



PERTH, WESTERN AUSTRALIA

SEISMOLOGICAL STATION - PERTH OBSERVATORY

Seismological Bulletin for January - March 1959

Instrument: Columbia-Lamont long period seismograph
 Milne-Shaw No.27
 Symbol: A, M
 Component: Vertical
 North - South

No.	Date	Inst.	Phase	Time G.M.T.			Amp. cms	Remarks
				h.	m.	s.		
<u>JANUARY 1959</u>								
1.	Jan. 1st	A	iP	3	21	38	.19	South of Java.
		M	i	-	21	42	.15	
		A	eS	-	25	40	.31	
		M	iS	-	25	40	.20	
		A	i	-	26	15	.44	
		A	M	-	29	11	1.24	
		A	M	-	31	13	1.30	
		M	M	-	31	37	.28	
		A	M	-	32	6	1.31	
M	M	-	33	31	.29			
2.	Jan. 5th	A	i	9	53	32	.26	
		A	i	-	55	43	.29	
		A	M	10	2	39	.94	
		M	M	-	2	54	.34	
		M	M	-	12	9	.26	
3.	Jan. 6th	A	eS	14	58	38	.24	South of Java
		A	M	15	2	4	.60	
		A	M	-	3	5	.59	
4.	Jan. 8th	A	i	22	51	20	.29	
		A	i	-	54	11	.40	
		M	i	-	55	9	.56	
		M	M	-	57	49	.65	
		A	M	-	57	50	3.10	
5.	Jan. 13th	A	iP	1	24	55	.20	
		M	i	-	25	18	.18	
		A	i	-	26	49	.15	
		A	iS	-	39	38	.28	
		A	M	-	47	30	.57	
		A	M	-	50	22	.83	
6.	Jan. 20th	A	iP	16	51	43	.35	Amp. not visible.
		M	i	-	55	55	.19	
		A	iS	-	56	10	.37	
		M	iS	-	56	11		
		A	M	17	3	5	2.10	
		A	M	-	4	11	2.49	
		M	M	-	7	15	.35	
7.	Jan. 22nd	A	iP	5	22	44	1.30	Near east coast of Honshu, Japan.
		M	i	-	30	20	.19	
		A	i	-	30	33	.38	
		A	iS	-	31	35	.81	
		M	i	-	31	50	.36	
		A	i	-	35	27	.39	
		M	i	-	36	9	.30	
		A	i	-	36	15	.88	
		A	M	-	47	15	2.10	
		M	M	-	50	20	.44	
		A	M	-	51	57	2.42	
		M	M	-	53	35	.40	
		M	M	-	57	15	.38	
M	M	6	1	15	.43			

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
8.	Jan. 30th	A	e	0	28	10	.26	Solomon Islands.
		A	i	-	30	20	.13	
		A	iS	-	35	0	.48	
		A	eSS	-	38	15	.50	
		M	i	-	38	20	.14	
		M	M	-	45	54	.29	
		A	M	-	47	55	3.20	
		M	M	-	48	22	.30	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 1st (1), 3rd (1), 9th (1), 13th (2), 18th (2), 24th (4), 29th (2), and 30th (4).

By instrument "M" on:- 1st (2), 13th (3), 18th (1), and 30th (3).

FEBRUARY 1959

9.	Feb. 7th	A	eiP	9	56	12	.25	Near Coast of Northern Peru.
		M	e	-	56	20	.11	
		A	i	-	59	34	.73	
		M	i	10	1	7	.20	
		A	i	-	9	8	.47	
		A	i	-	11	57		
		A	iSS	-	19	23	1.01	
		A	iSSS	-	24	50	.92	
		M	M	-	51	24	.34	
		M	M	-	55	20	.39	
		M	M	11	3	51	.40	
		A	M	-	5	36	5.45	
M	M	-	5	40	.53			
10.	Feb. 14th	A	eS	4	46	11	.50	Flores Sea
		A	M	-	50	55	.80	
		A	M	-	52	34	.79	
		M	M	-	55	6	.36	
11.	Feb. 15th	A	eP	4	11	56	.18	Sandwich Islands.
		A	iPP	-	15	10	.13	
		M	e	-	21	54	.13	
		A	iS	-	22	14	.35	
		M	e	-	27	48	.21	
		A	iSS	-	28	12	.32	
		A	iSSS	-	31	35	.40	
		A	M	-	47	3	1.64	
		M	M	-	47	14	.32	
A	M	-	48	15	1.65			
12.	Feb. 15th	M	i	5	7	18	.25	Sandwich Islands. (Phases obscured by preceding quake).
		M	iSS	-	10	59	.20	
		A	M	-	28	26	1.24	
		M	M	-	29	3	.28	
		A	M	-	30	24	1.34	
		M	M	-	31	16	.29	
13.	Feb. 23rd	A	iP	2	6	24	.20	New Britain.
		A	iPPP	-	8	40	.34	
		A	iS	-	12	38	.34	
		A	iSS	-	15	28	.25	
		A	M	-	25	22	1.72	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 6th (2), 8th (2), 9th (2), 11th (1), 12th (1), 16th (1), 17th (1), 22nd (1), 23rd (1), 25th (2), 27th (2) and 28th (2).

By instrument "M" on:- 22nd (1), and 28th (1).

No.	Date	Inst.	Phase	-3- Time G.M.T.			Amp. cms	Remarks
				h.	m.	s.		
<u>MARCH 1959</u>								
14.	March 1st	A	iP	16	56	6	.52	Near North Coast of New Guinea. (h about 100KM(USCGS)(M) light spot indistinct).
		M	iP	-	56	7	.08	
		A	iSP	-	56	52	.74	
		A	iS	17	1	55	1.72	
		M	M	-	9	0	4.26	
		A	M	-	11	20	9.00	
		A	M	-	12	20	>10.00	
		A	M	-	19	49	>10.60	
15.	March 2nd	A	iP	9	19	26	.11	Timor Island.
		A	iS	-	23	55	.14	
		A	M	-	31	48	2.39	
16.	March 12th	M	i	1	44	53	.18	Caroline Islands.
		A	i	-	48	17	.35	
		M	i	-	48	23	.31	
		A	M	-	54	55	1.10	
		M	M	-	55	5	.42	
		A	M	-	58	42	1.03	
17.	March 17th	A	iP	8	35	31	.28	Ryukyu Islands.
		A	eS	-	43	52	.31	
18.	March 26th	A	iP	2	32	25	.14	Salomon Islands.
		A	iS	-	39	0	.14	
		A	e	-	42	24	.18	
		A	M	-	51	2	1.25	
19.	March 28th	A	iP	19	56	21	.20	Fiji Islands. h about 600KM(USCGS)
		A	i	-	59	16	.20	
		A	iS	20	3	50	.22	
		A	i	-	11	25	.26	
		A	iG	-	11	40	.30	
		A	M	-	21	7	.46	
		A	M	-	21	41	.53	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 1st (1), 2nd (1), 4th (1), 5th (5), 6th (1),
7th (1), 8th (1), 17th (3), and 27th (1).

By instrument "M" on:- 2nd (1).

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No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
28	April 24th	A	iP	18	7	35	1.00	Kermadec Islands.
		A	i	-	7	55	.48	
		A	iS	-	15	32	.66	
		A	i	-	19	32	.68	
		A	i	-	21	53	.80	
		A	M	-	24	57	1.70	
		A	M	-	29	51	2.28	
		A	M	-	34	23	2.10	
		A	M	-	44	33	1.90	
29	April 26th	M	iP	20	50	7	.23	Northeast coast of Formosa.(h about 150KM)
		A	iP	-	50	8	3.06	
		A	i	-	50	40	3.26	
		A	i	-	53	28	1.30	
		A	i	-	54	55	1.50	
		M	iS	-	57	57	.72	
		A	iS	-	58	0	2.40	
		M	i	-	58	12	.60	
		A	i	-	59	22	3.00	
		M	i	-	59	57	.60	
		A	i	21	4	43	5.80	
		M	M	-	5	33	.54	
		A	M	-	9	0	8.00	
M	M	-	10	3	.57			
30	April 27th	A	iP	9	54	4	.48	Banda Sea.
		A	iPP	-	54	50	.90	
		M	i	-	58	30	.27	
		A	iS	-	58	39	.89	
		A	i	-	59	30	1.10	
		M	i	-	59	22	.25	
		A	M	10	1	55	1.60	
		M	M	-	2	39	1.20	
A	M	-	7	16	2.30			
31	April 28th	A	iP	11	29	16	.80	Mexico-Guatamala border.
		A	i	-	43	17	.44	
		A	M	12	24	42	.99	
		A	M	-	27	15	1.10	
Tremors and undecipherable disturbances were recorded:-								
By instrument "A" on:- 2nd (1), 8th (1), 10th (1), 11th (1), 19th (1), and 25th (1).								
By instrument "M" on:- 24th (1).								
MAY 1959								
32	May 4th	A	iP	7	28	56	1.92	Near east coast of Kamchatka (h. about 600 KM)
		A	iPP	-	33	11	2.61	
		A	iS	-	41	42	3.15	
		A	i	-	46	34	3.78	
		A	i	-	47	31	2.45	
		A	M	8	0	40	5.21	
		A	M	-	2	41	5.56	
33	May 7th	A	iS	0	17	49	.23	Bismark Sea. Early phases lost in changing seismogram.
		M	i	-	20	31	.20	
		A	e	-	21	29	.41	
		M	M	-	27	54	.51	
		A	M	-	29	41	6.62	
		M	M	-	29	46	.55	
34	May 7th	A	iP	20	28	12	.19	Flores Sea.
		A	i	-	28	32	.20	
		A	iS	-	32	31	.35	
		A	M	-	40	44	.55	
		A	M	-	41	29	.61	



No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
34	May 12th	A	i	5	30	30	.21	Komandorskie Islands.
		A	M	-	48	45	.35	
		A	M	-	57	27	.39	
		A	M	6	3	27	.37	
35	May 12th	A	i	10	5	58		Amp. not visible. Salta Province, Argentina.
		A	i	-	7	46	.24	
		A	i	-	34	39	.26	
		A	M	-	57	12	2.91	
		A	M	11	1	32	2.40	
36	May 16th	A	iP	6	24	34	.24	New Britain. (h about 60 KM)
		A	i	-	26	24	.49	
		M	iS	-	31	4	.30	
		A	iS	-	31	6	.99	
		A	i	-	34	18	.60	
		M	iSS	-	34	41	1.79	
		M	M	-	38	47	.35	
		M	M	-	42	11	.35	
		A	M	-	42	51	3.44	
37	May 24th	A	i	19	37	15	3.60	Caxaca Mexico.
		A	i	-	42	22	.26	
		A	i	20	0	20	1.04	
		A	M	-	27	26	1.90	
		A	M	-	29	33	1.99	
38	May 29th	A	iP	10	51	31	.55	
		A	i	-	52	53	.26	
		A	iPP	-	53	24	.49	
		M	iS	-	58	39	.11	
		A	iS	-	58	40	.61	
		M	i	-	59	10	.15	
		M	i	11	2	13	.11	
		A	i	-	3	12	.50	
		A	i	-	3	28	.56	
		A	iG	-	4	27	.44	
		M	M	-	11	30	.37	
		A	M	-	12	36	1.50	
		39	May 31st	A	iP	9	36	
A	iPP			-	38	21	.30	
A	iSS			-	46	31	.65	
M	i			-	46	49	.15	
M	M			-	52	45	.53	
A	M			-	53	53	2.10	
M	M			-	55	25	.50	
A	M			-	55	58	3.07	
M	M	-	57	36	.48			

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 1st (1), 6th (1), 7th (2), 12th (2), 14th (6), 20th (2), and 21st (1).

By instrument "M" on:- 12th (1), and 24th (1).

JUNE 1959

40.	June 1st	A	i	17	17	33	.30	Solomon Islands. (h about 100 KM)
		A	i	-	25	36	.30	
		A	M	-	34	27	1.24	
41	June 2nd	A	M	4	0	25	1.26	Probably Tonga Islands. Regions.
		A	M	-	0	43	1.20	
		A	M	-	4	12	1.16	
42	June 2nd	A	M	4	29	16	1.25	Probably Tonga Islands Regions.

No.	Date	Inst.	Phase	Time G.M.T.			Amp. cms	Remarks
				h.	m.	s.		
43	June 2nd	A	i	5	17	45	.44	Probably Tonga Islands Region.
		A	M	-	26	28	.65	
		A	M	-	27	40	.56	
44	June 14th	A	iPP	0	33	7	1.15	Southwestern Bolivia. (h about 100 KM)
		M	iPP	-	33	7	.15	
		M	i	-	34	23	.39	
		M	i	-	35	6	.26	
		M	iPPP	-	35	44	.10	
		A	iPPP	-	35	46	.96	
		A	i	-	44	35	.72	
		A	i	-	50	44	.93	
A	i	-	54	58	.91			
45	June 18th	A	i	15	48	42	.30	Near east coast of Kamchatka.
		A	i	16	7	0	.80	
		A	M	-	27	36	1.44	
		A	M	-	33	57	1.50	
46	June 29th	M	M	7	41	7	.40	Solomon Islands.
		A	M	-	43	50	2.97	
		M	M	-	47	41	.44	
		A	M	-	49	47	2.60	
		M	M	-	50	43	.46	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:-9th (1).

By instrument "M" on:- 18th (1).

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PERTH, WESTERN AUSTRALIA

SEISMOLOGICAL STATION - PERTH OBSERVATORY

Seismological Bulletin for July - September 1959

Instrument
Columbia-Lamont long
period seismograph.
Milne-Shaw No.27

Symbol
A
M

Component
Vertical
North-South

No.	Date	Inst.	Phase	Time G.M.T.			Amp. cms	Remarks
				h.	m.	s.		
July 1959								
47	July 3rd	A	iP	18	5	20	1.50	
		A	iPP	-	7	28	.80	
		A	iS	-	13	6	.96	
		A	iSS	-	16	40	.56	
		A	M	-	26	37	3.24	
		A	M	-	29	30	1.58	
48	July 11th	A	iP	12	8	59	.90	
		M	i	-	12	48	.32	
		A	iS	-	15	52	2.10	
		M	i	-	16	3	.31	
		A	M	-	17	55	4.32	
		A	M	-	19	55	3.10	
		M	M	-	19	55	1.68	
		M	M	-	21	9	1.30	
		M	M	-	22	35	1.53	
		A	M	-	24	20	2.42	
A	M	-	27	24	1.95			
49	July 18th	A	iP	20	3	24	.55	Luzon
		M	i	-	4	2	.16	
		A	iPP	-	5	13	.72	
		M	iPP	-	5	15	.15	
		A	iPPP	-	6	8	1.44	
		M	iPPP	-	6	10	.16	
		A	iS	-	10	5	2.14	
		M	iS	-	10	5	1.40	
		M	i	-	13	8	.98	
		A	i	-	14	2	2.30	
		A	M	-	18	41	4.82	
		A	M	-	20	12	6.00	
		M	M	-	20	15	1.00	
M	M	-	20	42	1.00			
50	July 19th	A	iP	3	48	9	.19	Sunda Strait.
		M	i	-	51	53	.16	
		A	iS	-	52	47	.47	
		A	i	-	53	19	.53	
		A	M	-	55	37	1.28	
		A	M	-	56	28	1.12	
		M	M	-	56	31	.18	
51	July 19th	A	iP'	15	25	8	.63	Peru(h about 200 KM).
		A	iPP	-	27	33	1.92	
		A	i	-	28	18	3.10	
		M	i	-	28	18	.12	
		M	i	-	28	48	.41	
		A	i	-	28	50	2.13	
		A	i	-	29	54	2.80	
		M	i	-	29	54	.51	
		A	i	-	38	56	1.02	
		A	i	-	45	58	.58	
		M	i	-	47	14	.37	

No	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	t.	cms	
52	July 20th	A	iP	2	46	6	1.78	
		M	i	-	46	26	.31	
		A	i	-	47	24	.88	
		A	i	-	48	30	.76	
		A	iS	-	50	5	1.18	
		M	iS	-	50	7	.24	
		M	i	-	51	6	.32	
		A	M	-	54	2	2.82	
		M	M	-	54	5	.44	
		M	M	-	54	46	.41	
M	M	-	55	55	.62			
53	July 21st	A	e	7	54	18	.44	New Hebrides Islands.
		A	i	-	54	50	.35	
		A	i	8	3	40	.69	
		A	M	-	10	20	.96	
		M	M	-	11	53	.45	
		M	M	-	13	10	.66	
		A	M	-	13	10	2.24	
54	July 22nd	A	iP	23	10	44	.76	New Britain.
		A	i	-	12	36	1.04	
		M	iS	-	16	59	.27	
		A	iS	-	17	1	.83	
		M	iSS	-	20	1	.36	
		A	iSS	-	20	3	1.30	
		M	i	-	24	7	.61	
		A	M	-	28	39	4.82	
		A	M	-	31	48	5.66	
		M	M	-	32	35	.83	
M	M	-	33	34	.86			

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:-6th (1), 16th (1), 21st (1), 23rd (1), and 24th (1).

By instrument "M" on:-21st (1), and 23rd (1).

AUGUST 1959

55	Aug. 9th	A	i	20	39	54	.23	Solomon Islands. (h about 100 KM).
		A	iSS	-	48	25	.46	
		A	i	-	48	55	.22	
		A	i	-	54	34	.25	
		M	M	-	55	22	.31	
		A	i	-	56	45	.52	
		A	M	-	58	4	.78	
56	Aug. 11th	A	i	22	15	21	.54	
		M	M	-	16	27	.38	
		M	M	-	17	9	.50	
		A	M	-	18	32	1.86	
57	Aug. 12th	A	iP	10	8	51	.41	
		M	i	-	24	15	.48	
		M	M	-	29	22	.53	
		A	M	-	30	56	1.00	
		A	M	-	32	30	1.34	
		A	M	-	32	54	1.67	
58	Aug. 15th	A	iP	9	6	26	.62	Formosa.
		M	iP	-	6	28	.25	
		A	iPP	-	8	30	.70	
		A	iS	-	14	0	2.36	
		M	iS	-	14	0	.97	
		M	i	-	17	35	.79	
		A	i	-	18	38	3.63	
		M	M	-	23	30	1.35	
		A	M	-	30	36	8.07	

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
59	Aug. 16th	A	iP	1	0	37	.41	
		M	i	-	16	40	.25	
		M	M	-	19	35	.48	
		A	M	-	21	27	1.97	
		A	M	-	25	46	1.86	
		A	M	-	27	35	2.07	
60	Aug. 17th	A	iP	21	13	7	2.53	Solomon Islands.
		M	iP	-	13	9	.11	
		M	iS	-	19	38	.52	
		A	i	-	19	47	1.60	
		M	i	-	20	46	.46	
		A	M	-	30	24	7.89	
		M	M	-	32	54	3.54	
		M	M	-	36	30	4.46	
61	Aug. 18th	A	iP'	6	56	50	1.11	Wyoming, U.S.A.
		A	iPP	-	59	53	1.13	
		A	i	7	14	52	.86	
		A	i	-	19	1		Amp. not visible.
		M	iSS	-	19	40	.82	
		M	M	-	43	53	.47	
		A	M	-	48	27	8.05	
		A	M	-	50	46	7.81	
		M	M	-	54	24	.71	
		A	M	-	57	15	8.07	
62	Aug. 18th	A	iP'	15	45	37	.22	Wyoming, U.S.A.
		A	iPP	-	48	46	.52	
		A	M	16	43	35	.40	
63	Aug. 20th	A	iP	12	26	36	.15	Indian Ocean.
		A	i	-	27	47	.22	
		A	iS	-	31	50	.26	
		M	M	-	34	40	.22	
		M	M	-	35	34	.21	
		A	M	-	35	49	.99	
64	Aug. 21st	A	iP	8	8	48	.58	Indian Ocean, South of
		M	iP	-	8	48	.18	Australia.
		A	i	-	9	30	.30	
		A	i	-	11	6	.81	
		A	i	-	11	50	.50	
		A	i	-	13	8	.52	
		M	i	-	13	32	.27	
		A	i	-	13	33	1.60	
		A	M	-	16	3	5.81	
		M	M	-	18	17	1.41	
		A	M	-	19	15	7.05	
65	Aug. 21st	A	iP	10	43	22	.53	Indian Ocean, South of
		A	iS	-	47	55	.98	Australia.
		A	M	-	50	48	4.00	
		A	M	-	50	55	3.98	
		M	M	-	54	57	1.06	
66	Aug. 24th	M	M	16	8	5	.38	Solomon Islands foreshock.
		A	M	-	10	3	1.12	
		A	M	-	10	41	1.14	
67	Aug. 26th	A	iP'	8	45	23	.88	Vera Cruz, Mexico.
		A	i	9	2	7	.52	
		A	M	-	44	15	1.70	
		A	M	-	51	42	1.60	
		A	M	10	1	29	.98	

No.	Date	Inst.	Phase	Time G.M.T.			Amp. cms	Remarks
				h.	m.	s.		
68	Aug.24th	A	iP	21	39	25	1.34	Solomon Islands.
		A	iS	-	46	24	4.52	
		M	iS	-	46	24	1.17	
		A	iSS	-	50	3	2.27	
		A	M	-	50	9	6.88	
		A	M	-	55	22	8.26	
		M	M	-	56	26	3.34	
		A	M	-	56	55	10.88	
		M	M	22	5	35	2.40	
		A	M	-	8	25	10.38	
69	Aug.26th	A	M	11	34	46	.80	South of Queen Charlotte Islands.
		A	M	-	36	13	.88	
70	Aug.28th	M	M	16	21	42	.26	
		M	M	-	23	32	.30	
		A	M	-	23	32	.88	
		A	M	-	25	33	.92	
71	Aug.29th	A	iP	17	15	49	.74	Lake Baikal, U.S.S.R.
		A	iPP	-	19	4	.40	
		M	i	-	27	22	.30	
		A	i	-	27	26	.40	
		A	iSS	-	31	43	.32	
		A	M	-	51	11	.97	
		M	M	-	55	42	.26	
		A	M	-	57	11	.78	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:-9th (1), 19th (1), 20th (4), 29th (1) and 30th (1).

By instrument "M" on:-10th(1), 19th(1), 20th(4), 29th(1) and 30th(1).

SEPTEMBER 1959								
72	Sept.3rd	M	iP	6	33	25	.20	Celebes Island.
		A	iP	-	33	26	.33	
		A	iPP	-	34	13	1.12	
		A	iS	-	38	21	1.14	
		M	iS	-	38	21	.32	
		M	M	-	48	6	.90	
		A	M	-	50	48	4.75	
73	Sept.10th	A	iS	5	49	58	.42	Solomon Islands.
		A	iSS	-	53	6	.40	
		A	M	6	1	37	.78	
		A	M	-	2	35	.76	
74	Sept.12th	A	iP	2	1	33	.35	Bismark Sea.
		A	iPP	-	3	1	.50	
		A	i	-	3	32	.54	
		M	i	-	7	37	.14	
		M	i	-	7	52	.26	
		M	M	-	16	46	2.74	
		A	M	-	17	4	4.24	
		M	M	-	17	20	2.76	
		A	M	-	18	38	4.48	
		A	M	-	19	45	3.95	
		A	M	-	21	55	3.58	

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
75	Sept.12th	M	i	7	15	49	.16	Bismark Sea.
		A	i	-	15	56	.40	
		M	i	-	18	50	.18	
		A	i	-	18	51	.36	
		M	i	-	19	7	.22	
		M	M	-	25	19	.85	
		A	M	-	26	51	1.54	
76	Sept.12th	A	eP	11	32	43	.29	Coral Sea.
		A	i	-	34	29	.72	
		A	iS	-	39	8	.88	
		M	iS	-	39	9	.38	
		M	iSS	-	42	13	.26	
		A	iSS	-	42	15	.85	
		M	M	-	49	7	.98	
		A	M	-	50	40	3.62	
		A	M	-	51	15	3.82	
77	Sept.14th	A	e	13	34	13	.15	Tonga Island Region.
		A	M	-	46	30	.46	
		M	M	-	47	33	.32	
		M	M	-	48	6	.32	
		A	M	-	51	20	.89	
		A	M	-	53	47	.97	
78	Sept.14th	A	iP	14	19	29	1.28	Kermadec Islands.
		M	i	-	27	58	.40	
		A	i	-	30	33	1.94	
		M	i	-	31	34	.38	
		A	M	-	37	38	4.68	
		M	M	-	41	40	1.68	
		M	M	-	43	41	2.10	
79	Sept.14	A	iP	17	16	5	.78	Kermadec Islands. (aftershock).
		A	i	-	19	46	.40	
		A	i	-	24	27	.48	
		A	M	-	37	22	2.97	
		M	M	-	39	18	.54	
		A	M	-	39	33	3.90	
		M	M	-	42	47	.46	
80	Sept.14th	A	i	22	33	47	.23	Kermadec Islands. (aftershock).
		M	M	-	56	34	.24	
		A	M	-	56	42	1.55	
		A	M	-	57	56	1.75	
		M	M	23	0	53	.30	
81	Sept.15th	A	iP	6	9	34	.76	Kermadec Islands. (aftershock).
		A	i	-	11	53	.71	
		A	i	-	17	18	.83	
		M	e	-	17	30	.24	
		A	i	-	21	47	1.18	
		M	M	-	27	12	.52	
		A	M	-	28	31	4.27	
		A	M	-	30	55	6.10	
		M	M	-	31	34	.64	
		A	M	-	33	28	9.75	
		A	M	-	42	17	9.19	
82	Sept.15th	A	iP	11	14	37	.96	Fiji Island Region. (h about 600 KM).
		A	i	-	16	27	.65	
		A	i	-	17	33	.49	
		A	iS	-	21	50	.35	
		A	i	-	29	12	.70	
		A	M	-	40	4	.93	
		A	M	-	42	53	.86	

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
83	Sept.16th	A	iP	16	6	56	.22	Kermadec Islands.
		A	iS	-	14	59	.30	
		A	i	-	21	42	.40	
		A	M	-	31	9	.96	
		M	M	-	32	1	.26	
		M	M	-	34	18	.28	
		M	M	-	36	16	.30	
84	Sept.21st	A	e	2	21	50	.18	Near coast of New Guinea.
		A	i	-	24	24	.52	
		A	i	-	25	2	.62	
		M	M	-	29	50	.34	
		M	M	-	30	35	.40	
		A	M	-	30	37	.68	
		A	M	-	31	30	.83	
85	Sept.25th	M	iS	2	53	50	.32	Formosa.(recording unit A out of action).
		M	M	3	4	40	.28	
		M	M	-	6	52	.28	
		M	M	-	10	28	.30	
86	Sept.29th	A	iP	15	41	47	.50	Kermadec Islands.
		A	i	-	45	32	.32	
		A	iS	-	49	42	.32	
		M	i	-	51	45	.20	
		A	i	-	54	47	.59	
		M	M	16	6	38	.54	
		A	M	-	8	28	2.39	
		M	M	-	8	42	.60	
		A	M	-	10	9	3.27	
		M	M	-	11	23	.57	
87	Sept.30th	A	i	20	35	5	.30	New Hebrides Islands.
		A	iSS	-	45	33	.35	
		M	M	-	55	15	.36	
		A	M	-	56	47	2.11	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:-15th(1), 16th(2), 17th(2), 18th(1), 20th(1),
21st(1), and 30th(2).

By instrument "M" on:-5th(1), 10th(1), and 17th(1).

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PERTH, WESTERN AUSTRALIA

SEISMOLOGICAL STATION - PERTH OBSERVATORY

Seismological Bulletin for October - December 1959

Instrument
Columbia-Lamont long
period seismograph
Milne-Shaw No.27

Symbol
A
M

Component
Vertical
North-South

No.	Date	Inst.	Phase	Time G.M.T.			Amp. cms	Remarks
				h.	m.	s.		
October 1959								
88	Oct.3rd	A	i	12	8	35	.15	Local shock S.W. of Perth
		M	i	-	8	47	.23	
		A	i	-	8	58	.06	
		A	i	-	9	6	.15	
89	Oct.12th	A	iP	3	29	27	.27	Near coast of Sumatra.
		A	iS	-	35	9	.26	
		A	i	-	38	11	.68	
		A	M	-	40	33	.69	
90	Oct.15th	A	iP	6	22	5	.48	Celebes.
		M	e	-	22	10	.24	
		A	iPP	-	23	10	1.67	
		M	iS	-	27	22	.66	
		A	iS	-	27	23	.82	
		M	M	-	31	34	1.42	
		A	M	-	33	4	10.00	
		M	M	-	34	35	1.70	
		A	M	-	34	57	10.20	
		M	M	-	39	22	1.58	
		A	M	-	39	34	7.95	
A	M	-	41	37	8.90			
91	Oct.19th	A	iP	8	37	15	.19	Kermadec Islands.
		A	iS	-	45	20	.28	
		A	M	-	58	34	.98	
		A	M	9	1	41	1.14	
		M	M	-	2	20	.29	
		M	M	-	5	15	.28	
		A	M	-	7	38	1.16	
92	Oct.19th	A	iP	16	8	29	.68	
		A	iPP	-	11	57	.34	
		M	i	-	19	4	.16	
		M	i	-	19	17	.23	
		A	i	-	19	28	.35	
		M	i	-	20	20	.27	
		A	i	-	25	8	.37	
		A	i	-	25	40	.58	
		M	M	-	43	35	.24	
A	M	-	44	5	1.80			
93	Oct.26th	A	iP	7	46	44	.24	Near east coast of Honshu, Japan. (h about 60 KM)
		A	i	-	47	6	.48	
		A	i	-	55	57	.28	
		A	M	8	13	12	.57	
		A	M	-	15	36	.44	
		A	M	-	24	44	.40	
		A	M	-	32	8	.47	
94	Oct.27th	A	iP	7	5	17	.99	Karile Islands. (h about 100 KM.)
		A	i	-	8	20	.33	
		A	i	-	15	44	.50	
		A	i	-	16	50	.90	
		A	M	-	38	34	1.14	
		A	M	-	45	32	1.14	

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
95	Oct.29th	A	iP	14	29	39	.34	Kermadec Islands. (h about 60 KM)
		A	M	-	48	45	.75	
		A	M	-	52	37	1.27	
96	Oct.30th	A	i	14	31	49	.40	
		A	M	-	35	13	.82	
		A	M	-	38	35	.86	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:-6th (1), 7th (1), and 16th (1).

By instrument "M" on:-12th (1), 26th (1), 27th (1), 29th (1), and 30th (1).

								November 1959				
No.	Date	Inst.	Phase	Time			Amp.	Remarks				
				G.M.T.								
				h.	m.	s.	cms					
97	Nov.2nd	A	iP	20	11	23	.38	New Britain. (h about 60 KM)				
		A	i	-	11	34	.52					
		A	i	-	13	43	.60					
		M	iS	-	17	49	.23					
		A	iS	-	17	42	.92					
		A	i	-	20	38	.73					
		M	i	-	20	48	.52					
		A	iSS	-	20	52	1.60					
98	Nov.3rd	A	iP	9	44	57	2.40	South of Java				
		M	iP	-	45	0	.26					
		A	i	-	48	43	6.00					
		M	iS	-	49	0	.62					
		A	iS	-	49	2	2.20					
		A	M	-	53	8	6.43					
		A	M	-	57	42	6.04					
		A	M	-	58	11	6.39					
99	Nov.5th	A	i	11	59	10	.24					
		A	i	12	10	9	.30					
		A	M	-	20	34	2.00					
100	Nov.5th	A	i	17	46	30	.19	Solomon Islands.				
		A	i	-	48	24	.32					
		A	i	-	53	21	.35					
		M	M	18	4	29	.38					
		A	M	-	11	39	1.50					
101	Nov.15th	A	iP	10	37	21	.19	Tadzhic				
		A	M	11	7	25	.22					
		A	M	-	14	39	.20					
		A	M	-	18	20	.20					
102	Nov.15th	A	eP	17	23	42	.09	Near west coast of Greece.				
		A	iPP	-	28	10	.22					
		A	iS	-	35	48	.24					
		M	iS	-	35	50	.20					
		A	i	-	36	10	.28					
		A	iSS	-	43	25	.42					
		M	i	-	43	52	.19					
		A	M	18	11	32	1.20					
		A	M	-	17	12	1.68					
		M	M	-	18	47	.19					

No.	Date	Inst	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
103	Nov.19th	A	iP	11	16	2	.49	Near north coast of New Guinea.
		A	i	-	17	23	.69	
		A	i	-	17	37	1.92	
		A	iPPP	-	18	5	1.63	
		M	iS	-	21	53	.60	
		A	iS	-	21	53	1.48	
		A	M	-	28	45	3.83	
		M	M	-	30	0	2.78	
		M	M	-	32	8	2.25	
A	M	-	34	57	5.07			
104	Nov.26th	A	iP	7	12	22	.18	Near coast of Sumatra.
		M	iS	-	17	15	.29	
		A	iS	-	17	17	.38	
		M	M	-	21	22	.94	
105	Nov.26th	A	iP	23	15	30	.31	Near coast of Sumatra.
		A	i	-	17	25	.66	
		A	i	-	20	15	.36	
		M	i	-	20	25	.22	
		A	i	-	20	36	.58	
		A	M	-	23	32	5.00	
		M	M	-	23	58	1.30	
106	Nov.28th	A	iP	2	55	17	.15	Fiji Islands Region.
		A	i	3	3	20	.21	
		A	M	-	15	58	.98	
		A	M	-	19	10	1.24	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 9th (1), 10th (2), 14th (1), 16th (1), 17th (1), 22nd (3), 23rd (1), 27th (1), 28th (1), and 29th(1).

By instrument "M" on:- 5th (1), 6th (1), 7th (1), 14th (1), 17th (1) 22nd (2), 23rd (1), 28th (2), and 29th (1).

December 1959								
No.	Date	Inst	Phase	h.	m.	s.	Amp.	Remarks
107	Dec.1st	A	iP	15	7	24	.19	Ballery Islands Region.
		A	i	-	9	0	.28	
		A	iS	-	13	25	.16	
		M	i	-	13	32	.19	
		A	M	-	20	7	3.62	
		M	M	-	20	12	.63	
		A	M	-	20	18	4.35	
108	Dec.2nd	A	iP	9	40	33	1.50	
		M	eP	-	40	35	.25	
		M	i	-	45	45	.61	
		A	iS	-	45	50	1.25	
		M	M	-	50	29	1.00	
		A	M	-	50	50	4.64	
		M	M	-	53	5	1.12	
		A	M	-	54	21	4.90	
109	Dec.14th	A	iP	18	5	42	.59	Off south coast of Mindanao
		A	i	-	7	53	.65	
		M	i	-	7	58	.15	
		M	i	-	12	10	.25	
		A	i	-	14	20	.33	
110	Dec.14th	A	iP	21	55	55	.16	Celebes.
		A	i	22	1	20	.15	

No	Date	Inst.	Phase	Time			Amp	Remarks
				G.M.T.				
				h.	m.	s.	cms	
11	Dec.14th	A	iP	23	34	27	1.16	Sandwich Islands.
		M	iP	-	34	27	.18	
		A	iPP	-	37	41	.67	
		M	i	-	44	32	.10	
		M	i	-	44	52	.40	
		A	i	-	44	59	1.18	
Dec.15th	M	M	0	7	56	.74		
	A	M	-	8	26	6.10		
112	Dec.21st	A	eP	10	30	32	.13	Kermadec Islands Region.
		A	eS	-	38	48	.24	
		M	M	-	54	17	.30	
		A	M	-	55	15	1.29	
		M	M	-	58	16	.30	
113	Dec.21st	A	i	11	24	14	.65	Kermadec Islands Region.
		A	M	-	51	29	2.76	
		M	M	-	51	52	.43	
114	Dec.27th	A	iP	16	6	24	.18	
		A	i	-	10	15	.28	
		A	i	-	12	25	.24	
		A	i	-	19	7	.39	
115	Dec.28th	A	i	7	46	13	.40	
		A	M	8	21	46	.82	
116	Dec.31st	A	M	10	46	19	.60	
		A	M	-	52	31	1.87	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 2nd (1), 3rd (2), 8th (1), 10th (1), 11th (2),
13th (2), 15th (1), 17th (2), 18th (1), 19th (2),
20th (1), 21st (1), 22nd (1), 23rd (2), 24th (1),
25th (2), 26th (2), 29th (1), and 31st (1).

By instrument "M" on:- 2nd (1), 12th (1), 14th (1), 23rd (1), 25th (1),
27th (1), 28th (1), 29th (1), and 31st (2).

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PERTH, WESTERN AUSTRALIA

SEISMOLOGICAL STATION - PERTH OBSERVATORY

Seismological Bulletin for January - March 1959

Instrument Columbia-Lamont long period seismograph
Milne-Shaw No.27

Symbol A
M

Component Vertical
North - South

No. Date Inst. Phase Time G.M.T. Amp. Remarks
h. m. s. cms

JANUARY 1959

✓ 1.	Jan. 1st	A	iP	3	21	38	.19	South of Java.
		M	i	-	21	42	.15	
		A	eS	-	25	40	.31	
		M	iS	-	25	40	.20	
		A	i	-	26	15	.44	
		A	M	-	29	11	1.24	
		A	M	-	31	13	1.30	
		M	M	-	31	37	.28	
		A	M	-	32	6	1.31	
		M	M	-	33	31	.29	
✓ 2.	Jan. 5th	A	i	9	53	32	.26	
		A	i	-	55	43	.29	
		A	M	10	2	39	.94	
		M	M	-	2	54	.34	
		M	M	-	12	9	.26	
✓ 3.	Jan. 6th	A	eS	14	58	38	.24	South of Java
		A	M	15	2	4	.60	
		A	M	-	3	5	.59	
✓ 4.	Jan. 8th	A	i	22	51	20	.29	
		A	i	-	54	11	.40	
		M	i	-	55	9	.56	
		M	M	-	57	49	.65	
		A	M	-	57	50	3.10	
✓ 5.	Jan. 13th	A	iP	1	24	55	.20	
		M	i	-	25	18	.18	
		A	i	-	26	49	.15	
		A	iS	-	29	38	.28	
		A	M	-	47	30	.57	
		A	M	-	50	22	.83	
✓ 6.	Jan. 20th	A	iP	16	51	43	.35	
		M	i	-	55	55	.19	
		A	iS	-	56	10	.37	
		M	iS	-	56	11		Amp. not visible.
		A	M	17	3	5	2.10	
		A	M	-	4	11	2.49	
		M	M	-	7	15	.35	
✓ 7.	Jan. 22nd	A	iP	5	22	44	1.30	Near east coast of Honshu, Japan.
		M	i	-	30	20	.19	
		A	i	-	30	33	.38	
		A	iS	-	31	35	.81	
		M	i	-	31	50	.36	
		A	i	-	35	27	.39	
		M	i	-	36	9	.30	
		A	i	-	36	15	.88	
		A	M	-	47	15	2.10	
		M	M	-	50	20	.44	
		A	M	-	51	57	2.42	
		M	M	-	53	35	.40	
		M	M	-	57	15	.38	
		M	M	6	1	15	.43	

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
✓ 8.	Jan. 30th	A	e	0	28	10	.26	Solomon Islands.
		A	i	-	30	20	.13	
		A	iS	-	35	0	.48	
		A	eSS	-	38	15	.50	
		M	i	-	38	20	.14	
		M	M	-	45	54	.29	
		A	M	-	47	55	3.20	
		A	M	-	48	14	2.45	
		M	M	-	48	22	.30	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 1st (1), 3rd (1), 9th (1), 13th (2), 18th (2), 24th (4), 29th (2), and 30th (4).

By instrument "M" on:- 1st (2), 13th (3), 18th (1), and 30th (3).

FEBRUARY 1959

✓ 9.	Feb. 7th	A	eiP	9	56	12	.25	Near Coast of Northern Peru.
		M	e	-	56	20	.11	
		A	i	-	59	34	.73	Amp. not visible.
		M	i	10	1	7	.20	
		A	i	-	9	8	.47	
		A	i	-	11	57		
		A	iSS	-	19	23	1.01	
		A	iSSS	-	24	50	.92	
		M	M	-	51	24	.34	
		M	M	-	55	20	.39	
		M	M	11	3	51	.40	
		A	M	-	5	36	5.45	
		M	M	-	5	40	.53	
✓ 10.	Feb. 14th	A	eS	4	46	11	.50	
		A	M	-	50	55	.80	
		A	M	-	52	34	.79	
		M	M	-	55	6	.36	
✓ 11.	Feb. 15th	A	eP	4	11	56	.18	Sandwich Islands.
		A	iPP	-	15	10	.13	
		M	e	-	21	54	.13	
		A	iS	-	22	14	.35	
		M	e	-	27	48	.21	
		A	iSS	-	28	12	.32	
		A	iSSS	-	31	35	.40	
		A	M	-	47	3	1.64	
		M	M	-	47	14	.32	
		A	M	-	48	15	1.65	
✓ 12.	Feb. 15th	M	i	5	7	18	.25	Sandwich Islands. (Phases obscured by preceding quake).
		M	iSS	-	10	59	.20	
		A	M	-	28	26	1.24	
		M	M	-	29	3	.28	
		A	M	-	30	24	1.34	
		M	M	-	31	16	.29	
✓ 13.	Feb. 23rd	A	iP	2	6	24	.20	New Britain.
		A	iPPP	-	8	40	.34	
		A	iS	-	12	38	.34	
		A	iSS	-	15	28	.25	
		A	M	-	25	22	1.72	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 6th (2), 8th (2), 9th (2), 11th (1), 12th (1), 16th (1), 17th (1), 22nd (1), 23rd (1), 25th (2), 27th (2) and 28th (2).

By instrument "M" on:- 22nd (1), and 28th (1).

No.	Date	Inst.	Phase	Time G.M.T.			Amp. cms	Remarks
				h.	m.	s.		
<u>MARCH 1959</u>								
✓14.	March 1st	A	iP	16	56	6	.52	Near North Coast of New Guinea. (h about 100KM(USCGS)(M) light spot indistinct).
		M	iP	-	56	7	.08	
		A	iSP	-	56	52	.74	
		A	iS	17	1	55	1.72	
		M	M	-	9	0	4.26	
		A	M	-	11	20	9.00	
		A	M	-	12	20	>10.00	
		A	M	-	19	49	>10.60	
✓15.	March 2nd	A	iP	9	19	26	.11	Timor Island.
		A	iS	-	23	55	.14	
		A	M	-	31	48	2.39	
✓16.	March 12th	M	i	1	44	53	.18	Caroline Islands.
		A	i	-	48	17	.35	
		M	i	-	48	23	.31	
		A	M	-	54	55	1.10	
		M	M	-	55	5	.42	
		A	M	-	58	42	1.03	
✓17.	March 17th	A	iP	8	35	31	.28	Ryukyu Islands.
		A	eS	-	43	52	.31	
✓18.	March 26th	A	iP	2	32	25	.14	Salomon Islands.
		A	iS	-	39	0	.14	
		A	e	-	42	24	.18	
		A	M	-	51	2	1.25	
✓19.	March 28th	A	iP	19	56	21	.20	Fiji Islands.
		A	i	-	59	16	.20	h about 600KM(USCGS)
		A	iS	20	3	50	.22	
		A	i	-	11	25	.26	
		A	iG	-	11	40	.30	
		A	M	-	21	7	.46	
		A	M	-	21	41	.53	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 1st (1), 2nd (1), 4th (1), 5th (5), 6th (1), 7th (1), 8th (1), 17th (3), and 27th (1).

By instrument "M" on:- 2nd (1).

PERTH, WESTERN AUSTRALIA

SEISMOLOGICAL STATION - PERTH OBSERVATORY

Seismological Bulletin for April - June 1959

Instrument
Columbia-Lamont long
period seismograph.
Milne-Shaw No.27

Symbol
A
M

Component
Vertical
North-South

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
<u>APRIL 1959</u>								
20	X April 1st	A	iP	14	16	15	.20	Indian Ocean.
		A	iS	-	20	7	.70	
		M	i	-	20	8	.14	
		A	M	-	22	31	1.42	
		M	M	-	22	50	.36	
		M	M	-	23	25	.30	
		M	M	-	24	30	.42	
21	✓ April 1st	A	iSS	23	51	55	.44	Solomon Islands.
		A	M	-	59	33	.47	
	April 2nd	A	M	0	0	19	.50	
22	✓ April 5th	A	iP	23	36	57	.58	Near north coast of New Guinea.
		A	iPP	-	38	24	.31	
		A	iS	-	42	55	.37	
		A	i	-	45	58	.33	
		M	M	-	50	50	.66	
		M	M	-	52	32	.48	
		A	M	-	54	16	3.17	
23	✓ April 6th	A	iP	14	17	34	1.08	Sumba Island.
		M	iP	-	17	35	.22	
		A	iS	-	21	25	1.73	Amp. not visible.
		M	iS	-	21	25		
		M	M	-	24	36	1.24	
		M	M	-	24	48	1.15	
		M	M	-	28	37	1.10	
		A	M	-	28	49	6.53	
		A	M	-	30	7	4.47	
24	✓ April 9th	A	eP	6	25	9	.21	Indian Ocean, about 1000 miles north of Kerguelin Island.
		A	iS	-	30	29	.44	
		M	iS	-	30	29	.21	
		A	M	-	34	3	2.13	
		A	M	-	36	23	1.60	
		M	M	-	38	45	.47	
25	X April 12th	M	M	15	41	55	.39	Near coast of New Guinea (Phases obscu- red by microseisms)
		A	M	-	43	44	2.50	
		A	M	-	45	4	2.56	
		M	M	-	46	30	.42	
26	X April 12th	A	M	21	31	29	.90	Samoa Islands Region Phases obscured by microseisms.
		A	M	-	32	25	.89	
27	✓ April 20th	A	iP	3	35	32	.32	New Britain. (h about 100 KM)
		A	i	-	37	22	.38	
		A	i	-	37	46	.28	
		A	iS	-	41	33	.30	
		M	iS	-	41	34	.18	
		A	iSS	-	42	10	.25	
		A	iG	-	44	25	.62	
		A	M	-	51	53	1.33	
		A	M	-	53	39	1.95	
		A	M	-	55	10	1.50	

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
28 ✓	April 24th	A	iP	18	7	35	1.00	Kermadec Islands.
		A	i	-	7	55	.48	
		A	iS	-	15	32	.66	
		A	i	-	19	32	.68	
		A	i	-	21	53	.80	
		A	M	-	24	57	1.70	
		A	M	-	29	51	2.28	
		A	M	-	34	23	2.10	
		A	M	-	44	33	1.90	
29 ✓	April 26th	M	iP	20	50	7	.23	Northeast coast of Formosa. (h about 150KM)
		A	iP	-	50	8	3.06	
		A	i	-	50	40	3.26	
		A	i	-	53	28	1.30	
		A	i	-	54	55	1.50	
		M	iS	-	57	57	.72	
		A	iS	-	58	0	2.40	
		M	i	-	58	12	.60	
		A	i	-	59	22	3.00	
		M	i	-	59	57	.60	
		A	i	21	4	43	5.80	
		M	M	-	5	33	.54	
		A	M	-	9	0	8.00	
		M	M	-	10	3	.57	
30 ✓	April 27th	A	iP	9	54	4	.48	Banda Sea.
		A	iPP	-	54	50	.90	
		M	i	-	58	30	.27	
		A	iS	-	58	39	.89	
		A	i	-	59	30	1.10	
		M	I	-	59	22	.25	
		A	M	10	1	55	1.60	
		M	M	-	2	39	1.20	
		A	M	-	7	16	2.30	
31 ✓	April 28th	A	iP	11	29	16	.80	Mexico-Guatamala border.
		A	i	-	43	17	.44	
		A	M	12	24	42	.99	
		A	M	-	27	15	1.10	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 2nd (1), 8th (1), 10th (1), 11th (1), 19th (1), and 25th (1).

By instrument "M" on:- 24th (1).

MAY 1959

32 ✓	May 4th	A	iP	7	28	56	1.92	Near east coast of Kamchatka (h. about 600 KM)
		A	iPP	-	33	11	2.61	
		A	iS	-	41	42	3.15	
		A	i	-	46	34	3.78	
		A	i	-	47	31	2.45	
		A	M	8	0	40	5.21	
		A	M	-	2	41	5.56	
33 ✓	May 7th	A	iS	0	17	49	.23	Bismark Sea. Early phases lost in changing seismogram.
		M	i	-	20	31	.20	
		A	e	-	21	29	.41	
		M	M	-	27	54	.51	
		A	M	-	29	41	6.62	
		M	M	-	29	46	.55	
34 ✓	May 7th	A	iP	20	28	12	.19	Flores Sea.
		A	i	-	28	32	.20	
		A	iS	-	32	31	.35	
		A	M	-	40	44	.55	
		A	M	-	41	29	.61	

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
34	✓ May 12th	A	i	5	30	30	.21	Komandorskie Islands.
		A	M	-	48	45	.35	
		A	M	-	57	27	.39	
		A	M	6	3	27	.37	
35	✓ May 12th	A	i	10	5	58		Amp. not visible. Salta Province, Argentina.
		A	i	-	7	46	.24	
		A	i	-	34	39	.26	
		A	M	-	57	12	2.91	
		A	M	11	1	32	2.40	
36	✓ May 16th	A	iP	6	24	34	.24	New Britain. (h about 60 KM)
		A	i	-	26	24	.49	
		M	iS	-	31	4	.30	
		A	iS	-	31	6	.99	
		A	i	-	34	18	.60	
		M	iSS	-	34	41	1.79	
		M	M	-	38	47	.35	
		M	M	-	42	11	.35	
A	M	-	42	51	3.44			
37	✓ May 24th	A	i	19	37	15	3.60	Caxaca Mexico.
		A	i	-	42	22	.26	
		A	i	20	0	20	1.04	
		A	M	-	27	26	1.90	
		A	M	-	29	33	1.99	
38	✓ May 29th	A	iP	10	51	31	.55	
		A	i	-	52	53	.26	
		A	iPP	-	53	24	.49	
		M	iS	-	58	39	.11	
		A	iS	-	58	40	.61	
		M	i	-	59	10	.15	
		M	i	11	2	13	.11	
		A	i	-	3	12	.50	
		A	i	-	3	28	.56	
		A	iG	-	4	27	.44	
		M	M	-	11	30	.37	
		A	M	-	12	36	1.50	
39	✓ May 31st	A	iP	9	36	34	.40	
		A	iPP	-	38	21	.30	
		A	iSS	-	46	31	.65	
		M	i	-	46	49	.15	
		M	M	-	52	45	.53	
		A	M	-	53	53	2.10	
		M	M	-	55	25	.50	
		A	M	-	55	58	3.07	
M	M	-	57	36	.48			

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 1st (1), 6th (1), 7th (2), 12th (2), 14th (6), 20th (2), and 21st (1).

By instrument "M" on:- 12th (1), and 24th (1).

JUNE 1959								
No.	Date	Inst.	Phase	h.	m.	s.	Amp.	Remarks
40	✓ June 1st	A	i	17	17	33	.30	Solomon Islands. (h about 100 KM)
		A	i	-	25	36	.30	
		A	M	-	34	27	1.24	
41	✗ June 2nd	A	M	4	0	25	1.26	Probably Tonga Islands. Regions.
		A	M	-	0	43	1.20	
		A	M	-	4	12	1.16	
42	✗ June 2nd	A	M	4	29	16	1.25	Probably Tonga Islands Regions.

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
43 ✓	June 2nd	A	i	5	17	45	.44	Probably Tonga Islands Region.
		A	M	-	26	28	.65	
		A	M	-	27	40	.56	
44 ✓	June 14th	A	iPP	0	33	7	1.15	Southwestern Bolivia. (h about 100 KM)
		M	iPP	-	33	7	.15	
		M	i	-	34	23	.39	
		M	i	-	35	6	.26	
		M	iPPP	-	35	44	.10	
		A	iPPP	-	35	46	.96	
		A	i	-	44	35	.72	
		A	i	-	50	44	.93	
A	i	-	54	58	.91			
45 ✓	June 18th	A	i	15	48	42	.30	Near east coast of Kamchatka.
		A	i	16	7	0	.80	
		A	M	-	27	36	1.44	
		A	M	-	33	57	1.50	
46 ✓	June 29th	M	M	7	41	7	.40	Solomon Islands.
		A	M	-	43	50	2.97	
		M	M	-	47	41	.44	
		A	M	-	49	47	2.60	
		M	M	-	50	43	.46	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:-9th (1).

By instrument "M" on:- 18th (1).

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PERTH, WESTERN AUSTRALIA

SEISMOLOGICAL STATION - PERTH OBSERVATORY

Seismological Bulletin for July - September 1959

<u>Instrument</u>	<u>Symbol</u>	<u>Component</u>
Columbia-Lamont long period seismograph.	A	Vertical
Milne-Shaw No.27	M	North-South

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
July 1959								
47	✓ July 3rd	A	iP	18	5	20	1.50	
		A	iPP	-	7	28	.80	
		A	iS	-	13	6	.96	
		A	iSS	-	16	40	.56	
		A	M	-	26	37	3.24	
		A	M	-	29	30	1.58	
48	✓ July 11th	A	iP	12	8	59	.90	
		M	i	-	12	48	.32	
		A	iS	-	15	52	2.10	
		M	i	-	16	3	.31	
		A	M	-	17	55	4.32	
		A	M	-	19	55	3.10	
		M	M	-	19	55	1.68	
		M	M	-	21	9	1.30	
		M	M	-	22	35	1.53	
		A	M	-	24	20	2.42	
		A	M	-	27	24	1.95	
49	✓ July 18th	A	iP	20	3	24	.55	Luzon
		M	i	-	4	2	.16	
		A	iPP	-	5	13	.72	
		M	iPP	-	5	15	.15	
		A	iPPP	-	6	8	1.44	
		M	iPPP	-	6	10	.16	
		A	iS	-	10	5	2.14	
		M	iS	-	10	5	1.40	
		M	i	-	13	8	.98	
		A	i	-	14	2	2.30	
		A	M	-	18	41	4.82	
		A	M	-	20	12	6.00	
		M	M	-	20	15	1.00	
		M	M	-	20	42	1.00	
50	✓ July 19th	A	iP	3	48	9	.19	Sunda Strait.
		M	i	-	51	53	.16	
		A	iS	-	52	47	.47	
		A	i	-	53	19	.53	
		A	M	-	55	37	1.28	
		A	M	-	56	28	1.12	
		M	M	-	56	31	.18	
51	✓ July 19th	A	iP'	15	25	8	.63	Peru(h about 200 KM).
		A	iPP	-	27	33	1.92	
		A	i	-	28	18	3.10	
		M	i	-	28	18	.12	
		M	i	-	28	48	.41	
		A	i	-	28	50	2.13	
		A	i	-	29	54	2.80	
		M	i	-	29	54	.51	
		A	i	-	38	56	1.02	
		A	i	-	45	58	.58	
		M	i	-	47	14	.37	

No	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	t.	cms	
52 ✓	July 20th	A	iP	2	46	6	1.78	
		M	i	-	46	26	.31	
		A	i	-	47	24	.88	
		A	i	-	48	30	.76	
		A	iS	-	50	5	1.18	
		M	iS	-	50	7	.24	
		M	i	-	51	6	.32	
		A	M	-	54	2	2.82	
		M	M	-	54	5	.44	
		M	M	-	54	46	.41	
M	M	-	55	55	.62			
53 ✓	July 21st	A	e	7	54	18	.44	New Hebrides Islands.
		A	i	-	54	50	.35	
		A	i	8	3	40	.69	
		A	M	-	10	20	.96	
		M	M	-	11	53	.45	
		M	M	-	13	10	.66	
		A	M	-	13	10	2.24	
54 ✓	July 22nd	A	iP	23	10	44	.76	New Britain.
		A	i	-	12	36	1.04	
		M	iS	-	16	59	.27	
		A	iS	-	17	1	.83	
		M	iSS	-	20	1	.36	
		A	iSS	-	20	3	1.30	
		M	i	-	24	7	.61	
		A	M	-	28	39	4.82	
		A	M	-	31	48	5.66	
		M	M	-	32	35	.83	
M	M	-	33	34	.86			

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:-6th (1), 16th (1), 21st (1), 23rd (1), and 24th (1).

By instrument "M" on:-21st (1), and 23rd (1).

AUGUST 1959								
No	Date	Inst.	Phase	h.	m.	t.	Amp.	Remarks
55 ✓	Aug. 9th	A	i	20	39	54	.23	Solomon Islands. (h about 100 KM).
		A	iSS	-	48	25	.46	
		A	i	-	48	55	.22	
		A	i	-	54	34	.25	
		M	M	-	55	22	.31	
		A	i	-	56	45	.52	
		A	M	-	58	4	.78	
56 ✓	Aug. 11th	A	i	22	15	21	.54	
		M	M	-	16	27	.38	
		M	M	-	17	9	.50	
		A	M	-	18	32	1.86	
57 ✓	Aug. 12th	A	iP	10	8	51	.41	
		M	i	-	24	15	.48	
		M	M	-	29	22	.53	
		A	M	-	30	56	1.00	
		A	M	-	32	30	1.34	
		A	M	-	32	54	1.67	
58 ✓	Aug. 15th	A	iP	9	6	26	.62	Formosa.
		M	iP	-	6	28	.25	
		A	iPP	-	8	30	.70	
		A	iS	-	14	0	2.36	
		M	iS	-	14	0	.97	
		M	i	-	17	35	.79	
		A	i	-	18	38	3.63	
		M	M	-	23	30	1.35	
		A	M	-	30	36	8.07	

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
59	✓ Aug. 16th	A	iP	1	0	37	.41	
		M	i	-	16	40	.25	
		M	M	-	19	35	.48	
		A	M	-	21	27	1.97	
		A	M	-	25	46	1.86	
		A	M	-	27	35	2.07	
60	✓ Aug. 17th	A	iP	21	13	7	2.53	Solomon Islands.
		M	iP	-	13	9	.11	
		M	iS	-	19	38	.52	
		A	i	-	19	47	1.60	
		M	i	-	20	46	.46	
		A	M	-	30	24	7.89	
		M	M	-	32	54	3.54	
		M	M	-	36	30	4.46	
61	✓ Aug. 18th	A	iP'	6	56	50	1.11	Wyoming, U.S.A.
		A	iPP	-	59	53	1.13	
		A	i	7	14	52	.86	
		A	i	-	19	1		Amp. not visible.
		M	iSS	-	19	40	.82	
		M	M	-	43	53	.47	
		A	M	-	48	27	8.05	
		A	M	-	50	46	7.81	
		M	M	-	54	24	.71	
		A	M	-	57	15	8.07	
62	✓ Aug. 18th	A	iP'	15	45	37	.22	Wyoming, U.S.A.
		A	iPP	-	48	46	.52	
		A	M	16	43	35	.40	
63	✓ Aug. 20th	A	iP	12	26	36	.15	Indian Ocean.
		A	i	-	27	47	.22	
		A	iS	-	31	50	.26	
		M	M	-	34	40	.22	
		M	M	-	35	34	.21	
		A	M	-	35	49	.99	
64	✓ Aug. 21st	A	iP	8	8	48	.58	Indian Ocean, South of Australia.
		M	iP	-	8	48	.18	
		A	i	-	9	30	.30	
		A	i	-	11	6	.81	
		A	i	-	11	50	.50	
		A	i	-	13	8	.52	
		M	i	-	13	32	.27	
		A	i	-	13	33	1.60	
		A	M	-	16	3	5.81	
		M	M	-	18	17	1.41	
A	M	-	19	15	7.05			
65	✓ Aug. 21st	A	iP	10	43	22	.53	Indian Ocean, South of Australia.
		A	iS	-	47	55	.98	
		A	M	-	50	48	4.00	
		A	M	-	50	55	3.98	
		M	M	-	54	57	1.06	
66	✗ Aug. 24th Also AUG 24 ON NEXT PAGE No. 68.	M	M	16	8	5	.38	Solomon Islands foreshock
		A	M	-	10	3	1.12	
		A	M	-	10	41	1.14	
67	✓ Aug. 26th Out of Chronological Order	A	iP'	8	45	23	.88	Vera Cruz, Mexico.
		A	i	9	2	7	.52	
		A	M	-	44	15	1.70	
		A	M	-	51	42	1.60	
		A	M	10	1	29	.98	

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
68 ✓	Aug.24th	A	iP	21	39	25	1.34	Solomon Islands.
		A	iS	-	46	24	4.52	
		M	iS	-	46	24	1.17	
		A	iSS	-	50	3	2.27	
		A	M	-	50	9	6.88	
		A	M	-	55	22	8.26	
		M	M	-	56	26	3.34	
		A	M	-	56	55	10.88	
		M	M	22	5	35	2.40	
A	M	-	8	25	10.38			
69 ×	Aug.26th	A	M	11	34	46	.80	South of Queen Charlotte Islands.
		A	M	-	36	13	.88	
70 ×	Aug.28th	M	M	16	21	42	.26	
		M	M	-	23	32	.30	
		A	M	-	23	32	.88	
		A	M	-	25	33	.92	
71 ✓	Aug.29th	A	iP	17	15	49	.74	Lake Baikal, U.S.S.R.
		A	iPP	-	19	4	.40	
		M	i	-	27	22	.30	
		A	i	-	27	26	.40	
		A	iSS	-	31	43	.32	
		A	M	-	51	11	.97	
		M	M	-	55	42	.26	
		A	M	-	57	11	.78	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:-9th (1), 19th (1), 20th (4), 29th (1) and 30th (1).

By instrument "M" on:-10th(1), 19th(1), 20th(4), 29th(1) and 30th(1).

SEPTEMBER 1959

72 ✓	Sept.3rd	M	iP	6	33	25	.20	Celebes Island.
		A	iP	-	33	26	.33	
		A	iPP	-	34	13	1.12	
		A	iS	-	38	21	1.14	
		M	iS	-	38	21	.32	
		M	M	-	48	6	.90	
		A	M	-	50	48	4.75	
73 ✓	Sept.10th	A	iS	5	49	58	.42	Solomon Islands.
		A	iSS	-	53	6	.40	
		A	M	6	1	37	.78	
		A	M	-	2	35	.76	
74 ✓	Sept.12th	A	iP	2	1	33	.35	Bismark Sea.
		A	iPP	-	3	1	.50	
		A	i	-	3	32	.54	
		M	i	-	7	37	.14	
		M	i	-	7	52	.26	
		M	M	-	16	46	2.74	
		A	M	-	17	4	4.24	
		M	M	-	17	20	2.76	
		A	M	-	18	38	4.48	
		A	M	-	19	45	3.95	
		A	M	-	21	55	3.58	

No.	Date	Inst.	Phase	Time			Amp.	Remarks	
				G.M.T.					
				h.	m.	s.	cms		
75	Sept. 12th	M	i	7	15	49	.16	Bismark Sea.	
		A	i	-	15	56	.40		
		M	i	-	18	50	.18		
		A	i	-	18	51	.36		
		M	i	-	19	7	.22		
		M	M	-	25	19	.85		
A	M	-	26	51	1.54				
76	Sept. 12th	A	eP	11	32	43	.29	Coral Sea.	
		A	i	-	34	29	.72		
		A	iS	-	39	8	.88		
		M	iS	-	39	9	.38		
		M	iSS	-	42	13	.26		
		A	iSS	-	42	15	.85		
		M	M	-	49	7	.98		
		A	M	-	50	40	3.62		
A	M	-	51	15	3.82				
77	Sept. 14th	A	e	13	34	13	.15	Tonga Island Region.	
		A	M	-	46	30	.46		
		M	M	-	47	33	.32		
		M	M	-	48	6	.32		
		A	M	-	51	20	.89		
		A	M	-	53	47	.97		
78	Sept. 14th	A	iP	14	19	29	1.28	Kermadec Islands.	
		M	i	-	27	58	.40		
		A	i	-	30	33	1.94		
		M	i	-	31	34	.38		
		A	M	-	37	38	4.68		
		M	M	-	41	40	1.68		
		M	M	-	43	41	2.10		
79	Sept. 14th	A	iP	17	16	5	.78	Kermadec Islands. (aftershock).	
		A	i	-	19	46	.40		
		A	i	-	24	27	.48		
		A	M	-	37	22	2.97		
		M	M	-	39	18	.54		
		A	M	-	39	33	3.90		
		M	M	-	42	47	.46		
80	Sept. 14th	A	i	22	33	47	.23	Kermadec Islands. (aftershock).	
		M	M	-	56	34	.24		
		A	M	-	56	42	1.55		
		A	M	-	57	56	1.75		
		M	M	23	0	53	.30		
81	Sept. 15th	A	iP	6	9	34	.76	Kermadec Islands. (aftershock).	
		A	i	-	11	53	.71		
		A	i	-	17	18	.83		
		M	e	-	17	30	.24		
		A	i	-	21	47	1.18		
		M	M	-	27	12	.52		
		A	M	-	28	31	4.27		
		A	M	-	30	55	6.10		
		M	M	-	31	34	.64		
		A	M	-	33	28	9.75		
		A	M	-	42	17	9.19		
		82	Sept. 15th	A	iP	11	14		37
A	i			-	16	27	.65		
A	i			-	17	33	.49		
A	iS			-	21	50	.35		
A	i			-	29	12	.70		
A	M			-	40	4	.93		
A	M			-	42	53	.86		

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
83 ✓	Sept.16th	A	iP	16	6	56	.22	Kermadec Islands.
		A	iS	-	14	59	.30	
		A	i	-	21	42	.40	
		A	M	-	31	9	.96	
		M	M	-	32	1	.26	
		M	M	-	34	18	.28	
		M	M	-	36	16	.30	
84 ✓	Sept.21st	A	e	2	21	50	.18	Near coast of New Guinea.
		A	i	-	24	24	.52	
		A	i	-	25	2	.62	
		M	M	-	29	50	.34	
		M	M	-	30	35	.40	
		A	M	-	30	37	.68	
		A	M	-	31	30	.83	
85 ✓	Sept.25th	M	iS	2	53	50	.32	Formosa.(recording unit A out of action).
		M	M	3	4	40	.28	
		M	M	-	6	52	.28	
		M	M	-	10	28	.30	
86 ✓	Sept.29th	A	iP	15	41	47	.50	Kermadec Islands.
		A	i	-	45	32	.32	
		A	iS	-	49	42	.32	
		M	i	-	51	45	.20	
		A	i	-	54	47	.59	
		M	M	16	6	38	.54	
		A	M	-	8	28	2.39	
		M	M	-	8	42	.60	
		A	M	-	10	9	3.27	
		M	M	-	11	23	.57	
87 ✓	Sept.30th	A	i	20	35	5	.30	New Hebrides Islands.
		A	iSS	-	45	33	.35	
		M	M	-	55	15	.36	
		A	M	-	56	47	2.11	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:-15th(1), 16th(2), 17th(2), 18th(1), 20th(1), 21st(1), and 30th(2).

By instrument "M" on:-5th(1), 10th(1), and 17th(1).

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PERTH, WESTERN AUSTRALIA

SEISMOLOGICAL STATION - PERTH OBSERVATORY

Seismological Bulletin for October - December 1959

Instrument Columbia-Lamont long
period seismograph
Milne-Shaw No.27

Symbol A
M

Component Vertical
North-South

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
<u>October 1959</u>								
88	× Oct.3rd	A	i	12	8	35	.15	Local shock S.W. of Perth
		M	i	-	8	47	.23	
		A	i	-	8	58	.06	
		A	i	-	9	6	.15	
89	✓ Oct.12th	A	iP	3	29	27	.27	Near coast of Sumatra.
		A	iS	-	35	9	.26	
		A	i	-	38	11	.68	
		A	M	-	40	33	.69	
90	✓ Oct.15th	A	iP	6	22	5	.48	Celebes.
		M	e	-	22	10	.24	
		A	iPP	-	23	10	1.67	
		M	iS	-	27	22	.66	
		A	iS	-	27	23	.82	
		M	M	-	31	34	1.42	
		A	M	-	33	4	10.00	
		M	M	-	34	35	1.70	
		A	M	-	34	57	10.20	
		M	M	-	39	22	1.58	
		A	M	-	39	34	7.95	
		A	M	-	41	37	8.90	
91	✓ Oct.19th	A	iP	8	37	15	.19	Kermadec Islands.
		A	iS	-	45	20	.28	
		A	M	-	58	34	.98	
		A	M	9	1	41	1.14	
		M	M	-	2	20	.29	
		M	M	-	5	15	.28	
		A	M	-	7	38	1.16	
92	✓ Oct.19th	A	iP	16	8	29	.68	
		A	iPP	-	11	57	.34	
		M	i	-	19	4	.16	
		M	i	-	19	17	.23	
		A	i	-	19	28	.35	
		M	i	-	20	20	.27	
		A	i	-	25	8	.37	
		A	i	-	25	40	.58	
		M	M	-	43	35	.24	
		A	M	-	44	5	1.80	
93	✓ Oct.26th	A	iP	7	46	44	.24	Near east coast of Honshu, Japan. (h about 60 KM)
		A	i	-	47	6	.48	
		A	i	-	55	57	.28	
		A	M	8	13	12	.57	
		A	M	-	15	36	.44	
		A	M	-	24	44	.40	
		A	M	-	32	8	.47	
94	✓ Oct.27th	A	iP	7	5	17	.99	Karile Islands. (h about 100 KM.)
		A	i	-	8	20	.33	
		A	i	-	15	44	.50	
		A	i	-	16	50	.90	
		A	M	-	38	34	1.14	
		A	M	-	45	32	1.14	

No.	Date	Inst.	Phase	Time			Amp.	Remarks
				G.M.T.				
				h.	m.	s.	cms	
95	✓ Oct. 29th	A	iP	14	29	39	.34	Kermadec Islands. (h about 60 KM)
		A	M	-	48	45	.75	
		A	M	-	52	37	1.27	
96	✓ Oct. 30th	A	i	14	31	49	.40	
		A	M	-	35	13	.82	
		A	M	-	38	35	.86	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:-6th (1), 7th (1), and 16th (1).

By instrument "M" on:-12th (1), 26th (1), 27th (1), 29th (1), and 30th (1).

November 1959								
No.	Date	Inst.	Phase	h.	m.	s.	Amp.	Remarks
97	✓ Nov. 2nd	A	iP	20	11	23	.38	New Britain. (h about 60 KM)
		A	i	-	11	34	.52	
		A	i	-	13	43	.60	
		M	iS	-	17	49	.23	
		A	iS	-	17	42	.92	
		A	i	-	20	38	.73	
		M	i	-	20	48	.52	
		A	iSS	-	20	52	1.60	
A	M	-	29	21	2.77			
98	✓ Nov. 3rd	A	iP	9	44	57	2.40	South of Java
		M	iP	-	45	0	.26	
		A	i	-	48	43	6.00	
		M	iS	-	49	0	.62	
		A	iS	-	49	2	2.20	
		A	M	-	53	8	6.43	
		A	M	-	57	42	6.04	
A	M	-	58	11	6.39			
99	✓ Nov. 5th	A	i	11	59	10	.24	
		A	i	12	10	9	.30	
		A	M	-	20	34	2.00	
100	✓ Nov. 5th	A	i	17	46	30	.19	Solomon Islands.
		A	i	-	48	24	.32	
		A	i	-	53	21	.35	
		M	M	18	4	29	.38	
		A	M	-	11	39	1.50	
101	✓ Nov. 15th	A	iP	10	37	21	.19	Tadzhic
		A	M	11	7	25	.22	
		A	M	-	14	39	.20	
		A	M	-	18	20	.20	
102	✓ Nov. 15th	A	eP	17	23	42	.09	Near west coast of Greece.
		A	iPP	-	28	10	.22	
		A	iS	-	35	48	.24	
		M	iS	-	35	50	.20	
		A	i	-	36	10	.28	
		A	iSS	-	43	25	.42	
		M	i	-	43	52	.19	
		A	M	18	11	32	1.20	
		A	M	-	17	12	1.68	
		M	M	-	18	47	.19	

No.	Date	Inst	Phase	Time			Amp.	Remarks
				G.M.T.				
			h.	m.	s.	cms		
103	Nov. 19th	A	iP	11	16	2	.49	Near north coast of New Guinea.
		A	i	-	17	23	.69	
		A	i	-	17	37	1.92	
		A	iPPP	-	18	5	1.63	
		M	iS	-	21	53	.60	
		A	iS	-	21	53	1.48	
		A	M	-	28	45	3.83	
		M	M	-	30	0	2.78	
M	M	-	32	8	2.25			
A	M	-	34	57	5.07			
104	Nov. 26th	A	iP	7	12	22	.18	Near coast of Sumatra.
		M	iS	-	17	15	.29	
		A	iS	-	17	17	.38	
		M	M	-	21	22	.94	
105	Nov. 26th	A	iP	23	15	30	.31	Near coast of Sumatra.
		A	i	-	17	25	.66	
		A	i	-	20	15	.36	
		M	i	-	20	25	.22	
		A	i	-	20	36	.58	
		A	M	-	23	32	5.00	
		M	M	-	23	58	1.30	
106	Nov. 28th	A	iP	2	55	17	.15	Fiji Islands Region.
		A	i	3	3	20	.21	
		A	M	-	15	58	.98	
		A	M	-	19	10	1.24	

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 9th (1), 10th (2), 14th (1), 16th (1), 17th (1), 22nd (3), 23rd (1), 27th (1), 28th (1), and 29th (1).

By instrument "M" on:- 5th (1), 6th (1), 7th (1), 14th (1), 17th (1), 22nd (2), 23rd (1), 28th (2), and 29th (1).

December 1959

107	Dec. 1st	A	iP	15	7	24	.19	Ballery Islands Region.
		A	i	-	9	0	.28	
		A	iS	-	13	25	.16	
		M	i	-	13	32	.19	
		A	M	-	20	7	3.62	
		M	M	-	20	12	.63	
		A	M	-	20	18	4.35	
108	Dec. 2nd	A	iP	9	40	33	1.50	
		M	eP	-	40	35	.25	
		M	i	-	45	45	.61	
		A	iS	-	45	50	1.25	
		M	M	-	50	29	1.00	
		A	M	-	50	50	4.64	
		M	M	-	53	5	1.12	
		A	M	-	54	21	4.90	
109	Dec. 14th	A	iP	18	5	42	.59	Off south coast of Mindanao
		A	i	-	7	53	.65	
		M	i	-	7	58	.15	
		M	i	-	12	10	.25	
		A	i	-	14	20	.33	
110	Dec. 14th	A	iP	21	55	55	.16	Celebes.
		A	i	22	1	20	.15	

No	Date	Inst.	Phase	Time			Amp	Remarks	
				G.M.T.					
				h.	m.	s.	cms		
111 ✓	Dec. 14th	A	iP	23	34	27	1.16	Sandwich Islands.	
		M	iP	-	34	27	.18		
		A	iPP	-	37	41	.67		
		M	i	-	44	32	.10		
		M	i	-	44	52	.40		
	Dec. 15th	A	i	-	44	59	1.18		
		M	M	0	7	56	.74		
		A	M	-	8	26	6.10		
112 ✓	Dec. 21st	A	eP	10	30	32	.13		Kermadec Islands Region.
		A	eS	-	38	48	.24		
		M	M	-	54	17	.30		
		A	M	-	55	15	1.29		
		M	M	-	58	16	.30		
113 ✓	Dec. 21st	A	i	11	24	14	.65	Kermadec Islands Region.	
		A	M	-	51	29	2.76		
		M	M	-	51	52	.43		
114 ✓	Dec. 27th	A	iP	16	6	24	.18		
		A	i	-	10	15	.28		
		A	i	-	12	25	.24		
		A	i	-	19	7	.39		
115 ✓	Dec. 28th	A	i	7	46	13	.40		
		A	M	8	21	46	.82		
116 ✗	Dec. 31st	A	M	10	46	19	.60		
		A	M	-	52	31	1.87		

Tremors and undecipherable disturbances were recorded:-

By instrument "A" on:- 2nd (1), 3rd (2), 8th (1), 10th (1), 11th (2),
 13th (2), 15th (1), 17th (2), 18th (1), 19th (2),
 20th (1), 21st (1), 22nd (1), 23rd (2), 24th (1),
 25th (2), 26th (2), 29th (1), and 31st (1).

By instrument "M" on:- 2nd (1), 12th (1), 14th (1), 23rd (1), 25th (1),
 27th (1), 28th (1), 29th (1), and 31st (2).

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