

PERTH, WESTERN AUSTRALIA.

SEISMOLOGIC STATION, PERTH OBSERVATORY.

from 1st January, to 30th January, 1938.

NO. 1/

Inst	No.	Date 1938	Phase	Time G.M.T. h. m. s.	Period s.	Amplitude		Dis- tance miles	Remarks
						Ae u cms.	An u cms.		
	1	Jan.	1	16-25- to 16-53-					Tremors
27	2	"	1	Pe 23-38-15 Si 23-46-52 PSi 23-47-8 Le 23-56-22 Fca 23-56-22		.5		4,000	Strong S Weak L
	3	"	2	6-48- to 7-7-					Tremors
	4	"	2	22-50- to 0-46-					Tremors from distant 'Quake Uncertain Phases
	5	"	3	Pe 21-34-15 i 21-47-2 i 21-51-10 i 21-53-51 i 21-58-20 i 22-1-2 Fca 23-2-		.15 .20			
	6	"	7	Pe 15-34-55 i 15-38-30 Se 15-41-30 SR1 15-44-31 SR2 15-45-27 Li 15-48-55 Mi 15-50-14 M2 15-50-34 M3 15-51-5 Fca 17-26-		.25 .6 1.15 1.10 1.-		3,200	
	7	"	8	Pe 3-6-27 Se 3-6-46 M 3-7-8 Fca 3-10-		.25 .27 .85		140	
	8	"	9	i 1-33-50 i 1-34-10 i 1-37-30 i 1-37-53		.17 .25 .20 .20			
	9	"	11	Pe 15-21-35 i 15-30-26 Se 15-31-59 PSe 15-32-32 SR1 15-39-34 SR2 15-41-3 L 15-46-5 Fca 17-37-		.15			Earthquake Japan
	10	"	12	2-53- to 3-37-					Tremors
	11	"	12	11-54- to 12-23-					Tremors
	12	"	13	3-47- to 4-11-					Tremors

(2)

No	Date 1938	Phase	Time G.M. T. h.m.s.	Period s	Amplitude		Dis- tance miles	Remarks
					Ae u cms.	An. u cms.		
13	Jan. 13		10-31-					Tremors
			to					
14	" 16		11- 8-					Tremors
			10- 4-					
			to					
15	" 17	Pe	14-18-22					
		PcP	14-19-51					
		i	14-22-25					
		Se	14-25-15					
		PS	14-25-27		.18			
		SR1	14-29- 2					
		SR2	14-30-28					
		L	14-32-45		.30			
		Fca	15-44-					
16	" 17	i	16-10- 8		.15			
		i	16-12- 5		.15			
		Fca	16-18-					
17	" 17	i	23-50-28		.20			
		i	23-51-55		.25			
		i	23-52-54		.20			
		Fca	0- 0-					
18	" 18		3-11-					Tremors
			to					
			3-22-					
19	" 18	Pe	4-30-39				820	
		Se	4-32-37		.35			
		L	4-34- 2		.50			
		Fca	5-54-					
20	" 19	Pe	8-18-10		.10		140	
		Si	8-18-35		.25			
		Li	8-19-19		.30			
21	" 19		15- 3-					Tremors
			to					
			15-28-					
22	" 22	P	15-37-24		.20		450	
		Se	15-39- 1					
		Le	15-40- 2		.20			
		Fca	16- 8-					
23	" 23	P					8,300	Lost in Micros
		PS	8-58-10		.30			
		PPS	8-58-40					
		SR1	9- 5-10					
		SR2	9-10- 1					
		SR3	9-12-45					
		i	9-17-59					
		L	9-23-32		.30			
		Fca	11-17-					
24	" 24	Pi	10-44-15		.30		5,900	
		PcP	10-44-32		.35			
		PR1	10-48-25		.55			
		Si	10-54-55		.90			
		PS	10-55-45		.80			
		SR1	11- 0-29		.70			
		SR2	11- 3-59		.75			
		L1	11-12-13		.55			
		M1	11-15- 2		1.20			
		M2	11-17-25		1.60			
		M3	11-19-41		1.90			
		M4	11-20-19		2.10			
		Fca	13-59-					

(3)

No.	Date 1938	Phase	Time G.M.T. h.m.s.	Period s	Amplitude		Dis- tance miles	Remarks
					Ae u cms.	An. u cms.		
25	Jan. 25	i	16-59-30					
		i	17- 2-35					
		i	17-18- 2					
		i	17-23-41					
		M	17-24-32		.47			
		i	17-27- 7		.35			
		M	17-27-49		.48			
		i	17-35-18		.45			
		i	17-37- 3		.30			
26	" 26	Fca	18-38-				6,800	
		Pe	3-28-37					
		Se	3-40-25		.20			
		SR1	3-46-14					
		L	4- 0-20		.25			
27	" 28	Fca	4-47-					
		P	4-25-25					
		PR1	4-25-41					
		i	4-26-30					
		S	4-28- 4		.20			
		SR1	4-28-38		.25			
		L	4-29-42					
		M1	4-30-55		.90			
M2	4-31-19		.95					
28	" 30	Fca	5-17-					
		i	17-40-9					
		i	17-43-20		.15			
		i	17-45-32		.16			
		Fca	18-21-					

PERTH, WESTERN AUSTRALIA.

SEISMOLOGIC STATION, PERTH OBSERVATORY.

From 1st February, 1938 to 27th February, 1938.

Inst.	No.	Date. 1938.	Phase	Time G.M.T.	Period	Amplitude.		Dis- tance. Miles.	Remarks.
						Ae.	An.		
				h, m. s		μ cms.	μ cms.		
27	29	Feb. 1.	Pc PR1 i i i Si SR1 L	19.10.32 - 11.0 - 11.20 - 11.54 - 13.23 - 14.10 - 15.22 - 17.35		7.45 8.85 10.15 6.25 5.85 9.05 9.50 9.80		$\phi = 110^{\circ} S$ $\lambda = 132 E$	Numerous Max's. Light spot swinging off sheet. At 19 ^h 28 ^m boom jolted off Agate point. Felt in Darwin.
	30	" 2.		9.28 to 10.27					Tremors. At 9 ^h 52 ^m to 9 ^h 59 ^m L & M phases.
	31	" 5		2.45 to 4.55					Strong Tremors. from distant 'quake.
	32	" 5	i i i i i Fca	10. 0.22 - 3.19 - 10.8 - 10.37 - 14.44 - 15.18 11.18		.17 .20 .25 .27 .23 .26			
	33	" 5	i i i Fca	21.46.34 21.48.13 - 50. 2 22. 3		.12 .13 .20			
	34	" 6	i i Se i i Le M M Fca	7.17.15 7.19.47 - 21.57 - 25.2 - 25.25 - 31.52 - 33.30 - 34.16 - 35.5 8.35.0		.13 .17 .24 .17 .26 .30 .35 .40 .40			No P.
	35	" 6	Pe Se L Fca	18.31.19 - 35.50 - 38.23 19. 7		.11 .15 .15			
36	" 7	i i Se SR1 L L M M	1.30. 1 - 33.45 - 34.12 - 38. 5 - 43.15 - 45.25 - 47. 0 - 48.10		.15 .15 .20 .25 .25 .25 .47 .47			No P	

Cont.

2.

No.	Date 1938.	Phase	Time G.M.T. h. m.s.	Period s.	Amplitude		Dis- tance miles	Remarks.
					Ae. u cms.	An. u cms		
37	Feb. 8		8.18 to 9.54					Continuous slight tremors.
38	" 8		15.20 to 16.22					Slight tremors.
39	" 9		7.45 to 8.14					Tremors.
40	" 10	Pe Se L F	7.27.37 - 28.18 - 28.52 7.32		.15 .20 .25			
41	" 11	Pe i Se Li M M Fca	1.33. 3 - 33.19 - 33.51 - 34.23 - 27.48 - 28.3 1.41.		.16 .28 .22 .30 1.35 .60		About 200	
42	" 11	Pe S L Fca	9.18.45 - 19.12 - 19.44 9.24		.10 .30 .35			
43	"11		14.53 to 15.10					Tremors.
44	"12		10. 9 to 11.36					Tremors.
45	"13	Pe Se i SR1 SR2 SR3 L L L M M M M M M M Fca	8.13.5 - 20.40 22.56 24.38 - 26.21 -27. 5 -29.17 -29.47 -32.3 -32.52 -34.24 -40.22 -40.58 -42.13 -44.48 -46.32 -48.58 10.41		.10 .20 .25 .15 .20 .25 .20 .22 .25 .65 .55 .50 .68 .72 .60 .55 .57		About 3,700	
46	"16		7.34 to 7.45					Tremors.
47	"17	i i	5.25.27 - 27.58		.16 .20			

Cont.

3.

No.	Date 1938.	Phase	Time G.M.T. h.m.s.	Period. s.	Amplitude		Dis- tance Miles	Remarks
					Ae. u cms.	An. u cms.		
48	Feb22	i	-32.7		.20			
		i	-32.47		.23			
		M	-34.2		.25			
		M	-35.48		.27			
		M	-37.6		.27			
		M	-38.48		.25			
		Fca	5.54.					
		Pe	5.48.39		.17			
		PR1	- 49.3		.17			
		PcP	- 51.52		.22			
		Se	-53.7		.25			
		SR1	-54.13		.22			
		L	-55.57		.25			
M	-58.10		.35					
M	-59.45		.37					
M	6.0.45		.30					
49	" 22	Pi	6.19.24		.25			
		PcP	- 22.35		.32			
		S1	- 24.40		.32			
		S2	- 25.25		.42			
		L	- 28.19		.42			
		M	- 28.55		.70			
		M	- 29.11		.95			
		M	- 29.48		.95			
		M	- 31 .59		.92			
		M	- 34.30		.67			
		M	- 37.40		.72			
Fca	7.52							
50	" 22		13.12 to 13.27				Tremors.	
51	" 22		14.32 to 14.42				Tremors.	
52	" 26		7.41 to 8.7				Tremors.	
53	" 27	i	11.36.9		.11			
		i	11.36.50		.15			
		i	- 37.12		.20			
		i	-38.34		.20			
		i	-39.13		.22			
		Fca	11.56					

PERTH, WESTERN AUSTRALIA.

SEISMOLOGIC STATION, PERTH OBSERVATORY.

From 1st March, 1938 to 26th March, 1938.

No.	Date.	Phase.	Time G.M.T.			Per- iod. s.	Amplitude		Dis- tance. Miles.	Remarks.
			h.	m.	s.		Ae. μ cms.	An. μ cms.		
54	1 Mar.		16	24	-					
			to							Tremors.
55	2 "		16	58	-					
			21	2	-					Tremors.
			to							
56	4 "	P	21	37	-					
			7	41	30		.22			
		S	-	50	40		.23			Phases un- certain. End lost in micros.
		L	8	0	30		.20			
57	5 "		11	36						Tremors.
			to							
58	6 "	Pe	12	11						
		PR ₁	2	9	39		.15			
		S	-	10	51		.15			
		SR ₁	-	14	50		.17			
			-	17	18		.20			
		L	-	19	0		.20			
		M	-	21	20		.32			
		M	-	22	40		.35			
		M	-	24	45		.30			
		Fca	3	15						
59	6 "		17	20						Tremors.
			to							
60	8 "	P	17	43			.20			
		PcP	5	43	2		.20			
		PR ₁	-	44	15		.27			
			-	45	43		.20			
		PcS	-	48	20		.17			
		Si	-	49	59		.40			
		SR ₁	-	53	35		.65			
		SR ₂	-	55	8		.70			
		L	-	58	6		.75			
		M	-	59	40		1.30			
		M	6	1	8		1.20			
		M	-	1	40		1.25			
		M	-	2	12		1.35			
		M	-	3	13		1.35			
		M	-	4	57		1.90			
		Fca	8	5						
61	8 "		11	5						Tremors.
			to							
62	8 "	P	11	42						
		S	20	7	45		.10			Phases un- certain.
		L	-	13	53		.10			
		Fca	-	18	30		.12			
63	9 Mar.	P	20	42						
		i	2	24	12		.10			
		S	-	26	4		.16			
		L	-	29	51		.20			
		M	-	33	50		.20			
			-	35	42		.50			

(2)

No.	Date.	Phase.	Time			Per- iod.	Amplitude		Dis- tance.	Remarks.	
			G.	M.	T.		Ae.	An.			
			h.	m.	s.	s.	μ cms.	μ cms.	Miles.		
64	10 Mar.	M	-	37	15		.47				
		M	-	39	11		.40				
		M	-	41	50		.45				
		P ₁	16	29	18		.12				
		P ₂	-	29	45		.10				
		PR ₁	-	30	21		.12				
		PR ₂	-	30	34		.10				
		PcP	-	33	0		.15				
		Si	-	34	12		.27				
		SR ₁	-	35	26		.12				
		SR ₂	-	35	41		.12				
		PcS	-	36	47		.12				
		L	-	37	7		.15				
Fca	17	8									
65	13 Mar.		12	29	to				Tremors.		
66	13 Mar.		12	46					Tremors.		
67	14 Mar.		21	42	to				Tremors.		
68	14 Mar.		22	14					Tremors.		
69	21 Mar.		1	8	to				Tremors.		
70	22 Mar.		1	59							
			11	49	to					Tremors.	
			12	2							
			1	37	to						Tremors.
		Pe	15	39	22		.10				Very distant
		PR ₁	-	44	36		.17				' Quake.
		PR ₂	-	49	2		.15				
		i	-	53	37		.25				
		PS	-	57	55		.15				Phases- doubtful.
		PPS	16	0	30		.20				
		i	-	3	20		.17				
		i	-	8	42		.15				
		SR ₂	-	12	26		.12				
i	-	17	2		.12						
L	-	27	33		.15						
M	-	37	2		.12						
M	-	37	51		.20						
M	-	38	22		.26						
M	-	39	13		.17						
71	23 Mar.		2	9	to				Tremors.		
72	25 Mar.		2	30							
		Pe	16	11	20		.12		2050		
		PR ₁	-	11	50		.12				
		PcP	-	13	58		.17				
		Se	-	15	57		.12				
		SR ₁	-	17	45		.15				
		L	-	19	30		.15				
		M	-	23	26		.31				
		M	-	25	0		.36				
		Fca	17	25	-		.26				
		Pe	9	13	7		.15		250		
		Se	-	13	53		.17				
		L	-	14	34		.17				
Fca	9	33	-								

PERTH, WESTERN AUSTRALIA.
SEISMOLOGIC STATION, PERTH OBSERVATORY.

From 2nd to 26th April, 1938.

Inst.	No.	Date	Phase	Time			Period	Amp. cms.	Distance Miles	Remarks					
				G.M.T.											
				h.	m.	s									
27	74	April 2	Pe	6	25	2		.16	340						
			PR1	-	28	1		.23							
			Se	-	33	47		.25							
			PS	-	34	2		.15							
			SR1	-	38	22		.20							
			L1	-	44	56		.15							
			L2	-	47	2		.25							
			M	-	50	18		.55							
			M	-	51	17		.57							
			M	-	52	47		.55							
			M	-	54	32		.55							
			M	-	55	1		.70							
			M	-	56	40		.60							
			Fca	7	46										
75	3		Pi	11	59	24		.55	340						
			S	12	0	25		.40							
			L	-	1	2		.60							
			M	-	2	0		.90							
			M	-	2	15		1.10							
			Fca	13	12										
			76	4		Pe	21	15			22		.18		
						i	-	17			15		.21		
						S	-	20			0		.24		
						L	-	22			2		.45		
77	7		Fca	22	55				Tremors from Earthquake						
				10	21										
78	9			10	43										
			P	9	23	6				.20					
			i	-	26	44				.22					
			i	-	31	3				.22					
			i	-	35	12				.25					
			L	-	36	8				.20					
			M	9	38	17				.33					
79	13		M	-	39	0		.40		Tremors					
				3	14										
				3	49										
80	14			1	26	28		.15		First Phases lost in micros					
			i	-	34	17		.30							
			i	-	35	55		.35							
			Fca	2	23										
81	14		P						Lost in micros						
			Se	16	0	50				.13					
			i	-	3	22				.20					
			i	-	6	0				.14					
			L	-	7	42				.17					
			M	-	8	55				.30					
			Fca	16	51										
82	17		Pe	9	0	56		.15	1200						
			Si	-	4	21		.45							
			SR1 SR1	-	4	56		.75							
			L	-	6	1		.70							
			M	-	6	50		5.20							
			M	-	7	9		5.00							

Inst.	No.	Date	Phase	Time			Period	Distance	Remarks
				G.M.T.					
				h	m	s	Amp.	Miles	
							cms.		
			M	-	7	25	5.30		
			M	-	8	40	4.10		
			M	-	9	20	4.50		
83		April 17	Fca	10	30				
			i	15	34	0			
			i	-	47	25			
			i	-	51	0			
84		19	Fca	16	12				
			Pe	11	9	54	.12	Anatolia 'Quake	
			Pl	-	12	40	.17		
			i	-	16	10	.15		
			PS	-	24	10	.17		
			i	-	32	33	.17		
			L	-	46	7	.15		
85		19	Fca	12	59				
			P	22	7	0	.22		
			S	-	9	50	.20		
			i	-	10	46	.27		
			L	-	11	49	.25		
			M	-	13	20	.27		
			M	-	14	0	.45		
			M	-	15	35	.40		
86		20	Fca	22	53				
			Pe	6	36	47	.15		
			PcF	-	38	42	.15		
			PR1	-	39	5	.17		
			PcS	-	42	35	.17		
			Si	-	43	55	.35		
			SP	-	44	10	.41		
			SR1	-	47	33	.25		
			SR3	-	49	1	.32		
			L	-	50	56	.30		
			M1	-	56	10	1.25		
			M2	-	57	15	1.57		
			M3	-	59	37	1.60		
87		24	Fca	7	28				
				0	27			Tremors from distant 'Quake	
					to				
				1	42				
88		25	P					Lost in micros	
			Se	15	31	20	.15		
			L	-	38	21	.13		
89		25	Fca	16	18				
			i	21	50	4	.07		
			i	-	52	25	.06		
			i	-	53	6	.10		
90		26	L	0	7	11	.10		
			Fca	0	45			Other phases lost in micros	
91		26	i	12	55	40	.11		
			S	-	59	40	.15		
			i	-	59	59	.25		
			SR1	13	1	14	.15		
			SR2	-	1	45	.20		
			L	-	3	23	.25		
			M	-	4	35	.57		
			M	-	5	40	.62		
			M	-	6	15	.55		
			M	-	7	35	.51		
			M	-	9	50	.70		
			M	-	11	52	.55		
			Fca	14	23				

PERTH, WESTERN AUSTRALIA.
SEISMOLOGIC STATION PERTH OBSERVATORY.

From 1st May to 30th May, 1938.

	No.	Date 1938	Phase	Time	Period	Amp.	Dis- tance	Remarks
				G.M.T		s.		
				h.m.s				
27	92	May 1		0.59 to 1.35				Tremors
	93	- 1	Pe i i i M M M M M	1.41.23 -45.35 -47.45 -49.49 -53.47 -54.40 -56.0 -57.5 -57.59		.15 .25 .19 .17 .37 .32 .25 .32 .31		L missed in chang- ing sheet.
	94	- 1	Fca. i i i	2.34. 13.43.11 -45.17 -45.52		.11 .13 .15		
	95	- 1	Fca i i	14.7 19.50.45 -54.25		.10 .11		
	96	- 4	Fca P PR1 PR2 S PS i SR1 SR2 SR3 L M Fca	20.9 5.52.57 -55.9 -55.32 -59.43 6.0.3 -1.3 -3.15 -3.58 -4.20 -6.5 -8.25 6.47.		.10 .15 .17 .16 .22 .25 .17 .18 .25 .20 .32		
	97	- 6		19.32 to 20.28				Tremors.
	98	- 8	P S M M M M M M M M M M Fca	13.52.38 -56.28 14.1.40 -3.58 -4.59 -6.25 -8.10 -9.20 -10.45 -12.40 -19.40 -22.7 16.38		.95 1.90 2.25 2.00 2.10 2.40 1.70 2.05 2.17 1.90 1.65 1.49		L lost, light faded
	99	- 8		17.19 to 17.38				Tremors.
	100	-11		17+ 13 to 17+				Continuous slight tremors
	101	-11	L Fca	17.47.4 20.0		.10		L of distant 'Quake pre- ceded by tremors. Con- tinuous slight tremors.
	102	-11		20.2 to 22.58				
	103	-12	Pi	15.46.40		.55	2,556	

No.	Date 1938	Phase	Time		Period s.	Amp. cms.	Dis- tance. mls.	Remarks.
			G.	M. T.				
			h.m.	s.				
		PR1	15-48.	3		.45		
		PR2	-48.	34		.82		
		Si	-52.	32		4.95		
		SR1	-55.	17		3.85		
		SR2	-55.	35		4.05		
		L	-57.	32		4.65		
		M	-59.	58		7.17		
	May 12	M.	16.0.	50		6.62		
		M.	- 1.	24		6.90		
		M.	- 2.	5		6.90		
		M.	- 2.	30		7.70		
		M.	- 3.	5		6.87		
		M.	- 4.	37		8.65		
104	- 13	Fca	20.	38				
		Pe	2.42.	32		.15		
		Se	- 48.	38		.17		
		L	- 56.	2		.17		
105	- 13	Fca	3.	27.				
		i	15.16.	8		.15		Phases doubtful
		L	- 20.	7		.20		
		i	- 24.	15		.20		
		i	- 28.	5		.20		
106	- 14	Fca	16.	28.				
		i	12.19.	7		.11		Phases doubtful
		L	- 28.	26		.12		
		i	- 32.	35		.15		
107	- 16	Fca	13.	10.				
		i	7.13.	8		.16		
		i	- 17.	28		.20		
		i	- 19.	4		.24		
		i	- 21.	37		.32		
		M	- 23.	3		.42		
		M	- 23.	40		.80		
		M	- 24.	15		.95		
		M	- 27.	5		.90		
		M	- 27.	35		1.10		
		M	- 32.	55		.80		
108	-16	Fca	8.	35				
			15.	35				Tremors
			to					
			16.	9				
109	-17	i	8.45.	5		.10		
		i	- 45.	25		.15		
		i	- 49.	22		.17		
		M	- 50.	18		.25		
		M	- 50.	42		.25		
110	-18	Fca	9.	16.				
		i	14.42.	27		.15		
		i	- 47.	12		.10		
		L	- 49.	55		.15		
		M	- 50.	30		.22		
111	-19	Fca	15.	20				
		i	15.30.	38		.15		
		i	- 32.	7		.15		
		i	- 37.	2		.17		
		L	- 39.	35		.20		
		L	- 41.	22		.30		
		M	- 41.	45		.40		
112	-19	Fca	16.	25				
		Pi	17.15.	13		1.75	1300	
		i	- 16.	13		1.15		
		i	- 16.	28		1.5		
		S	- 18.	43		2.5		
		i	- 19.	43		2.5		

3.

No.	Date 1938.	Phase	Time			Period s.	Amp. cms.	Dis- tance. mls.	Remarks.
			G.	M.	T.				
			h.	m.	s.				
		L	-	20.	22		4.00		
		M	-	20.	52		8.90		
		M	-	22.	8		8.70		
		M	-	22.	48		8.00		
		M	-	23.	45		8.70		
		M	-	25.	33		8.55		
		Max's from	17.25					Swinging off sheet.	
			to						
			17.34						
		M.	17.36	52			8.90		
		M	-	38.	45		9.00		
113	May 20		7.43					Tremors	
			to						
			8.11						
114	-22	P	8.	8.10			.12		
		i	-	11.10			.12		
		i	-	13.40			.17		
		S						Missed	
		L	-	21.48			.25		
		M	-	22.30			.35		
		M	-	24.15			.40		
		M	-	25.40			.33		
		M	-	27.0			.33		
115	- 22	P						Lost in tremors of	
		i	8.43	50			.20	<i>Previous Quake.</i>	
		L	-	49.45			.25		
		M	-	50.30			.30		
		M	-	52.35			.40		
		Fca	10.48						
116	- 22		11.38					Tremors	
			to						
			12.16						
117	- 23	P1	7.28.	1			.27	5260	
		P1	-	28.20			.31		
		PR1	-	30.47			.18		
		Si	-	37.22			.41		
		PS	-	37.46			.51		
		SR1	-	41.36			.55		
		SR2	-	46.32			.62		
		SR3	-	48.45			.65		
		L	-	51.30			.45		
		M	-	58.10			.70		
		M	8.	0.10			.60		
		M	8.	2.41			.55		
118	-23	P1	8.28.	46			.37	3400	
		PR1	-	30.47			.35		
		PR2	-	32.5			.30		
		S	-	35.50			.65		
		PS	-	36.10			.75		
		L	-	43.58			.55		
		M	-	44.50			.70		
		M	-	46.45			.55		
		M	-	49.20			.50		
		Fca	10.29						
119	-25	Se	21.44.	56			.15		
		L	-	45.28			.40		
		M	-	45.39			.42		
		M	-	45.50			.70		
120	-26	i	23.13.	25			.10		
		i	-	16.19			.10		
		L	-	18.22			.17		
		Fca	23.33						
121	-27		9.48					TREMORS.	
			to						
			10.8						

4.

No.	Date.	Phase.	Time.			Period	Amp.	Distance	Remarks.
			G. M. T.						
			h.	m.	s.	s.	cms.	mls.	
122	May 27		20.26						Tremors.
			to						
123	- 28		20.46						Tremors
			17. 1						
			to						
124	- 30		18. 2						
		Pe	14.38.24				.15		
		i	- 39. 1				.22		
		PR1	- 40.52				.20		
		i	- 44.52				.33		
		S	- 46.55				.35		
		SP	- 47.16				.45		
		i	- 48.28				.59		
		i	- 49.32				.63		
		SR1	14.51.46				.67		
		i	- 52.51				1.55		
		i	- 53.22				1.75		
		SR2	- 54.57				.75		
		i	- 56.55				1.40		
		i	- 58.22				1.85		
		L	- 58.47				1.10		
		L	- 59.10				2.25		
		M	15. 0.55				2.90		
		M	- 1.26				3.75		
		M	- 4.27				3.05		
		Fca	17.3						

PERTH, WESTERN AUSTRALIA.
SEISMOLOGIC STATION, PERTH OBSERVATORY.

From 1st June, 1938 to 30th June, 1938.

No. 6

	No.	Date 1938	Phase	Time	Period	Ampli- tude	Dis- tance	Remarks
				G.M.T.				
				h. m. s.				
27	125	June 1	Pe	12-12-26		.17		Phases un- certain
			Se	- 17-40		.20		
			L	- 21-46		.17		
	126	" 2	Fca	12-42-00				Tremors
				10-26-00 } to 11-16-00)				
	127	" 9						an Earth- quake occur- red but no record-clock stopped.
	128	" 10	P					
			Se	17-13- 3		.20		-Lost in micros.
			L	0-18- 5		.23		
			M	0-19-20		.35		
			M	0-20-20		.30		
	129	" 11	Fca	18-14-00				Deep seated
			P	10- 3-47		.50		
			PcP	0- 4-38		.50		
			Si	0-11-48		1.85		
			PS	0-12-18		1.30		
			SR1	0-15-53		.75		
			SR2	0-17-50		1.00		
			L	0-21-48		1.48		
			M	0-23-10		1.20		
			M	0-24-35		1.75		
			M	0-26-35		1.50		
			M	0-29-15		1.60		
			M	0-33-10		1.30		
	130	" 11	Fca	13- 5-00				Preceding phases and last move- ments lost in micros.
			i	19- 3-46		.21		
			L	0- 5-35		.21		
			M	0- 6-50		.35		
	131	" 12						-Earthquake between 9 th & 10 th . Phases lost in heavy micros.
	132	" 13	i	3-23-54		.32		
			L	0-31- 2		.25		
			M	0-32-15		.40		
	133	" 13	P	3-42-42		.32		
			S	0-45-33		.33		
			L	0-46-54		.40		
			M	0-47-54		1.15		
			M	0-48- 9		1.25		
			M	0-48-21		1.15		
			Fca	4-55-00				
	134	" 15	i	12-59-33		.17		
			Se?	13- 3- 2		.27		
			L	0- 7- 2		.25		
			M	0- 8- 2		.35		
			M	0- 9-35		.40		
			M	0-11-34		.45		
			Fca	14-32-00				

No.	Date 1938	Phase	Time	Period	Ampli-	Dis-	Remarks
			G.M.T. h. m. s.	s.	tude cms.	tance miles	
135	June 16	i	1-58-4		.20		
		i	2-0-7		.22		
		i	0-11-48		.27		
		Si	0-33-47		.55		
		i	0-34-5		.70		
		i	0-34-50		.65		
		i	0-47-36		.40		
		M	0-48-40		.57		
		M	0-50-35		.46		
		M	0-53-35		.40		
		Fca	4-15-00				
136	" 16	i	12-8-4		.20		First and last movements lost in micros
		i	0-11-36		.24		
		M	0-12-55		.32		
137	" 17		21-6-00 } to 21-24-00 }				Tremors.
138	" 18	i	1-13-42		.19		
		i	0-14-48		.25		
		M	0-15-30		.57		
		Fca	1-51-00				
139	" 18		18-29-00 } to 18-50-00 }				Tremors
140	" 20	i	4-24-5		.10		
		i	0-58-55		.10		
		Max from	5-16-00 } to 5-23-00 }				
		Fca	5-48-00				
141	" 20	i	14-8-57		.10		
		i	0-21-55		.15		
		Max from	14-22-00 } to 14-26-00 }				
142	" 22	i	23-20-12		.16		End uncertain.
		i	0-21-30		.23		
		Si	0-24-10		.45		
		L	0-27-3		.30		
		M	0-27-42		.50		
		M	0-28-10		.48		
		Fca	24-0-00				
		P	13-1-43		.17		
143	" 23	pP	0-3-32		.17	3000	Time at origin 12h. 54 m. 43 s.
		PR1	0-4-15		.12		
		i	0-5-19		.15		
		S	13-7-14		.20		
		i	0-9-52		.15		
		sS	0-10-38		.16		
		SR1	0-11-38		.15		
		i	0-12-56		.19		
		i	0-14-55		.20		
		i	0-15-16		.29		
		L ?	0-17-15		.18		
		L ?	0-17-55		.26		
		M	0-20-2		.55		
		M	0-22-20		.75		
		M	0-23-18		.70		
		M	0-23-38		.87		
		M	0-24-35		.75		
		M	0-26-45		1.05		
		Fca	14-43-00				

No	Date 1938	Phase	Time G.M.T.			Period s.	Ampli- tude cms.	Dis- tance miles	Remarks	
			h.	m.	s.					
144	June 23	=	23	49	00	}		Tremors		
145	" 29		24	30	00					
		Pe	18	53	53		.15			
		PR1	0	55	52		.15			
		S	19	3	2		.14			
		SP	0	3	20		.20			
		SR1	0	7	46		.19			
		i	0	8	48		.14			
		SR2	0	11	27		.17			
		SR3	0	13	5		.20			
		L	0	16	55		.15			
		M	0	19	40		.21			
		M	0	21	00		.21			
146	" 30	Fca	20	11	00					
		Pe	16	57	17		.17	4000		
		PcP	0	58	26		.17			
		PR1	0	59	9		.18			
		PcS	17	2	44		.12			
		S	0	4	28		.17			
		SP	0	4	37		.25			
		SR1	0	8	48		.18			
		L	0	11	30		.20			
		M	0	15	4		.40			
		M	0	16	6		.38			
147	" 30	Fca	17	57	00	}		Tremors		
			21	33	00					
			21	55	00					

PERTH, WESTERN AUSTRALIA.

SEISMOLOGIC STATION, PERTH OBSERVATORY.

from 4th July to 29th July, 1938.

No.	Date 1938	Phase	Time		Period	Ampli- tude	Dis- tance	Remarks.
			G.	M. T.				
			h.	m. s.	s.	cms.	miles.	
27	148	July 4	i	16.52.18		.23		
			i	- 56. 8		.20		
	149	" 4	Fca	17.26			2500	
			Pe	21.27. 5		.13		
			PR1	- 28.33		.23		
			S	- 32.35		.25		
			PcS	- 33. 2		.23		
			SR1	- 35.12		.24		
			L	- 37.38		.35		
			M	- 41.10		.70		
			M	- 41.30		.70		
	150	" 5	Fca	23. 0				
			i	2.14.42		.26		
			P	- 17.13		.22		
			i	- 18. 8		.27		
			PR1	- 18.35		.22		
			PR2	- 19.40		.30		
			PcS	- 22.18		.20		
			S	- 23.25		.25		
			PS	- 23.42		.23		
			SR1	- 26.22		.28		
			SR2	- 27.15		.45		
			SR3	- 27.49		.37		
			L	- 29.15		.55		
			M1	- 31.15		1.12		
			M2	- 31.48		1.10		
			M3	- 32.34		1.15		
			M4	- 34.36		1.20		
			M5	- 35.26		1.10		
			M6	- 37.21		.95		
	151	" 5	Fca	4.49				
			i	9.15. 5		.17		
			i	- 17.25		.22		
			i	- 18.48		.25		
			i	- 19.39		.25		
	152	" 5	Fca	9.43			3100	
			Pe	22.16.45		.20		
			PcP	- 18.10		.17		
			PR1	- 18.30		.22		
			PR2	- 19. 8		.21		
			PcS	- 22. 0		.20		
			S	- 23. 8		.42		
			PS	- 23.22		.55		
			i	- 24.58		.32		
			i	- 26. 2		.55		
			SR1	- 26.53		.30		
			SR2	- 27.58		.22		
			L	- 30. 0		.32		
			M	- 34.20		1.60		
			M	- 35. 5		2.16		
			M	- 35.55		2.23		
			M	- 36.12		1.65		
	153	" 6	Fca	23.55. -			3100	
			P	1.33.54		.17		
			PcP	-35.33		.19		
			PR1	-36. 0		.24		
			i	-36.20		.17		
			PcS	-39.46		.22		
			S	-40.30		.45		

No.	Date 1938.	Phase	Time G.M.T.			Period s.	Ampli- tude cms.	Dis- tance miles.	Remarks
			h.	m.	s.				
27	27								
		PS	-	40.43		.47			
		L	-	46.52		.61			
		M	-	51. 7		1.20			
		M	-	51.52		1.77			
		M	1.	52.32		2.70			
		M	-	52.48		2.95			
		M	-	53.30		2.55			
154	July 6	Fca	4.	58					
		i	6.	12.13		.15			
		i	-	18.45		.20			
		i	-	26.13		.13			
		i(L)	-	29. 5		.17			
155	" 6	Fca	7.	24			2000		
		i	9.	55.33		.20			
		P	-	58.22		.20			
		PR1	-	59. 8		.20			
		i	10.	1.32		.13			
		S	-	2.50		.23			
		SR1	-	4.15		.17			
		SR2	-	4.40		.23			
		PcS	-	5.12		.23			
		L	-	6. 7		.30			
		M	-	7.22		.42			
		M	-	8. 0		.45			
156	" 12	Fca	11.	12					
		P	3.	48.48		.15			
		i	-	49. 3		.20			
		i	-	50.40		.17			
		L	-	51. 0		.25			
		M	.	51.30		.37			
157	" 12	P	12.	52.48		.23			
		PR1	-	53.35.		.25			
		i		55.34		.22			
		S	.	57.57		.22			
		PcS		59. 0		.14			
		SR1	13.	0. 7		.21			
		SR2	13.	0.25		.24			
		L	-	1.58		.35			
		M	-	3.26		.35			
		M	-	3.37		.50			
		M	-	4.28		.88			
		M	-	5. 3		.85			
		M	-	5.30		.85			
		M	-	5.55		.75			
158	" 14	Fca	14.	14					
		P	23.	53. 2		.15			
		i	-	54.13		.20			
		i	-	54.53		.22			
		PcP	-	56.15		.23			
		S	-	57.33		.27			
		i	-	58. 0		.27			
		SR1	-	59.20		.22			
		SR2	-	59.37		.22			
		PcS &)							
		SR3)	-	59.57		.21			
		L	0.	1. 0		.25			
		M	-	3.10		.33			
		M	-	3.35		.35			
159	"16	Fca	0.	57					
			9.	26				Tremors.	
			to						
			9.	51					

PERTH, WESTERN AUSTRALIA.

SEISMOLOGIC STATION, PERTH OBSERVATORY.

From August 4th to August 30th, 1938.

	No.	Date 1938.	Phase	Time G.M.T.		Period s.	Ampli- tude cms.	Dis- tance miles	Remarks
				h.	m. s.				
27	163	Aug. 4		9-16-00) to			Tremors	
	164	" 8		10-26-00					
			i	12-50-29		.15			
			i	0-56-50		.15			
			i	13- 0-10		.13			
			i (L)	0- 0-55		.14			
			M	0- 2-15		.30			
			M	0- 2-52		.30			
			Fca	13-41-00					
		Aug. 12 to Aug. 17						Instrument under adjust- ment -- records uncertain.	
	165	Aug. 18	P	9-36-53		.22			
			PR1	0-37-13		.35			
			S	0-41-00		.42			
			SR1	0-41-40		.55			
			i	0-43-00		.50			
			L	0-43-35		.80			
			M	0-44- 8		.60			
			M	0-46- 2		.85			
			M	0-48- 2		.75			
			Fca	10-59-00					
	166	Aug. 20	i	5-13-38		.15		Micros of- scuring phases.	
			i	0-17-10		.22			
			i	0-18-25		.22			
			i	0-19-15		.15			
			i	0-19-55		.25			
			i	0-25- 8		.25			
			i	0-27-23		.37			
			i	0-30- 5		.30			
			Fca	6-14-00					
			i	8-41-35		.20			
	167	Aug. 20	P	0-42-40		.20			
			PR1	0-44-26		.23			
			FR2	0-45-00		.20			
			PR3	0-45-13		.20			
			PcS	0-48-13		.20			
			S	0-49- 6		.14			
			SP	0-49-20		.25			
			SR1	0-51-50		.23			
			SR2	0-53-28		.25			
			SR3	0-53-52		.27			
			L	0-55- 8		.39			
			i	0-55-48		.32			
			M	0-56- 5		.65			
			M	0-56-15		.70			
			M	0-56-43		.65			
			Fca	10-13-00					

No.	Date 1938	Phase	Time	Period	Ampli- tude	Dis- tance	Remarks
			G.M.T.				
			h. m. s.				
168	Aug. 20						No phases -- clock stopped.
169	Aug. 24	P	15-47-20		.23		
		PR1	0-48-23		.18		
		PR2	0-48-55		.25		
		i	0-49-5		.40		
		PR3 &)					
		PcP	0-49-15		.30		
		S	0-52-40		.55		
		PcS	0-52-50		.45		
		SR1	0-55-10		.27		
		L	0-57-53		.35		
		i	16-1-23		.42		
		i	0-13-27		.45		
		Fca	17-11-00				
170	Aug. 25	P	1-32-5		.20		
		PR1	0-32-27		.30		
		PR2	0-32-36		.30		
		i	0-33-43		.23		
		i	0-34-7		.27		
		PcP	0-35-5		.30		
		S	0-37-2		.35		
		SR1	0-38-20		.38		
		SR2	0-38-30		.32		
		SR3 &)					
		PcS	0-38-50		.23		
		L	0-39-58		.25		
		L ?	0-40-50		.45		
		M	0-42-25		3.45		
		M	0-42-48		3.45		
		Fca	4-0-00				
171	Aug. 29	i	15-29-5		.14		
		?	0-30-00				
		i	0-30-37		.20		
		PcP	0-31-22		.18		
		i	0-31-35		.13		
		PR1	0-32-13		.20		
		PR2	0-32-48		.15		
		PcS	0-35-30		.20		
		S	0-37-10		.40		
		SR1	0-40-43		.45		
		SR2	0-42-45		.65		
		SR3	0-43-23		.57		
		L	0-45-55		.40		
		L	0-46-25		.60		
		M	0-49-12		.62		
		M	0-50-45		.60		
		M	0-51-24		.62		
		M	0-54-2		.60		
		M	0-56-00		.55		
		Fca	17-21-00				

No.	Date 1938	Phase	Time G.M.T.	Period	Ampli- tude	Dis- tance	Remarks
			h. m. s.	s.	cms.	miles	
172	Aug. 30	P	11-57-20		.27		
		PR1	0-58-30		.22		
		PR2	0-58-55		.30		
		PR3	0-59-7		.30		
		PcP	0-59-20		.23		
		S	12-2-57		.35		
		PcS	0-3-10		.60		
		SR1	0-5-14		.65		
		SR2	0-5-43		.60		
		SR3 ?	0-6-40		1.25		
		L	0-7-45		1.40		
		M	0-10-47		6.48		
		M	0-11-35		7.45		
		M	0-11-55		6.50		
		M	0-12-48		7.25		
		M	0-14-52		7.87		
		M	0-15-25		6.40		
		M	0-17-15		4.60		
173	Aug. 31	Fca	14-32-0				
			17-51-00				Minor quake in midst of heavy micros caused by wave action. Impossible to mark phases.
			18-56-00				
) to				

PERTH, WESTERN AUSTRALIA.

SEISMOLOGIC STATION, PERTH OBSERVATORY.

from 1st October, 1938 to 31st October, 1938.

	No	Date 1938	Phase	Time	Period	Ampli-	Dis-	Remarks
				G.M.T. h.m.s.		s		
27	184	Oct.4	i(S) i(PS) i(L)	8 42 25 42 48 49 33		.40 .30 .30		Other phases & end masked by severe micros.
	185	" 7	i i i i	0 56 25 1 3 52 7 0 9 40		.32 .30 .35 .30		Other move- ments masked by severe micros
	186	" 7		16 42 to 17 10				Minor Earth- quake phases masked by severe micros.
	187	" 8		0 31 to 0 49				Tremors
	188	" 9	i ? i(L) Max's from	16 49 0 54 8 54 33 to 59 56		.17 .22		
	189	" 10	Fca Pi pP i i Si i sS i i i i(L) M M M Fca	17 53 20 55 5 55 55 56 12 56 48 21 0 41 1 8 2 8 2 35 2 58 3 53 4 12 5 42 6 43 7 50 12 30 23 24		.50 .50 .45 .70 2.90 1.45 1.00 .85 1.35 1.20 2.10 2.00 1.40 2.20 2.05	2,590	Deep focus 250 k.m.
	190	" 11		0 19 to 0 44				Main move- ment of Earthquake other phases uncertain owing to micros.
	191	" 12		0 55 to 2 2				Tremors from Earthquake
	192	" 13		10 10 to 10 27				Tremors
	193	" 17		22 34 to 23 24				Tremors
	194	" 19		4 36 to 5 36				Tremors

No	Date 1938	Phase	Time		Period	Amplitude	Dis- tance	Remarks
			G. M. T.	h. m. s.				
195	Oct. 20	Pi	2	24	33		3.40	
		i		24	42		4.95	
		i		24	50		5.45	
		i		24	56		5.40	
		i		25	5		8.10	
		i		25	40		4.80	
		i		26	5		4.00	
		i		26	27		4.40	
		i		26	57		4.00	
		S ?		27	35		4.35	
		S ?		28	43		6.60	
		i		29	4		7.05	
		i		29	38		7.90	
		L ?		30	10		7.95	
		M		32	10		8.30	
		M		33	4		8.40	
		M		36	15		8.25	
		M		37	8		8.30	
		M		37	48		8.35	
		M		38	20		8.40	
M		38	55		8.40			
M		39	53		8.10			
M		40	43		8.05			
196	Oct. 20	Fca	5	27				
		i	9	58	0		.07	
		i	10	2	10		.20	Main move- ment.
				to				
			10	5	50			
197	" 21	Fca	10	31				
		P	20	34	53		.15	
		PcP		35	58		.10	
		i		37	43		.15	
		S		42	13		.17	
		PS		42	25		.22	
		SR1		46	12		.15	
		L		50	33		.13	
		L		50	55		.10	
		Fca	21	59				
198	" 22	i	23	52	28		.13	Main shocks Qh. 10m. to Qh. 13m.
		i(L)	0	7	45		.11	
199	" 23	Fca	1	22				
		i	3	8	24		.10	
200	" 23	i(L)		11	0		.08	
		Fca	3	45				
201	" 29	i	15	17	38		.10	
		i		21	22		.17	
		i		31	12		.07	
		Fca	16	27				
		P	22	57	59		.37	1610 ? Depth 90? k.m.
		i		58	7		.40	
		Pp ?			14		.40	
		i			25		.49	
		S	23	2	2		.45	
		i			10		.97	
		i			20		.70	
		Ss ?			33		.67	
		i			52		.75	
		i	3	12			.67	
		i			23		.70	
		i	4	5			.55	
		L			55		.67	
		i	5	23			.72	
		Fca	0	16				

PERTH, WESTERN AUSTRALIA.
SEISMOLOGIC STATION, PERTH OBSERVATORY.

NOVEMBER, 1938.

	No.	Date 1938. Nov.	Phase.	Time.			Period	Ampli- tude.	Dis- tance.	Remarks.
				G.	M.	T.				
				h.	m.	s.	s.	cms.	miles.	
27.	202.	5.	P	8	-55-	0		.20		
			PcP	-	-	22.		.30		
			i	-	-	53.		.25		
			i	-	59-	2.		.23		
			i	9	-4-	19.		.17		
			S	-	-	30.		.40		
			i	-	-	43.		.45		
			PS	-	-	57.		.60		
			i	-	5-	23.		.80		
			i	-	-	55.		.70		
			SR ₁	-	9-	0.		.55		
			i	-	10-	30.		.65		
			SR ₂	-	12-	12.		.55		
			SR ₃	-	13-	28.		.70		
			i(L)	-	16-	3.		.45		
			L	-	18-	25.		.40		
			i	-	28-	3.		.65		
			i	-	30-	33.		.57		
										End lost in following quake.
	203.	5.	P	11-	2-	0.		.15		
			i	-	-	13.		.20		
			i	-	-	27.		.25		
			i	-	-	38.		.17		
			i	-	11-	30.		.32		
			S	-	-	35.		.42		
			PS	-	-	58.		.60		
			i	-	12-	10.		.82		
			i	-	14-	12.		.70		
			SR ₁	-	16-	5.		.65		
			i	-	-	45.		.82		
			i	-	17-	25.		.75		
			SR ₂	-	18-	48		.60		
			L	-	23-	53.		.65		
			(L)	-	25-	52.		.80		
			M	-	30-	0.		.75		
			M	-	35-	17.		.50		
			M	-	-	38.		.57		
			M	-	36-	8.		.57		
	204.	6.	Fca	13-	59	-.				
			P	10-	5-	27.		.20		
			PcP	-	-	53.		.37		
			PR ₁	-	8-	22.		.32		
			PR ₂	-	10-	42.		.42		
			PR ₃	-	12-	25.		.40		
			S	-	15-	0.		.90		
			PS	-	15-	18.		.85		
			i	-	15-	57.		.50		
			i	-	16-	45.		.50		
			i	-	18-	50.		.55		
			SR ₁	-	19-	48.		.57		
			i	-	26-	35.		.60		
			i	-	29-	7.		.47		
			L	-	30-	13.		.60		
			M	-	33-	20.		.50		

PERTH, WESTERN AUSTRALIA.

SEISMOLOGIC STATION, PERTH OBSERVATORY.

$\phi = 31^{\circ} 57' 9''.0$ S. $\lambda = 115^{\circ} 50' 21''.5$ E. Height = 182 ft. (55 Metres)

Instruments mounted on cement piers sunk one foot in solid, dense sand resting on limestone rock which must be 50 to 100 feet or more below the surface.

TIME : Mean Greenwich, midnight to midnight.

TIME CORRECTION : Within .50 sec.

INSTRUMENTS—FIXED CONSTANTS.

INSTRUMENT.	SYMBOL.	REGISTRATION.	DAMPING.	PAPER SPEED.	MASS.
Milne	84	Photographic	...	8 mm per min.	
Milne-Shaw	27	Photographic	Magnetic	8 mm per min.	1 lb.

INSTRUMENTS—DETERMINED CONSTANTS.

INSTRUMENT.	T.	r.	V. <i>Mag</i>	COMP.	l.	DETERMINED.
84						
27	<i>12 sec.</i>	<i>20:1</i>	<i>250</i>	<i>N-S</i>	<i>44</i>	

November 1938

From.....to..... No.....

No.	DATE.	PHASE.	TIME.	PERIOD.	AMPLITUDE.		DISTANCE.	REMARKS.
					AE.	AN.		
			h. m. s.	s.	μ	μ	km.	

No.	Date 1938. Nov.	Phase.	Time G. M. T.			Period s.	Ampli- tude. cms.	Dis- tance. miles.	Remarks.
			h.	m.	s.				
(Cont.) 204	6.	M.	-	37	- 3.		.52		
		M.	-	39	-17.		.60		
		M.	-	40	-25.		.60		
205	6.	Fca	12	0	-				
		P	21	50	-53.5 ³		.22		
		PR ₁	-	53	-32.		.18		
		PR ₂	-	54	-50.		.20		
		S	-	59	-54.		.40		
		PS	22	0	-17.		.30		
		i	-	-	43.		.70		
		i	-	4	-42.		.40		
		SR ₁	-	-	55.		.32		
		i	-	5	-10.		.47		
		i	-	5	-51.		.45		
		i	-	8	-25.		.50		
		L	-	12	-55.		.35		
		L	-	13	-52.		.25		
		M	-	18	- 7.		.47		
		M	-	21	-15.		.42		
		M	-	25	-13.		.50		
206.	9.	Fca	23	59	-.			Tremors	
			9	28					
			to						
			11	18					
207.	10.	i(s)	11	6	-43.			Previous phases masked by micros.	
208.	10.	Fca	12	25	-.				
		P	19	37	-51		.10		
		pP	-	38	-32.		.20		
		PR ₁	-	41	-35		.22		
		PR ₂	-	43	-20.		.47		
		PR ₃	-	44	-52.		.40		
		i	-	46	-30.		.57		
		i	-	47	- 2.		.50		
		i	-	47	- 40.		.60		
		S	-	48	- 13.		1.40		
		sS	-	49	-34.		2.05		
		SR ₁	-	54	-28.		1.00		
		i	-	54	-55.		.95		
		i	-	56	-19		1.25		
		SR ₂	-	58	-28		1.55		
		SR ₃	20	0	-41		1.40		
		i	-	3	-20.		1.65		
		L1	-	4	-45.		.80		
		L2	-	5	-28		1.25		
		M	-	14	-55		1.00		
		M	-	16	- 0		1.25		
		M	-	17	-20		1.30		
		M	-	18	-40		1.15		
		M	-	19	-58		2.05		
		M	-	21	- 2		1.50		
		M	-	32	-36		2.70		
		M	-	34	-50		2.05		
209	11.	Fca	0	56	-			Tremors.	
			1	15					
			to						
			2	35					

No.	Date 1938. Nov.	Phase.	Time	Period.	Ampli- tude.	Dis- tance.	Remarks.
			G. M. T.				
			h. m. s.	s.	cms.	miles.	
210	11.	i	14- 7-55		.10		
		i	- 18- 5		.10		
		i	- 21-45		.12		
		i	- 27-15		.13		
211	12.	Fca	15-17 -				
		P	6-12- 2		.07		
		PR ₁	- 12-40		.14		
		S	- 16-47		.32		
		SR ₁	- 18-10		.30		
		L	- 20-31		.40		
212	13.	Fca	6 -57 -				
		i	5 - 1-22		.11		
		i	- 7-44		.20		
		i	- 16- 8		.12		
213	13.	i	20-57		.12		
		i	13-22-42		.10		
		i	- 28-10		.12		
		i	- 36-15		.20		
214	13.	i	- - 40		.22		
		Fca	15- 0				
		i	22-52-17		.12		
		i	- - 47		.13		
215	14	i	- 58-58		.17		
		i	23-13-32		.16		Heavy tremors from distant quake from 22h 57m to 0h 7m
		P	12-20-18		.40		
		PR ₁	- - 28		.32		
216	15	i	- 23- 7		.40		
		S	- - 17		.75		
		i(s)	- - 27		1.27		
		i	- - 52		.45		
		L	- 24-47		.32		
		i	- 25-28		.30		
		i	- 26-18		.25		
		M	- - 43		.55		
		M	- 27-40		.50		
		M	- 28-30		.45		
		M	- 29-35		.42		
		M	- 30-10		.50		
		M	- 31-55		.50		
		M	- 34-22		.65		
217	15	Fca	13-47				
		i	11- 3- 3		.15		
		i	- 8-15		.20		
217	15	i	- 9- 8		.20		
		Fca	11-47				
		P	21- 6-45		.20		
		PR ₁	- 7-15		.15		
		i	- 8- 0		.16		
		i	- 9- 0		.20		
		S?	- 11- 4		.22		
		i	- 11-40		.22		
		i	- 12- 0		.30		
		SR ₁	- 12-17		.23		
		i	- 13- 0		.23		
		L	- 14-10		.45		
		M	- - 40		.95		
		M	- 15-25		1.57		
M	- - 55		1.55				
M	- 16-30		2.15				

No.	Date 1938 Nov.	Phase.	Time G. M. T.			Period. s.	Ampli- tude. cms.	Dis- tance. miles.	Remarks.
			h.	m.	s.				
218	17.	M	-	18-	5		1.47		
		M	-	19-	30		1.67		
		M	-	22-	10		1.30		
		M	-	23-	5		1.50		
		M	-	27-	5		1.25		
		Fca	23-	33					
		i	4	19-	9		.07		
		i	-	20-	43		.10		
		i	-	23-	47		.13		
		i	-	24-	17		.20		
		i	-	30-	7		.23		
		i	-	-	55		.20		
		i	-	36-	55		.18		
219	17.	i	-	40-	45		.13		
		i	-	44-	42		.17		
		i	-	45-	8		.13		
		i(L)	-	53-	43		.20		
		i	-	58-	25		.20		
		i	5	58-	55		.17		
		i	6	0-	25		.20		
		i(L)	-	3-	55		.20		
		i(L)	-	6-	55		.20		
		i	-	8-	57		.23		
220	18.	i	-	11-	42		.20		
		i	-	15-	12		.25		
		Fca	6	57					
		P	14	27-	0		.20		
		PcP	-	-	55		.25		
		PR ₁	-	29-	8		.15		
		PR ₂	-	-	58		.17		
		PR ₃	-	30-	27		.13		
		PcS	-	31-	45		.20		
		i	-	32-	0		.17		
		S	-	33-	55		.20		
		PS	-	34-	8		.25		
		i	-	36-	0		.33		
		SR ₁	-	38-	23		.35		
		SR ₂	-	39-	39		.27		
221	22.	i	-	42-	15		.27		
		i	-	43-	0		.20		
		L	-	43-	25		.15		
		Fca	15-	13					
		P	1	25-	42		.17		
		PcP	-	26-	15		.15		
		i	-	28-	10		.15		
		i	-	29-	45		.17		
		i	-	31-	50		.20		
		S	-	35-	0		.25		
		i	-	35-	35		.27		
		i	-	36-	0		.30		
222	25.	i	-	37-	10		.27		
		i(L)	-	49-	5		.25		
		Fca	3	59					
223	27.		22-	5			Tremors		
			22-	55					
			22-	17			Tremors		
			to						
			23-	1					

Phase lost in end of previous quake. May be series of earth-
quakes.

Tremors
Tremors

5.

No.	Date 1938 Nov.	Phase.	Time G. M. T.	Period.	Ampli- tude.	Dis- tance.	Remarks.
			h. m. s.	s.	cms.	miles.	
224.	30.	?	2 - 39-58		.17		
		P	- 40-42		.16		
		i	- 43-10		.20		
		S	- 50-40		.25		
		PS	- 51- 0		.25		
		i	- 55-12		.27		
		SR ₁	- 56- 0		.25		
		L	- 6-45		.23		
		Fca	5 - 36				