British Association for the Advancement of Science.

Circular No. 11, *issued by the Seismological Committee*, Professor J. W. Judd, *C.B., F.R.S.* (*Chairman*), Mr. John Milne, *F.R.S.*, *Shide, Isle of Wight* (*Secretary*).

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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 ten circulars and in the Reports of the Association, 1896 to 1899.

If observers at these and other places 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 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.

Observer, John Milne; *Assistant*, Shinobu Hirota.

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

On July 1st the load of A was changed from 243 to 400 gms., and its period was made 30 seconds. On July 15th this was reduced to 20 seconds, and on September 18th it was brought back to its original period of 17 seconds. With a longer period than 17 seconds inconvenience arises in consequence of "wandering."

Pendulum B has had a period of 25 seconds up to November 30th, the period of C was also 25 seconds, but on that date it was reduced to 20 seconds. The "sensibilities" or deflections for 1° turn the calibrating screw are as follows:—

A. Period 30 seconds = 11 mm. Period 20 seconds = 8 mm. Period 17 seconds = 4 mm.

B. Period 25 seconds = 10 mm.

A and B record E.W. motion. C records N.S. motion and is without a calibrating screw.

(For other details see page 298).

No.	Date	P.T. Commence	Max.	Max. Amplitude	Duration	Remarks
			1904.			
		H. M.	H. M.	MM.	H. M.	
864	July 1	3 56·0	—	0·2	0 8	C only. A not working.
865	,, 1	14 3·1	14 8·2	0·5	0 15	B and C. A not working.
866	,, 6	13 9·2	—	0·2	0 5	B and C. A not working.
867	,, 6	15 24·5	—	0·2	0 5	B and C. A not working.
868	,, 7	12 0.0	—	0·2	0 2	B and C. A not working.
869	,, 10	23 19·5	23 35·8	0·3	0 22	B and C. A not working.
870	,, 23	0 54·7	11 52·7	1·0	2 16	A times approx.
		1 10·8	1 41·3	0.5 B & 1.0 C	1 25	B and C. Times approx.
871	,, 23	16 15·9	16 18·9	0·5	0 33	B times approx.
		16 15·9	16 35·2	0·5	0 38	C times approx.

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

No.	Date	P.T. Commence	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
872	July 24	10 57·7	11 32·0	1·0	2 10	A times approx.
		10 49·3	11 10·9	0·5	1 4	B times approx.
		10 34·2	11 9·8	1·0	1 20	C times approx.
873	,, 27	5 47·9	6 3·1	0·3B 0·5C	0 30	B and C. A not working.
874	,, 27	16 21·5	16 37·7 16 46·9	0·2	1 0	B and C. A not working.
875	Aug. 2	11 49·9	—	0·2	0 10	C only. A not working.
876	,, 5	10 16·8	—	0·2	0 16	A.
		10 18·2	—	0·2	0 5	B and C.
877	,, 8	23 13·5	24 11·5	1·0	1 45	A.
		23 25·2	24 32·5	0·5	1 30	B.
		23 18·9	24 32·5	1·7	1 35	C.
878	,, 11	6 11·2	6 21·0	1·5	0 55	A.
		6 10·2	6 19·5	1·0	0 20	B and C. Time approx.
879	,, 14	4 7·6	4 32·2 4 44·5	0·3B 0·5C	0 40	B and C. A not working. Time approx.
880	,, 15	11 45·1	—	0·2	0 41	A.
		12 17·7	—	0·2	—	B and C.
881	,, 18	5 32·9	5 51·3	0·5	0 45	B and C with tremors. Tremors on A.
882	,, 18	20 14·7	20 18·7	0·2	0 10	A.
		20 14·5	20 18·5	0·2B 0·5C	0 5	B and C.
883	,, 20	22 32·5	—	0·2	—	B and C. Not on A.
884	,, 24	21 12·45	22 0·0	13·0	2 20 ?	A.
		21 13·9	21 52·6	14·0	2 20	B.
		21 12·9	21 52·6	8·0	2 20	C.
885	,, 27	22 5·7	22 36·0	2·5	3 0	B.
		22 4·7	22 36·0	8·0	—	C. A not working
886	,, 30	12 5·2	12 25·6 12 35·6	3·5	1 35	A.
		12 4·7	12 25·3	2·5	1 20	B.
		12 4·7	12 25·3	10·0	1 35	C.
887	Sept. 6	7 53·5	—	0·2	0 6	C just visible on B.
888	,, 8	2 0 abt.	3 7	0·2	2 0	A.
		2 43·7	3 43 abt.	0·5	1 25	B.
		2 43·7	3 43 abt.	1·0	1 35	C.
889	,, 11	—	6 29·0 6 34·0	2·0	—	A. Pts. lost by tremors.
		6 11·3	6 24·6	2·0B 5·0C	>1 10	B.
890	,, 13	18 3	—	—	—	A. Minute tremors
		18 37·0	—	0·2	0 32	C. Not on B.
891	,, 14	15 40·1	—	0·5	0 5	B just visible on C. A not working.
892	,, 19	—	6 35·0	1·0	—	A. Pts. lost by tremors.
		6 13·6	6 29·2	0·5B 1·0C	0 50	B. and C. Tremors present.
893	,, 19	19 43·6	—	0·2	0 5	C just visible on B.

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

No.	Date	P.T. Commence	Max.	Max. Amplitude	Duration	Remarks.
		H. M.	H. M.	MM.	H. M.	
894	Sept. 20	14 13·7	—	0·2	0 10	C. Not on A and B.
895	,, 24	5 58·9	—	0·2	0 3	B.
		5 39·2	—	0·5	0 20	C. Not on A.
896	,, 27	15 22·6	—	0·2	—	B. not C. On A tremors.
897	,, 27	6 21·5 6 53·6	—	0·2 0·2	—	B. Not C. On A tremors.
898	,, 30	2 15·2 ?	—	0·2	—	B not C. On A tremors.
899	Oct. 2	22 13·1	—	0·5	1 0	A. Not on B and C.
900	,, 3	3 16·1	3 54·5	2·5	2 57	A. P lasts 8m.
		3 16·1	—	0·7	1 50	B. Max. not pronounced.
		3 21·2	3 47·0	4·5	2 20	C. P lasts 3m.
901	,, 4	1 47·3	—	0·2	0 10	A. Not on B and C.
902	,, 5	19 58·3	20 57·3	0·2	1 23	A.
		20 20·1	—	0·2	0 20	C. Not on B.
903	,, 8	19 0·8	19 35·2	1·5	1 10	A.
		19 29·9	19 38·2	0·5	0 30	B.
		19 20·9	19 31·3	1·5	0 32	C.
904	,, 9	13 57·6	14 7·6	3·0 ?	1 50	A.
		13 57·1	?14 5·3	4·0	1 5	B.
		13 57·1	?14 5·3	3·0	1 5	C. Commencement uncertain.
905	,, 10	17 50·2	—	0·5	0 13	A.
		17 48·7	—	0·2	0 12	B and C.
906	,, 11	6 55·9	—	0·2B 0·3C	0 3	B and C. Not on A.
907	,, 14	15 45·4	—	0·5	0 11	A. Not on B. and C.
908	,, 19	4 35·4	—	0·2	0 5	B and C.
		4 46·5	—	—	—	A. Very slight.
909		9 27·2	—	0·2	0 10	—
910	,, 22	19 35·3	—	0·2	0 6	A. doubtful.
		19 34·6	—	0·2	1 0	C with tremors. Not on B.
911	,, 28	14 8·3	15 8·0	1·0	2 31	A.
		14 57·0	—	0·3B 0·2C	0 20	B and C.
912	,, 30	15 48·8	—	0·2	0 10	A. Earthquake ?
913	,, 31	7 46·8	—	0·2	0 7	A. ,,
914	,, 31	8 47·5	—	0·2	0 12	B only.
915	,, 31	10 12·3	—	0·2	0 15	B only.
916	Nov. 3	11 22·7	—	0·2	0 18	A.
917	,, 5	8 37·9	—	0·2	0 5	B only. A not working.
918	,, 5	21 17·3	—	0·2	0 7	B only. A not working
919	,, 6	4 55·5	5 11·0 5 20·3	1·0	0 42	B only. A and C not working.
920	,, 9	15 10·6	—	0·2	0 5	B only. A not working.
921	,, 10	15 47·4	—	0·2	0 5	B only. Not on A and C.
922	,, 12	16 7·5	—	0·2	0 5	B only. Tremors on A.

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

No.	Date	P.T. Commence	Max.	Max. Amplitude.	Duration.	Remarks.
		H. M.	H. M.	MM.	H. M.	H. M.
923	,, 22	2 13·6	2 23·9	1·0	>0 20	B. Tremors at commencement and end. Tremors on A. C not working.
		2 4·2				
924	Dec. 2	2 37·1	3 13·0	2·0	3 6	A.
		2 44·0	3 10·7	2·0	1 5	B.
		2 32·7	3 9·6	1·5	1 15	C.
925	,, 4	9 1·6	—	—	0 26	A. Small tremors.
		11 0·0	—	—	0 27	A. Small tremors.
		11 2·9	—	0·2	0 15	B and C.
926	,, 5	14 45·7	—	0·2	0 3	B and C.
927	,, 6	14 21·0	—	0·2	1 35	B. Series of thickenings.
928		15 26·2	—	0·2	0 5	C.
929	,, 10	6 36·1	—	0·2	0 28	A. Small tremors.
		6 47·7	—	0·2	0 30	B and C. Four thickenings.
930	,, 11	16 31·0	17 8·0	0·5	2 8	A.
		17 45·2	18 6·7	0·5B 0·7C	45m. B. 55m. C.	B and C.
931	,, 15	0 6·1	—	0·2	0 22	A. Small tremors.
932	,, 15	9 8·6	—	0·2	0 25	A. Small tremors.
		9 26·5	—	0·2	0 5	C. Not on B.
933	,, 15	10 58·1	—	0·2	0 25	A. Small tremors.
934	,, 16	14 27·6	—	0·2	—	B and C. Trace of movement.
935	,, 17	8 11·9	—	0·2	0 3	C. Just visible on B.
936	,, 17	15 55·2	—	—	—	B and C. Just visible on B.
937	,, 19	19 20·7	19 37·2	0·5	1 25	B. A not working.
		18 31·0	19 14·6 } 19 26·9 }	1·0	1 30	C. Repetition of max. 20 44·7.
938	,, 20	6 0·1 ?	6 34·0	5·0	2 0	B. Tremors present.
		6 0·1 ?	6 21·7	5·0	2 0	C. Tremors present. A not working.
939	,, 20	15 20·5	—	0·2	0 3	C only
940	,, 24	3 6·7	—	0·2	0 30	A.
941		7 28·7	—	0·2	0 15	A.
942		8 1·9 to 16 37·7	—	0·2	—	Thickenings each of about 3m. duration on C.
943	,, 25	7 30·4	—	0·3	0 10	C. B not working.
		15 36·5	—	0·2	0 16	C. B not working.
		23 20·3	—	0·2	0 12	C. B not working.
944	,, 28	16 24·2	16 32·0	0·2	0 32	A.
		16 28·3	—	0·3	0 3	B and C.
945	,, 30	7 28·1	—	0·2	0 3	C. Tremors on B. A not working.

Register from 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.

No.	Date	Commencement	Max.	Max. Amplitude	Duration	Remarks.
			1904.			
		H. M.	H. M.	MM.	H. M.	
548	July. 1	14 9·2	—	0·2	0 7	—
549	,, 10	23 33·5	23 44·0	0·3	0 15	—
550	,, 23	1 40·6	1 52·0	0·6	1 25	—
—	,, 24	Boom grazing on clock box.		—	—	—
551	Aug. 8-9	23 40·5	0 39·5	0·7	1 13	Times somewhat approximate.
552	,, 11	6 15·5	6 22·7	0·6	0 11	Ill defined.
553	,, 17	8 54·8	8 59·3	0·3	0 9	—
554	,, 24	21 28·3	21 59·5	6·0	2 8	Commencement ill defined.
555	,, 25	A series of small movements from 11h. 19m. to 12h. 14m., but seismic character somewhat doubtful.				
556	,, 27	22 14·8	22 39·2	3·7	2 7	—
557	,, 28	0 38·2	1 2·5	0·5	0 32	—
558	,, 30	12 7·4	12 26·7	3·1	1 29	—
559	Sept. 8	3 33·2	3 47·0	0·3	0 28	—
560	,, 11	6 22·7	6 29·1	1·1	0 57	—
561	,, 12	11 44·2	—	0·2	0 9	—
562	,, 13	18 45·0	—	0·2	0 7	—
563	,, 14	15 33·7	15 39·0	0·5	0 12	Seismic character perhaps doubtful.
564	,, 19	6 20·8	6 34·4	1·0	0 55	—
565	,, 24	5 50·8	—	0·3	0 14	Times a little approximate.
566	,, 25	16 45·3	16 53·7	0·6	0 25	—
567	,, 27	15 32·5	15 42·2	0·3	0 37	—
568	Oct. 3	3 19·4	3 59·2	3·0	2 11	P.T. lasted 8 minutes.
569	,, 5	19 33·7	—	0·2	0 50	Ill defined tremors.
570	,, 8	19 26·4	19 36·3	1·3	0 29	—
571	,, 9	13 57·2	14 4·2	2·1	0 46	—
572	,, 10	17 46·5	—	0·2	0 7	—
—	,, 27	A series of small movements from 11h. 30m. to 14h. 30m., but seismic character doubtful.				
573	,, 28	14 40·3	15 15·0	0·5	1 30	Movements after max. very small.
574	Nov. 6	4 54·0	5 10·7	1·4	0 41	—
575	,, 22	2 21·3	2 34·0	0·7	0 34	—
576	,, 23	17 34·5	17 37·7	0·4	0 12	—
577	Dec. 2	2 48·2	3 10·0	0·9	0 51	—
578	,, 4	11 6·8	—	0·2	0 18	Ill defined.
579	,, 11	18 2·3	—	0·4	0 16	Maximum indefinite.
580	,, 20	6 7·2	6 34·2	3·8	1 43	Second max. at 6h. 44m.
581	,, 24	11 29·7	—	0·4	0 15	—
582	,, 28	16 29·5	—	0·2	0 9	—

Mean scale value 1mm. = 0″·55. of arc.

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

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Duration	Remarks
			1904					
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
536	July 1	—	4 0·3	4 4·1	4 18·5	—	0 18	Small
537	,, 1	—	13 11·2	13 15·6	13 26·0	0·3	0 15	—
538	,, 3	—	—	15 19·8	—	—	—	Derby Earthquake
539	,, 5	—	22 8·2	22 13·6	22 25·7	0·5	0 18	—
540	,, 10-11	—	23 18·0	23 34·3	0 8·5	0·7	0 51	—
541	,, 13	—	18 14·2	18 19·0	18 24·9	0·3	0 11	—
542	,, 19	—	14 51·0	—	15 8·5	—	0 18	Small
543	,, 23	—	1 15·8	1 50·0	8 2·9	0.4	1 47	Perhaps two Earthquakes
544	,, 23	—	16 25·3	16 33·2	16 49·2	0·3	0 24	—
545	,, 24	11 6·0	11 15·8	11 36·2	12 5·0	0·8	0 59	—
546	,, 27	—	5 35·7	5 59·3	6 15·2	0·6	0 40	—
547	,, 27	—	16 25·9	16 32·0	16 51·2	0·2	0 25	—
548	,, 30	—	9 51·0	9 56·4	10 14·2	0·2	0 23	—
549	Aug. 8-9	23 7·0	0 19·8	0 27·2	0 53·6	0·6	1 47	—
550	,, 11	—	6 12·1	6 22·7	6 41·4	0·3	0 29	—
551	,, 14	—	4 18·0	—	4 23·6	—	0 6	Small
552	,, 15	—	9 59·5	10 8·0	10 26·7	—	0 27	Perhaps A.T.
553	,, 18	—	5 1·3	5 8·8	5 29·6	0·3	0 28	—
554	,, 18	—	20 10·0	20 15·5	20 25·0	0·2	0 15	—
555	,, 24	21 11·6	21 21·0	21 57·9	23 26·2	4·4	2 15	—
556	,, 27	—	22 13·1	22 36·9	0 17·3	3·9	2 4	—
557	,, 28	—	0 32·5	0 40·3	1 37·2	0·5	1 5	—
558	,, 30	—	12 12·7	12 29·3	13 22·8	3·7	1 10	—
559	Sept. 4	—	—	9 51	—	—	—	A small disturbance and again at 21·15
560	,, 8	3 8·3	3 32·0	3 42·2	4 5·5	0·5	0 57	—
561	,, 11	6 14·4	5 22·3	6 31·5	7 14·2	1·3	1 0	—
562	,, 12	—	18 36·8	18 41·0	19 11·9	0·4	0 35	—
563	,, 17	—	20 30	—	21 7·7	—	0 38	Small
564	,, 18	—	17 4·2	—	17 11·0	—	0 7	Small
565	,, 19	—	0 7·3	0 31·6	1 12·0	0·5	1 5	—
566	,, 19	—	6 11·1	6 23·5	7 11·2	0·7	1 0	—
567	,, 25	—	16 11·9	16 23·4	17 20·0	0·5	1 8	—
568	,, 27	—	15 14·2	15 37·9	16 13·6	0·5	0 59	—
569	Oct. 1	—	10 58·2	11 14·3	11 44·4	0·3	0 46	—
570	,, 2	—	22 33·0	22 39·4	22 58·0	0·3	0 25	—
571	,, 3	—	3 15·7	3 51·2	5 34·0	2·5	2 18	—
572	,, 8	—	19 23·0	19 30·4	19 58·1	0·8	0 35	—
573	,, 9	—	13 57·3	14 2·5	15 9·0	4·1	1 12	—
574	,, 22	—	18 24·0	—	18 32·7	—	0 9	Small
575	,, 23	—	10 32·1	10 34·3	10 44·0	0·2	0 12	—
576	,, 24	—	13 16·1	13 19·5	13 39·7	0·2	0 24	—
577	,, 25	—	10 1·8	10 31·9	10 47·2	0·5	0 45	—
578	,, 28	—	14 34·3	15 4·7	15 43·0	0·8	1 9	—
579	,, 28	—	16 0·6	16 5·6	16 23·9	0·3	0 23	—
580	Nov. 5	—	21 8·0	21 17·5	21 43·6	0·4	0 36	—
581	,, 6	—	4 56·6	5 14·5	5 29·0	1·0	0 32	—
582	,, 19	—	10 22·0	10 29·5	10 47·3	0·3	0 25	—
583	,, 19	—	16 53·3	—	17 12·5	—	0 19	Small: perhaps A.T.
584	,, 21	—	4 17·4	4 39·0	5 22·8	0·4	1 5	—
585	,, 22	—	2 17·0	2 27·9	2 59·5	0·6	0 43	—
586	,, 23	—	17 23·3	17 38·0	17 53·1	0·5	0 30	—
587	,, 27	—	7 48·0	7 57·4	8 16·2	0·3	0 28	—
588	,, 30	—	9 17·2	9 21·9	9 36·6	0·6	0 19	—
589	Dec. 2	2 4·0	2 40·4	3 10·0	3 51·0	2·3	1 47	End uncertain
590	,, 4	—	11 3·1	11 9·2	11 25·7	0·2	0 23	—
591	,, 5	—	18 38·8	18 43·5	18 51·6	0·3	0 13	—
592	,, 9	—	18 6·3	18 32·0	18 55·1	0·2	0 49	Possibly A.T.
593	,, 11	—	9 52·2	10 1·3	10 31·0	0·4	0 39	—
594	,, 11	17 31·3	17 56·0	18 7·5	19 2·0	1·0	1 31	—
595	,, 18	18 14·2	19 2·0	19 35·0	20 23·2	0·8	2 9	—
596	,, 19	—	6 1·4	6 25·1	8 27·3	3·9	2 26	Trace faint
597	,, 20	—	1 59·7	2 15·0	2 49·5	0·6	0 50	—
598	,, 28	—	16 27·0	—	16 33·0	—	0 6	Small

1 mm.= 0″·53

Register from Royal Observatory, Edinburgh.
Director, Dr. R. COPELAND. *Observer*, THOMAS HEATH.

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Duration	Remarks.
				1904				
		H. M.	H. M.	H. M.	H. M.	M.M.	H. M.	
274	July 10	23 32·0	—	23 40·5	23 50·0	0·2	0 18·0	—
275	,, 24	11 45·0	—	11 57·4	12 29·5	0·3	0 44·5	—
276	,, 27	5 58·5	—	6 5·0	6 9·0	0·5	0 10·5	—
277	Aug. 2	0 35·0	—	0 36·0	0 37·5	0·3	0 2·5	—
278	,, 2	10 2·0	—	10 2·6	10 5·0	0·2	0 3·0	—
279	,, 9	0 16·5	—	0 37·0	1 0·0	0·3	0 43·5	—
280	,, 11	6 18·0	6 22·5	6 23·5	6 42·0	0·5	0 24·0	—
281	,, 14	23 0·7	—	23 43·5	23 46·0	1·2	0 45·3	Four tremors, with abrupt beginnings
282	,, 18	5 48·0	—	6 1·5	6 12·0	0·4	0 24·0	—
283	,, 18	20 16·0	—	20 21·5	20 29·2	0·2	0 13·2	—
284	,, 24	21 23·3	21 47·5	21 59·0	23 35·0	2·4	2 11·7	—
285	,,27-28	22 14·0	22 21·5	22 35·5	1 21·0	5·1	3 7·0	—
286	,, 30	12 13·0	12 24·5	12 25·8	13 9·0	2·0	0 56·0	—
287	,, 31	—	—	7 31·0	7 34·0	0·4	0 3·0	Begins abruptly
288	,, 31	—	—	8 40·0	8 44·5	0·7	0 4·5	Ditto
289	Sept. 8	3 24·0	—	3 47·0	4 1·0	0·3	0 37·0	—
290	,, 11	6 15·5	6 27·0	6 32·0	7 16·0	0·9	1 0·5	—
291	,, 14	15 36·0	—	15 37·0	15 39·5	0·5	0 3·5	—
292	,, 19	0 29·5	0 33·5	0 56·0	1 4·5	0·1	0 35·0	—
293	,, 19	6 20·0	6 21·5	6 38·0	7 2·5	0·3	0 42·5	—
294	,, 27	15 34·0	—	15 43·5	16 13·0	0·4	0 39·0	—
295	Oct. 2	22 35·0	—	22 43·5	22 55·5	0·2	0 20·5	—
296	,, 3	3 20·0	3 24·2	4 0·5	5 1·5	2·0	1 41·5	—
297	,, 8	19 20·5	19 29·0	19 29·5	19 52·0	0·6	0 31·5	—
298	,, 9	13 56·5	13 59·0	14 1·5	15 10·0	3·5	1 13·5	—
299	,, 10	17 51·5	—	17 54·5	17 57·0	0·25	0 5·5	—
300	,, 23	10 33·0	—	10 35·0	10 39·5	0·25	0 6·5	—
301	,, 28	14 50·0	—	15 8·0	15 24·0	0·25	0 34·0	—
302	Nov. 5	21 12·0	—	—	21 24·5	—	0 12·5	Very small tremor, Max. not obtainable
303	,, 6	4 58·5	—	5 14·0	5 57·0	0·5	0 58·5	—
—	,, 9	—	—	—	—	—	—	Many large A.T.s
304	,, 21	4 37·0	—	4 45·5	5 2·0	0·2	0 25·0	—
305	,, 22	2 17·0	—	2 32·0	3 9·5	0·2	0 52·5	Small tremors, perhaps A.T.s
306	,, 27	7 51·5	—	—	7 53·0	0·2	0 1·5	—
307	Dec. 2	2 36·5	3 6·0	3 10·0	3 33·0	0·9	0 56·5	—
	,, 4	—	—	—	—	—	—	Frequent A.T.s
	,, 6-7	—	—	—	—	—	—	Small A.T.s
308	,, 11	17 57·0	—	18 11·0	18 25·0	0·2	0 28·0	—
	,, 12	—	—	—	—	—	—	Frequent A.T.s
309	,, 19	19 30·0	—	19 39·5	20 1·5	0·3	0 31·5	
310	,, 20	6 5·5	6 16·5	6 35·0	7 59·0	5·7	1 53·5	
311	,, 21	2 20·0	—	2 24·5	2 39·0	0·25	0 19·0	

1904, July 13. 1° of footscrew = 3·45 mm. at end of boom.
,, Dec. 30. 1° of footscrew = 3·55 mm. at end of boom.

Mean = 3·50 mm.

∴ 1 mm. displacement at end of boom = 0″·55 tilt of pillar.

Register from the Coats Observatory, Paisley.
Superintendent, DAVID CRILLEY.

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Duration	Remarks
				1904				
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
172	July 1	12 3	—	—	—	—	—	Thickening.
173	,, 5	20 44·5	20 55·5	21 5	—	0·5	—	Interrupted.
174	,, 6	—	—	12 13	—	—	—	Thickening.
175	,, 24	11 20	—	11 35	12 3	0·4	0 34	—
176	,, 27	6 0·5	6 3·2	6 7	6 11	0·6	0 11	—
	,, 28	to July 31, instrument failed to drive roll.						
177	Aug. 14	—	—	10 12	—	—	—	Thickening.
178	,, 24	—	—	22 0	—	4·0	—	Interrupted.
179	,,27-28	22 15	22 17·6	22 35·5	1 10	5·6	2 55	—
180	,, 30	12 13·2	12 24	12 31·5	13 27	2·2	1 14	—
181	Sept. 11	—	—	6 33·6	—	0·5	—	Obscured.
182	,, 18	4 49	—	4 59·5	—	—	—	Thickening.
183	,, 27	15 30	—	15 49	15 54·5	0·4	0 24	—
184	Oct. 3	3 19	3 23	3 52	4 15	2·0	1 26	—
185	,, 9	13 56	13 58	14 0·2	15 14	6·0	1 18	—
186	,, 23	—	—	10 34	—	0·2	—	Thickening.
187	,, 28	15 1	—	15 16	15 19	—	0 18	Thickening.
188	Nov. 6	5 8	5 14	5 17·8	5 25	0·6	0 17	—
189	,, 20	—	—	9 5	—	—	—	Doubtful.
190	,, 23	—	—	17 37	—	0·2	—	—
191	Dec. 3	—	—	3 10	—	—	—	Thickening.
192	,, 11	18 2·5	—	—	18 13	—	0 11	Thickening.
193	,, 16	—	—	11 30	—	—	—	Very slight thickening.
194	,, 20	6 5	6 13·5	6 34	7 13	4·5	1 8	—

Tremors occur in every month, but their amplitude is not so great in winter.

A 4° turn of the calibrating screw = 14 mm. displacement of boom.
1 mm. displacement = 0°·55.

Register from the Observatorio de Marina de San Fernando, Spain.
Director, Capitán de Fragata TOMÁS DE AZCÁRATE.

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Duration	Remarks
				1904				
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
293	July 1	14 19·6	14 19·6	14 21·1	14 22·1	0·8	0 9·5	—
294	,, 10	23 26·7	23 28·7	23 31·2	23 32·2	0·6	0 10·5	—
295	,, 24	11 12·4	11 33·4	11 39·4	11 43·9	1·0	1 58·1	—
296	,, 28	3 27·0	—	—	—	—	3 23·0	Tremors.
297	Aug. 8 ,, 9	23 13·6 —	—	—	—	—	—	— Tremors till 7h. 25m.
			0 18·2	0 26·3	0 37·0	2·5	1 47·2	
298	,, 11	15 32·3	15 32·3	15 37·3	15 40·8	1·9	0 8·5	—
299	,, 12	3 10·8	—	—	—	—	4 45·0	Very small movements.
300	,, 14	4 11·9	4 14·9	4 30·9	4 37·9	0·5	0 35·0	Small movements.
301	,, 18	5 13·9	—	—	—	—	1 35·0	Very small movements.
302	,, 24	21 24·0	21 32·0	22 0·0	22 23·0	>17·0	2 4·0	—
303	,, 26	12 6·1	—	—	—	—	22 19·0	Tremors.
304	,, 27	22 18·1	22 27·6	22 38·6	23 24·1	7·0	2 37·0	—
305	,, 30	11 21·6	12 27·1	12 30·6	12 45·1	4·7	1 56·5	—
306	Sept. 6	0 0·0	—	—	—	—	32 25·2	Tremors.
307	,, 9	21 31·8	22 22·8	22 25·3	22 29·2	0·5	1 31·5	—
308	,, 11	6 19·3	6 29·8	6 35·3	6 49·3	1·8	1 6·0	—
309	,, 13	18 38·4	—	—	—	—	0 28·0	Very small movements.

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

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
310	Sept. 19	3 18·5	6 30·5	6 35·5	6 39·0	0·6	3 39·5	—
311	,, 25	15 57·6	16 35·1	16 36·6	16 48·6	0·7	1 4·0	—
312	,, 28	11 25·6	—	—	—	—	12 34·4	Very small movements.
313	Oct. 8	19 18·5	19 31·0	19 40·5	19 48·0	1·7	1 8·0	—
314	,, 9	13 11·5	14 5·5	14 11·0	14 23·0	14·2	2 16·5	—
315	,, 10	10 45·0	—	—	—	—	21 40·0	Very small movements.
316	,, 17	1 25·5	—	—	—	—	8 0·0	Tremors.
317	,, 23	10 34·5	—	—	—	0·5	0 13·0	Small movements.
318	,, 23	13 33·5	—	—	—	—	0 15·0	Very small movements.
319	,, 23	22 25·5	—	—	—	—	9 0·0	Tremors.
320	,, 28	13 21·5	15 2·5	15 4·5	15 14·5	1·25	3 13·0	—
321	,, 30	22 25·5	—	—	—	—	12 0·0	Tremors.
322	Nov. 4	16 55·0	—	—	—	—	0 34·0	Tremors.
323	,, 4	21 5·5	—	—	—	—	10 20·0	Air tremors.
324	,, 5	21 25·5	—	—	—	—	0 15·0	Very small movements.
325	,, 6	4 4·0	5 5·0	5 19·0	5 29·0	1·0	4 52·0	—
326	,, 7	9 24·5	—	—	—	—	0 16·5	Very small movements.
327	,, 8	6 27·0	—	—	—	—	2 3·5	Very small movements.
328	,, 8	21 3·5	—	—	—	0·5	12 29·0	Small movements.
329	,, 10	4 28·0	—	—	—	—	3 35·0	Tremors.
330	,, 16	0 0·0	—	—	—	—	9 25·5	Very small movements.
331	,, 21	1 52·5	4 22·5	4 55·0	5 3·5	2·2	3 17·0	—
332	,, 22	1 53·4	2 20·4	2 31·9	2 43·8	2·8	1 7·0	—
333	,, 22	22 0·0	—	—	—	1·0	12 25·4	Small movements.
334	,, 26	2 0·0	—	—	—	—	2 0·0	Very small movements.
335	,, 29	8 0·0	—	—	—	—	7 0·0	Very small movements.
336	Dec. 2	2 44·4	2 58·4	3 1·4	3 7·4	2·0	0 38·0	—
337	,, 11	16 46·2	17 53·2	17 57·2	18 5·2	1·7	1 39·0	—
338	,, 15	22 25·0	—	—	—	0·5	8 0·0	Small movements.
339	,, 19	18 55·0	19 17·5	19 22·0	19 36·5	3·0	4 31·0	—
340	,, 20	5 11·5	6 5·0	6 23·0	6 55·0	8·5	4 37·0	—
341	,, 21	1 49·0	—	—	—	0·5	5 16·0	Small movements.
342	,, 22	6 35·0	—	—	—	0·7	0 5·0	—
343	,, 28	1 30·0	—	—	—	—	9 0·0	Tremors.
344	,, 29	0 0·0	—	—	—	—	11 0·0	Tremors.
345	,, 30	0 0·0	—	—	—	—	10 30·0	Tremors.
346	,, 31	0 0·0	—	—	—	—	9 25·0	Very small movements.

Period of boom 21 seconds. 1 mm.=0°·29.

Register from Ponta Delgada, St. Miguel, Azores.
Director, Major F. A. CHAVES

No.	Date	Commencement (G.M.T.)	Max.	Semi-Amplitude	Duration	Remarks
			1904			
		H. M.	H. M.	MM.	H. M.	
82	July. 4	9 8·0	9 9·0	0·4	0 3	I. of the Mercalli's scale.
83	,, 13	18 42·0	18 42·5	1·6	0 8	Idem.
86	Aug. 3	17 48·6	17 49·2	0·2	0 3	Idem.
	,, 6	21 58·5	—	—	0 2	Idem—Thickening of line
87	,, 7	14 49·0	—	—	0 5	Idem—Idem.
	,, 10	23 59·0	—	0·15	0 4	Idem—Idem.
89	,, 24	21 23·5	22 14·5	0·7	1 24	Idem.
	,, 27	22 9·0	22 45·5	1·1	1 27	Idem.
90	,, 30	12 34·5	12 44·6	0·2	0 22	Idem.
91	Register lost from 6h. 15m. to 16h. 55m. on Sept. 6.					

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

No.	Date	Commencement (G.M.T.)	Max.	Semi-Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
92	Sept. 14	15 46·0	15 47·5	0·6	0 13	I. of the Mercalli's scale
95	Oct. 3	3 18·0	3 34·1	0·7	0 16	Idem.
96	,, 9	?	14 15·3	5·6	?	Idem The commencement coincides with the substitution of the photographic ribbon on the seismograph. End at 14h. 51·9m.
	,, 13	8 12·0	8 13·0	0·4	0 9	Idem.
	Register lost from 18h. 5m. on Oct. 13 to 17h. 5m. on Oct. 14.					
99	Idem on Oct. 31 from 8h. 39m. to 10h. 2m. and from 17h. 50m. to 18h. 58m.					
103	Dec. 2	2 9·0	—	—	0 59	I. of the Mercalli's scale Thickening of line.
104	,, 5	4 42·0	—	—	0 3	Idem—Idem.
		6 20·0	—	—	0 4	IV. of the Mercalli's scale on all the Island of St. Miguel, at 6h. 22m. approximate. Small tremors of line.
	,, 6	4 49·1	—	—	0 3	I. of the Mercalli's scale Thickening of line.
105	Register lost from 1h. 40m. on Dec. 16 to 14h. 46m. on Dec. 18.					
106	,, 20	5 54·8	6 11·7	0·8	0 58	I. of the Mercalli's scale
107	,, 28	16 17·1	16 24·3	1·6	0 21	Idem.

Mean scale value 1mm. = 0″·49.

Register from the Royal Observatory, Cape of Good Hope, South Africa.
Director, Sir DAVID GILL, *K.C.B., F.R.S.*

No.	Date	P.T. Commence	L.W. Commence	Max.	End.	Semi-Max. Amplitude	Duration	Remarks.
		1904						
		H. M.	H. M.	H. M.	H. M.	″	H. M.	
286	July 1	4 30·0	—	—	7 0·0	—	2 30·0	Air tremors.
287	,, 8	15 7·5	—	—	15 14·0	0·06	0 6·5	—
288	,, 10	23 52·0	—	—	23 59·0	—	0 7·0	Tremors.
289	,, 23	1 32·0	—	—	1 56·0	0·10	0 24·0	—
290	Aug. 24	21 29·1	22 23·0	22 25·0	23 39·0	0·15	2 9·9	Dying out very gradually.
291	,, 27	22 40·0	23 24·0	23 33·5	0 37·0	0·26	1 57·0	—
292	,, 30	12 33·0	—	12 51·0	13 13·0	0·09	0 40·0	—
293	Sept. 9	21 40·0	—	—	21 45·0	—	0 5·0	Tremors.
294	,, 11	6 42·0	—	—	7 10·0	—	0 28·0	Slight vibrations.
295	,, 13	18 17·0	—	—	18 28·0	—	0 11·0	Tremors.
296	,, 25	15 46·0	—	—	16 7·0	—	0 21·0	Tremors.
297	,, 27	15 6·0	—	15 16·0	15 24·0	0·12	0 18·0	—
298	Oct. 3	3 22·0	3 43·0	3 45·0	4 45·0	0·14	1 23·0	—
299	,, 9	14 52·0	—	—	15 7·0	—	0 15·0	Slight vibrations.
300	,, 25	10 27·0	—	—	10 38·0	—	0 11·0	Tremors.
301	,, 28	14 13·0	—	14 46·5	15 5·0	0·08	0 52·0	—
302	Nov. 21	4 21·0	—	—	5 6·0	—	0 45·0	Tremors.
303	,, 23	16 44·5	16 45·0	16 45·3	16 51·0	0·29	0 6·5	—

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

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Semi-Max. Amplitude	Duration	Remarks
		H. M.	H. M.	H. M.	H. M.	″	H. M.	
304	Dec. 2	2 51·0	3 21·0	3 23·5	3 39·0	0·11	0 48·0	—
305	,, 4	10 28·0	—	10 37·0	10 50·0	0·06	0 22·0	—
306	,, 11	9 52·0	—	—	10 5·0	—	0 13·0	Tremors.
307	,, 11	17 41·0	—	—	17 59·0	—	0 18·0	Tremors.
308	,, 12	12 22·0	—	Slight change in level.				—
309	,, 17	3 54·0	—	—	5 2·0	—	1 8·0	Series of sudden vibrations. Seismic origin doubtful.
310	,, 19	18 4·0	—	—	18 31·0	—	0 27·0	Slight vibrations.
311	,, 20	5 48·0	6 19·0	6 23·0	7 26·0	0·36	1 38·0	—
312	,, 21	2 1·0	—	—	2 4·0	0·08	0 3·0	—
313	,, 22	5 54·0	—	—	5 58·0	0·13	0 4·0	—

July 30, 1mm. of boom motion = 0″·20. Boom period = 25 seconds.
Aug. 20, ,, ,, ,, = 0″·17. ,, ,, = 25 ,,
Sept. 24, ,, ,, ,, = 0″·15. ,, ,, = 25 ,,
Oct. 29, ,, ,, ,, = 0″·14. ,, ,, = 25 ,,
Dec. 10, ,, ,, ,, = 0″·12. ,, ,, = 25 ,,

Register from Alipore Observatory, Calcutta.
G. W. KÜCHLER, *Assistant Meteorological Reporter.*

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude.	Duration	Remarks
		1904						
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
295	July 23	0 51·1	—	1 5·3	1 17·5	1·25	0 26·4	Sensibility 1 mm. = 0″·38 of tilt.
296	,, 24	11 5·7	11 19·9	11 27·0	11 58·6	2·00	0 52·9	—
297	,, 27	5 39·4	—	5 41·9	5 57·7	2·50	0 18·3	—
298		12 55·6	—	12 56·6	13 0·7	0·50	0 5·1	—
299	Aug. 8	23 11·5	23 57·7	23 58·8	0 19·1	0·75	1 7·6	—
300	,, 24	7 9·2	—	7 29·6	8 10·2	2·50	1 1·0	—
301		21 8·5	—	21 25·8	22 46·1	?	1 37·6	—
302	,, 27	22 9·3	22 19·5	22 42·9	1 53·5	6·00	3 44·2	—
303	,, 30	11 49·5	—	11 52·6	13 19·0	17·50	1 29·5	Sensibility 1 mm. 0″·42 of tilt.
304	Sept. 4	8 5·1	8 17·3	8 38·7	9 22·4	2·50	1 17·3	—
305	,, 8	2 46·8	2 50·8	3 2·0	3 28·5	2·00	0 41·7	Sensibility 1 mm. = 0″·38 of tilt.
306	,, 10	3 22·2	3 46·4	4 7·7	5 0·6	1·50	1 28·4	—
307	,, 11	5 51·7	—	5 57·8	8 12·1	6·00	2 20·4	—
308	,, 22	6 27·1	6 40·3	6 55·5	7 14·9	1·00	0 47·8	—
309	,, 28	5 43·1	—	5 45·7	6 1·9	3·00	0 18·8	—
310	Oct. 1	10 27·2	10 30·8	10 42·5	10 57·7	1·00	0 30·5	—
311	,, 3	3 11·6	3 16·6	3 23·8	5 7·5	17·00	1 55·9	—
312	,, 8	18 47·9	18 55·1	19 1·7	19 32·7	2·25	0 44·8	—
313	,, 9	14 17·4	14 34·7	14 36·7	15 7·3	1·25	0 49·9	—
314	,, 28	14 0·8	14 16·0	14 23·7	15 0·8	5·00	1 0·0	Sensibility 1 mm. 0″·42 of tilt.
315	Nov. 5	20 42·7	20 43·7	20 45·8	20 56·4	1·75	0 13·7	Sensibility 1 mm. = 0″·38 of tilt.
316	,, 6	4 22·9	4 37·1	4 40·2	5 4·6	4·00	0 41·7	—
317	Dec. 19	17 23·5	17 40·8	17 43·9	18 11·8	1·25	0 48·3	—
318	,, 20	5 23·0	6 0·6	6 21·0	6 43·4	3·00	1 20·4	—

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

No.	Date	P.T. Commence	L.W. Commence	Max.	End.	Max. Amplitude.	Duration	Remarks
				1904				
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
	July 18	1 27·0	—	2 0.4	3 10·5	1·5	1 43·5	—
	,, 24	11 18·2	—	11 32·3	11 56·2	1·1	0 38·0	—
	,, 27	5 35·6	—	5 37·6	5 48·4	0·9	0 12·8	—
	Aug. 8–9	23 39·5	—	0 5·3	0 17·9	0·6	0 38·4	—
	,, 18	4 58·2	5 12·9	5 16·1	5 40·3	1·8	0 42·1	—
	,, 24	21 9·3	—	21 39·7	22 38·4	2·9	1 29·1	—
	,, 27–28	22 20·8	—	22 53·3	0 39·0	4·1	2 18·2	—
	,, 30	11 54·4	—	12 2·5	12 51·3	3·4	0 56·9	—
	Sept. 11	5 56·4	—	6 5·5	6 47·3	1·9	0 50·9	—
	Oct. 3	3 9·0	—	—	4 42·4	—	1 33·4	As the traces overlapped max amplitude cannot be found out.
	,, 8	18 48·5	—	19 8·1	19 22·8	0·9	0 34·3	—
	,, 9	14 20·6	—	14 36·0	14 49·0	0·5	0 28·4	—
	,, 28	13 58·0	—	14 26·7	14 46·4	0·8	0 48·4	—
	Nov. 6	4 31·5	—	4 46·5	5 2·8	0·6	0 31·3	—
	,, 9	3 35·9	—	3 42·7	3 48·1	0·4	0 12·2	—
	,, 21	4 16·4	—	4 25·8	4 42·2	0·5	0 25·8	—
	,, 23	17 14·8	—	17 18·3	17 28·0	0·4	0 13·2	—
	Dec. 16	7 9·2	—	7 10·9	7 21·0	0·7	0 11·8	—
	,, 19	18 23·8	—	18 59·5	19 18·4	0·6	0 54·6	—
	,, 20	6 12·9	—	7 25·4	8 17·5	1·4	2 4·6	—

Between 1st July and 31st December 1904, 1·0 mm. of amplitude = 0″·44.

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

No.	Date	P.T. Commence G.M.T.	L.W. Commence G.M.T.	Max. G.M.T.	End G.M.T.	Max. Amplitude.	Duration.	Remarks
				1904				
		H. M.	H. M.	H. M.	H. M.	MM. ″	H. M.	
26	July 23	0 50·3	—	0 56·4	—	0·5 = 0·3	—	—
27	,, 27	5 36·4	5 41·0	5 42·0	5 58·0	0·6 0·3	0 22	Occasional widening of line till 9.40.
28	Aug. 2	2 21·7	—	2 23·6	2 28·7	0·6 0·3	0 07	—
29	,, 12	4 10·8	—	4 11·0	4 37·8	0·5 0·3	0 27	—
30	,, 16	4 45·0	—	—	5 59·0	—	—	Widening of line.
31	,, 17	2 58·7	3 14·0	3 14·6	3 35·0	0·6 0·4	0 36	—
32	,, 18	4 59·7	5 12·1	5 13·1	?	0·9 0·6	—	—
	—	—	—	0 16·2	—	1·1 0·7	?	Clock driving badly
33	,, 19	3 47·3	—	3 50·3	4 14·3	— —	0 27	Widening of line.
35	,, 24	21 09·4	21 19·2	21 44·1	22 44·0	2·0 1·1	1 35	—
36	,, 27	22 20·0	22 47·2	23 04·1?	23 53·0	?	1 33	Trace faint.
38	,, 30	11 54·9	—	12 05·7	12 26·2	1·8 1·0	0 31	—
40	Sept. 11	5 25·9	5 59·4	6 09·8	7 01·0	1·1 0·7	0 35	—
41	Oct. 3	3 08·7	3 08·7	!	?	?	?	Boom went off scale at 8.35 and caught.
42	,, 8	18 59·7	19 02·8	19 03·9	19 19·3	0·6 0·2	0 20	—
43	,, 9	14 24·5	—	—	14 57·6	— —	0 33	Slight.
44	,, 28	14 12·0	14 16·1	14 17·1	—	0·5 0·2	—	—
	—	—	—	0 27·4	14 56·5	0·9 0·4	0 45	—
45	Nov. 5	20 52·3	—	20 54·3	20 57·4	— —	0 05	Slight.
46	,, 6	4 32·1	4 46·1	4 47·7	5 01·6	0·6 0·2	0 30	—
48	,, 11	11 21·0	—	11 29·2	11 37·0	0·4 0·2	0 16	—

Register from the Solar Physics Observatory, Kodaikânal, Madras—continued.

No.	Date	P.T. Commence G.M.T.	L.W. Commence G.M.T.	Max. G.M.T.	End G.M.T.	Max. Amplitude.	Duration	Remarks
		H. M.	H. M.	H. M.	H. M.	MM. ″	H. M.	
49	Nov. 20	0 02·5	0 07·7	0 08·2	0 17·6	0·4 0·2	0 15	—
50	Dec. 4	10 55·6	—	—	11 01·5	— —	0 06	Widening of line.
51	,, 13	9 01·4	9 12·0	9 14·1	9 40·0	0·9 0·5	0 36	—
52	,, 16	7 13·5	—	7 15·7	7 21·2	— —	0 08	Slight.
53	,, 19	18 31·9	—	18 45·1	—	0·4 0·2	—	—
	—	—	—	0 49·6	—	0·5 0·2	—	—
	—	—	—	0 53·2	19 22·7	0·3 0·1	0 51	—
54	,, 20	6 18·8	6 28·0	6 30·2	—	0·6 0·3	—	Record faint.
	—	—	—	0 39·6	—	0·6 0·3	—	—
	—	—	—	7 19·0	—	1·0 0·5	—	—
	—	—	—	0 31·1	8 17·8	1·1 0·5	1 59	—

Register from the Royal Magnetical and Meteorological Observatory, Batavia.
Director, Dr. S. Figee.

No.	Date	Commencement.	P.T. Commence	Max.	Amplitude Double	Total Duration	Remarks
				1904.			
		H. M.	M.	H. M.	MM. ″	M.	
599	July 1	4 0·4	—	4 1·1	0·8=0·3	7	—
600	,, 4	4 38·9	—	4 46·7	3·0 1·1	20	—
601	,, 20	2 18·4	—	2 19·6	1·3 0·5	7	—
602	,, 22	0 32·6	—	0 33·4	0·7 0·3	6	—
603	,, 23	0 39·3	—	0 44·7	9·3 3·7	80	—
604	,, 24	11 5·4	24·2	11 34·7	1·0 0·4	60	—
605	,, 26	0 3·2	—	0 4·4	0·5 0·2	2	—
606	,, 27	15 8·5	—	15 10·9	0·6 0·2	30	—
607	,, 27	15 57·2	8·1	16 15·4	2·0 0·8	60	—
608	,, 31	12 33·5	—	12 38·7	0·5 0·2	11	—
609	Aug. 4	19 8·8	—	19 9·3	0·8 0·3	2	—
610	,, 18	4 40·5	3·7	4 50·7	12·0 4·1	80	—
611	,, 21	2 32·9	—	2 35·5	3·0 1·0	20	—
612	,, 24	21 8·1	—	21 16·1	4·5 1·5	165	—
613	,, 27	22 22·7	31·3?	22 57·2	6·0 2·2	150?	—
	—	—	—	23 6·2	5·0 1·9	—	—
614	,, 30	11 56·7	7·0	12 4·7	8·2 2·9	90	—
	—	—	—	12 12·7	5·1 1·8	—	—
615	Sept. 8	2 37·0	—	2 48·9	7·4 2·6	?	3h. 5m. pendulum in disorder by local disturbance.
616	,, 11	5 59·1	—	6 7·0	11·5 3·9	60	—
616	,, 12	5 48·7	—	5 50·0	1·0 0·4	4	—
617	,, 12	18 33·7	—	18 35·2	0·6 0·2	3	—
618	,, 13	17 51·2	—	18 5·2	0·9 0·3	30	—
619	,, 18	16 38·0	—	16 39·5	0·6 0·2	3	—
620	,, 19	5 14·6	—	6 2·8	0·8 0·3	70	—
621	,, 20	13 48·4	—	13 48·7	1·3 0·4	10	—
622	,, 24	16 58·5	—	17 2·7	0·8 0·3	20	—
623	,, 25	15 20·4	—	15 46·1	1·0 0·3	70	—
624	Oct. 1	10 19·5	—	10 27·7	1·6 0·6	40	—
625	,, 3	3 5·1	16·5	3 34·2	5·0 1·6	120	—
626	,, 3	22 23·7	—	22 28·0	0·9 0·3	20	—
627	,, 4	3 31·5	—	3 31·9	0·6 0·2	10	—
628	,, 4	19 30·3	—	19 54·4	0·9 0·3	50	—
629	,, 6	4 3·2	—	4 6·2	1·0 0·3	15	—
630	,, 9	14 39·7	—	15 4·5	0·6 0·2	40	—
631	,, 12	23 11·9	8·6	23 20·9	3·0 1·0	20	—
632	,, 21	9 42·5	—	9 43·7	1·2 0·4	3	—
633	,, 23	6 37·6	—	6 45·7	0·8 0·3	30	—
634	,, 25	9 6·9	—	9 8·5	0·7 0·2	10	—
635	,, 28	13 52·5	—	13 55·7	18·0 6·3	80	—
636	Nov. 3	3 39·6	—	3 46·7	0·8 0·3	20	—
637	,, 5	20 42·9	—	20 48·7	0·8 0·3	25	—
638	,, 6	3 29·3	—	3 42·2	0·8 0·3	50	—

Register from Batavia Royal Magnetical and Meteorological Observatory—continued.

No.	Date	Commencement.	P.T. Commence	Max.	Amplitude Double	Total Duration.	Remarks
		H. M.	M.	H. M.	MM. "	M.	
639	Nov. 6	9 39·9	—	9 44·5	1·0 0·3	20	—
640	,, 11	11 7·7	—	11 14·3	0·8 0·3	35	—
641	,, 21	3 22·7	—	3 28·0	1·3 0·5	90	—
642	,, 22	1 19·7	—	1 39·5	1·7 0·6	50	—
643	,, 30	18 19·7	—	18 12·0	1·0 0·4	4	—
644	Dec. 2	1 35·7	—	1 49·5	2·2 0·7	200	—
		—	—	2 39·0	0·5 0·2	—	—
		—	—	3 57·7	0·7 0·2	—	—
		—	—	4 9·7	0·8 0·3	—	—
645	,, 10	1 31·2	—	1 33·5	1·0 0·3	15	—
646	,, 17	13 4·2	—	13 8·6	1·1 0·4	10	—
647	,, 19	18 10·9	—	18 39·7	2·0 0·7	70	—
648	,, 20	6 6·0	—	6 41·2	1·6 0·6	150	—
		—	—	7 38·2	1·6 0·6	—	—
649	,, 23	15 27·5	—	15 39·5	0·9 0·3	40	—

Register from Helwan Observatory, Cairo, Egypt.
Superintendent, B. H. WADE.

No.	Date.	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude.	Duration.	Remarks
				1904.				
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
216	Aug. 11	6 12	6 18	6 19	6 27	0·8	0 15	Slight tremor.
		—	—	6 20·5	—	—	—	—
		—	—	6 22·5	—	—	—	—
217	,, 18	5 36	—	5 41	5 57	0·5	0 21	Slight tremor.
218	,, 24	21 14	21 24	21 25	22 43	—	1 29	Distinct tremor.
		—	—	21 30	—	—	—	—
		—	—	21 54	—	—	—	—
		—	—	21 56	—	—	—	—
		—	—	21 59	—	2·2	—	—
		—	—	22 5	—	—	—	—
219	Sept. 11	6 22	6 26	6 27	6 47	—	0 25	Distinct tremor.
		—	—	6 30	—	1·2	—	—
220	,, 13	18 58	—	—	19 16	—	0 18	Thickening.
221	,, 27	15 45	—	15 50	16 06	0·7	0 21	Thickening.
222	Oct. 3	3 14	3 17·5	3 20·5	4 42	—	1 28	Strong tremor.
		—	—	3 23·5	—	—	—	—
		—	—	3 25	—	6·0	—	—
		—	—	3 36·5	—	—	—	—
		—	—	3 41·5	—	—	—	—
223	,, 8	—	—	19 32	—	—	—	Slight thickening.
224	,, 9	14 8	14 26·5	14 28	14 43	0·9	—	Slight tremor.
225	,, 25	—	—	10 52	—	0·6	—	Thickening.
226	Nov. 3	21 50						
	,, 4	—	—	4 46	8 30	0·6	10 40	Thickening.
227	,, 6	0 30	—	5 13	5 30	0·4	5 00	Thickening.
228	,, 21	5 13	—	5 28	5 34	0·4	0 21	Thickening.
229	,, 23	17 18	—	17 19	17 35	1·5	0 17	Slight tremor.
230	Dec. 4	—	10 46	10 47	10 57	0·9	0 12	—
231	,, 11	18 12	18 20	18 22	18 36	0·6	0 24	—
232	,, 19	19 10	trace tre	mulous.	19 50	0·4	0 40	—
233	,, 20	6 15	6 58	7 10	8 15	1·8	2 00	—

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

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude.	Duration.	Remarks
				1904.				
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
1	Jan. 1	3 3	—	—	18 0	0·2	—	A.C.
3	,, 7	15 45	—	15 56·3	16 45	0·8	—	E.Q.
4	,, 10	4 3·5	—	—	4 20	0·2	—	—
5	,, 10	10 40	—	—	19 0	0·4	—	A.C.
6	,, 15	4 43	—	—	5 52	0·2	—	21 slow waves lasting 69m. Period = 19m. 7s.
7	,, 17	9 45	—	—	10 35	0·5	—	—
8	,, 17	11 0	—	—	18 3	0·2	—	A.C.
9	,, 19	1 0	—	—	5 30	0·3	—	A.C.
10	,, 20	1 43	—	—	1 54	0·3	—	Slight swelling of line.
11	,, 20	14 58·6	15 4	15 11·5	17 12	0·8	—	Strong E.Q.
12	,, 21	14 5	—	—	14 9	0·3	—	Probably not E.Q.
13	,, 22	15 31·5	—	—	15 41·5	0·4	—	,, ,, ,,
14	,, 23	14 0	—	—	—	0·2	—	Probably not E.Q. Lasted 10 or 15 minutes. The last 3 disturbances are appar. artificial.
15	,, 24	8 5	—	—	25 0	0·5	—	A.C.
17	,, 27	4 26·5	—	4 32	4 47·5	0·6	—	Swelling of line. Disturbances like A.C. followed for 3h.
18	,, 28	3 0	—	—	9 0	0·4	—	A.C.
19	,, 29	3 0	—	—	6 0	0·3	—	A.C.
20	,, 30	4 35	—	—	5 18	0·3	—	Almost uniform broadening of line, followed for 3 hours by slight A.C.
21	,, 31	14 0	—	—	19 0	0·1	—	A.C.
22	Feb. 1	3 0	—	—	8 0	0·2	—	A.C.
23	,, 4	None	20 58·5	21 10	21 40	1·2	—	—
24	,, 9	2 0	—	—	6 0	0·2	—	A.C.
25	,, 10	2 0	—	—	7 0	0·2	—	A.C.
26	,, 21	3 0	—	—	7 0	0·4	—	A.C.
27	,, 21	11 15	—	—	17 30	0·3	—	A.C.
28	,, 22	14 28	—	—	14 46	0·2	—	Slight swelling of line.
29	,, 25	8 0	—	—	12 15	0·6	—	A.C.
30	,, 26	2 0	—	—	5 0	0·4	—	A.C.
31	,, 27	1 0	—	—	6 0	0·3	—	A.C.
32	,, 28	9 0	—	—	12 0	—	—	Slow waves, something like No. 6, 1904, but less distinct.
33	Mar. 1	16 24	—	—	16 35	0·4	—	Slight swelling of line.
34	,, 1	17 5	—	—	17 49	0·4	—	Several slight swellings, first preceded by a few vibrations of about 30s. period.
35	,, 2	22 14·5	—	—	22 22	0·2	—	Small swelling.
36	,, 3	21 7	—	—	24 0	0·2	—	A.C.
37	,, 4	4 30	5 8	—	12 0	0·3	—	Perhaps A.C. Many beads and widening of line.
38	,, 5	4 0	—	—	12 30	0·2	—	Similar to No. 37.
39	,, 9	8 45	—	—	12 20	0·3	—	A.C.
40	,, 10	6 40	—	—	12 10	0·3	—	A.C.
41	,, 11	8 0	—	—	11 30	0·2	—	A.C.
42	,, 17	9 20	—	—	12 20	0·2	—	A.C.
43	,, 19	—	6 49·5	—	8 55	0·6	—	Beads on line, main part lasted 39 minutes.
44	,, 21	10 34·5	7 40·5	—	7 50·5	0·4	—	Slight swelling.

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

No.	Date	P.T. Commence	L.W. Commence	Max.	End.	Max. Amplitude.	Duration.	Remarks
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
45	,, 27	7 0	.	—	20 0	0·3	—	A.C. In beginning slow waves like No. 6, 1901.
46	,, 31	3 6	3 21·5	—	3 53	0·2	—	Began by long waves at 45s. period, diminishing to about 25s. period, and then the usual period at 3·2s.
47	Apr. 5	11 25·4	—	11 33	11 46	0·4	—	E.Q. Phases indefinite.
48	,, 11	15 5·5	—	15 26	15 38	0·6	—	E.Q. Phases indefinite.
49	,, 12	19 23·3	19 29·4	19 32	20 26	1·7	—	E.Q.
50	,, 12	23 32·5	. .	23 38·5	23 57·5	0·4	—	E.Q. Phases indefinite.
51	,, 13	9 0	—	—	13 0	—	—	A.C.
52	,, 17	7 0	—	—	17 0	—	—	A.C.
53	,, 20	3 0	—	—	15 0	—	—	A.C.
54	May 1	16 44	—	—	17 40	0·4	—	A series of small beads.
55	,, 14	14 36	—	14 43	15 20	1·4	—	Phases indefinite, times inaccurate.
56	,, 19	6 0	—	—	—	0·3	—	Swelling of line for 10 minutes, time very inaccurate.
57	,, 29	20 3	—	—	—	0·3	—	Swelling of line for 30 minutes, time very inaccurate.
58	June 24	1 39	—	2 11	2 44	0·7	—	Times very inaccurate.
59	,, 25	15 21·5	15 44·5	1·15 47·5 2·15 53·5 3·15 56·5 4·15 59	17 30	2·5 2·5 2·1 2·5	—	,, ,, ,,
60	,, 25	21 38	21 54?	22 7	23 42	8·6	—	,, ,, ,,
61	,, 26	11 29	11 36?	—	11 57	0·9	—	,, ,, ,,
62	,, 27	0 33·5	0 42·5	1 7·5	3 11	7·8	—	,, ,, ,,
		No record Jan. 3d. 6h. to 4d. 14·7h. No record Jan. 27d. 13·1h. to 28d. 0·3h. No record Feb. 15d. 20·1h. to 20d. 14·9h. No record April 2d. 15h. to 4d. 19·2h. No record May 5d. 17·7 h. to 24·5h. No record June 22d. 10·6h. to 18·9h.						
63	July 13	17 53	—	17 53·3	18 10	11·5	—	Perhaps not E.Q. Times very inaccurate.
		No record July 18d. 10·2h. to 20·7h.						
64	,, 23	12 0	—	—	24 0	—	—	A number of small movements, looking in places like very long period waves.
65	,, 24	11 15	—	11 35·8	12 0	0·9	—	E.Q.
		No record Aug. 1d. 20·8h. to 8d. 16·7h.						
66	Aug. 8	23 50	—	24 29	—	0·4	—	Small swelling of line, times very inaccurate.
67	,, 24	21 25	—	23 0	—	0·3	—	Small swellings, perhaps A.C.
68	,, 27	22 4·2	22 14 17 or ?	22 25	24 30	16·6	—	Important E.Q. Time very inaccurate.
		No record Sept. 3d. 17·8h. to 24·3h. No record Sept. 7d. 12·3h. to 24h. No record Sept. 10d. 21·3h. to 11d. 0·4h.						

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

No.	Date	P.T. Commence	L.W. Commence	Max.	End.	Max. Amplitude.	Duration.	Remarks
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
69	Sept. 22	5 2	—	—	16 0	—	—	A.C. slight.
70	,, 24	None	5 47	5 47·8	6 8	1·3	—	E.Q. Times inaccurate.
		No record Oct. 5d. 10·8h. to 24·2h.						
71	Oct. 7	7 0	—	—	13 0	0·2	—	A.C.
72	,, 8	15 5	—	—	.	0·3	—	A.C.
		No record Oct. 8d. 17·8h. to 24·8h.						
73	,, 9	14 11·4	14 16·8	14 18·9	14 52	2·3	—	E.Q.
		No record 17d. 16·9h. to 21·4h.						
74	,, 24	6 0	—	—	13 0	0·1	—	Slight A.C.
		No record 24d. 19h. to 21·8. Instrument being cleaned.						
75	,, 27	6 0	—	—	13 0	0·2	—	Slight A.C.
76	,, 28	1 9	—	—	1 47	0·1	—	14 slow waves, 163s. period, followed by A.C. to 13h.
77	,, 29	6 0	—	—	13 0	0·1	—	A.C.
78	,, 31	2 0	—	—	13 0	0·2	—	A.C.
79	Nov. 6	11 0	—	—	—	—	—	Slow waves of 150s. period, followed by A.C. to 19h.
		No record 7d. 12·6h. to 16h. Film caught or clock stopped.						
80	,, 8	3 17	—	—	3 32	0·5	—	Fork beads, perhaps not E.Q.
81	,, 8	5 0	—	—	9 0	0·1	—	A.C. beads.
		No record 9d. 13h. to 13·8h. and 17h. to 18·7h.						
82	,, 10	6 0	—	—	13 0	0·2	—	A.C.
83	,, 11	10 0	—	—	13 0	0·1	—	A.C.
84	,, 12	3 0	—	—	13 0	0·3	—	A.C.
85	,, 13	18 0	—	—	14 11	0·2	—	A.C.
86	,, 15	10 0	—	—	12 0	0·2	—	A.C.
87	,, 18	6 0	—	—	14 0	0·1	—	A.C.
		No record 21d. 18h. to 19·7h.						
88	,, 24	12 0	—	—	17 0	0·1	—	A.C.
89	,, 27	7 5	—	—	28 12	0·2	—	A.C.
90	Dec. 1	3 5	—	—	12 0	0·3	—	A.C.
91	,, 2	2 31·7	2 36·3	2 37·7	3 10	1·4	—	E.Q.
92	,, 3	2 0	—	—	12 0	0·2	—	A.C.
93	,, 4	7 0	—	—	12 0	0·2	—	A.C.
94	,, 5	2 0	—	—	9 0	0·1	—	A.C.
95	,, 9	4 0	—	—	12 5	0·1	—	A.C.
96	,, 10	6 0	—	—	12 5	0·3	—	A.C.
97	,, 11	1 0	—	—	15 0	0·3	—	A.C.
98	,, 12	2 5	—	—	11 5	0·2	—	A.C.
99	,, 14	2 4	—	—	8 2	0·2	—	A.C.
100	,, 15	3 0	—	—	7 2	0·2	—	A.C.
101	,, 15	20 23	—	20 49	21 7	0·3	—	Probably E.Q.
102	,, 18	12 5	—	0 3·4	22 0	0·2	—	A.C.
103	,, 20	5 55	5 57·4	6 5·7	7 47	15	—	Large E.Q.
104	,, 21	1 50·5	—	3 max. =	2 23	1·2	—	E.Q.
105	,, 22	1 8	—	—	9 0	0·3	—	A.C.
		No record 25d. 2·9h. to 25d. 7·5h.						
106	,, 25	1 0	—	—	25 0	0·3	—	A.C.
		No record Dec. 26d. 10h. to 19·3h.						
107	,, 29	3 0	—	—	7 8	0·3	—	A.C.
108	,, 30	4 0	—	—	8 0	0·2	—	A.C.

Period of pendulum 16 seconds.

Register from the Observatory (Syrian Protestant College), Beirût, Syria. Observers, G. Maier, M.S., and Alfred H. Joy, M.A.

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Duration	Remarks
				1904.				
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
1	Jan. 20	15 17·3	—	—	17 12·3	—	1 55·0	Tremors, intervals of rest.
2	,, 22	9 21·9	—	—	10 24·1	—	1 02·2	Small continuous tremors.
3	,, 22	11 44·4	—	—	11 51·4	—	0 07·0	Small continuous tremors.
4	,, 23	0 35·6	—	—	2 47·1	—	2 11·5	Tremors, short intervals of rest.
5	,, 26	3 50·8	—	—	6 26·8	—	2 36·0	Small, continuous.
6	,, 26–27	23 20·1	—	—	6 55·1	—	7 35·0	Minute tremors, growing larger then smaller.
7	,, 29*	0 24·0	—	—	*0 42·0	—	0 18·0*	Tremors.
8	,, 30*	5 36·0	—	—	*7 35·0	—	1 59·0*	Tremors, slight, continuous.
9	Feb. 26	2 13·8	—	—	4 43·0	—	2 29·2	Minute tremors.
10	,, 26	6 01·5	—	—	6 34·0	—	0 29·5	Minute tremors.
11	,, 27*	4 16·0	—	—	*6 51·0	—	2 35·0*	Small tremors at intervals.
12	Mar. 3–4	16 52·1	—	—	30 33·1	—	13 41·0	Latter half tremors most pronounced.
13	,, 4	10 50·1	—	—	10 55·1	—	0 05·0	Tremors.
14	,, 4	11 30·6	—	—	11 42·6	—	0 12·0	Tremors.
15	,, 8	2 38·5	—	—	2 57·0	—	0 18·5	Minute tremors.
16	,, 9	0 21·3	—	—	5 27·3	—	5 06·0	Continuous tremors.
17	,, 23–24	4 40·0*	—	—	*29 40·0	—	25 00·0*	Short intervals of rest.
18	,, 27	1 56·1*	—	—	*5 0·1	—	3 4·0*	Continuous, small.
19	April 2	3 13·1*	—	—	*5 19·1	—	2 06·0*	Minute tremors.
20	,, 4	10 05·2	10 09·4	10 10·7 10 33·6	—	5·7 >20·0	—	—
		End of large waves 11h. 25·9m.			End of tremors 12h. 58·7.			
21	,, 9	5 46·1	—	—	5 56·1	—	0 10·0	Minute tremors.
22	,, 10	8 58·8	9 00·2	9 01·0	9 10·3	1·5	0 11·5	—
23	,, 12	4 48·6	—	—	4 52·1	—	0 03·5	Preceded and followed by minute tremors.
24	,, 30	2 13·0*	—	—	* 5 38·0	—	3 25·0*	Minute tremors.
25	May 1	4 51·0*	—	—	* 8 28·0	—	3 37·0*	Small tremors at close intervals.
26	,, 1	15 55·6	—	—	16 50·6	—	1 01·0	Pronounced tremors.
27	June 7	8 38·3	—	—	8 54·2	—	0 16·1	Marked tremors at intervals.
28	,, 24	1 04 *	—	1 59 *	2 17	—	1 13·0	Marked tremors at intervals.
29	,, 25	2 59·2	3 17·4	3 36·7 3 42·2	—	3·5 3·0	—	—
		End of large waves 4h. 08·2m.			End of tremors 4h. 43·2m.			
30	,, 25	21 13·2	21 23·2	21 58·2	—	5·0	—	—
		End of large waves 22h. 37·7m.			End of tremors 23h. 47·2.			
31	,, 26	?	11 19·2	11 42·2	11 45·7	0·6	—	—
32	,, 27	0 15·4	0 32·8	1 04·7	--	3·9	—	—
		End of large waves 1h. 38·2.			End of tremors 3h. 23·1.			
33	July 1	22 0	—	22 0·5	22 6	—	6	Slight thickening.
34	,, 6	9 5	—	—	9 9	—	4	Slight thickening.
35		11 23	—	—	11 25	—	2	Slight thickening.
36		14 18	—	—	14 22	—	4	Slight thickening.
37		16 46	—	—	16 48	—	2	Slight thickening.
38	,, 23	1 1	—	1 19	1 43	—	42	Slight thickening.
39	,, 24	11 8	—	11 39	12 2·5	0·6	54·5	—
40	,, 27	5 37·5	—	5 42·5	6 0	0·35	22·5	—
41		16 11	—	16 31	16 44	—	33	Thickening.
42	Aug. 5	2 17	—	3 29	4 42	0·3	2 25	—

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

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
43	Aug. 9	0 6	—	0 34	0 46·5	—	50·5	Slight thickening.
44	,, 11	6 9·5	—	6 14·5	6 47	0·5	37·5	—
45	,, 18	5 5	—	5 41	6 04	0·5	59	—
46		20 10·5	—	20 11	20 27	—	16·5	Thickening.
47	,, 23	10 17	—	10 17·5	10 22	—	5	Thickening.
48	,, 24	21 12	—	21 55	23 3·5	1·8	1 51·5	—
49	,, 27–28	22 9	—	22 58	1 9	1·1	3 0·0	—
50	,, 30	12 1	—	12 22·5	13 10	1·6	1 9	—
51	Sept. 8	2 56·5	—	2 57	3 3·5	0·4	7	—
52	,, 11	6 6·5	—	6 23	6 57	0·6	50·5	—
53	,, 25	16 28·5	—	16 35·5	16 47	—	18·5	Thickening.
54	,, 27	15 50·5	—	15 58·5	16 5·5	—	15	Thickening.
55	Oct. 3	—	—	22 42	—	—	—	Slight thickening.
56	,, 3	3 13	3 17·5	3 23·5	4 36·5	17·0	1 23·5	Suddenly reaching high max.
57	,, 8	19 8	—	19 33	19 47	—	39	Slight thickening.
58	,, 9	14 7	—	14 22	14 56	1·25	49	—
59	,, 10	—	—	5 45·5	—	—	—	Slight thickening.
60	,, 13	3 19·5	---	4 34·5	6 13	0·2	2 53·5	Air currents?
61	,, 14	4 42	---	4 56·5	4 25	—	43	Slight thickening.
62	,, 28	14 3·5	---	14 43	16 24	—	2 10·5	Thickening.
	Nov. 2–23	—	---	---	---	---	—	Seismograph not adjusted.
63	,, 30	—	—	15 5	—	—	3	Thickening.
	Dec. 2–4	—	—	—	—	0·7	—	Air currents.
64	,, 19	18 11·5	---	19 9·5	19 49	—	1 37·5	Thickening.
65	,, 20	3 54	---	6 18·6	8 15	—	4 21	Probably due to air currents.
66	,, 20	16 24	---	20 58	23 58	—	7 34	Probably due to air currents.
	,, 22–23	Continued irregularity due to air currents (see strip enclosed).						

From July 1 to Oct. 31, instrument in charge of assistant, and degree of sensitiveness unknown; from Nov. 23, period 15s.
1mm. = 0″·54.

Dates of deflection and interrupted records—
January 5, 6, 10, 19, 20, 24, and 25 in part.
February 11 to 15 inclusive.
March 29 to 31.
April 1 to 20 and 22.
May 13 to 14.

* = about.

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

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Duration	Remarks
			1902.					
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
190	April 1	10 41·6	—	12 26·4 to 12 38·5	—	0·5	2 32·2	? Salonika.
191	,, 6	0 12·3	—	—	—	—	0 8·2	Thickening merely
192	,, 11	Indefinite	14 11·3	13 12·9 to 13 15·9	14 23·6	4·3	Indefinite	P.T. and A.T., obscured by night tremors.
193	May 1	6 39·5	6 42·5	6 51·8	6 55·9	3·8	1 27·6	—
194	,, 1	15 35·7	15 55·5	16 00·7 to 16 11·4	16 17·5	5·5	Indefinite	A.T. obscured by night tremors.
195	,, 1	23 39·6	—	24 00	—	1·3	0 51·2	—
196	,, 21	15 12·4	—	15 16·5	—	0·4	0 31·8	—
197	,, 28	23 39·6	—	23 55·0	—	1·3	1 17·4	—
198	June 10	18 59·2	—	19 05·1	—	—	0 38·7	Thickening merely
199	,, 13	15 33·6	—	15 38·8	—	—	0 10·4	—
200	,, 13	17 22·3	—	17 25·9	—	—	0 6·1	—
201	,, 17	Indefinite	—	6 39·5	—	—	Indefinite	Elongated swelling, P.T. and A.T. obscured by night tremors
202	,, 17	Indefinite	—	13 29·2	—	0·5	Indefinite	P.T. and A.T. obscured by night tremors.
203	,, 17	19 18·0	—	19 31·3	—	0·5	0 20·4	—
204	,, 18	6 25·9	6 32·3	6 38·4	6 42·0	2·7	0 32·6	—
205	,, 26	19 58·2	—	20 20·7	—	0·9	1 13·3	—
206	,, 26	21 25·9	—	22 22·8	—	1·3	3 05·1	—
207	,, 27	0 32·5	—	1 31·0 to 1 36·1	—	0·9	2 34·9	In progress while attending to instrument.

Register from Wellington, New Zealand.
Director, GEORGE HOGBEN, *M.A.*

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude (= semi-amp).	Remarks
			1902.				
		H. M.	H. M.	H. M.	H. M.	MM.	
392	Jan. 14	2 04.8	2 31·2	2 38·8	4 43·6	16·5	—
393	,, 17	16 29·0	16 32·3	16 59·8	17 44·4	4·0	—
394	Feb. 28	10 14·9	10 30·3	10 34·9	10 47·2	1·0	—
395	April 10	—	15 16·6	15 20·8	15 27.8	1·5	—
396	,, 29	3 08·4 3 45·0 3 57·9 4 15·2	4 17·8	4 22·2 till 4 48·3	6 28·8	11·2	After-tremors for several hours gradually dying away.
397	May 13	6 34·1	{ 6 42·3 or 6 48·7 }	6 58·0	8 06·3	7·0	Tremors till 10h. 40·6m.
398	,, 31	6 32·5	6 35·9	6 39·1	6 52·1	3·5	—
399	June 8	5 31·9	5 46·1	5 49·1	6 39·1	1·5	—
400	,, 10	16 48·5	16 56·4	17 00·5	17 19·8	1·5	—

Register from Wellington, New Zealand.—continued.

No.	Date	P.T. from	Begin	Maxima From	Maxima Till	Amplitude	End	A.T. till	B.P.	Remarks
				1902.						
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	H. M.		
	Mar. 26	15 8·1	15 8·5	15 8·9	—	2·0	15 10·6	15 18·7	15·5	Felt at Invercargill and Dunedin (R. F. VI.)
	Apr. 23	—	11 57·5	11 58·5	—	1·0	11 59·9	—	16·7	—
	May 1	6 24·4	6 40·0	6 41·8	6 48·1	7·5	6 54·2	9 20	16·4	—
	,, 1	15 46·2	16 02·1	16 02·5	16 15·9	4·0	16 22·6	16 59·3	16·4	—
	,, 1	23 35·0 or 23 39·6	23 57·3	23 58·4	—	1·9	24 03·8	24 34·5	16·4	P.T. and A.T. obscured by tremors.
	,, 19	13 23·0	13 49·0	13 51·7	—	1·6	13 56·4	?	16·3	P.T. and A.T. obscured by tremors.
	June 18	6 20·8	6 30·5	6 39·1	—	1·2	6 44·7	7 51·8	—	—
	,, 25	15 14·8	15 45·0	16 05·9	—	1·0	16 09·8	17 42·5	16·1	—
	,, 25	21 29·8	21 59·7	22 06·5	22 16·8	2·0	22 27·5	24 12·0	16·1	—
	,, 26	20 00·1	20 17·8	20 20·8	20 22·4	0·6	20 22·9	21 57·0	16·1	—
	,, 27	0 32·5	1 09·4	1 56·5	1 35·5	1·6	1 43·0	3 11·5	16·1	—
	July 23	0 55·4	1 02·4	1 09·3	1 14·8	5·4	1 17·0	?	16·0	A.T. obscured by tremors.
	Aug. 8	22 50·3	22 51·5	22 51·6	—	—	—	7 30·0 (about) 9 Aug.	18·0	Origin 225 miles E.S.E. of Wellington ("East Coast origin")
	,, 14	2 54·1	2 56·0	2 57·0	2 58·0	3·8	3 07·0	?	—	E.Q. at Waipawa etc. East Coast origin.
	,, 18	5 01·8	5 12·8	5 15·9	—	3·6	5 18·1	5 39·0	—	—
	,, 24	21 18·0	21 42·5	21 43·8	—	1·5	21 51·5	?	16·0	A.T. obscured. E.Q. East Coast origin.
	,, 27	21 48·0 or 21 58·1	22 01·2	22 14·5	22 31·9	1·6	22 37·3	23 47·3	16·0	Times uncertain
	Sept. 13	17 16·1	17 17·0	17 23·4	17 25·1	5·0	17 27·3	18 17·7	17·2	—
	,, 15	16 31·2	16 32·4	16 35·9	16 40·0	0·6	16 41·9	16 49·8	17·2	—
	,, 25	14 36·5	14 39·2	14 41·3	14 54·1	13·5	14 57·2	15 45·8	17·2	—
	Oct. 3	4 06·5	4 18·5	4 23·7	—	1·0	4 26·2	4 51·2	17·0	—
	,, 4	0 10·1	0 11·6	0 12·6	—	1·5	0 15·6	0 20·7	17·0	—
	,, 7	7 19·7	8 01·1	8 02·7	?	25·5	?	?	16·9	Case opened while E.Q. in progress.
	,, 9	—	13 59·1	14 00·4	—	1·2	14 02·5	14 56·0	16·9	—
	,, 11	—	9 55·1	9 56·3	—	0·6	9 59·2	—	16·8	—
	,, 16	5 30·3	5 41·6	5 45·9	—	0·5	5 52·0	6 15·0 about.	16·8	—
	,, 19	—	3 18·0	3 24·0	—	0·5	3 25·9	3 35·0 about.	16·8	—
	,, 28	14 15·6	14 26·5	14 31·8	—	4·1	14 38·9	15 07·0	17·0	—
	Nov. 21	3 01·5	3 15·3	3 17·4	3 32·0	3·1	3 34·9	4 31·3	17·2	—
	Dec. 2	3 08·9	3 10·9	3 12·3	3 16·4	1·5	3 19·5	3 53·2	17·2	—
	,, 11	9 16·1	9 19·2	9 24·5	9 32·6	1·8	9 35·5	?	17·1	A.T. obscured by tremors.

Register from St. Clair Experimental Station, Botanical Dept., Trinidad, B.W.I.
Director, J. H. HART, *F.L.S.*

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Duration	Remarks
			1904.					
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
234	July 24	1 36	—	—	1 40	—	0 4	Thickening of line
235	Aug. 11	11 56	—	—	12 2	1	0 7	—
236	,, 11	11 48	—	—	14 52	—	0 4	Thickening of line
237	,, 27	20 31	—	—	20 53	1	0 22	Several maxima.
238	Oct. 15	18 8	—	—	18 17	—	0 9	Thickening of line
239	Nov. 26	13 38	—	—	13 41	—	0 3	Thickening of line
240	,, 26	18 42	—	—	18 44	—	0 2	Small displacement of boom.
241	Dec. 1	21 44	—	—	21 46	—	0 2	Small displacement of boom.
242	,, 3	18 25	—	—	18 29	—	0 4	Thickening of line
243	,, 9	0 34	—	—	0 50	—	0 16	Several thickenings of line.
244	,, 10	18 1	—	—	18 11	—	0 10	Thickening of line
245	,, 11	17 19	—	17 32	17 46	·75	0 27	—
246	,, 12	17 32	—	—	17 45	—	0 13	Thickening of line
247	,, 15	14 48	—	—	14 52	—	0 4	Thickening of line
248	,, 20	4 50	4 55	5 2	6 36	13	1 46	End merged in tremors.
249	,, 21	0 54	—	1 11	1 26	1	0 32	—

Register from Perth Observatory, Western Australia.— continued.

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Remarks.
		H. M.	H. M.	H. M.	H. M.	MM.	
42	Oct. 3	3 26·1	3 41·0	4 2·1	5 8·3	1·5	—
43	,, 5	18 56·7	19 39·0	19 45·5	20 35·3	1·5	—
44	,, 8	16 36·1	16 39·4	16 40·1	16 50·9	0·85	—
45	,, 8	18 58·4	19 5·2	19 5·9	19 25·9	0·5	—
46	,, 16	6 6·1	6 8·1	{ 6 9·7 } { 6 12·1 }	6 15·1	{ 0·4 } { 0·4 }	—
47	,, 28	13 52·4	14 0·1	14 7·3	15 18·9	3·4	—
48	Nov. 11	11 14·6	11 17·0	11 18·4	11 52·6	0·6	—
49	,, 21	3 20·3	3 39·9	3 46·3	4 18·8	0·55	—
50	Dec. 2	1 37·8	1 42·3	1 46·8	1 53·3	0·35	—
51	,, 11	9 4·2	9 8·5	9 11·7	9 56·1	1·0	—
52	,, 19	17 57·3	18 6·9	18 9·6	19 6·1	1·9	—
53	,, 20	6 3·0	6 4·5	6 7·5	6 35·0	0·3	—
54	,, 23	15 26·2	15 31·0	15 32·4	15 57·8	0·3	—

July 18 1mm. = 0″·58.
Sept. 3 1mm. = 0″·58.
Nov. 21 1mm. = 0″·65.

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

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Remarks.
			1904.				
		H. M.	H. M.	H. M.	H. M.	MM.	
25	July 4	4 47·4	4 51·1	4 52·4	5 14·9	0·5	—
26	,, 23	0 46·0	0 51·1	1 4·8	1 56·1	2·9	—
27	,, 28	15 59·5	16 3·3	16 6·1	16 6·7	0·35	—
28	,, 27	16 1·7	16 19·1	{ 16 20·2 } { 16 22·4 }	16 52·2	{ 0·6 } { 0·6 }	—
29	,, 31	—	7 16·0	7 20·2	7 24·0	0·4	—
30	Aug. 8	22 59·0	23 6·2	23 6·6	24 4·5	1·0	—
31	,, 14	3 8·3	3 27·6	3 32·6	3 57·1	0·35	—
32	,, 18	4 46·9	4 51·8	4 57·1	6 24·6	7·1	—
33	,, 24	21 14·7	21 34·0	21 38·4	23 14·2	1·7	—
34	,, 27	22 36·9	23 26·1	{ 23 29·4 } { 23 33·9 }	1 1·9	{ 1·0 } { 1·05 }	—
35	,, 30	12 1·9	12 22·2	12 30·2	12 58·4	0·5	—
36	Sept. 8	2 33·2	2 49·2	2 54·0	3 27·2	1·9	—
37	,, 9	21 5·8	21 8·4	{ 21 10·1 } { 21 13.6 }	21 28·1	{ 0·5 } { 0·5 }	—
38	,, 11	6 14·3	6 19·9	6 29·1	6 49·3	0·8	—
39	,, 13	17 28·2	17 45·5	17 53·2	18 32·0	1·05	—
40	,, 19	5 10·8	5 26·0	5 34·3	7 0·8	1·05	—
41	,, 25	15 21·6	15 28·8	15 33·5	16 5·0	2·3	—

The Seismological Institute, Tokyo, Japan.
Director, Dr. F. ŌMORI. *Observer*, A. IMAMURA, *D.Sc.*

No.	Date	P.T. Commence	Max.	Max. Amplitude	Duration	Remarks.
			1903.			
		H. M.	H. M.	MM.	H. M.	
346	July 9	5 59·7	?	0·4	?	Shaking sharp. Boom shifted.
347	,, 14	2 30·5	2 35·2	1·3	0 30·0	—
348	Aug. 23	12 33·6	12 33·8	0·4	0 2·3	Origin near Tokyo.
349	Oct. 10	16 45·9	16 51·5	1·7	0 42·0	Origin off the coast of Hyuga.
350	,, 14	3 32·7	3 33·4	0·4	0 8·0	—
351	,, 27	12 56·1	12 57·2	1·9	0 21·0	Origin near Tokyo.
352	Nov. 10	9 53·0	?	?	?	Boom shifted. Origin near Tokyo.
353	,, 11	3 22·0	3 25·0	1·0	0 15·0	—
354	,, 26	12 2·0	12 9·7	7·0	0 45·0	—
355	Dec. 10	17 27·6	17 30·6	1·2	0 12·0	—
356	,, 28	3 5·9	3 16·5	0·8	1 50·0	—
			1904.			
357	Jan. 1	5 39·8	5 43·1	0·7	0 35·0	—
358	Feb. 8	3 36·5	3 38·7	0·3	0 6·0	—
359	March 7	18 40·8	18 41·1	2·0	0 20·0	Origin off the coast of Iwaki.
360	,, 16	7 7·6	7 8·7	0·5	0 10·0	Origin near Tokyo.
361	,, 18	13 46·7	13 50·0	1·8	1 50·0	Origin in the East of Shikoku.
362	,, 27	2 42·3	—	0·4	0 10·0	—
363	,, 28	6 12·0	—	0·5	0 2·0	—
364	,, 31	2 36·9	2 47·9	1·8	0 57·0	—
365	,, 31	6 13·4	6 17·8	0·6	0 25·0	—
366	April 3	23 30·2	23 29·8	0·9	0 4·0	—
367	,, 4	10 14·1	10 37·2	3·7	2 20·0	Probably two earthquakes.
368	,, 4	16 49·1	16 52·3	1·1	0 22·0	—
369	,, 5	10 35·8	10 46·2	3·4	1 0·0	—
370	,, 5	20 20·9	20 24·5	1·0	0 12·0	—

The Seismological Institute, Tokyo, Japan.—continued.

No.	Date	P.T. Commence	Max.	Max. Amplitude	Duration	Remarks
		H. M.	H. M.	MM.	H. M.	
371	April 22	19 48·0	19 48·7	1·1	0 45·0	Origin off the coast of Iwaki.
372	,, 23	23 7·2	23 7·6	0·8	0 10·0	Off the coast of Rikuzen.
373	,, 24	19 7·7	19 12·7	1·5	0 18·0	—
374	,, 26	18 13·7	18 14·0	0·3	0 2·5	—
375	,, 26	19 1·8	19 2·8	0·4	0 8·0	—
376	,, 27	18 46·9	18 48·7	2·2	0 53·0	—
377	,, 27	20 28·6	20 28·9	0·4	0 16·0	—
378	,, 30	12 13·5	12 13·6	0·2	0 0·8	—
379	,, 30	14 21·0	14 21·4	0·9	0 4·5	—
380	May 1	23 38·5	23 42·4	0·7	0 26·0	—
381	,, 2	3 53·5	3 54·0	0·3	0 4·0	—
382	,, 6	20 36·7	20 37·9	0·6	0 12·0	Off the coast of Bo-Shiu peninsula.
383	,, 7	19 23·5	19 24·2	>15·0	0 40·0	Origin near Niigata.
384	,, 7	22 25·0	22 25·3	0·4	0 4·0	After shock of No. 383.
385	,, 7	23 0·8	23 1·5	0·5	0 7·0	After shock of No. 383.
386	,, 17	7 3·5	—	0·9	0 5·0	Origin near Tokyo.
387	,, 26	20 40·3	20 41·2	0·5	0 6·0	Off the E. coast of Idzu.
388	,, 26	22 46·5	22 47·0	1·5	0 6·0	Off the E. coast of Idzu.
389	June 4	22 49·7	22 52·7	0·4	0 7·0	—
390	,, 5	18 42·5	18 43·7	0·3	0 9·0	Origin in Chūgoku.
391	,, 6	2 55·1	2 55·8	1·0	0 11·0	Origin in Chūgoku.
392	,, 7	8 16·0	8 16·8	>15·0	2 0·0	Origin off the coast of N.E. Japan.
393	,, 13	20 59·2	—	1·1	0 6·0	—
394	,, 14	1 38·3	1 41·1	2·2	0 27·0	Origin in N.E. Japan.
395	,, 24	1 9·7	1 14·1	1·0	2 15·0	—
396	,, 25	14 51·6	14 55·9	7·5	3 0·0	—
397	,, 25	21 1·1	21 5·6	11·0	3 40·0	—
398	,, 26	10 46·8	10 50·7	1·1	2 20·0	—
399	,, 26	19 49·5	20 0·1	3·5	1 50·0	—
400	,, 27	0 16·1	0 22·4	10·0	3 0·0	—
401	,, 29	22 19·7	—	0·5	0 2·3	—
402	,, 29	23 20·5	23 20·7	0·4	0 5·0	—
403	July 1	3 20·4	4 18·0	1·6	2 20·0	—
404	,, 1	13 32·1	13 34·0	0·8	1 30·0	Origin off the S. coast of Hokkaido.
405	,, 12	10 40·3	10 42·8	1·8	0 40·0	Origin off the coast of Iwaki.
406	,, 16	1 10·0	—	4·5	0 11·0	Origin near Tokyo.
407	,, 16	1 35·0	—	0·6	0 3·5	—
408	,, 16	2 5·6	—	0·3	0 1·4	—
409	,, 16	19 27·2	—	3·3	0 19·0	Origin near Tokyo.
410	,, 17	5 5·6	—	0·4	0 1·3	—
411	,, 17	5 14·8	—	0·6	0 3·5	—
412	,, 18	4 4·2	—	0·4	0 3·0	—
413	,, 18	10 51·0	—	1·6	0 3·3	—
414	,, 19	9 21·3	9 22·6	1·1	0 8·0	—
415	,, 19	14 4·1	14 7·3	4·8	0 45·0	Origin near Tokyo.
416	,, 20	3 32·5	3 33·4	1·2	0 6·0	—
417	,, 24	11 53·9	11 55·6	1·0	0 18·0	—
418	,, 25	1 35·7	1 37·7	0·7	0 16·0	Origin in N.E. Japan.
419	Aug. 4	6 26·5	6 29·0	1·3	0 13·0	Origin in Kitachi.
420	,, 4	12 49·2	12 49·9	13·0	0 13·0	Origin near Tokyo.
421	,, 6	20 27·1	20 27·4	0·3	0 6·5	Origin off the coast of Iwaki.
422	,, 11	4 5·6	4 7·9	0·5	0 8·0	Off the coast of Bo-Shiu peninsula.
423	,, 13	13 30·8	13 31·9	1·9	0 11·0	Origin in N.E. Japan.
424	,, 22	19 49·0	19 50·9	0·9	0 20·0	Origin near Tokyo.
425	Oct. 1	10 22·1	10 29·9	0·4	0 26·0	—
426	,, 2	21 56·7	22 3·0	17·0	2 10·0	Felt at Tokyo.
427	,, 3	3 16·2	3 28·4	1·4	1 25·0	—
428	,, 8	22 42·9	—	0·2	0 16·0	—
429	,, 21	3 28·7	3 31·7	0·4	0 18·0	Origin off the coast of Rikuchū.
430	,, 24	15 28·7	15 30·4	0·4	0 16·0	Origin off the coast of Rikuzen.
431	,, 25	2 25·0	2 25·7	0·3	0 4·0	—
432	,, 25	13 50·2	—	0·3	0 3·0	—
433	,, 26	11 19·5	—	0·2	0 1·8	—
434	,, 27	22 11·9	22 14·2	1·7	0 28·0	Origin near Noto.
435	Nov. 6	3 11·3	3 37·8	4·3	1 40·0	—
436	Dec. 17	7 5·4	7 9·7	1·1	0 25·0	Felt at Tokyo and Akita.
437	,, 20	5 6·6	6 21·1	0·4	0 59·0	Nature doubtful.
438	,, 21	20 8·4	20 11·9	0·3	0 6·0	—
439	,, 24	2 48·8	2 55·8	0·5	0 15·0	Origin off the coast of Rikuzen.
440	,, 24	22 31·1	22 32·5	1·1	0 10·0	Masked by pulsatory oscillation.
441	,, 27	22 50·3	22 52·2	1·5	0 13·0	—
442	,, 30	6 40·8	6 46·3	2·4	0 31·0	Off the coast of Rikuzen.

1mm. amplitude = 0″·59.

Register from Irkutsk Magnetical and Meteorological Observatory.
Director, A. V. Voznessensky.

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Duration	Remarks
			1904.					
		H. M.	H. M.	H. M.	H. M.	MM.	H. M.	
641	July 1	3 31·3	—	3 35·4	4 16	0·6	0 45	—
642	,, 1	13 39·2	—	13 46·7	14 01	0·4	0 22	—
650	,, 23	0 51·4	—	1 09·9	1 40	0·4	0 49	—
651	,, 24	10 51·3	—	11 06·7	12 05	1·4	1 14	—
652	,, 24	18 47·9	—	18 48·2	18 53	0·3	0 05	—
653	,, 27	5 39·3	—	5 47·6	6 00	0·4	0 21	—
655	,, 27	16 06·9	—	16 09·1	16 43	0·3	0 36	—
668	Aug. 26	22 39·8	—	—	22 51	—	0 11	—
669	,, 27	22 05·0	22 16·3	22 31·5	23 03	7·0	0 58	—
670	,, 28	14 47·4	—	14 50·2	14 55	0·3	0 08	—
671	,, 30	11 51·3	11 54·2	11 55·1	13 17	5·6	1 26	—
673	Sept. 8	<3 57·4	—	3 11·4	3 37	0·4	>0 40	—
674	,, 11	5 20·1	5 54·0	5 58·0	7 13	2·7	1 53	—
678	,, 18	7 38·7	—	7 41·5	7 47	0·4	0 08	—
679	,, 18	23 59·5	24 07·4	24 39·6	24 47	0·8	0 47	—
680	,, 19	5 46·8	5 55·4	6 10·7	6 40	0·9	0 53	—
681	,, 19	18 54·9	—	—	19 46	—	0 51	—
682	,, 20	14 01·4	—	14 08·0	14 15	0·3	0 14	—
685	,, 27	16 06·1	—	16 16·8	16 33	0·3	0 27	—
687	,, 28	9 27·7	9 27·8	9 28·0	9 37	1·5	0 09	—
688	Oct. 1	10 28·6	10 30·1	10 47·5	11 10	0·4	0 51	—
691	,, 3	3 12·9	3 16·8	3 36·3	5 12	5·6	1 59	—
692	,, 3	15 34·1	—	15 37·8	15 48	0·3	0 14	—
693	,, 5	19 46·6	—	—	20 46	—	0 59	—
694	,, 8	18 47·9	18 55·8	18 58·5	19 55	4·3	1 07	—
695	,, 9	14 07·0	14 07·2	14 20·8	15 21	2·1	1 14	—
700	,, 28	14 09·7	14 20·1	14 32·6	15 31	1·0	1 21	—
701	Nov. 3	3 54·4	—	3 58·0	4 14	0·2	0 20	—
703	,, 5	20 39·7	20 42·0	20 43·1	21 14	1·1	0 34	—
704	,, 6	4 10·6	4 33·7	4 37·6	5 45	1·6	1 34	—
705	,, 8	7 07·7	—	—	7 36	—	0 28	—
706	,, 9	3 44·8	—	3 49·3	3 59	0·6	0 14	—
708	,, 16	3 38·2	—	—	3 43	—	0 05	—
709	,, 21	3 27·9	4 00·0	4 06·5	4 51	0·6	1 23	—
710	,, 22	1 26·5	1 32·2	1 54·8	> 2 20	0·8	>0 53	—
711	,, 23	17 38·7	—	17 45·4	18 00	0·4	0 21	—
713	,, 27	7 14·1	7 35·2	7 40·0	8 15	0·6	1 01	—
714	Dec. 2	1 49·9	3 23·4	3 33·2	4 19	0·5	2 29	—
715	,, 3	3 30·6	—	3 31·6	3 33	0·3	0 02	—
720	,, 11	9 08·8	9 24·5	9 25·4	10 00	0·6	0 51	—
721	,, 11	17 48·8	18 36·0	18 48·5	19 06	0·5	1 17	—
722	,, 13	7 11·6	—	—	7 23	—	0 11	—
723	,, 16	7 12·6	—	7 21·2	7 28	0·4	0 15	—
724	,, 17	7 11·7	—	—	7 35	—	0 23	—
725	,, 19	18 21·6	18 54·4	18 58·6	20 24	0·4	2 02	—
726	,, 20	6 11·3	6 34·5	6 56·8	8 28	2·1	2 16	—
727	,, 22	6 39·4	—	—	7 11	—	0 32	—
728	,, 22	14 57·6	—	14 57·8	15 10	0·3	0 12	—
729	,, 24	6 42·3	—	6 50·8	7 10	0·3	0 28	—
730	,, 24	22 36·3	—	22 45·1	23 18	0·2	0 42	—
733	,, 30	6 49·5	—	6 51·1	7 16	0·2	0 26	—

Up to September 16th 1mm. = 0″·59; after that date 1mm. = 0″·30.
The Recorder was out of order:
August 8th to 25th, September 17th, also on the 24th and 25th, October 22nd to 27th, and December 27th.

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

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Remarks
			1904.				
		H. M.	H. M.	H. M.	H. M.	MM.	
527	July 10	23 07·0	23 11·0	—	23 30·0	0·2	Very small.
528	,, 24	11 05·5	—	—	12 12·0	0·1	Slight thickenings.
529	,, 27	16 16·0	—	—	16 31·0	0·05	Very slight thickening.
530	August 8	23 55·5	—	—	24 02·0	0·2	Slight gradual thickening.
531	,, 11	6 08·0	—	—	6 14·0	0·2	Marked thickening.
532	,, 24	21 24·0	—	22 12·5	23 31·0	1·0	Extended.
533	,, 27	22 04·4	22 11·0	22 19·7 22 23·0	24 33·0	18·0 +	Very large and continuous, off paper for 1 and 1½ min.
534	,, 30	12 39·5	12 45·0	12 49·0	13 22·0	0·6	Decided.
535	Sept. 11	6 40·5	—	—	7 14·5	0·4	Small.
536	,, 13	18 27·0	—	—	19 30·0	0·3	Marked thickening at intervals.
537	,, 15	1 53·5	—	—	—	0·05	Quick jar. Earthquake felt at Toronto.
538	,, 19	0 04·0	0 27·5	0 30·0	1 25·0	1·1	Began gradually.
539	,, 19	5 24·0	6 16·0	6 21·2	6 56·5	1·0	Active.
540	,, 19	18 36·2	—	—	18 42·0	0·2	Very small.
541	,, 20	13 58·8	—	—	14 10·0	0·1	Very small.
542	,, 24	5 21·2	—	—	5 53·0	0·3	Very small.
543	Oct. 3	3 33·0	—	4 25·0	5 16·0	0·7	Prolonged.
544	,, 9	14 03·0	—	14 16·0	15 05·0	1·8	P.T. well marked.
545	Nov. 21	4 01·5	—	—	4 50·0	0·4	Prolonged.
546	,, 22	2 05·3	—	—	3 03·0	0·2	Extended.
547	,, 24	No P.T.	12 35·7	—	12 41·3	0·2	Small.
548	,, 27	7 34·5	—	—	8 19·0	0·15	Very small.
549	Dec. 2	2 32·4	—	2 40·0	3 23·0	1·1	Small.
550	,, 20	5 56·3	—	6 05·1 6 10·1	8 36·3	11·0	Three successive, distinct vibrations shortly after commencement.
551	,, 21	1 50·5	1 55·7	1 57·2	2 12·5	2·0	Marked oscillation.

Vibration of boom 14·6secs.
1mm. of amplitude represents a tilt of 0″·67.

Register from Victoria, B.C., Canada.
Superintendent, E. BAYNES REED.

No.	Date	P.T. Commence	L.W. Commence	Max.	End	Max. Amplitude	Remarks
			1904.				
		H. M.	H. M.	H. M.	H. M.	MM.	
535	July 10	23 22·5	—	—	23 41·0	0·3	Very small.
536	,, 24	11 00·0	—	—	12 06·5	0·4	Marked thickenings.
537	,, 27	No. P.T.	16 7·0	—	17 00·0	0·5	Abrupt commencement.
538	August 9	0 03·0	—	—	0 08·0	0·2	Minute thickening.
539	,, 11	6 14·0	—	—	6 18·0	0·2	Thickening. Gradual ending.
540	,, 24	21 12·3	—	21 30·0	23 36·5	1·0	Much extended.
541	,, 27	No. P.T.	22 0·7	22 08·9	24 44·5	18·0 +	Very large. Off paper over two minutes.
542	,, 30	12 08·7	—	12 36·8	13 16·5	0·9	Well marked.
543	Sept. 8	18 24·2	—	—	18 29·0	0·1	Brief thickening.
544	,, 11	6 34·0	—	6 39·0	7 03·0	0·4	Well defined.
545	,, 18	23 55·3	—	24 20·5	25 20·5	1·0	Active.
546	,, 19	5 18·5	—	6 25·5	6 40·9	0·4	Continuous.
547	,, 19	18 22·0	—	—	18 29·0	0·1	Very small.
548	,, 20	13 43·3	—	—	14 02·8	0·1	Very small.
549	,, 24	5 24·2	—	—	5 43·0	0·5	Small.
550	Oct. 3	3 41·0	—	4 27·2	5 11·0	0·4	Prolonged.
551	,, 9	14 13·0	—	14 24·9	15 03·0	1·4	Medium.
552	,, 20	23 32·3	—	—	23 35·6	0·2	Brief thickening.
553	Nov. 8	2 30·0	—	—	2 31·0	0·15	Brief thickening.
554	,, 21	3 47·6	—	—	4 43·0	0·05	Scarcely noticeable.
555	,, 22	1 50·2	—	—	2 31·2	0·15	Extended.
556	,, 24	12 53·5	—	—	12 55·0	0·05	Scarcely noticeable.
557	,, 27	7 17·0	—	7 26·0	8 16·0	0·25	Very small.
558	Dec. 2	2 28·0	—	2 51·8	3 37·0	2·00	Medium, P.T. long time before L.W.
559	,, 4	8 42·5	—	—	8 50·0	0·35	Very small.
560	,, 20	5 53·3	—	6 27·5	8 11·3	3·0	Extended.
561	,, 21	2 07·5	—	2 23·0	2 33·0	0·25	Small.

Vibration of boom 15secs.
1mm. of amplitude represents a tilt of 0″·76.

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