RAOUL ISLAND

29° 15!1S; 177° 55!1W; Altitude 350 ft

SEISMOLOGICAL BULLETIN : 1957 JULY

Instrument: Willmore vertical component seismometer. pend. period ¾ sec ca; galv. period ¼ sec. Recordings on 35 mm film; enlarged 8 x in viewer. Trace amplitudes as measured from viewer screen.

No.	Date 1957	Phase	h	m	s	T (sec)	Az (mm)	Remarks
1	July 1	eP	02	21	09	¾	1½	
		i			19½	½	6	
		i			23	½	8	
		i			27½	½	5	
		i			44	1	-	
		i(S)		22	27	¾	10?	
		i			44	1	12?	
		e		26ca				Renewed tremors
2	1	eP	03	46	00			
		i			04			
		i			09			
		e			17			
		e(S)			39			
3	4	iP	09	45	55	¼	8	Confused motion & large ampl.:
		i(S)		46	07	-	-	trace invisible for several mins.
4	5	iP	12	34	17	¼	4	
		i(S)			21	-	-	Trace invisible for several mins.
5	6	iP	17	09	51			Large ampl.; trace invisible for over 1 min.
6	6	e	20	31	58			Small movements
		i		32	01			
7	7	iP	02	14	43			
		i			47			
		i(S)			56			
		i(S)			59			
		i		15	02			
8	7	e(L)	16	17	59	1	10	Small movements
9	7	e(L)	17	16	13			Tremors in microseisms
10	8	e	15	00	43			Local tremor
11	8	iP	16	57	08			
		i			10			
		iS			24			
12	9	e	04	35	35			Local tremor
13	10	iP	04	38	45ca			Trace invisible for several mins; poor record.
14	10	iP	14	09	32			
		iS			46			
15	10	e	14	28	33ca			Tremors
16	10	e	14	45	44ca			" "
17	10	e	15	39	05ca			" "
18	10	e	23	05ca				" "
19	12	e	14	41ca				" "
20	12	e	14	52ca				" "
21	14	iP	06	24	41			Very large ampl. Felt locally M-M3
22	14	iP	08	11	06			Very large ampl. Felt locally M-M5
23	14	iP	09	39	05			
		iS			14			

No.	Date 1957	Phase	h	m	s	T (sec)	Az (mm)	Remarks
24	July 14	eP	09	44	46	½	1	
		i		45	03	1	2½	
		i			10	1	3	
		i(S)		46	28	½ ?	6	
		i			39	1½	10	
		i			50	1	5	
25	15		11	33ca				Tremors
26	16	eP	04	22	17	1?	2	
		i			20		3	
		i			23		3	
		i(S)			37			Rather large ampl.
27	16	e(P)	11	52	29			Small; in microseisms.
		iS			41			
28	17	iP	00	15	40			Confused motion; microseisms.
		iS			48			
29	17	i	05	58	07			Local tremors.
30	17	eP	11	15	21	1	2	Strong microseisms.
		e			43	2	2	
		i			46	1½	4	
		i			57	1	4	
31	17	e	13	17ca				Irregular tremors
32	17	P?	15	01	46			Indefinite
		S			57			
33	17		20	37ca				Short period tremors.
34	17	iP	21	33	57			
		i(S)		34	12			
35	18	eP	04	01	04			In microseisms
		iS			20			
36	18	eP?	06	09	23			In microseisms
		S			38			
37	18	iP	10	00	26			Large ampl.
		i(S)			40			Trace invisible for near 2 mins.
38	18	eP	21	17	12			
		iS			28			
39	19		00	52+				Local tremors.
40	19	iP	07	09	19			
		iS			37			
		i			41			
41	19	eP	10	13	44			
		i			56			
		iS		14	12			
		i			20			
42	19	iP	14	39	21			
		iS			37			
43	19	eP	14	48	44			
		iS			54			
44	19	eP	15	06	18			
		i(S)			36			
		i			38			
45	19	iP	15	12	42			
		i			47			
		iS		13	00			
46	19	iP	15	29	00ca			In minute mark.
		iS			14			
		i			29			
		i			40			
47	19	iP	15	35	55			
		iS		36	10			
		i			17			
48	19	P	15	38	25			Confused with microseisms.
		S			40			
		i			46			

No.	Date 1957	Phase	h	m	s	T (secs)	Az (mm)	Remarks
49	July 19	eP ? e(S) e(L)	16	18	20 32 43			Very small & doubtful.
50	19	e(S) i	17	28	13 18			
51	19	P i i(S) i(S)	18 19	59 00	42 47 54 01			
52	20		04	03ca				Local tremors.
53	20		07	23ca				" "
54	20	iP iS i	07	25	29 46 53			
55	20		08	16ca				Local tremors.
56	20	e(S)	11	12	32			
57	20	eP? iS	15	41 43	18ca 08	$\frac{1}{4}$ 1?	 2	In microseisms.
58	20		22	49ca				Tremors
59	20		23	50ca				Tremors
60	21	iP iS i	11	21	12 28 34			
61	21	P (S)	11	24	26 41			
62	21	eP iS i	11	34 35	57 13 19			
63	21		17	51ca				Local tremors
64	21		18	25ca				" "
65	21	iP i iS	19	37 38	50 54 25	- 	2 	 Confused motion; large ampl.
66	22		03	13ca				Local tremors.
67	22	iP	06	17	57		2?	Very large ampl.; trace invisible for several mins.
68	22	iP	06	22	55ca			Confused motion; in coda of previous shock.
69	23	iP iS	03	23	21 37			
70	23	i(S)	06	58	56			
71	23	eP iS	07	54 55	24 06	1 1	1 4	
72	23	eiP eS	13	31 32	43 47	 1	 3	Large ampl.
73	23	eP? S? i	13	40	11 39 45			Small
74	23	e	23	09	17ca			Local tremors.
75	24	iP iS	04	56 57	51 12			
76	24	e	06	07	12ca	1	$1\frac{1}{2}$	Series of tremors.
77	24	eL	10	00	54ca	$1\frac{1}{2}$	max. 4	
78	24	eL	11	06	19ca	2	max. 8	
79	24	i	14	56	27	1	3	Series of tremors.
80	25	eP e e(S)	08	04	39 34 50			

No.	Date 1957	Phase	h	m	s	T (secs)	Az (mm)	Remarks
81	July 25	e	19	30ca				Local tremors
82	26	e	06	08ca				Series of tremors
83	26	e(P)	06	51	26	1	2	
		e(S)		52	15	1	2½	
		i			37	½	2	
		e(L)			58	2	3	
84	26	e(P)	22	33	07ca			Small, in minute mark.
		i(S)			10			
85	27	iP	11	51	05			
		iS			14			Large ampl.
86	27		13	19ca				Local tremors.
87	27		14	14ca				" "
88	27	eP	14	47	41	½	1	
		iS		49	21	1	2	
		e			39	1	1½	
89	27		15	00+				Local tremors.
90	27	iP	17	29	41			
		iS			50			
		i		30	00			Confused motion.
91	28	e	13	16	55			Small
		i		17	01			
92	29	eP	02	40	05			Confused motion.
		iS			18			Considerable ampls. follow.
93	29	eiP	08	12	59			Large ampl.
		i(S)		13	16			Confused motion.
94	29	e(P)	09	58	27	1	1½	
		i			38	1	4	
		i			40	1	4	
		i(S)		59	17	1	2	
		i			21	1	5	
95	30	e	07	27+				Tremors
96	30	e	07	59	50ca			"
97	30	iP	08	03	02			Large ampl.
		(S)			14			
98	30	e(P)	13	08	32			
		e		10	14			
		e			54			
		e		12	26			Renewed tremors; possibly a separate shock.
99	30	e	17	02	40ca			
		i			55			
100	30	e?	21	39	21			Small & indefinite.
		i			34			
		i			40			
		i		40	07			
		i			28			
		i		41	44			
101	31	iP	14	27	15			Confused motion.
		i			22			
		iS			28			
102	31	iP	18	15	56			
		i(S)		16	09			
103	31	iP	20	10	22			
		iS			49			Large ampl.

RAOUL ISLAND

29° 15!1S; 177° 55!1W; Altitude 350 ft

SEISMOLOGICAL BULLETIN : 1957 AUGUST

Instrument: Willmore vertical component seismometer. pend. period ¾ sec ca; galv. period ¼ sec. Recordings on 35 mm film; enlarged 8 x in viewer. Trace amplitudes as measured from viewer screen.

No.	Date 1957	Phase	h	m	s	T (sec)	Az (mm)	Remarks
1	Aug. 1	eiP	16	57	55			Very large ampl., trace confused for over 2 mins.
		i			58			
2	3	iP	08	16	15	½	21	
		i			19			Very large ampl. for about 2
		S?			36			mins.
3	3	eP	08	58	00			
		e(S)			18			
		i			21			
4	3	eP?	15	48	20			In microseisms.
		iS			36			
5	3	e(P)	17	17	58	1	4	Doubtful.
		i		18	06	½	6	
		iS			22	½	9	
6	4	e(P)	01	26	10ca	1	2	Very doubtful; in minute mark.
		i			23	½	5	
		i(S)			28	-	12	
7	5	P?	10	54	14ca			Doubtful.
		i			22			
		iS			30			
8	5	i(P)	21	31	25	1	5	
		e			36	1	5	
		i			48	1	7	
		iS		32	11	1	15	
9	6	eP	08	49	11	< ½	2	
		i			22	½	4	
		(S)			44	½	12	
10	6	iP	08	53	11	½	3	
		i			14	< ½	4	
		i			23	1	4	
		i			35	1	10	
		i(S)			42	1	4?	
		i			45	1	8	
11	6	eP?	23	20	07ca			Doubtful.
		e(S)			48			
		i			51			
		i			54			
12	6	e	23	24				Tremors.
13	7	e	03	33	02			Tremors.
14	7	eP	05	46	25			
		i			39			
		(S)			52			
		i(S)			57			
15	7	eP	10	27	58			
		i		28	07			
		iS			23			
		i			53			
16	7	eP?	18	53	16	2	½	
		iP?			17ca	6	½	In minute mark.
		i			26	6	½	
		i(S)			42	15	½	
17	7	eiP	19	42	06			
		e			24			
		eS			59			
18	8	P	00	29	17ca	-	-	In minute mark.
		i			22	½	4	

No.	Date 1957	Phase	h	m	s	T (sec)	Az (mm)	Remarks
18	Aug. 8	i			39	1	5	
		i(S)			47	1	10	
		i(S)			53	1	20	
19	8	eP	03	38	35	< ½	2	
		i			38	< 1½	5	
		i(S)			45	< 1½	10	
		i			47	1½	10?	
20	8	(P)	09	38	53ca			Tremors, confused with micro-seisms.
21	9		02	01ca				Local tremors.
22	10		09	00ca				Local tremors; poor record.
23	10	iP	09	34	09			" "
		(S)			17			
24	11	P	03	43	56			" "
		S		44	12			
25	11	P?	05	16	54			Small & doubtful; " "
		S		17	18			
26	11	P	12	42	20			" "
		S?			55			
27	11	eP	13	40	53	-	3	" "
		i			56	-	6	
		S		41	23	-	30?	
28	11	eP	14	01	23ca			Small & doubtful; " "
		(S)			53			
29	11		14	08ca				Irregular tremors; " "
30	11	iP	21	41	57	-	2	" "
		i			59	-	4	
		iS		42	05	-	16	
31	11	e	22	07	45			Tremors; " "
32	12	iP	00	26	59	½	7	
		i		27	03	½	10?	Large ampl. follow
		i(S)			09	-	-	
33	12		00	30ca				Irregular tremors.
34	12	iP	11	56	30	½	3	
		i			32	½	3	
		i(S)		57	04	½	3	
		i			12	½	6	
		i			16	½	14	
35	12	e(P)	17	23	49	½	1	
		iS		24	02	½	4	
		i			07	½	15	
36	12	e	19	33	13			
		i			18			
		i			23			
37	13	eP	09	24	08			
		i			19			
		(S)			24ca			In minute mark.
38	14	iP	13	27	53	< ½	5	
		iS		28	06	½	20+	
39	14	eP	18	28	51			
		e		29	51			
		iS		30	24			
		i			28			
40	14		18	34ca				Tremors.
41	14	iP	19	50	31			
		iS		51	17			
		e		55	01			
42	15	eP	21	59	23			
		i			27			
		i(S)			34			
		i			41			

No.	Date 1957	Phase	h	m	s	T (sec)	Az (mm)	Remarks
43	Aug. 16	eP	00	13	32			
		i			34			
		i			41			
		i(S)			47			
44	16	eP	04	31	55ca			Very small; in minute mark.
		i		32	02			
		i(S)			19			
		i			26			
		i			33			
45	16	i	08	19	03			Seismic ?
		i			12			
46	16	i	11	24	51			Tremors.
47	16	i(P)	14	52	00			
48	17	e	12	59	23ca			
		e	13	00	24			
		e			49			
49	17	eP?	14	39	05			In microseisms.
		i			17			
		iS			39			
		i			55			
50	18	eP?	06	13	43ca			Very doubtful.
		i			53			
		iS		14	24			
		i			46			
51	18	e?	11	13	22ca			Very doubtful.
		e(S)		14	07			
52	18	e(P)?	11	56	42			Very doubtful.
		e		57	33			
		(S)		58	03			
53	18		14	19ca				Local tremors.
54	19		09	21ca				" "
55	19		10	24ca				" "
56	19	eP?	17	50	38ca			Very small, doubtful.
		iS		51	04			
57	20	eP	10	02	26			
		i			47			
		iS			53			
		i		04	29			
58	20	e?	11	16	54ca			Very small, doubtful.
		e		17	26			
		i			42			
59	20		11	26ca				Tremors.
60	20	e	12	08	45ca			"
61	20		14	03ca				"
62	20		19	57ca				Local tremors.
63	21		01	50ca				" "
64	21		14	20ca				" "
65	21	e	17	44	15			
		i(S)			41			
66	22	e	13	10ca				Traces in microseisms.
67	22	iP	16	38	27	½	4	
		i			34	½?	12	
		iS			43	½?	10ca	Rather large ampl.
68	22	e	16	48	10ca			Irregular tremors.
69	22		18	34ca				Local tremors.
70	22		23	17ca				" "
71	23		02	12ca				" "
72	23		07	18ca				" "

No.	Date 1957	Phase	h	m	s	T (sec)	Az (mm)	Remarks
73	Aug. 23	e(P)?	12	27	43ca			Very small.
		iS			52			
74	23	iP	20	11	47	½	2	
		i			59	½	7	
		iS		12	04ca	½	?	In minute mark: rather large ampl.
75	23	eP	21	33	02	½	1	
		i			12	< ½	5ca	Rather large ampls. follow
		iS			17	-	-	
76	24		20	35ca				Local tremors
77	25	iP	04	40	26			
		i			34			
		i(S)			45			
		i(S)			48			
78	25	i	07	15	50			Tremors.
79	25	iP	07	21	36			
		i			41			
		iS			49			Confused trace.
80	25	eP	09	52	04			
		S			23			
81	25	eP?	23	40	58ca			Very small.
		(S)		41	10			
		i			19			
82	26		16	47ca				Local tremors.
83	27	e	06	25	53			Tremors in microseisms.
84	27	P	18	24	11			In minute mark.
		S			24			
85	27	iP	20	58	02	-	-	Trace invisible owing to large ampl.
		iS		59	20	½	11	Large ampls follow S.
86	28	eP	00	44	39ca			Very small; doubtful
		i			59			
		i(S)		45	04			
		i(S)			07			
		e			16			
87	28	iP	08	19	50	-	-	Very large ampl.; trace invisible for 2 mins ca.
88	28		10	09ca				Local tremors in microseisms.
89	29	e	06	56	22			Tremors.
90	29	i?	07	23	10ca			In minute mark.
91	29		09	38ca				Local tremors.
92	29	iP	14	04	34	< ½	6	
		i			38	½	5	
		(S)		06	02	½	5	
		i			10ca	-	-	In minute mark.
93	29	i	22	26	12			Tremors.
94			22	58ca				Local tremors.
95	29	eP	23	39	55			
		S		40	15			
96	30	iP	03	51	10ca			In minute mark. Very large ampls; trace invisible for several mins.
97	31	iP	08	22	22			
		iS			44			
98	31		12	33ca				Local tremors.
99	31	P	16	55	56			Large ampl. heavy microseisms.
100	31	i	18	29	17			Movements in confused microseisms.

RAOUL ISLAND

29° 15!1S; 177° 55!1W; Altitude 350 ft

SEISMOLOGICAL BULLETIN : 1957 SEPTEMBER

Instrument: Willmore vertical component seismometer: pend. period ¾ sec. ca; galv. period ¼ sec.
Recordings on 35 mm. film; enlarged 8 x in. viewer. Trace amplitudes as measured from viewer screen.

No.	Date 1957	Phase	h	m	s	T (secs)	Az (mm)	Remarks
1	Sept. 1	P? S	09	17	04ca 44ca			In confused microseisms In minute mark
2	2	P? S	04	45	03ca 28	- < ½	- 10	Small; in microseisms
3	2	eP? iS i	09	02	39 52 58			Small, indefinite
4	3	eiP i e i(S) i i	14	42 43 44 	21 26 50 54 03 13	½ ½ 1 ½ 1 ½	2, 11 5 3 6 6 8	
5	3		16		00ca			Local tremors
6	5		05		50ca			Small local tremors
7	5		20		00ca			Tremors in microseisms
8	7	eP S	04	56	25ca 33			
9	7	(L)	06		34ca	1	6	Series of ~~traces~~ waves for 2 or 3 mins; started during change of record
10	8	iP i iS i	11	21	38 47 52 55	½ ½ ½ ½	3 4 8 10ca	
11	9		15		07ca			Local tremors
12	9	iP	18	20	21			
13	10	eP i i(S) i i	08	06	09 26 42 46 54ca	½ ½ ½ ½ 	2 4 6 3 ?	 In minute mark
14	10	eP eS	17	58 59	58 36			
15	10	eP? i(S)	19	08	54ca 59			Very small
16	11	eP i e(S) i i	13	44 46 	07ca 13 03ca 09 15			
17	11	eP iS i i	23	25 28 	34 03 11 14	< ½ ½ ½ ½	2 3 13 8	
18	12	iP i iS	15	05	03 10 15	< ½ < ½ -	3 8 15+	Large ampl.; confused motion

No.	Date 1957	Phase	h	m	s	T (secs)	Az (mm)	Remarks
19	Sept. 12	P? S	15	08	00ca 10			Very small
20	12	eP (S)	15	09 10	46 00	$< \frac{1}{2}$?	1 15ca	Confused motion
21	12	P? S	15	15	37ca 48			Very small; doubtful
22	13	iP i(S) i	02	26	21 40 51	$\frac{1}{2}$ $\frac{1}{2}$? -	5 10ca 15?	Rather confused motion Faint trace
23	13	eP S?	03	01 02	32ca 00ca			Very doubtful In minute mark
24	14		10		48ca			Local tremors
25	14	e	11	16	18			Brief tremors. No records 15^d to 18^d
26	19		02		29ca			Local tremors
27	19		03		15ca			" "
28	19	iP iS	05	48 49	50 01ca	$< \frac{1}{2}$	10	Felt locally, M-M1 In minute mark. Large ampl., confused motion.
29	19	iP e(S)	14	01 02	23 42			
30	19	e(S) e(S)	17	06	23 27			
31	20		17		24ca			Tremors in strong microseisms
32	22	iP e i(S)	10	51	21 27 31			
33	22	eP e(S)	22	49	17 32			Irregular movements; no marked phases
34	22		23		33ca			Tremors
35	23		14		54ca			Confused short-period tremors
36	24	e? e	08	32	07ca 15			In microseisms
37	24	eP iS i	13	03	24 48 52			
38	25		21		46ca			Tremors
39	25	P? eS i	23	01 02	03ca 57 18			Very small; doubtful
40	26		03		03ca			Local tremors
41	26	eP e(S) i	12	08	07 17ca 32			Very small
42	26	iP i i(S) i(S)	15	31	15 19 31 33	$< \frac{1}{2}$ 1 1 1	2 13? 5? ?	 Confused motion Large ampls follow
43	26	eP i i(S) i	20	22	09 22 43 56			

No.	Date 1957	Phase	h	m	s	T (secs)	Az (mm)	Remarks
44	Sept. 26	eP?	21	41	38			In microseisms
		eS		42	03			
45	26	i	23	15	25			
		i			27			Brief tremors
46	27	(P)	11	33	25			
		i			28			
47	28	i	00	38	16			Irregular tremors
		e			21			
48	28	P?	07	33	16			Very small
		S			21			
49	28	eP	14	22	08	½	5	
		iP			09	-	-	Large ampl; confused trace
		i(S)		23	46ca			Very large ampl; trace invisible for several mins
50	28	e	14	34	44			In coda of previous shock
51	28		14	38ca				Tremors
52	28		14	40ca				Tremors
53	28	iP	14	46	13			
		iS		47	54			
		i		48	04			
54	28	P?	15	11	15ca			Very small
		S		12	58			
55	28	P?	15	32	01ca			Very indefinite
		S?			42			
56	28	e(S)	16	08	44			
57	28	P?	20	58	01ca			Very small, indefinite
		S			30			
58	28	P?	21	25	37			Small
		iS			57			
59	29	iP	07	08	28			
		(S)		10	19			
60	29	eiP	08	14	57	-	12	Large ampl.
		(S)		16	15		-	Very large ampl.
61	29	eP	13	40	16			
		(S)		42	05			
62	30	e?	13	32	01			Very small
		(S)			12			

No.	Date 1957	Phase	h	m	s	T (secs)	Az (mm)	Remarks
19	Oct. 7	P	02	23	40	½	1	Small
		i			44	½	4	
		iS			52	½	10ca	Rather large ampls follow
20	7	iP	16	51	02			
		i			07			
		iS		52	51			
		i			55			
21	9		14	59ca				Short period tremors
22	10	iP	03	48	59			
		i		49	04			
		i(S)		50	36			
		i			40			
23	11	eP	02	41	48	½	1	
		i			54	½	2	
		(S)		42	30	½	5	
		i			35	½	10	
		i			37	1	10	
24	12	P?	00	12	33ca			Small
		i(S)			43			
		i(S)			44			
25	12	iP	19	29	00			In large microseisms
		(S)			16			
26	13	eP	10	59	50	< ½	4	
		iS			59	-	-	Large ampl; confused trace
27	13		16	35ca				Tremors
28	13	P	19	10	57	½	2	
		iS		11	09	½	4	
		i			12	-	10ca	Confused motion
29	13	P	22	44	32ca			In minute mark
		S			56			
30	14	iP	00	23	00	< ½	3	Confused trace
		iS			09	< ½	10+	Large ampls follow
31	14	iP	14	10	57	< ½	5	
		i		11	16	½	5?	
		i(S)			45	½	-	Large ampl.

Note: No further records available in October, owing to breakdown of seismograph recorder.