



DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, JANUARY, 1949.

Readings from two Milne-Shaw (horizontal) siesmographs 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.

Date 1949	Phase and component	Time G.M.T.	Period secs.	Amplitude microns.	Distance degrees	Time of origin $T_0$ .
Jan.14	MN	16.08				
Jan.19	MN	15.50	20	22		
Jan.23	MN	07.33	20	11		

DURHAM UNIVERSITY OBSERVATORYREADINGS FROM SEISMOGRAMS, FEBRUARY, 1949

Readings from two Milne-Shaw (horizontal) siesmographs 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.

Date	Phase and component	Time G.M.T.	Period secs.	Amplitude microns	Distance degrees	Time of origin $T_0$
Feb. 1	iE	18.35.17	20	9		
	iNE	18.38.58				
	iN	18.48.49				
	MN	19.28				
Feb.10	MN	23.13				
Feb.13	MN	19.56				
Feb.23	cPN	16.16.07	12	500	71.5	16.04.47
	iN	16.17.42				
	iSN	16.25.24				
	MN	16.43				

4th March,1949.



DURHAM UNIVERSITY OBSERVATORY  
READINGS FROM SEISMOGRAMS, MARCH, 1949

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

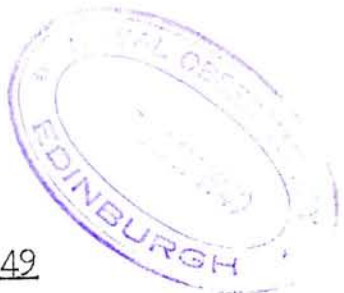
Position:- latitude  $54^{\circ}46'N$ , longitude  $01^{\circ}35'W$ , height above M.S.L.

Date	Phase and component	Time G.M.T.	Period secs.	Amplitude microns	Distance degrees	Time of origin $T_0$
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Correction to February list. For Feb.23 delete ePN 16.16.07; for iN read iPN; for 71.5 read 55; for  $T_0$  16.04.47 read 16.08.12; add the following:-

Feb.23	iP <sub>0</sub> PN	16.18.59				
	iPPN	16.19.50				
	iPPPN	16.21.02				
	iP <sub>0</sub> SN	16.22.49				
	iPSN	16.25.40				
	iPPSN	16.25.46				
	iS <sub>0</sub> SN	16.27.45				
Mar.4	MN	02.26.	18	5		
Mar.4	iPNE	10.28.14				
	iE	10.31.32				
	iN	10.32.07				
	iNE	10.34.21				
	iN	10.35.04				
	iNE	10.35.14				
	iSNE	10.36.39			62.3	10.17.54
	iNE	10.36.46				
	iNE	10.37.38				
	iNE	10.39.27				
	iNE	10.40.23				
	iNE	10.40.37				
Mar.16	MN	23.26	20	11		
Mar.17	MN	22.10	30	19		
Mar.24	iN	21.13.05				
	ME	21.40	18	9		
Mar.27	eNE	06.51.39				
	iN	06.51.55				
	iNE	06.53.15				
	iNE	06.59.17				
	iNE	07.02.35				
	MN	07.38	25	37		
Mar.30	eN	15.10.58				
	eE	15.13.48				
	ME	16.07.	19	2		
Mar.31	iNE	14.50.24				
	iNE	14.50.29	?seismic			

4th April, 1949.

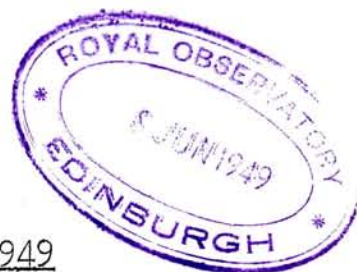


DURHAM UNIVERSITY OBSERVATORY  
READINGS FROM SEISMOGRAMS, APRIL, 1949

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.

Date	Phase and component	Time G.M.T.	Period secs.	Amplitude microns	Distance degrees	Time of origin $T_0$
<u>Correction to March list.</u> Entry for Mar.4, 10 hrs. should read as follows:						
Mar.4	iPNE	10.28.14				
	pPN	10.28.51				
	iPPPE	10.31.32				
	iN	10.32.07				
	iNE	10.34.21				
	iN	10.35.04				
	iSNE	10.35.14			50.5	10.19.32
	sSN	10.36.39			(hrs .02R)	
	iNE	10.36.46				
	iScSNE	10.37.38				
	iNE	10.39.27				
	iNE	10.40.23				
	iNE	10.40.37				
April 7	iE	18.04.33				
	iE	18.04.36				
	iE	18.04.40				
April 13	iPN	20.06.41				
	iNE	20.07.07				
	iSE	20.15.26			66	19.55.57
	ME	20.36.				
April 20	iE	03.54.10				
	ME	04.31	20	14		
April 24	ME	04.58				
April 25	ME	14.21				
April 30	iNE	01.58.00				
	iNE	01.52.57				
	ME	02.34	22	14		



DURHAM UNIVERSITY OBSERVATORY  
READINGS FROM SEISMOGRAMS, MAY, 1949

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
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Correction to April list. The entry for April 30 iNE 01.58.00 should read iNE 01.48.00.

May 9	iE	13.51.35				
	iE	13.59.52				
	iNE	14.00.10				
	MN	14.30	21	5		
May 21	eNE	22.03.12				
	ME	22.32	21	5		
May 25	eN	08.45.11				
	iN	08.47.11				
	iN	08.47.56				
	iN	08.52.10				
	MN	08.59	10	11		

3 June 1949.





DURHAM UNIVERSITY OBSERVATORY  
READINGS FROM SEISMOGRAMS, JULY, 1949

Readings from two Milne-Shaw (horizontal) seismographs recording North and East components respectively. T<sub>0</sub> 1.2 secs., damping ratio 20:1, magnification 250.

Position:- latitude 54°46' N, longitude 01°35' W, height above M.S.L. 105 metres.

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

Date	Phase and component	Time G.M.T.	Period Secs.	Distance degrees	Time of origin T <sub>0</sub>
28 June	eN	14 57 30			
	iN	14 58 08			
	iN	14 58 35			
	iE	14 58 42			
	iE	14 58 47			
	iE	14 59 28			
	iNE	14 59 52			
	iNE	15 00 18			
2 July	eN	20 15 37			
	iNE	20 15 45			
	iN	20 16 02			
	iNE	20 21 56			
	iN	20 23 05			
	iNE	20 25 00			
	iNE	20 30 22			
	ME	21 04	20	6	
4 July	iE	03 49 35			
	eNE	03 56 42			
	iNE	03 56 50			
8 July	eNE	08 18 15			
	ME	08 36	20	4	
8 July	NE	10 55 08			
	NE	10 55 13			
	NE	10 55 20			
	NE	10 55 22			
8 July	iN	18 22 10			
	iN	18 25 33			
	ME	18 28	15	3	



Date	Phase and component	Time G.M.T.	Period secs.	Amplitude microns	Distance degrees	Time of origin T <sub>0</sub>
10 July	iPNE	04 02 30				
	iNE	04 02 36				
	iNE	04 02 40				
	iNE	04 02 43				
	iNE	04 02 52				
	NE	04 04 31				
	PPNE	04 04 41				
	N	04 05 19				
	PPPN	04 05 51				
	N	04 07 31				
	P <sub>c</sub> SNE	04 07 51				
	NE	04 08 23				
	NE	04 09 38				
	NE	04 09 49				
	SNE	04 10 01			53.3	03 53
	NE	04 13 11				
	NE	04 13 31				
	SSNE	04 13 41				
	NE	04 13 58				
	NE	04 14 11				
NE	04 14 16					
ME	04 29		15	490		
10 July	cE	15 28 51				
	iE	15 30 26				
	iE	15 38 38				
	iE	15 39 11				
	ME	15 55		10	4	
10 July	iE	15 58 14				
	iNE	16 05 16				
	iE	16 09 06				
	iN	16 09 26				
	iNE	16 09 31				
	iNE	16 09 36				
	iNE	16 09 39				
10 July	cNE	16 32 55				
	iE	16 34 56				
	iNE	16 40 01				
	iNE	16 43 46				
	iNE	16 44 16				
	iNE	16 44 21				

Date	Phase and component	Time G.M.T.	Period secs.	Amplitude microns	Distance degrees	Time of origin $T_0$
11 July	iN	16 32 33				
	iNE	16 33 30				
	ME	17 04	19			
19 July	eNE	17 32 32				
	iE	17 51 14				
	iE	18 02 21				
	iN	18 09 24				
	ME	18 18	13	4		
23 July	iN	10 39 20				
	iNE	10 46 00				
	iNE	10 49 40				
23 July	iPNE	15 08 56				
	iNE	15 09 02				
	iE	15 09 38				
	iE	15 09 42				
	iNE	15 10 07				
	iE	15 11 09				
	iNE	15 11 19				
	iSNE	15 13 25			25.5	15 03 32
	iE	15 13 30				
	iE	15 13 38				
	iN	15 13 49				
	iNE	15 14 07				
	iN	15 14 58				
	iNE	15 15 30				
	ME	15 18	15	92		

1 August, 1949.



DURHAM UNIVERSITY OBSERVATORY
READINGS FROM SEISMOGRAMS, August, 1949.


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: 22 hrs, 5th Aug. to 18 hrs 6 Aug.

Date	Phase and component.	Time G.M.T.	Period secs.	Amplitude microns.	Distance degrees	Time of origin To
5 Aug.	iNE	19 32 03				
	ME	19 53				
11 Aug.	eE	14 41 14				
	iE	14 45 19				
	iE	14 45 29				
	iE	14 49 11				
17 Aug.	iPNE	18 50 48				
	PPNE	18 51 53				
	iN	18 52 48				
	NE	18 53 55				
	iN	18 55 55				
	iSNE	18 56 05			32.8	18 44 17
	iN	18 57 14				
	iNE	18 57 24				
	iSSE	18 58 11				
ME	19 06	12	62			
19 Aug.	iNE	12 14 01				
	iN	12 14 09				
	iNE	12 14 15				
	iE	12 14 20				
	iNE	12 14 27				
22 Aug.	iPNE	04 12 01				
	iPPE	04 14 29				
	iPPPE	04 16 06				
	iSNE	04 20 43			65.3	04 01 20
	iE	04 20 48				
	iPSNE	04 21 08				
	iPPSNE	04 21 20				
	LE	04 28 14				
ME	04 35	22	1250			
23 Aug.	iPNE	20 35 21				
	iSNE	20 44 14			67.3	20 24 27
	ME	21 03	18	5		
26 Aug.	iNE	11 33 54				
	iE	11 33 58				

Any further August readings will be given in the September list.

DUNDEE UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, September, 1949



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 <sub>0</sub>
5 Sept.	iE	02 15 18				
	iE	02 48 40				
	iE	03 09 37				
	iE	03 19 13				
	MN	03 56	15	2		
	MN	04 20	15	2		
14 Sept.	iE	20 09 30				
	iE	20 09 40				
	iE	20 15 35				
	iNE	20 18 45				
	iNE	20 18 50				
	iE	20 19 55				
	iNE	20 20 28				
	ME	20 46	20	39		
15 Sept.	eNE	10 58 15				
	iN	10 58 19				
	iNE	10 58 20				
	iE	10 58 25				
	iN	10 58 31				
	iE	10 58 37				
19 Sept.	ME	22 40				
21 Sept.	iPE	13 07 13				
	iSNE	13 16 55			76	12 55 26
	iNE	13 17 00				
	iE	13 17 09				
	iE	13 17 22				
	iN	13 17 39				
	ME	13 33	30	15		

READINGS FROM SEISMOGRAMS

September, 1949 (Contd.)

Date	Phase and component	Time G.M.T.	Period secs.	Amplitude microns	Distance degrees	Time of origin T <sub>0</sub>
24 Sept.	ME	05 42	20	2		
26 Sept.	iNE	11 04 21				
	iNE	11 04 24				
	iN	11 04 36				
27 Sept.	iPNE	15 41 13				
	ipPNE	15 41 24				
	iN	15 49 35				
	iSNE	15 49 40			62.7	15 30 53
	isSE	15 49 56				
	iS <sub>c</sub> SE	15 51 16				
	iSSNE	15 53 56				
	ME	16 10	16	37		
	MNE	18 16				
29 Sept.	ME	05 29	20	9		

Any further September readings will be given in the October list.



DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, October, 1949

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 <sub>0</sub>
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Correction to August list

17 Aug. should read:- iPNE 18 50 45, iSN 18 55 55, distance 31.7 degrees, time of origin 18 44 15.

1 Oct.	ME	22 46	30	7		
4 Oct.	iE	10 37 21				
	iE	10 37 33				
	iSNE	10 39 21				
	iE	10 41 10				
	iE	10 43 53				
	iSSSE	10 46 10				
	ME	10 48	12	20		
6 Oct.	iNE	11 58 56				
	iE	11 59 06				
7 Oct.	ePE	12 16 18				
	iNE	12 20 31				
	iNE	12 20 37				
	iSNE	12 26 10			89	12 03 25
	iNE	12 29 45				
	iNE	12 30 31				
	ME	13 08	14	9		
	ME	14 31	16	3		
8 Oct.	ePNE	03 13 41				
	eSNE	03 17 46			22.5	03 08 45
	iNE	03 17 51				
	iNE	03 18 13				
	iNE	03 18 23				
	iNE	03 23 16				

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Date	Phase and component	Time G.M.T.	Period secs.	Amplitude microns	Distance degrees	Time of origin $T_0$
12 Oct.	iNE	11 03 09				
	iNE	11 03 15				
	iNE	11 03 18				
	iNE	11 03 21				
19 Oct.	iNE	21 22 20				
	iNE	21 23 25				
	iN	21 23 32				
	iNE	21 31 44				
	iNE	21 37 30				
	iNE	21 38 50				
	iN	21 39 06				
	MN	22 02	40	170		
21 Oct.	ME	22 57	20	5		
31 Oct.	eNE	01 20 11				
	iNE	01 58 42				
	MN	02 18	18	12		

Any further October readings will be given in the November list.





DURHAM UNIVERSITY OBSERVATORY

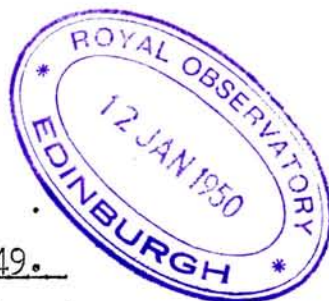
READINGS FROM SEISMOGRAMS, NOVEMBER, 1949

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 $T_0$
Nov.1	ME	13 41	12	7		
Nov.7	MN	07 23				
Nov.9	ME	00 28				
Nov.11	iNE	11 34 48				
	NE	11 34 54				
	iE	11 35 00				
	iNE	11 35 06				
	iN	16 34 01				
	MN	16 41	16	2		
Nov.20	iN	07 31 55				
	MN	07 54	16	34		
Nov.22	iNE	01 11 45				
	iN	01 12 54				
	iNE	01 13 20				
Nov.23	MN	17 16				
Nov.25	iE	11 25 20				
	iN	11 25 22				
	iE	11 25 25				
	iN	11 25 30				
	iE	11 25 32				
	iN	11 25 41				
	iN	11 25 45				
Nov.27	iN	09 05 22				
	iE	09 23 30				
	ME	10 11	20	11		



DURHAM UNIVERSITY OBSERVATORY

READINGS FROM SEISMOGRAMS, December 1949.

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.
Dec.12	iNE	15 11 44				
	iE	15 11 53				
	iE	15 12 01				
Dec.17	iNE	07 02 38				
	iNE	07 06 37				
	iNE	07 08 17				
	iNE	07 12 42				
	iN	07 13 44				
	MN	07 59	20	275		
.	iNE	15 38 35				
	ME	16 16	22	382		
Dec.21	ME	15 09				
Dec.26	iN	00 01 01				
	MN	00 14	22	14		
	iNE	06 47 25				
	MN	07 38	22	28		
Dec.28	iE	00 24 57				
	iN	00 26 47				
	iNE	00 26 56				
	iN	00 32 55				
	iNE	00 33 05				
	iN	00 33 15				
	iNE	00 33 29				
	iE	00 37 15				
	iN	00 37 22				
	iE	00 45 53				
	ME	01 00	20	26		
.	MNE	06 40				
Dec. 29	iPNE	03 17 22				
	iP <sub>o</sub> PN	03 17 40				
	iPPPN	03 22 30				
	iSNE	03 27 43				
	iS <sub>o</sub> SNE	03 28 05				83 03 04 58
	iPSE	03 28 44				
	iNE	03 28 50				
	iNE	03 29 59				
	iSSSE	03 36 35				
	ME	04 06	16	220		
	ME	18 32	20	6		

Any further December readings will be given in the January list.

January 2, 1950.