

SEISMOGRAPH RECORDS.

For the Month of February, 1935

FROM HELWAN OBSERVATORY, EGYPT.

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

Director M. R. Madwar

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.

DATE 1935.	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ.	REMARKS.		
		h.	m.	s.					
Feb 3	ep	2	17	47	13	± 4	confused with microseisms		
	is	2	22	18					
	M	2	33	35					
	F	3.1h							
22	ep	17	19	31	16	± 28	"P" doubtful preceded by microseisms.		
	is	17	29	56					
	L	17	59	15					
	M	18	8	59					
	F	20.7h							
25	ip	2	53	23	4.6h		Felt in Egypt. "S and M" doubtful because of rapid movement of waves		
	is	2	54	48					
	M	2	55	40					
	F	4.6h							
Smaller tremors were also recorded at;									
D	H	D	H	D	H	D	H	D	H
3	6	3	16	4	17	4	18	6	2
7	17	9	19	13	9	13	17	13	17
19	20	22	9	22	16	23	0	24	12
27	9	28	7	(28	7	Probably microseisms.)			



SEISMOGRAPH RECORDS

For the Month of M A Y , 1935.

FROM HELWAN OBSERVATORY, EGYPT

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

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 7241 A. 1934-300 ex.

DATE 193- <u>5</u>	PHASE	TIME			PERIOD s.	AMPLITUDE A _E μ	REMARKS
		h.	m.	s.			
/ May 1	P	10	28	07	11	± 53	
	S	10	30	56			
	M	10	34	48			
	F	12.3h					
/ " 13	iP	20	04	08	18	± 10	
	iS	20	12	43			
	M	20	37	51			
	F	21.6h					
/ " 14	eP	23	36	50	16	± 23	Confused with microseisms
	Pr	23	40	48			
	S _c P _c S	23	47	13			
	iS	23	48	37			
	L	24	10	14			
	M	24	18	32			
/ " 15	eP	2	07	58	14	± 21	Confused with the ending of the previous earthquake.
	eS	2	13	10			
	M	2	23	40			
	F	3.4h					
/ " 24	P	5	49	24	9.2h		Lost in changing paper.
	S	5	59	47			
	M						
	F						
/ " 26	P	22	16	42	23.8h		Preceded by microseisms.
	S	22	27	09			
	F						
/ " 30	P	21	39	06	? > 11	$> \pm 477$	
	iPr	21	40	12			
	iS	21	44	47			
	Sr	21	45	48			
	M	21	55	00			
	F	25.7h					
/ " 31	eP	2	09	57	14	± 14	Preceded by microseisms.
	eS	2	15	37			
	M	2	25	30			
	F	3.0h					

SEISMOGRAPH RECORDS

For the Month of April, 1935

SEISMOGRAPH RECORDS.

For the Month of March, 1935

FROM HELWAN OBSERVATORY, EGYPT.

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

Director M. R. Madwar

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.

DATE 193 <u>5</u> .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ .	REMARKS.		
		h.	m.	s.					
March 5	ip	10	31	02		± 80	Period not distinct		
	is	10	34	38					
	M	10	39	50					
	F	12.3h							
5	P	22	23	52	12	± 8			
	is	22	30	11					
	M	22	45	56					
	F	23.5h							
18	ip	8	42	22		± 62	Local felt in Cairo, Heliopolis & Alexandria M doubtful		
	is	8	43	30					
	M	8	43	35					
	F	Lost in changing paper							
Smaller tremors were also recorded at:									
D	H	D	H	D	H	D	H	D	H
2	19	7	8	8	13	9	14	10	16
12	13	12	16	14	13	14	15	15	0
17	22	20	0	20	19	20	23	22	12
29	0	29	12	30	21	31	3	23	4

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SEISMOGRAPH RECORDS

For the Month of M A Y , 1935.

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Director M. R. MADWAR

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 7241 A. 1934-300 ex.

DATE 193 <u>5</u> .	PHASE	TIME			PERIOD s.	AMPLITUDE	REMARKS
		h.	m.	s.		A _E μ	
May 31	P	8	30	03			
	S	8	39	33			
	F	9.5h					
" 31	iP	13	20	02			
	S	13	24	39			
	M	13	29	12	7	± 6	
	F	14.1h					
Smaller tremors were also recorded at :							
D	H	D	H	D	H		
1	04	4	23	21	07		
1	14	12	05	21	18		
1	15	13	23	23	09		
2	08	14	01	23	18		
2	10	16	17	25	00		
2	11	16	21	27	03		
2	16 &	18	17	28	17		
2	20	18	21	29	01	Local	
2	22	20	05	31	17		
3	05	21	04				
& Probably microseisms.							

SEISMOGRAPH RECORDS

For the Month of June 1935, 1935

FROM HELWAN OBSERVATORY, EGYPT

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

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 7241 A. 1934-300 ex.

DATE 193 <u>5</u>	PHASE	TIME			PERIOD s.	AMPLITUDE	REMARKS					
		h.	m.	s.		A _E μ						
June 2	iP	9	22	43	11	± 28	Preceded by microseisms					
	S	9	28	04								
	L	9	34	24								
	M	9	39	26								
	F	11.	1h									
14	P	19	2	19	not clear		Felt in Cairo & Helwan					
	S	19	2	25								
	F	19.	1h									
24	eP	23	42	21	21	± 22						
	i	23	45	13								
	i	23	45	49								
	i	23	55	47								
	i	23	58	40								
25	M	0	41	12	21	± 22						
	F	2.	8h									
29	eP	7	7	41			very faint					
	i	7	18	25								
	i	7	20	06								
	F	9.	4h									
Smaller tremors were also recorded at :												
D	H	D	H	D	H	D	H	D	H	Probably micro		
1	4	1	12	1	14	1	18,	31m local	2		23	
4	19	7	13	8	1	9	5	9	6		10	7
12	15	13	0	13	2,	16m local	15	17	18		22	
20	4, 29m	local		22	15	24	12	24	23		25	12
27	2	27	3	27	17	28	2	28	19		29	7
29	20	29	23	30	8							

SEISMOGRAPH RECORDS

For the Month of July 1935, 1935

FROM HELWAN OBSERVATORY, EGYPT

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

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 7241 A. 1934-300 ex.

DATE 193 <u>5</u>	PHASE	TIME			PERIOD s.	AMPLITUDE A_E μ	REMARKS
		h.	m.	s.			
July 2	eP	15	30	28	10	± 9	confused & preceded with microseisms
	S	15	33	28			
	L	15	37	29			
	M	15	39	36			
	F	16.4h					
/ 5	P	17	59	14	10	± 12	
	Pr	18	00	42			
	S	18	04	22			
	M	18	18	05			
	F	19.7h					
/ 7	e	13	32	30			Preceded by microseisms
	eX	13	35	26			
	is	13	45	30			
	F	14.9h					
/ 16	iP	16	30	58			
	iS	16	40	50			
	F	18.0h					
/ 17	eP	4	41	21	14 10	± 16 ± 11	Lost in changing paper at 6h 5m.
	eS	4	49	22			
	L	5	01	30			
	M ₁	5	04	20			
	M ₂	5	06	28			
	F						
/ 17	e	11	00	50	16	± 20	confused with microseisms
	e	11	02	47			
	S	11	11	50			
	M	11	49	00			
	F	13.3h					
/ 19	eP	1	2	31	20	± 15	Preceded by microseisms
	Pr	1	5	59			
	S	1	13	02			
	i	1	13	36			
	M	1	45	8			
	F	4.2h					
/ 29	P	7	57	49	25	± 42	doubtful, lines over lapping
	i	8	4	23			
	i	8	11	12			
	M	8	38	52			
	F	11.0h					

SEISMOGRAPH RECORDS

For the Month of July 1935, 1935

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Director M. R. M.

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 7241 A. 1934-300 ex.

DATE 193 <u>5</u>	PHASE	TIME			PERIOD s.	AMPLITUDE A _E		REMARKS			
		h.	m.	s.		μ	μ				
Smaller tremors were also recorded at :											
D	H	D	H	D	H	D	H	D	H	D	H
1	16	Probably microseisms		3	22	5	0	5	22	8	14
9	7	9	12	9	15	10	20	11	8	11	21
12	1	12	2	12	4	13	00	13	1	13	14
15	18	16	20	17	1	17	17	18	1	20	14
23	4	26	3	26	5	26	8	26	9	26	14
28	5	28	19	29	23	30	6	31	10	27	12

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SEISMOGRAPH RECORDS

For the Month of August 1935, 193

FROM HELWAN OBSERVATORY, EGYPT

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

Director M. P. M.

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 7241 A. 1934-300 ex.

DATE 19 <u>35</u>	PHASE	TIME			PERIOD s.	AMPLITUDE	REMARKS						
		h.	m.	s.		A _E μ							
August / 1	P	14	19	28			no definite maximum						
	S	14	30	15									
	F	15.8h											
/ 3	iP	1	20	48	20	± 167	time cutting indistinct						
	iS	1	29	41									
	L	1	41	23									
	M	1	49	37									
	F	5.0h											
/ 17	eP	2	4	3									
	iPr	2	7	33									
	S	2	27	11									
	F	5.1h											
/ 20	iP	8	56	25									
	i	9	0	19									
	F	9.4h											
/ 23	P	14	9	28	20	± 26							
	S	14	15	34									
	M	14	41	02									
	F	15.8h											
Smaller tremors were also recorded at :													
D	H	D	H	D	H	D	H	D	H	D	H		
1	16	3	5	3	11	3	13	3	14	5	14	6	0
6	14	7	9 ?	lines	lapping	10	17	11	1	19	16	19	16
22	13 45m	local		22	10	22	20	25	5	25	21	31	18

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SEISMOGRAPH RECORDS

For the Month of September 1935, 1935

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Govt. Press 7241 A. 1934-300 ex.

DATE 1935	PHASE	TIME			PERIOD s.	AMPLITUDE A _E μ	REMARKS
		h.	m.	s.			
Sept. 4	P	1	49	48	16	± 25	
	Pr ₁	1	52	59			
	Pr ₂	1	54	56			
	ScPcs	1	59	45			
	S	2	0	43			
	L	2	20	15			
	M	2	30	08			
F	5.1h						
9	e	6	27	46	23	± 25	"P" confused with the wa waves of a small tremor precedings.
	eP	6	32	16			
	Pr	6	36	28			
	ScPcs	6	42	20			
	S	6	45	10			
	L	7	13	10			
	M	7	20	34			
F	9.6h						
11	iP	14	16	37	24	± 57	
	iS	14	27	10			
	L	14	45	25			
	M	15	0	51			
	F	17.7h					
20	eP	2	1	16	24	± 286	Preceded by micros.
	Pr	2	5	57			
	i	2	11	58			
	i	2	15	22			
	M	2	55	50			
	F	Lost in the beginning of the following shock					
20	e	5	42	02	16	± 20	confused with the ending of the previous earthquake.
	e	5	42	23			
	i	5	51	44			
	i	5	55	05			
	i	6	03	10			
	M ₁	6	32	16			
	M ₂	6	34	00			
F ²	9.3h						
23	e	9	36	9	18	± 24	confused with microseisms
	i	9	41	15			
	i	9	46	48			
	F	12.7h					

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Govt. Press 7241 A. 1934-300 ex.

DATE 193 <u>5</u>	PHASE	TIME			PERIOD		AMPLITUDE A _E		REMARKS				
		h.	m.	s.	s.		μ						
Smaller tremors were also recorded at :													
D	H	D	H	D	H	D	H	D	H	D	H	D	H
3	11	3	17	6	20	8	1	8	10	9	3	9	6
11	13	lines over lapping											
						12	17	14	21	15	4	15	11
15	14	16	7	16	17, 14m local	18	5	18	5	18	6	18	8
18	15	19	2	20	21	22	1	24	22	25	0	25	10
26	23	28	18	30	19								



SEISMOGRAPH RECORDS

For the Month of October, 1935

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Govt. Press 7241 A. 1934-300 ex.

DATE 193 <u>5</u>	PHASE	TIME			PERIOD s.	AMPLITUDE A _E μ	REMARKS
		h.	m.	s.			
Oct. 2 /	eP eS M F	5	45	37 55 55 7.4h			minute cutting indistinct
/ 8	eP S M F	9	25	46 31 42 10.9h	10	±12	Preceded by microseisms
/ 11	eP ePr S F	22	35	13 41 44 25.3h			
/ 12	eP ePr S? L M ₁ M ₂ F	16	58	07 1 8 39 44 45 20.1h	20 18	±29 +22	
/ 15	eP eS i i M F	17	6	47 10 12 13 15 17.5h	7	±6	confused with microseisms
/ 18	eP ePr S M ₁ M ₂ F	0	24	37 28 35 7 10 3.7h	20 14	+36 +23	
/ 18	iP i i F	11	19	15 23 42 14.0h			
/ 18	P ePr iS M F	15	6	36 9 17 52 16.9h	16	±10	13 ✓

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SEISMOGRAPH RECORDS

For the Month of Oct., 1935

FROM HELWAN OBSERVATORY, EGYPT

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Govt. Press 7241 A. 1934-300 ex.

DATE 193 <u>5</u>	PHASE	TIME			PERIOD s.	AMPLITUDE A_E μ	REMARKS						
		h.	m.	s.									
Oct. 20	e S M F	4	57	40	12	+11	very faint						
		5	2	21									
		5	9	39									
		5.7h											
27	eP iS i M F	6	47	43	8	+20							
		6	51	38									
		6	54	39									
		6	57	21									
		7.6h											
Smaller tremors were also recorded at:													
D	H	D	H	D	H	D	H	D	H	D	H		
1	0	4	5	4	15	4	23	6	4	6	6	6	15
7	6	7	8	9	14	9	22	10	20	12	12	13	2
13	10	13	19	14	2	14	7	14	20	17	14	18	4
18	22	(19	1	19	3)	Probably microseisms		19	5	22	22	7	7
23	14	25	0	25	1	26	1	26	1	26	21	27	2
28	12												
11	H												
14	5												
24	11												

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SEISMOGRAPH RECORDS.

For the Month of November 1935, 1935

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DATE 193 <u>5</u> .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ.	REMARKS.
		h.	m.	s.			
Nov. / 1	eP	6	15	57			Preceded by microseisms
	pP	6	16	09			
	Pr	6	19	03			
	S	6	26	04			
	SS	6	26	30			
	F	Lost in changing paper at 6h 53m.					
/ 1	P	16	32	44			
	S	16	41	31			
	SS	16	42	20			
	M ₁	17	04	52	16	μ 18	
	M ₂	17	07	20	13	μ 15	
	F	18.4h					
/ 5	eP	21	10	45			
	pP	21	11	07			
	S	21	21	04			
	F	22.3h					
6	P	12	13	04			
	es	12	16	13			
	F	12.5h					
/ 7	e	4	40	10	?		
	es	4	43	25			
	SS	4	43	52			
	F	5.2h					
9	eP	23	11	23			
	S	23	12	24			
	M	23	13	12	9	μ 4	
	F	23.4h					
9	P	23	25	47			? Confused with the ending of the previous earthquake.
	e	23	28	05			
	M	23	28	52	8	μ 3	
	F	23.6h					
/ 10	eP	18	40	22			
	Pr	18	44	53			
	S	18	50	42			
	F	20.5h					

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Director M. R. Madwar

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Theoretical magnification = 250.

Period of undamped pendulum = 12^s.0.

Times are expressed in Greenwich Civil Mean Time.

DATE 193 .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ .	REMARKS.						
		h.	m.	s.									
Nov. 11	e	15	02	40			Local						
	i	15	03	07									
	e	15	03	25									
	F	15	2h										
13	eP	12	05	04			Preceded by microseisms						
	iS	12	10	42									
	sS	12	11	08									
	F	12	7h										
14	P	20	16	52			pp						
	pP	20	17	06									
	e	20	26	52									
	F	22	6h										
25	P	10	13	28			pp						
	1pP	10	13	52									
	Pr	10	15	37									
	iS	10	22	05									
	PS	10	22	52									
	sS	10	23	13									
	M	10	39	09	20	± 34							
	F	12	5h										
30	eP	3	53	50									
	i	4	04	24									
	i	4	07	07									
	i	4	07	47									
	F	6	5h										
Smaller tremors were also recorded at													
D	H	I	H	D	H	D	H	D	H	D	H		
1	18	5	15	7	21	10	9	11	13	11	19	12	13h.2h Local
12	16	12	21	14	00	14	1	16	00	16	06	17	8
17	14	19	01	19	07	22	12	23	08	24	23	25	18
26	16	29	19										

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SEISMOGRAPH RECORDS.

For the Month of December, 19 55

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 19 .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ.	REMARKS.
		h.	m.	s.			
<u>December</u> / <u>8</u>	eP	<u>17</u>	<u>29</u>	<u>35</u>			<u>very weak</u>
	eS	<u>17</u>	<u>30</u>	<u>05</u>			
	F	<u>18</u>	<u>5</u>				
<u>12</u>	eP	<u>16</u>	<u>54</u>	<u>32</u>			<u>Lines overlapping</u>
	eS	<u>16</u>	<u>59</u>	<u>03</u>			
	eL	<u>17</u>	<u>04</u>	<u>25</u>			
	F	<u>17</u>	<u>5</u>				
<u>18</u>	e	<u>18</u>	<u>07</u>	<u>25</u>			<u>Preceded by micro-</u> <u>seisms</u>
	e	<u>18</u>	<u>15</u>	<u>26</u>			
	F	<u>18</u>	<u>5</u>				
<u>12</u>	e	<u>18</u>	<u>57</u>	<u>58</u>			<u>Preceded by micro-</u> <u>seisms</u>
	L	<u>19</u>	<u>03</u>	<u>27</u>			
	F	<u>19</u>	<u>5</u>				
<u>14</u>	e	<u>1</u>	<u>44</u>	<u>20</u>			
	ePE	<u>1</u>	<u>48</u>	<u>48</u>			
	e	<u>1</u>	<u>57</u>	<u>07</u>			
	e	<u>1</u>	<u>58</u>	<u>05</u>			
	F	<u>3</u>	<u>2</u>				

SEISMOGRAPH RECORDS.

For the Month of December, 19 35

FROM HELWAN OBSERVATORY, EGYPT.

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

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.

DATE 19 .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ.	REMARKS.
		h.	m.	s.			
<u>December 14/15</u>	<u>1</u>	<u>22</u>	<u>19</u>	<u>59</u>			
	<u>1</u>	<u>22</u>	<u>30</u>	<u>30</u>			
	<u>M₁</u>	<u>23</u>	<u>08</u>	<u>46</u>	<u>22</u>	<u>41</u>	
	<u>M₂</u>	<u>23</u>	<u>12</u>	<u>50</u>	<u>22</u>	<u>41</u>	
	<u>M₃</u>	<u>23</u>	<u>27</u>	<u>51</u>	<u>19</u>	<u>34</u>	
	<u>P</u>	<u>1:53</u>					
<u>15</u>	<u>e</u>	<u>7</u>	<u>27</u>	<u>37</u>			
	<u>1</u>	<u>7</u>	<u>29</u>	<u>16</u>			
	<u>1</u>	<u>8</u>	<u>08</u>	<u>39</u>			
	<u>M₁</u>	<u>8</u>	<u>24</u>	<u>05</u>	<u>25</u>	<u>149</u>	
	<u>M₂</u>	<u>8</u>	<u>34</u>	<u>16</u>	<u>20</u>	<u>103</u>	
	<u>P</u>	<u>11:7</u>					
<u>17</u>	<u>P</u>	<u>19</u>	<u>30</u>	<u>04</u>			
	<u>S</u>	<u>19</u>	<u>40</u>	<u>15</u>			
	<u>H</u>	<u>20</u>	<u>10</u>	<u>31</u>	<u>16</u>	<u>22</u>	
	<u>P</u>	<u>22:5</u>					
<u>18</u>	<u>1P (?)</u>	<u>17</u>	<u>09</u>	<u>50</u>			<u>Preceded by micro-</u> <u>seisms</u>
	<u>e</u>	<u>17</u>	<u>12</u>	<u>10</u>			

SEISMOGRAPH RECORDS.

For the Month of December, 19 35

FROM HELWAN OBSERVATORY, EGYPT.

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

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.

DATE 19 .	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E . μ.	REMARKS.
		h.	m.	s.			
<u>Cont.</u> <u>December</u> / <u>18</u>	<u>13 (T)</u>	<u>17</u>	<u>18</u>	<u>12</u>			
	<u>P</u>		<u>13.2</u>				
/ <u>20</u>	<u>1 (P)</u>	<u>13</u>	<u>53</u>	<u>08</u>			
	<u>1</u>	<u>13</u>	<u>08</u>	<u>09</u>			
	<u>P</u>		<u>21.7</u>				
/ <u>24</u>	<u>e</u>	<u>12</u>	<u>53</u>	<u>21</u>			<u>preceded by micro-</u> <u>seisms</u>
	<u>e</u>	<u>12</u>	<u>52</u>	<u>42</u>			
	<u>P</u>		<u>15.1</u>				
<u>28</u>	<u>eP</u>	<u>2</u>	<u>45</u>	<u>33</u>			
	<u>1</u>	<u>2</u>	<u>45</u>	<u>51</u>			
	<u>1S</u>	<u>2</u>	<u>55</u>	<u>56</u>			
	<u>M</u>	<u>3</u>	<u>15</u>	<u>46</u>	<u>(20)</u>	<u>919</u>	
	<u>P</u>		<u>7.6</u>				
/ <u>29/30</u>	<u>e</u>		<u>50</u>	<u>50</u>			<u>preceded by micro-</u> <u>seisms</u>
	<u>S</u>	<u>0</u>	<u>2</u>	<u>20</u>			
	<u>(J)</u>	<u>0</u>	<u>28</u>	<u>50</u>			
	<u>M</u>	<u>0</u>	<u>49</u>	<u>15</u>	<u>20</u>	<u>9</u>	
	<u>P</u>		<u>2.6</u>				

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 Dr. M. R. Madwar

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.

DATE 19	PHASE.	TIME.			PERIOD. s.	AMPLITUDE A _E .		REMARKS.			
		h.	m.	s.		μ .	μ .				
Smaller tremors were also recorded at :-											
	D H	D	H	D	H	D	H	D	H	D	H
	8 1	8	17	4	1	5	13	6	1	7	13
	9 15	9	7	14	13	16	17	17	14	18	7
	21 13	22	10	22	20	23	15	25	21	27	00
	23 13	23	4	30	5	31	2				

20