



PERTH, WESTERN AUSTRALIA

SEISMOLOGICAL STATION - PERTH OBSERVATORY

Seismological Bulletin for January - March 1963

INSTRUMENTS

- 1 Columbia Lamont Seismometer (Vertical Component long-period) V
- 1 Sprengnether Horizontal Seismometer (N-S Component long-period) N
- 1 Sprengnether Horizontal Seismometer (E-W Component long-period) E

No.	Date	Phase	Component		Time			Remarks	
					h.	m.	s.		
<u>JANUARY</u>									
1	1st	iP	N		19	41	56	Indian Ocean	
		iS	N	E	-	47	04		
		i	V			-	47		15
		M		N		-	48		55
		M	V			-	50		07
		M			E	-	50		13
2	2nd	iP	V	E	15	02	46	Near South Coast of Western New Guinea	
		iPP	V	N	E	-	03		51
		iS		N	E	-	08		02
		i		N		-	08		29
		iSS	V	N	E	-	10		16
		M		N	E	-	14		34
		M	V			-	17		40
3	2nd	iS		E	16	18	40	South Pacific Ocean	
		iSS	N		-	24	24		
		iSSS	N		-	27	34		
		M		N		-	36		39
		M			E	-	37		16
		M	V			-	37		20
4	2nd	C	N		18	14	29	Near Southern Coast of New Guinea	
		M	N	E	-	17	45		
		M	V			-	20		21
5	3rd	iP	V		9	47	51	New Britain	
		iS	N	E	-	53	57		
		i	N		-	54	55		
		i		E	-	56	22		
		iSS	N		-	57	05		
		i	V			-	57		21
		i	N	E	-	57	26		
		M		E	10	01	36		
		M		N	-	04	28		
		M	V			-	05		07
6	4th	iP	V		12	24	48	Solomon Islands Region	
		iPP		N	E	-	26		41
		iPPP	V	N	E	-	27		10
		iS		N	E	-	31		34
		iSS	V	N	E	-	34		40
		M	V			-	39		43
		M			E	-	40		17
		M		N		-	40		55
7	5th	eP		E	13	13	52	New Hebrides Islands	
		ePP	V		-	15	46		
		iS		E	-	20	40		

No.	Date	Phase	Component			Time			Remarks	
						h.	m.	s.		
8	5th	iP	V			13	21	48	Timor	
		iPP	V			-	22	11		
		iPP		N	E		-	22		15
		iS	V	N	E		-	25		55
		M	V				-	33		41
		M		N			-	33		50
9	7th	iS			E	6	39	30	Solomon Islands Region	
		iSS	V		E	-	42	50		
		i			E		-	43		54
		M	V		E		-	51		14
10	7th	iP	V			11	55	05	Halmahera Region	
		iPP	V		E	-	56	23		
		iS		N			12	00		25
		M			E		-	06		22
		M		N			-	08		06
		M	V				-	08		24
11	7th	eP	V			19	28	13	New Hebrides Islands Region	
		iS			E	-	35	33		
		i		N			-	38		52
		M		N			-	49		26
		M	V				-	51		23
		M			E		-	51		50
12	16th	iP	V			21	13	16	South of Java	
		iS	V	N	E	-	17	16		
		M	V				-	23		14
		M		N	E		-	23		33
13	18th	iP	V	N	E	5	49	30	About 70 miles South East of Perth, Western Australia.	
14	24th	iP	V		E	22	35	13	Off Coast of Mindanao	
		iS		N	E	-	41	23		
		iSS	V		E		-	44		30
		M			E		-	55		28
		M	V				-	57		18
		M		N			-	58		07
15	28th	iP	V		E	12	20	23	New Britain	
		iPP	V	N	E	-	22	12		
		iS	V	N	E		-	26		51
		iSS	V	N	E		-	29		40
		M			E		-	35		45
		M	V				-	36		12
16	29th	i		N		9	44	14	Kurile Islands	
		iS			E	-	44	31		
		i			E	-	45	25		
		M			E	-	51	16		
17	30th	iP	V			10	22	59	Sandwich Islands Region	
		iPP	V			-	26	05		
		iPPP	V				-	28		05
		iS		N	E		-	33		31
		iSSS	V	N	E		-	39		25
		L			E		-	46		20
		M			E		11	11		56
		M	V	N			-	12		20

No.	Date	Phase	Component			Time			Remarks
						h.	m.	s.	
18	31st	iP	V			5	16	46	Ryukyu Islands
		i	V			-	17	40	
		iPPP	V			-	20	34	
		iS	V		E	-	25	05	
		iSS			E	-	29	40	
		iSSS			E	-	31	41	
		M	V		E	-	36	50	
		M		N		-	38	40	
Tremors and undecipherable disturbances were recorded:-									
By instrument <u>V</u> , <u>N</u> , <u>E</u> on:-									
1st (2) 2nd (1) 3rd (2) 6th (1) 9th (2) 11th (1) 13th (3)									
14th (1) 15th (4) 16th (1) 19th (1) 24th (2) 25th (1) 27th (1)									
<u>FEBRUARY</u>									
19	4th	eP			E	1	24	52	New Britain Region
		iS		N	E	-	30	49	
		iSS	V		E	-	33	45	
		M	V			-	44	26	
		M			E	-	44	40	
		M		N		-	44	44	
20	5th	iP'	V			20	58	25	Near Coast of Central Chile
		iS	V	N		21	07	36	
		iSS			E	-	13	50	
		M		N		-	46	42	
		M	V			-	47	04	
21	6th	iPP	V			10	29	36	Bismarck Sea
		iS			E	-	34	10	
		i		N		-	36	28	
		M		N		-	43	9	
		M			E	-	43	25	
		M	V			-	44	39	
22	13th	iP	V	N		8	59	45	
		iPP	V			9	01	35	
		iPPP		N	E	-	02	35	
		iS	V	N	E	-	06	40	
		iSS	V	N		-	10	25	
		M	V			-	19	21	
		M		N		-	19	35	
		M			E	-	21	11	
23	13th	iP	V		E	18	22	30	Solomon Islands
		iPP	V	N	E	-	24	25	
		iS		N	E	-	29	17	
		iSS	V			-	32	23	
		M		N		-	38	46	
		M			E	-	40	03	
		M	V			-	44	46	
24t	14th	eP	V			6	56	54	Solomon Islands
		iS			E	7	03	53	
		i	V			-	05	31	
		i		N		-	07	14	
		iSS	V		E	-	07	20	
25	14th	iP	V	N	E	7	10	23	Banda Sea
		ipP	V	N	E	-	10	53	
		iPP		N	E	-	11	30	
		iS	V	N	E	-	14	42	
		M		N		-	19	46	
		M	V			-	20	52	

No.	Date	Phase	Component			Time			Remarks
						h.	m.	s.	
26	14th	iP	V		E	22	15	07	Eastern New Guinea
		iPP			E	-	16	50	
		i	V	N	E	-	18	17	
		iS		N	E	-	20	56	
		i	V			-	23	34	
		M			E	-	28	47	
		M	V			-	31	51	
27	26th	iP	V	N	E	20	21	05	Eastern New Guinea
		iPP	V			-	21	45	
		iSP	V			-	22	07	
		iS	V			-	26	56	
		M	V			-	35	51	
		M		N		-	37	16	
28	27th	iP	V	N	E	4	37	46	
		iPP	V	N	E	-	39	10	
		iS	V	N	E	-	43	49	
		iSS	V			-	46	39	
		M	V			-	54	00	
29	27th	iP		N	E	20	43	06	New Britain
		i		N		-	43	30	
		iS		N	E	-	46	30	
Tremors and undecipherable disturbances were recorded:- By instrument <u>V</u> , <u>N</u> , <u>E</u> on:-									
4th (1) 6th (1) 7th (3) 8th (1) 11th (1) 15th (1) 20th (3) 21st (2) 25th (1) 28th (1)									
<u>MARCH</u>									
30	1st	i		N		4	49	09	Fiji Islands Region
		iS		N	E	-	56	45	
31	4th	eP	V			13	48	24	Formosa
		iS			E	-	56	13	
		i			E	-	58	15	
		i			E	14	02	35	
		M			E	-	04	21	
32	7th	iPP	V			5	40	31	Approx. 500 KM West of Easter Island
		iS		N	E	-	48	10	
		i			E	-	49	40	
		iSS			E	-	55	25	
		iSSS	V		E	-	59	47	
		G			E	6	05	40	
		M			E	-	12	25	
		M	V			-	12	30	
M		N		-	12	46			
33	9th	iS			E	16	37	44	Bismarck Sea
		i		N		-	40	56	
		e	V			-	41	36	
		i			E	-	45	10	
		M			E	-	46	54	
		M		N		-	47	07	
M	V			-	48	40			
34	9th	iPP	V			19	05	15	New Britain Region
		iS			E	-	09	46	
		e	V			-	12	24	
		M			E	-	18	53	
		M		N		-	19	31	
		M	V			-	20	45	

5.

No.	Date	Phase	Component		Time			Remarks	
					h.	m.	s.		
35	15th	iS	N	E	0	29	48	Mindanao, Philippine Islands.	
		i	N		-	30	06		
		iSS		E	-	33	15		
36	16th	iP	V	N	E	8	57	30	Kurile Islands Region
		i	V			-	57	41	
		iPP	V	N	E	9	00	48	
		iPPP	V			-	02	54	
		iS	V	N	E	-	08	03	
		i	V			-	08	57	
		iSS		N	E	-	14	56	
		iSSS	V	N		-	18	38	
		M			E	-	22	32	
		M		N		-	26	38	
M	V			-	38	03			
37	20th	i		N		16	53	36	Western New Guinea
		i	V			-	54	40	
		i	V			-	59	35	
		M		N		17	02	05	
M	V			-	02	31			
38	24th	iP	V	N	E	2	12	10	Sumba Islands Region
		iPP	V	N		-	12	51	
		iS	V	N		-	16	21	
		M		N		-	22	05	
M	V			-	24	51			
39	24th	iP			E	9	45	51	Bismarck Sea
		iS		N	E	-	54	18	
		M		N	E	-	54	57	
		M	V			-	56	46	
40	25th	e	V			20	25	36	Macquarie Islands Region
		iS		N		-	29	04	
		iSS		N		-	31	16	
		M		N		-	33	25	
M	V			-	33	30			
41	25th	eP	V			22	53	31	Off SW Coast of Sumatra
		iPP	V			-	54	55	
		iS	V			-	59	10	
		M		N		23	08	44	
		M	V			-	13	24	
42	26th	iP	V	N		9	57	57	Kermadec Islands
		i	V			-	58	16	
		iPP	V			10	00	25	
		iPPP	V	N		-	01	35	
		iS	V	N		-	05	45	
		iSS	V	N		-	10	00	
		M	V			-	15	44	
		M		N		-	21	40	
43	26th	iP	V			13	34	39	Kermadec Islands
		iPP	V			-	37	05	
		iPPP	V			-	38	20	
		iS	V	N		-	42	25	
		iSS	V			-	46	37	
		M	V			-	58	28	
		M		N		-	58	58	

6.

No.	Date	Phase	Component	Time			Remarks
				h.	m.	s.	
44	26th	iP	V	21	45	54	Near East Coast of Honshu, Japan
		iPP	V	-	48	20	
		e	V	-	50	24	
		iS	N	-	55	04	
		M	N	22	13	12	
		M	V	-	18	41	
45	30th	iP	V	2	02	02	New Hebrides Islands
		iPP	V	-	04	04	
		iSS	N	-	12	31	
		iSSS	N	-	14	00	
		M	N	-	18	17	
		M	V	-	23	17	
46	31st	iP	V	5	40	29	Kermadec Islands
		iPPP	V	-	44	06	
		iS	N	-	48	50	
		iSS	V	-	52	23	
		M	N	6	04	04	
		M	V	-	04	21	
47	31st	iP	V	7	15	24	New Britain
		iPP	V	-	17	00	
		iPPP	V	-	17	36	
		iS	N	-	21	15	
		iSS	N	-	23	52	
		M	N	-	30	19	
		M	V	-	33	14	
48	31st	iP	V	19	32	31	Kermadec Islands
		M	N	-	54	26	
		M	V	-	55	40	

Tremors and undecipherable disturbances were recorded:-

By instrument V, N, E on:-

2nd (1) 4th (3) 5th (1) 6th (1) 7th (3) 8th (2)
 9th (1) 10th (2) 11th (1) 12th (1) 14th (2) 17th (1)
 19th (1) 22nd (1) 24th (1) 27th (1) 28th (3) 29th (1) 31st (1)

25 JUN 1963

Perth
Jan - July
1963.

PERTH, WESTERN AUSTRALIA

SEISMOLOGICAL STATION - PERTH OBSERVATORY

Seismological Bulletin for January - March 1963

Copy
Jan. 1967
J. Double

INSTRUMENTS

- 1 Columbia Lamont Seismometer (Vertical Component long-period) V
- 1 Sprengnether Horizontal Seismometer (N-S Component long-period) N
- 1 Sprengnether Horizontal Seismometer (E-W Component long-period) E

No.	Date	Phase	Component	Time			Remarks		
				h.	m.	s.			
<u>JANUARY</u>									
1	1st	iP	N		19	41	56	Indian Ocean	
		iS	N	E	-	47	04		
		i	V		-	47	15		
		M	N		-	48	55		
		M	V		-	50	07		
		M		E	-	50	13		
2	2nd	iP	V	E	15	02	46	Near South Coast of Western New Guinea	
		iPP	V	N	E	-	03		51
		iS	N	E	-	08	02		
		i	N		-	08	29		
		iSS	V	N	E	-	10		16
		M	N	E	-	14	34		
3	2nd	iS		E	16	18	40	South Pacific Ocean	
		iSS	N		-	24	24		
		iSSS	N		-	27	34		
		M	N		-	36	39		
		M		E	-	37	16		
		M	V		-	37	20		
4	2nd	C	N		18	14	29	Near Southern Coast of New Guinea	
		M	N	E	-	17	45		
		M	V		-	20	21		
5	3rd	iP	V		9	47	51	New Britain	
		iS	N	E	-	53	57		
		i	N		-	54	55		
		i		E	-	56	22		
		iSS	N		-	57	05		
		i	V		-	57	21		
		i	N	E	-	57	26		
		M		E	10	01	36		
		M	N		-	04	28		
		M	V		-	05	07		
6	4th	iP	V		12	24	48	Solomon Islands Region	
		iPP	N	E	-	26	41		
		iPPP	V	N	E	-	27		10
		iS	N	E	-	31	34		
		iSS	V	N	E	-	34		40
		M	V		-	39	43		
		M		E	-	40	17		
		M	N		-	40	55		
7	5th	eP		E	13	13	52	New Hebrides Islands	
		ePP	V		-	15	46		
		iS		E	-	20	40		

2.

No.	Date	Phase	Component	Time			Remarks
				h.	m.	s.	
8	5th	✓ iP	V			13 21 48	Timor
		iPP	V			- 22 11	
		iPP		N	E	- 22 15	
		iS	V	N	E	- 25 55	
		M	V			- 33 41	
		M		N	- 33 50		
9	7th	✓ iS			E	6 39 30	Solomon Islands Region
		iSS	V		E	- 42 50	
		i			E	- 43 54	
		M	V		E	- 51 14	
10	7th	✓ iP	V			11 55 05	Halmahera Region
		iPP	V		E	- 56 23	
		iS		N		12 00 25	
		M			E	- 06 22	
		M		N		- 08 06	
		M	V		- 08 24		
11	7th	✓ eP	V			19 28 13	New Hebrides Islands Region
		iS			E	- 35 33	
		i		N		- 38 52	
		M		N		- 49 26	
		M	V			- 51 23	
		M			E	- 51 50	
12	16th	✓ iP	V			21 13 16	South of Java
		iS	V	N	E	- 17 16	
		M	V			- 23 14	
		M		N	E	- 23 33	
13	18th	✓ iP	V	N	E	5 49 30	About 70 miles South East of Perth, Western Australia.
14	24th	✓ iP	V		E	22 35 13	Off Coast of Mindanao
		iS		N	E	- 41 23	
		iSS	V		E	- 44 30	
		M			E	- 55 28	
		M	V			- 57 18	
		M		N	- 58 07		
15	28th	✓ iP	V		E	12 20 23	New Britain
		iPP	V	N	E	- 22 12	
		iS	V	N	E	- 26 51	
		iSS	V	N	E	- 29 40	
		M			E	- 35 45	
		M	V		- 36 12		
		M		N	- 37 49		
16	29th	✓ i		N		9 44 14	Kurile Islands
		iS			E	- 44 31	
		i			E	- 45 25	
		M			E	- 51 16	
17	30th	✓ iP	V			10 22 59	Sandwich Islands Region
		iPP	V			- 26 05	
		iPPP	V			- 28 05	
		iS		N	E	- 33 31	
		iSSS	V	N	E	- 39 25	
		L			E	- 46 20	
		M			E	11 11 56	
		M	V	N		- 12 20	

No.	Date	Phase	Component			Time			Remarks
						h.	m.	s.	
18	31st	✓ iP	V			5	16	46	Ryukyu Islands
		i	V			-	17	40	
		iPPP	V			-	20	34	
		iS	V			-	25	05	
		iSS			E	-	29	40	
		iSSS			E	-	31	41	
		M	V		E	-	36	50	
		M		N		-	38	40	
Tremors and undecipherable disturbances were recorded:-									
By instrument <u>V</u> , <u>N</u> , <u>E</u> on:-									
1st (2) 2nd (1) 3rd (2) 6th (1) 9th (2) 11th (1) 13th (3)									
14th (1) 15th (4) 16th (1) 19th (1) 24th (2) 25th (1) 27th (1)									
<u>FEBRUARY</u>									
19	4th	✓ eP			E	1	24	52	New Britain Region
		iS		N	E	-	30	49	
		iSS	V		E	-	33	45	
		M	V			-	44	26	
		M			E	-	44	40	
		M		N		-	44	44	
20	5th	✓ iP'	V			20	58	25	Near Coast of Central Chile
		iS	V	N		21	07	36	
		iSS			E	-	13	50	
		M		N		-	46	42	
		M	V			-	47	04	
21	6th	✓ iPP	V			10	29	36	Bismarck Sea
		iS			E	-	34	10	
		i		N		-	36	28	
		M		N		-	43	9	
		M			E	-	43	25	
		M	V			-	44	39	
22	13th	✓ iP	V	N		8	59	45	
		iPP	V			9	01	35	
		iPPP		N	E	-	02	35	
		iS	V	N	E	-	06	40	
		iSS	V	N		-	10	25	
		M	V			-	19	21	
		M		N		-	19	35	
		M			E	-	21	11	
23	13th	✓ iP	V		E	18	22	30	Solomon Islands
		iPP	V	N	E	-	24	25	
		iS		N	E	-	29	17	
		iSS	V			-	32	23	
		M		N		-	38	46	
		M			E	-	40	03	
		M	V			-	44	46	
24t	14th	✗ eP	V			6	56	54	Solomon Islands
		iS			E	7	03	53	
		i	V			-	05	31	
		i		N		-	07	14	
		iSS	V		E	-	07	20	
25	14th	✓ iP	V	N	E	7	10	23	Banda Sea
		ipP	V	N	E	-	10	53	
		iPP		N	E	-	11	30	
		iS	V	N	E	-	14	42	
		M		N		-	19	46	
		M	V			-	20	52	

No.	Date	Phase	Component			Time			Remarks
						h.	m.	s.	
26	14th	✓ iP	V		E	22	15	07	Eastern New Guinea
		iPP			E	-	16	50	
		i	V	N	E	-	18	17	
		iS		N	E	-	20	56	
		i	V			-	23	34	
		M			E	-	28	47	
		M	V			-	31	51	
27	26th	✓ iP	V	N	E	20	21	05	Eastern New Guinea
		ipP	V			-	21	45	
		isP	V			-	22	07	
		iS	V			-	26	56	
		M	V			-	35	51	
		M		N		-	37	16	
28	27th	✓ iP	V	N	E	4	37	46	
		iPP	V	N	E	-	39	10	
		iS	V	N	E	-	43	49	
		iSS	V			-	46	39	
		M	V			-	54	00	
29	27th	✓ iP		N	E	20	43	06	New Britain
		i		N		-	43	30	
		iS		N	E	-	46	30	
Tremors and undecipherable disturbances were recorded:-									
By instrument <u>V</u> , <u>N</u> , <u>E</u> on:-									
4th (1) 6th (1) 7th (3) 8th (1) 11th (1) 15th (1)									
20th (3) 21st (2) 25th (1) 28th (1)									
<u>MARCH</u>									
30	1st	✓ i		N		4	49	09	Fiji Islands Region
		iS		N	E	-	56	45	
31	4th	✓ eP	V			13	48	24	Formosa
		iS			E	-	56	13	
		i			E	-	58	15	
		i			E	14	02	35	
		M			E	-	04	21	
32	7th	✓ iPP	V			5	40	31	Approx. 500 KM West of Easter Island
		iS		N	E	-	48	10	
		i			E	-	49	40	
		iSS			E	-	55	25	
		iSSS	V		E	-	59	47	
		G			E	6	05	40	
		M			E	-	12	25	
		M	V			-	12	30	
M		N		-	12	46			
33	9th	✓ iS			E	16	37	44	Bismarck Sea
		i		N		-	40	56	
		e	V			-	41	36	
		i			E	-	45	10	
		M			E	-	46	54	
		M		N		-	47	07	
		M	V			-	48	40	
34	9th	✓ iPP	V			19	05	15	New Britain Region
		iS			E	-	09	46	
		e	V			-	12	24	
		M			E	-	18	53	
		M		N		-	19	31	
		M	V			-	20	45	

5.

No.	Date	Phase	Component		Time			Remarks	
					h.	m.	s.		
35	15th	✓ iS	N	E	0	29	48	Mindanao, Philippine Islands.	
		i	N		-	30	06		
		iSS		E	-	33	15		
36	16th	✓ iP	V	N	E	8	57	30	Kurile Islands Region
		i	V			-	57	41	
		iPP	V	N	E	9	00	48	
		iPPP	V			-	02	54	
		iS	V	N	E	-	08	03	
		i	V			-	08	57	
		iSS		N	E	-	14	56	
		iSSS	V	N		-	18	38	
		M			E	-	22	32	
M		N		-	26	38			
M	V			-	38	03			
37	20th	✓ i		N		16	53	36	Western New Guinea
		i	V			-	54	40	
		i	V			-	59	35	
		M		N		17	02	05	
		M	V			-	02	31	
38	24th	✓ iP	V	N	E	2	12	10	Sumba Islands Region
		iPP	V	N		-	12	51	
		iS	V	N		-	16	21	
		M		N		-	22	05	
		M	V			-	24	51	
39	24th	✓ iP			E	9	45	51	Bismarck Sea
		iS		N	E	-	54	18	
		M		N	E	-	54	57	
		M	V			-	56	46	
40	25th	✓ e	V			20	25	36	Macquarie Islands Region
		iS		N		-	29	04	
		iSS		N		-	31	16	
		M		N		-	33	25	
		M	V			-	33	30	
41	25th	✓ eP	V			22	53	31	Off SW Coast of Sumatra
		iPP	V			-	54	55	
		iS	V			-	59	10	
		M		N		23	08	44	
		M	V			-	13	24	
42	26th	✓ iP	V	N		9	57	57	Kermadec Islands
		i	V			-	58	16	
		iPP	V			10	00	25	
		iPPP	V	N		-	01	35	
		iS	V	N		-	05	45	
		iSS	V	N		-	10	00	
		M	V			-	15	44	
		M		N		-	21	40	
43	26th	✓ iP	V			13	34	39	Kermadec Islands
		iPP	V			-	37	05	
		iPPP	V			-	38	20	
		iS	V	N		-	42	25	
		iSS	V			-	46	37	
		M	V			-	58	28	
		M		N		-	58	58	

6.

No.	Date	Phase	Component	Time			Remarks		
				h.	m.	s.			
44	26th	✓ iP	V	21	45	54	Near East Coast of Honshu, Japan		
		iPP	V		-	48		20	
		e	V		-	50		24	
		iS	N		-	55		04	
		M	N		22	13		12	
		M	V		-	18		41	
45	30th	✓ iP	V	2	02	02	New Hebrides Islands		
		iPP	V		-	04		04	
		iSS	V		N	-		12	31
		iSSS	V		N	-		14	00
		M	N		-	18		17	
		M	V		-	23		17	
46	31st	✓ iP	V	5	40	29	Kermadec Islands		
		iPPP	V		-	44		06	
		iS	V		N	-		48	50
		iSS	V		N	-		52	23
		M	N		6	04		04	
		M	V		-	04		21	
47	31st	✓ iP	V	7	15	24	New Britain		
		iPP	V		-	17		00	
		iPPP	V		-	17		36	
		iS	V		N	-		21	15
		iSS	N		-	23		52	
		M	N		-	30		19	
		M	V		-	33		14	
48	31st	✓ iP	V	19	32	31	Kermadec Islands		
		M	N		-	54		26	
		M	V		-	55		40	

Tremors and undecipherable disturbances were recorded:-

By instrument V, N, E on:-

2nd (1) 4th (3) 5th (1) 6th (1) 7th (3) 8th (2)
 9th (1) 10th (2) 11th (1) 12th (1) 14th (2) 17th (1)
 19th (1) 22nd (1) 24th (1) 27th (1) 28th (3) 29th (1) 31st (1)

PERTH, WESTERN AUSTRALIA

SEISMOLOGICAL STATION - PERTH OBSERVATORY

Seismological Bulletin for April - July 1963

INSTRUMENTS

- 1 Columbia Lamont Seismometer (Vertical Component long-period) V
- 1 Sprengnether Horizontal Seismometer (N-S Component long-period) N
- 1 Sprengnether Horizontal Seismometer (E-W Component long-period) E

No.	Date	Phase	Component	Time			Remarks	
				h.	m.	s.		
JANUARY								
<u>APRIL</u>								
49	✓ 7th	iP	V		22	42	05	Near SW Coast of Sumatra
		iPP	V	E	-	42	50	
		iS	V	N E	-	46	52	
		M	V		-	51	00	
		M		E	-	51	06	
		M		N	✓	51	10	
50	✓ 10th	iS	V	N E	8	00	06	
		i	V	N	-	00	39	
		M		N	-	06	36	
		M	V		-	06	45	
		M		E	-	11	31	
51	✓ 13th	iP	V	E	14	38	20	Near North Coast of New Guinea
		iPP	V	E	-	39	23	
		iPPP	V		-	39	40	
		iS	V	N E	-	43	33	
		iSS	V	E	-	46	08	
		M		N	-	52	49	
		M	V		-	53	05	
		M		E	✓	53	10	
52	✓ 16th	iP	V	N E	1	35	56	Halmahera Region
		iPP	V	E	-	37	07	
		M		E	-	55	15	
		M	V		-	59	29	
53	17th ✓	iS		E	1	22	06	Halmahera Region
		i		N	-	22	30	
		iSS		E	-	24	15	
		i	V		-	25	40	
		M		N	-	31	51	
		M	V		-	32	40	
54	✓ 17th ✓	iP	V	E	2	21	11	Fiji Islands
		iS		N E	-	29	06	
55	19th ✓	iP	V	E	7	46	36	Tsinghai Province, China
		iPP	V		-	49	11	
		iS	V	N E	-	55	36	
		iSS	V	E	8	00	56	
		iSSS	V		-	03	52	
		M		E	-	07	50	
		M		N	-	08	08	
		M	V		-	15	26	

No.	Date	Phase	Component	Time			Remarks		
				h.	m.	s.			
56 ✓	21st ✓	iP		E	10	46	11	Bismarck Sea	
		i		E	11	00	00		
		M	N	E	-	02	16		
		M	V		-	03	39		
57 ✓	27th ✓	iPP	V		8	50	41	Halmahera Region	
		iPPP	V		-	51	05		
		iS	V	N	-	54	52		
		M	V		-	05	45		
		M		N	=	05	49		
58 ✓	29th ✓	iP	V		14	59	42		
		iS	V	N	15	06	04		
		iSS	V		-	09	26		
		M	V		-	12	38		
59 ✓	29th ✓	iPP	V		22	02	04	Andreanoff Islands, Aleutian Islands	
		iS		N	E	-	09		28
		iSS		N		-	16		34
60 ✓	30th ✓	iP	V		1	05	09		
		iS	V	N	E	-	08		56
		M	V		-	29	57		

Tremors and undecipherable disturbances were recorded:-

By instrument V, N, E on:-

1st (1) 2nd (2) 3rd (2) 6th (2) 8th (2) 10th (1)
 12th (1) 14th (1) 16th (1) 24th (1) 28th (1)

								<u>MAY</u>		
61 ✓	1st ✓	iP	V		E	10	11	55	New Hebrides Islands	
		iPP	V		E	-	13	55		
		iPPP	V		E	-	14	35		
		i	V			-	17	04		
		iS	V	N	E	-	18	51		
		iSS	V		E	-	22	10		
		iSSS	V	N		-	23	45		
		M		N		-	28	30		
		M			E	-	30	44		
M	V			-	31	06				
62 ✓	6th ✓	iP	V	N	E	8	43	30	Near South Coast of Java.	
		iS	V			-	47	55		
		M		N		-	51	34		
		M	V			-	51	49		
63 ✓	8th ✓	iP	V			10	33	35	Honshu, Japan	
		iS	V			-	43	04		
64 ✓	10th ✓	iP'	V			22	42	19	Ecuador	
		iPP	V			-	46	09		
		i			E	-	48	25		
		i			E	-	51	17		
		iSS			E	23	04	50		
		M			E	-	33	54		
65 ✓	12th ³ ✓	iP	V			9	50	29	Macquarie Islands Region	
		iS		N	E	-	56	31		
		M	V			10	02	18		

No.	Date	Phase	Component			Time			Remarks
						h.	m.	s.	
66	15th	iP	V			3	00	24	Bismarck Sea
		iPP	V			-	01	54	
		iS		N	E	-	06	36	
		iSS	V		E	-	09	20	
		M			E	-	16	55	
		M		N		-	17	45	
		M	V			-	18	46	
67	✓ 16th	eS	V			16	04	15	Halmahera Region
		M			E	-	12	06	
		M	V			-	14	14	
68	✓ 16th	iPP	V	N		16	25	55	Halmahera Region
69	✓ 18th	iP	V		E	12	25	46	
		iS	V			-	30	10	
		M	V		E	-	37	37	
70	✓ 19th	iP			E	1	16	46	Coast of Southern Chile
		iPP	V		E	-	21	09	
		iPPP	V			-	23	36	
		iS			E	-	28	34	
		iSS	V	N	E	-	35	50	
		iSSS			E	-	39	30	
M	V			2	03	15			
71	x 19th	iSSS	V			22	22	43	North Atlantic Ocean
		M	V			-	54	41	
72	✓ 20th	iP	V		E	11	47	35	Kermadec Islands Region
		iPP	V			-	49	41	
		iPPP	V		E	-	51	09	
		iS	V	N		-	55	19	
		iSS	V			-	59	04	
		iSSS	V		E	12	01	40	
		M	V			-	09	37	
		M			E	-	10	40	
73	✓ 21st	iP	V			17	40	47	
		i			E	-	46	02	
		i	V		E	-	49	32	
		i	V			-	57	38	
		i			E	-	58	20	
		M	V			18	04	14	
		M			E	-	06	31	
74	✓ 22nd	iPP			E	15	51	30	Molucca Passage
		iS			E	-	55	50	
		iSS	V			-	58	38	
		M			E	16	01	08	
75	✓ 22nd	iP	V		E	21	59	13	Java Sea
		iPP	V		E	-	59	44	
		iS	V		E	22	02	34	
		M			E	-	07	49	
		M	V			✓	10	04	
76	✓ 23rd	iPPP	V			3	46	55	Fiji Islands Region
		iS			E	-	51	24	
		iSS	V		E	-	55	11	
		iSSS			E	✓	57	35	
		M	V			4	03	58	

No.	Date	Phase	Component	Time			Remarks					
				h.	m.	s.						
77 ✓	25th	iP	V	16	21	06	Sandwich Islands Region					
		iPPP	V					-	26	30		
		iS						E	-	31	16	
		iSS						E	-	36	50	
		iSSS						E	-	40	45	
		M	V						-	56	30	
		M						E	17	00	00	
78 ✓	30th	iP	V	7	02	18						
		iS	V					N	E	-	07	25
		iSS						N	E	-	09	21
		M							E	-	10	34
		M	V							-	11	05
		M						N		-	11	21

79 Tremors and undecipherable disturbances were recorded:-
By instrument V, N, E on:-

3rd (1) 5th (1) 10th (1) 12th (2) 13th (2) 14th (1)
17th (1) 22nd (2) 23rd (1) 29th (1)

JUNE											
79 ✗	2nd	iP	V	10	08	25	Solomon Islands Region				
		iPPP	V					-	10	35	
		iS						E	-	14	40
		iSS	V					E	-	17	50
		M						E	-	26	38
		M	V						-	26	41
80 ✓	2nd	iP	V	21	16	40	Kermadec Islands Region				
		iPPP	V					-	19	49	
		i	V					E	-	26	54
		iSS	V						-	27	41
		M	V						-	45	52

81 ✓	4th	iP	V	21	11	15	Halmahera Region					
		iPP	V					-	12	16		
		iPPP						E	-	12	46	
		iS	V					N	E	-	16	30
		M						N		-	24	00
		M							E	-	25	49
		M	V						-	26	24	

82 ✗	7th	iP	V	23	07	50	Samoa Islands Region				
		iPP						E	-	09	08
		iS	V					E	-	13	16
		iSS	V						-	15	44
		M						E	-	18	55
		M	V						-	19	00

83 ✓	10th	iP	V	4	23	04	800 KM West of Macquarie Islands			
		iPP	V					-	24	11
		iPPP	V					-	24	33
		iS	V					-	28	20
		M	V					-	32	08

84 ✗	10th	iP	V	7	45	30	800 KM West of Macquarie Islands			
		iPP	V					-	46	33
		iPPP	V					-	46	49
		iS	V					-	50	45
		M	V					-	56	54

No.	Date	Phase	Component	Time			Remarks
				h.	m.	s.	
85	17th	eP	V	18	39	55	Scott Island Region
		iPP	V	-	41	51	
		iS	V N E	-	47	16	
		M	V N E	-	55	54	
86	19th	iP	V	9	16	18	Talaud Islands Regions
		iPP	V	-	17	52	
		iS	E	-	22	04	
		iSS	E	-	24	23	
87	24th	iS	V	4	51	30	Cook Inlet
		iSS	V	-	57	51	
		M	V	5	30	53	
88	28th	iP	V	22	08	19	Kurile Island Region
		iPP	V	-	11	31	
		iS	E	-	18	45	
		iSS	E	-	23	36	
		iSSS	V	-	27	49	
		M	V	-	42	45	

Tremors and undecipherable disturbances were recorded:-

By instrument V, N, E on:-

1st (2) 3rd (2) 4th (1) 5th (3) 6th (2) 7th (5)
 15th (2) 17th (1) 19th (4) 20th (1) 23rd (3) 25th (1)
 26th (1) 28th (1) 30th (1)

JULY

89	4th	iP	V	E	11	07	51	Tonga Islands Region
		i	V		-	08	50	
		iPPP		E	-	11	35	
		iS	V	E	-	15	29	
		iSS		E	-	19	46	
		iSSS	V	E	-	22	20	
90	10th	i		E	5	42	14	Kurile Islands Region
		iS	N	E	-	46	09	
		iSS		E	-	51	11	
91	20th	iP		E	6	41	00	
		iPP	V		-	42	57	
		iS	V	E	-	48	20	
		iSS	V		-	52	14	
92	29th	iP	V	E	20	23	50	
		iPP	V	E	-	26	13	
		iPPP		E	-	27	25	
		iS	V N	E	-	31	45	
		iSS	V N	E	-	35	18	
93	30th	iP	V	E	5	55	37	Kermadec Islands Region
		iPPP		E	-	59	11	
		iS	N	E	6	03	35	
		iSS	N		-	07	25	

Tremors and undecipherable disturbances were recorded:-

By instrument V, N, E on:-

1st (1) 9th (1) 13th (1) 14th (4) 16th (1) 18th (1)
 24th (3) 28th (1) 30th (3) 31st (2)