

Seismological Bulletin 1939.
Royal Magnetical and Meteorological Observatory
Batavia, Java.



October - December 1939

The recording at the seismographic station at Malabar was stopped on November 29th. Recording and time service at Amboina were unsatisfactory during the whole quarter.

No.	Date	Station	Character	Phase	G.M.T.	Distance	Remarks
	<u>October.</u>				h m s	degrees	
402	Oct 2	Med	Iv	PN	03 16 01		felt at Sigli (N. Sumatra)
				iNE	03 16 24		
				iNE	03 16 40		
403	" 3	Bat	Iu	PZ	13 51 58	64.6	
				PNE	13 52 00		
				iSE	14 00 44		
404	" 3	Med	Iv	PN	20 06 24	1.5	
				SN	20 06 44		
405	" 5	Mal		PE	15 09 46		felt in E. Java, Bali and Lombok.
				iNE	15 11 11		
		Bat	I	PZ	15 09 53		
				PE	15 09 54		in micros.
				iZ	15 12 17		
				iE	15 13.0		
		Med	Ir	PNE	15 12 31	20.0	in minute eclipse.
				iSNE	15 16 15		
				iE	15 21 21		
				iN	15 23 38		

406	Oct 6	Mal	v	INE	13 26 37		
407	" 7	Amb	IIIv	IPNE		6.0	$S_E - P_E = 1^m 17^s$
		Bat	IIr	IPZNE	20 47 53	25.2	dilatation.
				iSN	20 52 21		
				LZE	20 56		
		Med	IIr	PNE	20 49 27	35.4	
				INE	20 49 36		
				iN	20 54 34		
				INE	20 54 57		
				iSN	20 55 12		
				iE	20 55 32		
408	" 7	Amb	I		+ 22 20		
409	" 7	Amb	Ir		+ 23 20		
410	" 8	Amb	Ir		+ 01 00		aftershock?
411	" 9	Bat	Iu	PE	02 28 36	58.8	in micros.
				ePN	02 28 37		
				PZ	02 28 39		faint.
				iSN	02 36 48		
				SE	02 36 52		
				eLE	02 50		
		Med	Iu	ePE	02 29 46	70.0	extremely faint, minute eclipses uncertain.
				iSE	02 39 02		
				eLE	02 56		
412	" 9	Amb	Iv		+ 12 40		
413	" 9	Med	IIv	PNE	17 20 24		in micros.
				iN	17 21 16		
				iE	17 21 37		
414	" 10	Med	Iv	INE	11 05 44		

		Med	Iu	ePNE	18 41 10		faint.
				PE	18 41 12		faint.
				NE	18 41 24		may be P.
				iN	18 43 58		
				iN	18 44 27		
				iNE	18 48 50		may be S.
				iS?N	18 49 08		strong.
				iS?E	18 49 58		strong.
				eLNE	18 57		
				LE	18 59		
		Bat	Iu	PZNE	18 41 33	55.0	compression in micros.
				iPE	18 41 36		in micros.
				iSNE	18 49 21		
				eLZ	18 55		faint.
				eLN	18 57		
				eLE	18 58		
				LZN	19 04		
				LE	19 06		
416	" 10	Med	Iu	iE	18 58 30		P?, in previous, after- shock?
				iN	18 58 35		
				iE	19 00 44		
				iE	19 06 16		
				iE	19 08 22		
				iN	19 08 32		
		Bat	Iu	PZ	19 00 28	54.6	in previous.
				PNE			uncertain in previous.
				SNE	19 08 14		
417	" 11	Med	Iv	P?N	08 18 14		traces.
				iE	08 19 08		
418	" 12	Med	Iv	PNE	03 38 07	4.5	felt in Sum. Westcoast.
				iE	03 38 52		
				iN	03 38 55		
				iSNE	03 39 04		
				iN	03 39 23		
				iE	03 39 30		
		Bat	Iv				lost in micros.

418	(continued)			SNE	03 41 10		
				iN	03 41 53		
419	" 12	Bat	Iv	P?E	09 38 53		faint traces, felt at Talang Padang (S. Su- matra).
420	" 12	Bat	Iv	PZE	21 42 40	0.9	
				SZNE	21 42 53		
		Mal	v	PE	21 43 05		S?
				iE	21 43 08		
				iN	21 43 11		
421	" 13	Mal	v	PNE	06 37 13	1.4	
				iSNE	06 37 32		
		Bat	Iv	ePZE	06 37 35	2.8	extremely faint.
				SNE	06 38 11		
422	" 13	Mal	v	iNE	23 01 09		
423	" 14	Mal	v	iNE	22 19 36		artificial disturbance?
424	" 17	Amb	Ir				deep focus.
		Mal	u	PE	06 32 04		
				iPN	06 32 07		
				eSNE	06 40 01		
				iE	06 40 25		
				iE	06 41 41		
		Bat	IIu	PZNE	06 32 07		
				iPZ	06 32 09		
				iPN	06 32 11		
				iZ	06 32 14		
				iSNE	06 40 07		
				eLE	06 58		
		Med	IIIu	ePE	06 33 14		
				iPE	06 33 18		
				iPN	06 33 20		
				iSE	06 42 20		
				iSN	06 42 39		
				iE	06 42 57		

425	Oct 17	Bat	I	iE	09 13 41		
				iE	09 17 32		
				eN	09 17 32		
				iN	09 17 34		
		Med	I	eNE	09 20 05		traces.
426	" 17	Bat	Iv	PNE	12 45 36	0.8	in strong micros, felt at Bajah (Lebak, W. Java).
				iSN	12 45 46		
		Mal	v	iS?E	12 45 53		
427	" 17	Mal	v	eNE	15 42 15		faint traces.
				iNE	15 42 22		
428	" 17	Mal	v	iNE	20 15 58		
429	" 17	Med	Iv	eP	23 40 02		
				iN	23 40 39		
				iE	23 41 45		
430	" 18	Mal	v	eE	15 50 01		traces.
431	" 18	Med	Iv	iNE	19 29 00		felt in Sum. Westcoast.
432	" 20	Med	Iv	eP?E	07 05 34		faint traces.
433	" 23	Med	Iv	P?E	02 44 30		dubious.
				iNE	02 44 58		
434	" 23	Med	Iv	ePE	12 01 37		extremely faint.
				iN	12 02 15		
				iE	12 02 28		
				iN	12 02 32		
435	" 23	Mal	d	PNE	19 09 20	0.9	felt in Priangan (W. Java).
				iSNE	19 09 31		
		Bat	Iv	iPZNE	19 09 37	1.8	
				SNE	19 10 01		

435	(continued)			iN	19 10 32		
				iZ	19 10 37		
436	" 24	Med	I	eP?E	09 06 36		extremely faint.
		Bat	I	iPE	09 07 01		
				PN	09 07 02		
				iN	09 07 59		
				iN	09 11.1		in minute eclipse.
437	" 24	Mal	v	iNE	21 38 59		
438	" 28	Med	Iv	PNE	02 31 01	1.4	
				iSNE	02 31 19		
439	" 28	Mal	v	iE	09 20 13		
440	" 30	Bat	Iu	PNE	13 24 22	74.3	in micros.
				iSNE	13 34 01		
		Med	Iu	ePNE	13 25 10	82.7	
				iSE	13 35 31		
441	" 30	Med	IIv	eP?NE	17 05 18		uncertain in micros, felt in N. Atjeh (N. Sumatra).
				PE	17 05 35		
				iE	17 06 26		
				iNE	17 06 41		
				iE	17 06 50		
442	" 30	Amb	Iv		+ 17 44		
		Mal		PNE	17 46		
		Bat	I	PZ	17 46 49		
				PNE	17 46 53		in micros.
				eN	17 48 59		
				iE	17 49 36		
		Med	I	PNE	17 48 06		
				iE	17 52 35		
				eN	17 57 38		

443	Nov 1	Bat	I	PNE			faint in micros.
				iE	06 23 05		
				eN	06 26 39		
444	" 1	Med	Iv	iNE	14 22 05		
445	" 1	Med	Iv	PNE	14 53 26		
				iSNE	14 53 28		
446	" 2	Med	Iv	P?N	05 08 11		faint traces, felt Sum W- coast.
				iE	05 08 57		
447	" 3	Med	Iv	P?E	17 31 52		faint, dubious.
				P?NE	17 32.0		in minute eclipse
				iE	17 32 27		
448	" 4	Med	I	PE	10 25 39		faint traces.
449	" 4	Bat	Iv	iE	10 37 06		felt at Batoer (C. Java)
450	" 7	Bat	I	P?Z	04 00 06		
				iE	04 19 48		
		Med	I	P?NE	04 04 05		
				eN	04 07 41		
				iE	04 13 42		
451	" 9	Bat	I	P?ZNE	09 26 23		in micros.
				iN	09 31 25		
		Med	I	P?E	09 28 13		in strong micros.
				iE	09 34 05		
				iE	09 38 27		
452	" 9	Bat	Ir	PZ	16 13 56		
				iSNE	16 19 55		
		Med	Ir	iN	16 17 36		
				SE	16 21 00		
				iNE	16 26 14		
453	" 10	Bat		eE	17 08 56		faint traces.

454	Nov 10	Mal	v	eNE	18 04 08		felt at Batoer (Java).
				iNE	18 04 16		
		Bat	Iv	eE	18 05 07		
455	" 10	Bat	Ir	ePZE	20 28 37	41.2	in micros.
				iSN	20 34 57		
				iE	20 35 41		
456	" 11	Med	Iv	+	06 30		in strong micros, felt Sum. Westcoast.
457	" 12	Bat	Iv	ePZ	17 25 08		
				ePE	17 25 10		
				iE	17 25 27		
458	" 17	Bat	I	iPZE	09 10 05		
				eN	09 16 46		
		Mal		iNE	09 10 06		time correction uncertain.
				iNE	09 10 08		
459	" 17	Bat	Iu	PZ	18 50 11	63.8	
				iSNE	18 58 53		
460	" 18	Med	I	P	00 31		uncertain in micros.
		Bat	Iv	iPZNE	00 32 23	3.8	felt S. Sumatra.
				SE	00 33 11		
		Mal	v	P?E	00 32 47		extremely faint.
				iSE	00 33 41		
461	" 18	Med	Iu				no time eclipses.
		Bat	Iu	PZ	01 44 08	70.4	compression.
				PNE	01 44 10		
				SNE	01 53 26		
462	" 19	Mal	d	iPNE	17 10 46	0.6	
				iSNE	17 10 53		
		Bat	Iv	PZNE	17 10 58	1.2	faint minute eclipses.
				iSZNE	17 11 14		felt in Priangan (W.

					h m s	degrees	
463	Nov 20	Med	III	eP?N	06 19 39		extremely faint, time correction uncertain.
				ePNE	06 19 42		
				iE	06 20 43		
				iS?E	06 21 47		
				iN	06 22 00		
		Bat	I	NE	06 28		traces.
464	" 20	Mal	Id	iPNE	19 32 17	0.9	pens thrown off, felt in Priangan (W. Java).
				iSNE	19 32 29		
		Bat	Iv	iPZ	19 32 33		dilatation.
465	" 20	Bat	Iv	ZNE	22 37		traces, felt in C. Java.
466	" 21	Med	Iu	ePE	09 00 05	70.2	
				SE	09 09 22		
467	" 21	Med	IIIu	PNE	11 09 07	50.3	time correction uncertain.
				iN	11 10 13		
				iN	11 12 11		
				iSE	11 16 25		
		Bat	Iu	PZ	11 10 45	62.8	in micros.
				PNE	11 10 46		faint in micros.
				iSE	11 19 21		
				eLZ	11 31		
				iE	11 42 13		another shock?
		Mal	u	eE	11 12 02		
				eSE	11 19 51		
				iE	11 20 23		
468	" 21	Mal	v	iE	17 37 49		
469	" 21	Bat	Iv	ePN	21 31 03		faint traces, felt in Central Java.
470	" 22	Med	I	iNE	19 28 14		time correction uncertain.

					h m s	degrees	
471	Nov 23	Med	IIv		⁺ 04 01	2.3	no minute eclipses, felt at Tapa Toean (N. Sumatra).
472	" 23	Mal	v	iPNE	07 11 15	1.4	felt Priangan (W. Java).
				iSNE	07 11 34		
		Bat	IIIv	iPZ	07 11 26	2.5	
				iPN	07 11 27		
				iSE	07 12 00		
				iN	07 12 15		
473	" 23	Med	I	PNE	⁺ 07 21		faint, no minute eclipses.
474	" 23	Mal	v	PNE	16 14 13	1.9	
				eN	16 14 34		
				iSE	16 14 38		
		Bat	Iv	PZ	16 14 24	2.6	
				iSNE	16 14 58		
475	" 23	Mal	v	iNE	18 33 00		
476	" 23	Mal	v	PNE	21 00 51	0.8	felt Priangan (W. Java).
				SNE	21 01 02		
477	" 24	Bat	Iu	P?ZNE	23 33 20		extremely faint traces.
478	" 25	Bat	I	ePNE	06 57 18		
				iN	07 01.3		in minute eclipse.
479	" 28	Mal	v	PE	13 18 58		
				iN	13 19 13		
				iE	13 19 17		
480	" 28	Mal	v	iNE	13 26 12		
481	" 28	Mal	v	iNE	16 38 13		
482	" 29	Bat	Iv	iPZNE	00 22 38	2.1	felt at Talang Padang (S. Sumatra).

Nov 29

h m s

degrees

482	(continued)			iSZNE	00 23 04	
		Mal	v	ePNE	00 22 49	3.1?
				S?E	00 23 20	
	<u>December</u>					
483	Dec 1	Bat	I		06 45	traces.
484	" 1	Med	I	iE	16 44 37	traces of rather long waves.
				iN	16 45 37	
485	" 3	Med	I	P?NE	15 44 03	uncertain in very strong micros.
				iE	15 44 18	
				iE	15 46 20	
486	" 4	Med	Iv	PNE	07 07 24	in strong micros.
				iE	07 07 37	
				iE	07 08 00	
487	" 5	Bat	Iu	iPZ	08 50 08	compression.
				iE	09 01.3	in minute eclipse.
				eLE	10 05	
		Med	Iu	PNE	08 50.4	in minute eclipse.
				eLNE	10 04	
				LE	10 11	
				LN	10 13	
488	" 8	Bat	Iv	iPZNE	07 04 14	felt Priangan (W. Java).
				iN	07 04 30	
				iNE	07 04 42	
489	" 10	Bat	I	PNE	03 40	traces in strong micros.
				P?Z	03 40 41	
490	" 10	Bat	I	iE	14 00 08	
491	" 12	Bat	Iv	PZNE	02 44 21	
				iN	02 44 38	
				iE	02 44 42	

						degrees	
492	Dec 12	Med	IIIv	iPNE	04 50 33	0.6	pens thrown off, felt in Atjeh and Tapandul (N. Sumatra).
				iSN	04 50 42		
				iE	04 50 57		
		Bat	Ir	PZNE			lost in micros.
				iS?N	04 55 56		
				iS?E	04 56 27		
493	" 13	Bat	Iv	PZ	14 23 05	2.3	felt priangan (W. Java).
				iSE	14 23 32		
494	" 14	Med	I	iN	03 19 47		
495	" 15	Med	Iu	PNE	21 56 43		
				iE	21 57 37		
				iN	21 57 55		
				iN	21 58 11		
		Bat	Iu	ePZ	21 56 44		extremely faint.
				iN	21 58 39		
				iE	21 58 43		
496	" 16	Med	Iu	PNE	10 56 47	58.8	
				iE	10 58 13		
				iE	11 04 44		
				SN	11 04 59		
		Bat	Iu	iPZNE	10 56 48	60.3	
				iSNE	11 05 09		
497	" 17	Bat	Ir	iPNE	07 52 35		in micros, felt in Flores and Timor.
				iN	07 56 27		
				iE	07 56 38		
		Med	Ir	ePNE	07 53 51		
498	" 18	Bat	I	ePZE	06 36 32	60.1?	faint, uncertain in micros.
				eS?E	06 44 52		

					h m s	degrees	
499	Dec 18	Med	I	P?N	10 29 48		
				eP?E	10 29 51		
				iE	10 29 55		
		Bat	I	iPE	10 30 51		
				eE	10 37 48		
500	" 20	Amb	Ir			9.4	iS - iP = 1 m 41 s, deep focus, h = 350 km, provisional epicentre 1.5° S 119.0° E, O = 13 04 11.
		Bat	IIr	iPZ	13 07 02	13.0	compression.
				PNE	13 07 04		
				SZ	13 09 19		
				iSNE	13 09 21		
		Med	IIr			21.0	no minute eclipses, iS - iP = 3 m 29 s.
501	" 21	Med	IIIv	iPN	+ 01 20		no minute eclipses.
				ePNE	01 22.4		doubtful.
				P?E	01 23 44		in micros.
				P?Z	01 23 45		
				iN	01 23 50		in micros.
				iN	01 24 12		
				iNE	01 25 08		
502	" 21	Amb	IIIv			5.2	pens thrown off, com- pression, felt in Ce- lebes, Moluccas, Minda- nao and Soeloe Islands, destructive at Goronta- lo, provisional epicen- tre 0.3° S, 124.1° E, O = 21 00 34, deep focus h = 150 km.
		Bat	IIIr	iPZNE	21 04 35	18.2	pens thrown off.
				iE	21 04 52		
				iN	21 06 40		
		Med	IIIr	iPNE	21 05 52	25.7	pens thrown off.
				iNE	21 06 01		

503	Dec 22	Amb	Iv			5.2	$iS - iP = 1\text{ m } 03\text{ s,}$ aftershock 502, deep focus, $h = 150\text{ km.}$
		Bat	Ir	PNE	00 55 45	18.2	in strong micros.
				SN	00 59 01		
504	" 22	Med	Iu	ePNE	05 04 07		faint.
				iN	05 13 16		
		Bat	Iu	iPZNE	05 04 19		in very strong micros.
				iN	05 05 30		
				iE	05 15 54		
				iE	05 30 16		
				eLZ	06 22		
				eLN	06 24		
				eLE	06 25		
505	" 22	Amb	Iv			5.2	$S - P = 1\text{ m } 00\text{ s,}$ aftershock 502, deep focus, $h = 150\text{ km.}$
		Bat	Ir	ePNE	21 04 57	18.2	dubious in micros.
				iE	21 08 18		
				iN	21 08 34		
		Med	Ir		21 06	25.7	faint traces in strong micros.
506	" 23	Amb	Iv			6.8	$S - P = 1\text{ m } 15\text{ s,}$ felt in C. Celebes and at Laboeha (Batjan). Deep focus, $h = 350\text{ km.}$ Pro- visional epicentre 1.7° $S, 121.7^{\circ} E, O = 02\ 56\ 21.$
		Bat	Ir	PNE	02 59 41	15.5	uncertain in micros.
				iSN	03 02 22		
		Med	Ir	PE	03 01 21	23.6	
				iSE	03 05 09		
507	" 23	Bat	IIIv	ePZNE	12 18 18		dilatation, felt in Java.
				iS?ZE	12 19 06		
				iS?ZE	12 19 18		
				iN	12 19 37		

					h m s	degrees	
508	Dec 23	Amb	Iv		21 05	5.2	S - P = 1 m 00 s, after-shock 502, felt at Laboeha (Batjan) and Gorontalo (N. Celebes). Deep focus h = 150 km.
509	" 23	Med	Iv	iNE	22 02 16		
510	" 25	Amb	Ir			19.4	S - P = 3 m 39 s
		Bat	Ir	ePZ	16 32 33		uncertain in micros.
				iE	16 34 30		
				iSE	16 39 10		
		Med	Ir	PE	16 34 23	48.0	
				iSN	16 41 27		
511	" 25	Amb	Iv				S - P = 59 s, felt at Malili (C. Celebes) and Laboeha (Batjan). Shock near No. 502. Deep focus.
		Bat	Ir	PZ	21 00 10		in micros.
				PE	21 00 15		faint.
				iE	21 00 55		
				iSE	21 03 41		
		Med	Ir	PE	21 01 21		dubious in strong micros.
				iSNE	21 05 41		
512	" 25	Amb	Iv			4.6	S - P = 1 m 00 s.
		Bat	Ir	PE	22 27 39	25.7	in micros.
				iE	22 29 00		
				iSE	22 32 12		
		Med	Ir	PNE			doubtful in micros.
				iN	22 32 35		
				iE	22 33 28		
513	" 27	Med	IIu	PNE	00 08 05		
				iN	00 08 42		
				iN	00 08 51		
				iN	00 14 21		
				iE	00 14 27		

Dec 27									
513	(continued)	Bat	IIu	eLNE	00 32				
				iPZ	00 09 12				in strong micros
				ePNE	00 09 16				
				iN	00 19 34				
				iZ	00 20 14				
				iZ	00 20 34				
				eLZ	00 29				
				eLE	00 32				
				LN	00 36				
				LZE	00 37				
514	" 27	Bat	Ir	PE	03 08 30	29.8			
				iE	03 10 08				
				iSE	03 13 34				
		Med	Ir	PE	03 09 51	37.9			
				iN	03 10 13				
				iE	03 12 15				
				iN	03 12 21				
				iSNE	03 15 53				
515	" 28	Med	I	NE	00 08				traces.
		Bat	I	PNE					doubtful in micros
				iE	00 08 38				
				iE	00 11 31				
516	" 29	Med	I	P?E	00 35 32				
517	" 29	Med	I	iNE	07 25 19				
518	" 31	Amb	Iv		+ 03				

B A T A V I A .

	EW Component			NS Component			Z Component		
	V	T_0	ϵ	V	T_0	ϵ	V	T_0	ϵ
October	226	7.3	3.4	203	7.4	3.5	300	4.4	3.1
November	226	7.3	3.4	203	7.4	3.4	300	4.4	3.1
December	226	7.3	3.5	203	7.4	3.4	300	4.4	3.0

	e_0	r	e_0	r	e_0	r
October	1.08	0.60	1.08	0.40	1.15	0.41
November	1.09	0.62	1.10	0.40	1.14	0.35
December	1.09	0.70	1.09	0.38	1.13	0.52

M E D A N .

EW Component					NS Component				
V	T_0	ϵ	e_0	r	V	T_0	ϵ	e_0	r
231	5.8	4.7	1.09	0.95	249	5.6	4.0	1.11	1.37

Batavia 16 - 7 1940.