

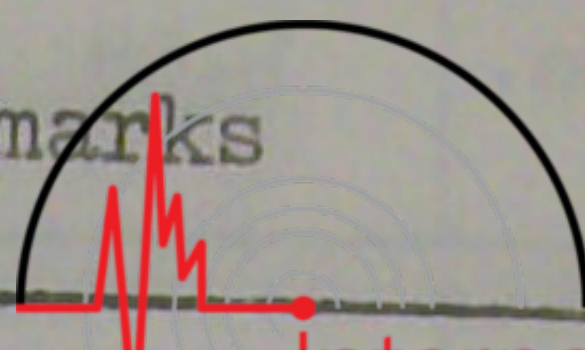
No.	Date 1957	Phase	Time (G.M.T.)	Per.	Amplitude			Remarks	
					A _N	A _E	A _Z		
6	Dec. 31 continued	iS eL	NE NE	h.m.s. 32 53 34.0	s. 5	(+)	-		
7	1958 Jan. 2	eP iS	NZ NEZ	07 32 44 53					
8	12	iP iS	NEZ NEZ	08 49 06 17					
9	15	iP i	Z Z	22 23 38 54	1.8 1.8		(-) (-)	USCGS: 13½S 167E.	
10	17	eL	NEZ	07 21.2				USCGS: 52S 139½E. L waves lasted ½ hour.	
11	30	eL	E	06 37.5				USCGS: 7½S 155½E. L waves lasted 6 mins.	
12	31	i	Z	06 37 16	2		(+)	USCGS: 44½N 153E.	
13	Feb. 1	iP iS	NEZ NEZ	02 31 31 44					
14	4	iP iS	NE NE	15 33 06 16				Z not operating.	
15	6	i(P) iS	NE NE	12 42 57 58				Z not operating.	
16	8	i(P) iS	NE NE	16 26 49 50				Z not operating.	
17	10	iP iS	E NE	14 56 51 57 08				Z not operating.	
18	20	eL	E	12 00.4					
19	20	i(S)	NEZ	14 28 41				Local tremor.	
20	25	iP iS	E NEZ	01 59 51 57					
21	Mar. 2	iP	NEZ	16 27 02				Local tremor. Very disturbed.	
22	3	iP iS	NEZ NEZ	14 26 54 27 00					
23	3	iP iS	NEZ NEZ	16 09 01 07					
24	11	iP ipP isP i i i i i iPP i i iS e	Z NEZ Z EZ E NZ Z Z Z Z Z NEZ NE	00 38 30 44 53 39 01 10 30 36 48 40 16 42 00 08 50 48 58 49.8	2 1.4 (2.4) 1.5 1.5 2.0 (1.2) 2.5 (2.0) 1.8 1.8 1.5 9.5	e e -	e + - e	+ - + (+) (+) (+) + + - + - + e	USCGS: 25½N 125E. H = 00 25 55 Δ = 9530Km. h = 50Km.
25	11	iP i i i	Z Z Z Z	14 06 52 57 07 06 16	(1.2) (1.2) (1.4) (1.4)		- + + -	USCGS: 13S 167E.	
26	12	iP iS	NEZ NEZ	21 18 30 39					



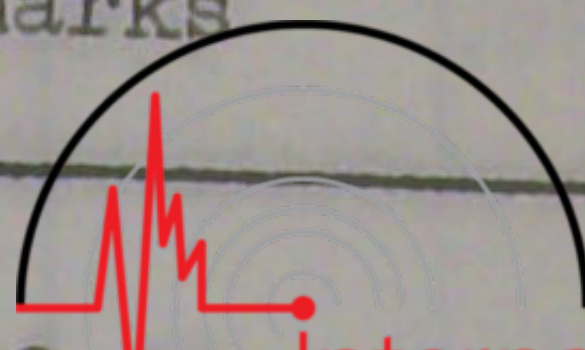
No.	Date 1958	Phase	Time (G.M.T.)	Per.	Amplitude			Remarks
					A _N	A _E	A _Z	
			h. m. s.	s.				
27	Mar. 17	iP Z	00 05 58					
		iS NEZ	00 06 12					
28	22	eP NEZ	01 42 04					
		iS NEZ	14					
29	Apr. 3	iP NEZ	10 29 25					
		iS NEZ	30					
30	7	iP NEZ	13 16 55					
		iS NEZ	Not read- able.					Local tremor S-P approximately 2 or 3 secs.
31	27	iP NEZ	10 57 23					
		iS NEZ	37					
32	28	eL NE	06 13.5	9-6				
33	30	iP NEZ	10 17 16					
		iS NEZ	18					
34	May 1	iP NEZ	00 36 44	1.6	-	e	+	USCGS: 13 $\frac{1}{2}$ S 167 $\frac{1}{2}$ E
		ipP Z	37 25	2.0			+	H = 00 29 15
		i Z	33	2.2			-	Δ = 5600Km.
		isP Z	51	(2.0)			-	h = 190Km.
		iPPP Z	39 13	(2.2)			(+)	
		iS N	42 44	3.6	-			
		iSP Z	42 50	2.2			(+)	
35	1	iP NEZ	13 17(21)					
		iS NEZ	33					
36	18	iP Z	02 40 46	1.7			-	USCGS: 13S 167E
37	18	iP Z	12 29 14	1.6			+	USCGS: 13S 167E
		i Z	20	(1.6)			+	Aftershock.
38	24	eL NE	07 34.7	6.7				
39	27	iP Z	06 59 58	0.8			-	H = 06 59 03
		iP NEZ	07 00 01	0.8			-	
		i(S) NE	(38)				-	
		iS NEZ	43	(1.2)			-	
40	31	i(P) Z	19 40 16	(2)			(-)	USCGS: 15S 169E
		i Z	47	1.6			(-)	Considerable wind
		i Z	41 28				+	disturbance. Direction
		i Z	42 08	1.6			-	of motion iP uncertain.
		eS EZ	46 27	(6)				Possible P phase two
		eSS E	50.0	(24)				seconds earlier.
		eL NE	55.0	11-14				Surface waves for 1/4
								hour.
41	Jun. 7	eS N	12 59 54	(12)				USCGS: 53S 140E
		eL NEZ	13 00.6	5-7				
42	9	iP NEZ	22 19 36					
		iS NEZ	45					
43	13	iP Z	11 03 27	1.6			+	USCGS: 50S 126E.
		i Z	33	1.8			+	
		eS E	07 18	(7)				
		e N	09.5	(6)				
		e E	09.9	(6)				
44	15	iP Z	15 01 32	1.6			-	USCGS: 18S 178 $\frac{1}{2}$ W
		e Z	05.1	3				
		eS N	07.0	7				
45	19	eS } NEZ	18 07.2	6-10				USCGS: 52 $\frac{1}{2}$ S 140E
		eL }						

No.	DATE 1958	Phase	TIME (G.M.T.)	Per.	Amplitude			Remarks
					A _N	A _E	A _Z	
			h. m. s.	s.				
46	Jun. 25	iP EZ	09 45(49)					
		ipP Z	56	(1.5)		e	(+)	USCGS: 3S 144 $\frac{1}{2}$ E
		i Z	46 00	1.5			-	
		eS N	53 13	3			+	
		e N	54 15	(4)				
		e N	56 15	(4)				
		eL E	10 02.8	11-13				
		eL N	05.9	10-13				
47	26	iP NEZ	23 29 08	(0.6)	-			
		iS NEZ	10		+			
48	Jul. 2	iP Z	04 55 13	1.6			-	USCGS: 18S 177W
49	4	iP NEZ	12 55 40	0.7	-	-	-	
		iS NEZ	46	0.7				
50	4	eP Z	21 20 04					
		iS NEZ	12	0.8	+	-		
51	5	i(P) E	12 20(46)					
		iS NEZ	52					
52	6	iP NEZ	00 37 51	0.5	(-)	-	(+)	
		iS NEZ	52	0.6				
53	9	iP Z	14 00 59	2			-	USCGS: 20 $\frac{1}{2}$ S 178 $\frac{1}{2}$ W
54	10	iPP Z	06 35 52	(1.6)			+	USCGS: 58 $\frac{1}{2}$ N 136W
		i Z	36 53	(1.6)			+	
		eSS NE	53 32	(22)				
		eL NE	07 15.2					Surface waves lasted 1 hour.
55	19	iP Z	06 39 23	1.6			-	USCGS: 4S 138 $\frac{1}{2}$ E
		ipP Z	40 00	1.6			-	
		iPcP Z	21	1.8			-	
56	21	iP NEZ	11 03 23	0.6	-		-	
		iS NEZ	27	1.0	-	+		
57	26	ePP Z	17 55 02	(1.2)				USCGS: 13 $\frac{1}{2}$ S 69W
		i Z	17 55 30	(1.8)			+	
		i Z	50	(1.2)			+	
		i Z	55	(1.6)			(-)	
		i Z	56 02				(-)	
		ePPP Z	56 48					
		iSKS E	18 00 43	(3.2)		-		
		iS NEZ	50	(6)	-	+	(+)	
		i NE	01 33	(8)	e	+		
		iSP Z	02 30	(3)			(-)	
		iS E	04 36	(7)	(-)			
		e Z	07 01					
		e Z	15 20					
58	27	i NEZ	11 42 01	(0.6)				Local
59	Aug. 12	eP Z	19 35(29)	1.8				USCGS: 0 126 $\frac{1}{2}$ E
60	13	i(P) Z	10 39 33					
		iS NEZ	38	0.8				
61	15	iP NEZ	22 39 27	1.5	e	e	-	USCGS: 1 $\frac{1}{2}$ N 125E
		iPcP Z	40 00	1.8			+	H = 22 29 13
		ipP Z	40 12	2.0			+	Δ = 7090Km.
		i Z	41 21	1.4			+	h = 190Km.
		i Z	41 33	2.4			-	
		iPPP Z	43 28	2.2			+	
		iS NE	47 45	4	-	-		
		iL NE	54.7	15	+	+		

No.	Date 1958	Phase	Time (G.M.T.)	Per.	Amplitude			Remarks
					A _N	A _E	A _Z	
			h. m. s.	s.				
62	Aug. 17	eP NE iS NEZ	18 39(00) 04	1.0				
63	17	iP NZ i Z	21 16 24 40	1.8 1.2	e		+	USCGS: 35 $\frac{1}{2}$ S 179 $\frac{1}{2}$ W.
64	21	iP NEZ	21 06 39	1.6	e	e	+	USCGS: 18S 176W.
65	22	iP NEZ iS NEZ	14 36 05 33	1.0 1.0	+		+	
66	25	iP Z iS NEZ	06 04(48) 55	0.8		-	+	
67	31	iP NEZ iS NEZ	05 14 05 12	< 1 1.0	+			
68	Sep. 5	iP NEZ iS NEZ i Z	15 49 29 33 41	< 1 < 1				
69	15	iP NEZ i Z iPP Z iS NE	19 55 28 54 58 02 20 03 20	(1.6) (2.0) (2.0)			+	USCGS: 2 $\frac{1}{2}$ N 120 $\frac{1}{2}$ E. H = 19 45 49 Δ = 7140Km. (assuming h = 600Km.)
70	15	i NEZ	20 06 04	1	+	+		Local tremor.
71	15	i NEZ	22 25 01	1	+	-	-	Local tremor.
72	18	iP NZ i Z i N iS NEZ	11 09 26 29 43 44	< 1 0.8 0.8			(-) -	H = 11 09 01
73	22	iP Z i NZ i Z i(PP) Z e E i Z i Z i Z i N M N	19 11 26 35 (49) 58 12 02 20 13 07 21 37 19 21.8	1.8 2 1.8 (2.2) 3 (6) (12)			- - (+) (+) (-) (+) +	USCGS: 33 $\frac{1}{2}$ S 177 $\frac{1}{2}$ W.
74	30	iP NEZ i NZ i NZ i Z	16 41 11 12 15 19	< 1 0.5	+			Local tremor.
75	Oct. 1	iP Z i Z i Z i Z i N i NE i(S) NEZ i Z i Z i Z	09 31 27 31 40 49 32 30 37 32 47 52 33 00 04	(1.2) (1.2) (1.4) 1.8 (7) (12) 8 (1.8) (1.8) 8			+	USCGS: 57S 147E H = (09 29 39) Δ = (790Km.)
					+	+	(+)	"S" has period of (2) secs. on vertical.
							(-)	Surface waves lasted 3/4 hour.
76	17	iP NEZ iS NEZ	03 01 44 47					
77	20	eP Z	01 22 35	(1.8)				USCGS: 9 $\frac{1}{2}$ S 112 $\frac{1}{2}$ E.
78	28	i NEZ	15 59 08	< 1				



International
Seismological
Centre

No.	Date 1958	Phase	Time (G.M.T.)	Per.	Amplitude			Remarks
					A _N	A _E	A _Z	
79	Oct. 30	iP	NZ	h. m. s.	s			
		i	Z	08 19 40	0.6		+	 H = 08 18 53 Δ = 310Km.
		i	Z	44				
		i	Z	48				
		i	Z	52				
		i(S)	NEZ	20 07	1.5			
		iL	E	12	10			
		i	NZ	16	1.7			
		i	Z	20				
		i	Z	25				
		i	Z	32				
		i	N	55				
80	31	iP	NEZ	17 03 40				
		i(S)	NEZ	45				
81	Nov. 6	iP	Z	23 11 33	(4)		(+)	USCGS: 44 $\frac{1}{2}$ N 148 $\frac{1}{2}$ E. H = 22 58 01 Δ = 11,100Km. h = 110Km.
		ipP	Z	12(04)	(2)		(-)	
		iPP	Z	15(37)	(2.6)		(+)	
		iPPP	Z	17(52)	(2.6)		(-)	
		i	Z	18 24	2.2		-	
		i(SKKS)	N	22 22	13	+		
		iS	N	52	15	+		
		isS	N	23 32	12	+		
		i	E	59	(8)	-		
		iSP	Z	24 40	(2.4)		(+)	
		iPS	N	46	10	+		
		i	N	26 06		-		
		i(PKKP)	N	28 20	(9)	-		
		eSS	N	29(57)	22			
		L	NEZ					
								Surface waves started while record being changed. Lasted 3/4hour.
82	10	iP	NZ	13 44 45		-	-	
		iS	EZ	48	1.0			
83	14	iP	NZ	13 58 00	1.4			
		iS	Z	11	1.4			
		e	E	26				
84	20	i	NEZ	06 12 23	< 1			Local tremor.
85	23	iP	NEZ	19 34 01	1.0	-	-	H = 19 33 36 Δ = 144Km. North.
		iS	NEZ	17	1.0			
		eL	E	20	3.5			
		i	Z	28	1.0			
		i	Z	56	1.5			
		i	Z	35 17	2.0			
86	27	eL	NE	13 46.7	9			USCGS: About 300 miles N.E. of Balleny Islands.

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COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

203 Collins Street,
MELBOURNE. VIC.

SEISMOLOGICAL BULLETIN

MACQUARIE ISLAND

DECEMBER 1958 to NOVEMBER 1959



Latitude: 54° 29' 55" S. Longitude: 158° 57' 22" E. Height: 14m.

Foundation: Weathered Basaltic Lava,

Instruments: Wood Anderson, two components.
Period: 1 sec.

Damping: 0.3 between April 14 and July 28;
otherwise 0.85.

Static Magnification: 2300

Grenet Vertical

Period: Seismometer 1.4. sec., galvanometer 0.8 sec.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Remarks
					A _N	A _E	A _Z	
			h. m. s.	s.	mm.	mm.		
1	Dec. 10	eP Z	07 07 31					USCGS: 37S 176½E
		iX NEZ	07 48					
		iX N Z	08 15					
		ipP Z	08 22					
		isP Z	08 48					
		iX Z	09 08					
		eX N	09 16					
		iX EZ	09 39					
		i(L) N	11 36					
2	25	iP Z	08 14 27					Dilatation.
		eX Z	14 46					H = 08 05 36
		eX Z	14 55					Δ = 5520Km.
		eS NE	21 32					USCGS: 5½S 151½E
		eX N	21 51					
3	Jan. 5	iP N Z	09 53 28					H = 09 46 (48)
		ePP NE	54 31					Δ = (3740)Km.
		eS N	58(47)					USCGS: 22S 171½E
4	6	i(P) Z	14 58 51					Dilatation.
								USCGS: 7½S 105½E
5	13	iP Z	21 26 21					USCGS: 25½S 180E
6	18	eiP NEZ	22 30 11					USCGS: 19S 178W
		epP Z	31(28)					
7	Feb. 3	eX Z	19 36 55					
		eX E	36 57					
8	9	iP Z	21 22 10					Dilatation.
		e(sP) Z	22 49					USCGS: 5S 154E
9	25	iP NEZ	23 41 42					H = 23 40 59
		iX N Z	41 47					Δ = 310Km.
		iX N Z	41 51					USCGS: 53S 160E
		iS NEZ	42 15					
10	28	eP Z	11 45 55					Δ = (830)Km.
		e(Lq) N	47 10					USCGS: West of
		e(Lr) NE	47(30)					Macquarie Island.
		M N	48.0	8	10			
		E	48.1	7		5		

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS.

203 Collins Street,
MELBOURNE VIC.



PROVISIONAL SEISMOLOGICAL BULLETIN.

MACQUARIE ISLAND

Latitude: 54° 29' 55" S. Longitude: 158° 57' 22" E. Height: 14m.
Foundation: Weathered Basaltic Lava.
Instruments: Wood-Anderson, two components
Period : 1 Sec.
Damping : 20:1
Magnification : 2900.

Grenet Vertical.

Period: Seismometer 1.3 Sec., galvanometer 0.8 Sec.

No.	Date 1958	Phase	Time (G.M.T.)	Remarks.
1	Dec. 1	Pg Sg i	04 17 09 17 14 17 29	H = 04 07 00 Δ = 44 Km
2	" 4	Pg Pn Sg	00 50 12 50 15 50 19	H = 00 50 01 Δ = 67 Km
3	" 4	Pg Sg Sn	07 16 52 17 07 09	H = 07 16 29 Δ = 122 Km
4	" 10	iP iPP isP iSS	07 07 42 08 28 09 08 11 34	H = 07 02 59 Δ = 2900 Km h = 290 Km
5	" 17	Pg Pn Sg	04 10 18 10 21 10 28	H = 04 10 06 Δ = 33 Km
6	" 17	Pg Sg S*	09 27 58 28 07 28 11	H = 09 27 43 Δ = 78 Km
7	" 21	Pg Sg	04 07 45 07 47	H = 04 07 42 Δ = 22 Km
8	" 21	Pg Sg S*	10 46 47 46 51 46 54	H = 10 46 42 Δ = 22 Km
9	" 21	Pg Sg S*	10 50 36 50 38 50 41	H = 10 50 33 Δ = 33 Km
10	" 22	Pg Sg Sn	09 11 03 11 10 11 19	H = 09 10 53 Δ = 56 Km

No.	Date 1958	Phase	Time (G.M.T.)	Remarks.
11	Dec. 23	Pg Pn Sg	07 23 36 23 39 23 37	H = 07 23 34 Δ = 11 Km
12	" 23	Pg Pn Sg	20 20 58 21 00 21 07	H = 20 20 45 Δ = 67 Km
13	" 24	Pn Sn Sg	08 22 58 23 44 23 52	H = 08 21 59 Δ = 411 Km
14	" 25	iP pP iS	08 14 27 14 46 21 34	H = 08 05 30 Δ = 5633 Km
15	" 30	Pg Pn Sg	17 20 45 20 47 20 49	H = 17 20 38 Δ = 33 Km

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