

53/1/2.

MACQUARIE ISLAND

Latitude: $54^{\circ} 29' 55''$ S. Longitude: $158^{\circ} 57' 22''$ E. Height: 14m. 
 Foundation: Weathered Basaltic Lava.
 Instrument: Wood-Anderson type seismograph, two components.
 Period: 0.75 seconds.
 Damping:
 Magnification: 2900.

No.	Date 1953	Phase	Time (G.M.T.)	Remarks
1	1st Jany.	i Pg E i Sg E	10 02 27 33	
2	9th "	e Pg NE i Sg NE	15 57 42 58 00	
3	10th "	i Pg NE i Sg NE	08 23 04 19	
4	11th "	i Pg NE i Sg NE	14 10 09 12	
5	13th "	i Pg E i Sg E	12 44 54 59	
6	20th "	i Pg NE i Sg NE	22 34 37 40	
7	24th "	i Pg NE i Sg NE	16 42 32 34	
8	24th "	e Pg E i Sg E	19 49 44 46	

HEARD ISLAND

Latitude: $53^{\circ} 01.2'$ S. Longitude: $73^{\circ} 23.1'$ E. Height: 10m.
 Foundation: Solid lava rock.
 Instrument: Wood-Anderson type seismograph, two components.
 Period: 0.75 seconds.
 Damping: 20 : 1
 Magnification: 2800

No tremors were reported during January, 1953

(P. B. NYE)
Director.

No.	Date 1953	Phase	Time (G.M.T.)	Remarks
✓ 30	Feb. 26th	iP eS eLq	11 48 55 54 12 56 54	
31	Feb. 27th	e e eL	05 59 54 59 56 06 03.4	

MACQUARIE ISLAND

Latitude: $54^{\circ} 29' 55''$ S. Longitude: $158^{\circ} 57' 22''$ E. Height: 14m.
 Foundation : Weathered Basaltic Lava
 Instrument : Wood-Anderson type seismograph, two components
 Period : 0.75 seconds
 Damping :
 Magnification: 2900

No.	Date 1953	Phase	Time (G.M.T.)	Remarks
9	Feb. 1st	iPg NE iSg NE	12 18 23 36	
10	Feb. 9th	iPg NE iSg NE	07 45 55 59	
12	Feb. 12th	ePg NE iSg NE	11 44 00 02	
13	Feb. 16th	ePg N iSg N	13 53 25 29	
14	Feb. 18th	ePg N iSg N	14 25 06 08	
15	Feb. 19th	iPg NE iSg NE	18 08 53 55	
16	Feb. 21st	iPg NE iSg NE	21 38 12 15	

HEARD ISLAND

Latitude: $53^{\circ} 01' 2''$ S. Longitude: $73^{\circ} 23' 1''$ E. Height: 10m.
 Foundation : Solid lava rock
 Instrument : Wood-Anderson type seismograph, two components
 Period : 0.75 seconds
 Damping : 20 : 1
 Magnification: 2800

No tremors were reported during February 1953.

MACQUARIE ISLAND

Latitude: $54^{\circ} 29' 55''$ S. Longitude: $158^{\circ} 57' 22''$ E. Height: 14m.
 Foundation : Weathered Basaltic Lava
 Instrument : Wood-Anderson type seismograph, two components
 Period : 0.75 seconds
 Damping :
 Magnification: 2900



No.	Date 1953	Phase	Time (G.M.T.)	Remarks
9	Feb. 1st	iPg NE iSg NE	12 18 23 36	
10	Feb. 9th	iPg NE iSg NE	07 45 55 59	
12	Feb. 12th	ePg NE iSg NE	11 44 00 02	
13	Feb. 16th	ePg N iSg N	13 53 25 29	
14	Feb. 18th	ePg N iSg N	14 25 06 08	
15	Feb. 19th	iPg NE iSg NE	18 08 53 55	
16	Feb. 21st	iPg NE iSg NE	21 38 12 15	

No. 53/3/2

MACQUARIE ISLAND.

Latitude: $54^{\circ} 29' 55''$ S. Longitude: $158^{\circ} 57' 22''$ E. Height: 14m.
 Foundation : Weathered Basaltic Lava
 Instrument : Wood-Anderson type seismograph, two components
 Period : 0.75 seconds
 Damping :
 Magnification : 2900

No.	Date 1953	Phase	Time (G.M.T.)	Remarks
17	March 16th	iPg NE iSg NE	17 29 12 20	doubtful

MACQUARIE ISLAND

Latitude: $54^{\circ} 29' 55''$ S. Longitude: $158^{\circ} 57' 22''$ E. Height: 14m.
 Foundation : Weathered Basaltic Lava
 Instrument : Wood-Anderson type seismograph, two components
 Period : 0.75 seconds
 Damping :
 Magnification: 2900



International
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No.	Date 1953	Phase	Time (G.M.T.)	Remarks
18	April 2nd	ePg N iSg N	04 04 55 04 58	
19	" 6th	eP N iS N	00 36 11 43 11	
20	" 6th	ePg N iSg N	03 12 06 46	
21	" 7th	ePg NE iSg NE	08 53 19 41	
22	" 7th	iPg NE iSg NE	18 14 41 15 21	
23	" 7th	ePg NE eSg NE	22 31 41 32 15	
24	" 8th	iPg N iSg	10 52 40 53 15	
25	" 19th	iPg N iSg N	01 17 26 45	
26	" 22nd	ePg iSg	15 38 21 39 35	
27	" 23rd	iPg NE iSg NE	14 53 04 53 18	
28	" 23rd	iP E PP NE PPP N PPP E iS N SS E SSS E	16 33 02 34 57 35 50 35 51 40 06 43 34 44 58	
30	" 26th	iPg N iSg N	20 57 36 58 03	
31	" 26th	iPg N iSg N	23 42 19 42 37	

HEARD ISLAND

Latitude: $53^{\circ} 01' 2''$ S. Longitude: $73^{\circ} 23' 1''$ E. Height: 10m.
 Foundation : Solid lava rock
 Instrument : Wood-Anderson type seismograph, two components
 Period : 0.75 seconds
 Damping : 20 : 1
 Magnification: 2800

No.	Date 1953	Phase	Time (G.M.T.)	Remarks
1	April 18th	(S)	03 21	
2	" 23rd	eP NE PP E eS N eS E	16 36 59 40 05 47 02 47 04	

P. B. Nye.
 (P. B. NYE)
Director

MACQUARIE ISLAND

Latitude: $54^{\circ} 29' 55''$ S. Longitude: $158^{\circ} 57' 22''$ E. Height: 14m.
 Foundation : Weathered Basaltic Lava
 Instrument : Wood-Anderson type seismograph, two components
 Period : 0.75 seconds
 Damping :
 Magnification: 2900

No.	Date 1953	Phase	Time (G.M.T.)	Remarks
33	May 13th	iPg E iPg E	19 05 18 05 44	
34	May 26th	iPg NE iSg NE	21 29 20 30 02	

HEARD ISLAND

Latitude: $53^{\circ} 01.2'$ S. Longitude: $73^{\circ} 23.1'$ E. Height: 10m.
 Foundation : Solid lave rock
 Instrument : Wood-Anderson type seismograph, two components
 Period : 0.75 seconds
 Damping : 20 : 1
 Magnification: 2800

No.	Date 1953	Phase	Time (G.M.T.)	Remarks
✓ 3	May 6th	eP N eSKS E eS NE	17 29 21 39 50 40 16	

P. B. Nye
 (P. B. NYE)
 Director

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COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS
485 Bourke Street,
MELBOURNE VIC.

1954 APR 27 AM 9:41

SEISMOLOGICAL BULLETIN

MACQUARIE ISLAND



Latitude: $54^{\circ}29'55''$ S. Longitude: $158^{\circ}57'22''$ E. Height: 14m.
Foundation: Weathered Basaltic Lava.
Instrument: Wood-Anderson type seismograph, two component (NS & EW)
Period: 0.75 seconds.
Damping: 0.1.
Magnification: 2900'.

Date	Phase	Time (G.M.T.)	Trace Amplitude		Period	Origin Time (G.M.T.)	Delta	Remarks
			N	E				
1953			mm	mm	Secs.		Degrees	
April 6	iPNE eSE eLE	00 45 26 52 50 01 03.9	1.0	1.4 0.8 0.6	4 12	00 36 13	52.7	
23	iPE ePPN eSN eScSN eLN ME	16 33 07 35 11 40 15 42 59 41.3 53.0	1.1 1.0 1.0 1.6 4	1.0	5 18 14	16 24 13	50.1	
26	eLN	12 24 17	2.0		9			
30	ePE eSE LQE LRE MN	06 33 32 39 03 41 24 43 22 45.5		0.4 0.6 0.5	2 4 11 13 17	06 26 38	35.3	
May 11	eLN MN	10 33 31 36 02	0.6		16			
June 25	iPE eSN eSSN	10 53 10 11 00 38 04 09	0.7 0.9	0.8	4 5	10 43 52	53.3	
June 25	iPE eSN eSSN	10 54 14 11 01 44 05 26	0.9 0.8	1.2	9 5	10 44 53	53.7	
July 2	iPNE iSN eSSSNE	07 03 43 09 09 12 31	1.1 3.0 0.8		2 8 8	06 56 50	37.0	Depth 0.025
29	iPNE iSN	23 26 18 32 58	0.3 0.6	0.6	1.8 6	23 17 58	45.8	
Aug. 29	iPNE	16 09 31.2	30					Max. trace amp. 52mm.
Sept. 14	eLE	00 42 47						
29	eLN eLE	03 48 27 03 48 39	4	3	8 10			

For Quake -
Aug. 29th. using Wellington, distance from Macquarie Island is 4.7

COPY

Date	Phase	Time (G.M.T.)	Trace Amplitude		Period	Origin Time (G.M.T.)	Delta	Remarks
			N	E				
1953 Sept. 29	ePNE	01 41 12	0.6	0.5	2	01 36 43	22.0	Depth about 300 Km
	iSN	44 49	1.1		3			
	SSNE	46 09	1.5	1.3	4			
	SSSNE	46 31	1.4		6			
	PcPE	44 56		1.4	1			
	ScSN	51 37	2.0					
Oct. 2	iPNE	01 05 19	0.6	0.6		01 03 51	5.7	Surface focus.
	eSNE	06 26		1.0				
	eLIE	06 29		2.5	9			
	MN	07 18	9.0		7			
	ePcPE	12 27	1.2					
	ePcSE	15 58		1.0				
	eScSN	19 28	1.0					
8	iPNE	22 31 05						
	eLN	32 26	0.3		12			
	eLE	32 32		0.3	10			
21	iPNE	03 39 36	0.5	0.8	1.5	03 36 52	11.4	
	eSN	41 43	0.8		4			
	eLQN	42 11	1.2		8			
	eLN	03 45 29	1.3		7			
Nov. 4	iPNE	03 57 01	1.0	0.5	1.5	03 49 09	42.3	
	eSNE	04 03 19	1.0	0.8	4			
	ipPE	03 57 10		1.6				
	ePPN	58 44	0.5					
	ePPPE	59 15		0.8				
	sSE	04 03 34	0.3	0.5				
	ScSN	06 59	0.4					
	LQE	06 56			12			
	MN	13.5	1.0		17			
4	iPE	04 12 44						
	iPN	46						
4	iPNE	12 35 38	0.2	0.2	1.5	12 27 41	42.9	
	eSN	42 00	0.2		7			
13	LE	19 36 34						
16	LE	17 35 31						
20	iPE	03 14 26	0.6					
	eSNE	15 41		1.1		03 12 49	6.6	
	ipPE	14 31	1.1					
	iPPNE	14 40	0.6	0.7				
	eLQNE	15 30		1.8	10			
	PcPE	21 12		3.5	5			
	MN	16.0	7.5		9			
25	iPE	18 01 50		0.8		17 48 50	90.9	
	iSNE	11 42		2.0	5			
	FPNE	05 24	0.9	0.9	3			
	FPNE	07 12			6			
	SKSN	12 13	1.0		10			
	FFSN	14 24	0.8		10			
	SSNE	18 54		0.9	10			
	LQE	26 01		0.3	30			
	MNE	38.4	1.0	1.0	21			
Dec. 2	LN	04 54 29			20			
12	LNE	18 20 25	0.3	0.5	40			

International
Seismological
Centre

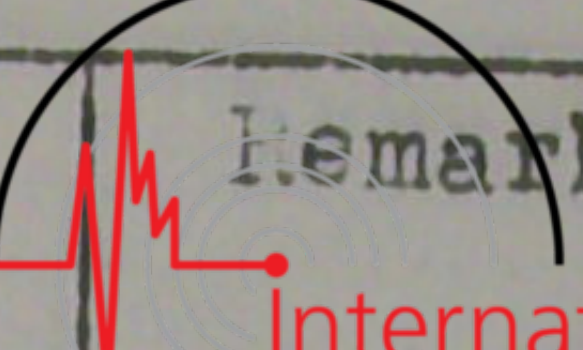
MACQUARIE ISLAND
LOCAL EARTHQUAKES.

Date	Phase	Time (G.M.T.)	Trace Amplitude		Origin Time (G.M.T.)	Delta	Remarks
1953			N	E		Degrees	International Seismological Centre
			mm	mm			
April 6	iPgNE iSgNE	03 11 57.8 12 00.9	0.6 2.1	0.4 1.8	03 11 52.8	0.25	
7	iPgE iSgNE	08 53 18.9 22.7		0.8 5.0	08 53 18.0	0.29	
7	iPgNE iSgNE	18 14 41.1 45.4	1.8 4.0	0.8 4.5	18 14 34.4	0.33	
7	iPgN iSgN iS N	22 31 38.3 44.2 48.0	0.3 7.0 4.5		22 31 29.0	0.46	
8	iPgN iPnN iSgN	10 52 40.0 42.9 48.3	1.0 4.2 4.0		10 52 19.6	0.65	
19	iPgN iP N iSgN	01 17 32.1 33.9 38.6	0.3 6.8 7.0		01 17 22.2	0.49	
22	iPgN iPnN iSgN iSnN	15 38 25.2 28.8 33.6 42.6	0.3 1.2 9.5 11.1	0.3 1.2 10.0 7.0	15 38 12.2	0.65	
23	iPgN iP N iSgN iSnN	14 54 04.9 05.9 12.7 17.4	1.6 8.1 4.3 2.9	1.1 6.4 3.5	14 53 52.6	0.61	
23		16 34 (Approx.)					Obscured by Teleseism
26	iPgNE	20 59 41.8			First Movement		
26	iPgN iSgN	23 42 18.7 22.5	0.5 2.2		23 42 12.8	0.29	
NOTE:		East times are not sufficiently clear to be read accurately but are very close to the North times.					

Date	Phase	Time (G.M.T.)	Trace Amplitude		Origin Time (G.M.T.)	Delta	Remarks
			N	E		Degrees	
1953			mm	mm			
May 6	iPgE	02 43 27.2		1.2	02 43 22.7	0.22	
	iSgE	30.0		4.8			
9	iPgE	23 01 10.7		0.8	23 01 05.0	0.53	
	iPx E	12.9		1.4			
	iSgE	17.5		3.0			
13	iPgE	19 05 13.1	1.8	2.2	19 05 00.5	0.63	
	iPx E	14.9					
	iSgE	21.1		7.3			
	iSnE	29.4		2.2			

LOCAL EARTHQUAKES

Date	Phase	Time (G.M.T.)	Trace Amplitude		Origin Time (G.M.T.)	Delta	Remarks
			N	E			
1953			mm	mm		Degrees	
May 26	iPgE iSgE	21 29 15.3 16.7	1.8	1.5 1.6	21 29 13.3	0.10	
NOTE: North times are not scaleable but are close to the East times.							



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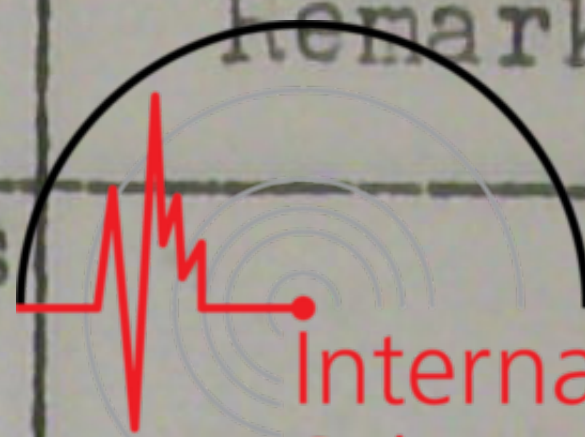
Date	Phase	Time (G.M.T.)	Trace Amplitude		Origin Time (G.M.T.)	Delta	Remarks
			N	E			
1953			mm	mm		Degrees	
June 2	iPgNE iPxNE iSgN iSnN	15 45 53.3 55.1 57.6 46 06.2	2.0 8.8 9.7 2.0	2.5 7.7 6.3 1.4	15 45 46.0	0.36	
5	iPgE iPnE iSgE	21 19 44.6 46.5 55.4		0.5 1.0 4.5	21 19 28.0	0.81	
10	iPgNE iSgNE	18 46 32.8 36.1	1.9 1.1	2.0 1.3	18 46 27.8	0.25	
13	iPgE iPxNE iSgNE iSxNE	00 42 02.3 03.5 07.0 09.1		0.5 1.0 0.8 1.1	00 41 54.7	0.36	
15	iPgNE iPxNE iSgNE	03 21 17.0 18.6 20.6	2.0 13.0 4.0	2.0 14.0 4.2	03 21 10.4	0.28	
18	iPgNE iSgNE iSxNE iSnNE	08 11 05.9 08.9 11.9 19.9	0.6 4.0 2.0 1.5	0.4 5.0 1.8 2.1	08 11 01.3	0.23	
18	iPgNE iSgNE	18 17 56.7 58.7	0.5 2.0		18 17 54.0	0.16	
21	iPgNE iPxNE iSgE	01 31 23.7 25.7 27.9		0.5 1.0 0.8	01 31 17.1	0.33	
22	iPgNE iSgNE	04 54 20.1 23.5	0.8 2.2	0.4 1.6	04 54 14.9	0.26	
26	iPgNE iPxNE iSgE	19 31 24.1 25.5 28.0	0.8 1.5	0.3 1.2 2.0	19 31 18.1	0.30	

LOCAL EARTHQUAKES

Date	Phase	Time (G.M.T.)	Trace Amplitude		Origin Time (G.M.T.)	Delta	Remarks
			N	E			
1953			mm	mm		Degrees	
July 4	iPgNE iPxNE iSgN	23 40 20.6 23.1 25.5	1.0 1.2 1.1	1.1 1.0	23 40 12.9	0.38	
6	iPgNE iSgNE iSnNE	19 50 02.4 08.0 15.9	1.4 10.0 3.9	0.9 12.0 6.0	19 49 53.5	0.44	
6	iPnNE iPxNE iSnE iSgE	19 54 12.0 17.9 49.9 59.8	3.5 49.0	3.5 60.0 10.0 7.5	19 53 20.0	3.3	
16	iPgNE iSgNE iSxNE iSnE	09 56 41.8 44.5 48.2 54.2	2.0 6.5 3.3	2.0 6.0 2.6 2.0	09 56 37.6	0.21	
19	iPgNE iSgNE iSnE	21 58 26.5 30.3 39.0	1.0 9.0	0.8 9.5 3.5	21 58 20.4	0.30	
20	iPgNE iSgNE iSxNE	19 17 51.5 54.5 58.5	2.6 5.5 7.0	4.3 8.0 10.0	19 17 46.9	0.23	
26	iPgNE iSgNE iSnNE	19 05 27.7 35.1 41.7	0.4 4.4 2.9	0.4 6.0 4.0	19 05 16.0	0.58	
28	iPgNE iSgNE iSxE	07 05 44.7 47.1 50.7	0.5 1.5	1.6 2.0 1.1	07 05 41.0	0.18	
Aug. 3	iPgN iSgNE iPnE	23 15 58.0 16 02.0 03.5	0.8 1.8	1.1 1.5	23 15 52.0	0.30	
6	iPgNE iSgNE iSxE	04 57 56.6 58.0 58 01.7	8.5	7.0 3.0	04 57 54.3	0.11	
15	iPgE iSgE iSnE	12 38 32.1 33.3 45.5		1.3 3.2 0.9	12 38 30.1	0.10	
19	iPgNE iSgE iPxN	15 18 37.8 39.0 40.2	1.2 1.4	0.8 2.2	15 18 35.8	0.10	
21	iPgNE iSgE	18 43 07.2 09.4	1.3	2.8 1.8	18 43 03.7	0.17	
25	Tremors	05 49 21.5 08 33 18.9 09 10 40.2 12 26 35.8	All small and not scaleable into phases				
26		08 33 07.1					



Date 1953	Phase	Time (G.M.T.)	Trace Amplitude		Origin Time (G.M.T.)	Delta	Remarks
			N	E			
Aug. 26	iPnNE iPgN iSnNE iSgN	09 58 59.5 59 12.9 38.8 51.8	mm 19.0 40.0 17.0 12.0	mm 92.0 11.0	09 58 06.5	Degrees 3.5	 International Seismological Center doubtful.
28	iPgNE iSgNE iSxN iSnN	07 46 58.1 47 03.1 06.8 10.9	3.5 9.8 7.0 3.3	2.0 9.5	07 46 50.5	0.38	
29	iPgNE iPxN iSgE	09 20 19.0 21.2 21.4	0.8 2.5	1.2	09 20 15.0	0.20	
Sept. 1	iPgNE iPxN iSgNE iSnN	08 28 18.7 20.3 26.6 34.0	2.0 6.0 7.0	2.0 9.0 4.0	08 28 06.3	0.61	
5	iPgNE iSgNE iSxN	06 02 19.9 21.5 24.1	1.0 9.0 3.0	1.0 5.5 2.0	06 02 16.9	0.13	
14	iPgNE iPxNE iSgE iSxN	13 19 40.2 41.5 43.5 47.1	0.9 2.3 1.1	1.5 3.5	13 19 35.2	0.26	
29	iPgE iSgNE iSnN	08 31 29.3 33.9 43.1	16.5 2.0	0.7 7.0	08 31 22.2	0.36	
30	Tremor	08 30 18.2					Small and not scale- able into phases.
Oct. 4	iPgNE iSgNE iSnNE	10 43 01.6 13.5 17.3	0.5 2.0 1.9	0.5 3.4 2.1	10 42 43.6	0.90	
4	iPgNE iSgNE	15 51 25.2 27.3	0.7 0.9	3.5 1.2	15 51 22.0	0.16	
8	iPgNE iSgNE iPnE	15 30 41.4 43.6 46.3	0.6 3.8	0.9 5.8 2.0	15 30 36.8	0.23	
11	iPgN iPnE iSgN iSgE iSnE	21 00 30.3 33.6 39.0 40.3 44.5	2.0 11.3	1.9 4.3 18.5 7.0	21 00 17.1(N) 21 00 15.2(E)	0.68 0.76	
13	iPgE iSgNE iSxNE	17 55 32.5 36.1 39.3	2.2 2.0	1.8 2.5 2.0	17 55 26.9	0.28	
18	iPgNE iPxNE iSgE iSxNE	19 36 10.2 12.4 14.4 18.5	1.0 1.8	1.7 1.3 2.2 1.6	19 36 03.3	0.34	

Date	Phase	Time (G.M.T.)	Trace Amplitude		Origin Time (G.M.T.)	Delta	Remarks
			N	E			
Oct. 26	iPnNE iPgNE iSnNE	07 30 16.4 20.3 43.7	mm 12.0 20.0 11.0	mm 15.5 32.0 19.0	07 29 38.9	Degrees 2.15	 International Seismological Centre
26	iPgN iSgNE iSnNE	07 31 56.1 59.3 32 06.3	2.5 12.0 5.0	16.5 9.5	07 31 50.9	0.26	
Nov. 4	iPgNE iSgNE iSxN iSnE	05 46 15.9 18.6 22.5 26.5	0.6 1.5 1.2	0.5 4.2 1.1	05 46 11.5	0.21	
10	iPgNE iPxNE iSgNE iSxE	13 56 31.8 34.2 38.5 40.5	1.0 3.0 17.0	1.1 2.8 16.0 6.5	13 56 21.3	0.52	
11	iPgN iSgN	16 23 03.2	10.0				Obscured by microseisms.
21	ePgN iSgE iSxN	21 06 02.7 06.5 10.0	0.9 2.5	1.9	21 05 56.8	0.29	
24	iPgNE iSgE iPnE	15 55 41.3 44.4 46.8	2.4 1.2	2.0 1.1 1.7	15 55 36.4	0.24	
24	iPxNE iPnNE iSgNE	16 34 15.2 17.2 30.2	1.1 4.8 33.0	0.8 4.3 32.0	16 33 53.2	1.16	
26	iPxNE iPnNE iSgNE	15 47 55.4 57.6 48 10.6	1.5 14.5 53.5	2.0 18.8 67.0	15 47 23.4	1.16	
27	iPgNE iPxNE iSgN	06 08 20.8 22.3 26.0	0.9 2.1 2.0	0.8 1.2	06 08 12.5	0.41	
Dec. 3	iPgNE iPxNE iSgNE iSnN	03 44 26.2 28.0 30.9 36.3	12.5 7.5 2.2	2.0 7.5 5.0	03 44 18.7	0.37	
7	iPgNE iPxNE iSgNE iSxN iSnNE	15 09 54.4 56.1 10 01.4 03.2 06.7	1.0 1.9 20.0 4.5 9.0	0.8 1.2 14.5 6.5	15 09 43.5	0.54	
9	iPnNE iPgE iSxN iSnNE	15 37 07.0 08.8 28.4 29.4	1.8 2.5 47.5	0.9 1.3 29.0	15 36 37.9	1.57	



Date	Phase	Time (G.M.T.)	Trace Amplitude		Origin Time (G.M.T.)	Delta	Remarks
			N	E			
1953			mm	mm		Degrees	
Dec. 10	iPgE	18 36 08.8		0.5	18 36 05.2	0.18	
	iSgNE	10.0	6.0	8.5			
	iSnN	13.6	1.5				
13	iPgNE	10 22 41.9	0.9	1.0	10 22 34.2	0.48	
	iSgNE	48.1	4.5	7.0			
	iSxNE	50.5	2.1	2.0			
15	iPgNE	15 46 58.2	10.0	15.0	15 46 47.3	0.54	
	iSgNE	47 05.2	50.0	42.0			
	iSnN	12.6		21.0			

Jeffries and Bullen notation and tables used throughout.

(P. B. NYE)
D i r e c t o r .