

SEISMOLOGICAL BULLETIN 1929.

BATAVIA OBSERVATORY, JAVA.

Foundation: River Quaternary.

Greenwich Civil 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, 1926.

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 writing styles 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 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).

(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.

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.
 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 commencement, not clearly defined.

MALABAR.

Foundation: Volcanic.

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

WEICHERT Horizontal Pendulum 100 kg, NS and EW component. Since July 1911.

Time Signals by Malabar Radio.

Possession of MR. R. A. KERKHOVEN.

MARON.

Foundation: Volcanic.

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

Thermometer, one component. Since February 1924.

AMBOINA.

Foundation: Quaternary.

S. Latitude 3° 42'; E. Longitude 128° 10'; Height above sea-level 4 m.

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

Time Signals by Malabar Radio.

MEDAN.

Foundation: Quaternary.

N. Latitude 3° 35'; E. Longitude 98° 41'; Height above sea-level 25 m.

WEICHERT Horizontal Pendulum 1000 kg, NS and EW component. Since July 24th, 1929.

Time Signals by Malabar Radio.

The distances given in the Bulletin Batavia are calculated with the time tables of Dr. S. W. Visser. See Verhandeligen 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
	m s	m s	m s		m s	m s	m s
1°	0 13	0 16	0 29	56°	7 46	9 54	17 40
2	25	31	56	57	52	10 1	53
3	38	46	1 24	58	58	8	18 6
4	50	1 1	51	59	8 4	15	19
5	1 1	17	2 18	60	10	22	32
6	12	32	44	61	15	29	44
7	24	47	3 11	62	21	36	57
8	35	2 2	37	63	26	43	19 9
9	47	16	4 3	64	32	49	21
10	57	31	28	65	38	55	33
11	2 8	45	53	66	43	11 2	45
12	19	59	5 18	67	49	8	57
13	30	3 12	42	68	55	14	20 9
14	40	26	6 6	69	9 1	20	21
15	50	39	29	70	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	13	45	90	46	20	24 6
36	36	22	58	91	50	25	15
37	43	30	13 18	92	55	30	25
38	50	38	28	93	59	35	34
39	57	46	43	94	11 3	40	43
40	6 5	53	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	53	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	17	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

CONSTANTS.

1929.	E-W component.			N-S component.			V component.		
	V.	T _o .	ε.	V.	T _o .	ε.	V.	T _o .	ε.
January	214	6.8	5.2	196	7.4	4.4	305	4.6	3.7
February	"	6.5	2.9	"	7.6	4.3	"	4.6	3.5
March	"	6.6	2.9	"	7.5	4.2	"	4.6	3.3
April	"	6.6	2.9	"	7.4	4.0	"	4.6	3.1
May	"	7.2	3.2	"	7.5	4.2	"	4.7	3.4
June	"	7.1	2.8	"	6.9	3.7	"	4.8	3.7

	With lifted pen						With writing pen					
	e _o			r			e _o			r		
	EW.	NS.	V.	EW.	NS.	V.	EW.	NS.	V.	EW.	NS.	V.
January	1.12	1.12	1.13	-0.02	-0.02	+0.02	1.17	1.16	1.17	0.44	0.44	0.64
February							1.13	1.14	1.16	1.48	0.45	1.25
March							—	—	—	—	—	—
April							1.14	1.14	1.15	1.18	0.42	0.80
May							1.14	1.21	1.15	1.62	0.88	0.81
June							1.17	1.14	1.16	1.81	0.43	0.91

N.B. The registrations at Malabar were stopped April 20th because of removal.

JANUARY.

No.	Date 1929.	Sta-tion.	Char-acter.	Phase.	Time (G. C. T.)			Period	Amplitude half.		Distance of epi-centre.	Remarks.
					h	m	s		A _E	A _N		
—	Jan. 1	Mal.	—	P	23	37	56	sec.	μ	μ	100	
				S	23	38	8					
				F	23	39						
—	" 2	Mal	—	P	1	2	46				100	
				S	1	2	58					
				F	1	4						
1	" 2	Bat.	I _v	P	7	25	0				850	Azimuth ENE. Dilatation.
				i _N	7	25	55					Tandjong Sakti (Benkoe- len) and Enggano (S. Sumatra).
				i _S	7	26	5					
				F _i	7	26	57					
				F	7	35						
		Mal.		P _{EW}	7	25	12				710	
				i	7	25	15					
				S	7	26	28					
				F	7	28						

No.	Date 1929.	Sta-tions.	Char-acter.	Phase.	Time (G. C. T.)			Period.	Amplitude (half).		Distance of epi-centre.	Remarks.
					h	m	s		A _E	A _N		
2	Jan. 2	Bat.	I _v	P	14	27	14	sec.	μ	μ	410	Benkoelen and Enggano.
				i _S	14	28	0					
				F	14	31						
3	" 2	Bat.	I	eP	20	27	47					
				i	20	27	52					
				F	20	31						
—	" 3	Mal.	—	eP	4	15	58				85	
				i _S	4	14	8					
				F	4	15						
—	" 3	Mal.	—	P	0	45	9				680	
				i _S	0	46	24					
				F	0	46						
4	" 7	Bat.	I	e	14	49						
				i _N	14	55	18					
				i _N	14	55	58					
				F	15	2						
3	" 8	Bat.	I	i _v	7	52	48					Dilatation.
				i _P	7	52	51					Compression.
				i _v	7	35	44					
				i	7	40	28					
				eL _v	7	49		19.5				
				F	7	56						
—	" 11	Mal.	—	i _P	10	45.5					85	No hour marks.
				i _S	10	45.7						
				F	10	48						
6	" 12	Bat.	I _v	P _w	16	2	16				380	
				S	16	2	59					
				F	16	8						
7	" 13	Bat.	II _u	i _P	0	14	12				7600	Azimuth N 40 E; dilata- tion.
				S	0	23	9					Amboina i S-i P=7.6 min. L-i P=14.4 min.
				i _N	0	45	3					Azimuth NE-SW. △ = 61.50 km.
				L	1	55		21				No hour marks.
				L	2	55		34				
				F	2	51						
		Mal.		i	0	14.7						
				i	0	23.7						
				i	0	24.5						
				L	0	28		40				
				i	0	42.8						
				F	1	15						
8	" 15	Bat.	I	P	17	37	20					
				F	17	55						
9	" 15	Bat.	I _v	P	8	46	21				340	
				S	8	47	0					
				F	8	54						
10	" 16	Bat.	I _r	P _N	8	11	45				3760?	Dilatation.
				i _P	8	11	48					
				S?	8	17	8					
				F	8	55						
		Mal.		P	8	11	55				3970	
				S	8	17	29					
				F	8	35						

No.	1929.	Station.	Character.	Phase.	Time (G. C. T.).			Period.	Amplitude (half)		Distance of epicentre.	Remarks.
					h	m	s		μ	μ		
11	Jan. 17	Bat.	I	i	12	7	56	46.9				
				i	12	11	17					
				L _{NS}	12	58						
				L	13	16	28					
				L	13	21	21					
				F	13	51						
12	• 17	Bat.	I _r	P	22	56	28	4450		4450	Dilatation.	
				i _w	22	57	46					
				S _N	22	42	52					
				F	22	54						
13	• 19	Bat.	I	i _{EW}	0	47	12				In minute eclipse.	
				i _S	0	51	46					
				i	0	53	3					
				F	1	0						
14	• 20	Bat.	II _r	i	14	59	16	2570		2570	Compression. Azimuth S80W.	
				iP	14	59	20					
				iS	15	5	24					
				F	15	27						
		Mal.		iP	14	59	14	2530		2530		
				S	15	5	15					
				F	15	8						
15	• 21	Bat.	I _u	e	5	4		7900?		7900?	Disturbed by street traffic.	
				i	5	7	59					
				S?	5	15	12					
				L	5	24						
				F	5	31	19.2					
—	• 24	Mal.	—	eP	19	10	37	70		70		
				iS	19	10	45					
				F	19	11						
16	• 24	Bat.	I _u	e	20	56	44	18				
				e	21	9.2						
				eL	21	23						
				eL	22	6	18					
				M	22	14	23					
				F	22	41						
17	• 25	Bat.	I	e	2	10						
				i	2	19.2						
				F	2	26						
18	• 26	Bat.	I _v	eP	7	5	0	200		200		
				S	7	5	23					
		Mal.		F	7	7		100		100		
				iP	7	2	44					
				iS	7	2	56					
				F	7	5						
19	• 28	Bat.	I	P	6	0	35					
				F	6	4						
—	• 28	Mal.	—	P	23	26	16	80		80		
				S	23	26	25					
				F	23	28						
20	• 30	Bat.	I _r	i _w	16	58	38	2700		2700	Menado, Taroena, Ternate.	
				i	17	0	12					
				i _E	17	0	40					
				iS	17	2	51					
				F	17	26						

FEBRUARY.

No.	Date 1929.	Station.	Character.	Phase.	Time (G. C. T.).			Period.	Amplitude (half)		Distance of epicentre.	Remarks.
					h	m	s		μ	μ		
21	Febr. 1	Bat.	I _v	P	15	4	50				150	
				iS	15	4	47					
				F	15	8						
22	• 1	Bat.	II _u	eP	17	23	50				5170?	
				i	17	25	57					
				S?	17	30	20					
				F	18	10						
23	• 2	Bat.	I	eP	0	20.2						
				i	0	36	58					
				F	2	26						
24	• 5	Bat.	I _u	iP _E	2	51	27				5410	
				iS	2	58	51					
				F	3	5						
25	• 4	Bat.	I _v	eP	8	23	54				(160) In minute eclipse.	
				S	8	24.2						
				F	8	27						
26	• 4	Bat.	I	i	9	15	56					
				i	9	17	51					
				F	9	21						
27	• 6	Bat.	I _u	iP	7	0	0				7570 Azimuth NE-SW.	
				iS	7	8	45					
				F	7	16						
28	• 7	Bat.	I _v	P _w	19	49	5				220 Cheribon (West-Java).	
				S _N	19	49	28					
				i _{NW}	19	50	16					
				F	19	55						
29	• 7	Bat.	I _v	P	25	45	20				100 Cheribon.	
				iS	25	45	52					
				F	25	49						
	• 7	Mal.	—	P	25	44	54				160	
				S	25	45	12					
				F	25	47						
30	• 8	Bat.	I _v	eP	9	41	49				510?	
				S?	9	42	45					
				F	9	49						
31	• 9	Bat.	I	i _E	2	4	56					
				i _N	2	4	44					
				i _w	2	6	19					
				i _w	2	15	19					
				F	2	19						
—	• 9	Mal.	—	eP	20	40	23				90	
				iS	20	40	33					
				F	20	42						
—	• 12	Mal.	—	eP _{NS}	22	26	45				100	
				iS	22	26	55					
				F	22	28						
32	• 15	Bat.	II _r	iP	5	45	52				3700 Compression. Azimuth NE.	
				iS	5	51	11					
				F	6	10						
		Mal.		iP	5	45	52					
				F	5	54						

No.	Date 1929.	Station.	Character.	Phase.	Time (G. C. T.).			Period.	Amplitude (half).		Distance of epicentre.	Remarks.
					h	m	s		sec.	μ		
—	Feb. 16	Amb.	—	P	18	39	44				110	
				S	18	39	57					
				F	18	49						
33	" 19	Bat.	I	P	12	45	11					
				i	12	45	55					
				F	12	51						
34	" 20	Bat.	I _u	i _v	21	15	6			8140		Dilatation. Azimuth ESE.
				iP	21	15	7					
				i	21	16	51					
				S _s	21	24	28					
				S _w	21	24	52					
				i _E	21	25	20					
				F	21	34						
35	" 22	Bat.	I _u	i _w	21	1	45					
				i	21	3	55					
				eL	21	57		26.4				
		Amb.	—	F	22	51						
				i	21	2	4					
				i	21	2	15					
				L	21	30		30				
				F	22	57						
—	" 25	Mal.	—	eP	9	1	47			50		
				iS	9	1	55					
				F	9	3						
36	" 26	Bat.	I	i _v	3	40	12					Compression.
				i _s	3	48	35					
				i _w	3	50	13					
				F	3	54						
37	" 26	Bat.	I _u	i _E	9	14	17					
				i _w	9	17	55					
				i _E	9	25	21					
				F	9	37						
—	" 26	Amb.	—	iP	15	45	48			210		
				S	13	44	12					
				F	13	56						
—	" 26	Amb.	—	P	18	46	17			210		
				eS	18	46	41					
				F	18	54						
38	" 28	Bat.	II	iP _E	0	17	8					
				i	0	20	58					
				i	0	21	49					
				F	0	41						
MARCH.												
39	March 1	Bat.	I	iP _v	15	42	18			180		Dilatation.
				iP _N	15	42	20					
				iS _{E_v}	15	42	41					
				i	15	43	44					
				F	15	46						
		Mal.	—	iP	15	42	4			100		
				iS	15	42	16					
				F	15	44						

No.	Date 1929.	Station.	Character.	Phase.	Time (G. C. T.)			Period.	Amplitude (half).		Distance of epicentre.	Remarks.
					h	m	s		sec.	μ		
40	March 3	Bat.	I	P	7	14	40					
				F	7	19						
41	" 5	Bat.	I	iP	7	21	16				680	
				iS	7	22	29					
				i _E	7	25	56					
				F	7	28						
				P	7	21	12				670	
				iS	7	22	22					
				F	7	26						
—	" 6	Amb.	—	e?	21	55	28					
				iP?	21	55	50					
				iS	21	55	54					
				F	21	59						
42	" 7	Bat.	II _u	iP _v	1	47	40					Dilatation.
				iP	1	47	44					
				i	1	51	26					
				i _v	1	59	52					Dilatation.
				iS	1	59	56					
				L _v	2	12		18				
				L	2	27		15				
				L	2	35		19				
				L	2	46		16				
				F	3	46						
		Mal.	—	eP	1	47	44					
				e	1	57	55					
				eL	2	8		18				
				F	3	0						
		Amb.	—	iP	1	46	28				8580	
				i	1	46	57					
				iS	1	56	11					
				L	2	5		45				
				L	2	22		18.4				
				F	3	41						
43	" 7	Bat.	II _r	iP _v	11	7	56				210	Compression. Bantam, West-Priangan strong dilatation.
				iP _w	11	7	40					
				iS _N	11	8	9					
				i _v	11	8	10					
				i	11	8	24					
				i	11	11	29					
				i	11	15	3					
				F	11	56						
		Mal.	—	P	11	7	49				320	
				iS	11	8	26					
				F	11	51						
44	" 7	Bat.	I	P	16	11	53				980?	
				S?	16	15	17					
				i	16	15	57					
				F	16	24						
45	" 7	Bat.	I	i	17	46	25					
				i	17	47	54					
				F	17	51						
		Mal.	—	P	17	46	52				160	
				iS	17	46	51					
				F	17	49						
46	" 7	Bat.	I	i	22	6	46					
				F	22	19						

No.	Date 1929.	Station.	Character.	Phase.	Time (G. C. T.).			Period.	Amplitude (half).		Distance of epicentre.	Remarks.
					h	m	s		μ	μ		
47	March 7	Bat.	I _r	i	6	7,1				1140	No minute eclipses.	
				iS	6	9,1				590?		
				P	6	25						
				P	6	7 16						
				S?	6	8 0						
				F	6	12						
48	" 8	Bat.	II	i _w	10	55 18						
				i	10	56 35						
				i	10	57 32						
		Mal.		F	11	26				530		
				P	10	55 22						
				S	10	56 20						
				F	11	5						
—	" 8	Mal.	—	P	17	47 15				80		
				S	17	47 25						
				F	17	49						
49	" 9	Bat.	I _u	i _w	2	20 21				5070		
				i _{sw}	2	21 49						
				iS	2	27 5						
				eL	2	42	18					
				F	2	51						
50	" 9	Bat.	I	e	4	1,2						
				i _N	4	6 54						
				F	4	18						
51	" 9	Bat.	I	i	11	1 36						
				i	11	10 57						
				i	11	11 27						
				L	11	22 45	37.4					
				M	11	28	20.5					
				M	11	52	18.0	62	155			
				F	12	9						
52	" 10	Bat.	I	P _s	1	17 41				550?	Central and East-Java.	
				S?	1	18 41						
				i	1	19 9						
				F	1	22						
		Mal.		P	1	17 45				500		
				S	1	18 17						
				F	1	22						
53	" 10	Bat.	I _u	iP _v	14	42 51				6280	Compression.	
				iP _{SE}	14	42 54						
				iS	14	50 45						
				F	16	1						
54	" 16	Bat.	I	e	6	11,2						
				i	6	18 56						
				F	6	26						
55	" 16	Bat.	I	P	22	29 30				200	Bantam (West-Java).	
				iS	22	29 55						
				i	22	50 25						
				F	22	55						
		Mal.		P	22	29 58				260		
				S	22	50 8						
				F	22	52						
56	" 18	Bat.	I	i _w	0	51 50						
				i	0	55 58						

No.	Date 1929.	Station.	Character.	Phase.	Time (G. C. T.).			Period.	Amplitude (half)		Distance of epicentre.	Remarks.
					h	m	s		μ	μ		
56	March 18	Bat.	I	F	1	5						
		Amb.		iP	0	48 45				560		
				eS	0	49 44						
				F	1	0						
57	" 18	Bat.	I	e	1	49 41						
				i	1	52 10						
		Amb.		iP	1	45 47						
				i	1	49 29						
				F	2	6						
—	" 19	Amb.	—	i	1	17 6						
				i	1	26 8						
				i	1	51 17						
				F	1	41						
58	" 19	Bat.	I	i	7	44 24						
				F	7	54						
—	" 19	Amb.	—	e	16	39 48				170		
				iS	16	40 8						
				F	16	45						
—	" 19	Amb.	—	P	17	9 50				340		
				iS	17	10 9						
				F	17	25						
59	" 19	Bat.	I _v	e	25	40,2						
				i _N	25	40 34						
				i	25	41 20						
				F	25	54						
		Mal.		eP _{EW}	25	59 57				460		
				S	25	40 48						
				F	25	45						
60	" 22	Bat.	I	i _v	5	9 38				260	Malabar: iS-iP = 15 ^{sec} ; $\Delta = 130$.	
				P	5	9 40						
				S	5	10 9						
				F	5	11						
61	" 22	Bat.	I	i	5	21 50					E. Priangan (West-Java).	
				F	5	57						
—	" 22	Amb.	—	eP	19	16 57				150		
				S	19	16 54						
				F	19	19						
62	" 25	Bat.	II _r	iP _v	20	5 1				2720		
				iP	20	5 4						
				S _N	20	9 19						
				F	20	51						
65	" 25	Bat.	I	P _w	20	54 54						
				F	21	5						
—	" 25	Amb.	—	iP	25	56 19				210		
				iS	25	56 45						
				F	24	0						
64	" 26	Bat.	I	e	8	27					Sumatra's Westkust and Tapanoeli.	
				F	8	45						

No.	Date 1929.	Station.	Character.	Phase.	Time (G. C. T.).			Period.	Amplitude (half).		Distance of epicentre.	Remarks.
					h	m	s		μ	μ		
65	March 26	Bat.	I _r	P _{EW} S _N F	19	58	40			2720		
66	" 26	Bat.	I	e i _w F	22	22	4					
APRIL												
67	Apr. 1	Bat.	I _v	iP iS F	12	56,2				150	No time eclipses. Compression. Malabar: i S-P=15 ^{sec} ; $\Delta = 150$. West-Java.	
—	" 5	Amb.	—	P S F	1	26	11			80		
—	" 5	Amb.	—	i F	5	2	34					
—	" 5	Amb.	—	i F	14	51	27					
68	" 8	Bat.	III _r	iP _v P i i i _{wv} i _{NE} i _v iS _{NE} F	10	21	12			2060	Dilatation. Faint dilatation. Dilatation.	
—	" 10	Mal.	—	eP i S F	10	22	15			1480		
—	" 10	Amb.	—	i S F	10	24	48			1360		
—	" 10	Mal.	—	P iS F	10	28	40			80		
69	" 12	Bat.	I	iP _v P _{EW} iS F	9	55	13			180	Tjilangkahan (Bantam, West-Java).	
—	" 20	Mal.	—	P F	9	35	56					
—	" 20	Amb.	—	iP S F	15	58	42			160		
70	" 26	Bat.	I	e _{NS} F	1	55	02					
71	" 26	Bat.	I	e i _{NW} F	11	55	14					

No.	Date 1929.	Station.	Character.	Phase.	Time (G. C. T.).			Period.	Amplitude (half).		Distance of epicentre.	Remarks.
					h	m	s		μ	μ		
72	Apr. 26	Bat.	III _v	i _v i iP iS F	18	5	27			160	Dilatation; azimuth SW. West-Java. EW-pen thrown off.	
73	" 26	Bat.	I	i _v P F	18	18	27				Dilatation.	
74	" 27	Bat.	I	c F	9	27	37					
75	" 28	Bat.	I	e F	21	12	7					
76	" 28	Bat.	I	iP _v P _s iS _E F	7	37	43			170	Compression.	
—	" 28	Amb.	—	P S F	15	40	17			(40)		
77	" 30	Bat.	I	P i F	2	10	50				Benkoelen (S. Sumatra).	
78	" 30	Bat.	I	e i _w F	18	54,1	45					
MAY.												
79	May 1	Bat.	I	i i _v F	7	46	47				Compression.	
80	" 1	Bat.	II	e _v i i i i L M L F	15	47	58					
—	" 5	Amb.	—	P S F	15	48	8					
—	" 5	Amb.	—	iP S F	15	49	27					
—	" 5	Amb.	—	i L M L F	15	52	25					
—	" 5	Amb.	—	P S F	15	56	42					
—	" 5	Amb.	—	P S F	16	6,1		47.2				
—	" 5	Amb.	—	P S F	16	13,7		26.0	747	494		
—	" 5	Amb.	—	P S F	16	22,7		14.8				
—	" 5	Amb.	—	P S F	17	24				420		
—	" 5	Amb.	—	P S F	15	49	54					
—	" 5	Amb.	—	P S F	15	50	21			250		
81	" 6	Bat.	I _r	eP i S i F	5	14	9			2900	Muluccas and Miei (New Guinea).	
—	" 6	Bat.	I _r	i S i F	5	14	55					
—	" 6	Bat.	I _r	i S i F	5	18	57					
—	" 6	Bat.	I _r	i S i F	5	19	47					
—	" 6	Bat.	I _r	i S i F	5	35						

No.	Date 1929.	Station.	Character.	Phase.	Time (G. C. T.).			Period.	Amplitude half.		Distance of epicentre.	Remarks.
					h	m	s		A _E	A _N		
81	May 6	Amb.		iP iS F	5	8	52		μ	μ	350	
82	" 7	Bat.	I _r	e _{EW} S F iP iS F	8	50	27				(2010)	
		Amb.		iP iS F	8	45	20				810	
83	" 7	Bat.	I	e i _N i _E F eP S L F	16	41	25				1400	
		Amb.		eP S L F	16	36	15	22				
84	" 10	Bat.	I	i _v i i F	17	29	0					Azimuth WNW-ESE.
		Amb.		P iS F	12	41	15				80	
85	" 19	Bat.	II _r	P _v eP i _v i S _N F P iS F	5	15	55				5150	Dilatation; azimuth ESE. S. Celebes?
		Amb.		P iS F	5	9	48				850	
86	" 20	Bat.	I _u	i _v i i _v i i _E F	12	14	2					Dilatation; azimuth SE. Compression. Azimuth NE-SW.
87	" 21	Bat.	II _r	e _v i i S eL F	25	50	57				(4920)	Azimuth WNW-ESE. NE-SW.
88	" 26	Bat.	I	i _v i F	8	47	24					Ceram (Moluccas).
		Amb.	III _d	iP	8	42	49					Pens thrown off; azimuth NE-SW.
89	" 26	Bat.	II	e L L M	25	58	42	54.4 25.6 32.6				

No.	Date 1929.	Station.	Character.	Phase.	Time (G. C. T.).			Period.	Amplitude (half).		Distance of epicentre.	Remarks.
					h	m	s		A _E	A _N		
				iL F	25	55	50	16.9	μ	μ		
90	May 28	Bat.	III _v	iP iS F _v	6	45	1				170	West Java. Pens thrown off 6 ^h 45 ^m 22 ^s .
	" 30	Amb.		P S F	2	28	40				460	
91	" 30	Bat.	I _u	e i L F	10	2,2	50					Azimuth SSE-NNW.
92	" 31	Bat.	I _v	eP S F	18	55,2	35				200	Tegal (Central Java).
JUNE.												
	June 1	Amb.	I _v	iP iS F	7	45	26				450	
95	" 2	Bat.	I _v	iP _v eP iS F	12	12	49				180	Compression.
94	" 2	Bat.	II _r	iP _v iP i _v iS iS _v i F	21	46	49				4950	Dilatation; azimuth SE.
		Amb.	II _r	iP iS i F	21	44	27				5840	
95	" 4	Bat.	II	iP _v iP i _v i i _v i F	15	20	24					Dilatation. Compression. Compression.
		Abm.	III _r	iP iS F	15	18	11				1160	
96	" 6	Bat.	I	e i _E F	15	50,3	32					
		Amb.	I	eP i F	15	46	27					

No.	Date 1929.	Station.	Character.	Phase.	Time (G. C. T.).			Period.	Amplitude (half).		Distance of epicentre. km.	Remarks.
					h	m	s		μ	μ		
—	June 7	Amb.	III _d	iP	12	34	26				Both pens thrown off. Ceram.	
97	" 9	Bat.	I	i	9	18	49					
				i	9	27	16					
				F	9	33						
98	" 9	Bat.	I _v	P	21	18	59			650	East Java.	
				iS	21	20	9					
				i	21	21	33					
				F	21	28						
99	" 12	Bat.	I	e	11	50.5						
				i _w	11	52	5					
		Amb.	I _r	F	12	12				1820		
				P	11	46	5					
				S	11	49	9					
				F	12	16						
100	" 12	Bat.	I	e	14	48						
				F	15	0						
101	" 13	Bat.	I	i _v	0	22	56				Compression.	
				i	0	23	5					
				i _v	0	25	10				Dilatation.	
				i _v	0	24	55					
				i	0	31	41					
				i _v	0	36	35				Dilatation.	
				i	0	46	54					
				eL	0	55						
				F	1	21						
102	" 13	Bat.	III _r	eP _v	9	29	53			3500		
				iP _N	9	29	55					
				i _v	9	29	57				Dilatation.	
				iP	9	29	59				Azimuth NNW.	
				i _v	9	30	9				Compression.	
				i	9	30	15					
				i	9	31	22					
				S	9	34	47					
				L _v	9	42	37	16				
				F	10	44						
		Amb.	II	P	9	26	46					
				i	9	29	10					
				F	10	56						
103	" 13	Bat.	I	i _v	19	55	0				Faint compression.	
				i _E	19	55	2					
				L _v	20	5		17				
				F	20	11						
104	" 13	Bat.	I	e _v	25	5	59					
				P _v	25	6	0				Dilatation; azimuth ENE.	
				P	25	6	5					
				i	25	8	1					
				F	25	46						
105	" 15	Bat.	I	i	9	5	24					
				i	9	7	52					
				i _w	9	8	55					
				F	9	18						
106	" 18	Bat.	I _r	iP	19	40	47			4210		
				iS	19	46	36					
				F	20	2						

No.	Date 1929.	Station.	Character.	Phase.	Time (G. C. T.).			Period.	Amplitude (half).		Distance of epicentre. km.	Remarks.
					h	m	s		μ	μ		
107	June 15	Bat.	I _r	P	21	15	17				4580	
				S	21	19	17					
				F	21	32						
108	" 16	Bat.	III _u	iP _v	22	58	23				9100	Compression; azimuth ESE.
				iP	22	58	25					
				iS	23	8	55					
				L _v	25	13		18				
				M _v	23	19	34	48.8				
				L	25	20	10	35				
				M _v	25	21		35.5				
				M	23	24		22.5	730	2170		
	" 17	Amb.		F	1	6						
				iP	22	56	58					
				i	25	5	1					
				i	25	8	46					
				F	25	56						
109	" 17	Bat.	I _r	i _w	10	21	50				4240	
				i _E	10	22	17					
				iS	10	27	41					
				F	10	38						
110	" 19	Bat.	II	iP	7	36	9				3850	Azimuth ENE-WSW.
				iS	7	41	37					
				F	8	6						
111	" 20	Bat.	III	iP	18	24	12					Compression; azimuth SE.
				iP _v	18	24	14					Java (W-Java-Bali I.).
				i _v	18	25	17					
				i _v	18	26	32					
				i _{EW}	18	27	9					
				F	18	49						
112	" 20	Bat.	I	i	20	16	11					Azimuth ENE; dilatation.
				F	20	35						Amahai (Ceram, Moluccas.
												Cheribon.
115	" 20	Bat.	I _v	P	22	5	47				170	
				iS	22	6	7					
				i	22	7	10					
				F	22	14						
114	" 21	Bat.	I	i	4	46	17					
				i	4	46	41					
				F	5	2						
115	" 25	Bat.	I	P _v	21	52	35					Faint dilatation.
				eP	21	52	36					
				i _w	21	54	8					
				F	22	16						
116	" 27	Bat.	II _u	i _v	15	1	56					Faint dilatation; azimuth SE.
				i _S	15	1	58					
				i	15	2	6					
				i _N	15	5	46					
				i _N	15	6	36					
				i	15	12	16					
				iS	15	15	25					
				i _v	15	15	32					
				L _v	15	24		37				
				L	15	32		42.4				
				L	15	37	58	24				

No.	Date 1929.	Sta- tion.	Char- acter.	Phase.	Time (G. C. T.).			Period. sec.	Amplitude (half)		Distance of epi- centre. km.	Remarks.
					h	m	s		A _E	A _N		
117	June 27	Bat.	I _v	L	13	48		18				Vlakken Hoek (S. Sumatra).
				F	14	52						
				eP	17	55	4					
				F	17	59						
118	" 29	Bat.	I _v	eP _{EW}	15	44	4				220	
				S	15	44	29					
				F	15	49						
119	" 30	Bat.	II	P _w	2	50	10	17.7				Faint compression. Strong dilatation; azimuth ESE.
				P _v	2	50	12					
				i _v	2	50	16					
				i	2	50	39					
				i	2	52	24					
				i	2	55	33					
				L _v	3	0,9						
F	3	21										
120	" 30	Bat.	I	e	5	19,5						
				i	5	19	42					
				F	5	36						

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BATAVIA OBSERVATORY, JAVA.

CONSTANTS.

1929.	E-W component.			N-S component.			V component.		
	V.	T ₀ .	ε.	V.	T ₀ .	ε.	V.	T ₀ .	ε.
July	210	7.0	2.8	193	6.7	3.5	330	4.8	3.9
August	„	7.3	2.9	„	6.8	3.5	„	4.8	4.2
September	„	7.3	2.8	„	6.8	3.3	„	4.6	3.7

	With lifted pen						With writing pen					
	e ₀			r			e ₀			r		
	EW.	NS.	V.	EW.	NS.	V.	EW.	NS.	V.	EW.	NS.	V.
July	1.12	1.12	1.13	0.0	0.0	0.0	1.14	1.12	1.14	1.47	0.34	0.97
August							1.10	1.10	1.16	1.10	0.24	1.44
September							1.11	1.10	1.17	1.13	0.21	1.05

For MEDAN: see Preface to the Bulletin 1929.

JULY.

No.	Date 1929.	Station.	Char-acter.	Phase.	Time (G C. T.)	Period.	Amplitude half		Distance of epi-centre.	Remarks.
							A _E	A _N		
—	July 2	Amb.	I _v	P	h m s	sec.	μ	μ	km.	
				iS	8 9 9				160	
				F	8 9 27					
					8 11					
121	• 5	Bat.	I _r	i	18 5 25				5400	
				iS	18 8 25					
				F	18 15					
122	• 4	Bat.	I	i _E	9 46 50					
				F	9 54					
125	• 7	Bat.	II _u	iP _v	21 55 49				9450	Compression.
				i _v	21 55 55					Dilatation.
				iP	21 55 55					Azimuth SW.
				i _w	21 57 55					
				iS	21 46 20					Azimuth SE.
				i	21 47 58					
				eL	22 6	25.5				
				L	22 20	19.5				
				F	25 5					

No.	Date 1929.	Sta- tion.	Char- acter.	Phase.	Time (G. C. T.).			Period. sec.	Amplitude (half).		Distance of epi- centre km.	Remarks.
					h	m	s		A _E	A _N		
—	July 26	Med.	I	i	23	14	30		μ	μ		
				i	23	17	23					
				F	23	58						
—	• 28	Amb.	I	P	1	33	52				80	
				iS	1	33	41					
				F	1	38						
—	• 29	Med.	I	i	21	38	16					
				i	21	41	7					
				F	21	30						
AUGUST.												
136	Aug. 1	Bat.	I	P	5	59	45				220	Benkoelen.
				iS	5	40	8					
				F	5	46						
		Med.	I	P	5	41	55					
				i	5	42	1					
				F	5	49						
157	• 1	Bat.	I	e	5	6	35					
				i	5	7	25					
				F	5	53						
		Med.	III _r	iP	5	5	46				1450?	Azimuth NW-SE.
				S?	5	6	16					
				F	6	29						
—	• 1	Med.	I	eP	8	46	57					Djeuram, Atjeh.
				F	8	55						
138	• 5	Bat.	I _u	P	15	1	43				8870	
				i	15	3	46					
				iS	15	11	40					
				i _w	15	12	35					
				F	15	17						
		Med.	I _u	P	15	3	29				9900	
				S	15	14	10					
				i	15	15	34					
				F	15	37						
139	• 5	Bat.	I	i _w	15	5	28					
				i _E	15	16	39					
				F	15	21						
140	• 6	Bat.	II _v	iP _v	12	17	49				290	Compression. Azimuth WSW. Bantam and Benkoelen.
				iP	12	17	50					
				S	12	18	23					
				F	12	38						
		Med.	I _r	eP	12	21	23				1370	
				iS	12	23	45					
				F	12	38						
141	• 6	Bat.	I _v	iP _v	14	21	23				210	Dilatation. West-Java and Benkoelen.
				P	14	21	23					
				iP _E	14	21	25					
				iS	14	25	47					
				F	14	30						

No.	Date 1929.	Sta- tion.	Char- acter.	Phase.	Time (G. C. T.).			Period.	Amplitude (half).		Distance of epi- centre.	Remarks.
					h	m	s		sec.	μ		
151	Aug. 28	Bat.	I _v	P	18	48	50				km. 160	Azimuth NW. Compression.
				i	18	49	8					
				i _v	18	49	11					
				F	18	52						
152	• 28	Bat.	I _u	e	19	1	52					Time: see No. 145!
				i	19	9	29					
				eL	19	27						
		Med.	I _u	F	19	45						
				i	19	5	28					
				i	19	5	58					
				i _N	19	15	58					
				L	19	24						
				M	19	27	40					
				F	20							
153	• 29	Bat.	I _r	i	5	45	58				780?	
				S?	5	47	22					
				F	5	53						
154	• 29	Bat.	I	i	10	21	57					No minute eclipses.
				i	10	22	28					
				i	10	32	51					
				F	10	40						
155	• 29	Bat.	I	iP	10	50	42					No minute eclipses.
				F	11	5						

SEPTEMBER.

156	Sept. 1	Bat.	I	e	5	23	20				360	No minute eclipses. Azimuth S 50 E.
				i	5	25	10					
				F	5	35						
		Amb.	II _v	iP	5	20	1					
				iS	5	20	42					
				F	5	34						
—	• 2	Med.	I _v	iP _E	7	28	16				140	Time: see No. 145!
				iS	7	28	52					
				F	7	29						
157	• 2	Bat.	II	iP _v	11	18	4					Dilatation. Azimuth WSW.
				iP	11	18	7					
				i	11	18	18					
				i _s	11	19	58					
				L _v	11	28,6						
		Amb.	II _r	F	11	55						
				P	11	16	1					
				S	11	18	57				2210	No minute eclipses.
				F	12	12						
—	• 5	Amb.	II _v	iP	12	29	20				120	Azimuth S 25 E.
				iS	12	29	54					
				F	12	55						
158	• 9	Bat.	I	eP	5	55	20					Azimuth SW.
				i _E	5	54	54					
				F	5	49						
		Med.	III _v	iP	5	51	12					
				iS	5	52	9					
				F	5	59						

No.	Date 1929.	Sta- tion.	Char- acter.	Phase.	Time (G. C. T.)			Period.	Amplitude (half).		Distance of epi- centre.	Remarks.
					h	m	s		sec.	μ		
—	Sept. 11	Med.	I	P	22	29	56					
				i	22	59	5					
				F	22	40	54					
				F	22	58						
159	» 14	Bat.	I	i	2	20	54					
				i	2	26,7						Disturbed by street traffic.
				F	2	52						
—	» 15	Amb.	I _v	iP	2	55	54				40	Azimuth N 45 E.
				iS	2	55	59					
				F	2	57						
160	» 16	Bat.	I _v	P _E	6	0	14				290	
				iS	6	0	47					
				F	6	7						
161	» 16	Bat.	I _v	iP	15	48	54				240	Azimuth NW.
				S	15	49	21					Felt in Priangan (W.
				i	15	50	7					Java).
				F	15	59						
162	» 17	Bat.	I _v	P	0	15	15				510	
				S	0	15	48					
				F	0	25						
—	» 17	Med.	I _v	P	9	11	51				280	
				iS	9	12	25					
				i	9	15	18					
				F	9	20						
163	» 17	Bat.	I	e	19	57,7						
				e	19	46,7						
				F	20	4						
164	» 18	Bat.	I _v	iP _v	1	24	17				660	Dilatation.
				iP	1	24	17					Azimuth WNW.
				iS	1	25	28					Azimuth NNE.
				F	1	55						
165	» 19	Bat.	I _r	eP _w	11	9	19				5000	
				i _w	11	10	17					
				iS	11	15	54					Azimuth NNW.:
				F	11	24						
166	» 21	Bat.	I _r	eP	18	59	25				2570?	
				i	19	0	4					
				i	19	0	28					
				S?	19	5	27					
				i	19	6	15					
				F	19	12						
		Med.	I _r	P	18	59	41				4520	
				eS	19	5	57					
				F	19	21						
167	» 22	Bat.	I _v	P _w	22	44	52				400	
				iS _s	22	45	57					
				F	22	54						
168	» 28	Bat.	I	i	11	47	44					
				F	11	56						
		Amb.	I	i	11	45	20					
				F	11	54						
—	» 28	Med.	I _v	iP	19	57	55				550	No minute eclipses.
				iS	19	58	31					
				F	19	44						

SEISMOLOGICAL BULLETIN 1929.

BATAVIA OBSERVATORY, JAVA.

CONSTANTS.

1929.	E-W component.			N-S component.			V component.		
	V.	T ₀ .	ε.	V.	T ₀ .	ε.	V.	T ₀ .	ε.
October	210	7.0	2.7	193	6.8	3.4	330	4.7	4.5
November	„	6.8	3.0	„	6.8	3.6	„	4.6	3.8
December	„	6.7	3.1	„	6.7	3.6	„	4.8	2.6

	With lifted pen						With writing pen					
	e ₀			r			e ₀			r		
	EW.	NS.	V.	EW.	NS.	V.	EW.	NS.	V.	EW.	NS.	V.
October	1.12	1.12	1.13	0.0	0.0	0.0	1.14	1.11	1.16	1.10	0.24	1.00
November	„	„	„	„	„	„	1.14	1.12	1.16	0.54	0.38	0.94
December	„	„	„	„	„	„	1.12	1.13	1.16	0.42	0.35	0.97

MEDAN: during December no time makrs.

MALABAR starts anew December 30.

OCTOBER.

No.	Date 1929.	Station.	Char-acter.	Phase.	Time (G. C. T.)	Period.	Amplitude half.		Distance of epi-centre.	Remarks.
							A _E	A _N		
169	Oct. 5	Bat.	I	e F	h m s 2 43 2 57	sec.	μ	μ	km.	Disturbed by street traffic.
170	• 6	Bat.	I	i _E F	8 15 58 8 27					
171	• 8	Bat.	I _u	iP _v iP i _w i L L F	17 27 41 17 27 46 17 57 20 17 58 21 18 0 28 18 5 18 12	20.7 17.0				Dilatation. Azimuth WNW.
172	• 15	Bat.	I _v	iP _v iP iS F	15 15 2 15 15 5 15 15 25 15 25				180	Dilatation. Azimuth ENE. Bantam (W. Java.)
173	• 14	Bat.	I	i _E F	3 55 28 3 52					

Batavia Observatory
Principal Earthquakes
November 1929.

182.	Nov.5	II _r	iP	11 ^h	43 ^m	50	2770 km.	azimuth WSW; faint com- pression.
			iS	11	48	8		
			L _v	11	54			
187.	,,17	III _r	iP	3	48	29	3004	azimuth NE; faint di- latation.
			iS?	3	53	6		
			L _v	3	56			
191.	,,18	II	i	20	51	48		
			i	20	55	6		
			oL	21	36			
192.	,,23	II	oP _{EW}	0	7,9			
			i _{EW}	0	9	4		
193.	,, 24	I _v	P	15	25	18	970	azimuth SW; compression.
			iS	15	27	2		

Woltovrodon, 12.12.1929.

S.W.V.

No.	Date 1929.	Sta-tion.	Char-acter.	Phase.	Time (G. C. T.).	Period.	Amplitude (half).		Distance of epi-centre.	Remarks.
							A _E	A _N		
					h m s	sec.	μ	μ	km.	
		Amb.	I	eP i F	3 30 55 3 32 15 3 51					
174	Oct. 16	Bat.	II _u	P S F	20 34 10 20 45 23 21 5					
175	• 17	Bat.	I	e _{EW} F	12 34 1 12 43					
176	• 18	Bat.	I	e F	10 59 10 11 8					
177	• 19	Bat.	II _u	iP _v iP i _v i i _w L L L _v L _v F	10 32 32 10 32 39 10 32 40 10 33 24 10 34 48 10 55 11 13 11 25 11 34 11 53				Dilatation. Azimuth ESE. Dilatation. Azimuth WNW.	
						32 28.6 38.5 21				
		Amb.	I	iP F	10 32 44 10 44					
178	• 22	Bat.	I _v	P iP _v iS F	11 5 41 11 5 42 11 6 0 11 9			150	Dilatation. Azimuth SW.	
179	• 24	Bat.	I _r	iP iP _v iS F	6 40 34 6 40 34 6 46 27 6 56			4270	Azimuth NW. Dilatation. Azimuth SW.	
180	• 29	Bat.	II _v	eP iP _v iP S F	9 32 44 9 32 46 9 32 47 9 35 11 9 52			190	Compression. Azimuth WNW. Azimuth SW.	

NOVEMBER.

181	Nov. 4	Bat.	I	i _w i _N i _w F	15 45 7 15 51 34 15 52 45 15 56					
182	• 5	Bat.	II _r	iP _v iP i _N iS L _v F	11 45 47 11 45 50 11 44 52 11 48 8 11 54 12 5			2760	Faint compression. Azimuth WSW.	
183	• 5	Bat.	I	e i F	15 44 15 44 28 15 51					

N ^o .	Date 1929.	Sta-tions.	Char-acter.	Phase.	Time (G. C. T.).	Period.	Amplitude (half).		Distance of epi-centre.	Remarks.
							A _E	A _N		
					h m s	sec.	μ	μ	km.	
—	Nov. 7	Amb.	I _v	P iS F	10 1 4 10 1 37 10 9				240	
184	• 12	Bat.	I	i i L F	0 40 7 0 41 28 0 57 1 2	19.5				
—	• 13	Amb.	II	i iL F	0 55 59 0 57 8 0 58	25				
185	• 13	Bat.	I _r	e i _w iS? F	20 47.6 20 48 28 20 49 50 21 4				1280?	
186	• 15	Bat.	I	i _v L _v F	18 58 55 19 9 35 19 49	38				Dilatation.
		Amb.	III _r	iP i _E iS F	18 45 45 18 54 50 18 58 10 19 58				2100	Azimuth NE-SW.
187	• 17	Bat.	III _r	iP _v iP i iS? L _v M _v F	5 48 25 5 48 29 5 48 44 5 55 6 5 56 4 0.1 5 2	25 16			3040	Faint compression. Azimuth N 60 E. Azimuth ENE. Sangi and Talaud I.
		Amb.	II _r	iP iS F	5 46 1 5 48 25 4 22				1370	
188	• 18	Bat.	I	i _w i F	2 10 22 2 14 54 2 21					
189	• 18	Bat.	I	e F	4 12 4 23					
190	• 18	Bat.	I	P _v P L _v F	5 46 7 5 46 10 5 59 6 7	21.7				Dilatation. Azimuth WNW.
—	• 18	Amb.	I _v	iP iS F	18 58 54 18 59 5 19 4				90	
191	• 18	Bat.	II	i i eL L F	20 51 48 20 55 6 21 56 21 55 22 41	26				
192	• 25	Bat.	II	eP _{EW} i _{EW} F	0 7.9 0 9 4 0 47					
		Amb.	I _r	P S F	0 5 11 0 5 15 0 20				1170	

No.	Date 1929	Station.	Character.	Phase.	Time (G. C. T.).			Period.	Amplitude (half).		Distance of epicentre.	Remarks.
					h	m	s		sec.	μ		
193	Nov. 24	Bat.	I _v	P iP _v i _v i iS i _w F	15	25	18			970	Compression. Compression.	
—	• 28	Amb.	I _v	P S F	19	51	59			170		
—	• 28	Amb.	I _v	P S F	25	16	4			180		
—	• 29	Amb.	II _v	iP iS F	0	2	59			150		
—	• 29	Amb.	I _v	P S F	0	18	10			160		
—	• 29	Amb.	I _v	eP S F	0	29	9			120		
194	• 29	Bat.	I	e _{EW} iP i F	10	2	9				Azimuth SW.	

DECEMBER.

195	Dec. 2	Bat.	I _v	iP _v P i _v i iS i _v F	15	28	46			160	Faint dilatation; strong compression. As above. Azimuth ESE. Azimuth SW.
196	• 3	Bat.	I	i i _{EW} i _N F	7	40	44				
		Amb.	I _v	P iS F	7	(46)				740	No time eclipses.
197	• 4	Bat.	I _r	i i S F	2	34	9			1020	Azimuth NW. Azimuth SE.
198	• 4	Bat.	I _v	e S F	11	46	51			800	

No.	Date 1929.	Station.	Character.	Phase.	Time (G. C. T.)			Period.	Amplitude (half).		Distance of epicentre.	Remarks.
					h	m	s		sec.	μ		
199	Dec. 5	Bat.	I	e F	15	45,9						
200	• 5	Bat.	II _v	iP _v P i i _v iS iS F	15	55	50			570	Compression. Azimuth SSW. Azimuth NNE.	
201	• 6	Bat.	I _v	P S F	6	55	10			670		
—	• 9	Med.	I _v	P S F	0	(50,3)				140		
202	• 9	Bat.	I	i F	6	9	47				Azimuth about W. Taroena, Sangi I. (?)	
203	• 9	Bat.	III	P _v iP iS? L _v iS? F	6	55	44	21.0		3760? 5700?	Dilatation. Azimuth WNW.	
—	• 9	Med.	III	iP iS off	7	(6,2)				140		
204	• 10	Bat.	I	eP F	5	14	52					
—	• 12	Med.	I _v	P iS F	20	(39,9)				140		
—	• 13	Amb.	I _v	iP iS F	25	25	52			70		
—	• 15	Med.	I	eP i i F	20	(57,9)						
—	• 15	Amb.	I _v	P S F	25	50	49			260		
205	• 16	Bat.	I	e i F	11	34,9						
206	• 17	Bat.	III _u	i _v i L M _v F P i	11	10	46	34			Azimuth about W.	
		Amb.	II _u		11	5	41			7600	Minutes uncertain.	

No.	Date 1929.	Sta-tion.	Char-acter.	Phase.	Time (G. C. T.).	Period.	Amplitude (half)		Distance of epi-centre.	Remarks.
							A _E	A _N		
					h m s	sec.	μ	μ	km.	
				i	11 6 11					
				iS	11 14 59					
				i	11 15 14					
				L	11 22,5	27				
				M	11 24 46	22,5				
				F	13 2					
		Med.	III _u	P	11 (8,0)				8670	
				iS	11 (17,8)					
				L	11 (44,4)	29				
				F	14 (27)					
—	Dec. 17	Amb.	II _v	iP	13 17 15				70	
				iS	13 17 23					
				F	13 22					
—	• 17	Amb.	I _v	P	18 16 31				260	
				iS	18 17 1					
				F	18 21					
207	• 18	Bat.	I	e	7 6,9					
				i	7 10 45					
				F	7 16					
208	• 24	Bat.	I _v	eP	11 50 6					Sumatras Westkust.
				i _N	11 51 6					
				i _E	11 51 17					
				F	11 58					
		Med.	I _v	iP	11 (45,4)				500	
				iS	11 (46,5)					
				F	12 (1)					
209	• 24	Bat.	I _v	P	15 54 34				740	Azimuth NW. Dilatation. Azimuth SW. Compression. Padang.
				iP _v	15 56 15					
				S	15 55 54					
				i _v	15 56 15					
				F	16 11					
		Med.	I	iP	15 (50,1)				350	
				iS	15 (50,7)					
				i	15 (51,5)					
				F	16 (7)					
	• 27	Med.	II _v	P	2 (55,6)				370	
				iS	2 (56,3)					
				i	2 (56,5)					
				F	3 (29)					
210	• 27	Bat.	II _r	iP _v	13 36 18				2150	Compression. Azimuth ESE.
				iP	13 36 21					
				iS	13 39 52					
				F	14 1					
		Med.	II	iP	13 (34,0)					
				i	13 (34,6)					
				i _{EW}	13 (38,4)					
				F	13 (41)					
—	• 28	Med.	I	i	1 (37,1)					
				L	2 (9)	29,5				
				L	2 (12,8)	20,5				
				F	2 (45)					
—	• 30	Mal.	I _v	P	22 42 27				160	Taloen (Central Priangan West-Java).
				iS	22 42 46					
				F	22 45					

No.	Date 1929.	Sta-tion.	Char-acter.	Phas.	Time (G. C. T.).	Period.	Amplitude (half)		Distance of epi-centre.	Remarks.
							A _E	A _N		
					h m s	sec.	μ	μ	km.	
211	Dec. 31	Bat.	I	iS?	1 17 6					Azimuth SSE.
				F	1 27					
		Amb.	I _r	iP	1 8 52				2990	
				iS	1 15 6					
				F	1 36					
—		Med.	I	P	1 (13,1)					
				i	1 (18,2)					
				i	1 (18,6)					
				i	1 (19,5)					
				F	2 (11)					
—	• 31	Med.	I	eP	4 (25,5)					
				e	4 (31,5)					
				eL	4 (45,8)					
				i	4 (54,1)					
				i	5 (0,7)					
				F	5 (28)					
212	• 31	Bat.	I	e	5 26,9					
				F	5 36					
213	• 31	Bat.	I	e _{EW}	5 50 10					Azimuth WNW.
				i	5 51 42	21				
				L _{EW}	6 9					
				F	6 12					