

No. 15.

1936.

**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. 15. July—Dec. 1936.

Instruments:

Galitzin-Wilip seismographs.

Constants:

Component	$l$	$A_1$	$T_1$		$\mu^2$	$T$	$k$
N	12.0	100	11.8	$1/7-13/10$	0.01	12.0	97
				$13/10-31/12$	0.1	11.9	53
E	12.0	100	11.9	$1/7-13/10$	0.0	11.9	100
				$13/10-31/12$	0.0	12.0	50
Z	14.9	100	10.0	$1/7-13/10$	0.2	$8\frac{1}{2}$	107
				$13/10-31/12$	0.1	$8\frac{1}{2}$	58

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.

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No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S						
			m s	m s	h m s	m s	h m	h m	°	
1	1936 July 3	3			19 3	24.5	.9			<i>e</i> 25 <sup>m</sup> .9. PS 28 <sup>m</sup> .8. Solomon Islands. No records 13 <sup>h</sup> 8 <sup>m</sup> —22 <sup>h</sup> 0 <sup>m</sup> .
2	3									
3	4	9			16 15	16 50				SS 29 <sup>m</sup> .5. <i>E</i> record only. North of [Sumatra. No records 12 <sup>h</sup> 29 <sup>m</sup> —16 <sup>h</sup> 4 <sup>m</sup> .
4	5	10					54			
5	5	17					.7			
6	5	19	8 59		13.1	19 37	.7			<i>e</i> 20 <sup>m</sup> 5 <sup>s</sup> . SS 28 <sup>m</sup> .0. Celebes Sea. <i>E</i> [record only.
7	6	2					1.0			Small preceding movement.
8	6	5						52		Faint.
9	6	18			47	59.5				
10	7	10					48			Small.
11	8	20					.5			
12	9	20					.0			
13	10	3					11			
14*	12	3			3.6		.7			
15	13*	11	26 3		30 24	39.3				Chile.
16	14	10			.4		.7			
17	14	18					40			Iceland.
18	14	23					.0			
19	15	2			16 9		.6			
20	16	7		23 35	27.6		33			Oregon.
21	19	3					.2			
22	21	0			18.1	23 11	.6			
23	22	6			57.2		89			
24	23	6			41.3	42.8	1.3			<i>e</i> 51 <sup>m</sup> 20 <sup>s</sup> .
25	23	7		27 20						East of Japan. Superposed on [preceding shock.
26	23	18					.7			
27	23	19					.5			
28	24	2						14		Small.
29*	24	14						35		Small.
30	26*	7	50 42		61.5	65 57	1.2			Chile.
31	27	10					.2			
32	28	5			37 41	47 18	1.1			Off New Guinea.
33	28	8			11 52	21 28	.8			» » »
34	30	15						.1		
35	31	18		0 57	5.0		14			Gulf of California.
36	Aug. 1	6					1.0			Kansu.
37	1	8		44 43			.2			
38	1	8					40			Superposed on preceding shock.
39	1	15					.4			
40	4	2					15			Faint.
41	4	4					.6			
42	4	6					44			
43	7	6					8			Small.
44	8	4			31.5		36			Crete.

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			P	S						
	1936									
	Aug.		<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>	°	
44	9	16			30 15	36.0	.8			
45	13	20	16 24		20.2	27 42	.8		Phases not clearly marked. [Mindanao.	
46	14	22					1.5		Disturbed.	
47	15	3			5 8		.5		Faint.	
48	15	6					.6			
49	16	14					.6			
50	16	21		55.8			1.2		Persia.	
51	17	6			12.1		14		Faint preceding movement.	
52	17	6					1.4			
53	17	14			19.8	29 22	.9			
54	17	17					.9			
55	17	18					.9			
56	18	7						14		
57	18	7	18 26				.7		No N record. Pacific Ocean off [Mexico.	
58	18	16					13		Small.	
59	18	17					10		»	
60*	22*	7	<i>i</i> 4 5	<i>i</i> 14 24	7 18	20.3			83 Formosa.	
61	22	11					.9		Sumatra.	
62*	23*	21	<i>i</i> 25 27		<i>i</i> 29 14	<i>i</i> 36 24	1.5		Phases in forerunners not clearly [marked.	
63	24	22						34		
64	25	6					.8			
65	25	19					1.2		65 Kurile Islands region.	
66	26	11	45 29	54 8			1.0		SS 50 <sup>m</sup> .0. Pacific Ocean off Peru.	
67	26	21			43 53	45.0	.6			
68	28	7			8.6		.1		Faint.	
69	29	13					.1			
70	29	20								
71	29	22		43 46			1.1		Arabian Sea.	
	Sept.									
72	2	13			31.0		.6			
73	3	5						44		
74	3	13					.4			
75	4	8	21.8	31 35	25 29	36.7	.8		77 P small, uncertain. Pacific Ocean [southeast of Tokyo.	
76	5	5					.1			
77	5	19						41		
78	6	18					.9		Strong microseisms.	
79	8	17					.0		Faint.	
80	9	9						40	Seismic?	
81	12	18					.7		Small preceding movement.	
82	18	18		60 26	60 50	61 46	1.3		SS 65 <sup>m</sup> 30 <sup>s</sup> . Japan.	
83*	19*	1	15.6		25 57*	<i>i</i> 26 51			Sumatra.	
84	19	6			55.4	69			»	
85	19	15						15		
86	21	9						37	Small.	
87	21	11	49 2	55 19	50 37	58.3		62	42 Black Sea.	

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			P	S						
88	1936 Sept. 21	12	<i>m s</i> 34.8	<i>m s</i> 41 12	<i>h m s</i> 36.3	<i>m s</i> 44.1	<i>h m</i> 50			Black Sea. Forerunners small, [readings not certain. No records 13 <sup>h</sup> 7 <sup>m</sup> —13 <sup>h</sup> 40 <sup>m</sup> . Iceland.
89	21	15					29			»
90	21	15					36			»
91	21	15					43			Iceland.
92	21	16					15			»
93	21	16					28			»
94	21	17					11			»
95	21	17					18			»
96	21	17					28			
97	21	18					13			Iceland.
98	21	18					57			»
99	21	20					32			»
100	21	23					3			»
101	25	13					27			No records 13 <sup>h</sup> 6 <sup>m</sup> —13 <sup>h</sup> 27 <sup>m</sup> .
102	28	13					.3			
103	29	15						3		
104	29	16			58 33		1.7			
105	Oct. 3	16						7		
106*	3*	22			14 58*	17 41	.7			East of Mindanao.
107	4	7			<i>i</i> 1 6					Pacific Ocean.
108*	5*	0			13 0	16 6				
109	5	6			32 47		1.0			
110*	5*	9	58 29	70 22	62 52	71 53		88		East Indies.
111	9	16						28		
112	10	1			.7		.9			
113	10	3			32 42		1.1			
114	16	12					.9			Strong microseisms.
115	18	3						25		
116	18	17					.0			
117	19	6					50			Small.
118	19	7					27			»
119	19	7					55			»
120*	19*	12			<i>i</i> 23 24	29 22	57			Moluccas.
121	21	14					.7			Faint.
122	22	23	50 35	51 24			52		4	Felt in North Iceland.
123	23	0	1 25	2 14			3		4	» » » »
124	23	6	32 29	39 17	<i>i</i> 34 20	42.6	.7		47	Alaska. Strong microseisms; <i>P</i> pos- [sibly a few seconds earlier.
125	26	20							14	Greenland Sea.
126*	26*	23	<i>i</i> 6 58							Very strong microseisms.
127	29	6					33			Strong microseisms.
128	29	18			58		1.4			
129	Nov. 2	15	8 13				.5			Sea of Okhotsk. Very strong [microseisms.

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			P	S						
			m s	m s	h m s	m s	h m	h m	°	
130	1936 Nov. 2	20	57 19				1.4			Japan. Very strong microseisms.
131	11	1					.3			Faint.
132	11	17					.6			
133	12	2			39.2	46.1	1.0			
134	12	4			48 25	53.5	1.1			
135	12	9			0		.3			
136	12	20	15 7	23 39	25 0					Kurile Islands. Deep focus.
137*	13*	12	40 52	48 35*	43.0	43 56	55		55	Pacific Ocean off Kamchatka.
138	15	22			39 3	42.5	50			
139	19	13					37			
140	19	21	21.5	30.6	27.0	35.5	43			SSS 38 <sup>m</sup> .5. Guatemala. Strong [microseisms.
141	22	18	30.7	39 46	44.7	48.0	.9			P quite small, uncertain. Guate- [mala. Strong microseisms.
142	23	20					.5			Faint.
143	25	12					.4			
144	26	2		32.4	37.6		.7			Costa Rica.
145	27	2					.8			
146	27	6					.8			Faint. 28 <sup>d</sup> 12 <sup>h</sup> —30 <sup>d</sup> 15 <sup>h</sup> no records.
	Dec.									
147	1	0			.2		.7			
148	1	6						.6		Faint.
149	13	21			48.1	56.9	1.3			Marianne Islands.
150	14	4			27		.9			
151	20	3					.3			Strong microseisms.
152	21	19			22.4		26			» »
153	21	19					52			Strong microseisms. Superposed
154	25	20			24.7		38			[on preceding shock.
155	26	23			11 57	15 32	.9			e 26 <sup>m</sup> .5. Kermadec Islands.
156	27	0	26 25				.8			Japan. Superposed on preceding
157	29	14					39			[shock.
158*	29*	15			7 22	16 58	41			East Indies.

Scoresby-Sund.

NOTES

- No. 14. July 13. 11<sup>h</sup>. Chile;  $\Delta = \text{ca. } 100^\circ$ . Focus deeper than normal. No *Z* record. *P* 26<sup>m</sup>3<sup>s</sup>, rather large. *e* 29<sup>m</sup>40<sup>s</sup>; *PP* 30<sup>m</sup>24<sup>s</sup> large. *e* 36<sup>m</sup>58<sup>s</sup>. *PS* 39<sup>m</sup>.3. Part of the records not readable because the trace is too faint.
- No. 29. July 26. 7<sup>h</sup>. Chile;  $\Delta = \text{ca. } 105^\circ$ . Phases not very clearly marked. *P* 50<sup>m</sup>42<sup>s</sup>, quite small. (*PP*) 54<sup>m</sup>.7, 55<sup>m</sup>.2. *e<sub>E</sub>* 58<sup>m</sup>.5; *e<sub>Z</sub>* 59<sup>m</sup>.0. *SKS* 61<sup>m</sup>.5; *SKKS* 62<sup>m</sup>18<sup>s</sup>. *PS* 65<sup>m</sup>57<sup>s</sup>.
- No. 60. Aug. 22. 7<sup>h</sup>. Formosa. *iP* ( $\div 1.7, \div 1.0, + 3.0; + 2.4, + 1.9, \div 6.6$ ); followed by several oscillations, possibly other phases. *PP* 7<sup>m</sup>18<sup>s</sup>, *iS* 14<sup>m</sup>24<sup>s</sup>. *PS* 15<sup>m</sup>16<sup>s</sup>; *PPS* 15<sup>m</sup>35<sup>s</sup>. *SS* 20<sup>m</sup>.3.
- No. 62. Aug. 23. 21<sup>h</sup>. Sumatra;  $\Delta = \text{ca. } 95^\circ$ . Some depth of focus. *iP* (+ 1.1, + 1.9,  $\div 3.2$ ). *i<sub>Z</sub>* 25<sup>m</sup>51<sup>s</sup> (not quite certain; the trace is too faint). *e* 28<sup>m</sup>54<sup>s</sup>; *iPP* 29<sup>m</sup>14<sup>s</sup> large. *e* 35<sup>m</sup>58<sup>s</sup>; *i* 36<sup>m</sup>24<sup>s</sup>; *e* 36<sup>m</sup>.8. *PS* 37<sup>m</sup>28<sup>s</sup>; *PPS* 38<sup>m</sup>.4 very large. *SS* 42<sup>m</sup>50<sup>s</sup>. *L* not large.
- No. 83. Sept. 19. 1<sup>h</sup>. Sumatra;  $\Delta = \text{ca. } 100^\circ$ . *eP<sub>Z</sub>* 15<sup>m</sup>.6, small. *PP* 19<sup>m</sup>.7; 20<sup>m</sup>3<sup>s</sup>. *PPP* 21<sup>m</sup>37<sup>s</sup>. *e<sub>E</sub>* 23<sup>m</sup>12<sup>s</sup>. *e<sub>E,Z</sub>* 24<sup>m</sup>8<sup>s</sup>. *SKS* 25<sup>m</sup>57<sup>s</sup> (in time-break); *i* (*SKKS*) 26<sup>m</sup>51<sup>s</sup>. *e<sub>E</sub>* 27<sup>m</sup>34<sup>s</sup>. *PS* 28<sup>m</sup>.2; *PPS* 28<sup>m</sup>57<sup>s</sup> (in time-break). *SS* 33<sup>m</sup>.1. *e* 35<sup>m</sup>55<sup>s</sup>. *SSS* 37<sup>m</sup>58<sup>s</sup>. *i<sub>N</sub>* 40<sup>m</sup>43<sup>s</sup>.
- No. 106. Oct. 3. 22<sup>h</sup>. East of Mindanao;  $\Delta = \text{ca. } 105^\circ$ . *PPP* 10<sup>m</sup>.7; faint preceding movement. *SKS* 14<sup>m</sup>58<sup>s</sup>, in time-break. *PS* 17<sup>m</sup>41<sup>s</sup>; *iPPS* 18<sup>m</sup>41<sup>s</sup>. *e<sub>N</sub>* 20<sup>m</sup>.1.
- No. 108. Oct. 5. 0<sup>h</sup>. Pacific Ocean, *P<sub>Z</sub>* 13<sup>m</sup>0<sup>s</sup>. *PP* 16<sup>m</sup>6<sup>s</sup>. *PKP* 16<sup>m</sup>31<sup>s</sup>. *SS* 34<sup>m</sup>. *e(L)<sub>N</sub>* 50<sup>m</sup>; *eL* 59<sup>m</sup>.
- No. 110. Oct. 5. 9<sup>h</sup>. East Indies;  $\Delta = \text{ca. } 105^\circ$ . *P* 58<sup>m</sup>29<sup>s</sup>, dilatation. *PP* 62<sup>m</sup>52<sup>s</sup>; *PPP* 64<sup>m</sup>53<sup>s</sup>. *SKS* 69<sup>m</sup>5<sup>s</sup>; *SKKS* 69<sup>m</sup>50<sup>s</sup>; *S* 70<sup>m</sup>22<sup>s</sup>. *PS* 71<sup>m</sup>53<sup>s</sup>; *PPS* 72<sup>m</sup>38<sup>s</sup>. *e<sub>E</sub>* 76<sup>m</sup>54<sup>s</sup>; *SS* 77<sup>m</sup>44<sup>s</sup>. *SSS* 81<sup>m</sup>.5.
- No. 120. Oct. 19. 12<sup>h</sup>. Moluccas;  $\Delta = \text{ca. } 110^\circ$ . *iPP* 23<sup>m</sup>24<sup>s</sup>; *PPP* 25<sup>m</sup>34<sup>s</sup>; *SKS* 29<sup>m</sup>22<sup>s</sup>; *PS* 32<sup>m</sup>.7. *SS* 38<sup>m</sup>.8.
- No. 126. Oct. 26. 23<sup>h</sup>. Greenland Sea. *iP*, condensation, followed by large movement on *E*. *e<sub>N</sub>*(*S*) 7<sup>m</sup>35<sup>s</sup>; *iL<sub>N</sub>* 7<sup>m</sup>48<sup>s</sup>.
- No. 137. Nov. 13, 12<sup>h</sup>. Pacific Ocean off Kamchatka. Masked by increasing microseismic movement. *P* 40<sup>m</sup>52<sup>s</sup>, dilatation, large on *N* and *Z*. *e<sub>N</sub>* 42<sup>m</sup>1<sup>s</sup>. *PP<sub>N</sub>* 43<sup>m</sup>.0; *PPP* 43<sup>m</sup>56, large on *N* and *Z*. *e<sub>N</sub>* 44<sup>m</sup>20<sup>s</sup>. *P<sub>c</sub>S<sub>N</sub>* 45<sup>m</sup>.5. *S* 48<sup>m</sup>35<sup>s</sup> (in time-break), large on *E*. *e<sub>E</sub>* 49<sup>m</sup>11<sup>s</sup>. *S<sub>c</sub>S* 50<sup>m</sup>.2. *e* 50<sup>m</sup>56<sup>s</sup>. *SS* 52<sup>m</sup>.4. *SSS* 53<sup>m</sup>.2. *L<sub>Q</sub>* 55<sup>m</sup>; *L<sub>R</sub>* 60<sup>m</sup>.
- No. 158. Dec. 29. 15<sup>h</sup>. East Indies;  $\Delta = \text{ca. } 115^\circ$ . Deeper than normal. *PP* 7<sup>m</sup>22<sup>s</sup>; *e* 8<sup>m</sup>.4. *SKS* 13<sup>m</sup>4<sup>s</sup>. *PS* 16<sup>m</sup>58<sup>s</sup> followed by a group of rather large oscillations. *SS* 23<sup>m</sup>.5. *SSS* 27<sup>m</sup>.8.