MANILA OBSERVATORY
Mirador, ~~Baguio City~~
Philippines

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16° 24' 39" Long. E. 120° 34' 47" Alt. 1507 meters

Instruments (All Sprengnethers) Hard Limestone Bedrock

Type	Component	Period Seism.	Galv.	Magnification (Dynamic) Synchronous
Photographic	Z	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.57 "	2451
Photoelectric Visual recording	N-S	11.80 "	12.00 "	1000
	E-W	1.54 "	1.49 "	3000

JANUARY 1960

	Date	Time (GMT)	Phase	Remarks
	1	No Quakes Recorded.		
1)	2	06 - 05 - 36	ePg	Very small. Δ g = 50 km.
		42	iSg	
2)		23 - 00 - 12	ePb	Very small. Δ b = 390 km.
		56	iSb	
3)	3	22 - 09 - 06	ePb	Very small. Δ b = 235 km.
		33	iSb	
4)	4	13 - 34 - 53	iPb	Small. Δ b = 165 km. Felt at Baguio, Int. II; Aparri, Int. II; Bangued, Int. II; Vigan, Int. III; Laoag, IV.
		35 - 12	iSb	
5)	5	18 - 30 - 47	iPb	Very small. Δ b = 230 km. Felt at Villaviciosa (Abra), Int. I.
		31 - 13	iSb	
6)	6	20 - 22 - 06	eP	Very small.
7)	7	08 - 23 - 06	iPb	Very small. Δ b = 155 km.
		24	iSb	
8)		08 - 26 - 06	eP	Distant. Δ = 1910 km. = 17.2°.
		29 - 24	iS	
9)		09 - 50 - 14	ePg	Very small. Δ g = 50 km.
		20	iSg	
10)		23 - 27 - 51	iP	Distant. Δ = 1800 km. = 16.2°.
		30 - 59	iS	

	Date	Time (GMT)	Phase	Remarks
	8	No Quakes Recorded.		
11)	9	05 - 37 - 31	ePg	Very small. Δ g = 114 km.
		45	iSg	
12)		07 - 32 - 27	iP	Distant. Δ = 5000 km. = 45.0°.
		39 - 11	iS	
13)		07 - 46 - 04	iP	Distant. Δ = 2165 km. = 19.5°.
		49 - 43	iS	
	10	No Quakes Recorded.		
14)	11	00 - 07 - 59	iPb	Very small. Δ b = 310 km.
		08 - 34	iSb	
15)		02 - 31 - 16	eP	Distant. Δ = 1780 km. = 16.0°
		34 - 22	iS	
16)		02 - 52 - 00	iPb	Small. Δ b = 283 km. Felt at Manila,
		32	iSb	Int. II.
17)		03 - 15 - 26	eP	Distant. Δ = 2865 km. = 25.8°.
		20 - 00	iS	
18)		14 - 59 - 07	eP	Very small.
19)		16 - 06 - 56	eP	Very small. Δ b = 210 km.
		07 - 20	iSb	
20)		22 - 59 - 50	iP	Distant. Δ = 3210 km. = 28.9°.
		23 - 04 - 48	iS	
21)	12	00 - 30 - 00	ePg	Very small. Δ g = 100 km.
		12	iSg	
22)		01 - 54 - 25	iPb	Very small. Δ b = 890 km. = 8.0°.
		56 - 05	iSb	
23)		18 - 13 - 48	ePg	Very small. Δ g = 100 km.
		14 - 00	iSg	
24)		21 - 57 - 00	eP	Teleseismic.
25)	13	01 - 22 - 30	iPg	Small. Δ g = 114 km.
		44	iSg	
26)		01 - 27 - 40	ePg	Very small. Δ g = 68 km.
		48	iSg	
27)		16 - 00 - 24	eP'	Distant. Arequipa, Peru.
		39 - 50	eX	
28)		18 - 45 - 52	ePb	Very small. Δ b = 820 km. = 7.4°.
		47 - 24	iSb	
29)	14	01 - 24 - 12	ePg	Very small. Δ g = 68 km.
		20	iSg	
30)		06 - 47 - 56	ePb	Very small. Δ b = 605 km. = 5.4°.
		49 - 04	iSb	
31)		10 - 31 - 21	iP	Distant. Δ = 3745 km. = 33.7°.
		36 - 52	iS	
32)		12 - 59 - 33	ePb	Very small. Δ b = 155 km.
		51	iSb	
33)		16 - 03 - 38	iP	Distant. Δ = 2300 km. = 20.7°.
		07 - 28	iS	

	Date	Time (GMT)	Phase	Remarks
34)	15	00 - 12 - 01	iPg	Small. $\Delta g = 110$ km.
		14	eSg	
35)		03 - 02 - 40	eP	Distant. $\Delta = 1220$ km. $= 11.0^{\circ}$.
		04 - 54	iS	
36)		09 - 50 - 18	iP'	Distant. Southern Peru.
		10 - 01 - 46	iX	
	16	No Quakes Recorded.		
37)	17	21 - 37 - 21	iPg	Small. $\Delta g = 114$ km.
		35	iSg	
38)	18	04 - 13 - 17	iPg	Very small. $\Delta g = 114$ km.
		31	iSg	
39)		09 - 07 - 43	iP	Distant. $\Delta = 1480$ km. $= 13.3^{\circ}$.
		10 - 21	iS	
40)		19 - 02 - 34	ePb	Very small. $\Delta b = 155$ km.
		52	iSb	
41)	19	02 - 25 - 30	ePg	Very small. $\Delta g = 114$ km.
		44	iSg	
42)		09 - 33 - 50	iP	Very small.
43)		23 - 57 - 16	iPg	Very small. $\Delta g = 114$ km.
		30	iSg	
44)	20	23 - 39 - 32	ePg	Very small. $\Delta g = 35$ km.
		36	iSg	
45)	21	10 - 11 - 56	iPg	Very small. $\Delta g = 114$ km.
		12 - 10	eSg	
46)		10 - 55 - 00	eP	Distant. $\Delta = 6345$ km. $= 57.1^{\circ}$.
		11 - 03 - 00	eS	
47)		22 - 41 - 59	ePg	Very small. $\Delta g = 85$ km.
		42 - 09	iSg	
48)	22	02 - 50 - 59	iPg	Very small. $\Delta g = 85$ km.
		51 - 09	iSg	
49)		13 - 40 - 01	iP	Very small.
50)		21 - 00 - 30	ePg	Very small. $\Delta g = 114$ km.
		44	iSg	
51)	23	02 - 42 - 10	iPg	Very small. $\Delta g = 68$ km.
		18	eSg	
52)		04 - 01 - 28	ePb	Very small. $\Delta b = 335$ km.
		02 - 06	iSb	
53)		04 - 26 - 26	ePb	Very small. $\Delta b = 165$ km.
		45	eSb	
54)		04 - 45 - 52	iP	Distant. $\Delta = 2420$ km. $= 21.8^{\circ}$.
		49 - 52	iS	
55)		07 - 36 - 07	iP	Distant. $\Delta = 2390$ km. $= 21.5^{\circ}$.
		40 - 04	iS	

	Date	Time (GMT)	Phase	Remarks
56)	23	18 - 01 - 24	iP	Distant. △ = 2390 km. = 21.5°.
		05 - 21	iS	
57)		23 - 52 - 29	iP	Distant. △ = 2645 km. = 23.8°.
		56 - 47	iS	
58)	24	04 - 32 - 43	iP	Distant. △ = 7455 km. = 67.1°.
		41 - 43	iS	
59)		21 - 13 - 37	eP	Distant. △ = 1755 km. = 15.8°.
		16 - 41	iS	
60)		21 - 20 - 43	ePb	Very small. △ b = 140 km.
		59	eSb	
61)	25	11 - 39 - 49	ePb	Very small. △ b = 710 km. = 6.4°.
		41 - 09	eSb	
62)		16 - 48 - 39	eP	Distant. △ = 3720 km. = 33.5°.
		54 - 09	iS	
	26	No Quakes Recorded.		
	27	No Quakes Recorded.		
63)	28	01 - 41 - 35	ePg	Very small. △ g = 50 km.
		41	iSg	
64)		01 - 11 - 45	ePg	Very small. △ g = 110 km.
		58	iSg	
65)	29	16 - 20 - 22	ePg	Very small. △ g = 40 km.
		27	iSg	
66)	30	18 - 43 - 40	eP	Distant. △ = 2255 km. = 20.3°.
		47 - 26	iS	
67)	31	05 - 13 - 07	iP	Distant. △ = 2345 km. = 21.1°.
		17 - 00	iS	
68)		20 - 38 - 00	eP	Teleseismic.

* * * * *

MANILA OBSERVATORY
Mirador, Baguio City
Philippines

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16° 24' 39"   Long. E. 120° 34' 47"   Alt. 1507 meters

Instruments (All sprengnethers)   Hard Limestone Bedrock

Type	Component	Period Seism.	Period Galv.	Magnification (Dynamic) Synchronous
Photographic	Z	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.57 "	2451
Photoelectric	N-S	11.80 "	12.00 "	1000
	E-W	1.54 "	1.49 "	3000

- - - - - - -

FEBRUARY 1960

	Date	Time (GMT)	Phase	Remarks
69)	1	01 - 58 - 09	iPb	Very small. Δ b = 220 km.
		34	iSb	
70)	2	23 - 43 - 56	iPg	Very small. Δ g = 35 km.
		44 - 00	iSg	
71)	3	00 - 01 - 17	iP	Distant. Δ = 1710 km. = 15.4°.
		04 - 17	iS	
72)		02 - 32 - 45	iPb	Very small. Δ b = 245 km.
		33 - 13	iSb	
73)		03 - 45 - 13	ePb	Distant. Δ b = 925 km. = 8.3°.
		46 - 57	iSb	
74)		17 - 30 - 34	ePb	Very small. Δ b = 335 km.
		31 - 12	iSb	
75)	4	03- 54 - 00	iP	Distant. Δ = 4035 km. = 36.3°.
		59 - 50	iS	
76)		05 - 22 - 12	ePb	Distant. Δ b = 425 km. = 8.3°.
		23 - 56	iSb	
77)		09 - 34 - 50	iP	Distant. Δ = 5035 km. = 45.3°.
		41 - 36	iS	
78)		16 - 56 - 31	eP	Distant. Δ = 3100 km. = 27.9°.
		17 - 01 - 25	eS	
79)	5	05 - 47 - 20	iP	Distant. Δ = 4100 km. = 36.9°.
		53 - 14	iS	
80)		14 - 13 - 04	ePb	Very small. Δ b = 155 km.
		22	iSb	

	Date	Time (GMT)	Phase	Remarks
81)	6	01 - 07 - 44	ePb	Very small. Δ b = 560 km. = 5.0°.
		08 - 47	iSb	
82)		10 - 36 - 38	ePg	Very small. Δ g = 85 km.
		48	iSg	
83)	7	10 - 10 - 33	iPb	Distant. Δ b = 1135 km. = 10.2°.
		12 - 40	iSb	
84)	8	13 - 06 - 00	eP	Teleseismic.
85)		21 - 57 - 05	iP	Very small.
86)	9	01 - 59 - 35	ePb	Very small. Δ b = 283 km.
		02 - 00 - 07	iSb	
87)		12 - 01 - 04	iP	Distant. Δ = 2390 km. = 21.5°.
		05 - 01	iS	
88)	10	00 - 00 - 42	iP	Distant. Δ = 2400 km. = 21.6°.
		04 - 40	iS	
89)		01 - 20 - 37	eP	Very small.
90)		02 - 03 - 58	iP	Distant. Δ = 2420 km. = 21.8°.
		07 - 58	iS	
91)		02 - 45 - 00	iP	Very small.
92)		03 - 17 - 08	ePb	Very small. Δ b = 245 km.
		36	eSb	
93)		07 - 49 - 40	ePb	Very small. Δ b = 355 km.
		50 - 20	iSb	
94)	11	13 - 19 - 21	iP	Very small.
95)		21 - 05 - 31	iP	Very small.
96)		21 - 30 - 15	iP	Very small.
97)	12	15 - 21 - 11	ePg	Very small. Δ g = 68 km.
		19	iSg	
98)		22 - 45 - 21	iPg	Very small. Δ g = 68 km.
		29	iSg	
99)	13	04 - 23 - 19	ePg	Very small. Δ g = 100 km.
		31	iSg	
100)		15 - 45 - 08	eP	Distant. Δ = 1665 km. = 15.0°.
		48 - 04	iS	
101)		15 - 51 - 20	ePb	Very small. Δ b = 210 km.
		44	iSb	
102)	14	20 - 38 - 17	iP	Very small.
103)	15	01 - 22 - 43	eP	Very small.
104)		03 - 40 - 49	ePb	Very small. Δ b = 190 km.
		41 - 11	eSb	
105)		05 - 10 - 37	ePb	Very small. Δ b = 300 km.
		11 - 11	iSb	
	16	No Quakes Recorded.		

	Date	Time (GMT)	Phase	Remarks
	17	No Quakes Recorded.		
	18	No Quakes Recorded.		
106)	19	00 - 36 - 38	ePb	Very small. Δ b = 190 km.
		37 - 00	iSb	
107)		10 - 45 - 13	iP	Distant. Δ = 5010 km. = 45.1°.
		51 - 58	iS	
108)	20	06 - 08 - 08	ePb	Very small. Δ b = 190 km.
		30	eSb	
109)		07 - 03 - 54	ePg	Very small. Δ g = 50 km.
		04 - 00	iSg	
110)		10 - 42 - 08	ePb	Very small. Δ b = 230 km.
		34	iSb	
111)		22 - 38 - 08	iPb	Very small. Δ b = 283 km.
		40	eSb	
112)	21	06 - 47 - 10	ePb	Very small. Δ b = 710 km. = 6.4°.
		48 - 30	isb	
113)		18 - 29 - 44	ePg	Very small. Δ g = 100 km.
		56	iSg	
114)	22	12 - 10 - 54	ePg	Very small. Δ g = 68 km.
		11 - 02	iSg	
115)	23	08 - 12 - 19	ePb	Small. Δ b = 710 km. = 6.4°.
		13 - 39	iSb	
116)		16 - 12 - 30	iP	Distant. Δ = 4335 km. = 39.0°.
		18 - 38	iS	
117)	24	06 - 15 - 56	ePb	Very small. Δ b = 265 km.
		16 - 26	iSb	
118)		21 - 44 - 59	iP	Distant. Δ = 1720 km. = 15.5°.
		48 - 00	iS	
119)		21 - 51 - 17	iP	Distant. Δ = 2090 km. = 18.8°.
		54 - 50	iS	
120)	25	03 - 56 - 48	iPb	Small. Δ b = 283 km.
		57 - 20	iSb	
121)		04 - 06 - 02	iPb	Very small. Δ b = 283 km.
		34	iSb	
122)		04 - 42 - 32	ePb	Very small. Δ b = 300 km.
		43 - 00	iSb	
123)		12 - 47 - 20	iPb	Distant. Δ b = 945 km.
		49 - 06	iSb	
124)		20 - 10 - 18	ePg	Very small. Δ g = 100 km.
		30	iSg	
125)		20 - 58 - 28	iPb	Very small. Δ b = 318 km.
		59 - 04	iSb	
126)		23 - 36 - 18	iP	Very small.

	Date	Time (GMT)	Phase	Remarks
127)	25	23 - 59 - 30	eP	Very small.
128)	26	01 - 10 - 44	eP	Distant. Δ = 3245 km. = 29.2°.
		15 - 44	iS	
129)		02 - 14 - 00	eP	Distant. Δ = 2645 km. = 23.8°.
		18 - 18	iS	
130)		05 - 39 - 37	eP	Very small.
131)		23 - 39 - 29	eP	Distant. Δ = 6850 km. = 59.2°.
		47 - 43	iS	
132)	27	08 - 20 - 09	ePg	Very small. Δ g = 110 km.
		22	iSg	
133)		14 - 05 - 43	iPb	Very small. Δ b = 370 km.
		06 - 25	iSb	
134)		14 - 31 - 11	iP	Distant. Δ = 4520 km. = 40.7°.
		37 - 30	iS	
135)		23 - 09 - 24	iP	Distant. Δ = 1655 km. = 14.9°.
		12 - 18	iS	
136)	28	23 - 17 - 00	eP	Distant. Δ = 1820 km. = 16.4°.
		20 - 10	iS	
137)	29	05 - 23 - 35	iPb	Moderate. Δ b = 265 km. Felt in Manila and other places of Luzon.
		24 - 05	iSb	

* * * *

MANILA OBSERVATORY
Mirador, Baguio City
Philippines

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16° 24' 39" Long. E. 120° 34' 47" Alt. 1507 meters

Instruments (All Sprengnethers) Hard Limestone Bedrock

Type	Component	Period Seism.	Period Galv.	Magnification (Dynamic) Synchronous
Photographic	Z	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.57 "	2451
Photoelectric Visual recording	N-S	11.80 "	12.00 "	1000
	E-W	1.54 "	1.49 "	3000

- - - - - - - - - - - -

February 1960
(correction)

Date		Time (GMT)	Phase	Remarks

February 24, Nos. 118 and 119 are not two quakes, but only one, as follows:

118)	24	21 - 44 - 59	iP	Distant. Δ = 4880 km. = 43.9°.
		51 - 17	iS	

Numbers of remaining quakes are to be changed (subtract "1") so that last quake in February will be No. 136.

- - - - - - - - - - - -

MARCH 1960

	Date	Time (GMT)	Phase	Remarks
137)	1	08 - 54 - 49	iP	Very small.
138)		17 - 37 - 09	ePg	Very small. Δ g = 110 km.
		22	iSg	
139)		21 - 59 - 48	eP	Distant. Δ = 2410 km. = 21.7°.
		22 - 03 - 47	iS	
140)	2	06 - 25 - 11	eP	Very small.
141)		10 - 12 - 52	ePb	Very small. Δ b = 155 km.
		13 - 10	iSb	
142)		16 - 56 - 41	iPg	Very small. Δ g = 68 km.
		49	eSg	
143)	3	01 - 10 - 16	iP	Very small.
144)		08 - 50 - 57	ePb	Very small. Δ b = 140 km.
		51 - 13	iSb	
145)		08 - 56 - 27	ePb	Very small. Δ b = 255 km.
		56	iSb	

	Date	Time (GMT)	Phase	Remarks
146)	3	12 - 26 - 53	ePb	Very small. Δ b = 245 km.
		27 - 21	eSb	
147)		14 - 58 - 00	eP	Teleseismic.
148)	4	03 - 57 - 01	iP	Distant. Δ = 1800 km. = 16.2°.
		04 - 00 - 09	iS	
149)		21 - 11 - 38	eP	Distant.
150)	5	13 - 53 - 24	iP	Distant. Δ = 2035 km. = 18.3°.
		56 - 52	iS	
151)		15 - 54 - 10	eP	Very small.
152)		21 - 02 - 20	ePg	Very small. Δ g = 100 km.
		32	iSg	
153)	6	01 - 06 - 50	iPb	Very small. Δ = 283 km.
		07 - 22	iSb	
154)		02 - 26 - 16	iP	Distant. Δ = 2055 km. = 18.5°.
		29 - 46	iS	
155)		12 - 02 - 30	iPb	Very small. Δ b = 230 km.
		56	eSb	
156)		21 - 22 - 20	eP	Very small.
157)		21 - 25 - 40	eP	Very small.
158)	7	04 - 11 - 50	iPb	Very small. Δ b = 155 km.
		12 - 08	iSb	
159)		05 - 16 - 58	iP	Distant. Δ = 1455 km. = 13.1°.
		19 - 34	iS	
160)		07 - 33 - 04	ePb	Very small. Δ b = 155 km.
		22	iSb	
161)		11 - 36 - 18	eP	Distant.
162)		15 - 50 - 00	eP	Distant. Δ = 1110 km. = 10.0°.
		52 - 04	eS	
163)	8	09 - 12 - 29	eP	Very small.
164)		16 - 43 - 08	iP	Distant. Δ = 6000 km. = 54.0°.
		50 - 48	iS	
165)		20 - 49 - 38	iPg	Very small. Δ g = 35 km. Felt in Baguio, Int. I. Did not operat starting pendulum of strong motion seismograph.
		42	iSg	
166)		21 - 26 - 28	iPg	Very small. Δ g = 35 km.
		32	iSg	
167)	9	05 - 49 - 16	iPb	Very small. Δ b = 283 km.
		48	iSb	
168)	10	08 - 51 - 35	eP	Very small.
169)		09 - 53 - 42	eP	Distant.
170)		14 - 40 - 10	iP	Distant. Δ = 4165 km. = 37.5°.
		46 - 08	iS	
171)		15 - 26 - 28	iPb	Very small. Δ b = 140 km.
		44	eSb	
172)		18 - 57 - 02	eP	Distant.

	Date	Time (GMT)	Phase	Remarks
173)	11	16 - 28 - 40	eP	Distant.
174)	12	02 - 22 - 04	iP	Distant.
175)		10 - 03 - 54	iPg	Small. Δ g = 100 km. Felt in Baguio. Did not operate starting pendulum of strong motion seismograph.
		04 - 06	eSg	
176)		20 - 38 - 08	iP	Distant. Δ = 4110 km. = 37.0°.
		44 - 02	iS	
177)	13	23 - 26 - 55	iPg	Very small. Δ g = 93 km.
		27 - 06	iSg	
178)	14	21 - 32 - 36	ePb	Very small. Δ b = 185 km.
		57	iSb	
179)	15	00 - 40 - 04	ePg	Very small. Δ g = 100 km.
		16	iSg	
180)	16	02 - 54 - 16	ePb	Very small. Δ b = 190 km.
		38	iSb	
181)		06 - 36 - 24	ePg	Very small. Δ g = 58 km.
		31	iSg	
182)		13 - 05 - 54	ePg	Very small. Δ g = 35 km.
		58	iSg	
183)		15 - 56 - 46	ePb	Very small. Δ b = 265 km.
		16	iSb	
184)	17	05 - 26 - 45	ePg	Very small. Δ g = 93 km.
		56	iSg	
185)		08 - 48 - 00	ePb	Very small. Δ b = 190 km.
		22	eSb	
186)		10 - 11 - 42	iP	Very small.
187)		18 - 25 - 27	iP	Very small.
188)		21 - 19 - 54	ePg	Very small. Δ g = 93 km.
		20 - 05	iSg	
	18	No Quakes Recorded.		
189)	19	03 - 57 - 09	iP	Very small.
190)		09 - 24 - 38	eP	Distant.
191)		19 - 21 - 16	eP	Distant. Δ = 2790 km. = 25.1°.
		25 - 44	iS	
192)		20 - 21 - 38	ePg	Very small. Δ g = 114 km.
		57	iSg	
193)		21 - 31 - 06	ePb	Very small. Δ b = 140 km.
		22	iSb	
194)	20	02 - 29 - 36	ePb	Very small. Δ b = 155 km.
		54	iSb	
195)		07 - 31 - 45	iPg	Very small. Δ g = 93 km.
		56	iSg	
196)		07 - 34 - 31	iP	Very small.

	Date	Time (GMT)	Phase	Remarks
197)	20	10 - 51 - 02	ePb	Very small. Δ b = 175 km.
		22	iSb	
198)		10 - 59 - 29	eP	Distant.
199)		10 - 35 - 10	iP	Very small.
200)		13 - 43 - 04	eP	Distant.
201)		14 - 11 - 38	ePb	Very small. Δ b = 230 km.
		12 - 04	iSb	
202)		17 - 13 - 44	iP	Distant. Δ = 3265 km. = 29.9°.
		18 - 46	iS	
203)		19 - 23 - 18	ePg	Very small. Δ g = 35 km.
		22	iSg	
204)		22 - 50 - 04	iP	Distant.
205)	21	00 - 41 - 04	eP	Distant. Δ = 3155 km. = 28.4°.
		45 - 58	iS	
206)		04 - 03 - 12	eP	Very small.
207)		09 - 24 - 36	eP	Distant. Δ = 3280 km. = 29.5°.
		29 - 38	iS	
208)	22	02 - 20 - 04	iPg	Very small. Δ g = 93 km.
		15	iSg	
209)		02 - 44 - 10	eP	Distant.
210)		16 - 52 - 27	iPb	Very small. Δ b = 155 km.
		45	eSb	
211)	23	00 - 29 - 42	iP	Distant. Δ = 3365 km. = 30.3°.
		34 - 50	eS	
212)		01 - 13 - 32	eP	Distant. Δ = 3065 km. = 27.6°.
		18 - 20	eS	
213)		04 - 25 - 44	ePb	Small. Δ b = 230 km.
		26 - 10	iSb	
214)		06 - 52 - 32	iPg	Very small. Δ g = 114 km.
		46	iSg	
215)		10 - 35 - 03	eP	Distant.
216)		11 - 57 - 12	eP	Very small.
217)		13 - 58 - 44	ePb	Very small. Δ b = 220 km.
		59 - 09	iSb	
218)		16 - 07 - 22	eP	Very small.
219)		22 - 28 - 48	eP	Distant. Δ = 3245 km. = 29.2°.
		33 - 48	iS	
220)	24	04 - 57 - 45	ePg	Very small. Δ g = 75 km.
		54	iSg	
221)		06 - 02 - 04	iP	Very small.
222)		12 - 29 - 14	ePb	Very small. Δ b = 148 km.
		31	iSb	
223)	25	05 - 49 - 00	ePb	Very small.
		18	iSb	
224)		06 - 06 - 26	eP	Very small.
225)	26	05 - 19 - 04	ePb	Very small. Δ b = 390 km.
		48	iSb	

	Date	Time (GMT)	Phase	Remarks
226)	26	12 - 05 - 30	ePg	Very small. Δ g = 114 km.
		44	iSg	
227)	27	03 - 57 - 54	iP	Distant. Δ = 5920 km. = 53.3°.
		04 - 05 - 30	iS	
228)		07 - 50 - 02	ePb	Very small. Δ b = 130 km.
		17	iSb	
229)		09 - 07 - 19	iP	Distant. Δ = 5965 km. = 53.7°.
		14 - 58	iS	
230)	28	00 - 33 - 30	eP	Distant.
231)		06 - 45 - 25	eP	Distant. Δ = 5010 km. = 45.1°.
		52 - 10	eS	
232)		22 - 09 - 58	iPb	Very small.
		10 - 13	iSb	
233)	29	04 - 06 - 24	eP	Distant.
234)		06 - 40 - 44	eP	Distant. Δ = 6380 km. = 57.4°.
		48 - 46	iS	
235)		07 - 36 - 24	iP	Very small.
236)		16 - 00 - 54	iPb	Small.
		01 - 40	iSb	
237)	30	11 - 29 - 14	iP	Distant. Δ = 5920 km. = 53.3°.
		36 - 50	iS	
238)		19 - 34 - 29	iPb	Very small.
		49	iSb	
239)	31	01 - 31 - 08	ePb	Very small. Δ b = 550 km. = 4.9°
		32 - 10	iSb	
240)		15 - 19 - 38	ePb	Very small. Δ b = 155 km.
		56	iSb	

* * * * * * * * * * * *
* * * * * * * * * * *

April-June Copied

254

MANILA OBSERVATORY
Mirador, Baguio City
Philippines

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16° 24' 39" Long. E. 120° 34' 47" Alt. 1507 meters

Instruments (All Sprengnethers) Hard Limestone Bedrock

Type	Component	Period Seism.	Period Galv.	Magnification (Dynamic) Synchronous
Photographic	Z	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.57 "	2451
Photoelectric	N-S	11.80 sec	12.00 sec	1000
	E-W	1.54 "	1.49 "	3000

- - - - - - - - - -

APRIL 1960

	Date	Time (GMT)	Phase	Remarks
241)	1	18 - 17 - 28	eP	Very small.
242)		18 - 37 - 02	ePg	Very small. △ g = 110 km.
		15	iSg	
243)	2	20 - 56 - 40	ePb	Very small. △ b = 300 km.
		57 - 14	iSb	
244)		22 - 49 - 47	iPb	Very small. △ b = 185 km.
		50 - 08	iSb	
245)	3	05 - 14 - 38	iPg	Very small. △ g = 50 km.
		44	iSg	
246)		05 - 17 - 50	iPg	Very small. △ g = 85 km.
		18 - 06	iSg	
247)	4	08 - 04 - 52	eiP	Distant. △ = 5945 km.
		12 - 29	iS	
248)		08 - 27 - 25	ePb	Very small. △ b = 175 km.
		45	iSb	
249)		09 - 03 - 50	iPg	Very small. △ g = 58 km.
		57	iSg	
250)		09 - 06 - 18	ePg	Very small. △ g = 50 km.
		24	iSg	
251)		11 - 23 - 59	ePb	Very small. △ b = 540 km. = 4.9°.
		25 - 00	iSb	
252)		18 - 52 - 48	iPb	Small. △ b = 190 km.
		53 - 10	iSb	
253)		20 - 52 - 48	iPb	Small. △ b = 190 km.
		53 - 10	iSb	
254)		23 - 19 - 02	iPb	Small. △ b = 190 km.
		24	iSb	
255)	5	01 - 36 - 48	ePb	Very small. △b = 265
		37 - 18	iSb	

	Date	Time (GMT)	Phase	Remarks
256)	6	05 - 04 - 46	iPb	Very small. $\triangle$ b = 245 km.
		05 - 14	eSb	
257)		08 - 28 - 50	ePb	Very small. $\triangle$ b = 220 km.
		29 - 15	iSb	
258)		12 - 07 - 59	ePg	Very small. $\triangle$ g = 40 km.
		08 - 04	iSg	
259)	7	13 - 57 - 57	iPg	Very small. $\triangle$ g = 58 km.
		58 - 04	iSg	
260)	8	00 - 06 - 57	iP	Distant.
261)		01 - 41 - 31	iPg	Very small. $\triangle$ g = 100 km.
		43	iSg	
262)		22 - 48 - 09	iPb	Very small. $\triangle$ b = 220 km.
		34	iSb	
263)	9	01 - 29 - 24	ePg	Very small. $\triangle$ g = 75 km.
		33	iSg	
264)		17 - 05 - 35	eP	Distant.

April 10 - 16 Frequent power failures. Some were over one hour.

	Date	Time (GMT)	Phase	Remarks
265)	10	01 - 30 - 23	iP	Very small.
266)		07 - 08 - 23	ePg	Very small. $\triangle$ g = 35 km.
		27	iSg	
267)		08 - 02 - 13	ePg	Very small. $\triangle$ g = 93 km.
		24	iSg	
268)	11	09 - 28 - 12	iPg	Very small. $\triangle$ g = 35 km.
		16	iSg	
	12	No Quakes Recorded.		
269)	13	08 - 12 - 00	eP	Teleseismic.
270)		09 - 21 - 31	ePb	Very small. $\triangle$ b = 318 km.
		22 - 07	eSb	
271)	14	09 - 03 - 20	iPg	Very small. $\triangle$ g = 100 km.
		32	iSg	
272)		14 - 59 - 20	iPb	Very small. $\triangle$ b = 318 km.
		56	iSb	
273)		16 - 31 - 48	ePg	Very small. $\triangle$ g = 68 km.
		56	iSg	
274)	15	03 - 50 - 00	eP	Teleseismic.
275)		11 - 45 - 04	eP	Distant. $\triangle$ = 3190 km. = 28.7°.
		50 - 00	iS	
276)		22 - 14 - 35	iP	Distant. $\triangle$ = 5945 km. = 53.5°.
		22 - 12	iS	
277)	16	22 - 27 - 30	ePg	Very small. $\triangle$ g = 114 km.
		44	iSg	

	Date	Time (GMT)	Phase	Remarks
	17	No Quakes Recorded.		
278)	18	04 - 58 - 01	ePb	Very small. Δ b = 620 km. = 5.6°.
		59 - 11	iSb	
279)		06 - 07 - 21	ePb	Very small. Δ b = 155 km.
		39	iSb	
280)		07 - 49 - 30	ePb	Very small. Δ b = 210 km.
		54	iSb	
281)		08 - 11 - 26	iP	Distant. Δ = 2110 km. = 19.0°.
		15 - 00	iS	
282)		11 - 29 - 00	iPg	Very small. Δ g = 100 km.
		12	iSg	
283)		23 - 31 - 19	ePg	Very small. Δ g = 40 km.
		32 - 24	eSg	
284)	19	22 - 06 - 27	ePb	Very small. Δ b = 300 km.
		07 - 01	iSb	
	20	No Quakes Recorded.		
285)	21	04 - 49 - 35	ePg	Very small. Δ g = 68 km.
		43	iSg	
286)		11 - 54 - 04	ePb	Very small.
		34	iSb	
287)	22	18 - 48 - 40	ePb	Distant. Δ = 710 km. = 6.4°.
		50 - 00	iSb	
288)		20 - 37 - 39	iP	Distant.
	23	No Quakes Recorded.		
289)	24	03 - 18 - 36	ePg	Very small. Δ g = 114 km.
		50	iSg	
290)		03 - 26 - 53	iP	Distant.
291)		11 - 31 - 30	ePg	Very small. Δ g = 35 km.
		34	iSg	
292)		12 - 24 - 52	iP	Distant.
293)	25	08 - 02 - 02	iP	Very small.
294)		14 - 43 - 00	ePg	Very small. Δ g = 35 km.
		04	iSg	
295)		17 - 34 - 28	iP	Very small.
296)	26	16 - 22 - 06	ePb	Very small.
		44	iSb	
297)		20 - 21 - 12	ePb	Very small. Δ b = 765 km. = 6.8°.
		22 - 38	iSb	
298)		23 - 07 - 22	ePb	Very small. Δ b = 140 km.
		38	iSb	
299)	27	12 - 31 - 54	ePg	Very small. Δ g = 58 km.
		32 - 01	iSg	

	Date	Time (GMT)	Phase	Remarks
300)	27	17 - 09 - 55	ePg	Very small. △ g = 35 km.
		59	iSg	
301)		17 - 19 - 00	eP	Teleseismic.
302)	28	03 - 15 - 00	eP	Distant. △ = 3245 km. = 29.2°.
		20 - 00	iS	
303)		05 - 39 - 06	ePb	Very small. △ b = 165 km.
		25	eSb	
304)	29	03 - 34 - 07	ePg	Very small. △ g = 40 km.
		12	iSg	
305)		09 - 20 - 07	eP	Very small.
306)		09 - 58 - 26	eP	Distant.
307)		10 - 10 - 10	iPg	Very small. △ g = 50 km.
		16	iSg	
308)		10 - 49 - 12	ePb	Very small. △ b = 140 km.
		28	iSb	
309)		11 - 34 - 46	eP	Very small.
310)		13 - 37 - 15	iP	Distant. △ = 1835 km. = 16.5°.
		40 - 26	iS	
311)		18 - 59 - 40	ePb	Very small. △ b = 155 km.
		58	iSb	
312)		19 - 36 - 11	iP	Distant. △ = 1780 km. = 16.0°.
		39 - 17	iS	
313)		20 - 48 - 27	iP	Distant. △ = 1810 km. = 16.3°.
		51 - 36	iS	
314)	30	00 - 24 - 10	iPg	Very small. △ g = 68 km.
		18	eSg	
313)		04 - 05 - 30	iP	Distant. △ = 1820 km. = 16.4°.
		08 - 40	iS	
316)		08 - 45 - 02	ePb	Very small. △ b = 230 km.
		28	iSb	
317)		10 - 45 - 22	iPg	Very small. △ g = 75 km.
		31	iSg	
318)		13 - 15 - 27	iP	Very small.
319)		14 - 25 - 14	eP	Distant. △ = 1780 km. = 16.0°.
		28 - 20	eS	
320)		20 - 49 - 05	iPb	Small. △ b = 255 km.
		34	iSb	
321)		21 - 57 - 27	iP	Very small.
322)		22 - 14 - 29	eP	Distant. △ = 1965 km. = 17.7°.
		17 - 52	iS	
323)		23 - 13 - 10	ePb	Very small. △ b = 283 km.
		42	iSb	

* * * * * * * * *

254

MANILA OBSERVATORY
Mirador, Baguio City
Philippines

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16° 24' 39"   Long. E. 120° 34' 47"   Alt. 1507 meters

Instruments (All Sprengnethers)   Hard Limestone Bedrock

Type	Component	Period Seism.	Period Galv.	Magnification (Dynamic) Synchronous
Photographic	Z	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.57 "	2451
Photoelectric	N-S	11.80 "	12.00 "	1000
Visual recording	E-W	1.54 "	1.49 "	3000

- - - - - - - - - - -

M A Y 1960

	Date	Time (GMT)	Phase	Remarks
324)	1	04 - 01 - 21	iP	Very small.
325)		04 - 15 - 48	eP	Distant.
326)		12 - 29 - 07	iPg	Very small. △g = 110 km.
		20	iSg	
327)		22 - 16 - 50	iPb	Very small. △b = 148 km.
		17 - 07	eSb	
328)	2	04 - 39 - 50	eP	Very small.
329)		05 - 15 - 44	eP	Very small.
330)		05 - 23 - 26	ePb	Very small. △b = 570 km. = 5.1°.
		24 - 30	iSb	
331)		06 - 46 - 05	ePb	Very small. △b = 580 km. = 5.2°.
		47 - 10	iSb	
332)		08 - 34 - 58	ePb	Very small. △b = 560 km. = 5.0°.
		36 - 01	iSb	
333)		10 - 41 - 27	eP	Distant. △ = 1600 km. = 14.4°.
		44 - 16	iS	
334)		11 - 49 - 25	iP	Distant. △ = 2310 km. = 20.8°.
		53 - 16	eS	
335)		12 - 14 - 11	ePv	Distant.
336)		14 - 42 - 23	iPb	Distant. △b = 1060 km. = 9.5°.
		44 - 22	iSb	
337)	3	03 - 55 - 58	ePb	Very small. △b = 130 km.
		56 - 13	iSb	
338)		08 - 00 - 25	iP	Distant. △ = 5435 km. = 48.9°.
		07 - 34	iS	
339)		12 - 02 - 02	ePb	Very small. △b = 380 km.
		44	iSb	

Monthly Seismological Bulletin for May 1960 — page 2

	Date	Time (GMT)	Phase	Remarks
340)	3	13 - 26 - 04	eiP	Distant. Δ = 1845 km. = 16.6°
		29 - 16	iS	
341)		22 - 27 - 42	iP	Distant. Δ = 2380 km. = 21.4°.
		32 - 38	iS	
342)	4	10 - 59 - 54	eP	Very small.
		18 - 30 - 36	eP	Very small. Power failure 02:03 to 05:01.
343)	5	03 - 59 - 32	ePg	Very small. Δ g = 58 km.
		39	iSg	
344)		06 - 11 - 48	iPb	Very small. Δ b = 318 km.
		12 - 24	iSb	
345)		06 - 27 - 02	ePb	Very small. Δ b = 300 km.
		36	iSb	
346)		20 - 18 - 15	ePb	Very small. Δ b = 415 km.
		19 - 02	iSb	
347)	6	06 - 09 - 44	iPg	Very small. Δ g = 68 km.
		52	iSg	
348)		07 - 52 - 01	ePb	Very small. Δ b = 335 km.
		39	iSb	
349)	7	04 - 12 - 32	iPg	Very small. Δ g = 93 km.
		43	iSg	
350)	8	05 - 26 - 07	ePb	Very small. Δ b = 148 km.
		24	iSb	
351)		12 - 12 - 49	iPb	Very small. Δ b = 110 km.
		13 - 02	iSb	
352)		23 - 22 - 31	ePg	Very small. Δ g = 100 km.
		43	iSg	
353)	9	00 - 15 - 08	iP	Very small.
		20 - 48 - 08	ePg	Very small. Δ g = 110 km.
		21	iSg	
355)	10	01 - 21 - 15	iPb	Very small. Δ b = 265 km.
		45	iSb	
356)		01 - 47 - 08	ePg	Very small. Δ g = 110 km.
		21	iSg	
357)	11	01 - 29 - 14	iPb	Very small.. Δ b = 140 km.
		30	iSb	
358)		02 - 01 - 36	ePb	Very small. Δ b = 283 km.
		02 - 08	iSb	
359)		18 - 41 - 03	iP	Distant. Δ = 2455 km. = 22.1°.
		45 - 05	iS	
360)	12	22 - 52 - 22	iP	Distant.

	Date	Time (GMT)	Phase	Remarks
361)	13	16 - 18 - 26	iP	Distant. △ = 7600 km. = 68.4°.
		27 - 32	eS	
362)	14	11 - 40 - 08	iPg	Small. △g = 85 km. Felt in Baguio, Int. I; Lubruelo, Pangasinan, Int. IV; Villaviciosa, Abra, Int. I.
		18	eSg	
363)		13 - 22 - 12	iPb	Very small. △b = 190 km.
		32	iSb	
364)		13 - 24 - 44	ePb	Very small. △b = 265 km.
		25 - 14	iSb	
365)		22 - 28 - 32	eP	Very small.
366)	15	13 - 32 - 19	ePb	Very small. △b = 785 km. = 7.0°.
		33 - 47	iSb	
367)		19 - 28 - 30	eP	Very small.
	16	No Quakes Recorded.		
368)	17	04 - 49 - 42	ePg	Very small. △g = 50 km.
		48	iSg	
369)		13 - 47 - 40	iPb	Very small. △b = 155 km.
		58	eSb	
370)		17 - 16 - 26	iP	Very small.
371)	18	06 - 38 - 44	iP	Distant. △ = 1720 km. = 15.5°.
		41 - 45	iS	
372)		07 - 00 - 05	iP	Very small.
373)		18 - 12 - 38	eP	Distant.
374)	19	02 - 15 - 26	iP	Distant. △ = 5110 km. = 46.0°.
		22 - 17	iS	
375)		10 - 22 - 26	eP	Distant.
376)		10 - 52 - 49	ePb	Small. △b = 275 km.
		53 - 20	iSb	
377)		20 - 48 - 05	iPb	Very small. △b = 155 km.
		23	iSb	
378)	20	11 - 23 - 05	iP	Distant.
379)	21	08 - 17 - 30	iP	Small. △g = 93 km. Felt in Baguio, Int. I; Clark Air Base, Int. I; Manila, Int. I; Operated pendulum of strong motion seismograph. No Record made.
		41	eS	
380)		10 - 22 - 47	iP'	Distant. Chile Quake.
381)		12 - 18 - 56	iPg	Very small. △g = 114 km.
		19 - 10	iSg	
382)		12 - 43 - 28	ePb	Very small. △b = 165 km.
		47	iSb	

	Date	Time (GMT)	Phase	Remarks
383)	21	17 - 27 - 35	iPg	Small. Δ g = 85 km.
		45	iSg	
384)	22	01 - 00 - 11	iPb	Very small. Δ b = 140 km.
		27	iSb	
385)		10 - 50 - 50	eP'	Distant. Chile Quake.
386)		10 - 57 - 13	iPb	Small. Δ b = 355 km. Babuyan Islands.
		53	iSb	
387)		19 - 15 - 54	iP'	Distant. Chile Quake.
388)		19 - 30 - 45	iPb	Small. Δ b = 580 km. = 5.2°.
		31 - 50	iSb	
389)		22 - 27 - 36	ePb	Very small. Δ b = 190 km.
		58	iSb	
390)	23	02 - 38 - 00	ePb	Very small. Δ b = 290 km.
		33	iSb	
391)		03 - 06 - 12	ePb	Very small. Δ b = 405 km.
		58	iSb	
392)		03 - 16 - 10	iP	Distant.
393)		07 - 28 - 58	iP	Distant.
394)		10 - 57 - 54	iP	Very small.
395)		12 - 59 - 45	ePg	Very small. Δ g = 110 km.
		58	iSg	
396)	24	03 - 55 - 30	eP	Very small.
397)		06 - 33 - 18	eP	Distant. Δ = 1700 km. = 15.3°.
		36 - 17	iS	
398)		14 - 58 - 15	eP	Distant. Δ = 6945 km. = 62.5°.
		15 - 06 - 49	iS	
399)		20 - 52 - 21	iP	Very small.
400)	25	08 - 54 - 23	eP'	Distant. Chile Quake
401)		13 - 42 - 34	eP	Distant. Δ = 1965 km. = 17.7°
		45 - 57	iS	
402)		14 - 31 - 51	eP	Distant. Δ = 2100 km. = 18.9°.
		35 - 25	iS	
403)		15 - 09 - 33	iP	Very small.
404)		21 - 53 - 28	iPb	Very small. Δ b = 165 km.
		47	eSb	
405)	26	04 - 01 - 24	iP	Very small.
406)		04 - 05 - 17	iPg	Very small. Δ g = 93 km.
		28	iSg	
407)		05 - 24 - 00	eP	Teleseismic.
408)		12 - 34 - 04	ePb	Very small. Δ b = 595 km. = 5.3°.
		35 - 11	iSb	
409)		20 - 11 - 12	iPb	Very small. Δ b = 185 km.
		33	iSb	

	Date	Time (GMT)	Phase	Remarks
410)	27	20 - 17 - 13	iP	Distant. Δ = 4680 km. = 42.1°.
		23 - 40	eS	
411)		22 - 27 - 00	eP	Teleseismic.
	28	No Quakes Recorded.		
412)	29	07 - 59 - 40	eP'	Distant. Chile Quake.
413)		08 - 22 - 20	eP	Distant. Δ b = 1075 km. = 9.6°.
		24 - 20	eS	
414)		09 - 24 - 02	ePg	Very small. Δ g = 93 km.
		13	iSg	
415)		14 - 14 - 05	ePb	Very small. Δ b = 155 km.
		23	iSb	
416)		20 - 01 - 29	iP	Distant.
417)	30	13 - 58 - 32	ePb	Very small. Δ b = 425 km.
		59 - 10	iSb	
418)		15 - 27 - 58	iP	Very small.
419)		16 - 06 - 30	iPg	Small. Δ g = 50 km. = Felt in Baguio, Int. I; Baler, Int. III; Quezon City, Int. III; Manila, Int. III; Casiguran, Int. II. Operated starting pendulum of strong motion seismograph. No record made.
		36	iSg	
420)	31	11 - 21 - 59	iP	Distant.
421)		13 - 18 - 59	iP	Distant. Δ = 4535 km. = 40.8°.
		25 - 18	iS	
422)		21 - 05 - 16	iP	Distant. Δ = 1545 km. = 13.9°.
		08 - 00	iS	
423)		21 - 55 - 28	ePb	Very small. Δ b = 130 km.
		43	iSb	
424)		23 - 53 - 36	ePg	Very small. Δ g = 50 km.
		42	iSg	

* * *

MANILA OBSERVATORY
Mirador, Baguio City
Philippines

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16° 24' 39"   Long. E. 120° 34' 47"   Alt. 1507 meters

Instruments (All Sprengnethers)   Hard Limestone Bedrock

Type		Component	Period Seism.	Period Galv.	Magnification (Dynamic) Synchronous
Photographic	{	Z	1.41 sec.	1.37 sec	Circa 3367
		E-W	10.90 "	11.70 "	2000
		N-S	1.84 "	1.57 "	2451
Photoelectric	{	N-S	11.80 "	12.00 "	1000
Visual recording		E-W	1.54 "	1.49 "	3000

- - - - - - - -

JUNE 1960

	Date	Time (GMT)	Phase	Remarks
425)	1	07 - 25 - 42	iPg	Very small. Δ g = 85 km.
		52	iSg	
426)		09 - 17 - 10	ePg	Very small. Δ g = 93 km.
		21	iSg	
427)		09 - 19 - 50	ePb	Very small. Δ b = 148 km.
		20 - 07	iSb	
428)		15 - 40 - 29	ePb	Very small. Δ b = 805 km. = 7.2°.
		41 - 59	eSb	
429)		20 - 12 - 12	iPb	Very small. Δ b = 165 km.
		31	iSb	
430)		20 - 18 - 19	ePb	Very small. Δ b = 140 km.
		35	iSb	
431)		21 - 35 - 27	ePb	Very small. Δ b = 155 km.
		45	iSb	
432)	2	01 - 57 - 47	iPg	Very small. Δ g = 50 km.
		53	iSg	
433)		06 - 17 - 47	iP	Distant.
434)		07 - 09 - 09	ePb	Very small. Δ b = 140 km.
		25	iSb	
435)		07 - 54 - 29	iP	Distant. Δ = 4035 km. = 36.3°.
		08 - 00 - 19	iS	
436)	3	09 - 09 - 53	ePg	Very small. Δ g = 40 km.
		58	iSg	
437)		10 - 14 - 36	eP	Very small.
438)		11 - 34 - 48	ePg	Very small. Δ g = 35 km.
		58	iSg	
439)		13 - 12 - 00	eP	Teleseismic.
440)		16 - 28 - 00	eP	Teleseismic.

	Date	Time (GMT)	Phase	Remarks
441)	4	16 - 39 - 31	eP	Very small.
442)	5	03 - 24 - 47	ePb	Very small. Δ b = 155 km.
		25 - 05	iSb	
443)		15 - 56 - 13	ePb	Small. Δ b = 945 km. = 8.5°.
		57 - 59	iSb	
444)	6	06 - 15 - 35	iP'	Distant. Chile Quake.
445)		07 - 11 - 49	ePb	Very small. Δ b = 318 km.
		12 - 25	iSb	
446)		14 - 07 - 45	ePg	Very small. Δ g = 68 km.
		53	iSg	
	7	No Quakes Recorded.		
447)	8	05 - 15 - 22	iP	Distant. Δ = 1195 km. = 10.7°.
448)	9	09 - 58 - 21	iP	Very small.
449)		11 - 33 - 55	iP	Distant. Δ = 6380 km. = 57.4°.
		41 - 57	iS	
450)	10	01 - 31 - 15	ePb	Very small. Δ b = 140 km.
		31	iSb	
451)		08 - 53 - 07	ePb	Very small. Δ b = 220 km.
		32	iSb	
452)		08 - 55 - 39	ePb	Very small. Δ b = 190 km.
		56 - 01	iSb	
453)		12 - 04 - 37	iP	Distant. Δ = 2620 km. = 23.6°.
		08 - 53	iS	
454)		21 - 23 - 34	eP	Distant. Δ = 8045 km. = 72.4°.
		33 - 02	iS	
455)	11	00 - 56 - 00	eP	Teleseismic.
456)		08 - 39 - 10	ePb	Very small. Δ b = 190 km.
		32	iSb	
457)		10 - 23 - 54	ePb	Very small. Δ b = 230 km.
		24 - 20	iSb	
458)		13 - 27 - 12	eP	Very small.
459)		15 - 21 - 51	iP	Distant. Δ = 4490 km. = 40.4°.
		28 - 08	iS	
460)		16 - 45 - 25	iP	Distant. Δ = 4455 km. = 40.1°.
		51 - 40	iS	
	12	No Quakes Recorded.		
461)	13	04 - 33 - 50	ePb	Very small. Δ b = 200 km.
		34 - 13	iSb	
462)		06 - 06 - 53	iP	Distant.
463)		10 - 02 - 43	iPb	Very small. Δ b = 130 km.
		03 - 03	iSb	

	Date		Time (GMT)	Phase	Remarks
464)	13	×	11 - 58 - 11	iP	Very small.
465)		×	18 - 20 - 38	iPb	Very small. △ b = 945 km. = 8.5°.
			22 - 24	iSb	
466)		×	18 - 31 - 12	ePb	Very small. △ b = 155 km.
			30	iSb	
467)	14	✓	23 - 45 - 57	iP	Distant.
468)	15	×	01 - 16 - 49	ePb	Very small. △ b = 130 km.
			17 - 04	iSb	
469)		✓	15 - 43 - 02	iP	Very small. △ = 3245 km. = 29.2°.
			48 - 02	iS	
470)		×	22 - 09 - 46	ePg	Very small. △ g = 100 km.
			58	iSg	
471)		✓	23 - 32 - 28	iP	Distant. △ = 2400 km. = 21.6°.
			36 - 26	iS	
472)	16	×	03 - 29 - 36	iP	Distant. △ = 2580 km. = 23.2°.
			33 - 48	iS	
473)		×	03 - 56 - 56	iPb	Very small. △ b = 200 km.
			57 - 19	iSb	
474)		✓	06 - 39 - 29	iPb	Distant. △ b = 755 km. = 6.8°.
			40 - 54	iSb	
475)		×	09 - 58 - 32	ePg	Very small. △ g = 35 km.
			36	iSg	
476)		✓	10 - 29 - 44	eP	Distant.
477)	17	×	22 - 05 - 40	ePb	Very small.
			56	iSb	
	18	×	No Quakes Recorded.		
478)	19	×	09 - 21 - 11	iPb	Very small. △ b = 140 km.
			27	iSb	
479)		✓	17 - 22 - 38	iP	Distant. △ = 2535 km. = 22.8°.
			26 - 47	iS	
480)		×	23 - 35 - 34	ePb	Very small. △ b = 300 km.
			36 - 08	iSb	
481)	20	×	00 - 46 - 30	ePb	Very small. △ b = 220 km.
			55	iSb	
482)		✓	02 - 21 - 04	eP	Distant.
483)		×	03 - 26 - 32	iP	Distant. △ = 2400 km. = 21.6°.
			30 - 30	eS	
484)		×	11 - 56 - 26	ePg	Very small. △ g = 58 km.
			33	iSg	
485)		×	12 - 10 - 00	eP	Very small.
486)		✓	13 - 19 - 36	iP	Distant.
487)		×	19 - 09 - 17	iP	Very small. △ b = 345 km.
			56	iS	

	Date	Time (GMT)	Phase	Remarks
488)	20	21 - 48 - 53	ePb	Very small. Δ b = 130 km.
		49 - 08	iSb	
489)	21	04 - 58 - 48	ePb	Very small. Δ b = 200 km.
		59 - 11	iSb	
490)		10 - 16 - 56	ePb	Very small. Δ b = 140 km.
		17 - 12	iSb	
491)		12 - 47 - 06	eP	Distant. Δ = 1590 km. = 14.3°.
		49 - 54	iS	
492)	22	16 - 22 - 18	iP	Very small.
493)	23	12 - 13 - 44	iP	Distant. Δ = 2580 km. = 23.2°.
		17 - 56	eS	
494)	24	13 - 45 - 22	iPb	Very small. Δ b = 148 km.
		39	iSb	
495)	25	14 - 53 - 34	iP	Distant.
496)		21 - 29 - 40	iP	Distant.
497)	26	05 - 47 - 40	ePb	Very small. Δ b = 380 km.
		48 - 23	iSb	
498)		08 - 32 - 02	ePb	Very small. Δ b = 130 km.
		17	iSb	
499)		08 - 48 - 56	iPb	Very small. Δ b = 140 km.
		49 - 12	iSb	
	27	No Quakes Recorded.		
500)	28	14 - 26 - 25	ePb	Very small. Δ b = 175 km.
		45	iSb	
501)	29	05 - 19 - 11	iPg	Very small. Δ g = 50 km.
		17	iSg	
502)		05 - 22 - 39	iP	Very small.
503)		15 - 02 - 40	eP	Very small. Δ g = 50 km.
		46	iS	
504)	30	12 - 59 - 16	ePg	Very small. Δ g = 35 km.
		20	iSg	
505)		14 - 27 - 08	iPb	Very small. Δ b = 185 km.
		29	iSb	

* * * * *

2-4

July-Sept. Copied

MANILA OBSERVATORY
Mirador, Baguio City
Philippines

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16° 24' 39" Long. E. 120° 34' 47" Alt. 1507 meters

Instruments (All Sprengnethers) Hard Limestone Becrock

Type	Component	Period Seism.	Period Galv.	Magnification (Dynamic) Synchronous
Photographic	Z	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.57 "	2451
Photoelectric Visual Recording	N-S	11.80 "	12.00 "	1000
	E-W	1.54 "	1.49 "	3000

- - - - - - - -

JULY 1960

	Date	Time (GMT)	Phase	Remarks
506)	1	18 - 46 - 00	eP	Teleseismic.
507)	2	12 - 18 - 16	iP	Distant.
508)	3	20 - 30 - 53	iP	Distant. △ = 6665 km. = 60.0°.
		39 - 12	iS	
509)	4	04 - 41 - 26	eP	Distant. △ = 9600 km. = 86.4°.
		52 - 04	iS	
	5	No Quakes Recorded.		
510)	6	05 - 25 - 10	iP	Distant.
511)		14 - 46 - 19	eP	Distant. △ = 1765 km. = 15.9°.
		49 - 24	iS	
512)		20 - 20 - 53	ePg	Very small. △ g = 75 km.
		21 - 02	iSg	
513)		23 - 22 - 13	eP	Distant.
514)	7	14 - 30 - 30	ePb	Very small. △ b = 415 km.
		31 - 17	iSb	
515)		14 - 36 - 37	ePb	Very small. △ b = 140 km.
		48	iSb	
516)		16 - 08 - 44	ePg	Very small. △ g = 100 km.
		56	iSg	
517)		20 - 08 - 10	eP	Very small.
518)	8	03 - 19 - 20	ePb	Very small. △ b = 175 km.
		40	eSb	
519)		12 - 55 - 17	iP	Distant. △ = 1845 km. = 16.6°.
		58 - 29	iS	

	Date	Time (GMT)	Phase	Remarks
520)	8	14 - 50 - 10	iP	Distant. Δ = 2620 km. = 23.6°.
		54 - 26	iS	
521)	9	00 - 45 - 01	eP	Distant. Δ = 1100 km. = 9.9°.
		47 - 04	iS	
522)		10 - 05 - 11	eP	Very small.
523)		20 - 28 - 38	iP	Very small.
524)		21 - 16 - 43	ePb	Very small. Δ b = 148 km.
		17 - 00	iSb	
525)		23 - 49 - 34	ePb	Very small. Δ b = 148 km.
		51	iSb	
526)	10	00 - 11 - 09	iP	Distant. Δ = 3280 km. = 29.5°.
		16 - 11	iS	
527)		02 - 51 - 17	eP	Very small.
528)		13 - 12 - 10	ePb	Very small. Δ b = 230 km.
		36	iSb	
529)	11	12 - 06 - 49	iP	Distant. Δ = 8320 km. = 74.9°.
		16 - 30	iS	
530)		16 - 15 - 30	ePb	Very small. Δ b = 140 km.
		46	iSb	
531)		17 - 34 - 50	iPb	Very small. Δ b = 283 km.
		35 - 22	iSb	
532)	12	09 - 52 - 59	iPg	Very small. Δ g = 85 km.
		53 - 09	iSg	
533)	13	00 - 41 - 44	eP	Very small.
534)		05 - 29 - 59	ePg	Very small. Δ g = 110 km.
		30 - 12	iSg	
535)		15 - 10 - 04	iPb	Very small. Δ b = 148 km.
		21	eSb	
536)		15 - 33 - 25	ePb	Small. Δ b = 362 km.
		34 - 06	iSb	
537)		18 - 34 - 07	ePg	Very small. Δ g = 85 km.
		17	iSg	
538)		20 - 33 - 16	eP	Distant. Δ 2580 km. = 23.2°.
		37 - 28	iS	
539)	14	01 - 21 - 02	iPg	Very small. Δ g = 114 km.
		16	iSg	
540)		02 - 09 - 30	eP	Distant. Δ = 1500 km. = 13.5°.
		12 - 30	iS	
541)		10 - 30 - 20	iP	Distant. Δ = 1355 km. = 12.2°.
		32 - 46	iS	
542)		15 - 25 - 22	iP	Distant.
543)		20 - 22 - 53	eP	Distant.

Seismic Bulletin for July 1960 - page 3

	Date	Time (GMT)	Phase	Remarks
544)	15	01 - 44 - 00	ePb	Very small. Δ b = 370 km.
		42	iSb	
545)		22 - 49 - 31	ePb	Very small. Δ b = 175 km.
		51	iSb	
546)	16	17 - 22 - 17	iP	Distant.
547)	17	00 - 06 - 52	iPb	Very small. Δ b = 370 km.
		07 - 34	iSb	
548)		00 - 48 - 38	ePb	Very small. Δ b = 165 km.
		57	iSb	
549)		02 - 16 - 50	iPb	Distant. Δ b = 1015 km. = 9.1°.
		18 - 44	iSb	
550)		05 - 42 - 00	eP	Telesseismic.
551)		07 - 26 - 10	ePg	Very small. Δ g = 58 km.
		17	iSg	
552)		08 - 49 - 04	iP	Very small.
553)		19 - 03 - 24	ePg	Very small. Δ g = 114 km.
		38	iSg	
554)	18	00 - 59 - 50	eP	Distant. Δ = 6980 km. = 62.8°.
		01 - 08 - 26	iS	
555)		01 - 50 - 34	eP	Distant. Δ = 4010 km. = 36.1°.
		56 - 22	iS	
556)	19	19 - 18 - 22	ePb	Very small. Δ b = 175 km.
		42	iSb	
557)	20	09 - 38 - 49	iP	Distant.
558)		21 - 09 - 21	iP	Distant. Δ = 6434 km. = 57.9°.
		17 - 26	iS	
	21	No Quakes Recorded.		
	22	No Quakes Recorded.		
559)	23	06 - 14 - 02	iP	Very small.
560)		07 - 41 - 56	iP	Very small.
561)	24	08 - 11 - 52	eP	Distant.
562)		09 - 41 - 24	ePb	Very small. Δ b = 245 km.
		48	iSb	
563)		09 - 58 - 05	iP	Distant. Δ = 5545 km. = 49.9°.
		10 - 05 - 20	eS	
564)	25	02 - 01 - 44	ePb	Very small. Δ b = 405 km.
		02 - 30	iSb	
565)		03 - 50 - 06	eP	Distant. Δ = 5490 km. = 49.4°.
		57 - 18	iS	
566)		11 - 20 - 29	iP	Distant. Δ 4980 km. = 44.8°.
		27 - 12	iS	

Seismic Bulletin for July 1960 - page 4

	Date	Time (GMT)	Phase		Remarks
567)	25	21 - 48 - 56	iP		Distant.
568)	26	08 - 49 - 48	ePb		Very small. Δ b = 345 km.
		45 - 27	iSb		
569)		12 - 17 - 16	ePg		Very small. Δ g = 40 km.
		21	iSg		
570)		19 - 51 - 52	ePb		Very small. Δ b = 165 km.
		52 - 11	iSb		
571)		20 - 59 - 15	ePb		Very small. Δ b = 165 km.
		34	iSb		
572)	27	03 - 27 - 46	eP		Distant. Δ = 1280 km. = 11.5°.
		30 - 05	iS		
573)		06 - 51 - 23	ePb		Very small. Δ b = 165 km.
		42	iSb		
574)		09 - 02 - 05	eP		Distant. Δ = 3555 km. = 32.0°.
		07 - 24	iS		
575)		10 - 24 - 38	eP		Distant.
576)	28	17 - 14 - 36	ePb		Very small. Δ b = 283 km.
		15 - 08	iSb		
577)		17 - 47 - 46	ePg		Very small. Δ g = 40 km.
		51	iSg		
578)	29	00 - 34 - 21	iP		Distant.
579)		10 - 59 - 00	eP		Distant.
580)		15 - 02 - 00	eP		Distant.
581)		17 - 37 - 50	iP		Distant. Δ = 3090 km. = 27.8°.
		42 - 40	iS		
582)	30	07 - 34 - 08	ePb		Distant. Δ b = 855 km. = 7.7°.
		35 - 44	iSb		
583)		10 - 34 - 10	ePb		Very small. Δ b = 300 km.
		44	iSb		
584)		14 - 35 - 00	eP	T	Teleseismic.
585)	31	03 - 02 - 58	iP		Distant. Δ 3855 km. = 34.7°.
		08 - 36	iS		
586)		07 - 11 - 52	eP		Distant.
587)		15 - 14 - 44	iP		Very small.
588)		18 - 53 - 00	eP		Teleseismic.

* * * * *

MANILA OBSERVATORY
Mirador, Baguio City
Philippines

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16° 24' 39"   Long. E. 120° 34' 47"   Alt. 1507 meters

Instruments (All Sprengnethers)   Hard Limestone Bedrock

Type	Component	Period Seism.	Period Galv.	Magnification (Dynamic) Synchronous
Photographic	Z	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.57 "	2451
Photoelectric	N-S	11.80 "	12.00 "	1000
Visual recording	E-W	1.54 "	1.49 "	3000

- - - - - - - - - -

AUGUST 1960

	Date	Time (GMT)	Phase	Remarks
589)	1	12 - 18 - 58	ePg	Very small. Δ g = 100 km.
		19 - 10	iSg	
590)		16 - 30 - 52	ePb	Very small. Δ b = 535 km.
		31 - 52	iSb	
591)		21 - 35 - 30	iPb	Small. Δ b = 585 km. = 5.2°. Felt at Borongon, Int. III; Tacloban, Int. III; Catbalogan, Int. I.
		36 - 36	iSb	
592)	2	00 - 02 - 00	ePb	Very small. Δ b = 210 km.
		24	iSb	
593)		00 - 39 - 02	ePb	Very small. Δ b = 290 km.
		35	eSb	
594)		04 - 47 - 40	iP	Distant.
595)		07 - 00 - 01	eP	Very small.
	3	No Quakes Recorded.		
596)	4	07 - 44 - 43	iP	Distant. Δ = 6280 km. = 56.5°.
		52 - 39	iS	
	5	No Quakes Recorded.		
	6	No Quakes Recorded.		
	7	No Quakes Recorded.		
	8	No Quakes Recorded.		

254

	Date	Time (GMT)	Phase	Remarks
597)	9	07 - 20 - 33	iPb	Very small. Δ b = 255 km.
		21 - 02	iSb	
598)		08 - 08 - 00	eP	Distant.
599)		16 - 57 - 00	eP	Distant.
600)		23 - 46 - 06	iP	Very small.
	10	No Quakes Recorded.		
601)	11	01 - 11 - 34	ePb	Very small. Δ b = 283 km.
		12 - 06	iSb	
602)		02 - 57 - 08	iP	Distant. Δ = 1955 km. = 17.6°.
		03 - 00 - 30	iS	
603)		04 - 52 - 44	ePb	Distant. Δ b = 910 km. = 8.2°.
		54 - 26	iSb	
604)	12	13 - 18 - 11	eP	Distant.
605)	13	07 - 17 - 14	iP	Distant. Δ = 3200 km. = 28.8°.
		22 - 11	iS	
606)		14 - 34 - 44	iP	Distant.
607)	14	23 - 47 - 30	ePb	Very small. Δ b = 155 km.
		48	iSb	
	15	No Quakes Recorded.		
If so NOT Pg or Sg 608)	16	03 - 05 - 36	iPg	Very small. Δ g = 35 km. Felt in Baguio, Int. I.
		40	iSg	
609)		03 - 20 - 56	iP	Very small.
610)		22 - 33 - 22	eP	Distant.
611)	17	20 - 13 - 18	ePb	Very small. Δ b 175 km.
		38	iSb	
612)		20 - 22 - 32	ePb	Very small. Δ b = 283 km.
		23 04	iSb	
613)	18	04 - 44 - 54	ePg	Very small. Δ g = 50 km.
		45 - 00	iSg	
614)		08 - 11 - 20	ePb	Very small. Δ b = 140 km.
		36	eSb	
615)	19	08 - 12 - 10	ePb	Very small. Δ b = 620 km. = 5.6°.
		13 - 20	iSb	
616)		12 - 46 - 00	iP	Distant. Δ = 1955 km. = 17.6°.
		49 - 22	iS	
617)	20	09 - 37 - 56	ePg	Very small. Δ g = 35 km.
		38 - 00	iSg	
618)		22 - 26 - 31	eP	Distant. Δ = 1455 km. = 13.1°.
		29 - 07	iS	

	Date	Time (GMT)	Phase	Remarks
619)	21	12 - 52 - 29 54 - 55	iP iS	Distant. △ = 1355 km. = 12.2°. Felt in Hinatuan, Int. II; Davao, Int. I.
620)	22	19 - 27 - 13 39	ePb iSb	Very small. △b = 230 km.
621)	23	22 - 56 - 08 23 - 05 - 06	iP iS	Distant. △ = 7420 km. = 66.8°.
622)	24	01 - 53 - 16 02 - 00 - 35	iP iS	Distant. △ = 5610 km. = 50.5°.
	25	No Quakes Recorded.		
623)	26	12 - 56 - 54 58 - 30	ePb eSb	Very small. △b = 855 km. = 7.7°.
624)		18 - 37 - 38 46	iPg iSg	Very small. △g = 68 km.
625)	27	18 - 23 - 57 30 - 09	iP iS	Distant. △ = 4400 km. = 39.6°.
626)	28	10 - 35 - 41	ePg	Very small. △g = 50 km.
627)	29	21 - 17 - 00 05	ePg iSg	Very small. △g = 40 km.
628)		22 - 58 - 56 59 - 15	ePb iSb	Very small. △b = 165 km.
629)	30	00 - 38 - 50 56	ePg iSg	Very small. △g = 50 km.
630)		02 - 37 - 48 38 - 01	iPg eSg	Very small. △g = 110 km.
631)		10 - 16 - 43 53	iPg iSg	Very small. △g = 85 km.
632)	31	17 - 22 - 38 23 - 13	iPb iSb	Small. △b = 310 km. Felt in Manila, Int. II.
633)		18 - 19 - 29 38	ePg iSg	Very small. △g = 75 km.

* * * * * * *

MANILA OBSERVATORY
Mirador, Baguio City
Philippines

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16° 24' 39" Long. E. 120° 34' 47" Alt. 1507 meters

Instruments (All Sprengnethers) Hard Limestone Bedrock

Type	Component	Period Seism.	Period Galv.	Magnification (Dynamic) Synchronous
Photographic	Z	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.57 "	2451
Photoelectric	N-S	11.80 "	12.00 "	1000
Visual recording	E-W	1.54 "	1.49 "	3000

- - - - - - - - - -

SEPTEMBER 1960
****

	Date	Time (GMT)	Phase	Remarks
634)	01	09 - 38 - 00	iP	Distant. △ = 6280 km. = 56.5°.
		45 - 56	iS	
635)		10 - 44 - 46	iP	Distant. △ = 6300 km. = 56.7°.
		52 - 44	eS	
636)		15 - 48 - 52	eP	Distant. △ = 8135 km. = 73.2°.
		58 - 25	is	
637)		16 - 58 - 10	eP	Distant.
638)		20 - 12 - 56	eP	Distant.
639)	02	13 - 51 - 26	iP	Distant. △ = 2700 km. = 24.3°.
		55 - 48	iS	
640)		22 - 13 - 20	iP	Distant. △ = 6790 km. = 61.1°.
		21 - 46	iS	
641)	03	01 - 34 - 20	ePb	Very small. △b = 300 km.
		54	iSb	
642)		11 - 06 - 10	ePb	Very small. △b = 148 km.
		27	iSb	
643)		12 - 02 - 54	ePb	Very small. △b = 300 km.
		03 - 28	iSb	
644)		12 - 48 - 31	iP	Distant. △ = 3820 km. = 34.4°.
		54 - 12	iS	
645)		23 - 53 - 36	iP	Distant. △ = 3945 km. = 35.5°.
		59 - 20	iS	
	04	No Quakes Recorded.		

	Date	Time (GMT)	Phase	Remarks
646)	05	02 - 43 - 55	ePb	Very small. △ b = 300 km.
		44 - 29	iSb	
647)	06	01 - 29 - 22	iPb	Very small. △ b = 135 km.
		43	iSb	
648)		14 - 13 - 06	eP	Very small.
649)		19 - 34 - 56	iPb	Very small. △ b = 155 km.
		35 - 16	iSb	
650)		21 - 01 - 57	iPb	Very small. △ b = 335 km.
		02 - 35	iSb	
651)		21 - 34 - 18	ePb	Very small. △ b = 335 km.
		56	iSb	
652)		23 - 13 - 42	ePb	Very small. △ b = 325 km.
		14 - 19	iSb	
653)	07	03 - 54 - 00	iP	Distant.
654)	08	11 - 10 - 38	iP	Distant. △ = 1480 km. = 13.4°.
		13 - 16	iS	
655)	09	08 - 47 - 42	iPb	Very small. △ b = 148 km.
		59	iSb	
656)		18 - 53 - 32	iPb	Very small. △ b = 275 km.
		54 - 03	iSb	
657)	10	04 - 19 - 58	ePb	Very small. △ b = 210 km.
		20 - 22	iSb	
658)		10 - 20 - 54	ePb	Very small. △ b = 310 km.
		21 - 29	iSb	
659)		10 - 47 - 37	eP	Distant.
660)		12 - 36 - 02	ePb	Very small. △ b = 148 km.
		19	iSb	
661)		15 - 59 - 00	eP	Teleseismic.
662)		23 - 26 - 58	ePg	Very small. △ g = 110 km.
		27 - 11	iSg	
663)	11	10 - 16 - 23	iP	Very small.
664)	12	06 - 37 - 26	iP	Very small.
665)		12 - 20 - 18	eP	Distant. △ = 1455 km. = 13.1°.
		22 - 54	iS	
666)		16 - 06 - 34	iPg	Very small. △ g = 114 km.
		48	iSg	
667)		20 - 27 - 31	iPg	Very small. △ g = 75 km.
		40	iSg	
668)	13	03 - 13 - 24	eP	Distant. △ = 1980 km. = 17.8°.
		16 - 48	iS	
669)		04 - 01 - 54	ePb	Very small. △ b = 405 km.
		02 - 40	eSb	
670)		16 - 18 - 40	ePb	Very small. △ b = 300 km.
		19 - 14	iSb	

	Date	Time (GMT)	Phase	Remarks
671)	14	00 - 34 - 54	iPb	Moderate. Δ b = 185 km. Felt in
		35 - 15	iSb	Baguio, Int. I; Manila, Int. IV.
672)		03 - 54 - 00	eP	Very small.
673)		06 - 10 - 46	iPb	Very small. Δ b = 220 km.
		11 - 11	iSb	
674)	15	13 - 40 - 09	ePb	Very small. Δ b = 265 km.
		39	iSb	
675)		14 - 54 - 33	ePb	Very small. Δ b = 165 km.
		52	iSb	
676)		15 - 55 - 03	ePg	Very small. Δ g = 100 km.
		15	iSg	
677)		16 - 12 - 09	ePb	Very small. Δ b = 370 km.
		51	iSb	
678)		18 - 02 - 10	iP	Distant. Δ = 2165 km. = 19.5°.
		05 - 49	iS	
679)		19 - 33 - 45	ePb	Very small. Δ b = 165 km.
		34 - 04	iSb	
680)	16	12 - 30 - 03	eP	Distant.
681)		14 - 07 - 58	eP	Distant.
682)	17	08 - 00 - 54	eP	Distant. Δ = 4665 km. = 42.0°.
		07 - 20	iS	
683)		12 - 58 - 21	iP	Distant.
684)		13 - 15 - 47	ePg	Very small. Δ g = 114 km.
		16 - 01	iSg	
685)		17 - 20 - 15	eP	Teleseismic.
686)		22 - 23 - 21	ePb	Very small. Δ b = 210 km.
		45	iSb	
687)	18	00 - 53 - 53	ePb	Very small. Δ b = 200 km.
		54 - 16	iSb	
688)		09 - 45 - 47	iP	Distant. Δ = 2500 km. = 22.5°.
		49 - 53	iS	
689)		12 - 42 - 09	ePb	Very small. Δ b = 370 km.
		51	iSb	
690)	19	03 - 39 - 50	iPb	Small. Δ b = 165 km.
		40 - 09	iSb	
691)		03 - 59 - 09	iP	Small.
692)		04 - 24 - 23	ePb	Very small.
		43	eSb	
693)	20	22 - 16 - 02	eP	Very small.
694)	21	08 - 25 - 42	ePb	Very small. Δ b = 185 km.
		26 - 03	iSb	
695)		10 - 26 - 46	iPb	Very small. Δ b = 300 km.
		27 - 20	iSb	

	Date	Time (GMT)	Phase	Remarks
696)	21	16 - 10 - 47	ePb	Distant. Δ b = 1055 km. = 9.5°.
		12 - 45	iSb	
697)	22	05 - 32 - 59	ePb	Very small. Δ b = 210 km.
		33 - 23	eSb	
698)		05 - 55 - 00	eP	Teleseismic.
699)		06 - 23 - 13	ePg	Very small. Δ g = 75 km.
		22	iSg	
700)		07 - 58 - 39	iPb	Very small. Δ b = 283 km.
		59 - 11	iSb	
701)		09 - 18 - 19	eP	Distant. Δ = 8000 km. = 72.0°.
		23 - 15	iS	
702)	23	11 - 32 - 39	iPg	Very small. Δ g = 114 km.
		53	iSg	
	24	No Quakes Recorded.		
	25	No Quakes Recorded.		
	26	No Quakes Recorded.		
703)	27	06 - 59 - 50	ePg	Very small.. Δ g = 93 km.
		07 - 00 - 01	eSg	
704)		07 - 22 - 45	iP	Distant. Δ = 2510 km. = 22.6°.
		26 - 52	iS	
705)		18 - 41 - 07	iPg	Very small. Δ g = 114 km.
		21	iSg	
706)	28	05 - 40 - 00	eP	Teleseismic.
707)		08 - 19 - 31	eP	Very small.
708)		12 - 16 - 31	ePb	Very small. Δ b = 370 km.
		17 - 13	eSb	
709)	29	11 - 23 - 27	iP	Distant. Δ = 2200 km. = 19.8°.
		27 - 09	iS	
710)		16 - 06 - 51	eP	Very small. Δ g = 85 km.
		07 - 01	iS	
711)	30	10 - 09 - 49	eP	Very small. Δ g = 85 km.
		59	iS	
712)		17 - 47 - 21	iPb	Very small. Δ b = 165 km.
		40	eSb	
713)		22 - 26 - 48	ePb	Very small. Δ b = 318 km.
		27 - 24	eSb	

*   *   *   *

254

Oct-Dec Copied

No 254

MANILA OBSERVATORY
Mirador, Baguio City
Philippines

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16° 24' 39" Long. E. 120° 34' 47" Alt. 1507 meters

Instruments (All Sprengnethers) Hard Limestone Bedrock

Type	Component	Period Seism.	Period Galv.	Magnification (Dynamic) Synchronous
Photographic	Z	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.57 "	2451
Photoelectric	N-S	11.80 "	12.00 "	1000
Visual recording	E-W	1.54 "	1.49 "	3000

- - - - - - - - -

OCTOBER 1960

	Date	Time (GMT)	Phase	Remarks
714)	01	03 - 06 - 20	eP	Very small.
715)		06 - 29 - 48	ePb	Very small. Δ b = 1090 km. = 9.8°.
		31 - 50	iSb	
716)		16 - 21 - 30	eP	Distant. Δ = 6790 km. = 61.1°.
		29 - 56	iS	
717)		18 - 54 - 25	iPg	Very small. Δ g = 58 km.
		32	eSg	
	02	No Quakes Recorded.		
718)	03	08 - 41 - 47	iPb	Very small. Δ b = 275 km.
		42 - 18	iSb	
719)		11 - 53 - 49	eP	Very small.
720)		19 - 56 - 38	eP	Distant.
721)	04	09 - 58 - 52	iP	Distant. Δ = 4510 km. = 40.6°.
		10 - 05 - 10	iS	
	05	No Quakes Recorded.		
722)	06	00 - 41 - 58	iPb	Very small. Δ b = 265 km.
		42 - 28	eSb	
723)		13 - 39 - 25	ePg	Very small. Δ g = 35 km.
		29	iSg	
724)	07	15 - 24 - 02	iP	Distant. Δ = 2690 km. = 24.2°.
		28 - 23	iS	
725)	08	05 - 57 - 41	eP	Distant.
726)	09	09 - 06 - 43	eP	Distant. Δ = 2980 km. = 26.8°.
		11 - 25	iS	
727)		19 - 24 - 48	ePb	Very small. Δ b = 675 km. = 6.0°. Felt at Tacloban, Int. III; Borongan, Int. II.
		26 - 04	iSb	

254

	Date	Time (GMT)	Phase	Remarks
728)	09	20 - 32 - 28	eP	Very small.
729)		21 - 40 - 22	ePb	Very small. △ b = 335 km.
		41 - 00	eSb	
	10	No Quakes Recorded.		
730)	11	17 - 31 - 15	ePg	Very small. △ g = 114 km.
		29	iSg	
731)	12	10 - 32 - 23	ePg	Very small. △ g = 35 km.
		27	iSg	
732)		15 - 34 - 15	ePg	Very small. △g = 100 km.
		24	iSg	
733)	13	10 - 43 - 31	ePb	Very small. △ b = 210 km.
		55	iSb	
734)		15 - 01 - 24	iP	Distant. △ = 2555 km. = 23.0°.
		05 - 39	iS	
735)	14	15 - 31 - 51	ePb	Very small. △ b = 210 km.
		32 - 15	eSb	
736)		21 - 29 - 41	eP	Distant.
737)	15	11 - 31 - 47	ePb	Very small. △ b = 660 km. = 5.9°.
		33 - 01	iSb	
	16	No Quakes Recorded.		
738)	17	14 - 44 - 16	ePb	Very small. △ b = 480 km.
		45 - 10	iSb	
739)	18	10 - 35 - 40	ePb	Very small. △ b = 140 km.
		56	iSb	
740)	19	14 - 00 - 59	ePb	Very small. △ b = 155 km.
		01 - 17	iSb	
741)	20	02 - 09 - 57	ePg	Very small. △ g = 75 km.
		10 - 06	iSg	
742)		11 - 15 - 04	iP	Distant. △ = 5680 km. = 51.1°.
		22 - 27	iS	
743)	21	01 - 04 - 56	ePb	Very small. △ b = 245 km.
		05 - 24	iSb	
744)		20 - 03 - 30	ePb	Very small. △ b = 165 km.
		49	eSb	
745)	22	08 - 30 - 34	iP	Distant. △ = 5200 km. = 46.8°.
		37 - 30	iS	
746)	23	10 - 12 - 04	ePg	Very small. △ g = 85 km.
		14	iSg	
747)		13 - 16 - 45	ePb	Very small. △ b = 175 km.
		17 - 05	iSb	

	Date	Time (GMT)	Phase	Remarks
748)	23	20 - 50 - 55	ePb	Very small. △ b = 140 km.
		51 - 11	iSb	
749)	24	08 - 21 - 31	iP	Very small.
750)		15 - 38 - 39	ePb	Very small. △ b = 155 km.
		57	iSb	
	25	No Quakes Recorded.		
751)	26	19 - 02 - 39	ePb	Very small. △ b = 130 km.
		54	ePb	
752)		22 - 25 - 41	ePb	Very small. △ b = 550 km. = 4.9°.
		26 - 43	iSb	
753)	27	10 - 51 - 52	iPb	Small. △ b = 210 km. Felt in Baguio, Int. I; Casiguran, Int. I. Operated starting pendulum only of strong motion seismograph. No record made.
		16	iSb	
754)		11 - 11 - 45	ePg	Very small. △ g = 114 km.
		59	iSg	
755)		12 - 42 - 25	ePg	Very small. △ g = 100 km.
		37	iSg	
756)		12 - 55 - 01	iPb	Very small. △ b = 140 km.
		17	iSb	
757)		13 - 19 - 06	iPb	Very small. △ b = 130 km.
		21	iSb	
758)		14 - 12 - 47	ePg	Very small. △ g = 114 km.
		13 - 01	eSg	
759)		14 - 21 - 31	ePg	Very small. △ g = 114 km.
		45	eSg	
760)		14 - 27 - 55	ePg	Very small. △ g = 85 km.
		28 - 05	iSg	
761)		15 - 26 - 03	iPg	Very small. △ g = 114 km.
		17	iSg	
762)		17 - 21 - 11	ePg	Very small. △ g = 112 km.
		23	iSg	
763)		19 - 14 - 49	ePg	Very small. △ g = 85 km.
		59	iSg	
764)		19 - 40 - 49	ePb	Very small. △ b = 140 km.
		41 - 05	iSb	
765)		22 - 38 - 51	iP	Very small.
766)	28	05 - 12 - 00	eP	Teleseismic.
767)		13 - 26 - 32	iP	Distant. △ = 4845 km. = 43.6°.
		33 - 08	iS	
768)		22 - 34 - 54	eP	Distant. △ = 3345 km. = 30.1°.
		40 - 00	iS	
769)	29	05 - 49 - 48	iPg	Very small. △ g = 58 km.
		55	eSg	
770)		17 - 10 - 13	iPb	Very small. △ b = 245 km.
		41	eSb	

	Date	Time (GMT)	Phase	Remarks
771)	29	17 - 12 - 58	iPb	Small. Δ b = 283 km.
		13 - 30	iSb	
772)	30	12 - 34 - 42	eP	Distant.
773)		15 - 55 - 08	eP	Distant. Δ = 2020 km. = 18.2°.
		58 - 35	iS	
774)		21 - 52 - 53	iP	Distant.
775)	31	06 - 43 - 46	ePb	Small. Δ b = 965 km. = 8.6°.
		45 - 34	iSb	
776)		14 - 35 - 55	ePb	Very small. Δ b = 130 km.
		36 - 10	eSb	
777)		23 - 20 - 26	iPb	Very small. Δ b = 190 km.
		48	iSb	
778)		23 - 34 - 57	ePg	Very small. Δ g = 100 km.
		35 - 09	iSg	

* * *
* *
*
* *
* * *

254

MANILA OBSERVATORY
Mirador, Baguio City
Philippines

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16° 24' 39" Long. E. 120° 34' 47" Alt. 1507 meters

Instruments (All Sprengnethers) Hard Limestone Bedrock

Type	Component	Period Seism.	Period Galv.	Magnification (Dynamic) Synchronous
Photographic	Z	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.57 "	2451
Photoelectric	N-S	11.80 "	12.00 "	1000
Visual recording	E-W	1.54 "	1.49 "	3000

- - - - - - - - - - -

NOVEMBER 1960

	Date	Time (GMT)	Phase	Remarks
779)	1	05 - 38 - 55	ePg	Very small. △ g = 110 km.
		39 - 08	iSg	
780)		09 - 05 - 45	iP'	Distant. Chile Quake.
781)		19 - 14 - 14	ePg	Very small. △ g = 75 km.
		23	iSg	
782)	2	06 - 02 - 12	ePb	Very small. △ b = 155 km.
		30	iSb	
783)		12 - 56 - 53	ePg	Very small. △ g = 35 km.
		57	iSg	
784)		17 - 23 - 57	iP	Distant. △ = 5635 km. = 50.7°.
		31 - 18	iS	
785)		20 - 47 - 57	ePb	Very small. △ b = 148 km.
		48 - 44	iSb	
786)	3	11 - 41 - 11	ePb	Very small. △ b = 148 km.
		28	iSb	
787)		23 - 11 - 18	ePb	Very small. △ b = 245 km.
		46	iSb	
788)	4	14 - 26 - 16	iP	Very small.
789)		20 - 06 - 43	ePb	Very small. △ b = 390 km.
		07 - 27	eSb	
	5	No Quakes Recorded.		
790)	6	03 - 20 - 20	ePb	Very small. △ b = 300 km.
		54	iSb	

	Date	Time (GMT)	Phase	Remarks
791)	6	04 - 46 - 55	iP	Distant. △ = 5190 km. = 46.7°.
		53 - 50	iS	
792)		06 - 40 - 33	iPb	Small. △ b = 148 km.
		50	iSb	
793)		22 - 20 - 52	eP	Distant. △ = 7190 km. = 64.7°.
		29 - 40	eS	
794)	7	03 - 40 - 46	ePb	Very small. △ = 175 km.
		41 - 06	iSb	
795)		13 - 27 - 29	iP	Distant.
796)	8	10 - 28 - 46	iPg	Very small. △ g = 114 km.
		29 - 00	eSg	
797)	9	03 - 37 - 08	iP'	Distant. Sandwich Island Quake.
798)		10 - 48 - 42	iP	Distant. △ = 2520 km. = 22.7°.
		52 - 50	iS	
799)	10	00 - 34 - 32	ePb	Very small. △ b = 405 km.
		35 - 18	iSb	
800)		06 - 24 - 19	ePg	Very small. △ g = 93 km.
		30	iSg	
801)		06 - 27 - 20	ePg	Very small. △ g = 85 km.
		30	iSg	
802)		14 - 50 - 27	iP	Distant. △ = 3235 km. = 29.1°.
		55 - 26	iS	
803)		18 - 31 - 56	ePg	Very small. △ g = 93 km.
		32 - 07	iSg	
	11	No Quakes Recorded.		
804)	12	01 - 48 - 57	eP	Very small.
805)		18 - 48 - 39	eP	Very small.
806)		19 - 07 - 49	iPg	Very small. △ g = 85 km.
		59	iSg	
807)		20 - 48 - 16	eP	Very small. △ b = 630 km. = 5.7°.
		49 - 27	iS	
808)	13	03 - 13 - 19	ePb	Very small. △ b = 165 km.
		38	iSb	
809)		06 - 40 - 55	iP	Distant. △ = 1800 km. = 16.2°.
		44 - 03	iS	
810)		09 - 31 - 14	iP	Distant. △ = 7180 km. = 64.6°.
		40 - 04	iS	
811)	14	04 - 34 - 36	iPg	Very small. △ g = 68 km.
		44	iSg	
812)		04 - 39 - 24	iPg	Very small. △ g = 58 km.
		31	iSg	
813)		15 - 12 - 45	eP	Very small.

	Date	Time (GMT)	Phase	Remarks
814)	14	21 - 05 - 25	ePb	Very small. △ b = 148 km.
		42	iSb	
815)		22 - 09 - 04	ePb	Very small. △ b = 190 km.
		26	iSb	
816)	15	05 - 26 - 08	eP	Very small.
817)		07 - 06 - 49	iP	Very small.
818)		09 - 11 - 29	iP	Very small.
819)		18 - 59 - 06	ePg	Very small. △ g = 35 km.
		10	iSg	
820)	16	04 - 30 - 38	ePg	Very small. △ g = 85 km.
		48	iSg	
821)		08 - 35 - 20	ePg	Very small. △ g = 40 km.
		25	iSg	
822)		22 - 52 - 43	ePg	Very small. △ g = 58 km.
		50	iSg	
823)	17	03 - 47 - 03	eP	Very small.
824)		05 - 30 - 16	iP	Distant. △ = 1920 km. = 17.3°.
		33 - 35	iS	
825)		21 - 17 - 49	ePb	Very small. △ b = 148 km.
		18 - 06	iSb	
	18	No Quakes Recorded.		
826)	19	12 - 21 - 04	iP	Distant. △ = 2180 km. = 19.6°.
		24 - 44	iS	
827)	20	07 - 19 - 30	ePb	Very small. △ b = 235 km.
		57	iSb	
828)		22 - 22 - 06	eP'	Distant. Peru Quake.
829)	21	13 - 08 - 34	iPb	Very small. △ b = 235 km.
		09 - 01	iSb	
830)	22	03 - 43 - 45	iP	Distant.
831)		06 - 34 - 12	iP	Distant.
832)		12 - 37 - 13	ePg	Very small. △ g = 68 km.
		21	iSg	
833)		12 - 48 - 51	eP'	Distant. Chile Quake.
834)		19 - 08 - 47	ePb	Very small. △ b = 130 km.
		09 - 02	iSb	
835)		23 - 42 - 22	ePb	Very small. △ g = 58 km.
		29	iSg	
836)	23	04 - 23 - 56	iP	Very small.
837)		04 - 26 - 26	iPb	Very small. △ b = 318 km.
		27 - 02	eSb	
838)		14 - 24 - 01	eP	Distant. △ = 7510 km. = 67.6°.
		33 - 03	iS	

	Date	Time (GMT)	Phase	Remarks
839)	23	16 - 55 - 21	iP	Distant. Δ = 1445 km. = 13.0°.
		57 - 55	iS	
840)		23 - 16 - 22	iPb	Small. Δ b = 670 km. = 6.0°.
		17 - 37	iSb	
841)	24	04 - 57 - 31	iP	Distant. Δ = 3535 km. = 31.8°.
		05 - 02 - 49	iS	
842)		07 - 04 - 15	iP	Distant. Δ = 8200 km. = 73.8°.
		13 - 51	iS	
843)		11 - 27 - 20	iPg	Very small. Δ g = 85 km.
		30	iSg	
844)		19 - 18 - 24	iPb	Very small. Δ b = 200 km.
		47	eSb	
845)	25	09 - 34 - 48	eP	Very small. Δ b = 640 km. = 5.8°.
		36 - 00	iS	
846)		09 - 59 - 54	ePb	Very small. Δ b = 190 km.
		10 - 00 - 16	iSb	
847)		19 - 52 - 22	ePg	Very small. Δ g = 110 km.
		35	iSg	
848)		21 - 59 - 54	iP	Distant. Δ = 2865 km. = 25.8°.
		22 - 04 - 28	iS	
849)	26	00 - 04 - 58	ePb	Very small. Δ b = 265 km.
		05 - 28	iSb	
850)	27	02 - 59 - 53	ePg	Very small. Δ g = 35 km.
		57	iSg	
851)		16 - 47 - 51	ePg	Very small. Δ g = 114 km.
		48 - 05	iSg	
852)	28	02 - 03 - 31	eP	Very small.
853)		02 - 08 - 27	ePb	Very small. Δ b = 148 km.
		44	iSb	
854)		02 - 47 - 12	ePg	Very small. Δ g = 93 km.
		23	iSg	
855)		18 - 04 - 31	iPg	Very small. Δ g = 114 km.
		45	eSg	
856)		22 - 12 - 30	ePg	Very small. Δ = 93 km.
		41	iSg	
	29	No Quakes Recorded.		
	30	No Quakes Recorded.		

* * * *

MANILA OBSERVATORY
Mirador, Baguio City
Philippines

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16°24'39" Long. E. 120°34'47" Alt. 1507 meters

Instruments (All Sprengnethers) Hard Limestone Bedrock

Type	Component	Period Seism.	Period Galv.	Magnification (Dynamic) Synchronous
Photographic	Z	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.57 "	2451
Photoelectric	N-S	11.80 "	12.00 "	1000
Visual recording	E-W	1.54 "	1.49 "	3000

- - - - - - - - - - -

DECEMBER 1960
****

	Date	Time (GMT)	Phase	Remarks
857)	01	09 - 43 - 48	eP	Very small.
858)		10 - 49 - 42	ePb	Very small. Δ b = 283 km.
		50 - 14	iSb	
859)		11 - 46 - 06	ePb	Very small. Δ b = 1055 km.= 9.5°.
		48 - 04	iSb	
860)		15 - 08 - 16	iPb	Very small. Δ b = 283 km.
		48	iSb	
861)		15 - 47 - 05	ePb	Very small. Δ b = 245 km.
		33	iSb	
862)		16 - 13 - 08	iPb	Very small. Δ b = 283 km.
		40	iSb	
863)		19 - 10 - 02	iPb	Very small. Δ b = 265 km.
		30	iSb	
864)		19 - 25 - 06	ePb	Very small. Δ b = 245 km.
		34	iSb	
865)		20 - 41 - 32	ePb	Very small. Δ b = 283 km.
		42 - 04	iSb	
866)	02	09 - 31 - 00	P'	Distant. Chile.
867)	03	04 - 30 - 26	iP	Distant. Δ = 3490 km.
		35 - 41	iS	
868)		06 - 48 - 10	ePb	Very small. Δ b = 165 km.
		29	iSb	
869)		07 - 17 - 47	iPb	Very small. Δ b = 230 km.
		18 - 13	iSb	
870)		07 - 38 - 01	ePb	Very small. Δ b = 175 km.
		21	iSb	

	Date	Time (GMT)	Phase	Remarks
871)	03	09 - 13 - 35	eP	Small. Δ b = 640 km. = 5.8°.
		14 - 47	iS	
872)	04	15 - 50 - 58	iP	Very small.
873)	05	03 - 54 - 55	iPb	Very small. Δ b = 265 km.
		55 - 25	iSb	
874)		05 - 12 - 01	ePb	Very small. Δ b = 245 km.
		29	eSb	
875)		09 - 21 - 39	ePb	Very small. Δ b = 265 km.
		22 - 09	iSb	
876)		12 - 24 - 01	ePb	Very small. Δ b = 175 km.
		21	iSb	
877)	06	09 - 15 - 53	iPb	Very small. Δ b = 335 km.
		16 - 31	iSb	
878)		18 - 21 - 19	ePb	Small. Δ b .. 840 km.= 7.6°.
		22 - 53	iSb	
879)		23 - 55 - 09	ePb	Very small. Δ b = 175 km.
		20	iSb	
880)	07	12 - 09 - 09	ePg	Very small. Δ g = 114 km.
		23	iSg	
881)		10 - 04 - 59	ePb	Small. Δ b = 965 km. = 8.6°
		06 - 47	iSb	
882)		15 - 39 - 50	ePb	Small. Δ b = 515 km.
		40 - 48	iSb	
883)	09	00 - 27 - 40	ePb	Very small. Δ b = 130 km.
		55	iSb	
884)		18 - 08 - 11	iPb	Very small. Δ b = 190 km.
		23	iSb	
885)	10	04 - 35 - 35	eP	Very small.
886)		05 - 38 - 03	ePb	Very small. Δ b = 710 km.= 6.4°.
		39 - 23	iSb	
887)		05 - 44 - 29	ePb	Very small. Δ b = 190 km.
		51	eSb	
888)		06 - 30 - 11	iPb	Small. Δ b = 283 km.
		43	iSb	
889)		06 - 55 - 39	ePb	Very small. Δ b = 283 km.
		56 - 11	iSb	
890)		07 - 39 - 01	ePg	Very small. Δ g = 75 km.
		10	iSg	
891)		10 - 44 - 09	ePb	Very small. Δ b = 185 km.
		30	iSb	
892)		11 - 42 - 34	ePg	Very small. Δ g = 40 km.
		39	iSg	
893)		13 - 59 - 39	iP	Distant. Δ = 1610 km. = 14.5°.
		14 - 01 - 29	iS	

	Date	Time (GMT)	Phase	Remarks
894)	11	03 - 21 - 57	eP	Distant. Δ = 1765 km. = 15.9°.
		25 - 02	iS	
895)		13 - 08 - 06	ePb	Very small. Δ b = 190 km.
		28	iSb	
896)		19 - 02 - 38	iP	Distant. Δ = 6200 km. = 55.8°.
		10 - 30	iS	
897)		21 - 15 - 59	ePg	Very small.
		16 - 09	iSg	
898)		21 - 43 - 15	iPb	Very small. Δ b = 165 km.
		34	iSb	
	12	No Quakes Recorded.		
899)	13	07 - 48 - 37	eP	Distant. Δ = 7695 km. = 68.8°.
		57 - 45	iS	
900)		10 - 10 - 33	iP	Distant. Δ = 2700 km. = 24.3°.
		14 - 55	iS	
901)	14	01 - 06 - 34	iP	Distant. Δ = 5700 km. = 51.3°.
		13 - 58	iS	
902)		13 - 10 - 11	ePb	Very small. Δ b = 210 km.
		35	iSb	
903)		23 - 54 - 54	iP	Distant. Δ = 1580 km. = 14.2°.
		57 - 41	iS	
904)	15	12 - 10 - 30	ePb	Small. Δ b = 355 km.
		11 - 10	iSb	
905)		13 - 49 - 30	ePb	Very small. Δ b = 245 km.
		58	iSb	
906)		14 - 01 - 48	ePb	Very small. Δ b = 425 km.
		02 - 36	iSb	
907)		18 - 42 - 52	eP	Very small.
908)		18 - 57 - 40	ePb	Very small. Δ b = 318 km.
		58 - 16	iSb	
909)	16	20 - 26 - 54	ePb	Very small. Δ b = 140 km.
		27 - 10	iSb	
910)	17	02 - 03 - 54	ePb	Very small. Δ b = 190 km.
		04 - 16	iSb	
911)		04 - 28 - 34	ePb	Very small. Δ b = 155 km.
		52	iSb	
912)		07 - 02 - 30	iPg	Very small. Δ g = 114 km.
		44	iSg	
913)		07 - 08 - 22	ePg	Very small. Δ g = 85 km.
		32	iSg	
914)		10 - 42 - 21	iPb	Very small. Δ b = 450 km.
		43 - 12	iSb	
915)		13 - 29 - 51	iPb	Very small. Δ b = 245 km.
		30 - 19	iSb	

	Date	Time (GMT)	Phase	Remarks
916)	18	07 - 40 - 45	ePb	Very small. △ b = 155 km.
		41 - 03	iSb	
917)		15 - 09 - 43	ePb	Very small. △ b = 230 km.
		10 - 09	iSb	
918)		18 - 23 - 01	iPb	Distant. △ b = 1145 km.= 10.3°.
		09	iSb	
919)	19	19 - 04 - 21	iPb	Very small. △ b = 155 km.
		39	iSb	
920)		22 - 11 - 35	ePb	Very small. △ b = 220 km.
		12 - 00	iSb	
921)	20	08 - 30 - 03	iPb	Very small. △ b = 290 km.
		36	iSb	
922)	21	20 - 58 - 31	iP	Distant. △ = 2455 km.= 22.2°.
		21 - 02 - 33	iS	
923)	22	03 - 08 - 01	eP	Distant. △ = 3435 km. = 30.9°.
		13 - 13	iS	
924)		21 - 09 - 50	iP	Distant. △ = 3945 km. = 35.5°.
		15 - 34	iS	
925)	23	09 - 47 - 22	iPg	Very small. △ g = 58 km.
		29	iSg	
926)		10 - 50 - 14	iP	Distant. △ = 1235 km. = 11.1°.
		52 - 29	iS	
927)		12 - 00 - 00	ePg	Very small.. △ g = 75 km.
		09	iSg	
928)		15 - 49 - 07	iP	Very small.
929)		19 - 31 - 06	iPg	Small. △ g = 85 km.
		16	iSg	
930)		20 - 12 - 22	ePg	Very small. △ g = 100 km.
		34	iSg	
931)		21 - 07 - 44	ePg	Very small. △ g = 75 km.
		53	iSg	
932)		21 - 22 - 51	ePg	Very small. △ g = 40 km.
		56	iSg	
933)		21 - 24 - 56	ePg	Very small. △ g = 75 km.
		25 - 05	iSg	
934)		21 - 36 - 09	ePg	Very small. △ g = 68 km.
		17	iSg	
935)		22 - 37 - 42	ePg	Very small. △ g = 35 km.
		46	iSg	
936)		22 - 39 - 08	ePg	Very small. △ g = 114 km.
		72	iSg	
937)		23 - 43 - 42	ePg	Very small. △ g = 100 km.
		54	iSg	

	Date	Time (GMT)	Phase	Remarks
938)	24	01 - 55 - 15	iPb	Very small. Δ b = 220 km.
		40	iSb	
939)		12 - 51 - 23	iPb	Very small. Δ b = 148 km.
		40	iSg	
940)	25	05 - 26 - 05	eP	Distant. Δ = 2690 km. = 24.2°.
		30 - 26	iS	
941)		11 - 11 - 42	eP	Distant. Δ = 1135 km. = 10.2°.
		13 - 54	iS	
942)	26	01 - 49 - 44	iP	Distant. Δ = 2465 km. = 22.2°.
		53 - 47	iS	
943)	27	15 - 57 - 15	ePb	Very small. Δ b = 200 km.
		38	iSb	
944)	28	00 - 23 - 09	ePb	Very small. Δ b = 140 km.
		25	iSb	
945)		05 - 12 - 37	ePb	Very small. Δ b = 140 km.
		53	eSb	
946)		08 - 58 - 11	ePg	Very small. Δ g = 100 km.
		23	iSg	
947)		11 - 56 - 31	iPb	Very small. Δ b = 140 km.
		47	iSb	
948)	29	06 - 13 - 38	eP	Distant.
949)		06 - 38 - 34	ePb	Very small. Δ g = 155 km.
		52	iSg	
950)		07 - 06 - 56	eP	Very small.
951)		07 - 08 - 02	iPg	Very small. Δ g = 85 km.
		12	iSg	
952)		19 - 55 - 12	iP	Very small.
953)	30	08 - 06 - 03	iPb	Very small. Δ b = 310 km.
		38	iSb	
954)	31	05 - 51 - 43	ePb	Very small. Δ b = 265 km.
		52 - 13	iSb	
955)		08 - 52 - 01	ePb	Small. Δ b = 360 km.
		35	iSb	
956)		18 - 27 - 48	eP	Very small.

# # #