

GEODÆTISK INSTITUT

Proviantgården · Copenhagen · Denmark

Bulletin of the seismological station

KØBENHAVN

$\varphi = 55^{\circ}41' N.$ $\lambda = 12^{\circ}26' E.$ $h = 13 \text{ m.}$

Lithologic foundation: chalk

Instruments

Galitzin-Wilip. *N*, *E* and *Z*. $T_p = T_g = 12^{3/4} \text{ sec.}$ $\mu^2 = 0,$ $\frac{Ak}{\pi l} = 260 \text{ sec}^{-1}$ or $V_{\max} = \text{abt. } 1000.$

Benioff. *Z'*. $T_p = 1 \text{ sec.}$ $T_g = 1/4 \text{ sec.}$ $V_{\max} = \text{abt. } 30000.$

Wiechert 1000 kg. *N* and *E*. $T = 8^{1/2} \text{ sec.}$ $\nu = 6:1,$ $\rho = 0.3 \text{ mm.}$ $V_0 = 210.$

Wiechert 1300 kg. *Z*. $T = 6 \text{ sec.}$ $\nu = 4:1,$ $\rho = 0.2 \text{ mm.}$ $V_0 = 150.$

Seismological Readings

Phases are indicated by the symbols used in ISS. Times are given in GMT. Positions of epicenters are most often due to 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.

København 1957

October

1	<i>L·NE</i>	2h31 ^m	
1	<i>L·NE</i>	3 21	
2	<i>i·Z'</i>	12 39 06	Possibly <i>P</i> to next shock.
2	<i>iP·Z'</i>	12 39 29	Possibly <i>PcP</i> . See previous shock.
	<i>iS·NE</i>	48 48	
	<i>eSKS·E</i>	49 31	
	<i>eSS·NE</i>	53.4	
	<i>L·NE</i>	59	
			$\Delta = 73^\circ$. Venezuela.
2	<i>eSS·E</i>	21 25.4	
	<i>L·NE</i>	36	
			$\Delta = 78^\circ$. Chagos Islands.
4	<i>eP·Z</i>	5 37 36	
	<i>i·Z</i>	38 14	
	<i>ePP·Z</i>	40 25	
	<i>ePPP·Z</i>	42 11	
	<i>iS·NE</i>	47 02	
	<i>e·N</i>	53.9	
	<i>e·E</i>	55.7	
	<i>L·NE</i>	6 00	
	<i>M·ZNE</i>	04	21 ^s . <i>Z</i> : 20 μ , <i>N</i> : 10 μ , <i>E</i> : 25 μ .
			$\Delta = 73^\circ$. Venezuela.
4	<i>L·NE</i>	23 49	
5	<i>L·E</i>	11 49.5	
5	<i>L·E</i>	16 06	
5	<i>iS·E</i>	22 54 53	
	<i>L·E</i>	23 05	
			$\Delta = 42^\circ$. Afghanistan.
6	<i>e·NE</i>	9 11.4	
	<i>L·NE</i>	13	
	<i>M·NEZ</i>	15.8	12 ^s . <i>N</i> : 8 μ , <i>E</i> : 5 μ , <i>Z</i> : 6 μ .
7	<i>eP·Z'Z</i>	13 30 58	
	<i>iPcP·Z'Z</i>	31 10	
	<i>eS·N</i>	40 10	
	<i>ePS·NE</i>	40 25	
	<i>L·NE</i>	57	
			$\Delta = 70^\circ$. Kamchatka.
7	<i>iPKP·Z'</i>	17 07 14	
	<i>epPKP·Z'</i>	09 55	
			$\Delta = 143^\circ$. <i>h</i> = 650 km. Fiji Islands.

October

8	<i>e·Z'</i>	7h04m58 ^s	
	<i>L·NE</i>	10.3	
10	<i>iPKP·Z'</i>	19 03 30	—
	<i>ePP·Z'</i>	07 22	
			$\Delta = 147^\circ$. <i>h</i> = 400 km. Fiji Islands.
10	<i>eP·Z'</i>	19 05 18	
	<i>i·Z'</i>	05 19	—
	<i>L·NE</i>	35	
			$\Delta = 71^\circ$. Aleutian Islands.
11	<i>L·NE</i>	7 44	
12	<i>L·NE</i>	19 52	
12	<i>L·NE</i>	23 11	
13	<i>iP·Z'Z</i>	4 30 25	
	<i>i·Z'Z</i>	30 40	
	<i>iS·E</i>	39 46	
	<i>ePS·N</i>	39 54	
	<i>L·NE</i>	56	
			$\Delta = 70^\circ$. Kamchatka.
17	<i>L·NE</i>	14 52	
18	<i>L·NE</i>	2 01	
19	<i>iP·Z'Z</i>	18 41 10	
	<i>ePP·NE</i>	44 14	
	<i>e·N</i>	47 48	
	<i>iS·NE</i>	51 13	
	<i>i·E</i>	51 31	
	(i) <i>PS·E</i>	52 06	in the time break.
	<i>i·N</i>	19 02 40	
	<i>L·NE</i>	09	
	<i>M·NE</i>	13	20 ^s . <i>N</i> : 95 μ , <i>E</i> : 50 μ .
			$\Delta = 82^\circ$. Formosa.
19	<i>iP·Z'Z</i>	21 53 15	+
	<i>iS·NE</i>	22 02 28	
	<i>L·NE</i>	16	
			$\Delta = 73^\circ$. Japan.
20	<i>eP·Z'Z</i>	12 14 46	
	<i>eS·N</i>	23 06	
	<i>i·NE</i>	23 11	
	<i>i·N</i>	24 12	
	<i>eScS·NE</i>	24 42	
	<i>L·NE</i>	31	
			$\Delta = 61^\circ$. Atlantic Ocean.

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22	<i>iP·Z'</i>	20 ^h 56 ^m 15 ^s	
	<i>L·NE</i>	21 25	
	$\Delta = 74^\circ$. Japan.		
23	<i>iP·Z'Z</i>	6 08 20	+
	<i>eS·NE</i>	17.8	
	<i>eScS·NE</i>	18.5	
	<i>L·NE</i>	6.5	
	$\Delta = 73^\circ$. Aleutian Islands.		
23	<i>i·Z'</i>	9 43 25	2 ^s .
24	<i>L·NE</i>	1 27	
24	<i>L·NE</i>	2 44.4	
24	<i>L·NE</i>	22 27	
25	<i>eP·Z</i>	10 14 45	
	<i>eS·NE</i>	23 55	
	<i>ePS·E</i>	24 22	
	<i>eSKS·NE</i>	24 44	
	<i>SSS·E</i>	31.9	
	<i>L·NE</i>	39	
	<i>M·NE</i>	43	25 ^s . N: 30 μ , E: 35 μ .
	<i>M·NE</i>	45	N: 22 ^s , 35 μ , E: 20 ^s , 20 μ .
	<i>M·NE</i>	49	N: 20 ^s , 50 μ , E: 15 ^s , 15 μ .
	$\Delta = 70^\circ$. Kamchatka.		
26	<i>iPKP·Z'Z</i>	8 44 48	-. Z' in the time break.
	$\Delta = 144^\circ$. $h = 600$ km. Fiji Islands.		
26	<i>iPP·Z</i>	14 34 54	-
	<i>e·E</i>	41 37	
	<i>ePS·E</i>	43 36	
	<i>e·Z</i>	43 39	
	<i>eSS·E</i>	49 12	
	<i>L·NE</i>	15 06	
	$\Delta = 99^\circ$. Borneo.		
27	<i>i·Z'</i>	18 01 36	
27	<i>iP·Z'</i>	22 43 13	
	$\Delta = 65^\circ$. Kamchatka.		
30	<i>eP·Z'</i>	1 48.1	
	<i>L·NE</i>	55	
	$\Delta = 23^\circ$. Dodecanese Islands.		
30	<i>iP·Z'</i>	7 35 26	
	<i>iS·N</i>	39 32	
	<i>i·E</i>	39 37	
	<i>L·NE</i>	42.1	
	<i>M·N</i>	45	15 ^s , 15 μ .
	<i>M·E</i>	46	15 ^s , 20 μ .
	$\Delta = 23^\circ$. Dodecanese Islands.		

October

31	<i>iP·Z'</i>	2 ^h 48 ^m 48 ^s	
	<i>iPcP·Z'</i>	49 06	
	$\Delta = 76^\circ$. Japan.		
31	<i>eP·Z'</i>	10 20 50	
	<i>ePP·Z</i>	24 12	
	<i>iSKS·E</i>	31 19	
	<i>iS·E</i>	31 29	
	<i>i·N</i>	31 31	
	<i>ePS·E</i>	32 27	
	<i>i·N</i>	32 37	
	<i>iSS·N</i>	37 07	
	<i>L·NE</i>	47	
	$\Delta = 88^\circ$. Off coast of Panama.		
November			
2	<i>L·NE</i>	18 38	
9	<i>L·NE</i>	22 22	
10	<i>eS·ZNE</i>	0 03 44	
	<i>L·NE</i>	06.8	
	$\Delta = 18^\circ$. Greece.		
10	<i>ePP·E</i>	2 57 07	
	<i>ePS·ZE</i>	3 07.1	
	<i>eSS·N</i>	13 49	
	<i>L·NE</i>	35	
	$\Delta = 123^\circ$. Solomon Islands.		
10	<i>L·NE</i>	6 50	
10	<i>L·N</i>	9 08	
10	<i>iP·Z'Z</i>	19 32 21	
	<i>ePP·ZNE</i>	35 19	
	<i>eS·NE</i>	42 16	
	<i>eSS·E</i>	47.5	
	<i>L·NE</i>	58	
	<i>M·NE</i>	19 03	25 ^s . N: 12 μ , E: 12 μ .
	<i>M·NE</i>	04	16 ^s . N: 12 μ , E: 12 μ .
	$\Delta = 80^\circ$. Japan.		
13	<i>iPKP·Z'</i>	17 42 37	-
	<i>iPP·Z</i>	46 40	
	<i>eSKSP·NE</i>	57 11	
	<i>iSSS·N</i>	18 13 14	
	<i>L·NE</i>	39	
	$\Delta = 156^\circ$. Kermadec Islands region.		
14	<i>L·NE</i>	14 26	
15	<i>L·NE</i>	8 43	

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November

15 *eP·Z'Z* 16^h41^m39^s
eS·N 50 46
e·E 51 20
L·NE 17 04
 $\Delta = 70^\circ$. Kamchatka.

17 *eSSS·N* 16 24.6
L·NE 46
 $\Delta = 125^\circ$. Southern Chile.

17 (i)·*Z'* 18 39 46 in the time break.

18 *eP·Z'* 10 23 33
L·NE 56
 $\Delta = 73^\circ$. Aleutian Islands.

18 *iP·Z'* 15 24 32 +
 $\Delta = 74^\circ$. Kurile Islands.

19 (i)·*P·Z'* 16 24 47 in the time break.
 $\Delta = 72^\circ$. $h = 100$ km. Kurile Islands.

20 *eP·Z'Z* 12 51 45
i·Z 51 49
eS·NE 13 01 09
iPS·NE 01 23
iSKS·N 01 41
eSS·N 06.2
SSS·N 09 15
L·NE 16
M·E 22 22^s, 15 μ .
M·E 26 20^s, 15 μ .
M·N 34 16^s, 15 μ .
 $\Delta = 72^\circ$. Unimak Island.

25 *eP·Z* 22 48.8
ePS·ZE 23 01 42
ePPS·E 02 41
eSS·NE 07.3
L·NE 23
 $\Delta = 99^\circ$. Borneo.

26 *eP·Z* 5 23 51
eSKS·E 34 32
ePS·EZ 36 36
ePPS·E 37 44
eSS·E 42.4
L·NE 6 00
 $\Delta = 99^\circ$. Borneo.

26 *L·ZNE* 8 26

26 *eP·Z'Z* 11 54 19
eS·ZN 57.7
L·E 58.8
 $\Delta = 18^\circ$. Greece.

November

27 *eP·Z'N* 3^h12^m16^s
eS·ZNE 15 42
L·E 18.5
 $\Delta = 18^\circ$. Greece.

27 *e·Z'* 13 32 04 doubtful.

28 *iPKP·Z* 21 09 34
ePP·Z 12 16
ePKS·ZNE 13 09
L·NE 22 01
 $\Delta = 135^\circ$. New Hebrides.

29 *e·E* 3 14.3
e·N 15 29
(L)·*NE* 20.2

29 *iP·Z* 22 33 19 3^s, -5 μ .
ipP·ZE 34 14 Z: 5^s, 8 μ .
iPP·ZE 37 35
ipPP·ZE 38 18 Z: 5^s, 10 μ .
isPP·E 38 30
iSKS·E 43 34 12^s, +130 μ .
i·N 43 36
i(SKKS)·E 43 47 12^s, -200 μ .
i·E 44 11
iS·N 44 28
Wiechert readings.
 $\Delta = 101^\circ$. $h = 200$ km. Southern Bolivia.

30 *iP·Z'Z* 22 05 41
eS·N 15.2
L·NE 31
 $\Delta = 73^\circ$. Kurile Islands.

December

1 *iP·Z'Z* 1 11 56
 $\Delta = 73^\circ$. Kurile Islands.

1 *eP·Z'Z* 1 20 30
i·Z 20 32 -
L·E 38
L·N 41
 $\Delta = 73^\circ$. Kurile Islands.

2 *eP·Z'* 12 53 36
 $\Delta = 21^\circ$. Algeria.

3 *iP·Z'* 0 04 57
 $\Delta = 29^\circ$. $h = 100$ km. Peary Land, Greenland.

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December

4 *eP·Z'Z* 3^h47^m00^s
iP·Z 47 04 5^s, + 35 μ .
 Wiechert readings:
ePcP·Z 48 17
ePP·Z 49 00
ePPP·E 49 45
iS·NE 54 45 16^s. N: 130 μ , E: 200 μ .
i·NE 54 55
 The pens on the Wiechert instruments thrown off at about 4^h10^m. The following is an estimate from the Benioff-record.
M·Z' 4 11 7^s, 3000 μ .
 $\Delta = 53^\circ$. Outer Mongolia.

4 *L·NE* 9 38

4 *L·NE* 11 45

4 *eP·Z'* 13 29 36
L·E 46.5
L·N 47.8
 $\Delta = 53^\circ$. Outer Mongolia.

5 *eS·N* 14 10 50
L·N 13.5
 $\Delta = 15^\circ$. Greenland Sea.

5 *L·NE* 18 37

6 *iP·Z'* 4 01 04
 Kurile Islands.

9 *eP·Z'* 22 17 26
 $\Delta = 57^\circ$. Alaska.

10 *iPP·Z* 14 56 37
ePPP·N 59 19
eSS·N 15 13.3
L·NE 31
M·E 33 35^s, 20 μ .
M·N 50 18^s, 15 μ .
 $\Delta = 122^\circ$. Solomon Islands.

13 *iP·Z'* 1 44 24
 $\Delta = 84^\circ$. $h = 100$ km. Colombia.

13 *iP·Z'Z* 1 51 31 6^s, + 20 μ .
i·E 52 25
i·E 56 32
i·N 56 35
iS·N 56 47 7^s, 12 μ .
iS·E 56 52
i·N 2 01 13 8^s, 30 μ .
M·E 07 18^s, 100 μ .
M·N 09 18^s, 100 μ .
 $\Delta = 33^\circ$. Iran.

December

13 *eP·Z* 20^h37^m52^s
eS·NE 47 32
e·N 48 10
eSS·N 52.3
L·NE 21 05
 $\Delta = 73^\circ$. Aleutian Islands.

17 *iP·Z'* 5 21 28 +
eS·N 30 31
iS·E 30 34
i(PS)·N 30 47
i(SKS)·N 31 26
L·NE 45
M·NE 6 01 14^s, N: 30 μ , E: 25 μ .
 $\Delta = 69^\circ$. East Coast of Kamchatka.

17 *iPKP·Z'Z* 14 09 22
 Wiechert readings:
iPP·Z'ZNE 11 48
iPKS·NE(Z) 12 52 8^s. N: 30 μ , E: 20 μ .
i·NE 13 26
e·E 22 47
L·NE 52
M·N 15 02 28^s, 100 μ .
M·E 11 20^s, 40 μ .
 $\Delta = 132^\circ$. Santa Cruz Islands.

23 *iP·Z'* 12 41 34
iS·NE 47 30
L·N 51.6
L·E 52.6
 $\Delta = 40^\circ$. North Atlantic Ocean.

25 *L·NE* 2.9

25 *L·NE* 17 02

26 *ePKP·Z'* 12 29 08
i·Z' 29 18
iPKP2·Z' 29 36
 $\Delta = 156^\circ$. Kermadec Islands.

28 *L·NE* 15 24

31 *iP·Z* 10 26 54
eS·N 31 09
L·NE 33.5
 $\Delta = 24^\circ$. North Atlantic Ocean.

31 *iPKP·Z* 14 48 16 +
ePKP2·Z 49 20
ePP·Z 52 48
e·NE 53 06
ePPP·Z 56 41
L·NE 15 50
 $\Delta = 160^\circ$. New Zealand.

January 1958.

HENRY JENSEN

Microseisms. København

1957		Z				N				E				1957	
Oct.		0h	6h	12h	18h	0h	6h	12h	18h	0h	6h	12h	18h	Oct.	
1		2 0.2 3.6	2 0.2 2.8	2 0.2 3.3	2 0.2 3.6	2 0.3 4.0	2 0.3 3.8	2 0.4 3.4	2 0.3 3.6	2 0.5 3.9	2 0.3 3.4	2 0.4 3.6	2 0.3 3.4	1	
2		2 0.3 4.0	2 0.2 3.6	2 0.4 3.9	2 0.5 4.0	2 0.4 4.0	2 0.4 3.8	2 0.5 4.0	2 0.5 4.0	2 0.5 4.2	2 0.5 3.9	2 0.4 3.8	2 0.7 3.9	2	
3		1 0.5 4.0	1 0.7 4.2	1 1.1 3.5	1 1.2 3.4	1 0.7 4.0	1 0.8 4.3	1 1.2 3.6	1 1.2 3.4	1 0.8 4.0	1 1.2 4.0	1 1.5 3.2	1 1.4 3.0	3	
4		2 0.8 3.1	.. ..	2 1.2 3.7	2 0.8 3.6	2 1.0 3.5	.. ..	2 1.2 4.0	2 0.9 3.9	2 1.1 3.4	.. ..	2 1.1 4.0	2 1.1 4.0	4	
5		2 0.7 4.0	2 0.5 3.7	.. ..	2 0.6 3.2	2 0.8 4.0	2 0.8 3.5	.. ..	.. ..	2 1.2 4.0	2 0.7 3.5	.. ..	2 0.6 3.3	5	
6		2 0.4 3.3	2 0.2 3.4	2 0.4 4.0	2 0.6 4.0	.. ..	.. ..	2 0.6 4.0	2 0.7 4.2	2 0.6 3.5	2 0.7 3.7	2 0.7 4.1	2 0.7 4.0	6	
7		2 0.5 4.5	2 0.6 4.0	2 0.5 3.5	2 0.6 3.5	2 0.7 4.2	2 0.7 4.0	2 0.6 3.8	2 0.6 3.6	2 0.7 4.1	2 0.8 4.0	2 0.7 3.9	2 0.6 3.6	7	
8		2 0.4 3.7	2 0.4 4.2	2 0.6 4.0	2 0.6 4.5	2 0.4 3.9	2 0.3 3.9	2 0.7 4.2	2 0.6 4.5	2 0.7 3.9	2 0.6 4.5	2 1.0 4.7	2 1.0 4.8	8	
9		2 0.7 4.5	2 0.6 4.4	2 1.0 5.0	.. ..	2 0.7 4.6	2 0.8 5.0	2 1.- 5.0	1 1.0 4.3	2 0.9 4.7	2 1.0 4.6	2 1.0 5.0	1 1.0 4.3	9	
10		.. ..	.. ..	1 1.0 5.2	1 0.8 5.4	1 1.0 5.0	1 1.0 5.5	1 1.1 4.8	1 1.0 4.6	1 1.0 4.7	1 1.0 4.4	1 1.1 5.5	1 1.0 4.4	10	
11		1 0.8 4.6	1 0.7 4.6	1 0.6 4.6	1 0.7 4.3	1 1.1 5.3	1 1.0 4.8	1 0.8 4.6	1 0.8 4.4	1 1.0 4.7	1 1.1 4.5	1 0.8 4.6	1 1.2 4.5	11	
12		1 0.7 4.4	1 0.6 4.5	1 0.6 4.4	1 0.6 4.4	1 1.0 4.7	1 1.0 4.3	1 0.1 4.8	1 0.6 4.5	1 1.0 4.7	1 0.8 4.9	1 0.8 4.4	1 0.8 4.5	12	
13		1 0.7 4.4	1 0.6 4.4	1 1.0 4.5	1 1.1 4.6	1 0.8 5.0	1 0.9 4.8	1 1.0 4.7	1 1.1 5.2	1 0.9 4.3	1 1.1 4.7	1 1.1 4.6	1 1.2 5.0	13	
14		1 2.0 4.7	1 2.2 4.9	1 1.5 5.0	1 1.0 4.9	1 2.0 4.5	1 2.2 5.6	1 2.0 4.9	1 1.1 4.7	1 2.0 5.0	1 2.4 5.3	1 2.0 4.7	1 1.1 4.8	14	
15		1 0.7 4.7	1 0.6 4.3	1 0.8 4.4	1 0.6 4.6	1 0.8 5.0	1 0.7 4.4	1 0.7 4.7	1 0.7 4.0	1 0.9 4.7	1 0.8 4.4	1 1.0 4.6	1 0.9 4.4	15	
16		3 0.6 4.4	3 0.6 4.2	3 0.4 4.1	3 0.6 4.0	3 0.6 4.5	3 0.7 4.0	3 0.4 3.8	1 0.7 4.1	3 0.8 4.3	3 0.7 4.0	3 0.6 4.1	1 0.7 4.1	16	
17		3 0.4 3.6	3 0.4 3.6	2 0.4 3.0	2 0.5 3.0	1 0.8 4.0	1 0.7 3.6	2 0.4 3.1	2 0.5 3.9	1 0.7 4.1	1 0.8 3.2	2 0.6 3.2	2 0.6 3.4	17	
18		2 0.4 3.6	2 0.4 3.5	2 0.6 3.0	2 0.5 3.4	2 0.3 4.3	2 0.5 4.3	2 0.6 3.6	2 0.3 3.5	2 0.6 3.6	2 0.7 3.7	2 0.7 3.5	2 0.6 3.6	18	
19		2 0.4 3.7	2 0.6 3.4	2 0.7 3.3	2 0.6 3.0	2 0.4 3.4	2 0.6 3.4	2 0.7 3.9	2 0.7 3.9	2 0.4 4.0	2 0.8 3.5	2 0.8 3.4	2 0.8 3.5	19	
20		2 0.7 3.2	2 0.4 3.5	2 0.4 3.3	2 0.4 3.6	1 0.5 3.6	1 0.5 4.0	1 0.5 3.4	1 0.6 3.8	1 0.6 4.2	1 0.5 3.5	2 0.5 3.8	2 0.6 3.5	20	
21		2 0.5 3.7	2 0.5 3.8	2 0.6 3.5	2 0.6 3.4	2 0.7 3.7	2 0.8 3.9	2 0.6 4.4	2 0.6 3.8	2 0.7 3.2	2 0.8 3.9	2 0.8 3.8	2 0.7 3.5	21	
22		2 0.5 3.9	2 0.3 3.5	2 0.2 4.3	2 0.3 3.8	2 0.6 4.0	2 0.5 4.0	2 0.6 4.0	2 0.4 3.7	2 0.6 4.1	2 0.6 3.7	2 0.6 3.4	2 0.5 3.9	22	
23		2 0.2 4.3	2 0.2 4.4	1 1.0 4.3	1 0.8 4.6	2 0.2 3.7	2 0.5 4.1	1 0.8 4.9	1 0.8 4.5	2 0.5 4.1	2 0.5 4.3	1 1.0 4.6	1 1.0 4.5	23	
24		1 0.9 4.3	1 1.0 4.6	1 1.5 4.8	1 2.- 5.4	1 0.8 4.6	1 0.9 4.7	1 1.8 5.3	1 2.- 4.9	1 1.2 4.0	1 1.4 4.0	1 1.8 5.2	1 2.- 5.3	24	
25		1 3.- 5.5	1 1.4 5.3	1 0.8 5.2	1 0.6 4.5	1 3.- 5.8	1 2.- 5.5	1 1.0 5.5	1 0.8 4.5	1 1.6 5.2	1 1.6 4.6	1 1.4 5.4	1 1.0 4.8	25	
26		1 0.5 4.5	1 0.5 4.7	2 0.6 4.1	2 0.6 4.6	1 0.6 4.6	2 0.5 4.5	2 0.5 4.7	2 0.7 4.2	1 0.8 4.5	1 0.8 4.8	2 0.6 4.7	2 0.7 4.8	26	
27		2 0.8 5.0	1 0.6 5.0	1 0.8 5.2	1 2.- 5.2	2 0.6 4.7	2 0.9 4.0	2 0.9 4.6	1 2.- 5.0	2 0.8 4.9	1 1.0 5.2	1 1.6 5.1	1 1.9 5.0	27	
28		1 3.- 5.8	1 3.- 7.-	1 3.- 5.8	1 2.- 6.6	1 2.- 6.0	1 4.- 7.-	1 4.- 6.5	1 4.- 6.0	1 2.8 5.7	1 3.- 5.5	1 3.- 6.3	1 4.- 5.5	28	
29		1 2.- 5.5	1 1.6 5.2	.. ..	2 1.4 5.1	1 2.- 5.3	1 1.8 4.9	.. ..	1 1.5 5.6	1 2.4 5.0	1 2.0 4.9	.. ..	1 1.4 5.3	29	
30		2 1.0 4.7	2 1.0 5.0	2 0.6 4.6	2 0.6 4.5	1 1.4 5.3	2 0.9 5.1	2 0.7 4.9	1 1.1 5.9	1 1.5 4.4	2 1.0 4.4	2 1.1 4.2	2 0.9 4.5	30	
31		2 0.7 4.6	2 1.1 4.9	1 0.7 5.2	1 0.8 5.0	1 1.0 5.2	1 1.1 4.7	1 0.8 5.4	1 0.8 4.7	1 0.9 4.9	1 0.8 4.9	1 1.2 4.7	1 1.4 4.6	31	

Microseisms. København

1957	Z				N				E				1957				
Nov.	0h	6h	12h	18h	0h	6h	12h	18h	0h	6h	12h	18h	Nov.	0h	6h	12h	18h
1	2.- 6.4	1 4.- 7.-	1 3.- 6.-	1 2.- 6.-	1 1.5 5.0	1 2.- 6.-	1 3.- 6.-	1 2.- 6.-	1 2.0 5.6	1 4.- 6.-	1 3.- 7.-	1 2.- 5.-	1	2.0 5.6	1 4.- 6.-	1 3.- 7.-	1 2.- 5.-
2	3 2.2 5.5	3 1.5 5.0	3 1.1 4.7	2 1.0 5.2	3 2.5 4.8	3 1.9 5.2	3 1.1 4.8	2 1.1 4.9	3 1.8 5.2	3 2.2 4.9	3 1.2 5.0	1 1.4 5.2	2	3 1.8 5.2	3 2.2 4.9	3 1.2 5.0	1 1.4 5.2
3	2 1.0 5.0	2 1.1 4.7	1 1.2 5.1	1 1.6 4.7	2 1.1 5.0	2 1.2 5.3	1 1.9 5.4	1 2.2 5.2	1 1.4 5.0	1 1.6 4.7	1 1.9 4.9	1 2.5 4.8	3	1 1.4 5.0	1 1.6 4.7	1 1.9 4.9	1 2.5 4.8
4	1 1.8 4.7	1 1.8 4.7	1 1.9 5.5	1 3.- 6.0	1 2.2 4.6	1 2.0 5.2	1 2.0 5.6	1 2.8 5.2	1 2.9 5.2	1 2.3 5.5	1 3.- 5.6	1 4.- 5.6	4	1 2.9 5.2	1 2.3 5.5	1 3.- 5.6	1 4.- 5.6
5	1 3.- 5.4	1 2.- 5.5	1 1.8 5.2	1 2.- 4.9	1 3.- 5.8	1 1.8 5.5	1 2.2 4.6	1 1.5 4.4	1 4.- 5.4	1 3.- 5.2	1 2.0 4.9	1 1.6 4.3	5	1 4.- 5.4	1 3.- 5.2	1 2.0 4.9	1 1.6 4.3
6	1 1.8 4.5	1 2.1 4.9	1 2.0 4.6	1 1.8 4.7	1 1.6 4.4	1 2.0 4.7	1 2.1 4.3	1 2.1 4.4	1 2.2 4.6	1 2.6 4.6	1 1.8 4.9	1 1.6 5.2	6	1 2.2 4.6	1 2.6 4.6	1 1.8 4.9	1 1.6 5.2
7	2 1.5 4.6	2 0.8 5.0	2 0.8 4.6	2 1.0 4.9	1 1.4 4.8	2 0.9 4.6	2 1.0 4.2	2 1.0 4.3	1 1.4 4.6	2 1.0 5.0	2 1.0 4.7	2 1.0 4.7	7	1 1.4 4.6	2 1.0 5.0	2 1.0 4.7	2 1.0 4.7
8	2 0.8 4.7	1 1.0 5.2	2 0.8 4.5	2 0.7 4.4	2 1.0 4.5	2 1.0 5.2	2 0.9 4.7	2 0.9 4.6	2 1.0 5.0	1 1.4 4.8	2 0.9 4.7	2 0.8 5.5	8	2 1.0 5.0	1 1.4 4.8	2 0.9 4.7	2 0.8 5.5
9	2 0.6 4.4	2 0.5 4.4	2 0.6 4.2	2 0.6 3.5	2 0.8 4.3	2 0.8 4.2	2 0.7 4.0	2 0.8 4.1	2 0.7 4.4	2 0.6 4.8	2 0.7 4.4	2 0.7 4.0	9	2 0.7 4.4	2 0.6 4.8	2 0.7 4.4	2 0.7 4.0
10	3 0.6 3.8	3 0.7 4.0	2 0.5 4.4	2 0.6 4.2	3 0.7 4.0	3 0.7 3.9	2 0.7 3.9	2 0.6 4.1	3 0.6 4.0	3 1.1 4.2	2 0.6 4.4	2 0.7 4.0	10	3 0.6 4.0	3 1.1 4.2	2 0.6 4.4	2 0.7 4.0
11	2 0.5 4.1	2 0.6 4.9	3 0.7 4.8	3 0.8 4.2	2 0.6 3.8	2 0.6 4.3	2 0.8 4.7	2 1.3 4.1	2 0.7 3.9	2 0.6 4.3	3 0.9 5.0	2 1.0 4.4	11	2 0.7 3.9	2 0.6 4.3	3 0.9 5.0	2 1.0 4.4
12	2 1.0 4.1	1 1.0 4.8	1 1.4 5.6	1 1.7 5.3	2 0.9 4.5	1 1.2 4.9	1 1.4 5.0	1 2.1 5.0	2 1.0 4.7	1 1.2 5.2	1 3.0 5.3	1 2.9 4.9	12	2 1.0 4.7	1 1.2 5.2	1 3.0 5.3	1 2.9 4.9
13	1 3.0 5.7	1 3.0 5.2	1 1.4 5.6	...	1 2.7 5.2	1 2.9 4.9	1 1.6 5.2	...	1 3.5 5.1	1 3.5 5.2	1 2.1 5.3	...	13	1 3.5 5.1	1 3.5 5.2	1 2.1 5.3	...
14	1 0.7 4.9	2 0.5 4.9	2 0.5 4.8	2 0.5 4.1	1 1.0 4.9	2 0.6 4.8	2 0.5 4.5	2 0.4 4.7	2 0.8 5.0	1 1.0 5.5	2 0.6 4.6	2 0.6 4.2	14	2 0.8 5.0	1 1.0 5.5	2 0.6 4.6	2 0.6 4.2
15	2 0.4 4.7	2 0.4 4.7	2 0.9 4.7	1 1.0 5.0	2 0.5 4.3	2 0.5 4.5	2 0.6 4.7	1 1.4 5.0	2 0.6 4.7	2 0.6 4.5	1 0.8 4.6	1 1.1 5.3	15	2 0.6 4.7	2 0.6 4.5	1 0.8 4.6	1 1.1 5.3
16	1 0.9 5.4	1 1.0 5.4	1 1.1 5.4	1 1.0 5.0	1 1.5 5.6	1 1.5 5.3	1 1.4 5.2	1 1.3 5.0	1 2.0 5.1	1 2.4 5.0	1 2.2 5.2	1 1.9 5.0	16	1 2.0 5.1	1 2.4 5.0	1 2.2 5.2	1 1.9 5.0
17	1 1.0 4.8	2 0.8 4.8	2 0.4 4.7	2 0.4 4.3	1 1.0 4.6	2 0.6 4.5	2 0.4 4.4	2 0.4 4.6	1 1.2 4.7	2 0.8 4.7	2 0.7 4.3	2 0.4 4.4	17	1 1.2 4.7	2 0.8 4.7	2 0.7 4.3	2 0.4 4.4
18	2 0.5 4.6	3 0.5 4.4	3 0.8 5.3	...	2 0.5 4.7	3 0.7 5.0	2 0.8 4.9	2 0.7 4.9	2 0.5 4.8	3 0.6 5.3	3 0.5 5.5	2 1.0 5.0	18	2 0.5 4.8	3 0.6 5.3	3 0.5 5.5	2 1.0 5.0
19	...	...	3 0.5 4.8	3 0.6 5.-	2 0.6 4.7	2 0.6 5.3	2 0.8 5.2	3 0.7 4.7	2 0.9 4.6	2 1.0 4.8	3 0.9 4.7	3 0.9 5.-	19	2 0.9 4.6	2 1.0 4.8	3 0.9 4.7	3 0.9 5.-
20	3 0.7 5.-	3 0.8 5.0	3 0.8 5.-	...	3 0.9 5.-	3 0.9 5.-	3 1.0 5.0	3 0.9 5.-	3 0.9 5.-	3 0.9 5.-	3 1.0 5.-	3 1.0 5.-	20	3 0.9 5.-	3 0.9 5.-	3 1.0 5.-	3 1.0 5.-
21	...	...	2 0.7 4.5	2 0.9 5.0	3 0.6 4.9	3 0.9 4.0	2 0.9 4.3	2 1.0 4.5	3 0.7 4.7	2 0.9 5.2	2 0.9 4.8	2 1.0 4.5	21	3 0.7 4.7	2 0.9 5.2	2 0.9 4.8	2 1.0 4.5
22	2 0.9 4.2	1 1.0 4.5	1 1.8 4.6	1 1.5 4.5	1 1.0 4.5	1 1.2 4.7	1 1.9 4.7	1 1.5 4.5	1 1.1 4.4	1 1.4 4.8	1 2.4 4.8	1 1.7 5.2	22	1 1.1 4.4	1 1.4 4.8	1 2.4 4.8	1 1.7 5.2
23	1 1.9 4.9	3 0.9 4.1	3 1.0 4.0	1 0.9 4.6	1 1.9 4.9	3 1.1 4.0	3 0.8 4.2	3 1.4 4.-	1 1.5 4.8	3 0.8 3.9	3 0.7 4.1	3 0.9 4.3	23	1 1.5 4.8	3 0.8 3.9	3 0.7 4.1	3 0.9 4.3
24	1 1.0 4.8	1 1.2 5.1	1 1.0 5.2	1 1.0 5.0	1 1.1 5.3	1 1.2 5.3	1 1.3 5.1	1 1.2 5.0	1 1.1 5.0	1 1.5 4.7	1 1.5 4.8	1 1.3 4.9	24	1 1.1 5.0	1 1.5 4.7	1 1.5 4.8	1 1.3 4.9
25	2 1.1 4.3	2 1.1 4.7	1 0.8 5.0	1 0.9 4.6	1 1.1 5.3	1 1.1 4.5	1 1.2 4.6	1 1.0 5.2	1 1.3 4.7	1 1.1 4.6	2 1.0 5.2	2 1.0 4.8	25	1 1.3 4.7	1 1.1 4.6	2 1.0 5.2	2 1.0 4.8
26	...	...	...	2 0.9 4.8	...	...	...	2 1.0 4.6	...	...	...	1 1.1 4.5	26	...	...	...	1 1.1 4.5
27	2 1.1 5.0	2 1.0 4.4	2 0.8 5.0	2 0.6 4.6	2 0.9 4.6	2 1.1 4.3	2 1.0 4.2	2 1.1 4.1	1 1.5 4.8	1 1.4 4.7	1 1.1 4.4	2 1.0 4.4	27	1 1.5 4.8	1 1.4 4.7	1 1.1 4.4	2 1.0 4.4
28	2 0.7 4.5	2 0.6 4.0	2 0.6 4.2	2 0.6 4.5	2 0.7 4.4	2 0.6 4.4	2 0.7 3.9	2 0.8 4.0	2 1.0 4.0	2 0.9 4.2	2 1.0 4.2	2 0.8 4.0	28	2 1.0 4.0	2 0.9 4.2	2 1.0 4.2	2 0.8 4.0
29	1 1.0 3.8	2 0.7 3.9	2 0.7 4.1	1 0.8 4.4	2 1.0 3.6	2 0.7 3.4	2 0.8 4.2	1 0.8 4.4	2 0.7 3.5	2 0.8 4.1	2 0.7 5.0	2 0.9 4.3	29	2 0.7 3.5	2 0.8 4.1	2 0.7 5.0	2 0.9 4.3
30	...	2 0.6 4.4	2 0.8 4.5	2 0.6 4.8	...	2 0.8 4.6	2 0.6 4.7	2 0.6 4.8	...	2 0.7 4.3	2 0.6 4.6	2 0.6 4.5	30	...	2 0.7 4.3	2 0.6 4.6	2 0.6 4.5

Microseisms. København

1957 Dec.	Z				N				E				18h	12h	6h	0h
	0h	6h	12h	18h	0h	6h	12h	18h	0h	6h	12h	18h				
1	2 0.5 4.5	3 0.5 4.5	2 0.4 4.4	2 0.4 4.6	2 0.6 4.3	3 0.5 4.5	3 0.5 4.5	3 0.5 4.8	2 0.5 4.4	3 0.6 4.5	3 0.6 4.5	3 0.6 4.5	3 0.7 4.5	3 0.6 4.5	3 0.6 4.5	2 0.5 4.4
2	2 0.4 4.8	2 0.4 4.7	1 1.1 4.8	1 1.2 4.8	2 0.5 4.9	2 0.7 4.8	1 1.1 4.7	1 1.4 4.7	2 0.6 4.8	2 0.8 4.5	1 1.2 4.9	1 1.5 4.8	1 1.5 4.8	1 1.2 4.9	1 1.2 4.9	2 0.6 4.8
3	1 0.9 4.6	1 0.8 4.7	1 0.9 4.9	1 1.0 5.0	1 1.4 4.6	1 0.9 4.6	1 1.2 4.7	1 0.9 4.5	1 1.0 4.9	1 1.2 4.7	1 1.2 4.7	1 1.0 4.9	1 1.0 4.9	1 1.2 4.7
4	1 0.7 5.0	.. ..	.. ..	2 1.3 4.5	.. ..	.. ..	.. ..	1 1.5 5.0	2 0.9 5.1	.. ..	.. ..	1 1.4 5.4	1 1.4 5.4	.. ..	2 0.9 5.1
5	1 2.6 5.0	1 2.0 4.7	1 1.9 5.7	1 1.4 4.9	1 2.2 5.2	1 2.0 5.2	1 1.5 5.2	1 1.5 5.5	1 2.3 4.8	1 3.0 5.6	1 2.0 4.9	1 1.3 5.0	1 1.3 5.0	1 2.0 4.9	1 3.0 5.6	1 2.3 4.8
6	1 1.1 5.0	1 2.0 5.4	1 2.0 5.4	1 1.6 4.8	1 1.2 5.0	1 2.5 5.3	1 2.6 5.0	1 2.0 4.8	1 1.7 5.3	1 1.9 5.5	1 1.8 4.9	1 2.0 4.5	1 2.0 4.5	1 1.8 4.9	1 1.9 5.5	1 1.7 5.3
7	1 1.1 4.3	1 1.7 4.7	1 1.7 4.6	1 1.2 4.7	1 1.6 4.4	2 1.4 4.4	2 1.5 4.8	2 1.3 4.5	1 1.5 1.4	1 1.9 4.7	1 1.2 4.6	1 1.2 4.9	1 1.2 4.9	1 1.2 4.6	1 1.9 4.7	1 1.5 1.4
8	3 0.8 5.0	3 2.0 5.0	3 4.0 6.0	3 4.0 5.0	2 1.2 4.8	3 2.2 5.0	3 3.0 6.0	3 5.0 4.5	3 1.3 4.4	3 2.2 4.6	3 3.0 6.0	3 5.0 4.5	3 5.0 4.5	3 3.0 6.0	3 2.2 4.6	3 1.3 4.4
9	3 4.0 5.0	3 2.6 4.0	3 1.4 4.0	3 1.0 4.3	3 3.0 5.0	3 2.0 4.4	3 1.4 4.4	3 1.2 4.2	3 4.0 4.6	3 1.8 4.4	3 1.4 4.7	3 1.2 4.8	3 1.2 4.8	3 1.4 4.7	3 1.8 4.4	3 4.0 4.6
10	3 1.1 4.4	3 1.2 4.2	.. ..	3 0.7 4.5	3 0.9 4.4	3 1.0 4.7	.. ..	3 1.0 4.4	3 1.1 4.7	3 1.6 4.5	.. ..	3 1.4 4.2	3 1.4 4.2	.. ..	3 1.1 4.7
11	3 1.1 4.5	3 1.3 4.3	3 1.8 4.4	.. ..	3 1.4 4.2	3 1.5 4.8	3 1.7 4.5	3 2.7 4.2	3 1.6 4.7	3 1.8 4.9	3 2.0 4.4	3 3.4 4.0	3 3.4 4.0	3 2.0 4.4	3 1.6 4.7
12	.. ..	.. ..	3 1.4 4.6	3 1.3 4.8	3 2.0 4.3	3 1.7 4.7	3 1.7 4.3	3 1.4 5.0	3 2.5 4.4	3 2.0 4.3	3 1.8 4.7	3 1.2 4.8	3 1.2 4.8	3 1.8 4.7	3 2.5 4.4
13	3 1.0 4.3	3 0.6 4.2	3 0.6 3.9	3 0.5 3.5	3 0.9 4.4	3 0.6 4.0	3 0.6 3.7	3 0.6 3.6	3 1.1 4.6	3 0.8 4.0	3 0.8 3.6	3 0.6 3.7	3 0.6 3.7	3 0.8 3.6	3 1.1 4.6	
14	3 0.6 3.5	3 0.6 3.6	3 0.7 3.5	3 0.6 3.5	3 0.7 3.4	3 0.6 3.4	3 0.6 3.5	3 0.6 3.5	3 0.6 3.5	3 0.7 3.2	3 0.7 3.2	3 0.7 3.6	3 0.7 3.6	3 0.7 3.2	3 0.6 3.5	
15	1 0.8 4.2	.. ..	1 1.2 5.4	1 1.0 5.3	3 0.7 3.9	1 1.0 4.9	1 1.1 5.0	2 1.0 5.1	3 0.8 4.1	1 1.2 5.1	1 0.9 5.2	2 0.9 4.7	2 0.9 4.7	1 0.9 5.2	3 0.8 4.1
16	3 2.0 5.2	3 3.0 5.4	3 2.8 7.0	3 2.8 6.0	3 2.3 5.6	3 3.3 5.6	3 3.0 6.5	3 3.0 6.0	3 1.7 5.3	3 2.4 5.8	3 2.5 6.5	3 5.8 5.3	3 5.8 5.3	3 2.5 6.5	3 1.7 5.3	
17	3 2.3 5.7	.. ..	3 2.3 5.9	3 2.3 6.2	3 2.5 5.8	.. ..	3 3.0 6.0	3 2.5 6.4	3 2.7 5.7	.. ..	3 2.5 5.4	3 2.2 5.4	3 2.2 5.4	3 2.5 5.4	3 2.7 5.7
18	2 1.8 5.4	.. ..	2 0.9 4.9	2 1.0 4.8	3 2.1 5.7	2 1.5 5.2	2 1.0 4.8	2 1.4 5.1	2 1.6 5.4	2 1.5 4.8	2 1.0 4.6	2 1.0 4.8	2 1.0 4.8	2 1.0 4.6	2 1.6 5.4
19	2 1.1 5.2	2 1.0 4.7	.. ..	.. ..	2 1.2 5.1	2 1.0 4.8	3 1.2 5.2	3 1.0 4.6	2 1.4 5.1	2 1.1 4.9	2 1.1 4.6	3 1.1 4.9	3 1.1 4.9	2 1.1 4.6	2 1.4 5.1
20	.. ..	.. ..	.. ..	.. ..	3 1.5 4.9	3 1.8 4.8	3 2.3 5.4	3 2.8 5.5	3 1.5 4.9	3 1.7 4.7	3 2.5 5.2	3 2.5 5.5	3 2.5 5.5	3 2.5 5.2	3 1.5 4.9
21	.. ..	.. ..	.. ..	.. ..	3 2.6 5.5	3 2.5 5.1	3 2.4 5.1	3 2.3 5.2	3 3.2 4.8	3 2.7 5.0	3 2.5 5.1	.. ..	.. ..	3 2.5 5.1	3 3.2 4.8
22	.. ..	.. ..	.. ..	.. ..	3 1.8 5.4	3 1.9 4.9	3 1.6 4.8	3 1.4 4.6	.. ..	.. ..	3 1.5 4.7	3 1.5 4.9	3 1.5 4.9	3 1.5 4.7	.. ..
23	.. ..	.. ..	.. ..	.. ..	1 1.9 5.0	1 2.1 5.2	1 1.8 4.8	1 1.5 5.0	1 2.0 5.0	1 2.2 5.2	1 2.0 4.9	1 1.8 4.9	1 1.8 4.9	1 2.0 4.9	1 2.0 5.0
24	.. ..	.. ..	.. ..	.. ..	1 1.7 4.7	2 1.2 4.6	2 0.9 4.6	3 0.6 5.0	1 1.7 4.6	3 1.4 4.7	3 0.7 4.8	3 0.6 4.5	3 0.6 4.5	3 0.7 4.8	1 1.7 4.6
25	.. ..	.. ..	.. ..	.. ..	3 0.6 4.6	3 0.5 5.0	3 0.6 5.1	3 1.4 4.7	3 0.5 4.5	3 0.7 4.6	3 0.9 4.8	3 1.7 5.4	3 1.7 5.4	3 0.9 4.8	3 0.5 4.5
26	.. ..	.. ..	.. ..	.. ..	3 2.0 5.2	3 2.0 5.5	3 2.2 5.7	3 1.8 5.2	3 1.5 5.5	3 2.2 5.3	3 1.8 4.6	3 1.7 5.4	3 1.7 5.4	3 1.8 4.6	3 1.5 5.5
27	.. ..	.. ..	.. ..	.. ..	3 1.6 5.0	3 1.5 4.8	3 1.3 4.9	3 1.5 4.7	3 2.0 5.5	3 1.7 5.2	3 1.5 4.8	3 1.7 5.4	3 1.7 5.4	3 1.5 4.8	3 2.0 5.5
28	.. ..	.. ..	.. ..	.. ..	1 1.6 4.9	1 1.7 5.0	1 1.5 5.1	1 1.9 5.6	1 1.8 5.4	1 2.3 5.2	1 2.0 5.0	1 1.5 4.9	1 1.5 4.9	1 2.0 5.0	1 1.8 5.4
29	.. ..	.. ..	.. ..	.. ..	1 2.5 5.6	1 2.5 5.8	1 2.7 5.6	1 1.8 5.2	1 2.2 5.2	1 2.0 5.4	1 1.7 5.0	1 2.0 5.6	1 2.0 5.6	1 1.7 5.0	1 2.2 5.2
30	.. ..	.. ..	.. ..	.. ..	3 1.6 4.4	3 1.7 4.5	3 1.4 4.6	3 1.0 4.3	3 1.7 4.6	3 1.4 4.4	3 1.5 5.0	3 1.5 4.8	3 1.5 4.8	3 1.5 5.0	3 1.7 4.6
31	.. ..	.. ..	3 0.6 4.6	3 0.6 4.5	3 1.0 4.8	3 0.9 4.4	3 0.7 4.5	3 0.8 4.2	3 1.0 5.2	3 0.7 4.6	3 0.7 4.4	3 0.7 4.4	3 0.7 4.4	3 0.7 4.4	3 1.0 5.2