



Geodætisk Institut

Proviantgaarden, Copenhagen, Denmark.

Bulletin of the seismological station

SCORESBY-SUND

$\varphi = 70^{\circ}29' N.$ $\lambda = 21^{\circ}57' W.$ $h = 69$ m.

Lithologic foundation: Gneiss.

No. 12. Jan.—June 1935.

Instruments:

Galitzin pendulums with galvanometric registration.

Constants:

Component	l	A_1	T_1		μ^2	T	k
	cm	cm	sec			sec	
N	12.0	100	11.8	$1/1-23/5$	0.0	11.7	49
				$23/5-30/6$	0.0	11.9	105
E	12.0	100	11.9	$1/1-23/5$	0.0	11.8	49
				$23/5-30/6$	0.1	11.8	99
Z	14.9	100	11.6	$1/1-25/5$	0.0	9	53
				$25/5-30/6$	0.1	9	92

Time-corrections have been determined daily by means of Nauen scientific time-signals and time is known with an accuracy of about $1/10$ sec.

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S						
1	1935 Jan. 1	13	<i>m s</i>	<i>m s</i>	<i>h m s</i>	<i>m s</i>	<i>h m</i>	<i>h m</i>	°	<i>i</i> 60 ^m 28 ^s . Pacific Ocean. Deep focus.
2	2	23			42.8	<i>i</i> 57 27	10			
3	3	2					18			Preceding movement masked by Asia Minor. [microseisms.]
4	4	14		55 9	50.6	58.0				" "
5	4	16		33.8	27.6	36.3				Faint.
6	4	20						.2		"
7	5	11					.1			"
8	17	2					1.1			Faint preceding movement.
9	18	18					.1			
10	23	7	33.7	41 30	43.6				56	Aleutian Islands. Masked by strong microseisms.
11	26	17						.9		
12	Febr. 4	18					.5			
13	6	2		8 7			14			Atlantic Ocean.
14	9	20					.1			
15	13	10					.0			
16	13	17			48.8					
17	22	17	15.9	<i>i</i> 23 50						Bering Sea. Strong microseisms, <i>P</i> Crete. Deep focus. [uncertain.]
18	25	2	59 21	65 34	69.2					
19	March 5	10	36.0	43 11	47.0					Persia. <i>P</i> quite small, uncertain.
20	5	22					.7			
21	14	13					.3			
22	14	15			55 20	64.3	1.6			
23	15	12					.7			
24	17	22					.1			
25	20	23					.9			
26	26	22					.1			
27	30	21		40 27	45.3		.9			Japan. Turkey.
28	31	3		34.5			41			
29	April 1	3					.6			
30	1	9					52			
31	3	7					.8			
32	3	11	21 25	29 9	34 34					
33	3	12					.4			
34	3	22					.1			
35	3	23					.9			
36	5	4					.0			
37	5	9						37		
38	7	14						55		
39	9	20		14 21	17.7					Caspian Sea. Indian Ocean.
40	11	1			41.4					
41	12	12	53 41	61 6	64.6		1.2		52	No records 11 ^d 16 ^h —12 ^d 11 ^h . Persia.

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S						
42	1935 April 12	22	<i>m s</i>	<i>m s</i>	<i>h m s</i>	<i>m s</i>	<i>h m</i>	<i>h m</i>	°	Persia.
43	17	4			48.4					
44	18	22	19 34	22.4	59.6			23		<i>P</i> and <i>S</i> small, uncertain.
45	19	8					.5			
46*	19*	15	<i>i</i> 31 35	38 11	<i>i</i> 33 24	<i>i</i> 34 13			45	Mediterranean Sea. <i>L'</i> of preceding shock?
47	19	18					.0			Mediterranean Sea.
48	19	20		46 24	41 45					Faint.
49	19	23					.5			
50	20	5	19 9	25 54	20 57	29.2		33	46	Tripolis.
51	20	7					.9			
52	20	12					.1			
53	20	21					.1			
54	20	22	14 20	<i>i</i> 24 36						Japan. <i>P</i> not quite certain, [possibly earlier.]
55	21	7			50.2		1.3			
56	23	16	57 20	66 55*	67.8				75	Assam.
57	24	16		16 19	9 15		.7			Indian Ocean.
58	24	19	2 49	11 59			.4			
59	27	19						18		
60	29	20					.7			
61	May 1	10	<i>i</i> 32 53	39.5	42.8				45	Transcaucasia. <i>iP</i> , condensation. [No <i>E</i> record.]
62	4	23					.8			Faint.
63	6	0					.2			
64	7	6			19.8		.6			
65	11	19			17 30*			20		
66	12	0					.8			Faint.
67	12	5							43	
68	12	13					.2			
69	12	16						47		Small.
70	12	20			15 4		.7			
71	13	2					.7			Faint.
72	13	6					.3			
73	13	20	5 59	16.2	9 1		.6			82 Siam.
74	14	0			.2		.9			
75*	14*	23			<i>i</i> 42 5	<i>i</i> 45 17				Atlantic Ocean.
76	15	2	12.0	20.6	27.8					Baluchistan. <i>P</i> and <i>S</i> small, not Afghanistan. [quite certain.]
77	16	17		41 44			.9			
78	16	21			1.4	28.7	.7			
79	17	13					.1			
80	18	17					.7			
81	19	22					.6			
82	20	5			39 52	46.6	1.2			<i>e</i> 49 ^m .7. Celebes.
83	21	7			11.4	21.2	.8			SS 27 ^m .4. Australia.
84	21	13					.8			
85	22	8						57		Small.
86	22	10						27		"
87	23	18	8 13*	15.0				19		<i>P</i> quite small. Atlantic Ocean.
88*	24*	5	49 56		60.5	62.6			46	Philippines.

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S						
	1935									
	May		<i>m s</i>	<i>m s</i>	<i>h m s</i>	<i>m s</i>	<i>h m</i>	<i>h m</i>	°	
89	25	0	21 22		31.8	32.5				
90	25	9					.5		<i>e</i> 36 ^m .2. <i>SS</i> 39 ^m .1. Philippines.	
91	25	22					.5			
92	26	22	17.5		27 51	28.5	1.0		No <i>Z</i> record, <i>P</i> uncertain.	
93	27	3			33.5		1.4		No <i>Z</i> record.	
94	28	17					.5		Small preceding movement.	
95	29	20					.5			
96*	30*	21	<i>i</i> 43 17	<i>i</i> 51 52	45.5	55 40			64	
97	31	2					.6		Baluchistan.	
98	31	8		37 37	30 41	41.8			Japan.	
99	31	17			31.0		.8			
	June									
100	1	4		48.9	53.6	55.5	1.1			
									<i>S</i> quite small, uncertain. Baluchistan.	
101	2	9	26 47	35.2	29.0	30.4	.1		62	
102	5	12					.8			
103	6	6					.0		Faint.	
104	7	5					.0		Small.	
105	8	0					.2		22	
106	8	1					.2			
107	8	4					.3	5	Small.	
108	8	23					.5			
109	9	7					.5			
110	11	22			17.6		.5			
111	12	2					.5			
112	14	22					.0			
113	16	6			38.7	48.0	1.3		12	
114	18	4					.5			
115	18	18					1.4			
116	18	22	41.3		51 38	52 13	1.4		48	
117	19	10					1.1		<i>P</i> quite small, uncertain. <i>PP</i> 44 ^m 55 ^s . [Pacific Ocean.]	
118	19	22			.6		1.1			
119	20	1					.8	13	Small.	
120	22	16			15		.8			
121*	24*	23	38.6		<i>i</i> 42 0	<i>i</i> 43 47				
122	25	12					.5		New Hebrides.	
123	25	12	44 11	52 39			1.0		Kurile Islands.	
124	27	17					.6		Germany. Small preceding	
125	28	2			19.8		1.0		[movement.]	
126	28	19	9 28	19.0			.6		Japan. <i>P</i> and <i>S</i> quite small.	
127	28	19			53 6		1.2			
128	29	1					.3			
129	29	7	<i>i</i> 0 3	9 12	2 41	9.9			70	
130	29	19			2		1.0		<i>SS</i> 14 ^m . Mexico. Faint.	
131	30	0						39		
132	30	7						34		
133	30	8			27.8		.8			

Scoresby-Sund.

NOTES

- No. 46. April 19. 15^h. Mediterranean Sea. Possibly some depth of focus. Forerunners large; much oscillatory movement. *iP*, condensation. *e* 33^m9^s; *i* 33^m24^s; *i* 34^m13^s. *e* 35^m.8; 36^m.5. *S* 38^m11^s; *i* 38^m47^s very large. *e_N* 40^m.3; *i_E* 41^m29^s; *i_N* 41^m46^s. *L* not very large.
- No. 75. May 14. 23^h. Atlantic Ocean. Some depth of focus. *iP_Z* 42^m5^s; *e_Z* 42^m.6. *e_N* 44^m.2. *e* 44^m50^s. *i* 45^m17^s and 46^m5^s rather large on *Z*. *e_{N,E}* 49^m.1. *e_E* 52^m.4. *e_N* 56^m43^s. *e_E* 61^m.5; *e_N* 62^m.2; *e_E* 63^m.9. *L* not large, the beginning uncertain.
- No. 88. May 24. 5^h. Philippines. $\Delta = \text{ca. } 95^\circ$. *E* record unreadable in parts. *P* small, but clearly marked. *e* 53^m.0; successive increase of movement. *SKS* 60^m.5; *PS* 62^m.6. *SS* 67^m.8, not clearly marked. *L* rather small, the beginning uncertain.
- No. 96. May 30. 21^h. Baluchistan. No *E* record. *iP_Z*, dilatation, followed by strong oscillatory movement. *PP_Z* 45^m.5. *e_Z* 47^m.9. *iS* 51^m52^s; *PS* 52^m.2 large, followed by large oscillations. *SS* 55^m40^s. *M* very large.
- No. 121. June 24. 23^h. New Hebrides; $\Delta = \text{ca. } 125^\circ$. *P* quite small. *iP_Z* 42^m0^s; *iPP* 43^m47^s, followed by several rather large oscillations; *e_Z* 44^m17^s possibly another phase. *PPP* 47^m19^s, *SKS* 49^m.3. *SKKS* 50^m.6. *PS* 53^m.6, followed by rather large movement. *i_N* 57^m7^s; *i_Z* 59^m6^s; *e_N* 59^m.8. *iSS_E* 60^m 31^s. *L* not large.

Seismometric readings: Notation

- P* — normal first preliminary tremors, longitudinal waves.
PP... — longitudinal waves reflected at the earth's surface.
S — normal second preliminary tremors, transverse waves.
SS... — transverse waves reflected at the earth's surface.
PS; PPS; ... — waves reflected at the earth's surface which travel partly as longitudinal, partly as transverse waves.
SKS — waves which traverse the mantle as transverse waves but are refracted through the core with longitudinal oscillation.
PKS — waves which pass the mantle on one side of the core as longitudinal waves, on the other side as transverse waves and are refracted through the core with longitudinal oscillation.
SKKS — waves which traverse the mantle as transverse waves, are refracted through the core with longitudinal vibration and are reflected on its inner boundary.
L — long, or surface, waves; main phase.
M — waves of greatest amplitude in the surface waves.
i — sharply defined beginning of a phase.
e — gradual beginning of a phase.
 Δ — arcual distance from the station to the epicentre.
 *) affixed to time of phase indicates that the beginning is in a time-mark.
 *) affixed to number and date refers to Notes.



No. 13.

1935.

Geodætisk Institut
 Proviantgaarden, Copenhagen, Denmark.

Bulletin
 of the seismological station

SCORESBYSUND

$\varphi = 70^{\circ}29' N.$ $\lambda = 21^{\circ}57' W.$ $h = 69$ m.

Lithologic foundation: Gneiss.

No. 13. July—Dec. 1935.

Instruments:

Galitzin pendulums with galvanometric registration.

Constants:

Component	l	A_1		T_1	μ^2	T	k
	cm	cm		sec		sec	
N	12.0	100	$1/7-28/11$	11.8	0.0	12.1	100
			$28/11-31/12$	11.8	0.0	12.1	51
E	12.0	100	$1/7-28/11$	11.9	0.1	11.5	99
			$28/11-31/12$	11.9	0.0	10.8	50
Z	14.9	100	$1/7-21/8$	11.6	0.1	9	92
			$21/8-8/12$	10.0	0.2	8	108
			$8/12-31/12$	10.0	0.0	8	61

Time-corrections have been determined daily by means of Nauen scientific time-signals and time is known with an accuracy of about $1/10$ sec.

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un- defined	△	Remarks
			P	S						
	1935 July		<i>m s</i>	<i>m s</i>	<i>m s</i>	<i>h m s</i>	<i>h m</i>	<i>h m</i>	°	
1	3	0					3		Small.	
2	3	22			13					
3	5	18	2 30	10 10	13.8			55	Buchara.	
4	6	3						50		
5	7	13	36 7	46 45	39.7	52.5		87	Luzon.	
6	9	2						.7		
7	9	5						.2		
8	9	7			8.5		.5		Small preceding movement.	
9	9	12			40	49.0				
10	10	10					.2			
11	10	21			54					
12	11	8	36 30	45 55*			1.1		Japan. <i>P</i> small, uncertain.	
13	11	14					.2			
14	12	1			59		1.2			
15	12	21					.7			
16	13	0			12					
17	13	15						41		
18	14	14					.3			
19	15	14			50 18				Preceding movement disturbed.	
20	16	16	<i>i</i> 31 18	41 40	34.4	47			Formosa. <i>S</i> small, uncertain.	
21	16	20			25					
22	17	0			7.1		10			
23	17	0			42					
24	17	4						34		
25	17	4			52.2		59			
26	17	11			<i>i</i> 5 20	<i>i</i> 7 30	.7		<i>i</i> 8 ^m 47 ^s . <i>e</i> 10 ^m .5. 18 ^m .2. South Atlantic Ocean.	
27	19	1	<i>i</i> 1 14	10 36	4 1	<i>i</i> 10 44		72	SS 15 ^m .4. East of Japan.	
28	20	2					49		Small.	
29	23	4			19 5		.7			
30	25	21					43		Small.	
31	26	4	54 57	64 18			1.2			
32	26	8					3		Small.	
33	26	8	<i>i</i> 13 11	20 57	<i>i</i> 14 51	22 14			<i>e</i> 25 ^m 36 ^s . Deep focus.	
34	26	9					.8			
35	26	10			52 34		66		China.	
36	28	5			34.4	41.6				
37	29	4	26 15	35 35				72		
38*	29*	7	54.0		57 7	<i>i</i> 59 3			Pacific Ocean.	
39	29	23			33.9	38.6	44			
40	30	6			4		.7			
41	31	10					30			
	Aug.									
42	1	14			19 59	23.9				
43	1	16	19 43	28 57	22.4		.6	71	Costa Rica.	
44	1	18					20			
45*	3*	1	23 24	34 39	<i>i</i> 27 34	34 2		95	Sumatra.	
46	3	5			47.1	43.0	51		Mediterranean Sea.	

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un- defined	△	Remarks
			P	S						
	1935 Aug.		<i>m s</i>	<i>m s</i>	<i>m s</i>	<i>h m s</i>	<i>h m</i>	<i>h m</i>	°	
47	3	11	58.9							
48	3	13					.8		<i>P</i> uncertain, disturbed. Recording [interrupted 12 ^h 0 ^m —13 ^h 12 ^m .	
49	4	2	35 28	44.9			1.0		<i>S</i> quite small, uncertain. <i>e</i> 46 ^m 53 ^s .	
50	4	9	45.0	51 18	46 36	54.9	60			
51	5	14					.8			
52	5	21					.2			
53	6	0			19.1		.7			
54	6	7					.0			
55	6	7					.8			
56	6	14					.4			
57	7	9	14 14*	24 9			.6			
58	10	17			53.4	<i>i</i> 54 55	1.4		<i>e</i> 55 ^m 31 ^s ; 58 ^m .5.	
59	11	7			56.7		1.3			
60	15	14			47.6		.9			
61*	17*	2	0.7		3 42	<i>i</i> 6 11	.6		Pacific Ocean.	
62	17	20			49 33		1.3			
63	19	2					.3			
64	19	10					.0			
65	20	9						.1		
66	22	6						23	No records 4 ^h —16 ^h .	
67	22	20	34 18	36.8	37 0	37 31		.5	Baffin Bay. <i>S</i> quite small, uncertain. [37 ^m 31 ^s possibly <i>L</i> .	
68	23	10					.3			
69	23	11						58		
70	23	11								
71	23	14			16.4	22.5	.7		SS 31 ^m .2. Sumatra.	
72	25	5	10 24	12 23					12 ^m 23 ^s possibly <i>L</i> . Spitsbergen.	
73	26	16					35			
74	29	11					24			
75	31	0					.9			
76	31	17	50 42	59 26			70		<i>P</i> and <i>S</i> small, uncertain. [South of Kurile Islands.	
	Sept.									
77	1	1			19		24			
78	2	7			35.1	44.8	1.2			
79	2	10					56		Small.	
80	3	11			20 15		.6			
81	3	17					58		Small preceding movement.	
82	3	23					.7			
83	4	1	35 29	41.7	37 10	44.8	.8		41 Alaska.	
84	4	1	<i>i</i> 50 10		72.4		1.3		Formosa. Superposed on preceding shock.	
85	4	3	40.5	50 50				83	Superposed on preceding shock.	
86	6	1					10		Small.	
87	6	5					30		»	
88	6	5					32		»	
89	6	5					36		»	
90	6	10					40		»	
91	6	18					.9			

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S						
			m s	m s	m s	h m s	h m	h m	°	
92	1935 Sept. 6	21			26		.8			
93	8	1					.8			
94*	9*	6			35 44	44 45	1.1			
95	10	7					7			
96	10	7					42			
97	11	12					1.0			
98*	11*	14	i 14 47	23 32	17.0	28.1	1.2		66	
99	15	11			35.1	44.8				
100	15	14			36.7		56			
101	18	5			19		.6			
102	18	8			43.7		1.0			
103	19	2			55 52	57.1	1.4			
104*	20*	2	1.6		i 6 4	12.2				
105*	20*	5			42.3	48 32				
106	20	21			24	33 6				
107	23	9					31			
108	23	9			37 38	47 9	64			
109	24	5			20 38	31 2	56			
110	24	9					.1			
111	24	14						9		
112	24	15					.2			
113	24	17					.4			
114	24	22	21 9	28 22	23 5	32.0	36		51	
115	25	1					.0			
116	25	10			39 0	48.5	1.2			
117	26	23					.6			
118	30	19	4 7	6.9			8		15	
119	Oct. 7	5					.6			
120	8	9			41		46			
121*	9*	22	10 22							
122	10	20					1.1			
123	11	4					.7			
124	11	22			36	50 58	1.1			
125	12	8					15			
126	12	16	56 31	i 65 40	59 7	69.9	74		70	
127	13	2		17 37			.6			
128	14	10					33			
129	15	20					46			
130	18	0	23 7	32 11	36.9		.7			
131	18	11			23.1	29.7				
132	18	15		14 6			.6			
133	24	15					.3			

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S						
			m s	m s	m s	h m s	h m	h m	°	
134	1935 Oct. 25	1					.1			
135	25	18					.3			
136	31	19					0			
137	Nov. 1	6		16 29			19			
138	1	16			44.5	50 2				
139	4	10					46			
140	4	14					.5			
141	5	22					.0			
142	7	4					.9			
143	10	18					46			
144	12	22					.4			
145	14	20			26.3	33.1	.9			
146	23	8	4.9	14 53			26		79	
147	25	10		23 56	26 57	27 29				
148	30	4					.2			
149	Dec. 2	0					.5			
150	9	8					.9			
151	14	1	i 42 54	52 18	45 9	i 52 38				
152	14	13	0	9 50						
153*	14*	22	i 16 37	25 42	19.4	21.8	.5		69	
154*	15*	7			29.2	38.0	1.0			
155	16	17			18 40					
156	17	13					1.2			
157	17	19	30 8	40 31	33.5	45 59	1.0		84	
158	18	7		31 50			.8			
159	18	8						17		
160	20	18			57 8	62.7	1.6			
161	21	6					.1			
162	21	8					.0			
163	21	12			12		.5			
164	24	12			48 57					
165*	28*	2	49 17	60 54	60 2	62 16				
166	28	18					.3			
167	28	19					.5			
168	29	23			57	63.5	1.5			
169	31	2					.5			

Scoresby-Sund.

NOTES

- No. 38. July 29. 7^h. Pacific Ocean; $\Delta = \text{ca. } 135^\circ$. Deep focus. eP 54^m.0 small. eP'_Z 57^m.7^s; iP' 57^m.12^s large on Z , clearly marked on N and E . i_Z 59^m.3^s; i 59^m.17^s large. i_Z 59^m.58^s. $iPKS$ 60^m.36^s, very large on N and E . e 61^m.9; e_E 63^m.3^s; $e_{N,E}$ 63^m.17^s; e_Z 64^m.3. e_N 69^m.0; e_Z 70^m.3; $e_{N,E}$ 71^m.4. e_N 73^m.5. $e_{N,E}$ 75^m.8. L not large.
- No. 45. Aug. 3. 1^h. Sumatra; $\Delta = \text{ca. } 95^\circ$. P not large, iPP 27^m.34^s larger. e_Z 31^m.9^s. SKS 34^m.2^s; S_E 34^m.39^s; e_N 34^m.47^s; PS 35^m.8 followed by rather large oscillations. SS 41^m.3. The beginning of L not certain.
- No. 61. Aug. 17. 2^h. Pacific Ocean; $\Delta = \text{ca. } 130^\circ$. P quite small. P' 3^m.42^s small. ePP 5^m.56^s; i 6^m.11^s. $iPKS$ 7^m.21^s, very large on N . S 13^m.0. PS 16^m.4 and PPS 18^m.1, large oscillations. SS 23^m.5.
- No. 94. Sept. 9. 6^h. Caroline Islands. $\Delta = \text{ca. } 105^\circ$. Masked by microseisms. P not discernible. PP 35^m.44^s small. (S) 42^m.5. PS 44^m.45^s. SS 50^m.6, large on N . e_N 52^m.24^s.
- No. 98. Sept. 11. 14^h. Japan. Focus deeper than normal. P and S very large and clearly marked; followed by large oscillations probably due to other waves, but phases not well defined. PPP 19^m.17^s. $eS_{E,Z}$ 23^m.32^s; iS_N 23^m.34^s. SSS 31^m.7; L immediately afterwards. M , regular groupes of oscillations, relatively not very large.
- No. 104. Sept. 20. 2^h. South of Caroline Islands; $\Delta = \text{ca. } 108^\circ$. Very strong record. P 1^m.6 small. P' 5^m.6 small. iPP 6^m.4^s followed by strong oscillatory movement. PPP_N 8^m.12^s; e 9^m.24^s; 9^m.55^s; 10^m.9. SKS 12^m.2. e 13^m.2; 13^m.27^s; 13^m.54^s; 14^m.25^s. $i(PPS)$ 15^m.50^s, very large on N , followed by large oscillations. SS_N 20^m.4; $e_{N,E}$ 21^m.5; e_N 22^m.4 very large. SSS_E 25^m.4; i_N 26^m.0^s. e 33^m, some very large waves of long period. L large, of long duration.
- No. 105. Sept. 20. 5^h. Bismarck Archipelago; $\Delta = \text{ca. } 110^\circ$. PP 42^m.3; e_Z 43^m.53^s. PPP 44^m.54^s. e_E 45^m.4. SKS_N 48^m.32^s. (S) 49^m.4. e_E 50^m.38^s. PS 52^m.1. SS 57^m.7.
- No. 121. Oct. 9. 22^h. Felt in south-western Iceland. P read on N , quite small on E and Z . e_E 11^m.31^s. iL 11^m.44^s. M very large.
- No. 153. Dec. 14. 22^h. $15^\circ 0' N$ $92^\circ 9' W$ according to $J.S.A.$ Strong microseisms. eP 16^m.30^s, not certain; iP 16^m.37^s, large, condensation. PP_E 19^m.4. e 21^m.8. S most clearly marked on N ; followed by several rather large oscillations. M large.
- No. 154. Dec. 15. 7^h. Salomon Islands; $\Delta = \text{ca. } 120^\circ$. Masked by strong microseisms. 29^m.2, uncertain beginning possibly PP . e_N 35^m.1; e_E 36^m.3; PS_N 38^m.0, followed by several, rather large oscillations. SS_E 44^m.7.
- No. 165. Dec. 28. 2^h. Sumatra; $\Delta = \text{ca. } 100^\circ$. No E record. eP_Z , condensation, not very large. (P') 52^m.35^s small. PP 53^m.22^s large. PPP 55^m.34^s. e 57^m.35^s. SKS 60^m.2^s, large; $i(S_N)$ 60^m.54^s, very large. PS 62^m.16^s, followed by several large oscillations. SS 67^m.47^s, very large; continued large oscillatory movement; the beginning of L not certain.