		24	
		i		35				e		18	02
	T	eP		30		T		eP		17	03
	USCGS: 15S, 175½W, 14:08:47					3	P	eP	06	07	39
1	P	iP	17	59	04		R	eP		41	
		e (pP)		23			Pr	iP		40	c
	R	iP		07	c		CL	iP		46	c
		i (pP)		24		3	MW	eP	23	04	20
	Pr	iP		13	c			e		35	
		i		26			CL	eP		15	
		i (pP)		31			T	eP		11	
	CL	iP		12	c	4	P	iPNEZ	03	03	01
		i (pP)		30				iP		18	
	T	eP		14				iP		24	
	BCIS: 32S, 177W, 17:46.4							iNEZ		33	
2	P	iP	10	52	46			iPcP		44	
	Pr	e		47				i		04	20
	CL	eP		45				iSE		11	12
	T	eP		44				isSE		40	
2	P	iPNEZ	18	40	11		PX	eGN		17.8	
		e (S)N		43	59			eREZ		20.5	
		iSN		44	31			eP'IP'		32	29
		e (L)N		46.4				A		0.2	1½
		e		48	09			T		2	6
		T		1½				MH		7	20
	PZ	1½	2½				R	eP	03	03	05
	PH	1½	2½					esP		30	
	SH	1½	5							30	
	(continued)										
	(continued)										

Pasadena and auxiliary stations, 1952

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Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
April (continued)						April (continued)					
4	Pr	iPNEZ	03	03	10	5	PX	eLEZ	09	09.9	
		i		43			R	iP	08	45	19
		iSE		11	30			iP		34	
	CL	iP		02	56			i		38	
		i		03	05		Pr	iP		19	d
		iP		13				eP		36	
		i		27			CL	iP		22	d
		ePP		04	06			iP		37	
		eSNEZ		11	02		T	eP		24	
		e (P'IP')		32	51		USCGS: 15½S, 177½E, 08:33:12				
	T	iP		02	48	5	P	eP	12	30	41
		iSNE		10	49		R	eP		40	
		Magnitude 6¼					Pr	eP		34	
		USCGS: 52N, 159½E, 02:52:55					CL	eP		50	
		Pasadena: 60 km, 02:52:57					T	e		31	00
				07	24	19	BCIS: 1½N, 83W, 12:22:15				
4	R	e		18		5	R	eP	15	28	08
	Pr	i		24			Pr	eP		07	
	CL	e		24			CL	eP		13	
4	CL	e	08	06	53	5	P	e (P)	19	27	32
	USCGS: 23½N, 121E, 07:49:25						Pr	e (P)		39	
4	P	iP	16	19	35		CL	e		39	
		i		39		6	P	eP	07	10	42
	R	eP		35			Pr	eP		49	
		e		42			CL	eP		49	
	Pr	eP		36			T	e (P)		49	
		i		42				e		54	
	CL	eP		41			Hawaii				
		e		47			USCGS: 07:03:35				
	T	eP		43		6	P	e	18	23	12
		e		49				e		18	
	Wellington: 35S, 179½W, 16:06.7						Pr	e		08	
4	R	eP	17	32	35		CL	e		02	
	P	eP		37				e		16	
	Pr	eP		37			BCIS: 11S, 78½W, 18:12:55				
		e		44		7	P	eP	00	06	43
	CL	eP		16				e		07	02
		i		30			R	e		05	
	T	eP		25			Pr	eP		06	52
5	Pr	e	02	19	51		CL	eP		37	
	CL	e		20	06			e		56	
		e		10			BCIS: 54.1N, 160.0E, 23:56:42				
	Mexico					7	P	eP	07	16	57
5	P	eP	03	17	29		R	eP		17	03
	R	eP		30			Pr	iP		07	
		e		36			CL	eP		05	
	Pr	eP		31			T	eP		04	
		i		37			USCGS: 21N, 157W, 07:09:51, 60 km.				
	CL	eP		34		7	MW	eP	12	36	33
		e		40			Pr	e (P)		35	51
	T	e		38				e		36	34
	USCGS: 33S, 180, 03:04:33						CL	eP		39	
5	R	eP	03	50	08			e		42	
	Pr	eP		07				eP		21	40
	CL	e (P)		11		7	R	eP		23	
	MW	eP	05	10	08		Pr	iP		28	
	R	eP		10			CL	eP		26	
	Pr	eP		10			T	eP		27	
		e		33			MW	eP	22	59	29
	CL	eP		15	c		R	eP		33	
	Kermadec Islands?					5	P	iPNZ	08	45	16
				31				iP		37	
				31			T	eP		36	
	(continued)										

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
8	April	eP	00	28	31	9	April	e	08	10	17
	MW	e			52		P	e			33
		epP			30		PX	eLNZ			16
	R	eP			28		R	e			10
		e			29		CL	e			37
		epP			30		T	e			43
	Pr	e(P)			32	9	MW	eP	10	58	32
		e			28		R	e			29
		epP			29		Pr	e			33
		i			30		CL	e			46
	CL	iP			31		T	e			56
		e			28	9	P	ePZ	16	33	21
		epP			29			e(PcP)N			37
		e			30			A			T
		e			39			PZ	0.2		1
		e			32			MH	16		12
	T	eP			28		R	eP	16	33	14
		e			29			e(PcP)			37
		epP			30		Pr	eP			33
		e			49			i(S)			36
								e(PcP)			37
	USCGS: 9S, 70½W, 00:19:04, 600 km.						CL	eP			33
8	MW	eP	03	05	02			e(PcP)			37
	R	eP			03		T	IEZ			33
	Pr	eP			09			eNEZ			38
	CL	eP			04						16
		e			54						
		e			32						
		e			46						
	USCGS: 53½N, 161E, 02:54:55, 60 km.										
8	MW	eP	03	17	22						
		epP			35						
	R	eP			38						
	CL	eP			15						
		e			24						
		ipP			29						
	T	eP			07						
		ipP			21						
		i			29						
	USCGS: 53½N, 161E, 03:07:30, 60 km.										
8	PX	eLN	10	44	3						
	MW	e	10	18	51						
		ePP			19						
	Pr	ePP			05						
		e			33						
	CL	e			18						
	T	e			19						
	BCIS: 8.1N, 123.2E, 10:00:39, 250 km.±										
8	MW	e(P)	20	58	40						
	R	e(P)			43						
	Pr	eP			49						
		e			58						
	CL	eP			47						
	T	eP			50						
9	P	eP	08	04	54						
	PX	eLE			14.1						
	R	eP			04						
	Pr	eP			43						
	CL	eP			05						
	T	e(P)			14						
	BCIS: 5S, 140W, 07:57:10										

C. F. Richter
Violet M. Taylor
Shigeji Suyehiro
April 15, 1953

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
9	MW	e	20	17	06	13	P	eP	16	00	05
	Pr	iP		15	42		R	eP		01	05
	CL	eP			32		Pr	eP		15	59
	T	eP			34		CL	eP		16	00
10	MW	e	05	00	51		T	eP		18	23
	R	e		01	17		Southeast				
	Pr	i			23		USCGS: 15:27:50				
	CL	e			41						
	BCIS:	04:41.2			22						
10	P	ePNZ	06	10	49	14	MW	eP	01	16	26
	e			11	12		R	e			28
	ePP			14	50		Pr	e			36
	PX	eLEZ		42.6			CL	eP			33
	R	eP		10	49		T	eP			34
	Pr	ePP		15	01	14	Pacific				
	e				56		P	iP?	18	00	50
	CL	ePP		15	00		e			02	06
	T	eP		10	45	14	CL	e	21	27	27
	USCGS: 25N, 126E, 05:57:20			14	39		R	eP			20
	CMO: 24.5N, 124.5E			10	42		Pr	eP			16
10	P	iP	07	10	59		e				23
	R	eP		11	01		CL	eP			23
	Pr	iP			02		T	e			51
	CL	iP			06		BCIS: 16½N, 100W, 21:21:57				48
	T	eP			09	14	P	iPNEZ	23	48	54
	USCGS: 06:58:43			14	37		iPcPZ				49
11	R	e(P)			22		ipPZ				24
	CL	eP			24		eGN	24	34.2		
	e				24		eREZ				38.8
	T	eP			39		R	iPNEZ	23	48	49
	BCIS: 20.1N, 102.2W, 14:32:40				20		iPcPZ				49
12	CL	e(P)	01	47	46		ipP				19
	e				51		iP	23	48	46	
	BCIS: 14½S, 66¾E, 01:27:09				17		iP				49
12	P	iPEZ	02	59	45		i(pPcP)				46
	ipP		03	00	01		i	24	19	38	
	PX	eLNEZ			06		i				56
	R	eP		02	59	48	CL	iPNEZ	23	48	57
	Pr	epP		03	00	04	iPcPZ				49
	CL	iP		02	59	54	ipPZ				27
	Pr	ipP		03	00	11	isPZ				38
	CL	iP		02	59	39	i(sPcP)	23	49	49	
	T	iP			31		i				50
	BCIS: 52N, 179E, 02:51:10, 60 km				48		ePP				51
12	P	eP	16	00	18		epPP				52
	R	eP			23		esPP				15
	Pr	eP			25		ei	24	19	25	
	e				38		e				21
	CL	eP			25		T	iPNEZ	23	49	05
	T	e(P)			30		ipPZ				36
12	P	iPNEZ	23	30	54		isPZ				47
	R	eP			55		Interpretation slightly uncertain,				
	Pr	iP			56		assuming h = 120 km				
	CL	iP			31		and 23:37:27				
	e				33		USCGS: 25S 69½W, 23:37:20, 100±				
	T	iP			31						
13	Pr	iP	07	20	55						
	CL	eP			57						



Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s		
15	April	MW	eP	00	04	46	15	April	CL	eP"	19	21	08
			e	08	18					e		25	
		R	i	09	05							22	59
		Pr	e	09	03					e(PKKP)		31	15
		CL	eP	04	19					e(SKKP)	19	35	25
			e	08	21			T		iP"		21	10
			e	09	31					e		27	
			e	52						e		34	26
		T	e	04	14								
			e	08	34								
		USCGS: 3 $\frac{1}{2}$ N, 126 $\frac{1}{2}$ E, 23:49:45								South Atlantic			
		Molucca Passage								USCGS: 56S, 24W, 19:02:12			
										BCIS: 58.0S, 25.8W, 19:02:11			
15	MW	e	04	59	44	15	MW	iP	20	17	45		
	CL	iP			45		R	iP		39			
	T	eP			43		Pr	iP		34			
15	P	eP	05	02	50	16	CL	iP		49			
	R	eP			52		P	iPNEZ	03	51	02		
	Pr	iP			56					21			
	CL	iP			49		R	eP		03			
	T	eP			46			e		06			
15	P	eP	06	11	28		Pr	eP		09			
		ipP			41		CL	eP		50	54		
		e			56			i		51	10		
					56			i		17			
	PX	eLEZ	34.2				T	eP		50	48		
	R	eP	11	29				e		51	04		
		ipP			43								
	CL	eP			22	16	USCGS: 47N, 154E, 03:40:19						
		ipP			37		P	e(P)	11	37	58		
		i			45		Pr	e		38	06		
		eP			16		CL	eP		37	47		
								e		55			
		CMO: 42.ON, 142.8E, 30-35 km											
		BCIS: 42.1N, 142.4E, 05:59:50								BCIS: 11:26:17			
15	P	iPNEZ	09	27	00	16	P	iP"	14	35	39		
		iN			02			e		37	09		
		i			18		R	eP"		35	37		
							Pr	eP"		31			
		PZ	A	1	1 $\frac{1}{4}$		CL	eP		40			
		PH	1 $\frac{1}{4}$		1 $\frac{1}{4}$								
	R	iPNEZ	09	27	02								
		i			10								
		i			06								
	CL	iP			11								
		i			16								
	T	iPNEZ			08								
		i			15								
		i			34								
		BCIS: 19S, 178W, 09:15:13, 100 km				17							
15	P	iPNZ	13	47	20		R	eP	04	08	51		
	R	eP			22			e		09	07		
	CL	iP			28		Pr	eP		08	52		
	T	iP			30			e		09	16		
15	MW	iP	14	53	32		CL	eP		08	51		
	CL	eP			37			e		09	02		
	T	eP			39		T	eP		08	55		
15	P	iP"	19	21	05								
		i			23								
		ePP			22	24							
	PX	eLN			57		R	eP		20			
		eLZ	20	00				e		34			
	R	iP"	19	21	04			e		50			
		i			22		Pr	eP		15			
		i			19			e		30			
		i			21		CL	eP		53			
								e		27			
								e		47			

(continued)

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s		
17	April	T	eP	11	55	35	19	April	R	eP	08	38	02
			e	54					Pr	eP		37	56
		BCIS: 30 $\frac{1}{2}$ S, 70 $\frac{1}{2}$ W, 11:43:20							CL	e		38	14
17	Pr	eP	14	08	16								
	CL	iP			20								
17	MW	eP	15	34	56	19	P	iPNEZ	10	07	49		
	Pr	eP			35	02			i(pP)Z		59		
	CL	eP			34	53			isPEZ		08	15	
18	P	iP	00	57	48				iPcPZ		53		
	R	eP			50				iZ		09	07	
	Pr	iP			51				ePPZ		09	7	
	CL	eP			55				iE		09	56	
18	MW	iP	03	47	20				i(PPP)N		11	12	
	R	eP			17				iE		11	52	
	Pr	iP			21				iSNE		15	08	
		e			56				eLE		20		
	CL	iP			25				eLZ		25.6		
		e			48	00							
	T	eP			47	28			PZ	A	1 $\frac{1}{4}$	2	
		e			48	04			PH	1 $\frac{1}{4}$	2		
					48	04			SH	7	10		
					25				MH	40	20		
		BCIS: 22 $\frac{1}{2}$ S, 176W, 03:35:15											
18	MW	eP	10	14	20		R	iPNEZ		07	45		
	Pr	eP			26				iZ		48		
18	P	eP	11	51	55				isPZ		08	10	
	R	eP			57		Pr	iPNEZ	10	07	38		
		e			52	05			i(sP)Z		08	04	
		eP			51	56			iPcPZ		56		
		i			52	00			iPP		09	35	
	CL	iP			03				i		13	13	
		i			07		CL	iP		07	50		
		eP			04				i(pP)		59		
					10				i		08	07	
					10				i		10		
		BCIS: 29 $\frac{1}{2}$ S, 179W, 11:39:19							i		28		
18	Pr	eP	12	10	52				i		09	01	
	CL	eP			57				T	iPNEZ	07	59	
18	P	eP	16	12	28					i(pP)Z	08	08	
		ipP			42					i	08	14	
		e			57					iZ	08	30	
	PX	eLNZ			44.1					iPP	10	00	
	R	eP			12	30							
		epP			45								
		e			28	28							
	Pr	eP			12	35							
		e			28	26							
		e			30								
	CL	eP			12	27							
		ipP			41								
		e			28	33							
	T	eP			12	24							
		epP			38								
		USCGS: 12N, 140E, 15:59:10											
18	P	eP	17	10	12								
	R	eP			14								
		e			26								
	Pr	eP			26								
		e			33								
	CL	eP			08								
		e			14								
		e			21								
		BCIS: 47 $\frac{1}{2}$ N, 154E, 16:59:33											
18	R	e(P)	23	01	11								
	Pr	e(P)			00	59							
		e			10								
		e			13								
	CL	e(P)			01	03							

Magnitude 6.8

USCGS: 7N, 71 $\frac{1}{2}$ W, 09:58:53, 60 km±

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
19	April	eP"	19	44	51	22	April	(continued)			
	Pr	eP"		46	16		CL	iP	04	38	15 c
	CL	eP"		44	54		T	e(PcP)			25
	T	eP"		46	11		USCGS: 27S, 176½W, 04:25:42				
				44	57		MW	eP	06	31	39
				45	04		Pr	iP			27
				46	37		CL	iP			44
							T	i			50
	South Atlantic						BCIS: 15N, 92½W, 06:26:0				
	BCIS: 19:25:59						P	iP	08	44	49
20	P	iP	07	19	24		R	iP			52
	Pr	iP			26		Pr	iP			52
	CL	iP			32		CL	iP			56
	T	eP			34		T	iP			57
					43		USCGS: 22S, 175W, 07:07:36, 100 km				
	USCGS: 22S, 175W, 07:07:36, 100 km						R	iP	16	57	56
21	MW	eP	01	28	54	22	R	iP	17	01	43
	R	eP			41		Pr	iP	16	58	02
					59		CL	e(S)E	17	00	59
	Pr	e			29		CL	i			00 45
	CL	e			28		T	iP	16	57	20
	T	e(P)			41						51
					42		USCGS: 46N, 111½W, 16:54:42½				
21	MW	iP	02	07	43	22	MW	eP	18	44	55
	R	iP			39		R	eP			50
	CL	eP			34		Pr	iP			45
	CL	eP			47		CL	eP			45 00
	T	iP			57		P	eP	19	54	56
	BCIS: 2½S, 78½W, 01:58:25						R	eP			55 01
21	MW	eP	04	20	42	22	Pr	eP			05
	R	eP			38		Pr	eP			09
	Pr	iP			31 c		CL	eP			54 56
	CL	iP			49 c		T	eP			55 01
	T	iP			21 00		BCIS: 27N, 143½E, 19:42:39				
21	MW	eP	16	13	18	22	P	epP	20	53	34
	R	e			21		MW	eP			51 36
	Pr	eP			21		Pr	epP			53 36
	CL	eP			25		R	eP			51 39
	T	e(P)			27		Pr	eP			50
21	R	e	19	06	32		CL	eP			53 39
	Pr	iP			27		Pr	eP			51 43
	CL	eP			39		CL	eP			51 43
	T	iP			46		T	epP			53 45
					59		BCIS: near coast of				
	BCIS: near coast of						Colombia, 18:58.2				
21	MW	e	23	23	14	23	CL	eP	16	09	17
	Pr	eP			22 52		T	e			21
					59		BCIS: 20:39.6				
	CL	iP			23 08		CL	e(P)			53
					15		T	e			29
	T	i			28		USCGS: 7½N, 83W, 23:15:07				
					37		CMO: 38N, 128E				
22	MW	eP	03	51	38	24	BCIS: 15:55.2				
	R	iP			40		P	eP	12	23	43
	Pr	eP			44		R	eP			46
	CL	eP			45		Pr	eP			58
22	P	iP	04	38	07		Pr	eP	23	45	
					47						56
	R	iP			10		C	eP			51 d
	Pr	eP			09		T	eP			56
	i(PcP)				18		BCIS: 21S, 175W, 12:11.8				

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
24	April	iP	14	16	55	26	April	iP'NEZ	12	46	57
	Pr	iP			57		e(SKP)				50 15
	CL	iP			17 00		i				41
	T	eP			03		i				47
24	MW	e	16	27	20		R	iP"			46 57
	R	eP			16		e(SKP)				50 17
	Pr	eP			16		e				42
	CL	eP			18		Pr	iP"			46 59
	T	i?			10		i				47 32
	BCIS: 4.7N, 32W, 16:14:47						e(SKP)				50 20
25	P	e(P)	05	15	28		CL	iP"			46 55
	R	eP			23		i(SKP)				50 15
	Pr	eP			10		i				29
	CL	e			41		i				46
					59		T	iP"	12	46	51
	T	e			57		i(SKP)				50 11
25	P	iP	06	09	53		BCIS: 3.2S, 103E, 12:27:47				
					10 01		MW	eP	14	02	40
							Pr	iP			42
	R	eP	06	09	48 c		CL	iP			47
	Pr	iP			42 c		T	eP			49
					46 c		26	MW	e(P)	21	08 54
	CL	iP			57 c		R	e			57
	i(pP)				10 07 c		CL	eP			54
	T	eP			06						09 03
	e(pP)				14		T	eP			08 48
	Magnitude 6¼-6½						BCIS: 20½N, 143½E, 20:56:20				
25	P	eP	07	18	35	26	R	i	23	14	35
	R	eP			30		Pr	eP			12 47
					34		CL	eP			13 04
	Pr	eP			33		BCIS: 23:08.1; Gulf of Mexico?				
					49	27	P	iPNEZ	08	24	55 d
	CL	eP			21		e				58
					32		R	iP			57 d
	T	e			26		Pr	iP			57 d
					37		i				25 17
	CMO: 41.7N, 144.5E,						e				28
	very shallow.						CL	iP			02 d
	BCIS: 42½N, 142E, 07:06:50						e				41
25	P	iP	08	11	45		T	iP			05 d
	R	iP			48		e				11
	Pr	iP			49		BCIS: 27½S, 180, 08:12:22				
	CL	iP			54	27	MW	e(P)	12	55	19
	T	iP			56		Pr	e(P)			10
	BCIS: 17S, 175W, 08:00:09						e				15
25	MW	eP	10	44	42		CL	e(P)			14
					45 21		e				25
	Pr	eP			44 47		T	e			17
					45 05		e				27
	CL	eP			44 46		Tonga region				
	BCIS: 33½N, 38½W, 10:34:14					27	BCIS: 12:43.2				
25	P	eP	15	10	54		P	eP	14	07	59
	R	eP			57		R	e			08 00
	Pr	iP			58		Pr	eP			01
	CL	eP			58		e				27
	T	eP			58		CL	eP			08
26	MW	eP	02	06	17		e				19
					24		T	e			07 57
	Pr	e(P)			25	27	P	ep	15	06	57
					33		R	eP			07 00
	CL	eP			10		Pr	eP			02
					16		CL	iP			06 58
	BCIS: 54N, 171E, 01:57:03						T	eP			44
							USCGS: 12N, 143E, 14:53:52				

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
4	May	(continued)				6	May	iP	22	31	14
	R	eP	14	27	38		i				22
		i			42		i				29
	Pr	iP	14	27	37		eSNE		34	9	
		i			42		e(ScP)		39	39	
	CL	eP			54		e		41	31	
		i			44		R	eP			31 08
		e			53		CL	iPNEZ			25
	T	eP			28 08		i				37
		i			27 45		T	iP			41
	USCGS: 24 $\frac{1}{2}$ S, 177 $\frac{1}{2}$ W, 14:15:16				28 02		eSN				35 49
5	P	eP	01	31	47	7	BCIS: 18 $\frac{3}{4}$ N, 105W, 22:26:48	iP	06	36	37
	R	eP			45		CL	iP			45 d
	Pr	eP			42		T	eP			52
	CL	eP			57		CL	eP			16 15 11
5	P	e(P)	01	49	16		T	e			19
	R	e			20		iP				10
	Pr	e(P)			16		i				17
	CL	eP			10		P	iPNEZ			16 19 01
	P	eP	04	59	23		R	iP			06
		epL			59		CL	iPNEZ			18 47
	PX	eL	06	10.0			T	iP			35
	R	eP	04	59	26		i				19 13
	Pr	epP	05	00	02		USCGS: 51N, 131W, 16:14:36	CL	e		16 23 05
		eP	04	59	29		7	CL	e		16 23 05
		e			45		8	P	West Pacific?		01 10 44
	CL	iP			22			iPEZ			58
		epP			53			i			11 01
	T	iP	05	00	03		PX	i(pP)			21 11
		epP	04	59	18			eE			31.2
	BCIS: 22 $\frac{1}{2}$ N, 143E, 04:47:00, 100 km				49			eLN			34.4
5	MW	e	21	01	05			eLEZ			A
	R	e			32			PZ			0.5
	CL	eP			00 59		R	MH			5
		e			01 29			eP			01 10 47
6	P	iP	02	25	14			i			50
	R	e			33		Bt	i(pP)			11 04
		eP			19			iP			10 54
	CL	eP			09			i(pP)			11 10
		e			18		CL	iP			10 42
	BCIS: 49 $\frac{1}{4}$ N, 177 $\frac{1}{2}$ W, 02:16:50				26 51		T	i(pP)			01 10 36
6	P	iPNZ	17	23	19 d			i			41
		iNZ			25			Magnitude 6 $\frac{1}{4}$ ±			
		iSNEZ			25 05			USCGS: 35 $\frac{1}{2}$ N, 140E, 00:58:40			
	R	iP			23 26			CMO: 35.45N, 140.15E, 50-60 km			
	CL	iNEZ			34		8	P	eP		09 49 49
		iPNZ			23 08			epP			50 17
		iNZ			16		R	eP			49 45
		iSNZ			24 52			epP			50 13
	T	iP			23 20		CL	eP			49 53
		i			26			epP			50 22
	USCGS: 41 $\frac{1}{2}$ N, 125W, 17:21:02				07		T	eP			02
6	P	iP	18	57	07			epP			30
	R	iP			09			BCIS: 16 $\frac{1}{2}$ S, 72W, 09:38.9			16 20 10
		e			20		8	CL	eP		15
	CL	iPNEZ			12			CL	eP		20 27 38 c
		i			25		8	MW	iP		40
	T	iP			15			R	eP		46 c
	BCIS: 17 $\frac{1}{2}$ S, 166 $\frac{1}{2}$ E, 18:44:16				48			CL	iP		48
								T	iP		55

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
8	May	eEZ	21	25	31	9	R	e(P)	14	22	02
		eP"			28 53		CL	eP			13
		e			29 21	9	P	iP	15	32	54
	PX	iPP			40			i			33 00
		eSKSE			35 45		R	iSE			34 16
		iNE			36 41			iP			32 59
		iSN			37 15		SB	ePN			34 21
		eSPZ			38 56			eSN			32 59
		ePSE			39 03		H	iP			32 35
		ePPSEZ			40 02			iSNEZ			33 22
		iE			25		T	iP			32 13
		eLN			55.3			iS			53
		A	0.1		2		CL	eP			32
		PZ	0.2		1 $\frac{1}{2}$			iS			33 21
		PPZ			6						
		MH			20						
	R	e	21	25	19						
		eP"			29 02						
		ePP			35		9	P	iP	18	00 43
		i			45			ipP			01 05
	CL	eP			25 12			iSPEZ			04 18
		e(P")			29 21			ePP			04 18
		e(P)			34			epPPE			34
		iPKKP			40 26			eSE			11.2
	T	iPP			29 37			isSNE			11 40
		Magnitude 6 $\frac{1}{2}$ -6 $\frac{3}{4}$						iE			13 20
	USCGS: 2 $\frac{1}{2}$ N, 127E, 21:10:40, 60 km±							i(PKKP)			18 11
8	P	iPEZ	22	02	57			eGN			24.4
	R	eP			03 00			eP'P'			26 26
	CL	eP			02 58			i			26 40
		e			03 49			iREZ			28.9
		e			06 58			eR ₂			20 02
		e			07 38			A	T		
	USCGS: 5 $\frac{1}{2}$ S, 145E, 21:49:36, 200 km							PZ			1
9	P	iPNZ	03	40	45			PZ			1 $\frac{1}{2}$
		i			51			PH			1
		i(pP)			42 15			pPZ			1
	PX	eSE			51 25			PPH			1 $\frac{1}{4}$
		eLEZ			04 05.3			MH			30
	R	eP			03 40 46			MZ			25
		i			52		R	eP			18 00 46
		e			41 21			e			04 46
		i(pP)			42 18			iPKKP			18 09
	CL	iP			40 52			iP'P'			26 21
		i			58		CL	eP			00 46
		i(pP)			42 23			ipP			01 07
	T	eP			40 53			i(PPP)			06 46
		e			41 07			iPKKP			18 10
	BCIS: 27S, 178 $\frac{1}{2}$ W, 03:29:01, 400 km							i(P'P')			26 16
9	MW	eP	06	05	26			iP			18 00 45
	R	eP			29						
		e			06 01						
	CL	iP			05 15						
		i			47						
		ScP			11 20		9	MW	e(P)		21 47 09
	T	eP			05 05			CL	e(P)		46 56
		ScP			11 16		9	MW	eP		22 52 32
	BCIS: 62N, 153W, 05:58:45, 200 km							e			43
9	MW	iP	09	00	06			R	eP		35
	R	eP			07 c			CL	eP		35
	CL	iP			01 c		10	MW	eP		09 30 47
	T	eP			06 59 54			CL	e		46
								T	e		31 05

Felt sharply at Reno, Nevada
39° 23' N, 119° 45' W, 15:31:33
Magnitude 5.4

Interpreted as h = 80 km;
but may be a multiple shock
with h = 50 km ±. Magnitude 7.
USCGS: 6 $\frac{1}{2}$ S, 155E, 17:47:40, 60 km

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
10	May	eP	14	34	19	13	May	(continued)	A	T	
	MW	iP			20		PZ		3	4	
	R	e			36		PH		2½	4	
	CL	eP			23		SH		7	10	
	CL	iP			17		MH		40	20	
	CMO: 41.9N, 145.2E, 60 km ±						MZ		20	20	
	BCIS: 14:22:53						R	iPNEZ	19	38	56
10	MW	e	17	23	32		i		39	04	
	R	e			09		i			11	
	CL	e			34		e		40	48	
	CL	e			22		eSE		44	52	
		e			23		iPNEZ	19	39	06	
		e			30		iNEZ			14	
	East Indies						i			29	
	BCIS: 17:04:08						i		40	06	
10	MW	e?	19	44	05		e		41	18	
	R	e			07		iSEZ		45	07	
	CL	e			19		iN		21		
10	R	e	22	18	10		iE			24	
	CL	eP			16		T	iPNZ	39	17	
10	MW	eP	23	45	14		i			24	
	R	P			07		i			33	
	CL	eP			20		i			43	
	Mexico						i		40.09		
	R	e	17	21	19		eSN		45.7		
	CL	e			28		eScSN		49	25	
	CL	e			33		Magnitude 6¼±				
11	MW	e	18	46	03	14	USCGS: 10½N, 85W, 19:31:45, 100km±				
	R	e			15		P	iPEZ	00	48	24
	CL	e			10		PX	iSE		57	46
11	R	e	19	23	15			eLEZ	01	09.8	
	CL	eP			19			PZ	A	¾	3
12	P	iP	04	24	11			SH		5	
	R	e(P)			12		R	iP	00	48	27
	CL	eP			19		CL	eP		17	
	T	eP			21			iPcP		37	
12	CL	e	19	47	14		T	iP		12	
	BCIS: 35.3N, 7W, 19:34:30						Magnitude 6½				
13	MW	e(P)	03	48	35		CMO: 41.9N, 145.4E				
	R	e			49	14	BCIS: 42.1N, 145.2E, 00:36:55				
	R	e(P)			48		P	eP	10	08	11
	CL	eP			49		R	eP		13	
	CL	e			43		CL	eP		13	
	CL	e			57	14	P	iPNEZ	21	18	20
	T	e			39		PX	iSNE		23	45
	BCIS: 03:35.9							eLN		25.8	
	Wellington: 32S, 179½E,							PZ	A	T	
	03:36.3, magnitude 5.6±							iP	1¼	2	
13	CL	eP	05	36	59		R	iP	21	18	14
	Aftershock?						CL	iPNE		29	
	BCIS: 05:23.2						CL	iSNE		22	
13	P	iPNEZ	19	39	03		T	ePNEZ	21	18	31
		iNZ			11		i			52	
		i			17		eSN		24	08	
		i(PcP)			21		USCGS: 16½N, 86½W, 21:11:36				
	PX	iSNE			41	15	MW	eP	03	53	43
		i			01		R	eP		40	
		eLNE			20			e		54	21
	(continued)						CL	eP		53	48
								e		54	21
							T	eP		53	46

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s	
15	May	iP	04	46	08	16	May	(continued)				
	T	eP			00		CL	iP	05	48	23	
15	MW	eP	11	16	34		i			49	02	
	R	e			42		T	iPcP		51	26	
	CL	eP			27			iP		48	45	
		i			32			ePcP		51	30	
	T	e(P)			41			e		55	21	
		i			53		Magnitude 5¼±					
	BCIS: 53N, 179W, 11:08.0						USCGS: 14N, 92½W, 05:42:09					
15	PX	eLNE	18	58.3		16	P	iP	10	57	47	
		A			T		i(pP)			55		
		2½			15		PX	i(L)	11	06	55	
	R	iP	18	50	08		R	eP	10	57	41	
	Pr	iPcP			53			i(pP)		51		
		iP			50		Pr	i(PcP)	11	01	00	
		i			28			iPNEZ	10	57	35	
	CL	eP			19		CL	i(pP)NEZ		43		
		i			30			ePNEZ		53		
		ePcP			53			i(pP)		58	02	
	T	eScP			57			i(PcP)	11	01	14	
		iP			50		T	eLNE		06	39	
		ePcP			53			eP	10	58	08	
		eScP			57			e(sP)		37		
	Magnitude 5½-5¾							e		11	07	18
	USCGS: 14N, 92½W, 18:43:52						USCGS: 16½N, 96½W, 10:52:18, 100 km					
15	P	iP	21	18	22	16	Pr	eP	14	41	34	
	R	iP			48		CL	iP		46		
	Pr	iP			19		BCIS: 63½N, 22½W, 14:32.2					
		ipP			44	16	R	e	16	27	22	
	CL	epP			35		CL	eP		14		
		iP			27		BCIS: 41½N, 144E, 16:15:42					
	CL	ipP			53		CMO: 41.6N, 144.5E, 80 km					
		i			19		16	P	eP?	17	16	19
	T	iP			18			e		17	10	
		ipP			59		PX	eLN		46.0		
	BCIS: 25S, 69½W, 21:06:46, 100 km						R	e		16	51	
15	MW	e(P)	21	45	40		Pr	e		56		
	R	e(P)			46			e		17	12	
	Pr	epP			46		CL	e		17	01	
	CL	eP			45		16	MW	e	17	28	09
		ipP			34		R	e		25		
	T	eP			26		Pr	e		09		
		iP			34			e		23		
		ipP			41		CL	e		28		
	BCIS: 53N, 179W, 21:37.1							e		33		
15	R	eP	23	46	24		16	R	e	18	49	07
	Pr	e(P)			25		CL	e(P)		00		
	CL	iP			29			e		12		
		e			51		BCIS: 18:37.3					
	P	iPNEZ	05	48	29		CMO: 41.4N, 144.0E, 40 km ±					
		ePcP			51		16	P	iPNEZ	20	54	03
		eLNE			56.6			i(pP)EZ		10		
		A			T			i(sP)E		18		
		2½			-15			iPcP		55	40	
	R	iP	05	48	23			i(P)EZ		59		
	Pr	iPcP			51			iN		56	45	
		iPNEZ			48			e(ScP)		59	42	
		i(pP)			28		PX	iSEZ	21	00	46	
		ePP			50			iE		02	40	
	(continued)							eLN		05.3		
								PZ	A	1	2	
								PH		1	2	
								SH		8	6	
								MH		20	20	
	(continued)						(continued)					

Pasadena and auxiliary stations, 1952

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Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
16	May	(continued)	20	53	58 c	17	May	e(P)	15	55	51
	R	iPNEZ		54	06		Pr	i(P)			41
		i(pP)		21	00 37		CL	i?			53
	Pr	eSE		20	53 53 c			i(P)			59
		iP		54	01			i			56 23
		i(pP)			09		USCGS: 7N, 78 $\frac{1}{2}$ W, 15:47:28				20 25 52
		i(sP)		21	00 16	17	MW	iP			47
	CL	iPNEZ		20	54 05		R	iP			32
		i(pP)			10		Pr	iP			41
		i(sP)NZ		21	00 19		CL	iP			26 01
	T	iPNEZ		20	54 15	18	P	iP			15 37 05
		i(pP)			21		R	iP			01 d
		i(sP)			27		CL	iP			09 d
		i(PcP)		55	46		T	iP			47
		i(S)N		21	00 06		BCIS: 21 $\frac{1}{2}$ S, 68 $\frac{1}{2}$ W, 15:25:31				20 44 09
	Magnitude 6 $\frac{3}{4}$					18	CL	eP			03
	USCGS: 6 $\frac{1}{2}$ N, 79W, 20:45:40					19	T	eP			05 32 41
16	MW	eP	22	31	42		CL	e			24
	R	eP			45		T	e			
		e			32 28		Philippines				
	Pr	eP			31.44	19	P	iP			18 43 55
		e			50			i			44 03
	CL	eP			52		PX	iSNEZ			53 16
	T	e(P)			52			iN			55
	BCIS: 24S, 176W, 22:19:5							eLNE			57.5
17	P	iP	06	09	40			eL			19 00.3
		e			10 40			T			2
	PX	eLN			34.3			PH			3
	R	eP			09 43 d			SH			2
	Pr	eP			45			MH			15 20
	CL	eP			42 d		Pr	iP			18 44 01
	T	eP			41			i			32
	BCIS: 4 $\frac{1}{2}$ S, 154 $\frac{1}{2}$ E, 05:56:37							iSE			53 31
	P	iP	06	32	40		CL	iPNEZ			18 43 48
	R	eP			42			i			44 19
	Pr	eP			48			eSNE			53 10
	CL	iP			33 c		T	iP			43 46
		i(pP)			34 00			i			54
	T	eP			32 27			eSN			52 58
	BCIS: 52N, 152 $\frac{1}{2}$ E, 06:22:54							Magnitude 6 $\frac{3}{4}$			
	500 km							CMO: 41.8N, 144.1E			
17	P	iNZ	09	59	53			BCIS: 42 $\frac{1}{2}$ N, 143 $\frac{1}{2}$ E, 18:32:21			
	PX	iSE	10	09	10						22 39 27
		eLN			19.6			P	eP		53
		T							eP		40 08
		PH			3			R	e(P)		28
		SH			7				iP		29
		MH			20			Pr	epP		55
	MW	iP	09	59	45				eP		30
		i			54			CL	epP		32
	R	iP			49				i		58
	Pr	iPEZ			55			CL	eP		30
		i			10 00 03				epP		55
	CL	eP			09 59 39			USCGS: 22:26:04, 100 km			
		eSNE			10 09 02			BCIS: 4S, 150E, 22:26.1			
	T	iP			09 59 35				CL	eP	04 25 18
		iSN			10 08 50					e	24
	Magnitude 6 $\frac{1}{2}$ -6 $\frac{3}{4}$									e	33
	CMO: 41.8N, 144.2E, 60 km									eP	11
	USCGS: 42 $\frac{1}{2}$ N, 144 $\frac{1}{2}$ E, 09:48:16									e	26

Pasadena and auxiliary stations, 1952

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Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
20	May	iPNEZ	13	43	56	23	P	eP	04	33	17
		e			47 13			i			33
		e			20			e			34 56
	R	iP			43 57 c		PX	eLEZ	05	03.6	
		e(sP)			47 17			A			T
	Pr	iPNEZ			43 58 c			PZ	0.1	1 $\frac{1}{2}$	
		e(pP)			45 54			MH	$\frac{1}{2}$	20	
		esP			47 15			Magnitude 6			
		eSE			53 31		R	eP	04	33	20
	CL	iP			44 03 c		Pr	eP			23
		e(sP)			46 02			e			30
	T	eP			44 05		CL	eP			14
	BCIS: 22 $\frac{1}{2}$ S, 180, 13:31.7							i			31
21	MW	eP	11	50	36		T	eP			19
	R	e(P)			30			Magnitude 6 \pm			
		eP			35			USCGS: 33N, 136E, 04:20:52,			
		e			52 41			60 km			
		e			53 02			CMO: 32.9N, 136.1E, 60 km			
	Pr	eP			50 25						
	CL	ePNEZ			50 43	23	P	eP"	15	31	18
		e			52		R	eP"			16
	Mexico						Pr	eP"			16
21	CL	e	13	18	45		CL	eP"			19
21	R	eP	15	58	01		T	eP"			22
		e			06			South Atlantic			
	Pr	eP			57 55			BCIS: 15:12:25			
		e			58 03		23	MW	eP	16	35 53
	CL	eP			10			iP			36 22
		e			14		R	eP			35 57
		e			18 24 00			iP			36 26
	21	CL	eP	09	09			e			43
		epP			03 19 39		Pr	eP			35 53
	22	Pr	eP	41				iP			36 21
		eP			09 13 55		CL	eP			35 43
	22	CL	eP	57				epP			36 11
		e			14 04		T	iP			01
	22	R	eP	13	44		Deep.	Aleutian Is.?			
		Pr	eP	34			P	iPNEZ	20	35	30 d
	CL	eP			10 12 09			epP			36 29
		e(P)			12			e			38 24
		i			53			A			T
		e			11			$\frac{1}{2}$			1 $\frac{1}{2}$
	R	eP			11		R	iP	20	35	32
	Pr	eP			10			epP			36 32
	CL	eP			10		Pr	iP			35 32
		eP			17 48 13			epP			36 32
	22	P	eP	4			CL	iPNEZ			35 37 d
		PN	eLN	26				eP			36 35
		e			41			e			38 31
		e			48		T	iP			35 40 d
	T	eP			23 21 11			epP			36 41
		e			16			USCGS: 18 $\frac{1}{2}$ S, 176W, 20:24:08			
	22	P	eP	6				250 km			
		e			54 6						
	PX	eLEZ			21 09	23	P	iPNEZ	22	19	37 c
	R	eP			17		PX	ePP			20 58
	Pr	eP			09			e(S)N			25 00
		eP			24 34			eSE			25 20
	CL	e(P)			21 04			eLN			27.7
		e						A			T
	T	eP			23 08:21,			$\frac{1}{2}$			1 $\frac{1}{2}$
		USCGS: 29 $\frac{1}{2}$ N, 131 $\frac{1}{2}$ E,						PPE			5
		60 km						SE			5
		CMO: 30.4N, 131.7E						MH			7

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
23	May	(continued)				24	May				
	R	iP	22	19	41		P	e	10	23	51
		e		31	18		R	e			47
	Pr	iP		19	44 c		Pr	i			41
		e		31	10		CL	iP			44
	CL	iPNEZ	22	19	44 c		e				58
		e		21	12		T	e		24	13
		e		30	25		Mexico				
	T	iP		19	46	24	R	eP	12	15	08
	iS			25	40		Pr	eP			04
	USCGS: 20N, 156W, 22:12:26						CL	eP			18
24	P	iP	02	10	30	24	MW	eP	12	40	31
		i		39			e				34
	iSNEZ			19	46		R	e			26
	eNE			24.3			Pr	eP			22
	eLN			33.3			CL	eP			35
		A				24	MW	e	15	59	59
	PZ	0.2	2				R	e			57
	(pP)Z		2				Pr	e			50
	(pP)H		2				CL	e	16	00	09
	SH		4	8		24	P	eP"	16	25	12
	MH		5	20			Pr	iPP			27 30
	R	eP	02	10	26		iSKPNEZ				28 35
		i		35			eN				37.4
	Pr	ePNZ		22					A		T
		iNZ		31			PZ		$\frac{1}{2}$		$\frac{1}{2}$
	eSNE			19	30		PPZ		$\frac{1}{2}$		$\frac{1}{2}$
	i(sS)NE			19	53		PPH		0.2		$\frac{1}{2}$
	CL	ePNEZ	02	10	33		SKPH				3
		iNEZ			43		MH			10	20
	T	eP			46		MZ			10	20
		eS		20	12		R	eP	16	25	13
	USCGS: 21 $\frac{1}{2}$ S, 71W, 01:59:05						ePP				27 35
	Magnitude 6 $\frac{1}{4}$						eSKP				28 37
24	P	iP	04	16	08		e				37 56
		iSE		17	01		Pr	e(P)	16	27	48
	R	iPNZ		16	02 d		CL	i(P")			25 11
		iSNE			49		ePP				27 26
	Pr	iP		16	05 d		iSKP				28 33
		iS			54						
	CL	iPNEZ		15	52		Magnitude 6 $\frac{1}{2}$ -6 $\frac{3}{4}$				
	H	eP			58		BCIS: 1.0S, 98.8E, 16:05:59				
		iPNZ		16	03	25	MW	eP	00	42	58
		iSNZ			37		R	eP			58
	T	eP		16	05		Pr	eP			59
		iNE			09		CL	eP		43	02
		iSN			53		e				06
	Felt sharply at Las Vegas, Nevada. Magnitude 5.						T	e			19
	USCGS: 36.1N, 114.7W, 04:15:15					25	MW	eP	00	56	51
24	R	e	04	45	49		i				55
	Pr	epP			29		R	eP			54
		eP			50		Pr	e(P)			53
	CL	eP			34		CL	eP			44
		epP			54		i				59 08
	Wellington: 35S, 178E, 04:32.4. Magnitude 5 $\frac{1}{4}$					25	T	i(P)			56 36
24	CL	eP	05	18	05		MW	e	05	40	08
		e			40		CL	e			50
		iP		10	08	20	Pr	i	07	15	23
	Pr	iP			22		CL	eP			15
							T	iP			11
							BCIS: 29 $\frac{1}{2}$ N, 131E, 07:02.3				
						26	CL	eP"	03	05	36
						26	P	i	03	38	15

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
26	May	(continued)				28	May	(continued)			
	R	e	03	38	13		Magnitude 6.8				
		i			46		USCGS: 35 $\frac{1}{2}$ N, 136E, 07:59:09				
	Pr	i			14		400 km				
	CL	i			15		CMO: 35.1N, 135.8E, 370 km				
		e			51	28	MW	iP	16	39	46
	T	e			19						40 16
		i			55		R	iP			39 43
	USCGS: 03:26:14						i(P)				40 13
	Tonga Is. region, 100 km						CL	iP			39 50
26	MW	e	19	21	00		i(P)				40 20
	R	i			01		e(P)				39 58
	CL	iP			20 58	29	MW	e	01	50	02
	Pr	e			00 14 17		CL	eP			49 58
	27	MW	e	05	22 19		P	iP	08	44	59
		R	i(P)		15		Pr	iP			45 01
		Pr	iP		10		CL	eP			06
	28	CL	iP		22		T	iP			08
						31	P	iP	03	44	52
	South America						R	eP			54
28	MW	iP	06	36	45		Pr	iP			53
	R	iP			41		CL	iP			59
	Pr	eP			37		T	iP			45 00
	CL	iP			48	31	PX	eL	05	53.9	
	T	iP			57		CL	e(P")			13 39
	South America						e				49 49
28	MW	e	08	06	06		T	eL			53
		e			21		BCIS: 63S, 155E, 04:54.5				
		e			28	31	MW	iP	12	03	36
	Pr	e			05 45		i				04 08
	CL	e			06 51		R	iP			03 37
		e					e				04 06
	BCIS: 36.5N, 70.5E						Pr	iP			03 37
	07:47:40, 220km					28	P	iP	08	10	52 d
							i(PcP)				11 02
							iPP				14 03
							iS				20 37
							e(L)				34.4
							eSKPP'				40 05
									A		T
							PZ		2		$\frac{1}{2}$
							PH		$\frac{1}{2}$		$\frac{1}{2}$
							PPZ		$\frac{1}{2}$		3
							SH		$\frac{1}{2}$		3
							R	iPNEZ	08	10	53
							i(PPP)				15 09
							e				20 51
							iPKKP				29 14
							eSKPP'				39 58
							i				40 07
							Pr	iPNEZ	08	10	59
							iPPNEZ				14 17
							iSNE				20 52
							e(ScS)				21 06
							iPKKP				29 14
							iSKPP'				40 06
							CL	iPNEZ	10	47	d
							i(PcP)NE				59
							iPPNEZ				13 56
							iSNEZ				20 29
							iPKKP				29 17
							eP'P'				37 22
							eSKPP'				40 09
							June				
						1	iPNEZ		10	55	47
							R	iP			49
							Pr	iP			48 c
							CL	iP			53 c
							T	eP			55
							Fiji region				
							USCGS: 10:43:59, 550 km				
							MW	e	12	58	08
							R	e			11
							Pr	e			12
							CL	e			14
							P	iPNEZ	17	05	00
							epP				25
							R	eP			03
							epP				28
							Pr	iP			04

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
2	R	iP	05	11	06 d	3	Pr	iP	19	02	15
		e(pP)			44			ipP			40
	Pr	eP			09		T	e(P)			36
	CL	eP			07 d		USCGS: 5S, 153E, 18:49:10, 100				
	Pacific					3	P	iP	20	22	38
	USCGS: 04:58:02						R	eP			42
2	P	e	05	38	08		Pr	iP			42 c
	R	e(P)			36 18		CL	eP			44
		eS			38 11		T	eP			43
	Pr	eP			36 27		USCGS: 11S, 167E, 20:10:07				
	iS				38 32	4	MW	eP	00	40	43
	CL	i(P)			36 12		R	eP			35
	iS				37 18		Pr	eP			30
	T	eP			35 52		BCIS: 18N, 101½W, 00:35.7				
	iS				36 45	4	P	eP	21	39	21
	Magnitude 5-						i				25
	Utah, Nevada, 05:34.7						A	T			1½
2	Pr	eP	06	51	31		R	eP	0.2		1½
	CL	eP			35				21	39	14
2	P	eP	10	26	49		i				19
	R	eP			52		e				35
	Pr	eP			56		Pr	eP			38 58
	CL	iP			43 d		i				39 04
	e(pP)				27 29		CL	eP			22
	T	eP			26 34		i				27
	e(pP)				27 17		T	eP			35
2	R	e	18	23	48		Magnitude 6-6½				
	CL	e			57		USCGS: 6N, 77½W, 21:30:52				
	BCIS: 7N, 126E, 18:06:44					4	P	eP	06	05	07
2	P	e(P)	18	36	44		i				12
	R	e(P)			43		e				42
	CL	e(P)			48		A	T			1½
	PKKP of preceding?						R	eP	0.2		1½
3	MW	e	00	38	39				06	05	01
	e				57		i				06
	CL	eP			58		Pr	eP			04 57
3	MW	eP	02	32	16		i				05 02
	R	eP			18		CL	eP			08
	Pr	eP			23		i				13
	CL	iP			11 c		T	e			19
	T	eP			06		e				23
3	P	iPNEZ	12	32	28 d		Magnitude 6½				
	epP				43		USCGS: 6N, 77½W, 05:56:35, 60 km				
	R	iP			23 c	5	MW	e	14	28	18
	Pr	iP			18 c		R	e			19
	e				36		Pr	iP			07
	CL	e			33 00		CL	eP			23
	T	eP			32 29 c	5	MW	iP	19	22	42
	USCGS: 8½N, 77W, 12:24:12						R	eP			45
	60 km						Pr	eP			49
3	P	eP	13	32	42		CL	iP			41 c
	R	iP			45		epP				23 22
	Pr	iP			50		T	iP			22 38
	CL	iP			38		epP				23 20
	T	iP			40	6	P	iP	02	20	55
	USCGS: 44½N, 143½E, 13:21:12						R	eP			51
	CMO: 42.1N, 143.4E, 55 km						CL	e(P)			59
3	P	iPNEZ	19	02	10	6	P	iPEZ	08	44	41
	ipP				34		R	eP			43
	i				36		e				58
	i				50		Pr	iP			48 c
	R	iP			13		CL	iP			34 c
	ipP				37		T	iP			27
	i				55		Kamchatka				
							USCGS: 08:34:30				

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
6	MW	eP	09	30	13	10	P	ePEZ	10	10	16
	R	eP			14		i				35
	Pr	eP			17		eGNE				29.1
	CL	eP			13		eREZ				32.6
6	R	e(P)	10	39	45		A	T			
	Pr	e			41		PZ		0.3		1½
	CL	e(P)			50		PN		0.2		1½
	e				43 58		R	eP			10 10 18
	BCIS: 7.0N, 35.7W, 10:27:33						i				38
7	P	eP	04	48	19		Pr	iP			19
	R	eP			22		i				39
	CL	eP			09		CL	eP	10	10	22
7	P	iP	06	27	36		i				43
	R	iP			38 d		T	eP			25
	Pr	iP			39 d		i				53
	CL	iP			40 d		Magnitude 6½-6¾				
	T	iP			42 d		USCGS: 15½S, 178½W, 09:58:27				
	New Hebrides					10	MW	eP			14 53 37
	USCGS: 06:15:13						R	eP			38
7	P	eP	07	07	51		Pr	eP			41
	Pr	eP			55		e				54 18
	CL	eP			59		CL	eP			53 41
7	R	e	22	10	03		T	eP			41
	Pr	eP			07 05		USCGS: 14S, 167E, 14:40:58				
	e				10 03	10	MW	eP	22	24	27
	CL	eP			07 20		R	iP			23
	e				10 06		CL	eP			31
	Mexico						T	e(P)			39
8	P	eP	01	19	14		iPNEZ		00	43	51 c
	R	eP			11	11	i(PcP)				56
	Pr	eP			09		iS				54 01
	CL	eP			23		A	T			1½
	T	eP			38		PZ		2½		1½
	BCIS: 18½N, 103W, 01:14:44						PH		2		3
8	P	eP	06	20	13		SH		2		3
	R	eP			10		MH		15		18
	CL	eP			18		R	iPNEZ	00	43	49 c
	T	eP			25		i(PcP)				57
8	Pr	eP'	09	39	48		Pr	iPNZ			43 44 c
	CL	eP'			53		iSN				53 49 c
	e				40 05		CL	iPNEZ	00	43	56 c
	T	eP'			39 51		i(PcP)				44 01
	e				40 14		iPPNZ				47 10
	BCIS: 8S, 66E, 09:19:58						eSN				54 13
8	P	iPNEZ	16	14	19 c		e				16
	R	iP			20 d		iE				20
	Pr	iP			21 d		ePKKP		01	02	34
	CL	iP			25 d		eP'P'				10 39
	T	iP			16 10		T	iPNZ	00	44	03 c
	BCIS: 24S, 179E, 16:01:53						iSN				54 20
9	MW	e	11	40	07		e				54 33
	R	e			07		Pasadena: Magnitude				
	CL	eP			10		31½S, 67½W, 00:31:36				
	T	e			12	11	MW	e(P)	01	44	36
10	P	iPNZ	08	53	23		e				42
	R	iP			18		R	e(P)			33
	Pr	eP			15		e				39
	CL	iP			26 d		Pr	e(P)			27
	T	eP			35		CL	e			41
	BCIS: 20S, 65W, 08:41.8						e				47
							T	e			47

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s	
11	June MW	e(P)	01	59	33	14	June MW	eP	08	07	39	
	R	eP			36		R	eP			41	
	CL	eP			37		CL	eP			35	
11	P	iPNEZ	03	12	47 c		T	eP			29	
	R	iP			44 c		BCIS: 40N, 143E, 07:55:53					
	Pr	iPNEZ			39 c		CMO: 39.1N, 143.0E.					
	CL	iPNEZ			51 c	14	MW	eP	13	37	03	
	T	iPNEZ			59		CL	eP			01	
	USCGS: 32S, 67½W, 03:00:28							e			16	
11	P	iPNEZ	10	52	55		T	eP			36 57	
	R	e(P)			46		USCGS: 24N, 143E, 13:24:35					
		iP			49	14	MW	iP	23	42	48	
		i			58		Pr	iP			50	
	Pr	eP			38		CL	iP			55	
		i			47	15	P	iPNZ	15	19	22	
	CL	eP	53	06			PX	eLE	30	1		
	T	eP			23		Pr	eP	19	27		
11	P	eP	21	47	14		CL	eP			05	
	R	eP			13			i			10	
	Pr	e(P)			08		USCGS: 66N, 134W, 15:12:41					
		eP			22	15	MW	ePP	15	34	50	
	CL	eP			23		CL	ePP			45	
12	MW	iP	10	07	16		BCIS: 31.7N, 92E, 15:15:57					
	R	eP			12	15	MW	e	16	32	04	
	Pr	eP			09			e			42	
	CL	eP			20		CL	e(P)	31	58		
	T	eP			27			e			32 05	
		e			32		USCGS: 40N, 143½E, 16:20:20					
	BCIS: 33½S, 69W, 09:54:55					16	P	iPNEZ	03	49	49 c	
13	MW	e(P)	01	18	15			ipPNEZ	51	37		
	R	e(P)			16		PX	ISE	59	23		
	CL	e(P)			19			A		T		
13	CL	e	01	21	01			PZ	0.4	1		
	Greece? or part of preceding shock?							PH	0.3	1		
13	Pr	e	05	54	42			SH	0.8	6		
	CL	e(P)			52		R	iPNEZ	03	49	41 c	
	T	i			54			ipP	51	38		
13	MW	iP	07	25	21		Pr	iPNEZ	49	51	c	
	R	iP			24			ipPNEZ	51	37		
	Pr	iP			23			e	53	05		
	CL	eP			27			iSNE	59	33		
14	P	iPNEZ	02	12	10 d		CL	iPNEZ	49	56	c	
		ipP			24			ipP	51	45		
					29			e	53	10		
	R	iPNEZ			15 d			eP'P'	04	16	27	
		ipP			29			e	19	04		
		i			34		T	iPNEZ	03	49	58 c	
	Pr	iPNEZ			21 d			i!(PcP)	50	07		
		ipP			35			ipP	51	48		
					41			Magnitude 6¼				
		eScP	18	33			USCGS: 23S, 179½W, 03:38:20, 500 km					
	CL	iPNEZ	12	01	d		16	Pr	e	04	41	31
		ipP			15			CL	e			58
		i			20			T	e			42 13
		iPcP	14	46			South America					
		iScP	18	24		16	R	eP	12	29	46	
	T	iPNEZ	11	52	d			Pr	eP		45	
		i			57			CL	eP		48	
		iScP	18	21				T	eP		50	
	USCGS: 58N, 153½W, 02:05:33					16	P	e	16	44	25	
	60 km						Pr	e			00	
								e			43	
							CL	e			09	

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
17	June P	eP	04	19	44	19	June P	iPEZ	01	48	41 c
	PX	eLEZ			45.1			i			49 27
		A			T		R	eP			48 45
		PZ	0.15	1½			Pr	iP			50 c
		MH	9	20			CL	iP			36 c
	R	eP	04	19	45			i			49 22
	Pr	eP			43		T	iP			48 28 c
	CL	eP			50		BCIS: 01:41.4, Alaska				
	T	e(P)			53	19	MW	e	03	37	58
		e			20 16		CL	eP			38 04
	Magnitude 6-6¼					19	MW	e	09	08	40
	USCGS: 21½S, 176W, 04:07:42						R	e			42
17	P	e	12	22	33		Pr	e			43
	R	e			42		CL	e			44
	Pr	e			35			e			48
	CL	e			32		T	e			51
	T	e			34	19	MW	eP	11	47	39
17	MW	e	21	02	10			e			52
	R	e			11		Pr	e			47
	Pr	e			10			e			48 01
	CL	e			16		CL	eP			47 34
	T	e			19			e			48
17	P	iP	22	49	48			e			54
	R	iP			45		T	e			47
	Pr	eP			46			e			48 10
	CL	iP			40 c	19	P	iPNEZ	12	14	40
		i			47		R	eP			33
	T	iP			38		Pr	eP			42
	BCIS: 36.7N, 11.8W, 22:37:25							i			43
18	P	eP	01	08	48		CL	eP			47
		ipP			09 18			e			16 58
	R	eP			08 44		T	eP			14 49
		epP			09 13		BCIS: 16½S, 178½W, 12:02:51				
		e			51	19	P	ePP	12	32	27
	Pr	iP			08 39		PX	eSPNE			41.9
		ipP			09 10			eSSNE			47.9
		i			50			eGN	13	01	0
	CL	eP			08 45			A			T
		epP			09 14			PPZ	0.4		3
		e			53			MH	12		20
	T	eP			08 51			MZ	10		20
		epP			09 26		R	ePP	12	32	36
	BCIS: 16.2N, 62W, 00:59:36						Pr	ePP			38
18	R	e	04	09	24		CL	e(P")			31 40
	CL	e			06			ePP			32 21
	T	e			27		T	ePP			32 37
18	MW	eP	05	58	14		Magnitude 6½				
	R	eP			16		USCGS: 23N, 100E, 12:12:56				
	Pr	eP			16	19	P	iP	13	57	34
		e			28		R	e			38
	CL	eP			22		Pr	eP			25
		e			34			e			39
	Wellington: 35S, 178W, 05:45.6						CL	eP			36
18	Pr	eP	09	11	43		West Pacific				
		e			55		USCGS: 13:44:04				
	CL	e			12 00	19	P	eP	19	23	21
		e			06		R	eP			23
18	MW	eP	15	23	48		Pr	eP			28
	Pr	eP			57			e			37
	CL	eP			55		CL	eP			04
		e			20 16			i			17
		e			20 16		T	eP			20
	USCGS: 42½N, 145E, 19:11:42						CMO: 42.0N, 145.0E, 70 km				

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
19	P	iP	21	08	31	21	T	e	16	42	56
	R	eP			35			USCGS: 18S, 72 $\frac{1}{2}$ W, 16:31:33			
		e			58			60 km			
	Pr	eP			35	21	P	e(P)	19	37	49
	CL	eP			39		R	e			52
	T	eP			40		Pr	e			45
		e			52		CL	e			55
		e			09		T	e			38
		e			49		P	eP	02	14	58
19	PX	i(SKS)NE	21	30	19	22	R	eP	15	00	
		eN			33.0		CL	eP	14	57	
		eE			37.7		T	eP	14	52	
		eLNE			48.8	22	P	iPNEZ	03	44	57
	R	e			24		Pr	ipP	45	03	
	CL	e			00		R	eP	44	59	
		e			10		Pr	ipP	45	12	
	T	e			39		CL	ipP	44	57	
20		BCIS: 55S, 55W, 21:05:24					CL	ipP	45	09	
	P	iPEZ	05	59	59			ipP	04	04	
		ePP	06	03	57		T	ePNEZ	06		
								ipP	11		
								ipP	18		
	PZ				3			ipP	19		
	PPZ				3						
	MH				10						
	R	eP	06	00	03			USCGS: 26S, 177W, 03:32:41			
	Pr	ipP			07			60 km			
	CL	iPP			04	22	P	eP	04	16	55
		eP	05	59	55		R	eP			52
		i(PcP)			57		Pr	eP			44
								e			17
					06		CL	eP	02		02
					03			eP			15
	T	ePP	05	59	52		T	eP			10
		eP	06	00	02			USCGS: 1 $\frac{1}{2}$ S, 80 $\frac{1}{2}$ W, 04:07:57			
		ePP	03	53		22	P	ipPNZ	10	18	58
							PX	iSNE	27	38	
								eL	35.1		
21	P	ep	06	39	43		R	eP	19	04	
		i(pP)			57			e			27
		i(PcP)			40		Pr	eP	09		09
					11		CL	eP	18	52	
	PX	iSE			48			e			55
		iN			49			e			19
		eE			57		T	eP	18	46	
		eLN			56.5			e			19
								Magnitude 6 $\frac{1}{4}$			
								USCGS: 46N, 153 $\frac{1}{2}$ E, 10:08:14			
	PZ				5	22	P	ipPNZ	10	32	06
	SH				5		PX	eL	59.4		
	MH				20		R	ipP	32	10	c
	R	ipP	06	39	44			i			16
	Pr	ipP			50		Pr	ipP	11		11
	CL	i(pP)			40		CL	ipP	11		11
		eP	06	39	35			i			17
					46			i			24
					40		T	ipP	10		10
	T	eP			39			i			17
								i			24
								USCGS: 10S, 161E, 10:19:14			
21	P	ipP	16	42	27	22	P	ipP	21	52	27
		ipP			38			i			47
	R	ipP			23			iPcP	53	10	
		ipP			35		PX	ePP	54	57	
	Pr	eP			18			iSNE	22	01	16
		epP			28			i(SS)	05.7		
	CL	ipP			31		P	eP'P'	21	20	
		ipP			42						

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Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s	
22						24	P	ipNEZ	03	28	25	
		PZ			2		R	ipP			28	
		PH			1		Pr	ipP			30	
		SH			12		CL	ipNE			32	
		MH			45		T	ipP			32	
	R	eP	21	52	40			e			38	
		i			49			e			49	
		e			55			USCGS: 14 $\frac{1}{2}$ S, 168 $\frac{1}{2}$ E, 03:15:49				
		eP'P'	22	21	25	24	MW	e	08	14	26	
	Pr	ipP	21	52	45		R	e			27	
		i			54		CL	EN			17	
		iSN	22	01	30		T	e			08	
	CL	ePNZ	21	52	31			Kuril Is., USCGS: 08:03:41				
		iNZ			40	24	P	eP	16	39	46	
		iPcP	53	25			PX	eN	49	31		
		eS	22	01	18			eLN	56.4			
		eP'P'	21	22			R	i	39	51		
	T	ePNEZ	21	52	26		CL	ipP	39	40		
		iSN	22	00	51			i			50	
		Magnitude 7						USCGS: 46 $\frac{1}{2}$ N, 154E, 16:29:02				
		USCGS: 46N, 153 $\frac{1}{2}$ E, 21:41:53						CMO: 46 $\frac{1}{2}$ N, 152 $\frac{1}{2}$ E				
		CMO: 46N, 153 $\frac{1}{2}$ E				25	MW	e	12	16	37	
22	P	ipP	22	10	47			e			51	
		ipP			58			e			58	
	R	eP			58		R	i			55	
	Pr	eP			10		T	e(P)			29	
		ipP			11			BCIS: 61N, 140W, 12:10:40				
	CL	eP	10	43		26	PX	eGN	00	06.2		
		ipP			55			e(R)E	13.7			
		e			11			BCIS: 31N, 101.5E, 23:19:56				
	T	eP	10	37		26	R	eP	15	44	27	
		ipP			47		T	eP			21	
		USCGS: 46 $\frac{1}{2}$ N, 154E, 22:00:04				26	P	i(P)NZ	20	17	40	
22	P	e	22	23	57			e(P)			42	
		e			24		R	i(P)			44	
	R	e			23		Pr	i(P)			44	
	CL	eP			28		T	e?			15	
		e			44			e			17	
					44			i			17	
		Aftershock, USCGS: 22:12:38									49	
23	P	eP	11	08	58			USCGS, South of Fiji Is.,				
		e			09			20:06:16, 600 km				
	R	e			10	27	R	eP	11	16	10	
	Pr	eP			01			e			28	
	CL	eP			04		T	eP			27	
	T	eP			10		P	ipNEZ	05	11	23	
		BCIS: 22 $\frac{1}{2}$ S, 175 $\frac{1}{2}$ W, 10:56:59				28		ipP			32	
23	P	ipP	12	16	52		R	ipP			26	
		A			T			epP			37	
		PZ	0.1	1 $\frac{1}{2}$			Pr	ipP			29	
		MH	2 $\frac{1}{2}$	26			T	ipP			07	
								epP			18	
		Magnitude 5 $\frac{3}{4}$ -6						USCGS: 55 $\frac{1}{2}$ N, 165E, 05:01:43				
	R	eP	12	16	54	(d)	28	P	ipP	07	54	41
	Pr	eP			58			R	ipP			44
	CL	ipP			49			Pr	ipP			44
	T	eP			43			T	eP			35
		i			45							
		BCIS: 24.3N, 121.8E, 12:03:10				23	MW	eP	18	19	54	
	R	e(P)			19			USCGS: 07:41:44				
		e			20		28	P	ePNZ	08	16	47
	CL	ePNE			01			R	eP			49
	T	e			19			Pr	eP			50
					51			T	ipP			42
		Kuril Is., BCIS: 18:09:13				28	MW	e(P)	10	23	17	
								R	e			20
								Pr	ipP			28
								T	e			02

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
28	P	iP	16	33	15	30	MW	eP	06	12	36
	PX	i(PcP)		37	02		R	eP			33
		eSNEZ		37	58		Pr	e			39
		iNEZ		42	00		T	eP			20
		i(ScS)N		43	59		e				27
	PZ	A	0.15	1			BCIS: 44N, 144E, 06:01:00				
	SH	T	1	6			CMO: 42.4N, 144.9E				
	R	eP	16	33	14	30	CL	eP	21	23	47
	Pr	iP			08		T	eP			48
	T	eP?			39		BCIS: 0.5S, 29.5E, 21:04:31				48
		i			43						
		Magnitude 5.4									
		USCGS: 162N, 97W, 16:27:47									
29	P	eP	08	12	54	2	Pr	e	02	43	21
	R	eP			43		e				33
		e			13	2	P	eP	17	06	59
	Pr	eP			12	49	e				07
	T	eP			23		Pr	eP			11
		e			41		Pr	eP			08
		USCGS: 52N, 171W, 08:04:47					CL	eP			15
29	P	eP	10	05	10		T	ipP	06	53	
	R	eP			06		e				07
		e			42		T	eP	06	45	
	Pr	iP			01		Pr	epP			58
		i			37		CL	eP			07
	T	iP			20		BCIS: 54N, 162E, 16:57:09				
		e			54		CL	eP	21	22	49
		USCGS: 8N, 72W, 09:56:36				2	T	eP			45
		150 km					P	iPNEZ	01	01	00
29	P	iP	16	03	47	3	PX	eLE	20.9		
	R	eP			50		R	eP	00	55	
	Pr	eP			54		Pr	eP			49
	T	eP			37		CL	eP			01
		USCGS: 42N, 142E, 15:52:08					T	eP			11
		CMO: 41.9N, 142.2E, 90-95 km					USCGS: 5N, 78W, 00:52:23				
29	P	eP	16	12	58	3	Pr	eP	15	18	50
		e			13	46	CL	eP			19
	R	eP			12	46 (d)	e				15
		e			13	24	P	eP	15	31	38
	P	eP			12	51	Pr	eP			28
	T	iP?			36		CL	eP			41
		i(P)			13	10	T	eP			51
29	P	eP	16	53	33	3	R	eP	21	18	21
		i			47		Pr	eP			16
		ipP			52		CL	eP			29
	R	eP			39		T	e(P)			38
	Pr	epP			57		P	iPNEZ	04	57	08
		eP			43		ipP				59
	T	epP			54	01	i(sP)				05
		eP			53	19	iSNE				05
		epP			38		eN				06
		USCGS: 55N, 162E, 16:43:51									35
		60 km									
29	P	ePNZ	20	51	02		PZ	A	0.2	1	
	R	ipP			09		PH	T	0.1	1	
		eP			01		SH	1/2	4		
	Pr	epP			11		R	eP	04	57	11
		eP			00		Pr	epP			59
		epP			11		iPEZ				57
	T	epP			07		ipPEZ				59
		epP			19		iSE				05
		USCGS: 15S, 173W					CL	iPNEZ	04	57	16 d
		20:39:36, 60 km					ipP				59

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
		July (continued)									
4	CL	e(sP)	05	00	26	7	P	iPNEZ	03	00	19 d
		e			01	08	PX	i(P)			01
		iSNEZ			06	39		eSNE			06.3
	T	iP	04	57	17			eLEZ			10.7
		iSNZ	05	06	45			A	1/2	1 1/2	
		Magnitude 5.9						PZ	0.2	1 1/2	
		USCGS: 20S, 178W, 04:46:01						PH	5	20	
		600 km						MH	03	00	23
4	P	iP	05	02	07		R	iP			29 d
	R	iP			10		Pr	iPEZ			12 d
	Pr	iP			10		CL	iP			23
	CL	iPNEZ			15 d			i			01
	T	iP			15			(PP)			02
		Probably an aftershock						i			06
5	P	iPNEZ	03	09	37			e(S)N			15
	R	eP			40			e(ScP)			09
		e			48			e			03
		e			51			iPNEZ	03	00	01 d
	Pr	iP			40 d			e			05
		i			50						
	T	iP			43			Magnitude 6.4			
		New Hebrides						USCGS: 54N, 164W, 02:53:01			
		USCGS: 02:56:55									
5	P	iPEZ	07	56	23	7	Pr	eP	07	16	48
	Pr	iP			26		CL	eP			29
	T	eP			32		T	eP			30
5	P	iPNZ	12	52	19	7	Pr	e	08	05	12
	R	eP			22			e			04
	Pr	iP			23 d		CL	e			05
	T	iP			29 d			e			39
		USCGS: 12:41:12, 600 km					7	P	iPNEZ	13	02
		17 38 06						R	iP		42
5	P	e(P)			39	15	Pr	eP			43
		e(PP)			39	15	CL	eP			41
	R	i(P)			37	56	T	eP			39
	Pr	e(P)			38	14		Pacific			
					39	49		USCGS: 12:49:07			
	CL	e(P)			33	47	7	P	iP	14	56
		e(pP)			34	38		R	iP		42 d
		i(P)			38	05		Pr	iP		44
		e(PP)			39	04		CL	iP		49 d
	T	i(P)			38	02		T	iP		35 d
		Hindu Kush						Marianas			
		USCGS: 36N, 71E, 17:19:47						USCGS: 14:43:50			
		200 km									
5	P	iPEZ	21	29	03	7	CL	eP	21	20	20
	R	iP			09		T	eP			31
	Pr	iP			14 c		8	P	iPNEZ	01	10
		iScP			34	18		e			44
	CL	iP			28	58 c		R	iP		43 c
		iPcP			30	35		Pr	iP		45 c
		iScP			34	09		CL	iP		35 c
	T	iPNEZ			28	50 c		ipP			12
		iScP			34	05		T	iP		30 c
5	P	e	23	18.4				USCGS: 42N, 131E, 00:59:23			
	PX	eLN			46			600 km			
	R	e			18	21	8	MW	e(P)	07	40
		e			19	14		R	eP		43
	Pr	eP			18	19		Pr	iP		46
		e			49			CL	eP		51
	CL	eP			19			P	iPEZ	15	51
	T	eP			19	01		R	eP		50
		e			19	01			e		52
		BCIS: 30S, 70W, 23:06:17						Pr	iP		51
								CL	iP		56
								e			52
								T	iP		51
								BCIS: 16S, 176W, 15:40.2			

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
15	P	ePNZ	19	08	50	17	R	ePNEZ	16	22	14
	R	e(PcP)N		12	40		Pr	iPNE		22	05
	Pr	e(P)		08	46			iNE			30
	CL	iP		36			T	iNE		25	39
	T	eP		09	00			iPNEZ		22	01
		eP		14				ipP			24
								iSN		32	06
16		USCGS: 19:03:35, off Mexico						Magnitude 6 $\frac{3}{4}$			
	P	iP		01	32			Yoshino earthquake, Japan			
	R	iSNZ		34	40			CM0: (tenths rounded off)			
	Pr	iP		32	54			34 ⁰ 27' N, 135 ⁰ 49' E			
	CL	iSNEZ		34	33			16:09:53, 70 km			
	T	iP		32	39	17	R	e		22	17
		iS		34	00		Pr	e			31
	LJ	ePN		32	38		CL	eP			20
	CL	iSN		33	48		T	e			36
		eP		33	17	18	P	eP		05	29
		iS		35	31		PX	eL			54.4
	T	iPNEZ		33	37		R	eP			29
		iSNEZ		36	22		Pr	eP			12
							CL	eP			18
		Magnitude 5.9±						e			27
		USCGS: 29 $\frac{1}{2}$ N, 113 $\frac{1}{2}$ W, 01:31:14					T	eP			19
16	Pr	e		02	09			e			40
		BCIS: 39.5N, 20.3E, 01:59.7						Near Apia			
16	MW	iP		03	13	18	P	iPNEZ		18	49
	R	e		55			PX	e(S)N			57
	Pr	iP		52				e(SS)N		19	01
	CL	iP		58				eL			06
	T	iP		14	04		R	iP		18	49
		BCIS: Samoa Is., 03:02:45					Pr	iP			49
16	P	iP		05	09		CL	iP			49
	R	iP		39			T	iPNEZ			49
	Pr	iP		42				ePP			52
	CL	iP		36				e		19	08
	T	iP		33				e(P'P')			19
16	MW	iP		06	13			USCGS: 23S, 114 $\frac{1}{2}$ W,			
	Pr	iP		48				18:39:40			
		e		15	54	18	P	eP		23	06
	CL	iP		13	55			e			54
	T	iP		55			Pr	eP			25
16	MW	eP		13	38		CL	iP			41
	R	eP		17			T	iP			56
	Pr	iP		38				Mexico			
	CL	iP		21				USCGS: 23:01:50			
		e		40	13			Tacubaya: 19 ⁰ 05' N,			
17	MW	iP		04	54			102 ⁰ 35' W, 23:02:05,			
	CL	iP		08				100 km			
		e		56	03	19	MW	eP		02	13
	T	iP		54	16		P	eP			11
		South America					CL	iP			38
		BCIS: 04:43.3					T	eP			38
17	P	iP		16	22			e			15
		ipP		30		19	MW	iP		14	43
		i!		38				epP			44
		ipP		25	37		R	eP			43
	PX	iSNE		32	22		Pr	iP			48
		iGNE		44.0			CL	iP			28
		e(P"p")		48	54			epP			44
		A		1	$\frac{1}{2}$		T	eP			43
		PH		1	3			epP			54
		PPZ		1	4	19	P	iP		21	31
		SH		3 $\frac{1}{2}$	5		Pr	eP			41
		MH		12	20		CL	eP			53
		MZ		12	20		T	iP			59
		(continued)									

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
19	MW	eP	22	21	42	20	T	eP	05	45	20
	Pr	eP		44				e		46	48
	CL	eP		52				BCIS: 28 $\frac{1}{2}$ S, 178 $\frac{1}{2}$ W, 05:34.5			
						20	CL	eP		19	22
20	MW	e	05	46	42	20	CL	i(P)		23	22
	Pr	eP		45	07			i(pP)			23
				47	10						
								(continued)			

KERN COUNTY EARTHQUAKES, 1952

Routine activities were interrupted by the major earthquake of July 21, 1952.

For about ten days following, seismograms at most of these stations were so crowded with aftershocks that the registration of all but the larger distant earthquakes was effectively cut off. Interference from this source continued to be serious throughout the month of August.

There was a small foreshock (magnitude 3.1). Its times at the nearer stations are:

P	eP	09	43	22.3	SB	iP	09	43	17.1
	eS			37.8		iS			27.1
MW	iP			23.3	CL	iP			28.1
						iS			48.6

The epicenter cannot be made precise, but is west of that of the principal earthquake, roughly 35.0 N, 119.1 W, 0 = 09:43:03.

The adopted epicenter and origin time for the principal earthquake are:

35⁰ 00' N 119⁰ 02' W, 0 = 11:52:14.3

Its magnitude is 7.6 (or possibly 7.7).

The times of P at the several stations, in order of increasing distance, were:

SB	11	52	28.7	R	11	52	42.9
P			33.7	BB			46.1
MW			34.3	T			50.9
CL			39.2	Pr			52.2
H			40.9	Bt			53 01.1

Selected readings for each aftershock of magnitude 5.0 or over are reported in regular chronological order in this Bulletin. Those identified as of magnitude 4.0 or over are listed, with epicenters and origin times so far as determined, in a mimeographed list headed "Larger Shocks of the Kern County series".

The epicenter given for the main earthquake represents the point of initial rupture, which extended northeasterly along the White Wolf Fault for about 65 kilometers (40 miles). The surface trace was developed largely in unconsolidated material, and shows much complexity.

The nearest large center of population is Bakersfield, where there was moderate damage to weak structures (intensity VII). The epicenter is in a thinly populated area, not far from a large oil field on a structure known as Wheeler Ridge. The town of Arvin is

immediately north of the Santa Monica fault; intensity there was VIII, with extensive damage to old masonry, and comparatively slight damage to better structures of later construction. Tehachapi is well to the east of the fault; epicenters of aftershocks are much nearer that town, and it is believed that these correspond approximately to the position of the initial rupture at depth, corresponding to a southeastward dip of the fault surface. Intensity at Tehachapi was between VII and VIII; here many old weak masonry structures were seriously damaged, and 14 lives were lost.

The shock was perceptible to persons in all of California except the northern part and the coastal area north from San Francisco; perceptibility extended into Nevada and Arizona, and across the Mexican boundary.

Intensity in the Los Angeles metropolitan area varied rather irregularly between VI and VII.

Special stations used to record aftershocks, with their abbreviations, are listed on page 2 (1952, No. 1) of this Bulletin. Detailed reports and studies are in course of publication.

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
		<u>July</u>						<u>July</u>			
21	P	iPiN	12	02	52	21	P	iP	17	43	03.8
		iSE		03	07			iSN			21.7
		Aftershock, epicenter					SB	iP!			08.5
		cannot be located closely.					H	iPNEZ			02.6
		Magnitude 5.6					T	iPNE			16.9
21	P	iPN!	12	05	50.4			Magnitude 5.0			
		iSN		06	07			35° 14' N, 118° 32' W,			
	R	iPNE			00.2			17:42:44			
	SB	iPE	05	45		21	P	iP	19	41	41.8
	CL	i		57			SB	iP			40.8
	T	iPE!		06	08.2			iSE!			54.7
		Largest immediate after-					H	iPNE			46.5
		shock. Magnitude 6.4					T	iP			57.0
		Felt widely in southern					BED	iP!			26.2
		California. Readings						Magnitude 5.5			
		difficult because of large						35° 08' N, 113° 46' W,			
		disturbance from the						19:41:22.3			
		principal earthquake.						BED = portable seismograph			
		Epicenter probably nearly						at triangulation point thus			
		the same.						designated on maps,			
21	P	iP	12	19	53.0			(35° 05.7' N, 118° 24.7' W,			
		iS		20	10			1310 meters).			
	SB	iP		19	52						
		iSE!		20	06						
	CL	iP		20	00.2						
	T	iPN			11						
		Aftershock; Magnitude 5.3									
		34° 57' N, 118° 52' W,									
		12:19:36.5									
21	P	iP!	15	14	18.2						
	SB	ePE			20.2						
	H	iP!			17.9						
	T	ePNE			32.5						
		Magnitude 5.1. 35° 11' N,									
		118° 39' W, 15:13:58.7									

C. F. Richter
 Violet M. Taylor
 Shigeji Suyehiro
 April 28, 1954

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
July (continued)											
25	MW	eP	19	36	58	28	Pr	iP	17	39	08
	R	eP		37	00		T	iP			32
	R	iP		36	50		BCIS: 8N 82W, 17:31:24				
26	T	eP		37	21	29	P	iPNEZ	07	04	10.0 c
	P	eP	00	54	28			iSN			28.8
		i		42			SB	iPNEZ			08.0 c
	Pr	iP		19			CL	iPNE!			06.5
		i		27			H	iPNE			06.0
	T	iP		48			T	iPEZ			18.3 c
	BCIS:	1S 91 $\frac{1}{2}$ W,	00:46:32				Ch	iP!	03	56.8	
27	P	eP	02	22	36		Magnitude 6.1				
		i		47			35° 23' N, 118° 51' W,				
		i		56			07:03:46.8				
	Pr	eP		35		29	P	iPEZ!	08	02	09.9 d
	T	eP		47				iSNE			28.2
		i		54			SB	iPNZ			08.2 c
	USCGS:	15 $\frac{1}{2}$ S 173W,	02:11:08				CL	iPNE!			05.8
27	P	iPNEZ!	08	34	40 c		H	iPNE			04.6
	PX	isP		37	22		T	iPNEZ			17.4 c
		iPP		45			Ch	iP	01	57.1	
		iSNZ!		44	01		Magnitude 5.1				
		iSPE		24			35° 24' N, 118° 49' W,				
		A		4		29	MW	e	20	02	46
	PH	2		1			R	e			46
	SH	20		8			Pr	i			52
	R	iP	08	34	44		T	eP			22
		ipP		36	37			i			30
		isP		37	25		USCGS: 53 $\frac{1}{2}$ N 175W, 19:54:27				
		iSNEZ		44	05	30	MW	e	03	43	11
	Pr	iPNEZ!		34	42 c		R	e			16
		i		35	04			i			21
		ipP		36	36		Pr	e			16
		iSNEZ		44	07			i			20
		eP'P'	09	14	20		T	eP			42 48
	CL	iPNE	08	34	47 c			e(sP)			43 00
		iSNE		44	16		USCGS: 45N 150 $\frac{1}{2}$ E, 03:32:02				
	T	iPNEZ		34	49	30	Pr	eP	12	43	41
		i		35	16		BCIS: 12:31:47				
		ipP		36	46	30	MW	eP	14	25	54
		ePP		37	59			e			50 54
		iSNEZ		44	18		R	iP			26 33
	Magnitude 6 $\frac{3}{4}$ -7 (as given by Wellington)										
	USCGS: 20 $\frac{1}{2}$ S 179W, 08:23:22										
	500 km										
27	P	iP	23	31	09	31	MW	ipP	05	04	40
	R	iP		06	d			i			44
	Pr	iP		01			Pr	iP			50
	T	iP		23	d		T	iP			26
	South America										
28	R	eP	02	33	52			i			29
	T	iP		34	21			e			41
	Mexico										
28	P	eP	08	48	10	31	P	iPNEZ!	12	09	30.5 d
	R	iP		13			CL	iPE!			25.8
	Pr	iP		14			H	iPNEZ			27.0 d
	T	eP		16			T	iPNEZ			41.1 d
	Pacific										
							Ch	iP			20.9
							Hv	iP!			13.8

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s	
July (continued)												
31	Santa Barbara not recording.					7	Aug.	iPNEZ	16	32	11.4	
	Magnitude 5.8							iSN			27.9	
	35° 19.5' N, 118° 36.5' W,						SB	iPNZ			05.1	
	12:09:08.8; depth apparently 23 \pm km.						W	iP!			03.2	
31	P	iP	12	28	40 c		Hv	iP!			02.9	
		i		46			35° 02' N 119° 03' W,					
	R	iP		35			Magnitude 4.9					
		i		44		7	P	iP	19	46	28	
	Pr	iP		32			R	iP			32	
		i		39			T	iP			29	
	T	iP		53		7	P	iP	21	27	31	
		i		29	01		R	iP			35	
	40 km ?						Pr	iP			35	
	USCGS: 34S 72 $\frac{1}{2}$ W, 12:16:35						T	iP			41	
	100 km						Tonga region.					
						7	BCIS: 21:15:20					
							P	e	22	05	06	
								e			14	
								e			11	
	Aug.	iPEZ	13	04	47.7 d		R	e				
		iSE		05	01.6		BCIS: 41 $\frac{1}{2}$ N 144E, 21:53:22					
1	SB	iPNEZ		04	43.6		CMO: 41 $\frac{1}{2}$ N 145E, 60 km					
	CL	iPE!		54.5		9	P	e	09	49	36	
	H	iPNE		55.9				e			47	
	T	iPNZ		05	07.1			e			36	
	Hv	iP		04	42.6			e			40	
	Magnitude 5.1											
	35° 54' N, 118° 57' W,											
	13:04:30.0											
1	MW	e?	21	48	15		Pr	e			42	
		e		34			T	e			23	
		e		41				e			50 29	
	T	eP		02	23	10	BCIS: 42 $\frac{1}{2}$ N 145E, 09:38:05					
2	T	eP	02	23	23		CMO: 42.0 N 145.2 E					
2	P	iP	09	07	13		P	eP	00	29	39	
		epP		25				epP			30 03	
	Pr	iP		00			R	eP			29 43	
		iP		14				ipP			30 07	
	T	ipP		14			Pr	iP			29 49	
		eP		27				ipP			30 12	
	BCIS: 12.1°N 88.9°W,											
	09:00:31, 100 km											
2	MW	iP	17	59	54		epPcP				31 32	
		e		18	00	08	epPcP				57	
	R	eP		17	59	53	T	eP			29 25	
	T	e		18	00	02		epP			47	
		e(P'P')		24	36			iPcP			31 23	
	Wellington: 34S 178W,											
	17:47:05; magnitude 5 $\frac{1}{2}$											
3	R	eP	01	08	56		ipPcP				49	
	T	eP		09	11		eScP				34 02	
	South America											
3	MW	e	13	24	12		USCGS: 52 $\frac{1}{2}$ N 173W, 00:21:48,					
	R	e		13		12	100 km	P	eP"	06	50	02
	USCGS: 12 $\frac{1}{2}$ S 78W, 13:13:48											
3	MW	epP	20	39	12			i			15	
	T	eP		02				e			39	
		e		24				epP			52 07	
		e		24			R	eP"			50 08	
5	MW	eP	03	46	29			i			16	
	T	iP		28				e			35	
	Felt at Apia											
	BCIS: 15S 173W, 03:34:55											
5	P	iP	19	35	49		Pr	eP"			11	
	R	iP		52				e			19	
		e		36	30			e			42	
	Pr	iP		35	54		T	iP"			11	
	T	eP		51			BCIS: 5 $\frac{1}{2}$ N 94E, 06:31:03					
						12	P	eP			16 08 02	
							R	eP			06	
							Pr	iP			12	
								e			20	
	USCGS: 35 $\frac{1}{2}$ N 140 $\frac{1}{2}$ E, 15:55:51											
	CMO: 35.5 N, 140.3 E											

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
20	Aug. (continued)					22	Aug. (continued)				
	PX	eGE	15	29	37		Magnitude 5.8				
		iLNE		45			35° 20' N, 118° 55' W,				
		iL		30	30		22:41:23.8				
		A		T			VIII at Bakersfield; much				
	PZ		15	7			damage, and two lives lost.				
	PH		15	7			CC: portable seismograph at				
	MH		180	15			Clear Creek.				
	R	eP	15	27	52		(35° 15.1' N, 118° 36.6' W,				
		i		28	00		820 M)				
		i		24		23	P	iP!NEZ	10	09	13.8 d
	CL	eP		27	33			iSE		19.7	
		i		44			MW	iP!		13.3	d
		ePNZ		31	36		R	iPEZ		22.3	d
		i		27	17			iSE		33.5	d
		i		29			SB	iPNEZ		29.6	d
		i		29				iSNE		47	
		i		30	08		CL	iP!		30.8	d
		i		31	24		H	iPNE		34.5	
		i		34	02			iSNE		58.2	
							T	iPNEZ		47.6	
	Magnitude 6.5							iS	10	26	
	Pasadena: 43 $\frac{1}{2}$ N 126 $\frac{1}{2}$ W, 15:25:04						D	iP!	09	15.6	
21	P	i	09	15	11		BB	iP!		26.8	
	CL	e		10			Ch	iP		19.7	d
	T	e		00			W	iP		30.3	
21	P	eP	09	47	33		Magnitude 5.0				
		e		44			34° 30' N, 118° 13' W				
	PX	eLNZ		50.4			10:09:06.9				
	R	eP		47	36		Epicenter near Acton, Calif.				
		e		51			Maximum intensity V-VI;				
	CL	eP		18			IV-V in the Los Angeles				
	T	eP		03			metropolitan area. Felt to				
	USCGS: 43N 127W, 09:44:48						distances of over 150 km.				
21	P	iPNEZ	16	30	10 d		Alarm caused by press reports				
		epP		32	12		incorrectly attributing this				
	R	iP		30	12 d		shock to the San Andreas fault.				
	CL	iP		16	d	23	P	iPNEZ	14	30	38
		epP		32	17		PX	eSNE		37	07
	T	iP		30	18			eLNE		41.7	
		e		44				A		T	
	USCGS: 20S 178 $\frac{1}{2}$ W,							3		20	
	16:19:04, 600 km							14	30	34	
21	P	iPNEZ	19	11	23		R	MH		3	
	R	eP		29				eP		14	30
		e		38				i		38	
	CL	eP		10			CL	eP		40	
	T	eP		10			T	eP		51	
		e		10	55						
		e		11	09						
	USCGS: 43 $\frac{1}{2}$ N 127W,					23	MW	e	22	23	48
	19:08:30							e		36	
22	P	iP	22	41	47.1 c		CL	e		44	
		iSN		42	05.8		T	e		44	
	MW	iP!		41	47.5	24	P	eP	12	58	04
	R	iP		41	54.5 c			i		09	
		iS		42	19.3			i		26	
	SB	iP		41	43.6 c		PX	eL	13	23.6	
	CL	eP		45.3 d			R	eP	12	58	07
	H	iP!		44.8				e		13	
	T	iP!		56.2 c			CL	eP		03	
	D	iP!		49.4 d				i		08	
	BB	iP!		56.8 c			T	eP		57	59
	CC	iP!		29.0				i		58	04
	Ch	iP!		33.8 d				e		21	
	W	iP!		30.3 c							
								BCIS: 23 $\frac{1}{2}$ N 142 $\frac{1}{2}$ E, 12:45:36			
								CMO: 25N 145E			

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s	
26	Aug.					28	Aug.					
	P	iP	10	26	48 d		ePNZ		10	59	44	
	R	iP			52 d		ipP				55	
	CL	iP			45 d		isP		11	00	16	
	T	iP			41		i				24	
		i			27 11		iPcP				02 10	
							ipPcP				21	
	BCIS: 32N 138 $\frac{1}{2}$ E, 10:14:35						iSEZ				05 22	
	CMO: 32.8N 140.1E, 120 km						iScP				51	
26	P	iP	18	34	03		eREZ				09.0	
	R	eP			06							
	Pr	iP			07							
	CL	eP			12 d		PZ		A		T	
		e			35 12		pPZ		0.3		1	
	T	iP			34 13		SE		1 $\frac{1}{2}$		6	
	BCIS: 18S 175W, 18:22:50						MH		7		20	
	250 km						R	iP		10	59	
27	P	ePNZ	11	34	47		ipP				59	
		ipPNEZ!			58		iPcP				02 11	
		isP			35 06		iScP				05 53	
		iE			21		CL	iP		10	59	
		esPPE			36 31		ipP				47	
		iPcP			37 14		iPcP				11 02	
		ipPcP			24		ipPcP				20	
		iSE			40 25		es				05 04	
		iScP			55		iScP				47	
	PX	eLN			42.8		T	iP		10	59	
		eREZ			44.3		ipPNEZ				38	
							i				11 00	
		A			T		ipPcP				02 04	
		PZ			0.1	2	eSNEZ				09 53	
		pPZ			0.3	1	e(S)				05 06	
		SE			2	7	iScP				44	
		MH			8	20						
	R	iP	11	34	54		Magnitude 6 \pm ; depth 55 \pm km					
		ipP			35 03		USCGS: 55N 160W, 10:52:41					
		ipPcP			37 27		USCGS: 55N 160W, 13:08:11					
	CL	eP	11	34	40		PX	eL			26.7	
		ipP			51		R	iP			08 12	
		iPcP			37 11		CL	eP			21	
		ipPcP			23		T	eP			30	
		eS			40 30		USCGS: 34S 106W, 12:57:04					
		iScP			52		28	P	eP'		14	41
		eiP			34 31			i			38	
		ipP			42			i			47	
		ipPcP			37 21		R	eP'			31	
		eS			39 57			e			47	
		iScP			40 49		CL	eP'			31	
								e			49	
							T	eP'			38	
								e			46	
	Magnitude 6 \pm ; depth 55 \pm km											
	USCGS: 55 $\frac{1}{2}$ N 160W, 11:27:54											
	60 km											
27	P	eP	19	23	00		BCIS: 53 $\frac{1}{2}$ S 25E, 14:21:45					
	R	eP			05		28	P	iP		15	
	CL	eP			09			iPcP			29 17	
	T	eP			10		R	eP			32 07	
27	P	iP	22	06	15			ePcP			29 13	
	CL	eP			08		CL	e			32 06	
		e			08 11			e			30 05	
	T	eP			06 00			iPcP			32 09	
	USCGS: 52 $\frac{1}{2}$ N 170W, 21:58:36						T	iP			29 32	
28	MW	eP	00	31	12			i			39	
	R	e			16			iPcP			32 19	
	CL	e			07		USCGS: 16N 91 $\frac{1}{2}$ W,					
	T	iP			30 57		15:23:15, 150 km					
							28	R	eP		22	
								CL	eP		43	
								T	eP		35	
	Aleutian Is.							CL	e		38	
	USCGS: 00:22:39							T	e		38	
28	MW	e	01	57	55							

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
Aug.						Sept. (continued)					
30	CL	eP	15	09	37	2	T	eP	20	34	13
	T	eP			39		USCGS:		20:21:25		
	USCGS:						CMQ:		28.2N 131.2E		
30	MW	e	19	42	28	3	MW	eP	21	00	33
	R	e			22		R	eP			35
	CL	eP			21		CL	e			39
31	CL	eP	02	41	11		T	e			34
	CMO:						e				40
	42° .2N	142° .3E					P	iPNEZ	05	31	31 c
31	P	eP	16	21	13	5	R	ipP			47
	PX	iSNE			29		R	iP			35 c
	eLNEZ				40		epP				50
					43.8		e				32 01
	PZ	A	0.1		1		Pr	iP			31 41
	SH				5		CL	iP			34
	MH		10		25		T	iP			33
	R	eP	16	21	16		USCGS:		6S 155E,		05:18:25
	epP				32	6	MW	eP	03	48	07
	CL	eP			09		R	e			09
	epP				25		CL	e			15
	T	eP			02		Near	Apia			
	epP				16		BCIS:		03:36:50		
	USCGS:					6	P	iP	14	42	25 c
	CMO:						R	eP			29
	41.9N	142.8E,			40 km		CL	eP			33 c
31	MW	eP	22	08	08		T	iP			35
	R	iP			05		BCIS:		20S 176½W,		14:30:31
	CL	eP			33	6	MW	eP	20	15	44
	e				42		Pr	eP			54
	T	eP			20		CL	e			38
	e				53		T	eP			29
	South America						e				44
	BCIS:				21:56.0		USCGS:		51N 173W,		20:07:42
	Sept.					6	CL	eP	20	44	50
1	CL	eP	05	57	20		T	eP			39
	T	e			30		CMO:		41.5N 142.3E,		60 km
1	CL	eP	06	22	32	6	MW	eP	21	49	21
2	P	eP	07	36	48		R	e			25
	R	eP			51		CL	eP			15
	CL	eP			52		T	iP			06
	T	iP			52		Aleutian Is.				
	USCGS:					7	USCGS:		21:41:20		
2	MW	eP	08	11	13		P	iP	02	50	44
	epP				21		R	eP			47
	R	eP			15		CL	eP			51
	epP				24		T	eP			52
	CL	eP			17	7	USCGS:		16S 177W,		02:38:58
	epP				26		P	iPNEZ	04	38	10
	T	eP			17		R	ipP			22
	epP				25		R	iP			15
2	USCGS:						epP				27
	05:58:37						CL	eP			05
	P	eP	11	38	34		epP				17
	e				50		T	iP			37 56
	R	eP			37		i				38 25
	CL	eP			36		USCGS:		51½N 173W,		
	T	eP			37		04:30:17,		60 km		
2	MW	eP	18	47	21	7	MW	e	04	46	30
	R	eP			25		R	e			29
	Pr	eP			32		CL	e			18
	CL	eP			12		e				31
	T	eP			00		T	e			09
2	MW	eP	20	34	21		e				22
	R	eP			22		Aleutian Is.				
	CL	eP			19		USCGS:		04:38:22		

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
Sept.						Sept. (continued)					
7	MW	e	05	18	35	9	CL	iP	13	02	18
	R	e			50		i				29
	CL	e			41		i				36
	T	e			29		i				04 23
	Aleutian Is.				21		e(ScP)				08 44
	USCGS:						T	iPNEZ			02 32
	05:10:20						i				37
7	P	iPEZ	09	40	33		i				03 56
	R	ipP			45		i				04 41
	R	iP			37		i				05 38
	epP				50		eSNZ				08 45
	CL	eP			27		USCGS:		9N 84½W,		12:54:42
	epP				39		Pasadena:		magnitude 6.8		
	T	iP			20	10	MW	iP	02	33	13
	iP				32		R	eP			14
	i				49		Pr	iP			17
	USCGS:						CL	eP			18
	51½N 173W,						T	eP			21
	09:32:39,				60 km	7	MW	iP	22	27	58
	7	CL	eP		51		CL	eP			51
	T	iP			43	10	T	eP			43
	Aleutian Is.						T	e			47
	USCGS:						USCGS:		22S 179½W,		02:20:57
	22:19:50					7	P	iPEZ	22	31	26
	7	MW	iP		27		MW	iP			27
	R	eP			29	10	R	eP			34
	CL	iP			23		CL	eP			39
	T	iP			20		T	eP			41
	BCIS:					8	P	eP'	15	17	53
	26N 139½E,						CL	eP'			53
	22:19:39,				500 km		T	eP'			53
	8	CL	eP'		53		BCIS:		6½S 130E,		14:59:16
	R	eP			06		P	eP	21	56	02
	CL	eP			07	8	R	eP			06
	e				15		CL	eP			07
	T	eP			08		e				15
	e				57 03		USCGS:		10S 161E,		21:43:10
	9	P	iPNEZ	13	02	18	P	iPNEZ	13	02	18
	i				24		i				45
	i				45		i				03 19
	i(PcP)				58		PX	eN	07	41	
	eN				41		e(PcS)NE				55
	i(S)E				21		P	e	08	21	
	e				26		A				26
	PZ	A			2		T				2
	PH				6		P	iP'			08 43 13
	SH				3		i				26
	MH				4		R	eP'			10
	R	iPNEZ	13	02	13		CL	eP'			09
	iNZ				19		T	eP'			11
	e(S)EZ				25		Johannesburg:		18.5S 22E,		
	Pr	iP	02	08	08	11	08:23:24				
	i				12		MW	e	21	18	52
	i				30		R	eP			16
	i(PcP)				03 52		CL	eP			55
	e(ScP)				08 18		e				17
	(continued)						T	e			56

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s	
22	CL	eP	09	34	49	24	MW	eP	17	48	39	
		epP		35	01		Pr	eP			30	
		iSP			07		CL	eP			43	
	T	eP		34	39		T	eP			51	
		iSP			58		USCGS: 7S 75W, 17:38:41					
		USCGS: 55 $\frac{1}{2}$ N 162 $\frac{1}{2}$ E, 09:25:15, 60 km				24	P	iPNZ	20	36	12 d	
22	P	iPNEZ	11	43	23 c			ipP			30	
		i(S)E		44	50		ipP				39	
		iSN!			55		PX	eSE	41	44		
		eLEZ		45	11			eLN	44.2			
	PX	iLN		46	02		Pr	iP	36	23 d		
								ipP			42	
								e	42	23		
							CL	iP	36	03 d		
								ipP			22	
								isP			31	
								e	42	14		
	R	iPEZ	11	43	28		T	iP	35	53 d		
	CL	iP		43	13			ipP			36	
		iS			13			e	42	10		
	T	iPNEZ		43	00		USCGS: 56 $\frac{1}{2}$ N 157W, 20:29:30, 100 km					
		iSE		44	36							
		Magnitude 5.4 \pm				25	MW	e	09	07	28	
		USCGS: 40 $\frac{1}{2}$ N 124W, 11:41:27					Pr	e			29	
		Some damage (VII) at					CL	eP			19	
		Petrolia, Humboldt County,					T	eP			17	
		Calif. Felt to distances					USCGS: 44 $\frac{1}{2}$ N 28W, 08:56:30					
		of as much as 120 km				25	MW	iP	15	10	47	
22	P	iPNEZ	17	34	14		Pr	eP			53	
		ipP!			42		CL	eP			44	
		i			56		T	eP			38	
	R	iP			09		CMO: 30.7N 137.7E, 240 km					
		ipP			38	25	Pr	eP	15	19	41	
	CL	eP			17		CL	e			56	
		ipP			46		T	e			20	
		i			35		25	MW	iP	22	11	30
		eP			34		R	e			32	
		ipP			55		CL	e			37	
		i			35		T	iP			40	
		USCGS: 20 $\frac{1}{2}$ S 67W, 17:22:57, 150 km				26	MW	eP	12	40	20	
22	MW	e	18	31	20		R	e			22	
	Pr	eP			08		CL	eP			27	
23	P	iPNZ	02	18	07		T	eP			29	
	R	eP			05		Fiji-Tonga region					
	Pr	iP			01 c	26	USCGS: 12:28:48, 550 km					
	CL	eP			12		P	eP	17	33	42	
	T	eP			19			e			34	
		USCGS: 02:06:00, Argentina					R	eP			33	
23	MW	e	09	05	24		Pr	eP			46	
	CL	e			28			e			58	
	T	e			46		CL	eP			46	
23	Pr	e	14	03	43		Southwest Pacific. First					
	CL	eP			34		of four shocks from the					
	T	eP			28		same source.					
23	Pr	e	17	45	20	26	P	eP	17	36	35	
	CL	e			28		R	eP			38	
	P	ePNEZ	07	25	26		T	eP			41	
	R	eP			18		CL	eP			39	
	Pr	iP			12	26	P	eP	17	45	46	
	CL	eP			30		R	eP			50	
	T	eP			40		Pr	eP			52	
					48		CL	eP			51	
		BCIS: 14N 91 $\frac{1}{2}$ W, 07:19:06										

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s	
26	P	iP	17	58	04	28	MW	iP	12	15	32	
	R	iP			07		Pr	eP			37	
	Pr	iP			09		CL	eP			40	
	CL	eP			08		T	eP			41	
	T	eP			06	28	P	iP"	14	35	08	
26	Pr	e	23	39	40			iSKP			38	
	CL	e			32		R	iP"			35	
27	MW	eP	06	41	42			iSKP			38	
	R	eP			46		Pr	iP"			35	
		ePcP			43			iSKP			38	
	Pr	eP			41		CL	iP"			35	
		e			42			iSKP			38	
		ePcP			43		T	iP"			35	
	CL	eP			41			iSKP			38	
		ePcP			43		28	BCIS: 55S 27 $\frac{1}{2}$ W, 14:16:25			22	
	T	eP			41		MW	iP	22	08	58	
		ePcP			43			e			09	
					17		R	eP			08	
		Aleutian Is.						e			09	
		USCGS: 06:33:20						e			09	
27	P	iPNEZ	19	15	55 c		CL	eP			08	
		ipP			16		T	eP			48	
		e			19			e			09	
	PX	iSNE			24		USCGS: 29N 142E, 21:56:36					
		eGN			31.3	29	P	iP	01	17	19	
		eREZ			34.2		R	eP			21	
	P	eP'P'			45		CL	eP			26	
					03		T	eP			28	
							Kermadec Is.					
							USCGS: 01:04:40					
	R	iPNEZ	19	15	58	29	Pr	eP	05	49	43	
		ipP			16		T	e			50	
		e			19		Mexico.					
		iS			24		BCIS: 05:44.8					
		eP'P'			44		30	MW	e(P)	06	18	26
	Pr	iP	19	16	04			e			31	
		i			31		T	iP			04	
		e			18			i			14	
		eP'P'			45		30	PX	iPP	13	10	44
	CL	iP			15			ePS			19	
		ipP			16			ePKKP			22	
		i			35		PX	eSSEZ			26.0	
		e			18			eLE			43.3	
		eP'P'			45							
	T	iPNZ			15			PPZ			1	
		ipP			59			MH			5	
		eSN			23		R	ePP	13	10	39	
		iP'P'			45			e			52	
					00			iPKKP			21	
		Magnitude 6 $\frac{1}{2}$, USCGS				28	Pr	eP"	13	10	26	
		50 $\frac{1}{2}$ N 157E, 19:05:46, 100 km						iPP			56	
	P	eP	02	27	10			iPKKP			22	
	PX	eLE			36		CL	iP	13	06	20	
	R	eP			27			e			07	
	Pr	eP			23			e			09	
		e			37			eP"			10	
	CL	eP			26			ePP			44	
	T	eP			46			ePP			28	
		USCGS: 58 $\frac{1}{2}$ N 137W, 02:21:20				28	P	eP	06	03	34	
	P	eP			35			e			35	
	R	eP			37		30	P	eP	14	34	25
	Pr	eP			42			R	eP		28	
	CL	eP			42			e			40	
	T	eP			42			Pr	iP		25	
		USCGS: 05:50:49						e			36	
		Wellington: 34S 178W, 05:50.8						T	eP		35	
								e			48	
								USCGS: 29 $\frac{1}{2}$ S 178W, 14:21:52				

Pasadena and auxiliary stations, 1952

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s		
10	P	ip"	21	28	55	13	Oct. (continued)						
	R	iSKPNEZ		32	15		Magnitude 4.5						
	CL	eP"		28	56		Berkeley gives 37° 45' N,						
	T	iSKP		32	19		122° 11' W, 00:34:09						
	CL	eP"		28	54	13	P	eP	07	07	28		
	T	eSKP		32	12		R	eP			49		
	CL	eP"		28	53		CL	eP			24		
	CL	eSKP		32	09		T	eP			33		
10	BCIS: 5S 103½E, 21:09:35						T	eP			54		
	MW	ip	22	00	36			e			41		
	R	ipP			48			South America			08		
	R	eP			40			BCIS: 06:55.5					
	CL	epP			53	13	MW	eP	19	20	32		
	CL	eP			25		CL	eP			39		
	T	ipP			38		T	eP			41		
	T	eP			28		T	ip			21		
	Alaska						P	ipP			06		
	USCGS: 21:53:46, 100 km							i			21		
10	CL	eP	22	50	26			i			32		
	T	eP			22			i			50		
	Alaska ?							eP			10.6		
10	P	ip	22	51	58		PX	eP	24	10	6		
		i			52		R	eP	23	37	04		
		i			39		CL	eP			34		
		e			53		CL	eP			09		
	R	ip			51			i			27		
		e			52			eP			41		
		e			03			e			16		
	CL	eP			50			Deep ?			30		
		i			06			Wellington: 34S 178W,					
		e			15			23:24:11, magnitude 5.9±					
	T	eP			26		14	MW	eP	15	20	01	
		i			19			R	eP			04	
		i			28			CL	eP			19	
	Tacubaya: 17° 01' N,							T	eP			20	
	101° 11' W, 22:47:06								e			13	
	USCGS: 22:47:00							14	MW	e	20	49	35
11	MW	e	00	27	39			14	P	eP	22	11	06
	R	e			38				CL	eP			01
	CL	e			37				T	eP			54
	T	e			45				CL	eP			10
	USCGS: 6S 149E, 00:13:59								T	eP			53
11	P	eP'	01	43	35				USCGS: 48N 70W, 22:03:41				00
		e			46				P	eP	00	03	57
	R	eP'			33				R	eP			04
	CL	eP'			32				CL	eP			03
		e			43				T	ip			04
	T	eP'			33					i			24
	BCIS: 19½S 23E, 01:24:02								USCGS: 8½N 83W, 23:56:03				00
	P	ip	04	39	38				P	e	00	22	40
	R	eP			34				R	e			44
	CL	eP			43				T	e			14
	South America								USCGS: 36N 141½E,				
	BCIS: 04:28.5								00:10:25				
12	P	ip	06	42	24				CMO: 35.9N 141.4E, 40 km				
	R	ip			20				MW	ip	02	24	02
	CL	eP			27					ipP			29
	T	eP			35					ip			23
	South America									ipP			24
	BCIS: 06:31.4									eP			24
13	P	IPNEZ	00	35	23					epP			07
	CL	ISNZ			36					e			34
	CL	eP			35								25
	H	ePN			10								06
	T	ip			02								

(continued)

(continued)

Pasadena and auxiliary stations, 1952

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
15	T	ip	02	24	15	17	Oct. (continued)				
		ipP			42		Oct. (continued)				
		BCIS: 20½S 67½W,									
		02:12.6, 100 km									
15	P	ip	19	15	26						
	R	ipP			36						
	R	eP			28						
	CL	ipP			39						
	CL	eP			20						
	T	ipP			32						
	T	eP			15						
		ipP			27						
		USCGS: 43N 145½E, 19:04:00									
		CMO: 42.2N 145.4E, 60 km									
16	MW	eP	02	28	10						
	R	eP			12						
	CL	e			14						
16	P	eP	09	59	29						
		ipP			48						
	R	eP			32						
		epP			51						
	CL	eP			25						
	T	ipP			44						
	T	ip			37						
		epP			57						
		USCGS: 41½N 142E, 09:47:51									
		CMO: 41.6N 142.4E, 60 km									
16	P	eP	20	34	10						
	R	eP			12						
	CL	eP			14						
	T	eP			13						
		New Hebrides									
		USCGS: 20:21:25									
16	CL	eP	22	07	54						
	T	eP			43						
17	MW	e	01	58	54						
	CL	e			44						
		CMO: 43.2N 146.1E, 40 km									
17	P	eP	03	30	01						
		e			24						
		e			29						
	R	e			42						
		e			29						
	CL	ip			29						
		e			30						
	T	eP			29						
		e			30						
		e			34						
		e			34						
		e			05						
17	CL	e	05	13	00						
		CMO: 34.0N 137.0E									
17	P	ipNEZ	07	44	50						
	R	eP			51						
	CL	eP			57						
	T	epP			59						
		USCGS: 15½S 175½W, 07:33:15									
17	R	e	09	01	43						
	CL	e			54						
17	MW	eP	15	27	37						
		e			49						
	R	eP			39						
		e			52						
	CL	eP			33						
	T	eP			44						
		e			38						
		CMO: 43.2N 145.2E, 30 km									

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s	
18	MW	eP	15	09	05	21	R	iP	06	16	37	
		e			11		T	eP			56	
	CL	e			14		USCGS: 9½ N 84½ W,					
18	P	ePNZ	20	44	41		06:09:05					
		e			48	21	P	ePEZ	06	43	22	
	PX	eL	21	06	8			e			30	
	R	eP	20	44	43			e			53	
		e			49		R	iP			16	
	CL	eP			49			i			26	
		e			56			e			45	
	T	eP			48		T	e			25	
		i			58			e			43	
	USCGS: 16S 173W, 20:33:14							e			53	
20	P	eP	00	32	03		USCGS: 9½ N 84½ W,					
	R	eP			06		06:35:44					
20	MW	iP	01	13	04	22	MW	e(P)	03	56	00	
	R	iP			02			e			18	
	T	iP			12			e			23	
	USCGS: 57N 57W, 01:04:35							e			09	
20	MW	eP	14	40	55			e			18	
	R	eP			41		USCGS: 18 S 174 W,					
	T	eP			40		03:44:30					
		i			51	22	P	iPNZ	19	47	46	
	CMO: 19½ N 143E							R	iSN		48	
	BCIS: 14:28.3							R	iPNEZ		47	
20	MW	eP	14	48	41			iS			48	
		e			56		H	ePNE			08	
	T	eP			35			eSN			49	
		e			41		BB	eP			47	
20	MW	eP	15	18	23			iS			48	
	R	eP			31		Magnitude 5.1					
	T	eP			26		31.5 N 113.6 W, 19:46:36					
		e			34	23	MW	e	06	30	52	
	BCIS: 20½ N 143¾ E							R	e		43	
	15:05:45						23	P	ePNZ	07	04	
	CMO: 19 N 141½ E							R	eP		26	
20	P	iP	16	27	59		USCGS: 06:51:48					
	R	iP			28	25	MW	eP	03	27	58	
	T	iP			27			e			28	
	Kamchatka.							R	eP		00	
	USCGS: 16:18:00, 60 km							CL	eP		27	
20	P	eP	18	30	43			e			28	
	R	eP			49		USCGS: 03:16:35					
	T	eP			33		CMO: 43.0 N 145.4 E					
	CMO: 42.6 N 140.4 E						25	PX	iPNEZ	14	33	
	120 km							iLN				35
21	P	iP	02	19	02			iXNE			56	
	R	eP			18		(iX = short periods,					
	T	eP			19		probably continental					
		e			21		channel wave)					
	USCGS: 9½ N 84½ W							R	iPNEZ	14	33	
	02:11:25							CL	iP			48
21	P	iPNEZ	02	38	24			i			52	
		eNZ			36			e(L)			36	
	PX	eLE	50				T	iP			33	
	R	eP	38	18				i			53	
		i			27		Magnitude 5¼ ±					
	T	iP			37		USCGS: 26 N 112 W,					
	USCGS: 9½ N 84½ W,						14:31:09					
	02:30:46						25	P	iPN	18	11	
21	P	iPNEZ	06	16	42			iSN			13	
		e			52			iPNEZ			11	
		e			59			iSNEZ			13	
	(continued)							CL	ePZ	11	27	
							(continued)					

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
25	T	(continued)				26	P	eP	15	57	58
		iPNEZ	18	11	47			e			16
	USCGS: 18:08:50							eP			15
	Lower California						R	eP			58
25	MW	e	20	23	41		CL	eP			57
		e			48			e			16
	CL	e			59			eP			15
	T	e			21			e			16
25	R	eP	21	08	22			e			57
	CL	e			29		USCGS: 39 N 143 E,				
		e			29		15:46:14				
26	MW	e	07	45	42		CMO: 39.3 N 144.0 E,				
		e			56		40 km				
	CL	e			28		P	ePEZ	16	04	38
	CMO: 39.6 N 114.2 E,							e			05
	40 km							e			24
26	MW	ePP	08	43	05		PX	eL			42
	CL	ePP			42		R	eP			04
	BCIS: 29½ N 68½ E,							eP			44
	08:23:18							eP			38
26	P	ePNEZ	08	52	50		USCGS: 39 N 143 E,				
		epP			54		15:53:03				
	PX	e(s)NE	09	04	34		CMO: 39.5 N 143.7 E,				
		eGN			14		50 km				
		A			T		MW	iP	16	40	52
		0.2			½			iP			54
	GN	6			50		CL	eP			55
	GN	10			20		P	ePEZ	18	13	47
	G is recorded almost exclusively in the N-S horizontal component (E-W small, Z absent); consists of 2 waves with period of 50 sec. followed by about 3 waves of shorter and rapidly decreasing period										
		52			54		PX	eSNE			23
		54			04			eL			36
	CL	iP			52						4
		iP			48			PZ			4
		iP			53			SH	1½		12
	T	iPNEZ			52			MH	1½		20
		iP			43		R	eP	18	13	47
		ePP			55			e			52
	Magnitude 5¾-6							eP			41
	USCGS: 34½ N 137 E							eP			46
	08:41:03, 300 km							i			37
	CMO: 34.1 N 137.8 E,							i			50
	280-290 km							Magnitude 6½			
26	P	e(P)	13	32	00		USCGS: 39 N 143 E,				
		e			31		18:02:00				
		e			32		CMO: 39.4 N 144.0 E,				
		e			32		40 km				
	CL	e(P)			31		P	iP	19	31	01
		e			32			iNEZ			11
		e(P)			57			iNZ			53
		e			01			e			35
	T	e(P)			31			eL			55
	USCGS: 39 N 143½ E										4
	13:20:14							PZ			4
	CMO: 39.4 N 143.9 E,							MH			20
	40 km							eP	19	31	05
26	P	eP	14	41	48			e			14
		e			49			e			32
	CL	eP			42			e			35
		e			46			eP			30
		e			46			i			31
	T	eP			41			e			35
	USCGS: 40 N 143½ E,							eP			12
	14:30:04							i			30
	CMO: 39.5 N 144.1 E,							i			31
	40 km							e			35
								Magnitude 6			
								USCGS: 38½ N 143½ E,			
								19:19:12			
								CMO: 39.3N 143.3E			

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s	
4	Nov. P	iPEZ	19	50	43	5	Nov. P	iP	03	39	50	
		i		51	05			iEZ			56	
	R	eP		50	45			eP'iP'	04	09	26	
		i		51	08		R	eP	03	39	54	
	CL	eP		50	37		CL	eP			46	
	T	iP			30			i			51	
		i			46		T	iP			38	
4	P	iPNEZ	20	59	03	5	P	eP	06	08	06	
		i			13			i			43	
	R	eP'iP'	21	27	54			iNEZ			10	
		iPNEZ	20	59	06			i			18	
		i			18		PX	eGN	24	2	2	
	CL	iP		58	58		P	eP'iP'	37	15		
		i		59	09		R	ePNEZ	08	14		
	T	iPNEZ		58	50		CL	eP	07	58		
		i		59	03			i	08	08		
4	P	iPNEZ	21	10	58		T	ePNEZ	07	51		
	R	iPNEZ		11	01			i	08	01		
	CL	iP		10	52	5	P	iP	07	16	26	
	T	iPNEZ			43			i			39	
4	P	iPNEZ	22	03	03		R	eP			28	
		i			21			e			44	
	R	iPNEZ			06		CL	iP			19	
	CL	iP		02	57			i			35	
		i		03	14		T	iPNEZ			12	
	T	iP		02	49			i			35	
		i		03	06	5	P	iP	09	40	10	
4	P	iPNEZ	22	22	55			i			21	
		i			59		R	eP			13	
	R	eP'iP'		52	08			e			24	
		iPNEZ		22	58		CL	iP			03	
	CL	iP		22	49			i			14	
		i			53		T	iPNEZ			39	
		i			59			i			40	
	T	iPNEZ			41	5	P	iP	11	44	46	
4	P	iPNEZ	22	29	22			i			59	
		i			30		R	eP			48	
	R	eP'iP'		58	34		CL	iP			40	
		iPNEZ		29	25			e			52	
		i			36		T	iP			32	
	CL	iP			15	5	P	iPNEZ	11	56	52	
		i			24		R	iP			56	
	T	iPNEZ			08		CL	iP			47	
		i			18		T	iPNEZ			39	
4	P	iPNEZ	23	39	15		USCGS: 50 N 157 E,					
		i			25		11:46:34					
	R	eP'iP'		24	08	32	5	P	iP	13	16	27
		iPNEZ		23	39	18		i			48	
	CL	iP			09	d	PX	iSN	24	35		
		i			19			iREZ	34	3		
	T	iPNEZ			02		R	eP	16	31		
5	P	iPNEZ	02	30	18		CL	eP			22	
		i			37			i			42	
		i			42		T	eP			15	
	PX	iSNE		39	11			i			41	
		iREZ		48	3	5	P	eP	14	19	54	
	P	iP'iP'		59	33			i			21	
	R	iPNEZ		30	20	c		i			03	
		i			38		MW	eP			19	
	CL	iP			11	c		e			20	
		i			36			i			21	
	T	iPNEZ			04	c		i			18	
		i			10		CL	eP			19	
		i			31	23		e			21	
		i						i			13	

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
5	Nov. T	eP	14	19	42	5	Nov. P	eP	22	56	06
		i			20			i			14
		i			30		R	eP			08
		i			55			e			17
	CM0: 44 1/2 N 317 E, 300 km						Pr	eP			20
5	P	iPNEZ	14	59	02			i			28
		iP			13		CL	eP			55
		eP'iP'		15	28	05		i			56
	R	iP		14	59	05	T	eP			55
		iP			17			iNEZ			56
	CL	iP			58	57	6	P	iPNEZ	01	08
		iP			59	08		i			48
	T	iP			58	49		i			09
		iP			59	01		eP			08
	pP large. No surface waves						R	eP			09
5	P	iP	16	51	50			e			14
		i(pP)		52	08		Pr	iP			08
	R	iP		51	54			i			56
		i(pP)		52	17			i			09
	CL	iP		51	40		CL	iP			08
		i(pP)		52	02			i			41
	T	eP		51	30			i			09
		e(pP)			52		T	iPNEZ			08
5	P	iPEZ	19	18	19			i			32
		e			29			i			57
		i			48		6	P	iP	04	04
	PX	iSN		26	20			i			35
	R	eP		18	22		R	eP			38
	Pr	iP			28		CL	iP			42
		i			39			eP			28
	CL	eP			18		T	iP			20
		i			25		6	P	eP	05	52
	T	iPNEZ			05			i			26
		i			35		R	eP			19
5	P	iP	19	45	26		Pr	eP			25
		i			37		CL	eP			08
	R	iP			29			i			20
		i			41		T	ePNEZ			00
	Pr	iP			34			i			13
		i			46		6	P	ePNZ	08	15
	CL	iP			20			e			16
		i			33		R	eP			15
	T	iP			13		Pr	eP			51
		i			25		CL	eP			37
5	P	iPNEZ	20	40	46			e			16
	R	iP			50		T	eP			15
	Pr	iP			56	c		iP			11
	CL	iP			40		6	i			34
	T	iPNEZ			33	c		eP			21
	P	eP		21	18	53	R	eP			27
		iPPEZ			19	07	Pr	iP			44
	R	eP			18	58		i			11
		iP			19	12	CL	iP			27
	Pr	eP			03			i			04
		iP			17		T	iPNEZ			20
	CL	eP			18	48	6	P	eP	11	21
		iP			19	02		i			53
	T	eP			18	41	R	eP			22
		iPNEZ			55		Pr	eP			21
5	P	ePNEZ	21	56	18			i			14
		e			22		CL	eP			21
	R	eP			27			i			46
	Pr	eP			27		T	ePNEZ			39
	CL	eP			13			i			50
	T	eP			06						

Mexico
Tacybaya: 17° 02' N,
100° 03' W, 11:17:09

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
6	Nov.					6	Nov.				
	P	iP	14	16	52 c		P	iP	21	01	01
	R	iP					R	iP			05
	Pr	iP	17	01			Pr	iP			09
	CL	iP	16	45			CL	iP	00	56	
	T	iPNEZ			38 c		T	iP			49
	Kamchatka						P	iPNEZ	04	05	32 d
6	P	iP	14	32	09		R	iP			44
	R	eP			12		CL	iP			26 d
	Pr	iP			17		T	iP			39
	CL	iP			02		T	iPNEZ			20 d
	T	iP			31		Kamchatka				
	P	iP	17	59	58		P	iP	05	26	20
	R	eP	18	00	03		R	iP			26
	Pr	iP			08		CL	iP			15
	CL	iP	17	59	53		T	iP			04
	T	iPNEZ	18	00	06		R	iP	06	36	00
	P	iPEZ	17	59	46		R	eP			03
	PX	iEZ	20	04	13		CL	eP	35	55	
		eSE			32		T	eP			48
		iSNZ			13.7		P	eP	06	59	58
		eR					CL	eP	12	19	10
							P	iPNZ			53
								iEZ			18
	PZ		A				R	iP			29
	SH		0.2				CL	eP			16
	e		3				T	eP			07
	R	eP			19 56 10		P	iNEZ			18 57
	e							i			59
	Pr	iP			14			i			19 24
	CL	eP			22		Kamchatka				
	T	eP			02		P	iPNEZ	13	51	45
		i			55 50		R	eP			55
		i			56 00		CL	iP			48
	Kamchatka. Overlays the next.						T	iPNEZ			39
6	P	iPEZ	20	01	00			i			50
	PX	iNEZ!			17		P	iPEZ	14	18	49
		eSN?			11.3			i			19 03
		iGN			28.7		PX	eS			27 17
		eR			30.7			iSN			40
								eG			34.3
							R	iPNEZ			18 54
	PZ		A					i			19 09
	MH		0.2		1 1/2		CL	eP			18 45
	R	eP			45 20			i			19 01
	i				20 01 03		T	iP			18 40
	Pr	eP			20		Kamchatka				
	i				05		P	eP	15	51	10
	CL	eP			22		R	eP			13
	e				02		CL	eP			06
	T	eP			18		T	eP			01
		i			00 59			e			11
		i			01 17		P	iP	17	04	39
	New Guinea						R	eP			51
	USCGS: 5 S 145 1/2 E,						CL	eP			42
	19:47:20						T	iP			34
	Pasadena: 5 S 145 E,						Kamchatka				
	19:47:25, 50 km(?);										26
	magnitude 7.1										
6	P	iP	20	08	46						
	R	eP			50						
	Pr	iP			54						
	CL	iP			40						
	T	iP			32						
	Kamchatka. Superposed on preceding.										

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
7	Nov.					8	Nov.				
	P	iPNEZ	20	57	28 c		P	eP	09	00	09
	PX	iGNE			59 22		R	eP			12
	P	iXZ			31		Pr	eP			17
	(iX = continental channel wave)						CL	eP			05
							T				08 59 57
							P	iP	12	18	25
							R	iP			27
							Pr	iP			32
							CL	iP			19
							P	eP	15	30	12
							R	e			17
							Pr	e			19
							CL	eP			08
							P	iPNEZ	15	46	51 d
							R	iP			55
							Pr	iP			58
							CL	iP			45
							T	iPNEZ			48
							P	iP	17	15	08
							R	eP			14
							Pr	eP			12
							CL	eP			14
								e			02
								e			09
							CMO: 49 N 158 E, Kamchatka				
							P	ePEZ	19	43	46
							PX	eLN	20	00.2	
								eZ			08 23
							R	eP	19	43	50
							Pr	eP			53
							CL	eP			42
							T	eP			36
							USCGS: 48 1/2 N 156 E,				
							19:33:18				
							P	iPEZ	23	41	53 c
							R	iP			57
							Pr	iP			59 c
							CL	eP			52 c
							T	iP			47
							CMO: 30.2 N 139.4 E,				
							500 km				
							P	iPEZ	00	32	45 d
								iP			57
								i			33 12
							R	iPNEZ			32 49
								i			55
								iP			33 02
							Pr	iP			32 53
								i			58
								iP			33 05
							CL	iP			32 40
								iP			53
							T	iPNEZ			33
								i			39
								iP			46
								i			58
							USCGS: 48 1/2 N 155 1/2 E,				
							00:22:15				
							P	iPEZ	01	27	41
								iN			50
							R	eP			45
							Pr	eP			49
								i			28 00

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
9	Nov. (continued)					9	Nov. (continued)				
9	CL	eP	01	27	35	9	Pr	eP	15	33	02
	T	eP			38		i				09
	USCGS: 52½ N 160 E,						CL	eP			32 49
	01:17:29						T	eP			42
9	P	iPNEZ	04	45	30	9	P	eP	15	42	02
	R	eP			33		R	eP			09
	Pr	eP			37		CL	eP			00
	CL	eP			25		T	eP			41 59
	USCGS: 49 N 158 E, 04:35:05						USCGS: 45 N 151½ E,				
9	P	iP	05	16	32		15:31:06				
	R	eP			46 11		CMO: 43 N 151½ E, 50 km				
	Pr	eP			16 37	9	MW	e	18	22	20
	CL	eP			39		R	e			23
	T	iP			41		Pr	e			38
	USCGS: 53½ N 159½ E,				25		CL	e			32
	05:06:29				39		T	e			15
9	P	iPNEZ	05	42	39	9	MW	eP	20	52	32
	R	iP			55		R	eP			36
	Pr	iP			44		CL	eP			58
	CL	iP			43 00		T	eP			42
	USCGS: 49½ N 156½ E, 05:32:15				42 47		Pr	eP			25
	05:06:29				43 04	9	CL	eP			19
9	P	iPNEZ	06	07	17		BCIS: 20:42:00, Kurile Is.				22 20 01
	R	iP			30		MW	e			20
	Pr	iP			36 29		R	e			19 55
	CL	iP			07 20		CL	e			22 33 08
	USCGS: 49 N 157 E, 05:56:54				26	9	MW	eP			09
	05:06:29				34		R	eP			11
9	P	iP			24	9	Pr	iP			14
	R	iP			36		CL	eP			48
	Pr	iP			11		R	eP			51
	CL	iP			24	10	CL	eP			56
	T	iP			05		MW	e	00	32	51
	USCGS: 49 N 157 E, 05:56:54				18		Pr	e			33 02
9	MW	eP	12	33	11	10	CL	e			32 43
	R	eP			15		T	e			34
	Pr	eP			19	10	MW	e	00	48	03
	CL	eP			06		R	e			47 58
9	MW	iP	12	53	23	10	CL	e			48 14
	R	eP			27		East Indies				
	CL	iP			16		P	iPNEZ	01	05	16 d
	T	iP			10		iN				21.0
9	P	iPNEZ	14	48	52		PX	eLNZ	01	05	18 d
	R	iP			49 20		R	iPNEZ			
	Pr	iP			48 56		Pr	iP			34 d
	CL	iP			49 23		CL	eP			57
	USCGS: 50 N 158½ E,				00		T	iP			09
	00:55:00				28		USCGS: 50 N 158½ E,				02
	Pr	iP			48 46		00:55:00				
	CL	iP			49 14		MW	eP	03	38	14
	T	iP			05		R	e			25
9	P	ePNEZ	15	32	55		Pr	eP			17
	R	iEZ			33 13		CL	eP			07
	Pr	i			20		T	eP			17
	CL	eP			32 59		USCGS: 53½ N 160 E,				37 59
	e				33 06		20:26:40				

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
10	Nov.					10	Nov.				
10	MW	e(P)	04	00	40	10	P	eP	22	04	12
	R	e			02 58		Pr	iNEZ			21
	CL	e(P)			03 00		CL	eP			21
	T	e			10		Pr	eP			30
	USCGS: 52½ N 160 E,				00 56		CL	eP			07
	01:17:29				03 01		T	e			15
9	P	iPNEZ	04	45	30	10	MW	eP	05	35	53
	R	eP			33		R	eP			56
	Pr	eP			37		CL	eP			58
	CL	eP			25		T	eP			14 08
	USCGS: 49 N 158 E, 04:35:05						R	e			12
9	P	iP	05	16	32		CL	e			13 54
	R	eP			46 11		T	e			57
	Pr	eP			16 37	10	P	eP	23	22	25
	CL	eP			39		R	e			48
	USCGS: 45 N 151½ E,				41		Pr	e			43
	15:31:06				37		CL	eP			36
	CMO: 43 N 151½ E, 50 km				25		T	e			20
	18 22 20				19		Pr	eP			48
9	MW	e			23		CL	eP			43
	R	e			38		T	e			36
	Pr	e			32		BCIS: 06:05:45				
	CL	e			15		Kurile Islands region				
	T	e			14		MW	eP	06	25	01
9	MW	eP	20	52	32	10	R	eP			03
	R	eP			36		CL	eP			24 55
	Pr	eP			58		T	eP			48
	CL	eP			42		10	MW	e	08	14
	USCGS: 53½ N 159½ E,				19		Pr	e			24
	05:06:29				42		CL	e			52
9	P	iPNEZ	05	42	39		BCIS: 20:42:00, Kurile Is.				22 20 01
	R	iP			55		MW	eP	08	18	43
	Pr	iP			44		Pr	e			52
	CL	iP			43 00		CL	iP			36
	USCGS: 49½ N 156½ E, 05:32:15				42 47		T	eP			29
	05:06:29				43 04		10	MW	e(P)	09	50
9	P	iPNEZ	06	07	17		R	i			24
	R	iP			30		Pr	e(P)			14
	Pr	iP			36 29		CL	e(P)			23
	CL	iP			07 20		10	P	ePEZ	17	51
	USCGS: 49 N 157 E, 05:56:54				26		R	eP			52 44
	05:06:29				34		Pr	eP			51 22
9	P	iP			24		CL	eP			03
	R	iP			36		Pr	eP			08
	Pr	iP			11		CL	eP			34
	CL	iP			24		10	P	ePEZ	17	51
	T	iP			05		R	eP			52 44
	USCGS: 49 N 157 E, 05:56:54				18		Pr	eP			03
9	MW	eP	12	33	11		CL	eP			08
	R	eP			15		Pr	eP			34
	Pr	eP			19		10	P	ePEZ	17	51
	CL	eP			06		R	eP			52 44
9	MW	iP	12	53	23		Pr	eP			03
	R	eP			27		CL	eP			08
	CL	iP			16		10	P	ePEZ	20	36
	T	iP			10		R	eP			47
9	P	iPNEZ	14	48	52		Pr	eP			42
	R	iP			49 20		CL	eP			49
	Pr	iP			48 56		10	P	ePEZ	20	36
	CL	iP			49 23		R	eP			42
	USCGS: 50 N 158½ E,				00		Pr	eP			47
	00:55:00				28		CL	eP			56
	Pr	iP			48 46		10	P	ePEZ	20	36
	CL	iP			49 14		R	eP			47
	T	iP			05		Pr	eP			49
9	P	ePNEZ	15	32	55		CL	eP			47
	R	iEZ			33 13		10	P	ePEZ	20	36
	Pr	i			20		R	eP			47
	CL	eP			32 59		Pr	eP			56
	e				33 06		CL	eP			32

USCGS: 02:20:37, 500 km
Wellington: 23 S 179½ E,
02:20:35, 470 km

Pasadena and auxiliary stations, 1952				Page 84			
Date	Sta.	Phase	h m s	Date	Sta.	Phase	h m s
11	P	iPEZ	05 37 07 c	11	CL	eP	14 20 37
	R	iP				epP	52
	P	iP				eP	29
	CL	eP		11	T	iP	16 24 09
	T	eP	36 54		MW	e	37
	R	eP	07 23 14		R	e	23 54
	Pr	eP			Pr	e	57
		e			CL	e	24 00
		e			CL	e	17 35 58
		e		11	T	ePEZ	36 10
		e			P	epPEZ	02
		e			R	eP	14
		e			Pr	epP	09
	CL	iP			Pr	iP	21
	T	eP			CL	iP	35 52
11	P	eP	08 26 04		CL	epP	36 05
		e	28 22		T	iP	35 44
		e	29 23		P	ipP	56
	R	eP	26 07	11	R	eP	18 58 52
	Pr	eP	29 26		Pr	eP	54
		e	26 15		Pr	eP	55
		e	29 20		CL	epP	59
		e	49		T	eP	59 02
	CL	eP	25 52				
		e	28 14				
		e	29 17				
	T	eP	25 51				
		e	28 26				
		e	29 15				
11	P	eP	09 24 34		R	eP	19 30 49
	Pr	eP	45			e	55
	CL	eP	29			e	54
	MW	eP	10 20 46			e	31 01
	CL	eP	40		Pr	eP	30 59
		e	47			e	31 07
		e	58		CL	eP	16
11	T	eP	11 27 08			e	30 44
	P	epP	22			e	50
	Pr	eP	20			e	31 00
		eP	33		T	eP	30 35
	CL	epP	03			e	43
		eP	17			e	53
	T	eP	26 55	11	MW	iP	21 11 26
11	P	iPNEZ	12 04 03		R	eP	30
	R	iP	03 59		Pr	eP	36
	Pr	iP	57		CL	eP	22
	CL	eP	04 07		T	eP	14
	T	iP	13 c	11	P	epP	23 48 59
					R	epP	49 14
					Pr	eP	49 03
						eP	09
						eP	24
11	MW	eP	12 46 19		CL	epP	48 54
	R	e	34			eP	49 09
	Pr	e	28		T	epP	48 46
	CL	eP	12			eP	49 01
11	P	eP	13 52 02	12	P	epP	00 14 59
	Pr	eP	13		R	eP	15 02
	CL	eP	51 56		Pr	eP	07
	T	e	52 02		CL	epP	14 51
11	P	iPEZ	14 20 42	12	T	eP	00 37 30
	R	ipP	57			eP	44
		eP	46			eP	33
	Pr	epP	21 01		R	e	40
		iP	20 52		Pr	eP	23
		ipP	21 06		CL	eP	

(continued)

Pasadena and auxiliary stations, 1952				Page 85			
Date	Sta.	Phase	h m s	Date	Sta.	Phase	h m s
12	P	e(P)EZ	00 51 17	12	P	e	16 52 10
	R	i	30			e	32
		e(P)	12		R	e	16
		e	20		Pr	e	16
	Pr	eP	50 49		CL	e	01
		e	51 07	12	T	e	00
		i	38		MW	e	17 10 04
	CL	e(P)	12			e	45
		e	26			e	28
	T	e(P)	04		R	e	28
		e	12		Pr	e	07
		i	18		CL	e	17
12	P	e	03 28 25	12	P	e(P)	17 36 38
	R	e	25			e	37 20
	Pr	e	22		R	e	36 20
	CL	e	28			e	32
	T	e	30		CL	e	27
12	P	eP	04 45 57	12	T	e	27
	R	eP	46 00	12	P	e(P)	19 14 53
	Pr	eP	07		CL	e(P)	47
	CL	eP	45 51		T	e(P)	35
	T	iP	43	12	P	eP	20 08 48
12	P	e	04 47 12			i	09 11
	Pr	e	16			i	23
	CL	e	20		R	e	16
12	MW	e	05 58 26			e	28
	Pr	e	36		CL	eP	08 41
	CL	e	08			e	09 04
		eP	20		T	eP	08 33
12	P	eP	08 14 06			e	56
	R	eP	10				
	Pr	eP	17	13	P	eP	00 56 23
	CL	eP	00			iNEZ	34
	T	eP	13 54			iSNEZ	57 36
12	P	iPNEZ	08 42 30		R	eP	56 27
		e	43 21			i	40
	R	iPNEZ	42 32			iSNEZ	57 45
	Pr	iP	33		SB	eP	56 42
	CL	iP	37 c			iS	57 27
	T	iPNZ	40		H	iPNEZ	56 00
					T	iSNEZ	36
						iPNEZ	55 42
						iSNEZ	56 03
12	P	e	09 36 10		CL	eP	55 59
	Pr	e	21			i	56 06
	CL	e	35 56			iS	45
	T	e	49				
12	MW	eP	11 51 54				
		e	52 15				
	R	e	51 58	13	MW	e	02 45 22
	Pr	eP	52 05		R	e	25
		e	25		CL	eP	02
	CL	eP	51 48			e	16
		e	52 08	13	P	ePNZ	03 04 55
	T	eP	51 41			i	05 19
		i	52 00		R	e(P)	01
12	P	iPNEZ	13 48 50			e	17
		i	49 01		Pr	eP	04 56
	R	eP	48 54			e	05 23
	Pr	iP	49 00		CL	eP	01
		i	10			e	13
	CL	eP	48 45		T	eP	04
	T	eP	37			e	15

USCGS: 18:46:30
Wellington: 29 S 179 W,
18:47.0

USCGS: 08:30:18
Wellington: 25 S 179½ W,
08:30.8, 130 km

USCGS: 02:52:41
Wellington: 27 S 179 E,
02:53.4

BCIS: 20:02.0, Alaska

Magnitude 4.7

Atlantic
BCIS: 13:42:22

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
29	Nov.	ePZ	08	43	41	30	Nov.	(continued)	12	39	24
	Pr	eP			49		CL	iP			32
	CL	eP			35		T	iP			15
	T	eP			28						23
	Involved in the preceding					30	P	iPNEZ	18	41	52
29	Pr	iP	14	03	24		Pr	iP			42 02
	CL	iP			12		CL	iP			41 45
					27						44 53
	T	eP			06		T	iP			41 37
	CMO:	40.4 N 144.4 E, 80 km									44 50
29	P	eP	18	32	34	30	P	iPNEZ	19	38	51
					56						56
	Pr	eP			32						41 22
					43		Pr	iP			39 00 d
	CL	eP			23						06
					27		CL	iP			38 45 d
	T	eP			20						53
29	P	i	18	52	41		T	iP			37
	Pr	e			46						46
	CL	e			30						39 26
	T	e			26						
29	P	iPNEZ	23	53	06		USCGS: 52½ N 159 E,				
	iPP				54 24		19:28:44				
	PX	iSE			58 23	30	P	iP	20	08	00
	eLNE		24	00.6			Pr	iP			10
	A	T									33
	6	8					CL	eP			07 53
	PH	2			5	30	T	eP	20	18	05
	SH	40			20		T	eP			17 58
	MH	80			20						18 36
	Pr	iP	23	53	16	30	P	iPEZ	20	39	06
	CL	eP			52 55		Pr	eP			17
					58		CL	e			00
	T	iP			44		T	eP			38 52
	Magnitude 6½										
	USCGS: 56 N 155 W,						Dec.				
	23:46:25					30	P	iP	00	10	35
	Pr	eP	02	22	07		Pr	iP			30
	CL	eP			12		CL	iP			35
					25		T	e			38
	T	e			28						
	Wellington: 34 S 178 W,						USCGS: 23:57:40,				
	02:09:16, magnitude 6-6½						Kermadec region				
30	Pr	e	06	42	01	30	P	e(P)	02	04	35
					09		Pr	e			37
					15		CL	e(P)			42
	CL	e	41	41	49		T	e(P)			44
					49	30	P	iPEZ	04	53	49
	T	e			33		Pr	eP			59
					38		CL	eP			44
					49		T	iP			34
											54 11
	USCGS: 56½ N 154 W,						BCIS: 04:43.9				
	06:35:14					30	P	iPEZ	06	30	51
	CL	e	07	39	21		Pr	epP			31 03
	T	e			23		CL	iP			00
	Southeast Pacific						CL	eP			30 45
	USCGS: 07:27:20							epP			56
30	CL	e	09	51	15		T	eP			38
	T	e			00			epP			49
30	CL	eP	10	54	53	30	MW	e	06	35	09
	T	iP			56		Pr	e			34 53
30	P	iP	12	39	29		CL	e			58
	Pr	iP			39		T	e			35 00

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
1	Dec.	eP	12	07	33	2	P	eP	19	25	17
					56		CL	eP			02
	CL	e			50						13
					08 13		T	eP			05
	T	e			00						25
					24						
	Tacubaya: 15° 20' N					2	BCIS: 19:14.9; Kamchatka				
	92° 36' W, 12:02:03, 100 km						P	e	21	30	27
1	P	iPEZ	13	08	02		CL	e(P)			06
					11						22
					12		T	e(P)			29 58
	Pr	iP			12						30 03
					25						14
	CL	iP			07 57		BCIS: 21:21.51; Kamchatka				
					08 06	3	P	iPEZ	00	40	30
	T	iP			07 49		Pr	iP			40
					57		CL	eP			10
					08 06			ipP			25
	BCIS: 59.2 N 160.1 E,						T	eP			03
	12:58:02; Kamchatka							ipP			18
1	P	iPEZ	13	10	05	3	Pr	e	00	42	27
	Pr	iP			15		CL	e			45
					31		T	e			35
	CL	iP			09 59	3	CL	e	07	54	08
					10 08						13
	T	iP			09 53		T	e			08
					10 01	3	MW	e	08	35	44
1	P	iP	13	13	34		CL	e			29
	Pr	iP			43		T	e			21
	CL	eP			27	3	MW	e	10	29	43
	T	iP			20		Pr	eP			28
					28		CL	eP			43
1	P	iPEZ	14	42	32		Tacubaya: 12° 07' N				
					39		90° 51' W; 10:17:08				
					49	3	P	iP	11	09	52
	Pr	iP			42			ipP			10 04
					50		CL	eP			09 46
	CL	iP			27						58
	T	iPNEZ			20						
					27	3	CL	eP	13	12	23
					36			epP			47
	BCIS: 14:32.8; Kamchatka					3	P	iPNEZ	14	18	06
2	CL	e	05	19	46						14
					20 08						30
					19 43						40
	BCIS: 5½ S 154½ E,						Pr	eP			16
	05:06:37										25
2	CL	eP	08	57	05		CL	eP			00
	T	eP			56 55						09
2	Pr	i	12	12	07						41
	CL	e			12						
	T	e			14						
	USCGS: 11:59:40,					3	P	eP	20	53	58
	Kermadec region						CL	e			47
2	CL	e(P)	13	49	31		T	e			54 05
	T	e(P)			23						
2	P	e(P)	19	10	18		BCIS: 20:43.9				
					24	3	CL	e	21	22	16
					35		T	e			09
	Pr	e			33	3	P	iPNEZ	22	35	46
	CL	eP			12			ipP			56
	T	eP			00		PX	eLEZ			54.2
					22		Pr	iP			35 56
	BCIS: 19:00:15; Kamchatka							ipP			36 06
											39

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
3	CL	Dec. (continued)	22	35	40	4	P	eP	11	06	21
		eP						CL	eP		12
		iP						T	eP		04
		T						BCIS: 10:56.3; Kamchatka			
		i				4	P	e	11	13	51
		i						CL	eP		46
		BCIS: 22:25:30; Kamchatka						T	eP		38
3	P	e(P)	23	29	57			e			44
	CL	e(P)		30	01			P	iPEZ	11	20
	T	e(P)			09	4	Pr	eP			44
	BCIS: 23:18.9							i			54
4	P	iPNEZ!	04	00	09 c			CL	e(P)		27
		i						T	iP		30
		isP						BCIS: 11:10.5; Kamchatka			
		i				4	P	iPEZ	12	33	14
		ePP	02	03				Pr	e		25
		iScP	05	15				CL	iP		08
	PX	iSN	07	00				T	iP		01
		iN				4	P	iPNZ	17	24	14
		eNZ	08	30				Pr	iP		19
		eN	11.6					CL	eP		20
		iN	12.5					T	e		26
		A				4	CL	eP	19	43	25
		PZ	1.2	1				T	iP		21
		PH	1.5	1		5	R	iP	01	02	24
		SH	5	9				Pr	eP		19
		iP	04	00	20 c			CL	eP		23
		i(pP)						T	iP		29
		isP						BCIS: 19½ N 70 W,			
		iPP	02	15				00:54:08			
		iScP	05	22		5	P	e(P)	07	06	54
	CL	iP	00	03	c			Pr	e(P)		07
		isP						R	e		06
		iPP	01	55				CL	e(P)		06
		eScP	05	11				Pr	eP		43
		iPNEZ	03	59	54	5	P	e(P)	07	06	54
		isP	04	00	29			R	e		06
		iPP	01	45				CL	e(P)		06
		iScP	05	06				T	e		06
								e			20
		Small initial compressions						USCGS: 06:59:59			
		at these stations,						Honduras-Nicaragua			
		followed by a larger impulse						P	eP	15	39
4	P	ePNZ	07	03	34			R	e(P)		40
	Pr	e						CL	e		40
	CL	eP						T	i		39
	T	eP				5	P	eP	15	39	38
	BCIS: 06:53.6; Kamchatka							R	e(P)		40
4	P	eP	09	18	02			CL	e		40
	CL	eP			17	53		T	i		39
		e						USCGS: 15:25:30			
		T						New Guinea			
		eP						P	iP	03	44
		e						i			45
		BCIS: 09:07:59; Kamchatka						R	eP		44
4	P	iPEZ	10	59	56			CL	iP		40
		iNEZ	11	00	01			CL	i		45
		e						i			39
		Pr						e			46
		i						T	i		44
		CL						BCIS: 03:34:20; Kamchatka			
		eP	10	59	52			P	eP	10	54
		i						iPNEZ!			23
		T									28
		i									55
		USCGS: 49 N 157 E,									
		10:49:35									

(continued)

Date	Sta.	Phase	h	m	s	Date	Sta.	Phase	h	m	s
6	PX	Dec. (continued)	10	54	39	7	Pr	eP	00	59	28
		i						i(pP)			40
		iPPE						i(sP)			46
		eE	11	04.3				iScP	01	04	36
		eSKSE						i			51
		BCIS: 10:56.3; Kamchatka						eP	00	59	12
		iE						i			23
		ISE						i			37
		iPPSE						iScP	01	04	26
		eSSEZ						iPNEZ	00	59	04
		eSSSEZ						i			11
		iGNZ						i			21
		iREZ						iScP	01	04	23
								eScSNEZ			08 57
		A						Magnitude 6¼, 40 km ?			
		1½						USCGS: 53 N 172½ E,			
		PH						00:50:12			
		PPH						P	iPNEZ	13	33
		SH						R	eP		46
		MH	40					Pr	iP		51
		MZ	40					CL	iP		37
						7	P	iP			30
		R						iPEZ	16	43	17
		eP	10	54	26			i			20
		iNEZ						R	eP		21
		i						Pr	eP		27
		eP						i			39
		i						CL	eP		13
		CL						i			16
		eP						T	eP		04
		i						i			08
		i						e			49
		USCGS: magnitude 7.1						USCGS: 51½ N 159 E,			
		8 S 156½ E, 10:41:18						16:33:10, Kamchatka			
6	P	eP	12	14	59			P	iP	19	44
	R	eP						R	e		52
	CL	eP						CL	eP		45 00
	T	iP						BCIS: 36 S 69 W, 19:32:26			
		i						P	iPNEZ	20	33
		e(P)	12	51	45			R	eP		10
		e(P)						Pr	eP		13
		e						CL	eP		11
		e						T	iP		12
		e(P)						Solomon Is.			
		e						USCGS: 20:20:02			
		e(P)						P	iP	04	00
		e(P)						Pr	eP	03	59
		e						CL	e	04	00
		e						R	e	04	30
		e						e			43
		e(P)						e			56
		eP						CL	e		34
		eP						T	eP?		29
		e						BCIS: 04:20:38, Kamchatka			
		CL						MW	e	04	53
		eP						e			12
		i						BCIS: 04:43:16, Kamchatka			
		eP						R	e	05	59
		i						CL	e		53
		i						BCIS: 05:47.4, Chile			
		i									

(continued)

Larger shocks of 1952

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

Date	Time	Lat.	Long.	Depth	Magnitude
Jan. 13	04 03 40	23 N	124 $\frac{1}{2}$ E	normal	6.9
Feb. 11	07 01 05	5 $\frac{1}{2}$ S	110 E	660	6.9
Feb. 14	03 38 12	7 $\frac{1}{2}$ S	126 $\frac{1}{2}$ E	normal	7 $\frac{1}{4}$
Feb. 26	11 31 00	14 S	70 $\frac{1}{2}$ W	260	7 \pm
Mar. 4	01 22 43	42 $\frac{1}{2}$ N	143 E	normal	8.3
Mar. 9	17 03 47	42 $\frac{1}{2}$ N	143 E	normal	7.1
Mar. 19	10 57 12	9 $\frac{1}{2}$ N	127 $\frac{1}{4}$ E	normal	7 $\frac{3}{4}$
May 9	17 47 41	6 $\frac{1}{2}$ S	155 E	50 \pm	7
June 11	00 31 36	31 $\frac{1}{2}$ S	67 $\frac{1}{2}$ W	normal	7 \pm
July 21	11 52 14	35.0 N	119.0 W	normal	7.7
Aug. 17	16 02 07	30 $\frac{1}{2}$ N	91 $\frac{1}{2}$ E	normal	7 $\frac{1}{2}$ \pm
Sept. 21	02 30 35	21 $\frac{3}{4}$ S	65 $\frac{3}{4}$ W	260	7.2
Nov. 4	16 58 26	52 $\frac{3}{4}$ N	159 $\frac{1}{2}$ E	normal	8 $\frac{1}{4}$
Nov. 6	19 47 25	5 S	145 E	50?	7.1
Nov. 29	08 22 37	52 $\frac{1}{2}$ N	160 E	normal	6.9
Dec. 6	10 41 18	8 S	156 $\frac{1}{2}$ E	normal	7.1
Dec. 24	18 39 38	5 $\frac{1}{2}$ S	152 E	normal	7