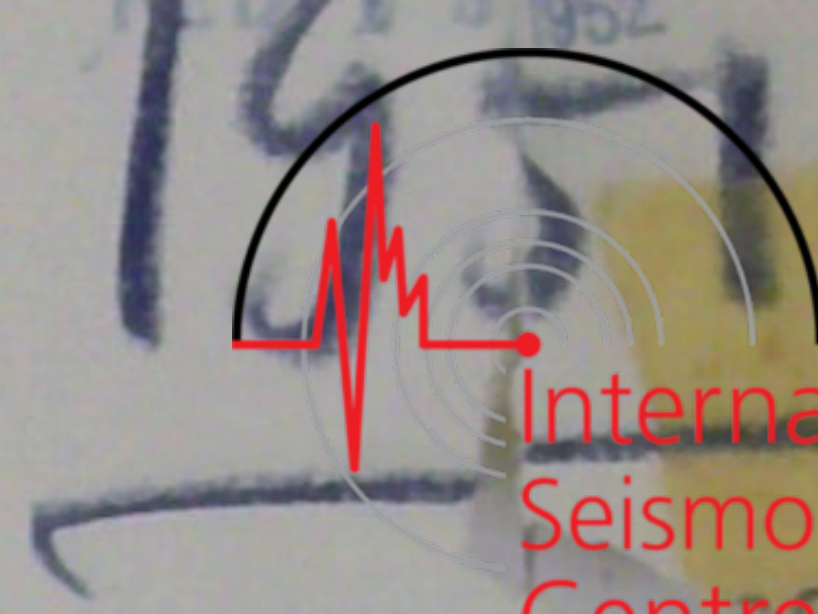


REPUBLIC OF THE PHILIPPINES
Department of Commerce and Industry
WEATHER BUREAU
Geophysical Division
Manila

FEB 3 1962



International
Seismological
Centre

No. 25

SEISMOLOGICAL BULLETIN

$\phi = 14^{\circ} 40'N$

$= 121^{\circ} 05'E$

$h = 70.4 \text{ m.}$

January, 1962
Tuff

--- oOo ---

INSTRUMENTS

3 Sprengnether Horizontal Seismometers, Series H (for microseismic work). Sprengnether Seismometers, Series D-H, Three Components.
1 Wood-Anderson Torsion Seismometer. 1 Sprengnether Strong-Motion Seismometer.

Constants of Sprengnether, Series D-H

Component	T Galvanometer	T Seismometer	kg
E - W	8.0	8.0	28.2
N - S	7.5	7.5	32.1

Data taken from Sprengnether, Series D-H, unless otherwise stated.

No.	DATE	PHASE	GREENWICH TIME			DISTANCE Kms.	REMARKS
			h	m	s		
1	Jan. 1	eP iPPNE iPPPNE iSNE	20	26	09 34 43 30 12	2460 or 22.2°	Mag. 6.6
2	2	ePNE eS	11	49	00 50 32	870	small
3	3	iP eP* eS eS*	09	50	07 29 51 39 52 07	870	Felt at Malaybalay, Int. II.
4	5	ePNE iSN	09	18	57 19 20	300	
5	6	ePNE iSN	03	20	44 21 17	300	
6	6	1PNE 1PR ₂ eS iSR ₁	05	25	51 26 20 29 39 30 20	2280 or 20.5°	Surface waves small.
7	6	eP	08	11	11 ca		Teleseismic.
8	6	1PNE iSNE	09	42	33 43 03	260	
9	6	1PNE iSNE	15	36	47 37 16	250	
10	7	1PNE iSNE	08	22	26 46	170	
11	9	1PNE iSN	08	55	32 57 24	1100	
12	9	eP	18	18	00 ca		
13	10	e	19	56	ca		

SEISMOLOGICAL BULLETINCont'd



No.	DATE	PHASE	GREENWICH TIME			DISTANCE KMS.	REMARKS
			h	m	s		
14	Jan. 12	eP	21	10	ca		
15	13	eP eS	00	41 42	47 20	270	Small.
16	13	eP eS	04	44	21 54	270	Small.
17	14	1PNE 1SNE	08	38	18 43	210	Felt at Daet, Int. II; Aurora, Int. not reported.
18	15	ePNE epPNE 1PPN 1PPPN 1SNE eGN	04	21 23 25 29 35	31 56 41 01 05 11	6300 or 56.7°	Depth 100 kms.-
19	15	1PNE 1SNE	07	21	04 19	130	Epicenter tentatively placed at 14°48'N, 119°44'E.
20	16	1PNE 1SNE	11	33	32 49	140	
21	17	eP eS	10	08 09	59 17	150	Small.
22	21	1PNE 1SNE	06	44	15 30	130	
23	21	eP eS	13	40	21 55	280	
24	22	eP 1S	11	52 53	18 22	540	Mag. 5.3-
25	22	1PNE 1SNE	16	07 08	56 37	350	Mag. 5; Felt at Legaspi, Int. II; Virac, Int. III
26	24	eP	18	24	47 ca		Teleseismic.
27	26	eP	16	46	55		Teleseismic.
28	26	eP eS?	03	28 32	27 ca. 02	2100? or 19°	
29	26	1PNE 1SNE	17	33	36 51	130	Mag. 3.5
30	27	1PNE 1SNE	16	08 09	52 22	300	
31	28	ePNE eS	12	28 30	57 55	1000	
32	29	ePNE	04	27	41		Small.
33	30	eP	23	18	49 ca		Small.

REPUBLIC OF THE PHILIPPINES
Department of Commerce and Industry
WEATHER BUREAU
GEOPHYSICAL DIVISION
Manila
SEISMOLOGICAL BULLETIN



No. 26

$\phi = 14^{\circ} 40' N$

$= 121^{\circ} 05' E$

$h = 70.4 m.$

February, 1951
Tuff

--- oOo ---

INSTRUMENTS

3 Sprengnether horizontal seismometers, Series H (for microseismic work). Sprengnether seismometers, Series D-H, Three components.
1 Wood-Anderson Torsion Seismometer. 1 Sprengnether Strong-Motion Seismometer

Constants of Sprengnether, Series D-H

Component	T Galvanometer	T Seismeter	kg
E - W	8.0	8.0	28.2
N - S	7.5	7.5	32.1

Data taken from Sprengnether, Series D-H, unless otherwise stated

No.	DATE	PHASE	GREENWICH TIME			DISTANCE kms.	REMARKS
			h	m	s		
34	Feb. 2	ePNE	17	51	16	460	
				52	00		
35	2	eP	19	32	04		Teleseismic
36	2	iPNE	20	09	34	150	
		iSNE			51.5		
37	3	eP	12	07	ca		
38	5	eP	19	04	03		Local
39	7	eP	03	43	53		Teleseismic
40	10	ePNE	23	57	29		Teleseismic
41	11	ePNE	06	06	15	680	
		iSNE		07	20		
42	12	ePNE	17	31	08	5650	Normal; Mag. $6\frac{1}{4} \pm$
		iPR ₁ N		32	01	or	
		iSNE		38	28	50.6°	
		eMNE ?		50	53		
43	12	eP	00	52	06		
44	17	ePNE	19	38	45	150	
		iSNE		39	07		
45	17	iPNE	21	13	29	3450	Depth 100 kms. $\pm$
		iPPE		13	49	or	
		iSNE		18	32	31°	
		iSNE		19	07		
		eSR ₁ NE		20	29		
46	22	ePNE	21	59	41	260	
		iSNE	22	00	11		
47	23	ePNE	00	13	35	95	
		iSNE			46		

SEISMOLOGICAL BULLETIN Cont'd



No.	DATE	PHASE	GREENWICH TIME			DISTANCE	REMARKS
			h	m	s		
48	Feb. 23	ePNE eSNE	12	34	07 37	260	Very small
49	23	ePNE iSNE	14	07	15 45	260	Very small
50	24	eP	02	00	47ca.		
51	24	eP? esP iSNE	20	43 44 46	48 20 12	1450? or 13°	Depth 100 kms. $\pm$
52	26	eP	20	27	04		Teleseismic
53	27	ePNE	16	22	22		Local

REPUBLIC OF THE PHILIPPINES
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WEATHER BUREAU
GEOPHYSICAL DIVISION
Manila

No. 27

$\phi = 14^{\circ} 40' N$

$\lambda = 121^{\circ} 05' E$

$h = 70.4$

--oOo--

March, 1951

Tuff



International
Seismological
Centre

INSTRUMENTS

3 Sprengnether horizontal seismometers, Series H (for microseismic work), Sprengnether Seismometers, Series D-H, Three components. 1 Wood-Anderson Torsion Seismometer. 1 Sprengnether Strong-motion Seismometer.

Constants of Sprengnether, Series D-H

Component	T Galvanometer	T Seismometer	kg
E - W	8.0	8.0	28.2
N - S	7.5	7.5	32.1

Data taken from Sprengnether, Series D-H, unless otherwise stated.

No.	Date	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
54	Mar. 5	iPNE iSPE iSNE iSk ₁	20	15	08 48 03 22	2,150 or 19.3°	Depth about 200 kms.?
55	6	eP	19	03	ca.		Teleseismic
56	7	iP eS	03	19	08 24	135	
57	8	eP	14	17	ca.		
58	9	iPNE iSNE	18	27	25 47	155	
59	9	iP eS eL iM	19	49	46 52 40 34	1,250 or 11.2°	Normal Depth; mag. 5.8
60	10	e	11	54	ca.		
61	10	e	14	50	ca.		
62	10	eP iS	17	58	21 06	380	
63	10	e	19	05	ca.		
64	10	eP iS	18	55	57 31	290	
65	10	iPNEZ iPPEZ ePK ₁ E iSNEZ esSEZ	22	06	50 14 00 10 50	5,780 or 52°	Depth 100kms. <u>1</u>
66	11	e	14	30	ca.		Local
67	11	e	20	10	ca.		

SEISMOLOGICAL BULLETIN Cont'd



No.	Date	PHASE	Greenwich Mean Time			DISTANCE KMS.	REMARKS
			h	m	s		
68	Mar. 12	eP? iS	11	04 05	58 ca. 29	260	
69	12	eP	14	58	ca.		Teleseismic
70	12	iPNEZ	22	30	31.6	260	
71	17	eP e? eS eL	04	03 04 06 08	14 59 54 27	2,180 or 19.6°	Deeper than normal.
72	17	eP eS?	15	51 54	36 32		
73	17	eP e eS? eL	23	26 27 28 29	21 42 16 05	1,000	
74	18	eP e iM	09	20 21 22	14 39 59		
75	18	eP iS	20	41	19 45	220	Felt at Bagiuo.
76	21	eP	14	29	ca.		
77	21	e	17	34	ca.		
78	21	e	19	50	ca.		
79	21	e	21	01	ca.		
80	23	eP i e	21	49 50 58	55 47 47		
81	24	iP e	00	27 28	30 39		
82	25	eP e	18	28 29	34 24		
83	25	eP	00	03	45ca.		
84	26	eP iS	20	14 15	19 11	440	Felt at Laoag, Int. II
85	27	eP iS	03	39	02 26	200	
86	28	e	02	15	ca.		
87	29	eP	12	07	43	270	
88	29	eP	13	02	ca.		Felt at Surigao, Int. II

$\phi = 14^{\circ} 40' N$ $\lambda = 121^{\circ} 05' E$ $h = 70.4 m$

Tuff



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INSTRUMENTS

3 Sprengnether horizontal seismometers, Series H (for microseismic work). Sprengnether Seismometers, Series D-H, Three components.
1 Wood-Anderson Torsion Seismometer. 1 Sprengnether Strong-motion Seismometer.

Constants of Sprengnether, Series D-H

Component	T Galvanometer	T Seismometer	kg
E - W	8.0	8.0	28.2
N - S	7.5	7.5	32.1

Data taken from Sprengnether, Series D-H, unless otherwise stated.

No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	APRIL						
89	1	eP eS	02	07 08	14 36	670	
90	1	eP	21	05	18ca		Local.
91	2	eP iS	19	53 54	48 04	135	
92	2	eP eS?	22	16 17	28 38	600	
93	3	eP iS	10	31	29 43	120	
94	6	eP iS	05	23	03 19	140	
95	7	eP eS	21	07 08	16 00	375	
96	8	eP	20	49	49ca		Teleseismic.
97	9	eP	16	59	28		Teleseismic, normal depth?
98	11	eP e eS?	12	21 22 23	38 16 54	650?	
99	12	eP i eS	11	08 09 10	58 20 48	940	
100	13	iP esP iS eSR ₁ ?	10	20 23 24	03 38 43 51	2,300 or 20.8°	Depth 100 kms. ?
101	14	eP ePR ₁ iS iL eM	13 14	41 43 49 00 04	39 56 54 16 54	6,600 or 59.4°	Normal depth.

SEISMOLOGICAL BULLETIN ... Cont'd



No.	DATE	PHASE	Greenwich Mean TIME			DISTANCE Kms.	REMARKS
			h	m	s		
102	APRIL 14	eP iS	20	51	31 48	145	
103	14	eP iS? eL	23	47 31 53	01 31 03	2,800 or 25.3°	
104	16	iP iS	19	57 58	08 08	480	Felt at Calayan, Int. III.
105	16	eP	05	04	27		
106	16	eP	12	45	23		
107	16	eP	23	42	15		
108	17	eP eS	11	03	25 47	190	
109	18	iP iS	04	17 18	39 09.5	320	Felt at Isabel, Int. III.
110	18	iP iS	04	21	08 38.5	320	Aftershock of 109.
111	19	eP	06	04	25ca		
112	19	eP	20	59	24ca		
113	20	eP iS?	14	33 34	35 35		Felt at Borongan, Int. III.
114	21	e	17	08	07		
115	22	iP iS	06	46	07 37.5	320	Aftershock of 109.
116	23	e	01	04	33		
117	23	eP e eS?	07	01 02 10	52 59 32	75°?	
118	23	iP iS	11	13	22 43	170	Felt at Iba, Int. III.
119	23	iP eS?	12	01 03	14 43	1,400 or 12.6°	
120	24	eP eS	00	28 29	37 22	380	
121	24	iP iS	13	50 51	03 22	160	Probably aftershock of 118.
122	24	iP iS	16	44 45	42 01	160	Do.

SEISMOLOGICAL BULLETIN ... Cont'd



No.	DATE	PHASE	Greenwich Mean TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	APRIL						
123	25	eP	18	34	09		
124	26	eP	03	25	34		
125	28	eP IS	06	58 59	45 41	480	
126	28	eP	21	26	47		
127	29	1P IS	18	13	10 41.5	260	Felt at Casiguran, Int. II Baguio, Int. III and Baler, Int. IV.
128	29	1P IS eL	19	38 39 41	33 33 16	510	
129	29	1P IS	22	57	12 43.5		Aftershock of 127.
130	30	eP e	15	34 39	41 40		

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WEATHER BUREAU
GEOPHYSICAL DIVISION
Manila

No. 29

$\phi = 14^{\circ} 40' N$

$= 121^{\circ} 05' E$

$h = 70.4 m.$

May 1954

Tuff

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INSTRUMENTS

3 Sprengnether horizontal seismometers, Series H (for microseismic work). Sprengnether seismometers, Series D-H, three components.
1 Wood-Anderson Torsion Seismometer. 1 Sprengnether Strong-motion seismometer.

Constants of Sprengnether, Series D-H

Component	T Galvanometer	T Seismometer	Kg
E - W	8.0	8.0	28.2
N - S	7.5	7.5	32.1

Data taken from Sprengnether, Series D-H, unless otherwise stated.

No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
131	MAY 1	1P 1PR ₁ oPR ₂ 1S 1L oM	05	13	47 16 17 22 34 40	7,450 or 67 ^o .1	Normal depth?
132	2	o	15	27	ca.		Masked by microseisms.
	3	oP 1S	14	09	58 10	170	From May 3-11, microseisms were heavy due to Typhoon "IRIS."
133	11	oP	01	26	35		
134	11	oP	12	02	33 ca.		
135	15	oP	05	08	ca.		
136	15	oP eS	09	53	12 55	365	
137	15	e	11	28	ca.		
138	16	e	01	02	ca.		
139	16	e	09	21	ca.		
140	16	oP eS	14	09	03 16	110	
141	16	e	14	38	ca.		
142	16	e	15	34	ca.		
143	18	e	14	12	ca.		
144	19	e	07	34	ca.		

FEB 1 1952

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No.	DATE	PHASE	Greenwich TIME			DISTANCE	REMARKS
			h	m	s		
145	MAY 19	e	09	04	ca		
146	19	oP eS	17	08	15 53	320	
147	19	oP eS	20	35	05 33	240	
148	20	oP eS	07	11 12	51 11	170	
149	20	eP	19	06	ca.		
150	21	e	02	26	ca.		
151	21	oP iPR ₁ i iS iSR ₁	08	34 35 36 40 41	42 16 05 30 08	4,220 or 38°	Depth about 150 kms.
152	21	oP	15	50	09		
153	22	iP e? eS	06	50	28 43 52 00	780	
154	22	oP	19	52	04		
155	23	e	06	50	27		
156	23	e	19	22	05		
157	26	iP iS	20	33	23 51	290	
158	27	eP iS	11	15 17	46 40	460	
159	28	i	20	06	46		
160	29	e	22	52	42		
161	29	e	02	53	44		
162	29	e	03	16	07		
163	29	e	04	00	13		
164	29	iP iPR ₁ iPR ₂ eS eL eM	06	08 09 12 13 15	40 00 07 23 57 38	2,220 or 20° ±	
165	29	e	20	35	38		
166	30	iP iS	01	12	26 41.5	165	Felt at Manila, Int. II.
167	30	iP iS	07	34	05 56	540	Felt at Calayan, Int. V. Also at Aparri, Int. IV.
168	30	oP	15	53	52		
169	30	iP iS	20	00	17 15	610	
170	31	iP iS	04	53	03 21	190	Felt at Iba, Int. II
171	31	iP	20	56	59	Amplitude too large. Epicenter probably in vicinity of 18N; 119E. Felt at Laoag (VI), Calayan (VI), Vigan (5), Aparri (V), Tuguegarao (IV), Baguio (III), Manila (III), Casiguran (II).	

REPUBLIC OF THE PHILIPPINES
Department of Commerce and Industry
WEATHER BUREAU
GEOPHYSICAL DIVISION
Manila

No. 30

$\phi = 14^{\circ} 40' N$

$\lambda = 121^{\circ} 05' E$

$h = 70.4 m.$

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INSTRUMENTS

3 Sprengnether horizontal seismometers, Series H (for microseismic work). Sprengnether seismometers, Series D-H, three components.
1 Wood-Anderson Torsion seismometer. 1 Sprengnether Strong-motion seismometer.

Constants of Sprengnether, Series D-H

Component	T Galvanometer	T Seismometer	kg
E - W	8.0	8.0	28.2
N - S	7.5	7.5	32.1

Data taken from Sprengnether, Series D-H, unless otherwise stated.

No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	JUNE						
172	1	iP	00	01	08		
173	1	i	04	16	55		
174	1	i	06	10	12		
175	1	iP iS	09	05 06	44 04	210	
176	1	eP	16	28	48		
177	1	i	20	12	40		
178	1	e	20	22	26		
179	2	iP iPR ₁ i eS e eL iM	06	50 52 53	07 11 14 21 41 57 51	1220 or 11.0°	
180	2	eP iS	10	16 17	49 36	380	
181	2	eP iS	11	39 40	24 23	500	Felt at Masbate, Int. III.
182	2	i	17	09	14		
183	3	e	17	53	56		
184	3	i	18	32	42		
185	5	iP iPR ₁ iPR ₂ iS iL _r iL _q	17	01 03 07 12 16	50 20 45 54 17 14	4300 or 39.0°	
186	6	eP	03	16	45	125	

June 1962



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Seismological
Centre

SEISMOLOGICAL BULLETIN ... Cont'd.



No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
187	JUNE 6	eP iS	10	53	30 54	200	
188	6	iP i ePR ₁ ? e iS ePPS eSR ₁ eSR ₂ F	16 18	24 34 36 40 44 00	04 28 46 52 33 33 37 49 00	9450 or 85.0°	
189	7	eP iS	01	33	13 32	160	
190	7	eP iS	01	42 43	57 29	270	
191	7	iP	07	13	15		
192	7	e	11	38	14		
193	7	e	23	10	38		Teleseismic.
194	9	e	11	41	44		
195	10	e	00	12	13		Teleseismic.
196	14	eP iS	11	36 37	01 25	710	Large microseisms from June 14th to 20th.
197	18	iP iS	18	36 37	56 30	350	
198	19	iP iS	14	21 22	13 00	490	
199	20	iP iS	14	38 39	36 08	340	
200	20	iP iS	15	03 04	51 22.5	340	
201	21	eP?	21	52	30		
202	21	eP?	22	44	15		
203	21	eP?	23	45	59		
204	22	iP iS	16	53 54	48 16	300	
205	23	eP iS	10	03	00 10	90	
206	24	eP?	05	02	47		

SEISMOLOGICAL BULLETIN ... Cont'd



No.	DATE	PHASE	Greenwich TIME			DISTANCE	REMARKS
			h	m	s		
207	JUNE 24	eP	10	59	46	2000 or 17.7°	Normal depth.
		ePR ₁		01	01		
		ePR ₂			06		
		eS		03	08		
		iL		04	22		
		eM		05	58		
208	24	eP	16	56	21	4600 or 41.4°	Depth 100 kms. <u>/</u>
		ipP			41		
		iPR ₁		58	00		
		isPP			39		
		iS	17	02	24		
		iG		05	30		
209	25	eP	15	50	23	3500 or 32.0°	Normal depth.
		e			36		
		e		51	01		
		ePR ₁			36		
		iS		55	40		
		i		57	28		
210	25	iL _r		59	15		Teleseismic.
		e	16	27	10		
211	26	iP	03	45	15	1600 or 15.0°	Normal depth.
		ePR ₁			24		
		ePR ₂			28		
		eS		48	03		
		eL			58		
		eM		50	11		
212	26	iP	16	21	38	180	
		iS			55		
213	27	iP	21	18	10	190	Large microseisms from June 28th to 30th due to typhoon "KATE".
		iS			28		
219	29	eP	07	25	05	150	
		iS			19		

Note:

Due to some construction undertaken in the vault room of the station, the seismic records for June have been interrupted several times.

The following earthquakes were reported for the month by Weather Stations of the Bureau and of which no instrumental records are available:

Roxas City,	June 11, 1:34 a.m.,	Intensity II
Butuan City,	" 12, 10:00 p.m.,	" II
Surigao,	" 13, 3:45 a.m.,	" III
Butuan City,	" 13, 3:45 a.m.,	" II
Surigao,	" 18, 3:07 p.m.,	" V
Aparri,	" 19, 5:38 a.m.,	" II
Hinatuan,	" 25, 2:29 a.m.,	" II
Hinatuan,	" 25, 2:29 a.m.,	" III.

Department of Commerce and Industry
WEATHER BUREAU
GEOPHYSICAL DIVISION
Manila

No. 31

July 1954

$\phi = 14^{\circ} 40' N$

$\lambda = 121^{\circ} 05' E$

$h = 70.4m$

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INSTRUMENTS

3 Sprengnether horizontal seismometers, Series H (for microseismic work). Sprengnether seismometers, Series D-H, three components.
1 Wood-Anderson Torsion seismometer. 1 Sprengnether Strong-motion seismometer.

Constants of Sprengnether, Series D-H

Component	T Galvanometer	T Seismometer	kg
E - W	8.0	8.0	28.2
N - S	7.5	7.5	32.1

Data taken from Sprengnether, Series D-H, unless otherwise stated.

No.	DATE	PHASE	Greenwich TIME			DISTANCE	REMARKS
			h	m	s		
	JULY						
220	1	1P	06	26	44	85	Distance by Ambulong Sta. Felt at Calapan, Int. III. Manila, Int. II Also by Batangas Province.
221	1	1P	06	44	12	80	Distance by Ambulong Sta. Same macroseismic area as No. 220.
222	1	1P 1S	06	44 55	54 09	160	
223	1	1P 1S	07	01	28 41	135	
224	1	e	10	58	12		
225	1	e	14	33	58		
226	1	1P eS	16	47	16 30	150	
227	1	e	17	04	36		Felt at Vigan, Int. II
228	1	e	17	17	30		
229	1	e	17	23	30		
230	1	e	17	48	20		
231	2	eP	02	17	43		
232	2	eP	04	34	18		
233	2	eP	04	49	59		
234	2	e	05	08	55		Felt at Cotabato, Int. II Davao, Int. II
235	2	1P	05	25	21	115	

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Seismological
Centre

NO.	DATE	PHASE	TIME			DISTANCE Kms.	REMARKS
			h	m	s		
236	2	e	05	53	30		
237	2	e	06	20	30		
238	2	e	07	23	58		
239	2	e	15	55	58		
240	2	eP iS	18	35 36	59 17	155	
241	3	iP iS	08	52	06 30	250	Felt at Daet, Int. IV Probable epicenter: 14°8N ; 123°2E.
242	3	e	16	06	01		
243	3	i	18	27	21		
244	3	e	19	00	56		
245	4	e	01	00	45		
246	4	e	07	17	50		Teleseismic.
247	4	e	12	21	05		
248	4	e	14	47	13		
249	4	eP iS	22	50	18 34	135	
250	5	iP iS	10	55 56	53 04	115	Felt at Manila, Int. II Calapan, Int. II Probable epicenter: 13°9N; 120°3E.
251	6	iP	02	09	30		Felt at Cuyo, Int. IV Iloilo Int. II
252	7	iP	03	19	28		
253	8	iP iS	05	45 46	55 41	490	Felt at Iloilo Int. VI Dumaguete Int. V Mambajao Int. III Roxas City Int. III Cuyo Int. III Dipolog Int. III Probable epicenter: 10°4N; 122°5E Magnitude $6\frac{1}{2}$ $\frac{1}{2}$ (Pasadena)
254	8	eP	07	08	14		
255	9	iP iS	13	24	32 57	260	
256	10	iP iS	01	34	13 35	230	
257	12	eP	06	41	38		
258	12	eP	12	21	10		Felt at Calayan, Int. III
259	14	iP iS	16	24	37 54	180	
260	14	e	18	55	39		
261	15	i	16	31	46		



No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	JULY						
262	16	iP iS	07	47 48	55 28	350	
263	16	iP i	10	46 47	40 13		Teleseismic.
264	17	iP	12	24	15		
265	17	iP eS	13	20	10 25	130	
266	18	eP iS	01	28	42 58	135	
267	18	i i i e	09	25 26 30	54 59 36 08		Teleseismic.
268	18	iP eS	12	36 37	27 47	680	
269	18	iP	18	09	45		
270	19	i	20	51	31		Teleseismic.
271	20	iP	00	32	35		
272	20	i	11	17	11		Teleseismic.
273	23	iP iS	09	34	18 48	310	
274	23	eP?	11	06	23		Teleseismic.
275	24	eS?	17	14	34		
276	24	eS?	20	38	07		
277	26	iP ipP isP esPP eScS eS esS	10	07 08 10 13 14 15	55 20 36 15 14 12 00	4800 or 43°2	H = 10h 00m 00s h = 100 Kms. $\frac{1}{2}$
278	28	e	21	03	16		Large microseisms from July 28th to Aug. 8th due to Typhoon "LOUISE".
279	28	e	23	10	11		
280	30	e	00	56	xx		

Department of Commerce and Industry
WEATHER BUREAU
GEOPHYSICAL DIVISION
Manila

No. 32

$\phi = 14^{\circ} 40' N$

$\lambda = 121^{\circ} 05' E$

$h = 70.4 m.$

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INSTRUMENTS

3 Sprengnether horizontal seismometers, Series H (for microseismic work). Sprengnether seismometers, Series D-H, three components.
1 Wood-Anderson Torsion seismometer. 1 Sprengnether Strong-motion seismometer.

Constants of Sprengnether, Series D-H

Component	T Galvanometer	T Seismometer	kg
E - W	8.0	8.0	28.2
N - S	7.5	7.5	32.1

Data taken from Sprengnether, Series D-H, unless otherwise stated.

No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	AUGUST						
281	4	iP	11	21	58		
282	4	iP iS	17	02	31 51	210	From the 1st to the 15th of August, Manila microseisms were large due to Typhoon "LOUISE", a Tropical Depression, and then Typhoon "MARGE".
283	4	iP	22	04	42		
284	5	iP i iS	08	56	17 38 51	360	
285	6	iP iS	06	16	46 23	390	
286	7	eP iS	15	17	56 07	95	
287	7	eP eS	17	54	07 18	95	Same region as 286.
288	8	iP i iS	20	15	18 35 51	350	
289	9	iP?	06	18	30		
290	9	eP	10	08	20		
291	9	eP	10	13	03		
292	9	iP iS	10	18	21 36	160	
293	9	eP	11	09	26		
294	9	iP e eS?	11	14	18 21 45	230?	
295	10	iP i i	23	07 08 12	01 06 23		Teleseismic.

FEB 17 1952

August 1951

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SEISMOLOGICAL BULLETIN ... Cont'd.



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No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	m		
	AUGUST						
296	13	iP i ePP eS eG	18	45	42 50 24 17 xx	8800 or 7900	
297	18	iP	03	41	52		Masked by microseisms.
298	20	iP iS	09	28	32 54	230	Felt at Daet, Int. II.
299	20	iP iS	10	29	45 30 17	340	
300	21	eP e eS	11	09	03 15 48	7200 or 6590	Normal depth. Determination doubtful due to microseisms.
301	23	eP?	21	09	14		
302	24	iP eS	02	03	41 04 13	270	
303	24	eP isP eScS iS esS	14	28	57 29 35 30 55 45	4600 or 4190	Depth 100 $\frac{1}{2}$ Kms.
304	25	iP iS	13	58	15 36	220	Probably same region as 298.
305	26	iP iS	05	40	23 43	210	Do.
306	26	iP iS	06	04	41 05 01	210	Do.
307	27	eS?	19	17	xx		Felt at Surigao, Int. III.
308	28	iP iS	14	36	32 37 02	320	
309	28	iP i iPR ₁ iPR ₂ eS iSR ₁ iL _r iScS	16	41	27 42 06 52 25 20 41 17 48	4200 or 3795	
310	30	iP eS	00	13	01 19	150	

WEATHER BUREAU
GEOPHYSICAL DIVISION
Manila

No. 33

$\phi = 14^{\circ} 40' N$

$\lambda = 121^{\circ} 05' E$

$h = 70.4 m$

September 1951

Tuff

International
Seismological
Centre

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INSTRUMENTS

2 Sprengnether horizontal seismometers Series H (for microseismic work). Sprengnether seismometers, Series D-H: 1 N-S horizontal component and 1 vertical component. 1 Wood-Anderson torsion seismometer.

Data taken from Sprengnether, Series D-H, unless otherwise stated.

No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	SEPT.						
311	1	iP	12	16	29		Masked by microseisms. Felt at Manila, Int. II.
312	1	iP iS	12	37	00 20	210	Reading and distance by Ambulong seismic station.
313	5	eP eS	07	57 58	49 07	150	From the 1st to the 6th, Manila microseisms were large due to Typhoon "NORA".
314	6	e	06	54	xx		Teleseismic
315	6	iP iS	23	11 12	56 08	125	Felt at Cabanatuan, Int. IV. Dagupan, Int. III. Baguio, Int. II. Manila, Int. II. Epicenter: $15^{\circ}6'N$; $120^{\circ}7'E$.
316	7	eP eS	11	09 10	31 00	250	
317	7	eP eS	11	25	11 50	330	
318	8	iP iS	19	47 48	24 14	520	
319	8	iP eS	20	31 32	48 19	260	
320	9	eP eS	01	35 36	44 10	220	
321	9	i e	04	55 56	22 11		Teleseismic. Felt at Apia.
322	9	iP iS	06	07 08	53 33	420	
323	9	iP iS	11	07 08	57 17	210	
324	10	iP iS	02	24 25	25 04	410	
325	10	eP	07	51	11		
326	10	eP	10	44	35		
327	11	e	18	10	55		Teleseismic.

No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	SEPT.						
328	12	eP iS	05	23 24	48 12	200	
329	12	iP	08	52	01		
330	12	iP iPR ₁ iPR ₂ eS eSR ₁	15	17 19 20 25	55 52 45 23 55	5800 or 5290	
331	13	e	06	10	xx		
332	13	iP iS	14	21 18	07 18	115	
333	13	iP ipP iPR ₁ iS iS _c S eG eS _c P	16	31 32 36 37 41	00 21 07 07 18 36 16	3500 or 3195	Depth 100 $\frac{1}{2}$ Kms.
334	14	e	00	20	xx		Felt at Calayan, Int. II.
335	14	e	08	08	xx		
336	14	iP i i iS	13	57 58	42 46 54 32	530	
337	14	e	17	20	xx		
338	14	e	20	07	xx		Teleseismic.
339	16	iP ePR ₁ ePR ₂ iS	01	41 42 47	20 34 59 14	4100 or 3790	
340	16	iP iPR ₁ ePR ₂ iS eL	01	48 49 52 54	28 52 01 28 23	2500 or 2294	
341	17	e	07	51	24		Masked by microseisms.
342	17	i	12	09	20		Masked by microseisms. Teleseismic.
343	17	eP iS	16	11 12	09 22	600	From the 17th to the 21st, Manila microseisms were large due to Typhoon "ORA".
344	17	eP?	20	53	31		
345	18	eP eS	04	17 18	34 14	340	Felt at Virac, Int. III

No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	SEPT.						
346	18	eP	10	11	00		Masked by microseisms.
347	20	eP eS	13	16 17	15 23	580	Felt at Tacloban, Int. III.
348	20	iP iS	21	46 47	08 02	570	Felt at Catbalogan, Int. III. Tacloban, Int. II.
349	20	iP iS	23	09 10	28 04	380	
350	21	iP iS	01	17	28 52	250	
351	21	e	03	31	47		Teleseismic.
352	21	iP iS	09	13 14	58 06	85	
353	21	iP iS	10	54 55	25 14	520	
354	21	eP	12	35	11		
355	21	iP iS	13	28 29	42 30	500	Felt at Calayan, Int. II.
356	21	e	14	02	59		
357	21	e	17	51	xx		
358	21	eP	18	26	26		
359	21	eP	18	56	24		Teleseismic.
360	21	eP	19	14	xx		Felt at Catbalogan, Int. II.
361	21	e	20	58	xx		
362	21	iS?	21	08	00		Teleseismic.
363	22	eP eS	06	00	26 47	180	
364	23	iP iS	04	23	24 42	190	
365	23	e	12	05	15		
366	24	e	13	18	45		Teleseismic. Masked by microseisms.
367	25	eP iS	17	17	00 52	440	
368	27	iP iS	05	25	20 36	170	
369	27	eS?	18	37	43		

SEISMOLOGICAL BULLETIN ... Cont'd



No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	SEPT.						
370	28	iP i i e i	03	37	06 29 17 29 28		No surface waves discernible.
371	28	e	23	39	49		Teleseismic.
372	29	eP?	10	04	49		
373	29	eP eS	10	16	00 23	200	
374	29	iP e i e i i	12	24	11 33 56 27 28 36		No surface waves discernible.
375	29	iP iS	20	34	16 39	240	
376	30	eP?	11	01	24		Teleseismic?
377	30	eP e i	16	13 14	40 30 56		Teleseismic.
378	30	eP iS	19	48 49	51 14	200	

REPUBLIC OF THE PHILIPPINES
Department of Commerce and Industry
WEATHER BUREAU
GEOPHYSICAL DIVISION
Manila



No. 34

October 1951

$\phi = 14^{\circ} 40' N$

$\lambda = 121^{\circ} 05' E$

$h = 70.4 m$

Tuff

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INSTRUMENTS

2 Sprengnether horizontal seismometers, Series H (for microseismic work). Sprengnether seismometers Series D-H: 1 N-S horizontal component and 1 vertical component. 1 Wood-Anderson torsion seismometer.

Data taken from Sprengnether, Series D-H unless otherwise stated.

No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	OCT.						
379	1	iP iS	05 06	59 00	53 12	200	
380	2	iP eS?	00	05 06	22 13	430?	
381	2	eP	01	37	23		
382	2	iP iS	06	18	29 45	170	
383	3	eP iS	00	28 29	47 16	250	
384	3	eP eS	01	10 11	50 20	250	
385	3	e	13	40	xx		Teleseismic.
386	3	e	15	38	xx		Felt at Hinatuan, Int. II.
387	3	e	20	46	xx		Teleseismic.
388	4	e	05	51	30ca.		
389	4	e	14	18	xx		
390	5	iP iS	02	35 36	23 28	580	Felt at Tacloban, Int. IV.
391	5	iS?	06	42	22		Teleseismic.
392	5	eP	08	18	21		
393	5	ePR ₁	11	49	03		Teleseismic.
394	6	iP iS	00	46 47	58 16	190	
395	6	iP iS	04	13	00 16	170	
396	6	eP eS	09	23 24	58 21	195	
397	6	eP eS	11	24 25	53 24	260	

SEISMOLOGICAL BULLETIN ... Cont'd.



No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	OCT.						
398	8	eP iS	00	27	15 32	145	
399	9	e	13	35	30ca		Teleseismic
400	10	iP iS	17	29	33 47	150	
401	10	e	22	18	30ca		Teleseismic.
402	11	iP iPR ₁ iPR ₂ iS eSR ₁ eSR ₂ eL	01	44 45 46 50 52 53 54	43 57 22 38 51 19 57	4120 or 3791	
403	11	iP iS	18	38	07 35	300	Felt at Casiguran, Int. II
404	12	iP iS	01	37	07 37	315	
405	12	iP	08	25	22		Trace lost due to large amplitudes. Felt at Iba, Int. III; Manila, Int. III; Baguio, Int. II; and Dagupan, Int. II. Epicenter placed at 15°3N; 120°3E.
406	15	iS?	21	06	54		
407	16	eP eS	04	26 27	41 13	270	
408	17	eP	19	52	xx		
409	18	eP	05	08	48		
410	18	eS?	08	00	39		
411	18	iP eS	08	32 33	51 21	250	This local tremor masked a teleseismic one.
412	20	e	08	10	34		
413	20	eP eS?	11	03 04	09 18	590?	
414	21	iP iS	17	37 38	15 22	700	
415	21	iP	21	36	26		Felt at Basco, Int. II. Destructive at Formosa.
416	22	eP iS	00	57 58	00 45		Formosa.
417	22	iP	03	31	40		Formosa.

SEISMOLOGICAL BULLETIN ... Cont'd



No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms	REMARKS
			h	m	s		
	OCT.						
442	23	iP iS	21	37	26 52	270	Felt at Daet, Int. III.
443	24	e	00	13	27		
444	24	iP iS	03	41 43	18 02		Aftershock Formosa quake.
445	24	iP iS	06	28 30	35 19		Aftershock Formosa quake.
446	24	iP eS	06	49 51	25 11		Aftershock Formosa quake.
447	24	e	07	36	51		
448	24	iP iS	08	16 17	54 08	150	Felt at Manila, Int. I
449	24	e	09	51	54		
450	24	iP eS	13	44 46	35 22		Aftershock Formosa quake.
451	24	e	15	48	16		
452	24	e	17	49.5			
453	24	i	19	29	52		
454	24	e	20	10	35		
455	24	eP	23	39	35		
456	25	e	03	03	10		
457	25	iP eS	12	22 23	00 52		Aftershock Formosa quake.
458	25	eP eS	21	40 42	20 09		Aftershock Formosa quake.
459	26	e	05	43	58		
460	26	iP eS	06	50 51	15 33	660	
461	26	eP eS	10	02 03	57 46	420	
462	26	iP iS	16	17	21 39	190	Felt at Dagupan, Int. III Iba, Int. II
463	26	iP iS	17	58 59	53 30	390	
464	28	iP iS	00	47 48	46 42	590	
465	28	eP eS	01	58 59	09 57		Aftershock Formosa quake.
466	28	iS?	06	59	45		Teleseismic?
467	28	eS?	15	12	50		

WEATHER BUREAU
GEOPHYSICAL DIVISION
Manila

No. 35

 $\phi = 14^{\circ} 40' N$ $\lambda = 121^{\circ} 05' E$ $h = 70.4 m$

November 1951

Tuff

International
Seismological
Centre

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INSTRUMENTS

2 Sprengnether horizontal seismometers, Series H (for microseismic work). Sprengnether seismometers, Series D-H: 1 N-S horizontal component and 1 vertical component. 1 Wood-Anderson torsion seismometer.

Data taken from Sprengnether, Series D-E, unless otherwise stated.

No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	NOV.						
468	2	eP eS	03	44 45	50 17	230	
469	3	eP i iS? i iL?	13	34 35 36 37	22 33 58 22 21	1000 or 990	Interpretation doubtful.
470	4	eP iS	00	08 51	21	250	
471	4	eP e ePR ₂ eS	09	00 01 03 07	40 43 17 48	1150 or 1094	Interpretation doubtful.
472	4	iP iS	11	11 12	05 09	670	Felt at Catbalogan, Int. VI. Borongan, Int. V Epicenter: 12°8N; 125°8E
473	4	iS?	17	15	53		
474	5	iP iS	09	39 40	20 03	450	
475	5	iP iS	10	39 40	51 06	160	
476	6	e F	04 05	38 20	32		Teleseismic, normal depth.
477	6	iS?	15	05	12		
478	6	eP iPR ₁ iPR ₂ eS	16	48 49 50 54	04 46 14 36	4800 or 4390	
479	7	eP eS	05	16 17	50 54	540	
480	8	e	13	56	30ca		Teleseismic.
481	9	e	22	28	xx		Teleseismic.
482	10	eP	05	43	13		



No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	NOV.						
483	10	eP iS	07	17	34 44	85	
484	11	iP iS	04	06 07	58 31	350	
485	11	e	12	23	01		
486	11	iP iS	22	36 37	49 07	190	
487	12	eP ePR ₂ iS	08	17 19 23	20 21 43	4610 or 4195	
488	12	eP ePR ₁ iPR ₂ iS	09	24 26 27 33	24 51 56 03	7020 or 6392	
489	13	e	08	02	56		Teleseismic.
490	13	eP	14	24	18		Teleseismic?
491	13	eP eS	17	15 16	34 26	440	
492	13	iS	17	52	36		
493	13	iS	17	59	08		
494	15	eP	08	34	30		
495	15	e	08	45	xx		Teleseismic.
496	15	e	10	40	12		
497	15	e	15	11	30ca		Teleseismic?
498	15	e	16	21	xx		
499	15	e	17	54	xx		
500	15	iP e	19	50 53	51 24		Teleseismic.
501	15	e	20	29	15		
502	15	e	20	43	40		Teleseismic?
503	15	e	20	08	xx		Teleseismic?
504	16	iP iS	04 03	03 31	31 54	240	
505	16	iP	15	12	04		
506	16	eP	15	29	21		
507	16	e	15	37	43		



No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	NOV.						
508	16	eP?	17	44	44		
509	17	iP e e	04	52 53 55	23 06 02		Teleseismic.
510	17	iP iS	12	57	02 40	400	
511	17	e	17	56	39		Teleseismic.
512	18	e	04	47	10		
513	18	iP e	09	32 34	59 01		Teleseismic.
514	18	iP ePR ₁ eS eSR ₁ eSR ₂ eL	09	42 43 48 50 51 56	12 29 13 42 05 27	4220 or 3800	
515	20	eP eS	01	23 24	58 13	130	
516	22	iP	16	25	18		
517	23	iP iS	00	48 49	25 02	390	
518	24	eP	14	01	xx		
519	24	iP eS	16	08 09	54 59	550	
520	24	iP F	18 21.2	49	17		Teleseismic. Amplitudes very large. Traces lost.
521	24	e	20	00	xx		Felt at Surigao, Int. III.
522	26	iP iS	06	40 42	31 19		Destructive in Formosa.
523	28	eP eS	02	26	03 34	260	Masked by microseisms.
524	28	eP	19	16	13		Felt at Hinatuan, Int. II. Masked by microseisms.
525	29	iP iPR ₁ iPR ₂ iS eSR ₁ eL F	04	49 51 52 05.3	12 20 23 55 20 48	1630 or 1497	
526	29	eP	09	18	12		
527	29	eP eS	14	28 30	55 22	740	

WEATHER BUREAU
GEOPHYSICAL DIVISION
Manila

No. 36

$\phi = 14^{\circ} 40' N$

$\lambda = 121^{\circ} 05' E$

$h = 70.4 m.$

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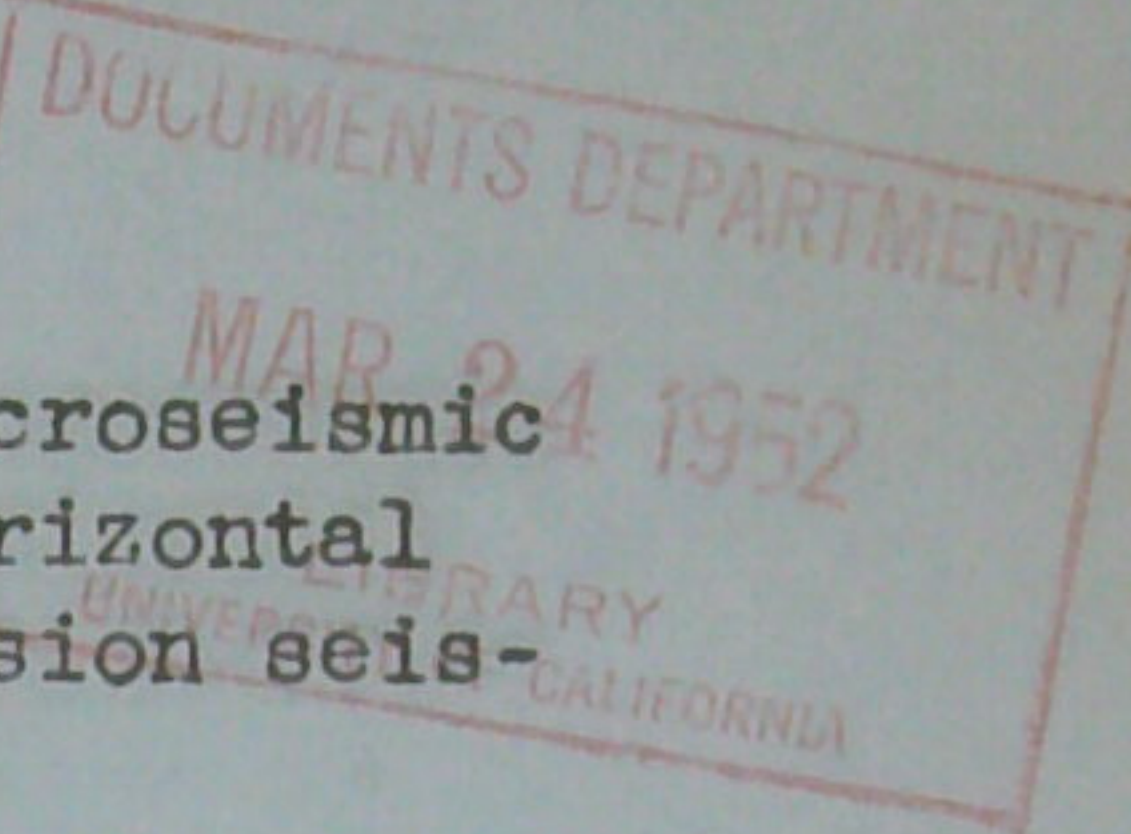
INSTRUMENTS

2 Sprengnether horizontal seismometers, Series H (for microseismic work). Sprengnether seismometers, Series D-H: 1 N-S horizontal component and 1 vertical component. 1 Wood-Anderson torsion seismometer.

December 1951

Tuff

International
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Data taken from Sprengnether, Series D-H, unless otherwise stated.

No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms.	REMARKS
			h	m	s		
	DEC.						
528	1	eS	04	00	14		
529	1	iP iS	13	14 15	58 05	75	
530	2	eP iS	22	01	30 55	210	Int. II. Felt at Iloilo City/ Dis- tance and phases by that Sta.
531	3	iP iS	12	59	26 39	135	
532	3	iS	22	02	33		
533	4	eP eS	08	29	11 49	320	
534	5	eP? e F	07	00 01 45	00 46 xx		Teleseismic.
535	8	iP i i iPR ₁ ePR ₂ iS eSR ₁	04	26	08 15 42 29 30 35 40	8550 or 77 ⁰⁰	Normal Depth. From the 11th to the 18th, Manila microseisms were large due to Typhoons "AMY" and "BABS".
536	10	iP	15	13	07		
537	13	iP iS	10	19	23 36	140	Epicenter: 15 ⁰⁴ N; 122 ⁰⁰ E.
538	16	eS?	00	09	28		
539	18	e	14	20	24		Teleseismic.
540	21	iP iPR ₁ ePR ₂ iS eSR ₁ iL eM F	08	42	35 56 43 46 47 48 49	2260 or 24 ⁰⁴	
			09	30			

No.	DATE	PHASE	Greenwich TIME			DISTANCE Kms	REMARKS
			h	m	s		
	DEC.						
541	21	eP	23	53	22		
542	22	iP iS	02	27	19 35	170	Epicenter: 13°7N; 119°8E
543	22	eP iS	06	26	19 36	145	
544	22	iS?	14	54	33		
545	22	e	20	17	05		
546	23	e	06	41	27		Teleseismic.
547	23	e	20	46	30		
548	23	iP iS	22	11 12	12 12	630	Epicenter: 9°1N; 123°0E. Felt at Dumaguete, Int. VI. Iloilo, Int. III.
549	24	eP	09	58	33		Epicenter: Probably same as No. 548. Felt at Dumaguete, Int. V; Iloilo, Int. II.
550	25	eP eS	06	49 50	32 04	270	
551	26	e	16	38	xx		Teleseismic.
552	26	e	17	02	xx		Teleseismic.
553	27	iP eS	03	13 15	40 16	820	Felt at Hinatuan, Int. II.
554	27	iS	09	10	12		
555	27	e	19	37	30		
556	28	iP eS	00 01	59 00	55 57	520	Felt at Laoag, Int. III.
557	28	iS?	02	48	08		
558	28	iP eS	15	15 16	03 05	520	Probably same epicentral area as No. 556.
559	28	iP eS	19	16 17	24 28	540	Do.
560	29	e	18	35	53		
561	29	iP eS	22	05 06	36 43	570	Felt at Oras, Samar Is.
562	31	e	21	11	11		
563	31	e	23	36	xx		

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THE DUMAGUETE EARTHQUAKES OF DECEMBER 24, 1951



The City of Dumaguete and southern towns in Negros Oriental, Negros Island, felt a series of tremors on the 24th of December, 1951. Altogether, Dumaguete reported having felt 25 earthquakes on that day, with the strongest one being of Intensity VI (Adapted Rossi-Forel Scale) at 6:10 (local time) in the morning. Iloilo City, approximately 170 kilometers northwest of Dumaguete, felt the same earthquake as Intensity III. The macroseismic area of this particular shock, considering the highest intensity reported, was not very large. Very little damage has been reported.

On the basis of Manila and Iloilo seismographic readings and from subsequent information gathered in the field, the epicenter of the strongest shock has been placed at 9°1 N. Lat. and 123°0 E. Long.

Investigation of the southern part of the Province of Negros Oriental, especially the areas in the vicinity of "Cuernos de Negros" and two places both called "Magaso", showed the presence of some solfataric activity in these places. However, such activity has been going on in the past prior to the December earthquakes, and although there is a very slight increase in this form of activity, no other untoward volcanic manifestations were observed.

The tremors as reported by the Weather Bureau Station at Dumaguete City on the 24th of December were as follows:

	Local Time (120th E. M.T.)	Intensity (Adapted R. F.)	Duration (Seconds)
	02:40 A.M.	I	10
	03:15 "	I	12
	06:10 "	VI	20
Iloilo City	do	III	35
	06:13 "	II	10
	06:14 "	I	08
Iloilo City	do	I	10
	06:18 "	I	06
	06:36 "	I	04
	07:03 "	I	05
	07:07 "	I	05
	07:38 "	I	06
	08:06 "	I	04
	08:20 "	I	03
	08:41 "	III	20
	08:52 "	I	04
	08:59 "	I	03
	02:10 P.M.	II	03
Iloilo City	05:26 "	I	25
	05:40 "	II	06
	05:55 "	IV	10
	05:56 "	V	10
Iloilo City	do	II	30
	05:59 "	IV	10
	06:11 "	II	05
	06:26 "	I	03
	06:33 "	I	02
	08:43 "	I	02
	10:30 "	I	02