



## DURHAM UNIVERSITY OBSERVATORY, READINGS FROM SEISMOGRAMS,

1946 January 1 to June 30.

Readings from two Milne-Shaw (horizontal) seismographs recording North and East components respectively.  $T=12$  secs., damping ratio 20:1, magnification 150. Position:- latitude  $54^{\circ} 46'$  N, longitude  $01^{\circ} 35'$  W, height above M.S.L. 108 metres.

January 5	iNE	20-19-49	Period 20 secs, amplitude $40 \mu$
	iNE	20-20-29	
	iNE	20-20-52	
	ME	21-21-30	
	MN	21-23-30	
January 12	iN	20-36-24	Period 20 secs, amplitude $40 \mu$
	iNE	20-44-39	
	ME	20-56-30	
	MN	21-06-	
January 25	iPNE	17-34-16	$\Delta = 16.3^{\circ}$ $T_0 = 17-30-31$
	NE	17-35-59	
	NE	17-37-19	
	iSNE	17-37-27	
	MNE	17-38-30	
February 12	iPN	02-47-52	$\Delta = 20.2^{\circ}$ $T_0 = 02-43-20$
	E	02-47-54	
	N	02-47-56	
	E	02-48-08	
	SE	02-51-36	
	iN	02-51-41	
	N	02-51-46	
	ME	02-54-30	
	MN	02-56-	
February 20	MNE	04-34-	Period 18 secs, amplitude $32 \mu$
March 12	ePE	02-30-13	$\Delta = 45.3^{\circ}$ $T_0 = 02-21-57$
	iE	02-32-06	
	SN	02-36-53	
	N	02-40-09	
	MN	02-53-	
	ME	02-54-15	
March 15	eN	14-03-48	Period 16 secs, amplitude $12 \mu$
	MN	14-32-	
March 16	MN	12-22-	Period 14 secs, amplitude $7 \mu$
March 26	N	17-34-43	Period 21 secs, amplitude $22 \mu$
	N	17-40-41	
	N	17-41-00	
	N	17-41-57	
	MN	18-14-	
March 28	ME	00-15-	Period 14 secs, amplitude $7 \mu$
March 29	ePE	07-38-44	$\Delta = 84.4^{\circ}$ $T_0 = 07-26-14$
	iSE	07-49-12	
	NE	07-49-19	
	ME	08-15-	

April 1	iPN	12-40-16	$\Delta = 71.8^\circ$	$T_0 = 12-28-54$
	iN	12-40-38		
	N	12-45-15		
	iSE	12-49-34		
	iN	12-49-37		
	MN	13-17-		
	ME	13-18-		
			Period 16 secs, amplitude 106 $\mu$	
April 1	iPN	19-08-59	$\Delta = 70.7^\circ$	$T_0 = 18-57-44$
	iSNE	19-18-11		
	MNE	19-47-		
			Period 18 secs, amplitude 18 $\mu$	
April 2	MN	05-00-30		
			Period 15 secs, amplitude 7 $\mu$	
April 2	eE	16-50-59		
	MNE	17-21-		
			Period 18 secs, amplitude 8 $\mu$	
April 9	eNE	20-42-27		
	MNE	20-52-30		
April 11	PN	02-02-19	$\Delta = 56.5^\circ$	$T_0 = 01-52-40$
	eNE	02-02-34		
	N	02-02-46		
	NE	02-02-52		
	N	02-02-55		
	NE	02-05-13		
	NE	02-05-26		
	SNE	02-10-10		
	N	02-10-25		
	N	02-10-37		
	E	02-10-47		
	?NE	02-16-17		
	ME	02-26-		
	MN	02-31-40		
			Period 15 secs, amplitude 67 $\mu$	
April 16	eNE	11-50-17		
	N	11-52-11		
	N	11-53-38		
	E	11-53-50		
	MNE	12-01-		
			Period 10 secs, amplitude 9 $\mu$	
April 23	?eNE	05-28-54		
	ME	06-33-30		
	MN	06-36-30		
			Period 12 secs, amplitude 10 $\mu$	
May 3	eNE	22-26-37		
	N	22-32-18		
	NE	22-44-45		
	NE	22-46-09		
	NE	22-54-46		
	NE	22-57-13		
	N	23-02-23		
	E	23-02-34		
	MN	23-33-		
	ME	23-34-		
			Period 24 secs, amplitude 90 $\mu$	
May 8	ePE	05-33-52	$\Delta = 88.2^\circ$	$T_0 = 05-21-03$
	NE	05-34-26		
	N	05-37-40		
	?PPNE	05-37-50		
	SE	05-44-39		
	NE	05-44-44		
	?PSNE	05-45-20		
	?SSN	05-51-30		
	?E	05-51-52		
	?N	05-52-04		
	MNE	06-24-		
			Period 18 secs, amplitude 36 $\mu$	

May 8	eNE	10-05-42	Period 18 secs, amplitude 12 $\mu$
	NE	10-08-23	
	NE	10-15-37	
	N	10-22-01	
	E	10-22-16	
	NE	10-25-34	
	MNE	10-52-	
May 10	MNE	00-22-	Period 12 secs, amplitude 7 $\mu$
May 10	eNE	13-26-35	Period 13 secs, amplitude 5 $\mu$
	ME	13-33-	
	MN	13-34-	
May 11	MNE	16-32-	
→ May 11	N	18-41-45	Period 12 secs, amplitude 10 $\mu$
	E	18-42-01	
	NE	18-44-00	
	ME	18-49-45	
May 12	iPNE	13-25-34	$\Delta = 24.7^\circ$ $T_0 = 13-20-17$ Period 12 secs, amplitude 18 $\mu$
	iSNE	13-29-56	
	MNE	13-34-	
May 15	eNE	22-23-01	
	eNE	22-33-04	
May 19	iNE	00-51-38	Period 16 secs, amplitude 5 $\mu$
	MNE	01-16-	
May 21	iPE	09-26-50	$\Delta = 59.8^\circ$ $T_0 = 09-16-47$ Period 20 secs, amplitude 20 $\mu$
	iSNE	09-35-00	
	NE	09-36-37	
	ME	09-46-	
May 30	ePE	03-43-43	$\Delta = 9.0^\circ$ $T_0 = 03-41-37$ Period 5 secs, amplitude 37 $\mu$
	N	03-43-47	
	SNE	03-45-28	
	NE	03-46-35	
	NE	03-46-46	
	MNE	03-47-50	
May 31	PE	03-19-15	$\Delta = 33.6^\circ$ $T_0 = 03-12-38$ Period 14 secs, amplitude 13 $\mu$
	SE	03-24-38	
	N	03-24-44	
	MNE	03-35-	
June 2	MNE	02-06-	Period 14 secs, amplitude 11 $\mu$
June 7	eE	04-25-17	Period 16 secs, amplitude 10 $\mu$
	eN	04-25-23	
	iE	04-34-55	
	N	04-35-02	
	iN	04-35-43	
	MNE	05-01-	
June 15	eE	18-51-20	Period 20 secs, amplitude 9 $\mu$
	ME	19-32-	
	MN	19-38-	
June 23	PNE	17-24-08	$\Delta = 64.2^\circ$ $T_0 = 17-13-35$ ?deep Period 18 secs, amplitude 71 $\mu$
	pPNE	17-25-17	
	N	17-25-33	
	N	17-25-51	
	NE	17-28-35	
	SNE	17-32-53	
	?SPNE	17-33-17	
	ME	17-50-	





With Mr. E.F. Baxter's compliments.  
1, Fieldhouse Terrace,  
Durham.

22 Feb. 1947.

DURHAM UNIVERSITY OBSERVATORY, READINGS FROM SEISMOGRAMS  
1946 July 1 to December 31.

Readings from two Milne-Shaw (horizontal) seismograms recording North and East components respectively.  $T = 12$  secs., damping ratio 20:1, magnification to August 31 150, after August 31 250.

Position:- latitude 54 46' N, longitude 01 35' W, height above M.S.L. 108 metres.

On many occasions and for a variety of causes either or both the records have been unserviceable.

Date 1946	Phase and component.	Time G.M.T.	Period secs.	Amplitude microns.	Distance degrees.	Time of origin $T_0$ .
July 7	eE ME	21-28-07 21-29-53	14	3		
July 9	iE ME	01-50-23 02-44-30	15	2		
July 11	1PE iSE	04-58-30 05-08-08			75.4	04-46-48
July 16	eE iE iE iE iE iE MN	05-37-01 05-37-16 05-37-39 05-38-08 05-38-18 05-46-05 05-46-30	14	28		
July 16	iE ME	19-56-09 20-04-				
July 18	1PNE iSE ME	06-27-01 06-34-23 06-44-	20	8	51.7	06-17-57
July 18	1PNE iE iSE ME MN	07-36-32 07-40-13 07-43-35 07-54- 07-59	20 16	8 7	49.0	07-27-48
July 19	MNE	22-09-	16	4		
July 25	iE ME	17-03-39 17-36-30	15	3		
July 26	iE	07-08-39				
July 27	iE iE	16-44-54 16-45-22				
August 2	ePE iSNE iIN iE iN MN ME	19-33-06 19-43-11 19-44-02 19-45-41 19-53-02 20-05- 20-13-	36 24	62 21	80.3	19-20-56

- 2 -

Date	Phase and Time component. G.M.T.	Period secs.	Amplitude microns.	Distance degrees	Time of origin T <sub>0</sub> .
1946					
August 4	1PNE 18-01-32 1E 18-01-43 1N 18-04-59 1SNE 18-09-48 1E 18-13-56 ME 18-22- MN 18-24-	18 23	350 408	61.0	17-51-20
August 8	eE 13-38-50 1PNE 13-38-20 N 13-44-19 SNE 13-47-19 1E 13-47-36 1E 13-48-11 ME 14-00- MN 14-04-30	21 14	94 34	57.9	13-29-31
August 11	MN 03-11-	20	11		
August 15	1N 15-43-53 MN 16-54-	18	6		
August 15	MN 20-00-	20	7		
August 17/18	1N 23-50-41 eE 23-50-41 MN 00-03-30 ME 00-04-30	15 15	4 2		
August 20	N 17-34-49 N 17-37-27				
August 21	eN 18-20-01 eN 18-23-31 1N 18-30-16 1N 18-33-46 1N 19-36-24 MN 19-52-	18	6		
September 9	eE 10-40-26 eE 10-43-40 eE 10-50-35 E 11-00-24 ME 11-25-	25	11		
September 11	eE 10-27-11 ME 10-32-	15	4		
September 12	1PE 15-29-00 1NE 15-29-34 1NE 15-31-10 1NE 15-33-54 1SNE 15-38-41 1E 15-41-46 1E 15-47-36 LE 15-58-26 ME 15-59-30	20	197	76.0	15-17-14
September 13	MN 19-48-30	18	6		
September 24	MNE 00-32-	30	26		



- 3 -

Date 1946	Phase and component.	Time G.M.T.	Period secs.	Amplitude microns.	Distance degrees.	Time of origin T <sub>0</sub> .
September 29	eE	03-22-36				
	1PNE	03-23-07				
	1NE	03-24-32				
	1NE	03-28-16				
	1NE	03-30-10				
	[1NE	03-28-26]				
	?SKSNE	03-32-47			?95	03-09-46
	?SE	03-34-17				
	?1SSNE	03-40-22				
	LE	03-58-16	30	145E		
MNE	04-03-30	30	164N			
September 30	E	11-53-59				
	N	11-55-06				
	ME	12-20-	20	3		
	MN	12-25-	15	2		
October 2	PN	04-57-32				
	SNE	05-06-49	19	5N	71.6	04-46-12
	MNE	05-36-	19	10E		
October 2	PNE	06-54-43				
	SNE	07-04-00	19	8N	71.6	06-43-23
	MNE	07-33-	19	4E		
October 4	ME	15-23-	18	5		
October 13	eNE	21-35-22				
	1NE	21-35-44	10	4N		
	MNE	21-44-	10	3E		
October 18	eE	04-45-01				
	E	04-53-33				
	NE	04-57-29				
October 22	NE	10-19-28				
	1N	10-23-00				
October 30	PN	07-58-54				
	1NE	08-08-08				
	1SNE	08-08-27			74.5	07-46-57
	ME	08-31-30	15	7		
November 1	ePN	11-26-00				
	SN	11-35-30			74.0	11-14-25
	?PSN	11-35-59				
	MN	12-05-	16	16		
November 2	1PN	18-37-12				
	1N	18-39-53				
	1SN	18-44-17			49.1	18-28-28
	?1PSN	18-44-27				
	?1SSN	18-48-29				
	MN	19-02-	12	160		
November 3	1N	19-42-15				
	1N	19-44-17				
	1N	19-50-07				
	MN	20-06-	15	7		
November 4	1PN	21-54-42				
	1N	21-55-17				
	1N	21-57-27				
	1SN	22-01-17			44.5	21-46-33
	1N	22-04-27				
	MN	22-12-	12	81		

Date	Phase and Time component. G.M.T.	Period secs.	Amplitude microns.	Distance degrees.	Time of origin $T_0$ .
1946 November 6	1E 20-06-17 1E 20-14-17 eN 20-20-32 1E 20-22-39 ME 20-35-30	14	9		
November 10	1PE 17-55-50 1PPE 17-59-18 1E 18-06-26 1SNE 18-06-32 1N 18-06-44 1NE 18-06-52 MNE 18-28-	26 26		87.2	17-43-06
November 12	N 06-17-12 MN 06-45-	17	4		
November 12	1N 17-48-17 1N 17-51-39 MN 18-42- ME 18-56-	25 20	23 20		
December 4	N 23-32-59 E 23-34-35 MN 23-37- MNE 23-43-30	16 15	32 31		
December 19	1NE 03-20-19 1NE 03-20-35 MNE 03-48-	18	7		
December 20	1PNE 19-31-45 1SNE 19-42-19 MNE 20-15 approx.	Unmeasurable	of trace 92 mms.	85.6	19-19-09
December 21	1E 10-40-38 1N 10-40-48 ME 11-04- ME 20-44-	21 10	75 10		