

## EARTHQUAKE RECORDS BY MILNE SEISMOGRAPH.

For the month of July 1914.

Time is Greenwich Civil Mean Time, in hours, minutes, and decimals of a minute; 0 or 24 H = midnight.

1 millimetre of amplitude = . . . . . Velocity of paper = 25 centimetres per hour.

Seismograph A records E.W. motion; Seismograph B records N.S. motion.

## REGISTER FROM KHEDIVAL OBSERVATORY, HELWAN, EGYPT.

*W. J. J. J.* Superintendent T. L. Eckersley.

I.N. 2250-1913-3000 ex.

No.	DATE		Commencement.		MAXIMUM.		MAXIMUM AMPLITUDE.		DURATION.		REMARKS.
	1914 .		H.	M.	H.	M.	mm.	H.	M.		
2911	July	1	16	3			trace	1	7	A only	
2912		3	0	23			0.2	1	1	A)	
		"	0	23			0.1	0	44	B)	
2913		"	8	45			trace	0	11	A only	
2914		"	13	52			0.1	0	31	A)	
		"	13	54			trace	0	13	B)	
2915		"	20	13			0.1	2	46	A) Nearly continuous	
		"	21	42			trace	1	16	B) small tremors.	
2916		4	11	42			0.1	2	10	A)	
		"	12	25			0.1	1	23	B)	
2917		"	18	00			0.2	3	00	A)	
		"	18	00			0.2	1	44	B) P <sub>2</sub>	18h. 11 <sup>m</sup> .2
2918		"	23	54			0.2	3	00	A) P <sub>2</sub>	0h. 2 <sup>m</sup> .9
	@	5	0	2.6			0.1	2	28	B)	
2919		"	22	15	23	00	0.3	3	15	A)	
		"	22	16			trace	2	35	B)	
2920		6	6	49			0.1	1	18	A)	
		"	7	00			0.1	0	56	B)	
2921		"	9	29			trace	0	12	A only	
2922		8	21	30			0.1	0	39	A only	
2923		9	6	50			0.1	0	21	A only	
2924		"	10	5			0.1	0	36	A)	
		"	10	5			trace	0	25	B)	
2925		11	9	27			0.1	0	26	A)	
		"	9	33			trace	0	5	B)	
2926		"	16	16			trace	0	12	B only	
2927		"	19	47			trace	0	10	A only	
2928		12	8	35			trace	0	35	A)	
		"	8	33			0.1	0	23	B)	
2929		"	22	29			trace	0	18	A only	
2930		13	9	53			trace	0	43	A only	

@ Probably P<sub>2</sub>



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Seismograph A records E.W. motion; Seismograph B records N.S. motion.

## REGISTER FROM KHEDIVAL OBSERVATORY, HELWAN, EGYPT.

*Widdich* Superintendent T. L. Eckersley.

I.N. 2230-1913-3000 ex.

No.	DATE 1914 .	Commencement.		MAXIMUM.		MAXIMUM AMPLITUDE.	DURATION.		REMARKS.
		H.	M.	H.	M.	mm.	H.	M.	
2931	July 14	3	22	4	00	0.6	2	47	A)
	"	3	24	3	57.5)	0.4	2	14	B) P <sub>2</sub> 3h. 33 <sup>m</sup> .1
2932	"	6	51			trace	0	7	B only
2933	15	2	15	2	34.5	0.2	0	40	A only
2934	17			8	12.1	0.2	10	50	A) Tremors begin during the changing of the
	"					0.1	10	18	B) papers.
2935	"	17	27			0.1	0	16	A only
2936	18	2	16			trace	0	8	A only
2937	21	23	29			0.1	1	57	A)
	"	23	20			trace	1	47	B)
2938	22	4	46			trace	1	1	A)
	"	4	52			trace	0	25	B)
2939	24	14	40			trace	0	12	A only
2940	"	19	37			trace	0	17	A only
2941	25	4	31			trace	0	14	A only
2942	"	21	58			0.1	1	27	A)
	"	21	54			0.1	1	25	B)
2943	29	15	13			0.1	1	45	A)
	"	15	29			trace	1	22	B)
2944	30	1	45			trace	0	17	A)
	"	1	53			trace	0	15	B)
2945	"	4	15			trace	0	10	A)
	"	4	16			0.1	0	25	B)
2946	"	5	8			trace	0	21	B only
2947	"	8	52			trace	0	12	B only
2948	31	18	48			0.1	0	42	A) B out of order at the time.



## EARTHQUAKE RECORDS BY MILNE SEISMOGRAPH.

For the month of August 1914.

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1 millimetre of amplitude = . . . . . Velocity of paper = 25 centimetres per hour.

Seismograph A records E.W. motion; Seismograph B records N.S. motion.

## REGISTER FROM KHEDIVIAL OBSERVATORY, HELWAN, EGYPT.

Act.  
*M. S. E. S.* Superintendent T. L. Eckersley

I.N. 2230-1213-3000 ex.

No.	DATE 1914.	Commencement.		MAXIMUM.		MAXIMUM AMPLITUDE.	DURATION.		REMARKS.
		H.	M.	H.	M.	mm.	H.	M.	
2949	August 3	11	57			trace	1	12	A)
		" 12	1			trace	0	32	B)
2950	4	4	44			trace	0	34	A)
		" 4	42			trace	1	27	B)
2951	"	9	23			0.1	2	47	A)
		" 9	50			0.1	2	16	B)
2952	"	21	17			trace	0	21	A only
2953	"	22	51	23	15.5	1.9	4	20	A) P <sub>2</sub> 22 <sup>h</sup> 58 <sup>m</sup> .1
		" 22	50	23	18.5				
2954	5	10	39			0.2	1	29	A)
		" 10	50			0.1	1	20	B)
2955	"	20	4			trace	0	13	A)
		" 20	5			trace	0	18	B)
2956	6	3	16			0.1	0	44	A)
		" 3	19			0.1	0	55	B)
2957	"	4	24	4	40	0.6	2	16	A)
		" 4	34			0.4	2	4	B)
2958	"	15	30			trace	0	11	A)
		" 15	33			trace	0	17	B)
2959	"	19	18			trace	0	10	B only
2960	"	19	54			0.3	0	19	A) only
2961	"	20	45	20	53	0.2	0	29	B only
2962	"	21	56			0.1	0	5	B only
2963	7	10	37			trace	0	30	A)
		" 10	39			trace	0	29	B)
2964	8	19	40			0.1	3	13	A) Continuous small tremors
		" 19	42			0.1	2	40	B) " " "
2965	9	23	12			trace	0	14	A)
		" 23	10			trace	0	10	B)
2966	11	13	37			0.1	0	34	A)
		" 13	37			0.2	0	34	B)
2967	12	21	32			trace	0	43	A)
		" 21	41			trace	0	30	B)

@  
L = long Waves commenced



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## REGISTER FROM KHEDIVAL OBSERVATORY, HELWAN, EGYPT.

Act.  
*W. H. H. H.* Superintendent T. L. Eckersley.

L.N. 2230-1913-3000 ex.

No.	DATE 1914	Commencement.		MAXIMUM.		MAXIMUM AMPLITUDE.	DURATION.		REMARKS.
		H.	M.	H.	M.	mm.	H.	M.	
2968	August 13	12	52			trace	0	12	A)
	"	12	51			trace	0	12	B)
2969	14	2	44			trace	0	16	A)
	"	2	47			trace	0	09	B)
2970	"	3	44			trace	0	10	A only
2971	"	20	16			trace	1	39	A)
	"	20	16			trace	1	00	B)
2972	16	13	15			trace	0	9	A)
	"	13	12			trace	0	11	B)
2973	19	12	48			trace	0	11	A)
	"	12	48			trace	0	15	B)
2974	21	8	52			0.1	0	19	A)
	"	8	53			0.1	0	21	B)
2975	22	5	54			0.1	2	51	A)
	"	5	56			0.1	2	31	B)
2976	"	15	28			0.2	2	54	A)
	"	15	28			0.1	2	52	B)
2977	24	-	-			0.2	8	55	A) Tremors began while the
	"	-	-			0.1	8	45	B) papers were being changed.
2978	26	7	13			trace	0	14	A)
	"	7	13			trace	0	13	B)
2979	"	19	53			trace	0	22	A only
2980	28	8	47	9	38.3	1.5	2	57	A) P <sub>2</sub> 8 <sup>h</sup> 57 <sup>m</sup> .1
	"	8	47	9	42.0	0.6	3	8	B) P <sub>2</sub> 8 56.8
2981	"	18	18			0.1	1	32	A)
	"	18	28			trace	0	42	B)
2982	@	31	15	28		trace	0	42	A)
	"	15	30			trace	0	43	B)
	@	Sudden beginnings on the 29th. at 5h. 26m., 5h. 43m., 5h. 51m., & 6h. 7m., on Seis. B. only, no sign on A. almost certainly due to a mouse.							



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## REGISTER FROM KHEDIVIAL OBSERVATORY, HELWAN, EGYPT.

*M. H. Knox-Shaw* Superintendent H. Knox-Shaw.

I.N. 2230-1913-3000 ex.

No.	DATE 1914.	Commencement.		MAXIMUM.		MAXIMUM AMPLITUDE.	DURATION.		REMARKS.
		H.	M.	H.	M.		min.	H.	
2983	Sept. 1	10	38			0.1	1	43	A)
	" 10	45				0.1	1	13	B)
2984	@ 2	20	42			0.1	1	7	A)
	" 20	46				trace	0	58	B)
2985	5	23	40			trace	1	30	A) Nearly continuous
	" 23	42				trace	1	2	B) small tremors.
2986	6	4	6			trace	0	11	A only
2987	7	18	40			0.1	0	22	A)
	" 18	38				0.1	0	26	B)
2988	10	16	52	17	34.0	0.5	2	2	A)
	" 16	50		17	40.0	0.3	2	11	B)
2989	11	12	12	12	56.3	0.6	2	7	A henceforth A only used.
2990	" 17	12				trace	1	4	A Nearly continuous small tremors.
2991	12	15	00			0.1	1	7	A Nearly continuous small tremors.
2992	13	18	00			0.1	1	8	A Nearly continuous small tremors.
2993	15	0	7			0.1	4	9	A Nearly continuous small tremors.
2994	" 14	32				trace	0	21	A
2995	17	13	8			0.1	0	55	A
2996	" 15	50				trace	0	54	A
2997	21	3	1	3	9.2	0.4	0	50	A
2998	23	0	52			trace	0	22	A
2999	" 2	13				0.1	0	59	A
3000	24	23	48			0.1	1	45	A
3001	25	11	00	11	41.6	0.3	2	00	A
3002	26	5	18			0.2	0	57	A
3003	29	19	20			trace	2	11	A Nearly continuous small tremors.

@ Light cut off from both instruments from 10h. on 4th.  
to 8h. on 5th.



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## REGISTER FROM KHEDIVIAL OBSERVATORY, HELWAN, EGYPT.

*Diodekba* Superintendent H. Knox-Shaw.

I.N. 2230-1913-3000 ex.

No.	DATE 1914.	Commencement.		MAXIMUM.		MAXIMUM AMPLITUDE.	DURATION.		REMARKS.
		H.	M.	H.	M.	mm.	H.	M.	
3004	Oct. 1	-	-			0.1	11	6	A) Started about 7h. when the instrument was being inspected.
3005	2	20	26			trace	0	15	A
3006	3	4	22			trace	1	50	A Nearly continuous small tremors.
3007	"	17	33	18	13.8	2.8	3	57	A(P <sub>2</sub> 17h. 44.4
3008	"	22	8.5	22	18.9	6.7	4	18	A(P <sub>2</sub> 22 <sup>h</sup> 10 <sup>m</sup> 0
3009	4	9	48			0.1	0	57	(Long waves 22 11.2
3010	"	15	57			trace	0	40	A
3011	"	18	52			0.1	0	28	A
3012	5	12	18			trace	0	9	A
3013	"	21	29			0.1	1	10	A
3014	6	19	39			0.2	2	54	A Nearly continuous small tremors.
3015	7	7	53			trace	0	32	A
3016	"	18	6			trace	0	14	A
3017	8	13	4			0.2	2	1	A
3018	"	16	19			trace	0	22	A
3019	9	2	48	3	8.2	1.0	2	55	(P <sub>2</sub> 2 <sup>h</sup> 53 <sup>m</sup> 2
3020	10	12	21			0.1	1	16	A(long waves 3 2.1
3021	11	1	57			trace	0	8	A
3022	"	9	48			0.1	0	17	A
3023	"	16	26			0.2	1	39	A(P <sub>2</sub> 16h. 53 <sup>m</sup> 0
3024	14	14	22			trace	2	45	A Nearly continuous small tremors.
3025	16	17	51			0.1	0	46	A
3026	"	22	31			trace	2	10	A Nearly continuous small tremors.
3027	17	6	25.5	6	36.6	1.6	1	41	A
3028	"	10	48	10	56	0.5	0	56	A



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*W. K. S.* Superintendent H. Knox-Shaw.

I.N. 2230-1913-3000 ex.

No.	DATE 1914 .	Commencement.		MAXIMUM.		MAXIMUM AMPLITUDE.	DURATION.		REMARKS.
		H.	M.	H.	M.	mm.	H.	M.	
3029	Oct. 17	13	27			trace	0	18	A
3030	21	3	35			trace	0	34	A
3031	"	16	13			0.2	2	54	A
3032	22	5	27			trace	0	36	A
3033	"	13	23			trace	0	14	A
3034	23	6	34			1.4	3	46	A (Maximum probably occurred while the papers were being changed about 7h.
3035	25	20	23			trace	1	12	A
3036	26	3	53			trace	0	21	A
3037	27	4	8	4	58.5	0.5	1	59	A
3038	"	16	1	16	17.7	0.5	1	14	A (P <sub>2</sub> 16 <sup>h</sup> 6 <sup>m</sup> .3
3039	28	0	39			0.2	2	51	A
3040	"	9	48			trace	0	38	A
3041	29	8	48			0.1	1	28	A
3042	30	10	47			0.1	0	7	A Probably local
3043	"	19	7			0.1	0	32	A
3044	"	21	6			0.1	0	40	A
3045	31	0	38			trace	0	7	A

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## REGISTER FROM KHEDIVIAL OBSERVATORY, HELWAN, EGYPT.

*ppp/* Superintendent H. Knox-Shaw.

I.N. 2230-1913-3000 ex.

No.	DATE 19 <u>14</u>	Commencement.		MAXIMUM.		MAXIMUM AMPLITUDE.	DURATION.		REMARKS.
		H.	M.	H.	M.	mm.	H.	M.	
3046	Nov. 1	22	00	22	6	0.2	0	12	A
3047	3	6	16			0.1	0	12	A Trace only
3048	4	2	37			0.1	0	28	A
3049	"	11	15	?		?	2	53	A Lamp went out.
3050	"	19	53	20	00	0.2	0	22	A
3051	5	7	41			0.1	0	6	A
3052	"	17	22			0.1	0	5	A
3053	6	4	3			trace	0	29	A
3054	7	7	?	7	43	0.2	1	?	A Beginning lost.
3055	8	12	41			0.1	1	44	A Nearly continuous small tremors.
3056	"	21	25	21	44	0.1	1	10	A
3057	9	9	19			trace	0	12	A
3058	10	2	55			trace	0	29	A
3059	"	7	?	8	31	0.2	2	?	A Beginning lost. Nearly continuous tremors.
3060	11	5	17			trace	0	5	A
3061	"	7	?	7	58	0.1	1	?	A Beginning lost.
3062	13	6	35			trace	0	5	A
3063	18	9	57.1	10	50.9	2.0	2	56	A
3064	19	7	24	7	31	0.1	0	34	A
3065	"	20	23			trace	0	5	A
3066	21	13	47			trace	0	4	A
3067	"	15	<b>56</b>			trace	0	3	A
3068	22	8	34.2	9	8	0.3	2	26	A Nearly continuous small tremors.
3069	23	9	11	9	17	0.2	0	15	A
3070	24	12	6.9	12	24.2	1.5	3	41	A Nearly continuous



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Seismograph A records E.W. motion; Seismograph B records N.S. motion.

## REGISTER FROM KHEDIVIAL OBSERVATORY, HELWAN, EGYPT.

*Directed* Superintendent H. Knox-Shaw.

I.N. 2230-1913-3000 ex.

No.	DATE 1914 .	Commencement.		MAXIMUM.		MAXIMUM AMPLITUDE.	DURATION.		REMARKS.
		H.	M.	H.	M.	mm.	H.	M.	
3090	Dec. 1	6	49			trace	0	7	A
3091	"	10	1	10	3	0.3	1	4	A
3092	3	0	22	1	3	0.3	2	17	A
3093	"	8	51			trace	0	1	A
3094	"	23	48			trace	0	9	A
3095	5	3	12	5	37	0.1	8	22	A Nearly continuous small tremors.
3096	6	1	30			trace	6	53	A Nearly continuous small tremors.
3097	9	18	20			0.1	0	8	A
3098	10	0	14	8	8	0.1	10	49	A Nearly continuous small tremors.
3099	11	7	44			trace	0	1	A
3100	13	8	2			trace	0	10	A
3101	14	14	52			trace	0	4	A
3102	15	3	47			trace	0	17	A
3103	"	9	27	10	58	0.2	2	33	A Nearly continuous small tremors.
3104	"	13	41			trace	0	1	A
3105	"	19	20			trace	0	26	A
3106	16	1	26			trace	1	37	A
3107	18	23	21	23	30	0.1	0	27	A
3108	19	13	21			0.1	0	25	A
3109	20	8	5			trace	0	12	A
3110	"	14	28	15	3	0.5	2	57	A
3111	21	12	22			trace	0	5	A
3112	22	5	33			trace	0	17	A
3113	"	9	16.7			trace	0	8	A
3114	23	18	30			trace	0	28	A



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 Seismograph A records E.W. motion; Seismograph B records N.S. motion.

## REGISTER FROM KHEDIVAL OBSERVATORY, HELWAN, EGYPT.

*Deleted* Superintendent H. Knox-Shaw.

I.N. 2230-1913-3000 ex.

No.	DATE 191 <u>4</u> .	Commencement.		MAXIMUM.		MAXIMUM AMPLITUDE.	DURATION.		REMARKS.
		H.	M.	H.	M.	mm.	H.	M.	
3115	Dec. 24	5	24			trace	4	12	A Nearly continuous small tremors.
3116	"	12	52			trace	0	14	A
3117	25	2	15			trace	0	43	A
3118	"	4	32			trace	0	56	A
3119	26	4	28			trace	0	47	A
3120	"	7	?			0.1	1	?	A Beginning lost.
3121	"	9	52			trace	0	32	A
3122	27	8	38			trace	0	14	A
3123	28	15	59			trace	0	6	A
3124	30	2	41			trace	1	39	A
3125	"	5	17			trace	0	17	A
3126	"	6	1			trace	0	6	A
3127	"	7	52			trace	0	59	A
3128	"	9	20			trace	0	5	A
3129	31	4	26			trace	2	42	A Nearly continuous small tremors.
3130	"	8	48			trace	1	50	A ✓