

SEISMOGRAPH RECORDS.

For the Month of JANUARY, 1921932

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 = $12^{\text{m}}.0$.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 9753 A, 1928-400 ex.

DATE 192 .	PHASE.	TIME.	PERIOD.	AMPLITUDE A_E .	REMARKS.
		h. m. s.	s.	μ .	
1932					
Jan. 2	P S F	23 40 11 23 42 41 24.4h			
Jan. 7	iP M F	16 52 38 16 52 43 17.0h	< 4	± 14	Local
Jan. 9	P F	Lo 41 22 13.2h			
Jan. 18	P M F	18 07 35 18 07 52 18.2h	< 4	± 12	Local
Jan. 22	P eS M F	00 52 20 00 54 50 00 57 12 01.2h	4	± 14	
Jan. 29	P e M F	14 01 25 14 11 25 15 47 26 18.4h	22	± 44	
Jan. 31	P eS M F	12 12 33 12 14 40 12 19 40 13.1h	6	± 11	

Smaller tremors were also recorded at :

1d 00h. 1d 21h. 2d 17h. 3d 08h. 3d 14h. 4d 12h. 5d 01h. 5d 02h.
 6d 17h. 7d 22h. 8d 06h. 10d 01h. 13d 16h. 17d 08h. 18d 13h. 18d 21h.
 20d 02h. 24d 04h. 25d 02h. 30d 03h. 30d 11h. 30d 17h. 30d 19h. 30d 20h.
 30d 21h. 30d 22h. 30d 23h. 31d 01h. 31d 03h. 31d 04h. 31d 05h. 31d 08h.
 31d 11h. 31d 14h. 31d 15h. 31d 16h. 31d 20h. 31d 23h.

N.B. The meteorological observer at Jibuti reported many shocks
 on January 30th. 1932

SEISMOGRAPH RECORDS.

For the Month of FEBRUARY, 192 1932

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.	AMPLITUDE A _E .	REMARKS.
		h. m. s.	s.	μ .	
1932					
Feb. 1	P	7 43 10			
	iS	7 47 10			
	L	7 50 20			
	M	7 52 51	10	± 19	
	F	8.8h			
Feb. 3	P	6 29 20			
	S	6 39 58			
	M	7 15 05	20	± 23	
	F	9.0h			
Feb. 3	e	19 49 28			
	M	19 54 32	8	± 3	
	F	20.7h			
Feb. 11	e	11 46 05			
	e	11 50 02			
	M ₁	11 55 42	10	± 12	
	M ₂	12 08 41	8	± 11	
	F	13.2h			Probably a 2nd earth-quake.
Feb. 12	eP ₁	1 04 32			
	eS	1 09 28			
	L	1 14 15			
	M ₁	1 15 25	15	± 24	
	M ₂	1 17 27	13	± 22	
	F	2.7h			
Feb. 14	eP	23 23 40			
	i(S)	23 31 50			
	L	23 38 21			
	F	24.7h			
Feb. 23	e	0 30 32			
	(S)	0 37 45			
	e	0 44 42			
	M	25 01 38	20	± 86	
	F	2.5h			

Smaller tremors were also recorded at :

1d 03h. 1d 04h. 1d 06h. 1d 09h. 1d 10h. 1d 19h. 2d 14h. 2d 19h.
 3d 13h. 3d 17h. 4d 21h. 5d 14h. 5d 17h. 5d 23h. 6d 07h. 15d 10h.
 16d 14h. 17d 17h. 19d 02h. 20d 16h. 20d 18h. 20d 19h. 21d 01h. 21d 13h.
 h. 23d 21h. 26d 11h. 27d 01h. 27d 11h.

SEISMOGRAPH RECORDS.

For the Month of MARCH 1932., 1922.

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.	AMPLITUDE A _E .	REMARKS.
		h. m. s.	s.	μ.	
March 15	1P	10 21 31			
	eS	10 26 05			
	L	10 29 10			
	H	10 31 33	10	$\pm$ 13	
	F	11.3h.			
" 26	P	00 11 32			
	iS	00 22 12			
	H	00 56 36	20	$\pm$ 17	
	F	3.2h.			
" 26	eP	10 06 10			
	iS	10 16 40			
	L	10 50 25			
	H	10 52 06	22	$\pm$ 36	
	F	12.9h.			
Smaller tremors were also recorded at :-					
4d 23h. 5d 03h. 6d 00h. 6d 22h. 7d 00h. (Local). 7d 3h; 7d 14h. 8d 5h.					
8d 18h. 9d 10h. 10d 6h. 12d 9h. 14d 11h. 14d 22h. 15d 4h. 15d 7h.					
16d 2h. 16d 21h. 16d 22h. 18d 5h. 19d 11h. 20d 01h. 21d 20h. 21d 22h.					
23d 4h. 23d 13h. 24d 16h. 26d 7h. 27d 9h. 27d 17h. 28d 00h. 30d 06h.					
31d 14h.					

SEISMOGRAPH RECORDS.

For the Month of APRIL, 1932

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 4730 A, 1929-300 ex.

DATE 19 <u>32</u> .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ.	REMARKS.
		h.	m.	s.			
April 4	P	19	28	45			
	IS	19	38	32			
	F	20.7h					
April 18	e	11	29	28			
	S	11	34	40			
	M	11	43	55	15	± 36	
	F	12.6h					
April 26	e	8	14	05			
	eS	8	23	40			
	M	9	04	40	16	± 8	
	F	9.7h					
April 30	e	1	15	45			
	eS	1	23	22			
	M ₁	1	39	30	12	± 5	
	M ₂	1	43	50	15	± 7	
	F	2.5h.					
Smaller tremors were also recorded at :							
1d 1h. 1d 5h. 1d 19h. 3d 21h. 4d 15h. 6d 9h. 8d 10h. 8d 13h. 10d 7h.							
11d 10h. 11d 13h 34m 50s (Local). 12d 7h. 13d 00h. 13d 4h. 13d 8h 23m							
44s (Local). 14d 1h. 14d 12h. 16d 11h. 18d 18h. 22d 5h. 25d 8h. 26d 2h.							
27d 1h. 27d 23h. 28d 5h. 29d 17h.							

SEISMOGRAPH RECORDS.

For the Month of MAY, 192 1932

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 .	PHASE.	TIME. h. m. s.	PERIOD. s.	AMPLITUDE A _E . μ.	REMARKS.
/ May 7	P	14 57 20			
	S	15 01 08			
	M	15 04 36	9	± 4	
	F	15.5h		$\pm$	
/ May 14	eP	3 46 30			
	IS	3 47 45			
	M ₁	3 47 50	< 4	± 12	
	M ₂	3 53 15	16	± 13	
	F	4.3h			
/ May 14	1P	13 24 17			
	1PS	13 34 32			
	M ₁	13 42 00	20	± 400	
	M ₂	14 07 22	20	± 370	
	F	18.0h			
/ May 20	1P	19 20 41			
	IS	19 24 32			
	M	19 29 41	15	± 15	
	F	20.5h			
/ May 21	eP	10 24 23			
	1Pr	10 28 52			
	1ScPos	10 34 56			
	Sr	10 38 12			
	L	11 05 00			
	M	11 14 56	20	± 46	
	F	13.3h			
/ May 21	eP	16 01 35			
	eS	16 09 03			
	L	16 18 00			
	M	16 21 16	11	± 14	
	F	17.2h			
/ May 26	eP	16 28 28			
	S	16 34 50			
	M	16 45 52	12	± 35	
	F	20.5h			
Smaller tremors were also recorded at :					
1d 2h. 1d 4h. 1d 5h. 1d 17h. 3d 00h. 3d 9h. 4d 2h. 5d 4h. 5d 9h. 6d 5h. 6d 17h.					
10d 1h. 10d 14h. 10d 21h. 11d 4h. 11d 7h. 12d 5h. 14d 9h. 14d 10h. 15d 16h.					
17d 11h. 17d 13h. 18d 19h. 21d 13h. 20m 33s Local. 21d 14h 34m 33s Local.					
21d 22h. 22d 11h. 22d 17h. 22d 23h. 23d 4h 12m 16s Local. 23d 16h 43m 01s Local.					
23d 18h. 24d 14h. 24d 23h. 26d 5h. 26d 22h. 27d 1h. 27d 10h. 27d 11h. 30d 1h.					

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SEISMOGRAPH RECORDS.

For the Month of JUNE, 1921932

FROM HELWAN OBSERVATORY, EGYPT.

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

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 3753 A, 1928-400 ex.

DATE 192 <u>1932</u>	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A_E μ .	REMARKS.
		h.	m.	s.			
/ June 3	iP.	10	52	02	20	± 225	Doutful, confused with waves of the following hour.
	Pr.	10	56	40			
	S	11	06	25			
	M	11	50	48			
	P	15.8h					
/ June 7	eP	22	07	08	10	± 5	
	eS	22	09	03			
	H	22	12	08			
	P	22.4h					
/ June 10	eP	20	34	29			
	S	20	44	53			
	P	21.6h					
/ June 11	eP	08	36	29	12	± 28	
	IS	08	43	19			
	M	08	48	40			
	P	09.4h					
/ June 13	eP	21	09	40	15	± 6	
	S	21	19	49			
	M	21	49	40			
	P	22.5h					
/ June 14	P	06	11	46			
	S	06	21	52			
	P	07.2h					
/ June 16	P	01	29	37	20	± 70	
	S	01	38	37			
	M	01	59	36			
	P	02.6h					
/ June 18	eP	10	27	28	20	± 140	
	Pr	10	32	00			
	[S]	10	38	09			
	S R	10	41	52			
	L	11	15	52			
	P	11	26	00			
	P	15.0h					
	P						

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SEISMOGRAPH RECORDS.

For the Month of JUNE, 192 1932

FROM HELWAN OBSERVATORY, EGYPT.

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

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.			
June 22	6 ²	13	19	08			
	Pr	13	25	15			
	13	13	29	02			
	M	14	09	20	22	+ 21	
	P	16.1h				- 21	
Smaller tremors were also recorded at:							
1 1 1h. 2d 20h. 3d 0h. 3d 18h. 4d 2h. 4d 14h. 5d 9h.							
5d 13h. 6d 5h. 6d 9h. 6d 12h. 6d 15h. 8d 8h. 8d 11h. 8d 14h.							
8d 15h. 9d 7h. 10d 6h. 11d 7h. 11d 17h. 12d 23h. 14d 10h. 14d 11h							
14d 13h 24 42s Local. 16d 18h. 16d 23h. 18d 1h. 18d 6h. 18d 18h.							
18d 12h. 19d 15h. 20d 4 h 20h 54h. 20d 6h. 21d 7h. 21d 5h. 21d 8h.							
22d 10h 22d 1h. 23d 2h. 24d 9h 30m 7s Local. 25d 2h. 26d 19h.							
28d 17h. 29d 12h. 29d 9h. 29d 18h. 29d 18h. 30d 12h. 30d 15h.							

SEISMOGRAPH RECORDS.

For the Month of JULY, 19232

FROM HELWAN OBSERVATORY, EGYPT.

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

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 2753 A, 1928-400 ex.

DATE	PHASE.	TIME.	PERIOD.	AMPLITUDE A _E .	REMARKS.
192 <u>32</u>					
July 7	eS	16 h. 44 m. 40 s.		μ .	
	K	16 50 56			
	E	16 55 00			
	L	17 10 00			
	M	17 20 47	25	± 20	
	F	19.2h			
July 12	E	19 43 26			
	L	19 59 27			
	M	20 31 30	22	± 15	
	F	22.3h			
Smaller tremors were also recorded at:					
	d	h	d	h	
	2	2	15	8	
	2	4	15	15	
	2	12	15	21	
	2	14	16	7	
	2	21	16	21	
	3	2	19	4	2m Local
	3	3	19	4	11m Local
	3	18	20	20	
	4	3	21	8	
	5 // 4	15	21 13 4	15	
	5	23	21	17	
	7	8	21	20	
	8	9	22	2	
	9	13	22	21	
	9	20	24	19	
	10	1	25	2	
	10	7	25	8	
	12 //	8	25	9	
	13	9	27	21	
	13	10	29	1	
	14	9	29	21	
			30	12	

SEISMOGRAPH RECORDS.

For the Month of August 1932., 19

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^m.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 4730 A, 1929-300 ex.

DATE 19 <u>32</u> .	PHASE.	TIME. h. m. s.	PERIOD. s.	AMPLITUDE A_E μ .	REMARKS.
August 2	P	4 38 48			
	S	4 49 20			
	M	5 23 25	20	± 8	
	F	5.8 h.			
" 14	1P	4 49 07			
	1S	4 56 40			
	1	5 02 07			
	L	5 10 00			
	M1	5 11 32	20	± 46	
	M2	5 15 27	15	± 36	
	F	7.0 h.			
" 21	e	4 27 40			
	S	4 37 41			
	M	5 10 02	15	± 7	
	F	5.8 h.			
" 22	e	11 33 41			
	F	2.6h.			
Smaller tremors were also recorded at :-					
D.	H.	D.	H.		
1	2	13	00		
1	3	13	21		
1	11	14	07		
2	10	15	04		
4	07	16	07		
5	01	17	09		
6	23	19	04		
8	10	20	17		
9	01	21	06		
9	07	24	12		
10	02	25	10		
10	17	26	23		
11	09	29	11		
Clock stopped from 5d. 12h. to 6d. 6h.					
& " 11d. 17h. to 12d. 6h.					

SEISMOGRAPH RECORDS.

For the Month of September 1932., 19

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 4730 A, 1929-300 ex.

DATE 19 .	PHASE.	TIME. h. m. s.	PERIOD. s.	AMPLITUDE A _E μ.	REMARKS.
September 3	• 18 H F	12 11 30 12 21 50 12 54 06 13.6h.	20	± 7	
" 8	• S L H F	07 31 00 07 35 11 07 38 50 07 42 22 8.5h.	12	± 36	
" 9	• H F	13 55 05 14 40 40 16.4h.	18	± 10	
" 15	• S H F	11 25 00 11 36 31 12 14 40 12.7h.	18	± 10	
" 15	• • L H1 H2 H3 H4 F	14 15 00 14 25 00 15 09 50 15 18 15 15 25 10 15 35 20 15 49 25 17.5h.	20 20 20 18	± 25 ± 25 ± 30 ± 20	There appears to be two earthquakes super posed on the record.
" 23	•P 13 F	14 33 55 14 43 30 16.5h.			
" 26	17 13 L H L F	19 23 40 19 26 08 19 31 13 19 33 20 21 31 05 23.4h.	18	± 300	
" 28	P S H F	16 55 12 16 57 25 17 05 08 17.8h.	18	± 14	

SEISMOGRAPH RECORDS.

(2)

For the Month of September 1938, 19

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 4730 A, 1923-300 ex.

DATE 19 .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A_E μ .	REMARKS.
		h.	m.	s.			
September 29	1P	04	00	24			
	1S	04	02	48			
	L	04	07	00			
	M	04	10	10	18	$\pm$ 62	
	F	5.7h.					
" 29	P	17	59	20			
	1S	18	09	48			
	M1	18	43	50	18	$\pm$ 10	
	M2	18	47	16	18	$\pm$ 10	
	F	19.8h.					
" 30	e	06	13	32			
	1S	06	15	10			
Smaller tremors were also recorded at :-							
D.	H.	D., H.					
2	2	14	18				
3	3	17	12				
5	7	17	22				
7	8	18	14				
8	2	20	16				
8	15	20	21				
8	23	24	12				
9	7	26	15				
11	14	29	15				
12	7	30	7				
12	23						
14	9						

Seismograph Milne-Shaw recording E - W motion

Theoretical magnification : 250.

Period of undamped pendulum : 120.0.

Times are expressed in Greenwich Civil Mean Time.

SEISMOGRAPH RECORDS.

For the Month of October 1932

From Helwan Observatory, Egypt.

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

Director P.A. Curry

Date 1932	Phase	Time	Period	Amplitude A E	Remarks.
October 2	e	3 18 00			
	e	3 33 20			
	M	3 46 22	15	± 18	
	M	4 00 25	20	± 29	
	F	5.8h.			
" 16	e	12 21 20			
	eS	12 32 00			
	M	13 06 32	25	± 16	
	F	15.5h.			
" 23	P	13 38 15			
	IS	13 39 26			
	F	14.6h.			
" 29	e	11 14 50			
	eS	11 20 30			
	M	11 34 40	10	± 5	
	F	13.7h.			

Smaller tremors were also recorded at ;

Date	Hour	Date	Hour	Date	Hour
1	8	10	15	20	19
1	10	12	3	23	1
1	13	12	20	23	17
2	18	12d. 2h. 10m. Local		23	21
3	9	15	22	25	17
7	11	17	13	28	11*
8	1	18	4	28d. 14h. 16m. 20s. Local. * 50	
9	6	18	12	30	21
9	13	20	17	31	7

SEISMOGRAPH RECORDS.

For the Month of November 1932, 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 2753 A, 1928-400 ex.

DATE 192 .	PHASE.	TIME. h. m. s.	PERIOD. s.	AMPLITUDE A _E . μ .	REMARKS.
November 1st	eP	16 22 27			
	eS	16 24 45			
	L	16 30 40			
	F	17.0h			
" 2nd	P	11 23 05			
	M	12 29 49	20	± 13	P. & S. probably marked by waves from previous earth quake
	F	13.5h			
" 13th	1P	4 58 33			
	1S	5 08 05			
	F	7.5h			
" 26th	eP	4 36 30			
	1S	4 46 41			
" 29th	eP	11 30 50			
	S	11 40 11			
	L	12 13 10			
	M	12 23 29	17	± 36	
	F	13.5h			
----- <u>Smaller Tremors were also recorded at</u>					
<u>Date</u>	<u>Hour</u>	<u>Remarks</u>	<u>Date</u>	<u>Hour</u>	<u>Remarks</u>
1	11		25	23	
3	20		26	17	
5	12		27	4	
8	5		28	14 57 ^a	Local
9	18		28	19 54 42 ^b	Local
11	9 58	Local	29	2	
11	18		29	3	
13	16		29	7	
14	1		29	18 19 ^a	Local
14	20		29	20 49 50 ^b	Local
15	14		30	4	
17	4		30	5	
18	14		30	7	
21	18		30	11	
22	15				
23	23				

SEISMOGRAPH RECORDS.

For the Month of December, 19 33

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 4730 A, 1929-300 EX.

DATE 19 .	PHASE.	TIME.	PERIOD.	AMPLITUDE A _E .	REMARKS.
		h. m. s.	s.	μ.	
Dec. 4th	SP	4 13 45			
	S	4 21 41			
	M	4 40 46	15	± 9	
	F	5.8 h.			
" 4th	1P	8 24 07			
	1S	8 34 57			
	L	8 7 26	18	± 59	
	M	9 09 08			
" 4th	1P	10 45 51			
	1S	10 56 35			
	M	11 29 51	20	± 8	Superposed on = remain- der of record of pre- vious earthquake.
	F	12.3 h.			
" 7th	S	7 57 36			
	1S	7 58 47			
	M	7 59 59	24	± 20	Local earthquake felt in Cairo.
	F	8.3			
" 7th	S	16 41 42			
	SP?	16 51 35			
	M	17 39 17	20	± 11	
	F	19.3 h.			
" 19th	S	15 19 56			
	S	15 21 18			
	M	15 21 39	8	± 21	
	F	15.9 h.			
" 21st	L	7 4 00			
	M ₁	7 12 37	22	4 47	
	M ₂	7 35 25	19	4 28	P. & S. lost in changing paper
	M ₃	7 39 05	30	4 30	
	M ₄	7 46 48	20	4 31	
	F	9.8 h.			
" 25th	1P	2 13 47			
	1S	2 21 23			
	M ₁	2 40 41	16	5 140	
	M ₂	2 42 46	15	5 136	
	M ₃	2 44 12	15	5 136	
	F	6.6 h.			

SEISMOGRAPH RECORDS.

For the Month of December, 19 32

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.

Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 4730 A, 1929-300 ex.

DATE 19 .	PHASE.	TIME.	PERIOD.	AMPLITUDE A _E .	REMARKS.
		h. m. s.	s.	μ.	
Dec. 28th	e	19 4 58			
	18	19 5 56			
	M	19 6 15	14	± 8	
	P	19.5 h			
31st	e	6 40 50			
	1	6 49 01			
	M	7 03 06	18	± 160	No record between 6h-51m and 6h-59m owing to changing of paper.
	P	8.5 h			
Smaller Tremors were also recorded at					
<u>Day</u>	<u>Hour</u>	<u>Remarks</u>	<u>Day</u>	<u>Hour</u>	<u>Remarks</u>
1	20				
2	22				
3	7				
3	8				
3	18				
5	22				
8	15				
9	16				
9	9				
9	16				
10	4				
10	10				
10	11				
11	4				
11	13				
15	19				
16	7				
17	18				
19	7				
23	14				
24	4				
24	7				
28	9				
28	21				
30	21				

17