Earthquake Records by Milne Seismograph, Meridian-room.

Register from Stonyhurst College Observatory. Lat. 53° 50' 40" N, [illegible] W.

Director, Walter Sidgreaves S.J.

No	Date 1910	Commence.-ment P_1	Max. M	Max. Ampli.-tude A	Duration D	Ats = Air tremors S = clear, but too small for measurement P_1 P_2 P_3, beginnings of 1st 2nd and 3rd phases Hours G.M.T. 0 or 24 = Midnight.
January	h. m.	h. m.	mm	h. m.		Boom-period 18 secs.
1	11 13.5	11 42.0	9.6	2 17.0		P_2 11.23 P_3 11 28
		11 47.	6.8			
6		20 22.	S			
7		6 31.5	"			
8		7 26.				
	15 12.	15 36.	0.9	3 6.		
11		19 38.	S			
14		10 34.	"			
		15 3.5	"			
		22 21.	"			
15	22 40.	23 22.	0.1	1 11.		
16	8 32.	9 16.	S	?		D > 3h 25m. End lost in Ats.
17						Film 17–18 lost. Clock stopped.
19		12 47.	"			
		12 53.	"			
		13 31.	"			
	15 32.	16 20.5	0.2	4 27.		
20		15 15	S			
	18 15.5	18 19.	0.2	26.5		
22	8 51.5	8 56.5	29.0	3 54.		P_2 8h 54m. P_1 P_2 sharply defined
		20 18.5	S			
		20 36.5	"			
		20 45.	"			
						Ats. prevalent:
	21 15.5	21 18.	0.1	8.		Jan. 2 7–24 h
23	18 69.	19 23.	2.4	2 56.		P_2 19h 8m " 3 0–14 "
25		1 19.	S			" 8 15.7–24 "
		2 22.	"			" 9 all day
		6 26.	"			" 10 0–15 "
27		15 6.	"			" 12 8–12 "
28		6 39.	"			" 16 12–24 "
		12 48.	"			" 17 0–12 "
		15 4.	"			" 19 frequent 5 m.
	18 24	18 52	0.7	54.		Duncerdum " 24 " "
29		0 6.5	S			
		0 20.5	"			
	6 8.	6 16.5	0.8	1 17.		very irregular
30	4 11.	5 27.	1.2	2 26.		P_2 4h 32m P_3 5h 23m
		5 31.5	1.4			
31		9 23.	6			
						1 mm A = 220" arc deviation of the boom.
						= 0".45 inclination " " pillar

Earthquake Records by Milne Seismograph. Meridian
Isenghurst College Observatory. Lat. 33° 30.7' N. Long. 2° 18.2 W.
Director Walter Hedgreaves, F.R.A.S.

Abbreviations etc. — P_1 P_2 P_3 = 1st 2nd and 3rd phases (arrivals) — M Maximum
A Amplitude — D Duration — Abs Air tremors — s small — m — BP Boom period
1mm A = 220" arc Boom-deviation = 0.497 Pillar-inclination at 15 seconds BP
= 0.355 " " " 21 " "

Time, Greenwich. 0 or 24 = Midnight.

No.	Date 1910	Commencement	M	M–A	D	Remarks
		h m		mm	h m	
Feb.	3	17 19.5	17 38.	·1	1 40	BP 18 sec?
			18 28.	·2		
	4	14 19.5	16 4.5	2.0	6 40	Probably second quake about 19h No break in continuity.
			16 45.	·1		
			19 9.	·1		
			19 30.	·1		
			19 37.	·1		
			20 37.	·2		
	12	18 25.	18 35.5	·9	1 45	
	13	17 11.	17 34.	·3	1 0	Times uncertain. Time shutter not active.
	16		3 4.5	S		
	18	4 43.	5 18.	·5		
			5 25.	·6		
	19		3 11.	S		
	22		19 57.	·		
			20 9.	·		
			21 6.	·		
	23		3 29.	·		
			8 5.	·		
			11 5.5.	·		
			18 37.	·		
	26		8 9.	·		
	27	15 9.7	15 21.	·8	0 39	
	28		6 35.	S		BP 20 sec?
		21 6.	21 43.2	1.0	2 48?	P_2 21 20.5; P_3 21 44.0
Mar.	6		17 33.	S		BP 19 sec?
			19 4.	·		
	18		14 51.	·		
	19	0 39.5	0 56.5	·6	0 48	
	22		10 36.	S		
	25	15 ?	16 17.5	1.4	?	Times uncertain — work in room — cleaning.
		19 25.2	19 28.	·1	0 26	
	28		19 45.	S		
	30	17 ?	18 19.	2.1	?	Work in room — Magnetograph Photos.
			18 26.	2.1		
			18 36.	1.8		
	31	18 38.5	19 24.5	1.4	2 30	P_2 18 49.5

Errata. — For July 15 4h 17m read July 21.
On July 30 11 4.5 for 21s read 11h 4m P_1 and P_3.

Earthquake Records by Milne Seismograph. Meridian Room
Stonyhurst College Observatory. Lat. 53° 50.7 N., Long. 2° 28.2 W. Above Sea 303 ft.
Director, 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 24h = Midnight.

No	Date 1910	P_1	P_2	P_3	Max.	2A	End	Remarks
	April	h m	h m	h m	h m	mm	h m	April.
	1	16 27.?	16 33.5	16 36.0	16 38.5	0.3	17 5.?	
	3	19 38.?	19 46.	–	19 58.	·1	20 42.	
	8	–	17 2.5	17 16.	17 20.	·1		
	"	–	–	–	17 57.	·1		
	"	–	–	–	18 9.	·1	18 58.	
	9	–	–	10 12.5	10 20.	·1	10 35.	
	12	0 34.5	0 45.3	0 58.2	1 14.	4.6	3 18.	Well defined, P_3 irregular.
	13	–	7 15.	7 22.5	7 25.	·1	8 8.	
	16	13 1.	13 13.	13 34.	13 46.	·4		
	"	–	–	–	50.	·4	14 59.	
	17	1 11.5	1 25.2	1 42.0	1 44.	·4		
	"	–	–	–	48	·4	3 31.	
	22	–	–	7 17.5	7 19.5	·1	17 32.	
	23	16 34.6?	16 55.?	17 15.?	17 17.	·1	?	
	27	1 34.	1 45.6	2 8.5	2 11.7	2.0	4 7.	Well defined — M very pronounced.
	May							May.
	1	19 4.5	19 12.5	19 19.2	19 21.	·2	?	P_1 possibly at 18.51.5 which is too strong.
	"	–	19 33.2	19 58.	20 5.	1·4	21 36.	P_1 lost in preceding.
	5	0 47.8	0 55.5	1 6.2	1 10.5	·2	2 7.	
	13	8 2.	8 19.3	8 38.5	8 44.	·8	11 25.	Well defined. Central America?
	14	23 45.	23 49.	23 57.	24 1.5	·2	24 15.	
	"	–	9 21.	9 34.4	9 38.	·5		
	"	–	–	–	41.	·4		
	"	–	–	–	47.	·2		
	"	–	–	–	54.	·1	11 20.	
	20	12 26.2?	?	12 47.	12 52.3	·5	13 47.	P_1 P_2 uncertain: near change time.
	21	–	7 57.	8 3.	8 5.5	·1	8 30.	
	22	6 36.8	6 46.8	7 9.5	7 18.2	3.3	9 38.	Well defined.
	24	–	19 25.?	19 30.5?	19 39.2	·1	20 22.	
	27	8 55.	9 18.3	9 26.5	9 31.5	·3	9 40.	P_1 v. clear but too great.
	28	–	6 53.	7 0.5	7 4.	·3	7 32.	
	31	5 7.5	5 17.9	5 41.5	5 45.8	3·0	11 0.	BP = 20 secs 1 mm boom = 0".38 pillar.

Earthquake Records by Milne Seismograph. Meridian boom.
Stonyhurst College Observatory. Lat: 53° 50'.7 N, Long. 2° 28'.2 W. Above Sea 363 ft.
Director, Walter Sidgreaves, S. J.

Abbreviations etc. – $P_1 P_2 P_3$ = 1st 2nd and 3rd phases (arrivals) – M Maximum. A Amplitude – D Duration – Mts Mir tremors – BP Boom-period.
1 mm A = 220" deviation of boom = 0".497 inclination of pillar, at 16 seconds BP.
= 0".333 " " " " 21 " "
Time, Greenwich. 0 or 24h = Midnight.

No	Date 1910	P_1	P_2	P_3	Max.	2A	End	Remarks
	June	h m	h m	h m	h m	mm	h m	June
	1	6 15	?	6 43.	6 45.	.3		
	"		6 57.3	7 22.	7 28.5	1.6	9 30.	P_1 lost in preceding
	3	23 34.	–	–	23 54.	.1	24 17.	
	6	–	12 44.1	12 47.	12 49.	.2	?	End in Mts.
	7	1 42.?	–	2 13.6	2 16.4	1.1	2 40.	followed by Mts.
	9	12 11.5?	12 19.	12 38.	12 39.8	.6		
	"	–	–	–	12 49.	.6	13 27.	
	14	19 45.	19 54.7	20 1.7	20 2.5	1.0	21 16.	
	16	?	?	4 24.1	4 27.5	2.9	5 19.	Almeria Storm.
	"	6 50	–	–	7 20.	3.8		Beginning very sharp, but not like P_1
	"	–	–	–	7 26.	4.0	after 12h	12 max.a > 1.5 between 6.52 & 8.38.
	"	–	–	–	–	–	–	
	"	–	–	16 35.	16 38.	.1	16 50	
	17	5 51	6 5.2	6 17.2	6 19.5	.1		
	"	–	–	–	6 23.2	.1		
	"	–	–	–	6 26.7	.1	6 49.	
	"	17 10.5	17 21.6	17 36.	17 37.5	.1	18 30.	
	23	–	–	20 9.	20 13.	.1	21 0.	
	24	13 31.2	13 35.2	13 36.5	13 37.7	16.0	15 30.	Algiers 13h 31m ("Nature").
	25	19 23.5	19 32.	19 39.	19 41.2	2.4	21..16.	
	27	9 35.	–	–	9 45.	.2	10 55.	
	29	8 41.5	–	–	9 6.5	.2	10 0.	
	"	–	–	–	12 15.2	5.0		Probably greater amplitudes during change.
	"	–	–	–	" 20.7	4.3		
	"	–	–	–	" 25.6	2.3		
	"	–	–	–	" 31.5	3.4		
	"	–	–	–	" 38.6	2.6		End last in following Eqk.
	"	15 2.0		–	15 47.5	.6	16 41.	
	"	19 12.5	–	–	19 24.	< .1	19 38.	
	30	3 21.5	–	–	4 7.2	.1	4 26.	BP = 20 seconds.
								1 mm boom = 0".38 pillar.

Earthquake Records by Milne Seismograph. Meridian boom.
Stonyhurst College Observatory, Lat. 53° 50'.7 N, Long. 2° 28'.2 W. Above Sea 363 ft.
Director, Walter Sidgreaves, S.J.

Abbreviations etc. – P_1 P_2 P_3 = 1st 2nd and 3rd phases (arrivals) – M Maximum, A Amplitude – D Duration – Mts Mir 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 24h = Midnight

No	Date 1910	P_1	P_2	P_3	Max	2A	End	Remarks
	July	h m	h m	h m	h m	mm	h m	Roman numerals day dates
	2	ε –	–	6 30.0	6 36.0	<.1	6 56	VI Hours 2–10 lost by lamp failing.
	3	ε 7 29.	–	–	7 52.	<.1	8 12	
	3	ε –	–	9 45.	9 50.	<.1	?	XV Mts 6 12 – 16 35
	4	ε 13 30.	–	–	14 25.5	<.1	15 0	XVI Mts 4 – 24
	5	ε –	–	19 20.5	19 25.	0.1	19 42	XVII " 0 – 24
	7	ε 5 2.5	5 7.	–	5 12.5	.4		XXIII " 12 – 19
	"	–	–	–	5 17.5	.4	6 6	XXIV " 14 30 – 18 50
	7	ε 8 37.	8 43.6	9 26.	9 38.	.7		XXV " 12 – 24
	"	–	–	–	9 41.6	.7	11 25	XXVI " 0 – 12
	8	ε 5 0.	–	–	5 12.	.1	5 42	
	10	ε 15 25.	–	–	15 48.	.2	16 31	
	12	ε 7 55.	–	–	8 10	<.1		
	"	–	–	–	8 17	<.1	8 35	
	12	ε 21 43.	–	–	22 3.7	<.1	?	
	12	i 22 23.4	22 33.	22 45.	22 50.8	1.2	23 24	
	15	ε 13 1.	13 13.	13 31.	13 43	.2	14 0	
	"	–	20 41.5	20 52.	20 55.	.1	21 37	
	20	ε –	–	4 3.3	4 6.	<.1	4 48	
	21	ε 22 50.2	23 1.5	–	23 7.	<.1		
	"	–	–	–	23 13.5	<.1	23 34	
	24	ε ?	.	.	16 50.	.3	?	
	29	ε 11 31.3			12 34.0	.5	17 27	P_1 v. probable: although just after work in room.
	Aug.							
	1	10 46.4	–	–	10 52.5	.2	11 17.	XIX Mts 14h 6 19h
	"	22 33.5	–	–	22 38.7	.1	22 58.	XXI " 2 – 6
	2	2 42.7	–	–	2 49.2	<.1	3 53	XXVI " 12 – 24
	3	23 12.5	–	–	23 25.2	<.1	23 51.	
	4	9 0.7	–	–	9 15.5	.1	9 23.	P_1 and end uncertain; in Mts
	5	1 55.	2 3.5	2 11.4	2 15.2	1.3	4 16.	
	6	15 9.	–	–	15 20.5	<.1	16 20.	Mts
	10	21 21.	–	–	21 30.	.1	21 45.	
	11	16 54.2	–	17 10.	17 16.5	.3	17 57.	
	14	16 5.	–	–	16 17.5	<.1	16 37.	
	16	8 25.	–	–	8 43.	<.1	9 5.5	
	17	during change	–	–	12 44.5	.5?	14 5.	
	21	5 57.	6 6.	6 19.	6 31.	.6	8 47.	
	"				6 40.	.6		
	"				6 43.	.6		BP 20 sec?
	21	16 22.	–	–	16 30.5	.3	16 52.5	1 mm boom = 0.38 pillar

Earthquake Records by Milne Seismograph. Meridian boom.
Stonyhurst College Observatory, Lat. 53° 50'.7 N, Long. 2° 28'.2 W. Above Sea 363 ft.
Director Rev. Walter Sidgreaves, S.J.

Abbrevations etc. – $P_1 P_2 P_3$ = 1st 2nd and 3rd phases (arrivals) – M Maximum.
A Amplitude – D Duration – Als Air tremors – BP Boom-period.
1mm 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 1910	P_1	P_2	P_3	Max.	2 A	End	Remarks.
	Sept.	h m	h m	h m	h m	mm	h m	
1		14 34.	14 45.5"	15" 10.0	15" 12.9	1.9		
"		–	–	15" 19.4	–	1.8	17 0.	
6		20 28.	?	?	21 2.5"	3.0	23.2.	
7		7 34.5"	7 51.	8 24.5"	8 33.5"	1.9	?	
8		?	–	3 34.	3 37.	< .1	3 56.	
8		?	6 28.	?	6 37.5	0.1	7 39.	
9		1 26.5	1 35.5"	1 58.2	2 7.5"	4.3	5 44.	
9		10 17.5"	10 29.	10 35.5"	10 38.	0.2	11 43.	
10		12 50.	13 0.7	13 37.2	13 49.5"	0.1	14 41.	
12		16 25.7	16 4.	–	16 44.	< .1	17 36.	
14		14 16.2	–	–	15" 11.	0.1	16 11.	
16		23 23.7	24 0.7	24 3.	24 4.	1.0	24 38.	
18		–	2 23.5"	2 30.5"	2 34.	0.1	2 44.	
24		3 46.5"	3 57.	4 20.2	4 23.2	1.5"	5" 37.	
24		16 0.	16 11.3	16 15"	16 17.	0.2	17 45.	
24		19 4.2	–	–	19 23.5"	0.3	19 58.	
24		–	–	21 5".	21 8.5"	< .1	21 12.	
Oct.								
2		–	–	23 13.5"	22 18.2	0.1	22 57.	
4		23 16.5"	23 26.7	–	23 56.5"	1.5"	25 10.	P_2 very sudden with 2A = 5mm.
7		8 12.5	–	–	8 24.5"	0.2	9 20.	
7		13 18.	–	–	13 25.5"	0.2	13 57.	
18		3 19.5"	–	–	4 8.8	0.2	4 54.	
20		5" 31.	5" 37.	6 5".	6 10.5"	0.2	6 44.	
26		15" 20.8	–	15" 54.5"	15" 56.5"	< .1	?	
27		1 7.5"	–	–	1 13.3	< .1	1 41.	
30		8 18.	–	–	9 7.5"	< .1	9 49.	
30		17 27.2	–	–	17 36.	< .1	17 40.	
Nov.								
2		13 22.5	–	–	13 33.0	< .1	13 57.	
2		14 27.4	14 38.	14 46.	14 49.	0.7	15" 40.	
6		19						Eqk. lost by clock stopping.
9		6 23.5"	?	?	7 24.	2.6		
"		–	–	–	7 33.	2.0		
"		–	–	–	7 45".	1.8		
"		–	–	–	8 3.	8.5"	after	
"		–	–	–	8 12.	5".0	11 33	Ending after change
10		12 48.	?	13 40.7	13 42.	0.3		
"		–	–	–	13 46.	0.3		
"		–	–	–	13 51.	0.3		
"		–	–	–	13 55".	0.6		
"		–	–	–	13 59.5	0.7	15" 6.	
14		7 54.	8 10.5"	8 23.	8 26.7	4.4		BP 19 secs
"		–	–	–	8 33.8	2.7	9 54.	1 mm boom = 0".41 pillar.

Earthquake Records by Milne Seismograph. Meridian boom.

Stonyhurst College Observatory, Lat: 53° 50'.7 N. Long. 2° 28'.2 W. Above sea 363 ft.

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.
= 0.356" " " " 21 " "

Time, Greenwich. 0 or 24 = Midnight–

No	Date 1910	P_1	P_2	P_3	Max.	2A	End	Remarks.
	Nov.	h m	h m	h m	h m	mm	h m	
	15	0 37.6	0 44.	0 48.	0 57.	0.9	1 20.	
	15	14 41.7	14 50.	15 20.8	15 23.5	3.0	17 27.	
	26	5 0.5	5 8.5	?	6 2.6	2.2		
	"	–	–	–	6 6.5	1.8		
	"	–	–	–	6 9.5	1.8		
	"	–	–	–	6 17.	2.7		
	"	–	–	–	6 46.	2.2	9 49.	
	29	2 57.5	3 3.0	3 17.8	3 20.0	4.2	4 25.	
	30	6 47.	–	–	6 57.5	< .1	7 24.	
	Dec.							
	1	16 1.0	?	16 44.	16 46.5	0.2		P_3 ending 17 18.5
	"	–	–	–	17 6.5	0.2	18 25.	
	4	?	12 13?	12 37.7	12 45.4	1.5		
	"	–	–	–	12 50.5	1.1	13 57.	
	10	9 49.3	10 6.6	10 32.6	10 48.4	2.0		
	"	–	–	–	10 52.7	3.0		
	"	–	–	–	10 57.5	4.5	12.	at change
	11	15 26.	–	–	15 31.	< .1	15 35.	Perhaps Ats
	12	8 5.3			1 32.8	< .1	1 36.	
	13	?	?	12 10.5	12 17.	12.4		P_2 during change.
	"	–	–	–	12 22.5	10.7		
	"	–	–	–	12 29.2	6.5		
	"	–	–	–	12 35.7	7.0		
	"	–	–	–	12 45.0	5.0	16 16.	
	14	21 22.2	?	21 26.	21 26.7	0.5	23 3.	
	16	15 4.	15 13.7	15 43.8	15 47.2	7.4		P_3 ending 16 25.
	"	–	–	–	15 57.6	6.5	18 38.	
	16	19 17.6	19 28.1?	19 51.?	20 4.	1.1	22 29	
	17	–	–	0 14	0 19.2	< .1		
	"	–	–	–	0 24.5	< .1	1 27	
	18	3 13.2	?	3 45.5	3 48.2	0.5		
	"	–	–	–	3 53.5	0.6	?	Ending in next.
	18	–	5 40.5	5 47.	5 53.	0.5	6 38.	
	21	10 47.1	10 57.6	–	11 12.	0.3	11 38	
	22	0 47.6	–	–	1 13.2	0.6	2 14	
	26	6 22.	6 30.2	6 35.5	6 50.2	< .1		Small but very clear
	"	–	–	–	6 54.5	< .1	7 19	
	27	19 44.7	19 57.5	20 2.4	20 6.	< .1	21 0	
	29	13 47.6	13 56.8	14 7.2	14 13.5	1.1	15 37.	
	30	–	–	–	0 38.	< .1		These may belong to the following.
	"	–	–	–	0 43.5	< .1		
	30	1 12.	–	–	1 15.9	< .1		
	"	–	–	–	1 46.	< .1	3 17.	
	30	3 27.5?	–	–	3 38.5	0.1	4 34	BP 19 seconds
	30	19 50.5	–	19 50.5	19 55.	< .1	20 24.	1 mm boom = 0.41