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THE AUSTRALIAN NATIONAL UNIVERSITY
DEPARTMENT OF GEOPHYSICS
CANBERRA, A.C.T., AUSTRALIA

Monthly Seismological Bulletin

January, 1960

Latitude: 35° 19' 15" S. Longitude: 148° 59' 55" E. Height: 650 M.

Instruments: three-component Benioff variable reluctance seismographs

T_g = 0.25 sec. (VNE)
T_g = 16 sec. (V_1)
T_g = 70 sec. (N_1E_1)

Abbreviations: R = rarefaction; C = compression; 0 = origin.

No.	Date	Time	Phase		Remarks
1	Jan. 1	06 06 50.5	eP	VN	0: 05 57 26 (USCGS)
		07 00.0	ipP	V	
2	2	04 46 51.0	eP	N	
		51.5	iP	V	R
3	2	05 17 22.5	iP	V	C 0: 05 06 54 (USCGS)
		31.0	e	E	
		56.0	i	V	
		18 03.5	iPcP	V	
		19 48.5	ePP	V	
4	2	08 07 50.5	iP	VNE	R
5	2	08 40 05.0	iP	V	R 0: 08 27 14 (USCGS)
		05.5	iP	N	
		09.5	iPcP	V	
6	2	09 31 30.0	iP	VN	C
7	2	12 34 40.0	iP	V	R 0: 12 21 51 (USCGS)
		45 18.0	iS	E_1	
		13 04.3	eL	V_1	
8	2	16 13 19.0	eP	V	
		19.5	iP	N	
9	2	21 29 17.0	iP	V	C 0: 21 22 51 (USCGS)
10	2	23 19 02.5	iP	V	C
11	3	20 37 33.5	i(PKP)	V	C
12	3	21 32 13.5	iP	VN	C 0: 21 20 13 (USCGS) h: 150 km.
13	3	21 34 40.5	iP	VN	R
14	4	04 12 32.5	iP	VNE	C
15	4	06 26 07.0	iP	VN	R 0: 06 19 49 (USCGS)
16	4	08 43 31.0	iP	VN	R
17	4	10 30 58.0	iP	VE	C
18	4	13 44 28.0	iP	V	R 0: 13 34 20 (USCGS)
19	5	09 39 34.5	iP	V	R 0: 09 32 07 (USCGS)
A	5	10 42 50.0	iP	VN	R Local
		43 05.0	iS	E	
		06.0	eS	VN	
20	5	11 16 07.0	iP	V	R
21	5	15 21 08.0	i	V	
B	5	20 11 41.0	eP	VE	Local
		42.5	eP	N	

No.	Date	Time	Phase		Remarks
22	6	13 17 12.0	iP	V	R 0: 13 11 00 (USCGS)
		25.3	eL	V_1	
23	6	18 57 07.5	iP	V	R 0: 18 45 08 (USCGS)
24	6	19 59 33.5	iP	V	C
25	6	20 23 00.5	iP	VNE	R 0: 20 16 29 (USCGS)
26	7	07 59 57.5	iP	V	C
27	7	08 26 11.5	iP	VE	R 0: 08 15 21 (USCGS)
28	7	09 05 08.5	eP	V	
29	7	09 11 45.0	e	V	
30	7	13 41 16.0	iP	V	C 0: 13 28 16 (USCGS)
		45 04.5	ePP	V	
		52 00.0	e(SKS)	E_1	
		53 33.5	e(PS)	E_1	
		14 05.6	e(L)	E_1	
31	7	17 28 11.5	i	V	
32	7	23 28 07.0	iP	VN	C 0: 23 17 18 (USCGS)
33	8	02 47 46.0	iP	VN	C 0: 02 35 00 (USCGS)
34	8	06 05 40.5	iP	VN	C
35	8	06 29 17.5	i	V	
36	8	07 51 29.0	iP	V	C
37	8	11 42 08.0	eP	V	0: 11 29 18 (USCGS)
38	8	14 58 51.0	eP	VN	0: 14 45 53 (USCGS)
39	8	23 38 52.0	iP	VN	R
C	9	03 15 29.0	iP	VNE	R Local
40	9	04 26 39.5	iP	VE	C
41	9	04 52 25.5	iP	V	
42	9	07 37 32.5	iP	VN	0: 07 23 50 (USCGS)
		41 53.5	ePP	V	h: 150 km
43	9	07 49 45.5	eP	V	0: 07 41 57 (USCGS)
		51 32.0	iPP	V	
		53 35.5	e	V	
44	10	03 45 50.5	eP	V	
45	11	01 12 55.0	iP	V	R
46	11	02 38 25.5	eP	N	0: 02 27 38 (USCGS)
		26.0	eP	V	
47	11	03 00 49.5	eP	V	0: 02 51 07 (USCGS)
48	11	03 21 39.0	iP	VN	C 0: 03 10 14 (USCGS)
49	11	15 00 10.5	eP	V	0: 14 53 29 (USCGS)
50	11	15 01 16.0	iP	VNE	
		03 22.0	i	V	
		06 19.5	i	NE	
51	11	15 10 45.0	i	V	R
52	11	17 33 50.0	e	V	
53	11	17 56 12.0	iP	V	C 0: 17 49 58 (USCGS)
		12.5	eP	E	
54	11	20 27 44.0	iP	VE	R
55	12	02 03 13.5	iP	V	C 0: 01 52 37 (USCGS)
56	13	01 32 06.5	eP	V	

No.	Date	Time	Phase		Remarks
57	13	06 40 17.5	iP	V	C
58	13	07 33 03.0	iP	VN	R 0: 07 26 26 (USCGS)
59	13	15 59 08.5	iPKP	V	C 0: 15 40 34 (USCGS)
		16 00 03.5	iPP	VV_1E_1	h: 200 km
		05 45.0	eSKS	N_1	
		45.5	iSKS	E_1	
		09 38.0	ePS	E_1	
		38.5	ePS	VV_1	
		39.0	ePS	N_1	
		16 02.0	i(SSP)	E_1	
60	13	16 42 48.0	iP	V	C 0: 16 29 41 (USCGS)
61	13	18 54 16.5	iP	V	R
62	14	02 51 54.5	iP	VNE	R 0: 02 41 24 (USCGS)
D	14	06 27 22.0	i	V	Local
		45.5	i	N	
		29 13.0	i	V	
		36.0	e	VN	
63	14	10 37 10.0	iP	VN	C 0: 10 25 52 (USCGS)
64	14	16 06 16.0	iP	VN	R 0: 15 58 56 (USCGS)
65	15	02 31 18.5	i	V	
66	15	03 09 14.0	e	V	
67	15	09 49 37.5	e(PP)	V_1	0: 09 30 24
		55 40.5	e(SKS)	N_1E_1	h: 150 km
		59 28.5	ePS	N_1E_1	
		32.5	ePS	V_1	
		39.0	i	V_1	
		10 03 21.5	e	V_1	
		05 28.5	eSS	E_1	
		43.0	eSSP	E_1	
68	15	14 37 52.0	iP	VE	R
		38 11.5	i	V	
69	15	23 46 59.0	iP	VNE	C 0: 23 38 50 (USCGS)
70	16	07 04 17.0	iP	VN	C 0: 06 59 00 (USCGS)
71	16	12 36 42.5	iP	V	R 0: 12 30 56 (USCGS)
					h: 600 km
72	16	15 38 22.0	iP	V	R 0: 15 32 56 (USCGS)
73	16	18 44 15.5	iP	V	R 0: 18 38 40 (USCGS)
74	16	19 47 29.0	e	V	h: 200 km
75	16	21 47 32.0	iP	VN	R 0: 21 41 44 (USCGS)
76	16	23 38 45.5	iP	V	R 0: 23 32 28 (USCGS)
77	17	03 11 44.5	eP	V	
78	17	03 17 47.5	i(PP)	V	C 0: 02 57 58 (USCGS)
79	17	04 13 55.0	i	V	h: 150 km
80	17	05 07 51.5	i	V	
81	17	05 21 03.5	i	V	
82	18	09 13 22.0	iP	V	C 0: 09 04 43 (USCGS)
		22.5	iP	N	
		23.5	iP	E	
83	18	14 44 34.5	iP	VN	C
84	19	02 29 40.0	iP	V	C 0: 02 16 52 (USCGS)
85	19	05 38 18.5	i	V	R
86	19	07 05 18.5	e	V	

No.	Date	Time	Phase		Remarks
87	19	09 20 23.5	iP	V	C 0: 09 15 04 (USCGS)
		25.0	iP	NEV_1E_1	h: 600 km
		21 54.0	i	V	
88	i9	10 56 18.0	i	V	
89	19	16 20 34.0	iP	V	C 0: 16 10 36 (USCGS)
					h: 100 km
90	20	01 23 27.5	iPKP	V	C 0: 01 03 25 (USCGS)
91	20	02 56 09.5	iP	V	R 0: 02 50 02 (USCGS)
					h; 500 km
92	20	20 02 33.5	iP	V	C 0: 19 56 14 (USCGS)
93	21	10 49 32.5	eP	VE	0: 10 43 33 (USCGS)
		54 23.5	eS	E_1	h: 600 km
		57 29.5	eSS	E_1	
94	21	15 56 36.0	i	V	
95	21	16 52 14.0	eP	V	0: 16 43 51 (USCGS)
96	21	17 51 01.0	iP	V	C 0: 17 43 46 (USCGS)
					h: 100 km
E	22	08 32 32.5	eP	VE	Local
		41.0	iS	VE	
97	22	13 43 47.0	iP	$VNEV_1E_1$	R 0: 13 35 54 (USCGS)
98	22	15 08 36.5	e	V	
99	22	16 26 01.5	i	V	
100	22	19 32 48.0	i	V	
101	23	02 46 13.5	iP	$VNEV_1$	R
102	23	04 48 11.0	iP	VEV_1	C 0: 04 40 56 (USCGS)
		53 54.0	eS	$V_1N_1E_1$	
		56 34.5	iSS	V_1	
103	23	06 30 35.0	iP	VE	C 0: 06 24 08 (USCGS)
		32 14.5	iPP	V	h: 400 km
104	23	07 25 43.5	iP	V	C
105	23	07 38 28.5	iP	V	C 0: 07 31 14 (USCGS)
		29.5	i	VNV_1	
		44 11.5	iS	V	
		16.0	eS	NE	
		46 49.0	eSS	E_1	
		51.0	eSS	VV_1	
106	23	07 47 57.5	iP	VN	R
107	23	08 11 22.0	iP	VE	
108	23	08 36 30.0	e	V	
109	23	08 41 09.5	iP	VN	R
110	23	10 27 04.5	e	V	
111	23	18 03 43.0	iP	VN	C 0: 17 56 30 (USCGS)
		46.0	i	V_1E_1	
		09 27.0	iS	V_1	
112	23	21 38 21.0	e	V	
113	23	22 03 10.0	eP	V	0: 21 57 08 (USCGS)
114	24	01 14 16.5	iP	VE	C
115	24	04 28 33.0	iP	V	C 0: 04 21 42 (USCGS)
		39.5	i	VN	
		29 47.5	ePP	E_1	
		31 14.0	ePcP	E_1	
		34 05.0	eS	V_1N_1	
		36 32.5	eSS	N_1	
		47.5	eSSS	E_1	

No.	Date	Time	Phase		Remarks
116	24	06 46 22.0	i	V	
117	24	07 10 03.5	i	VN	
118	24	07 20 48.5	i	V	
119	24	09 20 47.0	eP	V	0: 09 14 03 (USCGS)
120	24	09 23 39.5	iP	VNE	R 0: 09 17 59 (USCGS)
		25 19.5	iPP	VE	h: 600 km
121	24	12 22 38.0	iP	VN	0: 12 16 23 (USCGS) h: 100 km
122	24	15 54 36.0	e	V	
123	24	17 02 12.0	eP	V	
124	24	19 09 21.0	e	V	
F	24	19 58 18.0	i	V	Local
125	24	21 22 20.5	i	V	
126	25	06 04 46.0	iP	VNE	
127	25	11 04 22.5	i	V	
128	25	16 36 22.5	eP	V	0: 16 29 26 (USCGS)
		44 18.0	eSS	N_1	
129	26	04 15 21.0	iP	VN	C
130	26	09 24 52.0	iP	V	R
131	26	14 50 42.5	iP	V	R
132	26	20 46 08.0	i	V	
133	26	22 27 13.0	iP	V	C 0: 22 21 19 (USCGS)
		14.5	iP	NE	
G	27	09 04 33.0	e(P)	V	Local
		49.0	i	V	
134	27	19 21 11.0	iP	VN	
135	27	23 17 36.0	i	V	
136	28	01 49 22.5	iP	V	
		28.0	i	VE	
137	28	14 37 03.5	i	V	
138	28	15 27 56.0	iP	VE	C
H	28	23 37 31.0	iP	VNE	C Regional
		58.0	iS	V_1N_1	
139	29	08 16 47.5	eP	VNE	0: 08 10 18 (USCGS)
140	29	22 31 44.0	e	V	
141	30	00 49 28.5	i	VN	
142	30	02 54 44.0	iP	V	C 0: 02 45 03 (USCGS)
143	30	04 16 24.5	iP	VE	0: 04 10 40 (USCGS)
144	30	10 59 37.5	iP	VNE	C
145	30	15 37 09.0	iP	VN	C
146	30	18 05 55.0	iP	VN	R 0: 17 56 05 (USCGS)
147	30	18 47 59.0	iP	VN	C 0: 18 38 10 (USCGS)
148	30	19 40 33.5	e	V	
149	30	21 40 49.5	eP	V	
150	31	04 08 49.5	iP	V	0: 04 03 11 (USCGS) h: 200 km
151	31	04 44 30.5	iP	VN	C
152	31	05 19 27.5	eP	V	0: 05 08 18 (USCGS)
		28 35.0	eS	N_1	

No.	Date	Time	Phase		Remarks
153	31	14 04 50.0	eP	VE	0: 13 52 00 (USCGS)
154	31	19 14 52.0	iP	V	R 0: 19 07 23 (USCGS)

Please note the following corrections to bulletins for November and December, 1959.

30	Nov.9	19 53 54.0	iP	V	C
K	Dec.11	16 38 23.0	e	V	Local

Seismograms read by
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THE AUSTRALIAN NATIONAL UNIVERSITY
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MONTHLY SEISMOLOGICAL BULLETIN

February, 1960

Latitude: 35° 19' 15" S. Longitude: 148° 59' 55 "E. Height: 700 M.

Instruments: three-component Benioff variable reluctance seismographs

T_s = 1 sec.
T_g = 0.25 sec. (short periods VNE)
T_g = 16 sec. (long period vertical V_1)
T_g = 70 sec. (long period horizontals N_1E_1)

Abbreviations: R = rarefaction; C = compression; 0 = origin.

No.	Date	Time	Phase		Remarks
	Feb. 1	nil			
1	2	03 24 24.5	i	V	
2	2	06 35 38.5	iP	V	R 0: 06 29 52 (USCGS)
		43.2	eL	V_1E_1	
3	2	07 11 51.0	e	V	
4	2	07 16 35.0	i	V	
5	2	08 21 29.0	eP	V	0: 08 10 15 (USCGS)
6	2	23 48 01.5	eP	V	0: 23 40 01 (USCGS)
		02.0	iP	NE	
7	3	02 26 13.0	iP	VEV_1E_1	R 0: 02 20 55 (USCGS)
		15.5	i	NEV_1	
		30 25.0	eS	N_1	
8	3	09 09 28.0	i	V	
9	3	10 47 24.5	i	V	
10	3	10 49 15.0	iP	VE	R
11	3	13 43.3	eL	E_1	0: 13 28 29 (USCGS)
		45.4	eL	V_1N_1	h: slightly deeper than normal
12	3	14 35 53.5	iP	VE	R 0: 14 28 39 (USCGS)
		47.8	eL	V_1E_1	
13	3	17 58 18.5	iP	VE	C 0: 17 53 03 (USCGS)
14	3	18 16 38.5	iP	V	R
15	4	02 09 35.0	iP	V	R
16	4	03 52 50.5	iP	VNV_1	C 0: 03 46 30 (USCGS)
		51.0	iP	N_1E_1	
		53.0	i	E_1	
		55 41.0	ePcP	N_1	
		44.5	iPcP	V_1	
		57 48.0	eS	N_1	
		50.0	eS	V_1	
		51.5	eS	E_1	
		58 00.0	iS	N_1	
		59 45.5	iSS	E_1	
		51.5	eSS	V_1	
		04 00 11.0	iSSS	E_1	
17	4	09 33 37.0	iP	VNV_1N_1	R 0: 09 27 23 (USCGS)
		44.5	i	V	h: 100 km
		34 39.5	iPP	V	

No.	Date	Time	Phase		Remarks
17cont.	4	09 35 10.5	iPPP	E_1	
		38 39.0	iS	E_1	
		41 31.5	i	E_1	
		33.0	i	E_1	
18	4	11 07 37.5	iP	VN	C 0: 11 01 18 (USCGS)
19	4	17 02 06.5	iP	V	R 0: 16 50 30 (USCGS)
20	4	20 44 20.5	iP	VNE	C 0: 20 38 20 (USCGS) h: 600 km
21	4	21 09 38.5	i	V	
22	5	02 15 01.0	eP	V	0: 02 02 14 (USCGS)
A	5	03 43 20.0	e	E	Local?
		23.5	i	V	
23	5	05 46 06.0	iP	VN	R 0: 05 39 46 (USCGS)
24	5	06 35 41.0	iP	V	
25	5	20 01 35.5	e(P)	V	
26	6	01 16 40.0	e	V	
27	6	01 22 05.5	iP	VE	C
28	6	01 26 18.0	iP	VN	
29	6	01 34 46.0	iP	V	C
30	6	02 07 17.5	eP	V	
31	6	17 19 48.0	iP	VNE	C 0:17 1_0 45 (USCGS)
32	7	00 29 32.5	i(P)	V	R
33	7	02 22 39.0	i	V	
34	7	10 15 34.5	iP	$VNEV_1N_1E_1$	C 0: 10 07 50 (USCGS) h: 600 km
		16 55.0	iPcP	VNV_1	
		19 50.5	iPcS	VNV_1	
		21 43.0	iS	NEE_1	
		24 21.0	iScS	N	
		21.5	iScS	E	
		25 21.0	iSS	V	
35	7	11 24 25.0	iP	VE	R 0: 11 16 54 (USCGS)
36	7	21 15 52.5	iP	VN	R
37	8	09 25 56.5	iP	VN	R 0: 09 19 45 (USCGS) h: 100 km
38	8	12 57 59.5	eP	V	0: 12 45 34 (USCGS)
		58 00.0	eP	N	
		00.5	eP	EV_1	
		13 08 20.0	eS	E_1	
		13 20.5	eL	E_1	
		24.2	eL	V_1	
39	8	17 51 08.5	iP	V	C 0: 17 41 40 (USCGS)
40	9	02 00 49.5	iP	VN	C 0: 01 54 05 (USCGS)
41	9	05 59 51.5	i(P)	V	
42	9	07 30 22.5	i	V	
		33 17.5	i	V	
43	9	12 03 26.0	iP	VNE	C 0: 11 56 12 (USCGS)
		26.5	iP	$V_1N_1E_1$	
		05 46.5	iPcP	V_1	
		09 12.0	eS	E_1	
		14.5	eS	V_1N_1	
44	9	12 15 43.0	i	V	
45	9	13 55 35.5	iP	VNE	C

No.	Date	Time	Phase		Remarks
46	9	16 40 50.0	iP	VN	R 0: 16 34 45 (USCGS)
47	9/10	00 03 03.0	iP	$VNEV_1N_1E_1$	C 0: 23 55 49 (USCGS)
		04 29.5	iPP	E_1	
		30.5	iPP	NE_1	
		08 35.5	eS	N_1	
		41.0	eS	E_1	
		09 10.5	iPcS	E_1	
		11 25.0	eSS	N_1	
		11 58.0	iSSS	E_1	
		59.0	iSSS	V	
48	10	01 22 56.5	iP	$VNEV_1$	C 0: 01 15 44 (USCGS)
49	10	01 37 50.0	iP	VNE	C
50	10	02 06 18.0	iP	V	R 0: 01 59 05 (USCGS)
		18.5	iP	NEV_1	
51	10	02 30 42.0	i	VN	
52	10	02 47 18.5	iP	VN.	C
53	10	07 47 21.0	iP	V	R
54	10	09 26 31.0	iP	V	
		31.5	iP	N	
55	10	12 37 42.5	iP	VN	C
56	10	15 51 10.0	iP	VN	C 0: 15 44 54 (USCGS) h: 100 km
57	10	21 57 13.0	eP	V	0: 21 5o 45 (USCGS)
58	10	23 27 21.5	eP	V_1E_1	0: 23 19 55 (USCGS)
		22.5	eP	V_1	
		29 26.0	iPPP	V_1	
		33 18.0	eS	E_1	
59	11	04 04 46.5	iP	VE	R 0: 03 58 39 (USCGS)
		47.0	iP	NV_1	
60	11	04 32 50.0	iP	VNE	0: 04 27 22 (USCGS) h: 450 km
61	11	05 51 34.5	e	V	
62	11	06 42 52.5	iP	V	R
63	11	08 35 04.5	iP	V	R 0: 08 28 58 (USCGS)
		05.5	eP	N	h: 100 km
64	11	13 20 36.5	e	V	
65	11	21 02 07.5	iP	V_1NE	C 0: 20 56 08 (USCGS)
		03 08.5	iPP	E_1	
		06 50.0	eS	N_1	
66	11	21 32 36.0	iP	V	C
67	12	01 36 06.5	iP	VN	R 0: 01 29 42 (USCGS)
68	12	04 17 36.5	i	VE	
69	12	04 46 43.0	iP	VNE	C
70	12	05 37 47.5	iP	VNE	C
B	12	06 29 48.0	eP	VN	Local
		30 32.0	i	N	
71	12	06 55 36.0	iP	VE	
72	13	15 46 01.0	eP	V	
73	13	15 49 00.0	iP	$VNEV_1N_1$	C 0: 15 41 04 (USCGS)
C	13	20 29 08.0	e	E	Local
		13.5	i	V	
74	14	08 36 31.5	i	V	
75	14	10 44 10.0	iP	V	C

No.	Date	Time	Phase		Remarks
76	14	12 58 29.5	iP	$VNEV_1$	C 0: 12 53 08 (USCGS) h: 500 km
77	14	15 45 51.5	iP	V	C 0: 15 39 43 (USCGS)
		52.5	iP	E	
78	14	16 49 07.5	e	VN	
79	14	20 37 02.0	iP	V	C 0: 20 30 44 (USCGS)
		02.5	iP	N	
80	14	21 13 41.0	eP	V	0: 21 04 36 (USCGS)
		42.0	eP	N	h: 200 km
81	15	05 23 04.0	iP	V	C 0: 05 16 45 (USCGS)
		04.5	iP	NE	h: 350 km
D	15	05 56 32.5	iP	VN	Regional
82	15	18 48 22.0	e	V	
83	15	21 16 26.5	i	VE	
84	15	22 24 33.0	eP	VE	
85	16	01 15 37.0	eP	VE	0: 01 09 29 (USCGS)
86	16	05 09 40.5	iP	$VNEV_1$	C 0: 05 00 14 (USCGS)
		56.5	i	V	
87	16	05 27 31.0	iP	VE	R 0: 05 21 52 (USCGS)
		28 25.0	ePP	VE	
88	17	00 08 19.0	iP	V	C 0: 00 01 28 (USCGS)
		40.0	i	V	
89	17	10 06 30.0	eP	V	
90	17	11 21 12.5	eP	VE	
91	17	12 44 27.0	eP	VV_1	
92	17	16 55 56.5	eP	VE	0: 16 49 42 (USCGS)
		17 04.4	eL	E_1	
		05 40.5	i	E_1	
		06 30.5	iScS	V_1	
93	17	20 33 53.5	i	V	
94	18	05 17 04.5	i	V	
95	18	05 43 45.5	i	V	
96	18	08 15 25.5	i	V	
97	18	14 43 09.0	iP	VN	C
98	19	10 50 21.5	iP	VV_1	R 0: 10 36 46 (USCGS)
		23.0	iP	NE_1	h: 200 km
		54 43.0	iPP	N	
		11 04 12.0	i	E_1	
		15.5	e	NN_1	
		19.5	e	V_1	
		49.5	ePPS	V_1	
		51.0	ePPS	V_1	
99	19	12 31 57.5	i	V	
100	19	20 15 20.5	i	V	
101	20	00 20 31.0	eP	V	
102	20	05 28 23.5	i	V	
103	20	05 36 49.5	i	VN	
104	20	06 12 03.5	iP	VNE	R
105	20	18 19 27.5	eP	V	
106	21	00 51 28.0	iP	VEV_1E_1	C 0: 00 46 56 (USCGS)
		49.0	iPP	E	h: 60 km
		52 05.0	iPPP	V	

No.	Date	Time	Phase		Remarks
106	cont.	00 55 06.5	eS	V	
		11.0	iS	E	
		19.5	i(L_g)	E_1	
		29.5	i(PcP)	V_1	
		33.5	i(PcP)	E	
		56.5	eL_r	$V_1N_1E_1$	
107	21	01 04 05.5	eP	V	
		09 25.0	i(S)	V	
		28.0	i(S)	E	
		43,5	i	E	
108	21	08 33 30.0	ePKP	V	0: 08 13 31 (USCGS)
		32.5	i	V	
		34.0	i	E	
109	21	09 45 13.0	iP	VE	C 0:09 39 26 (USCGS) h: 600km
110	21	22 51 08.5	iP	V	0: 22 43 11 (USCGS)
111	22	00 53 22.5	iP	VE	
112	22	01 00 18.0	iP	VNE	C 0: 01 54 30 (USCGS) h: 600 km
E	22	03 37 11.5	eP	V	Regional
		12.5	eP	NE	
		38 25.0	i(S)	N	
		26.0	i(S)	E	
113	22	05 25 53.5	iP	VE	R
		26 27.5	i	N	
114	22	05 36 47.5	ePKP	VNE	0: 05 17 18 (USCGS)
		37 33.5	i	VE	
115	22	06 17 28.0	eP	VNE	
116	22	07 07 02.0	iP	VNE	R
117	22	08 40 10.0	iP	VNE	0: 08 34 11 (USCGS) h: 600 km
118	23	07 54 02.5	ePKP	V	0: 07 34 30 (USCGS)
119	23	08 21 05.5	eP	VN	0: 08 10 28 (USCGS)
120	23	09 34 56.5	eP	V	0: 09 23 37 (USCGS)
		35 32.5	i	V	h: 100 km
121	23	11 37 06.0	iP	VE	C 0: 11 31 04 (USCGS)
		38 40.0	iPP	VEV_1	h: 500 km
122	23	16 10 57.0	eP	VN_1	0: 16 04 50 (USCGS)
		11 08.5	i	VNE	
		15 39.5	eS	E_1	
		41.0	iS	V_1	
		51.0	eS	N_1	
		17.3	eL_g	E_1	
		17 30.5	iSS	E_1	
		43.0	ePcS	V_1	
		18.8	eL_r	E_1	
		21 39.5	iScS	N_1	
123	24	06 39 30.5	e	V	
124	24	08 46 24.5	iP	VNE	C 0: 08 41 00 (USCGS)
125	24	15 39 39.5	iP	VN	C
126	24	17 22 08.0	i	V	
127	24	21 43 02.5	eP	VNE	0: 21 37 04 (USCGS)
		44 13.5	iPPP	E_1	
		46 09.0	iPcP	V_1	
		47 48.0	eS	E_1	
		49 22.0	iSS	V_1	
		37.0	eSSS	V_1	
		39.5	iSSS	E	

No.	Date	Time	Phase		Remarks
128	25	12 54 54.5	iP	V	0: 12 45 44 (USCGS)
129	25	23 37 34.0	iP	VN	R
130	26	00 08 23.5	iP	V	C
131	26	01 13 46.0	iP	$VNEV_1$	C 0: 01 06 23 (USCGS)
		19 36.0	iS	VN	
132	26	02 15 30.5	eP	V	0: 02 08 31 (USCGS)
		32.0	iP	NEV_1	
		37.0	i	V_1	
		17 20.5	iPPP	E^1	
		18 05.0	iPcP	N	
		21 16.0	iS	E	
		25 26.5	$i(L_r)$	E	
		27 12.5	e	V	
		57.5	e	VN	
		30.4	e	V_1	
F	26	03 17 12.0	e	VE	Local?
G	26	06 04 06.0	e	VNE	Local?
133	26	06 39 40.0	iP	VE	C 0: 06 32 36 (USCGS)
		40.5	iP	NV_1	
		41 25.5	iPPP	VV_1^1	
134	26	23 42 33.5	iP	V	C 0: 23 29 25 (USCGS)
		46.5	i	V	
135	27	08 23 13.0	eP	V	0: 08 10 03 (USCGS)
136	27	09 01 43.0	eP	E	0: 08 56 00 (USCGS)
		47.0	i	V	
137	27	09 14 34.5	iP	VE	R 0: 09 05 25 (USCGS)
		35.0	iP	N	
138	27	10 03 47.0	iP	V	
139	27	23 14 05.0	iP	$VNEV_1$	C 0: 23 05 49 (USCGS)
H	28	04 01 35.5	e	E	Local?
140	28	14 57 36.5	iP	VE	C
141	28	17 27 12.5	eP	E	
		19.5	e	V	
142	28	23 12 18.0	iP	VN	0: 23 05 39 (USCGS)
143	28	23 59 02.5	eP	VN	0: 23 52 27 (USCGS)
144	29	00 15 43.0	eP	V	
145	29	05 32 25.0	eP	V	0: 05 22 53 (USCGS) h; 150 km
146	29	07 47 43.0	iP	VN	
147	29	08 46 32.0	eP	V	0: 08 34 30 (USCGS)
148	29	10 45 19.0	iP	VN	
149	29	20 07 45.5	iP	VNE	C
		08 22.5	i	V	
150	29	23 09 23.5	i	V	

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MONTHLY SEISMOLOGICAL BULLETIN.

MARCH, 1960.

Latitude: 35° 19' 15" S. Longitude: 148° 59' 55" E. Height: 700M.

Instruments: three-component Benioff variable reluctance seismographs

T_s = 1 sec.

T_g = 0.25 sec. (short periods VNE)

T_g = 16 sec. (long period vertical V_1)

T_g = 70 sec. (long period horizontals N_1E_1)

Abbreviations: R = rarefaction; C = compression; 0 = origin.

No.	Date	Time	Phase		Remarks	
1.	1	03 32 39.0	iP	VNE	R	0:03 26 41 (USCGS) h: 600 km
2.	1	08 12 38.5	eP	V		
		39.5	i	E		
3.	1	14 55 25.0	iP	VE	C	
4.	1	20 06 23.0	iP	V	C	0:19 59 33 (USCGS)
5.	1	22 02 04.5	iP	VNE	R	0:21 54 50 (USCGS)
	2	Nil				
6.	3	01 08 27.5	eP	V		0:01 02 20 (USCGS)
7.	3	14 19 21.5	ePP	VE		0:14 11 29 (USCGS)
8.	3	19 23 50.5	iP	VE	C	
9.	4	02 29 03.5	eP	V		0:02 15 56 (USCGS)
10.	4	04 03 59.0	iP	VV_1	C	0:03 53 00 (USCGS)
		04 00.0	i	N		h: 100 km
		31.5	ipP	V		
11.	4	21 16 40.5	iP	VNE	C	0:21 05 45 (USCGS)
		17 23.0	i(PcP)	V		
12.	5	10 16 15.0	eP	E		
		16.0	iP	V	C	
13.	5	11 38 09.5	iP	VE	R	0:11 25 00 (USCGS)
14.	5	13 57 01.0	iP	$VNEV_1N_1E_1$	C	0:13 49 16 (USCGS)
		58 44.5	ePP	VV_1N_1		
		14 02 58.0	iPeS	E_1		
		03 12.0	eS	E		
		14.5	iS	V		
		06 08.0	eSS	N_1E_1		
15.	5	14 20 04.5	iP	V	R	
16.	5	14 41 51.5	iP	V	C	
		52.0	iP	N		
17.	5	14 53 44.5	i	V		
18.	5	15 57 37.5	eP	V		0:15 49 53 (USCGS)
		39.5	i	VN		
		59 12.5	iPP	V		

No.	Date	Time	Phase		Remarks
19.	5	16 14 56.6	iP	VN	
20.	5	16 35 09.0	i	V	
21.	5	20 57 00.5	i(P)	V	R
22.	5	21 02 35.5	eP	V	
23.	6	02 29 51.5	iP	VNE	R 0:02 22 06 (USCGS)
		31 29.0	iPP	N	
		29.5	iPP	VV_1	
		51.0	iPcP	V	
24.	6	08 50 07.0	iP	V	C
25.	6	09 17 37.5	iP	V	C
26.	6	10 45 25.5	e	V	
		33.5	i	N	
27.	7	00 16 44.5	iP	VE	R
		18 58.0	i	V	
28.	7	02 17 38.5	e	V	0:02 08 04 (USCGS)
29.	7	05 21 13.5	iP	VNE	0:05 13 10 (USCGS)
		14.0	iP	V_1N_1	
		23 03.0	iPP	V	
		09.0	iPcP	N	
		27.30.0	iS	EE_1	
		30.5	iS	V	
30.	7	07 06 46.0	i	V	
31.	7	09 43 59.5	iP	VN	C 0:09 38 09 (USCGS)
		44 10.5	ipP	N	
32.	7	09 46 48.0	e(P)	V	
A	7	12 53 48.0	eP	VE	Local?
		49.0	e	N	
33.	8	04 07 02.0	i	V	
B	8	11 15 22.0	eP	V	Regional
		16 29.5	i	VE	
34.	8	11 58 07.0	iP	V	C 0:11 51 10 (USCGS)
		12 00.0	eL_q	N_1E_1	
C	8	12 33 01.0	eP	E	Regional?
		22.0		V	
35.	8	16 38 46.5	iP	VNE $V_1N_1E_1$	R 0: 16 33 38 (USCGS)
		39 31.0	iPP	VNV_1N_1	R: h: 250 km
		39.0	iPPP	N_1E_1	
		42 13.0	iPcP	V	
		55.5	eS	V_1	
		58.0	iS	V	
		49 19.5	iScS	NEN_1	
36.	8	18 34 31.5	i	V	
37.	8	19 33 39.5	iP	VE	C
38.	9	01 11 38.5	iP	VN	C 0:01 05 42 (USCGS) h: 150 km

No.	Date	Time	Phase		Remarks
D	9	04 25 39.0	e	VE	Regional?
39	10	00 46 04.5	iP	V	C
		05.0	iP	N	
E	10	01 11 05.0	e	E	Regional?
40	10	03 02 48.0	eP	E	
		53.5	i	VN	
41	10	05 05 18.5	iP	VE	C 0: 05 00 23 (USCGS)
		11 20.0	i(PcS)	N	h: 500 km
		11 25.0	i(PcS)	V	
42	10	09 19 29.0	iP	V	C 0: 09 10 47 (USCGS)
43	10	09 50 46.5	iP	VN	0: 09 44 57 (USCGS)
		55 28.0	iS	E	
44	10	13 51 53.5	iP	$VNEV_1$	C 0: 13 44 25 (USCGS)
45	10	14 44 53.5	iP	V	0: 14 32 39 (USCGS)
					h: 100 km
46	10	15 31 28.5	iP	VNE	C
47	10	22 49 43.0	iP	VN	
48	11	05 29 28.0	iP	V	C
49	11	11 32 18.0	iP	VE	R 0: 11 26 20 (USCGS)
					h: 600 km
50	11	13 20 17.5	eP	V	0: 13 11 10 (USCGS)
					h: 200 km
51	11	16 31 31.0	iP	V	C
52	11	22 02 01.5	iP	VN	R
53	12	01 36 12.0	iP	VE	R 0: 01 30 15 (USCGS)
54	12	02 21 07.5	iP	VN	R 0: 02 14 56 (USCGS)
		22 24.0	iPP	N	h: 150 km
		37.0	iPPP	E_1	
F	12	14 15 16.0	i	VE	Local
55	12	20 36 45.0	iP	VN	C 0: 20 30 39 (USCGS)
		37 43.5	iPP	V	
		57.0	iPPP	N	
		39 48.5	iPcP	E_1	
		49.5	iPcP	E	
		41 36.5	eS	N_1	
		53.5	i	V_1	
		43 24.5	eSS	V_1	
56	13	00 27 16.0	iP	VN	C
57	13	04 10 31.0	iP	$VNEV_1$	R
58	13	19 36 38.0	i(P)	V	
59	14	00 12 39.5	iPKP	V	R 0: 23 53 32 (USCGS)
					h: 60 km
60	15	01 17 37.5	i	V	

No.	Date	Time	Phase		Remarks
61	15	03 56 27.0	iP	V	R
		27.5	eP	E	
62	15	06 42 42.5	iP	V	R
63	15	09 08 53.5	iP	$VNEV_1$	C 0: 09 00 55 (USCGS)
64	15	09 34 05.5	iP	V	0: 09 20 56 (USCGS)
65	15	10 16 02.0	iP	VE	0: 10 08 58 (USCGS)
G	15	12 51 05.0	i(P)	V	Regional
66	15	19 37 33.0	i(P)	V	R 0: 19 31 50 (USCGS) h: 600 km
67	15	19 38 39.0	i	V	
68	15	22 40 52.0	i(P)	V	
69	16	00 45 43.0	eP	VN	0: 00 33 05 (USCGS)
70	16	17 46 47.0	eP	VEV_1	C 0: 17 39 16 (USCGS)
		48 58.0	iPcP	V	
		52 46.5	eS	E_1	
		56.0	eL_q	V_1	
71	16	21 49 36.0	i(P)	V	R
72	17	00 10 05.0	iP	VNE	C
73	17	11 41 06.0	i	V	
H	18	01 18 31.5	eP	VE	Regional
		56.0	i(S)	N	
74	18	07 18 30.5	iP	VN	R
75	18	10 41 18.0	eP	V	0: 10 35 31 (USCGS)
		29.5	i	V	
76	18	12 22 56.5	iP	VN	R 0: 12 16 51 (USCGS) h: 150 km
77	18	13 00 57.0	iP	VN	C
		03 40.0	i	V	
		07 13.5	i	V	
I	18	19 07 34.0	iP	VNE	Local
		45.0	iS	VNE	
78	18	21 07 52.5	iP	V	R
J	19	04 36 41.5	eP	VE	Regional
79	19	05 38 31.0	e(P)	VNE	
		39 45.0	i	V	
K	19	06 55 41.0	e	V	Regional?
		56 12.0	i	E	
80	19	09 28 53.5	iP	VNV_1	C 0: 09 20 51 (USCGS)
81	19	14 28 50.0	iP	VE	
82	19	19 22 20.5	eP	VEV_1N_1	0: 19 15 37 (USCGS)
		22.0	eP	E_1	
		23 35.5	iPP	V_1E_1	
		40.0	iPP	N	
		27 36.0	eS	N_1	
		38.5	eS	E	

No.	Date	Time	Phase		Remarks
		30 08.0	iSS	E_1	
		33 46.5	i	N_1	
83	19	19 43 02.0	e(P)	VN	
84	19	22 00 21.5	iP	VNE	R
85	20	07 35 55.0	iP	VE	C 0: 07 25 59 (USCGS)
86	20	13 48 38.5	eP	V	0: 13 36 54 (USCGS)
					h: 60 km
87	20	17 19 12.0	eP	VN	0: 17 07 30 (USCGS)
		13.0	eP	V_1	h: 60 km
		20.0	iPcP	E	
		23 49.5	iPPP	N_1	
		28 47.0	eS	N_1E_1	
		33 33.5	eSS	N_1	
88	20	18 38 04.5	i(P)	V	
89	20	21 13 15.0	iP	VE	C
90	21	00 46 35.0	eP	V	0: 00 34 50 (USCGS)
		40.0	i	VN	
91	21	01 57 11.0	iP	VV_1E_1	C 0: 01 49 42 (USCGS)
		21.0	ipP	V	
		02 06.2	eL_q	N_1	
92	21	07 42 01.0	e	VNE	
93	21	08 24 54.0	iP	V	C
94	21	09 30 04.5	iP	VN	R 0: 09 18 22 (USCGS)
95	21	11 47 43.0	iP	V	C 0: 11 40 15 (USCGS)
96	21	16 44 07.0	iP	VN	R 0: 16 37 46 (USCGS)
97	21	21 41 01.5	iP	VN	
98	22	02 36 56.5	iP	VN_1	R 0: 02 31 17 (USCGS)
		57.0	iP	NV_1	
		41 36.0	eS	E_1	
		41.0	e(S)	N_1	
99	22	12 32 08.0	iP	V	R
		08.5	eP	NE	
100	22	13 54 13.0	iP	VNV_1	C 0: 13 48 43 (USCGS)
		59.8	eL	E_1N_1	
L	22	14 18 13.0	eP	VE	Local
101	22	20 08 26.0	i(P)	V	
102	22	21 21 15.0	iP	VE	0: 21 12 42 (USCGS)
					h: 150 km
103	23	00 35 06.5	eP	VN	0: 00 23 22 (USCGS)
		38 06.0	iPP	V	
		39 50.5	iPPP	V	
		44 33.5	eS	EE_1	
		44.5	eS	V_1	

No.	Date	Time	Phase		Remarks
104	23	01 18 59.0	eP	V	0: 01 07 15 (USCGS)
		28 33.0	eS	E_1	
105	23	01 36 25.0	iP	VE	
106	23	01 41 01.0	iP	V	
		01.5	eP	NE	
		42 43.0	i	V	
107	23	04 34 33.5	iP	V	C
M	23	04 40 46.0	eP	VE	Regional
		47.0	eP	N	
		41 25.5	eS	E	
		26.5	eS	VN	
108	23	05 20 49.5	iP	VNE	
N	23	06 08 25.5	i	VNE	Local
109	23	08 58 26.5	i(P)	V	0: 08 46 44 (USCGS)
110	23	09 05 59.5	iP	V	
111	23	09 43 03.0	e	V	
0	23	13 50 25.5	eP	V	Local
		31.5	iS	V	
112	23	20 15 53.0	iP	VN	C 0: 20 03 47 (USCGS)
113	23	22 34 24.5	eP	V	C 0: 22 22 36 (USCGS)
114	23	23 19 22.0	eP	V	
115	23	23 28 38.0	iPKP	V	R 0: 23 08 49 (USCGS)
	24	No readings			
116	25	01 38 06.5	i	V	
117	25	02 35 05.0	iP	$VNEV_1E_1$	R 0: 02 28 56 (USCGS)
		36 15.5	i(pP)	V	h: 400 km
		39 57.0	iS	VE	
118	25	06 35 39.5	e(P)	V	
		46 17.0	e	V	
		19.0	e	E	
119	25	08 57 16.0	i	VN	
120	25	09 04 50.0	i	V	
121	25	11 56 31.5	i	V	
P	25	12 24 32.0	eP	V	Local
		34.5	iS	V	
122	26	09 16 56.0	i(P)	V	
123	26	18 38 12.0	iP	V	
124	26	19 27 46.5	i	V	
125	26	20 32 01.0	eP	VE	
		36.0	i	VNE	

No.	Date	Time	Phase		Remarks
126	27	03 54 09.0	iP	VNE	0: 03 48 27 (USCGS)
		36.0	i(pP)	E_1	
		57.5	iPP	E_1	
		55 20.5	i(PPP)	N	
		58 42.5	eS	N_1	
		47.0	eS	E_1	
127	27	05 06 47.0	eP	V	
128	27	09 03 37.0	iP	V	C 0: 08 57 53 (USCGS)
		37.5	iP	NV_1	
		04 16.0	i(PP)	E_1	
		08 16.5	iS	E_1	
		22.5	eS	N_1	
129	27	12 29 44.5	i	V	0: 12 23 10 (USCGS)
					h: 150 km
130	27	17 30 36.5	iP	VE	R 0: 17 24 41 (USCGS)
		33 46.0	iPcP	V	
131	27	19 40 55.0	eP	VE	0: 19 35 25 (USCGS)
132	27	23 32 57.0	iP	$VNEV_1N_1E_1$	0: 23 28 04 (USCGS)
		33 08.5	ipP	NE_1	
		36 39.5	eS	EE_1	
		50.5	iS	V	
133	27	23 50 07.0	eP	V	
134	28	00 32 47.5	iPKP	V	0: 00 13 38 (USCGS)
135	28	06 41 42.5	eP	VV_1	0: 06 36 27 (USCGS)
		42 17.0	ipP	N	h: 300 km
		17.6	epP	N_1E_1	
		46 38.5	i	V_1E_1	
		53 26.5	i	V	
136	28	06 45 11.0	eP	V	0: 06 39 32 (USCGS)
		17.5	ipP	E_1	
		48 46.0	iPcP	V_1	
137	28	06 48 24.0	iP	V	0: 06 42 44 (USCGS)
		49 24.5	iPPP	E	
138	28	08 01 43.0	eP	V	0: 07 55 59 (USCGS)
139	28	12 44 26.5	iP	VE	C 0: 12 37 50 (USCGS)
		47 12.0	i	V	
140	28	00 16 32.5	iP	VE	0: 00 10 45 (USCGS)
		44.0	ipP	V	
141	29	06 06 21.5	e	V	
		22.5	e	NE	
142	29	06 27 56.0	e(P)	V	
143	29	06 36 18.5	iP	V	C 0: 06 30 54 (USCGS)
		19.5	eP	NE	
		21.0	i	V_1	

No.	Date	Time	Phase		Remarks
		40 43.0	eS	N_1E_1	
		45.5	iS	E_s	
144	29	07 40 40.5	iP	VNE	0: 07 30 33 (USCGS)
145	29	14 20 39.0	iP	V	C
146	29	14 30 51.0	iP	VE	C 0: 14 25 26 (USCGS)
		31 17.0	iPP	VNE	
147	29	16 09 35.0	eP	V	
148	29	22 16 26.5	iP	VV_1	R 0: 22 10 20 (USCGS)
		21 15.5	iS	EE_1	
		24.3	eL_r	E_1	
149	30	01 33 09.5	e	V	
150	30	02 55 50.0	e	V	
151	30	09 43 32.5	iP	VE	R 0: 09 38 08 (USCGS)
		33.0	eP	N	
152	30	09 46 03.5	iP	VN	R
		10.5	i	EE_1	
		20.0	i	V	
153	30	09 58 10.5	eP	V	
		18.5	i	V	
		10 06 23.5	i	E_1	
154	30	10 55 28.0	eP	NE	0: 10 49 47 (USCGS)
		30.0	i	V	
		59 06.5	iPcP	V	
		11 00 07.5	e	N_1E_1	
		27.0	i	V	
		29.0	e	N	
155	30	14 21 04.5	iP	VN	R 0: 14 11 40 (USCGS)
		22 19.5	iPcP	V	
156	30	15 24 57.5	iP	$VNEV_1$	0: 15 19 30 (USCGS)
		29 18.5	eS	EE_1	
		34.5	i	$NEV_1N_1E_1$	
157	30	20 04 26.0	iP	VN	R
158	31	00 49 00.0	iP	VN	0: 00 39 59 (USCGS)
					h: 250 km

Seismograms read by

Jennifer Clay

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MONTHLY SEISMOLOGICAL BULLETIN.

APRIL, 1960.

Latitude: 35° 19' 15" S. Longitude: 148° 59' 55" E. Height: 700M.

Instruments: three-component Benioff variable reluctance seismographs.

T_s = 1 sec.
T_g = 0.25 sec. (short periods VNE)
T_g = 16 sec. (long period vertical V_1)
T_g = 70 sec. (long period horizontals N_1 E_1)

Abbreviations: R = rarefaction; C = compression; O = origin; Epicentre locations as given by USCGS.

Mt. Stromlo quartz clocks provide accurate time marks and 50 c/s for drum drive.

No.	Date	Time.	Phase			Remarks.
1	1	03 00 32.0	iP	VNE		22 S 179½ W. h: 650 km.
		01 26.0	ipP	VN		
		04 53.5	iS	N		Fiji region
2	1	23 08 34.0	iP	VE		17½ S 180 h: 550 km
3	1	23 15 31.0	e			
4	2	06 48 26.0	iP	VN		18½N 146E
5	2	14 20 51.0	e	V		6S 152E
6	2	14 54 06.5	eP	VE		
7	2	23 10 36.0	eP	VE		11S 113E
8	3	05 20 13.0	iP	VN		28N 139½E h: 550 km
9	3	08 34 40.5	eP	V		
10	3	09 58 18.5	eP	V		6S 148½E
11	4	00 17 34.0	e	V		
12	4	08 01 58.0	iP	V	C	10S 161½E h: 100 km
		02 20.0	ipP	V		
		03 06.0	iPPP	V		Solomon Is.
13	4	12 51 48.0	iP	VN	R	5S 152E h: 100 km
A	4	14 02 57.0	e	VE	Local	
14	4	15 05 24.5	iP	VN	C	
15	5	07 30 20.0	eP	VNV_1		61S 26W
16	5	12 48 48.0	eP	VNV_1		60½S 25W Sandwich Is.
	6	Nil				
17	7	13 52 52.0	iP	VE	C	24S 179½ W h: 500 km
		52.5	eP	NV_1		Fiji region
		53.5	i	VN		
		54 18.5	iPP	VV_1		
		55 13.0	i(PcP)	V_1		
		57 11.0	eS	VEV_1		
		14 02 37.0	eScS	E		
18	8	00 02 16.5	iP	VNE	R	
		07 21.0	e	N		
19	8	04 50 42.5	e	V		
20	8	08 41 43.0	eP	VN		6S 147E
21	9	19 41 25.5	i	V		

No.	Date	Time.	Phase			Remarks.
22	10	02 31 20.0	i	V		
23	10	13 17 57.0	iP	VNE	R	Bonin Is.
24	11	16 05 49.5	iP	VNE	C	17S 167½E
25	12	21 52 29.0	eP	VN		3½S 152E
26	13	14 01 06.5	iP	VE	R	
27	14	06 32 03.0	eP	VNE		8S 118E
28	14	12 50 46.0	e	V		
29	14	21 27 22.5	e(P)	V		
30	15	04 03.0	eL	V_1E_1		27S 113W
31	15	05 12 53.0	i	V		
32	15	08 39 17.0	iP	V	C	28S 177W
33	15	11 50 40.5	iP	VNV_1	C	40½N 142E h: 150 km
34	15	22 10 52.5	iP	VN	R	13½S 166E
		11 42.5	iPP	VV_1		New Hebrides Is.
		56.0	ePPP	V_1		
		59.0	iPPP	V_1		
		15 29.0	eS	N		
	16	Nil				
35	17	20 16 11.5	e	E		
		33.0	e	V		
36	17	21 55 21.0	i	VN		20S 180 h: 500 km
		57 52.5	i	V		
37	18	08 17 01.0	eP	VN	C	28N 139½ E
38	18	15 42 28.5	i	VN		
39	18	17 00 23.0	eP	VN		16½S 168E
		52.5	i	V		New Hebrides Is.
40	19	09 29 36.0	eP	V		20S 173½W
41	19	14 53 45.5	iP	VNE	R	
42	20	08 12 00.5	iP	VNE	C	
43	20	15 09 54.5	e	V		
		13 16.5	i	V		
44	20	21 43 27.5	eP	VN		2½S 140E
45	21	13 07 10.0	iP	V		
46	21	16 28 58.0	iP	VE	R	20½S 174W
47	22	03 34 56.5	e	VE		
48	22	15 04 14.5	iP	VE	C	30½S 177½W
49	22	18 56 37.0	eP	VE		12½N 123½E
50	22	20 33 21.5	eP	V		17½S 174½W h: 200 km
		22.5	iP	EV_1		
		34 10.0	ipP	V		
		57.0	iPP	V		Tonga Is.
		40 14.0	ePcS	N_1		
51	23	01 44 34.5	i	VN		
52	23	12 15 53.0	iP	V	C	17S 175W h: 200 km
53	23	17 27 28.0	e	V		
		36.0	i	E		

No.	Date	Time.	Phase			Remarks.
54	24	03 29 44.5	iP	VNE $V_1N_1E_1$	C	6S 113½ E h: 600 km
		31 17.0	iPcP	VV_1		
		28.0	i	E_1		Java Sea
		36.5	ipP	V_1N_1		
		43.0	iPP	V_1		
		32 31.0	i	V_1E_1		
		34 11.5	iScP	VV_1		
		35 06.5	iPcS	N_1		
		32.0	eS	$VNEV_1N_1E_1$		
		38 01.0	i	VV_1		
55	24	18 10 09.0	iP	VE		29S 177W
56	25	00 26 11.5	eP	VN		42N 142E
		29 52.5	i	VN		Near south coast of Hokkaido, Japan.
57	25	17 37 19.0	eP	VN		
58	26	17 33 29.5	i	V		
59	27	11 11 43.0	eP	V		9S 160E
60	27	17 25.2	eL	E_1		3½S 146½E
61	27	22 02 24.5	e	V		
62	27	22 58 53.5	eP	VE	C	18N 120E
		54.0	iP	N		Off coast of Luzon, P.I.
63	28	02 22 51.0	iP	V		59½S 26W
64	28	05 08 13.0	eP	VNE		
		09 12.0	e(S)	V_1		
		15.0	i(S)	N_1		
65	28	05 14 36.0	iP	V	C	3½S 144½E
		22.5	e	E_1		Near coast of New Guinea.
66	28	12 13 40.0	eP	VE		
67	28	13 13 59.5	iP	VNE	C	
68	29	02 28 30.0	eP	V		56½S 26W
69	29	03 56 01.0	eP	V		55½S 25W
B	29	05 38 54.0	iP	VNE	Local	
70	29	05 58 06.0	eP	V		Sandwich Is.
71	29	09 02 39.5	e	V		
72	29	09 11 14.5	e	V		
73	29	09 24 15.0	iP	VNE	C	0, 121½E
74	29	10 01 35.0	eP	VNE		0, 122E
75	29	10 09 39.5	i(P)	V	C	
		10 17.0	i	V		
76	29	10 14 22.5	eP	V		0, 122E
		26.5	i	VN		Celebes
		31.5	ipP	E		
77	29	11 38 56.0	eP	VN		0, 122E
78	29	13 24 40.0	i(P)	V	C	
79	29	13 41 24.5	iP	$VNEV_1N_1E_1$	R	0, 122E
		43 05.0	i(PcP)			Celebes
80	29	13 44 20.5	iP	VE		30S 178½W
		26.0	ipP	N		Kermadec Is.
		51 24.5	iPcS	E_1		
81	29	14 54 41.5	iP	VNE		Kermadec Is. region.

No.	Date	Time.	Phase			Remarks.
82	29	19 03 49.5	iP	VNE		½S 121½E
		04 07.5	i	VN		Celebes
83	29	19 21 05.5	iP	VNE	C	
		36.5	e	E		
84	29	19 40 19.0	iP	VNE	C	0, 122E
		20.5	i	V_1		Celebes
		28.0	ipP	$NEV_1N_1E_1$		
		42 06.0	iPP	NV_1		
		08.0	iPcP	V		
		46 48.0	eS	EN_1E_1		
		49 42.0	e	EV_1E_1		
		50 13.0	i(SS)	EE_1		
85	29	20 52 34.0	iP	$VNEV_1N_1E_1$	R	0, 121½E
		54 24.5	ePP	E		Celebes.
86	29	21 51 40.5	e	VN		
87	29	23 58 25.5	e(P)	VN		
88	30	00 28 16.0	iP	VNE	R	0, 122E
		24.0	ipP	V		Celebes
		30 14.5	i (PP)	VE		
89	30	02 28 57.5	e(P)	VN		
90	30	03 41 58.5	iP	VN	C	
91	30	04 09 39.5	iP	VNE	R	0, 122E
		40.5	i	$V_1N_1E_1$		Celebes
		16 06.0	eS	E_1		
		19 26.5	eSS	E_1		
92	30	08 49 10.5	iP	V	C	
		51 58.5	e	VN		
93	30	10 19 31.0	eP	VN		0, 121½E
94	30	11 07 31.0	eP	E		16S 173W
		36.0	e	V		Tonga Is. region
95	30	13 19 35.5	eP	V		
		41.0	i	V		
96	30	14 22 47.5	eP	VNV_1		9S 157E
		52.0	i	V		Solomon Is.
		23 51.0	ePPP	N		
		27 27.0	eS	NE_1		
		28.5	eL	E_1		
97	30	17 16 49.0	i(P)	VNE		
98	30	19 35 39.5	e	V		
99	30	22 16 32.5	iP	$VNEV_1N_1$	R	6S 124½E h: 600 km
		18 15.0	iPP	V		Banda Sea
		16.0	ipP	VV_1		
		35.0	iPcP	VV_1		
		21 20.0	iScP	VE		
		35.0	iS	$VNEN_1E_1$		
		24 37.5	iSS	V		
100	30	23 17 18.0	iP	V	C	

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MONTHLY SEISMOLOGICAL BULLETIN.

MAY, 1960.

Latitude: 35° 19' 15" S. Longitude: 148° 59' 55" E. Height: 700M.

Instruments: three-component Benioff variable reluctance seismographs.

T_s = 1 sec.
T_g = 0.25 sec. (short periods VNE)
T_g = 16 sec. (long period vertical V_1)
T_g = 70 sec. (long period horizontals N_1 E_1)
One N-S component Wood-Anderson Seismograph, T_s = 0.8 sec.

Abbreviations: R = rarefaction; C = compression; O = origin;

Epicentre locations given by USCGS.

Mt. Stromlo quartz clocks provide accurate time marks and 50 c/s for drum drive.

No.	Date	Time	Phase			Remarks.
1	1	04 19 55.5	eP	VN		O, 122E Celebes
2	2	01 30 29.5	i	V		
3	2	02 45 10.5	iP	VN		
4	2	04 43 58.5	iP	V	R	
5	2	05 19 52.5	iP	VN	R	½ S 121 E Celebes
6	2	11 59 40.0	iP	VN	R	O, 121½E Celebes
7	2	12 18 18.5	iP	VNE	C	O, 121½E Celebes
8	2	14 50 27.5	e	V		
9	2	17 57 29.5	iP	VNE	R	
10	2	18 28 36.5	eP	V		
11	2	20 10 01.0	iP	VN	R	
12	2	20 37 30.5	eP	V		Kermadec Is. region
13	3	08 02 04.0	eP	V		24S 179½W Tonga Is. region.
14	3	08 07 21.5	i(P)	V		29N 99½E China
15	3	08 13 21.0	iP	VE	C	24S 179½W Tonga Is. region
16	3	08 43 01.0	iP	VN	R	
17	3	10 08 38.5	e	V		
18	3	11 29 54.0	e	V		
19	3	13 30 14.0	iP	$VNEV_1$	C	O, 121½E Celebes
		32 04.0	ePP	N		
20	3	22 33 29.0	iP	VNV_1	C	32N 140E h= 150km
		34 12.5	ipP	V		South of Honshu, Japan
21	3	23 55 54.0	e	V		
22	4	00 03 30.5	iP	VNE	C	19½S 178½W h=600km Fiji Is.
23	4	10 42 57.5	e	V		
24	4	11 03 44.0	iP	VN	R	
25	4	18 34 44.0	iP	VN	R	O, 122E Celebes
		40 16	ePcS	N_1		
26	4	22 06 06.0	e	V		
27	5	01 09 17.0	iP	VNE		

No	Date	Time	Phase			Remarks.
28	5	04 22 21.5	iP	VN		
29	6	13 34 23.0	eP	VN		
	7	Nil				
30	8	05 35 26.5	eP	V		31S 178W Kermadec Is.
31	8	16 00 06.5	i	V		
32	9	02 54 52.5	iP	$VNEV_1$	R	5½N 122E Celebes Sea
		55 01.5	ipP	V		
		56 19.5	iPcP	V		
33	9	04 03 54	e	NE		
34	9	06 50 21.5	i	VNE		
35	9	16 47 21.5	e(PP)	V		6½N 33½W Atlantic Ocean
36	10	10 24 51.5	eP	V		20S 177½W H=500km Fiji Is. region
37	10	11 09 00.5	e(P)	V		55½S 26W Sandwich Is.
38	10	12 46 59.0	i	VN		
39	10	19 46 37.5	e	V		
40	11	04 07 18.5	e	V		
A	11	14 06 11.0	e	N		Regional
		24.0	e	VE		
41	11	18 43 05.0	iP	VV_1	R	3S 131E
		05.5	iP	NE		Ceram Sea
		07.5	i	N_1E_1		
		44 32.5	ePP	N_1		
		45 21.5	e(PcP)	VV_1		
		48 42.0	eS	N_1		
		42.5	eS	NE_1		
		43.5	eS	E		
		49 00.0	isS	E_1		
		51 18.0	iSS	N_1		
42	12	02 28 02.0	iP	V		
43	12	06 31 02.5	iP	VN		5½S 105½E H= 100km
		30.0	ipP	V		Sunda Strait
44	12	19 19 13.5	iP	VNE		3½S 130½E Ceram Is.
45	13	01 39 37.0	i(P)	VN		
B	13	01 55 05.0	e	NE		Regional
C	13	02 19 46.5	e	VNE		Regional
46	13	20 52 14.5	eP	VE		32½S 179W Kermadec Is. region
47	13	23 54 19.5	iP	VNE		
48	14	02 46 30.5	e	VE		
49	14	10 39 20.0	e	VE		
50	15	10 29 06.5	i(P)	VN		
51	15	13 41 06.0	eP	V		24N 121½E near Formosa
	16	Nil				
52	17	01 36 22	e	VN		

No.	Date	Time	Phase			Remarks.
53	18	06 46 06.5	iP	V	C	29N 130E h=100km
54	18	18 16 58.0	iP	VNV_1	R	Celebes
55	19	10 23 31.5	eP	VV_1		17S 66E
		23 59.0	i	V_1		Mascarene Is.region
56	20	00 29 56.5	iP	N		3½S 147½E near New Guinea
57	20	08 19 39.5	e	V		
58	20	11 16 35.0	eP	E_1		28S 167½E Norfolk Is
		36.0	iP	VEV_1		0; 11 12 33(Canberra)
		17 08.5	iPP	N_1		Mag. 6-1/4.
		19 48.0	iS	N_1		
		20 13.5	iSS	N_1		
		29 52	e(T)	VE		
59	20	12 13 25.0	eP	V		
60	20	12 29 27.5	e	N		
61	20	17 46 25.0	eP	V	C	
62	20	18 02 30.0	e	VN		
63	21	08 26 49.5	iP	VN		15½N 121½E Luzon Is. P.I.
64	21	10 16 44.0	e	VV_1		37½S 73½W Chile
		20 14.5	e	V_1		
		27 03.5	i(SKS)	N_1		
65	21	15 21 11.0	iP	VNE	C	
		39.0	i	V		
66	22	01 02 06.0	iP	$VNEV_1E_1$	C	0; 00 57 57 (Canberra)
		05 22.5	eS	E_1		
		05.5	eL	$V_1N_1E_1$		
		06.3	eL	$V_1N_1E_1$		
67	22	01 16 51.5	e	VNE		
68	22	10 46 31.5	e	VV_1		38S 73½W Chile
		48 16.5	e(PP)	V_1		
		56 51.5	e(PS)	E_1		
69	22	10 50 28.0	i(PP)	VV_1		37½S 73W Chile
		57 38.0	e(S)			
		59 10	e(PS)			
70	22	11 06 34.5	e(P)	V		19N 121½E Babuyan Is.
71	22	19 09 36.0	e(P)	V_1		38S 73½W Chile
		46.0	i			
		13 32.5	e(PP)	V		
		38.5	i(PP)	N_1		
		43.0	i	V_1		
		20 08	iSKS	N_1E_1		
		40	eS	E		
72	22	19 24 14	eP	V		38S 73½W Chile
73	22	19 24 52	i(P)	V_1		38S 73½W Chile
74	23	00 34 16.0	eP	VN		0: 00 28 13(Canberra)
		21.0	i	E		
		35 17.0	iPP	N		
		39 07.0	iS	E_1		
		40 43.0	eSS	EE_1		
		41 05.0	iPcS	V_1		
75	23	01 06 50.0	iP	V		
76	23	03 09 30.0	i	V		
		31.2	eL	V_1		

No.	Date	Time	Phase			Remarks.
77	23	07 22 08.5	i(P)	V	C	48S 77W Chile
		50.3	eL	V_1		
78	23	16 16 44.5	iP	V		
79	23	21 03 47.5	iP	VNE	C	
80	24	06 37 07.0	iP	VV_1	C	0: 06 29 19(Canberra)
		07.5	iP	NEE_1		
		25.5	i	V		
		38 47.5	iPP	V		
		39 11.0	iP_cP	V		
		42 39.0	$i(P_cS)$	V		
81	24	06 49 09.0	eP	V		
		50 55.5	i	V		
82	24	11 01 45.5	e	V		
83	24	14 50 30	eP	V		44½S 167½E
		32.0	iP	$NEV_1N_1E_1$		South Is., N.Z.
		53 44.0	i(S)	N_1		Mag. 6-1/4
		54 02.0	eSS	N_1		
		18.0	iSSS	N_1		
		26	iL	N_1		
84	24	16 44 11	e	V		
		17.7	i			
85	24	17 47 10.5	eP	VN		
86	24	18 33 01.5	e	V		
87	24	20 28 14.5	iP	$VNEE_1$		
		31 34.5	e	E_1		
D	24	20 43 28.0	eP	VN		Regional
		44 08.5	eS	NE		
88	24	22 51 08.5	i(P)	V		
E	24	22 54 08	e	V		Regional?
F	24	23 06 35.5	e	V		Regional?
		07 13.5	e(S)	E		
89	24	23 40 56.6	eP	V		
		41 08.0	i	V		
90	25	02 41 43.5	iP	$VV_1N_1E_1$	C	44S 168E
		42 06.0	i(PPP)	V_1		near South Is.N.Z.
		21.5	i	E_1		
		41.0	i	E_1		
		43 12.5	i	E_1		
		44 09.0	i	E_1		
		45 09.0	eS	N_1		
		13.0	i	E_1		
		56 56	e(T)	V_1		
91	25	04 04 00	eP	V		
		07 20	eS	N_1		
		30	e	E_1		
92	25	06 02 16.0	i	V		
G	25	06 12 29.0	eP	VN		Local
		35.5	iS	V		
		39.5	eL	N		
93	25	08 47 43.5	eP	VV_1E_1		45S 76W Chile
		54.0	ipP	V		
		50 39.5	e	V_1		
		53 35.5	iPPP	E_1		
		58 38.0	iS	E_1		

No	Date	Time	Phase			Remarks.
94	25	10 19 38.0	iP	V	C	
		29.5	e	E_1		
95	25	13 43 50.0	i	V		
		44 07.5	i	VN		
96	25	13 46 10.5	iP	VN		1 N 129½E Halmahera
97	25	14 35 29.5	i(P)	VN		1 N 128½E Halmahera
98	25	15 04 45.5	iP	VNV_1E_1	C	22S 179½W h: 600km
		06 20.0	ipP	E_1		Fiji Is.
		20.5	ipP	VV_1		
		24.0	ePP	V_1		
		40.0	ePPP	VV_1		
		09 07.5	iS	VE_1		
		10 15.5	iS_cP	V		
99	25	15 10 45.0	iP	VNV_1E_1	C	
100	26	05 29 35.5	ePKP	V		40N 20E Albania-Greece
		42.5	i	V		border.
101	26	18 15 21.5	iP	V		
102	26	20 17 24.5	eP	V		27N 93E Eastern India
		40.0	iP_cP	V		
103	27	00 26 30.5	e	VN		
104	27	00 30 21.5	iP	VN	C	22S 172E
		31 11.0	iPPP	N		Loyalty Is. region.
I	27	00 41 47.0	e	VN		Regional
		42 28.0	i(S)	N		
105	27	13 09 07.0	e	V		
106	27	17 32 37.0	e	V		
107	27	20 15 58.0	eP	V		5½S 153E h: 150km
108	28	01 10 13.5	e	V		
109	28	01 50 55.0	i	V		
110	28	06 15 06.5	i	VN		
111	28	07 10 06.5	e	V		
112	28	08 39 07.0	e	V		
113	28	12 35 42.0	i(P)	V		
114	28	14 11 53.5	eP	V		
115	28	20 56 44.0	i(P)	V		
116	29	20 05 39.0	eP	VN		
117	30	08 35 20.0	iP	V	C	
118	30	10 33 30.5	e	V		
119	30	16 15 50.5	i	V		
120	31	04 57 48.0	iP	VN		
		56.0	i(pP)	V		
		58 01.0	i	V		
121	31	10 48 18.0	i(P)	V		
122	31	11 22 02.5	iPKP	VV_1	C	18N 62W Leeward Is.
		04.5	i	NV_1E_1		
123	31	12 02 01.0	e	V		
124	31	13 17 04.0	iP	VN	R	
125	31	18 39 21.0	iP	V		
126	31	21 08 20.0	iP	VV_1	C	5½S 109½E h:600km
		09 42.5	i	V		Java Sea

Seismograms read by Jennifer Clay.

Professor J.C. Jaeger,
Department of Geophysics.

Department of Geophysics.
Australian National University,
CANBERRA, A.C.T., AUSTRALIA.

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MONTHLY SEISMOLOGICAL BULLETIN.

JUNE, 1960.

Latitude: 35° 19' 15"S. Longitude: 148° 59' 55" E. Height: 700M.

Instruments: three-component Benioff variable reluctance seismographs.

T_s = 1 sec.

T_g = 0.25 sec. (short periods VNE)

T_g = 16 sec. (long period vertical V_1)

T_g = 70 sec. (long period horizontals N_1 E_1)

One N-S component Wood-Anderson Seismograph, T_s = 0.8 sec.

Abbreviations: R = rarefaction; C = compression; O = origin:

Epicentre locations given by USCGS.

Mt. Stromlo quartz clocks provide accurate time marks and 50 c/s for drum drive.

No.	Date	Time	Phase			Remarks
A	1	05 19 39.5	i(P)	V		Regional
		20 27.0	e(S)	N		
1	1	16 15 19.0	eP	V		
B	1	16 22 05.5	eP	V		Local
		11.5	iS	V		
2	1	22 20 49.0	i(P)	V		
3	2	02 00 32.5	iP	VNV_1E_1	R	Near South coast of
		04 29.0	i	V		Mindanao, P.I.
		05 03.0	i	V^1		
4	2	02 22 59.0	i	V		
5	2	03 58 40.0	e(P)	VN		
6	2	04 14 05	e	VN		
C	2	05 58 21.0	i	V		Regional?
7	2	06 11 05.0	eP	VV_1		46½S 74W
		11.0	i	VNV_1		Southern Chile
8	2	07 17 17.0	e	V		
9	2	07 25 56.5	iP	V		19S 175W h: 150km Tonga Is.
10	2	07 53 21.5	eP	VN	5½S	151½E New Britain
		55 42.0	i	E_1		
		58 14.5	eS	N_1		
		16.0	eS	E_1		
		33.5	esS	NN_1		
11	2	08 19 15.5	e(P)	V		
D	2	09 09 41.5	eP	V		Local
		49.5	iS	VN		
E	2	14 26 24.0	e(P)	V		Local
		35.5	i(S)	V		
12	2	19 04 53.5	eP	NV_1	C	20½S 178½W h: 550 km
		54.0	eP	V		Fiji Is.
		06 37.0	i(pP)	V		
13	2	19 54 18.0	iP	V	R	20½S 178W h: 550km Fiji Is.
14	2	23 25 58.5	e	V		
15	3	03 28 34.5	i(P)	V		
16	3	10 36 00.5	i	V		

			Phase			Remarks
17	3	10 51 36	e	VN		
18	3	13 20 31.5	iP	VNV_1E_1	R	17½S 179½W h: 600 km Fiji Is.
19	3	13 29 31.5	iP	VNV_1E_1	R	17½S 179W h: 600 km
		31 11.0	iPP	VV_1		Fiji Is.
		34 08.5	iS	E_1		
20	3	13 47 14.5	eP	VNV_1E_1		
		49 08.0	i	E_1		
		50 28.0	i	E_1		
		57.5	e	E_1		
21	3	14 02 42	e	VN		
22	3	14 21 39.5	i(P)	V		
23	3	16 29 51.5	eP	V		41½N 141½E h: 100km
		30 20.0	ipP	V		near south coast, Hokkaido
24	4	02 28 17.0	eP	V		
25	4	03 30 56.5	eP	V		
26	4	03 56 26.0	eP	V		
27	4	06 26 13.0	eP	VN		
		17.0	i	VN		
F	4	06 29 28	e	VN		Regional?
28	4	06 42 49.5	e	VN		
G	4	09 57 (13)	e	V		Regional?
		46.5	e	V		
29	4	10 24 16.0	eP	VN		24N 143E Volcano Is.
30	4	12 44 54.0	e	V		
31	5	06 13 48.5	eP	V		
32	5	19 36 29.0	eP	V		31½S 177W
		43 33	e	V_1E_1		Kermadec Is.
		44 29.0	i	E_1		
33	6	06 08 53.5	eP	VNE	C	45½S 73½W
		09 29.5	i	E_1		near coast of Chile
		42.0	i	V_1		Mag. 7½
		14 11.0	e	VV_1		
		17 47.5	e	V_1		
		18 55.5	i	E_1		
		19 29.0	e	E_1		
		33.5	e	N		
		21 39.0	e	V_1		
		33 45	iG	E_1		
34	6	23 35 30.5	iP	VEV_1		23½S 180 h: 600km South of Fiji Is.
35	7	04 02 31.5	iP	V		
36	7	05 34 02.0	iP	VE		17S 98E Indian Ocean
		04.5	i	V		
		12.0	ipP	V		
		35 26.5	iPcP	V		
37	7	09 07 44.5	e	V		
38	7	09 42 52.5	i(P)	V		
39	7	11 07 25.5	eP	V		
40	7	13 10 08.0	iP	VE		53N 158½E near east coast of Kamchatka
41	7	13 33 47.0	iP	$VNEV_1E_1$		20S 177½W h:500 km Fiji Is.
42	7	16 09 23.0	iP	V		
43	7	16 48 36.5	eP	VE		

44	8	03	45	37.0	eP	V		
				52.0	i	VE		
45	8	04	02	06	e	V		
46	8	05	17	44.0	iP	$VNEV_1E_1$		3½S 127E Boeroe Is.
			25	29.0	i	VNE		
					very short period oscillation			
			30	42.0	eT	VNE		
47	8	17	55	31.5	e	V		
48	8	19	08	57.0	iP	V		
H	9	02	42	05	e	VE		Regional?
I	9	04	02	55	e	VE		Regional?
49	9	05	12	24	e	V		9 S 112½E h: 350 km
				40.5	i	E		Near south coast of Java
50	9	11	29	14.5	iP	VNE	C	18 S 169E
				16.0	i	V_1E_1		New Hebrides Is.
				22.5	ipP	VV_1		O: 11 23 57
			33	32.0	iS	NE_1		Mag. 6
				42.5	isS	VV_1		
51	9	11	57	42.5	i	V		
52	9	12	31	03.5	eP	VNE		
				16.0	i	V		
53	9	15	15	53.0	e	V		
54	9	23	05	32.5	iP	V	C	
55	10	09	10	01.0	iP	V		
56	10	09	15	27.5	iP	VNE	C	15½S 174W Samoa Is.region
57	10	12	05	45.0	iP	VNE		6½S 131E Banda Sea
			06	48.5	i	V		
58	10	14	37	20.5	i	V		
59	10	21	19	31.0	iP	V		15½ S 174W Samoa Is.
			25	36.0	i(PcS)	E_1		region.
60	11	01	03	38.5	i	V		
61	11	13	31	52.0	iP	VN		
62	11	15	19	44.0	eP	VN		9S 152½E D'Entrecasteaux
				46.5	i	V_1E_1		Mag.6½ Is.
			24	22.0	eS	VN		
				33.5	i	V_1		
63	11	16	35	06.5	eP	V		
				08.0	i	N		
64	11	16	43	17.0	iP	VNV_1		9½S 152½E D'Entrecasteaux
			47	(46)	iS	E_1		Mag. 6-3/4 Is.
			48	10.5	i	V_1		
65	11	17	13	30.5	iP	VN		D'Entrecasteaux Is.
66	11	17	42	50.5	i	V		
			43	09.0	i	V		
			44	37.0	i	V		
67	11	21	00	32.0	eP	VN		
68	11	21	54	05.0	eP	V		
				06.5	i	N		
69	12	04	02	04.5	iP	$VNEV_1E_1$	R	22½S 179E H: 600 km
			06	19.0	eS	N		South of Fiji Is.
			07	41.5	iScP	V		
70	12	05	03	50.0	iP	VN	C	
			05	19.5	i	V		
			09	23.5	i	V		

71	✓	12	07 03 36.3	iP	V		29½S 179W h:250km
			06 48.0	i	V		Kermadec Is.
72		12	07 32 19.5	eP	V		36S 98W South Pacific
	✓		42 44.5	eS	E_1		Ocean
			43 59.0	ePS	E_1		
73	X	12	14 07 51.0	i	V		
74	X	12	15 21 39.0	eP	VN		22½S 172E Loyalty Is. region
75	X	12	19 40 06	e	VN		
76	X	13	03 25 21.0	i	V		
77	✓	13	06 00 08.5	eP	V		44½S 76½W Off coast of Southern Chile
78	X	13	08 47 19	e	V		
79	X	13	12 00 09.5	eP	VE		
			10.0	i	V_1		
			02 37.5	i	V		
J	X	13	13 21 33.5	eP	V		Local
			37.0	i	V		
80	X	14	08 56 27	e	V		
K	X	14	12 22 05.0	eP	V		Local
			16.5	i(S)	V		
81	X	14	19 01 19.0	iP	VN	C	
82	X	14	19 35 28	e	V		
83	✓	14	23 43 48.5	iP	VNV_1	C	9S 152½E D'Entrecasteaux Is.
84	X	15	02 59 10.0	i	V		
85	X	15	08 14 50.5	e	V		
86	X	15	13 02 15.0	e	VN		
87	✓	15	15 48 42	eP	V		41N 142½E Near North
			52.0	i	V		coast of Honshu, Japan
88	X	15	19 46 46.0	e	V		
89	✓	15	22 55 32.5	iP	V	C	32S 177½W Kermadec Is.
			57 27.5	i			
90		15	23 34 58.5	eP	V		½S 133E Western New
	✓		59.5	i	V		Guinea.
			35 06.0	ipP	N		
			36 37.0	iPP	V		
			37 15.0	iPcP	VV_1		
91	✓	15	23 40 32.5	i(PcP)	V		26S 178½E h: 600 km South of Fiji Is.
92	✓	16	06 47 24.	e	V		12½N 125E near Samar, P.I.
93	X	16	09 10 29.5	eP	V		35S 179E Off north coast of North Is. N.Z.
94	X	17	02 50 55.5	iP	$VNEV_1$	R	
95	✓	17	05 08 35.0	iP	V	C	18S 178W h:600km Fiji Is.
96	X	17	08 52 25	e	V		
97	X	17	10 41 57.5	i	V		
			43 07.0	i	V		
98	X	17	14 35 42.5	e(P)	V		
99	✓	17	16 25 18.5	iP	V	C	

			Phase			Remarks
100	17	16 48 47.0	eP	V		52½N 173½W Andreanof Is
101	17	18 58 21.0	i(P)	V		
102	17	23 11 37.5	iP	V		
103	18	02 38 32.5	eP	V		
104	18	03 24 43.5	eP	VN		9½S 152½E D'Entrecasteau
		31 10.5	e	V		Is.
105	18	15 52 29.0	iP	VN	C	
106	18	18 27 18.0	iP	V	C	
107	18	19 01 18.0	e	V		
108	18	22 46 54.0	i(P)	V		
109	18	23 41 42.5	eP	V		Near south coast of Sumatra
110	19	03 30 24.0	iP	V		
111	19	09 49 27.0	eP	V		10S 161E Solomon Is.
112	19	12 28 04.5	eP	V		15S 178½W h: 500km Fiji Is. region
113	19	17 27 58.5	iP	V	R	28N 142½E Bonin Is.
114	20	02 14 52.0	i	V_1		38S 73½W Near coast of Chile
		18 47.5	ePP	V_1		
		20 49.5	ePPP	V_1		
		25 06.0	e	V_1		
		17.0	eSKS	N_1E_1		
		26 04.0	eS	EE_1		
		27 30.5	ePS	N_1E_1		
		32 43.0	eSS	E_1		
115	20	02 31 24.0	e	V		
116	20	03 28 47.0	eP	VNE		
		56.0	ipP	VN		
L	20	05 29 00	e	VN		Regional?
		46	i(S)	V		
117	20	12 12 19.5	eP	V		3S 129E Ceram Is.
118	20	13 13 14.0	eP	V_1		39½S 73W Chile
		17 12.5	ePP	V_1		
		23 45.5	eSKS	N_1E_1		
		24 29.0	eS	E_1		
		25 50.0	ePS	N_1E_1		
119	20	23 47 21.5	iP	V		
120	21	07 30 23.5	iP	V	R	
121	21	12 51 42.5	iP	VN		3N 126½E Molucca Passage
122	21	18 15 27.0	iP	V	C	19S 178W h: 400km
		27.5	eP	N		Fiji Is.
123	21	21 46 11.0	eP	V		61S 21W Sandwich Is.
		19.5	i	V		region.
124	21	23 52 42.0	iP	V		
125	22	02 33 20.5	i(P)	V		Kermadec Is.
126	22	03 04 18.5	i(P)	E_1		62S 156½E North west of
		10 15.0	i	E_1		Balleny Is., Antarctic Ocean.
127	22	04 25 04.5	iP	VN		New Britain region.
M	22	10 19 07.5	iP	VN		Local
		20.0	i(S)	V		
		21.0	iS	V		
128	22	21 46 17.5	i	V		
129	23	05 56 36.5	e	V		

No.	Date	Time	Phase			Remarks
N	23	10 16 23.5	eP	VN		Regional
		17 14.0	i(S)	V		
130	23	12 15 02.0	iP	VV_1		7S 127½E Timor Is.region
		02.5	iP	NE_1		
		22 52.0	eSS	V_1		
131	24	02 07 50.0	e	V		
0	24	10 47 14	e	V		Local?
		23.5	i	V		
132	24	15 33 16.0	eP	V		
133	24	22 40 45.0	iP	V		30S 177½W Kermadec Is.
134	25	00 08 13.0	iP	V		8S 118E Sambawa Is.
		20.0	i	V		region.
135	25	00 13 05.0	iP	VN	C	
136	25	02 08 38.0	iP	VEV_1		30½ S 177W Kermadec Is.
137	25	10 33 36.5	iP	VN		
138	25	14 12 54.5	i(P)	V		
139	25	14 47 15.0	eP	N		30½ S 177W Kermadec Is.
		48.5	ipP	V_1		
		51 45.0	eS	N_1		
		52 44.5	esS	N_1		
		54 13.0	ePcS	N_1		
140	25	15 04 58.5	iP	V		30S 177W Kermadec Is.
141	26	04 16 19	e	V		
142	26	09 42 28.0	iP	V		
143	26	15 58 06.5	i	V		
144	27	02 15 03	e	V		
145	27	15 11 04.5	i(P)	V		
146	27	16 56 16.0	iP	V	C	
		30.5	ipP	VV_1		
		17 02 21	eS	N_1		
147	27	17 39 47.0	eP	V		31½S 178W Kermadec Is.
148	27	19 15 16.0	iP	V	R	
149	28	01 08 43.5	e	V		
150	28	01 11 45.5	iP	VE	R	
151	28	01 22 49.5	e	V		
P	28	05 34 (04.5)	eP	V		Regional
		26.5	iS	VN		
152	28	08 30 26.0	iP	VN	R	
153	28	16 06 21.5	e	V		
154	28	16 10 48.0	iP	V		
155	28	16 13 19.0	iP	VNE	R	Tonga Is. region
156	29	04 35 15.0	iP	V_1E_1	C	30S 177½W Kermadec Is.
		37 12.0	i(PcP)	V_1		
		40 11.0	eS	E_1		
		41 47.5	eSS	N_1		
		42 08.5	iPcS	E_1		
157	29	09 57 31.5	e	V		
158	29	14 30 04.5	e	V		
159	29	16 22 08.0	iP	V		
160	29	17 03 56.0	iP	VN	C	
		56.5	eP	N		

No.	Date	Time	Phase	Remarks
161	30	05 50 37.5	iP	VN
		52 10.0	i	V
162	30	09 57 51.5	eP	V
163	30	15 39 24.0	i	V

Seismograms read by Jennifer Clay.

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Department of Geophysics.

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Department of Geophysics.
Australian National University
CANBERRA, A.C.T., AUSTRALIA

MONTHLY SEISMOLOGICAL BULLETIN

~~JUNE~~ JULY 1960.

Latitude: 35° 19' 15"S. Longitude: 148° 59' 55"E. Height: 700M.

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T_g = 16 sec. (long period vertical V_1)

T_g = 70 sec. (long period horizontals N_1E_1)

One N-S component Wood-Anderson Seismograph, T_s = 0.8 sec.

Mt. Stromlo quartz clocks provide accurate time marks and 50 c/s for drum drive.

Abbreviations: R - rarefaction; C = compression; H = origin

Epicentre locations are those given by USCGS.

No.	Date	Phase	Component	Time		Remarks
1.	1	eP	V	00 03 40.0		10 S 119E Soemba Is.
		i	V	50.0		
A	1	(eP)	V	05 56 42.0		Local
		i(S)	V	50.0		
2	1	i	V	09 47 55.0		
		i	V	48 03.5		
3	1	eP	V	10 16 07.5		10½S 165½E Santa Cruz Is.
4	1	iP	V	17 49 07.0		11½N 142½E h: 60 km Mariana Is.
5	1	eP	V	18 01 36.5		
6	1	i(P)	V	20 48 20.0		
7	2	e	V	01 03 31		
8	2	i	V	02 57 29.5		
9	2	eP	VN	08 03 06.0		
		i	VN	10.0		
10	2	iP	VNV_1	12 08 37.0	C	56S 27W Sandwich Is.
		ePP	V_1	12 08.5		
11	2	eP	V	12 55 28.0		41N 131½E h:550 km Sea of Japan.
B	2	eP	VN	13 02 58.0		Local
		iS	VN	03 02.0		
C	2	eP	VNE	14 03 52.5		Local
		eS	VNE	58.0		
12	3	eP	V	20 33 49.5		50½ N 177W
		i	VN	51.0		Andreanof Is., Aleutian Is.
		iPcP	VV_1	54.5		
		ipP	V	58.0		
		isP	V	34 02.5		
		iPP	V	37 29.0		

No.	Date	Phase	Component	Time		Remarks.
13	3	i	V	21 44 21.5		
14	4	e	V	04 20 40.0		
		i	VN	49.0		
15	4	eL_q	N_1	05 14.3		52N 131½W
		eL_r	V_1N_1	19.9		Queen Charlotte Is.
		M	N_1	24.2		
16	5	iP	V	21 33 05.5		
17	6	e(P)	V	05 27 14		
18	6	eP	V	05 30 17.5		36½N 70½E h; 200 km Hindu Kush region.
19	6	iP	VN	05 35 04.0		
20	6	e(P)	V	05 42 15.0		
21	6	e(P)	V	07 18 39.5		
22	6	iP	VN	14 50 49.5	C	3N 126½E h; 200 km Molucca Passage
23	6	eP	V	23 24 24.5		5S 125E Banda Sea
		i	VN	39.5		
24	6	i(P)	V	23 42 18.5		5½S 155E Solomon Is.
25	7	e	VN	02 23 35		
D	7	e	V	06 14 05		
		i(S)	VNE	37.5		Regional
26	7	e	V	06 33 23.0		
		i	N	23.5		
27	7	i	V	07 26 37.5		
28	7	iP	V	10 30 50.5	R	
29	7	i	V	12 16 34.5		
30	7	i	V	13 07 57.5		
31	7	e	V	16 57 48.5		
32	7	e(P)	V	20 52 18.5		
33	8	iP	VN	13 02 19.0		31N 130½E Near south coast of Kyushu, Japan.
		ipP	VN	36.0		
34	8	iP	VN	14 51 26.5	R	7S 129E Banda Sea.
		i	VN	54.5		
		i	NE_1	52 32.0		
		e	EE_1	58 15.5		
35	8	iP	$VNEV_1$	15 29 04.0	C	14S 168E New Hebrides Is.
		i	V	04.5		
36	8	iP	VN	20 57 46.5	C	
37	9	e	V	00 53 13.0		25½N 125½E Ryukyu Is.
38	9	e	V	18 00 26		
39	9	e	VN	18 59 21		
40	10	eP	$VNEV_1$	00 15 26.5	C	0, 98E Off west coast of Sumatra
		i	V_1	28.0		
		i	V_1	37.5		

No.	Date	Phase	Component	Time		Remarks.
		eS	N_1E_1	23 33.5		
		eL_r	N_1E_1	33.1		
		M	V_1E_1	42.0		
41	10	iP	V	07 52 01.5		
		i	V	02.5		
42	10	eP	V	11 26 49.0		
43	10	iPKP	V	13 58 44.0		12½N 86W h: 150 km near coast of Nicaragua
44	10	eP	VN	20 27 38.5		53½S 134E South of Aust.
		eS	V_1	31 35		
		eL_r	N_1	32 57		
45	11	eP	VNV_1	07 38 05.5		54S 140½E South of Aust.
		i	V	39 43.0		
		i	VN	49.0		
		e(S)	E_1	41 29		
		eL	V_1E_1	43.3		
		M	E_1	44.0		
46	11	iP	VE	12 02 45.0		16S 172 W Tonga Is.region
		i	V_1E_1	47.0		
		i	VN	05.43.5		
		i(S)	E_1	08 44.0		
		eS	NV_1	47.5		
		i	N_1	52.0		
		eSS	V_1	11 39.5		
		eL_r	V_1E_1	14.1		
	12	Nil				
47	13	iP	VN	00 45 56.0	R	
48	13	eP	V	08 08 47.5		53½S 1½E Bouvet Is.region
		eS	N_1	19 27		
		eL_q	N_1	32.1		
49	13	i(P)	V	15 10 49.5		
50	13	iP	VN	16 07 02.0	R	
51	13	iP	V	17 09 38.0		
52	14	iP	V	10 35 16.5	C	5N 127½E Molucca Passage
		i	N	18.0		
		ipP	VEV_1	21.5		
		isP	V	23.5		
53	14	iP	VN	10 50 24.5		23½S 180 h: 600 km South of Fiji Is.
		ipP	V	53 09.5		
54	14	iP	VN	15 30 03.0	R	1N 120½E Celebes
		ipP	VN	07.0		
55	14	e	VN	18 10 (24)		
		i	V	42.5		
56	14	iP	VN	20 26 50.5	C	0, 123E Celebes
57	15	i(P)	V	03 16 17.0		

No.	Date	Phase	Component	Time		Remarks.
58	15	i(P)	V	14 40 39.5		
59	15	e	VN	20 02 42		
60	15	iP	V	20 29 38.5		
61	16	iP	V	01 46 46.5	C	
		i	V	55.0		
62	16	e(P)	V	04 13 59.5		
E	16	e	N	04 30 (00)		Regional
		e(S)	V	35.0		
63	16	iP	V	17 27 04.5		21½N 143E h; 300 km Mariana Is. region
64	16	eP	VN	19 17 27.5		
		i	V	29.5		
65	17	eP	VN	02 24 19.5		12N 125½E Samar,P.I.
F	17	eP	VN	12 55 02.5		Regional?
		iP	V	08.0		
		iS	VN	23.5		
		i(S)	V	28.0		
66	17	e(P)	V	23 41 54.5		
67	18	iP	V	01 04 46.0		Nicobar Is.
		ipP	V	49.0		
		isP	VN	53.5		
68	18	i	V	01 22 25.5		
69	18	eP	V	01 26 06.0		Nicobar Is.
		ipP	V	12.0		
70	18	eP	V	01 49 27.5		4½S 151E h: 200 km
		ipP	V	50 11.0		New Britain region
		iS	E_1	54 09.9		
		e	N_1	24.5		
		e(SS)	E_1	56 13		
		eL_q	N_1	56.4		
		M	V_1E_1	02 01.8		
71	18	i	V	05 11 52.4		
72	18	i(P)	V	07 54 10.0		
73	18	i(P)	V	08 11 38.0		
74	19	iP	V	16 44 07.0		
G	20	eP	VN	06 44 40.5		Local?
75	20	i(P)	V	07 28 49.5		
76	20	e	V	11 11 17.5		
77	20	eP	VNE	21 04 25.0		20½S 169E H: 200km
		i	$V_1N_1E_1$	26.0		New Hebrides Is.
		i	N_1	33.5		
		iS	N_1	08 52.5		
		i	V_1N_1	09 03.0		
78	20	i	V	21 23 20.0		

No.	Date	Phase	Component	Time		Remarks.
79	20	e	V	22 33 07		
80	20	eP	VN	23 10 53.5		
81	21	eP	VNE	00 16 05.0		
82	21	e	NV	00 45 26.0		
		i	V	28.0		
83	21	iP	VN	17 01 45.0	C	
H	22	e	V	01 46 15.0		Regional
		e	V	37.0		
84	22	iP	V	03 45 51.0	C	
85	22	eP	V	10 59 28.5		
		ipP	V	33.5		
86	23	iP	VN	00 10 33.5		
		ipP	VN	38.0		
		i	V	11 53.0		
87	23	iP	V	02 43 40.5		
		i	V	49.5		
88	23	iP	V	05 50 48.5	R	
89	23	iP	$VNEV_1E_1$	07 37 14.0	R	21½ S 179½W h: 600km
		ipP	V	38 52.0		Fiji Is.
		(iS)	E_1	41 35.0		
		iScP	V	42 37.5		
90	23	e	V	12 47 35.5		
91	23	e	V	21 03 46.0		
92	23	i(P)	V	21 14 24.0		
93	23	e	V	22 46 23		
94	24	e	V	02 24 44.0		
		i	V	52.0		
95	24	i	V	03 31 20.0		
96	24	eP	VN	03 46 29.5		
		i	V	57.5		
		i	VN	59.5		
97	24	e	V	04 26 (27)		
98	24	e	V	08 20 27.0		
I	24	e(P)	N	15 58 40.5		Local
		iS	VE	48.0		
99	24	e	VN	20 59 54		
100	24	e	V	22 02 57.0		
101	24	e	VNE	22 18 (21)		
102	25	iP	VN	03 33 23.0	R	
103	25	e	V	03 54 18.0		55N 163E Near coast of
		i	VN	40.0		Kamchatka
104	25	i	N	04 00 06.0		
		i	NE	26.5		
		i	VE	01 02.5		
105	25	eP	V	04 16 (47)		

No.	Date	Phase	Component	Time		Remarks.
		i	V_1E_1	17 13.0		
		e	E_1	21 58.0		
		eL	N_1E_1	24 37		
106	25	i	VN	04 22 44.0		
107	25	eP	VNE	05 38 16.5		
108	25	e	V	10 12 23.5		
109	25	iP	$VNEV_1N_1$	10 33 09.0		17½S 178W h: 500 km
		i	V	36 26.0		Fiji Is.
110	25	eP	VV_1	11 24 47.0		54N 159E h: 100 km
		iP	VN	47.5		Kamchatka
		iPcP	V_1N_1	50.0		H: 11 12 00 (Canberra)
		ipP	VV_1	25 24.0		
		isP	V	45.5		
		iPP	V	28 21.5		
		ePPP	V_1	30 31.0		
		eSKS	NN_1	35 01.5		
		iS	V_1N_1	27.0		
		iS	NE	28.0		
		isS	E_1	36 30.5		
		iG	E_1	48 08.0		
111	25	iP	V	11 42 29.0		
112	25	e	V	11 40 16.0		
113	25	e	N	14 36 (47)		
		e	V	55.5		
114	25	eP	V	18 04 16.5		
115	25	e(.)	V	20 02 15.5		
116	25	iP	VNV_1	21 43 18.5		3S 148E Bismarck Sea
		e	E_1	54 41.0		
		eL	N_1	55.7		
		M	E_1	59.9		
117	25	eP	VN	22 48 17.5		
J	26	iP	VNE	04 49 18.0		Regional
		eS	N	39.5		
		iS	VNE	40.5		
118	26	iP	VN	06 47 46.0		
119	26	e(P)	V	08 02 42.5		
120	26	i	V	14 46 30.5		
121	27	iP	V	04 10 00.5	R	59.4N 25.1E h: 65 km. Sandwich Is.
122	27	eP	V	09 05 15.5		5.6S 103.6E h: 93 km.
		i	V	16.5		Near coast of Sumatra
123	27	iP	V	10 17 57.0		44.7S 75.1W Near coast of southern Chile.
124	27	iP	VN	13 10 24.0		

No.	Date	Phase	Component	Time		Remarks.
125	27	e	V	13 32 (25)		19.5S 167.8E New Hebrides Is.
126	27	i(P)	V	13 45 55.5		
127	27	iP	VN	14 15 59.5	R	5.5S 147.3E h: 205km. Bismarck Sea
K	27	e	N	15 26 38		Regional
128	27	iP	V	21 07 11.0		28.7S 176.7W Kermadec Is.
L	28	e	V	03 40 (49)		Local?
		i	V	41 09.5		
129	28	i	V	06 48 26.0		
130	28	eP	V	10 41 38.5	C	
131	28	eP	VN	21 04 37.0		
		i	V	06 06.0		
132	29	eP	V	00 29 26.5		19½S 170½E Loyalty Is.
		i	V_1E_1	31.0		
		ipP	V_1	48.5		
		i(PPP)	V_1	30 35.5		
		eS	N_1	33 48.0		
		eS	E	51.5		
		i	E	00 33 57.0		
		M	V_1	37.1		
		M	N_1	39.1		
133	29	e	VNE	00 33 04		
134	29	eP	V	00 42 21.5		
135	29	eP	VNE	01 55 45.0		
		i	NE	56 01		
136	29	eP	V	02 13 35.5		
137	29	e(P)	V	02 21 04.0		
138	29	iP	VNE	03 05 33.0	C	
139	29	iP	V	10 55 12.5		26.9N 90.3E India
140	29	eP	VE	11 13 12.0		
141	29	iP	VNE	13 30 49.5		
142	29	eP	VN	15 31 11.0		
143	29	iP	VNE	15 33 23.0	C	
		i	V	49.0		
144	29	e	V	16 25 (44)		
145	29	eP	VN	17 43 22.0		40.1N 142.3E h: 50km Honshu, Japan.
		iPcP	V	30.5		
		ipP	V_1N_1	40.5		
		isP	V_1	50.0		
		i	N	44 01.0		
		iS	N_1E_1	52 59.0		
		M	N_1	18 13.6		
		M	E_1	17.8		

No.	Date	Phase	Component	Time		Remarks.
146	29	i	V	22 01 27.0		
147	29	eP	V	23 06 00.5		
148	30	eP	V	05 50 07.0		
		ipP	V	12.5		
		i	V	23.5		
149	30	eP	V	12 14 09.0		
		ipP	V	19.0		
150	30	iP	VN	14 26 08.0	C	
151	30	iP	VN	14 47 32.5		
		i	V	55.0		
152	30	e	V	15 01 (42)		
153	30	iP	V	19 31 04.0		
154	30	i(P)	V	20 01 11.5		
155	31	eP	VV_1	03 01 45.0	R	5.6S 150.0E New Britain
		ipP	V_1N_1	55.5		
		isP	V	59.5		
		i	V_1	02 19.5		
		ePP	V_1	44.0		
		iPPP	V_1	54.5		
		iPcP	V_1N_1	04 54.0		
		iS	E_1	06 34.5		
		isS	V_1N_1	42.5		
		iPcS	V	08 41.5		
		i	V_1	47.0		
		iScS	N	12 35.0		
		M	V_1N_1	14.7		
		M	E_1	16.7		
156	31	iP	VE	04 33 25.5		
		i	N	28.0		
157	31	eP	VN	07 10 33.0		6.0S 150.0E h: 93 km
		eS	N_1	15 23.5		New Britain
		M	$V_1N_1E_1$	21.9		
158	31	i(P)	V	09 12 47.5		
159	31	iP	$VNEV_1$	09 24 36.0	R	6.5S 129.6E h: 83km
		ipP	V	25 00.5		Banda Sea
		isP	V	12.5		
		i	V	39.0		
		i	V	48.0		
		i	V	26 22.0		
		isS	V	30 40.5		
		isS	V	32 09.0		
160	31	eP	V	13 02 (34)		
		i	V	42.0		

No.	Date	Phase	Component	Time		Remarks.
161	31	eP	V	15 08 02.4		43.6S 74.3W h: 97km Near coast of central Chile.
162	31	iP	VN	16 36 10.0	R	
163	31	eP	VN	18 52 43.5		2.8S 148.2E Bismarck Sea
		M	E_1	08.0		
164	31	iP	VNE	22 34 49.0	R	

Seismograms read by Jennifer Clay.

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MONTHLY SEISMOLOGICAL BULLETIN

AUGUST, 1960

Latitude: 35° 19' 15"S. Longitude: 148° 59' 55"E. Height: 700M.

Instruments: Three-component Benioff variable reluctance seismographs

T_s = 1 sec.

T_g = 0.25 sec. (short periods VNE)

T_g = 16 sec. (long period vertical V_1)

T_g = 70 sec. (long period horizontals N_1E_1)

One N-S component Wood-Anderson Seismograph, T_s = 0.8 sec.

Mt. Stromlo quartz clocks provide accurate time marks and 50 c/s for drum drive.

Abbreviations: R = rarefaction; C = compression; H = origin

Epicentre locations are those given by USCGS.

No.	Date	Phase	Component	Time		Remarks.
1	1	iP	VN	01 14 49.0	R	
2	1	e	V	05 00 05.5		
A	1	eP	V	06 00 (52.5)		Local
		iP	VN	54.0		
		eS	VE	01 01.0		
3	1	e	V	07 01 19.5		
4	1	iP	VN	09 57 51.5		5.4S 131.0E h: 85km Banda Sea
5	1	iP	V	15 27 19.0		3.7N 98.0E h: 25km Near coast of Sumatra
6	1	i	VN	18 53 34.0		
7	1	iP	VN	20 27 07.0		
8	1	e(P)	N	21 35 40.5		
		i	V	42.0		
9	1	i	V	21 42 43.0		
10	2	iP	V	03 32 26.5	R	
11	2	iP	VN	04 14 52.5		
12	2	iP	VN	04 49 41.5		
13	2	iP	V	05 12 27.5	R K	22.2S 171.5E h: 108km Loyalty Is.
		i	$NEV_1N_1E_1$	28.5		
		ipP	V	55.5		
		eS	$V_1N_1E_1$	16 37.5		
		eS	VNE	38.0		
		i	NE	46.5		
		isS	NN_1	17 19.0		
		iScP	E_1	19 26.0		
		iScS	NN_1	23 29.5		
14	2	eP	V	06 27 52		51.5N 178.3W h: 34km Andreanof Is. Aleutians
15	2	iP	VN	09 36 32.0		28.2S 176.6W h: 61 km Kermadec Is.
		i	V_1E_1	33.0		
		i	V	42.0		
		iPP	E_1	37 35.0		
		i	V	42.5		
		eL_r	N_1	43.5		

No.	Date	Phase	Component	Time	Remarks.
15	2	eL_r	E_1	44.7	
Contd.		M	V_1E_1	47.4	
16	2	iP	VE	10 12 25.5	28.4S 176.8W h: 92 km.
		i	V	35.5	Kermadec Is.
17	2	eP	V	10 43 58	
18	2	iP	V	11 07 35.5	
19	2	e(P)	V	11 21 34.5	
20	2	i	V	13 36 34.5	
		i	V	37 42.0	
21	3	i	V	02 25 47.5	
22	3	e	VN	05 31 47	
23	3	iP	V	05 49 17.5	
24	4	eP	VV_1	07 47 51.5	51.4N 179.1E h: 83km
		eSKS	N_1	58 14.0	Rat Is., Aleutians
		iS	E_1	44.5	
		iSS	E_1	08 04 43.5	
		eL	E_1	11.2	
25	4	iP	V	13 26 49.5	
B	4	eP	VN	15 15 36.5	Local
		eS	VE	46.5	
26	5	e	V	03 14 (53)	
27	5	e	V	04 35 38	
		i	V	44.0	
28	5	eP	V	14 43 (03)	
29	5	eP	V	15 33 36	9.5S 118.8E h: 64km Sumba Is.
30	6	i	V	14 00 06.1	
31	6	e(P)	VN	21 20 10.5	
C	6	i(P)	VN	22 10 51.0	Local
		e(S)	VNE	58.5	
32	7	i(P)	V	02 15 41.0	
33	7	e	VNE	08 58 (32)	
34	7	e	VNE	09 14 (04)	Short period movement
		i max	V	15 16.5	
35	7	e	VNE	10 12 (29)	Short period movement
		i max	V	14 19.0	
36	7	e	V	12 34 (12)	
37	8	iP	VN	06 14 22.5	
		i	V	15 43.0	
38	8	e	V	14 46 (05)	
		e	V	(20.5)	
D	8	eP	VN	22 27 52.5	Regional
		i	VN	56.0	
		iS	VN	28 12.5	
		iS	V	14.0	
39	9	eP	V	00 39 43.0	
E	9	e	VN	04 32 (16)	Regional
		iS	VN	59.5	

No.	Date	Phase	Component	Time		Remarks.
F	9	iP	VN	04 48 43.0		Local
		e	VN	45.5		
		iS	VN	49.0		
G	9	e	V	04 54 (23)		Local
		e	V	33		
40	9	(i)	E_1	08 09 50.5		40.0N 126.6W h: 25km
		eSS	E_1	13 45.0		Off coast of northern
		eL_r	V_1E_1	29.2		California.
		M	E_1	37.2		
H	9	e	V	09 03 (37)		Regional
		i(S)	V	59.0		
41	9	eP	VV_1	16 52 48.5		24.5S 177.1W h: 186 km
		i	E_1	52.5		Tonga Is. region
		i	E_1	53 12.0		
		i(sP)	E_1	51.0		
		iS	E_1	57 52.0		
		i	E_1	58 12.0		
		eL_q	N_1	17 00.1		
		eL_r	E_1	01.2		
		N_1E_1	M	05.8		
		V_1E_1	M	10.1		
42	9	iP	VNE	23 42 44.0		11.5S 166.3E h:80km
		ipP	V	57.0		Santa Cruz Is.
		isP	V	43 13.5		
		iPP	E_1	47.0		
		iPcP	E_1	46 07.0		
		eS	N_1E_1	47 27.0		
		eL_q	N_1	49.1		
		eL_r	V_1E_1	50.3		
		M	$V_1N_1E_1$	58.2		
43	10	e	V	01 10 38.0		
44	10	i(P)	V	06 02 19.0		
45	10	i	V	10 32 14.0		9.4S 119.0E h: 31km
						Sumba Is.
46	10	iP	V	20 06 48.0		
		i	V	51.0		
47	11	iP	V	02 13 51.0		
		i	N	51.5		
48	11	iP	VNE	03 01 20.0		0.0, 121.6E h: 46km
		i	V	04 08.0		Celebes
49	11	eP	$VNEV_1$	04 59 15.0	C	8.8N 126.1E h: 79km
		i	VN	19.0		Mindanao, P.I.
		i	V_1	25.0		
		ipP	V_1	39.0		
		ePP	VN	05 01 10.0		
		i(pPP)	NV_1	19.5		
		eS	N	06 12.0		
50	11	iP	V	21 49 16.0		
51	12	iP	VN	10 34 29.5	R	
52	12	e	V	12 50 45.5		
53	12	eP	V	13 23 54		36.1N 141.4E h: 95 km.
		i	V	24 01.0		Near east coast of Honshu,
						Japan.
54	12	iP	VN	23 28 56.0		
		i	V	58.0		
		i	V	29 03.0		
		e	V	36.0		
		i	V	30 13.0		

No.	Date	Phase	Component	Time		Remarks.
55	13	e	V	03 37 16		
56	13	i(P)	V	07 22 48.0		40.6N 142.0E h: 60km
		iPcP	V	23 00.0		Near east coast of Honshu,
		iPP	V	25 47.5		Japan
57	13	eP	VV_1	14 28 16.5		39.7S 74.8W h: 61.km
		iPP	V_1	31 58.0		Near coast of southern Chile
		iPS	N_1E_1	40 49.0		
		eSSS	V_1	49 40.5		
		eL_q	N_1	55.2		
		eL_r	V_1E_1	58.5		
58	13	eP	V	14 45 13		
59	13	i	V	15 58 54.0		
60	13	iP	VN	17 50 54.0		
61	13	i	V	18 55 38.5		
62	14	e(P)	V	04 28 14.0		
63	14	eP	V	08 53 07.0		
64	14	iP	V	13 31 21.0	R	
65	14	iP	V	14 46 42.0		7.2S 146.2E h: 200km
		ipP	V	47 23.5		Near east coast of New Guinea
I	14	e	V	17 02 23.0		Local
J	14	i(P)	V	18 54 00.5		Local
K	15	e	V	04 33 (54)		Regional?
		eS	VN	34 38		
66	15	iP	VE	06 28 22.5	R	
67	15	eP	V	07 10 54.0		13.4S 65.8E h: 15 km
						Indian Ocean
68	15	iP	VNV_1	10 08 16.5	C	
69	15	eP	V	14 45 40.5		13.5S 67.0E h: 25km
		i	V	54.5		Indian Ocean
70	15	eP	VN	22 33 56.0		
71	16	e	V	06 01 11		
72	16	eP	VN	08 19 31.5		6.2S 147.2 E h: 30km
						Near east coast of New Guinea.
73	16	eP	V	10 43 11.0		3.6S 68.7E h: 60km
						Chagos Archipelago region
74	16	iP	$VNEV_1$	22 34 26.5	R	7.6S 128.8E h: 63km
		e	E_1	44 20.0		Timor Is. region
		e	N_1	49.5		
		i	E_1	46 00.0		
75	16	eP	VN	23 11 29.5		
76	17	eP	V	05 19 05.5		
77	17	iP	V	05 43 57.0		
78	17	iP	VNE	18 15 25.5		1.7S 138.6E h: 45km
		ipP	N	29.0		Near north coast of New
		e	E_1	28 29		Guinea.
79	18	iP	V	02 08 15.0	C	

No.	Date	Phase	Component	Time		Remarks.
80	18	eP	V	15 07 20.5	C	South Australia (Adelaide)
		eS	VN	09 19.0		
		eS	E	20.5		
		i	V	22.0		
		i	V	34.5		
		e	V	10 29.5		
81	18	eP	V	17 08 32.0		
82	18	eP	V	20 59 24.0		44.5N 147.6E h: 32km Kurile Is.
83	18	iP	V	22 49 40	C	11.4S 166.2E h: 62km Santa Cruz Is.
84	19	e(P)	V	01 42 28.5	C	
85	19	iP	V	03 20 34.0	C	25.9N 96.4E h: 27km Northern Burma
L	19	eP	V	04 37 49.0		Regional
		eS	VN	38 32.5		
86	19	eP	V	05 52 35.5		
		i	V	36.5		
87	19	e	V	12 09 (52)		
88	19	eP	V	12 51 29.5		27.0N 140.1 E h: 283km Bonin Is. region
89	19	e	V	13 08 57.5		
90	19	iP	VN	17 16 37.0	R	54.1 N 160.6E h: 25km Near east coast of Kamchatka
		ipP	V	47.5		
91	19	e(P)	V	22 08 45.5	C	
92	20	i	V	10 30 31.5		
93	20	eL	E_1	20 55.0		35.6S 15.4W h: 37km Tristan da Cunha region
		eL	V_1	21 04.3		
94	20	iP	VN	22 30 47.5	C	0.5N 122.0E h: 59km Northern Celebes
		ipP	VN	51.0		
		i	V_1	31 06.5		
		i	V_1	10.5		
		eS	E_1	37.2		
95	21	eP	VN	00 24 20.0		4.3S 143.3E h: 39km New Guinea
		ipP	V	32.0		
		isP	V	41.0		
		ePPP	V	25 43.5		
		i	V	28 07.5		
96	21	eP	VN	01 05 19.0	C	5.5S 149.5E h: 177km New Britain
		isP	V	06 19.5		
		ePP	V	24.0		
		eL	N_1	14.0		
M	21	iP	V	10 13 8.0		Local 138N 29°E (Canberra) Mag. 1.9
		iS	V	22.5		
97	21	iP	VNE	12 57 45.0	R	4.9N 125.1 E h: 211 km Near south coast of Mindanao, P.I.
		ipP	VNE	58 24.0		
		iPcP	V	59 18.0		
		i(PP)	V	30.0		
		iPPP	V	13 00 33.5		
		iScP	V	02 53.0		
		i(PcS)	V	03 16.5		
		eS	V	04 16.0		
		iScS	N	07 18.5		
98	21	eP	VN	17 13 42.0		7.2N 127.8E h: 200km Off coast of Mindanao, P.I.

No.	Date	Phase	Component	Time.		Remarks.
99	21	eP	V	17 28 10		15.3S 176.0W h: 24km Fiji Is. region
N	22	e	V	01 00 36.0		Local
100	22	eP	VN	18 10 48.0	C	
101	22	eP	V	20 52 39		
102	23	iP	V	01 05 50.5	C	
103	23	e(P)	V	05 22 24.0		
104	23	iP	V	13 14 16.0	C	
105	23	i(P)	V	13 45 16.0		
		i	V	46 24.5		
0	23	e	VN	13 49 46.0		Local
106	23	eP	V	14 27 55.5		
		i	V	28 07.5		
P	23	i	VN	15 00 54.0		Regional?
107	23	eP	V	22 52 02		14.5S 176.4W h: 56km
		iS	E_1	57 51		Fiji Is. region
		eL	N_1	23 00.6		
		eL^q_r	V_1	02.9		
108	24	i	V	03 59 57.0		
109	24	iP	V	04 32 52.0	C	6.2S 150.4E h: 66 km
		i	V	33 22.5		New Britain
Q	24	i	V	05 33 30.5		Local
110	24	eP	V	05 56 05.0		19.0S 174.1W h: 42km
		ipP	V	18.0		Tonga Is.
		eL	E_1	06 07.1		
111	24	iP	V	19 39 43.0	C	24.4N 95.0E h: 145km
		e(pP)	V	40 11.0		Burma-India border
112	25	eP	V	03 45 31.5		
		eT	VNE	04 01 (05)		
113	26	e	V	11 53 (58)		11.1S 123.7E h: 79km
		e	V	54 40.0		Timor Is. region
		e	V_1	12 08 53		
114	26	i	V	15 56 16.0		
115	26	iP	VNE	18 32 54.0	C	13.5S 165.9E h: 56km
		eS	E_1	37 35		New Hebrides Is.
		eL	N_1	38.0		
116	26	e	VNE	20 23 25.5		Short period movement
117	26	e	VNE	20 38 (45)		short period movement
		i max	N	40 08		
118	26	e	V	20 49 43		
119	26	e	VNE	22 35 52.0		Short period movement
120	26	e	VN	22 51 05.5		short period movement
121	27	i	V	00 58 32.5		
122	27	i(P)	V	10 26 12.0	Ca	
		e	V	33 (38)		
123	27	iP	VN	12 56 58.0	C	22.4S 179.1W h: 155km
		i	V	57 04.0		Tonga Is. region
		i	V	17.0		
124	27	iP	VN	19 31 12.0		
125	28	iP	V	00 30 10.0	R	
126	28	i	V	03 20 07		

No.	Date	Phase	Component	Time		Remarks.
127	29	iP	V	12 28 46.5	C	
R	29	e	V	13 42 12.5		Regional?
128	29	eP	VN	15 09 52.0		
129	30	iP	V	19 12 18.0		
130	30	eP	V	21 25 43.5		Eyre Peninsular, S.A.
		i(S)	V	27 44.0		(Adelaide)
		i(S)	N	47.0		
		e	V	28 53.5		
131	31	iP	VNE	02 17 22.5		South Australia
		i	V	39.5		
		i	V	56.0		
		i	V	18 51.5		
		iS	V	19 19.0		
		i	VN	21.5		
132	31	iP	VN	05 49 31.5		
133	31	iP	VN	07 41 26.5		
134	31	i	V	13 48 39.0		
135	31	e	V	16 21 28		
136	31	i	V	17 30 54.5		13.7N 120.1E h: 22km
		e	V	31 35.5		Near coast of Mindanao, P.I.
137	31	iP	VN	18 01 03.0	R	

Seismograms read by
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MONTHLY SEISMOLOGICAL BULLETIN

SEPTEMBER, 1960.

Latitude: 35° 19' 15"S. Longitude: 148° 59' 55"E. Height: 700M.

Instruments: three-component Benioff variable reluctance seismographs

T_s = 1 sec.

T_g = 0.25 sec. (short periods VNE)

T_g = 16 sec. (long period vertical V_1)

T_g = 70 sec. (long period horizontals N_1E_1)

One N-S component Wood-Anderson Seismograph, T_s = 0.8 sec.

Mt. Stromlo quartz clocks provide accurate time marks and 50 c/s for drum drive.

Abbreviations: R - rarefaction; C = compression; H = origin.

Epicentre locations are those given by USCGS.

No.	Date	Phase	Component	Time		Remarks.
A	1	eP	VNE	00 57 49.0		Regional
		iP	VNE	49.5		
		iS	VNE	16.0		
		i	VNE	17.5		
B	1	e(P)	V	02 11 29		Local
		eS	N	39		
1	1	iP	V	07 40 54.5		27.6S 176.9W h:500km
		eL	V_1	49.7		Tonga Is. region
		M	V_1	53.3		
2	1	iP	VV_1	09 33 40.5	R	16.8S 167.6E h:63km
		eP	E	42.0		New Hebrides Is.
		i	VN	43.0		
		i(PP)	V	34 25.5		
		iPPP	V	37.5		
		i	V	36 27.0		
		eS	N_1	38 05.0		
		eS	E	07.0		
		esS	N	21.0		
		eSS	V_1	39 12.5		
		eL	N_1	40.5		
		i	V_1	41 34.5		
		M	N_1	42.3		
		iS_cS	V	44 24.0		
3	1	iP	V	10 40 27.0		16.5S 167.6E h:27km
		i	V_1	28.0		New Hebrides Is.
		i	N	31.5		In coda of No.2.
		i	V	57.5		
		i(PP)	V	41 06.0		
		i(PPP)	V	17.0		
		eS	N_1	44 51.0		
		esS	N_1	45 05.5		
		M	N_1	49.9		
4	1	iP	V	11 20 22.5		16.6S 167.4E h:35km
		i	V_1	23.5		New Hebrides Is.
		e(S)	N_1	24 18.5		In coda of No.3.
5	1	iP	V	12 03 30.5		27.7S 176.2W h:92km
		i	V	04 09.0		Kermadec Is. region.

No.	Date	Phase	Component	Time		Remarks.
6	1	e	VNE	16 38 (17)		short period movement
7	1	eP	VE	18 48 08.0		15.8S 179.2E h:33km Fiji Is.
8	1	iP	$VNEV_1$	20 08 53.5		16.1S 179.6W h:183km
		eL	N_1	17.1		Fiji Is.
C	2	iP	VE	01 46 56.0		Regional
		eS	N	47 17.5		
		iS	VN	18.5		
9	2	i	VN	02 27 49.5		
10	2	e(P)	VN	03 55 09.5		
11	2	e	V	04 10 (36)		short period movement
12	2	iP	VNE	10 57 40.0	C	15.2S 167.4E h:163km
		i(pP)	VN	58 10.0		New Hebrides Is.
		iPP	V	22.5		
13	2	iP	V	13 58 20.0	R	28.7N 98.3E h:48km Tibet
14	2	eP	N	15 08 35.5		
		i	V	37.0		
15	2	i	V	18 22 10.0		
16	2	e	V	18 51 (26)		31.9S 68.9W Argentina
17	2	e	V	22 16 21.5		52.0N 171.4W h:49km
		i	V	28.5		Fox Is., Aleutian Is.
18	3	iP	VN	03 53 09.0	C	
		i	V	45.0		
19	3	iP	V	05 48 29.0		20.9S 174.4W h:61km Tonga Is.
20	3	iP	$VNEV_1E_1$	07 51 53.0	R	19.0S 169.1E h:212km
		i	VNE	55.0		New Hebrides Is.
D	3	eP	VNE	10 06 54.0		Local
		i(S)	VE	07 00.5		
		i	N	01.0		
21	3	iP	$VNEV_1N_1E_1$	12 47 03.0	C	6.1S 154.5E h:457km
		ipP	V_1N_1	48 17.0		Solomon Is.
		iPP	V_1N_1	26.0		
		e	V_1	50 35.0		
		iS	NV_1	51 26.0		
		iS	N_1	27.5		
		iS	EE_1	30.0		
		iS_cP	VV_1	52 59.5		
		eP_cS	N_1E_1	53 48.0		
		eSS	N	55.0		
		i	V	54 00.5		
		i	E	04.0		
		M	V_1N_1	59.7		
22	3	eP	VN	13 43 52.5		
23	3	e(T)	V	13 59 15		
		(T) max	VNE	14 00 30		
24	3	iP	VNE	15 23 10.5	C	20.1S 178.6W h:645km Fiji Is.
25	3	e	V	15 52 40		34.7S 179.7W Kermadec region
26	3	e	V	19 52 49.5		
27	3	eP	V	20 45 58.0		48.5S 126.3E South of Australia

No.	Date	Phase	Component	Time		Remarks.
28	3	iP	V	23 58 34.5		44.6N 149.1E h:27km Kurile Is.
		ipP	V	48.5		
		isP	V_1	51.5		
		iP_cP	V_1	59 05.5		
29	4	eP	V	02 44 09.5		21.5S 170.4E h:60km Loyalty Is.
E	4	iP	V	02 34 37.0		Local
		i	V	38.0		
		iS	VN	43.5		
		i(L)	V	44.0		
30	4	e	V	05 02 (08)		
31	4	e	VN	11 29 (25)		short period movement
32	4	eP	V	13 07 52.0		5.8N 125.1E h:204 km near south coast of Mindanao, P.I.,
33	4	e	V	17 15 23.0		
34	5	e	V	05 58 30		
35	5	iP	V	07 33 36.0	R	
36	5	eP	VN	09 47 07.5		48.9S 121.2E h:89km South of Australia
F	5	eP	VN	16 28 59.0		Local
		eS	VE	29 14.0		
		i	NE	16.5		
37	5	iP	VN	18 11 19.5	R	
38	5	iP	V	19 42 20.0		
39	6	e	V	01 54 21.5		
G	6	eP	VNE	02 58 33.5		Regional
		iP	VN	35.5		
		iS	VNE	57.0		
40	6	iP	V	07 37 48.5	R	
41	6	iP	V	11 30 40.5		35.7S 179.3E h:600km North of North Island, N.Z.
42	6	e	V	11 35 07		
43	6	iP	VN	12 41 28.0		4.9S 145.1E h:38km near north coast of New Guinea
44	6	eP	VNV_1	14 08 06.0		20.4S 169.4E h:35km Loyalty Is.
		eP	EE_1	06.5		
		ipP	VN^1	15.5		
		ePP	V_1	41.5		
		i	E^1	10 40.5		
		iS	E_1	12 10.0		
		iS	N_1E_1	14.5		
		i	N_1	23.0		
		eL	E_1^1	14.0		
		M	V_1E_1	17.2		
45	6	eP	V	15 36 (30)		41.9N 142.5E h:109km Near south coast of Hokkaido, Japan.
46	6	iP	VN	16 36 09.5	R	7.2S 129.0E h:84km Banda Sea.
47	6	i	V	21 03 41.5		
48	6	iP	VN	21 32 47.0		

No.	Date	Phase	Component	Time		Remarks.
49	6	e	VN	23 43 05.5		
		i	V	12.5		
50	7	waves		02.2		Tristan da Cunha region
51	7	iP	VN	02 32 49.0		
52	7	iP	VNE	03 57 48.0		
		i	V	58 09.5		
53	7	iP	VE	08 21 51.5		
		i	VE	53.0		
H	7	iP	VNE	17 59 26.0		Local
		iS	V	34.0		
		eS	NE	34.5		
54	8	iP	$VNEV_1$	11 16 09.0	C	6.2N 126.2E h:47km
		i	V	17 20.0		Near east coast of
		i	V	21 31.0		Mindanao, P.I.
55	8	iP	V	14 44 51.0		52.5N 158.8E h:29km Kamchatka
56	8	iP	V	17 10 33.5		
I	9	e	V	01 51 51.5		Regional?
		i	VNE	52 13.5		
57	10	iP	VN	07 17 04.5		
58	10	iP	VNE	10 52 28.0		4.0N 122.6E h:629km
		i	$V_1N_1E_1$	28.5		Celebes Sea
		i	V_1	53 10.0		
		ipP	N_1	54 24.0		
		i(PP)	V_1	30.0		
		i	V_1	55 04.5		
		iS_cP	$V\ V_1$	56 47.5		
		iS	$VNEV_1N_1E_1$	58 33.5		
		i	N_1	42.5		
		i	N_1	59 42.5		
		i	N	45.0		
		iS_cS	V	11 01 13.5		
		i	N_1	16.5		
59	10	i	VN	11 17 09.0		
60	10	i(P)	VN	12 00 51.5		
61	10	i(P)	V	13 32 38.5		
62	10	i(P)	VN	14 05 34.5		
63	10	e	V	14 10 07.0		11.2S 163.1E h:48km
		eL	E_1	19.2		Solomon Is.
64	10	iP	V	15 56 12.5		6.6N 93.8E h:29km
		ipP	V	20.5		Nicobar Is.
65	11	e	N	01 48 17		
		e	VN	24		
66	11	e	V	02 28 53		
67	11	iP	VNE	02 32 03.0	R	
68	11	eP	V	10 57 25.5		33.5S 179.1W h:76km Kermadec Is. region.
69	11	iP	V	13 42 19.0		
70	11	e	V	22 08 28.5		
71	12	iP	VNE	07 53 43.0	R	
72	12	e	V	08 29 55		
73	12	iP	VNV_1	12 27 51.5		27.3N 128.4E h:48km
		ipP	$VNEV_1$	28 03.0		Ryukyu Is.

No.	Date	Phase	Component	Time		Remarks.
74	12	e	VNE	12 55 58		
75	12	iP	V	14 56 14.5		
76	12	iP	$VNEV_1E_1$	16 08 58.5	R	7.0S 117.0E h:611km Java Sea
		ipP or P_cP	VV_1	10 46.0		
		iS_cP	V	13 38.5		
		eS	NE	14 26.0		
77	12	iP	VN	22 41 06.5		5.5S 130.5E h:57km Banda Sea
78	13	eP	V	03 18 55		27.0N 140.2E h:439km Bonin Is. region.
		i	V	20 18.5		
J	13	eP	VN	03 31 36.0		Regional
		iP	VN	36.5		
		i	VN	41.5		
		eS	V	32 13.5		
79	13	e	V	04 10 14		
80	13	i(P)	V	19 53 26.5		
81	14	iP	VN	00 44 16.0		16.9N 122.3E h:50km Luzon, P.I.
K	14	(iP)	V	01 13 35.0		Regional
		iP	VNE	35.5		
		i	N	14.01.5		
		iS	VN	02.5		
		iS	NE	03.0		
82	14	iP	VN	05 09 26.0		35.1S 106.0W h:40km South Pacific Ocean
L	14	eP	VN	06 07 39.0		Regional
		iS	NE	08 23.5		
83	14	iP	VN	16 30 08.5		17.5S 178.9W h:562km Fiji Is. region.
		i	VE	11.0		
84	15	iP	V_1	18 06 55.5		21.4N 142.9E h:361km Volcano Is. region.
85	16	e	V	01 01 16.5		
86	16	e(P)	VN	06 19 51.5	C	
87	16	iP	V	13 59 52.5	R	
88	16	e	V	18 13 45		
		i	V	14 19.5		
89	17	eP	V	07 18 08.0		17.4S 167.4E h:23km New Hebrides Is.
90	17	iP	V	08 05 24.0		49.3N 155.4E h:35km Kurile Is.
91	17	iP	VV_1	08 18 04.0	C	49.4N 155.2E h:28km Kurile Is.
		iS	E_1	28 28.5		
		iS_cS	E_1	31.5		
		isS	E_1	59.0		
		eL	V_1N_1	46.4		
92	17	iP	V	08 43 28.0		
93	17	iP	V	13 04 50.0	R	6.3S 154.4E h:134km Solomon Is.
94	17	iP	V	15 18 26.0		3.6S 149.5E h:220km Bismarck Sea.
95	17	iP	VN	16 00 35.0		6.3S 148.8E h:79km New Britain.

No.	Date	Phase	Component	Time		Remarks.
96	17	iP	VE	20 03 04.5	R	20.9S 174.5W h:23km
		i	V	05.0		Tonga Is.
		i	E_1	04 53.0		
		eL	N_1	11.1		
		eL	V_1	12.6		
		M	V_1E_1	17.6		
M	18	eP	V	02 04 04.0		Local
		e	V	08.0		
		eS	VNE	10.0		
97	18	iP	$VNEV_1N_1E_1$	09 47 06.0	R	6.8S 129.2E h:83km
		ipP	V_1E_1	40.5		Banda Sea
		isP	V_1	48 04.0		
		iPP	V_1N_1	23.5		
		isPP	E_1	49 01.5		
		i(P_cP)	V	48.5		
		iS	N_1E_1	52 15.5		
		isS	E_1	53 16.0		
		i	V_1N_1	48.5		
		i	V_1	54 17.0		
		i	N_1	28.5		
		iL	E_1	56 28		
		M	N_1E_1	58.5		
		M	V_1	59 09		
98	19	iP	VN	03 49 26.5		15.6N 120.0E h:97km, Luzon, P.I.
99	19	eP	VN	04 08 45.0		15.5N 120.0E h:25km
		e(P_cS)	E_1	13 36		Near west coast of Luzon, P.I.
100	19	ePKP	V	19 20 27		6.9N 77.5W h:66km
		eL	$V_1N_1E_1$	20 04.8		Colombia-Panama border
101	20	iP	V	00 47 37.5		29.8S 177.9W h:493km Kermadec Is.
102	20	iP	VE	03 09 54.0		36.9S 177.2E h:91km Off north coast of North Island, N.Z.
103	20	iP	V	03 29 25.5		
104	20	eP	VE	03 41 34.5		28.2S 177.9W h:47km
		eL	N_1	47.6		Kermadec Is.
105	20	iP	V	05 04 35.5		
106	20	iP	V	20 11 27.0		
107	21	eP	VN	02 54 23		8.1S 149.4E h:115km Eastern New Guinea.
108	21	eP	VE	07 31 07		27.9S 177.8W
		i	V	10.0		h: 249km Kermadec Is.
109	21	e(P)	V	07 59 18.0		
110	21	eP	V	08 10 16.5		
111	21	iP	$VNEV_1$	16 18 41.0	R	26.5N 124.8E h:207km East China Sea.
112	21	i(P)	V	22 27 27.0		
113	22	e	E_1	09 48.7		3.3S 29.3E h:28km
		eL	N_1E_1	50.3		Belgian Congo
		e	E_1	54.4		
		e	V_1	10 02.5		
		M	E_1	04.0		
		M	V_1E_1	12.3		

No.	Date	Phase	Component	Time		Remarks.
114	23	e	VNE	06 10 05		short period movement
		i (max)	V	11 32.5		
		i (max)	N	34.0		
		i Imax)	E	37.5		
115	23	iP	$VNEV_1$	16 01 15.0	R	23.7S 179.5W h:473km Tonga Is.
116	23	eL	N_1	23 19.1		22.2S 174.8W h:39km
		eL	V_1E_1	20.5		Tonga Is.
		M	V_1E_1	26.2		
N	25	iP	VNE	04 17 00.5		Local
		eS	VE	06.5		
117	25	iP	VE	09 02 46.5	C	
118	25	e	V	15 46 (40)		
119	25	iP	VN	17 39 33.0	R	19.5N 145.6E h:95km Mariana Is.
120	26	i(P)	V	03 37 38.5		
0	26	e	VNE	05 24 23		Regional
		e(S)	VNE	25 06		
121	27	iP	VN	03 44 20.5		
122	27	e	VNE	04 00 (25)		short period movement
		i max	V	01 36		
123	27	iP	VN	07 24 56.5		00.9S 134.5E h:107km
		i	V	25 00.0		Western New Guinea
124	27	iP	V	18 44 35.0		14.4N 145.8E h:109km Mariana Is.
P	27	iP	VN	23 17 18.0		Local
		iS	VNE	22.0		
125	28	e	V	05 42 08		
126	28	iP	V	09 15 53.0	C	
Q	28	eP	VN	13 49 10.5		Local
		eS	VE	16.5		
		e	NE	17.0		
127	28	iP	VNE	17 40 48.0	R	18.0S 178.8W h:705km Fiji Is.
128	29	eP	V	02 43 52.5		
129	29	iP	VN	11 27 40.5	C	18.9N 144.7E h:469km Mariana Is.
		i	V	42.0		
		i	N_1	43.5		
		i	VV_1	28 20.0		
		iP_cP	V_1	41.5		
		iPP	V_1	29 57.5		
		i	EE_1	30 25.5		
		iS_cP	VV_1	31 58.5		
		iS	VEE_1	34 48.0		
		iS	NV_1N_1	48.5		
		iS_cS	NN_1	36 49.5		
		iS_cS	EE_1	50.0		
		M	E_1	47.8		
R	29	iP	V	12 57 03.5		Local
		iP	VNE	04.0		
		iS	VE	10.0		
		i	V	11.0		

No.	Date	Phase	Component	Time		Remarks.
T	29	e	V	13 08 58.5		Local
U	30	e	V	01 05 41.0		Local
		i	V	46.5		
130	30	iP	V	02 31 23.0		26.9N 127.6E h:100km
		e	N	26.0		Ryukyu Is.
131.	30	iP	V	07 12 41.0	C	
V	30	iP	V	08 41 57.5		Local
		iS	VNE	42 04.5		
132	30	iP	V	18 30 34.5	R	

Seismograms read by Jennifer Clay.

Professor J.C. Jaeger,
Department of Geophysics.

Replied 4/5

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Department of Geophysics.
Australian National University,
CANBERRA, A.C.T., AUSTRALIA.

MONTHLY SEISMOLOGICAL BULLETIN.

October, 1960.

Latitude: 35° 19' 15"S. Longitude: 148° 59' 55"E. Height: 700 M.
Instruments; three-component Benioff variable reluctance seismographs

T_s = 1 sec.
T_g = 0.25 sec. (short periods VNE)
T_g = 16 sec. (long period vertical V_1)
T_g = 70 sec. (long period horizontals N_1E_1)
One N-S component Wood-Anderson Seismograph, T_s = 0.8 sec.

Mt. Stromlo quartz clocks provide accurate time marks and 50 c/s for drum drive.

Abbreviations: R - rarefaction: C = compression: H = origin.

Epicentre locations are those given by USCGS.

No.	Date	Phase	Component	Time		Remarks.
1	1	iP	VE	00 16 22.0	C	
2	1	iP	VN	03 12 45.5	C	23.3N 94.6E h: 67km Burma
3	1	iP	VN	06 35 19.0	R	6.1N 124.5E h: 544 km Mindanao, P.I.
4	1	eP	V	16 24 12.5		52.2N 172.6W h: 41km
		eL	N1	53.9		Fox Is., Aleutian Is.
5	2	eP	VN	00 02 04.5		
6	2	iP	VN	04 50 13.0	R	61.0S 23.3W h: 77 km. Sandwich Is.
7	2	i	V	08 22 17.0		
8	2	eP	V	12 06 26.5		38.7S 91.5W h: 84km.
		eL	V_1N_1	34.3		Pacific Ocean, south east
		eL	E_1	34.5		of Easter Is.
9	2	eP	VNE	16 40 10.0		3.1N 127.7E h: 31km Molucca Passage
10	2	iP	$VNEV_1$	18 19 42.5 K	R	18.6N 94.9E h: 104 km.
		iPcP	VV_1	20 00.0		Burma.
L1	2	e	V	19 48 25.0		Local?
11	3	iP	V	10 18 49.5		3.3S 137.8E h: 29km.
		i	VN	51.0		Western New Guinea.
		eL	E_1	30.1		
		M	V_1E_1	31.0		
12	3	i	V	16 11 39.5		
13	3	(eP)	VN	17 16 37.0		8.1S 152.8E h: 100 km
		i	V	43.5		D'Entrecasteaux Is.
		e	N_1	26.2		
		e	N_1E_1	27.4		
		M	V_1	28.3		
14	3	iP	VNE	19 59 53.5		5.7S 103.0E h:51km.
		ipP	VE	20 00 04.5		Off coast of Sumatra.
		eL	N_1E_1	18.4		
		eL	E_1	19.3		
		M	V_1E_1	22.1		
15	3	iP	VE	22 15 50.0		22.6S 172.3E h:243km. Loyalty Is. region.

No.	Date	Phase	Com onent	Time		Remarks.
16	4	iP	V	09 57 02.5		7.5S 155.3E h:134 km.
		i	V_1	04.5		Solomon Is.
		e(S)	V_1	10 01 44		
		eS	N_1	53		
		i	E_1	02 38		
		eL	N_1	03.9		
		M	E_1	07.7		
		M	N_1	08.7		
		M	V_1	08.8		
		M	V_1	16.7		
17	4	e	V	10 08 10		
18	4	iP	V	10 56 45.0		36.3N 137.4E h: 222km. Honshu, Japan.
L2	4	e	V	18 28 27		Regional?
L3	4	eP	VNE	19 36 00.0		Local
		i	V	02.5		
		i	V	04.0		
		iS	VNE	06.5		
L4	5	eP	VE	03 58 45.5		Local
		iS	VNE	52.0		
L5	5	i	VN	09 04 34.5		Local
19	5	i	V	17 32 27.5		
20	5	iP	VNE	17 32 51.0		
21	5	iP	VE	21 14 10.0	C	
L6	6	e	V	05 52 13.5		
22	6	iP	VE	06 13 25.5		27.3S 179.8E h: 506km. Kermadec Is. region.
23	6	iP	VE	10 15 33.0	R	
L7	6	iP	VE	10 26 22.0		Local
		iS	VN	26.5		
24	6	iP	VE	16 28 19.0	C	
25	6	i	V	16 32 38.5		52.2N 107.2E h:46km. Lake Baikal region
26	6	eP	V	16 54 18.5		5.7S 103.0E h: 167km.
		i	V	20.5	Off	coast of Sumatra.
L8	6	iP	VN	19 34 07.0		Regional.
		eS	E	33.0		
		eS	N	34.0		
L9	6	eP	VE	23 48 50.0		Local
		iS	VNE	55.5		
L10	7	eP	V	06 36 47		Regional
		iS	N	37 09		
		iS	VE	10		
27	7	iP	$VNEV_1N_1E_1$	15 24 57.0	R	7.4S 130.7E h: 45km.
		i	N_1	59.0		Banda Sea.
		ipP	N_1	25 06.0		Mag. 7-1/4.
		isP	N_1	15.5		
		eS	N_1	30 08.0		
		i	N_1	14.0		
		M	V_1N_1	36.4		
28	7	eP	V	20 13 46		20.4S 113.7W h: 203 km.
		eL	V_1E_1	48		Easter Is. region.

No.	Date	Phase	Component	Time			Remarks.
L11	8	i(P)	V	05 42 00.5			Local
		e	V	12.5			
		i(S)	V	14.0			
29	8	iP	VNV_1N_1	06 03 59.0	A	C	40.0N 129.7E h: 608km.
		i	E	04 00.5			Sea of Japan.
		iPcP	N_1	03.0			
		i	V_1	23.0			
		ipP	V_1	06 08.5			
		i(sP)	V_1	07 05.0			
		ePP	V_1	10			
		i	V_1	08 18.5			
		iS	EE_1	13 02			
		iS	N_1	04.5			
		iSKS	EE_1	24.0			
		i(SP)	V_1N_1	42.5			
		eSPP	E	14 10.5			
		i	V_1	16 43.0			
		iS	E_1	51			
L12	8	eP	V	12 58 14.5			Local
		iS	V	22.5			
30	8	eP	VE	17 39 07.5			35.9S 176.9E h: 176km.
		eS	N_1	43 31			Near coast of North Island,
		eL	N_1	45.4			N.Z.,
		eL	V_1	46.1			
31	8	eL	N_1	19 34.3			
32	8	iP	$VNEV_1$	20 51 02.0	A	C	7.9N 92.9E h: 84km.
		eL	N_1	21 12.9			Nicobar Is.
33	8	iP	V	22 24 45.5			
34	9	iP	VN	01 45 56.0		C	
35	9	iP	VNE	03 49 29.5		R	
36	9	i	V	04 26 53.5			
37	9	eP	V	04 52 40.5			
38	9	i	VE	04 53 25.5			
39	9	iP	VNE	09 12 19.0		C	40.8N 141.2E h: 155km.
		i(PcP)	N	24.0			Near coast of northern
		ipP	V	42.5			Honshu, Japan.
		i	V	13 18.0			
40	9	iP	VE	09 58 36.0		C	15.1S 174.0W h:129 km.
		i	N	36.5			Samoa Is. region.
		i	V	40.5			
		i	V	44.5			
41	9	eP	V	13 18 19.5			
42	9	iP	V	17 56 21.0			39.7N 142.3E h: 122 km.
		ipP	V	57 00.5			Near coast of Honshu
L13	10	e	VE	06 16 22			Regional
		e(S)	V	17 02			
L14	10	e(P)	V	14 35 20.5			Regional
		i(S)	VN	36 07.0			
L15	10	e	V	15 31 (54)			Regional?
43	10	i(P)	V	15 43 11.0			
44	10	eP	V	21 52 (48)			
		i	V	58.5			
		i	V	54 35.0			
45	11	eP	V	18 38 12			16.1S 67.1E h:100 km.
							Mascarene Is. region.

No.	Date	Phase	Component	Time		Remarks.
46	12	i(P)	V	02 30 45.5		
47	12	iP	VN	07 19 13.0		
L16	12	iP	VN	07 50 32.5		Local
		i	V	37.5		
		i	V	39.5		
		i	V	42.0		
		e(S)	NE	54.5		
48	12	iP	VNE	17 19 05.0	R	6.8S 130.1E h: 25 km. Banda Sea
49	12	iP	VN	17 45 57.0		
50	12	eP	VN	18 35 30.0		6.1S 148.6E h: 119km. New Britain region.
51	13	iP	V	12 47 02.5		
52	13	iP	V	15 05 34.5		54.8N 161.2E h: 35km. Kamchatka
		iPcP	VNV_1	37.5		
		ipP	V_1	47.0		
		eSKS	N_1	16 02.0		
		eS	$V_1N_1E_1$	32.0		
		isS	E_1	49.5		
		i	E_1	19 07.0		
		eL	E_1	28.7		
		i	E_1	32 38.0		
		M	V_1N_1	41.9		
		M	E_1	42.5		
53	13	iP	$VNEV_1$	18 46 36.5		3.8S 152.4E h: 213 km. New Ireland region.
54	14	eP	VNE	01 07 04.0		10.1N 125.8E h: 17km.
		ipP	V	15.0		Near coast of Leyte. P.I.
55	14	e	VE	01 33 59.5		
56	14	eP	V	12 25 29.5		4.7S 103.1E h: 159km.
		i	V	30.0		Near coast of Sumatra
57	14	iP	$VNEV_1N_1$	15 37 00.0	C	4.8N 125.5E h: 36km.
		i	V	03.5		Near south coast of Mindanao
		iPcP	V	38 36.0		P.I.
		iPP	VN	46.5		
58	14	eP	VV_1	21 32 23.5	R	51.7N 172.1W h: 50km.
		i	V	30.0		Fox Is., Aleutian Is.
		i	V	35.5		
		i	VN	36 17.0		
		eS	E_1	43 34		
		eSS	E_1	49 47		
		eL	N_1	22 01.6		
		M	E_1	07.7		
59	14	e	V	22 19 (09)		
60	15	i	V	02 43 36.5		
61	15	eP	V	02 59 18.5		11.0S 162.5E h:139km. Solomon Is. region.
L17	15	eP	V	09 58 34.5		Local
		iS	VNE	38.5		
		iL	V	41.0		
62	15	iP	VN	11 40 24.0		23.1N 123.4E h: 60km. Off coast of Formosa.

No.	Date	Phase	Component	Time.		Remarks.
63	15	iP	VN	12 17 31.0		7.7S 157.5E h:366km. Solomon Is.
L18	16	eP	VN	03 11 58.0		Local
		iS	VE	12 03.5		
64	16	iP	$VNEV_1$	04 59 18.5	C	22.9S 179.3E h: 565km. South of Fiji Is.
65	16	eP	VV_1	13 33 02.5		36.2S 177.3E h: 25km. Near north coast of North Island, N.Z.
		eP	EE_1	03.0		
		eS	E_1	37 24		
		eL_r	N_1E_1	39 20		
		M	E_1	41.9		
L19	16	iP	VNE	19 55 29.0		Local
		i(P)	VNE	31.5		
		iS	NE	44.0		
		iS	VN	44.5		
66	17	iP	V	16 04 37.0	C	
L20	17	eP	V	21 23 05.0		Local
		iS	VNE	12.0		
67	17	iP	VE	22 39 34.0	R	18.8S 177.6W h:491 km. Fiji Is. region.
68	18	iP	VNE	00 05 56.5	R	25.3S 178.4E h: 636 km. South of Fiji Is.
69	18	i	V	07 05 30.0		
L21	18	iP	VN	07 33 28.5		Regional
		i	V	30.5		
		iS	VE	58.0		
L22	18	eP	V	08 43 49.0		Local
		e(S)	V	55.5		
		iS	VN	56.0		
70	18	iP	V	10 59 40.5		18.7S 173.3W h: 90km. Tonga Is. region.
71	19	eP	V	07 14 47.5		20.0S 179.9W h: 608 km. Fiji Is. region.
72	19	i(P)	V	11 43 54.0		
73	19	iP	V	14 30 15.5		
L23	19	e	V	22 07 (46)		Regional
		iS	V	08 12.0		
		iS	N	13.0		
74	20	iP	$VNEV_1$	11 11 49.5	R	11.0S 164.9E h: 40km. Santa Cruz Is. region.
		iP	N_1E_1	50.0		
		ipP	V_1	55.5		
		i	V_1	12 26.0		
		iPcP	VV_1	15 05.0		
		iS	N_1E_1	16 35.5		
		eL	N_1	18.0		
		iSS	E_1	18 06.5		
		(e)	N_1	22 07.5		
		(i)	E_1	19.5		
		M	V_1	26.9		
75	20	iP	VN	13 17 51.5	C	
L24	20	e(P)	V	20 23 14.0		Regional?
		i(S)	V	50.0		
		i	N	52.0		
		i max	V	24 08		

No.	Date	Phase	Component	Time		Remarks.
L25	21	e	V	00 14 (05)		Regional
		e(S)	V	23.5		
		i	VN	24.5		
		i	N	27.0		
76	21	iP	V	02 10 50.0		
		i	V	11 17.5		
L26	21	e	V	03 11 16		Regional?
77	21	iP	VNV_1	06 32 00.5	C	6.9S 127.6E h: 134km.
		e	V	45.0		Banda Sea
L27	21	eP	VN	14 49 01.5		Regional
		iS	VNE	47.5		
		i	E	49.0		
		i	$V_1N_1E_1$	50 03.5		
L28	21	e	VN	18 30 33.5		Local
		i	V	46.5		
L29	21	i	VN	19 48 16.5		Local
		i	V	29.0		
78	22	iP	$VNEV_1$	08 27 40.5	C	10.3S 161.2E h: 93km.
		iP	N_1E_1	41.0		Solomon Is. region.
		i	VN	42.0		
		i	V_1	45.5		
		i	V	54.0		
		i(pP)	VV_1	58.0		
		eS	N_1	32 18.0		
		i(sS)	V_1	44.5		
		eL	N_1	33.6		
		eL	V_1	34.8		
		M	N_1	35.8		
		M	E_1	36.6		
		M	V_1	37.4		
L30	22	e	V	16 07 59.0		Regional
		i	N	08 45.0		
		i	N	56.5		
79	22	i	V	19 28 11.5		
80	22	iP	VN	22 28 26.0	C	4.6S 144.3E h: 170km.
						near coast of New Guinea
L31	23	eP	N	02 50 43.5		Local
		eS	V	51.0		
		eS	N	51.5		
81	23	i	V	15 45 51.5	C	
82	24	iP	V	05 17 29.5	C	15.0S 167.4E h: 145km.
		iP	N	30.0		New Hebrides Is. region.
		iP	EV_1E_1	30.5		h :0.01 (Canberra)
		ipP	V	55.0		
		iPcP	V	20 54.0		
		iScP	V	24 24.0		
83	24	eP	V	17 15 08.0		6.0S 150.0E h: 122 km.
		eL	V_1	23.0		New Britain region.
		M	V_1	28.0		
84	25	iP	V	01 13 12.5		20.0S 174.6W h: 64km.
						Tonga Is. region.
L32	25	e	V	05 47 47		Regional?
		i	VN	48 02.5		
85	25	i(P)	V	18 31 40.0		18.1S 167.8E h: 100km,
		i	V	50.0		New Hebrides Is. region.

No.	Date	Phase	Component	Time		Remarks.
86	26	i(P)	V	01 34 25.5		
L33	26	i(P)	VN	01 54 40.0		Local
		e(S)	NE	56.5		
		i	E	59.0		
87	26	eP	V	07 04 32		9.0S 121.0E H: 132km. Sawoe Sea
88	26	eP	VN	11 33 02.5		7.9S 121.4E h: 25 km. Flores Sea
89	26	iP	$VNEV_1$	17 40 27.0	R	17.8S 178.6W h:589km. Fiji Is. region
90	26	iP	VNV_1	19 59 25.0	R	2.0S 125.9E h: 86km. Spice Is. region.
91	27	eP	V	03 23 25.5		10.3S 161.5E h:.116km. Solomon Is. region.
92	27	eP	VN	10 31 39.0		
93	27	iP	V	11 01 30.0		16.3N 121.3E h:54km. Luzon, P.I.
94	27	e(P)	V	13 28 38		
95	27	iP	VNV_1	14 55 45.0	R	6.2S 104.0E h: 168km. Near south coast of Sumatra
		i	V	58.5		
96	27	eP	VN	15 51 04.0		
		i	V	05.5		
97	27	e(T)	VNE	16 06 (46)		
98	27	iP	V	18 24 23.0	C	
99	27	iP	V	18 53 21.0		
100	27	eP	V	19 48 54.5		6.3S 154.7E h:118km. Solomon Is. region.
101	27	iP	$VNEV_1N_1E_1$	22 34 52.5	R	15.2S 175.0W h: 253km. Samoa Is. region.
L34	28	iP	VNE	01 50 44.5		Local
		i	V	51 06.0		
		i(S)	N	07.0		
102	28	ePKP	V	04 38 19.0		71.3N 8.6W h:48km. Jan Mayen Is.
103	28	iP	V	11 21 10.0		2.1N 124.0E h: 25 km. Celebes sea.
104	28	i(P)	V	12 01 07.5		
105	28	iP	V	12 55 06.5		
106	28	iP	VN	13 03 15.5		5.7S 146.4E h:55km. Near coast of New Guinea.
107	28	iP	VV_1	13 30 55.0	C	52.0N 157.4E h:96km. Kamchatka.
		eP	NN_1	55.5		
		ipP	V_1	31 21.0		
		i	V	24.5		
		eSKS	N_1	41 09.0		
		eS	E	27.0		
		iS	E_1	28.0		
		isS	E_1	42 14.0		
L35	28	e	V	16 02 13.5		Local
		i	VNE	26.0		

No.	Date	Phase	Component	Time	Remarks.
108	28	eP	V	22 40 35.5	34.4N 141.1E h: 96km.
		i	N	39.0	Near east coast of Honshu,
		eL	E_1	23 02.9	Japan.
L36	29	i(P)	VNE	03 27 14.5	Local
		i	E	17.0	
L37	29	e	N	04 07 22.5	Local
		i	V	24.0	
		i	V	26.0	
L38	29	eP	VNE	05 21 28.5	Local
		iS	VNE	41.0	
109	29	eP	VE	09 45 04.5	15.8S 172.9W h:99km.
		eL	E_1	56 30	Samoa Is. region.
		eL	V_1	57 15	
L39	29	(iP)	VNE	10 00 50.5	Local
		i	N	59.0	
		i	V	59.5	
		e	E	01 00.5	
110	29	i(P)	V	21 53 16.5	12.0N 140.9E h: 25km.
					Mariana Is. region.
111	30	i	V	04 28 06.0	
112	30	iP	VN	09 08 26.0	
113	30	i	V	10 29 42.0	
114	30	iP	VNV_1	15 58 25.0	1.0S 127.0E h: 32 km.
		eP	E	25.5	Spice Is.
		i	V	31.5	
115	30	i(P)	V	22 02 14.0	
		i	V	40.0	
116	31	iP	VN	10 34 41.5	
117	31	i	V	12 59 25.5	
118	31	iP	VN	21 00 33.0	25.3N 141.3E h: 25km.
					South of Bonin Is.

Seismograms read by
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CANBERRA, A.C.T., AUSTRALIA.

MONTHLY SEISMOLOGICAL BULLETIN

NOVEMBER 1960.

Latitude: 35° 19' 15"S. Longitude: 148° 59' 55"E. Height: 700M.

Instruments: three-component Benioff variable reluctance seismographs.

T_s = 1 sec.

T_g = 0.25 sec. (short periods VNE)

T_g = 16 sec. (long period vertical V_1)

T_g = 70 sec. (long period horizontals N_1E_1)

One N-S component Wood-Anderson Seismograph, T_s = 0.8 sec.

Mt. Stromlo quartz clocks provide accurate time marks and 50 c/s for drum drive.

Abbreviations: R-rarefaction; C - compression;

Epicentre locations are those given by USCGS.

No.	Date.	Phase	Component	Time		Remarks.
1	1	e(P)	V	08 59 25.0		38.4S 74.4W
		i	V	36.5		h: 97 km. Near coast
		e(PKKP)	V	09 16 12		of Chile.
		eL	N_1E_1	26 47		
		eL	V_1	30.2		
		M	E_1	36.6		
		M	V_1	37.0		
2	1	iP	VN	10 33 08.0	R	5.5S 102.4E h:43km.
		ipP	VN	18.5		Near south coast of Sumatra
3	1	iP	VE	20 47 21.0	R	
4	2	iP	VE	00 04 04.0	R	30.2S 177.7W h: 43km.
						Kermadec Is. region.
5	2	i	V	01 05 13.5		
6	2	iP	V	16 02 31.0	C	
7	2	iP	V	16 43 45.5	C	23.1N 93.8E h:126km.
						Burma-East Pakistan border
8	2	iP	$VNEV_1N_1E_1$	17 20 43.0	R	10.9S 164.9E h:25km.
		i	VNE	44.0		Santa Cruz Is.
		ipP	V_1E_1	53.5		
		i	V_1	21 26.0		
		iPPP	V_1	50.0		
		iPcP	VV_1	23 58.5		
		eS	N_1	25 24.0		
		esS	N_1E_1	44.0		
		eSS	N	26 52.5		
		e	N_1E_1	56.0		
		eSSS	N_1	27 06.0		
		M	E_1	31.5		
		M	V_1N_1	36.5		
9	2	eP	V	18 19 01.5		44.8S 80.2E h:23 km
		i	V	04.3		South Indian Ocean
		i	V	07.0		
L1	2	e(P)	VN	19 42 55		Regional
		i(S)	VE	43 33.5		
		i	E	41.0		
10	3	iP	VN	02 08 33.5		

No.	Date	Phase	Component	Time		Remarks.
11	3	e(P)	V	02 49 43		22.1S 175.1W h: 25km.
		eL	N_1	03 00 02		Tonga Is. region.
		eL	E_1	00.9		
12	4	i(P)	V	07 54 17.0		
13	4	iP	VNE	14 25 45.5	C	1.1S 126.5E h:25 km.
		i	V	48.5		Spice Is. region.
		ipP	VN	58.0		
L2	4	e(P)	V	17 56 06.0		Local
		e(S)	V	24.0		
14	5	i(P)	V	01 02 42.5		30.5N 130.9E h: 74 km. Kyushu, Japan.
15	5	e(P)	V	05 31 53.5		
		i	V	32 51.5		
L3	5	(e)	V	06 31 51.5		Local
		i(P)	VN	55.0		
		eS	E	32 13.5		
		iS	VN	14.0		
L4	5	e	V	18 09 28.5		Local
16	6	iP	VV_1	04 51 10.0	C	53.0N 159.8E h: 32km.
		i	V_1	11.5		Near east coast of Kamchatka
17	6	iP	VEV_1	06 20 44.0	R	31.0S 177.7W h: 184km.
		i	V	46.0		Kermadec Is. region.
		eS	N_1	25 13.0		
		i	E_1	26 04.5		
		eL	E_1	28.5		
		M	N_1	30.7		
		M	E_1	34.5		
18	6	iP	V	06 50 05.5		16.8N 119.9E h: 98km near coast of Luzon, P.I.
L5	6	i	V	13 30 26.5		Local
19	6	i	V	19 07 53.0		
20	6	i	V	23 10 55.8		
21	7	i	V	13 34 27.1		32.2N 131.5E h:25km. Kyushu, Japan
22	7	i	V	15 31 03.1		
23	7	e	E_1	16 38 06		10.7S 163.0E h:25km.
		eL	E_1	40 15		Solomon Is. region.
24	8	eP	V	00 02 28.0		30.6S 177.5W h:25km.
		i	V	40.5		Kermadec Is. region.
		e(T)	VNE	31		
25	8	iP	V	00 39 13.5		31.3S 177.4W h:25km Kermadec Is. region.
26	8	eP	V	02 49 49.0		29.8S 176.9W h:25km. Kermadec Is. region.
27	8	eP	V	05 39 34.0		45.2N 149.7E h: 25km. Kurile Is.
28	8	iP	V	11 05 38.5		31.1S 177.6W h: 18km. Kermadec Is. region.
29	8	i(P)	V	19 53 03.5		18.4S 168.3E h: 25km.
		i	VNE	04.0		New Hebrides Is. region.
L6	8	iP	VNE	20 01 55.5	R	Local
		iP	VN	57.0		
		iS	VNE	02 07.5		
		iL	V	14.0		

No.	Date	Phase	Component	Time		Remarks.
30	8	iP	VN	20 34 49.5		2.6S 139.4E h:25km. near coast of New Guinea.
L7	8	(eP)	V	21 32 32.5		Local
		iP	VN	33.5		
		i	V	34.5		
		eS	VN	44.0		
31	9	eP	VN	03 30 28.5		60.7S 24.8W h:37km. Sandwich Is.
		i	VV_1	29.0		
		ipP	VV_1	42		
		iS	E_1	40 55		
		eS	N_1	58		
		iSS	N_1	46 31		
		e	E_1	52.3		
		e	E_1	52.7		
		eL	V_1	57.1		
		M	V_1N_1	04 06.1		
		M	V_1	10.2		
32	9	iP	VN	10 55 51.5	R	32.7N 103.4E h: 47km. Szechwan Province, China.
		iPcP	VV_1	58.0		
L8	9	(eP)	V	14 49 20.5		Local
		e(S)	E	31.0		
		eS	VN	31.5		
33	9	i(P)	V	19 38 32.9		30.7S 177.1W h:68km. Kermadec Is. region.
		i	V	44.5		
34	9	waves	$V_1N_1E_1$	21.1		23.2S 70.6W near coast of Chile
L9	10	eP	VN	06 00 55.5		Regional
		iS	VN	01 18.0		
		iS	NE	18.5		
35	10	iP	$VNEV_1N_1E_1$	14 51 30.0	C	2.6S 139.4E h:25km. near coast of New Guinea
		ipP	V_1	43.0		
		i	V_1N_1	56.0		
		iPPP	V_1	53 08.0		Mag.7 (Canberra)
		i	V_1	16.0		
		iS	N_1E_1	56 47.0		
		i	N_1	49.5		
		i	VV_1N_1	54.0		
		eSS	N_1	59 10.5		
		iSSS	N_1	36.0		
		iScS	V	15 01 52.0		
		M	E_1	03.5		
		M	V_1	03.8		
L10	10	e	VN	16 16 54.5		Local
		i	V	17 01.0		
L 11	10	eP	VN	16 20 25.5		Local
		eS	VN	36.0		
36	10	iP	VNE	16 35 20.0	R	22.0S 171.6E h: 128km. Loyalty Is. region.
		i	VN	31.0		
		eL	E_1	41 41		
37	10	eP	VN	18 43 21.5		
38	11	iP	VN	01 15 31.5		10.1S 119.1E h:25km. Soemba Is. region.
39	11	e(P)	V	02 03 23		
40	11	iP	V	06 20 21.0	C	19.6S 179.1W h:707km. Fiji Is. region.

No.	Date	Phase	Component	Time		Remarks.
L12	11	i(P)	VN	19 58 39.0		Local
		i	VN	39.5		
		iS	VNE	45.5		
41	11	iP	V	22 33 09.0		6.5N 94.4E h: 25km. Nicobar Is.
L13	12	iP	VN	01 47 05.0		
		eS	VN	16.5		
42	12	iP	V	06 27 33.0	C	17.3S 178.9W h:576km. Fiji Is. region.
L14	12	iP	VN	16 53 14.0		Local
		iS	VNE	18.0		
43	12	eP	VNE	23 05 45		H: 23 03 08(Canb.)
		iS	V	07 46		South Australia.
44	18	iP	$VNEV_1N_1E_1$	06 44 54.0	C	1.4N 127.2E h:59km.
		ipP	N_1	45 14.5		Molucca Passage
		isP	V_1	25.0		
		iPP	V_1	46 32.0		
		iPP	N_1	33.0		
		iPcP	V_1	46.5		
		iPcP	E	47.5		
		iScP	V	50 26		
		eS	EN_1	51 01.5		
		eS	V_1	04		
		e	N	52 18		
		e	N_1	54 10		
		iSS	N_1	21		
		eScS	V_1	50		
		M	V_1	07 05.7		
45	13	iP	V	09 33 52.5		51.1N 168.8W h:65km.
		eSKS	V_1N_1	44 26.5		Fox Is. Aleutian Is.
		eS	N_1	45 02		
		e	N_1	46 20		
		F		10.8		
L15	14	eP	V	02 09 39.0		Regional
		eS	V	10 00.5		
46	14	iP	VN	02 12 33.0		53.5S 140.7E h:21km.
		eL	N_1	17.6		Antarctic Ocean, south of
		eL	V_1	18.1		Australia
47	14	eP	V	04 21 32.0		53.5S 140.3E h:100km.
		i	V	39.6		Antarctic Ocean, south of Australia
48	14	iP	V	12 14 04.5		4.2S 142.9E h:86km.
		i	N	05.0		Near coast of New Guinea
49	14	iP	V	14 10 10.5		
		i	N	11.0		
50	14	iP	V	17 59 16.5	R	20.5S 177.7W h:536km. Fiji Is. region.
L16	15	e	VE	01 47 (08)		Regional
		i	VN	38.0		
		i	N	40.5		
51	15	iP	VN	05 33 54.0		
52	15	eP	V	06 31 11.0		62.5S 161.7W h:46km.
		i	N	15.0		Antarctic Ocean, south east
		eS	E_1	37 35		of New Zealand
		eL	E_1	40 31		

No.	Date	Phase	Component	Time		Remarks.
53	15	iP	V	09 17 52.0	C	23.2N 94.3E h: 103km. near Burma-India border
54	15	eP	VV_1	21 45 26.5		35.0S 178.4E h: 84km.
		eS	V_1E_1	49 58		Off coast of North Island, N. Z.
55	16	eP	VNE	01 28 28.0		23.7S 179.3E h: 552km.
		eS	N	32 37.5		South of Fiji Is. region.
		iS	E_1	38.5		
		i	E_1	34 32.5		
56	16	eP	VNE	07 21 36.5		
57	16	i	V	19 05 06.0		
58	17	eP	V	04 13 51.5		30.8S 177.7W h: 71km.
		eL	E_1	22.5		Kermadec Is. region.
59	17	eP	V	05 02 27.5		Felt in Brisbane, Queensland.
		i	N	03 52.0		
		i(S)	N	04 38.0		
		i	VE	43.0		
60	17	iP	VNE	05 34 11.0	C	
		i	V	31.0		
61	17	i	V	13 47 33.0		
L17	18	iP	VN	06 32 30.0		Local
		iS	V	43.0		
L18	18	iP	VN	07 14 08.5		Local
		iS	VE	16.0		
62	18	iP	VNE	15 29 34.0	R	6.3S 130.0E h: 68km. Banda Sea.
L19	19	iP	VN	06 17 25.5		Local
		i	V	28.0		
		eS	N	37.5		
		iS	NE	38.5		
63	19	e(P)	V	06 22 42.0		
64	19	iP	VNE	07 10 53	R	17.6S 179.0W h:594km. Fiji Is. region.
65	19	eP	VN	12 25 00.5		8.6N 137.6E h:27km.
		i	V	04.5		Caroline Is. region.
66	20	eP	V	00 28 11.0		
L20	20	iP	VN	02 04 46.0		Local
		iS	VNE	49.0		
L21	20	e	V	21 10 29		Regional
		e	E	54		
67	20	i(P KP)	E_1	22 21 44		6.8S 80.7W h:93km.
		e	V_1	22 47		Near coast of Peru
		e (PS)	E_1	31 27		
		i	E_1	38		
		M	E_1	59.6		
68	21	i	V	02 41 18.0		
69	21	iP	VN	04 35 02.0	R	3.4S 152.3E h:371km. New Ireland region.
70	21	i(P)	V	15 45 03.5	C	
L22	21	iP	VNE	23 20 12.5		Regional
		i	V	19.0		
		i	V	44.5		
		i(S)	E	48.5		
		i	N	52.5		

No.	Date	Phase	Component	Time		Remarks.
71	22	iP	VNE	03 39 02.0		19.2S 173.1W h:25km.
		e	N_1	47 34		Tonga Is. region.
		eL	V_1E_1	50.5		
		M	N_1	53.9		
		M	V_1	56.4		
72	22	eP	V	03 52 28		19.7S 172.6W h:70km.
						Tonga Is. region.
L23	22	(e)	V	05 29 41.5		
		e(S)	V	51.5		
73	22	iP	V	06 33 28.0	R	35.9S 52.3E h: 21km.
		eP	NE	28.5		Indian Ocean, north of
		i(pP)	V	31.0		Crozet Is.
		eL	$V_1N_1E_1$	57.4		
74	22	iP	V	18 02 35.5	C	7.3N 95.7E h: 25km.
						Nicobar Is. region.
75	22	i(P)	V	19 54 05.2		
76	23	e(P)	V	01 30 40		5.0S 153.3E h:79km.
						New Britain region.
77	23	iP	VN	04 17 09.5	C	4.9S 153.8E h:516km.
		ipP	VN	15.0		New Britain region.
		eS	N	21 43		
78	23	eP	VN	09 48 14.0		10.3S 152.3E h:70 km.
						D'Entrecasteaux Is.
79	23	e	V	10 13 46.0		
80	23	i	V	13 28 06.5		
81	23	iP	V	14 18 50.0		24.2S 176.1W h:28km.
		i	VNE	55.0		South of Tonga Is.
		ipP	V	59.0		Mag. 6-3/4 (Canb).
		ipP	V_1	19 00.0		
		ePP	EE_1	55		
		ePP	VV_1	59		
		iPPP	E	20 17.5		
		e	N_1	23 43		
		i	E_1	46		
		e(S)	N_1	24 08		
		G	N_1	25.9		
		eL	V_1	26.5		
		M	N_1	31.9		
		M	V_1E_1	33.4		
82	23	iP	VN	17 00 23.5	C	4.6N 125.8E h:143 km.
		i	$VNEV_1N_1E_1$	24.0		Near Mindanao, P.I.
		iScP	V	05 38.0		
83	23	i(P)	V	17 35 20.5		24.5S 176.4W h:171km.
						South of Tonga Is.region.
84	23	eP	VV_1	18 03 03		24.0S 176.3W h: 51km.
		i(pP)	V	16.0		South of Tonga Is. region
		iPP	E_1	04 14		
		i	VN	06 21.0		
		eS	E_1	08 18		
		eL	N_1	10 27		
85	23	e	V	18 40 07		
86	23	e	V	18 49 29		
87	23	iP	VE	21 19 56.5	R	22.1S 179.5W h: 631km.
						South of Fiji Is. region.

No.	Date	Phase	Component	Time		Remarks.
L24	23	e	V	22 49 (04)		Regional
88	23	iP	V	23 25 09.0	C	13.1N 120.2E h: 89km. near coast of Mindoro, P.I.
L25	24	eP	V	03 19 02.0		Regional
		eS	N	26.0		
89	24	eP	VN	04 56 27.0	C	4.6S 153.0E h: 87km.
		i	VN	42.5		New Britain region.
		isP	VN	57 00.5		
		(iPP)	E_1	31.0		
		iPPP	V	51.5		
		eS	N_1	05 01 25		
		iS	E_1	27		
		iPcS	VV_1	03 03.5		
		eL	N_1	04 30		
		M	V_1N_1	09.3		
90	24	e	V	05 25 16.0		
91	24	iP	VNE	06 59 09.5	C	24.2S 176.1W h:23km
		i	E_1	07 00 02		South of Tonga Is. region
		i(PP)	V	19		Mag.6-3/4 - 7 (Canb.)
		i	E	28.5		
		e(S)	N_1	04 11		
		i	E	29.5		
		i(L)	E_1	06 15.5		
		i(SS)	E_1	23.0		
		e(SSS)	E_1	48		
		M	N_1	13.1		
		M	V_1E_1	15.4		
92	24	eP	V	08 23 13.5		24.4S 176.3W h:25km. South of Tonga Is. region
93	24	eP	V	08 32 43.5		24.5S 175.9W h:25km. South of Tonga Is.region
94	24	eP	V	09 34 41		24.1S 176.6W h:93km. South of Tonga Is.
95	24	e	V	22 50 45		
L26	25	i	V	06 07 53.0		Local
L27	25	e	V	07 53 27.5		Local
96	25	i	V	17 57 34.5		
L28	25	e	V	21 46 26.0		Local
97	25	eP	V	22 05 35		38.0N 140.5E h:157 km. Honshu, Japan.
L29	25	i	V	23 02 12.0		Local
98	26	iP	V	01 52 43.5	C	
99	26	i	V	02 49 34.5	R	
100	26	i	V	03 12 18.0		
101	26	e	V	03 36 (37)		
102	26	iP	VN	05 50 59.0	C	
103	26	iP	V	07 48 21.0	C	36.6N 141.0E h:100 km.
		iPcP	V	35.5		Near coast of Honshu,Japan
104	26	eP	V	12 24 43.5		10.7S 162.3E h:51km. Solomon Is. region

No.	Date	Phase	Component	Time		Remarks.
105	26	eP	$VNV_1N_1E_1$	18 24 50.0		53.9S 141.5E h:25km.
		eS	E_1	28 25		Antarctic Ocean, south of
		e	N_1	44		Australia
		eL	V_1E_1	29.9		
		M	V_1	31.9		
106	26	eP	V	21 42 12		24.3S 175.5W h:20km.
						South of Tonga Is. region
107	27	iP	VNE	07 24 25.0	C	23.3S 179.7W h:552km.
						South of Fiji Is.
108	27	e(P)	V	10 49 49.5		
109	27	eP	V	11 04 05.5		
110	27	eP	VN	13 16 11.5	C	5.6S 146.4E h:100km.
						near coast of New Guinea.
111	27	iP	VN	15 29 06.0	C	42.8N 143.3E h:122km.
						Near coast of Hokkaido,
						Japan.
112	27	eP	VN	19 03 34.5		
		e	E_1	06.8		
		M	E_1	08.3		
113	27	e	V	19 18 (59)		
		i max	V	20 21.5		
114	27	eP	VN	20 54 09		
		i	V	11.0		
115	27	eL	E_1	20 57.8		
116	27	e	V	21 10 (04)		
		i max	V	11 06		
117	27	e	V	22 12 53		
L30	27	iP	VNE	23 53 52.5	R	Local
		iS	VNE	56.5		
118	28	e	VV_1	02 57 10		
		i	E_1	49		
L31	28	e	VN	06 23 31.0		Local
119	28	iP	VN	06 23 44.0	R	6.7S 128.4E h: 60km.
		iScP	V	29 52.5		Banda Sea
120	28	e	V	09 08 33		
121	28	e(P)	V	21 10 10		
122	28	e	V	22 03 (34)		
L32	29	eP	VE	00 33 55.5		Regional
		eS	NE	34 19.0		
L33	29	iP	VN	01 08 49.5		Regional
		eS	N	09 14.5		
123	29	i	V	02 37 57.5		
L34	29	e(P)	V	05 24 42.0		Local
		e(S)	V	52.5		
124	29	iP	VE	07 19 38.5	C	24.9S 180.0 h: 620 km.
						South of Fiji Is.
125	29	iP	VN	14 17 33.5	C	26.5N 126.1E h:147km.
						Ryukyu Is.
126	30	i(P)	V	10 19 49.0		

Seismograms read by
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MONTHLY SEISMOLOGICAL BULLETIN.

DECEMBER, 1960.

Latitude: 35° 19' 15"S. Longitude: 148° 59' 55"E Height: 700 M.

Instruments: three-component Benioff variable reluctance seismographs

T_s = 1 sec.
T_g = 0.25 sec. (short periods VNE)
T_g = 16 sec. (long period vertical V_1)
T_g = 70 sec. (long period horizontals N_1E_1)
One N-S component Wood-Anderson Seismograph, T_s = 0.8 sec.

Mt. Stromlo quartz clocks provide accurate time marks and 50 c/s for drum drive.

Abbreviations: R = rarefaction; C = compression; H = origin.

Epicentre locations are those given by USCGS.

No.	Date	Phase	Component	Time		Remarks.
1	1	iP	VN	09 44 57.0	R	6.9S 128.9E h: 32 km.
		i	V	45 25.0		Banda Sea
		e(L)	$VNEV_1N_1E_1$	51 43		
		M	E_1	56.3		
2	1	iP	VN	10 17 48.5	C	5.7S 145.9E h: 45km.
		i(pP)	V	18 14.0		Near coast of New Guinea
		isP	N	19.5		
3	1	e(P)	V	10 46 58		
		e(S)	E_1	52 39		
		eL	N_1	54.2		
		eL	V_1	56.2		
L1	1	iP	VN	18 19 03.0		Local
		iS	VN	10.5		
4	1	iP	V	20 56 02.5		4.5S 154.0E h: 117 km.
						Solomon Is. region.
5	2	iP	VN	04 43 26.5	C	6.6S 152.5E h: 33 km.
		ipP	V	35.5		New Britain region
		eL	E_1	50 11		
		eL	E_1	51 32		
6	2	ePKP	V	09 29 11.0		24.5S 69.9W h: 37 km.
		ePP	V_1	30 02		Near Coast of Chile
		eSKS	E_1	35 49		
		eSKS	N_1	55		
		ePS	N_1E_1	39 21		
		ePPP	V	25		
		e	V_1E_1	44 42		
		eSS	N_1	45 13		
		e	N_1E_1	48 51		
		eL_q	N_1	57.4		
		eL_r	V_1	10 02.2		
		M	V_1	08.9		
		F		12.0		
L2	2	(i)	V	10 33 48.0		Local
		e(S)	V	58.0		
7	2	iP	V	17 53 48.5		25.7N 129.2E h: 81 km.
						Ryukyu Is.
8	3	iP	VV_1N_1	04 37 07.5		42.8N 104.5E h: 45 km.
		i	V	10.0		Outer Mongolia.
		eSKS	N_1E_1	47 35		
		eS	V_1	47		
		ePS	N_1E_1	48 54		

No.	Date	Phase	Component	Time		Remarks.
9	3	eP	V	07 20 46.0	C	52.5N 177.3W h: 79 km. Andreanof Is., Aleutian Is.
10	3	eP	V	09 22 44.5		21.1N 121.1E h: 35km. Off south coast of Formosa
L3	3	e(P)	V	14 44 05.5		Local
		e(S)	E	14.0		
11	3	iP	V	18 09 20.0		43.1N 104.3E h: 25 km. Outer Mongolia
12	4	iP	V	13 33 56.0		5.3S 148.8E h: 43km. New Britain region.
13	4	eP	V	15 55 37.5		1.1N 120.6E h: 46 km. Northern Celebes
		i	V	43.0		
		i	V	45.5		
L4	4	e(S)	V	18 56 53.5		Local
14	5	iScP	V	00 06 36.3		21.2S 179.0W h: 633km. Fiji Is. region. (P missed during record change)
15	6	iP	V	03 48 19.0	C	42.9N 104.5E h: 55km. Outer Mongolia
16	6	i	V	09 25 37.5		21.4S 69.0W h: 25km. Northern Chile
		i	V	52.5		
17	6	iP	VN	18 28 44		11.5N 125.5E h: 25km. Samar, P.I.
L5	6	e	V	21 11 (30)		Regional
		eS	V	12 12		
18	6	eP	V	21 43 39.0		2.6S 101.5E h: 54km. Sumatra
		ipP	V	56.5		
		eL	V_1	22 08 06		
19	7	eP	E	03 05 04.0		35.7S 179.6W h: 25km. North Is, New Zealand region
20	7	eP	E	16 27 20.5		1.2N 121.8E h: 40km. Celebes Sea
21	8	eP	VE	01 06 43		35.8S 179.6W h:81km. North Is. N.Z. region.
22	8	iP	VN	01 29 46.0	C	21.8S 179.4W h: 685km. Fiji Is. region.
		eS	NE	34 10		
		iScP	V	35 12.5		
23	8	e	V	08 00 47		
24	8	eP	V	10 09 48.5		7.8N 127.2E h: 25km. Mindanao, P.I.
25	8	eP	V	10 30 29.5		
26	8	iP	VE	14 38 33.0	C	30.2S 178.2W h: 70km. Kermadec Is. region.
27	8	iP	VN	15 47 39.5		
28	8	eP	VN	19 21 02.5		9.8N 125.5E h: 77 km. Leyte, P.I.
29	8	iP	VNE	21 43 06.5	C	6.2S 129.6E h: 25 km. Banda Sea
30	9	iP	VNE	00 42 54.5	R	20.4S 176.2W h: 137km. Tonga Is.

Nb.	Date	Phase	Component	Time		Remarks.
L6	9	eP	VNE	06 58 (04)		Regional
		eS	N	(37)		
L7	9	e(P)	V	07 06 03.5		Regional
		i(S)	V	38.5		
31	9	iP	V	17 10 47.5		
32	10	eP	V	01 22 23.0		
33	10	eP	VN	06 39 43.0		19.0N 119.5E h:60km. Near north coast of Luzon, P.I.
L8	10	eP	V	06 43 12.0		Local
		iS	VN	15.5		
34	10	e	V	07 45 29.0		
35	10	eP	VN	12 26 33.5		
36	10	iP	VN	13 39 55.5		15.0S 172.3W h:25km. Samoa Is. region.
37	10	iP	VNE	14 02 54.0	R	1.5N 124.3E h: 292km. Celebes Sea
38	10	iP	VN	18 31 54.0	C	
39	11	eP	V	00 06 12.5		22.1S 171.4E h: 144km. Loyalty Is. region.
		i	NV_1E_1	13.0		
		i	V	39.5		
		isP	V	41.0		h: 0.005 (Canb.)
		i	V	07 05.5		
		e(S)	V_1N_1	10 21.0		
		e	EE_1	26.0		
		i	N	29.5		
		i	EV_1N_1	31.0		
		eScS	N_1	17 14.0		
40	11	iP	V	03 26 02.5	R	1.6N 126.4E h: 52km. Molucca Passage
		i	VNE	06.0		
		isP	V	30.0		
		eL	E_1	42.2		
		eL	V_1	45.1		
41	11	eP	V	08 26 39.5		
42	11	i(P)	V	17 39 49.0	R	
43	11	i(P)	V	18 03 29.5		
44	11	iP	V	18 58 29.0		15.7S 166.9E h: 133km. New Hebrides Is. region
		i(pP)	V_1	37.5		
		eS	N_1E_1	19 02 54		
		isS	V_1	03 15		
		eL	V_1	05.0		
		M	V_1E_1	12.0		
L9	11	e	VN	21 35 (04)		Regional?
45	11	i	V	21 41 10.0		
46	11	iP	VN	21 56 00.5		
		i	V	07.5		
L10	12	e	V	04 44 58.0		Regional?
47	12	iP	VNE	10 08 00.5	C	28.8S 167.6E h: 54km. Near Norfolk Is.
		ipP	V	06.5		
		eL	N_1E_1	13 12		
		e(T)	V	21 (59)		
		T max	V	25 25		
48	12	iP	V	14 51 09.0	C	
L11	12	e	V	18 15 37		Local

No.	Date	Phase	Component	Time		Remarks.
49	13	e	V	00 43 (47)		
L12	13	iP	VN	06 50 20.0		Local
		iS	NE	21.5		
50	13	eP	VNV_1N_1	07 40 36.0		52.1S 160.9E h: 29 km.
		i	VNE	38.0		Macquarie Is.
		iPP	E	58.0		
		iPPP	N_1	41 08		Mag. 6-3/4
		eS	EN_1	44 12.5		
		eL_g	N_1	32.5		
		eSS	N_1	43		
		eL_r	VN	45.0		
		M	NEN_1	45.6		
		eT	VNE	52		
		T max	E	57 20		
51	13	eP	VE	09 09 43.0		21.8S 175.5W h: 84km.
						Tonga Is.
52	13	eP	VN	10 15 53.0		27.7N 142.4E h: 28km.
						Bonin Is. region.
L13	13	e	V	11 07 (21)		Regional
53	13	e	V	11 09 43.5		
54	13	e	V	13 07 24		
55	13	e	V	13 46 (17)		
56	13	eP	VN	14 31 36.5		
57	13	e(T)	V	14 47 16		
L14	13	e	V	17 06 32		Regional
L15	13	e	V	19 03 (50)		Regional
58	13	e	V	22 02 08.0		
L16	14	e(P)	V	00 12 07.0		Local
		i(S)	V	19.0		
59	14	eP	V	00 26 47.5	C	10.7S 165.3E h: 51km.
						Santa Cruz Is.
60	14	eP	$VNEV_1N_1E_1$	01 03 18.0	R	10.8S 165.4E h: 65km.
		ePP	V_1	04 12.5		Santa Cruz Is.
		iPPP	E_1	28.5		
		i(PcP)	E_1	06 31.0		
		eS	N_1	08 05.5		
		iS	E_1	08.5		
		eL	N_1	09.7		
		iPcS	V_1	10 05.0		
		M	N_1	15.0		
		M	E_1	15.7		
61	14	iP	V	04 12 40.5		26.6N 130.3E h: 25km.
						Ryukyu Is. region.
62	14	e	V	12 33 34		
63	14	eP	N	14 27 43.0		51.9S 160.7E h: 77 km.
		eP	VV_1E_1	43.5		Macquarie Is. region.
		i	NE	45.5		
		isP	V	28 21.0		
		iS	E_1	31 20.0		
		e	N_1	26		
		e(SS)	V_1	31.5		
		eL	V_1	32 26		
		M	E_1	33.2		
		e(T)	V	43 56		
		T max	VE	45 08		
64	14	e	V	15 12 22		

No.	Date	Phase	Component	Time		Remarks.
65	14	e	V	17 52 25		
66	14	eP	VN	23 59 29.5		2.9N 126.5E h: 77km.
		i	$VNEV_1N_1E_1$	31.0		Molucca Passage.
		i	N_1	33.5		
		i	E_1	45.5		
		isP	V_1N_1	24 00 02		
		ePP	N_1	01 19		
		i(ScP)	V	04 44.5		
		iS	E_1	05 52		
		iS	N_1	52.5		
		eS	N	53.5		
		i	E_1	56		
		eSS	N_1	09 08.5		
		eSS	E_1	09.0		
		iScS	E_1	15.0		
		G	N_1	11.2		
67	15	e(P)	V	01 52 51.5		
68	15	eP	VN	14 06 38.0		
L17	15	e	VNE	14 23 00.0		Regional
		i max	V	41		
69	15	i	V	16 23 38.5		
70	15	iP	VNE	18 39 34.5	R	18.1S 178.5W h:702km. Fiji Is.
L18	16	eP	VNE	00 07 00.5		Regional
		i(S)	N	32.5		
71	16	e(L)	VNE	05 26 19		4.2S 139.9E h:194km. New Guinea
72	16	iP	V	10 20 19.0	C	
73	17	e	V	02 34 30		
		i	V	37.5		
74	17	iP	$VNEV_1E_1$	10 45 16.0	R	6.4S 109.3E h: 295km.
		i	E	31.0		Java Sea
		ipP	VN	46 16.5		
		iPcP	VV_1	46.5		
		iPP	VV_1	47 10.5		
		iPPP	N	48 08.0		
		eL	N_1	55.5		
75	17	iP	V	13 33 45.5	C	11.1N 141.3E h: 25km. Mariana Is. region.
76	17	iP	V	16 11 03.5	R	22.3S 172.4E h: 245km.
		i	V	06.0		New Hebrides Is. region.
		eL	N_1	18 43		
77	17	e	V	17 55 21		
78	17	i	V	18 13 23.5		
79	18	e	V	05 17 (14)		14.8S 167.6E h: 93km. New Hebrides Is.
80	18	iP	V	11 06 13.5	R	
81	18	eP	V	18 29 34.5		8.5N 125.9E h: 36km.
		i	V	37.5		Mindanao, P.I.
82	18	iP	V	22 30 32.0		
L19	19	iP	V	06 36 56.0		Local
		e	VN	37 (08)		
83	19	eP	VNE	07 04 57.5		21.0S 169.4E h: 25km.
		i	V	59.5		Loyalty Is. region.
84	19	eP	V	09 45 51.5		

No.	Date	Phase	Component	Time		Remarks.
77	17	e	V	17 55 21		
78	17	i	V	18 13 23.5		
79	18	e	V	05 17 (14)		14.8S 167.6E h: 93km. New Hebrides Is.
80	18	iP	V	11 06 13.5	R	
81	18	eP	V	18 29 34.5		8.5N 125.9E h:36km.
		i	V	37.5		Mindanao P.I.
82	18	iP	V	22 30 32.0		
L19	19	iP	V	06 36 56.0		Local
		e	VN	37 (08)		
83	19	eP	VNE	07 04 57.5		21.0S 169.4E h:25km.
		i	V	59.5		Loyalty Is. region.
84	19	eP	V	09 45 51.5		
85	19	iP	V	10 20 28.0	C	
86	19	iP	VN	19 08 10.5		11.3N 141.2E h: 77km. Mariana Is.
87	19	e	V	22 19 (44)		12.6S 166.8E h: 66km.
		eL	E_1	24		Santa Cruz Is.
L20	20	eP	N	00 36 32.0		Local
		iS	VNE	36.0		
88	20	eP	V	06 15 12.5		25.1N 122.9E h:60km. near north coast of Formosa
89	20	e	VE	15 58 (40)		
90	20	e	V	20 49 25.5		
91	20	iP	VE	21 35 32.5		
92	20	eL	E_1	22 16.0		
93	20	e	V	22 26 13.5		4.3S 152.1E h: 154km. New Ireland region
94	20	e	VN	22 28 (47)		
95	21	eP	V	00 04 08.5		
96	21	eP	V	01 04 27.5		
97	21	i	V	05 05 08.5		
L21	21	iP	VN	05 45 55.5		Local
		eS	V	46 07.0		
98	21	e	V	07 33 47		
99	21	iP	VN	10 13 13.5	C	
100	21	eP	VN	14 26 52.5		
101	21	e	V	18 38 20		
102	21	iP	V	21 02 21.0		11.2N 141.3E h: 72km. Mariana Is. region.
103	21	eP	VV_1	22 36 02		62.5S 167.1E h:29km.
		eS	N_1E_1	41 07		North of Balleny Is.
		eL	E_1	42.5		
		M	E_1	46.2		
104	21	eP	VN	22 47 07.0		
105	22	e	V	00 00 42		
		i max	V	02 13		
106	22	eP	V	01 25 32.5		

Nos repeated from previous Page H/S

No.	Date	Phase	Component	Time		Remarks.
L22	22	iP	VN	01 55 13.5		Regional
		eS	E	56 14		
107	22	iP	VE	02 30 45.0	R	29.8S 179.6W h: 379km.
		e(PP)	V	31 57.0		Kermadec Is, region.
108	22	eP	V	03 13 16.0		9.8N 94.2E h: 60km.
		i(pP)	VN	24.0		Nicobar Is.
109	22	iP	VV_1	06 37 19.0	C	30.8S 177.1W h:46km.
		eL	E_1	44.9		Kermadec Is. region
		eL	V_1	45.5		
		M	V_1E_1	48.0		
110	22	iP	VE	14 18 27.5	R	27.8S 176.1W h:60km.
		eL	N_1	25.1		Kermadec Is. region
		eL	E_1	26.8		
		M	V_1E_1	29.9		
111	22	i(P)	V	20 38 23.0		
112	22	i	V	20 45 37.5		
113	22	iP	VNE	21 08 05.0	C	6.8S 155.3E h:469km.
		ipP	VNV_1N_1	09 20.0		Solomon Is.
		iPP	$V_1N_1E_1$	23.5		
		isP	V_1	10 14.0		
113	22	iS	E_1	21 12 24.5		
		iPcS	E_1	14 45.5		
		i	V_1	53.5		
		iScS	VN	17 55.0		
114	23	e(P)	V	04 33 03		
115	23	i	V	06 41 35.0		
L23	23	e	V	09 40 32.0		Regional
		(eS)	VE	41 05.0		
116	23	iP	$VNEV_1E_1$	09 51 02.0	C	3.3S 101.9E h:134km.
						Near coast of Sumatra
117	23	eP	VNE	10 56 45.0		8.2N 125.7E h: 67km.
						Mindanao, P.I.
118	23	eP	V	15 55 49		8.8N 125.7E h:120km.
						Mindanao, P.I.
119	23	eP	V	16 20 13.0		10.6S 164.3E h:82km.
						Santa Cruz Is.
120	23	iP	VE	19 12 52.0		27.8S 177.2W h:261km.
						Kermadec Is. region.
121	23	eP	V	19 40 28.5		15.6N 121.7E h:49km.
		i	V	46.0		Near east coast of Luzon,P.I
122	23	eP	V	20 13 05.0		
123	24	eP	V	04 07 05.5		17.6S 66.6E h:100km.
						Indian Ocean
124	24	eP	V	05 09 17.0		
125	24	i	V	05 22 23.0		
L24	24	e	N	05 38 (17)		Regional
126	24	eP	VN	05 51 26.0		
		ipP	V	34.0		
L25	24	iP	$VNEV_1N_1E_1$	16 43 34.5		38.4S 143.6E h:77km.
		iS	V_1E_1	44 37.5		Victoria, Australia
		iL	N_1E_1	50.0		Mag. 5-1/4 to 5-1/2
127	24	iP	V	21 12 42.0	R	

No.	Date	Phase	Component	Time		Remarks.
128	25	eP	V	05 31 24		29.0N 142.8E h:25km. Bonin Is.
129	25	e(P)	V	05 55 50		10.7S 164.7E h:60km. Santa Cruz Is. region.
130	25	e	V	08 42 31		
131	26	eP	V	01 02 37		23.7S 176.9W h:59km. Tonga Is. region
132	26	iP	VN	01 55 55.0	R	33.8N 136.2E h: 109km. Near south coast of Honshu,
L26	26	e	V	04 35 (23)		Regional
133	26	eP	V	04 45 17.5		57.4S 26.2W h:25km. Sandwich Is.
		i	VN	18.0		
		ipP	VN	20.5		
		iS	EN_1	55 50.0		
134	26	e	V	09 44 (25)		
135	26	iP	VNE	13 47 26.0	C	49.4S 164.3E h:37km. South of South Island. N.Z.
		eS	V_1	50 58.5		
		eS	N_1E_1	59.0		
		e(T)	V	14 02 (46)		
		T max	V	04 11		
		T max	V	05 11		
136	27	eP	VN	02 36 03.0		
137	27	e	V	03 26 (20)		
138	27	iP	VNE	11 55 47.0	C	
139	27	e	V	15 41 17.5		
140	28	iP	V	02 03 37.5	C	
141	28	iP	VN	18 01 08.0	R	
142	28	iP	VN	18 10 49.0	C	
143	28	eP	V	22 25 57.0		
		i	V	59.0		
144	29	iP	V	00 49 34.5	C	
145	29	iP	V	06 01 30.0	R	
146	29	eP	VV_1E_1	06 09 11.0		18.4S 174.7W h:104km. Tonga Is.
		ePP	V_1	10 36.0		
		$i(P_1)$	E_1	40.0		
		e	VV_1	42.0		
		iS	E_1	14 47.5		
		M	V_1	21.6		
147	29	eP	V	10 49 41		44.8S 75.6W h:30km. Near coast of southern Chile
148	29	iP	V	11 47 32.0	C	
149	29	iP	VN	13 48 38.5	R	5.5S 146.1E h:57km. near north coast of New Guinea
		eL	E_1	55.1		
150	29	e	V	22 11 19		
151	30	iP	V	00 30 53.0	C	
152	30	iP	V	04 19 29.0		
153	30	iP	V	12 07 14.0	C	

No.	Date	Phase	Component	Time		Remarks.
154	30	iP	VE	00 14 02.0		29.9S 177.9W h:70km. Kermadec Is.region.
155	31	iP	V	16 12 44.0		7.8S 120.1E h:25km. Flores Sea
		ipP	V	54.0		
		i	V	13 08.5		
		i	V	14 11.0		
156	31	iP	VV_1	18 21 12.0		43.9S 75.0W h:92km. Near south coast of Southern Chile.
157	31	iP	V	20 05 41.5	C	6.6S 129.1E h:112km. Banda Sea
		e	V	11 (53)		
158	31	iP	V	21 12 01.5	C	5.0S 151.4E h:138km. New Britain.

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