

ROYAL OBSERVATORY, HONG KONG.

Latitude.....22° 18' 13.2" North.

Longitude...114° 10' 18.7" East.



MONTHLY SEISMOLOGICAL BULLETIN

1939

JULY,

1939.

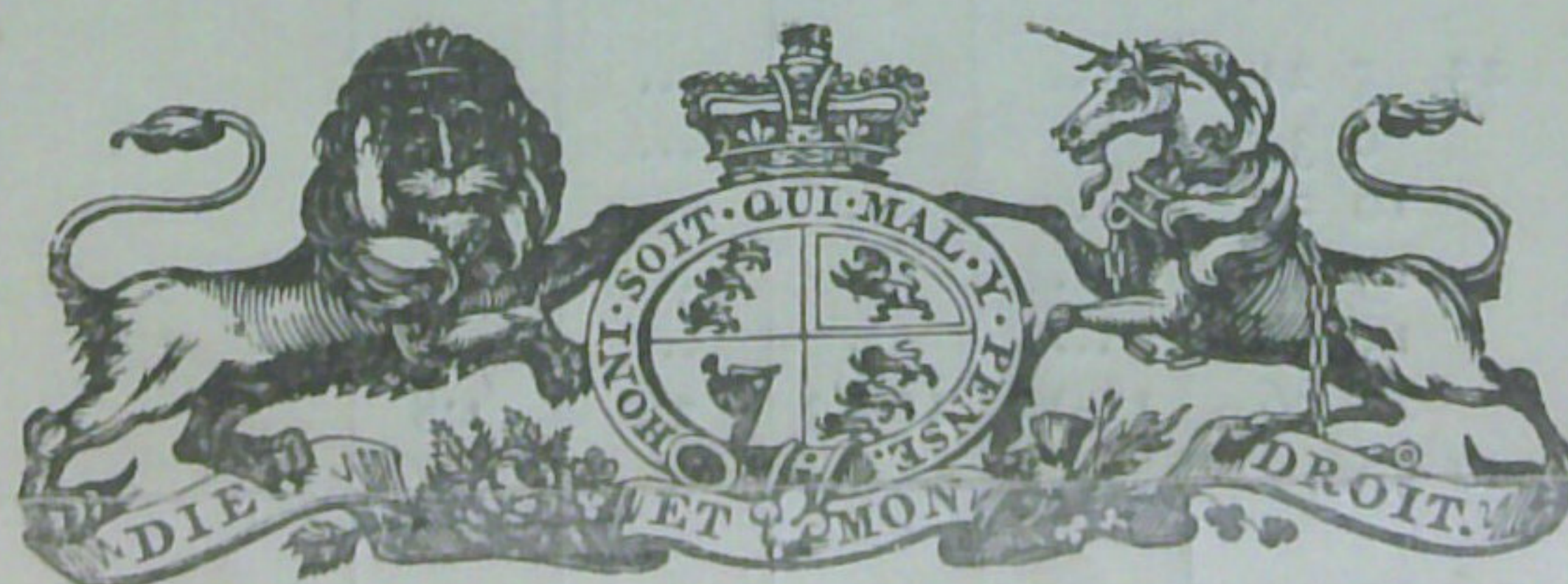
PREPARED UNDER THE DIRECTION OF

C. W. JEFFRIES, F.R.A.S.

DIRECTOR.

NOTATION.

- P = Time of arrival of longitudinal waves.
 PP = " " " " once reflected.
 S = " " of transverse "
 SKS = " " of transverse-longitudinal waves through core.
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 M = " " of maximum of long waves.
 F = " of end of record.
 A_N = Amplitude (half range) of N.-S. movement.
 A_E = " " " E.-W. "
 T = Period of undamped pendulum (complete swing).



HONG KONG.

PRINTED BY NORONHA & CO., LD.

GOVERNMENT PRINTERS.

1939.

ROYAL OBSERVATORY, HONG KONG. EARTHQUAKES RECORDED IN JULY, 1939.
(Milne-Shaw Instruments.)



No. 1939.	Date.	Phase	Greenwich Time (o = Midn.)	Recorded Period of Waves		A_N	A_E	Remarks.
				N-S	E-W			
			<i>h.m.s.</i>	<i>s.</i>	<i>s.</i>	<i>mm.</i>	<i>mm.</i>	
161	July 1	<i>M</i>	13 39 40	...	...	0.2	0.2	
162	3	<i>M</i>	7 59 35	...	...	0.1	0.2	
163	4	<i>M</i>	7 39 0	...	...	0.2	0.3	
164	4	<i>P?</i>	18 47 49	...	...	...	...	
		<i>?</i>	49 7	...	...	...	...	
		<i>PP?</i>	51 42	...	...	...	...	
		<i>S_E</i>	58 0	...	...	...	...	
		<i>S_N</i>	58 10	...	...	...	...	
		<i>SS</i>	19 1 51	...	...	...	...	
		<i>M_N</i>	15 40	16-20	...	1.4	...	
		<i>M_E</i>	20 49	...	16-20	...	1.0	
		<i>F</i>	20 25 —	...	...	...	...	
165	5	<i>M</i>	8 56 0	...	...	0.2	0.1	
166	5	<i>P</i>	22 52 3	...	...	0.4 _N	0.6 _W	
		<i>PcP</i>	52 22	...	...	...	...	
		<i>PP</i>	54 14	...	...	...	...	
		<i>PPP</i>	55 9	...	...	...	...	
		<i>S</i>	23 1 5	...	...	0.7 _S	2.5 _E	
	6	<i>PS</i>	1 20	...	...	...	...	
		<i>SS</i>	5 27	...	...	...	...	
		<i>M</i>	10 5	11-14	10-14	0.6	1.4	
		<i>F</i>	0 0 —	...	...	...	...	
167	9	<i>M</i>	6 44 50	...	...	0.5	0.4	
168	9	<i>M</i>	13 8 42	...	...	0.2	0.2	
169	10	<i>M</i>	6 44 40	...	...	0.2	0.2	
170	12	<i>P?</i>	12 54 12	...	...	...	...	
		<i>S?</i>	58 9	...	...	...	...	
		<i>M</i>	13 2 36	10-12	10-12	0.3	0.3	
		<i>F</i>	29 —	...	...	...	...	
171	12	<i>P</i>	20 15 15	...	...	...	...	
		<i>S</i>	20 40	...	...	...	...	
		<i>M</i>	29 30	9-11	9-11	0.4	0.4	
		<i>F</i>	55 —	...	...	...	...	
172	12	<i>P</i>	23 5 21	...	...	...	...	
		<i>PP</i>	6 31	...	...	...	...	
		<i>S</i>	10 50	...	...	...	...	
		<i>SS</i>	13 7	...	...	...	...	
		<i>ScS</i>	15 58	...	...	...	...	
		<i>M</i>	22 56	11-13	10-13	2.0	1.8	
	13	<i>F</i>	0 50 —	...	...	...	...	
173	13	<i>P?</i>	16 15 20	...	...	...	...	
		<i>S?</i>	19 10	...	...	...	...	
		<i>M</i>	23 0	10-12	...	0.4	...	E-W component drive stopped.
		<i>F</i>	49 —	...	...	...	...	
174	14	<i>M</i>	9 7 0	...	...	0.2	0.2	
175	18	<i>P?</i>	3 50 21	...	...	...	...	N-S component out of order.
		<i>?</i>	56 32	...	...	...	...	
		<i>M</i>	17 30	...	12-16	...	0.5	
		<i>F</i>	5 7 —	...	...	...	...	
176	18	<i>P?</i>	11 29 20	...	...	...	...	
		<i>S</i>	34 16	...	...	...	...	
		<i>M</i>	42 32	...	8-11	...	0.6	
		<i>F</i>	12 8 —	...	...	...	...	

ROYAL OBSERVATORY, HONG KONG. EARTHQUAKES RECORDED IN JULY, 1939.
(*Milne-Shaw Instruments*,)—*Continued*.

No. 1939.	Date.	Phase.	Greenwich Time (0=Midn.)	Recorded Period of Waves.		A_N	A_E	Remarks.
				N-S	E-W			
			<i>h.m.s.</i>	<i>s.</i>	<i>s.</i>	<i>mm.</i>	<i>mm.</i>	
177	20	<i>P?</i> <i>S?</i> <i>L</i> <i>M</i> <i>F</i>	2 34 4 39 3 43 11 46 40 3 13 —	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...	... ... ... 0·6 ...	N-S component out of order.
178	25	<i>M</i>	7 39 17	...	...	0·2	0·2	
179	27	<i>M</i>	5 27 30	...	...	0·2	0·2	
180	28	<i>M</i>	5 40 13	...	...	0·1	0·1	
181	28	<i>M</i>	10 4 19	...	...	0·4	0·4	

T :—N-S Component=12·0' ; E-W Component =12·0".

Damping Ratio :—N-S Component=19:1 ; E-W Component=20:1.

Normal magnification=150 for both pendulums.

Initial movements are of the pendulums.

B. D. EVANS,—*Assistant Director*.

Seismology

ROYAL OBSERVATORY, HONG KONG.



Latitude.....22° 18' 13.2" North.
Longitude...114° 10' 18.7" East.

MONTHLY SEISMOLOGICAL BULLETIN

AUGUST,

1939.

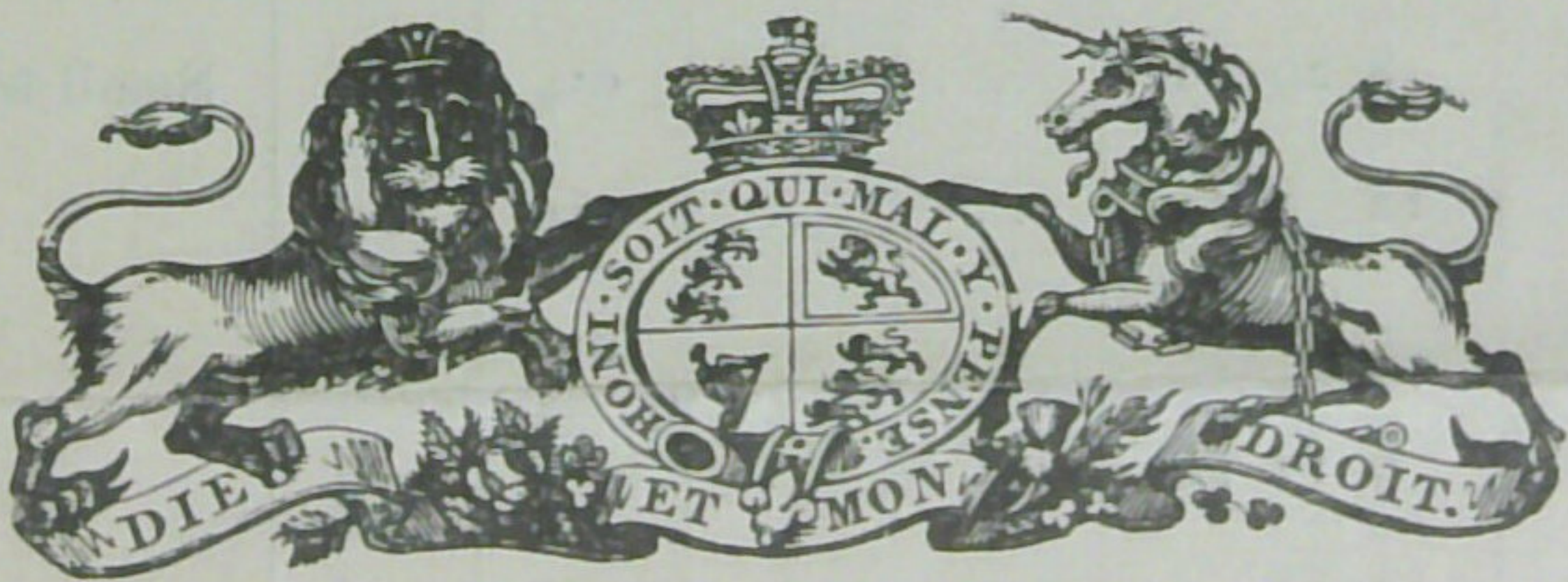
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 A_E = " " " E.-W. "
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No. 1939.	Date.	Phase	Greenwich Time (0 = Midn.)	Recorded Period of Waves		A_N	A_E	Remarks.
				N-S	E-W			
			<i>h.m.s.</i>	<i>s.</i>	<i>s.</i>	<i>mm.</i>	<i>mm.</i>	
182	Aug. 2	M	1 56 0	...	...	0.1	0.1	
183	3	M	3 12 20	...	...	0.1	0.1	
184	3	M	7 11 0	...	...	0.2	0.2	
185	5	P?	0 14 49	...	...	...	...	
		S?	18 8	...	...	...	...	
		M	21 0	10-14	10-14	0.5	0.4	
		F	39 —	...	...	...	...	
186	6	P?	4 42 8	...	...	...	...	
		S?	43 9	...	...	...	...	
		M	45 3	6-7	6-7	0.4	0.5	
		F	5 4 —	...	...	...	...	
187	12	P	2 17 52	...	...	0.3 _N	0.5 _W	
		PcP	18 30	...	...	...	...	
		PP	20 17	...	...	...	...	
		S	26 21	...	...	0.9 _N	0.9 _E	
		ScS	27 33	...	...	1.0	1.0	Largest movement.
		F	3 23 —	...	...	...	...	
188	12	P?	9 57 10	...	...	...	...	
		S	10 3 0	...	...	...	...	
		M	12 53	10-13	10-13	1.5	2.3	
		F	11 20 —	...	...	...	...	
189	13	M	13 10 0	...	...	0.3	0.3	
190	18	P	22 26 53	...	...	0.2 _S	0.2 _E	
		PcP	27 35	...	...	...	...	
		S	35 45	...	...	...	...	
		PS	35 59	...	...	...	...	
		ScS	36 40	...	...	...	...	
		SS	40 10	...	...	...	...	
		M	50 10	14-16	11-16	0.6	0.6	
		F	0 20 —	...	...	...	...	
191	19	P?	0 58 22	...	...	...	...	
		S	1 7 16	...	...	...	...	
		M	22 0	14-16	14-18	0.2	0.2	
		F	2 10 —	...	...	...	...	
192	19	M	8 29 49	...	...	0.4	0.2	Small local shock, unfelt.
193	19	M	12 1 35	...	...	0.1	0.1	
194	21	M	5 38 50	...	...	0.2	0.2	
195	21	M	9 17 20	...	...	0.3	0.3	
196	21	M	15 55 0	...	...	0.2	0.2	
197	23	M	5 10 24	...	...	0.1	0.1	
198	23	P	21 25 33	...	...	...	...	
		PP	25 47	...	...	...	...	
		S	29 11	...	...	...	...	
		SS	29 28	...	...	...	...	
		L	31 20	...	...	...	...	
		M	32 56	10-14	10-14	0.5	0.4	
		F	50 —	...	...	...	...	
199	24	M	20 21 17	...	...	0.2	0.2	

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No. 1939.	Date.	Phase.	Greenwich Time (0=Midn.)	Recorded Period of Waves.		A_N	A_E	Remarks.
				N-S	E-W			
			<i>h.m.s.</i>	<i>s.</i>	<i>s.</i>	<i>mm.</i>	<i>mm.</i>	
200	25	<i>P</i>	3 56 44	...	...	0.3 _S	0.3 _E	May be S.
		<i>S?</i>	4 1 38	...	...	...	...	
		<i>?</i>	2 17	...	...	...	...	
		<i>SS</i>	3 35	...	...	...	...	
		<i>M</i>	12 22	15-17	15-17	0.9	1.0	
		<i>F</i>	45 —	...	...	...	...	
201	26	<i>M</i>	3 30 10	...	...	0.8	0.8	
202	27	<i>M</i>	18 52 34	...	...	0.2	0.2	

T :—N-S Component=12.0'; E-W Component =12.0".

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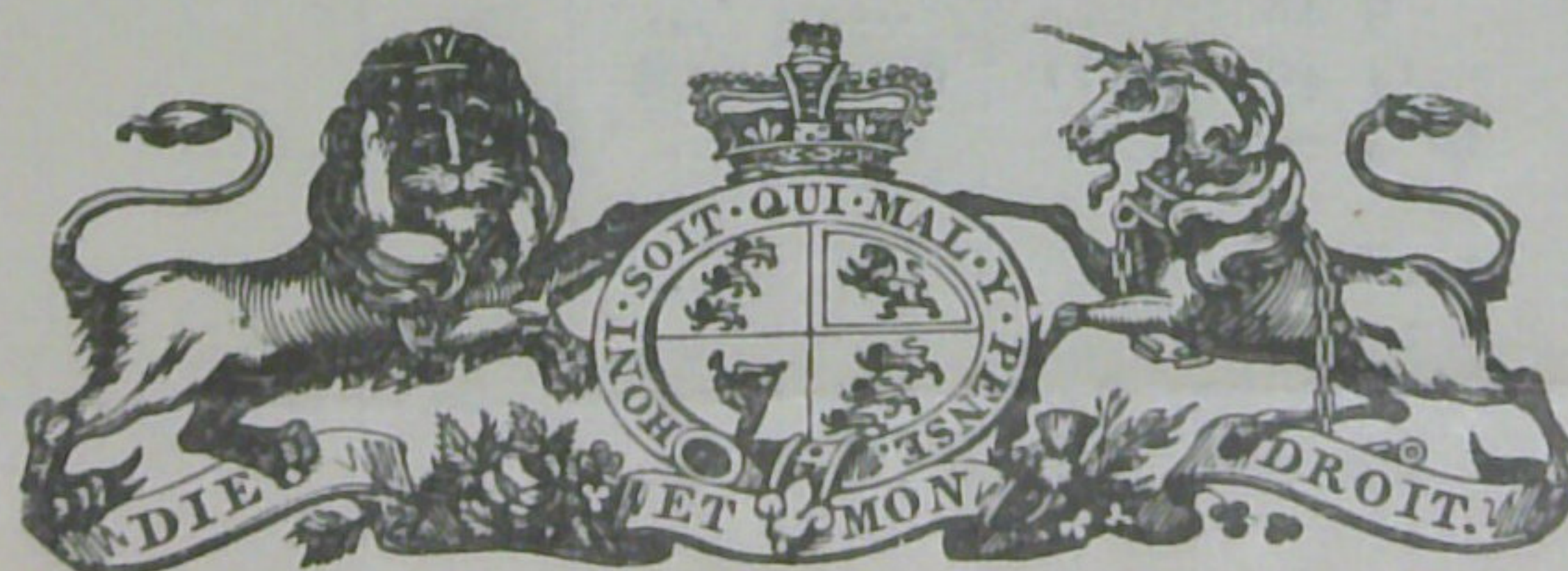
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				N-S	E-W			
			<i>h.m.s.</i>	<i>s.</i>	<i>s.</i>	<i>mm.</i>	<i>mm.</i>	
203	Sept. 2	<i>P</i> <i>S</i> <i>SS</i> <i>M</i> <i>F</i>	9 9 8 17 30 21 50 31 15 10 30 —	 16-20 ...	 16-20 ...	0'3 _S 0'4 ...	0'4 _E 0'5 ...	
204	3	<i>P</i> <i>S</i> <i>L</i> <i>M</i> <i>F</i>	7 45 47 47 30 48 7 49 0 8 33 —	 6-9 ...	 7-10 ...	0'2 _N 2'2 ...	0'5 _W 4'0 ...	
205	6	<i>M</i>	9 23 0	...	...	0'1	0'1	
206	6	<i>M</i>	11 52 24	...	...	0'2	0'2	
207	8	<i>P?</i> <i>S</i> <i>M</i> <i>F</i>	6 56 11 7 1 0 10 50 30 —	 9-11 ...	 9-13 ...	 0'5 ...	 0'5 ...	
208	8	<i>P</i> <i>S</i> <i>ScS</i> <i>SS</i> <i>M_N</i> <i>M_E</i> <i>F</i>	12 14 19 22 0 24 5 25 35 35 43 40 13 15 20 —	 12-16	 10-16 ...	0'3 _S 7'2	0'3 _W 11'5 ...	In minute break.
209	9	<i>M</i>	8 31 26	...	...	0'2	0'2	
210	9	<i>M</i>	21 34 50	...	...	0'2	0'1	
211	11	<i>M</i>	8 37 10	...	...	0'1	0'1	
212	11	<i>P?</i> <i>S?</i> <i>L</i> <i>M</i> <i>F</i>	22 50 43 52 20 53 7 54 44 23 25 —	 7-10 ...	 7-10 ...	 0'6 ...	 0'5 ...	
213	12	<i>M</i>	12 51 0	...	...	0'1	0'1	
214	14	<i>P?</i> <i>S</i> <i>M</i> <i>F</i>	9 5 48 9 48 14 49 10 3 —	 9-11 ...	 9-11 ...	 2'6 ...	 2'1 ...	
215	14	<i>S?</i> <i>M</i>	13 18 41 23 36	... ...	... ...	... 0'3	... 0'3	
216	15	<i>M</i>	21 26 0	...	...	0'1	0'1	
217	16	<i>M</i>	0 5 40	...	...	0'1	0'1	
218	16	<i>P</i> <i>S</i> <i>SS</i> <i>M</i> <i>F</i>	7 21 29 25 30 26 19 29 37 58 —	 12-16 ...	 12-16 ...	 0'4 ...	 0'4 ...	
219	17	<i>M</i>	5 22 0	11-13	11-13	0'2	0'2	
220	18	<i>M</i>	1 16 0	...	...	0'1	0'1	
221	18	<i>M</i>	7 9 30	...	...	0'5	0'2	
222	19	<i>M</i>	3 56 6	...	...	0'4	...	

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				N-S	E-W			
			<i>h.m.s.</i>	<i>s.</i>	<i>s.</i>	<i>mm.</i>	<i>mm.</i>	
223	19	<i>P?</i>	18 56 7	...	...	...	...	
		<i>S</i>	56 57	...	...	...	...	
		<i>L</i>	57 20	...	...	...	...	
		<i>M</i>	57 43	3-6	3-6	7.0	1.8	
		<i>F</i>	19 23 —	...	...	...	...	
224	20	<i>M</i>	7 51 24	...	...	0.2	0.2	
225	20	<i>M</i>	13 24 52	...	...	0.4	0.2	
226	20	<i>M</i>	13 34 56	...	...	0.3	0.2	
227	22	<i>S?</i>	0 57 47	...	...	...	...	
		<i>SS?</i>	1 2 49	...	...	...	...	
		<i>M</i>	24 40	14-16	14-16	0.8	0.5	
		<i>F</i>	2 25 —	...	...	...	...	
228	22	<i>M</i>	11 23 54	...	...	0.5	0.2	
229	25	<i>P</i>	15 36 17	...	...	...	...	
		<i>S</i>	40 40	...	...	...	...	
		<i>L</i>	43 34	...	...	...	...	
		<i>M</i>	46 31	8-10	8-10	1.6	1.4	
		<i>ScS</i>	47 51	...	...	...	...	
		<i>F</i>	16 20 —	...	...	...	...	
230	25	<i>M</i>	19 55 0	...	...	0.2	0.2	
231	25	<i>M</i>	21 22 32	...	...	0.5	0.4	
232	29	<i>M</i>	14 31 13	...	...	0.2	0.2	

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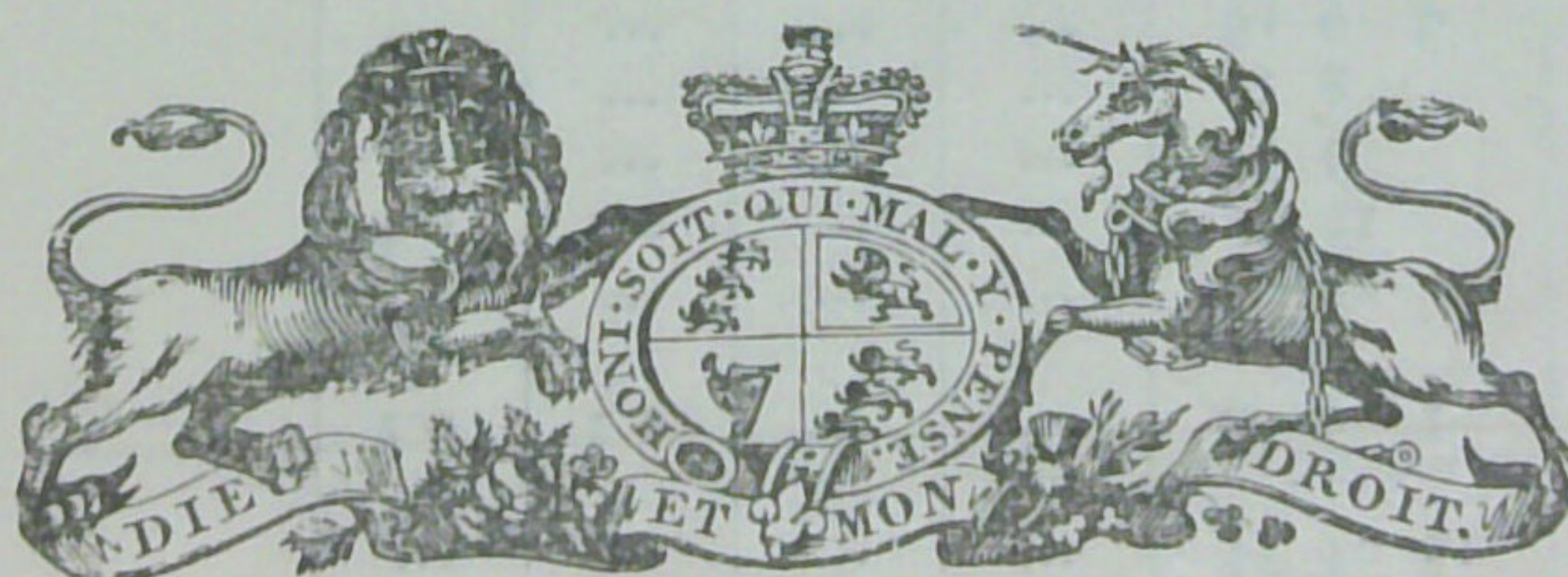
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				N-S	E-W			
			<i>h.m.s.</i>	<i>s.</i>	<i>s.</i>	<i>mm.</i>	<i>mm.</i>	
233	Oct. 1	<i>M</i>	4 15 35	...	...	0.3	0.2	
234	3	<i>M</i>	11 27 30	...	...	0.1	0.1	
235	3	<i>P?</i>	12 47 49	...	...	...	...	
		<i>S</i>	52 21	...	...	...	...	
		<i>M</i>	58 27	14-16	14-16	0.2	0.2	
		<i>F</i>	13 10 —	...	...	...	...	
236	7	<i>P</i>	20 49 30	...	...	0.4 _S	0.3 _E	
		<i>PP</i>	50 28	...	...	...	...	
		<i>S</i>	54 50	...	...	...	...	
		<i>SS</i>	57 4	...	...	...	...	
		<i>M</i>	21 1 16	8-11	7-11	0.9	0.8	
237	9	<i>M</i>	2 55 17	...	...	0.4	0.4	P and S masked by microseisms due to a typhoon east of the Colony.
238	10	<i>P</i>	18 38 2	...	...	0.4 _N	0.7 _E	Slightly masked by small microseisms.
		<i>PP</i>	39 4	...	...	...	...	
		<i>PcP?</i>	41 11	...	...	...	...	
		<i>S</i>	42 57	...	...	...	...	
		<i>SS</i>	44 22	...	...	...	...	
		<i>L</i>	46 19	...	...	...	...	
		<i>ScS</i>	48 28	...	...	...	...	
		<i>M</i>	51 40	9-15	9-15	26.1	25.3	
239	17	<i>F</i>	20 40 —	...	...	...	...	
		<i>P</i>	6 32 35	...	...	...	...	
		<i>?</i>	32 37	...	...	0.7 _S	0.8 _E	May be P.
		<i>PcP</i>	33 3	...	...	...	...	
		<i>S</i>	41 2	...	...	2.4 _N	3.8 _E	
		<i>ScS</i>	42 23	...	...	...	...	
		<i>SS</i>	45 21	...	...	...	...	
		<i>SSS?</i>	49 15	...	...	2.9	3.3	Maximum movement.
240	22	<i>F</i>	9 30 —	...	...	...	...	
		<i>P?</i>	14 51 9	...	...	...	...	
		<i>S?</i>	54 27	...	...	...	...	
		<i>M</i>	57 20	...	...	...	0.4	
241	24	<i>F</i>	15 12 —	...	...	...	...	
		<i>P?</i>	9 6 19	...	...	...	...	
		<i>S?</i>	8 56	...	...	...	...	
		<i>L</i>	9 59	...	...	...	...	
		<i>M</i>	10 11	...	...	0.3	0.4	
242	29	<i>F</i>	24 —	...	...	...	...	
		<i>M</i>	1 5 0	...	...	0.2	0.2	
243	30	<i>P?</i>	13 24 34	...	...	...	...	
		<i>PP?</i>	25 19	...	...	...	...	
		<i>L?</i>	34 25	...	...	...	...	
		<i>?</i>	34 41	...	...	...	0.5	Largest movement.
		<i>F</i>	14 7 —	...	...	...	...	

T :—N-S Component=12.0°; E-W Component =12.0°.

Damping Ratio :—N-S Component=19:1; E-W Component=20:1.

Normal magnification=150 for both pendulums.

Initial movements are of the pendulums.

B. D. EVANS,—Assistant Director.

ROYAL OBSERVATORY, HONG KONG.

Latitude..... $22^{\circ} 18' 13.2''$ North.

Longitude... $114^{\circ} 10' 18.7''$ East.



MONTHLY SEISMOLOGICAL BULLETIN

NOVEMBER,

1939.

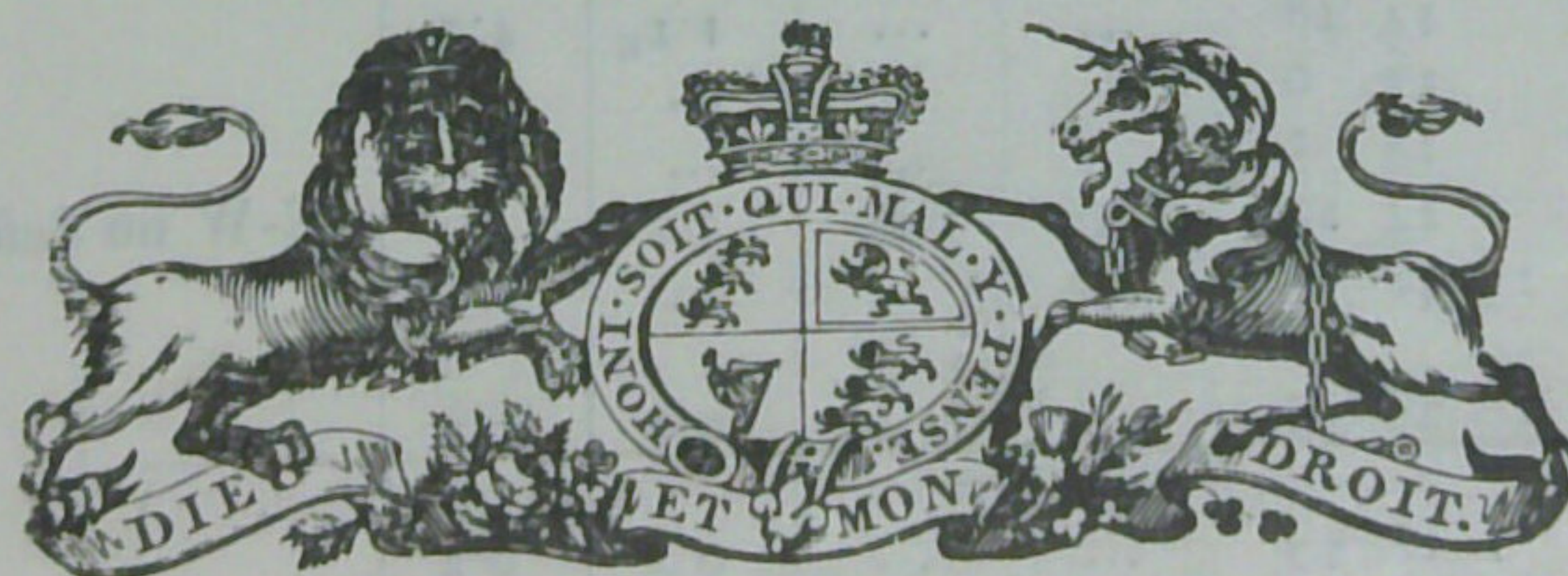
PREPARED UNDER THE DIRECTION OF

C. W. JEFFRIES, F.R.A.S.

DIRECTOR.

NOTATION.

- P = Time of arrival of longitudinal waves.
 PP = " " " " once reflected.
 S = " " of transverse "
 SKS = " " of transverse-longitudinal waves through core.
 SS = " " of transverse waves once reflected.
 L = " " of long, or surface "
 M = " " of maximum of long waves.
 F = " of end of record.
 A_N = Amplitude (half range) of N.-S. movement.
 A_E = " " " E.-W. "
 T = Period of undamped pendulum (complete swing).



HONG KONG.

PRINTED BY NORONHA & CO., LD.

GOVERNMENT PRINTERS.

1939.



No. 1939.	Date.	Phase	Greenwich Time (0 = Midn.)	Recorded Period of Waves		A_y	A_x	Remarks.
				N-S	E-W			
			<i>h. m. s.</i>	<i>s.</i>	<i>s.</i>	<i>mm.</i>	<i>mm.</i>	
244	Nov. 4	<i>P?</i> <i>M</i>	10 33 13 54 10	... ...	... 12-16	... 0.2	... 0.3	
245	7	<i>P</i> <i>S</i> <i>L</i> <i>M</i> <i>F</i>	3 55 8 56 18 57 2 57 27 4 38 —	 4-6 ...	 4-6 ...	 31.0 ...	 7.5 ...	Doubtful.
246	8	<i>M</i>	17 51 35	...	...	0.2	0.3	
247	10	<i>M</i>	17 25 24	...	...	...	0.2	
248	10	<i>P</i> <i>PP</i> <i>S</i> <i>F</i>	20 29 19 31 8 36 8 21 17 —	... ... ... ...	... ... ... ...	... ... 1.0 ...	 0.5 ...	Largest movement.
249	13	<i>M</i>	8 44 10	...	...	...	0.1	
250	18	<i>M</i>	0 52 20	...	...	0.1	0.1	
251	18	<i>P</i> <i>S</i> <i>SS</i> <i>M</i> <i>F</i>	1 40 55 47 21 50 9 55 7 2 54 —	 10-14 ...	 11-15 ...	0.1 _S 0.6 ...	0.2 _E 0.5 ...	
252	20	<i>P?</i> <i>S</i> <i>M</i> <i>F</i>	6 25 10 28 5 33 0 7 0 —	 7-9 ...	 7-9 ...	 1.9 ...	 0.5 ...	
253	21	<i>P?</i> <i>PP?</i> <i>S?</i> <i>M</i> <i>F</i>	9 8 11 9 29 15 10 30 5 10 11 —	 12-16 ...	 12-16 ...	 0.8 ...	 0.5 ...	
254	21	<i>P</i> <i>PP</i> <i>PcP</i> <i>S</i> <i>SS</i> <i>?</i> <i>M_N</i> <i>F</i>	11 9 1 10 9 11 45 14 48 17 0 18 5 24 20 12 48 —	 7-10 ...	 7-10 ...	0.6 _N 1.2 _E 3.0 ...	1.0 _W 4.5 _W	E-W no definite maximum.
255	22	<i>M</i>	10 28 46	...	...	0.2	0.2	
256	24	<i>M</i>	1 18 20	...	...	0.2	0.2	
257	25	<i>M</i>	0 1 30	...	...	0.3	0.3	P & S masked by movements due to changing sheets.
258	25	<i>M</i>	7 2 45	...	...	0.1	0.1	
259	28	<i>M</i>	15 0 40	...	...	0.1	0.1	

T :—N-S Component=12.0' ; E-W Component =12.2".
Damping Ratio :—N-S Component=21:1; E-W Component 1-23*d*=20:1, 23-30*d*=10:1.
Normal magnification=150 for both pendulums.
Initial movements are of the pendulums.

B. D. EVANS,—Assistant Director.

ROYAL OBSERVATORY, HONG KONG.



Latitude..... $22^{\circ} 18' 13.2''$ North.

Longitude... $114^{\circ} 10' 18.7''$ East.

MONTHLY SEISMOLOGICAL BULLETIN

DECEMBER,

1939.

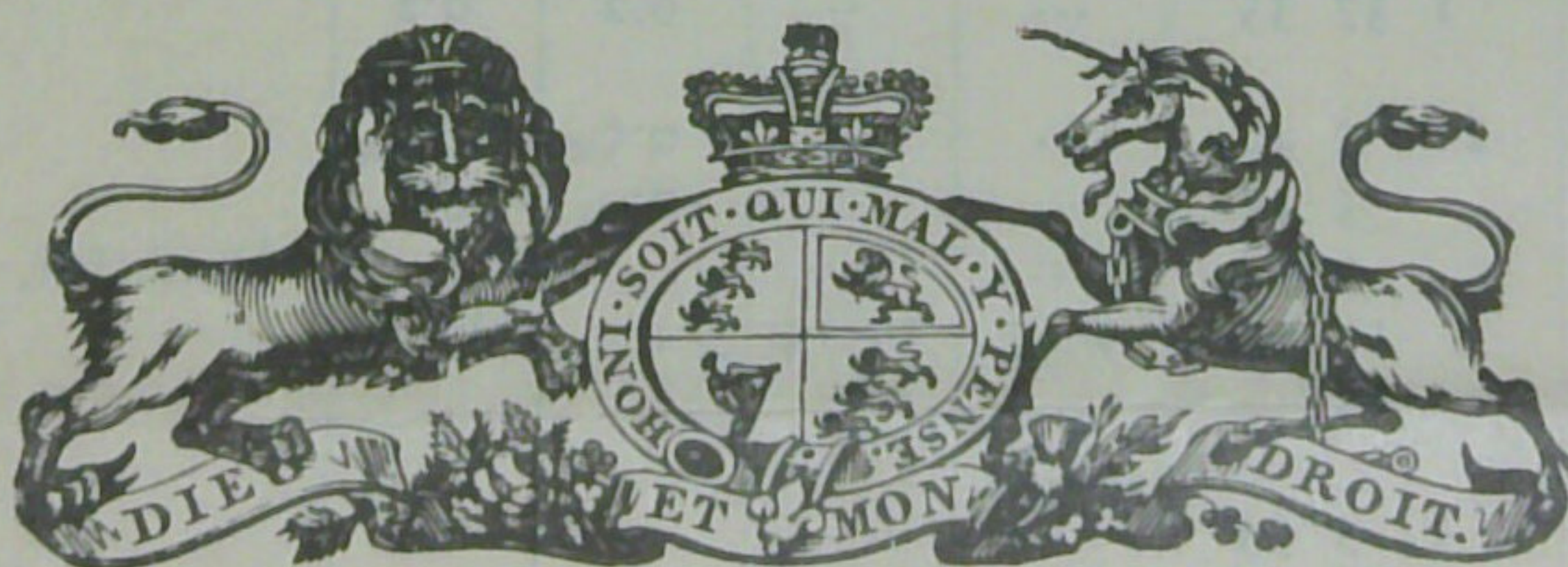
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 F = " of end of record.
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 A_E = " " " E.-W. "
 T = Period of undamped pendulum (complete swing).



HONG KONG.

PRINTED BY NORONHA & CO., LD.

GOVERNMENT PRINTERS.

1940,

ROYAL OBSERVATORY, HONG KONG. EARTHQUAKES RECORDED IN DECEMBER, 1939.
(Milne-Shaw Instruments.)



No. 1939.	Date.	Phase	Greenwich Time (0 = Midn.)	Recorded Period of Waves		A_N	A_E	Remarks.
				N-S	E-W			
			<i>h.m.s.</i>	<i>s.</i>	<i>s.</i>	<i>mm.</i>	<i>mm.</i>	
260	Dec. 5	<i>PP?</i> <i>S?</i> <i>M_E</i> <i>M_N</i> <i>F</i>	8 53 4 9 2 16 58 34 10 4 54 45 —	 16-20 ...	 14-18	 1.8 ...	 0.9	
261	7	<i>M</i>	10 50 0	...	...	0.1	0.1	
262	7	<i>M</i>	17 35 25	...	...	0.2	0.2	
263	16	<i>P</i> <i>?</i> <i>PP</i> <i>S</i> <i>?</i> <i>M</i> <i>F</i>	10 53 21 53 36 54 21 58 50 59 15 11 6 16 12 25 —	 9-12 ...	 10-14 ...	 2.6 ...	 3.5 ...	
264	17	<i>M</i>	0 51 30	...	...	0.1	0.1	
265	17	<i>P?</i> <i>S?</i> <i>M</i>	7 56 29 8 0 20 5 10	 10-12	 10-12	 0.2	 0.2	
266	18	<i>P</i> <i>PP</i> <i>S?</i> <i>?</i> <i>SS</i> <i>L</i> <i>M</i> <i>F</i>	10 29 32 30 33 34 50 35 14 36 20 38 48 39 27 59 —	... ... ... ... ... ... ... ...	... ... ... ... ... ... ... ...	... ... ... ... ... ... 0.5 ...	 0.4 ...	May be S.
267	19	<i>P?</i> <i>S</i> <i>L</i> <i>M</i> <i>F</i>	18 30 51 31 45 32 9 32 31 49 —	 3-5 ...	 3-5 ...	 2.5 ...	 1.0 ...	
268	20	<i>M</i>	13 13 45	...	...	0.4	0.4	
269	20	<i>M</i>	18 34 17	...	...	0.2	0.2	
270	21	<i>M</i>	1 37 35	...	...	0.2	0.2	
271	21	<i>P?</i> <i>P</i> <i>S</i> <i>M</i> <i>F</i>	21 5 40 5 45 9 59 12 45 2 15 —	 9-14 ...	 10-14 ...	0.5 _N 17.9 _S ... > 100 ...	0.2 _W 6.9 _E ... 80.0 ...	Doubtful.
272	22	<i>P</i> <i>PP</i> <i>?</i> <i>S</i> <i>SS</i> <i>M_E</i> <i>M_N</i> <i>F</i>	5 3 33 5 6 42 13 40 17 8 25 28 6 7 15 15 43 7 35 —	 16-18 ...	 14-17	 1.2 ...	 0.7 ...	
273	22	<i>M</i>	8 10 25	...	...	0.1	0.1	
274	23	<i>P</i> <i>S</i> <i>?</i> <i>F</i>	3 1 10 4 24 4 38 20 —	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	May be S.
275	23	<i>M</i>	18 38 20	...	...	0.1	0.1	

ROYAL OBSERVATORY, HONG KONG. EARTHQUAKES RECORDED IN DECEMBER, 1939.
(Milne-Shaw Instruments.)—Continued.



No. 1939.	Date.	Phase.	Greenwich Time (0=Midn.)	Recorded Period of Waves.		A_N	A_E	Remarks.
				N-S	E-W			
			<i>h.m.s.</i>	<i>s.</i>	<i>s.</i>	<i>mm.</i>	<i>mm.</i>	
276	24	<i>M</i>	7 48 48	...	...	0.2	0.2	
277	25	<i>P?</i>	16 33 38	...	...	...	...	
		<i>S</i>	39 46	...	...	...	...	
		<i>M</i>	45 0	16-20	16-20	0.4	0.4	
		<i>F</i>	17 21 —	...	...	...	...	
278	25	<i>P</i>	21 1 14	...	...	0.7 _S	0.2 _E	
		<i>PP</i>	1 41	...	...	...	...	
		<i>S</i>	5 22	...	...	...	...	
		<i>SS</i>	6 17	...	...	...	...	
		<i>?</i>	7 5	...	...	...	0.5	
		<i>M_N</i>	18 0	12-16	...	0.3	...	Largest movement.
		<i>F</i>	28 —	...	...	...	...	
279	25	<i>P?</i>	22 28 7	...	...	...	...	
		<i>S?</i>	33 8	...	...	0.4	0.3	" "
280	26	<i>M</i>	10 11 15	...	...	0.3	0.2	
281	26	<i>M</i>	13 17 25	...	...	0.1	0.1	
282	27	<i>P</i>	0 18 2	...	...	0.1 _N	0.1 _W	
		<i>PcP</i>	8 20	...	...	...	...	
		<i>PP</i>	10 51	...	...	...	...	
		<i>S</i>	18 2	...	...	5.5 _S	2.0 _E	
		<i>SS</i>	23 45	...	...	...	...	
		<i>L</i>	35 9	...	...	...	...	
		<i>M</i>	40 28	10-16	10-16	38.0	40.0	
		<i>F</i>	4 50 —	...	...	...	...	
283	28	<i>M</i>	0 27 7	...	...	0.3	0.3	
284	28	<i>M</i>	4 9 45	...	...	0.5	0.3	
285	31	<i>M</i>	7 10 33	...	...	0.3	0.2	

T :—N-S Component=12.0°; E-W Component =12.0°.

Damping Ratio :—N-S Component=23:1; E-W Component=21:1.

Normal magnification=150 for both pendulums.

Initial movements are of the pendulums.

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