

SEISMOLOGICAL BULLETIN 1927.

BATAVIA OBSERVATORY, JAVA.

Foundation: River Quaternary.

Greenwich Mean Time. S. Latitude $6^{\circ} 11' 0''$. Height above sealevel 8 m.

E. Longitude $7^{\text{h}} 7^{\text{m}} 20.3^{\text{s}}$. (1)

WIECHERT Horizontal Pendulum, 1000 kilograms.

WIECHERT Vertical Pendulum, 1300 kilograms.

PREFACE.

The astatic seismograph of WIECHERT of 1000 kg is registering regularly since December 6th 1908; the vertical seismograph since July 9th, 1927.

The instruments are mounted on heavy brick pillars in a room with thick walls (about 70 centimeters) that is protected against the sun's heat by open galleries around it. The horizontal components are placed in E-W and N-S direction respectively.

The pins are lifted electrically every hour for a period of 10 seconds by the Javanese observer on duty. A lifting of two seconds every minute is given by an electrical impulse dial of the Synchronome Company Ltd. London.

For each month the mean constants for that month are applied. T_0 and ϵ , the oscillation period and the coefficient of damping, are determined every week. V , the magnification for very short waves, is determined occasionally only. It is found for the horizontal pendulum by direct measurement, giving the pendulum a displacement by means of the horizontal adjusting screw, the value of which can be determined easily from the pitch (a), the angle of displacement of the screws and the height of the screws (b) and of the centre of gravity (c) above the Cardanic suspension apparatus.

It was found

$$(a) = 1.407 \text{ mm}; (b) = 1225 \text{ mm}; (c) = 895 \text{ mm}$$

The constants used from January — March incl., 1927, are given below

1927.	E-W component.			N-S component.			V. component.		
	V.	T_0 .	ϵ .	V.	T_0 .	ϵ .	V.	T_0 .	ϵ .
January	266	6.9	3.7	202	7.5	3.3	370	5.2	4.2
February	"	7.4	3.4	"	7.4	3.2	377	5.1	4.2
March	"	7.2	3.4	"	7.2	3.3	360	5.3	4.2

(1) For the E. Longitude of the Observatory, see: J. BOEREMA, Determination of the Eastern Longitude of Batavia; K. Magn. Met. Observ. Batavia, Verhandelingen No. 12, 1924.

The notation used is that of the Göttingen Geophysical Institute. The following abbreviations are employed:

CHARACTER OF THE EARTHQUAKE.

- I = perceptible; II = moderately strong; III = strong.
- d (terrae motus domesticus) = local.
- v (" " vicinus) = near (less than 1000 km).
- r (" " remotus) = distant (1000 to 5000 km).
- u (" " ultimus) = very distant (over 5000 km).

PHASES.

- P (undae primae) = 1st preliminary tremors.
- S (" secundae) = 2nd " "
- L (" longae) = principal phase, long waves.
- M (" maximae) = maximum amplitude.
- C (coda) = prominent waves among the after tremors.
- F (finis) = end of perceptible movement.
- PR₁, PR₂, SR₁, SR₂, = 1st, 2nd reflected waves of P and S.
- PS = waves changed by reflection from longitudinal to transversal oscillation.

WAVE-ELEMENTS, UNITS.

- T = complete period in seconds.
- A = amplitude, measured from median position in microns.
- A_E = E.-W. component of A.
- A_N = N.-S. " " "
- i (impetus) = abrupt commencement, clearly defined.
- e (emersio) = gradual " , not clearly defined.

MALABAR.

Foundation: Volcanic.

S. Latitude 7° 13'; E. Longitude 107° 37'; Height above sea-level 1550 m.

WIECHERT Horizontal pendulum 100 kg, NS and EW component. Since July 1911.

Time Signals by Malabar Radio.

Possession of Mr. K. A. R. BOSSCHA.

MARON.

Foundation: Volcanic.

S. Latitude 7 34' E; Longitude 110° 25' Height above sea-level 960 m. OMORI

Tremometer, one component Since February 1924.

AMBOINA.

Foundation: Quaternary.

S. Latitude 3° 41,5'; E. Longitude 128° 10,5'; Height above sea-level 4 m.

WIECHERT Horizontal Pendulum 1000 kg, NS and EW component. Since October 1924.

Time Signals by Malabar Radio. The time eclipses not yet working satisfactorily time is given in 1/10 minutes.

The distances given in the Bulletin Batavia are calculated with the time tables of Dr. S. W. Visser. See Verhandelingen Batavia No. 7, 1921 (out of print). The postponed table is an extract of these tables.

Distance.	S-P	P-O	S-O	Distance.	S-P	P-O	S-O
1°	m s	m s	m s	56°	m s	m s	m s
2	0 13	0 16	0 29	57	7 46	9 54	17 40
3	25	31	56	58	52	10 1	53
4	38	46	1 24	59	58	8	18 6
5	50	1 1	51	60	8 4	15	19
6	1 1	17	2 18	61	10	22	32
7	12	32	44	62	15	29	44
8	24	47	3 11	63	21	36	57
9	35	2 2	37	64	26	43	19 9
10	47	16	4 3	65	32	49	21
	57	31	28	66	38	55	33
11	2 8	45	53	67	43	11 2	45
12	19	59	5 18	68	49	8	57
13	30	3 12	42	69	55	14	20 9
14	40	26	6 6	70	9 1	20	21
15	50	39	29		6	26	32
16	3 0	52	52	71	11	33	44
17	10	4 4	7 14	72	16	39	55
18	19	17	36	73	21	45	21 6
19	28	29	57	74	27	51	17
20	37	41	8 18	75	32	57	29
21	46	53	39	76	37	12 3	40
22	55	5 4	59	77	42	9	51
23	4 3	16	9 19	78	47	15	22 2
24	11	27	38	79	53	20	13
25	19	38	57	80	58	26	24
26	27	48	10 15	81	10 4	31	35
27	35	58	33	82	9	37	46
28	41	6 9	50	83	14	42	56
29	48	19	11 7	84	19	47	23 6
30	56	28	24	85	24	52	16
31	5 3	37	40	86	28	58	26
32	10	46	56	87	32	13 4	36
33	17	55	12 11	88	37	9	46
34	24	7 4	28	89	41	15	56
35	30	15	45	90	46	20	24 6
36	36	22	58	91	50	25	15
37	43	30	13 13	92	55	30	25
38	50	38	28	93	59	35	34
39	57	46	43	94	11 3	40	43
40	6 5	55	58	95	7	45	52
41	11	8 1	14 12	96	11	50	25 1
42	18	9	27	97	15	55	10
43	25	17	42	98	18	14 0	18
44	32	24	56	99	22	5	27
45	40	31	15 11	100	25	10	35
46	47	39	26	101	27	15	42
47	55	47	40	102	30	20	50
48	7 0	54	54	103	32	25	57
49	6	9 2	16 8	104	34	30	26 4
50	13	9	22	105	37	34	11
51	18	18	35	106	40	39	19
52	24	24	48	107	42	44	26
53	29	32	17 1	108	45	48	33
54	35	39	14	109	47	53	40
55	40	47	27	110	50	58	46

JANUARY 1927.

N ^o .	Date 1927.	Station.	Char-acter.	Phase.	Time (G.M.T.).			Period.	Amplitude (half).		Distance of epi-centre	Remarks.	
					h	m	s		μ	μ			
					sec.	μ	μ		km.				
1	Jan. 1	Bat.	I	i ₁	18	56	51						
				i ₂	19	1	10						
				F	19	6							
—	" 5	Mal.	—	P	7	7	21			80			
				iS	7	7	30						
				F	7	9							
—	" 5	Mal	—	P	12	6	52			140			
				iS	12	7	8						
				F	12	8							
2	" 5	Bat.	I	i _N	15	41	54						
				F	15	45							
—	" 9	Amb.	—	iP	2	46,3				(50)			
				iS	2	46,4							
3	" 12	Bat.	I	i _N	0	10	55						
				F	0	25							
4	" 12	Bat.	I	e	24	45,6							
				i	21	56	35						
				F	22	2							
—	" 14	Amb.	—	e	17	29,5							
				F	17	56							
5	" 20	Bat.	—	i	11	17	6	8.8					
				L _N	11	58	24						
				F	11	45							
6	" 24	Bat.	II _u	iP _N	1	15	58						
				i	1	16	1						
				i _E	1	16	27						
				L	1	59	25						
				M	1	41,6	20.2						
				L _E	1	46	2						
				L	2	0	26						
				L _E	2	16,6	16.2						
				F	2	56							
				Mal.	P	1	15						52
					i	1	24						25
					L	1	29,4						
					M	1	59,4						20.5
					L	1	59,4						20.5
				Amb.	F	2	7						
iP	1	14	14										
i ₁	1	14	26										
i ₂	1	20	26										
L	1	28	25.5										
M	1	52	14										
F	2	30											

No.	Date 1927.	Sta-tion.	Char-acter.	Phase.	Time (G. M. T.)			Period.	Amplitude (half).		Distance of epi-centre.	Remarks.
					h	m	s		μ	μ		
7	Jan. 25	Bat.	I	P _v	25	20	50					
				P _E	25	20	54					
				i	25	25	24					
" 26	" 26	Bat.	I	F	0	8						
8	" 27	Bat.	I	i ₁	15	46	55					
				i ₂	15	52	55					
				F	16	1						
9	" 28	Bat.	I	F	6	30	54					
						6	58					
10	" 29	Bat.	I	iP	7	49,1					Lost in strong micros.	
				F	7	58						

FEBRUARY.

11	Feb. 1	Bat.	II _r	i _E	18	5	12	31.5			4980	Azimuth ESE; compression.									
				iP	18	5	14														
				i	18	6	40														
				iS	18	11	52														
				L	18	20	51														
				F	18	32															
				Mal.	iP	18	5						10								
					i	18	11						52								
					iS	18	11						55								
					i	18	14						56								
					F	18	17														
Amb	iP	18	1,9																		
	i _N	18	2,2																		
	iS	18	5,6																		
	i _E	18	7,1																		
12	" 5	Bat.	I _u	i _v	4	1	1	20.9			3080	Perhaps an error of one minute.									
				e	4	1	8														
				i _E	4	7	25														
				i	4	8	14														
				eL	4	16,7															
				L _v	4	17,7	12.5														
				M	4	19															
				F	4	57															
				13	" 5	Bat.	I _u						e _E	5	0,7					3160	Perhaps an error of one minute.
													L	5	17	16					
													F	5	50						
14	" 4	Bat.	II	P _v	2	59	52														
				iP	2	59	55														
				i _v	2	59	50														
				i	2	59	55														
				i _E	5	7	57														
				i _v	5	8	15														
				i	5	8	16														
				F	5	40															
				Mal.	e	2	59,4														
					i	5	8						5								
					F	5	16														

No.	Date 1927.	Station.	Character.	Phase.	Time (G. M. T.).			Amplitude (half)		Distance of epicentre.	Remarks.
					h	m	s	sec.	μ		
		Amb.		iP	2	57,4				850	
				iS	2	58,9					
				i ₁	2	59,2					
				i ₂	3	6,6					
				L	3	9,6			35		
				F	5	24					
15	Feb. 5	Bat.	I	e	7	42	2				
				i	7	47	51				
				F	7	55					
16	" 8	Bat.	I _v	P _E	5	59	12			260	
				iP _v	5	59	14				
				i	5	59	24				
				iS _N	5	59	41				
		Mal.		F	5	47					
				P	5	59	52			250	
				S	5	40	0				
				F	5	45					
	" 10	Mal.		iP	8	27	49			110	
				iS	8	28	2				
				F	8	50					
	" 13	Mal.		iP	5	7	40			90	
				iS	5	7	51				
				F	5	10					
17	" 16	Bat.	I _u	i _v	1	46	15			7890	Azimuth NE; Compression. more than one shock. Azimuth WNW.
				i	1	46	18				
				iS	1	53	26				
				i	2	15	47				
				L _v	2	21		17.5			
				L	2	25		15.7			
				e	2	44					
				e	3	7					
				i _v	3	7	20				
				L	3	53		12.6			
				L	3	54		18 0			
		Amb.		F	4	11				6070	
				P	1	44,6					
				iS	1	52,5					
				L	2	12		17 8			
				P	3	6,6				5500	
				iS	3	15,6					
				F	4	55					
18	" 17	Bat.	II _r	iP	25	1	21			5540	
				S	25	6	17				
				F	23	24					
19	" 20	Bat.	I	iP _v	5	4	20			720?	
				iP	5	4	21				
				S?	5	5	58				
				F	5	15					
20	" 21	Bat.	II	P _{E_v}	12	28	54			5160	Dilatation.
				i	12	29	42				
				iS	12	33	58				
				F	13	2					

No.	Date 1927.	Station.	Character.	Phase.	Time (G. M. T.)			Period	Amplitude half.		Distance of epicentre.	Remarks.
					h	m	s		sec.	μ		
		Mal.		P	12	28	58					
				F	12	44						
		Amb.		iP	12	26,7					770	
				iS?	12	28,1						
				i	12	28,9						
				i	12	29,7						
				L	13	10						
21	Feb 22	Bat.	I	i	20	20	15					
				F	20	27						
	" 23	Amb.		P	9	43	41				300	
				S	9	44	15					
22	" 24	Mal.	I	i ₁	19	55	58					
				i ₂	20	5	58					
				L	20	19,6		26.5				
				F	20	51						
23	" 26	Bat.	I	i ₁	2	16	27					
				i ₂	2	24	45					
				i ₃	2	26	42					
				F	2	55						
	" 27	Amb.		P	8	45	50				70	
				iS	8	45	58					
				F	8	50						
24	" 28	Bat.	I	i	14	27	29					Azimuth NNE.
				F	14	35						
25	" 28	Bat.	I	e	15	2	15					
				F	15	15						
MARCH.												
26	March 3	Bat.	III _r	iP	1	8	45					Compression. South Celebes and Flores.
				i	1	8	54					MARON i-P= 14 sec.
				F	1	40						S-P= 2 ^m 30 sec.
		Mal.		iP	1	8	35					Δ= 1450.
				i	1	9	1					
				F	2	5						
		Amb.		iP	1	15,2					980	
				i	1	15,5						
				iS	1	15,0						
				i	1	15,1						
				off	1	16						
	" 5	Amb.		iP	12	48,4						
27	" 4	Bat.	II _v	iP	2	16	14					Compression. E. Preanger.
				P _v	2	16	21				550	
				i	2	16	25					
				iS	2	16	51					
				F	2	50						
		Mal.		iP	2	16	25				520	
				iS	2	17	1					
				F	2	19						
	" 4	Amb.		iP	5	20	42					

N ^o .	Date 1927.	Sta- tion.	Char- acter.	Phase.	Time (G. M. T.).			Period.	Amplitude (half)		Distance of epi- centre.	Remarks.				
					h	m	s		A _E	A _N						
28	March. 7	Bat.	III u	P _v	9	56	55	sec.	μ	μ	km.	Azimuth SW; compres- sion.				
				iP	9	56	56									
				iS	9	45	48									
				L _v	9	52	5									
				L	9	55	59									
				M ₁	10	0	56						17.8	1180	884	
				M ₂	10	6	7						17.5	619	570	
				F	11	25										
				Amb.	iP	9	54						50			4540
				S?	9	41	0									
	L	9	45	55	15.8											
—	» 12	Amb.		iP	16	28	29			(50)						
				iS	16	28	55									
				F	16	50										
—	» 14	Amb.		iP	14	20	55			(50)						
				iS	14	20	41									
				F	14	56										
29	» 14	Bat.	I	e	17	48										
				L	17	55	8									
				F	18	6										
50	» 15	Bat.	I	i _E	17	4	54									
				i _N	17	5	46									
				F	17	16										
—	» 18	Amb.		iP	18	4	14			100						
				iS	18	4	26									
51	» 18	Bat.	I	i	21	52	1									
				F	21	42										
52	» 19	Bat.	I	e	20	37,6										
				F	20	44										
—	» 20	Amb.		P	18	44	25			90						
				S	18	44	55									
53	» 20	Bat.	I	iP _E	21	18	59			2470						
				iS	21	22	56									
				F	21	29										
		Amb.	P	21	14	26			650							
			S?	21	15	54										
			F	21	26											
54	» 21	Bat.	I	iP	15	14	54	54								
				i ₁	15	15	56									
				i ₂	15	22	54									
				L _v	15	29,6										
—	» 21	Mal.		iP	17	50	59									
				iS	17	51	2									
				F	17	55										

SEISMOLOGICAL BULLETIN 1927.

BATAVIA OBSERVATORY, JAVA.

1927.	E-W component.			N-S component.			V. component.		
	V.	T ₀ .	ε.	V.	T ₀ .	ε.	V.	T ₀ .	ε.
April	226	7.1	3.5	202	7.2	3.3	365	5.3	4.2
May	"	7.3	3.8	"	7.3	3.3	365	5.3	4.6
June	"	7.8	3.9	"	7.6	3.1	350	5.4	5.3

APRIL.

No.	Date 1927.	Sta- tion.	Char- acter.	Phase.	Time (G. M. T.)			Period	Amplitude half.		Distance of epi- centre.	Remarks.	
					h	m	s		A _E	A _N			
35	April 1	Bat.	I _u	iP	19	17	10	sec.	μ	μ	7640	Azimuth E S E, compres- sion.	
				i _N	19	17	44						
				iS	19	26	9						
		Amb.		F	19	45					5580		Azimuth S S E.
				iP	19	14	47						
				iS	19	22	1						
			i	19	23	57							
36	" 5	Bat.	I	e	5	22.6					2480	Tobelo (Halmaheira).	
				iS	5	26	55						
				F	5	35							
		Amb.		iP	5	18	15				680		Azimuth W N W.
				iS	5	19	26						
37	" 6	Bat.	I _v	P	17	27	9				590		
				S _E	17	28	15						
				F	17	35							
		Mal.		P	17	26	51				110		
				i	17	26	52						
				S	17	27	4						
			F	17	30								
—	" 6	Mal.		P	16	46	55				80		
				iS	16	46	45						
				F	16	48							
38	" 7	Bat.	I	P	16	49	15				310		
				S	16	49	50						
				F	16	58							
		Mal.		iP	16	48	57				100		
				i	16	48	59						
				iS	16	49	12						
			F	16	52								
39	" 7	Bat.	I	e	17	54	12						
				F	18	5							
40	" 9	Bat.	I	i ₁	9	2	8						
				i ₂	9	6	55						

No.	Date 1927.	Station.	Character.	Phase.	Time (G. M. T.)			Period.	Amplitude (half)		Distance of epicentre.	Remarks.
					h	m	s		sec.	μ		
		Amb.		F eP iS	9	12	56				1240	
42	April 12	Bat.	I	e i F	25	25	6				420	Compression. S. Sumatra.
	" 15	Bat.	I _v	iP _v i iS _N	7	39	12					
		Mal.		F e F	7	59	47					
				F	7	59	59					
				e	7	54						
				e	7	39	5					
				F	7	44						
43	" 15	Bat.	II	e	13	49	34					
				i ₁	15	50	10					
				i ₂	15	54	2					
				i _N	15	54	38					
				F	15	25						
		Amb.		iP iS	15	48	56				2150	Azimuth WNW.
				e	15	52	25					
44	" 15	Bat.	I	e F	14	40	6					
				F	14	55						
45	" 14	Bat.	I	iP i _E F	6	42	56					
				F	6	45	27					
		Amb.		P i iS L	6	45	11				2150	
				P	6	45	58					
				iS	6	46	42					
				L	7	10		19				
	" 14	Amb.		iP F	25	27	16					
				F	25	43						
	" 15	Mal.		P iS F	15	31	4				110	
				F	15	31	17					
				F	15	35						
46	" 15	Bat.	I _v	P iS F	16	46	56				850	
				F	16	48	27					
				F	17	4						
47	" 16	Bat.	I	i ₁ i ₂ F	8	27	40					
				F	8	58	5					
				F	8	47						
48	" 16	Bat.	I _u	i i _E iS F	9	20	38				5950	Azimuth NE.
				F	9	27	38					
				iS	9	28	10					
				F	9	55						
49	" 16	Bat.	I	i _E i _N F	15	8	41					
				F	15	15	34					
				F	15	21						
	" 17	Amb.		iP iS	4	58	54				80	
				F	4	59	5					

No.	Date 1927.	Station.	Character.	Phase	Time (Greenwich).			Period.	Amplitude (half)		Distance of epicentre.	Remarks.
					h	m	s		sec.	μ		
50	April 17	Bat.	I	iP i _N i _N i _E F	9	10	8					
				iP	9	11	7					
				i _N	9	15	36					
				i _E	9	14	48					
				F	9	29						
		Amb.		iP iS	9	6	35				450	
				F	9	7	25					
51	" 19	Bat.	III _a	iP iP _v iS off _{N,E}	8	34	7				170	Compression. W. Java.
				F	8	34	8					
				iS	8	54	27					
				off _{N,E}	8	54	34					
		Mal.		e _N i _E iP	8	35	27				150?	
				F	8	55	48					
				iP	8	55	57					
				iS?	8	54	12					
				off	8	54	15					Starting anew 9 ^h 28 ^m .
52	" 19	Bat.	I	P _v S _v F	9	29	18				210	Compression. Tjikaso (W. Priangan).
				F	9	29	42					
		Mal.		P iS F	9	32					100	
				F	9	29	18					
				iS	9	29	30					
				F	9	51						
53	" 19	Bat.	I _v	P _{N,v} i _E iS _{N,v} i _E F	15	52	15				160	No hour eclipses
				F	15	52	26					
				i _E	15	52	35					
				F	15	53	5					
				F	15	57						
54	" 19	Bat.	II _r	iP _v P i ₁ i _v i ₂ i ₃ F	17	35	24					Dilatation
				F	17	35	26					
				i ₁	17	36	5					
				i _v	17	36	7					
				i ₂	17	37	6					
				i ₃	17	59	38					
				F	18	11						
		Mal.		iP	17	35	35				2890	
				iS	17	40	0					
		Amb.		iP iS	17	35	55				2420	Azimuth ESE.
				F	17	59	46	20				
55	" 21	Bat.	I _v	P _v iP i _N i _v iS i _N i _E F	15	16	45				400	Dilatation.
				F	15	16	46					
				iP	15	17	8					
				i _N	15	17	13					
				i _v	15	17	28					
				iS	15	17	28					
				i _N	15	18	17					
				i _E	15	18	30					
				F	15	50						
		Mal.		P F	15	16	26					
				F	15	21						
	" 25	Amb.		iP iS	8	21	5				90	Namlea (Boeroe).
				F	8	21	16					
56	" 24	Bat.	I	e i i _N F	21	8	30					
				F	21	9	54					
				i	21	10	47					
				F	21	15						

JUNE.

No.	Date 1927.	Sta-tion	Char-acter.	Phase.	Time (Greenwich).			Period.	Amplitude (half).		Distance of epi-centre.	Remarks.
					h	m	s		A _E	A _N		
73	June 1	Bat.	II _r	i	17	28	2	1100				
				iP	17	28	42					
				i	17	29	4					
				iS	17	29	58					
		Mal.		F	17	45						
				F	17	50	2					
74	" 1	Bat.	I	i _E	21	10	7	22				
				i ₁	21	10	26					
				i ₂	21	11	7					
				F	21	17						
75	" 5	Bat.	III	iP	7 ^m	17	14	22		3580	Azimuth S 77.8° E; com-pression. Moluccas and New Gunica.	
				i ₁	7	17	45					
				i ₂	7	18	20					
				i ₃	7	21	55					
				iS	7	22	14					
				L _v	7	25						
				F	9	5						
		Mal.		i ₁	7	17	8					
				i ₂	7	17	14					
				i ₃	7	17	58					
				i ₄	7	21	12					
				L ₁	7	23			45			
				L ₂	7	25			20			
				F	7	28	19		5.2			
		Amb.		i	7	14	9					
				iP	7	14	15					
				off	7	14	28					
	" 5	Amb.		iP	20	49	2					
				F	20	50						
76	" 6	Bat.	I	P	5	41	8					
				F	5	58						
77	" 6	Bat.	I _v	iP	17	21	56			160		
				i	17	22	7					
				iS	17	22	15					
				F	17	28						
		Mal.		iP	17	22	2			210		
				S	17	22	26					
				F	17	24					In minute eclipse.	
78	" 6	Bat.	I	P	18	55	41					
				i	18	40	52					
				F	18	52						
79	" 7	Bat.	I	i	9	42	4					
				F	9	56						
	" 9	Mal.		P	6	44	58			90		
				iS	6	45	9					
				F	6	47						

No.	Date 1926	Sta-tions.	Char-acter.	Phase.	Time (Greenwich).			Period.	Amplitude (half).		Distance of epi-centre.	Remarks.
					h	m	s		A _E	A _N		
	June 10	Mal.		P	22	1	55				110	
				iS	22	1	48					
				F	22	2						
80	" 11	Bat	I _r	iP _v	2	57	28				2950	Azimuth ESE; dilatation.
				iP ₁	2	57	31					
				iS ₁	2	42	1					
				i _v	2	54	46				5520	New shock.
				iP ₂	2	54	48					
				iS ₂	2	59	43					
				F	3	15						
		Mal.		i ₁	2	57	29					
				i ₂	2	54	44					
				F	3	2						
		Amb.		iP ₁	2	54	23				540	
				iS ₁	2	55	2					
				F	in next.							
				iP ₂	2	51	59				580	New shock.
				iS ₂	2	52	22					
				F	3	10						
	" 11	Amb.		i	3	6	5					
81	" 12	Bat.	I	eP _E	12	49	53				890	
				iS _N	12	51	8					
				i	12	52	44					
				F	12	57						
82	" 15	Bat.	I	e	14	45	24					Benkoelen.
				F	14	49						
83	" 14	Bat.	I	e	8	29,2						
				F	8	32						
		Mal.		iP	8	28	24				170	
				iS	8	28	44					
				F	8	30						
84	" 14	Bat.	I	e	9	29	19					
				i ₁	9	33	33					
				i ₃	9	34	42					
				F	9	41						
85	" 14	Bat.	II	i ₁	17	26	10					
				i ₂	17	28	8					
				i ₃	17	29	6					
				i ₄	17	33	22					
				i ₅	17	35	30					
				eL	17	45		24.7				
				F	17	56						
86	" 16	Bat.	I _r	i _E	2	44	45					Tapanoeli.
				i _N	2	49	10					
				F	2	59						
	" 19	Amb.		i	2	25	25					
				F	2	27						
	" 23	Mal.		P	5	58	57				170	E. Preanger.
				iS	5	58	57					
				F	6	2						

No.	Date 1926.	Sta- tion.	Char- acter.	Phase.	Time (Greenwich).			Period.	Amplitude (half)		Distance of epi- centre.	Remarks.
					h	m	s		A _E	A _N		
87	June 26	Bat.	I	e	5	55	9		μ	μ		Disturbed by street traffic. Padang Pandjang, W. Sumatra.
				i	5	55	5					
				F	5	59						
—	» 26	Mal.		P	15	25	55				100	
				iS	15	26	7					
				F	15	27						
88	» 28	Bat.	I _v	iP	1	46	56				2650	Azimuth NE; dilatation.
				iS	1	51	4					
		Amb.		F	2	5						
				iP	1	45	8					
				F	1	54						
—	» 28	Amb.		P	2	2	8				480	
				S	2	5	1					
				F	2	13						
—	» 28	Amb.		P	19	52	41				520	
				iS	19	55	17					
				F	19	59						
89	» 50	Bat.	I _v	e	25	52.9						270
				i	25	55	22					
				F	25	40						
		Mal.		P	25	31	54					
				iS	25	32	25					
				F	25	56						

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BATAVIA OBSERVATORY, JAVA.

1927.	E-W component.			N-S component.			V. component.		
	V.	T ₀ .	ε.	V.	T ₀ .	ε.	V.	T ₀ .	ε.
July	208	7.9	3.8	197	7.5	3.2	374	5.3	4.0
August	"	7.6	3.2	"	7.6	3.3	"	5.3	4.0
September	"	7.2	3.7	"	7.4	3.7	"	5.3	4.0

N. B. 1927, Jan-March, E W component, read V=226.

JULY.

No.	Date 1927.	Station.	Char-acter.	Phase.	Time (G. M. T.)			Period	Amplitude half.		Distance of epi-centre	Remarks.	
					h	m	s		A _E	A _N			
90	July 1	Bat.	I	i _v	8	31	21	sec.	μ	μ	km.		
				i ₁	8	31	25						
				i ₂	8	41	42						
				i ₃	8	42	1						
				F	8	42	34						
—	" 2	Mal.		P	8	50	19				140		
				iS	8	50	35						
				F	8	52							
91	" 2	Bat.	I _v	iP _v	20	5	34				510	Central Java. MARON: iS-iP=48 ^s Δ=450.	
				iP	20	5	36						
				i	20	5	37						
				iS	20	6	8						
		Mal.			iP	20	14				47		140
					iS	20	6				3		
					F	20	11						
92	" 3	Bat.	I	i _v	8	21	45						
				i _N	8	21	45						
				F	8	46							
93	" 7	Bat.	I	e	20	24	12						
				F	20	28							
—	" 12	Mal.		P	19	54	5				140		
				S	19	54	21						
				F	19	56							
94	" 12	Bat.	I	i _v	21	17	21					Dilatation. Azimuth N E.	
				i ₁	21	17	25						
				i ₂	21	25	35						
				F	21	54							
95	" 12	Bat.	I _v	i _v	23	4	48				510		
				P _E	23	5	14						
				i _v	23	5	47						

No.	Date 1927.	Sta-tion.	Char-acter.	Phase.	Time (G. M. T.)			Period.	Amplitude (half)		Distance of epi-centre.	Remarks.
					h	m	s		sec.	μ		
				iS	25	6	10					
		Mal.		F	23	12					550	
				P	23	5	28					
				i _N	25	6	20					
				iS	23	6	26					
				F	23	9						
—	July 14	Amb.		P	4	58	40				390	
				iS	4	59	24					
				F	4	47						
—	" 14	Amb.		iP	21	48	20				500	
				iS	21	48	54					
				F	21	53						
96	" 14	Bat.	I _r	i _v	25	21	33					Dobo (Aroe I. Moluccas).
				eP	25	21	37					
				i _v	25	22	7					
				i _E	25	22	16					
				i	25	23	4					
				F	25	40						
		Mal.		iP	25	22	12					
				i	25	26	13					
				i _E	25	26	32					
				F	25	35						
		Amb.		iP	23	17	57				590	Azimuth S 50° E.
				iS	23	19	1					
				F	23	46						
97	" 17	Bat.	I	i _E	8	55	9					Dilatation.
				i _E	8	56	10					
				i _N	9	1	0					
				F	9	5						
		Amb.		P	8	54	8				2350	
				i	8	54	56					
				iS	8	57	55					
				F	9	5						
98	" 18	Bat.	I	i _E	11	30	37					
				i _N	11	31	57					
				i	11	40	6					
				i _N	11	40	39					
				F	11	51						
99	" 20	Bat.	I	e	19	23						
				F	19	28						
100	" 22	Bat.	I	i ₁	4	8	7					
				i ₂	4	9	4					
				i ₃	4	15	8					
				eL	4	26						
				M ₁	4	33		21,5				
				M ₂	4	42		17,5				
				F	4	58						
—	" 24	Amb.		P	3	59	6					
				iS	3	59	24					
				F	4	0	6					
				F	4	9						
101	" 29	Bat.	I	i	9	6	20					
				F	9	15						

No.	Date 1927.	Sta-tion.	Char-acter.	Phase.	Time (Greenwich).			Period.	Amplitude (half)		Distance of epi-centre.	Remarks.
					h	m	s		sec.	μ		
102	July 29	Bat.	I	e	0	10						
				F	0	24						
103	" 29	Bat.	I	iP _v	11	12	41					Compression; Azimuth E.
				iP _E	11	12	45					
				i _N	11	15	0					
				i	11	15	4					
				i	11	14	25					
				F	11	21						
104	" 29	Bat.	I _v	iP	12	18	50				180	Dilatation. East Priangan, Java.
				iP _v	12	18	52					
				iS	12	19	11					
				F	12	22						
		Mal.		iP	12	18	48				130	
				iS	12	19	5					
				F	12	22						
AUGUST.												
105	Aug. 3	Bat.	I _r	i _E	6	7	42				2450?	Minahasa.
				i _v	6	8	3					
				i	6	8	6					
				i _v	6	8	12					
				i _N	6	9	5					
				i	6	9	45					
				iS?	6	11	37					
				F	6	14						
		Mal.		iP	6	7	47					
				i ₁	6	7	51					
				i ₂	6	8	3					
				F	6	10						
		Amb.		iP	6	6	57					Minutes uncertain.
				F	6	16						
106	" 3	Bat.	I	i	7	6	13					E. Priangan and Banjoemas.
				i _E	7	7	14					
				F	7	11						
107	" 4	Bat.	II _r	iP	15	51	44				1930	Compression.
				i _v	15	52	1					
				i _N	15	52	36					
				iS	15	54	58					
				F	16	15						
		Mal.		iP	15	51	45				1780	
				iS	15	54	45					
				F	15	59						
		Amb.		iP	15	49	18				1110	
				iS	15	50	15					
				i	15	50	18					
				F	15	59						
—	" 4	Mal.		P	22	27	22				220	
				S	22	27	47					
				F	22	32						

No.	Date 1927.	Station.	Char-acter.	Phase.	Time (Greenwich).			Period.	Amplitude (half)		Distance of epi-centre.	Remarks.									
					h	m	s		μ	μ											
108	Aug. 5	Bat.	II _u	i ₁	21	22	26				6470	Dilatation.									
				i _v	21	22	28														
				i ₂	21	29	59														
				L	21	50	17														
				M	21	55															
				F	22	11															
				iP	21	21	0														
109	" 6	Bat.	I	e	14	37	35														
				i _N	14	42	28														
				F	14	47															
				110	" 6	Bat.	I _v						P	21	53	43				170	
													iS	21	54	3					
													F	21	56						
													—	" 7	Amb.						
i	18	45	32																		
iS	18	45	42																		
F	18	54																			
111	" 8	Bat.		e	1	8.8															
				i	1	18	1														
				F	1	27															
				112	" 8	Bat.	II _r						iP	18	47	14				1590	
													P _v	18	47	15					
													iS	18	49	38					
													iS _v	18	49	41					
i _v	18	49	58																		
F	19	9																			
iP	18	47	10																		
113	" 8	Bat.	II _r	iS	18	49	52				1580										
				F	18	55															
				114	" 10	Bat.	III _r						P _v	11	41	37				2640	Sorong (W. N. Guinea). Compression.
													iP	11	41	40					
													i _N	11	45	4					
													iS	11	45	49					
													i	11	46	29					
L _v	11	51	52																		
M _v	11	55	17																		
115	" 10	Bat.	I	e	1	37															
				F	2	21															
				116	" 10	Bat.	III _r						iP	11	41	41				150	
													i	11	46	14					
													F	12	7						
													iP	11	37	27					
													i	11	37	31					
iS	11	37	54																		
off	11	38	27																		
—	" 11	Amb.		P	17	54	12				360										
				S	17	54	53														
				F	17	59															

No.	Date 1927.	Sta-tions.	Char-acter.	Phase.	Time (Greenwich).			Period.	Amplitude (half)		Distance of epi-centre.	Remarks.																		
					h	m	s		μ	μ																				
115	Aug. 13	Bat.	I	P _v	11	52	6				2920																			
				P	11	52	8																							
				S _N	11	56	57																							
				F	12	7																								
116	" 17	Bat.	I _v	i _v	1	51	15				150	Dilatation.																		
				i	1	51	18																							
				iP	1	51	22																							
				iS	1	51	59																							
				F	1	59																								
				117	" 17	Mal.							iP	1	51	11				90										
													iS	1	51	22														
F	1	54																												
—	" 17	Amb.						iP	20	20	19																			
								iS	20	20	25																			
								F	20	24																				
								118	" 18	Bat.	I											P	19	37	0					
				i _E	19	38	54																							
				i	19	44	25																							
				eL	19	57																								
M	20	6																												
F	20	28																												
13																														
119	" 21	Bat.	I	iP _v	0	14	39					Compression.																		
				i _N	0	15	18																							
				F	0	55																								
120	" 21	Bat.	I _u	i _v	22	51	44				7600																			
				P	25	51	47																							
				iS	25	0	44																							
				F	25	6																								
121	" 22	Bat.	I _v	iP	23	19	17				250	Bantam (W. Java). Dilatation.																		
				i	23	19	19																							
				iS	23	19	43																							
				iS _v	23	19	45																							
				F _v	23	36																								
				P	23	19	30																							
				i	23	19	34																							
122	" 22	Mal.		S	23	20	11				560																			
				F	23	25																								
				—	" 23	Amb.							iP	11	4	39				400										
													iS	11	5	24														
													F	11	9															
													123	" 24	Bat.	I						e	9	7						
																						i	9	15	17					
F	9	19																												
124	" 24	Bat.	I					i _N	18	15	19																			
				L	18	28																								
				F	18	53																								
				125	" 25	Bat.	I	i ₁	16	57	25									360	Menado (N. Celebes).									
								i ₂	16	57	27																			
								i ₃	16	59	0																			
								F	17	15																				
i	16	57	25																											
F	17	4																												

No.	Date 1927.	Station.	Character.	Phase.	Time (Greenwich).	Period.	Amplitude (half).		Distance of epicentre.	Remarks.
							A _E	A _N		
					h m s	sec.	μ	μ	km.	
—	Aug. 25	Amb.		eP iS F	17 50 24 17 31 28 17 54 16				590	
—	" 25	Amb.		iP iS F	21 54 3 21 55 1 22 10 16				530	
SEPTEMBER.										
—	Sept. 5	Mal.		P iS F	4 59 27 4 59 36 5 1				80	
124	" 5	Bat.	I	i _N i _N F	20 7 33 20 8 20 20 18					
—	" 4	Amb.		iP iS F	4 37 53 4 38 13 4 41				190	
—	" 4	Amb.		iP S F	20 48 46 20 49 54 21 3				430	Dobo, Aroe I.
—	" 5	Mal.		P iS F	17 45 15 17 45 27 17 47				100	
—	" 5	Mal.		P iS F	21 8 51 21 9 2 21 11				90	
—	" 6	Mal.		iP S F	8 50 41 8 50 53 8 53					
125	" 7	Bat.	I _u	e i	20 6 54 20 14 57					Registration stops at 20 ^h 18 ^m .
126	" 8	Bat.	II _v	iP _E iP _N iS F	21 45 59 21 46 3 21 46 29 22 6				260	Dilatation; Azimuth S E. W. Java.
		Mal.		iP iS F	21 45 47 21 45 49 22 1				90	
127	" 8	Bat.	III _v	iP _E iS _E off	25 25 4 25 23 48 25 24 10				(250)	In minute-eclipse. W. Java.
		Mal.		iP iS F	25 23 6 25 23 19 25 42				110	MARON iS-iP=1 ^m 12 ^s ; Δ=670

No.	Date 1927.	Station.	Character.	Phase.	Time (Greenwich).	Period.	Amplitude (half).		Distance of epicentre.	Remarks.
							A _E	A _N		
					h m s	sec.	μ	μ	km.	
		Amb.		iP iS F	25 27 31 23 31 19 23 42				2360	
—	Sept. 8	Mal.		P S	25 58 0 25 58 12				100	
—	" 9	Mal.		iP iS F	0 6 53 0 7 8 0 9				100	
—	" 11	Mal.		P iS F	5 55 35 5 55 46 5 57				90	
128	" 11	Bat.	I _u	i ₁ i ₂ L F e i ₁ i ₂ eL	22 28 27 22 38 16 25 8 3 25 23 22 28 41 22 58 31 22 58 45 25 1			25.7		
		Amb.							48	
	" 12	Amb.		iP	2 44 34					Pens immediately thrown off. Felt at Ambonia.
129	" 12	Bat.	I	i ₃ i F	17 23 34 17 25 53 17 29					
130	" 13	Bat.	I _u	i ₁ i ₂ i ₃ F	10 26 5 10 34 22 10 35 25 10 45				6810	Compression.
—	" 15	Amb.		P S? F	3 5 57 3 6 8 3 12				(250)	
131	" 17	Bat.	I	e ₃ i _N iS F iP S F	0 51,4 0 52 48 0 56 14 1 12 0 46 52 0 48 10 1 15				(5250)	
		Amb.							720	
132	" 17	Bat.	I _v	iP iS F	1 22 18 1 22 34 1 25				140	
		Mal.		P S F	1 22 24 1 22 37 1 24				110	
133	" 25	Bat.	I	e eL F	14 6,5 14 25,5 14 32			22.2		
134	" 25	Bat.	I	P i S? F	21 59 4 21 59 14 21 59,5 22 5				(230)	In minute eclipse.

No.	Date 1927.	Sta- tion.	Char- acter.	Phase.	Time (Greenwich).			Period.	Amplitude (half)		Distance of epi- centre.	Remarks.		
					h	m	s		sec.	μ			μ	km.
135	Sept. 25	Mal.		P	21	58	50				140			
				iS	21	59	6							
				F	22	2								
		Bat.	I _v	iP	9	8	32				320			
				iS	9	9	9							
				F	9	24								
		Mal.		P	9	8	46				500			
				i ₃	9	8	51							
				i ₃	9	9	2							
S _N	9			9	41									
136	» 26	Bat.	II _v	iP _v	10	54					180	Dilatation; Azimuth W N W.		
				iP	10	54	11							
				iS	10	54	30							
		Mal.		F	10	56				590?				
				iP	10	54	32							
				S?	10	55	16							
				F	10	40								
				Bat.	I _v	P _v	5	15	59					190
						P	5	16	0					
S _N	5	16	21											
S _v	5	16	26											
S _E	5	16	27											
F	5	24												
Mal.		P	5	16	17				320?					
		S?	5	16	55									
		F	5	19										

SEISMOLOGICAL BULLETIN 1927.

BATAVIA OBSERVATORY, JAVA

1927.	E-W component.			N-S component.			V. component.		
	V.	T ₀ .	ε.	V.	T ₀ .	ε.	V.	T ₀ .	ε.
October	208	7.0	3.6	197	7.5	3.8	370	4.8	3.2
November	"	6.7	3.4	"	7.3	3.7	370	4.8	3.2
December	"	6.6	4.0	"	7.3	4.9	311	4.8	3.2

Erratum: No 18, Feb. 17, read Feb. 18.

OCTOBER.

No.	Date 1927.	Station.	Character.	Phase.	Time (G. M. T.)			Period	Amplitude half.		Distance of epicentre.	Remarks.			
					h	m	s		A _E	A _N					
138	Oct. 6	Bat.	I	e	2	1	41	sec.	μ	μ	km.				
					i _E	2	2		41						
					i	2	5		5						
					F	2	8								
139	" 6	Bat.	I _v	e _E P	6	15	44				450	Benkoelen.			
					i _N S	6	16						52		
					F	6	21								
140	" 7	Bat.	III _v	i	13	8	21				180	Azimuth SE; dilatation. E. Prianger.			
					iP	13	8						25		
					iS	13	8						44		
		Mal.		i	13	16	9,2						80	pens thrown off at 13 ^h 8 ^m 21 ^s . Azimuth SSE.	
					F	13	16								
					iP	15	8								6
—	" 7	Mal.	P	iS	18	8	6				150	Tjikalong, (E. Prianger).			
					F	18	8						25		
					F	18	9								
141	" 11	Bat.	I	e ₁	17	41,2									
					e ₂	17	49						25		
					F	17	55								
—	" 14	Amb.	P	iS	9	51	9				550				
					F	9	52						9		
					F	9	54								
142	" 16	Bat.	e	F	12	50,8									
					F	12	54								
—	" 17	Amb.	P	iS	1	10,1					(170)	In minute eclipse.			
					F	1	10						26		
					F	1	12								
—	" 18	Amb.	iP	iS	20	5	16				190				
					F	20	5						38		
					F	20	6								

No.	Date 1927.	Sta-tion.	Char-acter.	Phase.	Time (Greenwich).			Period.	Amplitude (half).		Distance of epi-centre.	Remarks.
					h	m	s		sec.	μ		
—	Oct. 19	Amb.		i	7	9	52			280		
				iP	7	9	55					
				iS	7	10	27					
				F	7	27						
143	" 19	Bat.	I	i ₁	13	58	58					
				i ₂	14	6	29					
				F	14	10						
144	" 20	Bat.	II _v	P _N	16	25	2			310	E. Priangan.	
				iS _E	16	25	57					
				F	16	29				90		
		Mal.		iP	16	24	58					
				iS	16	24	49					
				F	16	27						
145	" 24	Bat.	I _u	e	16	19						
				L ₁	16	53						
				L ₂	17	5						
				L ₃	17	11						
				L ₄	17	18						
				L ₅	17	49						
				L ₆	18	11						
				L ₇	18	22						
				F	18	51						
		Amb.		eL	16	57						
				F	18	6						
146	" 27	Bat.	I _v	P _v	18	46	36			210		
				P _v	18	46	39					
				S	18	47	5					
				F	18	49						
		Mal.		P	18	46,9				100	No hour eclipses.	
				S	18	47,1						
147	" 27	Bat.	I _r	i _v	19	47	0			2460		
				iP	19	47	4					
				i	19	47	10					
				S	19	51	0					
				F	20	4						
—	" 30	Amb.		iP	1	59	54			340	NW.	
				S	1	40	15					
				F	1	49						
148	" 31	Bat.	I	e	17	49	16					
				i _E	17	50	51					
				F	17	57						
		Amb.		iP	17	45	59			2400		
				iS	17	49	50					
				F	17	58						

NOVEMBER.

149	Nov. 2	Bat.	III _v	iP _v	21	7	53			320	Azimuth ENE; compression. S. Sumatra.
				iP	21	7	54				
				i _E	21	7	59				
				i _N	21	7	40				
				i _v	21	7	41				
				iS _N	21	8	10				
				iS _E	21	8	21				
				F	21	50					

No.	Date 1927.	Sta-tion.	Char-acter.	Phase.	Time (G. M. T.).			Period.	Amplitude (half)		Distance of epi-centre.	Remarks.
					h	m	s		sec.	μ		
		Mal.		P	21	7	15				440?	
				S _E ?	21	8	2					
				F	21	25						
150	Nov. 3	Bat.	II _v	P	8	26,4				(330)	In minute eclipse.	
				i _v	8	26	56					
				iS _v	8	26	59					
				iS	8	27	5					
		Mal.		F	8	40						
				i	8	27	18					
				F	8	55						
151	" 3	Bat.	I	e	12	40,4						
				F	12	44						
152	" 4	Bat.	I _u	e	14	11,4						
				eL ₁	14	50						
				eL ₂	15	56						
				F	16	4						
153	" 5	Bat.	I	e	6	45,4						
				F	6	59						
154	" 5	Bat.	I _v	iP	14	21	39			150	Compression. Bantam, W. Prianger.	
				iP _v	14	21	40					
				iS	14	21	56					
				F	14	26						
		Mal.		P	14	21	18			150		
				S	14	21	43					
				F	14	25						
—	" 6	Amb.		P	12	56	38					
				F	15	5						
155	" 6	Bat.	I _v	i _v	15	39	42			970	Azimuth about E; dilata-tion. Wonreli and Dobo (S. Mo-luccas).	
				iP _v	15	39	45					
				iP	15	39	44					
				i	15	39	56					
				iS	15	41	28					
				F	16	5						
		Mal.		P	15	39	12			2350		
				iS	15	42	57					
				F	15	46						
		Amb.		iP	15	35	28			(450)	In minute eclipse.	
				S	15	56,5						
				F	16	1						
156	" 7	Bat.	I	e	0	16,4						
				i	0	25	6					
				F	0	52						
157	" 8	Bat.	I	i _v	5	20	10				Azimuth SW; compression.	
				i	5	20	11					
				i _v	5	21,4					In minute eclipse.	
				i _N	5	21	29					
				i	5	26	57					
				L _v	5	56,4		22				
				F	5	58						
—	" 9	Amb.		iP	1	9	18					
				L	1	17,5						
				F	1	42						

No.	Date 1927.	Sta-tions.	Char-acter.	Phase.	Time (Greenwich).			Period. sec.	Amplitude (half).		Distance of epi-centre. km.	Remarks.
					h	m	s		μ	μ		
158	Nov. 10	Bat.	I	e F	5	10,4						
159	" 12	Bat.	I _v	i i _E F	14	0 11						Kota Agoeng (Lampongs, S. Sumatra)?
160	" 12	Bat.	I	i ₁ i ₂ F	16	2 56						
161	" 14	Bat.	I	e F	0	24,5						
162	" 14	Bat.	I	i F	0	56 26						
163	" 14	Bat.	I	e L F	5	10 59,5	20.2					
164	" 14	Bat.	I	i _{v1} i _{v2} i F	7	39 8						NE; Compression.
165	" 16	Bat.	II _r	e _E iP _v iP i _N i _v i i _N i _N S F	21	15 25				2720		Taroena (Sangi I.).
		Mal.		P _E iP i _N iS F	21	15 12				2740		
		Amb.		iP iS F	21	12 45				1140		
166	" 16	Bat.	I _v	e F	25	1 44						Central Java. MARON: S-iP = 17 sec. $\Delta = 150$ km.
		Mal.		P S F	25	0 56				520		
167	" 17	Bat.	I	e i F	15	55 16						
		Amb.		P i F	15	48,1 55						In minute eclipse.
168	" 17	Bat.	I _r	i _v i iS F	22	40 34				2640		Taroena (Sangi I.).

No.	Date 1927.	Sta-tion.	Char-acter.	Phase.	Time (Greenwich).			Period. sec.	Amplitude (half)		Distance of epi-centre. km.	Remarks.
					h	m	s		μ	μ		
		Amb.		P F	22	37 50						
169	Nov. 18	Bat.	I _v	P _E S _N F	1	29 27					240	
170	" 18	Bat.	II _r	i _v i _v iP i _v i iS F	5	30 18					2970	
		Mal.		P F	5	30 11						
		Amb.		P i ₁ i ₂ F	5	27 55						
	" 20	Amb.		iP F	5	28 57						New shock?
	" 20	Amb.		F	5	40 27						
171	" 20	Bat.	I	e _E i i _E F e i F	12	15 15						
		Amb.		F	12	27						
172	" 21	Bat.	I _u	e eL _v L F	25	34 40						
	" 22				0	15	42					
					0	20	25.5					
					0	48						
173	" 22	Bat.	I _v	P iS F	0	40 41					150	E. Preanger. In No. 172.
		Mal.		iP iS F	0	40 4					150	
174	" 24	Bat.	I _v	P _v eP S _v iS F iP iS F	15	39 26					190	Preanger.
		Mal.		F	15	39 47						
				F	15	39 50						
				F	15	44						
				F	15	59 12					120	
				F	15	39 26						
175	" 26	Bat.	I	i i _N F	15	14 52						
				F	15	18 4						
				F	15	55						
	" 28	Amb.		eP iS _N F	20	1 56					450	
				F	20	2 47						
				F	20	10						

No.	Date 1927.	Station.	Char-acter.	Phase.	Time (Greenwich).			Period.	Amplitude (half).		Distance of epi-centre.	Remarks.
					h	m	s		sec.	μ		
—	Oct. 19	Amb.		i	7	9	52			280		
				iP	7	9	55					
				iS	7	10	27					
				F	7	27						
143	• 19	Bat.	I	i ₁	13	58	58					
				i ₂	14	6	29					
				F	14	10						
144	• 20	Bat.	I _v	P _N	16	25	2			310	E. Priangan.	
				iS _E	16	25	57					
				F	16	29				90		
		Mal.		iP	16	24	58					
				iS	16	24	49					
				F	16	27						
145	• 24	Bat.	I _u	e	16	19						
				L ₁	16	53						
				L ₂	17	5						
				L ₃	17	11						
				L ₄	17	18						
				L ₅	17	49						
				L ₆	18	11						
				L ₇	18	22						
				F	18	51						
		Amb.		eL	16	57						
				F	18	6						
146	• 27	Bat.	I _v	P _v	18	46	36			210		
				P	18	46	59					
				S	18	47	5					
				F	18	49						
		Mal.		P	18	46,9				100	No hour eclipses.	
				S	18	47,1						
147	• 27	Bat.	I _r	i _v	19	47	0			2460		
				iP	19	47	4					
				i	19	47	10					
				S	19	51	0					
				F	20	4						
—	• 30	Amb.		iP	1	59	54			340	NW.	
				S	1	40	15					
				F	1	49						
148	• 31	Bat.	I	e	17	49	16					
				i _E	17	50	51					
				F	17	57						
		Amb.		iP	17	45	59			2400		
				iS	17	49	50					
				F	17	58						

NOVEMBER.

149	Nov. 2	Bat.	III _v	iP _v	21	7	33			320	Azimuth ENE; compression. S. Sumatra.
				iP	21	7	34				
				i _E	21	7	39				
				i _N	21	7	40				
				i _v	21	7	41				
				iS _N	21	8	10				
				iS _E	21	8	21				
				F	21	50					

No.	Date 1927.	Station.	Char-acter.	Phase.	Time (G. M. T.).			Period.	Amplitude (half)		Distance of epi-centre.	Remarks.
					h	m	s		sec.	μ		
—												
150	Nov. 3	Bat.	II _v	P	8	26,4				(330)	In minute eclipse.	
				S _E ?	21	8	2					
				F	21	25						
				i _v	8	26	36					
				iS _v	8	26	59					
				iS	8	27	3					
				F	8	40						
		Mal.		i	8	27	18					
				F	8	35						
151	• 3	Bat.	I	e	12	40,4						
				F	12	44						
152	• 4	Bat.	I _u	e	14	11,4						
				eL ₁	14	50						
				eL ₂	15	56						
				F	16	4						
153	• 5	Bat.	I	e	6	45,4						
				F	6	59						
154	• 5	Bat.	I _v	iP	14	21	39			150	Compression. Bantam, W. Prianger.	
				iP _v	14	21	40					
				iS	14	21	56					
				F	14	26						
		Mal.		P	14	21	18			150		
				S	14	21	45					
				F	14	25						
—	• 6	Amb.		P	12	56	38					
				F	13	5						
155	• 6	Bat.	I _v	i _v	15	39	42			970	Azimuth about E; dilata-tion. Woureli and Dobo (S. Mo-luccas).	
				iP _v	15	39	45					
				iP	15	39	44					
				i	15	39	56					
				iS	15	41	28					
				F	16	3						
		Mal.		P	15	39	12			2350		
				iS	15	42	57					
				F	15	46						
		Amb.		iP	15	38	28			(450)	In minute eclipse.	
				S	15	36,5						
				F	16	1						
156	• 7	Bat.	I	e	0	16,4						
				i	0	25	6					
				F	0	32						
157	• 8	Bat.	I	i _v	3	20	10					
				i	3	20	11					
				i _v	3	21,4						
				i _N	3	21	29					
				i	3	26	37					
				L _v	3	36,4						
				F	3	58						
—	• 9	Amb.		iP	1	9	18					
				L	1	17,3						
				F	1	42						

SEISMOLOGICAL BULLETIN 1927.

BATAVIA OBSERVATORY, JAVA

1927.	E-W component.			N-S component.			V. component.		
	V.	T ₀ .	ε.	V.	T ₀ .	ε.	V.	T ₀ .	ε.
October	208	7.0	3.6	197	7.5	3.8	370	4.8	3.2
November	"	6.7	3.4	"	7.3	3.7	370	4.8	3.2
December	"	6.6	4.0	"	7.3	4.9	311	4.8	3.2

Erratum: No 18, Feb. 17, read Feb. 18.

OCTOBER.

No.	Date 1927.	Sta- tion.	Char- acter.	Phase.	Time (G. M. T.)			Period	Amplitude half.		Distance of epi- centre.	Remarks.
									A _E	A _N		
138	Oct. 6	Bat.	I	e i _E i F	h 2 2 2 2	m 1 2 5 8	s 41 41 3 3	sec.	μ 	μ 	km.	
139	" 6	Bat.	I _v	e _E P i _N S F	6 6 6	15 16 21	44 52				450	Benkoelen.
140	" 7	Bat.	III _v	i iP iS i F	13 13 13 13	8 8 8 16	21 23 44 9,2				180	Azimuth SE; dilatation. E. Prianger.
	" 7	Mal.		iP iS	15 15	8 8	6 15				80	pens thrown off at 13 ^h 8 ^m 21 ^s . Azimuth SSE.
	" 7	Mal.		P iS F	18 18 18	8 8 9	6 25				150	Tjikalong, (E. Prianger).
141	" 11	Bat.	I	e ₁ e ₂ F	17 17 17	41,2 49 55	25					
	" 14	Amb.		P iS F	9 9 9	51 52 54	9 9				550	
142	" 16	Bat.		e F	12 12	50,8 54						
	" 17	Amb.		P iS F	1 1 1	10,1 10 12	26				(170)	In minute eclipse.
	" 18	Amb.		iP iS F	20 20 20	5 5 6	16 58				190	

No.	Date 1927.	Station.	Char-acter.	Phase.	Time (Greenwich).			Period. sec.	Amplitude (half).		Distance of epi-centre. km.	Remarks.
					h	m	s		μ	μ		
—	Oct. 19	Amb.		i	7	9	52			280		
				iP	7	9	55					
				iS	7	10	27					
				F	7	27						
145	• 19	Bat.	I	i ₁	13	58	58					
				i ₂	14	6	29					
				F	14	10						
144	• 20	Bat.	I _v	P _N	16	25	2			310	E. Priangan.	
				iS _E	16	25	57					
				F	16	29				90		
		Mal.		iP	16	24	58					
				iS	16	24	49					
				F	16	27						
145	• 24	Bat.	I _u	e	16	19						
				L ₁	16	55						
				L ₂	17	5						
				L ₃	17	11						
				L ₄	17	18						
				L ₅	17	49						
				L ₆	18	11						
				L ₇	18	22						
				F	18	51						
		Amb.		eL	16	57						
				F	18	6						
146	• 27	Bat.	I _v	P _v	18	46	36			210		
				P	18	46	59					
				S	18	47	5					
				F	18	49						
		Mal.		P	18	46,9				100	No hour eclipses.	
				S	18	47,1						
147	• 27	Bat.	I _r	i _v	19	47	0			2460		
				iP	19	47	4					
				i	19	47	10					
				S	19	51	0					
				F	20	4						
—	• 30	Amb.		iP	1	59	54			340	NW.	
				S	1	40	15					
				F	1	49						
148	• 31	Bat.	I	e	17	49	16					
				i _E	17	50	31					
				F	17	57						
		Amb.		iP	17	45	59			2400		
				iS	17	49	50					
				F	17	58						

NOVEMBER.

149	Nov. 2	Bat.	III _v	iP _v	21	7	53			320	Azimuth ENE; compression. S. Sumatra.
				iP	21	7	54				
				i _E	21	7	59				
				i _N	21	7	40				
				i _v	21	7	41				
				iS _N	21	8	10				
				iS _E	21	8	21				
				F	21	50					

No.	Date 1927.	Station.	Char-acter.	Phase.	Time (G. M. T.).			Period. sec.	Amplitude (half)		Distance of epi-centre. km.	Remarks.
					h	m	s		μ	μ		
				P	21	7	15			440?		
				S _E ?	21	8	2					
				F	21	25						
150	Nov. 3	Bat.	II _v	P	8	26,4				(330)	In minute eclipse.	
				i _v	8	26	56					
				iS _v	8	26	59					
				F	8	27	3					
				i	8	40						
		Mal.		F	8	27	18					
				F	8	55						
151	• 3	Bat.	I	e	12	40,4						
				F	12	44						
152	• 4	Bat.	I _u	e	14	11,4						
				eL ₁	14	50						
				eL ₂	15	56						
				F	16	4						
153	• 5	Bat.	I	e	6	45,4						
				F	6	59						
154	• 5	Bat.	I _v	iP	14	21	39			150	Compression. Bantam. W. Prianger.	
				iP _v	14	21	40					
				iS	14	21	56					
				F	14	26						
		Mal.		P	14	21	18			150		
				S	14	21	45					
				F	14	25						
—	• 6	Amb.		P	12	56	58					
				F	15	5						
155	• 6	Bat.	I _v	i _v	15	59	42			970	Azimuth about E; dilata-tion. Wonreli and Dobo (S. Mo-luccas).	
				iP _v	15	59	45					
				iP	15	59	44					
				i	15	59	56					
				iS	15	41	28					
				F	16	5						
		Mal.		P	15	59	12			2550		
				iS	15	42	57					
				F	15	46						
		Amb.		iP	15	55	28			(450)	In minute eclipse.	
				S	15	56,5						
				F	16	1						
156	• 7	Bat.	I	e	0	16,4						
				i	0	25	6					
				F	0	52						
157	• 8	Bat.	I	i _v	3	20	10				Azimuth SW; compression.	
				i	3	20	11				In minute eclipse.	
				i _v	3	21,4						
				i _N	3	21	29					
				i	3	26	57					
				L _v	3	36,4						
				F	3	58						
—	• 9	Amb.		iP	1	9	18					
				L	1	17,3						
				F	1	42						

No.	Date 1927.	Stations.	Char-acter.	Phase.	Time (Greenwich).			Period. sec.	Amplitude (half).		Distance of epi-centre. km.	Remarks.
					h	m	s		A _E	A _N		
158	Nov. 10	Bat.	I	e F	5	10,4						
159	" 12	Bat.	I _v	i i _E F	14	0 11					Kota Agoeng (Lampongs, S. Sumatra)?	
160	" 12	Bat.	I	i ₁ i ₂ F	16	2 56						
161	" 14	Bat.	I	e F	0	24,5						
162	" 14	Bat.	I	i F	0	56 26						
163	" 14	Bat.	I	e L F	5	10 39,5	20.2					
164	" 14	Bat.	I	i _{v1} i _{v2} i F	7	39 8					NE; Compression.	
165	" 16	Bat.	II _r	e _E iP _v iP _v i _N i _v i _N i _N S F P _E iP i _N iS F iP iS F	21	15 25				2720	Taroena (Sangi I).	
		Mal.			21	15 12				2740		
		Amb.			21	12 43				1140		
166	" 16	Bat.	I _v	e F	25	1 44					Central Java. MARON: S-iP = 17 sec. Δ = 150 km.	
		Mal.		P S F	25	0 56				520		
					25	1 95						
					25	5						
167	" 17	Bat.	I	e i F	15	55 16						
		Amb.		P i F	13	48,1 55					In minute eclipse.	
168	" 17	Bat.	I _r	i _v i iS F	22	40 34				2640	Taroena (Sangi I).	

No.	Date 1927.	Sta-tion.	Char-acter.	Phase.	Time (Greenwich).			Period. sec.	Amplitude (half)		Distance of epi-centre. km.	Remarks.
					h	m	s		A _E	A _N		
169	Nov. 18	Bat.	I _v	P _E S _N F	1	29 27					240	
					1	29 34						
					1	55						
170	" 18	Bat.	II _r	i _v i _v iP i _v i iS P F P F P i ₁ i ₂ F F	5	30 18					2970	
					5	30 20						
					5	30 21						
					5	30 25						
					5	30 27						
					5	34 54						
					5	59						
		Mal.			5	30 11						
					5	44						
		Amb.			5	27 53						
					5	28 57						
					5	40 27						New shock?
					5	44						
—	" 20	Amb.		iP F	12	15 15						
					12	27						
171	" 20	Bat.	I	e _E i i _E F e i F	17	17 41						
					17	19 52						
					17	22 52						
					17	44						
		Amb.			17	15,8 19						
					17	17 19						
					17	42						
172	" 21	Bat.	I _u	e eL _v L F	25	34 40						
	" 22				0	15	42					
					0	20	25.5					
					0	48						
175	" 22	Bat.	I _v	P iS F iP iS F	0	40 41					150	E. Preanger. In No. 172.
					0	40 58						
		Mal.			0	40 4					150	
					0	40 19						
					0	42						
174	" 24	Bat.	I _v	P _v eP S _v iS F iP iS F	15	39 26					190	Preanger.
					15	39 28						
					15	39 47						
					15	39 50						
					15	44						
		Mal.			15	39 12					120	
					15	39 26						
					15	42						
175	" 26	Bat.	I	i i _N F	15	14 52						
					15	18 4						
					15	55						
—	" 28	Amb.		eP iS _N F	20	1 56					450	
					20	2 47						
					20	10						

DECEMBER.

No.	Date 1927.	Sta-tion.	Char-acter.	Phase.	Time (Greenwich).			Period.	Amplitude (half).		Distance of epi-centre.	Remarks.	
									A _E	A _N			
					h	m	s		sec.	μ			μ
176	Dec. 1	Bat.	II _r	P	4	40	31	sec.	μ	μ	km.	Azimuth ENE; compression. Central Celebes; destruc-tive at Donggala and Paloe.	
				i	4	45	19						
		Mal.	F	5	17								
			P	4	40	50							
			iP	4	40	57							
			i ₁	4	43	54							
			i ₂	4	43	59							
			i ₃	4	44	37							
			i ₄	4	46	14							
			L	4	46,5								
			F	4	59								
			Amb.	iP	4	59,5							
		S?		4	40,6								
		L		4	41,2								
M	4	52,9											
F		5	18										
177	" 2	Bat.	I	i _E	20	10	55	150?			160	Azimuth (NW).	
				F	20	22							
—	" 4	Amb.		iP	6	54	11	150?			160	Azimuth (NW).	
				S?	6	55	56						
F				7	9								
	178	" 11	Mal	P _E	3	24	23	18			160	Azimuth S E; Dilatation.	
iS				3	24	41							
F				3	27								
Bat.	" 11	II		i _v	17	29	44	18			400?	Azimuth (WNW). In hour eclipse.	
				iP	17	29	47						
				L _v	17	41							
				F	18	3							
				Mal.	i	17	29						45
					L	17	57						
					F	17	45						
					Amb.	iP	17						26
				S?		17	27,1						
				F	18	2							
—	" 12	Amb.		iP	6	25	14	130			150	In minute eclipse.	
				F	6	56							
—	" 15	Amb.		P	14	6	44	130			150	In minute eclipse.	
				iS	14	6	59						
				F	14	10							
—	" 15	Amb.		i	16	14	55	130			150	In minute eclipse.	
				L	16	19							
				F	16	57							
—	" 16	Amb.		P	7	56	10	130			150	In minute eclipse.	
				iS	7	56	25						
				F	7	42							
—	" 16	Amb.		P	12	19,3		(70)			150	In minute eclipse.	
				iS	12	19	26						
				F	12	27							

No.	Date 1926	Sta-tion.	Char-acter.	Phase.	Time (Greenwich).			Period.	Amplitude (half).		Distance of epi-centre.	Remarks.								
									A _E	A _N										
					h	m	s		sec.	μ			μ	km.						
179	Dec. 22	Bat.	I	e	15	52,4		sec.	μ	μ	km.									
				i ₁	15	54	59													
				i ₂	15	55	51													
				F	14	12														
				Mal.	P	15	52						54							
		iP			15	52	58													
		iS			15	54	21													
		F			15	55														
		—			" 22	Amb.							P _E	15	52	49	390			390
				i									15	52	56					
S _N	15		53	35																
F	15		58																	
—	" 24		Amb.					eP	4	51	2	140			140					
		iS			4	51	18													
		F			4	54														
180	" 26	Bat.	I _v	i	12	9	50				160	Central Java Marou registers a heavy shock at 12 ^h 10 ^m and 7 after-shocks. Mean distance 44 km. (iS-iP = 1,15 sec).								
				F	12	14														
—	" 27	Amb.		iP	15	18	59				160									
				iS	15	18	57													
				F	15	21														
181	" 28	Bat.	I _u	i _v	18	52	10	32			17.3									
				i ₁	18	52	11													
				i ₂	18	56	22													
				i ₃	18	42	8													
				L _v	18	47,5														
		Amb.		L	18	54,5														
				M _E	19	6,5														
				F	19	57														
				e	18	51,0														
				i ₁	18	51	12													
—	" 30	Bat.	I _r	i _E	6	5	45				(2710)	Minutes uncertain.								
				i _N	6	9	57													
				F	6	16														
—	" 30	Amb.		iP	6	1	24	260			260	Minutes uncertain.								
				iS	6	1	54													
				F	6	22														
—	" 30	Amb.		P	14	11	42				(240)	Tjiletoeh (W. Preanger).								
				F	14	16														
183	" 31	Bat.	I _v	eP	22	52,5					240									
				iS	22	55	0													
				F	22	58														
				Mal.	iP	22	52						37							
					iS	22	52						50							
F	22	56																		
184	" 31	Bat.	I	e	25	22,5					240									
				i	25	30	17													
				F	25	48														