

GEODÆTISK INSTITUT

Proviantgården · Copenhagen · Denmark

Bulletin of the seismological station

SCORESBYSUND

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

Lithologic foundation : gneiss



Instruments

Galitzin-Wilip. *N* and *E*. $T_p = T_g = 12 \text{ sec}$, $\mu^2 = 0$, $\frac{Ak}{\pi l} = 300$ or V_{\max} abt. 1000.Galitzin-Wilip. *Z*. $T_p = 9 \text{ sec}$, $T_g = 10 \text{ sec}$, $\mu^2 = 0$, $\frac{Ak}{\pi l} = 200$ or V_{\max} abt. 600.Grenet *Z'*. $T_p = 1 \text{ sec}$, $T_g = \frac{1}{4} \text{ sec}$, V_{\max} abt. 30000.

Seismological Readings

Phases are indicated by the symbols used in ISS. Times are given in GMT. Positions of epicenters are most often due to BCIS or USCGS. The periods given are periods of full oscillations. The amplitudes are single amplitudes of the ground in microns. + indicates ground motion towards the north, towards the east, or upwards. - indicates the opposite direction. Unless otherwise stated, the periods and amplitudes are due to readings on the Galitzin instruments.

Microseismic Readings

For every group of figures the first one indicates the character of the microseisms. 1 is group microseisms, 2 is continuous microseisms, 3 is irregular or mixed microseisms. Thereafter the single ground amplitude in microns is given, and at last the period of a full oscillation is stated. All readings are due to the Galitzin instruments.

Scoresbysund 1958

January

2	<i>iP·Z'</i>	2h16m04 ^s	
	$\Delta = 42^\circ$.	Greece.	
2	<i>iP·Z'</i>	21 22 42	-
	$\Delta = 64^\circ$.	Kuriles Islands.	
5	<i>iP·Z'</i>	11 39 45	-
	$\Delta = 50^\circ$.	Siberia.	
9	<i>iP·Z'</i>	17 48 52	-
	$\Delta = 54^\circ$.	Sinkiang Province, China.	
11	<i>ePP·Z'</i>	13 40 16	
	<i>ePKS·Z'</i>	41 13	
	$\Delta = 130^\circ$.	Tonga Islands.	
12	<i>eP·Z'</i>	15 02 56	
	$\Delta = 41^\circ$.	North Atlantic Ocean.	
13	<i>iP·Z'</i>	0 11 58	+
	<i>epP·Z'</i>	12 31	
	$\Delta = 56^\circ$.	$h = 100$ km. Aleutian Islands.	
15	<i>iP·Z'Z</i>	19 27 39	Z': -
	<i>epP·Z'Z</i>	27 59	
	<i>ePP·Z'ZNE</i>	31 27	
	<i>iSKS·NE</i>	38 07	
	<i>iS·E</i>	38 17	
	<i>isSKS·N</i>	38 49	
	<i>ePS·E</i>	39 55	
	$\Delta = 93^\circ$.	$h = 100$ km. Peru.	
17	<i>eP·Z'</i>	14 19 24	
	<i>i·Z'ZNE</i>	19 27	Z: -
	<i>ePP·Z'Z</i>	22 39	
	<i>iS·NE</i>	29 27	
	<i>M·NE</i>	52	20 ^s . N: 110 μ , E: 125 μ .
	$\Delta = 78^\circ$.	$M = 7\frac{1}{2}$. Equador.	
19	<i>iP·Z'</i>	14 55 26	
	Aftershock.		
20	<i>L·NE</i>	3 19.5	
	Near?		
23	<i>eP·Z'</i>	13 38 00	-
	<i>i·Z</i>	38 01	+
	<i>eL·E</i>	41 06	
	$\Delta = 12^\circ$.	West of Norway.	
24	<i>eP·Z'</i>	4 44 53	
	$\Delta = 49^\circ$.	Lake Baikal.	

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January

24	<i>eP·Z'Z</i>	6h03m21 ^s	
	<i>eS·N</i>	11 03	
	<i>e·NE</i>	11 38	
	<i>L·E</i>	22	
	$\Delta = 53^\circ$.	Kamchatka.	
24	<i>(i)P·Z'</i>	18 14 12	in the time break.
	$\Delta = 55^\circ$.	Komandorskie Islands.	
24	<i>iP·Z'</i>	23 25 42	
	<i>ipP·Z'Z</i>	26 02	
	<i>ePP·Z'Z</i>	27 37	
	<i>eS·N</i>	32 22	
	<i>esS·N</i>	32 51	
	$\Delta = 45^\circ$.	$h = 100$ km. Alaska.	
26	<i>ePKP·Z'</i>	3 55 01	
	$\Delta = 146^\circ$.	South Pacific.	
26	<i>iP·Z'</i>	6 52 40	
	$\Delta = 62^\circ$.	Kuriles Islands.	
26	<i>L·NE</i>	8 46	
27	<i>eP·Z'</i>	15 08 40	
	<i>eS·Z'</i>	09 58	
	$\Delta = 7^\circ$.	Iceland.	
30	<i>ePS·N</i>	6 43 02	
	<i>e·N</i>	44 52	
	<i>L·NE</i>	7 08	
	$\Delta = 117^\circ$.	Solomon Islands.	
February			
1	<i>iP·Z'</i>	16 22 17	Strong microseisms.
	<i>i·Z'</i>	22 38	
	$\Delta = 78^\circ$.	Equador.	
1	<i>iP·Z'</i>	18 14 40	Strong microseisms.
	Aftershock.		
6	<i>e·Z'</i>	15 53 43	
	<i>e·Z'</i>	55 26	
	<i>i·Z'</i>	56 31	
	Possibly three shocks about 250 km east of the station.		
7	<i>eP·Z'</i>	23 34 53	
	<i>L·NE</i>	24 02	
	$\Delta = 71^\circ$.	Szechwan province, China.	
13	<i>L·N</i>	0 06	

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February

16	<i>L·NE</i>	6h40 ^m	
16	<i>e·Z'</i>	23 00 06	
	<i>e·Z'</i>	00 42	
	Two foreshocks?		
16	<i>iP·Z'</i>	23 02 43	
	<i>iS·N</i>	03 10	
	<i>M·E</i>	04.0	10 ^s , 15 μ .
	<i>M·ZN</i>	05.5	7 ^s , 10 μ .
	$\Delta = 3^\circ$.	South of the station.	
17	<i>iP·Z'Z</i>	5 28 08	+
	<i>epP·Z</i>	29 15	
	<i>iS·NE</i>	35 54	
	<i>isS·NE</i>	37 11	
	<i>eSS·N</i>	39 18	
	<i>e·NE</i>	41 16	
	$\Delta = 58^\circ$.	$h = 200$ km. Hindu Kush.	
22	<i>iP·Z'</i>	11 00 20	-
	$\Delta = 57^\circ$.	Aleutian Islands.	
23	<i>eP·Z'</i>	8 27 42	
	$\Delta = 102^\circ$.	$h = 600$ km. Argentina.	
23	<i>iP·Z'</i>	9 23 51	-
	$\Delta = 80$.	$h = 400$ km. Bonin Islands.	
23	<i>eP·Z'</i>	10 19 04	
	$\Delta = 85^\circ$.	Batan Islands.	
23	<i>iP·Z'</i>	11 00 18	-
	$\Delta = 85^\circ$.	Volcano Islands.	
24	<i>eP·Z'</i>	12 36 57	
	<i>eS·NE</i>	45 01	
	<i>eSS·NE</i>	50.8	
	$\Delta = 58^\circ$.	Outer Mongolia.	
25	<i>eP·Z'</i>	2 06 31	
	<i>L·NE</i>	27	
	$\Delta = 57^\circ$.	Aleutian Islands.	
25	<i>e·Z'</i>	20 44 40	
26	<i>iP·Z'</i>	11 47 30	+
	$\Delta = 78^\circ$.	Japan.	
26	<i>eP·Z'</i>	17 29 55	
	$\Delta = 68^\circ$.	Japan.	
27	<i>eP·Z'</i>	23 40 33	
	<i>eSKS·NE</i>	51 01	
	<i>eSS·E</i>	56 28	
	<i>L·NE</i>	24 12	
	$\Delta = 85^\circ$.	Batan Islands.	

February

28	<i>(e)P·Z'</i>	10h03m13 ^s	in the time break.
	$\Delta = 46^\circ$.	Mid Atlantic Ocean.	
March			
11	<i>iP·Z'</i>	00 38 12	
	<i>ipP·Z'NE</i>	38 31	
	<i>iPP·Z'</i>	41 36	
	<i>eS·NE</i>	48 10	
	<i>isS·NE</i>	48 26	10 ^s . N: 60 μ , E: 45 μ .
	<i>eSS·NE</i>	53 46	
	<i>L·NE</i>	01 08	
	$\Delta = 80^\circ$.	$h = 75$ km. Ryukyu Islands.	
18	<i>iP·Z'</i>	22 29 55	
	<i>eS·E</i>	37 58	
	<i>L·NE</i>	51	
	$\Delta = 58^\circ$.	Aleutian Islands.	
20	<i>iP·Z'Z</i>	1 47 56	
	<i>ePPP·ZNE</i>	51 24	
	<i>iS·NE</i>	55 58	
	<i>L·NE</i>	2 07	
	<i>iPKPPKP·Z'</i>	2 17 50	
	$\Delta = 58^\circ$.	Aleutian Islands.	
22	<i>iP·Z'</i>	10 23 17	
	<i>i·Z'</i>	23 44	
	<i>eS·E</i>	32 57	
	<i>eSS·E</i>	37 51	
	<i>L·E</i>	49	
	$\Delta = 76^\circ$.	Burma.	
22	<i>iP·Z'</i>	11 17 38	
	<i>eS·E</i>	25 34	
	<i>L·E</i>	36	
	$\Delta = 57^\circ$.	Afghanistan.	
23	<i>L·E</i>	11 03	
27	<i>L·NE</i>	6 44	
27	<i>L·NE</i>	20 03	
	<i>F</i>	20 05	
	Near?		
28	<i>iP·Z'ZE</i>	12 15 53	Z'Z: +
	<i>i·Z'</i>	15 57	
	<i>i·Z'</i>	16 03	
	<i>i·Z'</i>	16 11	
	<i>ipP·ZE</i>	16 58	
	<i>iS·NE</i>	23 38	
	<i>esS·E</i>	24 53	
	<i>e·NE</i>	29 08	
	$\Delta = 57^\circ$.	$h = 200$ km. Hindu Kush.	

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March

30 *iP·Z'* 17^h56^m01^s
iS·Z' 56 36
L·ZNE 56.8-58.0 from East.
 $\Delta = 3^\circ$. About 71° N 15° W.

30 *e·Z'* 22 08 55

April

3 *iP·Z'* 2 30 48 -
eS·E 36 28
L·NE 43
 $\Delta = 36^\circ$. Albania.

3 *iP·Z'* 7 26 45
e·Z' 27 48
L·NE 44
 $\Delta = 43^\circ$. Crete.

3 *eP·Z'* 8 37 45
L·NE 9 07
 $\Delta = 78^\circ$. Equador.

4 *ePS·N* 7 59 29
eSS·N 8 06.4
L·NE 31
 $\Delta = 115^\circ$. New Britain.

4 *L·NE* 13 56

4 *eSKKS·N* 16 04 54
ePS·N 07 29
eSS·NE 13.7
L·NE 35
 $\Delta = 115^\circ$. New Britain.

7 *e(S)·NE* 4 56 53
 East of Jan Mayen.

√7 *eP·Z'NE* 15 38 18
i·Z'Z 38 23
iS·E 44 29
M·NE 55 20^s. N:190 μ , E: 330 μ .
 $\Delta = 41^\circ$. $M = 7\frac{1}{2}$. Alaska.

7 *iP·Z'* 18 16 21
i(PcP)·Z' 16 33
 $\Delta = 71^\circ$. Japan.

7 *eP·Z'* 18 41 32
 $\Delta = 71^\circ$. Japan.

7 *eP·Z'* 19 23 10
i·Z' 23 13
 $\Delta = 57^\circ$. Outer Mongolia.

April

8 *iP·Z'* 0^h21^m59^s
ePP·Z' 23 24
eS·NE 27 59
L·NE 34
 $\Delta = 41^\circ$. Alaska.

8 (L)·E 11 34

9 *iP·Z'* 6 23 37
i·Z' 23 57
iPP·Z' 25 39
eS·E 30.4
eSS·N 33 44
L·NE 38.4
 $\Delta = 46^\circ$. Gulf of Alaska.

10 *eP·Z'* 12 01 26
eS·E 10.5
 $\Delta = 71^\circ$. Japan.

10 *eSS·NE* 23 43 15
eSSS·N 47.0
e(SSSS)·N 50.1
L·NE 57
 $\Delta = 92^\circ$. Eastern Pacific Ocean.

11 *iP·Z'* 1 09 29
iS·E 18 46
L·NE 32
 $\Delta = 71^\circ$. Japan.

11 *iP·Z'N* 23 21 40 *Z': +, N: -*
iS·E 29 58
i·E 30 52
i·E 32 17
eSSS·E 37.0
L·E 42
 $\Delta = 62^\circ$. $h = 100$ km. Kurile Islands

12 *L·NE* 10 57

√12 *eP·Z'* 11 57 46
iS·N 12 06 26 -
L·NE 16
M·NE 25 15^s. N: 30 μ , E: 30 μ .
 $\Delta = 65^\circ$. California.

12 *iP·Z'* 13 37 46
 $\Delta = 82^\circ$. Ryukyu Islands.

No time-service 12^d20^h - 16^d20^h.

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April

17 *ePS·N* 10^h34^m13^s
eSS·N 40 15
L·NE 11 00
 $\Delta = 115^\circ$. New Britain.

21 *L·NE* 21 07

21 *e·E* 23 07 18
e·E 12 16
e·NE 16
 $\Delta = 106^\circ$. $h = 200$ km. Sumatra?

23 *eP·Z'* 3 08 22
eS·NE 17 11
eScS·E 18 12
L·E 28
 $\Delta = 65^\circ$. Kurile Islands.

27 *eS·NE* 19 21 14
L·NE 30
 $\Delta = 55^\circ$. Aleutian Islands.

28 *iP·Z'* 12 00 42 -
eSKS·E 11 08
ePS·E 12 20
L·E 31
 $\Delta = 89^\circ$. Peru.

30 *e(S)·E* 14 20.2
e·E 22.1
L·E 23.2
 $\Delta = 33^\circ$. Portugal.

May

1 *iPKP·Z'* 0 47 51 +
ePP·Z' 49 30
iPKKP·Z' 57 45 +
e(SKKP)·Z' 1 01 31
 $\Delta = 122^\circ$. $h = 200$ km. New Hebrides Islands.

2 *L·E* 21 08

3 *iP·Z'* 20 26 04 +
 $\Delta = 42^\circ$. Greece.

5 *eP·Z'* 5 30 20
ePP·Z' 32 15
 $\Delta = 49^\circ$. Iran-Irak border.

5 *eP·Z'* 6 44 27
 $\Delta = 87^\circ$. Belgian Congo.

6 *eS·E* 0 08.4
L·E 13
 $\Delta = 45^\circ$. Alaska.

May

6 *eSS·E* 4^h33.8
L·E 41
 $\Delta = 43^\circ$. Caucasia.

6 *iP·Z'* 14 29 21
eS·E 33.0
 $\Delta = 20^\circ$. North Atlantic Ocean.

7 *eP·Z'Z* 7 34 57
eS·E 38 30
 $\Delta = 14^\circ$. North Atlantic Ocean.

8 *iP·Z'* 2 52 40
eS·E 57 19
L·ZN 59.4
 $\Delta = 25^\circ$. North Atlantic Ocean.

8 *ipP·Z'* 12 54 59 - *P* possibly in the time break.
iSKS·NE 13 04 38
iS·NE 05 58
 $\Delta = 99^\circ$. $h = 200$ km. Argentina.

9 *iP·Z'* 2 48 45 +
eS·E 55 08
L·N 3 02
 $\Delta = 43^\circ$. Greece.

9 *eSKS·NE* 5 04 48
eSKKS·NE 06 01
i·ZNE 07 41 *Z: +*
eSS·N 14.3
 $\Delta = 107^\circ$. $h = 100$ km. Argentina.

10 *eP·Z'* 23 02 21
eS·NE 08 33
L·NE 14
 $\Delta = 41^\circ$. Alaska.

11 *iP·Z'* 5 31 41 -
iPP·Z' 33 03
iS·NE 37 50
L·NE 43
 Repetition.

12 *iP·Z'* 5 47 51
i·Z' 48 04
L·E 6 05.5
 $\Delta = 55^\circ$. Aleutian Islands.

12 *iP·Z'* 17 01 51 -
iS·E 11 40
esS·E 12 14
 $\Delta = 78^\circ$. Japan.

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May	
14 <i>eL·N</i>	2 ^h 50.6 $\Delta = 33^\circ$. Volcanic quake, Azores.
14 <i>L·NE</i>	4 53
17 <i>L·NE</i>	7 53
18 <i>ePP·N</i>	2 53 30
<i>ePS·N</i>	3 03.3
<i>e·N</i>	05.8
<i>eSS·NE</i>	10.5
<i>L·E</i>	27
$\Delta = 123^\circ$. New Hebrides Islands.	
18 <i>L·NE</i>	13.3
Repetition.	
22 <i>e(P)·Z'</i>	14 39 56
22 <i>eSS·E</i>	15 43.2
<i>L·NE</i>	16 04
$\Delta = 113^\circ$. New Britain.	
24 <i>L·NE</i>	23 32
25 <i>L·E</i>	0 31
25 <i>L·NE</i>	0 53
25 <i>L·NE</i>	15 24
25 <i>iP·Z'Z</i>	21 24 00
<i>iS·N</i>	34 12
<i>iSKS·NE</i>	34 18
<i>L·NE</i>	48
$\Delta = 82^\circ$. $h = 100$ km. Peru-Ecuador border.	
26 <i>iP·Z'</i>	9 02 02
<i>i·Z'</i>	02 09
<i>eS·NE</i>	12.2
<i>L·NE</i>	37
Repetition.	
26 <i>iP·Z'</i>	11 06 00
<i>ipP·Z'</i>	06 33
<i>i(ScP)·Z'</i>	10 49
<i>eS·NE</i>	13.4
<i>es·E</i>	14 23
<i>eScS·E</i>	15 33
$\Delta = 54^\circ$. $h = 150$ km. Aleutian Islands.	

May	
27 <i>e(L)·NE</i>	16 ^h 03.1
27 <i>iP·Z'</i>	18 35 22
<i>i(PcP)·Z'</i>	37 04
$\Delta = 42^\circ$. $h = 150$ km. Greece.	
29 <i>iP·Z'</i>	5 33 02
$\Delta = 82^\circ$. $h = 450$ km. Bonin Islands.	
30 <i>iP·Z'</i>	18 14 20
<i>i·Z'</i>	14 25 -
<i>i·Z'</i>	15 50
<i>eS·E</i>	21 51
<i>(i)·E</i>	22 11 in the time break.
<i>eScS·E</i>	24 17
<i>L·E</i>	32
$\Delta = 55^\circ$. Aleutian Islands.	
31 <i>L·E</i>	4 13
31 <i>eL·Z'</i>	6 07 40 per. 3 sec.
<i>F·Z'</i>	08 05 per. 1.5 sec.
Near shock?	
June	
1 <i>iP·Z'</i>	18 29 21
<i>L·NE</i>	42
$\Delta = 43^\circ$. Alaska.	
2-10 no recording.	
11 <i>e·Z'</i>	14 35 24
12 <i>L·NE</i>	12 26
12 <i>M·NE</i>	21 32
Forerunners and <i>L</i> in the paper-shift.	
15 <i>ePP·Z'ZN</i>	15 14 36
<i>e·Z'</i>	15 44
<i>eSKP·Z</i>	15 04
<i>eSKS·NE</i>	18 57
<i>eSKKS·NE</i>	20 41
<i>eSS·NE</i>	30 54
$\Delta = 127^\circ$. $h = 600$ km. Fiji Islands.	
16 <i>L·NE</i>	9 08
17 <i>iP·Z'</i>	19 19 23 +
$\Delta = 84^\circ$. Volcano Islands.	
18 <i>iP·Z'NE</i>	1 15 38 9 μ . $N: + 10\mu$, $E: - 19\mu$. $Z': +$
$\Delta = 2\frac{1}{2}^\circ$. Southeast of the station.	
18 <i>e·Z'</i>	1 30 49
<i>e·Z'</i>	1 36.9
Two aftershocks?	

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June	
18 <i>e(P)·Z'NE</i>	2 ^h 19 ^m 24 ^s
<i>e(L)·Z'NE</i>	20 11
Aftershock?	
18 <i>iP·Z'NE</i>	2 24 03 $Z': +$, $N: +$, $E: -$.
<i>iS·E</i>	24 28
Aftershock.	
18 <i>e(P)·Z'</i>	2 44 01
Aftershock?	
18 <i>eP·Z'NE</i>	2 55 14
<i>eS·Z'NE</i>	55 46
Aftershock.	
18 <i>e·Z'NE</i>	4 27.1
Aftershock?	
18 <i>iP·Z'NE</i>	4 34 36 9 μ , $N: + 5\mu$, $E: - 9\mu$, $Z': +$.
<i>i(S)·N</i>	35 02
Aftershock.	
18 <i>e(P)·Z'</i>	5 10 24
Aftershock?	
18 <i>e·Z'NE</i>	12 51.1
Aftershock?	
18 <i>e(P)·Z'</i>	16 34 18
Aftershock?	
19 <i>iP·Z'NE</i>	5 28 09 $Z': +$
<i>eS·NE</i>	36 17
<i>L·NE</i>	47
<i>ePKPPKP·Z'</i>	57 39
$\Delta = 60^\circ$. Kurile Islands.	
23 <i>iP·Z'</i>	5 19 33 +
<i>eS·NE</i>	27.2
<i>eSS·N</i>	31 13
<i>L·NE</i>	39
$\Delta = 55^\circ$. Outer Mongolia.	
23 <i>L·NE</i>	7 28
24 <i>e(S)·NE</i>	5 05 24
<i>L·NE</i>	18
$\Delta = 55^\circ$. Sinkiang province, China.	
24 <i>L·NE</i>	7 35
June	
25 <i>ePP·Z'NE</i>	9 ^h 55 ^m 57 ^s ✓
<i>eSS·NE</i>	10 11 35
<i>eSSS·E</i>	15 33
<i>e·E</i>	22.5 30 μ , 30 μ .
<i>L·NE</i>	31
$\Delta = 112^\circ$. New Guinea.	
26 <i>iP·Z'</i>	4 47 48 -
<i>iPcP·Z'</i>	48 47
<i>iS·E</i>	55 26 -
<i>es·E</i>	56 17
<i>iScS·E</i>	57 28 -
<i>isScS·E</i>	58 26 -
<i>L·N</i>	5 06
$\Delta = 56^\circ$. $h = 100$ km. Kamchatka.	
26 <i>eP·Z'</i>	23 41 35
<i>iS·E</i>	51 29
<i>eSS·NE</i>	56 29
<i>L·E</i>	24 11
$\Delta = 78^\circ$. Japan.	
27 <i>eP·Z'</i>	5 55 37
<i>epP·Z'</i>	55 54
<i>ePP·Z'</i>	58 29
<i>eS·NE</i>	6 04 39
<i>es·N</i>	05 15
<i>L·NE</i>	17
$\Delta = 70^\circ$. $h = 100$ km. San Salvador.	
29 <i>eSKS·NE</i>	3 49 00
<i>eS·N</i>	49 34
<i>ePS·N</i>	50 46
<i>L·NE</i>	4 12
$\Delta = 93^\circ$. $h = 150$ km. Peru.	
29 <i>L·NE</i>	10 20
30 <i>iP·Z'</i>	8 50 33 +
<i>iPP·Z'NE</i>	52 15
<i>eS·E</i>	56 53
<i>L·NE</i>	9 03
$\Delta = 43^\circ$. Greece.	
30 <i>i(P)·Z'</i>	8 56 03 -
30 <i>iP·Z'</i>	14 05 30 +
<i>L·NE</i>	10.5
$\Delta = 15^\circ$. Baffin Bay.	
30 <i>iP·Z'N</i>	18 38 20 $Z': -$
<i>iS·NE</i>	48 15 $N: -, E: +$.
<i>iSS·E</i>	53 18
<i>L·NE</i>	19 08
$\Delta = 78^\circ$. Japan.	
October 1959.	

Microseisms. Scoresbysund

1958 January				1958 February			
Z	N	E		Z	N	E	
	0h	6h	12h	18h	0h	6h	12h
1	1 1.3 5.6	1 1.3 5.4	1 1.3 5.4	1 1.2 5.6	1 1.3 5.8	1 1.3 5.7	1 1.2 5.7
2	1 1.2 5.5	1 1.1 5.5	3 1.1 5.7	3 1.0 5.2	1 1.5 5.8	1 1.5 5.7	3 1.5 5.7
3	1 2.3 4.0	1 2.3 4.3	1 2.1 4.7	3 1.6 4.0	1 1.4 4.6	1 1.5 4.6	1 1.2 4.8
4	3 2.3 4.4	3 4.1 6.5	1 4.8 6.5	1 3.3 5.5	3 1.6 5.0	3 2.5 6.5	1 3.5 6.0
5	...	...	...	...	1 2.2 5.6	1 2.5 5.5	1 2.5 6.0
6	3 5.4 5.0	3 4.1 5.0	1 3.8 5.0	1 4.5 4.5	1 4.4 6.4	1 3.0 6.2	1 3.0 6.8
7	1 4.1 5.0	3 3.4 5.0	3 2.7 5.5	3 2.7 5.0	1 2.7 6.4	1 2.5 5.8	1 2.3 6.0
8	3 2.5 5.5	3 2.2 5.2	1 2.3 5.5	1 2.2 5.6	1 1.8 6.0	1 1.7 5.8	1 1.5 6.2
9	3 2.0 5.3	3 2.3 4.3	1 3.1 4.0	1 2.3 4.4	1 1.3 6.0	3 1.2 5.0	1 1.7 4.3
10	2 1.6 4.1	2 1.7 4.1	1 4.0 5.2	1 3.2 4.8	...	2 1.3 4.8	1 1.7 5.0
11	1 2.7 4.7	1 2.5 5.0	1 3.1 5.8	1 3.4 6.0	3 1.5 5.0	3 1.6 5.0	1 2.0 6.2
12	1 3.6 6.0	1 3.2 5.9	1 3.2 5.5	1 3.2 4.4	1 2.5 6.0	1 2.0 6.3	1 2.0 6.0
13	1 3.4 4.6	1 3.1 5.0	1 3.2 4.5	1 5.4 4.3	3 1.8 4.7	1 1.9 5.5	1 2.0 5.3
14	1 8.49	1 7.51	1 6.53	1 5.5 4.7	1 4.5 2	1 4.5 5	1 3.5 4
15	1 3.6 5.0	1 2.9 4.5	3 2.3 5.0	1 2.2 5.2	1 2.0 5.2	1 1.7 5.0	3 1.4 5.0
16	1 3.2 5.2	1 3.6 5.0	1 4.0 5.0	1 4.7 5.0	1 2.2 5.3	1 2.2 5.5	1 2.9 5.2
17	1 5.4 5.5	1 5.4 6.0	1 5.8 6.5	1 5.9 6.8	1 3.6 6.4	1 3.5 6.5	1 3.6 6.5
18	1 5.5 6.8	1 4.5 6.6	1 3.6 6.5	1 3.6 6.2	1 4.6 7	1 3.6 6.7	1 3.5 6.5
19	1 3.6 6.3	1 3.2 6.5	1 3.2 6.6	1 3.0 6.7	1 2.5 6.4	1 2.3 6.3	1 2.3 6.3
20	1 2.4 6.7	1 2.2 6.6	1 2.2 6.5	1 2.2 6.6	1 1.8 7.0	1 1.8 6.8	1 1.6 6.7
21	1 2.2 6.8	1 2.0 6.7	1 2.0 6.5	1 1.8 6.3	1 1.7 7.2	1 1.5 6.7	1 1.4 7.0
22	2 1.4 6.0	2 1.4 5.7	2 1.5 6.0	2 1.6 6.0	2 1.2 6.4	2 1.2 6.5	2 1.1 6.2
23	2 1.5 6.0	2 1.4 5.8	2 1.5 6.0	2 1.4 6.0	2 1.2 6.2	2 1.2 6.6	2 1.2 6.3
24	2 1.8 5.8	2 1.6 6.0	2 1.6 6.0	2 1.3 5.4	2 1.5 6.0	2 1.4 6.0	2 1.4 6.0
25	2 1.4 5.7	2 1.8 5.8	1 2.2 5.8	1 2.1 5.5	2 1.0 6.0	2 1.2 5.8	1 1.7 6.2
26	1 2.5 5.7	1 2.5 5.7	1 2.9 5.8	...	1 2.0 5.8	1 2.1 5.8	1 2.2 5.6
27	...	...	...	...	1 2.5 5.7	1 2.0 6.5	1 2.0 6.5
28	...	...	...	...	1 2.2 6.2	1 2.5 6.2	1 2.3 6.5
29	...	...	...	...	1 2.5 6.0	1 2.3 6.4	1 2.3 5.6
30	1 2.1 5.6	3 2.2 5.2	3 2.1 5.0	3 1.8 5.0	1 1.6 5.8	3 1.6 5.5	3 1.5 5.3
31	3 2.1 5.6	3 2.0 5.0	3 2.3 4.0	1 3.6 4.5	3 1.5 6.0	3 1.4 6.0	3 1.5 4.5

Microseisms. Scoresbysund

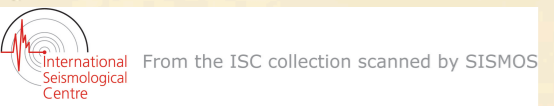
1958 February				1958 February			
Z	N	E		Z	N	E	
	0h	6h	12h	18h	0h	6h	12h
1	1 3.6 5.4	1 6.60	1 6.60	1 5.5 6.0	1 1.6 5.2	1 1.3 5.4	1 3.0 6.0
2	1 9.62	1 7.65	1 7.65	1 6.3 6.3	1 4.64	1 5.65	1 4.70
3	1 4.5 6.2	1 4.5 5.5	1 3.6 5.0	1 3.6 4.5	1 2.6 6.3	1 2.5 6.2	3 2.4 4.6
4	3 3.6 4.3	3 3.2 4.5	3 2.3 5.0	...	3 2.0 5.0	3 2.0 6.0	...
5	3 1.6 5.6	...	2 1.6 5.5	2 1.5 5.5	1 1.5 6.5	...	2 1.3 6.5
6	2 1.8 5.7	2 1.5 5.5	2 1.4 6.0	...	1 1.3 6.3	1 1.2 6.2	1 1.1 6.3
7	...	...	...	...	1 1.2 6.3	1 1.2 6.2	3 1.0 5.2
8	...	...	...	...	1 1.1 6.3	1 1.1 6.2	1 1.2 6.2
9	2 1.4 5.5	2 1.5 5.7	2 1.4 5.3	3 1.8 5.5	1 0.8 6.0	2 0.7 5.5	2 1.0 5.5
10	3 2.5 6.0	1 2.7 5.7	1 2.7 5.8	1 2.1 5.8	1 1.3 5.5	1 1.4 5.6	1 1.4 5.7
11	2 1.2 5.2	...	...	...	2 0.8 5.0	2 0.7 5.3	2 0.7 5.6
12	...	...	...	...	1 2.0 5.0	1 2.6 5.7	1 2.3 5.5
13	1 3.2 5.3	1 3.1 5.5	1 2.9 5.5	1 2.3 5.4	1 2.0 5.4	1 1.7 5.5	1 1.8 5.2
14	1 2.1 5.5	1 1.4 5.7	2 1.4 4.0	1 2.0 4.5	1 1.2 5.2	1 1.0 5.3	1 1.0 4.8
15	...	...	...	...	1 1.1 5.4	1 1.5 5.7	1 1.3 5.8
16	1 1.4 5.3	3 1.6 5.3	3 2.1 5.5	1 2.4 6.0	1 1.1 5.5	1 1.0 5.5	1 1.2 5.5
17	3 2.2 5.7	3 2.0 6.0	3 2.1 6.0	3 2.1 6.0	3 1.2 5.2	3 1.2 6.0	3 1.2 5.5
18	3 2.0 4.2	3 2.0 4.0	3 2.1 4.0	3 2.1 4.3	3 1.1 4.5	3 1.4 4.3	3 1.4 4.6
19	3 2.1 4.3	2 1.5 4.8	2 1.4 6.0	2 1.2 5.6	3 1.3 4.8	3 1.2 6.0	1 1.0 6.5
20	2 1.2 5.8	2 1.1 5.6	2 1.1 6.0	1 1.3 5.8	2 0.8 5.7	2 0.7 5.5	1 0.8 5.5
21	...	...	...	...	1 2.3 6.0	1 1.1 6.0	1 1.1 5.7
22	1 2.7 5.8	1 3.0 6.0	1 3.1 6.1	1 2.9 6.2	1 2.3 6.0	1 2.3 6.2	1 2.2 6.3
23	1 2.7 6.0	1 2.4 6.0	1 2.2 6.0	1 2.0 5.6	1 1.9 6.0	1 1.8 5.8	1 1.6 5.9
24	1 1.8 5.5	1 1.6 5.5	1 1.4 5.6	2 1.2 5.4	1 1.5 5.8	1 1.1 5.5	1 1.0 5.5
25	2 1.2 5.3	2 1.2 5.2	2 1.2 5.5	2 1.1 5.4	2 0.7 5.4	2 0.7 5.3	2 0.7 5.7
26	2 1.0 5.2	2 1.0 5.3	2 1.0 5.0	2 1.0 5.0	2 0.7 5.6	2 0.6 5.5	2 0.6 5.6
27	2 1.0 4.0	3 1.0 4.3	3 1.0 4.3	3 1.0 5.0	2 0.7 4.3	3 0.7 4.5	3 0.8 4.4
28	...	...	...	...	3 0.7 5.0	3 0.6 5.3	3 0.7 5.5

Microseisms. Scoresbysund

Table with columns for months (March, April), times of day (0h, 6h, 12h, 18h), and seismicity (Z, N, E). Rows represent individual days from March 1 to April 30, 1958.

Microseisms. Scoresbysund

Table with columns for months (April, March), times of day (0h, 6h, 12h, 18h), and seismicity (Z, N, E). Rows represent individual days from April 1 to March 31, 1958.



GEODÆTISK INSTITUT

Proviantgården · Copenhagen · Denmark

Bulletin of the seismological station

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

Lithologic foundation: gneiss

InstrumentsGalitzin-Wilip. *N* and *E*. $T_p = T_g = 12 \text{ sec.}$ $\mu^2 = 0,$ $\frac{Ak}{\pi l} = 300$ or V_{\max} abt. 1000.Galitzin-Wilip. *Z*. $T_p = 9 \text{ sec.}$ $T_g = 10 \text{ sec.}$ $\mu^2 = 0,$ $\frac{Ak}{\pi l} = 200$ or V_{\max} abt. 600.Grenet *Z'*. $T_p = 1 \text{ sec.}$ $T_g = \frac{1}{4} \text{ sec.}$ V_{\max} abt. 30 000.

During most of the period the instruments did not work satisfactorily.

Seismological Readings

Phases are indicated by the symbols used in ISS. Times are given in GMT. Positions of epicenters are most often due to BCIS or USCGS. The periods given are periods of full oscillations. The amplitudes are single amplitudes of the ground in microns. + indicates ground motion towards the north, towards the east, or upwards. - indicates the opposite direction. Unless otherwise stated, the periods and amplitudes are due to readings on the Galitzin instruments.

Microseismic Readings

For every group of figures the first one indicates the character of the microseisms. 1 is group microseisms, 2 is continuous microseisms, 3 is irregular or mixed microseisms. Thereafter the single ground amplitude in microns is given, and at last the period of a full oscillation is stated. All readings are due to the Galitzin instruments.

Scoresbysund 1958

July		July	
1 <i>eP·Z'</i>	6 ^h 02 ^m 47 ^s	8 <i>L·NE</i>	7 ^h .2
<i>ePPP·NE</i>	06 26	8 <i>L·NE</i>	23 54
<i>eS·NE</i>	10 39	9 <i>L·NE</i>	2 22
<i>eSS·N</i>	14 53	9 <i>L·N</i>	15 55
<i>L·N</i>	21	10 <i>eP·Z'</i>	6 23 57
$\Delta = 57^\circ$. Aleutian Islands.		<i>i·ZNE</i>	24 03
3 <i>ePP·E</i>	6 04 12	<i>i·Z'</i>	24 39
<i>ePS·E</i>	13 03	<i>i(PeP)·Z'Z</i>	25 56
$\Delta = 106^\circ$. Indian Ocean.		<i>eS·E</i>	30 47
3 <i>ePKP·Z'</i>	6 46 24	<i>i·ZE</i>	34 25
<i>i·Z'</i>	46 27	<i>L·NE</i>	39.0
<i>ePP·Z'</i>	49 13	<i>M·NE</i>	43
<i>ePKS·N</i>	50 04	$\Delta = 45^\circ$. Alaska.	
$\Delta = 137^\circ$. $h = 400$ km. Kermadec Islands.		10 <i>L·NE</i>	12 49
3 <i>ePKP·Z'</i>	10 42 55	10 <i>L·N</i>	15 22
$\Delta = 145^\circ$. South Pacific.		11 <i>L·NE</i>	8 09
4 <i>iP·Z'</i>	1 03 39	11 <i>eP·Z'</i>	19 23 56
$\Delta = 62^\circ$. Atlantic Ocean.		<i>ePP·Z'</i>	27 42
4 <i>ePP·ZNE</i>	18 51 49	<i>eSKKS·E</i>	34 54
<i>ePPP·Z</i>	54 21	<i>L·NE</i>	56
<i>iSKS·NE</i>	58 29	$\Delta = 97^\circ$. Chile	
<i>L·NE</i>	19 23	11 <i>e·E</i>	23 45.3
$\Delta = 100^\circ$. Philippine Islands.		12 <i>e(S)·N</i>	1 12 54
6 <i>eL·NE</i>	5 00.8	<i>ePS·E</i>	14 04
6 <i>eL·NE</i>	15 50	<i>iSS·NE</i>	18 59
6 <i>eS·E</i>	16 17 06	<i>eSSS·N</i>	22.6
<i>L·NE</i>	23	<i>L·NE</i>	33
$\Delta = 40^\circ$. Alaska.		$\Delta = 93^\circ$. Pacific Ocean.	
6 <i>e(L)·NE</i>	19 08	13 <i>eP·Z'</i>	8 18 15
6 <i>eL·E</i>	20 41	<i>ePP·Z'NE</i>	19 57
7 <i>L·NE</i>	0 23.3	<i>eS·NE</i>	25 00
Near?		<i>L·NE</i>	33
7 <i>eP·Z'</i>	5 26 04	$\Delta = 45^\circ$. Alaska.	
<i>eS·N</i>	34.2	13 <i>e·Z'</i>	22 57.3
$\Delta = 58^\circ$. Aleutian Islands.		13 <i>eS·NE</i>	23 21 32
7 <i>L·Z'ZNE</i>	10 52.4	<i>L·NE</i>	32
Near?		$\Delta = 54^\circ$. Kommandorskie Islands.	
7 <i>eP·Z'</i>	13 47 58	14 <i>e(L)·E</i>	3 16
$\Delta = 58^\circ$. Aleutian Islands.		14 <i>L·NE</i>	5 58
7 <i>L·NE</i>	15 59		

Scoresbysund 1958

July		July	
14 ^d 20 ^h —18 ^d —20 ^h	no records.	24 <i>e·NE</i>	15 ^h 12 ^m .8
19 <i>ePP·NE</i>	6 ^h 49 ^m 36 ^s	24 <i>e·Z'NE</i>	15 16 51
<i>eSKS·NE</i>	55 19	26 <i>L·NE</i>	7 10
<i>e·NE</i>	56 21	26 <i>iP·Z'NE</i>	17 49 08
<i>ePS·NE</i>	57 27	<i>iSKS·NE</i>	58 41
<i>e·NE</i>	59 57	<i>iSS·NE</i>	18 05 33
$\Delta = 113^\circ$. $h = 150$ km. New Guinea.		<i>ePKPPKP·Z'</i>	14 34
19 <i>ePP·N</i>	15 10.7	<i>eP'P'P'·Z'</i>	35.5
<i>L·N</i>	30	$\Delta = 90^\circ$. $h = 650$ km. Bolivia-Peru border.	
$\Delta = 68^\circ$. Japan.		26 <i>eP·Z'</i>	18 17.2
19 <i>L·NE</i>	17 54	$\Delta = 88^\circ$. $h = 650$ km. Bolivia.	
19 <i>ePP·Z'N</i>	18 35 44	27 <i>iP·Z'</i>	18 34 29 +
<i>eSKS·N</i>	42 01	<i>iS·NE</i>	37 45
<i>eSS·NE</i>	50 58	<i>L·NE</i>	39.0
<i>L·NE</i>	19 07	$\Delta = 17^\circ$. North Atlantic Ocean.	
$\Delta = 108^\circ$. Molucca Islands.		28 <i>e(L)·NE</i>	11 15
19 ^d 20 ^h —20 ^d 20 ^h	no records.	28 <i>eP·Z'Z</i>	16 01 24
21 <i>iP·Z'ZN</i>	7 35 42	<i>e(S)·Z</i>	04 31
<i>eS·NE</i>	44 20	<i>L·N</i>	05.8
<i>L·N</i>	57	$\Delta = 17^\circ$. North Atlantic Ocean.	
<i>ePKPPKP·Z'</i>	8 04 28	28 ^d 20 ^h —august 2 ^d 20 ^h	no records.
$\Delta = 65^\circ$. Kurile Islands.		August	
21 <i>e(P)·Z'</i>	8 26 38	3 <i>iPP·Z'</i>	1 27 06
<i>e(L)·Z'</i>	27 46	<i>eSKS·N</i>	31 06
21 <i>L·NE</i>	10 16	$\Delta = 130^\circ$. $h = 550$ km. Fiji Islands.	
21 <i>iP·Z'ZNE</i>	14 47 05	4 <i>ePP·N</i>	4 32 44
<i>eS·NE</i>	55 02	<i>epPP·ZN</i>	33 32
<i>L·NE</i>	15 06	<i>i(PPS)·N</i>	43 06
<i>ePKPPKP·Z'</i>	17.0	$\Delta = 113^\circ$. $h = 150$ km. Banda Sea.	
$\Delta = 57^\circ$. Aleutian Islands.		9 <i>L·N</i>	13 44
22 <i>e·Z'NE</i>	2 11.0	12 <i>L·N</i>	16 56
Near shock?		13 <i>L·NE</i>	20 44
22 <i>L·NE</i>	4 18	14 <i>iP·Z'</i>	15 04 58 +
23 <i>eP·Z'</i>	10 39 22	<i>eS·N</i>	12 49
<i>iS·NE</i>	49 18	<i>L·N</i>	25
<i>ePS·NE</i>	49 49	<i>iPKPPKP·Z'</i>	35 29
<i>iSS·NE</i>	54 23	$\Delta = 56^\circ$. Aleutian Islands.	
$\Delta = 78^\circ$. Bonin Islands.		15 <i>eP·Z'Z</i>	20 05 21
24 <i>iP·Z'</i>	13 17 40	<i>i·Z'</i>	05 23 -
<i>eS·E</i>	25.6	$\Delta = 57^\circ$. Kamchatka.	
<i>L·NE</i>	39		
$\Delta = 55^\circ$. Aleutian Islands.			

Scoresbysund 1958

August

15	<i>eP·Z'Z</i>	22 ^b 43 ^m 08 ^s	
	<i>iPP·Z</i>	47 30	
	$\Delta = 105^\circ$, $h = 200$ km. Celebes.		
16	<i>(i)P·Z'</i>	13 27 40	In the time break.
	$\Delta = 57^\circ$, Aleutian Islands.		
16	<i>iP·Z'Z</i>	19 22 54	$Z': +$, $Z: -$.
	<i>ePP·Z'Z</i>	24 50	
	$\Delta = 52^\circ$, Iran.		
17	<i>e·Z'</i>	1 26 37	
20	<i>ePKP·Z'</i>	3 59 06	
	<i>ePP·Z</i>	4 00 46	
	<i>eSS·E</i>	17 19	
	$\Delta = 123^\circ$, New Hebrides.		
27	<i>L·E</i>	3 11	
27	<i>iP·Z'Z</i>	15 24 09	
	<i>ePP·Z'Z</i>	24 30	
	<i>ePPP·ZNE</i>	25 46	
	<i>iS·NE</i>	30 16	$N: -$, $E: -$.
	<i>L·NE</i>	37	
	$\Delta = 40^\circ$, Greece.		

30 *L·NE* 19 0931 *e·Z'* 22 24 4531 *e·Z'* 22 54 4131 *L·NE* 23 20

September

2 *e(P)·Z'* 2 21 072 *L·NE* 20 443 *iP·Z'* 3 54 44*iS·E* 4 04 59 +*iSKS·E* 05 59 -*eSSS·E* 13 01*L·N* 19 $\Delta = 71^\circ$, Atlantic Ocean.3 *iP·Z'* 8 21 29*iS·NE* 30 32 $E: +$.*L·E* 42 $\Delta = 68^\circ$, Japan.3 *e(P)·Z'* 11 47 42*i(L)·Z'* 47 50

September

4 *ePP·Z'NE* 22^b10^m15^s*ePS·NE* 19 45*e·NE* 23 45*L·NE* 43 $\Delta = 109^\circ$, Chile-Argentina border.8 *iP·Z'N* 5 35 23*ipP·Z'* 35 44*ePP·N* 37 38*eS·NE* 43 14*i·E* 43 37*L·NE* 52 $\Delta = 58^\circ$, $h = 75$ km. Kamchatka.9 *iP·Z'* 11 42 39 $\Delta = 63^\circ$, Kurile Islands.11 *L·NE* 11 5314 *iP·Z'* 14 30 37 $\Delta = 50^\circ$, Siberia.20 *ePS·N* 17 38 56*e·E* 40 01*eSS·N* 45.3*L·NE* 18 04 $\Delta = 116^\circ$, Solomon Islands.22 *ePKP·Z* 19 25 09*i·Z'* 25 13*iPP·ZN* 28 13*iPKS·NE* 28 53*iSS·E* 46 39 $\Delta = 140^\circ$, Kermadec Islands.24 *i·E* 4 02 47 invers dispersion.*L·NE* 05 $\Delta = 43^\circ$, Gulf of Alaska.25 *eP·Z'* 7 30 34*i·Z'Z* 30 39 +*eS·NE* 39 07*ePS·NE* 39 19*e·N* 40 19*eScS·NE* 40 42*eSS·NE* 46.1*L·NE* 49.7 $\Delta = 63^\circ$, Atlantic Ocean.27 *iP·Z'* 10 42 39*e(S)·N* 43 06 $\Delta = 2\frac{1}{2}^\circ$.

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October

1 *eP·Z'* 16^b45^m13^s in the time break. $\Delta = 6^\circ$, East of Jan Mayn.1 *iP·Z'* 17 56 49*i·Z'* 56 55 $\Delta = 54^\circ$, Aleutian Islands.2 *L·NE* 12 022 *e(L)·NE* 14 32 523 *e·Z'* 8 57.26 *eS·E* 9 45 47*L·E* 59 $\Delta = 51^\circ$, Iran.6 *L·E* 19 247 *L·E* 13 289 *eSKKS·E* 11 48 42*eSS·E* 58.3*L·E* 12.5 $\Delta = 127^\circ$, Sandwich Islands.10 *iP·Z'* 8 40 03 $\Delta = 56^\circ$, $h = 100$ km. Kamchatka.10 *e·Z'* 14 21 4512 *iP·Z'* 15 30 25 $\Delta = 79^\circ$, $h = 250$ km. China Sea.20 *ePP·Z'* 1 31 46 $\Delta = 113^\circ$, $h = 100$ km. Java.29 *iP·Z'* 7 54 02 $\Delta = 57^\circ$, Aleutian Islands.29 *iP·Z'* 8 05 07 $\Delta = 57^\circ$, Aleutian Islands.

November

1 *ePP·Z'* 3 58 02*ePS·N* 4 07 49*eSS·N* 13.9*L·N* 33 $\Delta = 113^\circ$, Bismarck Sea.1 *e·Z'* 12 35 02

November

1 *ePKP·Z'* 12^b35^m42^s*ePP·N* 37 44*e(PKS)·N* 39 03*e·N* 47 53 $\Delta = 127^\circ$, New Hebrides.2 *e(P)·Z'* 3 24 174 *iP·Z'* 8 40 47 $\Delta = 80^\circ$, $h = 60$ km. Bonin Islands.4 *iP·Z'* 8 43 17*i(pP)·Z'* 43 26 $\Delta = 80^\circ$, $h = 60$ km. Bonin Islands.6 *iP·Z'* 23 08 48 +*ePKPPKP·Z'* 37 27*ePKPPKP₂·Z'* 37 45*e·Z'* 38 01 $\Delta = 65^\circ$, Deeper than normal. Kurile Islands.6 *iP·Z'* 23 24 59*eP·Z'* 23 26 597 *iP·Z'* 0 47 01*(i)P·Z'* 0 48 34 in the time break.*eP·Z'* 0 50 10*iP·Z'* 1 12 46*eP·Z'* 1 15.7*iP·Z'* 1 24 31*iP·Z'* 1 25 22*eP·Z'* 1 53 42*eP·Z'* 1 55 47*eP·Z'* 2 06 22*iP·Z'* 2 21 01*(i)P·Z'* 3 01 34 in the time break.*(i)P·Z'* 5 10 33 in the time break.*iP·Z'* 7 51 21*eP·Z'* 11 35 06*eP·Z'* 19 25 18*eP·Z'* 20 52 06

19 repetitions.

8 *iP·Z'* 9 32 48*L·E* 50 $\Delta = 58^\circ$, Kamchatka.8 *iP·Z'* 12 19 15 $\Delta = 65^\circ$, Kurile Islands.8 *i·Z'* 17 49 2910 *L·NE* 12.0

Scoresbysund 1958

November

12	<i>eP·Z'</i>	20 ^h 34 ^m 10 ^s	
	<i>i·Z'</i>	34 14	-
	<i>iS·NE</i>	42 55	
	<i>L·NE</i>	53	
	<i>iPKPKP·Z'</i>	21 03 02	
	<i>e·Z'</i>	03 15	
	$\Delta = 65^\circ$.	Kurile Islands.	
12	<i>iP·Z'</i>	23 10 17	
	$\Delta = 65^\circ$.	Repetition.	
13	<i>e·Z'</i>	0 01 08	
13	<i>eP·Z'</i>	3 07 15	
	$\Delta = 65^\circ$.	Kurile Islands.	
13	<i>iP·Z'</i>	4 15 23	-
	$\Delta = 65^\circ$.	Kurile Islands.	
13	<i>e·Z'</i>	4 44 10	
13	<i>eP·Z'</i>	16 29 28	
	$\Delta = 89^\circ$.	Nicobar Islands.	
14	<i>ePKP·Z'</i>	14 07 03	
	<i>ePP·Z'</i>	07 54	
	$\Delta = 114^\circ$.	Banda Sea.	
15	<i>iP·Z'</i>	9 11 31	
	$\Delta = 65^\circ$.	Kurile Islands.	
19	<i>iP·Z'</i>	9 34 34	
	<i>L·NE</i>	59	
	$\Delta = 65^\circ$.	Kurile Islands.	
19	<i>iP·Z'</i>	15 10 25	
	$\Delta = 44^\circ$.	Alaska.	
20	<i>L·NE</i>	6 04	
20.	<i>iP·Z'</i>	14 28 41	
	<i>L·NE</i>	48	
	$\Delta = 65^\circ$.	Kurile Islands.	
25	<i>e·Z'</i>	21 52 14	
30	<i>iP·Z'</i>	1 44 38	-
	$\Delta = 76^\circ$.	Japan.	
30	<i>iP·Z'</i>	2 07 26	
	Repetition.		

December

1	<i>eP·Z'</i>	3 ^h 31 ^m .5	
	<i>L·E</i>	54	
	$\Delta = 61^\circ$.	California-Mexico border.	
1	<i>eP·Z'</i>	7 29 41	
	$\Delta = 42^\circ$.	North Atlantic Ocean.	
1	<i>e(P)·Z'</i>	12 29 41	
2	<i>iP·Z'</i>	1 23 07	
	$\Delta = 65^\circ$.	Kurile Islands.	
6	<i>eP·Z'</i>	1 00 18	
	<i>iP·Z'</i>	9 44 30	
	<i>eP·Z'</i>	9 45 00	
	$\Delta = 4\frac{1}{2}^\circ$.	3 quakes off northern coast of Iceland.	
6	<i>iP·Z'</i>	9 45 29	
	$\Delta = 74^\circ$.	South of Panama.	
6	<i>eP·Z'</i>	11 13 43	
	<i>eP·Z'</i>	11 18 03	
	<i>eP·Z'</i>	11 26 49	
	<i>eP·Z'</i>	11 47 02	
	<i>iP·Z'</i>	15 32 35	
	<i>i(Pg)·Z'</i>	52	
	<i>iP·Z'</i>	15 34 23	
	<i>eP·Z'</i>	15 49 42	
	<i>eP·Z'</i>	19 01 23	
	$\Delta = 4\frac{1}{2}^\circ$.	8 quakes off northern coast of Iceland.	
7	<i>L·NE</i>	18 34	
7	<i>iP·Z'</i>	20 39 19	
	$\Delta = 4\frac{1}{2}^\circ$.	Off northern coast of Iceland.	
8	<i>iPKP·Z'</i>	3 28 53	
	$\Delta = 122^\circ$.	$h = 200$ km. New Hebrides Islands.	
8	<i>eP·Z'</i>	4 49 16	
	<i>eP·Z'</i>	9 21 18	
	<i>eP·Z'</i>	9 22 03	
	<i>eP·Z'</i>	15 15 57	
	<i>eP·Z'</i>	16 09 10	
	$\Delta = 4\frac{1}{2}^\circ$.	5 quakes off northern coast of Iceland.	
10	<i>iP·Z'</i>	3 53 22	
	$\Delta = 57^\circ$.	$h = 150$ km. Hindu Kush.	
10	<i>iPKP·Z'</i>	7 22 03	
	<i>i·Z'</i>	22 04	
	<i>i(pPKP)·Z'</i>	23 15	
	<i>i(sPKP)·Z'</i>	23 32	
	<i>i·Z'</i>	25 14	
	<i>e·Z'</i>	25 23	
	$\Delta = 146$ km.	$h = 300$ km. New Zealand.	

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Scoresbysund 1958

December

10	<i>eP·Z'</i>	22 ^h 00 ^m 12 ^s	
	<i>L·NE</i>	23	
	$\Delta = 67^\circ$.	Gulf of California.	
11	<i>eP·Z'</i>	4 02 03	
	$\Delta = 4\frac{1}{2}^\circ$.	Off northern coast of Iceland.	
12	<i>eP·Z'</i>	0 00 59	
	<i>eP·Z'</i>	0 04 21	
	<i>eP·Z'</i>	0 35 50	
	<i>eP·Z'</i>	1 26 52	
	Probably 4 Iceland-quakes.		
13	<i>eP·Z'</i>	9 23 50	
	<i>e·Z'</i>	24 13	
	<i>e(S)·Z'</i>	25 17	
	<i>e(R)·Z'</i>	26 39	
	$\Delta = 7^\circ$.	Off southern coast of Iceland.	
15	<i>e·Z'</i>	0 18 48	
	<i>e·Z'</i>	19 17	
	<i>e·Z'</i>	20 01	
15	<i>iP·Z'</i>	11 57 06	
	$\Delta = 65^\circ$.	Kurile Islands.	
17	<i>eP·Z'</i>	2 35 05	
	$\Delta = 52^\circ$.	Alaska.	

December

17	<i>eP·Z'</i>	15 ^h 46 ^m 21 ^s	
	<i>L·NE</i>	16 16	
	$\Delta = 78^\circ$.	Ryukyu Islands.	
18	<i>eP·Z'</i>	7 43 34	
	$\Delta = 60^\circ$.	Iran.	
19	<i>L·NE</i>	19 08	
21	<i>iP·Z'</i>	5 55 45	
	<i>eS·NE</i>	6 03 25	
	<i>e·NE</i>	03 43	
	<i>L·NE</i>	12	
	$\Delta = 53^\circ$.	Sinkiang Province, China.	
25	<i>L·NE</i>	9 05	
31	<i>e·Z'</i>	9 33 16	
31	<i>e·Z'</i>	9 36 13	
31	<i>e·Z'</i>	10 41 25	
31	<i>i·Z'</i>	19 24 24	per. abt. 1.5 sec.
	January 1960.		

HENRY JENSEN

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Microseisms. Scoresbysund

Table of microseismic data for Scoresbysund in 1958. Columns: Date, Z, N, E, 0h, 6h, 12h, 18h. Rows: July 1-31.

Microseisms. Scoresbysund

Table of microseismic data for Scoresbysund in 1958. Columns: Date, Z, N, E, 0h, 6h, 12h, 18h. Rows: Aug. 1-31.

Microseisms. Scoresbysund

1958 Sept.	Z	N	E	6h	12h	18h	6h	12h	18h	6h	12h	18h
1	1 1.2 3.8	1 1.5 3.9	1 1.0 3.8	1 1.0 4.1	2 0.3 3.8	2 0.2 3.9	2 0.8 3.9	2 0.1 4.1	2 0.1 4.8	2 0.1 5.1	2 0.1 5.1	2 0.1 5.1
2	...	2 0.2 3.6	2 0.1 4.-	2 0.1 4.-	2 0.1 5.-	2 0.1 5.-	2 0.1 4.-	2 0.1 4.-	2 0.1 4.-	2 0.1 4.-	2 0.1 4.-	2 0.1 4.-
3	...	2 0.1 5.2	2 0.2 5.3	2 0.2 5.3	2 0.2 4.7	2 0.2 4.8	2 0.2 4.9	2 0.2 4.9	2 0.2 4.9	2 0.2 4.9	2 0.2 4.9	2 0.2 4.9
4	...	2 0.2 5.1	3 0.2 5.5	3 0.2 5.5	3 0.2 5.2	2 0.2 5.0	2 0.2 4.9	2 0.2 4.9	2 0.2 4.8	2 0.2 4.8	2 0.2 4.8	2 0.1 5.1
5	2 0.1 5.3	2 0.1 5.3	2 0.1 5.-	2 0.1 5.-	2 0.1 5.1	2 0.1 5.1	2 0.1 5.-	2 0.1 5.-	2 0.1 5.-	2 0.1 5.-
6	...	2 0.1 5.-	3 0.1 4.2	3 0.1 4.2	3 0.1 4.1	3 0.2 4.0	2 0.1 4.1	2 0.2 3.9	2 0.2 3.9	2 0.2 3.9	2 0.2 4.0	2 0.2 4.0
7	...	2 0.3 4.5	2 0.3 4.2	2 0.3 4.2	2 0.3 4.2	2 0.3 5.2	2 0.3 4.7	2 0.3 4.7	2 0.3 4.3	2 0.3 4.3	2 0.3 4.7	2 0.4 4.7
8	...	2 0.2 5.0	...	...	2 0.1 4.6	2 0.1 4.9	2 0.3 4.4	2 0.3 4.4	2 0.2 5.0	2 0.2 5.0	2 0.2 4.8	2 0.2 4.8
9	...	0.1	0.1	0.1	0.1	0.1	...	...	2 0.2 4.5	2 0.1 4.8	2 0.1 4.8	2 0.1 4.8
10
11	...	3 0.3 4.0	3 0.3 4.5	3 0.3 4.5	3 0.3 4.6	3 0.2 5.0	3 0.5 4.4	3 0.5 4.2	3 0.5 4.5	3 0.5 4.5	3 0.4 4.8	3 0.4 4.8
12	...	3 0.2 4.5	3 0.2 4.6	3 0.2 4.6	3 0.2 4.3	3 0.1 5.0	3 0.2 4.6	3 0.3 4.1	3 0.4 3.9	3 0.4 3.9	3 0.4 4.7	3 0.4 4.7
13	...	3 0.1 4.7	3 0.1 4.5	3 0.2 5.2	3 0.2 5.2	3 0.2 5.0	3 0.4 4.7	3 0.4 4.3	3 0.3 4.0	3 0.3 4.0	3 0.4 4.5	3 0.4 4.5
14	...	3 1.2 5.5	1 2.6 5.8	1 3.8 6.0	1 3.7 6.1	1 3.7 6.1	1 1.0 5.3	1 3.2 6.1	1 3.8 5.9	1 3.8 5.9	1 3.4 6.2	1 3.4 6.2
15	...	1 1.8 5.7	1 1.1 5.5	3 0.6 5.4	...	...	1 2.3 5.4	1 1.6 5.3	3 0.9 5.8	...	...	...
16	3 0.6 5.5	...	...	...	3 0.9 5.2	...	...
17	...	3 0.8 5.8	...	...	1 2.0 5.8	1 2.3 5.7	3 0.8 6.0	...	1 2.4 6.7	1 2.6 5.9	...	...
18	...	1 3.8 5.8	1 3.4 6.1	...	...	...	1 3.7 6.3	1 3.5 5.9	...	...	...	...
19	...	1 2.2 5.7	1 1.8 5.7	3 1.6 5.9	3 1.3 4.8	3 1.3 4.8	1 2.5 5.0	1 2.2 5.0	3 1.5 5.3	3 1.5 4.9	...	...
20	...	3 1.0 4.3	3 1.1 5.0	3 0.7 5.0	...	...	3 1.3 4.7	3 1.2 4.8	3 0.9 5.3	...	...	...
21	...	2 0.5 5.4	2 0.6 5.5	2 0.4 5.3	2 0.3 5.5	2 0.3 5.5	2 0.7 5.5	2 0.6 5.4	2 0.5 5.0	2 0.5 5.0	...	...
22	2 0.2 4.2	2 0.4 4.2	2 0.4 4.2	...	...	2 0.3 3.9	2 0.5 4.3	...	...
23	...	2 0.5 4.7	3 0.8 5.2	3 1.0 4.7	3 0.8 4.2	3 0.8 4.2	2 0.7 4.6	3 0.9 4.6	3 1.0 4.4	3 1.0 4.5	...	...
24	...	3 0.8 3.9	3 0.9 3.9	3 0.7 4.1	1 0.6 5.3	1 0.6 5.3	3 0.9 4.0	3 1.0 3.8	3 0.7 4.2	1 0.7 5.2	...	...
25	...	1 1.0 5.3	2 0.2 4.1	2 0.2 4.1	2 0.2 4.3	2 0.2 4.5	1 0.9 5.9	2 0.6 5.0	2 0.3 4.3	2 0.2 4.2	...	...
26	...	2 0.1 4.1	2 0.2 3.9	2 0.2 4.4	2 0.2 4.1	2 0.2 3.9	2 0.2 4.7	2 0.2 4.8	2 0.3 4.9	2 0.2 4.2	...	...
27	...	2 0.3 4.1	2 0.5 4.5	2 0.6 4.8	0.7 5.-	0.7 5.-	2 0.2 4.5	2 0.6 4.6	1 0.8 5.0	1 1.2 5.0	...	...
28	...	2 0.6 4.8	2 0.6 4.4	...	2 0.8 5.5	2 0.8 5.5	1 1.1 4.8	1 0.7 5.4	3 0.8 6.0	3 0.6 5.7	...	...
29	...	2 0.7 4.8	2 0.8 4.9	2 0.9 4.9	3 1.0 4.3	3 1.0 4.3	2 0.5 5.0	2 0.3 5.0	2 0.5 5.2	2 0.5 5.0	...	...
30	...	1 1.0 5.0	1 0.9 5.1	1 1.1 5.3	1 0.8 5.0	1 0.8 5.0	3 0.8 5.0	3 0.7 5.2	3 0.7 5.3	3 0.8 5.5	...	...

Microseisms. Scoresbysund

1958 Oct.	Z	N	E	6h	12h	18h	6h	12h	18h	6h	12h	18h
1	2 0.7 4.8	2 0.5 5.0	2 0.6 5.0	3 1.5 7.5	3 2.3 7.3	3 2.0 7.0	3 1.4 7.0	3 2.0 7.8	3 1.7 7.5	3 0.8 4.4	3 0.8 4.5	3 0.8 4.2
2	...	3 1.1 8.0	3 1.0 6.0	3 1.0 6.0	3 0.8 4.9	3 1.2 6.-	3 1.0 5.3	3 0.7 5.1	3 0.9 5.3	3 0.7 4.6	3 0.8 5.3	...
3	...	3 0.9 5.0	3 0.7 4.8	3 0.7 4.8	3 0.5 4.9	3 0.7 5.2	3 1.0 5.0	3 0.6 4.9	3 0.6 5.0	3 0.6 5.0	3 0.7 5.3	...
4	...	3 0.7 5.5	3 0.9 4.9	3 0.6 5.0	...	...	3 0.8 5.2	3 0.6 5.0	...	...	...	...
5
6	3 0.7 4.5	3 0.8 4.4	3 0.8 4.5	3 0.8 4.2	...	...
7	3 0.7 4.6	3 0.7 4.8	3 0.8 5.3	...	...	...
8	...	3 0.5 5.0	3 0.6 4.6	3 0.8 4.8	3 0.8 5.0	3 0.8 5.0	...	...	...	...	...	...
9	...	3 1.0 5.3	3 1.0 4.8	3 2.1 4.8	3 2.6 5.2	3 2.6 5.2	...	...	...	...	...	...
10	...	1 2.2 4.7	1 2.5 5.0	1 2.2 5.6	1 2.2 5.8	1 2.2 5.8	...	...	...	...	...	...
11	...	1 1.6 5.9	2 1.7 5.1	2 1.2 5.0	2 1.0 5.2	2 1.0 5.2	1 1.6 5.1	1 1.3 5.3	1 1.2 5.0	1 1.2 5.0	1 1.1 5.2	1 1.1 5.2
12	...	1 1.0 5.0	1 1.2 5.6	1 1.2 5.2	1 1.0 5.3	1 1.0 5.3	1 1.3 5.0	1 1.2 5.7	1 1.3 5.2	1 1.3 5.2	1 1.1 5.2	1 1.1 5.2
13	...	2 0.6 4.9	2 0.7 4.8	2 0.6 4.7	2 1.0 5.8	2 1.0 5.8	2 0.7 5.5	3 0.8 5.2	3 0.6 5.4	3 0.6 5.4	3 1.0 5.9	3 1.0 5.9
14	...	1 1.5 6.2	1 4.- 6.3	1 5.- 6.0	1 5.- 6.0	1 5.- 6.0	1 1.6 6.2	1 3.0 7.0	1 3.5 7.0	1 6.- 6.5	1 6.- 6.5	1 6.- 6.5
15	...	1 6.- 6.0	1 6.- 6.0	1 6.- 6.0	1 6.- 6.0	1 6.- 6.0	1 6.- 6.-	1 6.- 6.-	1 6.- 6.0	1 6.- 6.0	1 6.- 6.0	1 6.- 6.0
16	...	1 4.0 5.7	1 4.0 5.2	1 1.8 5.3	1 2.0 5.5	1 2.0 5.5	1 3.7 6.0	1 2.8 6.0	1 2.5 6.3	1 1.3 5.8	1 1.3 5.8	1 1.3 5.8
17	...	3 1.8 5.8	3 3.5 7.3	1 3.5 7.0	1 7.- 7.-	1 7.- 7.-	3 1.2 5.3	3 2.2 7.0	1 2.7 7.5	1 6.5 7.3	1 6.5 7.3	1 6.5 7.3
18	...	1 6.- 7.0	3 4.5 6.2	3 4.0 5.0	3 2.3 5.3	3 2.3 5.3	1 4.5 7.0	1 2.5 5.8	3 2.3 5.3	3 1.7 5.5	3 1.7 5.5	3 1.7 5.5
19	...	3 1.2 5.7	3 1.5 6.0	3 1.2 6.0	1 1.5 5.0	1 1.5 5.0	...	...	...	...	...	...
20	...	1 3.5 5.2	1 3.3 5.4	1 3.2 5.2	3 3.5 5.3	3 3.5 5.3	...	...	...	...	...	...
21	...	1 7.- 6.8	1 7.- 6.0	1 8.- 6.0	1 7.- 6.0	1 7.- 6.0	...	...	...	...	...	...
22	...	1 4.5 5.5	1 3.3 5.0	1 3.3 4.8	1 3.3 5.0	1 3.3 5.0	...	...	...	...	...	...
23	...	1 2.8 5.7	1 4.0 5.3	1 5.- 5.5	1 4.2 5.3	1 4.2 5.3	...	...	...	...	...	...
24	...	1 3.0 5.0	1 1.8 5.0	1 1.5 4.8	1 1.3 4.5	1 1.3 4.5	...	...	...	...	...	...
25	...	1 1.3 4.8	1 1.8 5.0	1 1.6 4.6	1 2.0 4.7	1 2.0 4.7	...	...	...	...	...	...
26	...	1 4.0 6.2	1 7.- 6.-	1 8.- 7.-	1 7.- 6.-	1 7.- 6.-	1 5.5 6.0	...	...	...	...	...
27	...	1 7.- 7.-	1 7.- 6.0	1 5.- 6.0	1 2.2 5.6	1 2.2 5.6	...	...	...	...	...	...
28	...	1 1.8 5.4	1 3.0 5.8	...	1 3.0 5.3	1 3.0 5.3	...	...	...	...	...	...
29	...	1 5.- 5.6	1 6.- 5.8	1 6.- 5.8	1 4.0 5.5	1 4.0 5.5	1 5.- 6.3	...	...	...	...	...
30	...	1 3.0 5.5	1 2.4 5.6	1 3.2 5.6	1 3.2 5.6	1 3.2 5.6	1 4.- 5.7	...	...	...	...	...
31	...	1 2.3 5.7	1 1.5 5.2	1 1.1 5.1	2 0.7 5.8	2 0.7 5.8	...	...	...	...	...	...

Microseisms. Scoresbysund

1958 Nov.	Z	0h	6h	12h	18h	N	0h	6h	12h	18h	E	0h	6h	12h	18h	1958 Nov.
1	2	0.8 5.0	2 0.9 4.3	2 0.7 4.8	2 0.9 4.8	..	..	..	..	..	1
2	1	1.5 5.2	1 2.1 5.8	..	..	..	..	..	..	..	2
3	1	1.0 5.0	2 1.0 4.6	2 1.0 5.0	1 1.6 5.0	..	..	..	..	..	3
4	1	1.7 5.0	1 2.8 5.8	1 2.3 5.6	1 2.3 5.2	..	..	..	..	..	4
5	3	1.4 5.0	3 1.0 5.0	3 1.0 5.0	3 1.0 5.0	..	..	..	..	..	5
6	1	2.5 5.0	1 3.2 5.7	1 2.3 5.0	..	..	..	..	..	..	6
7	7
8	2	0.9 5.3	1 0.8 4.6	1 0.8 5.0	1 1.1 5.8	..	..	..	..	..	8
9	1	1.2 5.0	1 1.0 5.5	3 0.8 5.8	3 0.8 5.5	..	..	..	..	..	9
10	10
11	11
12	1	3.0 5.2	1 2.6 5.8	1 3.1 6.2	1 2.0 6.2	..	..	..	..	..	12
13	1	2.0 6.0	1 2.4 5.8	1 3.5 6.0	1 4.5 6.4	..	..	..	..	..	13
14	1	3.3 6.0	1 3.0 6.2	1 2.1 5.6	1 1.8 4.8	..	..	..	..	..	14
15	1	1.3 4.8	1 2.5 5.3	1 2.8 5.8	1 3.0 6.0	..	..	..	..	..	15
16	1	3.2 6.1	1 2.3 5.5	1 2.5 5.6	1 2.4 5.2	..	..	..	..	..	16
17	1	3.0 5.7	3 5.0 5.5	3 5.0 6.0	1 5.0 6.0	..	..	..	..	..	17
18	1	3.0 5.7	1 3.5 5.8	1 3.5 6.0	1 2.5 4.8	..	..	..	..	..	18
19	1	2.5 5.9	1 2.5 5.8	1 1.5 5.8	3 1.0 5.5	..	..	..	..	..	19
20	3	1.0 4.0	1 2.0 4.2	1 1.2 4.0	3 0.6 3.9	..	..	..	..	..	20
21	3	1.0 5.0	3 1.0 5.0	3 1.0 5.0	3 1.0 5.0	..	..	..	..	..	21
22	2	1.0 5.0	2 1.0 5.0	2 1.0 5.0	2 1.0 5.0	..	..	..	..	..	22
23	1	5.8 4.7	1 1.3 5.6	3 0.9 4.7	3 0.6 5.2	..	..	..	..	..	23
24	3	0.8 4.7	1 1.4 5.6	1 3.0 5.4	1 4.5 6.0	..	..	..	..	..	24
25	1	3.0 5.8	1 2.3 6.0	1 2.1 5.8	1 3.2 6.0	..	..	..	..	..	25
26	1	3.0 6.0	1 2.8 5.7	3 3.3 6.0	3 2.7 6.0	..	..	..	..	..	26
27	3	3.0 5.5	3 3.5 6.0	3 3.3 6.3	3 4.0 6.0	..	..	..	..	..	27
28	3	5.0 6.8	3 4.5 6.5	1 3.5 5.8	1 3.0 5.8	..	..	..	..	..	28
29	1	2.6 6.0	1 3.0 6.0	1 3.3 5.2	1 3.5 5.7	..	..	..	..	..	29
30	1	2.5 6.0	3 1.5 5.8	3 1.4 6.0	1 1.6 5.8	..	..	..	..	..	30

Microseisms. Scoresbysund

1958 Dec.	Z	0h	6h	12h	18h	N	0h	6h	12h	18h	E	0h	6h	12h	18h	1958 Dec.
1	3	1.7 5.7	3 1.8 5.2	3 1.0 5.3	3 1.4 5.3	..	..	..	..	..	1
2	3	1.1 5.6	3 1.4 5.0	3 1.1 5.9	1 0.9 5.0	..	..	..	..	..	2
3	3	0.9 4.3	1 2.1 5.6	1 2.9 6.0	1 3.0 5.8	..	..	..	..	..	3
4	1	1.6 5.6	1 1.8 6.0	1 1.6 5.8	1 2.1 5.6	..	..	..	..	..	4
5	1	2.6 6.6	1 2.5 6.8	1 2.2 6.3	1 2.6 6.9	..	..	..	..	..	5
6	1	2.1 6.3	1 1.8 6.0	1 2.3 6.0	1 2.1 5.7	..	..	..	..	..	6
7	1	1.4 5.5	1 2.0 5.7	1 1.6 5.5	1 1.7 5.8	..	..	..	..	..	7
8	1	5.3 5.3	1 1.7 5.2	1 2.3 5.8	1 3.2 6.0	..	..	..	..	..	8
9	1	3.5 6.5	1 3.0 6.0	1 2.8 6.6	1 2.8 6.3	..	..	..	..	..	9
10	1	3.0 6.0	1 3.5 6.6	1 2.2 6.6	1 2.3 6.2	..	..	..	..	..	10
11	1	2.1 6.0	3 1.7 6.5	1 4.0 6.8	1 4.0 6.8	..	..	..	..	..	11
12	1	3.5 6.8	1 4.5 6.5	1 6.0 6.5	1 6.0 6.5	..	..	..	..	..	12
13	1	4.5 6.8	1 4.5 6.0	1 3.5 6.2	1 2.3 6.5	..	..	..	..	..	13
14	1	2.3 6.8	1 1.8 6.2	1 2.2 6.0	1 2.0 7.0	..	..	..	..	..	14
15	1	2.3 6.3	1 1.6 6.8	1 1.4 6.8	1 1.1 5.8	..	..	..	..	..	15
16	1	1.2 6.8	1 1.1 6.5	2 1.2 6.5	2 0.9 6.0	..	..	..	..	..	16
17	2	1.3 6.4	3 1.2 6.0	3 1.0 6.5	3 1.5 7.5	..	..	..	..	..	17
18	1	2.2 7.5	1 1.7 7.5	1 1.6 7.5	1 2.0 6.5	..	..	..	..	..	18
19	1	1.6 6.2	1 1.8 7.0	1 1.5 7.0	1 1.6 6.8	..	..	..	..	..	19
20	1	5.0 7.0	1 1.3 7.0	1 1.4 6.2	1 1.7 6.8	..	..	..	..	..	20
21	1	1.9 6.0	1 1.6 6.3	1 1.7 6.7	1 2.3 7.5	..	..	..	..	..	21
22	3	4.0 7.5	3 7.0 7.5	1 6.0 7.0	1 5.0 7.0	..	..	..	..	..	22
23	1	7.0 6.5	1 7.0 6.0	1 5.0 6.0	1 3.0 5.8	..	..	..	..	..	23
24	1	3.0 6.2	1 3.2 5.8	1 1.6 6.0	1 1.3 5.2	..	..	..	..	..	24
25	1	2.0 5.7	1 1.0 5.3	1 1.5 5.7	1 3.5 6.2	..	..	..	..	..	25
26	1	3.3 5.6	1 3.8 5.7	1 2.5 5.9	1 1.3 5.3	..	..	..	..	..	26
27	1	4.0 6.0	3 1.1 5.1	3 1.3 5.8	3 1.5 6.0	..	..	..	..	..	27
28	3	2.4 5.0	1 3.3 5.7	1 3.3 6.5	1 3.5 6.1	..	..	..	..	..	28
29	1	3.0 6.9	1 2.0 5.4	1 1.5 5.6	1 1.0 5.3	..	..	..	..	..	29
30	3	0.7 4.9	3 0.9 5.2	3 1.1 5.2	3 1.2 5.6	..	..	..	..	..	30
31	31