

SEISMOGRAPH RECORDS.

For the Month of January, 1931., 192

FROM HELWAN OBSERVATORY, EGYPT.

$\varphi = 29^{\circ} 51' N$, $\lambda = 31^{\circ} 20' E$, $h = 115$ m.

Director P. A. Curry.

Seismograph Milne-Shaw recording E—W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 7441 A, 1927-300 ex.

DATE 192 1931.	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ	REMARKS.
		h.	m.	s.			
January 2	P S M F	0	04	31	16	± 6	
		0	14	30			
		0	47	00			
		1.0 h.					
12	eP S F	15	09	16			
		15	10	29			
		16.5 h.					
15	eP S M F	2	05	25	20	± 126	
		2	17	06			
		2	56	25			
		6.0 h.					
27	iP iS M F	20	19	07	12	± 77	
		20	27	05			
		20	47	42			
		23.5 h.					
28	eP iS F	21	41	42			Probably Pr. record confused with microseisms.
		21	49	00			
		24.5 h.					

Smaller tremors were also recorded at : 1d 9h. 2d 10h. 3d 12h.

4d 0h. 4d 20h. 9d 2h. 9d 7h. 12d 15h. 12d 20h. 15d 21h. 15d 23h. 16d 19h.

17d 3h. 17d 23h 17m (local). 18d 13h. 18d 14h. 19d 13h. 20d 9h. 20d 15h.

21d 00h. 24d 13h. 24d 17h. 26d 4h. 28d 6h. 29d 1h 31m (local). 29d 18h.

SEISMOGRAPH RECORDS.

For the Month of February, 1931., 192

FROM HELWAN OBSERVATORY, EGYPT.

 $\phi = 29^{\circ} 51' N$, $\lambda = 31^{\circ} 20' E$, $h = 115$ m.Director P. A. Curry.

Seismograph Milne-Shaw recording E—W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 9753 A, 1928-400 ex.

DATE 192 . 1931.	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ.	REMARKS.
		h.	m.	s.			
February 2	P	23	06	35	21	± 94	
	S	23	20	32			
	M	24	16	22			
	F	26.7 h.					
		2.42 m					
" / 10	P	6	46	15	20	± 115	
	S	6	56	02			
	M	7	18	50			
	F	10.5 h.					
" / 12	eP	5	55	55	18	± 17	
	S	6	05	39			
	M	6	28	45			
	F	7.7 h.					
" / 13	eP	0	53	15			
	IS	1	02	17			
" / 13	P	1	47	17	20	± 69	
	S	2	01	04			
	M ₁	2	53	56			
	M ₂	3	05	35			
	F	5.3 h.					
" / 14	P	14	10	45	18	± 45	
	S	14	20	45			
	M	14	42	30			
	F	16.5 h.					
" / 19	P	17	52	24	20	± 30	
	IS	18	02	08			
	M	18	23	59			
	F	20.8 h.					

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SEISMOGRAPH RECORDS.

For the Month of February, 1931., 192 .

FROM HELWAN OBSERVATORY, EGYPT.

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Seismograph Milne-Shaw recording E—W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 9753 A, 1928-400 ex.

DATE 192 .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E μ.	REMARKS.
		h.	m.	s.			
1931.							
February 20	iP	5	44	53			Maximum lost in changing paper.
	iS	5	54	16			
	F	7.5 h.					
" 27	eP	9	50	54	28	+ 33	
	S	10	01	23			
	M	10	30	50			
	F	12.4 h.					
Smaller tremors were also recorded at : 6d 5h. 8d 2h. 9d 3h. 10d 1h. 11d 17h. 11d 20h. 13d 22h. 15d 12h. 16d 19h. 17d 3h. 18d 20h. 20d 10h. 22d 22h. 24d 17h. 26d 3h.							

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SEISMOGRAPH RECORDS.

For the Month of _____, 192__.

March 1931.

FROM HELWAN OBSERVATORY, EGYPT.

 $\varphi = 29^{\circ} 51' N$, $\lambda = 31^{\circ} 20' E$, $h = 115$ m.

Director _____

Seismograph Milne-Shaw recording E—W motion.

P. A. Curry.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 9753 A, 1928-400 ex.

DATE 192 .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ.	REMARKS.
		h.	m.	s.			
31							
March 2	1P 1 S F	2	37	53 08 17 5.0 h.			
" 7	P 1S M F.	0	19	57 29 05 3.0 h.	12	± 13	
" 8	1P 1S M F	1	53	32 00 58 4.2 h.	15	± 140	
" 9	P 1S M F	4	01	32 57 20 7.5 h.	20	± 250	
" 18	P 1S M F	8	22	05 00 48 12.1h.	18	± 200	
" 18	1P 1S M F	20	26	43 10 15 23.2h.	22	± 22	
" 19	1P 1S M F	6	37	18 15 04 9.1h.	16	± 18	
" 28	P S M F	12	52	17 45 35 16.0 h.	22	± 55	

A

SEISMOGRAPH RECORDS.

For the Month of _____, 192__.

March 1931.

XXXX

FROM HELWAN OBSERVATORY, EGYPT.

$\phi = 29^{\circ} 51' N$, $\lambda = 31^{\circ} 20' E$, $h = 115$ m.

Director _____

Seismograph Milne-Shaw recording E-W motion. **P. A. Curry.**

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 9753 A, 1928-400 ex.

DATE 192 .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE	REMARKS.
		h.	m.	s.		A _E . μ.	
Smaller tremors were also recorded at : 5d 18h. 7d 10h. 8d 13h.							
11d 6h. 11d 12h. 12d 10h. 12d 19h. 12d 22h. 14d 10h. 15d 9h.							
15d 15h. 15d 16h. 16d 7h. 25d 2h. 28d 00h. 29d 18h. 30d 1h 56m(Local)							
30d 14h. 30d 16h. 31d 16h.							
Record lost from 13d 23h. to 14d 6h.							
" " from 14d 13h. to 15d 6h.							

SEISMOGRAPH RECORDS.

For the Month of April, 1931., 192 .

FROM HELWAN OBSERVATORY, EGYPT.

 $\varphi = 29^{\circ} 51' N$, $\lambda = 31^{\circ} 20' E$, $h = 115$ m.Director P. A. Curry.

Seismograph Milne-Shaw recording E-W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 9753 A, 1928-400 ex.

DATE 192 .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ.	REMARKS.
		h.	m.	s.			
1931.							
April / 6	eP eS F	7	10	00 20 9.5 h.			
" / 9	eP eS F	23	13	50 25 24.2 h.			
" / 24	eP S M F	15	22	55 59 44 16.0 h.	7	± 13	
" / 27	iP iS M F	16	54	15 25 02 19.5 h.	5	± 90	
Smaller tremors were also recorded at : 1d 9h. 3d 2h. 3d 5h. 3d 14h 9m (local). 3d 21h. 3d 23h. 4d 20h. 6d 3h. 7d 8h. 8d 19h. 9d 8h. 11d 16h. 12d 2h. 12d 5h. 13d 1h. 15d 17h. 16d 12h. 17d 23h 50m (local). 19d 2h. 20d 20h. 22d 0h. 24d 3h. 24d 17h. 26d 5h. 29d 9h 55m (local).							

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SEISMOGRAPH RECORDS.

For the Month of May, 1931., 192

FROM HELWAN OBSERVATORY, EGYPT.

 $\varphi = 29^{\circ} 51' N$, $\lambda = 31^{\circ} 20' E$, $h = 115$ m.Director P. A. Curry.

Seismograph Milne-Shaw recording E—W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 9753 A, 1928-400 ex.

DATE 192 . 1931.	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ.	REMARKS.
		h.	m.	s.			
May / 1	eP eS M F	9	51	06 40 53 10.5 h.	6	± 7	
" / 5	P S F	6	47	03 00 7.4 h.			
" / 5	eP iS M F	14	15	12 25 48 14.9 h.	8	± 6	
" / 7	P iS F	0	50	21 20 1.5 h.			
" / 20	iP PR iS SR M ₁ M ₂ F	2	30	25 00 34 30 40 32 6.3 h.	22 20	± 180 ± 190	
Smaller tremors were also recorded at: 1d 0h. 1d 23h. 3d 19h. 4d 18h. 6d 16h. 6d 20h. 7d 18h. 8d 9h. 9d 9h. 10d 19h. 10d 20h. 12d 1h. 12d 10h. 12d 12h. 13d 14h. 13d 23h. 15d 8h. 17d 21h. 17d 13h. 17d 15h. 18d 11h. 20d 22h. 21d 15h. 22d 8h. 24d 0h. 24d 22h. 26d 20h. 27d 6h. 27d 7h. 28d 4h. 28d 18h. 29d 4h. 31d 22h.							

SEISMOGRAPH RECORDS.

For the Month of June, 1931., 192__.

FROM HELWAN OBSERVATORY, EGYPT.

 $\varphi = 29^{\circ} 51' N$, $\lambda = 31^{\circ} 20' E$, $h = 115$ m.Director P. A. Curry.

Seismograph Milne-Shaw recording E—W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 9753 A, 1928-400 ex.

DATE 192 .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E .	REMARKS.
		h.	m.	s.			
1931.							
June / 18	P	13	06	50			
	S	13	13	35			
	M	13	28	42	15	± 7	
	F	14.0 h.					
" / 23	P	6	27	45			
	S	6	31	07			
	M	6	38	47	10	± 7	
	F	6.9 h.					
" / 23	P	12	18	10			
	S	12	22	50			
	M	12	27	10	10	± 10	
	F	12.9 h.					
" / 24	S ?	23	58	15			
	M	24	04	27	15	± 23	
	F	24.5 h.					<i>Aqui voy.</i>
" / 30	1P	10	26	10			
	1S	10	27	51			
	F	10.8 h.					
<p>Smaller tremors were also recorded at : 1d 12h. 2d 2h. 2d 5h. 2d 17h. 4d 10h. 6d 16h. 7d 0h. 9d 0h. 9d 5h. 9d 13h. 9d 14h. 9d 16h. 13d 15h. 15d 4h. 15d 11h. 17d 12h. 17d 17h. 22d 15h. 22d 16h. 26d 1h. 28d 1h. 28d 8h. 28d 16h. 29d 21h.</p>							
<p>Record lost at 13d from 7h to 15h. " " " 14d " 5h. " 8h. " " from 17d 21h. to 18d 10h. " " at 26d from 3h. to 6h.</p>							

SEISMOGRAPH RECORDS.

For the Month of July, 1931., 192

FROM HELWAN OBSERVATORY, EGYPT.

 $\varphi = 29^{\circ} 51' N$, $\lambda = 31^{\circ} 20' E$, $h = 115$ m.Director P. A. Curry.

Seismograph Milne-Shaw recording E-W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 7441 A, 1927-300 ex.

DATE 192 1931.	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ	REMARKS.
		h.	m.	s.			
July 5	P	18	01	00			
	S	18	06	32			
" 12	P	16	58	08			
	S	17	08	28			
	M	17	39	30	20	+ 11	
	F	18.5 h.					
" 18	P	11	36	20			
	S	11	46	43			
	M	12	22	40	15	+ 7	
" 28	P	17	40	39			
	S	17	43	50			
	M	17	49	20	10	+ 10	
	F	17.5 h.					

Smaller tremors were also recorded at : 2d 4h. 3d 21h. 4d 7h.
4d 11h. 4d 21h. 6d 18h. 7d 4h. 8d 13h. 9d 12h. 11d 6h. 13d 12h. 14d 3h.
14d 8h. 14d 16h. 15d 16h. 17d 10h. 17d 12h. 18d 5h. 20d 8h. 23d 14h.
25d 12h. 28d 4h. 28d 15h. 28d 22h. 28d 23h. 29d 16h. 29d 17h. 29d 18h.
31d 0h. 31d 22h.

Record lost from	4d 21h.	to	5d. 6h.
"	" 10d. 18h.	"	11d. 6h.
"	" 12d. 20h.	"	13d. 6h.
"	" 20d. 10h.	"	21d. 6h.
"	" 21d. 22h.	"	22d. 6h.
"	at 30d. from	Oh. to	7h.

SEISMOGRAPH RECORDS.

For the Month of August, 1931

FROM HELWAN OBSERVATORY, EGYPT.

$\phi = 29^{\circ} 51' N$, $\lambda = 31^{\circ} 20' E$, $h = 115$ m.

Director

F. A. Curry.

Seismograph Milne-Shaw recording E-W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 7441 A, 1927-300 ex.

DATE 19 <u>31</u>	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ	REMARKS.
		h.	m.	s.			
August / 7	eP	2	27	35	20	± 34	
	PR	2	36	45			
	S	2	40	15			
	M	3	22	31			
	F	5.5h.					
" 18	Large earthquake between 14h. & 17h. Phases not measurable owing to the lines running together.						
" / 24	eP	21	41	42	12	± 105	
	S	21	47	55			
	M	21	57	25			
	F	25.4h.					
" / 27	P	15	33	38	12	± 500	Approximate
	S	15	39	58			
	M	15	53	10			
	F	19.5h.					
" / 28	eP	00	48	42	10	± 14	
	eS	00	54	00			
	M	01	05	50			
	F	1.7h.					
" / 29	P	12	34	31	10	± 7	
	S	12	37	29			
	M	12	42	48			
	F	13.0h.					
Smaller tremors were also recorded at :- 1d 17h. 1d 20h. 2d 18h. 4d 5h. 4d 0h. 6d 18h. 7d 10h. 8d 1h. 8d 4h. 8d 9h. 10d 3h. 11d 7h. 12d 8h. 15d 14h. 16d 2h. 16d 11h. 17d 18h. 20d 10h. 24d 2h. 25d 3h. 25d 10h. 25d 16h. 25d 19h. 25d 21h. 26d 00h. 26d 8h. 26d 11h. 26d 15h. 26d 19h. 26d 22h. 27d 5h. 27d 6h. 27d 9h. 27d 20h. 28d 3h. 28d 10h. 28d 12h. 28d 19h. 29d 21h. 29d 2h. 29d 6h. 29d 13h. 29d 20h. 30d 6h. 30d 22h. 31d 0h.							
RECORD	lost from	10d 9h.	to 11d. 7h. & from 11d 11h. to 12d 6h.				
"	"	12d 12h.	" 13d 7h. " " 13d 8h. " 14d 7h.				
"	"	14d 14h.	" 15d 7h. " " 19d 12h. " 20d 7h.				

SEISMOGRAPH RECORDS.

For the Month of SEPTEMBER, 1921 1931

FROM HELWAN OBSERVATORY, EGYPT.

 $\varphi = 29^{\circ} 51' N$, $\lambda = 31^{\circ} 20' E$, $h = 115$ m.Director P. A. Curry.

Seismograph Milne-Shaw recording E—W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 7441 A, 1927-300 ex.

DATE 192 .	PHASE.	TIME.	PERIOD.	AMPLITUDE A _E .	REMARKS.
Sept. 21	P	h. m. s. 2 32 50	s.	μ	
	S	2 42 08			
	M	3 05 05	18	± 11	
	F	4.1 h			
" / 21	P	10 38 52			
	S	10 49 00			
	M	11 19 28	15	± 14	
	F	12.5 h			
" / 25	1P	6 11 38			
	1S	6 21 25			
	M ₁	6 44 30	20	± 340	
	M ₂	6 46 32	20	± 330	
	F	9.5 h			
Smaller tremors were also recorded at :					
2d. 03h.	2d. 07h.	3d. 15h.	3d. 17h.	4d. 19h.	5 d. 08h.
6d. 12h.	6d. 14h.	8d. 16h.	8d. 19h.	9d. 14h.	9d. 20h.
10d. 14h.	10d. 22h.	11d. 14h.	11d. 16h.	11d. 23h.	12d. 02h.
12d. 16h.	12d. 18h.	13d. 07h.	13d. 09h.	14d. 03h.	14d. 05h.
14d. 21h.	15d. 12h.	15d. 21h.	16d. 10h.	16d. 13h.	16d. 19h.
18d. 19h.	18d. 22h.	19d. 08h.	20d. 15h.	21d. 00h.	21d. 13h.
22d. 02h.	23d. 02h.	23d. 13h.	24d. 00h.	24d. 17h.	25d. 04h.
25d. 21h.	26d. 20h.	27d. 01h.	28d. 17h.	29d. 05h.	29d. 10h.
30d. 13h.					30d. 11h.

SEISMOGRAPH RECORDS.

For the Month of October 1931, ~~192~~

FROM HELWAN OBSERVATORY, EGYPT.

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Director

P. A. CURRY.

Seismograph Milne-Shaw recording E—W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

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Govt. Press 7441 A, 1927-300 ex.

DATE 192 ³¹	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ	REMARKS.
		h.	m.	s.			
October 1	iP	5	45	01			Local shock, felt in Cairo. <i>Connecting lever displaced from its bearing.</i> Large earthquake lasting until 3h. on Oct. 4th. No definite S or Maxima. Record appears to be from more than one earthquake superposed.
" 3	Pr	19	34	50			
" 5	P	22	37	46	10	± 10	
	S	22	43	58			
	M	22	54	29			
	F	23.7h					
" 10	eP	0	39	12	19	± 95	
	Pr	0	41	15			
	S	0	51	15			
	M	1	46	32			
	F	5.6h					
" 18	eP	4	49	35	6.5h		
	S	4	53	23			
	F	6.5h					
" 20	P	16	02	52	16.7h		
	S	16	06	27			
	F	16.7h					
Smaller tremors were also recorded at :-							
1d 12h.	3d 10h.	5d 05h.	5d 19h.	6d 18h.	7d 11h.	8d 01h.	
10d 08h.	10d 16h.	12d 04h.	12d 13h.	13d 05h.	13d 07h.	17d 15h.	
18d 01h.	21d 10h.	23d 12h.	23d 20h.	24d 12h.	25d 06h.	26d 05h.	
26d 12h.	26d 15h.	26d 20h.	26d 21h.	27d 02h.	27d 19h.	28d 00h.	
28d 05h.	29d 09h.	31d 10h.					
Record lost from 18d 7h. to 19d 6h.							

SEISMOGRAPH RECORDS.

For the Month of November 1931, 1921.

FROM HELWAN OBSERVATORY, EGYPT.

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Seismograph Milne-Shaw recording E—W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

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DATE 192 .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ.	REMARKS.
		h.	m.	s.			
1931							
Nov. / 2	P	10	15	19			
	Pr	10	22	10			
	S	10	25	52			
	M ₁	10	58	38	18	± 110	
	M ₂	11	02	52	16	± 96	
	F	13.5h					
Nov. / 5	eP	12	28	10			doubtful
	S	12	35	08			
	M	12	51	40	14	± 10	
	F	13.9h					
Nov. / 16	eP	8	29	40			
	S	8	33	35			
	M	8	39	50	10	± 8	
	F	9.0h					
Nov. / 20	P	14	37	46			
	M	15	33	50	22	± 14	
	F	17.1h					
Smaller tremors were also recorded at :-							
1d 13h.	1d 19h.	2d 00h.	2d 05h.	2d 17h.	3d 16h.	4d 18h.	
5d 22h.	16d 03h.	16d 10h.	18d 03h.	18d 23h.	21d 08h.	21d 17h.	
23d 13h.	23d 23h.	24d 09h.	26d 03h.	26d 13h.	30d 17h.		

SEISMOGRAPH RECORDS.

For the Month of DECEMBER, 1921 1931

FROM HELWAN OBSERVATORY, EGYPT.

 $\varphi = 29^{\circ} 51' N$, $\lambda = 31^{\circ} 20' E$, $h = 115$ m.Director P. A. CURRY.

Seismograph Milne-Shaw recording E—W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 9753 A, 1928-400 ex.

DATE 192 .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE	REMARKS.
		h.	m.	s.		A _E . μ.	
1931							
Dec. 18	P	10	01	12	16	± 14	
	e(S)	10	12	20			
	M	10	36	45			
	F	11.5h					
Dec. 24	iP	23	03	27	7	± 6	
	S	23	07	20			
	M	23	11	16			
	F	23.6h					
Dec. 31	e	00	33	27	18	± 11	
	eS	00	41	30			
	M	01	00	32			
	F	02.5h					
Smaller tremors were also recorded at :							
1d 03h.	1d 17h.	1d 19h.	2d 21h.	3d 21h.	4d 03h.	6d 23h.	
7d 20h.	11d 04h.	18d 02h.	20d 09h.	22d 03h.	24d 04h.	25d 03h.	
28d 21h.	30d 01h.						