

Ref 2691

Year 1927, No. 1.

January 1st to 11th, 1927.

MANILA ? P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY

$\phi=14^{\circ} 34' 41''$ N. $\lambda=120^{\circ} 58' 33''$ E. $h=2.40$ ms. Alluvium.

Instrument: Wiechert's astatic pendulum (1,000 Kg.)

	T_0	V		$\frac{r}{T_0^2}$
A_N	3.36	182	2.199	0.182
A_E	3.47	175	2.004	0.142

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A_N	A_E		
							s.	μ	μ	Km.	
1	1	I_v	eP iL F	18	53	17 54 06				890	NE Mindanao. Mi-croseisms on the 1st and 2nd.
2	2	III_v	iP iL ME MN F	0	19	22 37 40 12 40	7 9	261	257	680	Felt slightly at Baguio.
3	2	I_v	eP F	22	54	47 59				180	
4	2	I_v	eP F	23	10	16 13				220	
5	3	I_r	eP iL F	22	12	22 54 51					
6	5	III_d	iP iL ME MN F	16	25	08 51 35 45 01	5 3	310	297	390	Ilocos Sur and Mountain Provinc-es.
7	9	I_v	eP iL F	1	28	53 57 46				580	W Leyte.
8	10	I_v	eP F	4	31	17 34				170	
9	10	I_v	iP iL F	6	02	06 22 11				690	Near Batanes Is-lands.
10	10	I_v	eP F	7	18	41 20				250	
11	10	I_v	eP F	7	21	50 24				210	SE Luzon.
12	10	I_v	eP iL F	15	44	48 55 49				610	Near Samar Island.

Year 1927, No. 2.

January 12th to 26th, 1927.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		μ _N	μ _E		
13	12	III _d	iP iL F	0	05	53 13 44			180	Western coast of Zambales in the China Sea.	
14	12	I _v	eP F	2	50	51 54			190	Aftershock of the No. 13.	
15	12	I _v	eP F	3	22	11 26			170	Aftershock of the No. 13.	
16	15	I _v	eP L F	14	39	22 40 47			470		
17	17	I _r	eP L F	22	04	35 11 32					
18	18	I _v	eP F	10	07	35 10			130		
19	20	I	e F	11	16	30 49				Trace only.	
20	21	I _v	eP iL MN ME F	3	00	05 52 53 54 18	4 3	58	38	430 NE Luzon.	
21	24	II _v	iP iL ME MN F	0	20	35 01 05 13 30	2 2	55	49	230	
22	24	II _r	iP iPRN iPRE eS iSRN eL ME MN F	1	15	34 35 56 05 55 09 29 56 43	6 7	44	106		
23	24	I	e F	6	47	7 24				Trace only.	
24	25	I	e F	8	06	25				Trace only. NE Mindanao.	
25	25	I _r	eP eL? F	23	20	28 20 32					

Year 1927, No. 4.

February 13th to 28th, 1927.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich Mean time			Per-iod	Amplitude		Dis-tance	Remarks.
				h.	m.	s.		A _N	A _E		
				h.	m.	s.	s.	u	u	Km.	
40	13	Iv	eP F	22	51	12 53				125	
41	14	I	e F	11 12	57 08	32					Trace only.
42	16	III _u	eP iL?	1 2	43 05	19 26					End overtaken by following quake,
43	16	II _v	eP iL? F	4	14 15 34	00 40					
44	18	II _r	eP iL F	22 23	59 01 59	13 34					E Mindanao.
45	20	Iv	eP L F	2	02 03 24	48 38			450		SE Panay.
46	21	II _r	iP iL ME MN F	12 13	28 35 37 31	45 00 41 51	9 9	16	19		
47	22	I _r	eP iL MN ME F	19 20	59 05 08 09 51	28 30 00 03	8 9	17	23		
48	23	I _r	eP L F	2	49 54 32	47 37					
49	25	Iv	eP F	15	52 59	56				270	
50	25	Iv	eP F	16	02 11	28				230	
51	26	I	e F	2	15 52	19					
52	26	I	e F	13	29 44	00					
53	26	I	e F	14	07 48						
54	27	Iv	eP L F	3	56 57 17	29 14				410	
55	28	I	e F	14 16	28 18						Trace only.

Year 1927, No. 3.

March 1st to 18th, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.

$\phi=14^{\circ} 34' 41''$ N. $\lambda=120^{\circ} 58' 33''$ E. $h=2.40$ ms. Alluvium.

Instrument: Wiechert's astatic pendulum (1,000 Kg.)

	T_0	V	ϵ	$\frac{r}{T_0^2}$
A_N	7.14	197	2.638	0.032
A_E	7.43	170	2.046	0.038

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A_N	A_E		
56	3	III _r	iP iS iL MN ME F	1	10	00 58 46 31 12 49	8 8	221	250	3180	
57	3	I	e F	16	58	17 56					Trace only.
58	5	I _v	eP iL F	0	39	52 15 44				210	Western part of LUzon.
59	7	III _r	iP iS iL MN1 ME1 ME2 MN2 F	9	32	58 32 23 07 41 02 36 57	8 9 10 11	329	470 475	2880	Japan.
60	12	I	e F	12	14	46					Trace only.
61	14	I _r	eP L F	15	25	37 39 55					
62	14	I _r	eP L F	17	42	19 04 49					
63	15	I _r	eP L F	17	02	28 00 35					
64	15	I _r	eP L F	22	00	08 32 41					
65	16	I _v	eP L F	18	28	54 39 46				410	
66	18	I _v	eP F	15	55	38 58				125	

Year 1927, No. 6.

March 18th to April 6th, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A _N	A _E		
							s.	^v	^u	Km.	
67	18	I _r	eP L F	21	29	42 31 30 22					
68	20	I _v	eP L F	21	17	00 18 24 43				770	
69	21	I _r	i L? F	15	17	34 27 00 56					
70	21	I	e F	22	41	55					
71	22	I	e F	7	44	8					Trace only.
72	23	I _v	eP F	7	55	46 8				330	
73	23	I	L F	9	41	55					Trace only.
74	24	I _v	eP iL MN F	5	02	41 03 13 03 18 16	3	26		290	
75	25	I	e F	13	06	30 35					
76	25	I _v	eP iL F	23	07	18 07 33 13				130	
77	26	I _v	eP F	20	15	17 21				310	
78	27	I _v	eP F	16	55	02 59				120	
79	31	I	e F	21	14	00 55					Trace only.

A P R I L , 1 9 2 7 .

80	1	II _r	eP iL ME MN F	19	16	47 25 20 26 00 26 05 20 12	8		88		
81	3	I	e F	13	53	14					Trace only.
82	5	I _v	eP L F	5	21	14 23 19 46					
83	6	I _v	eP F	21	47	46 56				530	

Year 1927, No. 7.

April 7th to 18th, 1927.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A _N	A _E		
				h.	m.	s.	s.	μ	γ	Km.	
84	7	Iv	eP L F	17	51	44				435	
				18	28						
85	7	Iv	eP L F	21	19	38				390	Northwestern coast of Luzon.
				20	21	38					
86	9	Ir	eP L F	8	59	27					E Mindanao.
				9	02	00					
				31							
87	9	Iv	eP L F	15	48	00				920	
				16	49	46					
				16	12						
88	9	I	e F	17	13						Trace only.
				35							
89	11	IIv	eP iL ME MN F	14	49	44	4 5	37	37	450	
				50	34						
				50	56						
				51	09						
				15	06						
90	12	Iv	eP F	7	13	37				140	
				16							
91	12	I	e F	23	23						Trace only.
				45							
92	13	IIIId	iP iL	13	44	43				190	China Sea, near western coast of Luzon. Maxima and end lost by the force of the shock
				45	04						Do.
93	13	IIIId	iP	14	33	37				200	
94	14	Iu	e? S? F	6	43	29				17000?	Chile?
				7	01	00					
				29							
95	16	Iv	eP F	8	06	33				190	
				11							
96	16	Iu	eP S? L?	8	25	44					End in succeeding movement.
				32	25						
				40	21						
97	16	Ir	eP L? F	9	23	32					
				10	33	00					
				10	15						
98	16	Ir	eP L F	13	06	43					E Mindanao.
				08	56						
				23							
99	17	Ir	eP L F	9	10	45					
				14	36						
				37							
100	18	Iv	eP F	15	10	55				630	
				21							

Year 1927, No. 8.

April 18th to 30th, 1927.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		μ _N	μ _E		
101	18	I _v	eP F	18	46	18 52			400		
102	19	III _d	iP iL F	17	30	42 31 00 18 27			160	China Sea. Maxima lost by the force of the shock.	
103	19	I _v	eP F	18	42	49 47			155	Repetition of the No. 102.	
104	19	I _v	eP F	19	02	21 06			170	Repetition of the No. 102.	
105	20	I _v	eP F	8	55	31 59			180		
106	20	I _v	eP iL F	15	34	34 35 17 42			390		
107	20	I _v	eP F	20	04	41 08			70		
108	21	I	e F	3	21	50				Trace only.	
109	23	II _v	eP iL MN ME F	13	21	42 22 35 22 46 23 12 52	4 5	121 141	480	China Sea?	
110	25	I _v	eP F	1	54	32 2 04			220		
111	27	I	e F	3	01	00 49				Trace only.	
112	27	I _r	eP iL? F	19	21	50 31 15 20 35					
113	27	I _v	eP F	19	32	03 35			100		
114	28	I _r	eP L? F	10	27	26 30 00 11 02					
115	30	I _u	e? M F	14	06	39 24 15 08					

Year 1927, No. 9.

May 1st to 12th, 1927.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.

$\phi=14^{\circ} 34' 41''$ N. $\lambda=120^{\circ} 58' 33''$ E. $h=2.40$ ms. Alluvium.

Instrument: Wiechert's astatic pendulum (1,000 Kg.)

	T_0	V	ϵ	$\frac{r}{T_0^2}$
A_N	7.31	105	2.814	0.023
A_E	7.11	189	1.989	0.039

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A_N	A_E		
						s.	γ	μ	Km.		
116	2	I _r	e	12	41	30					
			L?	12	50	00					
			F	13	16						
117	3	I _r	eP	13	48	00					
			L?	14	01	00					
			F	14	32						
118	4	II _v	eP	14	05	58				200	
			iL	14	06	20					
			ME	14	06	25	4		244		
			MN	14	06	43	5	398			
			F	14	28						
119	5	I _r	eP	18	53	28				1000	
			iL	18	55	17					
			F	19	11						
120	6	I _v	eP	18	41	06				80	
			F	18	44						
121	9	I	e	16	19						Trace only.
			F	16	32						
122	10	I _r	eP	6	09	39					
			L?	6	19	00					
			F	7	04						
123	11	I _r	e	1	25	22					
			L?	1	32	00					
			F	1	48						
124	11	I _v	eP	9	50	42				320	Abra Province.
			iL	9	51	18					
			F	10	01						
125	11	I	e	10	45						Trace only.
			F	11	02						
126	12	I	e	4	10	55					Trace only.
			F	4	33						

Year 1927, No. 10.

May 13th to 21st, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A _N	A _E		
							μ	μ	Km.		
127	13	III _d	iP iL	15 15	33 33	28 43			130	China Sea, near SW coast of Luzon. Maxima and end lost by the force of the shock.	
128	13	I _v	eP iL F	18 18 18	28 28 35	20 44			220		
129	13	I	e F	23 23	16 39	03				Trace only.	
130	14	I _v	eP L F	1 1 1	35 37 49	38 00			750		
131	14	I _v	eP iL F	2 2 2	01 02 09	59 13			125	China Sea, near SW coast of Luzon.	
132	14	I _v	eP L F	15 15 15	33 34 45	47 51			580		
133	14	I _v	eP iL F	16 16 16	16 16 21	32 50			160		
134	15	I	e F	3 3	36 54	39				Trace only.	
135	16	I _r	eP iL F	12 12 13	06 12 22	43 00					
136	17	I _r	e L F	6 6 7	17 26 02	34 26					
137	17	I _r	e? L? F	21 21 22	50 54 24	00 06					
138	18	I _v	eP iL F	7 7 7	37 37 47	34 51			150		
139	18	I _v	eP iL F	15 15 15	43 43 51	03 19			140		
140	18	I _v	eP F	16 16	41 44	13			140		
141	21	I _r	e L? F	17 17 17	05 13 41	00 52					

Year 1927, No. 11.

May 22nd to 31st, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A _N	A _E		
				h.	m.	s.	s.	μ	μ	Km.	
142	22	III _v	eP	11	58	00	7		293	490	Pacific, felt SE end of Luzon.
			iL	11	58	51					
			M _T	12	01	47					
			F	13	21						
143	22	I _v	eP	12	09	15				600	Aftershock of the No. 142.
			L	12	10	21					
			F	12	15						
144	22	I _v	eP	20	38	26				540	Aftershock of the No. 142.
			L	20	39	25					
			F	20	58						
145	22	I _r	eP	21	49	25					
			L	22	01	13					
			F	22	23						
146	22	III _r	iP _E	22	38	38			P-L = 3900 P-S = 2580	3900	Kansu, China.
			iS _E	22	44	37					
			iL _E	22	48	32					
			F	23	2	47					
147	23	I _r	eP	2	52	42				3640	Aftershock of the No. 146.
			iL	3	01	48					
			F	3	32						
148	23	I _r	e	6	45						Aftershock of the No. 146.
			L	6	53	00					
			F	7	20						
149	23	I _r	e	13	57	39					
			iL	14	07	32					
			F	14	38						
150	23 24	I _r	eP	23	50	55					
			iL	0	02	00					
			F	0	33						
151	24	I _r	e	16	13	00					Micros. on the 24 and 25 and moderate on the 26, caused by a typhoon.
			eL	16	19	00					
			F	16	34						
152	28	I _v	eP	23	15	28				270	
			F	23	18						
153	29	I _v	eP	14	52	30				190	Micros. on the 27, 28 and 29.
			F	14	55						
154	31	I _v	eP	21	27	44				240	Micros. on the 30 and 31.
			F	21	31						

Year 1927, No. 12.

June 1st to 7th, 1927.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.

$\phi=14^{\circ} 34' 31''$ N. $\lambda=120^{\circ} 58' 33''$ E. $h=2.40$ ms. Alluvium.

Instrument: Wiechert's astatic pendulum (1,000 Kg.)

	T_0	V	ϵ	$\frac{r}{T_0^2}$
A_N	6.52	155	2.618	0.054
A_E	6.32	202	1.865	0.046

No.	Date	Character	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		γ_N	γ_E		
155	1	I_V	iP iL F	6	56	30 48 06			160		
156	1	I_r	eP iL F	7	29	29 30 44					
157	1	I_V	eP iL F	21	13	16 32 16			140		
158	1	I_V	eP iL F	22	23	11 31 28			180		
159	2	I	MN F	17	00	13					
160	3	III_r	iP P iL F	7	17	13 03 41 02			3400	Felt at Darwin Port, N Australia, according Sydney Observatory.	
161	3	I_V	eP iL F	19	29	39 13 38			310	W Luzon.	
162	6	I_r	eP iL F	5	37	52 04 08			1020	E Mindanao.	
163	6	I	e F	12	36	00 04				Trace only.	
164	6	I	e F	18	35	51 08				Trace only.	
165	7	I_r	eP iL MN ME F	9	38	30 43 24 37 08	9 7	44 35	1440	Pacific.	

Year 1927, No. 13.

June 7th to 20th, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A _N	A _E		
				h.	m.	s.	s.	μ	μ	Km.	
166	7	I	e F	11	52	38					Trace only.
167	7	I _v	eP F	14	38	13				115	
168	9	I _v	eP L F	11	38	39				770	
169	10	I _v	eP F	20	44	56				150	NW Luzon.
170	11	I _r	eP iL? ME MN	2	36	26	7 9	19	38		End overtaken by following earthquake.
171	11	I _r	eP iL F	2	53	43					
172	11	I	e F	12	59	00					
173	14	I _r	eP iL F	9	26	29					Pacific.
174	14	I.	e F	17	27	54					Trace only.
175	15	I _v	eP F	10	31	14				810	Bashi Channel,
176	17	I _v	eP F	9	36	19				40	
177	17	I _v	eP iL F	10	33	19				140	
178	18	III _v	iP P iL ME F	0	57	05	4	452		440	China Sea near northwestern part of Luzon.
179	18	I _v	eP eL F	6	47	55				740	Pacific, near Dinagat Island,
180	19	I _v	eP F	10	24	48				370	Pacific, SE Luzon.
181	20	I _v	eP F	7	32	22				250	

Year 1927, No. 14.

June 20th to 30th, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A _N	A _E		
				h.	m.	s.	s.	μ	μ	Km.	
182	20	I _u	e	14	22	39					
			L?	14	41	00					
			F	15	19						
183	22	I	e	3	35	44					Trace only.
			F	3	51						
184	23	I _v	eP	20	13	28				140	W Luzon.
			iL	20	13	44					
			F	20	18						
185	23 24	I	e	23	53	00					
			M	0	00	00					
			F	0	22						
186	24	II _v	eP	20	24	36				300	SW Tablas Island.
			iL	20	25	09					
			MN	20	25	12	3	121			
			ME	20	25	13	3		74		
			F	20	42						
187	26	I _u	e?	11	43	00				8370?	Felt in Crimea Pe-ninsula, according Kew Observatory.
			L?	12	08						
			F	12	37						
188	27	I _v	eP	12	35	12				120	
			F	12	40						
189	28	II _v	iP	1	43	28				650	Off SE Samar.
			iL	1	44	39					
			MN	1	44	56	6	38			
			ME	1	45	10	6		73		
			F	2	18						
190	28	I _r	eP	11	09	34				1530	
			M	11	13	22					
			F	11	24						

M A N I L A . . P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.

$\phi=14^{\circ} 34' 41''$ N. $\lambda=120^{\circ} 58' 33''$ E. $h=2.40$ ms. Alluvium.

Instrument: Wiechert's astatic pendulum (1,000Kg.)

	T_0	V	ϵ	$\frac{r}{T_0^2}$
A_N	6.52	155	2.618	0.054
A_E	6.32	202	1.865	0.046

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A_N	A_E		
							s.	μ	μ	Km.	
191	1	I_r	e	8	31	45				9300	
			S	8	42	05					
			F	9	37						
192	1	I_v	eP	23	06	53				160	
			F	23	11						
193	2	I_v	eP	9	33	21				460	Pacific, off SE coast of Luzon.
			L	9	34	12					
			F	9	42						
194	2	I_r	e	20	44	53					
			M	20	53	19					
			F	21	17						
195	3	III_v	iP	8	17	38				590	Pacific, off SE coast of Luzon.
			iL	8	18	43					
			MN	8	18	45	4	490			
			ME	8	18	46	4	408			
			F	9	42						
196	3	I	e	10	49	17					
			F	11	33						
197	4	I_v	eP	7	17	43				200	
			L	7	18	05					
			F	7	22						
198	7	I_r	eP	20	16	09				5260	
			L	20	30	29					
			F	20	51						
199	8	II_v	eP	0	29	19				490	NE Luzon.
			iL	0	30	13					
			MN	0	31	23	4	61			
			ME	0	31	30	4	67			
			F	0	51						
200	10	I_v	eP	10	43	28				150	
			F	10	46						
201	11	I_u	eP	13	16	15				8400	Palestine.
			S	13	25	36					
			L	13	42	40					
			ME	13	53	00	24	1			
			F	14	27						

Year 1927, No. 16.

July 12th to 23rd, 1927.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		s.	μ ^N		
202	12	I _r	iP iS F	21	14	55 00 16				5400	Kurile Islands.
203	13	I _v	eP iL F	15	35	00 15 39				130	
204	13	II _v	iP iL ME F	20	30	00 34 36 45	2		181	310	Southeastern part of Luzon.
205	14	I _r	eP iL MN ME F	23	22	00 12 22 52 56	4 5	88	79		
206	17	I _r	eP ME F	8	53	03 26 14	5		10		
207	18	I _r	e ME F	11	31	32 42 56	7		12		Microseisms on the 17th and 18th.
208	21	I _v	eP L F	9	56	51 05 01				125	
209	21	I _v	eP F	10	04	26 07				100	Microseisms on the 19th, 20th and 21st
210	21	I _v	eP F	10	41	33 43				90	
211	22	I _u	e(P) iS L? MN ME F?	4	06	14 00 00 24 53	22 20	5	9		Phases very indefinite and disturbed by microseisms.
212	23	I _v	eP iL F	6	12	51 03 16				110	
213	23	I _v	e? L? F	12	04	22 31 15					
214	23	I	L? F	20	58	21 12					

Year 1927, No. 17.

July 23rd to 31st, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A _N	A _E		
				h.	m.	s.	s.	μ	μ	Km.	
215	23	I	L?	23	21.	5					Moderate microseis- ms on the 22nd and 23rd.
			F	23	33						
216	24	I _v	eP	19	33	18				220	
			F	19	38						
217	25	I _v	eP	10	36	42				140	Microseisms on the 24th and 25th.
			F	10	39						
218	27	I	e	14	58	19					Trace only.
			F	15	16						
219	28	I _v	eP	10	03	32				200	
			iL	10	03	54					
			F	10	10						
220	28	I	e	16	29						Trace only.
			F	16	57						
221	29	I _r	e	0	09	48					
			M	0	23	00					
			F	0	53						
222	29	I _v	eP	9	15	56				490	
			iL	9	16	50					
			F	9	28						
223	29	I _v	eP	11	28	18				260	
			F	11	37						
224	30	I _r	eP	14	25	51					
			L?	14	32	00					
			F	14	52						
225	30	I _v	eP	15	42	09				240	
			F	15	46						
226	31	I _v	eP	23	37	46				280	
			L	23	38	17					
			F	23	45						

Year 1927, No. 18.

August 1st to 7th, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.

$\phi=14^{\circ} 34' 41''$ N. $\lambda=120^{\circ} 58' 33''$ E. $h=2.40$ ms. Alluvium.

Instrument: Wiechert's astatic pendulum (1,000 Kg.)

	T_0	V	ϵ	$\frac{r}{T_0^2}$
A_N	6.52	155	2.618	0.054
A_E	6.32	202	1.865	0.046

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A_N	A_E		
						s.	μ	μ	Km.		
227	1	I	e F	11	49.5						Trace only.
228	1	I	e F	19	03						Feeble movements.
229	3	I_v	eP iL F	6	07	23			510		
230	3	I	e M F	7	17	33					
231	4	II_v	iP iL ME MN F	1	18	00				260	Romblon Island.
				1	18	29					
				1	18	42	2				
				1	13	43	2	180	126		
				1	36						
232	4	I	e F	15	52	20					
				16	26						
233	4	I_v	eP F	16	32	54			100		
				16	36						
234	5	II_r	iP iPRN2 PSE iSE iSN iSRE1 iSRN1 iLN iLE MN ME F	21	19	06				3900	Japan.
				21	20	30					
				21	23	46					
				21	23	52					
				21	24	43					
				21	26	28					
				21	26	34					
				21	28	54					
				21	29	05					
				21	31	09	13	33			
				21	31	15	8		37		
				22	59						
235	6	I_v	eP L F	14	34	00			920		Pacific, off NE Mindanao.
				14	35	40					
				14	52						
236	7	I_v	eP L F	16	08	20			380		Microseisms on the 6th and 7th.
				16	09	02					
				16	15						

18

Year 1927, No. 19.

August 8th to 24th, 1927.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		μ ^{NN}	μ ^{AE}		
237	8	I _r	e L? F	1	06	29					
				1	12	30					
				1	31						
238	8	I _v	eP L F	10	28	45			160		
				10	29	03					
				10	35						
239	8	I _r	iP L F	18	48	00					
				18	50	55					
				19	14						
240	10	III _r	iP iPSE iPSN iSE iLE ME1 ME2 F	11	40	31			2300	Near New Guinea.	
				11	42	39					
				11	42	44					
				11	44	14					
				11	45	31					
				11	45	47					
				11	48	49					
				14	06						
241	10	I _v	eP F	18	59	37			100		
				19	02						
242	12	I _r	eP iL? F	0	38	13					
				0	42	00					
				1	42						
243	12	I	e? F	10	31						
				11	23						
244	13	I _r	eP iL ME F	11	47	58	7	64	1350		
				11	51	00					
				11	51	42					
				12	56						
245	18	I	e? F?	10	05					Moderate microseisms on the 18th, from 6h to 15h due to typhoon.	
				10	27						
246	18	I _r	(e) (iL) F	19	34	36				Initial phases badly masked by strong microseisms.	
				19	42	00					
				20	58						
247	20	I	e? F	21	45					Strong microseisms on the 19th and moderate on the 20th.	
				22	22						
248	21	I	i F	0	14						
				1	51						
249	21	I _v	eP F	5	30	00			130		
				5	33						
250	23	I _r	eP eS iL MN ME F	6	35	49	12 11	12 19			
				6	41	15					
				6	45	05					
				6	46	19					
				6	48	02					
				8	07						
251	24	I	eP F	9	02	17				Trace only.	
				10	10						

Year 1927, No. 20.

August 24th to September 10th, 1927.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		μ _N	μ _E		
252	24	II _v	iP	18	11	04	12	60		940	Formosa.
			iL	18	12	06					
			MN	18	16	10					
			F	19	32						
253	25	I _v	eP	12	32	17				630	
			F	12	43						
254	25	I _r	eP	16	56	01				1200	
			iL	16	58	40					
			F	17	53						
255	25	I	e	22	47						
			M	23	12						
			F	23	29						
256	26	I _v	eP	12	39	48				400	
			iL	12	40	32					
			F	12	51						
257	27	I _v	eP	11	43	18				110	Microseisms on the 21, 22, 24, 25, 26 and 27.
			F	11	46						
258	31	I _v	eP	8	59	38				100	
			F	9	02						

SEPTEMBER, 1927.

	T_0	V	ϵ	$\frac{r}{T_0^2}$
A _N	7.1	141	2.774	0.023
A _E	8.3	133	1.804	0.041

259	2	I	e	2	16	44					
			F	2	34						
260	7	I	e	20	10						Feeble movements.
			F	20	51						
261	8	I	e	17	18	00					
			F	18	13						
262	8	I	e	23	28	26					Trace only.
			F	0	19						
263	9	I _v	eP	3	46	29				140	
			iL	3	46	45					
			F	3	54						
264	10	I	e	16	40	48					
			F	17	04						

Year 1927, No. 21.

September 11th to 30th, 1927.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.	
				h.	m.	s.		s.	μ			μ
265	11	I _u	eP	22	27	57	33	6	9	690	Asia Minor.	
			SN	22	37	32						
			SE	22	37	34						
			iSREL	22	43	04						
			iSRM.	22	43	05						
			eL	22	54	43						
			MN	22	58	45						
			ME	22	59	00						
266	12	I _r	F	0	12							
			I	eP	10	25	39					
				L?	10	33	05					
F	10	57										
267	16	I	e	15	58	24				Trace only.		
			F	16	48							
268	17	I _r	eP	0	50	13					Strong microseisms on the 17th from 14 ^h to 17 ^h , due to a typhoon.	
			F	1	41						Microseisms on the 18th.	
269	18	I _v	eP	17	15	23						
			iL	17	16	39						
			F	17	27							
270	19	I	e	8	39	00					Trace only.	
			F	9	08							
271	22	I	e	12	00	00					Very small move-ments.	
			F	12	56							
272	23	I _u	eP	14	02	13						
			L?	14	16	37						
			F	15	05							
273	25	I	e	0	24	51					Trace only.	
			F	0	46							
274	26	I _v	eP	4	21	00						
			iL	4	21	22						
			F	4	25							

Year 1927, No. 22.

October 1st to 13th, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.

$\phi=14^{\circ} 34' 41''$ N. $\lambda=120^{\circ} 58' 33''$ E. $h=2.40$ ms. Alluvium.

Instrument: Wiechert's astatic pendulum (1,000 Kg.)

	T_0	V	ϵ	$\frac{r}{T_0^2}$
A_N	7.1	141	2.774	0.023
A_E	8.3	183	1.804	0.041

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A_N	A_E		
							μ	μ	Km.		
275	4	I	M F	2	21						
276	4	Iv	eP F	19	49	15			80	Microseisms on the 5th, and strong on the 6th and 7th.	
277	8	I	e F	12	36					Microseisms on the 8th.	
278	9	I	e F	4	54					Moderate microseisms on the 9th.	
279	9	Iv	eP F	18	08	29			430		
280	10	I	e F	17	55					Microseisms on the 10th. Trace only.	
281	11	I	e M F	3	07	33				Trace only.	
282	11	I	e M F	4	30	29				Very small movements.	
283	11	I	e F	17	37	00				Trace only.	
284	11	Iv	eP iL	23	28	52			170	Microseisms on the 11th.	
285	12	I	e MN ME F	6	31	20	18	8			
				6	36	24	9		21		
				6	36	43					
				7	16						
286	12	I	e M F	7	58	56					
				8	05	50					
				8	32						
287	12	Iv	eP F	10	49	47			230		
				10	54						

Year 1927, No. 23.

October 14th to 26th, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A _N	A _E		
288	14	I _v	eP iL F	12	04	58 48 19			900		
289	15	I	e F	6	31	57				Trace only.	
290	16	I _v	iP iL F	6	20	00 42 37			380	Pacific, SE Luzon.	
291	17	I _v	eP F	16	22	36 25			110		
292	19	I _v	eP F	7	18	32 26			690		
293	20	I _v	eP F	16	29	47 36			710		
294	21	I _v	eP L F	17	49	39 40 04			550		
295	21	I _v	eP F	18	09	35 16			350		
296	21	I _v	eP F	22	55	46 04			510		
297	21	I _v	eP F	23	06	12 17			620		
298	23	I _v	eP L F	20	50	08 17 00			630	Southeastern part of Samar.	
299	24	II _u	e? L? F	16	33	39 00 11			12500?		
300	24	I _r	e L F	19	14	35 00 54					
301	24	I _v	eP L F	19	33	43 42 37			490	South Panay Island. Microseisms on the 24th and strong on the 25th and 26th.	

Year 1927, No. 24.

October 27th to 31st, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A _N	A _E		
							s.	μ	μ	Km.	
302	27	I _v	eP	19	43	30				990	North Celebes Sea. Microseisms on the 27th.
			L	19	45	17					
			F	20	05						
303	28	I	e	15	30						
			F	15	54						
304	29	I _v	eP	5	38	09				490	S Panay Island.
			iL?	5	39	03					
			F	5	48						
305	30	I _v	eP	2	10	32				350	
			F	2	15						
306	30	I _v	eP	6	42	23				720?	
			iL?	6	43	42					
			F	7	00						
307	31	I _v	eP	17	36	35				150	
			F	17	40						

Year 1927, No. 25.

November 1st to 13th, 1927.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.

$\phi=14^{\circ} 34' 41''$ N. $\lambda=120^{\circ} 58' 33''$ E. $h=2.40$ ms. Alluvium.

Instrument: Wiechert's astatic pendulum (1,000 Kg.)

	T_0	V	ϵ	$\frac{r}{T_0^2}$
A_N	6.58	198	2.288	0.039
A_E	7.77	198	1.487	0.049

No.	Date	Char-acter	Phase	Greenwich mean time		Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m. s.		A_N	A_E		
						s.	μ	μ	Km.	
308	2	I_v	eP F	5	11 17 5 13				80	
309	2	I_r	e L? F	6	05 55 6 08 53 6 19					
310	2	I_r	e M F	21	12 13 21 25 00 21 49					Very small.
311	2	I	e F	23	00 29 23 32					Trace only.
312	3	II_v	eP iL F	6	19 02 6 19 37 6 32				315	
313	4	I_u	e L? F	14	02 14 30 15 44					
314	5	I_r	eP iL F	6	40 55 6 43 41 7 19				1240	Near NE Formosa.
315	6	I_r	eP iL F	15	39 24 15 44 37 16 06					
316	7	I_v	eP L F	3	39 20 3 40 03 3 46				390	Northwestern part of Luzon.
317	8	I	e	3	22 24					Trace only. F over-taken by following earthquake,
318	8	I	e F	3	42 43 4 05					Very small movements
319	8	I_v	eP F	9	14 19 9 18				140	
320	9	I_r	{e) i(L) F	1	13 1 20 00 2 07					Initial phases masked by microseisms
321	10	I_r	e L F	3	06 00 3 08 19 3 25					
322	12	I_v	eP iL F	20	04 00 20 04 17 20 08				150	

Year 1927, No. 26.

November 14th to 17th, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.		
				h.	m.	s.		A _N	A _E				
				h.	m.	s.	s.	μ	μ	Km.			
323	14	I _u	eP	0	21	12							
			PSE	0	30	06							
			SE	0	30	26							
			eLE	0	44	35							
			MN	0	46	50	18	4					
			ME	0	47	21	16			17			
			F	1	36								
324	14	I _u	eP	5	05	58							
			eS	5	14	28							
			eL	5	26	14							
			MN	5	30	25	17	7					
			ME	5	31	21	16			40			
			F	6	52								
325	14	I _u	eP	7	39	23						Near Chile?	
			eS?	7	55	38							
			eL	8	35	47							
			F	9	41								
326	14	I _v	eP	7	45	27			140	End missed by move-ments of the pre-ceeding quake.			
327	14	I _r	eP	19	49	18							
			iS	19	53	27							
			iL	19	56	00							
			F	21	12								
328	15	I _r	e	8	39	47							
			iL	8	47	54							
			F	9	14								
329	16	III _r	iP	21	12	16						1980 At Mati SE Minda-nao it caused so-me light Damage. Epicenter near Mo-luccas.	
			iS	21	15	36							
			iL	21	16	48							
			ME	21	17	17	7		283				
			MN	21	17	18	7	275					
			F	23	25								
330	17	I _r	e?	13	42								
			L?	13	49								
			F?	14	10								
331	17	I _r	e?	22	37						Felt at Davao SE Mindanao. After-shock of the No. 329.		
			F	23	11								

Year 1927, No. 27.

November 18th to 30th, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		AN	AE		
				h.	m.	s.	s.	μ	μ	Km.	
332	18	III _v	iP	3	26	31				870	Felt in eastern and Northeastern Min-danao, Leyte and Samar Islands and very lightly in Cebu and Bohol.
			iS	3	27	43					
			iL	3	28	05					
			MN	3	29	37	6	290			
			ME F	3 4	29 57	50	6	354			
333	19	I _v	eP	2	59	44				140	
			F	3	03						
334	20	I _r	eP	17	17	54					
			L?	17	25	56					
			F	17	38						
335	21	I _v	eP	23	31	43				340	Moderate microseisms on the 21st and 22nd due a typhoon in the Pacific.
			iL	23	32	21					
			F	23	46						
336	24	I _v	e	2	19	45				820	Microseisms on the 23rd.
			L	2	21	14					
			F	2	36						
337	24	I _v	eP	15	20	38				350	
			iL	15	21	17					
			F	15	27						
338	26	I	e	13	13	55					
			F	13	52						
339	28	I _v	eP	2	27	11				390	Pacific, near SE Luzon.
			iL	2	27	54					
			F	2	35						

Year 1927, No. 28.

December 1st to 22nd, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.

$\phi=14^{\circ} 34' 41''$ N. $\lambda=120^{\circ} 58' 33''$ E. $h=2.40$ ms. Alluvium.

Instrument: Wiechert's astatic pendulum (1,000 Kg.)

	T_0	V	ϵ	$\frac{r}{T_0^2}$
A_N	6.58	198	2.288	0.039
A_E	7.77	198	1.487	0.049

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A_N	A_E		
							s.	μ	μ	Km.	
340	1	II _r	iP	4	41	05				2060	According Batavia, epicenter was in Central Celebes; small destructions at Paloe and Dong-gala. Tsunami in Paloe Bay. Small movements.
			iS	4	44	42					
			iL	4	45	51					
			M _E	4	46	45	8		23		
			M _N	4	46	48	4	16			
		F	5	44							
341	2	I	eP	20	08	12					
			F	20	22						
342	11	I _r	i	17	29	27				1520	Felt at Butuan, in-tensity IV.
			iL	17	33	00					
			M _E	17	33	09	5		54		
			M _N	17	33	28	4	24			
			F	18	05						
343	14	I _v	eP	9	06	43				230	
			F	9	11						
344	15	I _r	eP	16	17	24					
			iL	16	21	47					
			F	16	56						
345	19	I _r	eP	5	43	44					
			eL	5	47	52					
			F	6	02						
346	19	II _d	eP	6	13	30				180	Felt at Manila with intensity II.
			iL	6	13	50					
			M _E	6	13	52	3		242		
			F	6	24						
347	19	I _v	eP	12	31	07				140	
			iL	12	31	23					
			F	12	34						
348	22	I _r	eP	13	56	45					
			L	14	02	42					
			F	14	12						

Duplicate

Year 1927, No. 28.

December 1st to 22nd, 1927.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.

$\phi=14^{\circ} 34' 41''$ N. $\lambda=120^{\circ} 58' 33''$ E. $h=2.40$ ms. Alluvium.

Instrument: Wiechert's astatic pendulum (1,000 Kg.)

	T_0	V	ϵ	$\frac{r}{T_0^2}$
A_N	6.58	198	2.288	0.039
A_E	7.77	198	1.487	0.049

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A_N	A_E		
							μ	μ	Km.		
340	1	II _r	iP	4	41	05				2060	According Batavia, epicenter was in Central Celebes; small destructions at Paloe and Donggala. Tsunami in Paloe Bay.
			iS	4	44	42					
			iL	4	45	51					
			M _E	4	46	45	8	23			
			M _N	4	46	48	4	16			
		F	5	44							
341	2	I	eP	20	08	12					Small movements.
			F	20	22						
342	11	I _r	i	17	29	27				1520	Felt at Butuan, intensity IV.
			iL	17	33	00					
			M _E	17	33	09	5	54			
			M _N	17	33	28	4	24			
			F	18	05						
343	14	I _v	eP	9	06	43				230	
			F	9	11						
344	15	I _r	eP	16	17	24					
			iL	16	21	47					
			F	16	56						
345	19	I _r	eP	5	43	44					
			eL	5	47	52					
			F	6	02						
346	19	II _d	eP	6	13	30				180	Felt at Manila with intensity II.
			iL	6	13	50					
			M _E	6	13	52	3	242			
			M _N	6	13	52					
			F	6	24						
347	19	I _v	eP	12	31	07				140	
			iL	12	31	23					
			F	12	34						
348	22	I _r	eP	13	56	45					
			L	14	02	42					
			F	14	12						

Year 1927, No. 29.

December 22nd to 31st, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued,

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A _N	A _E		
							s.	μ	μ	Km.	
349	22	I _v	eP L F	21	00	54				160	
350	28	I _u	eP F	9	03	43					Very small move-ments.
351	28	II _u	ePNE PSE iSNE iSR ₁ NE iLNE MN1 ME1 MN2 ME2 F	18	29	33				6370	
				18	37	11					
				18	37	35					
				18	42	09					
				18	47	38					
				18	49	33	18	8			
				18	49	57	17		11		
				18	54	01	16	12			
				18	55	00	15		14		
				21	03						
352	30	I _r	e iL F	6	05	34					
				6	09	35					
				6	23						

Duplicate

Year 1927, No. 29.

December 22nd to 31st, 1927.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued,

No.	Date	Char-acter	Phase	Greenwich mean time			Per-iod.	Amplitude		Dis-tance.	Remarks.
				h.	m.	s.		A _N	A _E		
							s.	μ	μ	Km.	
349	22	I _v	eP	21	00	54				160	
			L	21	01	12					
			F	21	04						
350	28	I _u	eP	9	03	43					Very small move-ments.
			F	9	58						
551	28	II _u	ePNE	18	29	33				6370	
			PSE	18	37	11					
			iSNE	18	37	35					
			iSR ₁ NE	18	42	09					
			iLNE	18	47	38					
			MN ₁	18	49	33	18	8			
			ME ₁	18	49	57	17		11		
			MN ₂	18	54	01	16	12			
ME ₂	18	55	00	15		14					
		F	21	03							
352	30	I _r	e	6	05	34					
			iL	6	09	35					
			F	6	23						