



No. 7.

1931.

# Geodætisk Institut

Proviantgarden, 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. 7. Jan.—June 1931.

Instruments:

Galitzin pendulums with galvanometric registration.

Constants:

Component	$l$	$T_1$	$A_1$		$\mu^2$	$T$	$k$
N	cm	sec	cm			sec	
	12.0	12.4	100	$1/1-21/4$	0.05	12.6	46
				$21/4-25/6$	0.2	12.6	89
E	12.0	11.9	100	$25/6-30/6$	0.0	12.5	88
				$1/1-21/4$	0.0	12.1	53
Z	14.1	10.1	100	$21/4-30/6$	0.0	12.1	86
						ca. 8	

Time-corrections have been determined daily by means of Nauen scientific time-signals and time is, as a rule, known with an accuracy of about  $1/2$  sec.



## Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S	h m s	m s				
1	1931 Jan. 2	0			11.4		.5			
2*	2*	10	0.4	9 35	10 24	13.6	.20	70	Pacific Ocean.	
3	4	0			17		.4			
4	12	15			24		.5			
5	12	20	43.7	51.3	55.2		1.0		Kamtchatka. <i>P</i> uncertain.	
6*	15*	2	<i>i</i> 1 53	11 3	15.6	18.8		70	Mexico.	
7	15	21			28.9		.7			
8	15	23			10	18	.6			
9	16	19			31.1	40.6	.9		Mexico.	
10	17	3		9.6	14		.20		"	
11	17	6					.2			
12	23	6					.5			
13	24	14					.42		Recording interrupted 12 <sup>h</sup> 42 <sup>m</sup> —	
14	25	13					.2		[14 <sup>h</sup> 42 <sup>m</sup> .	
15*	27*	20	<i>i</i> 21 2	30 34	23.9	25.6		74	Burma.	
16	28	6						.3		
17*	28*	21			41 50	49 21			Caroline Islands.	
18	29	17					.8			
	Febr.									
19*	2*	23			6 25	<i>i</i> 6 38			New Zealand.	
20	8	2			3 31		.9		" "	
21*	10*	6			52.8	59.3			Sumatra.	
22	12	6					.7		" Forerunners masked by	
23*	13*	1			47 1	47 12			New Zealand. [microseisms.	
24	14	14			.4					
25	16	19					.4		Small preceding movement masked	
26	19	18			8		.4		[by microseisms.	
27*	20*	5	<i>i</i> 43 36	<i>i</i> 51 36	44 44	<i>i</i> 52 43			Siberia.	
28	27	9			56.2	62 22	1.5			
	March									
29*	2*	2			39 52	<i>i</i> 41 3	1.3		New Caledonia.	
30	5	18					.9			
31*	7*	0			25 21	32 29			Yugoslavia.	
32	7	1					.2			
33*	8*	1	<i>i</i> 57 31	63 22	<i>i</i> 58 58	65.9		38	Yugoslavia.	
34	8	13					.2			
35*	9*	3	59 58	69 7	62 31	69 47		70	Japan.	
36	10	4					.0			
37	11	6			27		1.0			
38*	11*	12	39.5	49 48	55.4		1.2		Marianne Islands region.	
39	12	10			53.5	63.7	1.4			
40	12	19			32.3		.9			
41	12	21					.8		Faint.	
42*	18*	8			21.4	30 56			Chile.	
43*	18*	20		38 45	38 1	44.9	1.0		SE of Mindanao.	
44	19	5					.7		Faint.	
45*	19*	6	37 49		48 14	54 19	.70		Near Luzon.	
46	22	21					.27			

## Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S	h m s	m s				
	1931 March									
47	24	13						19		
48*	28*	12	53.3		58 9	64 2			South Moluccas.	
49	29	17			42.5		.9			
50	29	18	2 30		<i>i</i> 2 51	11 11			Superposed on preceding shock.	
51	29	19					.7			
52	30	8					.3			
53	30	14			3		.5		Faint.	
54	30	15					.8			
55	31	16			22.9		.6			
	April									
56	1	13					.7			
57	3	2			19.9	21.2				
58	3	6					.3		Small.	
59	3	22					.1		<i>e</i> 40 <sup>m</sup> .7. <i>e</i> 48 <sup>m</sup> .4.	
60	3	23			37.3	39.7		.0	Faint.	
61	5	22								
62	6	7			9 29*	19.2			Faint.	
63	6	12			32.3		1.0			
64	7	8					.7			
65	8	19			31.8		1.0			
66	9	23	12.0	20.7	28.8		.6		<i>P</i> quite small, uncertain.	
	11								No records 13 <sup>h</sup> 19 <sup>m</sup> —16 <sup>h</sup> 43 <sup>m</sup> .	
67	12	2			23.3		1.0			
68*	15*	17		9 3					Atlantic Ocean.	
69	16	23					.0			
70	18	13					.44			
71	19	2			20.9	28.5	.6			
72	19	3					.3			
73	20	20						.9		
74	21	0			21.3				Faint.	
75	22	0			0.1				"	
76	22	0			22.8	40.3	.9			
77	24	0			10.3		.6			
78	24	2			39.2		1.0			
79*	24*	17	37 17		42 4	51 39	.70		Salomon Islands.	
80	25	11					.7			
81	25	19			.6		1.1			
82	25	23					.1		Faint.	
83	26	4	31 50	39.7	44.6		.50	57	Kamtchatka.	
84	26	6					.8			
85	26	7					.9			
86*	27*	16	<i>i</i> 59 10	66 2	60 57	69 17		47	Armenia.	
87	27	19	28 56							
	May									
88	1	22	48.0	57 9					<i>P</i> faint, not quite certain.	
89	4	17			.2		1.2			
90	6	15	15.5		39.6		1.1			
91	6	20						41		

## Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S						
	May 1931		<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>	°	
92	7	1			4.6		.3			
93	7	6					.2			
94	8	0					.9			
95	9	10			54 24	62.1		69		
96	10	19			.9			80		
97	11	4							.5	
98	12	1	46 55	54 50	47 13*	50.7	1.1		57	Kamtchatka.
99	12	10			34		.9			Faint preceding movement.
100	13	9					.3			
101	13	23			26		.8			
102	15	0					.0			
103*	20*	2	29 30	i 34 50					33	15 <sup>d</sup> 12 <sup>h</sup> —19 <sup>d</sup> 18 <sup>h</sup> time-service failing. Atlantic Ocean.
104	20	22			.3					
105	22	1					.8			
106	22	8					.1			
107	22	20						58		
108	23	3					.9			
109	24	0			31	37.3	1.0			
110	24	21			42	51.1				
111	26	3							47	Small.
112	27	6			17 16			29		Faint preceding movement.
113	27	7					.5			
114	27	10					.9			
115	28	3							39	
116	28	5			26 28			27		
117	28	18	43 58	51 57			1.0		58	Kurile Islands. Alaska.
118	29	5		30 38	26.3					
119	29	8			50					
120	30	11	43.8	51 50			1.0		58	
121	30	19			7					
122	30	20							46	Small.
	June									
123	1	12			14.2	23 58	.8			
124	1	14			25.7	29.8				
125	2	2		58 3	50.3	59 48				<i>P</i> quite small, about 49 <sup>m</sup> .1.
126	2	4			40 29		1.0			
127	2	5			57.7		1.8			
128	2	18					.0			
129	4	10			9.8	19 0				New Guinea. North Sea. <i>N</i> record only.
130	7	0	29.7	33 23	29 54				20	
131	9	5	19 0	28.8			.7			
132	9	12					81			No Records 12 <sup>h</sup> 8 <sup>m</sup> —13 <sup>h</sup> 21 <sup>m</sup> .
133	9	16					147			No Records 14 <sup>h</sup> 3 <sup>m</sup> —18 <sup>h</sup> 27 <sup>m</sup> .
134	11	5							25	
135	11	6					.9			
136	11	19						.9		
137	12	1					24			Small.
138	12	2							6	"

## Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S						
	1931 June		<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>	°	
139	13	15			55.9	56 39	1.7			<i>e</i> 65 <sup>m</sup> .9; <i>e</i> 69 <sup>m</sup> .4. Not very distant.
140	14	7							23	
141	15	10					.3			
142	15	11	33 14		44 16	50.5	1.1			
143	17	12	21 9	30 31	34.8			45		72 Japan.
144	17	17			21.9	31.1	1.0			
145	18	13	9.5	18 21	26.2		.6			67 Tibet. Small.
146	20	0							12	
147	20	1			34		.7			
148	20	15	9 51	13 36*				15		21 Arctic Sea.
149	21	12			43.9			58		
150	22	10					.3			
151	22	16					.7			Recording interrupted 13 <sup>h</sup> 59 <sup>m</sup> —16 <sup>h</sup> Japan. [40 <sup>m</sup>
152	23	6	26 27	35 52	29 7	40.6	.9		73	Arabian Sea.
153	24	23	58.7	68 10					73	
154	27	18			.5		1.0			No records 12 <sup>h</sup> 7 <sup>m</sup> —17 <sup>h</sup> 59 <sup>m</sup> .
155	28	21	36 38	44.7			1.0		59	
156	29	16	i 54 19	i 63 27					72	
157	29	20			42 44	49 20				<i>e</i> 52 <sup>m</sup> .0.
158	29	21					.3			
159	30	10							38	Small.
160	30	22							2	

## Scoresby-Sund.

## NOTES

- No. 2. Jan. 2. 10<sup>h</sup>. Pacific Ocean near Mexico. *P* quite small; *S* clearly marked on *N*. Some large *M* groups.
- No. 6. Jan. 15. 2<sup>h</sup>. Mexico. Strong record.  $iP_Z$ , dilatation. Strong variable movement between *P* and *S* but phases not clearly marked. *S* large, followed by very large movement of long period.  $SS\ 15^m.6$  and  $SSS_N\ 18^m.8$  followed by large oscillations. *L* shortly after  $SSS$ ; *M* very large.
- No. 15. Jan. 27. 20<sup>h</sup>. Burma. Much microseismic movement.  $iP_Z$ , dilatation. *S* large, followed by large movement.  $SS\ 34^m.9$ ;  $SSS\ 38^m.6$ . Strong movement continues into *L*.
- No. 17. Jan. 28. 21<sup>h</sup>. Caroline Islands. No *N* record. Additional readings:  $(S_cP_cS)\ 48^m.42^s$ ;  $SS\ 56^m.6^s$ .
- No. 19. Febr. 2. 23<sup>h</sup>. New Zealand.  $eP\ 6^m.25^s$ ;  $i\ 6^m.38^s$  followed by large oscillations. Later strong, irregular movement but phases not clearly marked.  $e_Z\ 7^m.47^s$ ;  $e_Z\ 8^m.36^s$ .  $PP_N\ 9^m.9$ .  $e\ 14^m.9$ ;  $e_N\ 17^m.8$ .  $(S_cP_cS)_N\ 20^m.23^s$ ;  $e_E\ 22^m.0$ ;  $PPS_N\ 23^m.5$ .  $SS\ 29^m.0$ .
- No. 21. Febr. 10. 6<sup>h</sup>. Sumatra. Masked by microseisms. Additional readings:  $e_N\ 63^m.0$ ;  $SS\ 68^m.4$ . The beginning of *L* uncertain; *L* not large but of long duration.  $L'\ ca.\ 8^h.7$ .
- No. 23. Febr. 13. 1<sup>h</sup>. New Zealand.  $P'_Z\ 47^m.1^s$ ;  $e_{N,E}\ 47^m.12^s$ . In following movement phases not clearly marked.  $e_N\ 50^m.4$ ;  $e_E\ 59^m.8$ ;  $e_N\ 65^m.9$ .  $e_E\ 69^m.1$ .
- No. 27. Febr. 20. 5<sup>h</sup>. Siberia. Deep focus. *S* large, on *E* only; the following phase large on *N*.  $e_E\ 55^m.0$ ;  $e\ 59^m.1$ . *L* small.
- No. 29. March 2. 2<sup>h</sup>. New Caledonia.  $\Delta = ca.\ 130^\circ$ . The clearest marked phase  $i_N\ 41^m.3^s$ , probably  $P_cP_cS$ . ( $PPS$ )  $52^m.2$ ;  $SS\ 57^m.2$ .
- No. 31. March 7. 0<sup>h</sup>. Yugoslavia.  $PP\ 25^m.21^s$ ;  $SS_N\ 32^m.29^s$ ;  $e_E\ 33^m.0$ . *M* from about  $39^m$ .
- No. 33. March 8. 1<sup>h</sup>. Yugoslavia. Phases well defined.  $PP$  and  $SS$  large.
- No. 35. March 9. 3<sup>h</sup>. Japan. The beginning of *P* small, read on *Z*. *S* large, well defined on *E*.  $e_E\ 11^m.8$ .  $SS\ 13^m.9$ .  $SSS_E$  (or  $L?$ )  $16^m.9$ . *M* large.
- No. 38. March 11. 12<sup>h</sup>. Marianne Islands region. No *Z* record. *P* quite small, possibly  $39^m.27^s$ . *S* well defined.
- No. 42. March 18. 8<sup>h</sup>. Chile;  $\Delta = ca.\ 110^\circ$ .  $PP\ 21^m.4$ ;  $S_cP_cS\ 27^m.4$ ;  $PS\ 30^m.56^s$ ;  $SS\ 36^m.9$ ;  $SSS\ 40^m.9$ . *M* regular.
- No. 43. March 18. 20<sup>h</sup>. SE of Mindanao;  $\Delta = ca.\ 100^\circ$ . First forerunners quite faint, first discernible movement  $28^m.1$ .  $S_cP_cS\ 38^m.1^s$ , well defined on *N* and *E*.  $S_N\ 38^m.45^s$ .  $PS_N\ 39^m.7$ .  $SS\ 45^m$ .
- No. 45. March 19. 6<sup>h</sup>. Near Luzon. *P* small, read on *Z*. Later phases very clearly marked. Additional readings:  $e_N\ 41^m.18^s$ ;  $e_{E,Z}\ 41^m.32^s$ .  $PS_N\ 50^m.0$ .  $e_{N,E}\ 61^m.1$ .
- No. 48. March 28. 12<sup>h</sup>. South Moluccas;  $\Delta = ca.\ 110^\circ$ . *P* quite small. Later phases clearly marked.  $PP\ 58^m.9^s$ ;  $S_cP_cS\ 64^m.2^s$ ;  $S_N\ 65^m.8$ ;  $PS\ 67^m.8$ ;  $PPS\ 68^m.46^s$ ;  $SS\ 74^m.1$ ;  $e_Z\ 75^m.8$ ;  $SSS\ 77^m.8$ .
- No. 68. April 15. 17<sup>h</sup>. Atlantic Ocean. *P* quite small, possibly  $4^m.2$ .  $9^m.3^s$  a clearly marked phase on *E*; on *N* earlier increase of movement but no marked phase. *L* small, irregular.
- No. 79. April 24. 17<sup>h</sup>. Salomon Islands;  $\Delta = ca.\ 115^\circ$ . *P* quite small, on *N* only. Later phases in forerunners clearly marked on *N*:  $PP\ 42^m.4^s$ , large;  $S_cP_cS\ 47^m.8$ ;  $PS\ 51^m.39^s$  and  $SS\ 58^m.2$ , large;  $SSS\ 62^m.2$ . On *E*, *L* begins distinctly  $70^m$ .
- No. 86. April 27. 16<sup>h</sup>. Armenia.  $iP_Z$ , dilatation, large;  $PP$  slightly smaller, clearly marked. The beginning of *S* not well defined, followed by a group of oscillations.  $SS$  clearly marked. On *N*,  $SSS\ 70^m.1$  very large; large movement continues; no distinct beginning of *L*. On *E* smaller movement follows  $SSS$  and *L* begins distinctly  $77^m$ .  $19^h.6$   $L'$  or  $L$  of a following shock.
- No. 103. May 20. 2<sup>h</sup>. Atlantic Ocean. Small beginning of  $P\ 29^m.30^s$ ;  $i_{N,Z}\ 29^m.33^s$ .  $e_{N,Z}\ 30^m.4$ , increase of movement  $30^m.7$ ;  $e_E\ 30^m.50^s$ . In following movement several pulses; strongest on *N*.  $iS_E\ 34^m.50^s$ , large. On *N*, preceding large oscillations and no corresponding pulse; increase of movement about  $34^m.59^s$ .  $i_E\ 36^m.49^s$  followed by very large oscillations. *M* large.



No. 8.

1931.

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. 8. July—Dec. 1931.

Instruments:

Galitzin pendulums with galvanometric registration.

Constants:

Component	$l$	$T_1$	$A_1$		$\mu^2$	$T$	$k$
N	cm 12.0	sec 12.4	cm 100	$1/7-8/10$	0.0	sec 12.5	89
				$8/10-7/11$	-0.06	12.4	46
E	12.0	11.9	100	$7/11-8/12$	0.0	12.4	46
				$1/7-14/10$	0.0	12.1	88
				$14/10-16/12$	0.0	12.0	44
Z	14.1	10.1	100	$16/12-8/12$	0.1	12.1	45
						ca. 8	

On Aug. 5th the time-marking pendulum clock was replaced by a first-class marine chronometer (Ulysse Nardin).

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	h m s	m s				
1	1931 July 2	3			61 39	62 3	1.3		Faint beginning ca. 52 m. No time-marks 4 <sup>d</sup> 21 <sup>h</sup> —5 <sup>d</sup> 14 <sup>h</sup> .	
2	5	18			12.6	16.0				
3	7	4	5 37	14 54			.6	71		
4	8	20					.8			
5	9	12			6.6	7.5		13		
6	9	21					.5			
7	10	21					.5			
8	11	6			8 48	19 16	.6			
9*	12*	16			58 52	69.1			Pacific Ocean.	
10	12	22			34		.7			
11	14	3					.5		Faint.	
12	14	8					.5			
13	14	13					.8			
14	14	16			.0					
15	15	16	36.0	43 13				50		
16	15	19					.2			
17	16	20					.1			
18	17	9	24 58	34 9			.8	70		
19	18	5			54.1		1.3			
20	18	8			i 28 33	31.7			Small. 28 <sup>m</sup> 33 <sup>s</sup> read on Z. Z record only.	
21	18	11	i 33 23		34 22					
22	19	20			.4		.7			
23	20	8			51.0	56.2		86	e 60 <sup>m</sup> .7. No time-service 21 <sup>d</sup> —24 <sup>d</sup> .	
24	25	8					.1			
25	25	13					.3		Disturbed.	
26	27	7			35 39		.7			
27	27	16			51.5		1.1			
28	28	4					.7			
29	28	6						33	Small.	
30	28	17					.9			
31	28	23					.8			
32	29	6					.9			
33	29	17			31					
34	29	18					.3			
35	31	0			43					
36	31	23					.1			
37	Aug. 1	0					.8			
38	1	19			.6		1.5			
39	1	23					.8		Faint.	
40	2	4						48	Not very distant.	
41	2	12					.4		Disturbed.	
42	2	18					.7		Faint preceding movement.	
43	2	20			27.5	33.7			e 34 <sup>m</sup> .5.	
44	2	23	39 2	46 34				54		
45	6	1						22	Small.	
46	6	15			46.3	49.8	1.3			

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S	h m s	m s				
47	1931 Aug. 6	18	24 59	32 7	26.9			42		
48*	7*	2	26.4		30 55	37.0			Pacific Ocean.	
49	7	11			.1			.3		
50	8	1			22.2	30.4		.9		
51	8	4			20.1	30.6		.8		
52	8	9			11.0			.3		
53	8	13						.4		
54	8	21			14.7	24.6		.9		
55	8	23							51	
56	9	0							52	
57	9	1			30.7			1.1	66 <sup>m</sup> .6 } Same or different shocks?	
58	9	23							22	
59	10	8						.3		
60	10	10			.1			1.0		
61	10	15						.2		
62*	10*	21	27 58							
63	11	3						.9	Altaï.	
64	11	7		20 16					12 <sup>m</sup> 47 <sup>s</sup> possibly P <sub>2</sub> ; quite small.	
65	11	13						.1		
66	11	18						.4	Faint.	
67	12	4						.4	"	
68	12	7						.0	"	
69	12	7						.5	"	
70	12	15						.6		
71	13	22			28.5	32 7		1.2	31 <sup>m</sup> .3.	
72	14	5						.7	Faint.	
73	14	13						.2		
74	14	16	21.5	29 19				.7		
75	15	4	10.4	18.2	11 46	19.7			56	
76	16	2	10 12	17 46	21.5				54	
77	16	8			21.9	25.6		.5	Altaï.	
78*	16*	11	50 23	58 32*	53 55	62.4			60	
79	17	9						.6	Mexico.	
80	17	13						.9		
81	17	18	i 0 57	10.9				.5	79	
82	18	5	51 41	61.1				1.3	China Sea.	
83	18	9			56 6			1.1	P and S quite small.	
84*	18*	14	30 22	i 37 52	32.4	41.7			1.1	
85	18	18			12.1				53	
86	18	20							Macedonia.	
87	19	2						.0	1	
									9	
									56	
88	21	19						.3	19 <sup>d</sup> 12 <sup>h</sup> —21 <sup>d</sup> 12 <sup>h</sup> no time-marks.	
89	22	17						.4	Faint.	
90	22	22			.9			1.4		
91	23	10							9	
92	23	15							Small.	
93	23	18			19 23			27		
94	24	3							22	
95*	24*	21	45 44	54 12	49 28				63	

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S						
	1931 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>	°	
96	25	3			29		.5			
97	25	19						13		Small.
98	25	21					.9			Faint.
99	25	22					.5		6	Small.
100	26	1								
101	26	6					.3			
102	26	11			6.9		1.1		64	Small preceding movement.
103	26	19								Baluchistan.
104*	27*	15	37 43	46 20	41 32	53.0				
105	28	1		1.5						
106	28	19			.9			0		Small.
107	29	4					.6			
108	29	17					1.2			Near shock.
109	30	7			56.8			5		" "
110	31	3						36		Small.
111	31	3						0		
112	31	4								
113	31	6			.9					
	Sept.									
114	2	15			52		1.0			Small.
115	2	20						59		
116	3	17						.6	40	
117	5	1								Near shock.
118	5	2					59			
119	6	6			0.7			20		
120	6	7						10	18	Atlantic Ocean.
121*	6*	8	<i>i</i> 6 2	9 17						
122	6	14			51.8		.8			
123	8	19	20.5				1.1			Marianne Islands region.
124	9	13			58.4					" " "
125*	9*	20	<i>i</i> 51 9					19		Near shock.
126*	9*	20						.8		Faint.
127	10	1								
128	11	14								
129	11	16			33	39.9	.6			Faint.
130	11	23						.9		Kamtchatka.
131	12	0								
132	12	2		1 57				9		
133	12	7						3		
134	14	3			49.5					
135	15	21			52.5		1.4			No records 12 <sup>h</sup> 2 <sup>m</sup> —13 <sup>h</sup> 51 <sup>m</sup> .
136	16	12						111		
137	16	19					.8			
138	17	2					.9			Near shock.
139	19	9						27		" "
140	19	10						5		" "
141	19	22						35		" "
142	21	2	31.4	<i>i</i> 40 56			.9			Japan. <i>P</i> small, uncertain.
143	21	10	39 59	50 24	51.5		1.1			Annam. <i>P</i> small, uncertain.

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S						
	1931 Sept.		<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>	°	
144	21	13			<i>i</i> 54 0	54 54				
145*	25*	6	14.1	26 17	<i>i</i> 24 42	<i>i</i> 27 57				$e_z$ 53 <sup>m</sup> 57 <sup>s</sup> .
146	26	20			14.5	19.6				Sumatra.
147	28	18					.4			28 <sup>m</sup> .4.
148	29	6					.2			
149	29	10						.1		
150	30	11					.8			
	Oct.									
151	1	12					.3			Strong microseisms.
152	3	19			34 6	39 58				Salomon Islands.
153	5	22		48 36				.0		Strong microseisms.
154	7	10								
155	9	3			22.5		.8			
156	9	7					.0			Faint.
157*	10*	0			40 10	45 46				Pacific Ocean.
158	10	8					.2			
159	10	17					.0			Strong microseisms.
160	17	12							49	
161	17	16			56 9					
162	18	1			.0		.3			
163	18	4			52.7	68 42				
164	18	7					.9			Faint.
165	21	1						51		
166	23	20			.6		1.1			<i>N</i> disturbed.
167	26	4						59		Disturbed.
168	28	3							21	No records 12 <sup>h</sup> 3 <sup>m</sup> —13 <sup>h</sup> 23 <sup>m</sup> .
169	28	5			59		1.3			Small.
170	28	7					.48			Near shock.
171	29	9							3	Faint.
	Nov.									
172	1	19					.6			
173	2	0	43.5	52.5			1.1			Mexico.
174*	2*	10	14 47	24 31	17 39	29.3			76	China Sea.
175	2	17			23		1.0			
176	2	19					.1			
177	4	18					.4			Faint preceding movement.
178	5	12						66		No Records 12 <sup>h</sup> 2 <sup>m</sup> —13 <sup>h</sup> 6 <sup>m</sup> .
179	18	4					.7			
180	20	14			.6	46.9	1.1			
	Dec.									
181	1	4			12		.8			
182	1	18			58		1.6			Possibly 2 shocks.
183	14	19					.8			
184	18	10			15		.8			
185	24	3			55 35					

## Scoresby-Sund.

## NOTES

- No. 9. July 12. 16<sup>h</sup>. Pacific Ocean. Phases not clearly marked. *P* quite small,  $e_Z$  58<sup>m</sup>52<sup>s</sup>, possibly an earlier beginning.  $e_E$  69<sup>m</sup>.1;  $e_N$  69<sup>m</sup>19<sup>s</sup>.  $e_N$  76<sup>m</sup>.4.
- No. 48. Aug. 7. 2<sup>h</sup>. Pacific Ocean.  $\Delta = \text{ca. } 110^\circ$ . *P* small; *P'* small, ca. 30<sup>m</sup>.3. *PP* 30<sup>m</sup>55<sup>s</sup>;  $\overline{S_e P_e S}$  37<sup>m</sup>.0, *PS* 40<sup>m</sup>.4, well defined phases. *SS* 46<sup>m</sup>.7.  $e_N$  52<sup>m</sup>.6;  $e_E$  (*L*) 57<sup>m</sup>.8.
- No. 62. Aug. 10. 21<sup>h</sup>. Altaï;  $\Delta = \text{ca. } 53^\circ$ . Very strong shock. *N* and *E* records hardly readable. *P* begins quite faintly, increases gradually to very large movement; on *Z*, largest oscillations begin about 28<sup>m</sup>39<sup>s</sup>.  $PP_Z$  30<sup>m</sup>4<sup>s</sup>;  $e_{N,E}$  30<sup>m</sup>.6;  $PPP_Z$  31<sup>m</sup>8<sup>s</sup>, followed by increasing, large oscillations;  $e_N$  31<sup>m</sup>21<sup>s</sup>.  $S_N$  35<sup>m</sup>23<sup>s</sup>;  $e_Z$  35<sup>m</sup>30<sup>s</sup>;  $e_Z$  36<sup>m</sup>1<sup>s</sup>, large. *M* very large.
- No. 78. Aug. 16. 11<sup>h</sup>. Mexico. Records slightly disturbed. Phases very clearly marked. Additional readings: 59<sup>m</sup>.0;  $e_N$  65<sup>m</sup>.0. *M* large.
- No. 84. Aug. 18. 14<sup>h</sup>. Mongolia. The beginning of *P* small; *iP* 30<sup>m</sup>27<sup>s</sup>, large; *PP* 32<sup>m</sup>.4, smaller.  $e_E$  33<sup>m</sup>34<sup>s</sup>. *S* large.  $e_N$  39<sup>m</sup>.8, a well-defined phase. *SS* large, but the beginning not clearly marked; on *N*, larger movement about 43<sup>m</sup>.0 (*SSS*). *L* shortly afterwards.
- No. 95. Aug. 24. 21<sup>h</sup>. Baluchistan. No *E* record, *N* partly unreadable. *S* not clearly marked.
- No. 104. Aug. 27. 15<sup>h</sup>. Baluchistan. Strong shock. *P*, condensation, followed by a large group of oscillations;  $e_Z$  38<sup>m</sup>12<sup>s</sup>. *PP* not large, 40<sup>m</sup>.5;  $PPP$  41<sup>m</sup>32<sup>s</sup>, followed by large oscillations. *S* large.  $i_{N,E}$  47<sup>m</sup>12<sup>s</sup>, very large. *SS* 50<sup>m</sup>.4;  $SSS_N$  53<sup>m</sup>.0, large; *L* shortly afterwards. Large *L'* about 18<sup>m</sup>.0.
- No. 121. Sept. 6. 8<sup>h</sup>. Atlantic Ocean SE of Greenland. No *E* record. *P* very large, dilatation. *S* not clearly marked.
- Nos. 125-126. Sept. 9. 20<sup>h</sup>. Marianne Islands region.  $iP_Z$  51<sup>m</sup>9<sup>s</sup>, dilatation.  $e_Z$  51<sup>m</sup>49<sup>s</sup>;  $i_{N,E}$  52<sup>m</sup>7<sup>s</sup>.  $e_Z$  54<sup>m</sup>.6;  $e_{N,E}$  54<sup>m</sup>48<sup>s</sup>;  $i_{N,E,Z}$  55<sup>m</sup>27<sup>s</sup>.  $i_N$  61<sup>m</sup>22<sup>s</sup>, no corresponding pulse on *E*.  $e_N i_E$  61<sup>m</sup>47<sup>s</sup>;  $e_E$  62<sup>m</sup>.5;  $i_N$  62<sup>m</sup>36<sup>s</sup>;  $e_N$  62<sup>m</sup>.9;  $e_{E,Z}$  62<sup>m</sup>58<sup>s</sup>.  $e_N$  67<sup>m</sup>.3;  $e_N$  69<sup>m</sup>.1. *L* irregular, small.
- No. 145. Sept. 25. 6<sup>h</sup>. Sumatra;  $\Delta = \text{ca. } 100^\circ$ . *P* small, uncertain.  $PP_Z$  18<sup>m</sup>15<sup>s</sup>;  $e_{N,E}$  18<sup>m</sup>.5.  $e$  20<sup>m</sup>.5. *SS* 33<sup>m</sup>.5.
- No. 157. Oct. 10. 0<sup>h</sup>. Pacific Ocean;  $\Delta = \text{ca. } 115^\circ$ . Phases best marked on *N*; on *E*, increasing movement without clearly marked phases. *PP* 40<sup>m</sup>10<sup>s</sup>, faint preceding movement.  $PPP$  42<sup>m</sup>.5.  $\overline{S_e P_e S}$  45<sup>m</sup>46<sup>s</sup>;  $\overline{S_e P_e P_e S}$  47<sup>m</sup>8<sup>s</sup>. *PS* 49<sup>m</sup>.9.  $e$  52<sup>m</sup>.7; 54<sup>m</sup>.4. *SS* 56<sup>m</sup>.7; *SSS* 61<sup>m</sup>.3.  $e_E$  70<sup>m</sup>.1 followed by large oscillations of long period, the beginning of *L*?
- No. 174. Nov. 2. 10<sup>h</sup>. China Sea.  $eP_{N,Z}$  14<sup>m</sup>47<sup>s</sup>;  $i_{N,E}$  14<sup>m</sup>52<sup>s</sup>.  $e_N$  20<sup>m</sup>.5.  $S_E$  24<sup>m</sup>31<sup>s</sup>, no corresponding pulse on *N*;  $i_N$  25<sup>m</sup>15<sup>s</sup>.