British Association for the Advancement of Science.

Circular No. 22, *issued by the Seismological Committee*, Professor H. H. Turner, *F.R.S.* (*Chairman*), Mr. John Milne, *F.R.S.*, *Shide, Isle of Wight* (*Secretary*).

Contents.

I. *General Notes on Registers from Similar Horizontal Pendulums* (*Milne Type*).

The following registers are continuous with those published by the Seismological Investigation Committee in their first twenty-one circulars and in the Reports of the Association, 1896 to 1899.

If observers will kindly send a copy of their register, together with copies of their more important seismograms, to the Secretary of the Seismological Investigation Committee, British Association, Burlington House, London, W., as early as possible after June 30, *and again after December* 31 *of each year, the interval of time which must elapse before they receive copies of the registers of co-workers in various parts of the world will be considerably reduced.*

The time employed is Greenwich mean time (civil), expressed in hours, minutes, and in decimals of minutes. 24 or 0 hours = midnight.

Amplitude indicates half of the complete range of the maximum motion, and is expressed in millimetres. Values less than 1 millimetre refer to the thickening of the line or minute ripples, and indicate half its width.

As 1° turn of the calibrating screw in the bed-plate of the instrument causes a tilt of 1″·9, and as this is accompanied by a measurable displacement of the outer end of the boom, it is easy to determine the angular value corresponding to a 1 millimetre displacement. This quantity should be stated at the end of each register.

II. *Registers.*

The Register from Shide, Newport, Isle of Wight, England.

Director, John Milne; *Assistants*, Messrs. S. Hirota and J. H. Burgess.

The following entries refer to records obtained from three pendulums, A, B, and C.

The periods and "sensibilities" or deflections for 1° turn of the calibrating screw were as follow :—

A. Period 18 seconds. 1° turn = 16mm.

B. Period 18 seconds. 1° turn = 6mm.

C. Period 18 seconds. This pendulum records N.S. motion and is without a calibrating screw. A and B record E.W. motion.

Ats. = Air tremors. P_2 refers to the commencement of the second phase of motion. d. = duration. a. = amplitude.

All entries refer to disturbances recorded not only at Shide, but also at other stations. Records only obtained at Shide have been excluded.

No.	Date	Commencement		Max.		Max. Amplitude	Duration		Remarks
					1910				
		H.	M.	H.	M.	MM.	H.	M.	
2194	Jan. 1	11	7·7	11	55	2·5	2	43	A. P_2. 11h. 23m. 2nd Max., 12h. 1m.
		11	12·7	11	55	2·3	>3	30	B. P_2. 11h. 23m. 2nd Max., 12h. 2m. For C Max., 11h.53m. and 12h. 9·7m.
2195	,, 3			0	55	0·1			A. B. and C.
2196				2	50	0·1			,, ,,
2197				10	32 to 10 55	0·1			,, ,,
2198	,, 4			5	54	0·1			A. B. and C.
2199	,, 6			10	34	0·1			,, ,,
2200				20	35	0·1			,, ,,
2201	,, 7	6	7	6	15	0·5	1	0	,, ,,
2202	,, 8			5	58	0·1			A.

The Register from Shide, Newport, Isle of Wight, England—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
2203	Jan. 8	10 3	10 15	0·6	1 20	A and B.
2204		15 1·5	15 36·5	1·0		A and B. Max. for B. 15h. 38m.
2205	,, 11		19 46	0·1		A.
2206	,, 13		9 2	0·2		B and C.
2207	,, 14		9 42	0·2		A and C.
2208			10 22·5	0·2		A, B and C.
2209			15 9·5	0·1		,, ,,
2210			22 29·5	0·1		,, ,,
2211	,, 15	8 56	9 7·5	0·1	0 32	,, ,,
2212		22 22	23 24	0·5	3 13	,, ,,
2213	,, 16		8 17	0·1		,, ,,
2214			11 47·5	0·2		,, ,,
2215	,, 17		10 12 &	0·1		,, ,,
			10 50	0·1		
2216	,, 18		12 12	0·1		A, B, and C.
2217	,, 19		12 37	0·1		,, ,,
2218			12 57	0·1		,, ,,
2219			13 31	0·1		,, ,,
2220		16 3	16 26	0·2	>2 0	,, ,,
2221	,, 20		15 25	0·2		,, ,,
2222		18 4	18 24·5	0·2	1 0	A. Com. for B and C. 18h. 13m. d.=0·40m.
2223	,, 22		0 7	0·1		A, B, and C.
2224			6 41	0·1		,, ,,
2225		8 52	9 0	>30·0	>4 0	A, B, and C. P_2 for B and C, 8h. 56m.
2226		20 20	20 27	0·2	0 15	A, B, and C. Max. for B and C, 20h. 21m.
2227		21 17	21 22	0·2	0 23	A, B, and C.
2228	,, 23	19 0	19 25	1·7	3 0	A, B, and C. P_2, 19·8.
			19 30	2·7		
2229	,, 25		1 17	0·1		A, B, and C.
2230			2 16	0·1		,, ,,
2231			6 28	0·1		,, ,,
2232	,, 26		17 16	0·1		,, ,,
2233	,, 27	14 56	15 8	0·3	0 25	,, ,,
2234	,, 28		6 37	0·1		A.
2235			12 49	0·1		A.
2236			15 4	0·1		A.
2237		17 59·5	18 7	1·5	0 20	A, B, and C.
2238	,, 29		0 6	0·1		A and B.
2239			0 20	0·1		A and C.
2240		6 0	6 11	0·2	0 30	,,
2241	,, 30	4 6	5 30	0·5	>4 0	A, B, and C. a. for B =2mm.; a. for C =3mm.
2242		16 24	16 28	0·1	0 15	B and C.
2243			17 42	0·2		,,
2244	,, 31	9 50	9 54	0·2	0 40	A, B, and C.
2245	Feb. 2	11 40	11 53	0·5	1 25	,, ,,
2246	,, 3	10 42	11 25	0·1	1 50	,, ,,
2247		16 47	18 27	0·5	4 0	A, B, and C. Com. for B, 17h. 9m.; for C 17h. 6m.
2248	,, 4	14 18	15 28	0·5		A, B, and C.
			16 1	1·2		

The Register from Shide, Newport, Isle of Wight, England continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
			18 8	0·6		
2249	Feb. 4	17 13·5	18 23	0·2	>4 0	A.
			19 21	0·6		
			18 11	0·2		
		17 55	18 26	0·5	>4 0	B and C.
			19 17	0·5		
2250	,, 5		0 57	0·1		A, B, and C.
2251			2 19	0·1		,, ,,
2252			15 20	0·1		,, ,,
2253	,, 6		13 21	0·1		,, ,,
			13 37	0·1		
2254	,, 7		6 42	0·1		,, ,,
2255			16 42	0·1		,, ,,
2256	,, 8		10 55	0·2		B and C.
2257	,, 9	8 56	8 56·5	0·1		A and B.
2258			21 29	0·1		A, B, and C.
2259			22 54	0·1		,, ,,
2260	,, 10	8 45·5	8 56·5	0·6	0 45	A, B, and C. a. for B and C=0·3.
2261			12 0	0·1		A, B, and C.
2262	,, 12	18 22	18 33	1·7		A and B. a. for B=0·8. P_2 for A, 18h. 26m.
2263			19 8·5	1·5		A and B.
2264	,, 13		17 33	0·2		,,
			17 51	0·2		
2265	,, 15		3 1	0·2		A, B, and C.
2266	,, 16		3 45	0·2		,, ,,
2267	,, 18	4 55	5 19	1·0	2 0	,, ,, P_2, 5h. 13m.
2268	,, 19		3 5	0·1		,, ,,
2269	,, 21		11 40	0·1		,, ,,
2270	,, 22		9 11	0·1		,, ,,
2271			19 45	0·1		,, ,,
2272			21 6	0·1		,, ,,
2273	,, 23	3 15	3 37	0·2	0 45	,, ,,
2274			8 3	0·1		,, ,,
2275			10 58	0·1		,, ,,
2276	,, 25		5 2	0·1		A.
2277	,, 26		8 18	0·1		A, B, and C.
2278	,, 27	15 8	15 29	1·2	0 45	A, B, and C. Max. for B, 15h. 23m. a.=0·3.
2279	,, 28		6 24	0·2		A and B.
2280		21 13·5	21 41	0·7		A, B, and C. P_2, 21·20. a. for C=1·5mm.
2281	Mar. 1	12 32	12 48			A, B, and C.
2282	,, 6	17 30	17 34	2·2	0 27	,, ,,
2283		19 2	19 16	0·1	0 48	,, ,,
2284	,, 11	6 58	7 40	0·1	2 35	,, ,,
2285			12 12	0·1		,, ,,
2286			15 55	0·1		A and B.
2287	,, 13		15 38	0·1		A.
2288	,, 15		23 15·5	0·1		A, B, and C.
2289	,, 17		7 0	0·1		,, ,,
2290	,, 18		14 47	0·1		,, ,,
2291	,, 19		0 40	0·1		A.
			0 49	0·1		
2292	,, 21		1 22	0·1		C.

The Register from Shide, Newport, Isle of Wight, England—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
2293	Mar. 22	2 11·5	2 16	0·1	0 12	A.
			2 15	0·1		B and C.
2294	,, 22		10 37	0·1		A, B, and C.
2295	,, 23		14 26·5	0·1		B and C.
			14 48	0·1		A, B, and C.
2296	,, 24		14 47	0·1		A, B, and C.
2297	,, 25	15 14	16 18	1·0	2 45	,, ,,
2298			19 36	0·2		,, ,,
2299	,, 28		7 8	0·2		,, ,,
2300			19 37	0·1		A.
2301	,, 30	17 8	18 37	2·0	4 0	A. P_2, 17h.16m.
2302	,, 31	18 8·5	19 21	2·2		A, B, C. P_2, 18h.5·4m.
2303	April 2		13 20·5	0·1		C.
2304	,, 3	19 35	19 57	0·2	1 25	A, B, and C.
2305	,, 4		17 38·5	0·1		C.
2306	,, 6	2 33	2 38·5	0·1		A.
			2 35·5	0·1		B and C.
2307	,, 7		19 0	0·1		A, B, and C.
2308	,, 8	16 41	17 5	0·2		A. 2nd Max., 17h.22m.
		16 45	17 22	0·2		B and C.
2309	,, 9		10 11	0·2		B and C.
2310			11 55	0·1		B & C. A not working.
2311			13 43·5	0·1		B and C.
2312	,, 11		8 46	0·3		A, B, and C.
2313	,, 12	0 34·5	0 46	2·0	3 25	B & C. A not working.
			1 17	3·5		
2314	,, 13	6 55	7 29	0·2		A, B, and C.
2315	,, 14		20 31	0·1		A and B.
2316	,, 15		2 56	0·1		A and B.
2317			6 49	0·1		A and C.
			13 4	0·2		
2318	,, 16	12 39	13 12	0·3	4 0	A, B, and C.
			13 44	0·5		
2319	,, 17	0 58·5	1 58·5	0·7		A.
			1 45	0·7		B.
			1 47·5	0·7		C.
2320	,, 18		7 39	0·2		B and C.
2321			8 18	0·2		,,
2322			9 16	0·2		,,
2323	,, 20		23 15	0·1		A, B, and C.
2324	,, 22	7 18	7 28	0·2	0 35	,, ,,
2325	,, 26		2 30	0·1		,, ,,
2326			17 57	0·1		,, ,,
2327			18 53	0·1		,, ,,
2328	,, 27		1 24	0·1		,, ,,
			1 35	0·1		
			1 45	0·1		
			2 12	0·1		
2329	May 1	18 50·5	19 59	0·7	2 0	A.
			19 59	1·0		B. 2nd Max., 20h.2·1m.
		18 50·5	20 10	1·5	3 0	C. 2nd Max., 20h.5·4m.
2330	,, 2	21 23	22 22			B.
2331	,, 4		0 41	0·1		B.
2332			16 49	0·1		B.
2333			18 18	0·1		A.
			18 40	0·1		B.
			18 43	0·1		C.

The Register from Shide, Newport, Isle of Wight, England—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
2334	May 5	0 51	1 11		0 53	A.
2335	,, 9	10 48	10 54	0·2	0 11	A.
		10 50	10 55	1·5		C.
2336		16 25	16 46	0·1		B.
		16 26	16 55	0·1		C.
2337	,, 10		9 43	0·1		A.
			9 57	0·1		C.
2338		14 45	14 56	0·2		A.
			14 53	0·1		C.
2339		16 5	16 15	0·1		A and C.
2340		18 15	18 55	1·0		A.
			19 0	0·5		B and C.
2341	,, 11		15 55			A.
2342			19 50	0·1		A, B and C.
2343			20 33	0·1		A and B.
2344	,, 12		3 40	0·1		C.
2345	,, 13	8 17	8 48	2·5	2 49	A.
2346	,, 14		23 50	0·1		A, B, and C.
2347	,, 15		4 54	0·1		A.
			4 56	0·1		B and C.
2348			16 35	0·1		A and B. Also 17h.4m. and 17h.17m.
			6 30	0·1		
2349	,, 16		8 58	0·1		A and B.
			9 13	0·1		
2350			15 22	0·1		A.
2351	,, 18		9 32	0·1	>1 19	A.
2352	,, 19		23 53	0·1		B and C.
2353	,, 20		4 54	0·1		B.
2354		12 24	13 1	0·3	1 2	A.
		12 23	12 50	0·5	1 6	B.
		12 26	12 55	0·5	0 42	C.
2355	,, 21	7 55	8 4	0·2	0 32	A.
2356	,, 22	6 36·5	7 18·5	4·5	3 0	A.
2357	,, 23	19 10·5	19 41	0·5	1 50	C.
2358	,, 26		6 12	0·1		A and B.
2359			8 30	0·1		A, B. and C.
2360	,, 27		9 22			A, B, and C.
2361			12 13			A, B, & C. 12h.16m.
2362	,, 28	6 54	7 8	0·5	0 27	A, B, & C. Max. for B, 7h.4m.
2363	,, 29	6 20	0 24	0·3	0 30	A, B, and C.
2364			13 1	0·1		A and B.
2365	,, 30	12 58	13 2	0·4	0 10	A, B, and C.
2366	,, 31	5 8·5	5 51	3·5	2 55	A and C. a. for C = 1mm.
		5 8	5 48	1·6	2 55	B.
2367	June 1	6 15·5	7 25	0·1	3 52	B and C. a. for B=0·5.
			8 0	1·6		
2368			19 30	0·1		A.
2369	,, 2		15 55	0·1		A, B, and C.
2370	,, 3		4 43	0·1		C.
2371			23 50	0·1		A, B, and C.
2372	,, 5		19 54	0·1		A.
2373	,, 6		12 42	0·1		A, B, and C.
2374	,, 7	2 10	2 14	0·5	0 36	A, B, and C. a=1·0 for A.

The Register from Shide, Newport, Isle of Wight, England—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
2375	June 8		12 53	0·1		A and B.
2376	,, 9	12 12	12 20	0·1	1 8	,,
2377	,, 9		16 50	0·1		A and B.
2378	,, 13	2 8	2 9	0·5	0 6	A.
2379	,, 14		20 36	0·1		A, B, and C.
2380	,, 15	11 35	11 37	0·1	0 6	A and B.
2381	,, 16	4 14	4 22	5·0	>1 0	A.
		4 17	4 25	2·5	>1 0	C.
2382		6 40	7 15·5	4·0	3 10	A.
		6 45	6 52	2·0	3 10	C.
2383		16 14·5	16 36	0·5	0 45	A.
		16 30·5	16 37	0·6	0 18	C.
2384	,, 17		6 21	0·2		C.
2385		17 39	17 44·5	0·2	0 37	A.
2386	,, 18	11 40	11 53	0·1		A and C.
2387	,, 20		9 3	0·1		A, B, and C.
2388			13 31	0·1		B.
2389	,, 21		13 40	0·2		A, B, and C.
2390			15 41	0·2		,, ,,
2391	,, 23		3 22	0·1		B.
2392			10 41	0·1		A, B, and C.
2393		19 12	19 36·5	0·2	>1 0	A and C.
2394	,, 24		2 55·5	0·1		A.
		13 29	13 36	7·0	2 21	B and C.
2395	,, 25	18 57	19 40	3·0	>2 0	A, B, & C. P_2, 19h.31m. a. for B=1·0mm.
2396	,, 25	15 9·5	15 12·5	0·1	0 6	A, B, and C.
2397	,, 26		17 8	0·1		A.
2398			17 12	0·1		B. C, 17h. 6m.
2399	,, 27		14 15	0·1		A, B, and C.
2400	,, 29	8 26	8 45	0·2		B and C.
2401			9 10	0·5		,,
2402		11 5	12 22	1·5		,,
2403			16 2	1·0		,,
2404	,, 30	3 22	4 4	0·3		B. Max. for C, 4h.10m.
2405			17 42	0·1		B and C.

Register from The National Physical Laboratory, Kew Observatory. Director, R. T. Glazebrook, *D.Sc., F.R.S.*; *Superintendent*, C. Chree, *LL.D., F.R.S.*; *Observer*, E. G. Constable.

B.O.T. = Merely a broadening of the trace, and duration less than 10 minutes.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
1025	Jan. 1	11 22·8	11 49·7	2·9	2 33	
1026	,, 7	6 14				B.O.T.
1027	,, 8	15 20·4	15 37·2	1·0	0 54	
1028	,, 19	12 56				B.O.T.
1029	,, 19	16 20				,,
1030	,, 22	8 52·6	8 58 'o 9 0	>17·0	2 36	
1031	,, 23	18 58·9	19 19·4	1·5	1 13	
1032	,, 28	15 5	15 11	0·3	0 10	Ill-defined.
1033	,, 28	18 6				B.O.T.
1034	,, 29	6 15				,,
1035	,, 30	4 36·7	5 29·2	1·1	1 25	
1036	Feb. 2	11 43·2	11 49·3	0·4	0 16	
1037	,, 4	15 31·1	15 44·5	0·7	1 27	
1038	,, 4	19 15·5	19 18·5	0·4	0 20	
1039	,, 10	8 56				B.O.T.
1040	,, 12	18 39	19 2·0	0·5	0 49	Commencement indefinite.
1041	,, 18	5 19	5 25·7	0·4	0 19	
1042	,, 23	8 4				B.O.T.
1043	,, 27	15 19·5	15 25·5	0·4	0 14	
1044	,, 28	21 20·2	21 44·6	0·6	1 12	
1045	Mar. 11	7 25				B.O.T.
1046	,, 11	12 27				,,
	,, 17	7 18·5		0·3	0 7	Seismic character doubtful.
1047	,, 19	0 51	0 53·0	0·3	0 12	
1048	,, 30	17 39	18 37·8	0·9	1 44	
1049	,, 31	18 37·8	19 26·5	0·9	1 19	
1050	April 3	19 52				B.O.T.
1051	,, 8	17 0 17 41·5				,,
1052	,, 12	8 43·4	9 12·2	2·3	1 24	
1053	,, 16	13 44			—	B.O.T.
1054	,, 17	1 47	1 58·5	0·5	0 31	
1055	,, 18	9 31	9 35·5	0·4	0 11	
1056	,, 26	17 53 18 49				B.O.T.
1057	,, 27	2 16				B.O.T.
1058	,, 28	12 12				,,
1059	May 1	19 53·2	20 16·3	0·5	0 53	
1060	,, 4	16 45·5				B.O.T.
1061	,, 5	0 19				,,
1062	,, 9	17 7				,,
1063	,, 10	9 36·5				,,
1064	,, 10	14 51 16 12				B.O.T.
1065	,, 10	18 34·3	19 3·5	0·4	0 40	
1066	,, 13	8 19·8	8 50·7	0·7	1 45	
1067	,, 15	16 35				B.O.T.
1068	,, 16	9 15				,,
1069	,, 20	12 37·3	12 58·3	0·5	0 46	
1070	,, 22	6 47·3	7 15·2	2·0	2 25	
1071	,, 23	19 43				B.O.T.
1072	,, 28	7 5				,,
1073	,, 31	5 19·2	5 52·0	1·1	1 5	
1074	June 1	6 50·7	7 36·5 8 5·0	0·5	1 44	
1075	,, 1	19 4				B.O.T.
1076	,, 7	2 12·2	2 14·3	0·6	0 5	
1077	,, 8	13 12				B.O.T.
1078	,, 9	12 33 16 59				,,
1079	,, 12	20 40				B.O.T.
1080	,, 14	19 54·0	20 4·4	0·6	0 37	
1081	,, 16	6 49·7	8 20·2	2·0	2 10?	Masked by Ats.
1082	,, 16	16 32				B.O.T.

Register from the National Physical Laboratory, Kew Observatory—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
1083	June 17	6 22				B.O.T.
1084	,, 18	11 43				
1085	,, 24	13 33·2	13 35·0	11·0	0 50	Rise to Max. very abrupt.
1086	,, 25	19 30·3	19 39·1	1·3	0 45	
1087	,, 27	14 15				B.O.T.
1088	,, 29	11 30 ?	12 28·3	1·5	1 57 ?	Commencement masked by Ats.
1089	,, 29	15 26·3	16 24·4	0·7	1 50	
1090	,, 30	4 4				B.O.T.

March 25–26, trace lost, paper jammed.

January to April: 1mm. amplitude = 0″·56 of arc.
April to June: 1mm. amplitude = 0″·55 of arc.

Register from Liverpool Observatory, Bidston. Director, W. E. PLUMMER.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
1472	Jan. 1	11 10·9	11 57·4	2·5	2 9	14h. 36m. Possibly insect.
1473	,, 1	13 27·7	13 40·4	0·3	0 59	
1474	,, 3					0h. 38m. ? 2h. 50m. 10h. 43m.
1475	,, 4					5h. 55m. ?
1476	,, 5					20h. 30m. ?
1477	,, 6					10h. 35m. ?
1478	,, 8					5h. 58m.
1479	,, 8	15 29·7	15 35·2	0·6	0 38	19h. 51m.
1480	,, 10					20h. 10m. ?
1481	,, 15	23 13·0	23 22·2	0·1	0 28	
1482	,, 16					8h. 32m. ? 12h. 21m. ?
1483	,, 17					10h. 24m. ?
1484	,, 18	11 1·7	11 8·3	0·2	0 16	5h. 36m. ?
1485	,, 22	8 52·3	8 56·8		1 56	More than width of paper.
1486	,, 22	11 53·1	11 59·7	0·3	0 19	21h. 18m.
1487	,, 23	19 10·0	19 22·2	2·0	1 4	Light feeble, trace uncertain.
1488	,, 24					4h. 36m. ? 11h. 47m. ?
1489	,, 25					10h. 7m. ?
1490	,, 27					1h. 46m. ?
1491	,, 27	5 23·2	5 28·5	0·1	0 23	
1492	,, 28					15h. 5m. ?
1493	,, 28	17 53·2	18 2·9	0·8	0 44	
1494	,, 29	6 1·7	6 8·8	0·9	0 56	0h. 16m.
1495	,, 30	4 18·6	4 34·0	0·5	1 32	Possibly two earthquakes; a second and principal maximum at 5h. 18m.
1496	Feb. 2	11 37·0	11 42·3	0·4	0 24	
1497	,, 3		18 26			
1498	,, 4	7 34·2	7 38·0	0·1	0 12	
			19 52			
1499	,, 7	16 43·7	16 50·4	0·3	0 29	
1500	,, 8	22 9·7	22 14·0	0·3	0 28	Possibly air tremor.
1501	,, 10	8 42·2	8 50·0	0·2	0 31	
1502	,, 11		8 45			?
1503	,, 12	18 22·9	18 36·1	1·3	1 25	
1504	,, 13	8 22·4	8 27	0·2	0 40	?
1505	,, 13	17 12·2	17 26·5	0·3	0 57	
1506	,, 15		0 35			
1507	,, 18	5 19·3	5 26·8	0·5	0 32	
1508	,, 19	8 10·7	8 28·0	0·2	0 50	
1509	,, 23		3 30			
1510	,, 27	15 11·1	15 18·8	0·6	0 41	
1511	,, 28	21 26·0	21 46·2	1·2	1 24	
1512	Mar. 1	12 46·7	12 48·0	0·2	0 14	

Register from Liverpool Observatory, Bidston—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
1513	Mar. 11		7 30			
1514	,, 13		15 50			,,
1515	,, 19	0 43·8	1 0·0	0·5	0 45	
1516	,, 21		1 20			
1517	,, 22		10 28			
1518	,, 25	16 11·7	16 26·8	0·4	1 19	
1519	,, 25		19 30			
1520	,, 28		19 34			
1521	,, 30	17 13·0	19 2·2	0·8	2 51	Perhaps two earthquakes.
1522	,, 31	18 56·9	19 38·0	0·7	1 45	
1523	April 1	16 35·5	16 43·0	0·2	0 23	
1524	,, 3	19 49·0	19 52·7	0·2	0 21	
1525	,, 5		22 55			—
1526	,, 8	17 48·2	18 17·0	0·1	0 59	
1527	,, 11	0 21·4	0 33·8	0·2	0 27	
1528	,, 12	0 38·0	0 52·7	1·6	1 50	
1529	,, 15	4 23·0	4 27·2	0·3	0 32	? Air tremor.
1530	,, 16	13 49·2	13 51·0	0·3	0 25	
1531	,, 17	1 47·2	2 2·4	0·6	1 7	
1532	,, 18	8 10·2	8 17·3	0·2	0 26	
1533	,, 22		6 55			
1534	,, 26		17 30		0 30	
1535	,, 27	1 47·2	2 11·8	0.4	1 58	
1536	,, 28		20 14·7			Curious disturbance, perhaps insect.
1537	May 1	19 22·6	20 21·0	0·7	1 46	
1538	,, 3	22 22·3	22 31·0	0·2	0 39	
1539	,, 5	1 4·7	1 17·6	0·3	0 44	
1540	,, 10	14 46·7	14 53·0	0·3	0 27	
1541	,, 10	18 44·6	18 52·0	0·3	0 58	
1542	,, 11	8 5·8	8 13·6	0·2	0 35	
1543	,, 12		4 45			
1544	,, 13	8 17·2	8 49·6	0·9	1 53	
1545	,, 13		11 2			
1546	,, 16		14 25			
1547	,, 18		1 58			
1548	,, 18	9 27·2	9 43·0	0·6	0 52	
1549	,, 20	12 41·5	12 52·1	0·5	0 53	
1550	,, 21	8 0·0	8 9·6	0·2	0 33	
1551	,, 22	6 34·2	7 18·5	2·2	2 5	
1552	,, 23		9 18			
1553	,, 24	19 21·4	19 38·3	0·4	0 53	
1554	,, 31	5 5·9	5 48·3	2·6	1 34	
1555	,, 31	21 33·0	21 57·2	0·2	0 45	Doubtful.
1556	June 1	7 32·4	7 41·7	0·4	1 43	
1557	,, 7	2 11·6	2 17·0	0·3	0 29	
1558	,, 9	12 19·0	12 47		0 57	Indistinct.
1559	,, 13		2 9			
1560	,, 14	19 47·4	20 2·8	1·3	0 59	
1561	,, 15		1 27			
1562	,, 16	4 23·0	4 26·3	1·1	0 28	
1563	,, 16	6 50·0	7 26·2	2·3	2 57	
1564	,, 17	6 20·0	6 26·6	0·2	0 19	
1565	,, 17	17 35·2	17 39·3	0·1	0 11	
1566	,, 24	13 29·6	13 35·3	11·0	1 6	
1567	,, 25	19 31·8	19 47·5	2·7	0 52	
1568	,, 27		12 35			,
1569	,, 27	18 3·9	18 12·2		0 27	Small; similar marking at 23h. m.
1570	,, 29	9 5·0	9 9·7	0·5	0 39	
1571	,, 29	11 23·0	12 35·0	1·3	2 29	
1572	,, 29		15 13			Possibly belongs to the preceding.
1573	,, 29	15 38·5	16 0·8	0·8	1 18	
1574	,, 30		3 20			On tidal seismometer.
1575	July 3		9 56			
1576	,, 5		6 30			
1577	,, 5	12 9·4	12 14·3	0·2	0 14	
	,, 6	9 27			0 24	Small and uncertain.
1578	,, 6	21 50			1 10	,, ,,
1579	,, 7	5 7·9	5 17·4	0·4	0 26	
1580	,, 7	8 48·2	9 36·0	0·8	1 34	
1581	,, 7	10 38·0	10 41·4	0·2	0 13	
1582	,, 8		2 40			
1583	,, 10	15 38·6	15 53·1	0·5	0 38	

From February 2, 1mm. amplitude = 0″·49.

Register from Royal Observatory, Edinburgh.
Director, F. W. Dyson, M.A., F.R.S.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
231	Jan. 1	11 12·9	11 53·4	2·5	3 59·9	
232	,, 1	21 0				to Jan. 4, 0h.0m. Frequent thickenings.
233	,, 4	5 22·2			0 39·1	Very minute tremors.
234	,, 4	15 8·1	15 14·1		0 15·4	Small.
235	,, 6	20 17·8			0 48·2	Very small.
236	,, 7	6 5·9	6 18·2	0·3	0 37·9	
237	,, 8	10 25·2	11 7·6	0·2	1 18·4	
238	,, 8	15 11·3	15 35·7	0·5	1 46·6	
239	,, 9					Frequent Ats.
240	,, 13					
241	,, 13	8 59·7	9 11·7		0 22·7	Very minute tremor.
242	,, 15	22 41·0	23 34·6		1 16·5	Small.
243	,, 16	11 35·6			0 37·7	Very small.
244	,, 16					Frequent Ats. and thickenings.
245	,, 19					
246	,, 17	10 12·2	10 21·6	0·4	0 38·3	
247	,, 19	16 9·7	16 19·7	0·2	0 59·5	
248	,, 20	18 7·7	18 18·0		0 29·8	Small.
249	,, 22	8 51·4	8 55·7	29·0	4 4·0	
250	,, 22	19 44·4			0 3·8	
251	,, 22	19 57·4			0 4·8	
252	,, 22	20 16·0			0 9·9	Small.
253	,, 22	20 42·3			0 7·9	
254	,, 22	21 14·4		0·2	0 9·2	
255	,, 23	18 59·7	19 25·4	3·5	3 26·5	
256	,, 25		1 19·5			Very small.
257	,, 28	18 1·6	18 3·3	0·2	0 27·6	
258	,, 29	0 2·6	0 8·4		0 29·1	Small.
259	,, 29	5 35·5			0 2·4	Very small.
260	,, 29	5 55·6	6 14·1	0·2	0 29·8	
261	,, 30	4 12·4	5 33·7	0·7	2 52·8	
262	,, 30	16 21·7	16 27·6		0 10·9	Very small.
263	,, 30	17 47·6	17 54·7		0 14·3	
264	Feb. 2	11 37·3	11 51·1		0 52·8	Very small.
265	,, 3	17 24·3	18 22·3		1 43·3	,,
266	,, 4	14 19·5	16 4·4	0·9	3 18·3	
267	,, 4	17 57·7	19 17·3	0·3	3 23·7	
268	,, 5	2 16·5	2 21·1		0 15·6	Very small.
269	,, 5					Occasional Ats.
270	,, 6					
271	,, 7	16 49·6			0 7·9	Very small tremors.
272	,, 10	8 42·7	8 51·2		0 43·8	,, ,,
273	,, 11					Ats.
274	,, 12					
275	,, 12	18 21·4	18 32·4	0·9	2 50·2	
276	,, 13	17 16·3	17 25·8		0 40·8	Small.
277	,, 15	2 2·0			1 14·7	Small, perhaps Ats.
278	,, 18	5 12·1	5 28·9	0·5	1 2·2	
279	,, 18	7 50·2	8 16·4		0 49·8	Small.
280	,, 19	13 39·4			0 11·6	Small, perhaps Ats.
281	,, 23	3 23·5	3 29·4	0·3	0 42·1	
282	,, 23	7 39·6	8 9·2		0 45·6	Small.
283	,, 27	14 52·8	15 19·6	0·5	1 8·3	Two equal maxima.
			15 26·1			
284	,, 28	21 19·2	21 41·5	1·0	1 32·6	
285	March 1		12 48·5			
286	,, 1		12 56·0			
287	,, 4	20 31·5			0 10·7	
288	,, 6	17 29·8			0 6·5	
289	,, 6	19 1·8			0 20·0	Very minute tremors.
290	,, 11	7 30·2			0 19·3	
291	,, 11	12 5·7			0 35·5	
292	,, 12	14 5·3	14 34·6		0 57·3	Very small.
293	,, 17	16 57·6			0 20·3	,,
294	,, 19	0 26·1	0 51·4	0·2	1 21·3	
295	,, 22	10 12·4			0 31·3	Very minute.
296	,, 25	12 58·9			0 4·0	,,
297	,, 25	15 44·8	16 27·6	0·5	2 51·8	
298	,, 25	19 24·9	19 34·5		0 26·4	Small.
299	,, 30	17 15·2	18 36·3	1·0	3 37·3	Two equal maxima.
			19 0·3			

Register from Royal Observatory, Edinburgh—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
300	Mar. 31	18 41·4	19 29·1	0·7	3 11·2	
301	April 1	14 17·9	16 40·4	0·2	3 9·2	
302	,, 3	19 25·2	19 55·4	0·2	1 37·9	
303	,, 4	15 25·4			0 6·0	Very small.
304	,, 4	17 27·7			0 27·2	
305	,, 8	17 3·2	17 15·8	0·2	1 59·3	
306	,, 9	10 7·6	10 18·0		0 32·5	Very small.
307	,, 9	11 55·0	11 56·9		0 9·6	,,
308	,, 11	8 45·5	8 48·4	0·2	0 22·7	
309	,, 12	0 34·5	1 11·8	1·4	3 6·5	
310	,, 13	7 5·0	7 32·3		0 46·0	Small.
311	,, 15	9 18·3			0 56·7	,,
312	,, 16	12 56·6	13 33·3	0·2	2 26·0	
313	,, 17	1 7·4	1 51·6	0·3	2 50·1	
314	,, 18	8 6·7	8 19·5		0 50·4	Very small.
315	,, 18	9 8·2			0 18·3	,,
316	,, 20	22 56·6			1 30·3	,,
317	,, 22	7 16·0	7 23·4		0 23·9	Small.
318	,, 26	17 54·7	17 56·3		0 5·5	,,
319	,, 27	1 35·7	2 15·2	0·5	2 44·8	
320	May 1	18 50·3	20 38·2	0·6	3 19·5	
321	,, 4	0 40·9	0 49·0	0·2	0 27·3	
322	,, 4	16 38·0			1 18·8	Very minute.
323	,, 4	18 38·0			0 30·5	Very small.
324	,, 5	0 48·8	1 14·0	0·3	1 59·9	
325	,, 6	17 17·8			0 10·1	Very minute.
326	,, 9	10 16·0	10 57·7		1 7·4	,,
327	,, 9	16 47·8			0 9·9	,,
328	,, 10	10 1·6	10 29·4		0 47·0	,,
329	,, 10	14 18·8			1 5·5	Very small.
330	,, 10	16 1·6			0 37·6	,,
331	,, 10	17 13·1			0 36·2	,,
332	,, 10	18 13·8	18 53·3	0·4	2 24·2	
333	,, 11	7 43·7			1 1·2	Very small.
334	,, 11	12 17·9			0 9·1	Very small, perhaps accidental.
335	,, 11	21 14·4			0 6·4	,, ,,
336	,, 12	9 36·8			0 16·6	Very small.
337	,, 12	19 22·1			0 6·2	,,
338	,, 13	8 10·4	8 42·8	0·6	3 17·4	
339	,, 14–15	23 43·9	0 1·4	0·2	0 39·1	
340	,, 15	4 50·8			0 15·2	Small.
341	,, 15	16 27·1			1 16·9	,,
342	,, 16	15 40·8			0 21·6	,,
343	,, 18	9 10·8	9 40·0	0·3	2 11·1	
344	,, 19	23 51·6			0 10·8	Very small.
345	,, 20	4 58·6			0 22·5	,,
346	,, 20	12 21·5	12 55·2	0·4	1 25·4	
347	,, 21	7 56·4	8 6·9	0·2	0 30·8	
348	,, 22	6 36·3	7 14·5	1·3	3 1·8	
349	,, 23	19 6·0	19 43·9		1 48·2	Small.
350	,, 27	12 14·2	12 18·0		0 15·1	,,
351	,, 28	6 53·8	7 11·1		0 37·8	,,
352	,, 29	0 17·4	0 19·3		0 15·3	,,
353	,, 30	12 53·3	13 4·0		0 33·1	,,
354	,, 31	5 7·7	5 45·9	1·0	3 1·9	
355	June 1	6 15·2	7 58·4	0·6	3 30·4	
356	,, 1	19 14·1	19 19·8		0 33·6	Small.
357	,, 3	4 43·3			0 4·7	Very minute.
358	,, 3–4	23 45·0	0 3·3		0 57·0	Small.
359	,, 5	19 47·5			0 10·9	Very small.
360	,, 6	12 44·8			0 32·1	,,
361	,, 7	2 12·1	2 17·9	0·3	0 42·1	
362	,, 9	12 3·1			1 38·2	Very small.
363	,, 9	23 28·3			0 4·6	,,
364	,, 12	20 53·5			0 9·4	,,
365	,, 13	2 2·2			0 12·9	,,
366	,, 13	14 8·6	14 18·3		0 54·6	,,
367	,, 14	19 54·5	20 3·0	3·2	1 45·6	
368	,, 16	4 23·6	4 27·0	0·7	1 23·8	
369	,, 16	6 49·8	8 34·6	1·5	4 22·0	
370	,, 16	16 35·1	16 38·9		0 20·3	Small.
371	,, 17	5 51·1	6 25·6	0·3	0 57·7	
372	,, 17	17 4·9	17 41·8		1 18·6	Small.
373	,, 23	3 16·5	3 49·4		1 2·0	Very small.

Register from Royal Observatory, Edinburgh—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
374	June 23	19 33·5			0 3·7	Very small.
375	,, 23	19 58·8			1 11·4	,,
376	,, 24	2 51·4			0 8·8	Very minute.
377	,, 24	13 31·2	13 38·1	7·4	2 20·6	
378	,, 25	19 26·7	19 41·8	1·7	1 38·4	
379	,, 26	0 46·9			3 31·1	Very small.
380	,, 26	16 54·7			0 29·4	,,
381	,, 29	8 34·9	9 6·3	0·3	2 5·7	
382	,, 29	11 9·2	12 22·0	1·2	3 21·8	
383	,, 29	14 33·9	16 0·8	0·4	2 55·0	
384	,, 30	3 13·4	3 58·1		3 7·2	Small.

1° of footscrew=3·77 mm. at end of boom.
1mm. of amplitude=0″·507.

Register from the Coats Observatory, Paisley.
Observer to the Board of Directors, DONALD MACLEAN.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
786	Jan. 1	11 13	11 55·5	2·8	2 20	
787	,, 6		10 35			Very small.
788	,, 6		20 35			
789	,, 7		6 18			
790	,, 7		6 30			
791	,, 8		10 15	0·1		
792	,, 8	15 13	15 37·5	0·5	2 35	
793	,, 11		19 37·5			Possibly air tremor.
794	,, 11		19 45			
795	,, 14		10 21·5			
796	,, 14		10 33			
797	,, 14		15 8			
798	,, 14		22 9·5			
799	,, 14		22 22			
800	,, 15		9 7·5			
801	,, 15	22 49	23 26	0·1	0 56	
802	,, 16	8 5	9 2	0·2	>2 48	
803	,, 17		10 12			
804	,, 17		10 52			
805	,, 18		10 11			
806	,, 19		12 36			
			12 55			
807	,, 19	15 30	16 21	0·3	3 56	
808	,, 20		15 25·5	0·1		
809	,, 22	8 49	8 56	?	>3 26	Oscillations went beyond the scale of photographic paper.
810	,, 22	21 16	21 19·5	0·2	0 9	
811	,, 23	18 43	19 25	3·3	2 52	
812	,, 25		1 18·5	0·3		
			2 23			
			6 28			
813	,, 27		15 6			
			15 8			
	,, 28					A storm of Ats. from 17h. on 27th to 10h. 50m. on 28th.
814	,, 28	—	12 48			
815	,, 28	—	15 3·5			

Register from the Coats Observatory, Paisley—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
816	Jan. 28	18 1·5	18 4·5	0·6	>0 56	
817	,, 29		0 7			
818	,, 29		0 20·5			
819	,, 29	6 2	6 13·5	0·5	1 19	
820	,, 30		5 30·5	0·8		Commencement and end lost in Ats.
821	,, 30		16 26·5			
822	,, 31		9 53			Very small.
823	Feb. 2	11 41	11 49·5	0·3	>0 34	
824	,, 3	17 15	17 38	0·2		
			18 26·5	0·2	1 30	
825	,, 4	14 16	16 12	0·8	3 25	
826	,, 4	17 54	19 21·5	0·3	2 53	
827	,, 5		0 56			Very small.
828	,, 5		2 18·5			
829	,, 6		13 35·5			
830	,, 9		21 29			
831	,, 9		22 54·5	0·1		
832	,, 10		8 56	0·1		
833	,, 12	18 18	18 31·5	0·8	>1 55	
834	,, 16		3 46			Thickening.
835	,, 18	2 2	2 15	0·6	5 4	Quake small, but of long duration.
836	,, 19		3 11·5	0·2		
837	,, 21		11 40	0·1		
838	,, 22		21 6	0·1		
839	,, 23		5 35·5	0·3		
840	,, 23		8 4·5	0·1		
841	,, 23		10 56·5			Very small.
842	,, 26		8 10	0·1		
843	,, 27	15 5·5	15 20	0·4	0 38	
844	,, 28		6 20·5			
845	,, 28		6 24			
846	Mar. 1		12 49			
847	,, 1		12 56	0·3		
848	,, 6		17 33·5			
849	,, 6		19 4			
850	,, 6		19 18			
851	,, 11	7 19·5	7 42·5	0·4	1 48	Quake very small, but distinct and prolonged.
852	,, 11		12 12			
853	,, 11		15 38·5			
854	,, 17		7 0·5	0·2		
855	,, 18		14 49·5			
856	,, 19		0 51·5	0·4		Commencement and end lost in Ats.
857	,, 22		10 36·5	0·1		
858	,, 24		14 45	0·1		
859	,, 25	15 50	16 18	0·7	1 21	
860	,, 25		19 35·5	0·1		
861	,, 30	17 15·5	18 55	1·2		End lost in Ats.
862	,, 31	18 39	19 30	0·8	2 17 ?	End uncertain, due to the commencement of Ats.
863	April 1	16 26·5	16 39·5	0·3	0 48	
864	,, 3	19 32	19 59	0·2	1 14	
865	,, 8	17 2·5	17 18	0·2		
			17 59	0·2	1 55	
866	,, 9		10 10·5	0·1		
867	,, 11		8 47	0·1		
868	,, 12	0 34	1 21	1·3	2 45	Well defined and prolonged.
869	,, 13		7 32·5	0·2		
870	,, 16		13 37	0·2		
			13 43·5	0·1		
871	,, 17	1 28	1 54	0·3	3 23	
872	,, 20		23 15			
873	,, 22		7 23·5	0·1		
874	,, 23		17 54·5	0·2		
875	,, 27		2 13	0·6		Commencement and end lost in Ats.
876	May 1	19 4	20 27·5	0·8	2 30	
877	,, 9		10 54	0·1		
878	,, 9		16 15	0·1		
879	,, 10		14 55·5	0·1		
880	,, 10		16 15·5	0·1		
881	,, 10	18 34	18 55·5	0·5		End lost in Ats.
882	,, 11		15 55	0·1		
883	,, 13	8 1·5	8 44	0·8	3 39	Well defined and prolonged.
884	,, 15		16 35·5	0·1		

Register from the Coats Observatory, Paisley—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
885	May 16		6 29·5	0·1		
886	,, 16		9 12·5	0·1		
887	,, 18	9 30	9 43·5	0·5	1 9	
888	,, 20		4 54			
889	,, 20	12 23	12 51·5	0·5	1 36	
890	,, 21	7 54	8 7·5	0·3	0 44	
891	,, 22	6 35	7 18	1·3	3 5	Well defined and prolonged.
892	,, 23		19 34·5	0·1		
			19 40	0·2		
893	,, 27	8 50	9 30·5	0·2	0 57	
894	,, 28	6 47 ?	7 8·5	0·3	1 1	
895	,, 30		13 4	0·2		
896	,, 31	5 6·5	5 50	1·2	4 9	Well defined and prolonged.
897	June 1	6 14	7 32·5	1·0	3 29	
898	,, 4		0 41	0·1		
899	,, 4		16 46	0·1		
900	,, 6		12 42	0·1		
			12 47	0·1		
901	,, 9		10 54·5	0·1		
902	,, 9	12 7	12 39·5	0·3	1 25	
903	,, 14	19 36	20 2·5	2·8		End lost in Ats.
904	,, 16	4 24	4 29·5	0·8	0 56	
905	,, 16	6 50	8 11·5	2·1	>4 40	Beginning very sharp, well defined, and prolonged.
906	,, 16		16 38·5	0·2		
907	,, 17	17 6	17 36	0·1	1 24	
908	,, 21		9 18·5	0·1		Very small.
909	,, 24	13 30	13 39	> 8·5	2 0	Oscillations almost beyond the scale of paper.
910	,, 25		15 12	0·1		
911	,, 25	18 45	19 42	2·3		End lost in Ats.
912	,, 26		17 11	0·1		
913	,, 27		9 45	0·1		
914	,, 29	8 40·5	9 18·5	0·3	1 20	
915	,, 29	11 5	12 30	1·0	>3 52	Well defined and prolonged.
916	,, 29	15 0	16 15·5	0·4	>2 20	
917	,, 30	—	4 26·5	0·4	?	Commencement lost in Ats.

Period of Pendulum = 0″·7.
1mm. of amplitude = 0″·47 of arc.

Register from Eskdalemuir Observatory, Superintendent, GEORGE W. WALKER.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks.
			1910			
		H. M.	H. M.	MM.	H. M.	Waves. Scale value.
29	Jan. 1	11 15	11 59	1·2	3 18	N.S. 1mm. = 0″·39.
30	,, 1	11 12	11 44	2·9	3 14	E.W. 0″·39.
31	,, 8	15 32	15 37	0·7	0 20	N.S. 0″·39.
32	,, 8	15 31	15 35	0·6	0 19	E.W. 0″·39.
33	,, 22	8 55	8 58	>18·0	1 32	N.S. 0″·36.
34	,, 22	8 55	8 58·5	>20·0	1 36·5	E.W. 0″·39.
35	,, 23	19 7	19 20	0·7	0 50	N.S. 0″·36.
36	,, 30	5 3	5 36	0·9	0 40	N.S. 0″·37.
37	,, 30	5 4	5 30	1·0	0 37	E.W. 0″·40.
38	Feb. 4		15 31	0·6		N.S. 0″·36.
39	,, 4		15 33	0·9		E.W. 0″·40. Duration of each
40	,, 4		16 1	1·0		E.W. 0″·40. doubtful; whole
41	,, 4		16 10	1·2		N.S. 0″·36. disturbance lasted about two
42	,, 4		16 13	0·8		E.W. 0″·40. hours.
43	,, 4		16 49	0·5		N.S. 0″·36.
44	,, 4		16 41	0·5		E.W. 0″·39.

Register from Eskdalemuir Observatory—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	Waves. Scale value.
45	Feb. 4	18 57	19 4	0·7	0 15	N.S. 1mm. = 0″·36.
46	,, 4	18 57	19 8	0·4	0 16	E.W. 0″·39.
47	,, 12	18 32	18 35	0·7		N.S.
48	,, 12		18 36·5	0·6		N.S.
49	,, 12		18 44·5	0·6		N.S. 0″·34.
50	,, 12		18 47·5	0·6		N.S.
51	,, 12		19 0·5	0·8	1 8	N.S.
52	,, 12	18 33	18 33·5	0·9		E.W.
53	,, 12		18 38·5	0·7		E.W. 0″·43.
54	,, 12		19 18·5	0·7	1 9	E.W.
55	,, 27	15 14	15 22	0·9	0 25	N.S. 0″·43.
56	,, 27	15 14	15 20	0·9	0 26	E.W. 0″·34.
57	,, 28	21 20	21 43	1·2	0 13	N.S. 0″·38.
58	,, 28	21 20	21 41·5	1·0	0 16·5	E.W. 0″·35.
59	Mar. 25	15 49	?	0·2	0 58	N.S. 0″·39.
60	,, 25	15 48	16 26	0·6	0 57	E.W. 0″·38.
61	,, 30	17 14	18 53	1·1	2 31	N.S. 0″·39.
62	,, 30	17 14	19 0	1·5	2 38	E.W. 0″·38.
63	,, 31	18 49	19 32·5	1·3	2 35	N.S. 0″·39.
64	,, 31	18 48	19 24	1·3	2 40	E.W. 0″·38.
65	April 6	16 18	16 27	0·5	0 35	N.S. 0″·42.
66	,, 6	16 17	16 26	0·2	0 34	E.W. 0″·39.
67	,, 10	16 9	16 27	0·4	0 44	N.S. 0″·42.
68	,, 10	16 9	?	0·1	0 32	E.W. 0″·39.
69	,, 12	0 33	0 44·5	1·7		N.S. Start of large
70	,, 12		1 13	1·2		N.S. 0″·43. waves at 0h.
71	,, 12		1 15	0·9		N.S. 43·5m.
72	,, 12	0 29	0 44·5	1·1		E.W. Start of large
73	,, 12		1 17	1·6		E.W. 0″·38. waves at 0h.
74	,, 12		1 19	1·5		E.W. 43·5m.
75	,, 27	1 39	2 17	0·2	1 27	N.S. 0″·43.
76	,, 27	1 35	2 12·5	0·6	1 39	E.W. 0″·37.
77	May 1	18 49	19 57	0·4		N.S.
78	,, 1		20 39·5	0·3	2 44	N.S. 0″·41.
79	,, 1	18 45	19 55·5	0·5		E.W.
80	,, 1		20 5	0·5		E.W. 0″·37.
81	,, 1		20 33·5	0·6	2 45	E.W.
82	,, 10	18 45	18 52	0·3	0 24	N.S. 0″·43.
83	,, 10	18 43	18 54	0·4	0 30	E.W. 0″·38.
84	,, 13	8 10	8 40·5	1·1	1 49	N.S. 0″·43.
85	,, 13	8 12	8 41·5	0·9	1 49	E.W. 0″·38.
86	,, 18	9 40	9 46	0·3	0 23	N.S. 0″·52. Workmen in room.
87	,, 18	9 32·5	9 40	0·6	0 32	E.W. 0″·38. ,,
88	,, 22	6 35	7 16·5	0·9		N.S.
89	,, 22		7 18·5	0·8	2 36	N.S. 0″·45. ,,
90	,, 22	6 35	7 14	1·0		E.W.
91	,, 22		7 22	1·2		E.W. 0″·36. ,,
92	,, 31	5 10·5	5 45·5	0·5	2 54	N.S. 0″·43. ,,
93	,, 31	5 7	5 45·5	1·0	2 56	E.W. 0″·36. ,,
94	June 1	6 15	* 8 1	0·1	3 10	N.S. 0″·43. ,,
						*Several of equal magnitude.
95	,, 1	6 15	7 30	0·6		E.W. 0″·36. Workmen in room.
96	,, 14	19 54	20 2	(?) *	0 55	N.S. 0″·46. ,,
						*Hour break at same place.
97	,, 14	19 54	20 2·5	2·8	0 55	E.W. 0″·34. ,,
98	,, 16	4 19	4 27	1·1	0 31	N.S. 0″·46. ,,
99	,, 16	6 49	* 6 53	1·2	3 10	N.S. 0″·46. ,,
						*Also at numerous other places.
100	,, 24	13 31	13 37	8·6	1 28	E.W. 0″·34. ,,
101	,, 24	13 31	13 39	2·8	1 28	N.S.
102	,, 25	19 30	19 44·5	1·1	0 57	N.S. 0″·46. ,,
103	,, 25	19 30	19 40·5	1·5	0 59	E.W. 0″·34. ,,
104	,, 29	11 9	12 45	1·1	2 46	N.S. 0″·39. ,,
105	,, 29	11 10	12 16·5	2·2	2 4	E.W. 0″·36. ,,

Register from Woodbridge Hill, Guildford, England.
Owner and Observer, F. EDWARD NORRIS. *Assistant*, E. SMART.

North–South Boom (N.), and West–East Boom (W.), have each a period of 17½ seconds.
1° arc. = 0·53mm., or 1mm. = 1·88° arc.
As there is no multiplication, all amplitudes give the complete range of motion.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		1910				
		H. M.	H. M.	MM.	H. M.	
1	Jan. 1	11 9·6	12 2·7	2·2	2 50	N. P_2 11h.17·5m.
		11 10	12 1·2	1·5	3 30	W. P_2 11h.15·4m.
2	,, 8	15 21·5	15 37·6	0·8	1 5	N.
		15 21·5	15 37·6	1·0	1 32	W.
3	,, 22	8 50	9 2	29·3	2 32	N. P_2 8h.58m.
4	,, 23	19 3·6	19 18·1	0·7	2 6	N. P_2 19h.10·1m.
		19 3·6	19 21·2	1·3	2 24	W. P_2 19h.10·4m.
5	,, 24		19 9			
			20 47			
			22 30			
			23 21			
6	,, 25		5 54			
			10 15			
7	,, 28	17 23	17 30	0·4	0 16	
8	,, 30	5 0·7	5 35·1	1·0	1 30·0	N.
		5 0·5	5 32·9	2·0	1 35·0	W.
8	Feb. 4	15 19·6	16 4	0·7	1 30	N. P_2 15h.27·5m.
		15 18·0	16 16	1·1	2 33	W. P_2 15h.26·3m.
9	,, 12	18 27·2	19 4	0·6	1 30	N. P_2 18h.36·2m.
		18 25·2	19 17·9	0·6	1 56	W. P_2 18h.34·2m.
10	,, 13	17 37				
11	,, 18	5 5·7	5 30	0·6	0 48	N. P_2 5h.16·6m.
		5 5·7	5 26·5	0·3	0 31	W. P_2 5h.17·2m.
12	,, 27	15 15·6	15 25·7	0·4	0 25	N.
		15 15·4	15 23·9	0·5	0 18	W.
13	,, 28	6 55	7 11·5	0·3	0 32	N.
		6 55	7 10·5	0·2	0 29	W.
		21 20	21 45	0·3	0 48	N.
		21 17	21 46·5	0·6	1 6	W.
14	Mar. 25	16 15·9	16 25·0	0·4	0 48	N. P_2 16h.20m.
		16 14·5	16 49·4	0·3	0 48	W. P_2 16h.19·1m.
15	,, 30	17 15·1	18 0·4	0·8	2 3	N. P_2 17h.22·5m.
15	,, 31	18 42·5	19 22·6	1·1	3 20	N. P_2 18h.53·6m.
		18 43·6	19 27	1·3	3 19	W. P_2 18h.54m.
17	April 1	16 31·5	16 45	0·3	0 42·5	N.
		16 27·7	16 44·8	0·2	1 9	W.
18	,, 4	16 57	17 55	0·1	1 25	N.
		16 56	17 29	0·1	1 25	W.
19	,, 12	0 41·7	1 5·7	1·7	1 37	N. P_2 0h.47·8m.
			1 18·1			
		0 42·7	1 15·5	1·6	1 39	W. P_2 0h.48m.
21	,, 20	22 38·1	23 9·8	0·25	1 43	N. P_2 22h.42·9m.
		22 38	23 8·8	0·2	1 48	W. P_2 22h.42m.
			23 17·5			
22	May 1	18 48·9	20 36·8	0·75	3 15·3	N. P_2 18h.59·2m.
23		18 50·7	20 31·0	0·75	3 46·3	W. P_2 18h.59·8m.
21	,, 4	16 50	17 22·9	0·05	0 56	N.
		16 48·6	17 24·2	0·1	0 59·4	W.
		18 41·7	18 52·5	0·05	1 10·3	N.
		18 43·4	18 51·6	0·1	1 15	W.
25	,, 10	14 47	14 51	0·1	0 42·5	N.
		14 47	14 59·3	0·1	0 55	W.
26	,, 12	3 52	4 22	0·15	1 13·5	N.
		3 36·5	4 22	0·15	1 41·9	W.
27	,, 13	8 9·8	8 53·1	0·7	4 46·2	N. P_2 8h.18·2m.
		8 10·6	8 47·8	1·0	4 47·4	W. P_2 8h.17·2m.
28	,, 15	16 37	16 12·5	0·05	0 51	N.
		16 38·8	16 49·9	0·05	1 19·8	W.
29	,, 16	14 26	14 27	0·05	0 11	N.
		14 26	14 33	0·05	0 18	W.
30	,, 18		9 45	0·5		Com. lost changing paper.

Register from Woodbridge Hill, Guildford, England—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
31	May 20	12 27·6	12 58·9	0·35	1 7	N.
		12 27·9	12 56	0·1	1 5	W.
			13 2·2			
32	,, 22	6 36·5	7 23·3	2·7	3 10	N.
		6 23·2	7 26·8	2·8	4 6·8	W.
33	,, 23	18 55·1	19 44·2	0·2	1 57	N.
		18 56	19 46·2	0·2	2 6	W.
34	,, 28	6 55·5	7 4·8	0·05	0 13·5	N.
		6 56	7 6·8	0·05	0 16·3	W.
35	,, 31	5 13	5 47·9	0·7	1 29	N. P_2 5h.26·2m.
		5 11·7	5 52	1·0	1 50·3	W. P_2 5h.25·6m.
36	June 1	7 0·2	7 51·7	0·6	2 3·8	N. P_2 7h.7m.
		7 0	7 34	0·35	>2 7	W. P_2 7h.7·8m.
			7 41·8	0·25		
			7 45			
			7 56·7			
37	,, 7	2 10·2	2 13·8	0·25	0 27	N. Avellino.
		2 8·8	2 14·2	0·75	0 35	W.
38	,, 12	20 52·3	20 53·5	0·07	0 23	N.
		20 52·4	20 54·9	0·1	0 22	W.
39	,, 14	19 47	20 7·3	0·7	0 58	N. P_2 19h.54·9m.
			20 11·1			
		19 45·4	20 6	1·0	0 58	W. P_2 19h.54·9m.
40	,, 16	4 17·3	4 27	1·6	0 46	N. Spain.
		4 14·9	4 27·8	0·6	0 53	W.
			4 28·2			
		6 40·5	8 19·5	1·95	3 28	N. P_2 6h.48·2m.
		6 40·4	8 20·1	2·85	3 41	W. P_2 6h.51·2m.
		16 27·2	16 36	0·1	0 15·5	N.
		16 27·5	16 37·3	0·08	0 17·5	W.
41	,, 21	13 22·7	13 31·5	0·07	0 19·3	N.
		13 21	13 30·4	0·07	0 16·8	W.
42	,, 21	13 31·4	13 37·6	6·6	2 0	N.
		13 32·4	13 38·3	2·5	2 22	W.
43	,, 25	19 18·6	19 46·6	1·4	1 27·5	N.
		19 21·1	19 38·9	2·2	1 7	W.
44	,, 29	11 9·1	12 25	2·5	3 38·9	N. P_2 11h.20·7m.
		11 9·1	12 56·5	2·1	3 54·3	W. P_2 11h.15·8m.
		15 2·8	15 18·5	0·07	0 23	N.
		15 5·0	15 21·1	0·1	0 18·7	W.
49	,, 30	15 39·0	15 59·6	0·65	1 20·0	N.
		15 36·0	15 58·2	0·3	2 17·0	W.

Register from Stonyhurst College Observatory,
Director, WALTER SIDGREAVES, *S.J.*

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.*

No.	Date	Commencement	Max	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	M.M.	H. M.	
			1910			
83	Jan. 1	11 13·5	11 42·0	9·6	2 17·0	Boom period, 15 secs.
			11 47	6·8		P_2 11h. 23m. P_3 11h. 28m.
84	,, 6		20 22	s		
85	,, 7		6 31·5	s		
86	,, 8		7 26			
87	,, 8	15 12	15 36	0·9	3 6	
88	,, 11		19 38	s		
89	,, 14		10 34	s		
90	,, 14		15 3·5	s		
91	,, 14		22 21	s		
92	,, 15		14 36			
93	,, 15	22 40	23 22	0·1	1 11	
94	,, 16	8 32	9 16	s	?	D > 3h. 25m. End lost in Ats.
95	,, 17					Film 17th–18th lost. Clock stopped.
96	,, 19		12 47	s		
97	,, 19		12 55	s		
98	,, 19		13 31	s		
99	,, 19	15 32	16 20·5	0·2	4 27	
100	,, 20		15 15	s		
101	,, 20	18 15·5	18 19	0·2	0 26·5	
102	,, 22	8 51·5	8 56·5	29·0	3 54	P_2 8h. 5m. P_3 and P_2 sharply defined.
103	,, 22		20 18·5	s		
104	,, 22		20 36·5	s		
105	,, 22		20 45	s		
106	,, 22	21 15·5	21 18	0·1	0 8	
107	,, 23	18 59	19 23	3·4	2 56	P_2 19h. 8m.
108	,, 25		1 19	s		
109	,, 25		2 22	s		
110	,, 25		6 26	s		
111	,, 27		15 6	s		
112	,, 28		6 39	s		
113	,, 28		12 48	s		
114	,, 28		15 4	s		
115	,, 28	18 2·4	18 5·2	0·7	0 54	D uncertain.
116	,, 29		0 6·5	s		
117	,, 29		0 20·5	s		
118	,, 29	6 3	6 16·5	0·8	1 17	Very irregular.
119	,, 30	4 11	5 27	1·2	2 26	P_2 4h. 32m. P_3 5h. 23m.
			5 31·5	1·4		
120	,, 31		9 23	s		
121	Feb. 3	17 19·5	17 38	0·1	1 40	
	,, 3		18 28	0·2		
122	,, 4	14 19·5	16 4·5	2·0	6 40	Probably second quake about 19h. No break in continuity.
123	,, 4		16 45	0·1		
124	,, 4		19 9	0·1		
125	,, 4		19 30	0·1		
126	,, 4		19 37	0·1		
127	,, 4		20 37	0·2		
128	,, 12	18 25	18 35·5	0·9	1 45	
129	,, 13	17 11	17 34	0·3	1 0	Times uncertain. Time shutter not acting.
130	,, 16		3 4·5	s		
131	,, 18	4 43	5 18	0·5		
132	,, 19		3 11	s		
133	,, 22		19 51	s		
134	,, 22		20 9	s		
135	,, 22		21 6	s		
136	,, 23		3 29	s		
137	,, 23		8 5	s		
138	,, 23		11 5·5	s		
139	,, 23		12 37	s		
140	,, 26		8 0	s		
141	,, 27	15 9·7	15 21	0·8	0 39	
142	,, 28		6 35	s		Boom period, 20 secs.
143	,, 28	21 5	21 43·2	1·0	2 48 ?	P_2 21h. 20·5m. P_3 21h. 40m.
144	Mar. 6		17 33	s		Boom period, 19 secs.
145	,, 6		19 4	s		

Register from Stonyhurst College Observatory – continued.

Small movements, 2A < 0·1mm.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM. 2A	H. M.	
146	Mar. 11		7 34	s		
147	,, 18		14 51	s		
148	,, 19	0 39·5	0 51·5	0·6	0 48	
149	,, 22		10 36	s		
150	,, 25	15 ?	16 17·5	1·4	?	Times uncertain, work in room, cleaning.
151	,, 25	19 25·2	19 28	0·1	0 26	
152	,, 28		19 45	s		
153	,, 30	17 ?	18 19	2·1		
	,, 30		18 26	2·1	?	Work in room, magnetograph deflections.
	,, 30		18 36	1·8		
154	,, 31	18 38·5	19 24	1·4	2 50	P_2 18h. 47·5m.
155	April 1	16 27·0	16 38·5	0·3	0 48	
156	,, 3	19 38 ?	19 58	0·1	1 0	
157	,, 8	17 2·5 ?	17 20	0·1		
	,, 8		17 57	0·1		
	,, 8		18 9	0·1	1 50 ?	
158	,, 12	0 34·5	1 14	4·6	2 45	P_2 0h. 45·3m. P_3 0h. 58m.
159	,, 13	7 15	7 25·5	0·1	0 43	
160	,, 16	13 0·5	13 46	0·4	2 0	
	,, 16		13 50	0·4		
161	,, 17	1 11·5	1 44	0·4	2 20	
	,, 17		1 48	0·4		
162	,, 20	23 1·0	23 11	0·1	1 40	
163	,, 22	7 17·5	7 19·5	0·1	0 13	
164	,, 23	16 34·6	17 17	0·1	?	
165	,, 27	1 34	2 11·7	2·0	2 33	

Maxima (Roman numerals refer to day dates):—April II, 13h.37·5m.; V, 23h.10m.; VI, 2h.37m.; VII, 3h.12m., 13h.7·5m., 17h.47m., 19h.3·5m.; IX, 9h.3·5m., 10h.20m., 13h.31m.; XI, 8h.48m.; XVIII, 15h.9m.; XX, 15h.3m.; XXVI, 18h.37m.; XXVIII, 7h.40m.

166	May 1	19 4·5	19 21·0	0·2	?		P_1 possibly at 18h. 51·5m., but appears too strong.
167	,, 1	*19 33·2	20 5	1·4	2 30		*P_2. P_1 being lost in preceding.
168	,, 5	0 47·8	1 10·5	0·2	1 20		P_2 0h. 55·5m. P_3 1h. 6·2m.
169	,, 13	8 2·0	8 44	0·8	3 20		P_2 18h. 19·3m. P_3 8h. 38·5m. Well defined.
170	,, 14	23 45	24 1·5	0·2	0 30		
171	,, 18	*9 21	9 38	0·5	2 0		*P_2 ? P_3 9h. 34·4m.
172	,, 18		9 41	0·4			
173	,, 18		9 47	0·2			
174	,, 18		9 54	0·1			
175	,, 20	12 26·2	12 52·3	0·5	1 20		P_1, P_2 uncertain; too near change time.
176	,, 21	*7 57	8 5·5	0·1	0 30		*P_2 ? P_3 8h. 5m.
177	,, 22	6 36·8	7 18·2	3·3	3 0		P_2 6h. 46·8m. P_3 7h. 9·5m. Well defined.
178	,, 24	19 23 ?	19 39·2	0·1	1 0		
179	,, 27	8 55 ?	9 31·5	0·3	0 45		P_1 clear, but too strong. P_2 9h. 18·3m. P_3 9h. 26·5m.
180	,, 28	*6 53	7 4	0·3	0 40		*P_2 ? P_3 7h. 0·5m.
181	,, 31	5 7·5	5 45·8	3·0	>6 0		P_2 5h. 17·9m. P_3 5h. 41·5m.

May VI, 13h.53·5m.; XIV, 11h.17m.; XVI, 15h.44·5m.; XXI, 8h.5·5m.; XXVII, 14h.38·5m.; XXVIII, 16h.10·5m.; XXIX, 0h.19m., 0h.23m., 13h.2·5m., 15h.49·5m.; XXX, 2h.55m. 1mm. at boom period 20 secs. = 0°·38.

182	June 1	6 15·0	6 45·0	0·3	3 16		P_2 ? P_3 6h. 43m.
183	,, 1	?	7 28·5	1·6			P_2 6h. 57·3m. P_3 7h. 22m. P_1 masked in preceding.
184	,, 3		14 18				
185	,, 3	23 34	23 54	0·1	0 43		
186	,, 6	12 44·1	12 49	0·2	?		End in Ats.
187	,, 7	1 42 ?	2 16·4	1·1	1 0		Followed by Ats till noon.
188	,, 9	12 11·5	12 39·8	0·6	1 26		
189	,, 9		12 49	0·6			
190	,, 11		7 35				
191	,, 13		2 8				
192	,, 13		9 51				
193	,, 14	19 45	20 2·5	1·0	1 31		P_2 19h. 54·7m. P_3 20h. 1·7m.
194	,, 16	4 24·1	4 27·5	2·0			Almeria, Spain.
195	,, 16	6 50·5	7 20	3·8			Beginning very sharp, unlike P_1.
196	,, 16		7 26	4·0	>5 0		12 maxima > 1·5mm. between 6h.52m. and 8h.38m.

Register from Stonyhurst College Observatory—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
197	June 17	5 51	6 15·5	0·1	0 58	P_2 6h.5·2m. P_3 6h.17·2m.
198	,, 17		6 23·2	0·1		
199	,, 17		6 29·7	0·1		
200	,, 17	17 10·5	17 37·5	0·1	1 20	P_2 17h.21·6m. P_3 17h.36m.
201	,, 20		13 25			
202	,, 21		10 29			
203	,, 22		8 53			
204	,, 23		3 19			
205	,, 23	20 9·5	20 13·0	0·1	0 50	
206	,, 24		3 20			
207	,, 24	13 31·2	13 37·7	16·0	2 0	P_2 13h.35·2m. P_3 13h.36·5m. Phases very clear.
208	,, 25	19 23·5	19 41·2	2·4	1 44	P_2 19h.32m. P_3 19h.39m.
209	,, 27	9 35	9 45	0·2	1 20	—
210	,, 29	8 41·5	9 6·5	0·2	1 20 ?	—
211	,, 29	11 6·7	11 57	6·0	?	Probably greater amp. earlier, during change; but it may be too great, being first move after change.
212	,, 29		12 15·2	5·0		6 maxima > 2·5mm. between 12h.15m. and 12h.40m.
213	,, 29	15 2	15 47·5	0·6	*5 40	*D of both.
214	,, 29	19 12·5	19 24	<0·1	0 25	
215	,, 30	3 21·5	4 7·2	0·1	1 5	
216	,, 30		18 34	0·2	?	In Ats. Boom period, 20secs. 1mm. = 0″·38.

June III, 14h.18m.; **XI**, 7h.35·5m.; XIII. 2h.8·0m.; **XX**, 13h.25m.; **XXI**, 10h.29m.; **XXII**, 8h.46m., 8h.53m.; **XXIII**, 3h.19m.; **XXIV**, 3h.20·7m.

Errata:—For July 18, 4h.1·0m., read July 21.
On July 30, 11h.4·5m., for 21h. read 11h. at P_2 and P_3.

Ats. prevalent:—Jan. 2nd, 7h. to 24h.; 3rd, 0h. to 14h.; 8th, 18h.7m. to 24h.; 9th, all day; 10th, 0h. to 15h.; 12th, 8h. to 12h.; 16th, 12h. to 24h.; 17th, 0h. to 12h.; 19th, frequent p.m.; 24th, frequent p.m.
1mm. A = 220″ arc deviation of boom. 1mm. A = 0″·45 inclination of the pillar.

Register from Hill Top, West Bromwich.
Observer, J. J. Shaw.

A = N—S Component. B = E—W Component.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
64	Jan. 1	11 14	12 5·5	9·0	2 45	A.
		11 13·9	12 5·8	8·5	2 45	B.
65	,, 7		6 10·5	0·7		
		6 7·5	6 16·2	0·8	0 35	A and B.
66	,, 8	15 31	15 37	11·0	0 31	A. Tsing-tau, China, at 14h.49·9m., G.M.T.
		15 34·7	15 37	2·0	0 36	B.
67	,, 18		10 18	1·5		A.
			10 19	0·6		B.
68	,, 22	8 52	9 0 ?	>76·0	3 38	A. Iceland. Went beyond scale at 8h.57m.
		8 52	9 0 ?	>84·0	3 38	B.
69	,, 22		21 26	0·6		A.
			21 22	0·4		B.
70	,, 23	19 6·7	19 16·5	4·0	1 8	A. Paramaribo, Dutch Guiana, South America.
		19 6	19 31·5	4·5	0 54	B. Occurred at 18h.51m., G.M.T.
71	,, 28		18 6			B.
72	,, 29	0 5	0 9·2			B. Bosnia.
73	,, 29		6 16	1·0		A.
			6 18	0·2		B.

Register from Hill Top, West Bromwich—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
74	Jan. 30	4 5·1	5 30·7	4·0	2 11	A.
		4 8·1	5 31·2	4·25	1 51	B.
75	,, 31		9 56	0·5		B.
76	Feb. 2	11 18 ?	11 51	0·5		B.
77	,, 3		18 27	0·1		B.
78	,, 4		12 32	0·5		A.) Doubtful origin.
		12 8	12 30	1·75		B.)
79	,, 4	14 21	14 44			B.) One earthquake.
80	,, 4		15 25·5			B.)
81	,, 4		15 45·5			B.)
82	,, 4		16 3·5			B.)
83	,, 4	18 45	19 41	0·75	2 8	B.
84	,, 12	18 23	18 33·2	2·0		A. Occurred in Central Japan at 18h.9m. G.M.T.
		18 23·1	18 33·3	3·25		B. End lost in succeeding shock.
85	,, 12		19 2	2·25		A. Beginning masked. End 19h.49m.
			19 9·3	3·0		B.
86	,, 18		5 19·5			A. Crete at 5h.9m. G.M.T.
		5 14	5 20	4·0		B.
87	,, 19		8 12	0·5		B.
88	,, 23		8 7	0·5		B.
89	,, 27	15 10·9	15 20	1·0	0 49	A. Japan at 14h.28m. G.M.T.
		15 11	15 27·7	1·25	0 49	B.
90	,, 28	21 20 ?	21 44·2	2·5	1 20	A.
		21 20·2	21 43·5	1·5	1 20	B.
91	Mar. 11		7 42	0·3		B.
92	,, 11		14 36	0·7		B.
93	,, 19		0 56·7	0·8		A.
		0 44	0 56·7	0·6	0 49	B.
94	,, 22		11 4	0·7		B.
95	,, 25	15 43	16 11·8	0·8	2 5	A.
		15 38·8	16 10	1·25	2 10	B.
96	,, 25	19 22	19 35·2		0 28	B.
97	,, 30	17 15·4	18 42·9	3·5	3 0	A. Large waves commenced 18h.16·9m.
		17 15·4	19 1·4	3·5	3 0	B. ,, ,, 18h.15·6m.
98	,, 31	18 39·4	19 33	3·0	2 55	A. ,, ,, 19h.7·9m.
		18 39·4	19 22·0	2·5	2 40	B. ,, ,, 19h.6m.
99	April 1	16 26·8	16 42·1	0·5	1 4	B.
100	,, 3	19 50			0 34	B. One long tremor for 34 minutes.
101	,, 7		18 59	1·0		A.
		18 50	18 59	0·7	0 20	B.
102	,, 12	0 34·8	0 46·7	15·0		A.) One shock.
		0 34·8	0 46	5·5		B.) B ran off edge of paper at 1h.21m.
103	,, 12		1 14·1	15·0		A.)
			1 21·3	>11·0		B.) End 4h.14m.
105	,, 16	13 5	13 34	0·5		B.
			13 48	0·5	1 28	B
106	,, 17	1 38	1 56	0·6	1 50	B.
107	,, 27	1 43·2	2 11	0·6	1 57	A.
		1 36	2 21·9	1·1	2 4	B.
108	May 1	18 50·2	20 33·8	1·0	2 40	A. Early max. on A at 20h.0·8m. 1mm.
		18 50·2	20 32·2	0·75	2 30	B. Cartago!
109	,, 5	0 24 ?	1 5·5	0·3	1 20	A. Costa Rica.
		0 34 ?	1 11	0·5	1 20	B.
110	,, 10	13 52 ?	14 51·5	0·6		A.
			14 55	0·5		B. 15h.59m. 0·6mm. 16h.13·5m. 0·6mm.
111	,, 10	18 43·6	19 4·8	1·1		A. Tremor at 18h.14m.
		18 45·5	18 58	1·0		B.
112	,, 13		8 46·5	7·75		A.
		8 3·5 ?	8 48·3	2·5		B. P_2 8h.19m.
113	,, 13		12 23·4	1·1		B. Doubtful origin.
114	,, 18	9 14·8	9 42·7	4·0		A.
		9 16·8	9 38	2·25		B.
115	,, 20		12 55	0·8		A.
		12 25·7	12 56	0·6	1 30	B. P_1 ? 12h.6·5m.
116	,, 21	7 57·5	8 14	0·5		B.
117	,, 22	6 36·4	7 22	7·5	2 36	A. P_2 6h.46·3m. 2·25mm.
		6 36·4	7 21·5	6·0	2 47	B.
118	,, 27		9 30·5	0·5		A.
119	,, 28	6 ..2	7 9·5	1·0		A.
		6 32·5	7 7·5	1·0		B.
120	,, 30		13 2	0·5		B.
121	,, 31	5 7·6	5 49·5	2·0		A.
		5 7·6	5 47	4·0		B.

Register from Hill Top, West Bromwich—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
122	May 31		8 11	1·0		B. Doubtful origin.
123	June 1	6 15	7 43·3	1·5	3 15	A. Maxima: 7h.43m., 7h.56m., 8h.11m. and 8h.36m.; all long and straggling.
		6 15	7 43·5	1·75	3 15	B.
124	,, 7	2 9·9	2 16	4·25		A. Near Naples.
		2 9·1	2 16	3·25	0 45	B. Maxima began and ended very suddenly.
125	,, 9		12 41·8	0·75		A. End 13h.50m.
126	,, 12	20 48	20 53·5	0·1	0 18	B.
127	,, 13	2 1·5	2 8·4	0·1	0 28	B.
128	,, 14	19 54	20 2·2	3·0	1 0	A.
		19 54	20 2·2	3·5	1 0	B.
129	,, 16	4 20	4 27·3	12·5	1 0	A. Vessels felt shock at sea at 4h.15m. G.M.T.
		4 19·6	4 28·5	17·5	1 0	B. Off South of Spain.
130	,, 16	6 50·2	*	11·0	6 0	A. *27h.14·5m. 11mm. From 7h.17m. to 8h.50m., 3mm. average.
		6 50·2	7 30·5	10·75	6 0	B. P_1 commenced with amplitude of 5·5mm.
131	,, 16	16 21·4	16 38·2	1·5	0 56	A.
		16 23·7	16 38·3	1·5	0 56	B.
132	,, 17	5 44·5	6 30	0·6	1 30	A. P_2 5h.52m.
		5 44·5	6 28·2	1·4	1 30	B.
133	,, 17		11 41	0·5		A and B. Doubtful origin.
134	,, 17	17 1·8	17 40	0·75	2 0	A.
		17 1·8	17 41·3	0·75	2 40	B. P_2 17h.11·2m.
135	,, 24	13 30·7	13 38	48·0	2 10	A. Between Algeria and South Spain. P_2 13h.34·2m. L.W. commenced A, 13h.37m., and
		13 30·7		>82·0	2 10	B. B, 13h.35·8m. Max. on B went beyond scale.
136	,, 25	19 31·1	19 42·5	6·0	1 0	A.
		19 31	19 39·8	2·75	1 0	B.
137	,, 29		9 10	1·0		A and B.
138	,, 29	11 11	12 35	5·0	2 50	A.
		11 10	12 33	7·5	2 50	B.
139	,, 29		16 9	1·5		A. P_2 15h.17·5m.
			16 2·5	2·0		B.
140	,, 30		4 1·5	0·1		A.
			4 4·6	1·0		B.

Period: 16 secs. Sensibilities: A, 1mm.=0″·1 tilt; B, 1mm.=0″·15 tilt.

Register from Frensham Hall, Haslemere, Surrey, England. Observer, SAML. KEVAN.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
1910						
364	Jan. 1	11 16·0	11 42·48	2·0	3 39·12	
365	,, 7	6 8·0	6 15·0	0·3	0 25·0	
	,, 8	8 13·24	8 36·12	0·2	0 20·0	
	,, 8	9 16·0	9 28·0	0·2	0 15·0	
	,, 8	10 4·0	10 11·0	0·3	0 18·0	
366	,, 8	15 30·0	15 34·25	2·0	0 22·0	
369	,, 23	10 8·0	10 22·0	2·0	1 7·0	
374	Feb. 12	18 32·0	18 59·0	0·9	1 0·0	
384	Mar. 25	15 41·0	16 16·9	1·0	1 25·0	
385	,, 30	17 37·48	18 24·12	3·0	2 10·0	
	,, 31	18 45·50	19 20·0	2·0	1 11·0	
388	April 12	24 37·0	1 9·12	3·5	2 30·0	
	,, 12		1 16·36			

Register from Frensham Hall, Haslemere, Surrey, England—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
392	May 1	19 42·20	20 0·0	1·5	1 11·0	
396	,, 18	9 19·0	9 39·15	1·0	1 10·0	
397	,, 20	12 26·0	12 41·0	0·7	0 52·0	
	,, 22	6 45·0	7 14·40	4·0	3 0·0	
			7 17·25			
399	,, 31	5 17·0	5 44·12	2·0	2 30·0	
	June 1	7 6·0	7 24·0	1·5	1 45·0	
401	,, 7	2 15·0	2 17·30	0·6	0 19·0	Many Ats.
403	,, 14	19 52·10	20 1·0	1·6	0 41·0	
	,, 16	4 22·0	4 24·45	3·5	0 30·0	One location suggested ?
	,, 16	6 43·55	7 13·36	4·2	1 10·0	
405	,, 24	13 32·10	13 34·12	9·0	0 36·0	
	,, 25	19 21·0	19 37·0	2·0	0 50·0	
406	,, 29	10 32 ?	12 18·24	4·5	6 ?	

Boom period = 20 secs.

Register from the Observatorio de Marina de San Fernando, Spain. Director, Commodore T. DE AZCÁRATE.

Pendulum A records N—S motion (new model).
Pendulum B records E—W motion (old model).

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
1910						
1	Jan. 1	11 12·7	11 41·4	2·1	2 47·6	A. P_2 11h.22·8m.
			11 52·4	3·1		
			12 2·4	2·0		
	,, 1	11 12·7	11 34·2	1·5	2 52·7	B. P_2 11h.22·2m.
			11 58·7	1·3		
			12 30·2	1·0		
7	,, 7	0 39·0	6 12·9	0·5	10 52·4	A. Tremors.
	,, 7	6 13·8	6 14·5	0·5	0 16·7	B.
8	,, 8	10 52·8	10 58·6	0·5	0 18·3	A.
9	,, 8	15 27·1	15 45·3	0·9	0 55·3	A. P_2 15h. 32·6m.
			15 52·1	0·75		
	,, 8	15 41·1	15 44·4	0·6	0 23·0	B.
			15 49·9	0·6		
18	,, 17		10 8·3	0·5		A.
22	,, 19	16 0·7			1 6·0	A. Tremors.
25	,, 22	8 54·6	9 6·1	16·2	4 9·0	A. P_2 9h.0·6m.
		9 0·6	9 10·4	13·5		
			9 16·6	5·0		
			9 22·6	3·2		
	,, 22	9 0·0	9 6·5	2·5	4 3·0	B.
			9 9·0	>17·5		
			9 17·2	9·5		
			9 21·0	10·5		
26	,, 23	19 0·5	19 20·5	2·0	2 0·0	A. P_2 19h.6·5m. Martinique.
	,, 23	19 0·0	19 16·2	1·5	2 2·8	B. P_2 19h.6·0m.
28	,, 28	18 12·4			0 27·0	A. Small movement.
	,, 28	18 10·5			0 11·6	B.
29	,, 29	5 28·6	6 19·5	0·75	2 45·8	A.
31	,, 30	4 37·2	5 17·9	2·7	1 38·5	A. P_2 4h.55·5m. Tremors till 12h.45·2m.
	,, 30	4 31·0	5 18·4	1·1	1 39·0	B. Tremors till 10h.32m.
			5 25·0	1·0		
			5 34·0	1·25		
34	Feb. 2	10 51·8			0 24·0	B. Small movement.
35	,, 3	17 29·6			1 32·8	A. Small movement.
	,, 3	19 14·8			0 35·2	B.

Register from the Observatorio de Marina de San Fernando, Spain—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
36	Feb. 4	14 22·7	15 36·7	2·2	7 11·5	A. P_2 15h.29·2m. Hungary.
			15 46·2	2·2		
	,, 4	14 22·8	15 53·8	0·75	6 15·0	B. P_2 15h.31·8m.
			16 5·3	0·90		
38	,, 5	12 28·1			0 11·3	A. Tremors.
47	,, 12	14 34·2			0 29·3	A. Tremors.
48	,, 12	18 33·5	19 17·5	2·0	1 26·0	A.
	,, 12	18 33·7	19 16·5	1·5	1 14·5	B.
50	,, 13	17 4·2	17 42·7	1·0	1 16·5	A.
54	,, 18	5 15·6	5 21·6	0·5	0 47·0	A. Crete.
	,, 18	5 14·6	5 19·0	0·6	0 28·0	B.
60	,, 26	1 2·2			8 26·0	A.
62	,, 27	14 57·5			1 13·8	A. Small movement.
	,, 27	15 26·3			1 28·8	B.
64	,, 28	21 23·4	21 52·9	1·5	2 35·5	A.
	,, 28	21 22·5	21 52·1	0·7	1 40·0	B.
81	Mar. 19	0 35·2			1 14·0	A. Tremors.
87	,, 25	15 34·8			2 41·5	A. Tremors.
	,, 25	15 24·1			1 51·0	B. Tremors.
92	,, 30	17 16·4	18 31·0	3·5	3 9·3	A.
			18 45·2	4·0		
	,, 30	17 16·1	18 48·1	1·5	2 50·2	B.
93	,, 31	18 34·0	19 15·0	5·0	3 16·5	A. P_2 19h.5·5m.
	,, 31	18 33·0	19 19·2	1·5	2 17·0	B.
97	April 8	17 0·3			2 13·5	A. Tremors.
101	,, 12	0 40·5	1 31·0	3·5	3 7·5	A.
	,, 12	0 41·0	1 22·2	3·0	1 45·0	B.
102	,, 13	6 49·6			13 55·2	A. Tremors.
104	,, 17		1 39·7	1·6	10 3·0	A. Tremors.
112	,, 24	12 15·9			0 13·0	B. Tremors.
113	,, 26	3 58·9			1 55·0	B. Tremors.
114	,, 27	0 34·9	1 18·9	0·45	2 8·0	B.
119	May 1	18 50·7	20 12·2	2·75	4 33·0	A.
	,, 1	18 50·9	20 31·7	0·90	2 18·0	B.
126	,, 10	14 14·7	18 42·7	1·5	5 39·0	A.
	,, 10	18 11·9	18 44·9	0·6	1 28·0	B.
129	,, 13		8 52·5	4·5	11 40·0	A.
	,, 13	7 3·9	9 7·4	1·6	3 47·0	B.
135	,, 18	9 10·4	9 36·0	1·0	1 24·3	A.
	,, 18	9 17·1	9 37·4	1·5	1 15·8	B.
138	,, 22	6 38·2	7 31·2	8·1	2 43·0	A. P_2 6h.57·2m.
	,, 22	6 39·1	7 23·9	1·6	1 44·8	B. P_2 6h.52·9m.
			7 33·9	1·6		
139	,, 23	19 11·0	19 49·3	0·6	2 5·0	A.
	,, 23	19 42·1			0 31·6	B.
141	,, 28		7 0·4	1·0		A. P_2 6h.54·4m.
	,, 28	6 54·9	6 59·9		0 14·0	B.
142	,, 29	0 26·5			4 1·0	A. Tremors.
143	,, 30	12 41·7	12 53·9	0·45	0 37·3	A.
	,, 30	12 46·8	12 52·3	0·90	0 18·2	B.
144	,, 31	5 7·7	5 45·2	4·50	2 34·5	A.
	,, 31	5 8·3	5 40·3	0·9	1 32·7	B.
145	June 1	6 18·7	7 37·2	2·5	7 43·	A. P_2 7h.26·2m.
			7 43·7	2·4		
	,, 1	6 18·8	7 39·3	1·2	2 55·6	B. P_2 7h.27·8m.
147	,, 6	12 20·0			1 19·1	A. Tremors.
148	,, 7	2 6·1	2 14·6		2 27·0	A. P_2 2h.11·8m. Basilicata.
	,, 7	2 9·3	2 16·8	1·1	0 21·5	B. Tremors till 8h.48m.
155	,, 14	19 49·6	20 1·9	3·1	0 32·5	A.
	,, 14	19 52·2	20 2·2	1·3	0 59·5	B.
156	,, 16	4 16·7	4 18·5	7·5	0 21·5	A. Almeria and Granada.
	,, 16	4 16·9	4 18·7	10·0	0 53·8	B.
157	,, 16	6 50·9	7 10·2	4·0	5 1·3	A.
			7 23·4	4·0		
			7 33·2	3·5		
			7 46·4	3·6		
			8 7·4	5·1		
			8 12·7	5·0		
			8 17·2	7·1		
			8 25·7	5·0		
	,, 16	6 50·7	7 20·7	4·0	3 9·3	B.
			8 27·2	2·6		
			8 35·7	3·1		

Register from the Observatorio de Marina de San Fernando, Spain—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
158	June 16	16 28·5	16 29·4	1·0	0 19·9	A. Almeria and Granada.
	,, 16	16 28·7	16 29·7	1·5	0 16·0	B.
159	,, 17	6 28·7			0 19·0	B.
160	,, 17	17 13·3	17 44·8	0·56	1 19·0	A.
	,, 17	17 45·8			0 16·6	B.
167	,, 24	13 29·1	13 32·6	14·0	1 1·7	A. P_2 13h.29·9m. Alger.
	,, 24	13 29·7	13 33·2	10·0	1 38·0	B.
168	,, 25	19 33·5	19 41·2	1·1	0 54·2	B.
172	,, 29	8 34·1			1 50·5	A. Tremors.
	,, 29	8 12·5			0 42·9	B.
173	,, 29	11 0·1	12 27·6	5·75	2 45·5	A.
			12 31·8	5·50		
			12 39·6	7·50		
	,, 29	11 9·0	12 22·3	1·0	2 43·8	B.
			12 34·3	1·0		
			13 3·8	1·0		
174	,, 29	14 42·6	16 7·1	1·8	2 17·4	A.
	,, 29	14 43·8			2 20·0	B.
175	,, 30	4 14·0	4 14·0	0·40		A.
	,, 30	4 4·8			0 21·0	B.

Pendulum A: Period = 20secs.; 1mm. = 0″·25.
Pendulum B: Period = 16secs.; 1mm. = 0″·43.

Register from Ponta Delgada, St. Miguel, Azores.
Director, Lieutenant-Colonel F. A. Chaves.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
			1910			
368	Jan. 1	11 20·2	11 46·5	2·0	1 31·8	I. of Mercalli's scale.
371	,, 22	8 56·0	9 01·8	*	1 54·3	,,
						*Oscillations covering all the ribbon.
	,, 23	18 56·8	19 02·7	2·6	1 01·0	I. of Mercalli's scale.
372	,, 28	18 11·8			0 13·0	I. of Mercalli's scale. Thickening of line.
	,, 30	4 11·0			0 18·2	,, ,,
373	Feb. 4	14 31·5			1 03·5	,, ,,
374	,, 12	18 32·8			0 37·2	,, ,,
	,, 13	17 33·7			0 03·3	,, ,,
376	,, 26	0 59·0			0 01·0	,, ,,
379	Mar. 18	14 47·0				,, ,,
	,, 21	0 53·0			0 05·0	,, ,,
381	,, 28	19 34·0			0 04·0	,, ,,
	,, 30	17 20·0			1 39·0	,, ,,
	,, 31	18 52·0			0 16·0	,, ,,
	April 1	16 24·0	16 28·0	1·0	0 10·0	I. of Mercalli's scale.
382	,, 6	18 25·0			0 16·0	I. of Mercalli's scale. Thickening of line.
	,, 9	13 17·0			0 04·0	,, ,,
384	,, 18	18 27·3			0 10·1	,, ,,
385	May 1	16 53·5			0 01·0	,, ,,
	,, 1	19 09·0			0 27·5	,, ,,
387	,, 11	18 37·8			0 03·3	,, ,,
	,, 12	6 17·8			0 03·0	,, ,,
	,, 12	10 03·0			1 42·5	,, ,,
	,, 13	3 56·7			0 03·3	,, ,,
	,, 13	7 11·5			0 01·5	,, ,,
390	,, 31	5 09·0	5 16·6	1·2	0 38·5	I. of Mercalli's scale.

Register from Ponta Delgada, St. Miguel, Azores—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
390	June 1	6 16·0			0 38·0	I. of Mercalli's scale. Thickening of line.
392	,, 14	19 45·0	19 51·9	1·1	1 07·0	I. of Mercalli's scale.
	,, 16	4 25·0			0 35·0	I. of Mercalli's scale. Thickening of line.
	,, 16	6 50·9	7 06·5	3·0	1 47·7	I. of Mercalli's scale.
393	,, 24	13 38·3	13 51·2	1·1	0 22·7	,,
	,, 25	16 18·5			0 02·8	I. of Mercalli's scale. Thickening of line.
394	,, 29	11 10·5			4 00·8	,, ,,

Register lost from 12h.50·0m. to 15h.28·0m. and 20h.00·0m. to 22h.58·0m. on January 28.
17h.24·5m. on March 24 to 14h.6·0m. on March 25.
15h.57·0m. on April 11 to 9h.42·0m. on April 12.
15h.23·0m. to 17h.6·5m. on June 11.

Mean scale value, 1mm.=0″·48.

Register from Toronto, Ont., Canada—continued.

No.	Date	Commencement	Max	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
923	June 16	6 50·8	7 2·0	2·00	2 45·2	Small and extended. Increased activity at 7h.51m. and 8h.47m.
924	,, 17	17 23·0?		0·20	?	
925	,, 24	14 00·0		0·15	0 26·0	
926	,, 25	20 7·8	20 13·1	0·1	0 9·7	P.T's.
927	,, 29	8 43·7	8 55·9	1·5?	1 09·1	
928	,, 29	11 15·1	11 22·0	0·1	0 19·5	
929	,, 29	11 38·6	12 18·1	1·0	1 10·4	
930	,, 29	12 52·9	12 57·9	0·5	0 17·0	
931	,, 29	14 47·5	14 48·0			Doubtful as to being seismic. Barely noticeable.
932	,, 29	15 21·9	15 53·6	0·4	1 7·3	

Vibration of boom, 14·8 seconds. 1mm.=0″·64.

Register from Toronto, Ont., Canada.
Director, R. F. Stupart, *F.R.S.C.*

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
			1910			
886	Jan. 1	11 11·0	11 18·0	>18·0	2 23·0	Very large. P_2 11h.13·1m.
887	,, 10	5 53·7		0·05	0 9·5	
888	,, 12	2 26·7	2 27·6	0·80	0 7·1	
889	,, 22	9 2·5	9 13·0	20·0	1 36·7	Very large. L.W. 9h.8·0m.
890	,, 23	18 59·5	19 26·5	0·30	1 23·5	
891	,, 28	18 19·7		0·05	0 6·3	
892	Feb. 4	14 30·0		0·05	?	
893	,, 4	15 08·5		0·40	1 15·5?	
894	,, 4	18 41·0		0·10	0 49·0?	
895	,, 12	17 59·5?		0·10	0 7·5	
896	,, 12	18 32·0		0·30	0 50·2	
897	,, 13	11 23·5		0·10	0 14·0	Doubtful as to being seismic.
898	,, 18	7 38·0		0·10	0 3·0	
899	,, 19	23 25·0		0·05	0 4·0	
900	,, 21	16 0·0?		0·05	0 4·0	
901	,, 28	21 15·0	21 31·0	2·00	1 5·0	
902	Mar. 19	0 27·5		0·20	0 28·5	
903	,, 25	15 45·5		0·20	0 18·0	
904	,, 30	17 17·0?			2 28·0?	
905	,, 31	18 49·5?		0·10	0 48·5?	Gradual thickenings.
906	April 12	0 41·0	1 4·2	0·90	1 24·8	
907	,, 13	6 58·0	7 3·0	1·00	0 11·0	Max. shortly after beginning.
908	,, 15	4 6·8		0·10	0 4·2	Doubtful as to being seismic.
909	,, 18	7 50·8		0·10	0 4·7	
910	,, 27	1 38·5		0·40	0 22·3	
911	May 1	18 53·0		0·20	1 36·0	
912	,, 5	0 42·8	0 46·5	1·00	0 36·2	Small and decided.
913	,, 11	7 40·0		0·05	0 14·0	
914	,, 13	8 15·3	8 33·5	7·20	2 12·7	Fairly large. Double disturbance.
915	,, 20	12 16·6	12 25·8	4·20	0 47·6	Cigar-shaped Max.
916	,, 22	6 39·8	7 22·0	0·40	1 10·2	
917	,, 27	23 34·5		0·15	0 5·7	
918	,, 31	5 2·3	5 19·3	1·30	1 19·9	
919	June 1	6 16·5		0·10	2 26·5	Isolated thickenings.
920	,, 9	21 56·5		0·10	0 9·5	Doubtful as to being seismic.
921	,, 14	19 51·5	20 30	0·25	0 38·5	
922	,, 16	4 50·0		0·10	0 8·0	

Register from Victoria, B.C., Canada.
Superintendent, E. Baynes Reid.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
			1910			
914	Jan. 1	11 9·9	11 33·4	5·10	2 0·1	Medium and active disturbance.
915	,, 10	5 52·5		0·08	0 4·5	
916	,, 12	2 44·0		0·10	0 3·5	
917	,, 22	9 4·5	9 22·5	5·01	1 46·5	Medium and well-defined.
918	,, 23	18 57·5	19 10·5	1·00	0 54·5	
919	Feb. 4	14 25·0		0·20	0 9·0	
920	,, 4	14 53·0		0·20	1 27·6	
921	,, 4	18 2·5		0·10	0 55·0	
922	,, 11	16 33·0		0·30	0 28·0	Doubtful as to being seismic.
923	,, 12	18 29·7		0·20	1 1·3	
924	,, 18	7 49·0		0·40	0 6·0	Began gradually.
925	,, 19	23 24·0		0·20	0 2·0	
926	,, 21	3 40·0		0·10	0 5·0	
927	,, 21	16 44·0		0·20	0 3·5	
928	,, 28	21 5·0	21 14·5	9·10	1 17·5	Fairly large.
929	Mar. 11	6 59·0		0·40	0 8·0	Gradual swelling. Quake reported from San Francisco.
930	,, 19	0 13·8	0 17·0	2·60	0 11·7	Max. shortly after P.T's, then gradually tapered down.
931	,, 25	15 48·1		0·10	0 7·9	
932	,, 25	16 10·0?		0·30	0 31·0	
933	,, 30	17 17·2		0·40	1 44·8	
934	,, 31	19 33·0?		0·10	0 17·0	Time scale off the paper. Rock blasting in Victoria harbour in vicinity of instrument.
935	April 11	19 4·4		0·05	0 4·0	
936	,, 12	0 35·0	0 45·7	2·10?	1 5·0	End rather doubtful. Boom off paper caused by rock blasting.
937	,, 12	22 39·0?	23 14·0	0·80	2 7·0	
938	,, 13	6 38·0		0·05	1 7·0	Minute thickenings.
939	,, 15	2 18·5?		0·25		Series of thickenings. Doubtful as to being seismic.
940	,, 15	9 52·0		0·03		Doubtful as to being seismic.
941	,, 15	14 '				
942	,, 18	7 44·6		0·20	0 12·0	Gradual beginning and ending.
943	,, 27	1 42·0		0·15	0 6·5	
944	,, 27	1 55·0	2 4·0	0·50	0 30·2	
945	May 1	18 55·0		0·25	0 40·0	Extended thickenings.
946	,, 5	0 57·1		0·20	0 19·9	

Register from Victoria, B.C., Canada—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
947	May 11	8 0·3		0·10	0 3·7	
948	,, 13	8 3·2	8 15·5	8·00	2 27·3	Fairly large.
949	,, 20	12 20·7		0·05	0 2·8	
950	,, 20	12 32·9		0·20	0 16·8	
951	,, 22	6 33·7		0·20	1 16·8	
952	,, 31	5 2·3	5 19·6	12·30	1 41·5	Large.
953	June 1	6 20·9		0·25	1 39·1	
954	,, 7	19 14·2		0·10	0 7·8	
955	,, 16	4 59·0		0·10	0 7·0	
956	,, 16	6 43·0	6 56·0	2·00	2 34·0	
957	,, 17	17 2·0		0·20	1 3·0	Prolonged thickenings.
958	,, 21	14 1·0		0·10	0 3·0	Doubtful as to being seismic.
959	,, 24	14 15·0		0·10	0 12·0	
960	,, 25	20 1·0		0·05	0 3·9	Barely noticeable.
961	,, 27	5 50·0		0·05	0 1·0	
962	,, 29	8 26·8	8 36·8	0·50	1 8·0	Well defined.
963	,, 29	11 11·8		0·05	0 6·0	
964	,, 29	11 27·0		0·05	0 29·5	
965	,, 29	14 38·0		0·05	0 1·0	

No record on April 12, 1h.50m. to 20h.; also from 21h.55m. on April 29 to 20h.30m. on April 30. Boom off scale. Blasting rock for G.T.P. dock.

Vibration of boom, 15 seconds. 1mm. = 0″·76.

Register from the Syrian Protestant College Observatory, Beirût, Syria.
Director, Alfred H. Joy, *M.A.*

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
442	Jan. 16	11 36·5	11 40		0 7	Thickening.
443	,, 17	10 17	10 20		0 8·5	
444	,, 22	9 1	9 25	2·2	1 40	
445	,, 23	19 14	19 50	0·5	1 33	
446	,, 30	4 22	5 23·5	0·7	1 34	
447	Feb. 3	18 10	18 11·5	0·2	0 2	
448	,, 4	14 23·5	15 30	0·6	2 28	
449	,, 4	17 59·5	18 0·5		0 2	Thickening.
450	,, 4	18 55·5	19 6·5	0·4	1 35	
451	,, 12	18 50·5	19 12	0·4	1 8	
452	,, 28	21 23	22 9		1 0	Thickening.
453	Mar. 25	15 54	16 9	0·5	0 39	
454	,, 30	17 19	18 26·5	1·8	2 35	Interrupted by cleaning lamp.
455	,, 31	19 6	19 20·5	1·3	1 17	
456	April 1	14 49			0 16·5	Thickening.
457	,, 12	0 32	0 52·5	2·2	1 36	
458	,, 16	1 35	1 47·5	1·1	0 38	
459	May 1	18 55	19 58·5	0·8	1 59	
460	,, 10	18 41·5	18 53·5	0·8	0 29	
461	,, 13	8 28	9 4	0·4	0 58	
462	,, 18	9 19	9 21	0·7	0 35	
463	,, 22	6 28·5	7 9	1·2	1 36	
464	,, 23	19 33·5	19 41·5		0 17	Thickening.
465	,, 26	8 11·5	8 12·5	0·3	0 5	
466	,, 28	6 44·5	6 53	0·4	0 23·5	
467	,, 30	12 43	12 44·5	0·3	0 9	
468	,, 31	5 25	5 26·5		0 8	Thickening.
469	,, 31	5 57	6 9	0·3	1 26	

Register from the Syrian Protestant College Observatory, Beirût, Syria—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
470	June 1	6 19	6 20	0·3	0 40	
471	,, 1	7 2	7 24·5	1·3	2 0	
472	,, 7	2 14·5	2 15	0·3	0 3	
473	,, 9	12 11			0 52	Thickening.
474	,, 10	19 37·5	19 45·5		0 11	,,
475	,, 12	20 41·5	20 43	0·3	0 13·5	
476	,, 14	19 59·5	20 26·5	0·3	0 40	
477	,, 16	6 48·5	6 53·5	2·9	3 0	
			7 57	4·1		
478	,, 17	5 47·5	5 58		0 50	Thickening.

1mm. = 0″·38 arc.

Seismograph not running after June 18.

Register from Helwan Observatory, Cairo, Egypt.
Superintendent, B. F. E. Keeling.

In all cases the record from Seismograph A (recording E.W. motion) is placed before that of B (recording N.S. motion).

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
805	Jan. 1	11 21·2	11 36·2	0·6	3 4	A. P_3 11h.26·4m.
		11 21·2	11 33·0	0·4	2 44	B.
805a	,, 4	5 34·7		0·1	0 06	
		5 35·3		0·1	0 03	
806	,, 4–5	23 29·3		0·1	3 03	A only.
807	,, 5	4 24·8		0·2	4 10	,,
807a	,, 7	5 54·8	5 59·7	1·0	?	
		5 52·7	6 03·5	0·3	?	
807b	,, 13	6 16·8		0·1	4 46	
		6 25·8		0·1	4 14	
808	,, 15	22 42·3		0·1	0 55	
		22 31·6		0·1	1 00	
809	,, 16	11 28·5		0·2	1 02	
		11 31·8		0·1	0 46	
810	,, 17	9 40·5	10 38·0	0·2	1 30	
		9 40·7		0·1	1 24	
810a	,, 19	13 26·5		0·1	0 12	A only.
811	,, 22	8 57·2	9 28·0	1·0	3 25	Maximum doubtful.
		8 57·2		1·0	3 20	
812	,, 23	19 02·6	19 41·0	0·6	2 46	
		19 10·5	19 38·5	0·6	?	
812a	,, 28	18 15·6		0·1	0 24	A only.
812b	,, 28	5 18·2		0·1	1 42	29th ?
		5 19·4		0·1	0 41	
813	,, 29	23 54·1		0·1	0 09	Doubtful tremor.
		23 54·9		0·1	0 05	
814	,, 30	4 08·5	5 23·5	0·6	3 04	
		4 09·5	5 20·5	0·3	2 52	
814a	Feb. 2	11 11·0		0·1	1 23	
		11 10·3		0·1	1 15	
815	,, 3	17 11·8		0·2	2 06	
		17 12·4		0·2	1 52	
816	,, 4	14 20·7		0·3	3 20	
		14 25·6		0·3	3 03	
817	,, 4	18 00·0		0·2	3 04	
		18 00·8		0·2	2 58	

Register from Helwan Observatory, Cairo, Egypt—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		h. m.	h. m.	mm.	h. m.	
817a	Feb. 5	2 12·2		0·1	0 06	
		2 14·8		0·1	0 02	
818	,, 7	16 35·6		0·1	0 35	
		16 34·1		0·1	0 42	
819	,, 8	5 24·2		0·1	3 54	
		5 30·6		0·1	0 52	
819a	,, 8	10 51·4		0·1	0 16	
		10 50·0		0·1	6 06	
819b	,, 9	22 37·3		0·1	0 11	
		22 38·6		0·1	0 08	
819c	,, 10	8 45·5		0·1	0 18	
		8 49·0		0·1	0 14	
820	,, 12	18 22·4	18 34·4	0·9	2 04	P_3 18h.31·8m.
		18 23·3	18 34·8	0·8	1 56	P_3 18h.31·6m.
820a	,, 13	16 57·0		0·1	0 18	
		16 56·7		0·1	0 19	
820b	,, 13	17 33·3		0·1	0 49	
		17 39·2		0·1	0 21	
821	,, 18	5 10·8	5 17·5	1·6	1 27	P_3 5h.14·1m.
		5 11·5	5 18·2	1·6	1 06	
822	,, 25	16 25·8		0·2	0 24	A only.
822a	,, 27	14 49·0		0·1	0 54	
		14 49·5		0·1	0 48	
823	,, 28	21 23·7		0·1	2 28	
		21 22·7		0·2	2 26	
823a	Mar. 1	12 02·4		0·1	0 49	
		12 04·8		0·1	0 18	
823b	,, 6	18 55·2	19 06·5	0·2	0 27	
		18 58·1	19 06·1	0·2	0 19	
824	,, 14	1 25·5		0·1	6 38	Doubtful tremor. A only.
824a	,, 19	0 39·0		0·1	0 21	
		0 38·8		0·1	0 10	
825	,, 23	14 41·7		0·1	0 30	
		14 44·8		0·1	0 30	
826	,, 25	15 49·4	16 36·5	1·6	2 30	P_3 16h.31·2m.
		15 48·7		0·6	2 05	B not free.
826a	,, 25	19 28·2		0·1	0 09	A only.
827	,, 28	19 51·7	20 0	0·2	0 24	
		19 52·0		0·1	0 15	
828	,, 30	17 15·4		0·5	4 28	
		17 19·2		0·3	3 26	
828a	,, 31	18 35·2	19 20·9	2·0	3 43	
		18 34·5	19 23·2	1·0	2 51	
829	April 1	14 13·8	17 0·7	0·4	4 19	
		14 14·0	16 52·5	0·3	4 25	
830	,, 2	3 30·4		0·1	0 05	
		3 31·2		0·1	0 04	
831	,, 3	20 11·2		0·1	1 23	A only.
832	,, 5	12 27·7		0·2	1 07	
		12 29·5		0·2	1 00	
833	,, 5	22 51·5	22 55·5	0·2	0 16	
		22 51·0	22 54·4	0·2	0 13	
834	,, 6	2 13·8	2 23·5	0·2	0 21	
		2 18·2	2 22·0	0·2	0 09	
835	,, 8	16 57·8		0·2	2 42	
		16 58·3		0·1	2 14	
836	,, 9	9 50·0		0·1	0 33	
		9 55·0		0·1	0 17	
837	,, 9	13 31·8	13 40·6	0·4	0 36	
		13 32·3		0·1	0 22	
838	,, 11	?		0·2	?	Beginning lost. End 2h.0m.
		7 0·0		0·2	1 55	
839	,, 12	0 34·8	0 45·4	3·0	3 10	
		0 33·0	0 45·2	2·0	2 51	
839a	,, 13	?		0·1	?	Beginning lost. End 8h.15m.
		?		0·1	?	,, ,,
840	,, 14	4 23·5		0·1	1 50	A only.
841	,, 16	12 51·2	13 31·2	0·5	2 29	
		12 55·2	13 32·8	0·3	2 24	
842	,, 17	1 10·6	1 47·4	2·0	2 40	
		1 10·7	1 50·2	1·7	2 13	
843	,, 17	13 22·6		0·2	0 35	
		13 25·6		0·2	0 30	

Register from Helwan Observatory, Cairo, Egypt—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		h. m.	h. m.	mm.	h. m.	
843a	April 18	8 17·3		0·1	1 15	
		8 38·5		0·1	0 48	
843b	,, 20	22 55·0		0·1	1 36	
		22 57·6	23 04·7	0·1	1 32	
844	,, 23	16 55·7		0·1	0 29	
		16 56·5		0·1	0 26	
845	,, 24	11 57·3	12 2·1	0·5	0 29	A. B out of order.
846	,, 27	1 42·4	2 35·5	1·0	2 45	,, ,, ,,
847	May 1	18 49·5	19 58·8	1·0	3 54	
		18 50·1	20 10·0	0·7	3 35	
847a	,, 4	18 46·4		0·1	0 12	A only.
848	,, 5	0 59·0		0·1	2 22	
		0 59·0		0·1	2 18	
849	,, 6	10 31·0		0·1	0 21	
		10 32·9		0·1	0 15	
850	,, 8	?		0·2	?	Beginning lost. End 7h.58m.
		?		0·2	?	,, ,, End 7h.46m.
850a	,, 9	10 37·5		0·1	0 32	
		10 35·5		0·1	0 31	
851	,, 10	14 52·6		0·1	1 59	
		14 48·0		0·1	1 26	
852	,, 10	18 12·0	18 48·5	1·5	2 44	
		18 12·2	18 53·7	1·5	2 16	
852a	,, 11	7 34·0		0·1	1 18	
		7 36·0		0·1	1 11	
852b	,, 11	16 02·1		0·1	0 25	
		16 02·1		0·1	0 22	
853	,, 13	8 15·2	9 11·0	0·4	3 21	
		8 13·2	9 10·1	0·3	3 30	
854	,, 14-15	23 49·8		0·1	1 18	
		23 57·0		0·1	0 45	
855	,, 15	4 36·0	4 37·7	0·4	0 37	
		4 32·7	4 36·9	1·0	0 32	
856	,, 15	16 23·4		0·1	1 28	
		16 32·2		0·1	1 06	
856a	,, 16	6 25·2		0·2	0 10	
		6 25·6	6 28·8	0·4	0 10	
857	,, 18	9 13·4	9 22·0	2·5	2 16	P_3 9h.20·3m.
		9 7·3	9 23·6	2·5	2 8	P_3 9h.21·2m.
858	,, 20	12 27·7		0·2	2 9	
		12 30·7		0·2	2 2	
859	,, 21	7 51·0	7 59·0	0·2	0 44	
		7 52·0	7 58·2	0·2	0 33	
	Between					
860	,, 22	6 23 &	7 25·8	1·0	?	Beginning lost; paper End 10h.23m.
		6 36	7 16·6	1·0	?	being changed. End 10h.14m.
861	,, 23	19 9·3		0·2	2 51	
		19 9·2		0·2	1 33	
862	,, 26	9 59·0		0·1	0 36	
		10 5·4		0·1	0 31	
862a	,, 27	12 6·9	12 12·2	0·2	0 10	
		12 8·9		0·1	0 05	
863	,, 28	?	6 45·7	1·5	?	Beginning lost, paper End 7h.45m.
		?	6 47·0	1·0	?	being changed. End 7h.48m.
864	,, 30	12 36·9	12 41·9	0·4	0 50	
		12 34·3	12 43·8	0·5	1 02	
865	,, 31	?	6 12·2	1·0	?	Beginning lost; paper End 8h.22m.
		?	6 14·2	0·5	?	being changed. End 8h.19m.
866	June 1	6 15·6	7 25·1	1·3	4 23	
		6 16·8	7 35·4	0·8	4 19	
866a	,, 1	18 38·8	19 16·0	0·2	0 26	A only.
867	,, 3-4	23 49·5	0 11·4	0·3	1 08	
		23 51·1		0·2	1 06	
868	,, 6	12 42·8		0·2	0 55	
		12 48·1		0·1	0 59	
869	,, 7	2 11·4		0·2	0 41	
		2 11·9		0·2	0 38	
870	,, 9	12 2·4		0·2	2 40	
		12 12 8		0·2	2 26	
871	,, 12	20 38·9	20 47·0	0·3	0 35	
		20 39·0	20 51·8	0·2	0 27	
872	,, 13	14 31·5		0·1	0 50	
		14 45·0		0·1	0 39	

Register from Helwan Observatory, Cairo, Egypt—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
872a	June 14	19 59·5	20 25·3	0·4	1 36	
		19 59·5	20 22·5	0·5	1 24	
873	,, 16	4 22·0	4 38·0	0·5	1 26	P_3 4h.26·8m.
		4 25·2	4 39·9	0·5	1 26	
874	,, 16	6 49·6	7 56·0	4·4	4 49	P_3 6h.53·3m.
		6 49·7	7 12·3	3·5	4 38	
874a	,, 16	16 37·8		0·1	0 23	
		16 37·2		0·1	0 24	
875	,, 17	5 44·0		0·1	1 10	
		5 46·9		0·1	0 47	
875a	,, 17	17 18·8		0·1	1 09	
		17 08·0		0·1	1 31	
876	,, 23	3 12·6		0·1	0 54	
		3 12·1		0·1	0 55	
876a	,, 23	11 29·0		0·1	1 00	A only.
876b	,, 23	19 18·1		0·1	0 43	,,
876c	,, 23	20 27·6		0·1	0 41	
		20 23·2		0·1	0 46	
877	,, 24	13 31·1	13 43·8	3·5	2 19	P_2 13h.35·9m. P_3 13h.42·2m.
		13 32·4	13 43·2	5·8	2 11	P_2 13h.35·8m. P_3 13h.41·3m.
878	,, 24	22 47·2		0·2	1 14	
		22 48·6		0·2	1 05	
879	,, 25	19 23·5	19 34·5	2·8	2 06	
		19 22·6	19 32·2	2·3	1 57	
879a	,, 26	17 04·0		0·1	0 38	
		17 04·5		0·1	0 28	
880	,, 29	8 52·6	12 39·3	2·6	9 12	
		8 44·0		1·2	9 13	
881	,, 30	3 10·9		0·3	1 49	
		3 10·3		0·2	1 56	

Register from the University, Valletta, Malta.
Observer, C. Leach.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
289	Jan. 1	11 12	11 28	1·5	1 48	
290	,, 7	?	6 6·5	1·0		Beginning and end masked by tremors.
291	,, 8	?	11 6·7	1·5		,, ,,
292	,, 22	8 51	9 9·5	6·0	1 30	Very good record, but amplitude small in comparison with Europ. Inst.
293	,, 23	?	19 21	1·0		Beginning and end masked by tremors.
			19 28	1·5		
			19 36·5	1·0		
294	Feb. 3	17 26	17 48	0·5	1 21	
295	,, 4	14 19	15 34 or	2·0	2 49·5	
			15 51·5			
296	,, 12	18 22	18 35	1·5	1 40	
297	,, 18	5 12·5	5 16	2·0	0 39·5	Candia Earthquake. Very poor record.
298	Mar. 3	11 26·7	11 32	0·5	0 15·3	
299	,, 10	9 12·5	9 30	0·5	0 31	
300	,, 12	7 53·7	8 6·5	0·5	0 21·5	

Register from the University, Valletta, Malta—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
301	Mar. 25	13 41 or	14 33	2·0	?	
		13 56				
302	,, 30	17 17·5	18 26·2	2·5	2 42·5	
303	,, 31	18 15	19 26·5	2·0	1 29	
304	May 1	19 53	20 57	1·5	1 31	
305	,, 10	18 20	18 42	1·0	0 58	
306	,, 12	6 22	7 3	0·5	0 52	
307	,, 13	8 22	9 1	0·7	0 39	
308	,, 19	4 53	?	0·3	1 7	
309	,, 20	12 27·5	12 49	0·5	1 21	
310	,, 21	?	7 54	0·3	>0 12	
311	,, 22	6 37	7 20	2·5	2 23	
312	,, 23	10 24·5	10 38	0·5	0 28	
313	,, 24	1 44·5	1 55	1·0	0 24	
314	,, 28	6 17	6 52	1·0	0 50	
315	,, 31	5 11	5 51·5	1·5	2 8	
316	June 7	2 5·7	2 7·5	1·5	0 31	Naples. Very good record.
317	,, 12	20 42	?	0·3	>0 18	
318	,, 15	?	11 30	0·3	—	
319	,, 16	4 20·2	4 25·5	1·5	0 40	Malaga. Very good record.
320	,, 23	2 41·5	2 43·5	0·5	0 10	
321	,, 24	13 30	13 34	3·5	1 30	Algiers. Very good record.
322	,, 25	19 27·5	19 32·5	3·5	0 52	
323	,, 28	12 21	12 35	2·5	2 56	
324	,, 28	14 49	16 5	1·0	1 55	

Tremors on February 2nd, 4th, 10th, 22nd, 28th; June 5th, 6th, 8th, 9th, 10th.
Slit closed from 5 a.m. on June 16 till 8 a.m. on June 17. Period 20 secs. 1°=5mm. 1mm.=0°·38.

Register from the Royal Observatory, Cape of Good Hope, South Africa.
Director, S. S. Hough, *M.A., F.R.S.*

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
652	Jan. 1	11 28·8	12 11·0	0·4	1 33	
653	,, 7	5 57·5	5 58·7	1·1	0 13	
654	,, 14	12 27·6	12 28·0	0·7	0 4	
655	,, 22	9 33·0	9 43·0	2·0	1 0	Times approximate; paper caught.
656	,, 23	19 12·7	19 13·7	0·9	1 11	
657	,, 30	4 8·5	4 20·7	0·9		
			4 43·7	0·6	1 36	
658	Feb. 3	-	17 19·2	0·2	0 25	
659	,, 4	14 49·5	15 20·5	0·4	1 54	
660	,, 7	—	16 5·0	0·1	0 4	
661	,, 18	5 46·0	5 53·8	0·3	0 15	
662	,, 28	22 26·6	22 40·0	0·3	0 16	
663	Mar. 12	—	14 35·0	0·1	0 3	
664	,, 25	15 45·8	16 11·8	0·6	1 15	
665	,, 30	17 32·0	18 19·5	1·1	2 8	
666	,, 31	18 33·0	18 38·0	2·5	1 44	
667	April 12	0 43·0	1 36·0	0·6	1 28	
668	,, 16	—	13 35·0	0·2	0 14	
669	,, 19	0 59·5	1 16·5	0·7	1 32·5	
670	,, 23	—	19 55·3	0·1	0 2	
671	,, 27	1 49·7	2 24·0	1·7	1 18	
672	May 1	19 48	19 50·8	0·6	2 20	
673	,, 5	1 28·1	1 29·4	0·3	0 10	
674	,, 6	—	12 10·2	0·2	0 7	
675	,, 10	—	17 3·0	0·1	0 5	
676	,, 10	18 0·6	18 4·5	0·7	0 59	
677	,, 13	9 30·6	9 35·5	0·6	0 48	? Commencement. Instrument disturbed for winding.

Register from the Royal Observatory, Cape of Good Hope, South Africa—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
678	May 15		17 2·5	0·1	0 20	
679	,, 16		7 28·5	0·1	0 4	
680	,, 18	9 11·2	9 16·2	1·9	0 42	
681	,, 20	12 30·8	13 7·3	0·4	0 48	
682	,, 22	6 46·5	7 46·0	0·9	2 7·5	
683	,, 25	22 50·0			10 55	Series of slight vibrations.
684	,, 26	22 37·0	3 19·5	0·6	6 53	,, ,,
685	,, 28	6 28·8	6 31·5	1·2	0 17	
686	,, 29	20 30·0			5 0	Series of tremors.
687	,, 30	12 33·5	12 34·0	0·5	0 11	Times approximate. Watch stopped.
688	,, 31	0 44·5	0 46·0	0·5	0 6	,, ,,
689	,, 31	5 27·0	6 13·5	0·6	1 53	,, ,,
690	June 14	20 14·5	20 23·5	0·6	0 34	
691	,, 16	4 53	6 59·5	0·5		
			7 50·0	0·5	3 57	Two earthquakes.
692	,, 23	10 30			28 0	Series of slight thickenings.
693	,, 25	9 50			38 10	,, ,,

January, 1mm. boom motion = 0″·22. Boom period, 24·5 seconds.
February, ,, = 0″·19. ,, 21 ,,
March, ,, = 0″·20. ,, 20 ,,
April, ,, = 0″·28. ,, 19 ,,
May, ,, = 0″·27. ,, 20 ,,
June, ,, = 0″·26. ,, 20 ,,

Register from the Government Observatory, Bombay.
Director, N. A. F. Moos.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
3	Jan. 1	11 42·4	12 30·2	0·5	1 50·1	
15	,, 22	9 15·7	9 38·7	0·8	1 11·6	
18	,, 30	4 27·2	4 48·5	1·0	1 9·3	
26	Feb. 4	14 49·6	15 5·8	0·5		End lost in shifting time.
30	,, 12	18 27·1	18 49·2	0·4	0 39·8	
56	Mar. 25	16 45·2	16 46·8	0·3	0 29·0	
59	,, 30	17 20·0	18 1·0	1·0	2 13·8	
60	,, 31	19 6·9	19 23·1	0·6	0 52·8	
71	April 12	0 30·2	0 49·2	1·8	1 4·4	
77	,, 16	12 48·0	13 6·9	0·4	0 36·7	
78	,, 17	1 43·0	1 52·0	0·3	0 18·9	
89	,, 27	2 52·9	2 57·2	0·4	0 25·9	
95	May 1	18 53·9	19 37·6	1·2	1 17·8	
110	,, 13	8 40·1	8 58·0	0·3	0 57·2	
113	,, 18	9 21·7	9 31·1	0·8	0 28·6	
117	,, 22	6 44·6	7 3·2	1·0	0 58·3	
125	June 1	6 20·3	7 0·8	0·7	2 25·0	
133	,, 9	12 24·2	12 27·4	0·1	0 10·8	
143	,, 16	6 45·1	7 4·8	2·4	2 43·8	
			7 36·8	2·2		
145	,, 17	5 58·7	5 59·8	0·2	0 5·2	
157	,, 25	19 37·8	19 46·1	0·7	0 27·3	
161	,, 29	11 14·0	12 2·5	0·8	2 7·3	

Between January 1 and May 27, 1·0mm. of amplitude = 0″·36. Between May 28 and June 5, 1·0mm. 0″·41. Between June 6 and June 30, 1·0mm. = 0″·41.

Where no distinction of P.T. or L.W. can be made, the commencement of the disturbance is entered in the column of "Commencement."

Register from the Solar Physics Observatory, Kodaikânal, Madras.
Director, C. Michie Smith.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM. =	H. M.	
1	Jan. 1	11 22·3	12 46·5	0·4 0·2	2 44	
2	,, 8	14 59·9	15 23·0	0·4 0·2	0 59	
3	,, 14	8 40·3	8 53·8	0·4 0·2	0 34	
4	,, 15	22 34·1			0 36	Widening of line.
5	,, 22	8 54·7	9 36·2	0·9 0·5		
			9 43·4	1·0 0·5	2 32	
6	,, 23	19 36·2	20 11·2	0·3 0·2	1 32	
7	,, 30	4 09·6	4 45·4	0·6 0·3	1 15	Sheet marked 4h.47m.
8	Feb. 4	14 24·4		0·5 0·2	2 36	Many small maxima.
9	,, 4	18 00·8			2 27	Widening of line.
10	,, 12	18 18·2	18 53·3	0·6 0·3	1 33	
11	,, 28	21 55·6	22 06·3	0·6 0·3	0 43	
12	Mar. 30	17 16·4	18 10·7	2·0 1·0	2 57	
13	,, 31	18 52·8	19 35·6	0·7 0·4	1 51	
14	April 1	14 06·2			0 50	Widening of line.
15	,, 12	0 22·8	0 38·3	2·0 1·0	1 57	
16	,, 16	12 37·2	13 06·1	0·5 0·3	0 59	
17	,, 17	1 38·6	1 55·4	0·4 0·2	1 06	
18	,, 27	2 50·3	3 02·5	0·6 0·3	0 39	
19	May 1	18 54·6	19 43·3	2·1 1·1	1 56	
20	,, 10	18 43·2	19 03·9	0·5 0·2	0 43	
21	,, 11	15 59·7			0 16	Widening of line.
22	,, 13	8 21·7	9 06·2	0·6 0·3	2 31	
23	,, 15	16 17·1	16 39·3	0·5 0·2	0 53	
24	,, 18	16 15·6	16 34·6	1·1 0·5	1 02	
25	,, 20	13 40·6			0 18	Widening of line.
26	,, 22	6 36·1	7 12·5	1·2 0·5	1 39	
27	June 1	6 17·2			1 06	Widening of line.
28	,, 16	6 44·4	6 55·9	4·0 2·2	3 36	
29	,, 17	5 36·2	5 59·0		0 35	Widening of line.
30	,, 19	15 11·0			1 42	,, ,,
31	,, 24	3 36·7	4 01·8		0 45	,, ,,
32	,, 24	13 40·3	14 12·0	0·4 0·3	1 44	
33	,, 29	9 17·2			0 24	Widening of line.
34	,, 29	11 20·6	11 52·5	1·1 0·6	2 13	
35	,, 29	14 42·8	15 28·7	1·2 0·7	2 09	

Register from Colombo Observatory.
Superintendent, H. O. Barnard.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
34	Jan. 1	11 37·1	12 50·5	1·0	1 56	
35	,, 8	15 20·1	15 25·8	0·5	0 12	
36	,, 15	22 32·1	22 49·0	0·5	0 24	
37	,, 22	8 48·8	9 17·9	0·9	2 12	
38	,, 23	19 25·0	20 18·2	0·6	1 38	
39	,, 30		4 48·1	0·7		Beginning lost in changing film.
40	Feb. 4	14 24·4	15 5·5	1·0	1 47	
41	,, 4	18 0·6	18 43·0	0·5	1 54	
42	,, 12	18 24·5	18 26·5	0·4	0 44	
43	,, 28	22 1·7	22 6·9	0·3	0 24	
44	Mar. 25	15 50·4	15 52·0	1·0	0 07	Doubtful. Movements at 9h. and 11h., probably spurious.

Register from Colombo Observatory– continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
45	April 2	4 4·7	4 5·1	0·9	0 03	
46	,, 12	0 29·6	0 36·5	2·0	1 42	P_1 absent.
47	,, 16	12 46·5	13 3·0	0·9	0 36	
48	,, 17	1 13·0	1 41·9	0·6	--	End lost in changing film.
49	,, 19	11 36·0	11 37·6	0·6	0 06	
50	,, 19	13 51·4	13 54·0	0·3	0 05	
51	,, 20	1 45·0	1 46·4	1·4	0 10	
52	,, 26	5 25·0	5 25·4	0·5	0 05	
53	,, 27	2 48·4	3 2·9	0·6	0 35	
53a	,, 27	8 57·5	8 58·7	0·4	0 05	
54	May 1	18 35·7	19 32·3	0·9	1 29	
55	,, 13	8 24·3	9 13·0	0·3	1 15	
56	,, 18	9 19·0	9 31·6	2·0	0 37	
57	,, 22	6 43·5	7 14·0	1·0	0 56	
58	,, 31	6 28·2	6 47·3	0·3	0 29	
59	June 1	6 17·7	6 59·0	1·9	1 59	
60	,, 16	6 43·4	6 56·5	4·0	2 46	
61	,, 25	19 49·5	19 53·2	0·5	0 20	
62	,, 29	11 25·6	11 50·0	0·8	2 12	
63	,, 29	14 50·5	15 26·0	0·7	0 52	

Mean values of 1mm. displacement—January to March 0''·55, March to June 0''·44.

Register from Honolulu, T.H.
Observer-in-Charge, OSCAR H. GAARDEN.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
682	Jan. 1	11 12·8	11 39·8	11·0	1 40	P_2 11h.21·3m.
683	,, 15	22 39·8	23 4·0	0·6	0 35	
684	,, 16	23 12·2	23 17·4	3·0	0 13	
685	,, 19	15 8·2	15 9·2	0·6	0 04	
686	,, 22	9 12·6	9 25·6	3·0	2 22	P_2 9h.18m.
687	,, 23	19 14·2	19 50·6	1·0	2 17	
688	,, 26	1 12·2	1 13·8	0·3	0 38	
689	,, 26	16 46·0	16 47·8	0·5	0 04	
690	,, 29	5 10·4	5 15·4	2·4	0 53	
691	,, 30	4 9·6	4 30·8	1·5	2 18	
692	Feb. 2	11 11·8	11 12·6	0·5	0 37	
693	,, 3	10 12·2	10 16·2	0·9	0 12	
694	,, 4	14 9·6	14 30·6	6·0	2 52	P_2 14h.16·8m.
695	,, 4	17 46·2	18 6·8	5·6	1 43	P_2 17h.54·6m.
696	,, 9	8 8·2	8 14·2	1·1	0 15	
697	,, 12	18 19·0	18 42·6	3·0		
698	,, 28	21 12·9	21 15·0	2·5	1 10	
699	Mar. 1	11 45·4	11 45·8	0·9	0 34	
700	,, 11	17 48·6	18 8·0	1·1	0 24	
701	,, 14	3 58·2	4 6·4	0·7	0 14	
702	,, 15	19 15·8	19 17·2	1·1	0 09	
703	,, 19	0 26·0	0 29·8	0·8	0 09	
704	,, 22	20 57·5	21 2·0	0·9	0 12	
705	,, 25	15 49·7	16 13·2	7·4	1 23	P_2 16h.4·8m.
706	,, 30	17 5·8	17 26·5	33·7	3 06	P_2 17h.13·2m.
707	,, 31	18 59·0	19 39·7	0·8	1 53	P_2 19h.12·3m.

Register from Honolulu, T.H.– continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
708	April 1	14 24	14 36·3	1·1	0 28	
709	,, 2		12 37·5	0·9		
710	,, 3	19 18	19 24	0·7	0 12	
711	,, 8	16 48	16 49	0·9	0 58	
712	,, 12	0 34	1 2	5·9	1 47	P_2 0h.43·2m.
713	,, 12	19 16	19 59	0·9	0 18	
714	,, 16	12 53	13 19·3	1·9	0 46	P_2 13h.8m.
715	,, 17	1 49	1 52	0·8	0 21	
716	,, 18	7 31	7 32·5	0·7	0 7	
717	,, 20	22 35·8	22 36·3	0·8	0 14	
718	May 1	18 41	19 0·3	12·5	3 7	
719	,, 4	16 2·5	16 7·5	0·4	0 13	
720	,, 4	18 16·5	18 21	0·5	0 10	
721	,, 5	0 49	1 5	0·4	0 27	P_2 1h.1·5m.
722	,, 10		17 27·2	0·9		
723	,, 13	8 7	8 13·3	3·9	2 3	P_2 8h.11m.
724	,, 15	4 57·5	5 1·5	0·9	0 13	
725	,, 18	10 33·7	10 42·5	0·7	0 18	
726	,, 20	12 24·5	12 41·7	1·4	0 58	P_2 12h.37·5m.
727	,, 22	6 32·7	6 52	6·5	1 58	P_2 6h.40·2m.
728	,, 23	19 2·5	19 16·3	0·6	0 45	P_2 19h.10m.
729	,, 31	5 4·5	5 25	5·6	1 42	P_2 5h.12·3m.
730	June 1	6 4·3	6 25	16·3	3 33	P_2 6h.12·3m.
731	,, 3	23 46	23 50	0·8	0 10	
732	,, 9	12 6	12 20	3·3	0 54	P_2 12h.13·5m.
733	,, 14	19 56	20 37·5	0·4	0 46	
734	,, 16	6 39	7 0	39·0	3 58	
735	,, 17	5 48	6 8	0·5	0 36	
736	,, 17	17 2·5	17 10·3	0·8	0 21	
737	,, 22	19 38·7	19 42	0·4	0 8	
738	,, 23	3 28	3 35	0·5	0 12	
739	,, 23	10 21	10 29	0·8	0 17	
740	,, 24	14 29·8	14 36·6	0·6	0 19	
741	,, 29	8 34	8 37	1·0	0 56	
742	,, 29	10 55·5	11 17·2	3·9	5 17	
743	,, 30	3 15·7	3 37	0·9	0 38	

Period of Pendulum, 19 secs.

Sensitiveness—December 15, 1909 1mm. = tilt of 0''·36.
February 18, 1910 ,, ,, 0''·30.
March 19, 1910 ,, ,, 0''·39.
June 16, 1910 ,, ,, 0''·47.

Nos. 697, 702, end obscured by air tremors.
Nos. 684, 700, 704, possibly artificial.

A majority of the recorded disturbances are small tremors without distinct phases, merely a swelling of the line.

Register from Perth Observatory, Western Australia.
Director, W. E. COOKE, *M.A., F.R.A.S.*

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1909			
		H. M.	H. M.	MM.	H. M.	
	July 3	2 15·0	Ats.		43 45	End 22h.0m.
	,, 4	0 0·0				
27	,, 7	21 49·3	22 0·1	2·0	1 25·1	
	,, 15	4 15·0		0·3		Small tremor.
	,, 15	4 18·5			2 39·5	
	,, 26	3 58·2				Continuous air tremors to 20h. 38·0m. on 28th.
	,, 30	5 58·5			3 14·5	Air tremors.

Register from Perth Observatory, Western Australia—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
28	July 30	11 12·5	12 53·5	1·25	2 27·0	—
	Aug. 1	2 32·0				Air tremors to 0h.42·5m. on 4th.
	,, 6	2 0·0				Air tremors during very rough weather to 17h.30m. on 8th.
	,, 10	14 38·0			0 7·0	Air tremors.
	,, 14	6 59·0			0 59·0	,,
	,, 18	0 57·5			0 54·5	,,
	,, 21	3 24·0			0 3·0	,,
	Sept. 2	1 15·0				Air tremors to 2h.11·0m. on 4th.
	,, 5	9 31·0			0 26·0	Small tremors.
	,, 6	14 58·0			0 12·0	,,
	,, 7	2 35·0			18 41·0	
29	,, 8	23 32·1	23 47·1	1·0	0 54·3	
	,, 9	4 42·0			0 5·0	Small tremors.
	,, 10	20 2·5			0 29·1	,,
30	,, 11	11 4·0	11 27·0	0·75	0 54·0	
	,, 16	19 5·0			0 38·5	Small tremor.
	,, 17	11 59·8			0 8·1	,,
	,, 24	6 41·0			0 12·0	,,
	,, 24	6 53·0				Air tremors to 1h.46·5m. on Oct. 1.
31	Oct. 4	13 50·3	14 6·2	1·25	0 24·9	—
32	,, 21	0 4·8	0 43·0	1·0	1 10·2	—
	,, 21	1 16·0				Small tremors to 4h.20·0m. on 22nd.
	,, 22	12 0·0			2 38·0	Small tremors.
	,, 23	2 0·0			7 37·5	
33	,, 30	10 28·5	10 37·5	1·75	0 41·0	
	Nov. 3	6 32·0			0 32·0	Small tremor.
34	,, 10	6 24·0	6 34·0	2·75	1 24·0	
35	Dec. 3	3 28·5	3 41·5	1·5	0 39·0	
36	,, 8	9 16·7	9 32·0	3·75	0 57·9	
37	,, 9	15 43·2	16 4·7	6·25	2 1·8	
38	,, 9	21 22·2	21 37·4	2·5	1 35·0	
			22 9·4	4·0		
39	,, 9–10	23 39·0	0 2·5	2·25	1 25·3	
40	,, 22	13 5·3	13 20·3	2·25	1 0·5	
	,, 23	19 53·0			0 38·7	Small tremor.
41	,, 23	22 29·3	22 44·5	1·5	0 48·0	
		1910				
1	Jan. 30	3 55·0	4 3·0	7·5	1 57·0	
2	Feb. 3	16 57·5	17 2·0	4·0	1 28·5	
3	,, 4	14 10·0	14 34·0		2 10·0	Amplitude too large to measure.
4	,, 4	17 48·0	18 11·0	6·0	1 57·0	
	Mar. 11	2 40·0			0 5·0	
5	,, 30	17 11·0	17 27·4	7·5	2 16·5	
6	May 1	18 34·9	19 0·8	5·0	1 55·0	
7	June 1	6 4·0	6 25·3	9·5	1 58·0	
8	,, 29	11 1·5	11 30·5	5·5	1 8·7	
9	,, 29	14 34·0	14 52·0	1·75	0 47·0	
10	,, 29	18 22·4	18 24·9		0 23·0	

June 30, 1mm. = 0″·58. Period, 15 seconds.

Old Instrument dismantled on February 21, at 2h. G.M.T.
New Instrument installed on February 24, at 5h. G.M.T.

Register from Sydney Astronomical Observatory, New South Wales.
Acting-Director, W. E. Raymond. *Observer*, W. C. Graham.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
103	Jan. 1	11 24·2	11 36·5	0·5	1 35·0	P_2 11 32·7; P_3 11 34·3.
104	,, 13	0 18·5	0 22·9	0·7	0 34·7	P_3 0 21·2.
105	,, 13	13 55·9	13 59·3	0·4	0 10·0	P_3 13 58·2.
106	,, 15	10 47·7	10 52·2	0·55	0 34·0	P_3 10 48·7.
107	,, 15	22 34·1	22 38·1	0·6	0 47·7	P_3 22 37·6.
108	,, 19	15 9·8	15 20·3	0·5	0 42·8	P_3 15 18·3.
109	,, 26	16 28·9	16 32·4	0·7	0 13·5	P_3 16 31·5.
110	,, 29	5 1·5	5 20·5	0·3	0 31·5	
111	,, 30	3 50·1	3 56·1	6·25	2 1·3	P_2 3 51·9; P_3 3 54·4.
112	Feb. 3	16 47·7	16 53·7	9·5	1 36·5	P_2 16 49·9; P_3 16 52·3.
113	,, 4	14 5·0	14 12·5	1·0	2 56·1	P_2 14 8·4; P_3 14 11·2.
114	,, 4	17 41·0	17 49·0	2·0		P_2 17 42·0; P_3 17 45·2. After-tremors merged into P.T's of succeeding tremor.
115	,, 4		18 44·0	1·0		P_3 18 41·5.
116	,, 8	5 30·7	5 48·4	0·25	5 11·3	
117	,, 12	18 28·6	18 52·8	0·5	0 46·2	P_2 18 30·8; P_3 18 47·9.
118	,, 25	4 26·4	4 28·9	0·3	0 12·2	P_3 4 28·2.
119	Mar. 1	11 48·3	12 2·3	0·2	0 38·5	P_3 12 1·0.
120	,, 18	23 23·3	23 25·9	0·35	0 4·8	
121	,, 30	16 59·9	17 6·4	6·0	1 45·5	P_3 17 5·4.
122	,, 31	18 41·9	19 6·9	0·5	1 51·7	P_3 19 5·4.
123	April 1	14 3·0	14 8·7	3·5	0 59·8	P_2 14 5·0; P_3 14 7·2.
124	,, 8	16 47·5	17 3·0	0·8	0 37·4	P_3 16 58·9.
125	,, 12	0 32·1	0 45·3	2·4	1 17·5	P_2 0 36·6; P_3 0 41·1.
126	,, 13	5 48·0	5 50·7	0·5	0 7·0	P_3 5 50·0.
127	,, 14	20 54·2	21 1·2	0·2	0 49·4	
128	,, 16	12 43·6	12 50·3	6·0	1 1·0	P_2 12 44·8; P_3 12 48·5.
129	,, 20	22 26·8	22 41·5	0·8	0 55·1	P_3 22 34·4.
130	,, 23	15 52·1	15 54·1	0·15	0 6·6	P_3 15 52·9.
131	,, 27	2 14·7	2 16·9	0·1	0 12·2	
132	,, 27	20 56·7	21 30·7	0·15	0 45·5	
133	May 1	18 34·8	18 40·8	6·0	1 59·4	P_2 18 36·0; P_3 18 38·8.
134	,, 3	14 9·5	17 53·8	0·4	7 16·5	
135	,, 4	15 49·7	15 51·9	0·55	0 16·3	P_3 15 51·0.
136	,, 8	18 23·8	18 29·1	0·2	0 9·2	
137	,, 10	3 30·1	3 39·4	0·1	0 16·8	
138	,, 11	18 50·1	19 38·1	0·3	1 5·5	
139	,, 12–13	21 49·2	23 33·2	0·35	6 16·9	
140	,, 13	8 21·5	8 48·1	0·3	0 42·3	P_3 8 45·5.
141	,, 15	4 38·8	4 41·8	0·2	0 19·3	P_3 4 39·8.
142	,, 15	16 15·4	16 37·9	0·6	1 22·8	P_2 16 19·5; P_3 16 25·8.
143	,, 21	22 53·7	23 59·4	0·3	0 19·2	P_3 23 56·9.
144	,, 22	6 45·7	7 2·7	0·5	0 56·1	P_2 6 55·7; P_3 7 0·5.
145	,, 28	15 31·8	16 3·8	0·2	1 47·9	
146	,, 28	20 28·9	21 21·3	0·15	2 4·7	
147	,, 30	13 20·1	13 49·4	0·2	1 27·3	
148	,, 30	20 5·4	20 32·9	0·1	0 59·8	P_3 20 29·4.
149	June 1	6 0·1	6 5·7	6·1		P_2 6 1·3; P_3 6 4·1. After tremors merged into P.T's of succeeding tremor.
150	,, 1		6 57·4	3·0		P_3 6 56·4.
151	,, 1	18 27·2	18 38·0	0·75	0 31·0	P_3 18 36·8.
152	,, 9	5 16·2	5 35·8	0·15	1 27·0	
153	,, 9	12 6·8	12 8·3	0·25	0 23·6	
154	,, 12	18 31·7	20 10·5	0·1	2 29·1	
155	,, 13	8 11·7	8 13·9	0·1	0 23·7	
156	,, 13	11 50·2	11 53·9	0·1	0 10·4	
157	,, 15	17 32·1	17 53·3	0·15	0 41·7	
158	,, 15	6 35·1	6 45·5	>17·0	2 39·9	P_2 6 39·0; P_3 6 42·4.
159	,, 20	18 7·9	19 22·1	0·2	1 58·2	
160	,, 23	3 8·2	3 11·4	0·3	0 21·7	P_3 3 10·2.
161	,, 23	10 13·0	10 15·3	0·5	0 26·4	
162	,, 24	2 42·2	2 47·5	0·5	0 21·0	P_3 2 46·4.
163	,, 29	10 50·4	11 18·1	5·2	2 28·4	P_2 10 55·5; P_3 10 59·4.
164	,, 29	14 18·7	14 37·7	3·0	2 0·3	P_2 14 24·0; P_3 14 32·5.
165	,, 29	17 48·6	17 51·8	0·15	0 23·6	
166	,, 29	18 21·2	18 28·0	2·1	1 23·3	P_3 18 27·2.
167	,, 29	20 2·4	20 7·2	0·2	0 59·5	
168	,, 29–30	23 56·5	0 43·6	0·2	1 3·2	

Register from Sydney Astronomical Observatory, New South Wales—continued.

D.V. = 0'·51. B.P. = 13·2 secs.

Notes:—Owing to flaw in the paper stopping the clock, the record from 3h.42m. to 23h.58m. on February 15 was lost.
Tremor No. 421.—The times of the phases of this tremor must be taken as only approximate, owing to the failure of the light.
Tremor No. 458. One of the largest tremors ever recorded here. Waves in P_2 and also in P_3 were larger than the width of the seismograph band.

Register from Wellington, New Zealand.
Observer, GEORGE HOGBEN, M.A.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
1	May 29	20 43				
	,, 30		5 58·8	1·0	13 15·5	Tremors.
2	June 1	5 30·1	5 43·7	7·5	1 27	Probably Pacific ('Tonga region'.
3	,, 16	6 34·1	6 49·3	14·5	1 40	Probably Pacific ('Tonga region'.
	,, 17				23 21	Followed by tremors and reports till 5h.55m. on June 17.
4	,, 26	21 19·3	23 28·2	0·6		
	,, 27				12 56	Tremors.
5	,, 29	10 50·5	11 06·9	12·5	2 24	Probably Pacific ('Tonga region'.
6	,, 29	14 24·8	14 29·5	9·0	1 38	'Tasman Sea (near Thompson Deep, west side of).

Boom period, 12·5 secs. till end of April; 13·5 secs. afterwards.
1mm. of amplitude = 1'·08 of arc of tilt. Time signal every hour from observatory.

Register from the Magnetic Observatory, Christchurch, New Zealand.
Observer, HENRY F. SKEY, *B.Sc.*

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1910			
		H. M.	H. M.	MM.	H. M.	
80	Jan. 10	Indefinite	19 27·8	0·3	Indef.	P_1 and D obscured by Ats.
81	,, 13	0 22·2	0 34·6	0·45	0 44·4	
82	,, 15	Indefinite	16 58·1	0·65	Indef.	P_1 and D obscured by Ats.
83	,, 15	22 52·9			0 19·7	Thickening of line.
84	,, 19	15 01·1	15 09·3	1·5	1 21·5	
85	,, 29	5 03·7	5 11·9	1·0	1 01·0	
86	,, 30	3 49·2	3 54·0	17+	2 30·8	'Origin Samoa.
87	Feb. 3	9 57·9	10 05·8	0·75	0 26·6	
88	,, 3	Indefinite	16 51·9	17+	Indef.	P_1 and D obscured by Ats.
89	,, 4	14 07·5	14 14·2			
			to 14 15·0	17+	Indef.	End obscured by following quake.
90	,, 4	Indefinite	14 55·5	5·0±		P_1 obscured by preceding quake. Ended 16h.07·8m.
91	,, 4	17 44·2	17 50·9	2·75	Indef.	End obscured by following quake.
92	,, 4	Indefinite	18 47·8	1·4		P_1 obscured by preceding quake. Ended 20h.11·9m.
93	,, 6	2 13·7	2 15·2	0·25	0 11·3	
94	,, 6	4 41·5	4 45·1	0·2	0 09·7	
95	,, 6	7 16·2			0 20·6	Thickening of line.
96	,, 7	23 03·2	23 04·7	0·1	0 10·3	
97	,, 13	10 04·9	10 08·5	0·45	0 34·3	
98	,, 15	1 27·1	1 31·2	0·25	0 21·3	

Register from the Magnetic Observatory, Christchurch, New Zealand—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
99	Mar. 1	11 37·8	11 44·0	0·5	1 14·5	
100	,, 29		8 48·9	0·25		'Sharp and sudden.
101	,, 29		8 50·4	0·15		'Both felt slightly in Christchurch.
102	,, 30	17 01·5	17 10·0			
			and 17 10·8	17+	Indef.	Followed by continuous Ats.
103	,, 30	23 59·4	24 02·7	0·4	0 27·7	
104	,, 31	5 37·2	5 40·9	0·2	0 14·0	
105	April 1	13 35·0	14 27·8	0·9	1 38·5	
106	,, 4	5 23·7			0 08·2	Slight thickening.
107	,, 8	Indefinite	16 55·2	0·9	Indef.	P_1 and D obscured by Ats.
108	,, 12	0 50·3	0 56·6	1·5	1 04·4	Preceded and followed by minute Ats.
109	,, 13	5 56·6	5 58·7	0·4	0 18·5	
110	,, 16	Indefinite	13 09·3		Indef.	P_1 and D obscured by Ats.
111	,, 18	7 34·9			0 41·0	Thickening of line.
112	,, 20	22 28·5	22 49·6		1 14·4	Preceded by continuous Ats.
113	,, 23	Indefinite	15 52·8	1·3	Indef.	P_1 and D obscured by Ats.
114	,, 27	2 16·3			0 35·1	Thickenings.
115	May 1	4 44·7	4 46·3	0·35	0 11·8	
116	,, 1	Indefinite	18 45·7	5·5	Indef.	P_1 and D obscured by Ats.
117	,, 5	0 57·4	1 09·7	0·2	0 41·0	
118	,, 6	23 22·9	23 29·1	0·4	0 38·0	
119	,, 8	18 25·2	18 34·4	0·1	0 20·0	
120	,, 10	18 32·7			0 35·4	Small swellings.
121	,, 13	2 33·6	2 36·2	0·3	0 12·8	
122	,, 15	4 42·6	4 49·5	0·15	0 26·4	
123	,, 21	22 58·3	23 07·5	0·2	0 22·5	
124	,, 22	6 48·1	7 10·6	0·4	1 11·2	
125	,, 29	8 38·4			1 26·1	Minute tremors, possibly Ats.
126	,, 29	11 12·2			0 06·1	Slight swelling.
127	,, 31	5 19·8	5 21·3	0·15	0 06·6	
128	,, 31	5 32·6	6 01·8			
			6 09·3			
			and 6 22·9	0·7	1 29·2	
129	June 1	6 00·7	6 12·5	5·1	3 00·6	'Origin Fiji.
130	,, 2	10 30·5	10 32·0	0·2	0 06·1	
131	,, 5	5 02·6	5 04·6	0·1	0 27·1	
132	,, 9	6 50·0			0 05·1	Minute.
133	,, 9	8 10·5			0 02·5	Minute.
134	,, 13	13 08·1	13 13·2	0·3	0 39·5	
135	,, 23	10 16·6	10 20·7	0·4	0 26·9	
136	,, 24	2 58·9			0 14·3	Very slight.
137	,, 29	10 51·5	11 03·8			
			to 11 08·7	17+	Indef.	End obscured by quake following.
138	,, 29	Indefinite	14 28·9	4·2	Indef.	P_1 obscured by preceding quake. Ended 15h.49·5m.

1mm. = 0'·49.

Register from Baltimore, Md., U.S.A.
Director, PROF. HARRY FIELDING REID.

No.	Date	Commencement	Max.	Max. Amplitude	Remarks
			1909		
		H. M.	H. M.	MM.	
15	June 27	8 15·9	8 27·0	0·4	Swellings.
16	July 7		23 25·5		Origin Northern India. Path of waves parallel with beam, hence beginning not determinable. P_2 23h.03·7m. P_3 23h.22·5m.
17	,, 30	10 57·7	11 14	7·0	From Bosch-Omori machine. Milne not recording. P_2 11h.03·5m. P_3 11h.08·9m.
18	,, 31	19 29·9	19 39·2	2·0	From Bosch-Omori machine. Milne not recording. P_3 19h.37·7m.
19	Oct. 31	10 03·5			A single disturbance.
20	,, 31	10 35·0			A series of disturbances, with three equal max. at 1mm. apart.

Register from Baltimore, Md., U.S.A.—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Remarks
		H. M.	H. M.	MM.	
21	Nov. 10	6 31·8	7 01·5	0·5	E.Q. swellings. P_2 6h.37·8m.
22	,, 17	23h. to	18th, 13h.	0·2	Air currents.
23	Dec. 9		16 50·0	0·15	Distant earthquake. P_2 16h.30·5m. ? P_3 16h.35·0m.

No record—November 12, 1·2h. to November 15, 17·2h.

Period of Pendulum—June 27, 12″·4; July 7, 13″·5; July 30 and 31, 22″·0; November 10 and December 9, 12″·2.

Register from the Royal Alfred Observatory, Mauritius.
Director, T. F. Claxton, *F.R.A.S.*

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
			1909			
		H. M.	H. M.	MM.	H. M.	
728	Jan. 3	22 5·7			0 32·0	Slight thickenings in both components.
729	,, 17	3 49·0	3 52·5		0 7·0	E.-W.
730	,, 21	3 15·1	3 18·6		0 8·0	E.-W. Very slight in N.-S.
731	,, 23	2 58·0	3 18·0	1·0	?	E.-W.
		2 58·0	3 21·0	0·9	?	N.-S.
732	,, 28	20 43·7			0 14·0	Irregular thickenings in E.-W. only. ? Seismic origin.
733	,, 29	0 3·7			0 11·0	E.-W.
734	,, 29	1 29·7	1 31·3		0 22·0	E.-W.
735	Feb. 2	8 19·9			0 3·0	N.-S.
736	,, 2	23 25·3			0 5·0	E.-W.
737	,, 5	10 40·2			0 3·0	Irregular thickenings in both components. Seismic origin.
738	,, 22	9 41·9	9 50·9	1·1		E.-W.
			10 23·4	0·6		E.-W.
			9 51·9			N.-S.
			10 2·9			N.-S.
739	,, 26	12 15·9			0 4·0	E.-W. Very slight in N.-S.
740	,, 26	17 57·9			0 42·0	E.-W. Slight irregular thickenings.
		17 30·9			1 5·0	N.-S.
741	,, 27	8 33·2			0 17·0	E.-W. Seismic origin.
742	Mar. 7	18 24·0			0 12·0	E.-W.
		18 24·5			0 7·0	N.-S.
743	,, 8	11 55·5	12 19·5	0·6	0 36·0	E.-W. In N.-S. very slight.
744	,, 12	23 42·5	0 14·0			E.-W. Occasional thickenings.
	,, 13	0 0·5	0 14·5		0 29·0	N.-S.
745	,, 13	14 48·5	15 22·5	0·8	2 28·5	E.-W. Frequent isolated movements.
746	,, 17	16 33·7			0 6·5	E.-W. Irregular thickenings. Very slight in N.-S.
747	,, 17	23 6·2	23 28·2	2·5	1 2·5	E.-W. In N.S. very slight and irregular.
748	,, 20	14 28·4			0 4·0	E.-W.
749	April 10	5 50±	6 24·8	1·5	2 10±	E.-W. Slight in N.-S.
750	,, 10	19 11·3	20 34·5	0·6		E.-W. Frequent slight isolated movements.
			20 36·8	0·5		N.-S.
751	,, 11	4 19·3	4 23·3		0 11·0	E.-W.
752	,, 25	22 25·1	22 30·1			E.-W.
	,, 25		23 18·1			E.-W.
753	,, 26	20 46·3			0 6·0	Irregular movements in both components
754	,, 27	13 4·8	13 29·8	3·0	1 31·0	E.-W.
			13 29·8			N.-S.
755	May 2	7 45·7	7 53·2		0 27·0	E.-W.
756	,, 2	19 4·7	19 10·2	0·6	0 15·5	E.-W. Very slight in N.-S.
757	,, 2	22 16·4	22 20·4		0 8·0	E.-W. Thickenings.
	,, 2	22 18·4	22 20·4		0 5·0	N.-S.
758	,, 2	22 42·4	22 47·4		0 9·0	E.-W. Thickenings.
	,, 2	22 43·4	22 46·9		0 8·0	N.-S.
759	,, 3	0 15·4	0 19·4		0 8·0	E.-W.
	,, 3	0 16·9	0 18·9		0 7·5	N.-S.
760	,, 10	13 4·3			0 12·0	E.-W. Irregular thickenings.
761	,, 10	20 19·4	20 23·9		0 12·5	E.-W. Slight in N.-S.

Register from the Royal Alfred Observatory, Mauritius—continued.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
762	May 12	1 13·2	1 25·2	1·0	0 27·0	E.-W. Thickening with max. at 1h.21·2m. in N.S.
763	,, 17	8 21·6	8 32·1	1·0	0 31·5	Very irregular movements in both components.
764	,, 25	5 33·0	5 37·5		0 15·0	E.-W.
765	,, 26	2 45·8	2 53·8		0 15·0	E.-W.
766	,, 30	21 21·7	21 43·7	0·5	0 44·0	E.-W.
767	June 4	18 49·8	18 57·8	5+	0 16·5	E.-W. Max. in N.-S. at 19h.7·3m.
768	,, 8		6 47·3	2·0	?	E.-W. Very slight in N.-S.
769	,, 9	1 21·9	1 28·9		0 30·0	E.-W.
770	,, 12	20 41·2	20 58·2		1 5·2	E.-W.
771	,, 18	19 28·0			0 14·0	E.-W.
772	,, 22	9 35·0			0 15·0	E.-W. Boom much disturbed. Seismic origin ?
773	,, 25	0 51·2			1 0·0	Many irregular movements in both. Seismic origin ?
774	,, 27		8 8·8	0·9		E.-W. Slight in N.-S.
775	,, 29	16 48·7			0 6·0	E.-W. Irregular isolated movements.
776	July 2	8 31·9			4 0·0	E.-W. Frequent thickenings. ? Seismic origin.
777	,, 2	23 50·7			0 46·5	Isolated thickenings in both components.
778	,, 3		6 12·7			E.-W. Irregular isolated thickenings.
			7 27·7			N.-S. Seismic origin uncertain.
779	,, 5		22 34·5			Irregular movements in both components.
780	,, 7		7 24·7			
781	,, 7		10 10·7			In N.-S. only.
782	,, 7	21 48·8	21 55·8	4·0	0 15·5	E.-W.
		21 48·3	21 55·8	4+	0 7·5	N.-S.
783	,, 26	11 9·2	11 12·2		0 8·0	E.-W.
784	,, 30	11 16·1	12 13·6	1·4	2 3·5	E.-W.
		11 28·1	11 33·1	1·3	1 39·0	N.-S.
			11 52·6	1·1		
785	,, 31	20 5·4	20 41·9	0·6	1 23·0	E.-W. Frequent thickenings in N.-S.
786	Aug. 7	17 45·3	17 51·3		0 11·0	E.-W. Slight in N.-S.
787	,, 15	9 1·7			0 5·0	N.-S. Small irregular movements.
788	,, 16	8 10·5	8 14·5	1·1	0 7·0	E.-W. Thickening of trace in N.-S.
789	,, 25	10 8·8			0 6·0	Irregular isolated movements in both.
790	Sept. 8	17 50·8	17 55·8		0 15·0	E.-W.
791	,, 16	19 1·2	19 11·7	0·6	0 16·0	E.-W.
792	,, 19	14 34·6	14 36·6		0 6·0	E.-W. Irregular movements.
793	,, 22	15 57·8			0 12·0	E.-W.
794	,, 23	6 37·9	6 43·4	0·6	0 21·0	N.-S. Very slight in E.-W.
795	Oct. 4	14 29·5			0 5·0	E.-W.
796	,, 21	0 0·1	0 6·1	1·0	0 54·0	E.-W.
			0 11·1	1·9		
	,, 20	23 55·1	0 9·6	1·2	0 49·5	N.-S.
797	,, 28	4 17·2	4 20·7	0·5	0 18·5	E.-W.
798	,, 31	11 50·5	11 51·5	0·8	0 30·0	E.-W.
799	Nov. 8	21 18·5	21 22·5		0 10·0	E.-W.
800	,, 10	6 25·2	6 52·2	0·7		E.-W. Other maxima in E.-W. at 6h.37·7m. and 7h.0·5m. Sheet changed at 11h.36m.
			6 37·7	1·0		N.-S.
801	,, 12	20 9·9	20 13·4		0 8·0	E.-W.
802	,, 16		19 16·7			E.-W.
803	,, 24	7 26·3	7 29·3		0 6·0	E.-W.
804	,, 29	3 38·5	3 40·5		0 22·0	Irregular movements in both components
805	Dec. 4	17 9·7	17 11·7		0 7·0	E.-W.
806	,, 8	9 50·4	9 56·9		0 19·0	E.-W.
			9 59·9			
807	,, 9	16 0·3	16 34·3	2·0		E.-W. Movements continued for several hours.
			16 36·8	2·0		
808	,, 9	21 56·9	22 28·4	1·0		E.-W.
809	,, 9	23 45·9	0 1·4	0·5	1 15·0	E.-W.
	,, 9	23 54·4	23 55·9	1·0	0 10·5	N.-S.
810	,, 22	13 41·9	13 47·9	0·5	0 23·0	E.-W.
811	,, 23	23 4·5	23 11·0	0·5	0 14·0	E.-W.

From July 1 to 7 the booms were disturbed at intervals by workmen.

1mm. = 0″·6.

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