No. 19. 1939.

Geodætisk Institut
Proviantgaarden, Copenhagen, Denmark.

Bulletin
of the seismological station

SCORESBY-SUND

$\varphi = 70°29'$ N. $\lambda = 21°57'$ W. $h = 69$ m.

Lithologic foundation: Gneiss

No. 19. Jan.—Aug. 1939.

Instruments:

Galitzin-Wilip seismographs.

Constants:

Component	l	A_1	T_1		T	k
	cm	cm	sec		sec	
N	12.0	100	11.8	$^{1}/_{1}-^{8}/_{6}$	12	52
				$^{8}/_{6}-^{28}/_{8}$	11.8	103
E	12.0	100	11.9	$^{1}/_{1}-^{8}/_{6}$	11.6	50
				$^{8}/_{6}-^{28}/_{8}$	11.6	95
Z	14.9	100	10.0	$^{1}/_{1}-^{23}/_{3}$	8	59
				$^{23}/_{3}-^{8}/_{6}$	10	50
				$^{8}/_{6}-^{28}/_{8}$	10	98

Damping was approximately aperiodic.
Time corrections were determined daily by means of Nauen scientific time-signals.

Scoresby-Sund.

No.	Date	Hour	Forerunners P or P′	Forerunners S	Forerunners	Forerunners	L	△	Remarks
	1939 Jan.		*m* *s*	*m* *s*	*m* *s*	*m* *s*	*h* *m*	°	
1	25	3	47 18 +		51 35	52 4			*PPP* 54m8s. *SKS* 57m26s; *SKKS* 58m35s. *PS* 61m11s. e_N 61m46s. *SS* 67m11s. Destructive in Chile.
2	30	2	33 30		*i* 38 19	44 4			36m.9. 44m19s. 45m20s. 46m4s. 48m0s. 49m15s. 54m.9. $\overline{\triangle}$ = ca. 115°. Felt in New Guinea.
3	31	0			10 26	16 32			17m52s. 19m.3.
4	Febr. 3	5			46 33	52 17			53m36s. 54m22s. 56m.1. 61m.4. 62m.9.
5	March 21	1			29.0	35 42			37m.8. 38m.1. 43m.3. Indian Ocean.
6	April 5	17	1 49 +		3 51	5 11			8m.2. 13m.9. *SS* 22m.0. △ = ca. 130°.
7	18	6			41.2	47.1			50m.2. 54m.5. 55m.8. Masked by microseisms. Chile.
8	21	4	38 33 +	*i* 46 15	*i* 40 20	*i* 47 30			53m.1. 53m56s. Depth about 500 km. Sea of Okhotsk.
9	23	16		*i* 43 38	*i* 44 35		51		Atlantic Ocean.
10	30	3	11.2		14 21	15 55			*SKS* 21m37s. 22m.3. 23m.3. *PS* 25m11s. 25m34s. 26m26s. 27m.9. *SS* 32m.4. No time-marks on E. Solomon Islands region.
	May								
11	1	6	9 36	18 45				70	Japan.
12	1	6	*i* 11 21 +						»
13	1	6	14 0	23 3				69	»
14	1	16	17 0 —	26.2				70	»
15	2	13	25 26	33 54	37 4	37.8		63	40m.2. California.
16	6	6	12 0	21 38				75	
17	8	1	*i* 53 35	58 59	54 43				*P* possibly earlier than read; no *Z* record. Azores.
18	9	7		44 22	39.3	47 9	52		*SS* 48m.2. No *Z* record. South of Alaska.
19	10	7	*i* 54 6 —		57 32	62 38			South of Aleutian Islands.
20	14	18	31 50		*i* 31 52				
21	16	7	32 38						
22	17	18	*i* 43 16	*i* 53 50	46.6	53.6		86	Pacific Ocean.
23	19	18			49 49	50 39			
24	21	20			42 29				
25	26	18			19 17				
26	27	3		*i* 67 1	*i* 57 43	60 15			*i* 67m32s. 72m13s. Burma.
	June								
27	2	3			51 19	57 43	1.2		58m39s. No *Z* record.
28	5	23	10 29	16 10			19	36	

Scoresby-Sund.

No.	Date	Hour	Forerunners P or P′	Forerunners S	Forerunners	Forerunners	L	△	Remarks
	1939		*m* *s*	*m* *s*	*m* *s*	*m* *s*	*h* *m*	°	
	June								
29	8	21	5 42		6 12	*i* 7 17			*SKS* 12m37s. *SKKS* 13m28s. 15m8s. *SS* 23m.7. *SSS* 26m53s. △ = ca. 120°. Depth about 100 km. Pacific Ocean.
30	12	4	14 52 —	22 42	17 7	18 10	29	57	
31	18	17		6 35	7 16		16		No *Z* record.
32	22	19	30 19 +	39 16	32 42	43.5		68	Atlantic Ocean.
33	27	23	18 4		22 10	28 45			31.m3. 36m.4. No *Z* record. East of Mindanao.
	July								
	4								No records 13h to 20h.
34	5	23			*i* 1 27	*i* 2 34			6m9s. 7m22s. *SS* 18m2s. *sSS* 21m50s. △ = ca. 130°. Depth about 550 km. No *Z* record.
	Aug.								No records July 7. 16h to Aug. 10. 23h.
35	12	2	26 9		27 57	29 0			*SKS* 33m0s. 34m42s. 37m44s. 38m39s.
36	12	10	0 29	*i* 9 11	*i* 9 49		17	65	[Deeper than normal. New Hebrides [region.
37	16	17	18 22 —						
38	18	22			37 7	38 23			No *Z* record.
39	21	15	28 55	36 53	32 31			58	South of Aleutian Islands. No *Z* record.
40	22	0	17 45	26 57	20.3		.7	70	No Z record. Japan.

After April 9. 1940 station records could no longer be sent to Copenhagen. Those of Aug. 28. were the last ones received.

Seismometric readings: Notation

P — normal first preliminary tremors, longitudinal waves.
P+ — first wave condensational (away from the epicentre).
P— — first wave dilatational (towards the epicentre).
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.
i — sharply defined beginning of a phase.
e — gradual beginning of a phase.
△ — arcual distance from the station to the epicentre.
*) affixed to time of phase indicates that the beginning is in a time-mark.

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