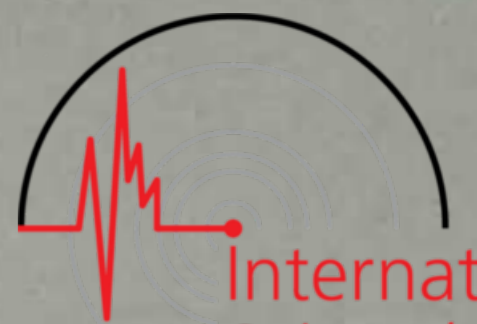


No. 1.

January, 1938.

MANILA, P. I.
SEISMOLOGICAL BULLETIN OF THE OBSERVATORY



International
Seismological
Centre

$\phi=14^{\circ} 34' 42''$ N.

$\lambda=120^{\circ} 58' 41''$ E.

h=3 m.

Alluvium.

CONSTANTS OF THE
GALITZIN-WILIP

CONSTANTS OF THE WIECHERT
INVERTED PENDULUM. M=955 Kg.

January 1, 1938.

	T_1	T	μ^2	V_s
N-S	12.6	12.9	0	400
E-W	11.8	11.9	.00	229
Z	11.6	9.0		

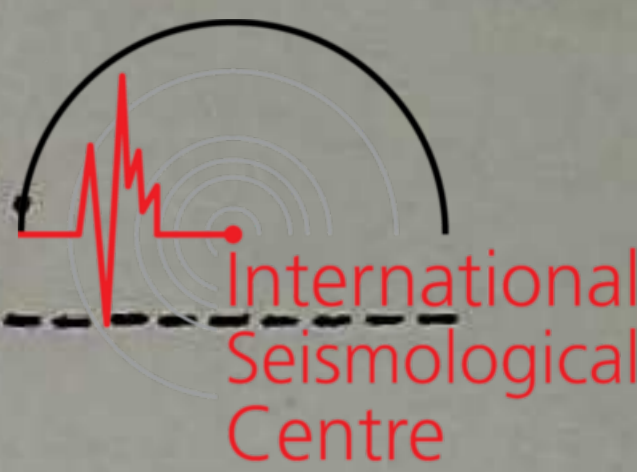
	T_0	V	ϵ	$\frac{-I}{T_0^2}$
N-S	4.3	209	2.4	0.074
E-W	4.4	255	2.7	0.087

Cf. Theoretical Seismology.
Sohn, S.J.

No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
Jan. 1938				
#2 1st	PNEZ SNE F	7 35 53 40 44 57	3290	
#4 1st	PNEZ SNEZ F	16 16 31 20 43 50	2710	Deeper than normal.
#5 1st	iPEZ SNEZ iZ	23 33 07 37 24 28	2780	Compression.
2nd	F	1 40		
#8 2nd	PPEZ SKP PPP PS LN	22 48 47 50 03 51 25 58 56 23 27 ca	14555	$15^{\circ}.7N: 98^{\circ}W: 0122:27:13$ by U.S.C.G.S.
3rd	F	0 55		
#11 3rd	iPEZ iZ SNE F	21 28 42 31 40 38 24 23 07	8270	Dilatation (?)
#12 4th	P?NEZ SNE F	2 41 40 45 46 3 00	2620?	
#14 5th	PNEZ SNE F	2 39 53 40 07 51	110	
#15 6th	PNEZ SNEZ F	0 53 53 53 53 50	1545	
#17 7th	PEZ SEZ MNEZ F	15 33 40 38 56 45 10ca 16 21	3665	Disturbed by microseisms.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued



No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
Jan. 1938				
#19 10th	PNEZ iZ SNEZ F	20 53 34 21 01 12 02 03 31	2100	Disturbed by microseisms.
#20 11th	iPNEZ SNE F	15 17 03 21 16 16 02	2720	
#24 16th	P?NEZ S?N F	14 12 52 18 48 15 03	4320?	Disturbed by microseisms.
#25 17th	PNZ SNE F	23 35 35 39 01 56	2065	Disturbed by microseisms.
#26 18th	iPEZ SNE LNE MNE F	4 25 40 30 13 33 25ca 35 40ca 5 20	3020	
#28 18th	●PNEZ iSE iN F	9 37 36 44 27 45 54 10 25	5255	
#29 18th	ePNEZ SNE F	20 48 37 49 30 21 33	435	Felt at Virac with intensity V and at Capalonga, intensity III.
#30 18th	PNEZ SNEZ F	21 47 53 48 14 55	165	
#31 19th	ePNZ S?NEZ F	2 46 35 50 19 3 16	2300?	
#32 19th	ePNEZ SNE F	14 54 13 57 52 15 35	2235	Deeper than normal.
#34 22nd	iPZ ePNE SNE F	15 33 16 16 37 37 16 06	2845	Dilatation.
#35 22nd	ePNEZ SNE F	18 24 39 26 15 40	895	Felt at Basco with intensity II.
#36 23rd	ePNEZ S?N F	8 44 08 54 47 11 15	9535?	Disturbed by microseisms.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
Jan, 1938				
#30 24th	PNEZ iNE iNE F	10 51 01 54 36 56 25 13 15		
#40 25th	eEZ SNE(?) F	17 05 15 15 00 18 21	8400?	
#41 25th	iPZ ePNE SNE F	21 01 19 21 43 10	190	
#44 26th	PNEZ SNE LN F	5 16 54 19 52 21 25ca 46	1720	P in minute gap.
#47 28th	iPZ ePNE SNE LNE F	4 16 51 51 21 23 24 ca 57	3000	
#48 29th	ePNEZ SNE LN MNE F	4 19 56 25 55 30 35ca 34 50ca 5 01	4380	
#51 30th	ePNE SNE F	10 09 51 11 40 30	1030	
#52 30th	ePNEZ SN F	17 21 33 31 00 18 47	8020	

Twenty-three insignificant or undecipherable disturbances on the following days of January: 1st(2), 2nd(2), 3rd(2), 4th, 6th, 8th, 12th(2), 13th, 18th, 20th, 23rd, 25th(2), 27th, 29th(2), and 31st.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.

$\phi=14^{\circ} 34' 42''$ N.

$\lambda=120^{\circ} 58' 41''$ E.

h=3 m.

Alluvium.



CONSTANTS OF THE GALITZIN-WILIP

	T_1	T	μ^2	V_s
N-S	12.6	12.9	0	400
E-W	11.8	11.9	.08	229
Z	11.6	9.0		

CONSTANTS OF THE WIECHERT INVERTED PENDULUM. M=955 Kg. February 1, 1938.

	T_0	V	ϵ	$\frac{I}{T_0^2}$
N-S	4.3	211	2.6	0.069
E-W	4.3	258	2.9	0.081

Cf. Theoretical Seismology.
Sohn, S.J.

No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
Feb. 1938 #54 1st	PNEZ SNE F	7 49 23 50 48 8 19	540	
#55 1st	PNEZ SNEZ	18 55 02 59 04	2455	
#56 1st	PNEZ SN	19 09 12 13 00	2280	4°S: 133°5E by U.S.C.G.S. 5°S: 131°E by J.S.A. S from the Wiechert. #55 still recording.
#57 1st 2nd	PE SE F	19 43 49 47 30 0 18	2260	#56 still recording.
#59 2nd	PNEZ SE ME F	9 42 30 46 55 52 ca 10 45	2890	Disturbed by microseisms.
#64 3rd	PEZ (S?)NE F	0 37 39 41 25 59	2320?	Disturbed by microseisms.
#66 3rd	PN SNE LNE F	12 55 49 13 00 55 04 35ca 50	3520	
#68 4th	PNEZ SNE F	10 42 28 47 27 11 07	3410	
#69 4th	PNEZ SNE F	11 11 12 52 26	300	



SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
Feb. 1938 #70 5th	iPZ ePNE iZ iE iNE F	2 43 21 21 44 45 45 46 49 16 5 25	17555	4°5N: 76°W, 02:23:34 by U.S.C.G.S.
#72 5th	iPNEZ SNEZ F	9 55 56 56 36 12 10	295	Dilatation. Felt in southeastern Luzon. Probably a little deeper than normal.
#75 5th	iPZ ePNE SNE	20 31 00 00 40	295	
#76 5th	P?NEZ SNE F	20 33 36 40 32 21 03	1110	#75 still recording.
#81 6th	PNE SN	7 01 48 03 54	1135	
#82 6th	iPZ ePNE SNE F	7 14 20 20 20 26 8 50	4490	#81 still recording.
#84 6th	PZ SNE F	18 24 00 27 59 19 15	2520	
#85 7th	iPZ S?E iE F	1 25 58 32 12 36 28 3 15	4620?	Compression.
#86 7th	ePNEZ SNE F	3 53 25 58 16 4 32	3290	
#89 7th	PNEZ S?NE F	14 48 31 53 08 16 05	2890?	
#91 8th	PEZ SNE F	7 36 02 44 53 9 40	7320	
#92 8th	PNEZ SNE F	13 15 37 17 24 14 37	1010	



No. and Date	Phase	Greenwich Time h. m. s.	Dist. Km.	Remarks.
Feb. 1938				
#93	ePNEZ iE F	14 40 13 50 08 16 50		
#99 11th	iPZ iN iN SNE F	7 03 30 05 16 06 23 10 37 8 13	5535	Compression.
#101 11th	iPNE SN SE F	14 40 30 41 20 30 16 20	400	Compression from NW. Felt in northern Luzon. S and S from the Wiechert and Horizontal. Baguio, 200 Km.
#102 11th	ePNEZ SN F	17 02 21 05 38 33	1945	
#103 11th	ePNEZ SNE F	19 28 24 29 36 46	460	
#107 13th	iPEZ ePN SNEZ	8 15 33 33 25 03	8200	Compression. 38°S: 179°W: 0=8:03:44 by U.S.C.G.S.
#108 13th	iPEZ iN SNE F	8 33 35 36 55 38 45 11 20	3590	#107 still recording.
#111 14th	PNEZ SNE F	3 04 45 13 16 4 10	6890	Compression.
#114 15th	PP SKP PPP L F	3 49 31 50 15 52 20 4 36 ca 5 05	14800	Dilatation. 18°N: 25°W, 0=3:27.7 by U.S.C.G.S.
#118 16th	PNEZ SNEZ F	20 47 20 43 12 21 50	430	Felt in SE Luzon and in Masbate.
#119 17th	PNEZ SNE iZ F	5 25 00 28 47 53 6 00	2335	Compression. Deep focus.
#120 17th	PNEZ SNE F	23 15 28 18 03 55	1510	

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.



No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
Feb. 1938				
121 18th	PNEZ SNE LNE	1 03 39 05 30 07 ca	1050	
1222 18th	PNEZ SNE F	2 29 44 33 23 3 24	2220	#121 still recording.
124 18th	PNZ SEZ F	5 51 11 53 09 6 49	1135	
125 18th	\bar{P} NEZ \bar{S} NEZ F	19 43 53 44 10 48	135	
127 20th	PNEZ SNEZ F	7 15 19 19 15 37	2480	
128 20th	PNEZ SNE F	21 35 00 39 34 55	2865	
130 21st	P?NEZ SNE F	15 55 08 16 00 21 28	3625?	Disturbed by microseisms.
131 21st	P?EZ SNE F	16 35 19 42 22 17 27	5465?	Disturbed by microseisms.
132 22nd	PNEZ SNE F	5 44 39 48 40 6 09	2545	
133 22nd	PNEZ SNE F	6 12 29 19 21 7 30	5265	
135 23rd	$i\bar{P}$ NEZ \bar{S} NEZ F	0 50 17 37 1 17	160	Compression. Felt in Central Luzon. 16.2N: 120.5E by Manila and Baguio.
136 23rd	PNEZ \bar{S} NEZ F	17 17 44 18 21 22	260	
139 26th	PEZ SNE F	19 55 54 56 44 20 07	400	

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks
Feb. 1938				
140	PNEZ	1 36 07	4590	
27th	IZ	34		
	SNE	42 19		
	F	2 11		
141	ePNEZ	11 25 12	4755	
27th	SNE	31 34		
	F	12 10		
142	FEZ	6 34 34	120	Compression from SW.
28th	SEZ	49		Felt slightly in Manila, and Cavite
	F	45		Province.
145	PNEZ	12 52 25	200	Felt at Daet, intensity III.
28th	SNE	50		
	F	13 00		
146	PNEZ	17 35 04	180	
28th	SNEZ	24		
	F	40		

Forty-three insignificant or undecipherable disturbances on the following days of February: 2nd(5), 3rd(2), 5th(6), 6th(2), 7th(2), 8th, 9th(4), 10th, 11th, 12th(3), 13th(2), 14th(2), 15th(3), 18th, 19th, 21st, 22nd, 25th(2), and 28th(3),

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY

Ref 2836



$\phi = 14^{\circ} 34' 42''$ N.

$\lambda = 120^{\circ} 58' 41''$ E.

h=3 m.

Alluvium.

CONSTANTS OF THE GALITZIN-WILIP

CONSTANTS OF THE WIECHERT
INVERTED PENDULUM, M 955 Kg.
March 1, 1938.

	T_1	T	u^2	V_s
N-S	12.8	12.9	0	400
E-W	11.8	11.9	.08	229
Z	11.6	9.0		

	T_0	V	ϵ	$\frac{r}{T_0^2}$
N-S	4.3	211	2.5	0.067
E-W	4.4	247	2.6	0.086

Cf. Theoretical Seismology.
Sohn, S.J.

No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
March 1938 #148 1st	P?EZ LNE F	4 35 39 41 ca 5 00	2110?	
149 1st	\bar{P} NEZ SNEZ F	6 38 19 35 41	125	
154 3rd	P?NEZ SN F	18 41 47 44 29 19 11	1555?	
155 3rd	PEZ SNEZ F	23 30 42 31 31 46	395	
156 4th	\bar{P} NEZ SNEZ F	1 41 03 44 31 2 20	2090	
158 5th	iPZ •PNE iZ SNE LN MN F	11 36 00 03 36 37 39 14 40 55ca 42 40ca 13 46	1935	
159 5th	\bar{P} NEZ SNEZ	17 43 00 17	135	
160 5th	\bar{P} NEZ SNEZ F	17 50 30 57 18 10	210	No. 159 still recording.
162 5th	i \bar{P} Z SNE F	23 06 30 50 21	160	Dilatation.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.



No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
March 1938				
163 6th	PNEZ SNE F	0 07 36 56 15	160	
164 6th	iPZ SNE LNE MN F	2 03 35 09 46 16 ca 21 ca 3 05	4390	
165 6th	PNEZ SNE F	12 16 41 17 14 30	240	
166 6th	iPZ ePE SNE F	17 04 27 27 12 54 45	6910	Deep focus.
167 8th	iPZ iZ S?Z F	5 42 30 46 17 51 11 7 15	7145?	Compression. N and E components defective.
173 9th	PNEZ SNE LN F	2 15 20 20 51 25 15ca 3 12	3920	
174 10th	ePNEZ SNE MN	15 46 35 50 36 55 ca	2545	
175 10th	iPNEZ SNE F	16 23 23 25 27 18 15	1110	No. 174 still recording. Felt in Davao. Butuan, 320 Km.
178 13th	P?EZ iN SNE LNE F	21 21 21 24 23 28 35 38 ca 22 10	5655?	
179 14th	PNEZ SNEZ LNE F	0 56 43 1 03 08 09 30 51	4810	
180 14th	iPZ ePNE iSNEZ LNE MNE F	5 19 33 33 23 59 26 50ca 29 ca 6 34	2910	Dilatation. Deeper than normal.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

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No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
March 1938				
182	PNE	8 24 58	115	
17th	SNEZ	25 13		
	F	30		
185	ePZ	1 51 11	3750?	
21st	S?N	36 32		
	LN	40 40ca		
	F	2 25		
188	1PZ	15 35 10	10050	Dilatation.
22nd	1SNEZ	46 07		
	MN	16 12 ca		53°N: 131.0°W; 0=15:22:19 by U.S.C.G.S.
	F	18 26		
189	P?NEZ	22 42 21	7700?	
22nd	SNE	51 35		
	F	23 35		
193	ePNEZ	16 00 20	7055	
25th	SNE	08 56		
	LN	20 30ca		
	MNE	25 30ca		
	F	17 55		
199	ePNEZ	2 04 44	400	Felt at Laoag and Aparri, intensity II.
30th	SNEZ	05 34		
	F	24		
201	ePNEZ	5 34 53	1520	
31st	SNE	37 31		
	F	6 50		
202	PNEZ	15 19 17	580	
31st	SNE	20 23		
	F	42		
203	PNEZ	22 32 35	755?	Felt in Laoag. S from the Wiechert.
31st	S?NE	33 58		
Apr. 1	F	0 30		

Twenty-seven insignificant or undecipherable disturbances on the following days of March: 1st(2), 2nd(2), 4th, 5th, 8th(5), 12th, 13th, 14th, 18th(2), 21st(2), 23rd, 25th(2), 27th, 28th(4), and 30th.

MANILA OBSERVATORY



APRIL, 1938

We thankfully acknowledge the receipt of the following
Bulletins and Reports.

STATIONS

BULLETINS

Bucarest-----	February, 1938.
De Bilt-----	Magnetic Character: April to September, 1937.
Göttingen-----	July, August and September, 1937.
Graz-----	March 1, 1937 to March 2, 1938.
Hong Kong-----	Principal earthquakes of March, 1938.
Hukuoka-----	July 1, 1936 to June 30, 1937.
Jena-----	Year, 1936.
Kew-----	February, 1938.
Ksara-----	February, 1938.
Lemberg-----	September 19, 1936 to July 31, 1937.
Ottawa-----	January, 1938.
Palau-----	November 2, 1937 to March 5, 1938.
Paris-----	January, 1938.
Pasadena-----	June, 1937.
Phu-Lien-----	December, 1937 and Principal earth- quakes of March, 1938.
Rathfarnham-----	February, 1938.
San Fernando-----	January and February, 1938.
Strasbourg:	
L'Institut-----	January, 1938.
Bureau Central-----	January, 1938.
Union International-----	January, 1938.
Sydney-----	November 30 to December 28, 1937.
Wellington-----	February, 1938.
Zinsén-----	October, November and December, 1937.

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Director, Weather Bureau,
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WILLIAM C. REPETTI, S.J.,
Seismologist.

MANILA, P. I.

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.

$\phi=14^{\circ} 34' 42''$ N.

$\lambda=120^{\circ} 58' 41''$ E.

h=3 m.

Alluvium.

CONSTANTS OF THE
GALITZIN-WILIF

CONSTANTS OF THE WIECHERT
INVERTED PENDULUM. M=955 Kg.
April 1, 1938.

	T_1	T	μ^2	V_s
N-S	12.6	12.9	0	400
E-W	11.3	11.9	.08	229
Z	11.6	9.0		

	T_0	V	ϵ	$\frac{-T}{T_0^2}$
N-S	4.3	217	2.5	0.071
E-W	4.4	256	2.5	0.090

Cf. Theoretical Seismology.
Sohn, S.J.

No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks
April 1938				
204 1st	P?NEZ SNE F	0 45 15 46 47 1 29	850?	Disturbed by microseisms.
208 1st	PNZ SNE F	21 32 33 33 43 22 40	620	No. 207 still recording.
212 4th	PNEZ SNEZ F	4 27 32 50 31	140	Felt in Marinduque.
213 4th	PNEZ SNEZ F	4 32 54 33 12 36	140	Felt in Marinduque.
214 4th	PNEZ SNE	21 13 27 17 05	2155	Dilatation.
219 7th	P?NEZ SE F	2 22 53 25 24 40	1455?	
223 7th	PNEZ SNE F	16 38 00 40 25 17 33	1400	
229 9th	iPZ ePNE SNE F	9 20 08 08 24 15 10 15	2510	Dilatation.

M A N I L A ? P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.



No. and Date	Phase..	Greenwich Time			Dist. Km.	Remarks
		h.	m.	s.		
April 1938						
231 10th	ePZ STN F	5	19	51	3300?	Disturbed by microseisms.
			24	43		
			45			
232 12th	PNEZ SNEZ F	1	56	34	450	Felt in N. Luzon. Baguio, 260 Km.
			57	26		
			2	17		
235 13th	iPZ SNEZ F	2	59	36	7510	Deep focus.
			3	08		
			4	11		
236 13th	ePZ SE F	11	02	19	2435	Deep focus.
			06	12		
			20			
238 14th	iPZ ePN iPE SNE LNE F	1	22	03	2935	Compression.
				03		
				04		
			26	31		
			28	25ca		
			3	16		
239 14th	ePNEZ iZ SNE F	15	52	00	2180	
				30		
			55	35		
			16	54		
242 15th	PNEZ SNE F	11	55	11	950	Felt in eastern Mindanao.
			56	52		
			12	10		
243 15th	PE SNE F	17	56	05	1210	
			58	09		
			18	12		
245 17th	iPZ iPNE SNE F	9	04	23	4880	Compression.
				24		
			10	52		
			10	10		
247 17th	iP ₁ 'Z iP ₂ 'Z PPZ SKK(SNE) F	14	59	40		
			15	00	58	
			04	45		
			11	21		
			17	05		

M A M I L A , F . I .



SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks
April 1938				
248 18th	PZ SNE F	5 34 43 35 37 47	440	Felt at Aparri.
253 19th	iPZ ePNE SNE LNE MNE F	11 11 27 27 21 37 40 18 ca 48 ca 13 40	8930	Compression. 39°N: 33°E. 0=10:59:12 by U.S.C.G.S.
254 19th	ePZ SNE F	21 54 07 22 03 27 23 15	7335	
255 20th	PZ SN PSNE F	6 37 40 46 29 49 8 50	7290	
258 20th	PNE SNE LNE F	22 57 51 59 56 23 01 ca 55	1200	
260 21st	PNEZ SNE F	4 22 34 24 03 33	820	
264 21st	PNEZ SNE F	23 02 38 03 07 26	215	Dilatation.
266 22nd	ePNEZ SNEZ F	23 23 25 51 57	200	
267 23rd	iPZ ePNE iZ S?NE F	0 31 42 42 51 37 21 2 34	4045?	Dilatation.
268 23rd	PNEZ SNE	2 16 31 58	210	No. 267 still recording.
270 23rd	iPZ SNE F	7 17 10 27 31	135	Dilatation. Felt in western Luzon. Epicenter in China Sea.
271 23rd	PNEZ SNE F	8 54 58 56 32 10 23	875	

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.

No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
April 1938				
275 24th	ePZ SNE LNE F	14 14 03 16 44 18 05 55	1545	
279 25th	PNE SNEZ LN F	14 51 05 57 32 15 04 ca 16 05	4835	
283 26th	iPNEZ IZ SNEZ LE iE F	12 58 33 36 13 02 40 05 05ca 06 03 14 20	2635	Compression from SE.
287 30th	PNEZ SNE F	3 34 11 52 47	310	Felt in Masbate. Disturbed by microseisms.

Fifty insignificant or undecipherable disturbances on the following days of April: 1st(4), 2nd, 3rd, 4th, 5th(2), 7th(5), 8th(3), 9th(2), 12th, 13th(2), 14th, 15th, 17th(2), 18th(3), 19th, 20th(2), 21st(4), 22nd, 23rd(3), 24th, 25th(6), 28th(2), and 29th.

M A N I L A , P . I .

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY. --- May, 1938

$\phi=14^{\circ} 34' 42''$ N.

$\lambda=120^{\circ} 58' 41''$ E.

$h=3$ m.

Alluvium.

CONSTANTS OF THE
GALITZIN-WILIP

CONSTANTS OF THE WIECHERT
INVERTED PENDULUM. $M=955$ Kg.
May 1, 1938

	T_1	T	μ^2	V_s
N-S	12.6	12.9	0.400	
E-W	11.8	11.9	.08	229
Z	11.6	9.0		

	T_0	V	ϵ	$\frac{I}{T_0^2}$
N-S	4.3	212	2.4	0.072
E-W	4.3	253	2.6	0.098

Cf. Theoretical Seismology.
Sohn, S.J.

No. and Date	Phase	Greenwich Time			Dist. Km.	Remarks
		h.	m.	s.		
May 1938						
288	PNE	1	39	34	2720	
1st	SN		43	47		
	LNE		46	10ca		
	F	2	20			
291	P?N	14	58	43	2655?	Disturbed by microseisms.
2nd	SNE	15	02	52		
	F		32			
295	PNEZ	19	23	26	4400	Deep focus.
3rd	iSNE		29	27		
	F	20	07			
296	iPZ	5	55	09	2520	Compression(?)
4th	ePNE			09		
	iSNE		59	17		
	F	6	45			
300	ePNEZ	5	47	44		
6th	LNE		57	35ca		
	F	4	20			
301	PZ	6	01	04	1320	
6th	SNEZ		03	21		
	F		30			
302	eNEZ(?)	18	38	49		15° N: 87° W. $\phi=18;17.4$ by USCGS.
6th	F	20	40			
305	iPZ	15	58	45	7145	No. 304 still recording.
8th	ePNE			45		Compression.
	iSNE	14	07	27	222	
	SSEZ		12	13		
	LNE		19	ca		
	MNE		24	ca		
	F	16	55			

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SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.



No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
May 1938				
306 8th	iPZ iN S?NE LN	14 44 56 48 11 25 50 30ca	2365?	No. 305 still recording.
307 9th	ePNEZ SNE F	9 02 51 03 41 23	400	Felt at Aparri.
308 9th	ePNZ SNEZ LNE F	15 45 35 49 16 51 10ca 16 56	2255	
309 10th	iPNZ ePE SNE F	12 21 59 59 22 23 13 00	190	Compression. S from the Wiechert and Horizontal.
312 10th	iPZ iPNE SNE F	14 21 14 15 58 57	190	Compression. Aftershock of No. 309. S from the Wiechert and Horizontal.
314 10th	PNEZ SNEZ F	15 10 32 56 22	190	Aftershock of No. 309.
316 10th	PNEZ SNEZ F	15 55 35 59 16 02	190	Compression. Aftershock of No. 309.
317 10th	PNEZ SNEZ F	17 34 51 35 14 41	185	Aftershock of No. 309.
319 10th	PNEZ SNEZ F	22 51 03 19 59	125	
322 11th	ePZ SNEZ F	2 58 40 53 3 04	145	Felt slightly in Manila.
327 11th	ePNEZ F	15 05 47 17 10		17°N: 101°W. 014:44:54 by USCGS.
328 11th	PNEZ SNZ F	17 43 47 49 17 18 16	3900	
329 11th	PNEZ SNEZ F	22 05 40 06 03 13	180	

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.



No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks
May 1938 333 12th	PNEZ SNE F	3 54 17 41 45	190	
334 12th	iPNEZ SNE F	15 45 38 51 26 20 25	4190	New Guinea. Compression. 8°S: 147°E. 0715:59:02 by USCGS. S from the Wiechert and Horizontal.
336 12th	PZ SNE F	21 31 12 34 57 22 48	2310	
337 12th	PNEZ SNEZ F	21 50 27 48 57	165	No. 336 still recording.
341 13th	ePNEZ SN LN F	12 00 07 04 50 08 ca 50	3150	
342 13th	iPNEZ SNE LN F	15 10 20 15 24 19 10 17 15	3490	Compression. Data after P from the Wiechert.
344 14th	iPNEZ SNEZ F	12 08 55 12 14 13 42	2220	Dilatation.
345 15th	PNEZ SNEZ F	0 03 27 06 03 55	1510	
348 15th	PNE SNE F	13 33 07 37 53 14 22	2910	
350 16th	PNEZ SNE F	7 10 23 14 47 8 10	2880	Deep focus. Dilatation.
351 16th	PNEZ iZ PPNE? iE F	15 34 34 54 38 57 42 51 17 40		Long distance.
353 17th	P?NEZ SNE F	3 44 28 48 35 5 00	2610?	
357 13th	PNEZ SNZ F	19 22 36 55 50	150	

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SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.



No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
May 1938 364 19th	iPNEZ SNE F	17 12 05 15 06 21 20	1720	Compression. Felt in Jolo, intensity III. 0°5N: 119°E, approx. by USCGS. Data after P from the Wiechert.
369 20th	PNEZ SN F	10 46 47 51 29 11 50	2980	
374 22nd	ePNEZ SN	7 55 51 8 04 01	6665	20°S: 170°E by Riverview and Manila.
375 22nd	eP?EZ SEZ F	8 26 07 32 11 10 15	4455?	No. 374 still recording.
376 22nd	ePNEZ iEZ F	11 32 16 34 53 14 00		Long distance.
377 22nd	iPNEZ SNE F	17 56 23 36 18 08	100	Dilatation. Felt at Infanta, int. IV.
379 23rd	iPNEZ SNE	7 24 25 29 40	3665	Compression. Japn. 36°N: 141°E. 07: 18:50 by USCGS. S from the Wiechert.
380 23rd	iPNEZ SNE	8 22 51 23 43	430	Compression from NW. Felt in Luzon and also in Hong Kong. 18°15' N: 119° 45' E by Manila, Hong Kong and Phu-Lien. No. 379 still recording.
382 23rd	iPNZ SNZ F	15 09 43 10 35 16 05	430	Compression. Second earthquake or after- shock of No. 380. Felt in Vigan with intensity IV. E component defective.
386 24th	PNEZ SNEZ F	7 20 47 21 08 30	170	
388 24th	PNE SNE F	8 37 29 37 43	60	
391 24th	PNEZ S?N F	18 54 17 57 30 19 30	1910?	
392 24th	PNEZ SNE F	21 39 09 59 49	400	Felt in Lapag, intensity II.
397 26th	ePNEZ SNE F	11 16 19 23 11 12 45	5270	

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY,--Continued.

No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks.
May 1958 398 26th	P?NE SNE	11 36 ca 42 33	4945?	No. 397 still recording.
403 27th	PEZ SN LN F	3 41 09 44 41 46 40ca 4 20	2135	
405 27th	PZ SNE F	13 04 48 07 11 30	1380	
407 28th	PNEZ SNE F	7 56 40 57 37 8 17	480	
408 28th	P?NE eNE F	10 27 47 40 20 12 40	10745	43°N: 125°W. 0-10:14:13 by USCGS.
409 28th	iPZ ePNE iZ SNE LNE F	16 48 57 57 49 02 54 34 17 00 ca 19 10	4010	Compression.
411 30th	iPNEZ SE iZ LNEZ MNEZ F	14 39 46 47 49 50 37 57 30ca 15 02 30ca 18 30	6390	Compression from SE. 20°S: 169°E by USCGS.

Seventy-four insignificant or undecipherable disturbances on the following days of May: 1st(2), 3rd(3), 4th(2), 5th, 7th, 8th, 10th(5), 11th(7), 12th(5), 13th, 14th, 15th(2), 16th(2), 17th, 18th(4), 19th(6), 20th(5), 21st, 23rd(4), 24th(4), 25th(3), 26th(5), 27th(2), 30th(3), and 31st(3),

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SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.



No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks
July 1938				
526 6th	iPNEZ SNE LN F	1 34 44 42 56 53 ca 3 45	6665	Compression from SE (?)
527 6th	iPZ SNEZ F	9 49 51 58 21 11 10	6860	
533 7th	P?NZ SNE F	14 02 33 05 32 15 01	1700?	Felt in Jolo, Sulu.
534 7th	iPZ iZ PP? F	17 32 53 35 26 37 03 19 35		Compression (?)
537 8th	ePNEZ iSNEZ F	14 02 03 04 45 15 15	1555	
539 9th	P?NE SNE F	1 02 15 03 44 27	820?	
540 9th	PEZ S?N F	2 03 53 06 25 34	1465?	
542 11th	PNEZ SNEZ F	11 28 44 29 20 45	260	Felt at Baguio.
543 11th	ePNEZ SNE LE MNE F	15 58 58 16 01 40 03 ca 04 30ca 37	1555	
546 12th	iPZ SNE F	12 47 05 55 37 14 20	6900	Compression.
557 14th 15th	PEZ S?NE F	23 42 07 50 33 0 57	6900?	
562 17th	ePNZ iZ iSN F	13 19 28 52 23 31 14 50	2580	
564 18th	PNZ SNEZ LN F	11 55 37 57 55 59 10ca 12 30	1335	Felt at Davao.

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SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.



No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks
July 1938				
566	P?NEZ	9 01 47	1660?	
19th	SNEZ	04 39		
	F	22		
567	PNEZ	11 15 07	850	
19th	SNE	16 39		
	F	36		
568	1PNEZ	11 47 43	125	Dilatation.
19th	SNEZ	59		Felt very slightly in Manila.
	F	12 02		
569	eP?NEZ	21 57 35	5065?	
19th	SN	44 15		
	F	22 30		
571	ePNEZ	11 54 35	3245	
20th	1SNE	59 23		
	F	13 05		
574	eP'NEZ	8 07 33	13565	Long distance.
22nd	SS	25 15		18°9N: 107W; 07:48:08 by USCGS.
	L	45 ca		
	F	10 15		
576	PNEZ	12 23 11	370	
23rd	SNEZ	58		
	F	27		
577	ePNEZ	20 10 54	3410	
23rd	SN	15 53		
	F	21 10		
578	1PZ	23 06 41	3590	Dilatation.
23rd	ePNE	47		
	SNE	11 51		
	LN	15 45ca		
24th	F	0 25		
579	ePNEZ	13 23 15	7445	Compression. 53°N: 167°W by USCGS.
24th	SNE	32 07		
	F	15 10		
581	PNEZ	9 42 51	375	Dilatation. Felt in southeastern part
25th	SEZ	43 18		of Luzon.
	F	11 10		
586	1PNEZ	8 45 28	140	Compression.
27th	SNEZ	46		
	F	58		
589	ePNEZ	16 58 28	1350	
27th	SNE	17 00 54		
	F	19 00		

SEISMOLOGICAL BULLETIN OF THE OBSERVATORY.--Continued.



No. and Date	Phase.	Greenwich Time h. m. s.	Dist. Km.	Remarks
July 1938				
594	PEZ	12 59 39	2620	
28th	SN	13 03 45		
	F	22		
595	PNEZ	21 09 31	4780	
28th	SNE	16 03		
	F	40		
596	iPNEZ	4 34 42	125	Dilatation. Felt in Batangas.
29th	iSNEZ	58		
	F	5 20		
597	iPNEZ	13 12 15	3100	Compression from southwest.
29th	PPZ	13 27		
	iSNE	17 06		
	MNE	29 ca		
	F	14 25		
598	PNEZ	7 36 09	530	
30th	SN	37 11		
	F	8 00		
599	PNEZ	15 59 30	360	
30th	SNE	16 00 16		
	F	10		
601	PNEZ	22 01 12	2180	Deeper than normal.
31st	SNE	04 47		
	F	25		

Fifty-three insignificant or undecipherable disturbances on the following days of July: 2nd(3), 4th(3), 5th(3), 6th(4), 7th(3), 8th(2), 10th, 11th, 12th(4), 13th, 14th(6), 15th, 16th(2), 17th(2), 19th, 20th(3), 22nd, 25th(2), 26th(2), 27th(5), 28th(2), and 31st.