

Earthquake Records by Milne Seismograph. Meridian 6.11.11
 Stonyhurst College Observatory. Lat 53° 50' N Long. 2° 28' 2" W. 100 ft S.W. 100 ft S.E.

Director, Rev. Walter Sidgreaves, S.J.



Abbreviations etc. - P_1, P_2, P_3 = 1st, 2nd and 3rd phases (arrivals) - M. Maximum.
 A. Amplitude - D. Duration - Ats Air tremors - BP Boom-period.

1 mm A = 220° deviation of boom = 0.497 inclination of pillar at 16 seconds BP.
 = 0.355 " " " 21 " "

Time, Greenwich 0 or 24 = Midnight

No.	Date 1911	P_1	P_2	P_3	Max.	2A	End	Remarks
	Jan.	h m	h m	h m	h m	mm	h m	
1		10 26.9	10 37.5	10 48.2	10 50.5	4.2	after	
		-	-	-	10 54.3	2.9	12.0.	End after change.
1		15 21.2	15 31.2	15 33.1	15 34.	.6	16.8.	
2		11 17.6	11 35.9	11 44.1	?	?	12.?	Max during change
2		23 23.2	?	24 16.	24 29.5	.6	25.42.	
3		7 45.5	7 56.2	8 2.5	8 4.	1.4	9.3.	
3		23 37.	23 44.5	23 48.5	24 2.	35.0		Max betw ⁿ 23 48.5 & 24 12.
		23 37.	-	-	24 15.	20.0	25.6.	
4		22 2.6	22 6.5	?	22 11.1	.6	22.27.	
6		15 38.5	-	-	15 48.	.2	15.56.	
7		2 36.5	2 44.4	2 48.	2 50.2	.8		
		-	-	-	3 16.	.9		
		-	-	-	3 21.6	1.2	4.55.	
8		10 46.5	-	-	10 52.	.1	11.25.	
9		4 16.	-	4 25.2	4 26.5	.8	4.42.	
12		14 24.	-	-	14 30.	.1	15.6.	
14		18 15.2	-	15 25.	18 26.5	.2	18.52.	
16		9 23.5	-	9 34.5	10 2.	.5	10.48.	
25		1 22.5	-	1 22.5	1 28.8	.3	1.46.	
30		0 36.0	-	-	0 41.2	.1	0.46.	
Feb	Feb							
5		4 44.7	-	-	5 13.0	0.4	5.55	
18		+	2 35.7	2 39.5	2 42.	.2		+ in tremors
"		18 49.	19 1.3	19 10.5	19 13.5	18.0		
"		+	21 40.2	21 45.2	21 49.2	5.3	23.18	+ P in preceding 29k
26		12 55.5	13 5.3	13 11.5	13 13.7	1.1	14.48?	
Mar	Mar							
11		4 13.5	4 23.7	4 32.5	4 35.	0.6		
"		-	-	-	4 40.5	.6	6.3	
13		+	15 36.5	15 49.7	15 53.	.1	17.3	+ in tremors
24			4 4.	4 9.	4 11.	.1	4.50.	
27		5 47.7	5 53.5	5 59.	6 1.7	.1	6.14.	Boom-period 19 sec.

Earthquake Records by Milne Seismograph. Meridian boom.
 Stonyhurst College Observatory. Lat 53.50.7. N. Long. 2.28.24. W. 1863
 Director Rev. Walter Sidgreaves S.J.

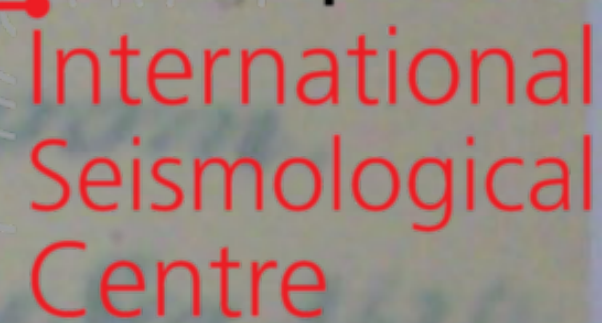


Abbreviations etc. - P₁ P₂ P₃ = 1st 2nd and 3rd phases (arrivals) - M. Maximum.
 A. Amplitude - D. Duration - Als Air tremors - B.P. Boom Period.
 from A = 320° deviation of boom = 0.49 y. inclination of Pillar at 16 seconds B.P.
 = 0.355 " " 21 " "

Time Greenwich 0 or 24 = Midnight

Date	P ₁	P ₂	P ₃	Max	2 A	End	Remarks
April	h m	h m	h m	h m	m m	h m	
6	15 40.	15 49	15 54.1	16 2.	.5	16 50.	
7	6 56	-	7 36.3	7 38.2	.5	9 56.	
10	18 54	19 3	-	19 22.5	.6	21 41.	
11	14 29.5	-	-	14 56.	.1	15 40	
15	23 49	-	-	24 27.	.1	25 18.	
16	6 9.7	-	-	6 23	2.1	7 0.	
17	5 4.	-	-	5 36.5	.3		
	-	-	-	5 42.5	.4	7 6	
18	17 59.5	-	-	18 48.3	2.0	21 45.	
21	3 48.5	-	-	3 32.8	.5	4 22	
23	14 7	-	-	14 16	2.1	16 4	
29	5 44.5	5 48.5	5 56.	6 4.	.1	6 35	
30	5 4	5 10.	5 16.5	5 18.3	.1	5 53	
							May
4	14 22.2	14 32.	14 37.5	14 38.5	.3		
	-	-	-	14 45.	.2	15 16.	
4	23 49.0	-	23 58.1	24 0 0	7.5		
	-	-	-	24 11.	3.5		
	-	-	-	24 29.7	3.0	27 16.	First moves E. ward
6	17 35.	-	-	-	2.1	17 45.	
9	20 0	-	-	20 8.2	.1		
	-	-	-	20 12.4	.1	21 2.	
11	14 54.2	-	-	5 13.4	.5		
	-	-	-	5 22.	.3	7.5.	
11	11 3.3	11 9.3	11 12.6	11 16.	.6	12 58	
13	3 47.2	-	-	4 18.3	.1	4 35.	
							June
7	11 16.2	-	-	12 3	11.5		
	-	-	-	12 21.8	6.6	15 46	
7	-	-	19 53.5	19 56.5	.1	20 12	
8	0 13.4	0 17.6	0 24.4	0 27.5	3.0		
15	14 41.1	14 44.1	14 51.5	15 23.4	21.8	19 12	Pr very sudden to East
"				14 55	14.0		
"				14 59.2	11.5		
"				15 3.5	9.2		
"				15 7.5	10.0		
"				15 30.	15.2		
"				15 46.7	5.6		
17	5 37.8	-	-	6 12	7.18		Boom-Period 19 sec?

Obs'd Maxima



Director Rev. Walter Sidgreaves, S. J.

Earthquake Records by Milne Seismograph. Meridian boom.
 Cambridge College Observatory, Lat. $53^{\circ} 56' 7''$ N, long. $2^{\circ} 28' 2''$ W. Above S.E.
 Director Rev. Walter Sidgroves, S.E.



Abbreviations etc. - P_1, P_2, P_3 = 1st, 2nd and 3rd phases (arrivals) - M Maximum.
 A Amplitude - D Duration - Alt Air tremors - BP Boom-period.
 1 mm A = $220''$ deviation of boom = 0.497 inclination of pillar at 16 seconds BP.
 = 0.356 " " " 21 " "
 Time, Greenwich. 0 or 24 = Midnight.

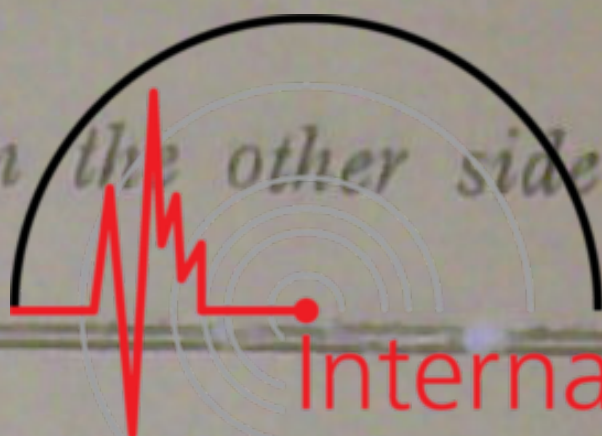
No	Date 1911	P_1	P_2	P_3	Max.	$2A$	End	Remarks
	Sept.	h m	h m	h m	h m	mm	h m	
6	1 6.7	1 16.	-	1 28.1	0.5	2 19.		P_2 1-16 sharp
8	23 5.5	-	-	23 57.7	.5	24 3.		
11	13 45.	-	-	13 51.8	.1	14 0.		
13	3 24.8	-	-	3 36.	<.1			
"	-	-	-	3 46.2	.1	4 25.		
15	13 23.5	-	-	14 5.5	2.0	16 44.		
17	3 50.5	-	-	4 26.5	2.1			
"	-	-	-	5 23.8	2.4	7 47.		Probably second shock
20	5 22.	-	-	5 54.6	<.1	6 38.		
22	5 18.	-	-	5 34.	.4			
"	-	-	-	6 14.	.3	6 57.		
27	6 5.8	-	-	6 21.	<.1	7 6.		
	Oct.							
6	10 21.5	10 33.8	-	10 57.	2.4	12 27.		Max uncertain on account of visitors at 10-43.
"	-	-	-	-	-	-		
10	13 34.9	13 45.5	14 0.	14 1.6	1.6	14 55.		
13	2 57.5	3 5.7	3 20.	3 28.5	1.6	5 27.		
14	6 52.3	-	-	7 6.5	.3	7 36.		
"	12 41.7	-	-	13 14.5	.5			
"	-	-	-	13 18.2	.7	14 40.		
"	16 56.	17 13.5	17 31.2	17 34.8	.5	18 38.		
"	23 41.5	23 58.5	24 1.5	24 2.	1.5			
"	-	-	-	24 8.		24 53		
15	12 29.	-	-	12 42.	.1	13 11		
16	0 7.6	-	-	0 23.	.1	1 11		
17	10 17.7	-	-	10 55.	.1			
"	-	-	-	11 0.	.1			End after 11-30
"	12 26.7	12 34.5	12 42.2	12 47.	.5	13 24.		
19	2 39.5	-	-	2 49.5	<.1	2 56.		
"	9 22.5	-	-	9 30.5	<.1	9 44.		
"	10 21.	-	-	10 47.5	.5	?		Work in room 11-12 h.
20	18 7.	-	-	18 39.3	.1			
"	-	-	-	19 4.9	.2	20 30		
22	22 44.5	-	-	22 56.5	.5	23 1.		
24	0 43.3	-	-	1 32.	.1			
"	-	-	-	1 36.	.1	2 52.		
24	16 55.5	-	-	17 0.	<.1	17 5.		

Earthquake Records by Milne Seismograph Meridian Boom. Stonyhurst College Observatory.

Lat. 53° 50' 7 N., Long 2° 28' 2 W., Above Sea, 363 feet.

Time, Greenwich, 0 or 24 = Midnight

Abbreviations on the other side



Date	P ₁		P ₂		P ₃		Maximum		2 A	End		Boom Deviation, 1 mm =	Boom Period	Pillar Inclination 1 mm =
	H.	M.	H.	M.	H.	M.	H.	M.	mm	H.	M.	" arc	sec.	" arc
Nov.														
1	9	40.7	9	48.5	10	9.0	10	14.5	1.5	12	37.			
2	2	4.7	2	20.5	2	24.1	2	32.	.6	3	27.			
-	8	11.5							<.1	8	21.			
9	7	56.5	8	12.0	8	35.2	8	48.5	.8	10	0.			
13	16	34.5					17	12.	1.4					
-								21.8	1.6	19	37.			
16					21	30.7	21	35.	.5	22	23.			
18	7	46.7	5	57.2	8	22.2	8	25.2	.9					
20	14	1.9					14	39.5	.7					
-								44.	.6					
-								49.	.5	15	46.			
28	16	52.5	16	59.5	17	3.8	17	5.1	.5	18	2.			
30	-				12	10.7	12	14.	.3	12	45.	P ₁ during "change"		
-	23	56.0					24	6.5						
-							24	21.3	<.1	24	29.			
Dec.														
4	14	48.5					14	54.0	.5	16	7.			
6	22	57.6	23	45.3	23	59.0	24	3.5	.5					
11							12	33.5	.2	14	0.			
16	19	27.0	19	37.3	20	2.9	20	6.1	15.0			P ₁ preceded by micro-		
-								10.7	9.0	24	48.	tremors 19 11.7		
20	6	2.6	6	12.1	6	25.0	6	25.5	.3			Preceded by small		
-								57.5	.5			max ² at 8 16.7		
-								52.7	1.0	9	15.	and 5 35.5		
22	13	19.5					13	51.	.5	14	2.			
29	15	52.8					16	33.5	.4	17	27.			
31	6	21.4	6	38.5	7	11.7	7	33.5	1.6	9	14.	P ₁ preceded by micro-		
-												tremors 6 13.7		

Rev W. S. Dysones, Sec.