

APIA PRELIMINARY SEISMIC BULLETIN.

1957 JANUARY:



Date.	Phase.	Comp.	Time	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
2	e e e(ScS) eSSS eL	W XW N E	02 38 41 46 38 39 44 27 56	0.4	2 2 18 20 17	66	Aleutian Is. (U.S.C.G.S.)
2	e	WX	03 24 15	0.2	2	67	Aleutian Is. (U.S.C.G.S.)
2	e(P) e eSSS	XW N E	03 59 42 04 00 16	0.4	2 15 20	67	Aleutian Is. (U.S.C.G.S.)
3	e(S)		02 20 15	0.2	2/3		Fiji Is. (U.S.C.G.S.)
3	e(S)		12 59 28	0.6	1/2		
3	e(S)		13 07 16	0.5	1/2		
5	P S		14 50 12 48	1 1/2 9			
6	(S) e(T)		04 49 50 52 49	0.6 0.7			
6	P S		21 17 26 57	1.3 7			
10	eP eS eT		06 03 37 04 26 07 07	0.7 1.2			Weak Coda.
10	eP eS eT	WX X X	08 12 04 51 15 52	0.8 0.8 1.2	2 1/2		Weak Coda.
14	P eS		09 51 04 52 38	1.8 1.0		7 1/2	Fiji Is. (U.S.C.G.S.).
14	eP S		14 22 46 24 40	0.5 0.8		10 3/4	Fiji Is. (U.S.C.G.S.).
16	eP eS		20 38 29 40 11	0.5 0.7			
17	P eS		12 45 49 46 42	0.9 1.1			
18	eP e eS		12 16 24 18 40 45	0.5 0.4			
19	iP iS		05 18 57 20 45	2.2 5.3		9 1/2	Fiji Is. (U.S.C.G.S.) iP to N and E.
21	e(P) eS		15 52 25 53 56	0.4			
22	eP		02 37 07	0.3	2		
22	eP eS		05 37 52 39 15	0.7			
22	eP		12 36 46	0.5	2 1/2		Santa Cruz Is. (USCGS).
23	eP eS		17 42 27 44 02	1/2 0.7		8 3/4	Tonga Is. (U.S.C.G.S.). Weak Coda for 1/2 hr.
24	eP eS		19 27 16 28 46	0.4 0.7		7 2/3	Tonga Is. (U.S.C.G.S.).

JANUARY 1957 (Continued).



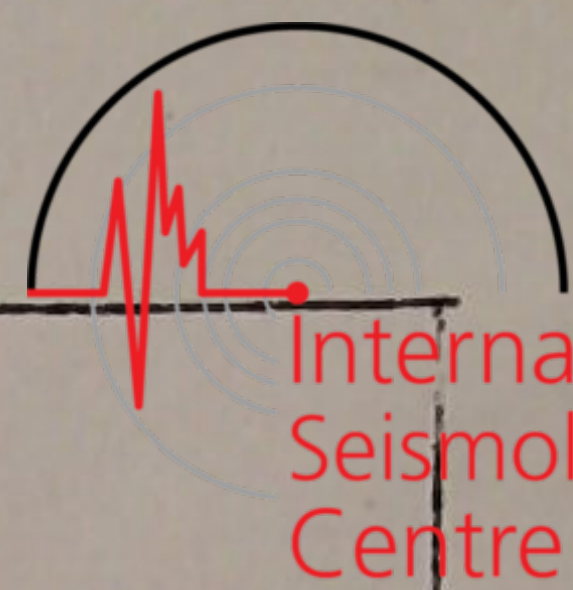
Date.	Phase.	Comp.	Time	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
25	eP e eS		08 58 36 48 59 02	5+			
28	iP		08 16 52	?		2	Samoa Is. region (USCGS) iP to S and W Felt Apia MM.3 Coda for 15 mins.
28	P eS		10 59 27 11 00 03	1.4 1.7			
28	P S		11 18 32 20 10	0.7 1.1			
29	eP eS eT		15 47 40 48 29 51 35	0.6 0.8		4 $\frac{2}{5}$	Fiji Is. (U.S.C.G.S.) Coda for 15 mins.
30	P eS		09 46 37 54	2 $\frac{1}{2}$		1 $\frac{3}{4}$	Samoa Is. (U.S.C.G.S.)
30	eP eS eT		15 30 41 31 49 35 40	0.7 1.7		7	Tonga Is. (U.S.C.G.S.)
30	P e eS		16 55 07 15 27	12 \pm			Samoa Is. (U.S.C.G.S.)

In the column "Component", the symbols X and W refer to the N-S and E-W Wood-Anderson seismograms, while N and E refer to the Wiechert horizontals.

There are no Wiechert recordings between January 23d and February 14d.

APIA PRELIMINARY SEISMIC BULLETIN.

1957 FEBRUARY:



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Date.	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
2	i(P) e		11 50 11 28	0.4 0.4	2 2	19	Loyalty Is. (USCGS).
3	P e S		09 36 51 38 22 25	1.2			
5	P e S e(T)		04 03 31 04 34 37 09 21	1½ 5±		6¼	Fiji Is. (USCGS).
5	eP e		16 02 23 39	0.7	2	22	Santa Cruz Is. (U.S.C.G.S.)
6	eP eS e		05 34 37 35 04 36 58	0.5 1.6			
6	P S		08 51 10 43	2 5±			
9	eP iS e e(ScS) e	X W W WX	13 33 59 37 36 44 44 53 45 12	0.3 0.8 0.5 0.3 0.5	½ ½ 1 2 2	21½	New Zealand (USCGS).
9	P S eT		17 57 28 58 24 18 02 28	2.2		5⅔	Tonga Is. (USCGS).
17	eP eS		21 12 03 29	3½			
18	P S		07 21 05 22	5± ?			Samoa Is. region. O=07 20.7 Felt Apia. Felt Pago Pago MM 1-2.
22	eP S		12 12 19 48	3±			
23	(P) i eL	W XW N	20 37 57 38 00 21 00	1.1	1 35	75	Formosa (U.S.C.G.S.) (P) to East.
24	P S		06 40 57 41 41	3±			

In the column "Component", the symbols X and W refer to the N-S and E-W Wood-Anderson seismograms, while N and E refer to the Wiechert horizontals.

A.A. Thomson,
Observer-in-Charge.

APIA PRELIMINARY SEISMIC BULLETIN.

1957 MARCH:



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Date.	Phase.	Comp.	Time	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
2	e(P) e e	W WX X	08 17 39	0.1	2	37½	New Britain(USCGS).
			18 09	0.4	1½		
			29	0.4	1		
2	P eS		20 12 48	1.6			
			14 11	1.7			
5	P S		12 23 08	2.6			
			24 07	1.2			
7	P S		10 49 28	0.8		8½	Fiji Is. (USCGS).
			51 01	4.5			
7	eP i e e(S)		17 45 19	0.4			
			31	2			
			49				
			53	25±			
7	P S		19 12 19	2.9			
			38	1.5			
8	ePKP ₂		12 41 11	0.4	1½	151	Greece (U.S.C.G.S.)
8	P S		16 37 56	0.8		12½	Fiji region(USCGS). P to North.
			40 08	0.4			
8	eP eS		18 21 12	0.5			
			22 46	0.5			
8	eP eS		22 26 42	0.8			
			28 13	0.6	2/3		
9	e e e e? e e e e? i eL eL	WXN	14 33 28	0.5	2	65	Aleutian Is.(USCGS)
		X	38	1.0	2		
		XW	55	1.0	2		
		X	41 32	1.2	2		
		X	42 15				
		NXW	32	2.4	8		
		WX	44 18	0.6	2		
		X	47 17	1.0	2		
		N	43.0		15		
		N	48 22		15		
9	e	XW	15 02 50	1.1	2		
9	e e	XW W	15 52 34	2.0	1	65	Aleutian Is. (USCGS)
			50	0.8	1		
9	e e eL	XW XN X	20 50 14	0.3	1	66	Aleutian Is. (USCGS)
			59 00	0.8	16±		
			21 09		30		
10	e e eL	XW XW X	03 16 58	0.4	2	66	Aleutian Is. (USCGS)
			17 15	0.4	1		
			42		20		
11	e e eL	XW NX XN	03 23 25	0.6	2	65	Aleutian Is. (USCGS)
			32 27	0.3	18±		
			42		30		

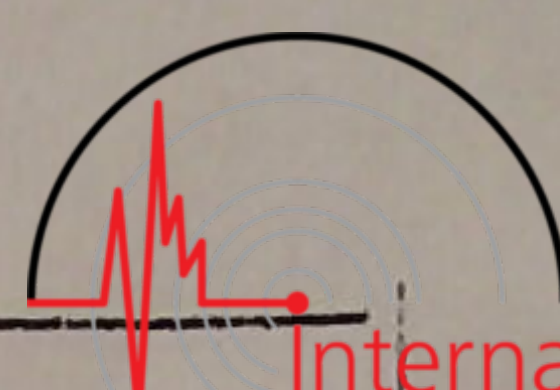
MARCH 1957 (Continued).



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Date.	Phase.	Comp.	Time	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
11	e e eS eL	X X XN XN	10 09 52 10 06 18 20 29	0.7 0.6	1 8 30	67	Aleutian Is. (USCGS).
11	e e e eS eL	X X X XN XN	15 06 15 07 14 14 38 45 25	0.7 0.8 0.6	2/3 2 9 30	66	Aleutian Is. (USCGS).
12	e	XW	07 39 35	0.3	2	65	Aleutian Is. (USCGS)
12	e	XW	07 50 08	0.4	2	66	Aleutian Is. (USCGS)
12	i eS e eL eL	XWN X X W XW	11 55 38 12 04 14 05 05 11 1/2 15	0.5 0.5 0.5	2 6 6 20 14	65	Aleutian Is. (USCGS)
12	e e	XW X	12 24 30 32 24	0.3 1/2	2 11		
12	e	XW X	16 36 52 37 48	0.5 0.8	1 1 1/2	19 2/3	New Hebrides (USCGS)
12	P S		17 24 08 25 56	0.9 0.9	0.4 1/2	10 1/3	Fiji Is. (USCGS).
12	P S		18 30 49 32 18	2.0 1.0	0.4 0.4	7 2/3	Fiji Is. (USCGS).
12	iP eS iS		19 12 40 13 44 46	18 5	1/2 2	5	Fiji Is. (USCGS). iP to South & West eS to West & South
13	P S		04 59 52 05 00 49	1.4 6 1/2			Deep
13	P e	XW X	09 16 48 18 30	0.5 0.5	1 2		New Zealand (USCGS) P to North?
13	iP	XWN	15 52 50	0.5	2	66	Aleutian Is. (USCGS). iP to N and E.
14	eP e e(S) i eL	XN XW W X WX	14 58 23 38 15 07 07 15 15	0.9 0.2 0.7	1 1/2 6 4 15	65	Aleutian Is. (USCGS). eP to North.
14	e e	W X	15 15 56 16 16	0.3	1-2		
14	e	XW	15 27 16	0.3	2		
15	eP? e	X W	03 03 02 06	0.3	2	67	Aleutian Is. (USCGS)

MARCH 1957 (Continued).



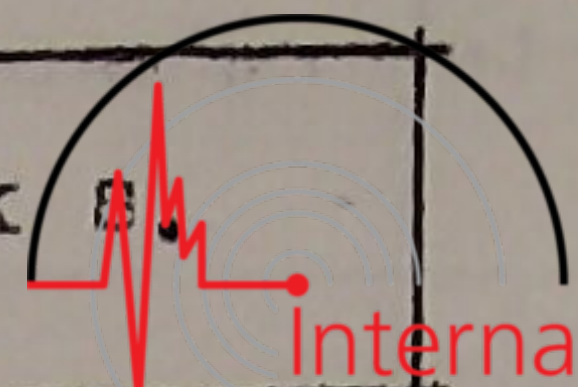
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Date.	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
Wood-Anderson records absent 15d 09h till 15d 19 30.							
16	e eS e eL	WX XN X XN	02 45 08 53 41 54 05 03 03	0.5 0.4 0.5	2 20± 20± 35±	66	Aleutian Is. (USCGS)
16	P eS		17 45 19 47 02	0.5 0.9			
18	P iS		19 32 16 33 46	1.5 3.5			Fiji Is. (U.S.C.G.S.)
19	e e		13 01 38 02 34	0.2 0.5	1 1	65	Aleutian Is. (USCGS)
20	iP S		18 36 06 37 10	2.1 1.2			
21	eP eS		13 42 22 43 53	1.4 0.6			
22	eP eS		01 14 06 15 24	0.6 0.8			
22	e e e eL eL	XW XW W W XN	14 32 11 30 34 12 48 51	0.2 0.6 0.4	2 2 2 25 30	68	Aleutian Is. (USCGS)
23	iP e	WX WX	05 22 15 26 43	1.4	1.8 4	57	Banda Sea (USCGS). iP to West.
24	iP iS		05 28 22 32	7 25			
24	e	WX	11 17 14	0.3	2	66	Aleutian Is. (USCGS)
27	eP i e eS e		07 34 12 16 35 51 55 40 13	0.9 9 0.5		9½	Tonga Is. (USCGS).
28	iP S		03 55 10 43	15 28			iP to East and (North)
28	eP eS		09 28 18 29 15	1.3 1.2			
29	P eS		05 02 56 03 15	2½ 18			
29	e eL	XNW XN	05 21 36 41	0.3	2 28		Aleutian Is. (USCGS).
29	e? e	W W	05 48 42 46	0.3	2	63	Talau Is. (USCGS).

A.A. Thomson,
Observer-in-Charge.

APIA PRELIMINARY SEISMIC BULLETIN.

1957 APRIL.



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Date.	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks
1	e(P) eS		18 27 16 28 47	0.3 0.4			
2	eP eS		17 36 13 38 13	0.6 0.8			
5	P S e eT		07 33 30 35 48 38 32 43 02	4.8 11 0.5	$\frac{1}{2}$ $\frac{1}{2}$ 0.8	13 $\frac{1}{2}$	Kermadec Is. (USCGS)
6	eP eS		15 32 40 34 08	0.4			
7	e		10 23 25	0.1	2	52	New Guinea (USCGS)
9	eP		00 34 42	0.1	$\frac{1}{2}$ -1	66	Japan (USCGS)
10	e eS eL eL	XW WX W X	11 41 24 50 35 59 12 03	0.6 0.3	2 14 20 25	71	Kodiak Is. (USCGS)
10	P i S		13 44 11 14 32	1.5 13 41		1.7	Samoa Is. (USCGS) Felt Apia MM 3-4 Coda for $\frac{1}{4}$ hr.
10	eP i S		14 28 16 20 36	7 27			
11	P i S		01 10 44 50 11 03	29			
11	iP S		06 44 54 45 13	27			Samoa Is. (USCGS) W/A Az. = S 34 W. iP to S and W.
11	P e S		06 53 23 30 43	11			
11	iP S		10 14 50 15 09	18			iP to S and W. W/A Az. = S 34 W.
14	P S e e	X XW	07 22 27 23 15 26 30 27 26	0.6 3.1 0.6 1.2	$\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$		
14	iP		19 18 32	20+		2	Samoa Is. (USCGS) iP to N and E W/A Az. = S 20 W - 2° Felt MM. 4-6 Through- out Upolu and Savai'i. Felt MM 5 at Pago - Pago. Felt about MM 6-7 at Lat. 14° 28'S Long. 173° 37'W on board M.V. "Matua"

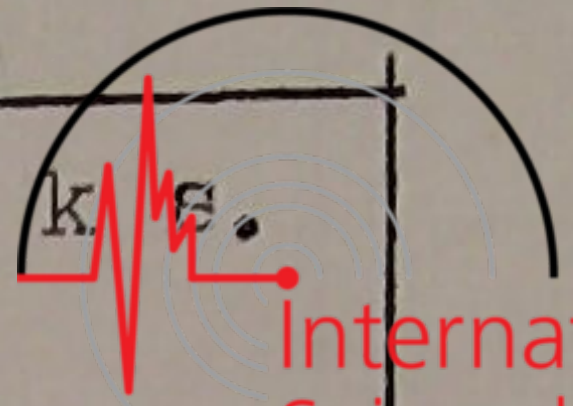
W/A traces disappear after about 3 secs.
Wiechert N-S trace ceases after about
10 secs.
Wiechert E-W not operating.

- 2 -
APRIL 1957 (Continue)

Date	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
							Apia Wiechert and E-W W/A thrown out of action, and pendulum clocks stopped. Practically no damage in Samoa.
			A large number of aftershocks then follow of which only those of Magnitude 4.6 and greater are here given.				
14	P eS		19 50 26 48	16			
14	eP eS		20 09 01 17	0.7 4			Probably readings should be resolved into two shocks thus.
14	P i(S) e	NW W	20 09 25 41 44	12 45			
16	P e S		01 07 19 08 01 03	0.8 2.6			
16	i(PcP) epP e e(PPP) e(S)	WX XW X X WX	04 15 21 17 22 19 27 20 24 24 40	1.3 1.0 0.7 0.8 0.8	2 3 3 2½ 7	80	Java (USCGS). i(PcP) to West and (South) epP to East and North. e(PPP) to (North)
16	iP S		10 19 06 25	18			iP to West and South. W/A Az. = S 35 W (or opposite)
16	iP i S		22 57 06 07 27	21			iP to E and N. W/A Az. = S 30 W (or opposite)
17	iP i iS eT		08 09 43 10 55 57 15 26	1.8 25 2½	¾	7½	Tonga Is. (USCGS)
18	eP S		01 44 22 42	26			
19	e(P) e	X XW	15 55 35 43	0.6 0.4	1 2	65	Fox Is. (USCGS)
19	eP? i(P) e e(S) eL	W XW X XW	22 30 15 16 32 39 06 46.2	1.5 1.8 0.8	2 2 4 20	66	Fox Is. (USCGS) i(P) to N and E
20	e eL	XW W	06 57 17 07 09	0.8	1½ 20	51	South Pacific (USCGS)
20	eP e e	XW W X	12 38 16 23 30	0.2 0.4 0.8	1 1½ 1	40¾	New Guinea (USCGS)

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APRIL 1957 (Continue)



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Date.	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
20	iP S		21 40 53 41 58	0.6 1.8			iP to N.
24	ePKP ₂ e	XW XW	19 30 06 10	0.5	2 1/2	151	Turkey(USCGS) PKP ₂ to North? and East? (USCGS)
25	ePKP ₂ e e	XW XW X	02 45 33 42 46 26	0.4 0.7 1.2	2 2 1	150	Turkey (USCGS)
25	eP e e	WX W X	10 25 17 32 42	0.3 0.3 0.5	2 2 1 1/2	54 1/4?	New Guinea?(USCGS)
27	eP? i(P) e?	W XW X	11 34 51 52 44 22	0.8 0.8	1 1/2-2 1	18 1/2	Loyalty Is. (USCGS) eP? to West i(P) to North and West.
28	P e S		14 38 57 39 32 58	2.2 1.7 10			
28	P S		15 03 14 34	17			
<p>Wood-Anderson records were absent during the following times:</p> <p>13^d 08 12 to 11 44 18^d 08 18 to 08 53 19^d 09 05 to 11 23 23^d 18 14 to 19 34 24^d 06 06 to 07 29 24^d 17 55 to 18 35 26^d 15 47 to 19 31 27^d 13 02 to 19 28 29^d 18 45 to 19 47</p>							
<p>In the Column "Component" the symbols X and W refer to the N-S and E-W Wood-Andersons seismograms, while N and E refer to the Wiechert horizontals.</p>							
<p>A.A. Thomson. Observer-in-Charge. Apia Observatory.</p>							

APIA PRELIMINARY SEISMIC BULLETIN.

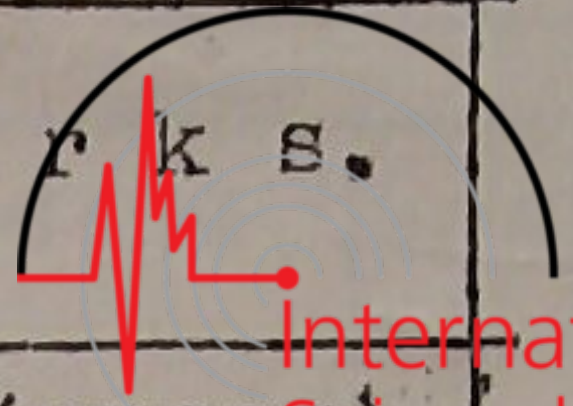
1957 MAY.

Date	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
2	e? e(L)	N	10 54 27 59		2 10	57	South Pacific (USCGS)
2	e	WX	11 49 53	0.7	2	66	Fox Is. (USCGS)
2	i(P)	WXN	21 46 27	0.8	2	67	Flores Sea (USCGS) i(P) to West.
4	e	WX	10 15 05	0.4	2	51½	New Guinea (USCGS)
6	iP S		11 38 54 39 53	2½ 15		5½	Tonga Is. (USCGS) iP to South.
8	eP i? e(L)	W X XWN	20 11 19 12 11 13.0	0.4 0.8	2 3 15		Fiji Is. region near 15 S 180° h=N Coda for ½ hr.
12	eP S		01 18 52 19 58	1.4 5½			
12	iP S		05 34 15 42	5½ 17			iP to South and West
12	iP		11 30 19 38	2½ 14			iP to South.
12	eP? e	WX XW	11 41 14 30	0.6	1½ 1½-2	79	Java (USCGS)
12	iP S		17 48 05 24	2½ 18			iP to South.
12	iP S		23 30 01 19	5 19			iP to S and W W/A Az. = S 37 W (or opposite)
15	iP S		10 29 11 34	5 10			iP to N and E. W/A Az. = S 18 W (or opposite)
15	iP S		23 34 45 35 07	7 18			Felt Apia MM. 3 iP to N and E W/A Az. = S 25 W (or opposite)
<p>Owing to Building alterations the Wiechert instruments are dismantled on May 23rd. The Wood-Andersons are shifted to a temporary location, later to be taken out of service in Samoa. The W/A records are absent from 17^d 02 41½ until 18^d 05 25. The new orientations are roughly NE-SW and NW-SE, but the latter instrument is usually not recording owing to severe tilt.</p>							
21	P pP S e e(L)		01 21 32 22 02 29 11 31 19 36	0.6 0.8	2 2 6 27 187	56	Marianas Is. (USCGS)
22	e		13 40 28	0.3	1-2	64	Aleutian Is. (USCGS)

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MAY 1957 (Continue)

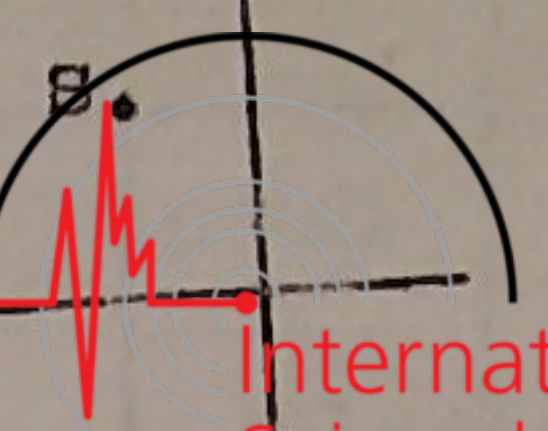
Date.	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.															
24	F S		12 49 47 50 07	43			Samoa Is. (USCGS)															
26	ePKP ₂ ? e e		06 53 15 24 55 02	0.4 0.4	1 2 2		Turkey (USCGS)															
	1P S		00 19 36 56	14 59			Samoa Is. (USCGS) 1P to SW															
	e? e		06 07 56 08 14	0.5	1																	
28	eP		23 23 46	0.6	2	19 2/3	New Hebrides (USCGS) eP to SW?															
29	P S		02 31 55 32 15	18			P to SW															
30	P S eT		00 20 41 21 55 27 55	0.6 1.5		7	Tonga Is. (USCGS)															
30	P S eT		19 42 43 43 58 49 54	0.5 0.7																		
30	eP S		21 00 36 02 36	0.4 1.2		10 2/3	Fiji Is. (USCGS)															
30	eP b oS eT		22 59 05 15 23 00 21 06 30	0.2 0.4 0.6																		
31	eP e i(S)		20 06 00 07 09 14	0.4 0.5 0.9																		
<p>Until May 18th:- In the column "Component", the symbols X and W refer to the N-S and E-W Wood-Andersons, while N and E refer to the Wiechert horizontals. The constants of the Wood-Anderson seismographs were:-</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>X</th> <th>W</th> </tr> </thead> <tbody> <tr> <td>T</td> <td>0.75 sec.</td> <td>0.80 sec.</td> </tr> <tr> <td>h</td> <td>0.21</td> <td>0.65</td> </tr> <tr> <td>V</td> <td>2300</td> <td>2100</td> </tr> <tr> <td>Orientation</td> <td>001-181</td> <td>091-271</td> </tr> </tbody> </table>									X	W	T	0.75 sec.	0.80 sec.	h	0.21	0.65	V	2300	2100	Orientation	001-181	091-271
	X	W																				
T	0.75 sec.	0.80 sec.																				
h	0.21	0.65																				
V	2300	2100																				
Orientation	001-181	091-271																				
<p>After May 18th:- In the column "Component", the symbols X and W refer to the NW-SE and NE-SW Wood-Andersons. The Wiechert seismographs cease recording after May 23rd.</p>																						
<p>A.A. Thomson. Observer-in-Charge. Apia Observatory.</p>																						



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APIA PRELIMINARY SEISMIC BULLETIN.

1957 JUNE.



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Date.	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
2	P eS		02 19 50 20 45	0.5 1.4			
2	P S		23 52 37 53 11	1.3 13			
4	P		11 19(48)	1.0	2	22	Santa Cruz Is. (USCGS)eP to NE Time may be in error by two or three secs. say, due to failures in time marking chro- nometer. Times should be reliable to this degree in the following shocks.
4	iP e eS		17 07(03) 08(32) (34)	3.7 5.7		7 2/3	Fiji Is. 18 S 178 1/2 W 17 05-08 h= 550± iP to SW.
4	eP S		20 00(44) 01(49)	1.5		6	Tonga Is. (USCGS)
4	eP S		22 35(06) (36)	16			
7	P S		20 55 47 57 43	0.4 0.3	1/2 1		Fiji Is. Near 20 S 179 E 0= 20 53.3 h= 550±
8	eP S		03 33 40 34 16	6			
8	iP eS		17 13 01 35	15 53±			Tonga Is. region iP to NE Felt Apia.
10	eP e		00 45 03 11	0.3 0.8	1/2 1		
10	eP		01 11 06	1.1	2	70	Sumbawa Is. (USCGS)
11	eP e e(S) eL e(T)		14 53 43 53 56 48 53 58 15 07 10	0.2 0.7 0.9 1.3 0.3	1/2 2 1/2 0.9 30 1/2	17	Kermadec Is. (USCGS)
11	e		19 01 07	0.5	3/4	74	Philippines (USCGS)
13	e e(S)		10 51 28 11 00.2	0.5	2 16	65	Aleutian Is. (USCGS)
16	eP S (T)		12 04 23 05 09 08 59	7			

- 2 -
JUNE 1957 (Continue)

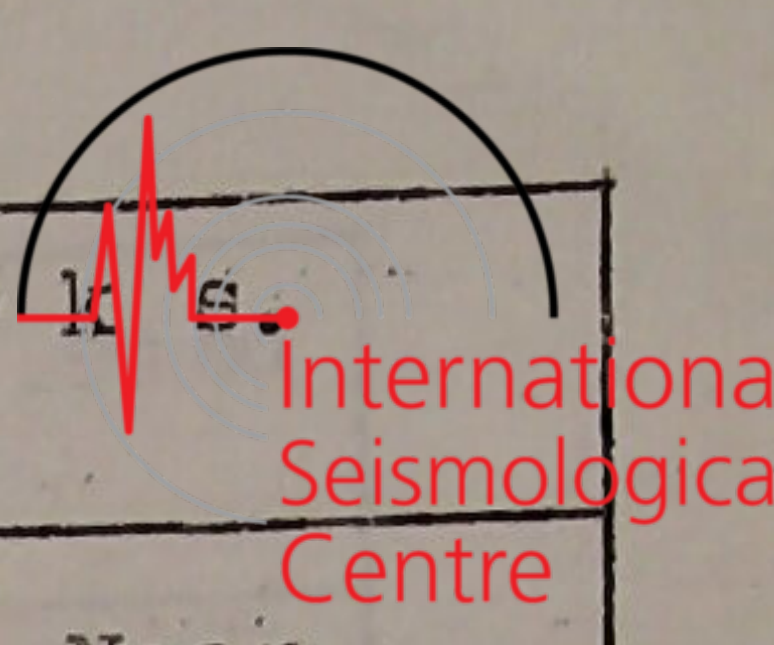
Date	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
17	iP S		06 17 21 40	24 55±		2	Samoa Is. (USCGS) iP to NE and NW. Felt Apia MM. 3.
17	e(P) i(S)		16 36 00 37 36	0.2 0.6	$\frac{1}{2}$ 1		
18	eP? e eL		18 00 41 46 06 08	0.1 2.2 0.2	2 26	20½	Loyalty Is. (USCGS) Coda for ½ hr.
21	P eS		Record Absent 18 ^d 20 34 till 19 ^d 20 13 21 40 11 41 07	1.2 2.0			
22	eP e e(S) eL e?	X W WX	23 59 32 46 24 07 09 13 35 39	0.4	2-4 3 20 25 4		New Guinea (USCGS) eP to SW.
23	P e(S)		03 34 35 36 14	1.2 0.7	2/3 2/3		
23	iP S		03 38 51 39 11	9 42			Samoa Is. (USCGS) iP to SW Felt Apia.
24	iP iS		01 38 46 39 18	6 12			
24	e(P)		09 20 10	0.5	1-2		
26	iP S		15 23 22 45	10 25±			
27	eL		00 50		20	92	U. S. S. R. (USCGS)
27	e e		12 54 23 31	0.3	$\frac{1}{2}$ $1\frac{1}{2}$	18½	Loyalty Is. (USCGS)
30	e(P)		12 59 13	0.3	$\frac{1}{2}$		
<p>In the Column "Component" the symbols W and X refer to the NE-SW and NW-SE Wood-Andersons, but usually, only the W instrument is operating.</p> <p align="right">A. A. Thomson. Observer-in-Charge. Apia Observatory.</p>							

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APIA PRELIMINARY SEISMIC BULLETIN.

1957 JULY.

Date.	Phase.	Comp.	Time	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
1	eP e e(S)		02 24 44 26 20 24	0.5 2.0			Tonga Is. Near 22½ S 176 W 0=02 22.5
3	P i e(S) e e		06 05 23 07 31 35 37 12 01	1.4 0.4 0.5 1.0	½ 1 ½ 1		Possibly Fiji region
3	e(P)		08 26 53 28 31	0.2 0.3			
5	P S		06 26 19 39	5 26			
5	eP eS		10 37 41 39 23	0.5			
5	e e		12 38 01 39 23	0.3 0.3	1	16	Kermadec Is. (USCGS)
7	e		16 17 56	0.5	2	32½	Solomon Is. (USCGS) (P) ½ mu, 2 sec.
9	iP S		14 18 31 19 24	3 4			
13	iP (S)		09 32 36 56	10± 57±		1¾	Samoa Is. (USCGS.) iP to SW Felt Apia.
13	iP e S		13 59 13 20 34	2 5 30		1¾	Samoa Is. (USCGS.) iP to SW.
13	P e S		14 24 52 57 25 02	2 5 30			
14	P e e iS i eT		06 27 09 26 29 32 34 37 37 18	3.0 4.5 2 5 13	½ 1½ ½	14½	Tongs Is. (USCGS.) P to NE and NW. P 1½mu, ½ sec. S 6½mu, ½ sec.
14	eP i i(S) eT		08 14 40 17 30 33 25 18	0.8 2.5M	2 2/3	17	Kermadec Is. (USCGS.) P 3 mu, 2 sec. (S) 1½ mu, 2/3 sec.
14	eP i e e(S) eT		09 44 09 34 45 16 32 50 52	0.9 0.5 0.8 1.3	½	6¾	Tonga Is. (USCGS.) S ½ mu, ½ sec.
17	i(P) e(S) e e		11 15 04 19 05 32 40	3.0 0.5 0.5 0.4	2 6 10 8	21	Santa Cruz Is. (USCGS.) i(P) to NE and SE (P) 11mu, 2 sec. (S) 17 mu, 6 sec.



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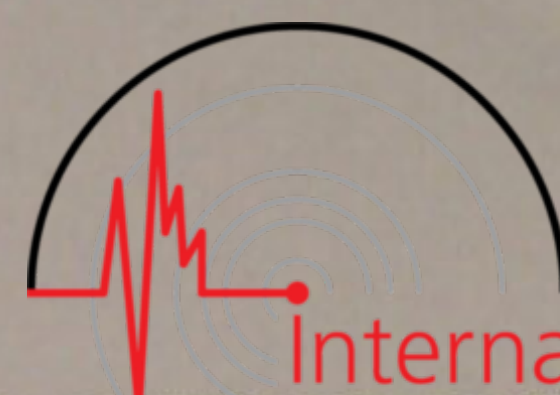
JULY 1957 (Continued.)



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Date.	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks
20	P e S		15 40 25 41 22 28	3½ 10		6	Tonga Is. Near 19S 175W O=15 39.0 h=100 km ±
22	eP e(S)		06 21 34 25 03	0.7 0.7	2 ½	20½	Kermadec Is. (USCGS.) P 2½mu, 2 sec. (S) ½mu, ½ sec.
22	eP e(S)		06 26 33 30 00	0.5 0.4	2/3 2/3	21	Kermadec Is. (USCGS.)
21	eP e e e		19 40 23 42 29 36 53 35	0.5	½	14½	Kermadec Is. (USCGS.)
23	eP		06 25 07	0.6	2	18 2/3	Loyalty Is. (USCGS.) P 2½mu, 2sec.
23	e(P) e(S)		13 33 07 35 28	0.5	½	13½	Kermadec Is. (USCGS.)
24	eP		10 01 21	0.3	2	18½	New Hebrides (USCGS.) P 1mu, 2sec.
24	eP i e e		11 06 51 56 13.0 14 14	0.8 0.1 0.1	2 9 9	19½	New Hebrides (USCGS.) P 3mu, 2sec.
24	eP S		19 57 51 58 33	8			
25	P S		10 41 00 52	0.6			
25	P eS		11 08 48 10 19	0.5			
26	eP		06 54 44	0.2	2	22½	New Zealand (USCGS.) P 1mu, 2sec.
27	P i i(S) i		12 17 55 18 27 29 32	1.2 1.0 2.5 5			
27	e(P) e e		13 41 54 42 22 44 18	0.3 0.4 0.3	1/2 1/2 1/2		
27	eP eS e e		14 47 12 48 25 51 25 54 12	0.5 0.8 0.2 0.6	1/2 1/2 1/2 2/3	6¾	Tonga Is. (USCGS.)
27	P eS		20 09 12 40	4.2 13			

JULY 1957 (Continued.)



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Date.	Phase.	Comp.	Time.	W/A Trace Amp.mm.	Period Secs.	Dist. Degs.	Remarks.
28	e e e eL		08 52 15 48 54 14 09 16 26	0.2 0.4 0.4	2 2 2½ 25	78	Maxico (USCGS.) (P) ¾ mu, 2sec.
28	P e S		13 15 37 17 23 25	0.6 0.4 0.7			
28	e e		19 46 36 49 47	0.2 0.1	2/3 ½		

The recording instruments are two short period Wood-Anderson seismographs W and X, oriented approximately NE and SE respectively.

Owing to tilt, the X component is frequently not recording.

The constants of W are: T = 0.75

V = 1800

Damping ratio 15:1

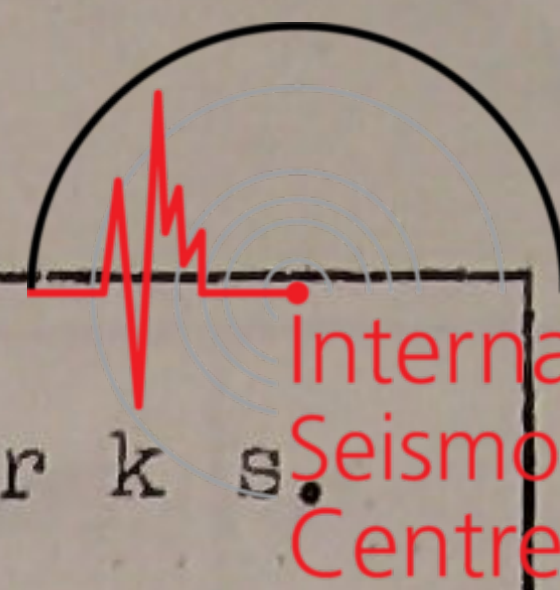
The amplitudes and ground motions refer to the NE-SW component.

Deflection time-marks are controlled by a Synchronome clock, which is corrected daily by WWVH time signals.

A.A. Thomson,
Observer-in-Charge,
Apia Observatory.

APIA PRELIMINARY SEISMIC BULLETIN.

1957 AUGUST.



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Date.	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
3	e(P) e(S)		08 19 13 21 48	0.2 0.2	1½ 1	15	Kermadec Is. (USCGS.)
4	iP S		23 55 46 56 04	17 45 +			
5	P S		07 49 48 50 09	5 27			
5	iP S		12 58 05 25	12 35			
5	e(P) e(S)		21 35 43 38 51	0.2 0.1	1 2/3		Kermadec Is. (USCGS.)
7	eP e eS		19 42 47 44 18 20	2.0 3.5	½ 1	8	Fiji Is. (USCGS.) P 1mu, ½sec. S 4mu, 1sec.
8	e(P) eS		14 54 45 55 46	0.3 0.4			
10	eP eS		02 21 08 23 01	0.3 0.7	½ 1½	10½	Fiji Is. (USCGS.) P 0.2mu, ½sec. S 1mu, 1½sec.
10	eP? e(P) e S e eT		03 56 39 41 59 57 19 59 59 04 00 04	0.8 1.1 6	2/3 ½	3¼	Tongs Is. (USCGS.) Coda for ¼ hr.
10	iP S		09 44 07 28	19 20			Samoa Is. (USCGS.)
11	P S		05 33 20 34 13	0.9 3.8			
11	eP? e?		13 44 34 47 37			18½	Kermadec Is. (USCGS.)
11	e		21 43 10 48.5	0.5 0.2	1½ 10	19	1mu, 1½sec. Beginning lost while changing records. New Hebrides (USCGS.)
11	eP eS		22 04 52 06 15	0.4 0.6			
12	iP S		10 25 59 26 41	11 18			
13	eP eS		07 03 02 43	0.7			
13	eP eS e		08 00 58 01 36 04 29	0.4 1.0 0.5			
13	P S		10 02 25 03 07	0.7 2.0			

AUGUST 1957 (Continued.)



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Date	Phase	Comp.	Time	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks
14	e(P) S eT		18 28 (46) 30 (08) 34 (33)	1.1 7 1/2	1/2 1/2	8 1/2	Tongs Is. (USCGS.) Time marks failed, but times should be reliable to say 2secs or better. P 1/2 mu, 1/2 sec. S 4 mu, 1/2 sec.
14	eP e. eS		19 55 (33) 57 (13) (18)	0.6 1.1	1/2 1/2		Ditto.
14	P S		23 09 17 50	2 1/2 28			
16	eP eS		14 53 27 55 45	0.2 0.3	1/2 1/2		
17	e(L) M		00 07 09		8 7	72	Pacific Ocean (USCGS)
17	P		18 34 30	0.5	1		
19	eP eS eT		07 49 03 40 52 35	0.5 0.4	1/6 1		Weak Coda.
19	P eS eT e		10 47 45 48 24 51 17 33	0.3 1.2 0.9 1.3	1/3 1/6 1 4		Coda for 10mins.
20	eL	W	12 14.1	0.3	20	27	Solomon Is. (USCGS) L 100mu, 20sec.
20	eP eS eT		22 58 27 59 07 23 02 02	0.4 1.6 0.6			
21	P S		17 39 13 36	8 50		2	Samoa Is. (USCGS.)
22	e		16 48 19	0.3	1		New Hebrides (USCGS) (P) 1/4 mu, 1sec.
23	P eS		18 50 50 51 32	1.0 16			
24	e e(L)		01 03 26 05.6	0.2	2/3 10		
26	e(P) e(S)		02 10 18 11 33	0.3 0.3			
27	eP i eS		20 59 37 40 21 02 09	0.2 0.8 0.4	0.4 0.4 1/2	15	Fiji (USCGS.) P 1/2 mu, 1/2 sec. S 1/4 mu, 1/2 sec.

AUGUST 1957 (Continued.)



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Date.	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
28	eP e eL		08 22 42 25 08 26½	0.2 0.6	$\frac{1}{2}$ $\frac{1}{2}$ 10	15	Kermadec Is. (USCGS) P 0.1mu, $\frac{1}{2}$ sec. (S) $\frac{1}{4}$ mu, $\frac{1}{2}$ sec.
29	e(P) e e S		14 05 20 29 07 39 41	0.1 1.4 0.3 0.5	0.4 1 $\frac{1}{2}$		P $\frac{3}{4}$ mu, $\frac{1}{2}$ sec. S $\frac{1}{4}$ mu, $\frac{1}{2}$ sec.

The recording instruments are two short period Wood-Anderson seismographs W and X, oriented approximately NE and SE respectively. Owing to tilt, the X component is frequently not recording.

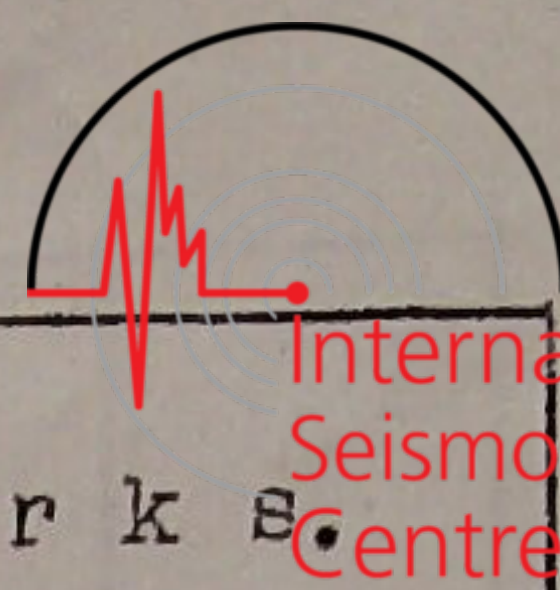
The constants of W are: T = 0.75
V = 1800
Damping ratio 15:1

The amplitudes and ground motions refer to the NE-SW component. Deflection time-marks are controlled by a Synchronome clock, which is corrected daily by WWVH time signals.

A.A. Thomson,
Observer-in-Charge,
Apia Observatory.

APIA PRELIMINARY SEISMIC BULLETIN.

1957 SEPTEMBER.



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Date.	Phase.	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
2	eP e	WX W	05 42 01 44 44	0.4 0.3	1½ 2		Fiji Is. region O = 05 38.1 P 1mu, 1½sec.
2	P e(S)		09 46 58 47 18	15 52		2	Samoa Is. (USCGS.) P to NE Felt Apia MM 2. Coda for ½hr.
2	eS		09 51 52	2.0			Aftershock.
2	eP eS		09 53 19 39	7½ 27			Aftershock.
3	P S	WX XW	14 42 54 44 45	0.3 0.3	0.4 ½	10	Fiji Is. region Near 20S 180° O = 14 40.5 h = 600 km ± P 0.2mu, ½sec. S 0.2mu, ½sec.
6	eP eS		00 26 10 27 17	0.6 0.6			
9	eP e e(S) e(T)		09 01 43 44 02 15 03.0 05 38	0.6 0.7 0.8	2½ 0.4 2 9	4 2/3	Fiji Is. region (USCGS.) P to NE P 0.3mu, ½sec. Coda for ½hr.
9	P S		13 06 12 33	2½ 11			
11	P e i(S)		13 43 40 45 08 12	1.6 0.8 1.8	0.4 0.4	8	Fiji Is. (USCGS) P to SW and NW P 1mu, ½sec. S 1mu, ½sec.
11	iP S		23 22 46 23 08	22 55+		2¼	Samoa Is. (USCGS.) P to NE and NW Felt Apia.
19	iP S		00 54 58 55 18	15 40		2	Samoa Is. 15S 173½W. O = 00 54.4 P to NE.
19	P S		17 03 32 04 36	0.8 14	0.4 0.4	6½	Tonga Is. (USCGS.) P to NE and NW P ½mu, ½sec. S 8mu, ½sec.
20	iP iS		06 33 14 52	3½ 27			P to NE and NW
20	P eS		18 48 12 49 27	0.3 0.8	0.4 1		Tonga Is. Near 19S 176 W O = 18 46.6 P ½mu, ½sec. S 1mu, 1sec.

SEPTEMBER 1957 (Continued)



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Date.	Phase	Comp.	Time.	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
23	P S		18 44 49 45 14	20		2½	Samoa Is. (USCGS.)
24	eP S		01 45 14 39	12			Samoa Is. region O = 01 44.7
24	e(PcP) e e(S) e LR MR		08 32 02 36.3 40.4 41.2 51 58	0.4 0.1 0.1 0.3	2 3 12 15 22 18	63	Philippine Is. (USCGS) (PcP) 1½mu, 2sec. (S) 15mu, 12sec. MR 100mu, 18 sec.
26	eP		11 30 06	0.2	1½		P ½mu, 1½sec.
28	eP		00 37 32	0.3	2/3	66	Japan (USCGS) P 0.2mu, 2/3 sec.
28	iP e iS e		14 22 12 23 56 59 34 46	23 9 40 0.5	½ 1 1	9	Fiji Is. (USCGS) P to NE. S to SW P 12mu, ½sec. S 40mu, 1sec. Coda for an hour. X record absent.
28	P e S		14 46 15 47 55 58	0.6 3.2	½ ½	9¼	Fiji Is. (USCGS.) P ½mu, ½sec. S 2mu, ½sec.
29	P eS		07 08 20 10 02	1.3 0.5	2/3 ½	8½	Fiji Is. (USCGS.) P 1mu, 2/3 sec. S ¼mu, ½sec.
29	eP i eS eScS		08 16 26 33 18 53 27 22	1.7 4½ 1.7 0.4	0.4 0.4 0.5 2.	14½	Fiji Is. (USCGS.) O = 08 13 22 P to NE. P Max 2½mu, ½sec. S 1mu, ½sec. ScS 1½mu, 2sec.
29	eP e eS		13 40 28 42 16 19	0.3 0.5	½ ½	10½	Fiji Is. region 22½S 178W. O = 13 38.1 h = 600km ± P 0.2mu, ½ S 0.3mu, ½

The recording instruments are two short period Wood-Anderson seismographs W and X, oriented approximately NE and SE respectively.

The constants of W are T = 0.75
V = 1800
Damping ratio 15:1

The constants of X are T = 0.72
V = 1900
Damping ratio 20:1

The amplitudes and ground motions refer in general to the component recording the largest values.

Deflection time-marks are controlled by a Synchronome clock which is corrected daily by WWVH time signals.

A.A. Thomson,
Observer-in-Charge.
Apia Observatory.

APIA PRELIMINARY SEISMIC BULLETIN.

APIA

OCTOBER 1957.



International
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Date.	Phase.	Comp.	Time	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks.
3	P eS	W WX	13 46 33 48 08	0.2 0.4		8.3	Fiji Is. (BCIS)
4	P S eT		01 03 17 05 00 09 30	0.5 3 0.5		9.5	Fiji Is. region. (USCGS)
4	P S T		16 47 24 48 00 51 18	0.9 3.4 0.5			South of Tonga Is. (BCIS)
4	iP S	W W	20 47 46 48 06	12 20			Local iP to NE and NW Deep.
7	P S	W	03 55 43 56 59	0.7	$\frac{1}{2}$	7.5	Tonga Is. (USCGS) S $\frac{1}{2}$ mu, $\frac{1}{2}$ sec.
7	eP e(S) e	W W WX	16 51 04 52 50 56	0.6 0.6 0.7	$\frac{1}{2}$ $\frac{1}{3}$ 2	9.3	Fiji Is. (USCGS) P 0.3 mu, $\frac{1}{2}$ sec. S 0.3 mu, $\frac{1}{2}$ sec. e 3 mu, 2 sec.
10	iP eS	W X	03 07 06 44	5 2.5			Local iP to NE Deep.
10	P		03 51 52	0.3	1	10.4	South of Fiji Is. (USCGS) P $\frac{1}{2}$ mu, 1 sec.
10	iP e S	W WX	18 47 00 48 53 56	1.3 3.0	$\frac{1}{3}$ $\frac{1}{3}$	11.4	Fiji Is. (USCGS) iP to NE P 0.7 mu, $\frac{1}{3}$ sec. S 1.7 mu, $\frac{1}{3}$ sec.
14	P e eS	W W	14 13 47 15 54 16 00	1.0 1.2	$\frac{1}{2}$ $\frac{1}{2}$		South of Tonga Is. (BCIS) P $\frac{1}{2}$ mu, 1 sec. S $\frac{1}{2}$ mu, $\frac{1}{2}$ sec.
15	eP e	W W	04 20 46 22 27	0.2 0.9	1 2/3		Tonga Is. (BCIS) P $\frac{1}{4}$ mu, 1 sec. e $\frac{1}{2}$ mu, 2/3 sec.

OCTOBER 1957 (Continued)



Date.	Phase	Comp.	Time	W/A Trace	Amplitude (mm)	Period (Secs.)	Dist. (Degs.)	Remarks
21	eP e	W WX	00 22 05 20	0.3 0.4	2 2	20.9	Santa Cruz Is. (USCGS) P 1 mu, 2 sec. e 1 mu, 2 sec.	
24	eP e(PP) e(S)	WX WX W	00 22 15 44 26 30	0.4 0.3 0.2	2 1 1/2 8	20.1	New Hebrides Is. (USCGS) P 1 1/2 mu, 2 sec. (PP) 0.4 mu, 1 1/2 sec. (S) 14 mu, 8 sec.	
24	eP iS e(T)	W WX	09 09 59 11 18 16 21	1.1 5 0.2	2 1 1/2	9.5	Fiji Is. (USCGS) iS to NE and NW P 4 1/2 mu, 2 sec. S 6 mu, 1 sec.	
26	P iS	WX WX	iS-P = 1 ^m 4 1/4 ^s	2.5 10.5	1 1/2	9.0	Fiji Is. (USCGS) P to SW and NW S to NE and SE P 3 mu, 1 sec. S 5 1/2 mu, 1/2 sec. Power failure & clock Stoppage.	
26	e(P)	W	-----	0.3	1 1/2		Borneo (USCGS) (P) 1/2 mu, 1 1/2 sec. clock stoppage.	

The recording instruments are two short period Wood-Anderson seismographs W and X, oriented approximately NE and SE respectively.

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V = 1800
Damping ratio 15:1

The constants of X are T = 0.72
V = 1900
Damping ratio 20:1

The amplitudes and ground motions refer in general to the component recording the largest values.

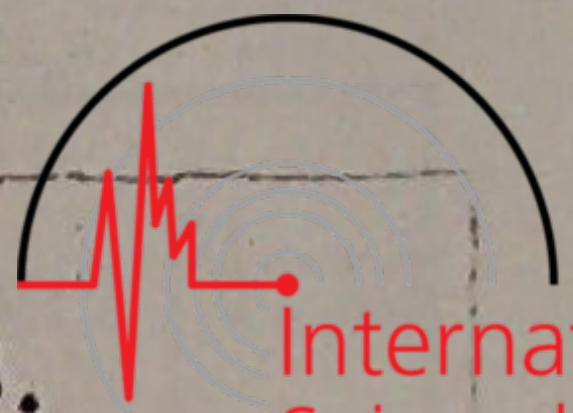
Deflection time-marks are controlled by a Synchronome clock which is corrected daily against WWVH time signals.

J.G. Keys,
Observer-in-Charge,
Apia Observatory.

APIA PRELIMINARY SEISMIC BULLETIN.

APIA

NOVEMBER 1957



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DATE	Phase	Comp.	Time	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	REMARKS.
2	iP ePP ePPP S ePcS	WX W X WX WX	18 35 13 37 44 39 10 43 09	2.2 2.5 1.2 0.7 0.3	2 2 2 3 6	21.1	New Hebrides Is. (USCGS) P to NE and NW P 9 mu, 2 sec. S 6 mu, 3 sec.
5	iP	W	09 58 18	0.6	1	18.7	New Hebrides Is. region (USCGS) P to SW P 1 mu, 1 sec.
7	P S	X X	14 35 12 36 02	0.8 4.5	$\frac{1}{2}$ $\frac{1}{2}$	4.3ca	
7	e(P)	X	16 01 03	0.5	1		
8.	eP eS	W WX	10 02 32 03 58	0.2 0.2	$\frac{1}{2}$ $\frac{1}{2}$	7.6ca	Tonga Is. region
10	eP ePP eL	WX W W	02 42 56 43 30 51	0.3 0.4 0.2	2 2 18	33	Solomon Is. (USCGS)
10	P eS e(T)	WX	05 30 49 32 43 42	0.4 0.5 0.3	0.4 1 1	11.3	Tonga Is. (USCGS) P to NE Weak coda 10 sec. period Deep.
12	P S	WX WX	00 22 57 24 54	1.4 1.4	$\frac{1}{2}$ 1	11.3	Tonga Is. region (BCIS) P to SW P 0.7 mu, $\frac{1}{2}$ sec. S 1.7 mu, 1 sec.
12	P S	WX WX	17 04 27 06 13	0.5 0.5	$\frac{1}{2}$ $\frac{1}{2}$	10.3	Fiji Is. region (BCIS)

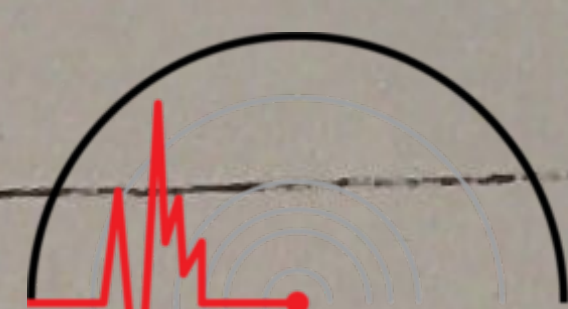
NOVEMBER 1957 (Continued)



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DATE	Phase.	Comp.	Time	W/A Trace Amp. mm.	Period Secs.	Dist Degr.	REMARKS
12	eP e i	W W W	18 25 (17) 27 (55) 28 15	0.5 0.3 0.3	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	20.8	South of Kermadec Is. (BCIS) P 0.2 mu, $\frac{1}{2}$ sec.
13	P ePP e eS e(PcP) e i(sScS) (T) max	WX WX W WX W W WX	17 27 15 32 28 24 30 56 30 59 31 04 39 16 48	0.4 2.0 1.0 0.7 0.8 1.0 0.8 0.5	2 2 2 $\frac{1}{2}$ $\frac{2}{3}$ $\frac{1}{2}$ 2 1	20.3	Kermadec Is. region (USCGS) P $1\frac{1}{2}$ mu, 2 sec. PP 8 mu, 2 sec. e 4 mu, 2 sec. S $\frac{1}{2}$ mu, $\frac{2}{3}$ sec. e(PcP) $\frac{1}{2}$ mu, $\frac{1}{2}$ sec. i(ScS) 3 mu, 2 sec (ScS) to NW Coda for $\frac{1}{2}$ hr.
14	iP S	WX WX	16 35 27 36 05	$4\frac{1}{2}$ 20	$\frac{1}{2}$ $\frac{1}{2}$		North of Tonga Is. (BCIS) iP to NE and NW
18	eP eS	W W	14 59 39 15 01 (42)	0.3 0.5	$\frac{1}{2}$ $\frac{1}{2}$	11.5ca	South of Fiji Is. (BCIS)
21	e(PP)	W	14 40 (08)	0.4	$\frac{1}{2}$	21.5	Kermadec Is. region (USCGS)
24	P eS	W W	03 22 41 24 12	0.5 0.3	$\frac{1}{2}$ $\frac{1}{2}$	8.0ca	
25	eP	W	22 46 36	0.4	1.0	72.7 ⁺	Near East coast of Borneo (USCGS)
No records from 26 ^d 21 ^h to 27 ^d 10 ^h , and from 28 ^d 10 ^h to 29 ^d 01 ^h - re-installation of seismographs.							
29	P iS	NE NE	21 44 36 45 26	2.0 14	$\frac{1}{2}$		Tonga Is. region (BCIS) iS to S and W

- 3 -
NOVEMBER 1957 (Continued)



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DATE	Phase.	Comp.	Time	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	REMARKS.
50	eP iS	NE NE	17 58 31 58 50	2.5 15	$\frac{1}{2}$	1.5ca	Samoa Is.

The recording instruments are two short period Wood-Anderson seismographs.

Up to November 26^d they are designated W and X, oriented approximately NE and SW respectively.

From November 28^d onwards they are designated N and E, oriented approximately NS and EW.

Instrumental constants:

W (to 26.11.57)

T = 0.75

V = 1800

Damping ratio 15:1

X (to 26.11.57)

T = 0.72

V = 1900

Damping ratio 20:1

N (from 28.11.57)

T = 0.80

V = 2050 ± 100

Damping ratio 15:1

E (from 28.11.57)

T = 0.80

V = 2050 ± 100

Damping ratio 15:1

The amplitudes and ground motions refer to the component recording the largest values.

Deflection time marks are controlled by a Synchronome clock which is corrected daily against WWVH time signals.

J.G. Keys,
Observer-in-Charge,
Apia Observatory.

PRELIMINARY SEISMIC BULLETIN.

AFIA, WESTERN SAMOA

DECEMBER 1957



Date.	Phase.	Comp.	Time	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks	
3	eP S	NE NE	17 59 15 18 00 20	0.5 3.0	$\frac{1}{2}$ $\frac{1}{2}$	5.5ca		
4	eP ePPP eS eSS eL _Q eL _R M ₂	E NE E N NE N N	03 52 05 55 48 04 02 16 09 08 19.1 22 30	0.5 0.5 0.6 0.5 1.2 1.5 1.2	2 $1\frac{1}{3}$ 12 12 40 25 22	98.8	Outer Mongolia (USCGS) eP $1\frac{1}{2}$ mu, 2 sec. eS 70 mu, 12 sec. eL _Q 1500 mu, 40sec M ₂ 400 mu, 22 sec.	
			Coda for 3 hour.					
4	eP eS	E E	07 20 (14) 22 06	0.5 0.6	$\frac{1}{2}$ $\frac{1}{2}$		Tonga Is. region (USCGS)	
5	eP iS	NE NE	10 36 28 38 12	1.0 0.8	$\frac{1}{2}$ $\frac{1}{2}$		South of Tonga Is. (BCIS) iS to W.	
6	eP iS!		21 16 39 18 21	1.0 2.0	$\frac{2}{3}$ $\frac{1}{2}$		Tonga Is. (BCIS) iS to S.	
10	eP ePPP iPPP eL _Q	NE E E NE	14 42 (52) 44 12 44 44 51.3	0.7 0.7 0.8 0.6	$1\frac{1}{2}$ 2 2 20	34	Solomon Is. (USCGS)	
12	eiP iS	NE NE	02 07 37 08 00	2.5 15.5	$\frac{1}{3}$ $\frac{2}{3}$		Samoa Is. region iS to N.	
12	iP iS	NE NE	02 13 14 13 34	3.5 19.0	$\frac{1}{3}$ $\frac{2}{3}$		Samoa Is. region iP to N iS to S	
12	iP! iPP iPPP	NE N N	18 43 07 33 46	2.5 0.9 0.8	2 2 2	20.5	New Hebrides Is. (USCGS)	

PRELIMINARY SEISMIC BULLETIN.

APIA, WESTERN SAMOA.

DECEMBER 1957.
(continued)



Date.	Phase.	Comp.	Time	W/A Trace Amp. mm.	Period Secs.	Dist. Degs.	Remarks
13	iP eS	NE NE	17 30 55 31 16	24.0 38.5	$\frac{1}{2}$ $\frac{1}{2}$	2.0	Samoa Is. (USCGS) iP to N and E 7.0 mu, $\frac{1}{2}$ sec.
No record from 15d 20h 10m to 16d 19h 40m							
17	iP iPP iPPP iPcP iS eL	NE N E E E NE	13 54 57 55 18 30 58 50 59 11 14 00.2	20.5 11.0 12.0 3.5 7.5 2.2	$2\frac{1}{2}$ 2 3 5 12 16		
				Code for 1 hr.			
23	eP eS	NE NE	23 38 54 39 10	3.5 12.5	$\frac{1}{3}$ $\frac{1}{3}$		Samoa Is. region.
25	eP eS	N N	12 42 44 45 06	0.8 1.1	$\frac{1}{2}$ $\frac{1}{2}$	13ca	South of Fiji Is.
26	eP eS	N N	12 13 42 17 (02)	0.5 0.8	$\frac{1}{2}$ $\frac{2}{3}$	19 $\frac{1}{2}$	Kermadec Is. (USCGS)
28	iPn P eiS	N E N	19 02 04 14 35	14.0 35± 44±	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2.0	Tonga Is. (USCGS)
				Code for $\frac{1}{2}$ hour.			
31	eP	NE	14 35 24	0.7	2	36.7	Off coast of South Island, New Zealand (USCGS)