DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, JANUARY, 1953.

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 of the instruments have not recorded.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin T_o
Jan.5	?iSNE	08 09 06				
	MN	08 38	12	60		
Jan.5	iPNE	10 18 11				
	iSN	10 27 27			73	10 06 50
	MN	10 55	20	75		
Jan.7	iE	00 08 28				
	iSNE	00 09 18				
	iE	00 11 51				
	iNE	00 12 20				
	iNE	00 12 53				
Jan.7	iE	01 23 30				
	iE	01 23 38				
	iE	01 27 11				
	iNE	01 29 59				
	iNE	01 30 25				
Jan.7	ME	15 15	27	22		
Jan.9	MN	17 26	10	1		
Jan.11	iPN	23 03 05				
	PcPN	23 04 12				
	PPN	23 05 12				
	PPPN	23 06 25				
	iE	23 06 49				
	iNE	23 10 27				
	iSNE	23 10 45			55	22 53 37
	SSN	23 14 30				
	ME	23 25	18	34		
Jan.12	iPN	17 35 15				
	PPN	17 38 03				
	iSE	17 44 48			74.5	17 23 38
	SKSE	17 45 24				
	PSNE	17 45 30				
	PPSE	17 45 44				
	ME	18 16	15	16		
Jan.15	MN	13 05				
Jan.21	iNE	16 08 27	Artificial			
Jan.25	ME	20 27				
Jan.27	MNE	04 03				

2 February 1953.

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, FEBRUARY, 1953.

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 T_o
Feb. 6	E	13 34 56				
	MN	14 05	18	28		
Feb. 7	MN	19 15	15	7		
Feb.12	iPE	08 23 26				
	iE	08 23 40				
	iE	08 25 26				
	iSNE	08 29 59			44	08 15 19
	MN	08 47	16	55		
Feb.19	iNE	12 28 54	Artificial			
Feb.19	?eN	15 27 29				
	N	15 29 19				
	iNE	15 35 17				
	MN	15 57	14	35		
Feb.26	?E	12 04 24				
	?E	12 05 36				
	E	12 12 46				
	ME	12 49	22	44		

2 March 1953.

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, MARCH, 1953.

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
Mar. 10	ME	22 40				
Mar. 12	MN	07 00				
Mar. 14	ME	18 08	15			
Mar. 18	ePNE	19 11 32				
	iNE	19 11 35				
	iN	19 12 03				
	iPPNE	19 12 09				
	iE	19 12 45				
	iN	19 13 35				
	iPcPNE	19 15 24				
	iE	19 15 46				
	iSNE	19 15 52				
	ME	19 23	14	680	24.5	19 06 12
Mar. 19	iPE	08 37 56				
	iE	08 38 01				
	iPcPE	08 38 38				
	iPPE	08 40 17				
	iPPPNE	08 41 46				
	iN	08 42 34				
	iPcSNE	08 42 45				
	iE	08 45 46				
	iE	08 45 59				
	iSNE	08 46 04			59.5	08 27 56
	iPPSE	08 46 34				
	iN	08 47 02				
	iScSE	08 48 04				
	iSSE	08 50 08				
	ME	09 02	19	90		
Mar. 21	MNE	19 44	16	3		

Any later March readings will be given in the April list.

1 April, 1953

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, APRIL, 1953.

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 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
April 2	iNE	16 16 57	Artificial			
April 4	iNE	11 30 40	Artificial			
April 6	MN	13 05	17	3		
April 18	iNE	11 08 42	Artificial			
April 19	ME	16 52	20	3		
April 23	iNE (high frequency)	16 43 54				
	eNE (long period)	16 44 39				
	iNE	16 45 37				
	ME	17 25	35	430		
April 24	eNE	02 14 15				
	iN	02 14 49				
	NE	02 18 54				
	MN	02 22	18	2		
April 30	iNE	06 46 24	?Artificial			
April 30	MN	16 08				

May 2, 1953.

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, MAY 1953.

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.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
May 2	eNE	18 47 31				
	ME	18 52	17	5		
May 2	MN	19 30	17	5		
May 4	MN	12 22	15	3		
May 5	iNE	14 14 35	Artificial			
May 6	iE	17 35 45				
May 7	iNE	15 02 34	Artificial			
May 16	iE	10 51 21	Artificial			
May 18	iNE	08 26 00				
	ME	08 43	16	4		
May 24	iNE	11 00 37	Artificial			
May 25	iN	18 15 00				
	MN	18 35	15	2		
May 31	iPE	20 09 05				
	iSE	20 17 24			61·5	19 58 50
	iPSE	20 17 43				
	iScSE	20 18 58				
	iSSE	20 21 26				
	ME	20 32	17	3		

2 June 1953.

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, JUNE, 1953

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
June 6	iNE	11 23 42				
June 6	iN	12 14 18				
	MN	12 18	11	3		
June 7	MN	13 05	15	1		
June 8	eE	12 01 08				
	PNE	12 01 18				
	MN	12 31	18	6		
June 9	MN	02 32	13	6		
June 13	iNE	18 48 23				
June 15	iPN	17 58 07				
	iPPPN	18 02 21				
	iSE	18 07 04			68	17 47 09
	iSKSE	18 08 08				
	MN	18 30	11	48		
June 16	eN	10 16 32				
	iNE	10 16 55				
	MN	10 50	19	4		
June 18	?iNE	10 27 19				
June 21	NE	08 20 43				
June 23	eN	14 04 25				
	iN	14 05 03				
	iN	14 14 23				
	MN	14 43	21	6		
June 25	eNE	11 03 56				
	iNE	11 05 01				
	iE	11 13 48				
	MN	11 49	24	48		
June 26	iPE	06 02 52				
	MN	06 52	20	23		

July 2, 1953.

URHAM UNIVERSITY OBSERVATORY

GS FROM SEISMOGRAMS, JULY, 1953.

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 T_o
Additional readings for earlier months.						
April 14	iSE	13 50 25				
	iN	13 50 40				
	N	13 54 30				
May 6	iPPE	17 35 45				
June 13	PNE	18 44 12				
	iSNE	18 48 23			23	18 39 09
June 18	PE	05 49 08				
	SNE	05 53 25				
	NE	05 53 43			24	05 43 59
Addition and correction.						
June 26	eNE	06 01 24				
	NE	06 02 07				
	E	06 02 35				
	iE	06 02 52				
	MN	06 52	20	23		
July readings.						
July 1	iPNE	03 11 07				
	eN	03 20 25				
	MN	03 49	20	10		
July 2	iPNE	07 16 04				
	MN	08 07	21	26		
July 2	iNE	15 10 12	Artificial			
July 5	eE	04 12 21				
	iN	04 12 28				
July 9	?ePN	19 17 36				
	?SNE	19 23 16				
	MN	19 36	15	8	36	19 10 36

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, JULY, 1953 continued.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin T_o
July 9	eNE	21 15 38				
	iE	21 31 13				
	iNE	21 37 13				
	ME	21 44	22	18		
July 10	eE	15 30 35				
	iE	15 33 53				
	iNE	15 35 29				
	iNE	15 37 13				
July 20	NE	08 28 41				
	ME	08 50	14	6		
July 21	eE	18 08 59				
	ME	18 20	16	2		
July 22	iPNE	05 22 44				
	iSN	05 33 04			83	05 10 21
	MN	06 01	18	19		
July 22	NE	14 58 58				
	eN	15 03 13				
	ME	15 27	11	4		
July 22	?NE	17 52 04				
	iE	18 06 59				
	ME	18 25	21	6		
July 23	MN	19 15	13	1		
July 26	iNE	17 17 11				
	MN	17 56	16	2		
July 29	?NE	18 38 29				
	?NE	18 47 09				
	ME	19 05	16	3		

August 3, 1953.

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, AUGUST 1953.

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 T
1 August	iNE	10 34 28	Artificial			
6 August	?N	19 13 02				
	N	19 15 24				
	N	19 20 30				
	MN	19 31	13	2		
9 August	iPNE	07 46 09				
	iSNE	07 50 12			23	07 41 15
	iPcSN	07 53 42				
	ME	07 55	12	39		
	iScSE	07 57 28				
11 August	iPNE	03 37 22				
	iSN	03 41 25			23	03 32 28
	iE	03 41 30				
	iPcSN	03 44 42				
	MN	03 46	17	143		
	iScSNE	03 48 35				
12 August	eE	09 28 52				
	iPE	09 28 55				
	iSE	09 32 59			23	09 23 52
	ME	09 37	14	760		

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, AUGUST, 1953 (continued)

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin T
12 August	iPNE	12 10 26				
	iSN	12 14 30			23	12 05 23
	N	12 14 33				
	MN	12 22	12	21		
12 August	iPNE	14 13 42				
	iSN	14 18 48			23	14 08 36
	iN	14 19 06				
	MN	14 23	10	9		
12 August	iN	17 13 27				
13 August	NE	09 42 55	?seismic			
18 August	iNE	16 38 33	Artificial			
22 August	iNE	10 46 29	Artificial			
27 August	iNE	15 05 06	Artificial			
27 August	iNE	15 56 54	Artificial			
29 August	iPN	14 13 11				
	SNE	14 16 59			21	14 08 28
	iN	14 17 04				
	MN	14 24	10	9		

2 September 1953.

DURHAM UNIVERSITY OBSERVATORY

FROM SEISMOGRAMS, SEPTEMBER, 1953.

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
Sept. 2	iE	00 38 12				
	eN	00 39 07				
	iE	00 39 15				
	MN	00 58	20	3		
Sept. 4	iPE	07 34 29				
	iSE	07 44 23			78.5	07 22 29
	iN	07 44 57				
	ME	08 15	15	22		
Sept. 4	ME	15 04	25	7		
Sept. 5	iPNE	14 23 55				
	iSNE	14 28 09			23.5	14 18 49
	iNE	14 32 05				
	iNE	14 32 15				
	ME	14 33	14	12		
	iN	14 33 09				
	iE	14 35 48				
Sept. 5	ME	18 48	19	5		
Sept. 7	iPNE	04 04 40				
	iSE	04 09 14			26	03 59 10
	MN	04 19	13	23		
Sept. 10	iPE	04 12 18				
	iSE	04 17 13			29	04 06 19
	ME	04 28	15	42		
Sept. 12	iNE	11 41 56	Artificial			
Sept. 12	iNE	13 04 17	Artificial			
Sept. 14	?eN	15 03 08				
	eE	15 05 13				
	iPN	15 05 20				
	iPPN	15 07 22				
	iPcPN	15 08 21				
	iSN	15 10 13			29	14 59 24

READINGS FROM SEISMOGRAMS, SEPTEMBER 1953 (coninued)

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
Sept. 16	iNE	15 54 34	Artificial			
Sept. 17	iNE	21 31 23				
	iNE	21 53 30				
	ME	22 40	18	7		
Sept. 19	iNE	10 41 30	Artificial			
Sept. 23	iNE	02 36 04				
	MN	03 06	16	24		
Sept. 24	iNE	13 26 04	Artificial			
Sept. 25	ME	14 41	13	1		
Sept. 26	iN	01 23 26				
	iN	01 24 24				
	ME	01 55	14	1		
Sept. 26	iNE	10 28 40	Artificial			
Sept. 29	iNE	02 00 18				
	MN	02 29	11	14		
Sept. 30	iNE	17 07 59	Artificial			
Sept. 30	eN	23 26 36				
	iN	23 26 49				
	NE	23 36 11				
	MN	23 55	15	22		

2 October, 1953.

AM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, OCTOBER 1953.

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.

The readings marked with an aste[illegible] trial short period Willmore vertical seismograph.

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

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
		Additional readings for September				
Sept. 23	eZ*	02 26 18				
Sept. 26	eZ*	01 14 02				
Sept. 27	eZ*	06 15 32				
Sept. 29	eZ*	01 57 04				
Sept. 30	eZ*	23 16 36				
Oct. 1	iNE	13 56 01	Artificial			
Oct. 3	iNE	10 40 52	Artificial			
Oct. 5	iZ*	04 43 00				
Oct. 6	eN	21 56 45				
	eE	21 59 19				
	MN	22 52	19	16		
Oct. 8	MN	17 01	20	3		
Oct. 8	iE	19 29 39				
	iNE	19 36 20				
	MN	19 52	14	9		
Oct. 10	iNE	11 42 39	Artificial			
Oct. 10	ePZ*	21 34 17				
	iPPPE	21 35 05				
	iSNE	21 38 24			23	21 29 1
	MN	21 42	19	5		

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, OCTOBER 1953 (continued)

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
Oct. 11	?iPNE	13 20 14				
	?iSNE	13 29 30			71·5	13 08 55
	MN	13 59	20	31		
Oct. 11	?iPNE	17 26 40				
	?iSNE	17 33 03			43	17 18 43
	MN	17 49	13	24		
Oct. 17	iNE	11 48 34	Artificial			
Oct. 17	Z*	21 20 22				
	Z*	21 27 36				
	eE	21 28 29				
	eN	21 29 04				
	MN	21 59	15	8		
Oct. 21	eE	11 39 58				
	ME	11 49	10	2		
Oct. 21	iPNEZ*	18 44 55				
	eSN	18 48 56			22	18 39 58
	iSE	18 48 58				
	ME	18 53	15	38		

2 November 1953

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, NOVEMBER, 1953.

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.

The readings marked with an asterisk are from a trial short period Willmore seismograph.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
		Correction and addition to the October list.				
	In place of October 11, 17 hours read:-					
Oct.11	ePZ*	17 18 20				
	eZ*	17 18 28				
	iSNE	17 36 40			61·5	17 08 05
	iNE	17 33 03				
	MN	17 49	13	24		
Oct.14	Z*	14 59 14				
Nov.1	MN	19 08	16	11		
Nov.4	eZ*	04 08 31				
	iNE	04 11 25				
	iN	04 27 50				
	MN	05 09	22	127		
Nov.7	iNEZ*	11 36 46	Artificial			
Nov.9	iZ*	17 40 40				
	iNE	17 46 25				
	MN	18 18	14	10		
Nov.10	iE	15 18 03				
	iN	15 18 13				
	ME	15 23	10	4		
Nov.10	ePZ*	23 51 50				
	iN	23 56 14				
	eE	23 56 19				
	iN	23 01 05				
	iNE	24 01 19				
	MN	24 30	20	38		

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, NOVEMBER, 1953 continued.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
Nov.13	iN	16 41 08				
Nov.13	iE	18 14 51				
Nov.13	MN	21 46	20	18		
Nov.14	iNEZ*	11 41 00	Artificial			
Nov.14	iN	20 24 22				
	eNE	20 33 52				
	MN	20 54	17	9		
Nov.15	eNE	12 40 25				
Nov.15	?eZ*	03 13 07				
	ME	03 30				
Nov.17	iEZ*	13 42 01				
	iE	13 51 36				
	ME	14 21	18	50		
Nov.19	iNEZ*	11 02 31	Artificial			
Nov.21	iEZ*	11 42 04	Artificial			
Nov.25	ePNEZ*	18 01 33				
	NE	18 01 39				
	iN	18 05 06				
	iN	18 06 02				
	iSNE	18 12 02				
	MN	18 43	25	1650	84·5	17 49 02
Nov.26	eZ*	00 16 14				
	iNE	00 26 48				
	MN	00 59	19	65		
Nov.26	iNE	08 37 27				
	ME	09 09	21	85		
Nov.27	MNE	12 25				
Nov.28	iNEZ*	11 28 20	Artificial			
Nov.29	eZ*	01 03 35				
	MN	01 06	20	11		
Nov.29	MN	05 05				

2 December 1953.

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, DECEMBER, 1953.

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 time when both the instruments have not recorded.

The readings marked with an asterisk (*) are from a trial short period Willmore seismograph.

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
	Addition to November list					
Nov. 13	eZ*	16 30 27				
Dec. 2	?eZ*	05 03 58				
	MN	05 40	19	11		
Dec. 3	eNE	15 13 21				
	iNE	15 20 40				
	MN	15 35	15	18		
Dec. 4	?iE	15 06 36				
	iNE	15 14 50				
	ME	15 32	15	18		
Dec. 5	iNEZ*	11 39 39	Artificial			
Dec. 7	eE	02 22 58				
	eN	02 25 38				
	iNE	02 29 23				
	ME	03 10	18	15		
Dec. 7	MN	15 03	20	9		
Dec. 8	?eZ*	02 53 43				
	?eZ*	02 53 54				
	MN	03 17	21	7		

DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, DECEMBER, 1953 continued

Date	Phase and component	Time G.M.T.	Period Secs.	Amplitude microns	Distance degrees	Time of origin To
Dec. 12	eEZ*	17 44 11				
	iPNEZ*	17 44 15				
	PcPNE	17 44 27				
	PPN	17 47 31				
	PPPN	17 49 25				
	E	17 54 03				
	SE	17 54 38			83.5	17 31 50
	SN	17 54 43				
	SKSN	17 54 49				
	ScSE	17 55 02				
	ME	18 22	19	93		
Dec. 13	?eZ*	07 37 22				
	?eN	07 37 35				
	MN	07 49				
Dec. 14	ME	11 36				
Dec. 14	MN	14 33				
Dec. 19	iNE	11 56 26	Artificial			
Dec. 22	MNE	19 49				
Dec. 24	MN	03 44				
Dec. 25	ME	02 51	16	28		
Dec. 27	?MN	19 25				