

DUBLIN UNIVERSITY OBSERVATORY.

Seismograms. 1938 January 1 to June 30.

January 1/2	iN	23-48-9		
	iR	23-48-16		
	ME	0-20-30		
	MN	0-24-		
January 2	ePNE	22-39-41		
	eN	22-49-41		
	iSNE	22-49-51	$\Delta = 80^{\circ}4$	$T_0 = 22-27-31$
	MN	23-17-30		
	ME	23-19-		
January 11	iE	15-22-53		
	iNE	15-34-49		
	MNE	16-5-30		
January 23	MN	9-28-20		
February 1	?ePN	19-19-47		
	ePPN	19-24-21		
	iN	19-24-30		
	iSKN	19-30-40		
	iPSN	19-34-31		
	iSSN	19- 30 -30	4	
	iN	19-40-42		
	MN	20-8-		
February 5	iPE	2-35-20		
	iSNE	2-44-55		
	iPSE	2-46-1	$\Delta = 74^{\circ}2$	$T_0 = 2-23-44$
	iN	2-55-32		
	ME	3-4-		
February 14	iPNE	3-1-41		
	iSE	3-7-35	$\Delta = 38^{\circ}4$	$T_0 = 2-54-23$
	iN	3-7-56		
	?E	3-10-22		
	MN	3-17-		
February 15	?ePE	3-35-15		
	?eSE	3-41-10	$\Delta = 38^{\circ}6$	$T_0 = 3-27-56$
	MN	3-48-		
	ME	3-50-40		
February 15	iN	7-4-46		
	MN	7-19-		

Seismograms Durham University Observatory 1938 (continued).

March 8	ME	6-53-		
March 11	ePNE eN eSE iN MNE	14-55-52 14-59-15 14-59-48 14-59-65 15- 4-40	$\Delta = 22^{\circ} 1$	$T_0 = 14-51-01$
March 13	ePB ?eN iSNE LNE iNE	17-50-32 17-54-25 17-58-35 17-58- 2 17-59-17	$\Delta = 22^{\circ} 9$	$T_0 = 17-45-34$
March 14	ME	5-59-		
March 22	iPN iSN MNE	15-33- 1 15-41-29 16- 2-40	$\Delta = 62^{\circ} 7$	$T_0 = 15-22-38$
March 22	MN	23- 8-		
March 27	iN iE MNE	11-24-20 11-24-33 11-26-40		
March 31	MN	23-32-		
April 1	MN	22-33-		
April 10	ME	5-50-40		
April 13	iPN iN iSN	2-49-51 2-51-14 2-53-10	$\Delta = 18^{\circ} 1$	$T_0 = 2-45-43$
April 14	iPNE iSN iPSE iNE	1-28- 4 1-37-24 1-37-31 1-38- 4	$\Delta = 71^{\circ} 6$	$T_0 = 1-16-44$
April 17	iE ME	15- 3-47 15-30-		
April 19	iPNE iN iE iSNE MN ME	11- 5-15 11- 7-46 11- 7-52 11-10- 4 11-15- 11-18-30	$\Delta = 28^{\circ} 1$	$T_0 = 10-59-34$

34

should be len 3

should be len 7

17

Seismograms Durham University Observatory 1938 (continued).

April 19	ME MN	23-32- 23-34-
April 20	eN eE ME MN	6-46-50 6-46-58 7-53- 8-27-
April 21	MN	2-25-
April 22	iE ME MN	4-35-41 4-54-30 4-55-
April 23	eN eN MNE	0-44-15 0-51-10 1-27-30
April 23	eN eE ME	6-19-41 6-19-46 6-40-
April 23	eN eE eN eE	9-40-15 9-40-30 9-41-33 9-41-40
April 25	ME MN	9-18- 9-19-
April 25	ME MN	11-50- 11-51-
April 25	MNE	15-38-
April 25	MNE	17-55-
May 5	eP _g E iS ^x E iE	5- 2-18 5- 3-30 5- 3-39
May 6	MN	19- 4-
May 8	eNE MNE	14-27-23 15- 3-40
May 11	eE eE iN MNE	14-57- 8 15- 4-58 15- 6-24 15-44-

8.9 14-58-36
 $\Delta = 6^{\circ} 5'$ $T_0 = 5-0-14$

Seismograms Durham University Observatory 1938 (continued).

May 12	iNE	15-59-58		
	iE	16- 0-20		
	iNE	16- 1-21		
	iNE	16- 2-25	55	
	iNE	16- 9-55		
	iNE	16-17-29		
	iNE	16-17-46		
	iNE	16-23-00		
	iNE	16-23-25		
	iNE	16-24-00		
	iN	16-25-44		
	iNE	16-25-58		
	iE	16-26-30		
	MNE	16-54-		
May 12	PNE	22 21 -15-28	$\Delta = 27.6$	$T_0 = \overset{29}{21}-9-\overset{31}{27}$
	SN	22 21 -20- 8		
	iE	22 21 -20-12		
	MNE	23 22 -26-		
May 13	MNE	1-59-		
May 13	MNE	3- 4-		
May 14	MN	12-46-		
May 15	iPNE	3-37-49	$\Delta = 19.3$	$T_0 = 3-33-27$
	SNE	3-41-20		
	MNE	3-44-		
May 16	MNE	14-30-30		
May 16	eNE	18-40-30		
	MNE	18-48-30		
May 19	MNE	15-27-30		
May 19	eE	17-23- 8		
	eNE	17-23-13		
	eE	17-27- 5		
	iNE	17-27-45		
	iE	17-33-42		
	iNE	17-33-49		
	iNE	17-34-43		
	iN	17-35-50		
	iE	17-36-57		
	iE	17-37-30		
	iNE	17-37-57	continued on next sheet	

SEISMOGRAMS Durham University Observatory 1938 (continued).

May 19	iE	17-42- 0	continued from previous sheet	
	iE	17-47-11		
	iN	17-47-25		
	iE	17-49-45		
	iN	17-49-55		
	iN	17-53-10		
	MNE	18-12-30		
May 23	iPNE	7-30-57		
	iN	7-34-10		
	iSNE	7-41-18		
	(iNE	7-36- 3)	$\Delta = 82^{\circ}.4$	$T_0 = 7-18-37$
	(iNE	7-36-15)		
	iE	7-47- 1		
	LE	8- 0-45		
	LN	8- 1- 0		
	MNE	8-11-		
May 23	?iE	8-45-31		
	?iN	8-45-35		
	MNE	9-13-		
May 27	eN	21-31-28		
	iN	21-36-16		
May 28	PNE	10-25-36		
	?PNE	10-27-20		
	eN	10-31-44		
	iSNE	10-34-48	$\Delta = 20^{\circ}.3$	$T_0 = 10-14-24$
	MNE	10-58-30		
May 28	iPE	16-54-39		
	iSE	17- 4-35	$\Delta = 77^{\circ}.9$	$T_0 = 16-42-42$
	ME	17-27-40		
May 31	ME	18-15-		
June 9	eNE	19-33-15		
	eE	19-33-25		
	iNE	19-34-42		
	iNE	19-37- 8		
	iNE	19-38-42		
	iE	19-44-13		
	iNE	19-44-27		
	iNE	19-50-42		
	iE	19-55-15		
	MN	20-25-		

Seismograms Durham University Observatory 1938 (continued).

June 10 iPN 10- 6-40
 iPPN 10-10-15
 iSKSNE 10-17- 5
 iSN 10-17-21
 iSSN 10-23-11
 iSSNE 10-27-39
 MNE 10-49-30
 MNE 12-15-

$\Delta = 86^{\circ}3$ $T_0 = 9-54-00$

June 11 eP₁NE 10-58-51
 iP₂NE 10-59-14
 iNE 10-59-31
 iE 10-59-40
 iS₁NE 10-59-45
 iNE 10-59-58
 i₂NE 11- 0-15
 iNE 11- 0-21
 iNE 11- 0-30
 iNE 11- 0-50

$\Delta = 5^{\circ}0$ $T_0 = 10-57-40$

33

June ¹²~~13~~ iE 13-28- 6
 iNE 13-28-32

look at 26-19

June 16 iPNE 2-28- 4
 iSKSNE 2-38-33
 iSKSE 2-38-40
 iSN 2-38-46
 iPSNE 2-38-53
 iN 2-39-56
 iN 2-40-24
 MNE 3-14-

$\Delta = 86^{\circ}6$ $T_0 = 2-15-23$

June 16 MNE 23-48-20

June 18 iE 13-27-13

June 20/21 ePE 23-59-31
 iPE 23-59-33
 iN 23-59-35
 iPPE 0- 1-26
 iN 0- 1-28
 iN 0- 2-25
 iE 0- 6-43
 iSNE 0- 6-52
 iE 0- 9-38
 iSSN 0-10-15
 iNE 0-10-32
 iN 0-11-47
 iNE 0-12-41

$\Delta = 51^{\circ}8$ $T_0 = 23-59-27$

50-31

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Seismograms Durham University Observatory 1938 (continued).

June 20/21	iNE	0-16-30	continued from previous sheet
	iNE	0-16-40	
	ME	0-22-	
	MN	0-23-	
	MNE		
June 21	MNE	7-35-	
June 23	iNE	13-15- 2	
	iN	13-15-13	
	ME	14-17-	
	MN	14-20-30	
June 25	ePN	23-50-10	
	iN	23-50-17	
	i3N	23-54-20	$\Delta = 23^{\circ}.7$ $T_0 = 23-45-4$
	iN	23-54-30	
June 29	MNE	20-13-	

DURHAM UNIVERSITY OBSERVATORY.

Seismograms. - 1938 July 1 to December 31.

July 2	eNE	13-41-13
July 5	eE ME	22-26-37 23-45-
July 6	eE ME	1-44-11 3- 3-
July 8	MNE	14-55-
July 14	MN	3-16-
July 18	iE iN iE iNE iNE MN	1- 2-30 1- 2-32 1- 2-37 1- 2-45 1- 4-16 1- 5-20
July 20	iPNE PPNE iSNE iSSE LNE	0-28-49 0-29-22 0-33- 8 0-33-40 0-37-21
July 21	iE ME	9-30-33 9-50-
July 22	ePNE iSKSE iSNE iSSE MNE	8- 0-40 8-11- 3 8-11- 6 8-16-31 8-37-
July 24	iN ^P iNE ^S ME	13-23-39 13-32-52 13-59-
July 27	MNE	13-32-40
July 27	MNE	17-46-
July 29	iE iN iE MN ME	13-30-36 13-31-20 13-32-38 14- 5- 14-10-

$\Delta = 23.8$
 $\Delta = 22.7$ $T_0 = 0-23-32$

$\Delta = 83.4$ $T_0 = 7-48-15$

Seismograms Durham University Observatory 1938 (continued).

August 4 iNE 9-18-18
 iNE 9-18-59
 MN 9-46-

August 8 eN 13-15-50
 MNE 13-25-

August 8 iRN 15-39-10
 eSE 15-42-25
 eN 15-42-34
 ME 15-44-40

$\Delta = 17.7$

$T_0 = 15-35-8$
~~01~~

August 14 MNE 21- 7-

August 16 ePNE 4-39-31
 iPNE 4-39-35
 iPPE 4-42-20
 iSNE 4-49- 4
 iPSNE 4-49-40
 ME 5-17-

$\Delta = 75.3$
~~20.2~~

$T_0 = 4-28-5$
~~27-55~~

August 22 MN 22-17-

August 23 ME 8-53-

August 25 eE 1-46-15
 iE 1-52-33
 MN 2-32-
 ME 2-34-

August 28 ME 21-12-45

August 29 iNE 15-46-48
 iNE 15-48- 8
 MNE 16-17-30

August 30 eNE 12-10-11
 iNE 12-20-12
 MNE 13- 5-30

August 30 MNE 19-41-

August 31 eN 18- 5-26
 ME 18-26-

September 1 ME 3-52-

Seismograms Durham University Observatory 1938 (continued).

September 1	iPE iPc PN ePPE iSNE ME	23- 0-23 23- 0-33 23- 3-23 23-10-13 23-39-	$\Delta = 78.5$ 78.8	$T_0 = 22-48-21$ 32
September 3	eE ME	4-50- 5 4-59-		
September 3	ME	6-50-		
September 4	MNE	20-16-		
September 5	MNE	16-14-		
September 6	MNE	21-38-		
September 7	MNE	3- 1-		
September 7	iPNE iPPE iJKSNE iSN iNE iSSE MNE	4-16- 8 4-19-34 4-26-48 4-27-12 4-27-55 4-32-44 5- 1-	$\Delta = 91.8$ 91.1	$T_0 = 4-3-27$ 5
September 18	iPNE iE iSNE MNE	3-55-41 3-59-54 4- 0- 1 4- 6-	$\Delta = 23.8$ 24.9	$T_0 = 3-50-28$ 23
September 21	ePN eE eJKSN iSNE MNE	19- 4-22 19- 4-31 19-14-43 19-14-57 19-46-	$\Delta = 83.7$ 85.1	$T_0 = 18-51-28$ 48
September 25	MN	21-37-		
September 27	iPE iSNE iPSNE MNE	2-41-23 2-49- 9 2-49-20 3-13-	$\Delta = 56.0$ 55.9	$T_0 = 2-31-41$ 49
September 27	eE MNE	10-36-35 11-33-		
September 28	eE ME	13-36-20 19-34-		

Seismograms Turhan University Observatory 1938 (continued).

October 10 iNE 21-13-13
 iNE 21-14-40
 iNE 21-16-20
 MNE 21-52-

October 12 iPN 0-46-45
 ~~iSKON~~ 0-56-57
 iSN 0-57-18
 LN 1-19-25
 MN 1-29-

$\Delta = 84.7$ $T_0 = 0-34-13$

October 13 MNE 16-16-

October 19 ePE 4-22-49
 iSNE 4-30-10
 iPSNE 4-30-15
 iN 4-32-28
 iN 4-34-15
 MNE 4-44-

$\Delta = 51.8$ $T_0 = 4-13-45$

October 20 iE 2-39-18
 iNE 2-44-49
 iNE 2-46-5
 iNE 2-48-45
 iNE 2-50-17
 iNE 2-55-21
 MNE 3-18-

October 23 MNE 3-9-

October 23 ME 5-31-

October 23 ME 15-51-
 MN 15-54-30

October 29 MNE 14-1-30

November 5 iPNE 8-55-50
 iE 8-56-24
 iE 8-59-17
 iSNE 9-6-6
 iNE 9-6-42
 iNE 9-7-0
 iNE 9-7-20
 iNE 9-8-56
 iNE 9-11-43
 MNE 9-37-

$\Delta = 81.5$ $T_0 = 8-43-24$

Seismograms Durham University Observatory 1938 (continued).

November 5	?ePN	11- 2-47		
	iPNE	11- 2-59		
	iN	11- 3- 4		
	iN	11- 3-16		
	iN	11- 6-11		
	iN	11- 8- 5		
	iSNE	11-13-20	$\Delta = 82^{\circ} 4$	$T_0 = 10-50-26$
	iNE	11-14-22		
	MNE	11-46-		
November 6	ePN	9- 6-15		
	iSN	9-16-37	$\Delta = 82^{\circ} 6$	$T_0 = 8-53-53$
	MN	9-45-		
November 6	iPNE	21-51-20		
	iSN	22- 1-39	$\Delta = 82^{\circ} 1$	$T_0 = 21-39-2$
November 7	iE	2- 1-15		
	MN	2-33-		
November 7	MN	20-31-		
November 9	iPN	9-29-20		
	iSNE	9-38-52	$\Delta = 73^{\circ} 7$	$T_0 = 9-11-47$
November 10	iE	11-10- 3		
	MNE	11-46-		
November 10	iPNE	20-29-55		
	MNE	21- 0-		
November 11	iPN	1- 8-51		
	iSNE	1-17-53	$\Delta = 63^{\circ} 6$	$T_0 = 0-57-49$
	iPSE	1-18-10		
	MNE	1-39-		
November 11	MNE	2-57-		
November 11	MNE	9-37-		
November 12	MN	15-43-		
November 13	iPNE	13-25-36		
	iSNE	13-35-21		
	iSN	13-35-47	$\Delta = 80^{\circ} 6$	$T_0 = 13-13-36$
	MNE	14- 4-30		
November 13	MNE	23-24-		
	MN	23-28-		

Seismograms Durham University Observatory 1938 (continued).

November 14	ME	13-23-
November 15	ePPE	21-18-11
	iTKSNE	21-24-56
	?N	21-27-10
	?N	21-28-30
	?E	21-28-51
	iJSE	21-32-47
	MN	22- 5-
	ME	22- 7-40
November 16	eE	S 11-30-47
	ME	12- 4-
November 17	iPNE	4- 5-40
	iN	4- 8-12
	eSE	4-14-40
	iSE	4-14-44
	iNE	4-14-50
	ME	4-31-30
	MN	4-34-30
November 21	ME	1-57-30
November 22	ePNE	1-26-37
	iE	1-36-54
	iSNE	1-37- 4
	MNE	2- 9-
November 25	iE	S ² 0-16-11
	ME	0- 19-
November 25	ME	9-13-
November 30	iPPN	2-46-41
	iSNE	2-52-37
	iPSE	2-52-54
	MNE	3-22-
December 2	MNE	22-51-
December 3	MNE	13- 4-
December 6	iNE	S 23-24-28
	MNE	23-52-
December 7	ME	14-33-

$\Delta = 89/0$

$T_0 = 3-54-35$

$\Delta = 82/9$

$T_0 = 1-14-14$

Seismograms Durham University Observatory 1938 (continued).

December 9	ME ME	4-15- 2 4-34-
December 9	MM	5-56-
December 13	MNT	18-17-
December 16	MN	19- 7-
December 17	MN	17-12-
December 21	MNT	13-41-
December 22	MN	17-55-

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