

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. 5. Jan.—June 1930

Instruments:

Galitzin pendulums with galvanometric registration.

Constants:

Component	l	T_1	A_1		μ^2	T	k
	cm	sec	cm			sec	
N	12.0	12.4	100	$1/1-14/1$	-0.06	11.7	77
				$14/1-22/6$		12.1	68
				$22/6-30/6$	0.1	11.8	86
E	12.0	11.9	100	$1/1-22/1$	0.14	11.8	76
				$22/1-29/3$		12.0	72
				$29/3-30/6$	0.02	12.1	78
Z	14.1	10.1	100				

In the intervals for which no value of μ^2 is given, the damping has been somewhat varying, but nearly aperiodic.

Z has not been very stable; the period has been about 5 sec.

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

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S						
1	1930 Jan.	5 1	m s	m s	h m s	m s	h m	h m	°	
2	5	19	2 56	11 39			.4		65	Strong microseisms. Kurile Islands.
3	14	23					.1			
4	16	1					0			Strong microseisms.
5	17	4					.31			
6	17	17					.6			
7	28	7					.4			
8	Febr.	1 19					.6			Some preceding movement.
9	2	15	5 49*	13 43	19.2				57	Aleutian Islands.
10	2	17							28	
11	5	1					.1			
12	7	7					.4			
13	7	17					.5			
14	8	7						.0		
15	12	7					.6			
16*	14*	18	i 46 4	i 52 20	48 10	55.6				Aegean Sea.
17	14	21			4.2		.8			
18	15	2						.0		
19	18	3					.0			
20	24	21			15	18.2	.8			
21	26	3							1	
22	27	2			39.0					
23	27	7					.9			
24	28	1			15.7	22 14				Atlantic Ocean.
25	March	6 3		i 52 26						Following movement faint.
26	6	8					.7			Faint.
27	6	9		32 50	36.3		.7			Archipelago.
28*	6*	15			54 50	58.2	1.8			
29	7	6					.9			
30	7	11					.7			
31	8	3			56.8	65.9	1.3			
32*	10*	16	36 38	44 1					52	Sea of Okhotsk. No Z record.
33	15	9			16 19		.8		18	Faint.
34	16	5								
35*	26*	7			31.7	41 21	1.1			Timor.
36	26	11						.9		
37	30	8			58		1.4			
38	30	15			39.2	49 37	1.3			
39*	31*	12	41.3	47 17	42 47	49.8			40	Aegean Sea.
40	April	2 5					.2			
41	2	20					.9			
42	4	9						.9		Faint.
43	10	14			42.6		.9			
44	15	10					.2			Faint.

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S						
45	1930 April	16 4	m s	m s	h m s	m s	h m	h m	°	
46	16	13					.52			38
47	16	14			46 49		.9			
48	17	20	14 21							Later phases not clearly marked.
49	20	16			52.8		1.3			
50	21	10	i 29 46	38.4			.8		64	S small, uncertain.
51	21	12			9 46	14.4	.8			Atlantic Ocean.
52	21	22					.5			
53	23	18			43.9		.9			Alaska.
54	23	21	59 30	68 10	69 31		1.3		64	East of Japan.
55	24	0			43		.9			
56	25	15			.4		.6			
57	26	7						2		
58	26	15					.6			
59	26	16					.72			Recording interrupted 16 ^h —17 ^h 12 ^m .
60	27	10					.9			Faint.
61	27	14			46 30	56.1				
62	27	21			56					Faint.
63	28	13					.5			
64	28	18	46 22	i 56 3	61.1	63.8	1.3		74	China. E record only.
65	29	8					.8			
66*	30*	16			24 54	26.7				Tonga.
67	May	1 1	i 9 26	i 18 54	12.2	19 17	.6		72	Japan.
68	1	5					.0			
69	1	10						.9		Faint.
70	2	2			2.1	12.0	.8			
71	2	6			22 22	32.3	1.1			
72	5	10					.4			
73*	5*	13	i 58 20	i 68 39			1.5		81	Burma.
74	6	7			19				48	Persia.
75*	6*	22	42 56	49 51				14		
76	7	14								
77	8	5			.8					
78	8	13			6.6	9.1	.8			Overlapped by next shock.
79	8	13			58 8		1.5			" " " "
80	8	15						.4		" " " "
81*	8*	15	43 56	50 48	45 50	54 41	1.0		48	Armenia.
82	8	18					.4			
83	8	23			10.5		.3			
84	8	23					.9			
85	9	7	15 43		17.5	21.3	.5			No distinct S.
86	9	8					.4			
87	9	14			23.5		.6			
88	10	0					.9			Faint.
89	10	22					.2			
90	10	22			38.4		46			
91	11	22	45 54	54.3	48.1	61			62	Persia. S uncertain.
92	12	0	31 20	40.0	46.5		.9		64	" " "

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un- defined	△	Remarks
			P	S						
	1930 May		m s	m s	h m s	m s	h m	h m	°	
93	12	3			1		.8			Faint.
94	12	22					.7			Small preceding movement.
95	13	1					.0			Faint.
96	13	1					.9			"
97	13	5					.7			"
98	13	6					.9			"
99	13	8			34.0		.8			
100	13	16					.1			
101	13	18					.4			
102	13	20							.9	Faint.
103	14	19			49.8		.9			
104	16	2					.7			
105	16	2			58.9		.1			
106	16	21					.0			Faint.
107	18	0			27 36	28 45	1.0			
108	18	23							54	
109	19	3			36.0	38.1	1.2			
110	19	14							54	Faint. Recording interrupted 15 ^h –17 ^h .
111	19	21					.3			
112	20	8			.3		.8			
113	20	11	24.8	32 45*	27.3	36.9			58	E record only. Aleutian Islands.
114	21	12					.5			
115	21	22			19.8			21		
116	22	5							52	Small wave-groups.
117	22	6						0		" "
118	23	0					.8			
119	23	10			7		.2			
120*	23*	16	49 39	159 5					72	Japan. Small preceding movement. Time uncertain.
121	24	22					.3			
122	29	8			50 59	52.2				
123	29	17			32			41		
124	30	15							37	Small wave-group.
125	31	10			42			46		
126	31	18	9 46	19 11*	12.5		.6		71	Japan.
127	June 1	3			23		.9			
128	1	4							.3	
129	1	13			.4	35	1.1			
130	3	18							.3	Disturbed.
131	4	7	36 39	43.2	38.3		.8		45	Persia. S small, uncertain.
132*	4*	10			9 24	11.4	.8			
133	5	12			3 30	20.7				
134	5	17							.2	Disturbed.
135	5	22							.4	Faint.
136	6	8			25		.6			
137*	11*	1			9 33	19.2				Salomon Islands.
138	12	10					.2			
139*	13*	1	3 36	11.5	6.9	15.3	.4		57	

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un- defined	△	Remarks
			P	S						
	1930 June		m s	m s	h m s	m s	h m	h m	°	
140	15	8			12.8		.6			
141	15	21			31		1.2			
142	17	20					.7			
143	19	13			32.4		1.0			Superposed on preceding movement.
144	19	14					.4			
145	19	18						19		
146	21	29					.9			
147	22	2					.9			
148	22	19					.4			Preceding movement disturbed.
149	23	19			54.0	61.2	1.5			
150	25	1					.5			
151*	25*	10	30 58		42 7	43 20	1.1			Peru. In preceding shock.
152	25	12			19.3		.5			
153	25	13					.6			
154	25	20					.8			
155	25	21			30 27					Quite small movement.
156*	25*	21	34 55*		45 32	45 58	1.1			Peru. Faint.
157	26	5						.8		
158	26	19					.7			

Scoresby-Sund.

NOTES

- No. 16. Febr. 14. 18^h. Aegean Sea. Deep focus. Phases in forerunners large, begin sharply. Additional readings: i 46^m21^s; 52^m37^s. L small.
- No. 28. March 6. 15^h. Additional readings: 57^m.7; 76^m.0; 77^m.8.
- No. 32. March 10. 16^h. Sea of Okhotsk. P quite small, readable on Z only. S large and sharp. L faint.
- No. 35. March 26. 7^h. Timor; $\Delta = \text{ca. } 115^\circ$. No Z record. P quite faint, possibly 27^m.0; P' faint, 30^m.0. PP most clearly marked on N ; followed by much movement. PS large, 41^m21^s, followed by large movement, e_N 42^m.2, e_E 42^m.6; SS 47^m.6; SSS 51^m.6. Waves of long period in first part of L .
- No. 39. March 31. 12^h. Aegean Sea. P quite small, readable on Z only. PP large and well defined.
- No. 66. April 30. 16^h. Tonga. No N record. Additional readings: 34^m44^s; 43^m38^s. Recording interrupted 16^h46^m.
- No. 73. May 5. 13^h. Burma. P sharp on Z , condensation; continued oscillatory movement until S . After S , stronger oscillatory movement. Large M of long duration.
- No. 75. May 6. 22^h. Persia. Strong record. iP 42^m57^s, followed by much oscillatory movement; e_E 44^m48^s; e_Z 45^m16^s; e_E 45^m32^s. eS 49^m51^s, iS 49^m58^s, large on E . After S , large oscillations; very large oscillations, (SS), begin 53^m.5. Large M .
- No. 81. May 8. 15^h. Armenia. Phases clearly marked. Forerunners until SS largest on E . PP , about as large as P , followed by much movement. SS large and very clearly marked on N . Additional readings: $e_{N,E}$ 52^m.4; e_E 56^m.4. Recording interrupted soon after the beginning of L .
- No. 120. May 23. 16^h. Japan. P on Z only, small but clearly marked; S large, the movement otherwise quite small. Time uncertain, owing to clock-repairs.
- No. 132. June 4. 10^h. Additional readings: 14^m34^s; 15^m43^s; 18^m.3; 19^m.1.
- No. 137. June 11. 1^h. Salomon Islands. Additional readings: 20^m.5; 26^m.1.
- No. 139. June 13. 1^h. South of Aleutian Islands. S quite small. On E , a later clearly marked phase 13^m29^s, possibly S_eP_cS .
- No. 151. June 25. 10^h. Peru. No Z record. P small, not quite certain. PP 34^m.6. S_eP_cS not clearly marked, about 41^m.6. S 42^m7^s clearly marked on N .
- No. 156. June 25. 21^h. Peru. $\Delta = \text{c. } 90^\circ$. Additional readings: 36^m.0; PP 38^m.6; PS 47^m.1; SS 51^m.9; SSS 55^m.5. S_eP_cS 45^m32^s and S 45^m58^s clearly marked on N .



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. 6. July—Dec. 1930.

Instruments:

Galitzin pendulums with galvanometric registration.

Constants:

Component	l	T_1	A_1		μ^2	T	k
N	cm	sec	cm			sec	
	12.0	12.4	100	$1/7-10/9$	0.1	12.4	86
				$10/9-7/10$	0.0	12.5	87
E	12.0	11.9	100	$7/10-31/12$	0.0	12.6	47
				$1/7-3/9$	0.2	12.6	75
				$3/9-7/10$	0.0	13.2	84
Z	14.1	10.1	100	$7/10-31/12$	0.0	12.1	54

Z has not been very stable; the period has been about 8 sec.

Owing to some friction in the galvanometer, N has not been working satisfactorily.

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				
	1930 July		m s	m s	h m s	m s	h m	h m	°	
1	1	1	17 49	24 59	19.8	28.7	33		50	Pacific Ocean. Tibet.
2*	2*	21	15 13	24 39					73	
3	3	0		39.9						
4	4	1						.4		
5	5	7						.9		
6	5	18			16	26	.9			
7	5	23					.4			
8	7	13							23	
9	7	13			53.4		1.1			Some preceding movement.
10	7	21					.3			" " "
11	8	5			53					
12	8	10					.5			
13	8	17							33	
14	9	4							55	
15	10	3						22		
16	11	7			27 49					
17	13	1			15	18.6		22		
18	13	1					1.2			Preliminary phases not clearly marked; beginning in preceding shock. Faint preceding movement.
19	13	14					.0			
20	13	14			21.3		.7			
21	13	19	37 49	46 22	50.7	53.5	1.0		64	China.
22	14	21					.2			
23*	14*	22	51 46	60 56	61 49	65.2			70	Central America.
24	15	6					.3			
25	15	9					.6			
26	16	3					.6			
27	17	15			0	5	.4			
28	17	18			58.7		1.2			
29	19	23					.9			
30	20	11						.3		
31	20	13					.6			
32*	22*	19	i 36 20	44 55			.9		64	Kurile Islands.
33*	23*	0	15 36							Italy.
34	23	18					.4			Faint preceding movement.
35	23	19					.5			
36	23	21							43	
37	24	15					.1			
38	25	19			55		1.2			
39	25	22					.1			
40	25	22							57	
41	26	18					.1			
42	27	9					.1			
43	27	13					.1			
44	27	13					.5			
45	27	15			21		.6			
46	27	19			19 9		.6			Beginning disturbed. No records ²⁸ / ₇ — ¹ / ₈ .

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks
			P	S	h m s	m s				
	1930 Aug.		m s	m s	h m s	m s	h m	h m	°	
47	2	16			25 49		.3			Z record only.
48	4	5	16 11		18 25	25 53				" " " - Deep focus. No Z records 3d—21 d. No records Faint. [4d 17h—5d 12h.
49	5	23					.8			
50	8	0					.5			
51	8	6					.3			Small.
52	9	18						30		
53	9	20					.8			
54	10	0					.9			
55	13	21					.9			
56	17	9			49.6					Faint.
57	17	12		47.8	40		1.1			Persia.
58	18	7						30		Near shock.
59	18	10			14.8	24.4	.8			Strong microseisms.
60	19	6						.7		
61	20	9					.9			
62*	20*	21	7	16 45	12.5	18.3		34		Formosa.
63*	23*	11	3.3	i 11 40	13.2				62	
64	25	15						25		Iceland.
65	25	15						39		"
66	25	15						48		"
67	25	18						10		"
68	25	18						22		"
69	25	22						1		"
70	27	15					.9			
71	28	2						11		Small.
72	29	8			48.4		1.0			
73	29	20			21.4					
74	29	22						46		
	Sept.									
75	1	17								Disturbed. No time-marks on E.
76	2	16			12		.5			
77	2	19	8 36	16.5	11.9		.5		57	Persia.
78	5	16					.9			
79	9	11					.6			
80	11	12	44 40	51.5			1.0		47	Asia Minor.
81	12	8					.7			
82	12	9					.8			
83	14	0					.4			
84	14	4					.5			Preceding movement masked by Near shock. [microseisms.
85	18	18						45		
86	20	2						.5		
87	21	8					.2			
88*	21*	23	16 2	25 40	18 54	30.8			75	China.
89*	22*	1			50 50		1.8			
90	22	5						39		
91	22	13							.3	
92*	22*	14	30 50	40 25	45.6	48.7		54	75	Assam.
93	22	16			48.6		.9			Faint preceding movement.

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>	°	
94	23	3					.5			Faint.
95	23	6					.8			Faint.
96	23	10					.6			
97	30	21			.8	56.1	1.2			Time-service failing 24 d—26 d. New Guinea.
	Oct.									
98	1	14					.7			
99	2	1			6.2		.7			
100	2	15			49.6		1.0			
101	3	1						0		
102	3	19					.2			Faint.
103	3	23					.9			
104	8	10			.7		1.1			
105	8	20					.1			Faint.
106	9	22					.1			"
107	10	1					.3			
108*	11*	3	7 5							Greenland Sea. Near shock.
109	11	7						21		
110	11	10						4		" "
111	12	2						0		" "
112	12	15					.6			
113	19	11					.6			Faint preceding movement.
114	21	19						.3		Disturbed.
115	23	10					.0			Strong microseisms.
116*	24*	20		39 7	31.5	40 13	.9			Marianne Islands. 12 ^h —14 ^h no records.
117	28	0					.0			
118	28	21		34 17	33.9	41	.9			Marianne Islands.
119	30	7			26			30		Italy.
120	31	11			1 7		.5			
	Nov.									
121	2	17					.1			
122	3	19			5 55		.5			
123	4	15			59.5		1.3			Small preceding movement.
124*	9*	19			30					New Guinea.
125	12	19					.7			Strong microseisms.
126	17	12			32.8		1.0			
127	21	2		13 27				21		Faint preceding movement.
128	22	14					1.5			" " "
129	24	3						.5		
130	24	6			29.0			35		
131*	25*	19		24 0			.6			Japan.
132	28	7			53 24			66		
133	30	22					.1			
	Dec.									
134	2	7					.7			
135*	3*	19	4 14	14 22	7.4	19.3			81	Burma.

Scoresby-Sund.

No.	Date	Hour	Forerunners				L	Un- defined	△	Remarks
			P	S						
	1930 Dec.		<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>	°	
136	6	7			21.3		.5			Masked by microseisms.
137	8	8					.7			
138	8	16					.6			Small preceding movement.
139	9	19						50		Masked by microseisms.
140	10	10			46		.9			Armenia.
141	11	9					.5			
142	21	15			14.2					Armenia.
143	22	0					.9			Very strong microseisms.
144	23	22			.2					
145	24	6					.8			

Scoresby-Sund.

NOTES

- No. 2. July 2. 21^h. Pacific Ocean. The beginning of *P* small, strong increase about 10 sec. later. Between *P* and *S*, relatively strong movement with several sharp pulses; best defined phases: 18^m.0, 19^m56^s, 20^m50^s. The beginning of *S* small, not very clearly marked, about 24^m39^s; followed by a group of large oscillations; *i_N* 24^m54^s. *SS* 29^m.1; *SSS* 33^m.0.
- No. 23. July 14. 22^h. Central America. *P* and *S* well defined. *PR* not clearly marked. After *SS* continued movement; the beginning of *L* not certain. On *N*, a large *M* group in first part of *L*. *M* later and smaller on *E*.
- No. 32. July 22. 19^h. Kurile Islands. Deep focus. *i P_Z* condensation. *e_{N,Z}* 37^m.0; *e_E* 40^m.8; *e_N* 41^m.1. On *E*, *S* clearly marked and followed by distinct pulses: 45^m.8, 46^m16^s, 47^m.0. *e_N* 50^m33^s; *e_E* 53^m.2. *L* small.
- No. 33. July 23. 0^h. Italy. *P* small. *PP* large, the beginning not well defined, about 16^m.9. Increase of movement 18^m.6 and again 19^m.1. *S* not well defined, about 21^m.2, on *E* preceded by quite large movement beginning about 20^m.8; *SS* large, 23^m.3.
- No. 62. Aug. 20. 21^h. Formosa. No *Z* record. *P* quite small, uncertain, *S* clearly marked on *N*. *SS* 24^m.0. *L* earliest on *N*.
- No. 63. Aug. 23. 11^h. Persia. No *Z* record. *P* small, uncertain. On *N*, *S* clearly marked by a large oscillation. 17^m.5 a group of oscillations (*L*?), relatively large on *N*. Later *L* small, largest on *E*.
- No. 88. Sept. 21. 23^h. First forerunners small; *PPP* 20^m48^s. *S* large and well defined. *e_N* 27^m.4; *e_N* 28^m55^s. *L* not large, the beginning uncertain.
- No. 89. Sept. 22. 1^h. *P_Z* 50^m50^s; *e_Z* 51^m12^s. Later forerunners distinct, but phases not very clearly marked. *e_{N,Z}* 54^m0^s; *e_E* 54^m4; *e_N* 54^m42^s; *e_N* 57^m.1; *e_N* 58^m.6. *SS* 72^m.7. *L* regular, not large but of long duration.
- No. 92. Sept. 22. 14^h. Assam. *P* small, clearly marked on *Z* only. *e_E* 36^m.6. *S* small but clearly marked on *N*; on *E* hardly discernible. *PS* 40^m48^s, large on *N* and *E*. Some waves of long period in first part of *L*; later *L* small.
- No. 108. Oct. 11. 3^h. Greenland Sea. No *Z* record. *i_E* *e_N* 7^m5^s. *i_E* 7^m12^s; *i_N* 7^m31^s; subsequent movement very strong, traces hardly visible.
- No. 116. Oct. 24. 20^h. Marianne Islands. No *Z* record. *P* not very certain; a distinct pulse 28^m26^s, but possibly an earlier small beginning, masked by microseisms. *e_E* 36^m.2. *S_cP_cS* not clearly marked, 38^m.5. *SS* 45^m.
- No. 124. Nov. 9. 19^h. New Guinea. *E* record only. Phases not clearly marked; strong microseisms. Readings: 37^m.0; 38^m.0 38^m.5; 43^m.0; 46^m.9.
- No. 131. Nov. 25. 19^h. Japan. Masked by strong microseisms. *e_{N,Z}* 14^m41^s. *S* clearly marked on *E*; no corresponding pulse on *N*.
- No. 135. Dec. 3. 19^h. Burma. *P* small; *PP* not well defined. *S* large and clearly marked, followed by strong movement.