

SEISMOGRAPH RECORDS.

For the Month of July, 1920, 1920

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 = 12s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 7441 A, 1927-300 ex.

| DATE 1920 | PHASE. | TIME. h. m. s. | PERIOD. s. | AMPLITUDE A_E . μ | REMARKS. |
|---|-------------------|--|---------------|---------------------------|----------|
| 1930. | | | | | |
| July 2 | P IS M F | 21 12 46 21 20 08 21 40 43 25, 2 h. | 15 | + 160 | |
| " 22 | P S F | 19 38 20 19 48 42 21.0 h. | | | |
| " 23 | P IS F | 0 12 32 0 16 02 2.3 h. | | | |
| " 25 | P S F | 19 47 45 19 48 45 20.3 h. | | | |
| Smaller tremors were also recorded at : 1d 1h. 1d 15h. 1d 17h. 3d 19h. 4d 0h. 5d 18h. 5d 23h. 7d 13h. 7d 19h 08m (local). 7d 21h. 8d 5h. 8d 10h. 8d 17h. 9d 4h. 10d 0h 1m (local). 10d 20h. 11d 7h. 11d 17h. 13d 1h. 13d 8h. 13d 14h. 13d 19h. 14d 22h. 17d 14h. 17d 20h. 19d 0h. 19d 15h. 19d 21h. 20d 10h. 21d 14h. 21d 18h. 22d 0h. 22d 12h. 27d 3h. 27d 19h. 28d 4h. 29d 6h. | | | | | |

MINISTRY OF PUBLIC WORKS.

OBSERVATORY.

HELWAN, EGYPT

PHYSICAL DEPARTMENT.

TELEPHONE NO. 45 (HELWAN.)

, 192

Earthquake recorded by Milne-Shaw Seismograph
at Helwan Observatory.

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| Date | Phase | G. M. T. | Remarks. |
|---------------------------------|-------|---|----------|
| August 23 rd 1930 | eP | 10 ^h 57 ^m 53 ^s | |
| | iS | 11 01 53 | |

J. L. Forte
Acting Director

Helwan Observatory.

MINISTRY OF PUBLIC WORKS.

OBSERVATORY.

HELWAN, EGYPT

PHYSICAL DEPARTMENT.

TELEPHONE NO. 45 (HELWAN.)

Helwan
a 25 Km. au sud du Caire

26th July 1930, 192

Earthquake recorded by Milne-Shaw Seismograph
at Helwan Observatory.

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| Date | Phase. | G. M. T. | Remarks. |
|-------------------------------|--------|---|----------|
| 1930 22 nd July | P | 19 ^h 38 ^m 20 ^s | |
| | S | 19 48 42 | |

| | | | |
|-----------------------|---|---------|----------------|
| 23 rd July | P | 0 12 32 | Felt in Italy. |
|-----------------------|---|---------|----------------|

| | | |
|-----|---------|-----------------|
| i S | 0 16 02 | $\Delta = 2080$ |
|-----|---------|-----------------|

$\Delta = 2080$
D. April 1930 P. 1930 S.

J. L. Forte
Acting Director

Helwan Observatory.

MINISTRY OF PUBLIC WORKS.

PHYSICAL DEPARTMENT.

OBSERVATORY,
HELWAN, EGYPT.

TELEPHONE NO. 45 (HELWAN.)

, 192

Earthquake recorded by Milne-Shaw Seismograph
at Helwan Observatory.

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| Date | Phase. | G. M. T. | Remarks. |
|------------------|--------|---|----------|
| July 2nd 1930 | P | 21 ^h 12 ^m 46 ^s | Calcutta |
| | iS | 21 20 08 | India |

J. L. Forte
for Director

Helwan Observatory.

SEISMOGRAPH RECORDS.

For the Month of August. 1930., ~~102~~
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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. Print. 7441 A, 1927-300 ex.

| DATE 1930. | PHASE. | TIME. h. m. s. | PERIOD. s. | AMPLITUDE A_E . | REMARKS. |
|--|--------|-------------------|---------------|----------------------|----------|
| | | | | | |
| August 17 | P | 12 34 14 | | | |
| | S | 12 38 05 | | | |
| | M | 12 42 03 | 4 | ± 24 | |
| | P | 13.9h. | | | |
| " 18 | eP | 10 07 20 | | | |
| | S | 10 17 52 | | | |
| | M | 10 50 11 | 18 | ± 65 | |
| | F | 12.7h. | | | |
| " 23 | eP | 10 57 53 | | | |
| | S | 11 01 53 | | | |
| | M | 11 07 50 | 10 | ± 280 | |
| | F | 13.5h. | | | |
| Smaller tremors were also recorded at :- | | | | | |
| 1d.18h.49m.(local) 2d.16h. 3d.00h. 3d.22h. 4d.5h. 4d.16h. 5d.2h. 5d.23h. | | | | | |
| 6d.4h. 8d.0h.9d.15h. 9d.18h. 9d.20h. 10d.0h. 10d.4h.35m.(local) 17d.9h. | | | | | |
| 18d.4h. 20d.00h. 20d.19h. 20d.21h. 21d.6h. 22d.00h.47m.(local). 22d.19h. | | | | | |
| 23d.4h. 23d.15h. 24d.00h. 24d.9h. 25d.20h. 26d.4h. 29d.7h. 29d.9h. 30d. | | | | | |
| 10h. | | | | | |

SEISMOGRAPH RECORDS.

For the Month of January, 1930., 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 = 12s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Print. 10,356 A, 1926-300 ex.

| DATE 1930. | PHASE. | TIME. h. m. s. | PERIOD. s. | AMPLITUDE A_E . μ | REMARKS. |
|---------------|--------|-------------------|---------------|-------------------------------|---|
| | | | | | Smaller tremors were recorded at : 1d 11h. 5d 1h. 5d 9h. 5d 19h. 7d 1h. 7d 17h. 9d 4h. 14d 3h. 14d 22h. 16d 0h. 16d 13h. 17d 11h. 17d 18h. 18d 7h. 20d 8h..21d 5h. 21d 18h. 23d 3h. 24d 15h. 24d 21h. 25d 1h. 28d 7h. 28d 10h. 28d 11h. 29d 20h. |

SEISMOGRAPH RECORDS.

For the Month of February, 1930., 192^{XXX}

FROM HELWAN OBSERVATORY, EGYPT.

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

P. A. CURRY.

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 10,356 A, 1926-300 ex

| DATE 19 <u>2</u> ^{XXX} . | PHASE. | TIME. | | | PERIOD. | AMPLITUDE A_E . | REMARKS. | | | | | | | | |
|--------------------------------------|---|---------|-----|-------|---------|----------------------|----------|--|--|--|--|--|--|--|--|
| | | h. | m. | s. | | | | | | | | | | | |
| February 14 | iP | 18 | 40 | 07 | 5 | ± 120 | | | | | | | | | |
| | iS | 18 | 41 | 30 | | | | | | | | | | | |
| | M | 18 | 41 | 48 | | | | | | | | | | | |
| | F | 19.8 h. | | | | | | | | | | | | | |
| " 15 | eP | 19 | 10 | 10 | 10 | ± 31 | | | | | | | | | |
| | S | 19 | 14 | 37 | | | | | | | | | | | |
| | M | 19 | 19 | 34 | | | | | | | | | | | |
| | F | 19.9 h. | | | | | | | | | | | | | |
| " 23 | P | 18 | 21 | 05 | | | | | | | | | | | |
| | S | 18 | 23 | 15 | | | | | | | | | | | |
| | F | 19.0 h. | | | | | | | | | | | | | |
| | Smaller tremors were also recorded at : 1d 12h. 1d 19h. 2d 15h. 3d 5h. 5d 2h. 7d 7h. 7d 10h 43m (local). 7d 16h. 8d 5h. 8d 6h. 13d 6h. 14d 21h. 15d 3h. 18d 2h. 20d 10h. 24d 0h. 24d 21h. 27d 2h. 27d 16h. 28d 1h. 28d 19h. 28d 23h. | | | | | | | | | | | | | | |
| Record lost at 16d. from 4h. to 7h. | | | | | | | | | | | | | | | |
| " " " | 23d | " | 0h. | " 7h. | | | | | | | | | | | |

2

SEISMOGRAPH RECORDS.

For the Month of March, 1930., 192 XXX

FROM HELWAN OBSERVATORY, EGYPT.

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

Director P. A. Curry.

Seismograph Milne-Shaw recording E-W motion

Theoretical magnification = 250.

Period of undamped pendulum = 12s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 10,356 A, 1926-300 ex.

| DATE 192 <u>1930.</u> | PHASE. | TIME. h. m. s. | PERIOD. s. | AMPLITUDE A _E . μ | REMARKS. |
|---|--------|-------------------|---------------|------------------------------------|-------------|
| | | | | | |
| March 6 | eP | 8 23 12 | | | |
| | iS | 8 24 21 | | | |
| | F | 8.9 h. | | | |
| " 6 | iP | 9 20 14 | | | |
| | S | 9 21 33 | | | |
| | M | 9 21 43 | 5 | ± 16 | |
| " 26 | P | 7 25 45 | | | |
| | S | 7 36 25 | | | |
| | L | 8 02 50 | | | |
| | M | 8 09 04 | 20 | ± 80 | |
| | F | 10.5 h. | | | |
| " 30 | eP | 8 43 50 | | | P doubtful. |
| | S | 8 51 33 | | | |
| | M | 9 24 12 | 18 | ± 19 | |
| " 31 | iP | 12 36 36 | | | |
| | S | 12 38 43 | | | |
| | M | 12 45 55 | | | |
| | F | 13.5 h. | | | |
| Smaller tremors were also recorded at : 1d 2h. 1d 5h. 5d 5h. 6d 11h. 6d 15h. 7d 7h. 7d 11h. 8d 4h. 9d 9h. 10d 14h. 10d 16h. 12d 12h. 12d 15h. 12d 23h. 13d 10h. 13d 20h. 15d 4h. 15d 7h. 16d 1h. 16d 5h. 16d 17h. 17d 6h. 20d 13h. 20d 14h. 21d 19h. 22d 21h. 26d 11h. 26d 20h. 30d 15h. | | | | | |
| Record lost at 8d. from 6h. to 12h. | | | | | |
| " " from 27d 9h. to 28d 7h. | | | | | |

SFISMOGRAPH RECORDS.

For the Month of April, 1930., 1992

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 = 12⁰.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 10,356 A, 1926-300 ex.

| DATE 1992 1930 | PHASE. | TIME. h. m. s. | PERIOD. s. | AMPLITUDE A _E . μ | REMARKS. |
|--|---|---|---------------|--|----------|
| April 15 | P S M F | 10 00 54 10 04 40 10 07 47 11.0 h. | 4 | ± 10 | |
| " 17 | P S F | 20 09 05 20 11 03 21.2 h. | | | |
| " 21 | P M F | 12 15 06 12 48 31 15.1 h. | 18 | ± 46 | |
| " 23 | P S M ₁ M ₂ F | 22 01 42 22 12 08 22 45 20 22 52 05 23.6 h. | 20 16 | ± 16 ± 12 | |
| " 27 | P eS M F | 14 37 26 14 46 36 15 08 25 16.4 h. | 18 | ± 10 | |
| " 28 | eP S M | 18 44 32 18 52 40 19 14 30 | 12 | ± 8 | |
| Smaller tremors were also recorded at : 2d 5h. 2d 20h. 3d 6h. 3d 7h. 3d 12h. 4d 9h. 5d 12h. 9d 5h. 10d 14h. 13d 10h. 13d 21h. 15d 4h. 15d 17h. 15d 23h. 18d 13h. 19d 11h. 20d 10h. 20d 16h. 20d 18h. 21d 10h. 21d 21h. 22d 2h. 22d 14h. 25d 11h. 25d 15h. 26d 11h. 26d 16h. 27d 10h. 27d 22h. 28d 13h. 29d 12h. 30d 3h. 30d 16h. | | | | | |

SEISMOGRAPH RECORDS.

For the Month of May, 1930., 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 = 12s.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 10,356 A, 1926-300 ex.

| DATE 192 1930. | PHASE. | TIME. | | | PERIOD. | AMPLITUDE A_E . | REMARKS. | | |
|----------------------|----------------|---|----|----|---------|----------------------|----------|--|--|
| | | h. | m. | s. | | | | | |
| May 5 | P | 13 | 56 | 04 | 15 | ± 300 | | | |
| | S | 14 | 04 | 23 | | | | | |
| | M | 14 | 28 | 05 | | | | | |
| | F | 17.4 h. | | | | | | | |
| " 6 | IP | 22 | 37 | 41 | 12 | ± 470 | | | |
| | IS | 22 | 40 | 32 | | | | | |
| | M ₁ | 22 | 42 | 00 | | | | | |
| | M ₂ | 22 | 47 | 37 | | | | | |
| | F | 3.0 h. | | | | | | | |
| " 8 | IP | 15 | 38 | 41 | 12 | ± 66 | | | |
| | S | 15 | 41 | 26 | | | | | |
| | M | 15 | 45 | 00 | | | | | |
| | F | 17.8 h. | | | | | | | |
| " 9 | IP | 7 | 08 | 33 | 3 | ± 44 | | | |
| | IS | 7 | 09 | 27 | | | | | |
| | M | 7 | 09 | 36 | | | | | |
| | F | 8.5 h. | | | | | | | |
| " 11 | IP | 22 | 40 | 31 | 15 | ± 86 | | | |
| | IS | 22 | 44 | 28 | | | | | |
| | M | 22 | 50 | 25 | | | | | |
| | F | 0.4 h. | | | | | | | |
| " 12 | eP | 0 | 25 | 50 | 12 | ± 41 | | | |
| | S | 0 | 29 | 40 | | | | | |
| | M | 0 | 35 | 42 | | | | | |
| | F | 1.5 h. | | | | | | | |
| " 29 | P | 17 | 18 | 13 | 8 | ± 15 | | | |
| | S | 17 | 20 | 52 | | | | | |
| | M | 17 | 25 | 06 | | | | | |
| | F | 18.4 h. | | | | | | | |
| Smaller tremors | | were also recorded at : 1d 1h. 1d 6h. 4d 18h. 6d 7h. 7d 9h. 7d 11h. 7d 13h. 8d 5h. 8d 13h. 8d 23h. 9d 1h. 9d 21h. 10d 0h. 10d 6h. 10d 21h. 11d 0h. 11d 11h. 12d 21h. 13d 1h. 13d 9h. 13d 17h. 13d 20h. 14d 3h. 14d 19h. 15d 3h. 18d 0h. 19d 3h. 19d 15h. 19d 21h. 20d 8h. 20d 11h. 21d 10h 47m (local). 21d 12h. 21d 13h. 21d 22h. 23d 0h. 23d 9h. 23d 12h. 23d 16h. 24d 3h. 24d 12h. 25d 3h. 26d 16h. 26d 23h. 27d 8h. 27d 16h. 29d 2h. 29d 8h. 30d 7h 0m (local). 31d 11h. 31d 18h. | | | | | | | |

SEISMOGRAPH RECORDS.

For the Month of June, 1930., 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 = 12⁰.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 7441 A, 1927-300 ex.

| DATE 192 XXX 1930. | PHASE. | TIME. | | | PERIOD. s. | AMPLITUDE A_E . μ | REMARKS. | | |
|--|--------|---------|----|----|---------------|-------------------------------|----------|--|--|
| | | h. | m. | s. | | | | | |
| June 4 | P | 7 | 31 | 25 | ? | ± 31 | | | |
| | S | 7 | 35 | 20 | | | | | |
| | F | 8.4 h. | | | | | | | |
| " 11 | P | 1 | 09 | 40 | 25 | ± 31 | | | |
| | S | 1 | 19 | 22 | | | | | |
| | M | 1 | 55 | 34 | | | | | |
| | F | 4.0 h. | | | | | | | |
| " 19 | eP | 13 | 19 | 28 | 20 | ± 17 | | | |
| | eS | 13 | 29 | 22 | | | | | |
| | M | 14 | 12 | 20 | | | | | |
| " 25 | eP | 10 | 36 | 50 | 18 | ± 38 | | | |
| | S | 10 | 47 | 40 | | | | | |
| | M | 11 | 25 | 04 | | | | | |
| | F | 14.0 h. | | | | | | | |
| " 25 | P | 21 | 41 | 00 | 20 | ± 57 | | | |
| | S | 21 | 51 | 44 | | | | | |
| | M | 22 | 30 | 51 | | | | | |
| | F | 24.2 h. | | | | | | | |
| Smaller tremors were also recorded at: 1d 4h. 1d 13h. 4d 10h. 5d 0h. 5d 12h. 5d 22h. 6d 9h. 7d 10h. 8d 13h. 9d 5h. 9d 6h. 13d 1h. 13d 12h 53m 32s (local). 15d 9h. 15d 21h. 19d 6h. 20d 15h. 20d 23h. 21d 21h. 22d 19h. 23d 20h. 24d 21h 48m (local, felt in Upper Egypt). 25d 1h. 26d 4h. 29d 22h. 30d 0h. 30d 14h. | | | | | | | | | |

MINISTRY OF PUBLIC WORKS.

OBSERVATORY.
HELWAN, EGYPT

PHYSICAL DEPARTMENT.

TELEPHONE NO. 45 (HELWAN.)

4th September, 1930.

Earthquake recorded by Milne-Shaw Seismograph
at Helwan Observatory.

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| Date | Phase | G. M. T. | Remarks. |
|----------|-------|----------|----------|
| 2-9-1930 | P. | 19 02 55 | <i>S</i> |
| | IS | 19 06 24 | |

J. L. Garki
Act. Director

Helwan Observatory.

SEISMOGRAPH RECORDS.

For the Month of September 1930, 1930

FROM HELWAN OBSERVATORY, EGYPT.

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

Director

P. A. CURRY.

Seismograph Milne-Shaw recording E-W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12⁰.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Press 7441 A, 1927-300 ex.

| DATE 1930 | PHASE. | TIME. h. m. s. | PERIOD. s. | AMPLITUDE A_E . μ | REMARKS. |
|---|--------|-------------------|---------------|-------------------------------|----------|
| September 2 | P | 19 02 55 | | | |
| | is | 19 06 24 | | | |
| | P | 20.0h. | | | |
| " 11 | P | 12 38 30 | | | |
| | S | 12 39 46 | | | |
| | P | 13.8h. | | | |
| " 21 | eP | 23 13 30 | | | |
| | S | 23 22 17 | | | |
| | P | 25.5h. | | | |
| | | 201:30 | | | |
| Smaller tremors were also recorded at :- | | | | | |
| 1d 17h. 5d 16h. 6d 21h. 7d 20h 5m (local). 8d 5h. 11d 3h. 12d 8h. 12d 9h. | | | | | |
| 12d 13h. 13d 20h. 14d 00h. 14d 3h. 14d 17h. 15d 4h. 16d 00h. 17d 11h. | | | | | |
| 18d 1h. 21d 2h. 22d 1h. 22d 13h. 22d 14h. 22d 16h. 23d 10h. 24d 00h. 24d 8h | | | | | |
| 24d 12h. 25d 12h. 25d 18h. 26d 10h. 29d 13h. 30d 21h. | | | | | |

MINISTRY OF PUBLIC WORKS,

OBSERVATORY,
HELWAN, EGYPT.

PHYSICAL DEPARTMENT.

TELEPHONE NO. 45 (HELWAN.)

, 192

Earthquake recorded by Milne-Shaw Seismograph
at Helwan Observatory.

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| Date | Phase. | G. M. T. | Remarks. |
|----------------------------------|--------|---|----------|
| 24 th October 1930 | e P | 10 ^h 52 ^m 07 ^s | |
| | S | 10 56 13 | |

| | | |
|---|---|----------|
| " | e | 20 29 10 |
| | S | 20 39 36 |

J. L. Galt
for Director
Helwan Observatory.

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SEISMOGRAPH RECORDS.

For the Month of October, 1930., 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 = 12⁰.0.

Times are expressed in Greenwich Civil Mean Time.

Govt. Print. 7441 A, 1927-300 ex.

| DATE 192 1930. | PHASE. | TIME. h. m. s. | PERIOD. s. | AMPLITUDE A_E . | REMARKS. |
|----------------------|----------------|-------------------|---------------|----------------------|----------------------|
| | | | | μ | |
| October 2 | P | 15 37 18 | | | |
| | S | 15 40 53 | | | |
| | M | 15 45 41 | 10 | ± 12 | |
| | F | 16.5 h. | | | |
| " 7 | P | 20 57 12 | | | |
| | S | 21 00 50 | | | |
| | F | 21.6 h. | | | No definite Maximum. |
| " 17 | e | 9 06 31 | | | |
| | S | 9 15 52 | | | |
| | M ₁ | 9 49 36 | 22 | ± 31 | |
| | M ₂ | 9 59 11 | 17 | ± 21 | |
| | F | 10.7 h. | | | |
| " 24 | eP | 10 52 07 | | | |
| | S | 10 56 13 | | | |
| | M | 11 01 22 | 8 | ± 30 | |
| | F | 12.4 h. | | | |
| " 24 | eP | 20 29 10 | | | |
| | iS | 20 39 36 | | | |
| | M | 21 18 12 | 20 | ± 34 | |
| | F | 24.0 h. | | | |
| " 25 | e | 17 46 42 | | | |
| | eS | 17 50 40 | | | |
| | M | 17 55 25 | 15 | ± 16 | |
| " 25 | eP | 23 37 42 | | | |
| | eS | 23 40 42 | | | |

SEISMOGRAPH RECORDS.

For the Month of October, 1930., 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 1930. | PHASE. | TIME. | | | PERIOD. s. | AMPLITUDE A_E . μ | REMARKS. |
|--|----------------|--------|----|----|---------------|---------------------------|--------------|
| | | h. | m. | s. | | | |
| October / 27 | e | 23 | 33 | 10 | | | |
| | S | 23 | 37 | 32 | | | |
| | M | 23 | 43 | 59 | 8 | ± 20 | |
| " / 30 | iP | 7 | 17 | 42 | | | |
| | iS | 7 | 21 | 24 | | | destructive. |
| | M ₁ | 7 | 23 | 22 | 8 | ± 9 | |
| | M ₂ | 7 | 24 | 20 | 8 | ± 8 | |
| | M ₃ | 7 | 31 | 28 | 15 | ± 14 | |
| | F | 8.5 h. | | | | | |
| Smaller tremors were also recorded at: 1d 2h. 1d 3h. 2d 1h. 4d 6h. 5d 2h. 5d 18h. 6d 18h. 6d 21h. 8d 10h. 9d 5h. 9d 21h. 10d 0h. 11d 3h. 11d 20h. 12d 15h. 12d 16h. 13d 4h. 16d 11h 8m (local). 16d 22h. 17d 4h. 17d 5h. 17d 7h. 18d 1h. 19d 19h. 21d 19h. 22d 17h. 22d 18h. 23d 9h. 23d 21h 12m (local). 25d 12h. 25d 15h. 25d 16h. 25d 19h. 26d 4h. 26d 13h. 27d 1h. 28d 4h. 28d 21h. 29d 5h. 29d 8h. 31d 1h. 31d 10h. 31d 18h. | | | | | | | |

SEISMOGRAPH RECORDS.

For the Month of November, 1930., 192

FROM HELWAN OBSERVATORY, EGYPT.

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

Director

P. A. Curry.

Seismograph Milne-Shaw recording E-W motion.

Theoretical magnification = 250.

Period of undamped pendulum = 12^{8.0}.

Times are expressed in Greenwich Civil Mean Time.

Govt. Progs 7441 A, 1927-300 ex.

| DATE 192 | PHASE. | TIME. | | | PERIOD. | AMPLITUDE A_E | REMARKS. |
|---|--------|---------|----|----|---------|--------------------|----------------|
| | | h. | m. | s. | | | |
| 1930. | | | | | | | |
| November 8 | eP | 3 | 34 | 25 | | | |
| | S | 3 | 38 | 10 | | | |
| | M | 3 | 43 | 51 | 12 | ± 15 | |
| | F | 4.5 H. | | | | | |
| " 9 | P | 19 | 22 | 21 | | | |
| | S | 19 | 35 | 28 | | | |
| | M | 20 | 13 | 16 | 24 | ± 62 | |
| | F | 22.5 H. | | | | | |
| " 11 | P | 8 | 42 | 06 | | | |
| | S | 8 | 51 | 28 | | | |
| | F | 9.3 H. | | | | | |
| " 16 | P | 20 | 47 | 42 | | | |
| | iS | 20 | 48 | 36 | | | |
| | M | 20 | 48 | 53 | < 4 | ± 15 | Felt in Cairo. |
| | F | 21.1 H. | | | | | |
| " 21 | P | 2 | 03 | 41 | | | |
| | S | 2 | 06 | 11 | | | |
| | M | 2 | 14 | 50 | 14 | ± 16 | |
| | F | 3.1 H. | | | | | |
| " 25 | P | 19 | 15 | 41 | | | |
| | iS | 19 | 26 | 10 | | | |
| | M | 20 | 03 | 20 | 20 | ± 69 | |
| | F | 22.4 H. | | | | | |
| Smaller tremors were also recorded at : 2D 9H. 3D 19H. 4D 15H. 5D 1H. 7D 6H. 10D 5H. 10D 6H. 10D 14H. 11D 20H. 12D 19H. 13D 16H. 15D 17H. 22D 14H. 23D 12H. 23D 16H. 24D 4H. 25D 17H 37M 17S (local). 28D 7H. | | | | | | | |

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SEISMOGRAPH RECORDS.

For the Month of December, 1930., 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 1930. | PHASE. | TIME. | | | PERIOD. s. | AMPLITUDE A_E . μ | REMARKS. | | | |
|---|--------|---------|----|----|---------------|-------------------------------|----------|--|--|--|
| | | h. | m. | s. | | | | | | |
| December / 2 | P | 7 | 11 | 22 | 12 | ± 5 | | | | |
| | S | 7 | 19 | 28 | | | | | | |
| | M | 7 | 39 | 30 | | | | | | |
| | F | 8.2 h. | | | | | | | | |
| " / 3 | iP | 19 | 01 | 58 | 15 | ± 140 | | | | |
| | iS | 19 | 10 | 00 | | | | | | |
| | M | 19 | 33 | 22 | | | | | | |
| | F | 22.8 h. | | | | | | | | |
| " / 10 | eP | 10 | 34 | 10 | 12 | ± 19 | | | | |
| | S | 10 | 36 | 36 | | | | | | |
| | M | 10 | 44 | 45 | | | | | | |
| | F | 11.5 h. | | | | | | | | |
| " / 21 | P | 15 | 03 | 25 | | | | | | |
| | iS | 15 | 13 | 15 | | | | | | |
| | F | 16.2 h. | | | | | | | | |
| | | | | | | | | | | |
| Smaller tremors were also recorded at : 2d 13h. 3d 17h. 5d 17h, 1m 38s (local)? 6d 7h. 6d 9h. 6d 19h. 8d 8h. 8d 17h. 13d 3h 7m (local). 13d 14h. 13d 17h. 15d 9h. 22d 00h. 23d 22h. 24d 6h. 25d 13h. 25d 23h. 27d 11h. 29d 6h 4m (local)? 29d 10h 25m (local). | | | | | | | | | | |

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