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DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, JANUARY 1954

Readings from two Milne-Shaw (horizontal) seismographs recording North and East components respectively.  $T = 12$  secs., damping ratio 20 : 1, magnification 250.

Position:- latitude  $54^{\circ}46'N$ , longitude  $01^{\circ}35'W$ , height above M.S.L. 103 metres.

There have been time when both the instruments have not recorded.

The readings marked with an asterisk (\*) are from a trial short period Willmore seismograph; the trial finished on 15th December, 1953.

Addition and correction to December list.

Dec. 7            eZ\*P            02 18 53,    PPeE    02 22 58.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
Jan. 4	MN	13 09				
Jan. 6	?N	02 45 45				
Jan. 9	iNE	12 13 33	Artificial			
Jan. 11	NE	18 00	20	8		
Jan. 12	iN	14 40 49				
	iE	14 45 38				
	MN	14 56	9	5		
Jan. 12	MN	16 04	18	18		
Jan. 13	eN	00 14 34				
	E	00 15 36				
Jan. 13	N	00 37 56				
	N	00 38 20				
	MN	00 59	18	15		
Jan. 13	MN	01 58	17	19		
Jan. 23	iNE	11 32 26	Artificial			
Jan. 30	iNE	10 08 04	Artificial			



READINGS FROM SEISMOGRAMS, FEBRUARY, 1954.

Readings from two Milne-Shaw (horizontal) seismographs recording North and East components respectively. T = 12 sec., damping ratio 20 : 1, magnification 250.

Position:- latitude 54°46'N, longitude 01°35'W, height above M.S.L. 103 metres.

There have been times when both the instruments have not recorded.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
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Addition to the January list.

Jan. 13	iE	00 33 34				
Feb. 1	N	01 11 57				
	iNE	01 14 49				
	iNE	01 24 21				
	MN	02 03	19	48		
Feb. 5	iNE	09 50 11				
	ME	10 32	35	70		
Feb. 9	MN	23 45	10	4		
Feb. 11	iPNE	00 41 04				
	iE	00 41 42				
	iNE	00 45 01				
	iPPPN	00 45 17				
	iSNE	00 49 50			66	
	iScSNE	00 51 03				00 30 19
	iSSN	00 54 11				
	ME	01 07	19	340		
Feb. 19	ME	01 22	21	55		
Feb. 19	ME	20 52	13	10		
Feb. 19	ME	22 16	20	27		
Feb. 20	iNE	18 58 53				
	iNE	19 00 12				
	iNE	19 02 53				
	iN	19 12 36				
	iE	19 12 49				
Feb. 22	?ME	12 53				
Feb. 23	ME	07 26	14	10		
Feb. 28	ME	01 50	20	15		



2 March 1954.





DURHAM UNIVERSITY OBSERVATORY  
READINGS FROM SEISMOGRAMS, MAY 1954.

Readings from two Milne-Shaw (horizontal) seismographs recording North and East components respectively. T = 12 secs., damping ratio 20 : 1, magnification 250.

Position:- latitude 54°46'N, longitude 01°35'W, height above M.S.L. 103 metres.

There have been times when one of the instruments has not recorded.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
May 1	eNE	15 39 24				
May 1	N MN	20 48 37 21 08	15	5		
May 3	E E MN	15 49 15 15 50 43 16 20	12	11		
May 4	?N E NE ME	16 35 08 16 48 19 16 50 28 17 00	9	6		
May 5	eN E ME	13 31 57 13 37 01 14 00	15	24		
May 9	N N MN	14 18 31 14 22 01 14 27	9	7		
May 13	iPE iPcPE iSE iPPSE iSSE ME	14 58 41 14 58 59 15 08 34 15 09 43 15 13 33 15 29	22	11	78	14 46 44
May 14	eNE NE E N NE	22 51 27 22 58 28 23 01 24 23 02 40 23 03 06				
May 15	NE	10 38 21	Artificial			
May 19	eN eN iE iN ME	09 39 13 09 40 11 09 40 20 09 40 24 09 41	?Seismic    9	    12		
May 20	ME	00 24	20	2		
May 26	ePNE iNE iSNE MN	22 08 33 22 08 36 22 12 35 22 19	12	8	22	22 03 40
May 27	MN	02 35	14	3		
May 29	iNE	10 39 41	Artificial			
May 31	eNE iE iE iNE ME	16 08 13 16 17 21 16 17 41 16 24 03 17 09	17	4		



DURHAM UNIVERSITY OBSERVATORY
READINGS FROM SEISMOGRAMS, JULY, 1954.

Readings from two Milne-Shaw (horizontal) seismographs recording North and East components respectively.  $T = 12$  secs., damping ratio 20 : 1, magnification 250.

Position:- latitude  $54^{\circ}46'N$ , longitude  $01^{\circ}35'W$ , height above M.S.L. 103 metres.

There have been times when both the instruments have not recorded.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
July 2	?eN	02 45 18				
	iN	03 09 33				
	ME	03 39	22	45		
July 2	iNE	16 41 09	Artificial			
July 3	?N	00 40 19				
	ME	01 10	15	7		
July 3	eE	22 44 49				
	iE	22 49 41				
	iE	22 49 59				
	iN	22 57 47				
	iE	22 59 01				
	ME	23 39	22	40		
July 5	iNE	18 00 20	Artificial			
July 6	eNE	08 16 08				
	iN	08 16 19				
	iN	08 26 12				
	iE	08 26 16				
	ME	08 56	17	18		
July 6	iE	11 24 48				
	iE	11 34 04				
	ME	11 57	15	18		
July 6	iPNE	22 19 08				
	PcPN	22 19 26				
	PPN	22 21 50				
	PPPN	22 23 28				
	iSNE	22 28 29				
	ScSNE	22 29 16			72	22 07 43
	SSE	22 33 11				
ME	22 49	20	14			



DURHAM UNIVERSITY OBSERVATORY
READINGS FROM SEISMOGRAMS, July 1954 continued.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time to origin To
July 8	iNE	17 00 18	Artificial			
July 10	ME	17 06	20	1		
July 13	MN	22 58	19	1		
July 18	eN	09 30 18				
	iE	09 30 28				
	ME	10 00	19	9		
July 18	ME	11 56	12	1		
July 18	iN	14 51 36				
	iE	14 51 43				
	iNE	14 52 00				
	LNE	14 55 47				
July 19	iNE	16 02 19	Artificial			
July 29	iNE	04 46 42				
	iN	04 48 06				
	iE	04 48 12				
July 30	?iE	23 20 40				
	?iNE	23 37 13				
	?ME	23 42	19	5		
July 31	eE	00 36 21				
	iE	00 39 49				
July 31	iPN	01 10 33				
	iE	01 19 47				
	iSNE	01 19 59			73	00 59 03
	MN	01 39	20	240		
July 31	iNE	10 57 25	Artificial			

3 August 1954.



DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, AUGUST 1954.

Readings from two Milne-Shaw (horizontal) seismographs recording North and East components respectively. T = 12 secs., damping ratio 20 : 1, magnification 250.

Position:- latitude 54°46'N, longitude 01°35'W, height above M.S.L. 103 metres.

There have been times when both the instruments have not recorded.

Additional reading for 1953 November 10 ePZ 23 51 35

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
August 3	ePNE	18 23 17				
	iPcPN	18 23 21				
	iPPPE	18 24 06				
	iSNE	18 27 25			23	18 18 17
	iSSE	18 28 09				
	iPcSE	18 30 54				
	ME	18 32	16	24		
August 7	iNE	10 45 58	Artificial			
August 9	iE	19 37 21				
	iNE	19 38 13				
	MN	20 09	17	8		
August 12	iNE	15 06 47	Artificial			
August 17	iNE	17 29 14	Artificial			
	iNE	17 29 31	Artificial			
August 18	eN	05 01 38				
	iNE	05 01 49				
	iN	05 02 29				
	iNE	05 02 49				
	iN	05 03 08				
	iN	05 05 48				
	iE	05 23 52				
	iE	05 24 55				
August 20	iN	19 25 30				
	MN	19 31	17	2		
August 20	iN	20 28 09				
	MN	20 34	12	5		



DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, AUGUST, 1954 continued

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
August 20	MN	21 33				
August 20	E	21 48 30				
	ME	21 58	13	4		
August 20	NE	22 08 31				
	ME	22 18	14	5		
August 20	ME	22 50				
August 20	iN	23 03 14				
	MN	23 09	14	9		
August 21	E	00 28 27				
	eN	00 29 23				
	iN	00 29 33				
	iN	00 31 04				
	ME	00 35	15	18		
August 21	ME	04 22	14	3		
August 21	ME	06 29				
August 21	iN	07 23 49				
	iNE	07 23 59				
	ME	07 29	15	16		
August 21	ME	09 00				
August 21	ME	10 57				
August 21	ME	13 01				
August 21	ME	13 14	15	4		
August 21	ME	17 49	12	4		
August 21	ME	20 45				
August 21	iN	22 55 02				
	iN	22 55 09				
	iE	22 58 24				
	ME	23 00	16	17		
August 22	ME	03 01	15	4		
August 22	ME	08 56				



DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, AUGUST 1954 continued.

Date	Phase and component	Time G.M.T.	Period Secs	Amplitude microns	Distance degrees	Time of origin To
August 22	iN	10 12 03				
	iNE	10 12 11				
	MN	10 18	12	3		
August 22	N	12 43 48				
	MN	12 50	15	3		
August 22	ME	18 30				
August 23	ME	09 42				
August 23	ME	11 49				
August 24	iPNE	06 12 25	compression			
	iNE	06 13 10				
	PPE	06 15 03				
	PPPE	06 16 48				
	PcSNE	06 17 03				
	iE	06 20 16				
	iNE	06 20 32				
	SNE	06 21 30			69.5	06 01 17
	PSNE	06 22 10				
	ScSNE	06 22 23				
	SSN	06 26 07				
ME	06 33	16	90			
August 27	MN	12 31	12	4		
August 31	?iE	22 36 17				
	E	22 41 24				
	MN	23 01	13	6		

2 August 1954.

SEP

DURHAM UNIVERSITY OBSERVATORY
READINGS FROM SEISMOGRAMS, SEPTEMBER, 1954.

Readings from two Milne-Shaw (horizontal) seismographs recording North and East components respectively.  $T = 12$  secs., damping ratio 20 :1, magnification 250.

Position:- latitude  $54^{\circ}46'N$ , longitude  $01^{\circ}35'W$ , height above M.S.L. 103 metres.

**There** have been times when one of the instruments has not recorded.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
Sept. 2	E MN	02 02 35 02 07				
Sept. 3	ME	11 03	11	4		
Sept. 4	MN	04 41	12	9		
Sept. 4	MN	09 45	18	10		
Sept. 4	iNE	11 05 10	Artificial			
Sept. 6	?eE ME ME	17 11 00 17 40 17 45				
			20	6		
			16	10		
Sept. 6	iPN iE iPPPN eNE iSNE SKSN ScSN MN	18 42 16 18 42 21 18 46 45 18 51 37 18 51 39 18 52 16 18 52 34 19 20				
					73	18 30 49
			20	6		
Sept. 7	ME	01 10	14	9		
Sept. 9	iPNE iSE iSSSNE iPcPE ME	01 09 01 01 12 33 01 13 12 01 13 35 01 15				
						small C followed by large D.
						19
			15	630		01 04 43



DURHAM UNIVERSITY OBSERVATORY
READINGS FROM SEISMOGRAMS, SEPTEMBER, 1954 continued.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
Sept. 10	iPN	05 48 22				
	iE	05 48 26				
	iSN	05 51 48			18	05 44 14
	iN	05 53 09				
	iE	05 53 39				
	iN	05 54 27				
	iN	05 55 04				
	MN	05 56	11	74		
Sept. 12	ME	08 36	18	12		
Sept. 13	iNE	02 29 26				
	iE	02 51 23				
	iE	02 52 37				
Sept. 13	eNE	18 36 07				
	eNE	18 43 21				
	ME	19 10	16	5		
Sept. 14	MN	01 47	14	8		
Sept. 17	iNE	11 22 31				
	iN	11 22 52				
	iN	11 25 50				
	iN	11 26 18				
	iN	11 34 17				
	iE	11 44 35				
Sept. 23	?eE	21 46 12				
	eE	21 59 17				
	ME	22 33	19	19		
Sept. 26	iNE	14 01 45	Artificial			
Sept. 30	?ME	09 59	20	6		

2 October, 1954.



DURHAM UNIVERSITY OBSERVATORY  
READINGS FROM SEISMOGRAMS, NOVEMBER 1954.

Readings from two Milne-Shaw (horizontal) seismographs recording North and East components respectively.  $T = 12$  secs., damping ratio 20 : 1, magnification 250.

Position:- latitude  $54^{\circ}46'N$ , longitude  $01^{\circ}35'W$ , height above M.S.L. 103 metres.

There have been times when one of the instruments has not recorded.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
2 Nov.	?E MN	08 49 44 09 24	32	85		
2 Nov.	MN	23 01	14	9		
4 Nov.	MN	02 17				
18 Nov.	MN	21 36	19	4		
19 Nov.	iE iNE	06 15 59 06 19 27				
25 Nov.	?iPE ?iSE ME	11 28 11 11 37 57 11 57	19	70	77	11 16 19

2 December, 1954.



DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, DECEMBER, 1954.

Readings from two Milne-Shaw (horizontal) seismographs recording North and East components respectively. T = 12 secs., damping ratio 20 : 1, magnification 250.

Position:- latitude 54°46'N, longitude 01°35'W, height above M.S.L. 103 metres.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin
11 Dec.	ME	04 03				
11 Dec.	iE	13 01 14				
	iE	13 04 48				
	MN	13 07	12	100		
16 Dec.	eNE	11 19 27				
	ME	11 52	12	100		
21 Dec.	?eN	20 04 13				
	?N	20 12 33				
	?N	20 16 50				
	MN	20 40	15	33		
28 Dec.	eN	01 30 18				
	iE	01 30 23				
	MN	02 02	33	18		
29 Dec.	?E	03 14 46				
	MN	03 48	26	12		

3 January 1955