

July copied W.H.

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

<u>Type</u>	<u>Component</u>	<u>Period</u> <u>Seism.</u>	<u>Galv.</u>	<u>Magnification (Dynamic)</u>	
				<u>Synchronous</u>	
Photographic	Z *	1.41 sec	1.37 sec	Circa 3367	
	E-W	10.90 "	11.70 "	2000	
	N-S	1.84 "	1.67 "	2451	
Photoelectric	N-S	11.80 "	12.00 "	1000	
	Visual Recording	E-W	1.54 "	1.49 "	3000

JULY, 1956

<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
1	No quakes.		
-621)	02 - 46 - 22	iPb	Very small. $\Delta b = 219$ Km.
	- 47	iSb	
-622)	10 - 59 - 34	iPb	Small to moderate. $\Delta b = 174$ Km.
	- 54	iSb	
-623)	12 - 59 - 51	iPg	Very small. $\Delta g = 68$ Km.
	- 59	iSg	
-624)	14 - 32 - 01 [‡]	iP	Very small. Teleseismic. <u>S</u> difficult.
-625)	07 - 07 - 12	iPb	Very small. $\Delta b = 129$ Km.
	27	iSb	
-626)	23 - 19 - 40 [‡]	iPn	Very small. $\Delta n = 1054$ Km.
	21 - 30 [‡]	iSn	
-627)	✓ 00 - 50 - 22	iP	Very small. $\Delta = 4580^{\pm}$ Km. = $41^{\circ}.2$
	55 - 44 [‡]	eS	
-628)	03 - 12 - 08	iP	Small. $\Delta = 4465$ Km. = $40^{\circ}.2$
	- 18 - 24	iS	
-629)	✓ 03 - 50 - 43	iP	Small. $\Delta = 4490$ Km. = $40^{\circ}.4$
	57 - 00	iS	
-630)	07 - 27 - 02	iP	Small. $\Delta = 4465$ Km. = $40^{\circ}.2$
	33 - 18	iS	
-631)	19 - 32 - 29	iPb	Very small. $\Delta b = 344$ Km.
	33 - 09	iSb	
5	No quakes.		

(* - Discontinued April 24th, pending repairs.)

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-632)	6	01 - 39 - 04	iP	Very small. $\Delta = 2510$ Km. = $22^{\circ}.6$
		43 - 11	iS	
-633)		22 - 38 - 15 [±]	iPg	Very small. $\Delta_g = 84$ Km.
		25	iSg	
-634)	7	20 - 31 - 49	iPb	Very small. $\Delta_b = 138$ Km.
		32 - 05	iSb	
-635)	8	03 - 05 - 51	iPb	Very small. $\Delta_b = 129$ Km.
		06 - 06	iSb	
-636)		04 - 36 - 57	iP	Very small. $\Delta = 2410$ Km. = $21^{\circ}.7$
		40 - 56 [±]	iS	
-637)		06 - 05 - 57	iP	Small. $\Delta = 2465$ Km. = $22^{\circ}.2$
		10 - 00	iS	
-638)		11 - 59 - 50	iP	Very small. $\Delta = 1545$ Km. = $13^{\circ}.9$
		12 - 02 - 34	eS.	
-639)		12 - 08 - 40	iPb	Very small. $\Delta_b = 255$ Km.
		09 - 09	iSb	
-640)		18 - 29 - 46	iPb	Very small. $\Delta_b = 228$ Km.
		30 - 12	iSb	
-641)		20 - 03 - 44	iPb	Very small. $\Delta_b = 192$ Km.
		04 - 06	iSb	
-642)	9	03 - 24 - 15	iP	Small to moderate. $\Delta = 10,000^{\pm}$ Km. = $90^{\circ}.0$. $h \sim 250-300$ Km. Des- tructive.
		25 - 06	iPp	
		34 - 35	iS	
		36 - 43	iSs	
-643)		05 - 47 - 44	iPg	Very small. $\Delta_g = 50$ Km.
		52	iSg	
-644)		10 - 15 - 44	iP	Very small. $\Delta = 2055$ Km. = $18^{\circ}.5$
		19 - 14	eS	
-645)		14 - 42 - 11	iPg	Very small. $\Delta_g = 41$ Km.
		16	iSg	
-646)	10	02 - 58 - 26	iPg	Small. $\Delta_g = 92$ Km.
		37	iSg	
-647)		09 - 26 - 11	iPn	Very small. $\Delta_n = 926^{\pm}$ Km.
		27 - 48?	iSn	
-648)		13 - 31 - 00	iPn	Very small. $\Delta_n = 1132$ Km.
		32 - 58	eSn	
-649)		18 - 04 - 08	iP	Very small. <u>S</u> difficult.
-650)	11	04 - 53 - 04	iPb	Very small. $\Delta_b = 766^{\pm}$ Km.
		54 - 30 [±]	iSb	
-651)		07 - 51 - 05	iPg	Small to moderate. $\Delta_g = 84^{\pm}$ Km.
		15 [±]	iSg	
-652)		08 - 13 - 48	iPb	Very small. $\Delta_b = 228$ Km.
		14 - 14	iSb	
-653)	12	08 - 53 - 10	iPb	Very small. $\Delta_b = 129$ Km.
		25	iSb	

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remark</u>
-654)	12	08 - 55 - 05	iS	Very small. P?
-655)		08 - 55 - 01	iPb	} Very small. $\Delta b = 138$ Km.
		- 17	iSb	
-656)	✓	15 - 06 - 54	iP	Very small; perhaps teles. <u>S</u> very difficult.
-657)		17 - 19 - 00 [†]	i	Very small. Teleseismic traces.
-658)	13	07 - 11 - 21	iPb	} Very small. $\Delta b = 289^{\dagger}$ Km.
		- 54 [†]	iSb	
-659)		14 - 05 - 00	iPg	} Small. $\Delta g = 50$ Km.
		- 06 [†]	iSg	
-660)	14	20 - 57 - 13 [†]	iPb	} Very small. $\Delta b = 148^{\dagger}$ Km.
		- 30	iSb	
-661)		22 - 06 - 44	iPb	} Moderate. $\Delta b = 398$ Km.
		07 - 29	iSb	
-662)	15	11 - 38 - 02	iPg	} Very small. $\Delta g = 21$ Km.
		- 05	iSg	
-663)		12 - 44 - 56	iPb	} Small. $\Delta b = 168$ Km.
		45 - 27	iSb	
-664)	✓	12 - 56 - 32	iP	} Small. $\Delta = 1980$ Km. = $17^{\circ}.8$
		59 - 56	iS	
-665)		13 - 56 - 56	iPg	} Very small. $\Delta g = 33$ Km.
		57 - 00	iSg	
-666)	16	01 - 38 - 17	iPg	} Very small. $\Delta g = 32$ Km.
		21	iSg	
-667)	✓	15 - 12 - 25	iP	} Moderate. <u>S</u> difficult. $\Delta = 2620$ Km. = $23^{\circ}.6$
		16 - 41 [†]	eS	
-668)		21 - 44 - 10 [†]	i	Very small. Teleseismic traces.
-669)	17	03 - 53 - 04	iPb	} Very small. $\Delta b = 542$ Km.
		54 - 05	iSb	
-670)		04 - 41 - 28	iP	Very small. <u>S</u> very uncertain.
-671)		07 - 03 - 47	iPb	} Very small. $\Delta b = 264$ Km.
		04 - 17	iSb	
-672)	✓	07 - 38 - 47	iP	} Moderate to large. Deep focus. $\Delta = 2445$ Km. = $22^{\circ}.0$. $h \sim 400$ Km.
		40 - 13	iP	
		42 - 27	iS	
		44 - 21	iS	
-673)		13 - 17 - 21	iPb	} Very small. $\Delta b = 604$ Km.
		18 - 29 [†]	iSb	
-674)		17 - 10 - 44	iP	} Very small. $\Delta = 2590$ Km. = $23^{\circ}.3$ or 2910 Km. = $26^{\circ}.2$
		14 - 57	iP	
		or 15 - 21	eS	
-675)	18	00 - 34 - 48	iP	} Very small. $\Delta = 4000$ Km. = $36^{\circ}.0$
		- 40 - 35	eS	

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
676)	18	06 - 24 - 34	iP	Moderate to large. $\Delta = 2510 \text{ Km.} = 22^{\circ}.7$
		28 - 41	iS	
677)		09 - 37 - 13 [±]	iPb	Very small. $\Delta b = 138 \text{ Km.}$
		- 29	iSb	
678)		10 - 04 - 32	iPb	Very small. $\Delta b = 318 \text{ Km.}$
		05 - 08	iSb	
679)		22 - 05 - 33 [±]	ePb	Very small. $\Delta b = 121 \text{ Km.}$
		- 05 - 47	iSb	
-680)	19	09 - 20 - 58	iPb	Very small. $\Delta b = 192 \text{ Km.}$
		21 - 20	iSb	
-681)		11 - 32 - 44	iPb	Very small. $\Delta b = 282 \text{ Km.}$
		33 - 16	iSb	
-682)		20 - 41 - 27	iPb	Large. $\Delta = 165^{\pm} \text{ Km.}$ (from after-shock). <u>S</u> indeterminate. <u>S</u> unreadable. <i>felt: IBA, Int. VI</i>
			Sb	
-683)		21 - 54 - 18	iPb	Very small. $\Delta b = 165 \text{ Km.}$
		- 37	iSb	
-684)		22 - 13 - 00	iPb	Small. $\Delta b = 165 \text{ Km.}$
		- 19	iSb	
-685)		23 - 24 - 52 [±]	iPb	Very small. $\Delta b = 165 \text{ Km.}$
		25 - 11	iSb	
-686)	20	00 - 32 - 46 [±]	iPb	Very small. $\Delta b = 156^{\pm} \text{ Km.}$
		33 - 04	iSb	
-687)		00 - 50 - 40 [±]	iPb	Very small. $\Delta b = 165 \text{ Km.}$
		- 59	iSb	
-688)		04 - 25 - 16	eP	Very small. <u>S</u> indeterminate.
-689)		11 - 48 - 44	iPb	Very small. $\Delta b = 856 \text{ Km.}$
		50 - 20	iSb	
-690)		13 - 20 - 45	eP	Very small. $\Delta = 2065^{\pm} \text{ Km.} = 18^{\circ}.6$
		- 24 - 16?	eS	
-691)		17 - 36 - 50	i	Very small. Teleseismic traces.
-692)		17 - 54 - 00 [±]	iPn	Small. $\Delta n = 1152^{\pm} \text{ Km.}$ <u>S</u> difficult.
		56 - 00 [±]	iSn	
-693)	21	04 - 24 - 30	iPb	Very small. $\Delta b = 169 \text{ Km.}$
		- 49	iSb	
-694)		14 - 57 - 57	iP	Very small. $\Delta = 3565 \text{ Km.} = 32^{\circ}.1$
		15 - 03 - 17	eS	
-695)		15 - 41 - 09	iP	Very small. $\Delta = 5235^{\pm} \text{ Km.} = 47^{\circ}.1$. <u>S</u> difficult.
		48 - 07?	eS	
-696)	22	04 - 49 - 32	iPg	Very small. $\Delta g = 117 \text{ Km.}$
		- 46	iSg	
-697)		06 - 00 - 27	iPb	Very small. $\Delta b = 192 \text{ Km.}$
		- 49	iSb	
-698)		14 - 41 - 16	iPb	Very small. $\Delta b = 183 \text{ Km.}$
		- 37	iSb	
-699)		16 - 09 - 45	iPb	Very small. $\Delta b = 138 \text{ Km.}$
		10 - 01	iSb	

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-700)	22	16 - 13 - 34 14 - 02	iPb } iSb }	Very small. $\Delta b = 246$ Km.
-701)	23	04 - 15 - 16 - 53	iPb } iSb }	Small. $\Delta b = 327$ Km.
-702)		04 - 46 - 55 47 - 07	iPg } iSg }	Very small. $\Delta g = 102$ Km.
-703)		09 - 31 - 00	i	Very small. Teleseismic traces.
-704)		09 - 46 - 18	i	Very small. Teleseismic traces.
-705)		14 - 33 - 00 [‡] 34 - 44 [‡]	eP } eS }	Very small. $\Delta n = 995^{\frac{1}{2}}$ Km.
-706)		19 - 20 - 00 [*]	i	Very small. Teleseismic traces, long.
-707)		21 - 58 - 54 22 - 03 - 44 [‡]	eP } eS }	Very small. $\Delta = 3165$ Km. = $28^{\circ}.5$ <u>S</u> difficult.
-708)	24	13 - 03 - 32 - 40	iPg } iSg }	Very small. $\Delta g = 68$ Km.
-709)		13 - 07 - 49 08 - 04	iPb } iSb }	Very small. $\Delta b = 129$ Km.
-710)		15 - 29 - 46 - 30 - 03	iPb } iSb }	Very small. $\Delta b = 148$ Km.
-711)		19 - 00 - 26 03 - 19	iP } iS }	Very small. $\Delta = 1645$ Km. = $14^{\circ}.8$
-712)	25	02 - 40 - 48 41 - 10	iPb } iSb }	Small. $\Delta b = 192$ Km.
-713)		02 - 49 - 50 50 - 12	iPb } iSb }	Small. $\Delta b = 192$ Km.
-714)		03 - 26 - 38 27 - 01	iPb } iSb }	Moderate. $\Delta b = 201$ Km.
-715)		04 - 51 - 06 - 27	iPb } iSb }	Very small. $\Delta b = 183$ Km.
-716)		04 - 53 - 12 [*] - 28	iPb } iSb }	Very small. $\Delta b = 228$ Km.
-717)		07 - 54 - 05 [‡] - 30	iPb } iSb }	Very small. $\Delta b = 224^{\frac{1}{2}}$ Km.
-718)		12 - 51 - 36 - 59	iPb } iSb }	Very small. $\Delta b = 201$ Km.
-719)		16 - 55 - 30 - 54	iPb } iSb }	Very small. $\Delta b = 210$ Km.
-720)		17 - 12 - 11 - 16	iPg } iSg }	Very small. $\Delta g = 41$ Km.
-721)	26	00 - 57 - 00	iS	Small. Short distance. <u>P</u> came while changing records.
-722)		03 - 35 - 18 - 37	iPb } iSb }	Very small. $\Delta b = 165$ Km.
-723)		03 - 51 - 16 [‡] - 32	iPb } iSb }	Very small. $\Delta b = 138^{\frac{1}{2}}$ Km.
-724)		06 - 20 - 56 [‡] 24 - 00 ⁱ	iP } eS }	Very small. $\Delta = 1755^{\frac{1}{2}}$ Km. = $15^{\circ}.8$

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
- 725)	26	15 - 18 - 15	iPb } iSb }	Small. $\Delta b = 255$ Km.
- 726)		17 - 59 - 32	i	Very small. Traces.
- 727)		18 - 14 - 30	i	Very small. Traces.
- 728)		23 - 07 - 32	iPb } iSb }	Very small. $\Delta b = 290$ Km.
		08 - 05		
- 729)	27	08 - 47 - 36	iPb } iSb }	Small. $\Delta b = 165$ Km.
		- 56		
- 730)		12 - 03 - 08	iPb } iSb }	Very small. $\Delta b = 264$ Km.
		- 38		
- 731)		12 - 12 - 53	iPb } iSb }	Very small. $\Delta b = 188$ Km.
		13 - 15		
- 732)		14 - 23 - 22	i	Very small. Traces.
- 733)		16 - 45 - 59	iPb } iSb }	Very small. $\Delta b = 165$ Km.
		46 - 18 $\frac{1}{2}$		
- 734)		21 - 42 - 28	iP	Very small. $\Delta = 2920$ Km. = $26^{\circ}.3$
		47 - 06	eS	
- 735)		23 - 29 - 04	iPb } iSb }	Very small. $\Delta b = 219$ Km.
		- 29		
- 736)	28	02 - 09 - 26	iP } iS }	Very small. $\Delta = 4200$ Km. = $37^{\circ}.8$
		- 15 - 26		
- 737)		06 - 00 - 31	iPb } iSb }	Very small. <i>moderate.</i> $\Delta b = 174$ Km.
		- 51		
- 738)		10 - 05 - 05	iPg } iSg }	Very small. $\Delta g = 33$ Km.
		- 09		
- 739)		11 - 14 - 40	iP } eS }	Very small. $\Delta = 2710$ Km. = $24^{\circ}.4$
		19 - 03		
- 740)		20 - 45 - 50	iPb } iSb }	Very small. $\Delta b = 273$ Km.
		46 - 21		
- 741)	29 ✓	07 - 21 - 44 $\frac{1}{2}$	i	Very small. Traces.
- 742)		11 - 50 - 48	iP } iS }	Very small. $\Delta = 1200$ Km. = $10^{\circ}.8$
		53 - 00		
- 743)	30 ✓	09 - 27 - 44	i	Very small. Teleseismic traces.
- 744)		11 - 27 - 00 $\frac{1}{2}$	i	Very small. Teleseismic traces.
- 745)		14 - 44 - 15	iPb } iSb }	Moderate to large. $\Delta b = 183\frac{1}{2}$ Km. Felt: Aparri iv; Vigan & Baguio ii; Tuguegarao iii.
		- 36 $\frac{1}{2}$		
- 746)	31	12 - 03 - 12	iSg	Very small. Nearby quakes. <u>P</u> unreadable due to typhoon microseisms.
- 747)		14 - 43 - 44	iPg } iSg }	Small. $\Delta g = 50$ Km.
		- 50		
- 748)		16 - 42 - 28	iPg } iSg }	Very small. $\Delta g = 50$ Km.
		- 34		

August coming

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

<u>Type</u>	<u>Component</u>	<u>Period</u>		<u>Magnification (Dynamic)</u> <u>Synchronous</u>
		<u>Seism.</u>	<u>Galv.</u>	
Photographic	Z*	1.41 sec	1.37 sec	Circa 5367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.67 "	2451
Photoelectric	N-S	11.80 "	12.00 "	1000
	E-W	1.54 "	1.49 "	3000

AUGUST 1956

<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-749)	1 10 - 46 - 58	iPg } iSg }	Very small. $\Delta g = 84$ Km.
	- 47 - 08		
-750)	18 - 13 - 16	iPb } iSb }	Very small. $\Delta b = 165$ Km.
	- 35		
-751)	2 00 - 51 - 35	iS	Very small. Nearby. P too small to read.
-752)	07 - 39 - 18	iPb } iSb }	
	40 - 18		Small. $\Delta b = 201$ Km.
-753)	17 - 05 - 14	iPb } iSb }	Small. $\Delta b = 156$ Km.
	- 32		
-754)	19 - 59 - 23	iPb } iSb }	Very small. $\Delta b = 165$ Km.
	- 42		
	3 No quakes.		
-755)	4 09 - 56 - 04	iP } iPp }	Small. Deep focus. $h \sim 500$ Km. $\Delta = 5710$ Km. = $46^{\circ}.0$.
	- 57 - 38		
	10 - 02 - 14	iS } iSs }	
	- 04 - 54		
-756)	19 - 32 - 13	iPb } iSb }	Small. $\Delta b = 291 \pm$ Km.
	- 46		
-757)	5 01 - 32 - 25	iPg } iSg }	Very small. $\Delta g = 76$ Km.
	- 34		
-758)	6 17 - 25 - 41	iPb } iSb }	Very small. $\Delta b = 138$ Km.
	- 57		

(* - Discontinued April 24th, pending repairs.)

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-759)	6	19 - 43 - 28	iPg } iSg }	Very small. $\Delta g = 32$ Km.
-760)		21 - 26 - 54 27 - 24	iPb } iSb }	Very small. $\Delta b = 264$ Km.
-761)		23 - 36 - 16 - 34	iPb } iSb }	Very small. $\Delta b = 156$ Km.
-762)	7	08 - 11 - 30 - 51	iPb } iSb }	Very small. $\Delta b = 183$ Km.
-763)		08 - 38 - 45 39 - 05	iPb } iSb }	Very small. $\Delta b = 174$ Km.
-764)		09 - 35 - 36 - 46	iPg } iSg }	Small. $\Delta g = 84$ Km.
-765)	8	11 - 08 - 49 09 - 03 or 08 - 58	iPb } iSb }	Small, peculiar. $\Delta b = 117$ Km. or $\Delta g = 74$ Km.
-766)	✓ 9	23 - 30 - 00±	i	Very small. Teleseismic traces.
-767)	10	21 - 54 - 16 55 - 56	iPb } iSb }	Small to moderate. $\Delta b = 354$ Km.
-768)	11	02 - 42 - 17± - 21	iPg } iSg }	Very small. $\Delta g = 33±$ Km.
-769)		06 - 00 - 25 - 36	iPg } iSg }	Very small. $\Delta g = 92$ Km.
-770)		10 - 00 - 39± 01 - 15	iPb } iSb }	Very small. $\Delta b = 318±$ Km.
-771)		21 - 32 - 00 04	iPg } iSg }	Very small. $\Delta g = 53$ Km.
-772)	✓ 12	17 - 04 - 50 09 - 20	iP } iS }	Small. $\Delta = 2810$ Km. = $25^{\circ}.3$. S difficult.
-773)		17 - 34 - 10 22	iPg } iSg }	Very small. $\Delta g = 102$ Km.
-774)		23 - 01 - 30 - 43	iPg } iSg }	Small. $\Delta g = 109$ Km.
-775)	13	10 - 55 - 46 56 - 09	iPb } iSb }	Small to moderate. $\Delta b = 201$ Km.
	14	No quakes.		
-776)	✓ 15	05 - 25 - 41 26 - 44 29 - 44± 31 - 32	iP } iP } iS } iS }	Small. $\Delta = 3000-4000$ Km. = $27-28^{\circ}$. Deep focus. $h \sim 300-400$ Km.
-777)	✓	10 - 55 - 08 58 - 20	iP } iS }	Moderate. $\Delta = 1845$ Km. = $16^{\circ}.6$.

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-778)	15	11 - 03 - 34	eP	} Very small. $\Delta = 2000$ Km. = $18^{\circ}.0$.
		07 - 00	iS	
-779)	✓ 13	20 - 44	iP	} Small. $\Delta = 3090$ Km. = $27^{\circ}.8$.
		25 - 34	iS	
-780)	16	09 - 13 - 40	iPg	} Very small. $\Delta_g = 102$ Km.
		52	iSg	
-781)		20 - 26 - 12 \pm	iPb	} Very small. $\Delta_b = 156$ Km.
		30	iSb	
-782)	17	10 - 14 - 18 \pm	iPb	} Very small. $\Delta_b = 121$ Km.
		- 32	iSb	
-783)		11 - 46 - 55	iP	} Very small. S difficult. $\Delta = 2020\pm$ Km. = $19^{\circ}.1$.
		50 - 30 \pm	eS	
-784)		14 - 20 - \pm	i	} Very small. Teleseism. Phases difficult.
-785)		21 - 36 - 11	iPg	
		- 20	iSg	} Very small. $\Delta_g = 76$ Km.
-786)	18	03 - 15 - 20	iPg	} Very small. $\Delta_g = 23$ Km.
		- 24	iSg	
-787)		06 - 54 - 47	iPb	} Very small. $\Delta_b = 201$ Km.
		55 - 10	iSb	
-788)		07 - 06 - 16	iPg	} Very small. $\Delta_g = 102$ Km.
		- 28	iSg	
-789)		14 - 18 - 23	iP	} Very small. S too difficult. Teleseismic.
-790)		22 - 08 - 58	iPb	
		- 09 - 14	iSb	} Very small. $\Delta_b = 138$ Km.
-791)	✓ 19	05 - 25 - 40	i	} Very small. Teleseism. Phases unreadable.
-792)	✓ 20	05 - 54 - 32	iP	} Very small. $\Delta = 6580\pm$ Km. = $59^{\circ}.2$.
		06 - 02 - 46	iS	
-793)		07 - 06 - 15	iPg	} Very small. $\Delta_b = 560$ Km.
		07 - 18	iSg	
-794)		16 - 55 - 45	iPg	} Very small. $\Delta_g = 102$ Km.
		57	iSg	
-795)		18 - 12 - 19	iPb	} Small. $\Delta_b = 170$ Km.
		- 38	iSb	
-796)		18 - 22 - 53	iPb	} Small. $\Delta_b = 219$ Km.
		23 - 18	iSb	
-797)		23 - 42 - 16	iPb	} Small. $\Delta_b = 138$ Km.
		- 32	iSb	
-798)	21	05 - 14 - 52	iPb	} Very small. $\Delta_b = 129$ Km.
		15 - 07	iSb	
-799)		05 - 57 - 43	iPg	} Very small. $\Delta_g = 76$ Km.
		- 52	iSg	
-800)		09 - 58 - 02	iPg	} Very small. $\Delta_g = 109$ Km.
		- 15	iSg	

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-801)	✓ 21	11 - 34 - 09 40 - 36±	iP } eS }	Very small. $\Delta = 4680 \pm$ Km. = $42^\circ.1$.
-802)		18 - 42 - 50 43 - 55	iP } iS }	Very small. $\Delta b = 578$ Km.
-803)	22	00 - 21 - 53 22 - 13	iPb } iSb }	Very small. $\Delta b = 174$ Km.
-804)		11 - 36 - 08 44 - 00±	iP } eS }	Very small. $\Delta = 6200 \pm$ Km. = $55^\circ.8$.
-805)		14 - 46 - 49 47 - 01±	iPg } eSg }	Very small. $\Delta g = 102$ Km.
-806)		17 - 16 - 46	iP	Very small. Teleseismic. S difficult.
-807)	✓	19 - 45 - 52	iP	Very small. Teleseismic. S difficult.
-808)	23	12 - 27 - 54 28 - 23	iPb } iSb }	Very small. $\Delta b = 255$ Km.
-809)		13 - 24 - 28 - 48	iPb } iSb }	Very small. $\Delta b = 174$ Km.
-810)	✓	14 - 08 - 31 17 - 30±	eP } eS }	Very small. $\Delta = 7455 \pm$ Km. = $67^\circ.1$.
×811)		15 - 00 - ff.		Long wave traces of teleseism. 1/2 hr.
-812)		15 - 34 - 50 35 - 10	iPb } iSb }	Very small. $\Delta b = 174$ Km.
-813)		16 - 25 - 32 - 48	iPb } iSb }	Very small. $\Delta b = 138$ Km.
-814)		18 - 54 - 14	iS	Very small. P indiscernible.
-815)		19 - 07 - 51 - 40	iPg } iSg }	Very small. $\Delta g = 74$ Km.
-816)		21 - 59 - 39 - 49	iPg } iSg }	Very small. $\Delta g = 84$ Km.
-817)	✓ 24	04 - 37 - 00 44 - 56	iP } eS }	Small to moderate. $\Delta = 6265$ Km. = $56^\circ.4$.
-818)		08 - 37 - 58	iP	Very small. S difficult.
-819)		15 - 39 - 12± - 24	iPg } eSg }	Very small. $\Delta g = 102 \pm$ Km.
-820)	25	00 - 26 - 52 30 - 25	eP } eS }	Very small. $\Delta = 2090$ Km. = $18^\circ.8$.
-821)		09 - 57 - 05 - 18	iPg } iSg }	Very small. $\Delta b = 109$ Km.
-822)	26	11 - 23 - 11 19	iPg } iSg }	Very small. $\Delta g = 68$ Km.
-823)		16 - 33 - 21 - 45	iPb } iSb }	Very small. $\Delta b = 210$ Km.
×824)		21 - 30 - ff.	i	Very small. Teleseismic 1 hr. traces.
-825)		22 - 52 - 45 53 - 32	iPb } iSb }	Very small. $\Delta b = 417$ Km.
-826)		25 - 22 - 52	i	Very small. Probably local.

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
- 827)	27	07 - 55 - 26	i	Very small. Phases difficult.
- 828)		07 - 58 - 14	i	Very small. Phases difficult.
- 829)		11 - 36 - 22±	iPb	} Very small. $\Delta b = 165$ Km.
		- 41	iSb	
- 830)		15 - 45 - 20	iPb	} Very small. $\Delta b = 515$ Km.
		46 - 18	iSb	
- 831)		20 - 18 - 35	iPb	} Very small. $\Delta b = 156$ Km.
		- 53	iSb	
- 832)		21 - 34 - 01±	iPb	} Very small. $\Delta b = 192\pm$ Km.
		- 23	iSb	
- 833)	28	10 - 44 - 24	iPg	} Very small. $\Delta g = 41$ Km.
		29	iSg	
- 834)		17 - 36 - 55±	iPb	} Very small. Heavy micros. $\Delta b = 389$ Km.
		57 - 39±	iSb	
	29	No quakes.		
	30	No quakes.		
- 835)	31	15 - 26 - 41	iPg	} Very small. $\Delta g = 50$ Km.
		- 47	iSg	
- 836)		22 - 09 - 04	iP	Very small. S indeterminate.
- 837)		23 - 12 - 17	iP	Very small. S indeterminate.

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September copies

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

<u>Type</u>	<u>Component</u>	<u>Period</u>		<u>Magnification (Dynamic)</u> <u>Synchronous</u>
		<u>Seism.</u>	<u>Galv.</u>	
Photographic	Z*	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.67 "	2451
Photoelectric	N-S	11.80 "	12.00 "	1000
	Visual Recording	E-W	1.54 "	1.49 "

SEPTEMBER 1956

13 MAY 1963
13 MAY 1963

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-838)	1	00 - 27 - 09± - 21±	iPg } iSg }	Very small. $\Delta g = 102 \pm$ Km. Heavy micros.
-839)	2	07 - 05 - 34± - 40±	iPg } iSg }	Very small. $\Delta g = 50 \pm$ Km.
-840)		07 - 17 - 16± - 21±	iPg } iSg }	Very small. $\Delta g = 41 \pm$ Km.
-841)		07 - 23 - 40 24 - 04	iPb } iSb }	Very small. $\Delta b = 210 \pm$ Km.
-842)		07 - 45 - 36± - 57	iPb } iSb }	Very small. $\Delta b = 183 \pm$ Km.
-843)		22 - 56 - 20± - 30±	iPg } iSg }	Very small. $\Delta g = 84 \pm$ Km.
-844)	3	09 - 50 - 12 - 50±	iPb } eSb }	Small. Large micros. $\Delta b = 336 \pm$ Km.
-845)		14 - 58 - 30 15 - 00 - 42±	iP } eS }	Very small. $\Delta = 1200 \pm$ Km. = $10^0.8$.
-846)	4	19 - 53 - 18±	iP	Small. S very difficult.
-847)		23 - 23 - 40 - 24 - 20±	iPb } iSb }	Small. $\Delta b = 354 \pm$ Km.
-848)	5	04 - 37 - 10 - 37 or 50±	iPb } iSb }	Small. $\Delta b = 237 \pm$ or $336 \pm$ Km.
-849)		05 - 02 - 52± 03 - 10	iPb } iSb }	Very small. $\Delta b = 156 \pm$ Km.

* Discontinued April 24th, pending repairs.

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-850)	5	12 - 28 - 31 28 - 54 or 29 - 00±	iPb } iSb }	Very small. $\Delta b = 201\pm$ or $255\pm$ Km.
-851)		16 - 14 - 26± - 48	iPb } iSb }	Very small. $\Delta b = 192\pm$ Km.
-852)		21 - 07 - 59 08 - 06	iPg } iSb }	Very small. $\Delta g = 58$ Km.
-853)		21 - 53 - 14 - 32	iPb } iSb }	Small. $\Delta b = 106$ Km.
-854)		23 - 14 - 03	i	Very small. Teleseismic traces.
-855)		23 - 39 - 57 - 43	iPg } iSg }	Very small. $\Delta g = 50$ Km.
-856)	6	06 - 14 - 09 - 26	iPb } iSb }	Very small. $\Delta b = 148$ Km.
-857)		10 - 23 - 27 24 - 00	iPb } iSb }	Very small. $\Delta b = 291$ Km.
-858)		10 - 46 - 57	i	Very small. Traces.
-859)		11 - 59 - 14 - 28±	iPb } iSb }	Very small. $\Delta b = 121$ Km.
-860)		23 - 19 - 15	i	Very small. Seismic traces.
-861)	7	00 - 30 - 59 31 - 31	iPb } iSb }	Very small. $\Delta b = 281$ Km.
-862)		04 - 05 - 17± - 22	iPg } iSg }	Very small. $\Delta g = 41\pm$ Km.
-863)		07 - 15 - 58 - 16 - 01	iPg } iSg }	Very small. $\Delta g = 23\pm$ Km.
-864)		11 - 23 - 27 - 48	iPb } iSb }	Small. $\Delta b = 178$ Km.
-865)		12 - 34 - 13± - 41	iPb } eSb }	Very small. $\Delta b = 246\pm$ Km.
-866)		13 - 12 - 31	i	Very small. Traces.
-867)		14 - 10 - 25 - 37	iPg } iSg }	Very small. $\Delta g = 102$ Km.
-868)		21 - 59 - 31 - 47	iPb } iSb }	Very small. $\Delta b = 138$ Km.
-869)	8	10 - 17 - 56 - 18 - 11	iPb } iSb }	Very small. $\Delta b = 129$ Km.
-870)	9	11 - 28 - 47 29 - 05±	iPb } iSb }	Very small. $\Delta b = 156$ Km.
-871)		17 - 38 - 51 42 - 13±	iP } eS }	Small. $\Delta = 1955\pm$ Km. = $17^\circ.6$. Heavy micros.
-872)	10	12 - 37 - 02 41 - 13±	iP } iS }	Very small. $\Delta = 2565\pm$ Km. = $23^\circ.1$.
-873)	11	02 - 43 - 26± - 52 - 08±	iP } eS }	Very small. $\Delta = 7090\pm$ Km. = $63^\circ.8$.

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-874)	11	05 - 56 - 21 [±]	iP	} Very small. $\Delta = 2355$ Km. = 21 ^o .2.
		06 - 00 - 15	eS	
-875)		15 - 54 - 00 [±]	iP	} Very small. $\Delta = 6380^{\pm}$ Km. = 57 ^o .4.
		16 - 02 - 02 [±]	eS	
-876)		17 - 16 - 48 [±]	iPb	} Very small. $\Delta b = 372^{\pm}$ Km.
		17 - 30	iSb	
-877)		22 - 12 - 03	iP	} Very small. $\Delta = 1248^{\pm}$ Km. = 38 ^o .2.
		18 - 06 [±]	iS	
-878)	12	06 - 10 - 44	iPg	} Moderate. $\Delta g = 102$ Km.
		- 56	iSg	
-879)		08 - 24 - 10 [±]	iPb	} Very small. $\Delta b = 156^{\pm}$ Km.
		- 28 [±]	iSb	
-880)		13 - 30 - 34 [±]	i	Very small. Traces.
-881)		20 - 08 - 00 [±]	i	Very small. Traces.
-882)		23 - 20 - 51	iPb	} Very small. $\Delta b = 174$ Km.
		21 - 17	iSb	
-883)	13	11 - 41 - 11	iS	Very small. Local. P unreadable.
-884)		11 - 48 - 36	iPb	} Very small. $\Delta b = 138$ Km.
		- 52	iSb	
-885)		13 - 57 - 20	iP	} Very small. $\Delta = 1655$ Km. = 14 ^o .9.
		14 - 00 - 14	iS	
-886)		15 - 18 - 00 [±]	i	Very small. Traces.
-887)		15 - 54 - 51	iPg	} Small. $\Delta g = 109$ Km.
		55 - 04	iSg	
-888)		17 - 48 - 38	iPg	} Very small. $\Delta g = 84$ Km.
		- 48	iSg	
-889)		18 - 02 - 32	iPb	} Very small. $\Delta b = 160$ Km.
		- 51	iSb	
-890)		18 - 55 - 36	iPg	} Very small. $\Delta g = 102$ Km.
		- 48	iSg	
-891)		19 - 23 - 20	iPb	} Very small. $\Delta b = 174$ Km.
		- 40	iSb	
-892)		22 - 50 - 08	iPb	} Very small. $\Delta b = 156$ Km.
		- 26	iSb	
-893)	14	02 - 25 - 32 [±]	eP	} Very small. $\Delta = 1152^{\pm}$ Km.
		27 - 32 [±]	eS	
-894)		03 - 48 - 12	iPb	} Very small. $\Delta b = 129$ Km.
		- 37	iSb	
-895)		07 - 50 - 57	iPb	} Very small. $\Delta b = 183$ Km.
		51 - 18	iSb	
-896)		08 - 08 - 24	iPb	} Very small. $\Delta b = 174$ Km.
		- 44	iSb	
-897)		15 - 44 - 52	iPb	} Small. $\Delta b = 299$ Km.
		45 - 26	iSb	
-898)	15	02 - 58 - 08	iPb	} Very small. $\Delta b = 129$ Km.
		- 23	iSb	
-899)		07 - 59 - 09 [±]	iP	} Very small. $\Delta = 3455^{\pm}$ Km. = 31 ^o .1.
		08 - 04 - 22 [±]	eS	

Date	Time (GMT)	Phase	Remarks
-900)	15 10 - 37 - 18	iPg	} Very small. $\Delta g = 76$ Km.
	- 27	iSg	
-901)	12 - 41 - 52	iPb	} Very small. $\Delta b = 372$ Km.
	42 - 34	iSb	
-902)	14 - 14 - 52	iPb	} Very small. $\Delta b = 389$ Km.
	15 - 36	iSb	
-903)	17 - 58 - 04	iPb	} Very small. $\Delta b = 121$ Km.
	- 18	iSb	
-904)	18 - 55 - 37	iPg	} Very small. $\Delta g = 76$ Km.
	- 46	iSg	
-905)	19 - 28 - 56	iPb	} Very small. $\Delta b = 165$ Km.
	30 - 17	iSg	
-906)	21 - 18 - 12	iPg	} Very small. $\Delta g = 23$ Km.
	- 16	iSg	
-907)	16 08 - 46 - 12	iP	} Small to moderate. $\Delta = 5345 \pm$ Km. = $48^\circ.1.$
	53 - 16	iS	
-908)	13 - 36 - 41	iPg	} Very small. $\Delta g = 58$ Km.
	- 48	iSg	
-909)	17 05 - 25 - 45	iPg	} Small to moderate. $\Delta g = 84$ Km.
	- 55	iSg	
-910)	09 - 03 - 48 \pm	iS	} Very small. Probably nearby quake. iP not large enough.
-911)	10 - 43 - 47 \pm	iP	
	44 - 17 \pm	eS	
-912)	10 - 46 - 29 \pm	iPg	} Very small. $\Delta g = 41 \pm$ Km.
	- 34	iSg	
-913)	11 - 02 - 53	iPb	} Small. $\Delta b = 569$ Km. Felt Legaspi.
	03 - 57	iSb	
-914)	12 - 41 - 45	iPg	} Very small. $\Delta g = 41$ Km.
	- 50	iSg	
-915)	15 - 46 - 25	iPb	} Very small. $\Delta b = 165$ Km.
	- 44	iSb	
-916)	19 - 15 - 29	iPg	} Very small. $\Delta g = 102$ Km.
	- 41	iSg	
-917)	20 - 24 - 37	iPg	} Very small. $\Delta g = 50$ Km.
	- 43	iSg	
-918)	18 15 - 11 - 01	iS	} Very small. iP not readable. Nearby quake.
-919)	19 - 17 - 29 \pm	iPg	
	- 35 \pm	iSg	
-920)	21 - 18 - 38	iPg	} Very small. $\Delta g = 76$ Km.
	- 47	iSg	
-921)	21 - 29 - 24	iPb	} Small. $\Delta b = 121$ Km.
	- 38	iSb	
-922)	22 - 03 - 16	iPb	} Very small. $\Delta b = 219$ Km.
	- 41	iSb	
-923)	22 - 12 - 10 \pm	iPg	} Very small. $\Delta g = 84$ Km.
	20	iSg	
-924)	22 - 15 - 24	i	} Very small. Traces.

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-925)	19	01 - 05 - 48	iPb } iSb }	Very small. $\Delta b = 246$ Km.
		06 - 16	i	
-926)		12 - 44 - 28	i	Very small. Traces.
-927)		18 - 57 - 46 \pm	iPg } iSg }	Very small. $\Delta g = 58\pm$ Km.
		- 53 \pm		
-928)		23 - 53 - 10	eP } eS }	Small. $\Delta = 3465\pm$ Km. = $31^{\circ}.2$.
		58 - 24 \pm		
-929)	20	02 - 59 - 43	iPb } iSb }	Very small. $\Delta b = 143$ Km.
		03 - 00 - 00		
-930)		04 - 24 - 50	iPb } iSb }	Very small. $\Delta b = 380$ Km.
		- 25 - 33		
-931)		10 - 54 - 36	i	Very small. Traces.
-932)		14 - 20 - 00	iPb } iSb }	Small. $\Delta b = 219$ Km.
		- 25		
-933)		06 - 00 - 31	i	Very small. Teleseismic traces; phases difficult.
		16?		
-934)	21	08 - 28 - 54	iPb } iSb }	Very small. $\Delta b = 129$ Km.
		- 49		
-935)		23 - 38 - 41	iPb } iSb }	Very small. $\Delta b = 121$ Km.
		- 55		
-936)	22	03 - 51 - 59	iS	Very small. P doubtful.
-937)		05 - 45 - 55	i	Very small. Traces.
-938)		11 - 00 - 21	i	Very small. Traces.
-939)		11 - 04 - 36	iPg } iSg }	Very small. $\Delta g = 50$ Km.
		- 42		
-940)	23	05 - 26 - 39	iPb } iSb }	Very small. $\Delta b = 444$ Km.
		27 - 29		
-941)	24	07 - 22 - \pm	i	Very small. Teleseismic traces.
-942)		08 - 26 - 22	iS	Very small. P too small to measure.
-943)		10 - 29 - 40 \pm	iP	Very small. S uncertain.
-944)	25	00 - 04 - 30	iPb } iSb }	Very small. $\Delta b = 587$ Km.
		- 05 - 36		
-945)		04 - 01 - 48	iPg } iSg }	Very small. $\Delta g = 102$ Km.
		02 - 00		
-946)		07 - 44 - 52	iPb } iSb }	Small. $\Delta b = 721$ Km.
		46 - 13		
-947)		09 - 40 - 42	iPb } iSb }	Small. $\Delta b = 583$ Km.
		41 - 47		
-948)	26	03 - 39 - 06	iPb } iSb }	Very small. $\Delta g = 23$ Km.
		- 09		
-949)		05 - 09 - 20 \pm	eP } eS }	Very small. $\Delta = 2735\pm$ Km. = $24^{\circ}.6$.
		13 - 44 \pm		
-950)		10 - 49 - 54	iPb } iSb }	Very small. $\Delta b = 148$ Km.
		50 - 11		

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-951)	26	11 - 53 - 06	iPg	} Very small. $\Delta_g = 84$ Km.
		- 16	iSg	
-952)		13 - 56 - 56	iPb	} Very small. $\Delta_b = 156$ Km.
		57 - 14	iSb	
-953)	27	04 - 00 - 09	iPb	} Very small. $\Delta_b = 246$ Km.
		37	iSb	
-954)		21 - 06 - 58	iPb	} Very small. $\Delta_b = 246$ Km.
		07 - 26	iSb	
-955)		25 - 40 - 46 \pm	iPb	} Very small. $\Delta_b = 228\pm$ Km.
		41 - 12	iSb	
-956)	28	04 - 47 - 58	iPn	} Very small. $\Delta_n = 1113$ Km.
		49 - 54	iSn	
-957)	29	05 - 59 - 03	iP	} Small. $\Delta = 1810$ Km. = $16^\circ.3$.
		04 - 02 - 12	iS	
-958)		09 - 09 - 30	iP	} Small. $\Delta = 2845$ Km. = $25^\circ.6$.
		14 - 02	iS	
-959)		21 - 26 - 40	iP	} Very small. $\Delta = 2920\pm$ Km. = $26^\circ.3$.
		31 - 18 \pm	eS	
-960)		22 - 26 - 27	iP	} Small. Possibly deep focus. Tentative. $\Delta = 1745\pm$ Km. = $15^\circ.7$.
		- 29 - 30?	eS	
-961)		23 - 26 - 17	iP	} Small. $\Delta = 4055\pm$ Km. = $36^\circ.5$.
		32 - 08 \pm	eS	
-962)		23 - 37 - 12	i	} Small. May be part of previous quake or iS of another. Puzzling. May be T Phase of previous quake.
-963)	30	04 - 05 - 38	iPb	} Very small. $\Delta_b = 136$ Km.
		- 54	iSb	
-964)		04 - 34 - 42	iPb	} Very small. $\Delta_b = 121$ Km.
		- 56	iSb	
-965)		04 - 38 - 39	iPb	} Very small. $\Delta_b = 121$ Km.
		- 53	iSb	
-966)		14 - 46 - 53	iP	} Small. Deep focus. $\Delta = 2665$ Km. = $24^\circ.0$. h \sim 140 Km.
		47 - 21	iP	
		51 - 01	iS	
		51 - 49	iSS	

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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

<u>Type</u>	<u>Component</u>	<u>Period</u>		<u>Magnification (Dynamic)</u>	
		<u>Seism.</u>	<u>Galv.</u>	<u>Synchronous</u>	
Photographic	Z*	1.41 sec	1.37 sec	Circa	3367
	E-W	10.90 "	11.70 "		2000
	N-S	1.84 "	1.67 "		2451
Photoelectric	N-S	11.80 "	12.00 "		1000
	Visual Recording	E-W	1.54 "	1.49 "	3000

OCTOBER 1956

<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
1	No quakes.		
- 967)	2 04 - 19 - 40	iPb } iSb }	Very small. $\Delta b = 141$ Km.
- 968)	15 - 05 - 00	iP } iS }	Very small. $\Delta = 5100$ Km. = $45^\circ .9$.
- 969)	17 - 34 - 29	iPg } iSg }	Very small. $\Delta g = 102$ Km.
- 970)	3 10 - 23 - 23	iPb } iSb }	Very small. $\Delta b = 623$ Km.
- 971)	08 - 36 - 33*	i } iPg }	Very small. Phase not very clear.
- 972)	15 - 12 - 45	iPg } iSg }	Very small. $\Delta g = 58$ Km.
- 973)	4 14 - 42 - 29	iPb } iSb }	Very small. $\Delta b = 855$ Km.
- 974)	20 - 05 - 09	iPb } iSb }	Small to moderate. $\Delta b = 308$ Km.
- 975)	5 00 - 00 - 46	iS	Very small. P too small to measure.
- 976)	00 - 06 - 32	iPg } iSg }	Very small. $\Delta g = 84$ Km.
- 977)	01 - 54 - 04	iPb } iSb }	Very small. $\Delta b = 183$ Km.

* Discontinued April 24th, pending repairs.

Date	Time (GMT)	Phase	Remarks
-978)	5 04 - 08 - 32	iPb	Very small. $\Delta b = 237$ Km.
	- 59	iSb	
-979)	10 - 16 - 18	iPb	Very small. $\Delta b = 246$ Km.
	- 46	iSb	
-980)	10 - 59 - 18	i	Very small. Traces.
-981)	21 - 46 - 58	iPb	Very small. $\Delta b = 201$ Km.
	47 - 21	iSb	
-982)	21 - 52 - 43 [±]	i	Very small. Traces.
-983)	22 - 41 - 11	iPb	Very small. $\Delta b = 273$ Km.
	- 42	iSb	
-984)	6 06 - 19 - 33	iP	Very small. Slightly deep focus. $\Delta = 1690$ Km. = $15^{\circ}.2$.
	22 - 31	eS	
-985)	18 - 57 - 05	iPb	Very small. $\Delta b = 121$ Km.
	- 19	iSb	
-986)	7 04 - 18 - 18	iPn	Very small. $\Delta n = 1163$ Km. Felt:- Surigao III; Mambajao I.
	20 - 19	iSn	
-987)	15 - 49 - 11	iPg	Very small. $\Delta g = 23$ Km.
	- 14	iSg	
-988)	16 - 13 - 59	iPg	Very small. $\Delta g = 23$ Km.
	14 - 02	iSg	
-989)	19 - 08 - 31	i	Very small.
-990)	19 - 14 - 42	iPg	Very small. $\Delta g = 58$ Km.
	- 49	iSg	
-991)	21 - 37 - 14	iP	Small. $\Delta = 5910$ Km. = $53^{\circ}.2$.
	44 - 50	iS	
-992)	8 04 - 34 - 00	iP	Very small. $\Delta = 2455$ Km. = $22^{\circ}.1$.
	- 38 - 02	iS	
-993)	06 - 57 - 43	iP	Very small. S difficult.
-994)	13 - 13 - 28	iPb	Very small. $\Delta b = 148$ Km.
	- 45	iSb	
-995)	15 - 07 - 33	iP	Very small. S difficult. Teleseismic.
-996)	17 - 23 - 53	iPb	Small. Probably deep focus. $\Delta b = 685$ Km.
	25 - 10	iSb	
-997)	9 04 - 06 - 37	i	Very small. Teleseismic?
-998)	09 - 54 - 01	iPb	Very small. $\Delta b = 497^{\pm}$ Km.
	- 57 [±]	iSb	
-999)	15 - 57 - 50	iPb	Very small. $\Delta b = 192$ Km.
	58 - 12	iSb	
-1000)	16 - 56 - 36	iP	Very small. $\Delta = 2900$ Km. = $26^{\circ}.1$.
	17 - 01 - 12	eS	
-1001)	17 - 20 - 19	i	Very small. Difficult to find phases.
-1002)	10 12 - 29 - 01	iPb	Very small. $\Delta b = 174$ Km.
	- 21	iSb	
-1003)	13 - 51 - 51	iPb	Very small. $\Delta b = 336$ Km.
	52 - 29	iSb	
-1004)	21 - 33 - 44	iPg	Very small. $\Delta g = 68$ Km.
	- 52	iSg	

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	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-1005)	11	02 - 20 - 51	iPb } iSb }	Small. $\Delta b = 246$ Km.
-1006)		21 - 19	iPb } iSb }	
-1006)		02 - 31 - 51	iP ✓ } iS ✓ }	Moderate to large. Dilat. to NE (Kuriles?) $\Delta = 4035$ Km. = $36^{\circ}.3$.
-1007)		37 - 41	iPb [±] } iSb }	Very small. $\Delta b = 192$ Km.
-1007)		10 - 08 - 31	iPb [±] } iSb }	
-1008)		- 53	iPb [±] } iSb }	
-1008)		11 - 00 - 40 [±]	iPg } iSg }	Very small. $\Delta g = 41^{\pm}$ Km.
-1008)		- 45	iPg } iSg }	
-1009)		17 - 02 - 21 [±]	eP ✓ } eS ✓ }	Small. $\Delta = 9210$ Km. = $82^{\circ}.9$. Tentative only.
-1009)		12 - 40 [±]	eP ✓ } eS ✓ }	
-1010)		19 - 30 - 02	iPb } iSb }	Very small. $\Delta b = 246$ Km.
-1010)		- 30	iPb } iSb }	
-1011)	12	02 - 57 - 49 [±]	i ✓	Small. Phases difficult.
-1012)		04 - 23 - 45	iPb } iSb }	Very small. $\Delta b = 183$ Km.
-1012)		24 - 06	iPb } iSb }	
-1013)		12 - 29 - 15 [±]	iP ✓ } eS ✓ }	Very small. $\Delta = 3700$ Km. = $35^{\circ}.3$.
-1013)		34 - 44	iP ✓ } eS ✓ }	
-1014)		14 - 07 - 27	iPg } iSg }	Very small. $\Delta g = 74$ Km.
-1014)		- 36	iPg } iSg }	
-1015)		19 - 59 - 29	iPb } iSb }	Very small. $\Delta b = 426$ Km.
-1015)		20 - 00 - 17	iPb } iSb }	
-1016)	13	08 - 27 - 11	iPb } iSb }	Very small. $\Delta b = 156$ Km.
-1016)		- 29	iPb } iSb }	
-1017)		12 - 21 - 38	iPb } iSb }	Very small. $\Delta b = 138$ Km.
-1017)		- 54	iPb } iSb }	
-1018)		15 - 20 - 30 ✓	i	Very small. Teleseismic traces.
-1019)		18 - 39 - 48	iPb } iSb }	Very small. $\Delta b = 264$ Km.
-1019)		40 - 18	iPb } iSb }	
-1020)		19 - 00 - 52 ✓	i	Very small. Phases difficult.
-1021)		22 - 01 - 17	iPb } iSb }	Small. $\Delta g = 109$ Km.
-1021)		- 30	iPb } iSb }	
-1022)	14	00 - 14 - 00 [±]	i	Very small. Traces.
-1023)		01 - 41 - 27	iPb } iSb }	Very small. $\Delta b = 174$ Km.
-1023)		- 47	iPb } iSb }	
-1024)		08 - 29 - 17	iPg } iSg }	Very small. $\Delta g = 102$ Km.
-1024)		29	iPg } iSg }	
-1025)		11 - 24 - 17 [±]	iPg } iSg }	Very small. $\Delta g = 50$ Km.
-1025)		- 23	iPg } iSg }	
-1026)		12 - 16 - 47	iPb } iSb }	Small to moderate. $\Delta b = 183$ Km.
-1026)		17 - 08	iPb } iSb }	
-1027)		22 - 08 - 29	iPg } iSg }	Very small. $\Delta g = 23$ Km.
-1027)		- 32	iPg } iSg }	
-1028)		23 - 45 - 25	iPb } iSb }	Very small. $\Delta b = 121$ Km.
-1028)		- 39	iPb } iSb }	
-1029)	15	09 - 47 - 50	iP	Small to moderate. Probably deep focus. Phases difficult. Felt Mambajao II.

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-1030)	16	03 - 01 - 45 \pm 02 - 40 \pm	ipb } eSb }	Small. $\Delta b = 488\pm$ Km.
-1031)		03 - 06 - 47 - 07 - 49 \pm	ipb } eSb }	Very small. $\Delta b = 551$ Km.
-1032)		08 - 30 - 45 - 57	ipg } iSg }	Very small. $\Delta g = 102$ Km.
-1033)		22 - 10 - 11 - 35	ipb } iSb }	Very small. $\Delta b = 210$ Km.
-1034)	17	06 - 11 - 23 12 - 03	ipb } iSb }	Very small. $\Delta b = 354$ Km.
-1035)		06 - 20 - 27 - 21 - 05	ipb } iSb }	Small. $\Delta b = 336$ Km.
-1036)	18	00 - 09 - 12 - 36	ipb } iSb }	Very small. $\Delta b = 121$ Km.
-1037)		03 - 29 - 45 32 - 20 \pm	ip } eS }	Very small. $\Delta = 1465\pm$ Km. = $13^{\circ}.2$.
-1038)		15 - 25 - 04	i	Very small. Near N coast Mindanao, P.I.
-1039)		18 - 35 - 12 - 23	ipg } iSg }	Very small. $\Delta g = 94$ Km.
-1040)	19	02 - 38 - 27 39 - 01	ipb } iSb }	Small to moderate. $\Delta b = 299$ Km.
-1041)		10 - 58 - 18	i	Very small.
-1042)		12 - 10 - 49 \pm - 57 \pm	ipg } eSg }	Small. Heavy micros. Typhoon Jean. $\Delta g = 68$ Km.
-1043)		21 - 08 - 01 - 08 - 14	ipg } eSg }	Small. Micros. too large. $\Delta b = 109\pm$ Km.
20	No apparent quakes. Typhoon Jean. Large micros.			
21	No apparent quakes. Typhoon Jean. Large micros.			
-1044)	22	07 - 59 - 06 - 09	ipg } iSg }	Very small. $\Delta g = 23$ Km.
-1045)		12 - 42 - 39 48 - 33 \pm	ip } eS }	Very small. $\Delta = 4110\pm$ Km. = $37^{\circ}.0$. Deep focus.
-1046)		13 - 12 - 05 - 35	ipb } iSb }	Small. $\Delta b = 246$ Km.
-1047)		20 - 41 - 55 - 42 - 12	ipb } iSb }	Small. $\Delta b = 148$ Km.
-1048)		21 - 28 - 25 39	ipb } iSb }	Very small. $\Delta b = 121$ Km.
-1049)	23	08 - 42 - 09	i	Large. S too faint & difficult.
-1050)		10 - 33 - 52 35 - 10	ipb } iSb }	Very small. $\Delta b = 694$ Km.
-1051)		10 - 12 - 28 \pm	iS	Very small. p?

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-1052)	24	01 - 08 - 57	i	Very small. Occurred while changing photogr. records.
-1053)		04 - 23 - 52	iPg	} Very small. $\Delta g = 76$ Km.
		24 - 01	iSg	
-1054)		15 - 01 - 39	iP	Small. Perhaps very distant quake.
-1055)		17 - 30 - 43	iPg	} Very small. $\Delta g = 68$ Km.
		- 51	iSg	
-1056)		20 - 13 - 43	iPb	} Very small. $\Delta b = 308$ Km.
		14 - 18	iSb	
-1057)	25	17 - 12 - 19	iPg	} Very small. $\Delta g = 92$ Km.
		- 30	iSg	
-1058)		22 - 23 - 58	iPb	} Very small. $\Delta b = 237$ Km.
		24 - 25	iSb	
-1059)	26	08 - 59 - 54	iP	} Small to mod. Compr. $\Delta = 2555$ Km. = $23^{\circ}.0$. Deep focus?
		09 - 04 - 04	iS	
-1060)		22 - 59 - 55	iP	} Small. Compr. $\Delta = 6020$ Km. = $54^{\circ}.2$.
		07 - 37	iS	
-1061)	27	12 - 16 - 43	iPb	} Small. $\Delta b = 389$ Km.
		17 - 27	iSb	
-1062)		12 - 22 - 08	i	Very small.
-1063)		13 - 13 - 47	iPb	} Small. $\Delta b = 121$ Km.
		14 - 01	iSb	
-1064)		15 - 10 - 53	iPb	} Small. $\Delta g = 33$ Km.
		- 57	iSb	
-1065)		22 - 41 - 06	iPb	} Very small. $\Delta b = 730$ Km.
		42 - 28 [±]	eSb	
-1066)	28	03 - 40 - 26	iP	} Small. $\Delta = 8300$ Km. = $74^{\circ}.7$.
		50 - 06	eS	
-1067)		10 - 46 - 04	iPb	} Large. For S see aftershocks. Felt Daet int. VI.
			S?	
-1068)		10 - 55 - 26	iPb	} Small. Aftershock. $\Delta b = 372$ Km.
		56 - 18	iSb	
-1069)		12 - 22 - 43	iPb	} Small. Aftershock. $\Delta b = 380$ Km.
		23 - 26	iSb	
-1070)		12 - 37 - 35	iPb	} Very small. $\Delta b = 380$ Km. Aftershock.
		38 - 18	iSb	
-1071)		12 - 49 - 21	iPb	} Very small. Aftershock. $\Delta b = 406$ Km.
		50 - 05	iSb	
-1072)		15 - 28 - 26	iPb	} Large. Aftershock. $\Delta b = 406$ Km.
		29 - 10	iSb	
-1073)		14 - 02 - 54	iPb	} Small to moderate. Aftershock. $\Delta b = 406$ Km.
		03 - 38	iSb	
-1074)		15 - 14 - 54	iPb	} Very small. $\Delta b = 372$ Km.
		15 - 36	iSb	
-1075)		18 - 43 - 53	iPb	} Very small. $\Delta b = 372$ Km.
		44 - 35	iSb	
-1076)		19 - 57 - 37	iPb	} Very small. Aftershock. $\Delta b = 372$ Km.
		58 - 19	iSb	

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-1077)	28	20 - 18 - 51 19 - 34	iPb } iSb }	Very small. $\Delta b = 380$ Km. Aftershock.
-1078)	29	02 - 08 - 37 09 - 17	iPb } iSb }	Small. $\Delta b = 354$ Km. Aftershock.
-1079)		03 - 17 - 35 18 - 17	iPb } iSb }	Very small. $\Delta b = 372$ Km. Aftershock.
-1080)		03 - 22 - 53 23 - 35	iPb } iSb }	Small. $\Delta b = 372$ Km. Aftershock.
-1081)		21 - 40 - 16 - 55	iPb } iSb }	Very small. $\Delta b = 345$ Km.
-1082)	30	00 - 11 - 02	i	Very small.
-1083)		00 - 42 - 57 44 - 05	iPb } iSb }	Moderate to large. Dilat. $\Delta b = 604$ Km.
-1084)		02 - 50 - 46 51 - 34	iPb } eSb }	Small. $\Delta b = 426$ Km.
-1085)		07 - 52 - 11 53 - 07	iPb } iSb }	Small. $\Delta b = 497$ Km.
-1086)		16 - 39 - 10 - 53	iPb } iSb }	Small. $\Delta b = 380$ Km.
-1087)		19 - 55 - 11 - 25	iPb } iSb }	Small. $\Delta b = 121$ Km.
-1088)		23 - 37 - 06 38 - 15	iPb } iSb }	Moderate. $\Delta b = 613$ Km.
-1089)	31	13 - 11 - 26 12 - 02	iPb } iSb }	Very small. $\Delta b = 318$ Km.
-1090)		14 - 14 - 06 22 - 30	iP } eS }	Very small. Compr. $\Delta = 6755$ Km. = $60^{\circ}.8$.
-1091)		14 - 32 - 48 41 - 11	iP } iS }	Very small. Compr. $\Delta = 6735$ Km. = $60^{\circ}.6$.
-1092)		15 - 57 - 22 - 54	iPb } iSb }	Very small. $\Delta b = 282$ Km.
-1093)		17 - 31 - 24 32 - 58 [±]	iPb } iSb }	Very small. $\Delta b = 838^{\pm}$ Km.
-1094)		20 - 05 - 27 06 - 07	iPb } iSb }	Very small. $\Delta b = 354^{\pm}$ Km.
-1095)		22 - 30 - 58	i	Very small.

MANILA OBSERVATORY
Mirador, Baguio City
Philippines

November copied

MONTHLY SEISMOLOGICAL BULLETIN

Lat. N. 16° 24' 59"

Long. E. 120° 54' 47"

Alt. 1507 meters

Instruments (All Sprengnethers)

Hard Limestone Bedrock

<u>Type</u>	<u>Component</u>	<u>Period</u>		<u>Magnification (Dynamic)</u> <u>Synchronous</u>
		<u>Seism.</u>	<u>Galv.</u>	
Photographic	Z	1.41 sec	1.37 sec	Circa 3367
	E-W	10.90 "	11.70 "	2000
	N-S	1.84 "	1.67 "	2451
Photoelectric	N-S	11.80 "	12.00 "	1000
	E-W	1.54 "	1.49 "	3000

NOVEMBER 1956

<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-1096)	1 06 - 03 - 21	i	Very small.
-1097)	16 - 04 - 43	iPb	Very small. $\Delta b = 500$ Km.
	05 - 40	iSb	
-1098)	22 - 30 - 01	iPb	Small. $\Delta b = 461$ Km.
	- 53	iSb	
-1099)	2 05 - 38 - 30	iPb	Very small. $\Delta b = 426$ Km.
	39 - 18	iSb	
-1100)	19 - 55 - 22	iPb	Small. $\Delta b = 506$ Km.
	56 - 19	iSb	
-1101)	3 06 - 10 - 07	iPb	Small. $\Delta b = 156$ Km.
	- 25	iSb	
-1102)	11 - 42 - 30	iPb	Very small. $\Delta b = 291^{\pm}$ Km.
	43 - 03 \pm	iSb	
-1103)	14 - 08 - 14	iPg	Very small. $\Delta g = 84$ Km.
	- 24	iSg	
-1104)	17 - 41 - 29	iPb	Very small. $\Delta b = 121$ Km.
	- 43	iSb	
-1105)	18 - 12 - 35	iPg	Very small. $\Delta g = 68$ Km.
	- 43	iSg	
-1106)	19 - 15 - 01	iPb	Very small. $\Delta b = 380$ Km.
	15 - 44	iSb	
-1107)	4 05 - 42 - 59	iP	Very small. $\Delta = 3265^{\pm}$ Km. = $29^{\circ}.4$.
	48 - 00 \pm	eS	
-1108)	06 - 42 - 45	i	Very small.
-1109)	07 - 17 - 15	iP	Small. $\Delta = 8045$ Km. = $72^{\circ}.4$.
	26 - 43	iS	

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
- 1110)	5	01 - 12 - 50	1Pb } 1Sb }	Very small. $\Delta b = 174$ Km.
- 1111)		07 - 40 - 30	1Pb } 1Sb }	Very small. $\Delta b = 408$ Km.
- 1112)		17 - 03 - 32	1Pb } 1Sb }	Very small. $\Delta b = 246$ Km.
- 1113)	6	11 - 29 - 53 \pm	1Pb } 1Sb }	Very small. $\Delta b = 246\pm$ Km.
- 1114)		14 - 18 - 07	1P } 1S }	Small. Dilat. to SW. $\Delta = 2735$ Km. = $24^{\circ}.6$.
- 1115)		19 - 29 - 46	1	Very small.
- 1116)	7	13 - 31 - 53	1Pb } 1Sb }	Small. $\Delta b = 515\pm$ Km.
- 1117)		15 - 48 - 34	1Pb } 1Sb }	Small to moderate. $\Delta b = 129$ Km.
- 1118)	8	07 - 00 - 49	1Pg } eSg }	Very small. Dilat. $\Delta g = 58\pm$ Km.
- 1119)		15 - 47 - 02	1P } eS }	Small. Dilat. to S \pm . $\Delta = 1180\pm$ Km. = $10^{\circ}.6$.
- 1120)	9	09 - 49 - 19	1P } 1S }	Very small. $\Delta = 2235\pm$ Km. = $20^{\circ}.1$.
- 1121)		13 - 25 - 17	1P } 1S }	Very small. Dilat.? $\Delta = 1710\pm$ Km. = $15^{\circ}.4$.
- 1122)		19 - 12 - 51	1Pb } 1Sb }	Very small. Dilat. $\Delta b = 291$ Km.
- 1123)		19 - 51 - 25	1	Very small.
- 1124)		20 - 22 - 16	1Pb } 1Sb }	Very small. $\Delta b = 237$ Km.
- 1125)		23 - 34 - 30	1Pg } 1Sg }	Very small. $\Delta g = 92$ Km.
- 1126)	10	01 - 28 - 16	1Pb } 1Sb }	Very small. $\Delta b = 237$ Km.
- 1127)		07 - 08 - 28	1Pb } 1Sb }	Very small. $\Delta b = 165$ Km.
- 1128)		09 - 17 - 48	1Pb } 1Sb }	Very small. $\Delta b = 336$ Km.
- 1129)		14 - 40 - 15	1Pg } 1Sg }	Large. Compr. to SW. Felt, Baguio Int. IV. $\Delta g = 75$ Km. (from strong motion only).
- 1130)		18 - 14 - 32	1Pb } 1Sb }	Very small. $\Delta b = 299$ Km.
- 1131)		23 - 26 - 14	1Pg } 1Sg }	Very small. $\Delta g = 23$ Km.
- 1132)		23 - 36 - 18	1	Very small.
- 1133)	11	03 - 38 - 10 \pm	1Pb } 1Sb }	Very small. $\Delta b = 327\pm$ Km.

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-1134)	11	05 - 32 - 33	1Pg	Small to moderate. $\Delta g = 92$
		- 44	iSg	
-1135)		16 - 01 - 00	1Pb	Moderate. Compr. $\Delta b = 380$ Km.
		- 43	iSb	
-1136)		19 - 22 - 10	1P	Small. S indeterminate.
-1137)		19 - 49 - 18	1Pg	Very small. $\Delta g = 76$ Km.
		27	iSg	
-1138)	12	02 - 56 - 34	1Pg	Very small. $\Delta g = 84$ Km.
		44	iSg	
-1139)		08 - 37 - 18	1P	Small. $\Delta = 1800$ Km. = $16^{\circ}.2$.
		40 - 26 $\frac{1}{2}$	eS	
-1140)	13	01 - 29 - 00	1S	Very small. P indistinct.
-1141)		02 - 40 - 59	1Pb	Small. $\Delta b = 183$ Km.
		41 - 20 $\frac{1}{2}$	iSb	
-1142)		06 - 58 - 15	1Pb	Very small. $\Delta b = 121$ Km.
		- 29	iSb	
-1143)		03 - 42 - 59	1Pb	Small. $\Delta b = 121$ Km.
		43 - 13	iSb	
x-1144)		10 - 50 - ff.	i	Traces only.
-1145)		14 - 39 - 37	1Pb	Large. Compr. to SE. $\Delta b = 380$ Km.
		40 - 20	iSb	
-1146)		16 - 32 - 01	1Pb	Very small. $\Delta b = 192$ Km.
		23	iSb	
-1147)	14	00 - 00 - 53	1Pb	Small to moderate. $\Delta b = 389$ Km.
		01 - 37	iSb	
-1148)		00 - 08 - 42	1Pb	Very small. $\Delta b = 327$ Km.
		9 - 19	iSb	
-1149)		00 - 10 - 00	i	Very small.
-1150)		01 - 00 - 04	i	Small.
-1151)		01 - 04 - 07	1Pb	Small. $\Delta b = 354$ Km.
		- 47	iSb	
-1152)		12 - 34 - 01	1Pg	Very small. $\Delta g = 92$ Km.
		- 12	iSg	
-1153)		12 - 36 - 11	1Pg	Small. $\Delta g = 109$ Km.
		- 24	iSg	
-1154)		14 - 15 - 55	1Pg	Very small. $\Delta g = 102$ Km.
		16 - 07	iSg	
-1155)		15 - 24 - 33	i	Phases difficult. Very small.
-1156)		19 - 55 - 43	1Pg	Very small. $\Delta g = 102$ Km.
		- 55	iSg	
-1157)		20 - 38 - 51	1Pb	Very small. $\Delta b = 138$ Km.
		39 - 07	iSb	
-1158)		22 - 22 - 09	1Pb	Very small. $\Delta b = 407$ Km.
		- 55	iSb	
-1159)	15	14 - 49 - 07	1Pb	Small. $\Delta b = 461$ Km.
		59	iSb	
-1160)		17 - 35 - 02	1Pg	Very small. $\Delta g = 50$ Km.
		- 08	iSg	

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-1161)	15	23 - 55 - 04 - 40	1Pb } 1Sb }	Very small. $\Delta b = 316$ Km.
-1162)	16	03 - 22 - 24 03 - 23 - 02	1Pb } 1Sb }	Very small. $\Delta b = 336$ Km.
-1163)		08 - 53 - 51 54 - 35 [±]	1Pb } 1Sb }	Very small. $\Delta b = 388$ Km.
-1164)		11 - 37 - 28 - 32	1Pg } 1Sg }	Very small. $\Delta g = 30$ Km.
-1165)		11 - 44 - 31 45 - 21	1Pb } 1Sb }	Large. $\Delta = 404$ Km. Felt Daet IV, Infanta III, Vivac II.
-1166)		11 - 50 - 48 [±] 51 - 12	1Pb } 1Sb }	Small. $\Delta b = 210$ Km.
-1167)		12 - 14 - 16 - 56	1Pb } 1Sb }	Very small. $\Delta b = 354$ Km.
-1168)		12 - 24 - 27 25 - 08	1Pb } 1Sb }	Small. $\Delta b = 363$ Km.
-1169)		12 - 31 - 06 31 - 48	1Pb } 1Sb }	Small. $\Delta b = 910$ Km.
-1170)		16 - 30 - 10 52	1Pb } 1Sb }	Small. $\Delta b = 372$ Km.
-1171)		16 - 44 - 50 30	1Pb } 1Sb }	Small. $\Delta b = 354$ Km.
-1172)		22 - 28 - 04 - 44	1Pb } 1Sb }	Small to mod. $\Delta b = 354$ Km.
-1173)	17	02 - 49 - 47 50 - 27	1Pb } 1Sb }	Very small. $\Delta b = 354$ Km.
-1174)		04 - 53 - 44 - 33	1Pb } 1Sb }	Small. $\Delta b = 435$ Km.
-1175)		16 - 10 - 11 44	1Pb } 1Sb }	Very small. $\Delta b = 291$ Km.
-1176)		18 - 24 - 01 - 47	1Pb } 1Sb }	Very small. $\Delta b = 407$ Km.
-1177)		21 - 32 - 15 33 - 05	1Pb } 1Sb }	Very small. $\Delta b = 444$ Km.
-1178)		23 - 28 - 32 39	1Pg } 1Sg }	Very small. $\Delta g = 58$ Km.
-1179)	18	00 - 29 - 32 - 54	1Pb } 1Sb }	Very small. $\Delta b = 150$ Km.
-1180)		14 - 17 - 50 - 42	1Pb } 1Sb }	Small. $\Delta b = 372$ Km.
-1181)		22 - 01 - 22 02 - 04	1Pb } 1Sb }	Small. $\Delta b = 372$ Km.
-1182)		23 - 01 - 16 - 54	1Pb } 1Sb }	Small. $\Delta b = 331$ Km.
-1183)	19	01 - 30 - 16 31 - 08	1Pb } 1Sb }	Small to mod. $\Delta b = 363$ Km.
-1184)		01 - 41 - 07 22	1Pb } 1Sb }	Very small. $\Delta b = 124$ Km.

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-1185)	19	02 - 55 - 36	iPb	} Very small. $\Delta b = 160$ Km.
		- 56 - 17	iSb	
-1186)		16 - 31 - 24	iPb	} Very small. $\Delta b = 169$ Km.
		32 - 44	iSb	
-1187)		18 - 43 - 34	iPg	} Large. $\Delta g = 92$ Km. Felt Dagupan IV.
		46	iSg	
-1188)		18 - 55 - 48	iPg	} Small. $\Delta g = 57$ Km.
		- 56	iSg	
-1189)		19 - 09 - 38	iPb	} Small. $\Delta b = 373$ Km.
		10 - 20	iSb	
-1190)		20 - 02 - 28	iPg	} Small to mod. $\Delta g = 50$ Km. Felt Dagupan IV.
		- 34	iSg	
-1191)		20 - 51 - 15	iPg	} Small. $\Delta g = 62$ Km.
		- 23	iSg	
-1192)		21 - 27 - 18	iPg	} Small. $\Delta g = 80$ Km.
		- 28	iSg	
-1193)	20	02 - 16 - 55	iPg	} Small. $\Delta g = 84$ Km.
		17 - 05	iSg	
-1194)		12 - 03 - 44	iP	} Small. $\Delta = 1310$ Km. = $11^{\circ}.8$.
		- 06 - 06	eS	
-1195)	21	00 - 01 - 10	iS	ES Very small.
-1196)		04 - 10 - 11	iPg	} Very small. $\Delta g = 84$ Km.
		21	iSg	
-1197)		07 - 39 - 35	iP	} Very small. $\Delta = 2890$ Km. = $26^{\circ}.0$.
		44 - 15	eS	
-1198)		07 - 56 - 52	iS	Very small.
-1199)		10 - 07 - 48	iPg	} Very small. $\Delta g = 76$ Km.
		- 57	iSg	
-1200)		11 - 07 - 47	iPg	} Very small. $\Delta g = 76$ Km.
		56	iSg	
-1201)		17 - 16 - 30	iPg	} Small. $\Delta g = 84$ Km.
		- 40	iSg	
-1202)		17 - 35 - 18	iPb	} Small. $\Delta b = 135$ Km.
		34	iSb	
-1203)		17 - 51 - 06	iPg	} Very small. $\Delta g = 84$ Km.
		- 16	iSg	
-1204)	22	16 - 11 - 32	iPb	} Very small. $\Delta b = 210$ Km.
		- 56	iSb	
-1205)		16 - 12 - 26	iPg	} Small. $\Delta g = 73$ Km.
			iSg	
-1206)		23 - 34 - 16	iP	} Small. $\Delta = 2565$ Km. = $23^{\circ}.1$.
		- 38 - 27	eg	
-1207)	23	17 - 51 - 30	iPb	} Very small. $\Delta b = 572$ Km.
		- 52 - 12	iSb	
-1208)		21 - 14 - 20	iPb	} Very small. $\Delta b = 354$ Km.
		15 - 00	iSb	

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-	1209)	24 12 - 41 - 07	iPg } iSg }	Very small. $\Delta g = 102$ Km.
-	1210)	12 - 57 - 36 - 44	iPg } iSg }	Very small. $\Delta g = 36$ Km.
-	1211)	25 16 - 16 - 02	iPg } iSg }	Very small. $\Delta g = 102$ Km.
-	1212)	18 - 17 - 08? - 20?	iPg } iSg }	Very small. $\Delta g = 102$ Km.
-	1213)	26 05 - 11 - 44	iPg } iSg }	Moderate to small. $\Delta g = 102$ Km.
-	1214)	21 - 57 - 16 46	iPb } iSb }	Very small. $\Delta b = 264$ Km.
-	1215)	23 - 19 - 46 20 - 00	iPg } iSg }	Very small. $\Delta g = 112$ Km.
-	1216)	27 05 - 53 - 45 5 - 00	iPb } iSb }	Small. $\Delta b = 121$ Km.
-	1217)	05 - 54 - 45	iS	Very small.
-	1218)	09 - 46 - 48 47 - 00	iPg } iSg }	Small. $\Delta g = 102$ Km.
-	1219)	13 - 25 - 50 26 - 00	iPg } iSg }	Very small. $\Delta g = 84$ Km.
-	1220)	28 02 - 56 - 56 - 32	iPb } iSb }	Very small. $\Delta b = 210$ Km.
-	1221)	19 - 35 - 14 ✓ 41 - 40	iP } eS }	Moderate to large. $\Delta = 4665$ Km. Maybe deep focus.
-	1222)	29 09 - 20 - 23 ✓ - 24 - 20 ✓	iP } eS }	Moderate. $\Delta = 2390$ Km.
-	1223)	17 - 23 - 40	iS	Moderate.
-	1224)	18 - 04 - 06 - 56	iP } iS }	Small to moderate. $\Delta b = 442 \pm$ Km.
-	1225)	19 - 07 - 52 08 - 02	iP } iS }	Very small. $\Delta g = 84$ Km.
-	1226)	19 - 17 - 15 23	iP } iS }	Very small. $\Delta g = 67$ Km.
-	1227)	30 17 - 53 - 03 17	iP } iS }	Very small. $\Delta b = 121$ Km.
-	1228)	20 - 00 - 45	S	Very small.

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December copied 11/15

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

<u>Type</u>	<u>Component</u>	<u>Period</u>		<u>Magnification (Dynamic)</u>	
		<u>Seism.</u>	<u>Galv.</u>	<u>Synchronous</u>	
Photographic	Z	1.41 sec	1.37 sec	Circa	3367
	E-W	10.90 "	11.70 "		2000
	N-S	1.84 "	1.67 "		2451
Photoelectric	N-S	11.90 "	12.00 "		1000
	E-W	1.54 "	1.49 "		3000
Visual Recording					

DECEMBER 1956

<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-1229)	1 02 - 44 - 23	iPb } iSb }	Very small. $\Delta b = 187$ Km.
-1230)	02 - 59 - 28	iPg } iSg }	Very small. $\Delta g = 83$ Km.
-1231)	03 - 32 - 45	iPg } iSg }	Small. $\Delta g = 89$ Km.
-1232)	03 - 58 - 05	iPb } iSb }	Very small. $\Delta b = 289$ Km.
-1233)	07 - 47 - 00	iPb } iSb }	Small. $\Delta b = 534$ Km.
-1234)	2 07 - 44 - 33	iPb } iSb }	Small. $\Delta b = 363$ Km.
-1235)	20 - 08 - 44	iPb } iSb }	Very small. $\Delta b = 250$ Km.
-1236)	3 11 - 32 - 09	iPg } iSg }	Very small. $\Delta g = 102$ Km.
-1237)	14 - 20 - 57	iPg } iSg }	Small. $\Delta g = 84$ Km.
-1238)	4 14 - 07 - 06	iPg } iSg }	Small. $\Delta g = 84$ Km.
-1239)	21 - 02 - 42	iP } iS }	Small. $\Delta = 1265$ Km. = $21^\circ .8$.
-1240)	5 10 - 24 - 55	iPb } iSb }	Small. $\Delta b = 156$ Km.
-1241)	12 - 16 - 40	iPb } iSb }	Small. $\Delta b = 345$ Km.

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-1242)	5	14 - 26 - 15 - 57	iPb } iSb }	Small. $\Delta b = 372$ Km.
-1243)	6	05 - 40 - 33 - 56	iPb } iSb }	Small to moderate. $\Delta b = 201$ Km.
-1244)		06 - 50 - 59 51 - 09	iPg } iSg }	Small. $\Delta g = 84$ Km.
-1245)	7	08 - 23 - 45 - 53	iPg } iSg }	Small. $\Delta g = 68$ Km.
-1246)		10 - 48 - 02 - 52	iPb } iSb }	Small. $\Delta b = 444$ Km.
-1247)		11 - 22 - 24 - 56	iPb } iSb }	Moderate. $\Delta b = 282$ Km.
-1248)		20 - 40 - 20	iS	Very small.
-1249)		21 - 04 - 46 05 - 28	iPb } iSb }	Small to moderate. $\Delta b = 372$ Km.
-1250)		22 - 56 - 30 57 - 10	iPb } iSb }	Small. $\Delta b = 354$ Km.
-1251)		25 - 57 - 30 58 - 10	iPb } iSb }	Very small. $\Delta b = 354$ Km.
-1252)	8	02 - 30 - 54 31 - 36	iPb } iSb }	Small. $\Delta b = 372$ Km.
-1253)		05 - 45 - 00 - 16	iPb } iSb }	Very small. $\Delta b = 138$ Km.
-1254)		07 - 51 - 52 52 - 26	iPb } iSb }	Very small. $\Delta b = 304$ Km.
-1255)		✓ 16 - 20 - 36 28 - 30	iP } eS }	Small. $\Delta = 6235$ Km. = 56° .l.
-1256)		17 - 20 - 10 - 36	iPb } iSb }	Very small. $\Delta b = 228$ Km.
-1257)	9	00 - 44 - 51 45 - 13	iPb } iSb }	Very small. $\Delta b = 192$ Km.
-1258)		04 - 49 - 11 27	iPb } iSb }	Small. $\Delta b = 138$ Km.
-1259)	10	09 - 58 - 07 - 38	iPb } iSb }	Small. $\Delta b = 192$ Km.
-1260)		20 - 06 - 14 $\frac{1}{2}$ 28	iPb } iSb }	Very small. $\Delta b = 121$ Km.
-1261)	11	08 - 41 - 52 42 - 52	iPb } iSb }	Moderate. $\Delta b = 532$ Km.
-1262)	12	17 - 34 - 26 35 - 02	iPb } iSb }	Very small. $\Delta b = 318$ Km.
-1263)		20 - 55 - 02 $\frac{1}{2}$	iS	Teleseismic. Perhaps S-P \rightarrow 2 min.
-1264)		20 - 59 - 19	iS	Very small. Local.

	<u>Date</u>	<u>Time (GMT)</u>	<u>Phase</u>	<u>Remarks</u>
-1265)	13	02 - 10 - 34 38	iPg } iSg }	Small. $\Delta g = 35$ Km.
-1266)		14 - 55 - 56 59 - 02	iP } iS }	Small. $\Delta = 1780$ Km. = $16^{\circ}.0$. 2 N. 126 $\frac{1}{2}$ E. Molucca Passage.
-1267)		19 - 39 - 33 43 - 41	iP } eS }	Small. $\Delta = 2520$ Km. $22^{\circ}.7$. Marianas 12 N. 143 E.
-1268)	14	12 - 53 - 48 34 - 34	iPb } iSb }	Very small. $\Delta b = 408$ Km.
15 - 24	Due to instrument defects and repairs (no time marks) records dropped.			
25	No quakes.			
-1269)	26	02 - 15 - 32 - 48	iPb } iSb }	Very small. $\Delta b = 138$ Km.
-1270)		04 - 46 - 58 47 - 07	iPg } iSg }	Very small. $\Delta = 76$ Km.
-1271)		06 - 18 - 00 10	iPg } iSg }	Very small. $\Delta g = 84$ Km.
-1272)		06 - 20 - 08 18	iPg } iSg }	Small. $\Delta g = 84$ Km.
-1273)		16 - 26 - 42 27 - 32 or 50	iPb } iSb }	Small. $\Delta b = 440$ Km. or 604 Km.
-1274)	27 ✓	00 - 25 - 17 34 - 17 $\frac{1}{2}$	iP } eS }	Small. $\Delta = 7465$ Km. = $67^{\circ}.2$.
-1275)		21 - 34 - 00 36 - 10	iP } eS }	Small to mod. 1180 Km. = $10^{\circ}.6$. Mindanao quake.
-1276)	28	13 - 44 - 26	i	Small. S difficult. Phil. South of Baguio type.
-1277)	✓	14 - 36 - 10	i	Small. S difficult. Phil. South of Baguio type.
-1278)	29	04 - 41 - 23 45	iPb } iSb }	Very small. $\Delta b = 201$ Km.
-1279)		05 - 21 - 15 - 23	iPg } iSg }	Very small. $\Delta g = 68$ Km.
-1280)	30	02 - 32 - 18 36	iPb } iSb }	Very small. $\Delta b = 174$ Km.
-1281)		04 - 39 - 48	i	Small. S diff. Phil. South of Baguio type.
-1282)	✓	22 - 04 - 47	i	Small. Same type as above.
-1283)	31	06 - 36 - 00 11	iPg } iSg }	Very small. $\Delta g = 94$ Km.
-1284)		06 - 58 - 54 59 - 30	iPb } iSb }	Small. $\Delta b = 313$ Km.