

GEODÆTISK INSTITUT
 Proviantgården · Copenhagen · Denmark

Bulletin of the seismological station

K Ø B E N H A V N

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

Lithologic foundation: chalk

Instruments

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

Benioff. *Z'.* $T_p = 1 \text{ sec,}$ $T_g = \frac{1}{4} \text{ sec,}$ $V_{\text{max}} = \text{abt. } 30\,000.$

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

Wiechert 1300 kg. *Z.* $T = 6 \text{ sec,}$ $\nu = 4:1,$ $\rho = 0.3 \text{ mm,}$ $V_0 = 150.$

Seismological Readings

Phases are indicated by the symbols used in ISS. Times are given in GMT. Positions of epicenters are most often due to 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. C means compression and D dilatation. The magnitudes given (M) are computed from the readings. Unless otherwise stated, the periods and amplitudes are due to readings on the Galitzin instruments.



January	
2	<i>eP·Z'</i> 5 ^h 19 ^m 30 ^s $\Delta = 85^\circ$. Sumatra.
2	<i>L·NE</i> 13 17
3	<i>iP·Z'</i> 11 32 35 C <i>L·NE</i> 47.5 $\Delta = 46^\circ$. Sinkiang Province, China.
3	<i>iP·Z'Z</i> 20 23 11 D <i>iS·NE</i> 26 10 N: -, E: -. $\Delta = 16^\circ$. $h = 250$ km. Tyrrhenian Sea.
4	<i>L·NE</i> 6.7
4	<i>eP·Z'</i> 12 55 03 <i>L·NE</i> 59.2 <i>iLg·Z'N</i> 13 00 16 $\Delta = 14^\circ$. Rumania.
7	<i>L·NE</i> 14 30
8	<i>L·NE</i> 15 46
9	<i>eS·ZNE</i> 4 07.8 <i>L·NE</i> 11 $\Delta = 22^\circ$. Turkey.
9	<i>iP·Z'Z</i> 7 31 41 C $\Delta = 43^\circ$. $h = 150$ km. Hindu Kush.
11	<i>L·NE</i> 3 13
11	<i>L·NE</i> 3 50
12	<i>L·NE</i> 2 34
12	<i>L·NE</i> 4 07
13	<i>iP·Z'Z</i> 15 54 11 C <i>iSKS·E</i> 16 04 43 - <i>iS·N</i> 05 39 - <i>iSS·NE</i> 12 39 N: +, E: -. <i>L·NE</i> 22 <i>M·NE</i> 26 20 ^s . N: 110 μ , E: 50 μ . <i>iG2·ZN</i> 17 23 48 N: 25 ^s , 85 μ . $\Delta = 100^\circ$. $h = 100$ km. $M = 7.6$. Peru.
13	<i>iP·Z'</i> 16 41 13 C $\Delta = 73^\circ$. Aleutian Islands.
14	<i>L·NE</i> 21 55
15	<i>iP·Z</i> 9 44 03 C <i>iSKS·E</i> 54 22 <i>iS·N</i> 55 41 <i>L·NE</i> 10 12 $\Delta = 101^\circ$. $h = 150$ km. Peru.

January	
16	<i>iPKP·Z'</i> 12 ^h 49 ^m 28 ^s D $\Delta = 144^\circ$. $h = 600$ km. Fiji Islands.
16	<i>iP·Z'</i> 20 59 31 C $\Delta = 61^\circ$. $h = 150$ km. Alaska.
23	<i>L·NE</i> 5 32
23	<i>L·NE</i> 8 26
23	<i>L·NE</i> 18 50
24	<i>L·NE</i> 5 28
25	<i>L·NE</i> 17 39
26	<i>eP·Z'</i> 9 48 41 <i>iPcP·Z'</i> 48 53 C $\Delta = 75^\circ$. Kurile Islands.
26	<i>eP·Z'</i> 9 57 21 <i>i·Z</i> 57 26 D <i>eS·NE</i> 10 01 40 <i>L·NE</i> 04.5 $\Delta = 25^\circ$. Turkey.
26	<i>eP·Z'</i> 13 10 30 <i>L·NE</i> 17 $\Delta = 22^\circ$. Turkey.
26	<i>iP·Z'</i> 20 30 04 C $\Delta = 13^\circ$. $h = 150$ km. Rumania.
26	<i>e(PKP)·Z'</i> 22 41 20
31	<i>iP·Z'Z</i> 5 20 22 <i>e·Z'Z</i> 20 39 <i>eS·NE</i> 30 17 <i>e(ScS)·N</i> 30 41 <i>eSS·NE</i> 35.5 <i>L·NE</i> 48 $\Delta = 79^\circ$. Japan.
February	
1	<i>iP·Z'Z</i> 12 04 32 C <i>i·Z'</i> 04 34 D <i>eS·NE</i> 08 38 <i>L·NE</i> 11 $\Delta = 23^\circ$. Crete.
2	<i>e·Z'</i> 12 39 30 <i>i(S)·Z'NE</i> 39 53 $\Delta = 14\frac{1}{2}^\circ$. Karelia, Finland.
3	<i>L·NE</i> 0 26
4	<i>L·NE</i> 4 43

February	
4	<i>eP·Z'Z</i> 17 ^h 02 ^m 19 ^s <i>eS·NE</i> 12 15 <i>L·NE</i> 29 Z' masked by strong microseisms. $\Delta = 77^\circ$. Japan.
4	<i>L·NE</i> 21 39
8	<i>L·NE</i> 13 46
18	<i>iP·Z'</i> 21 46 18 <i>L·NE</i> 22 15 $\Delta = 69^\circ$. Kamchatka.
19	<i>iP·Z'Z</i> 10 44 37 C <i>ipP·Z'Z</i> 45 23 <i>isP·ZE</i> 45 47 C <i>ePP·Z</i> 46 22 <i>ipPP·Z</i> 46 55 D <i>isPP·ZE</i> 47 24 D Z: 8 ^s , 20 μ . <i>iS·ZNE</i> 50 50 Z: +, N: +, E: 10 ^s , - 40 μ . <i>esS·NE</i> 52 01 <i>iSS·ZNE</i> 54 04 10 ^s . Z: 35 μ , E: 75 μ . $\Delta = 43^\circ$. $h = 200$ km. Hindu Kush.
21	<i>eS·NE</i> 8 22.2 <i>L·NE</i> 24 $\Delta = 21^\circ$. Algeria.
21	<i>L·NE</i> 21 46
22	<i>L·NE</i> 21 13
23	<i>L·NE</i> 0 40
23	<i>iP·Z'</i> 2 17 35 $\Delta = 43^\circ$. $h = 200$ km. Hindu Kush.
23	<i>eP·Z</i> 7 38 38 <i>eS·NE</i> 42 00 <i>L·NE</i> 43.4 $\Delta = 18^\circ$. Greece.
23	<i>L·NE</i> 7 57
23	<i>L·NE</i> 8 57
24	<i>L·NE</i> 22 33
26	<i>eP·Z</i> 23 41 03 <i>L·NE</i> 24 05
27	<i>L·NE</i> 8 54

February	
29	<i>eP·Z</i> 23 ^h 46 ^m 27 ^s <i>eS·NE</i> 51 27 <i>L·NE</i> 55.3 <i>M</i> 57 20 ^s . N: 18 μ , E: 30 μ . $\Delta = 30^\circ$. Extremely surfacenear. $M = 6.0$. Agadir, Morocco.
March	
2	<i>eP·Z'</i> 22 01 54 <i>e·Z</i> 02 01 <i>L·NE</i> 09 $\Delta = 26^\circ$. Mid Atlantic Ridge.
2	<i>e(P)·Z'</i> 23 31 58
4	<i>iP·Z'</i> 2 27 37 C <i>e·Z'</i> 27 44 <i>i·Z'</i> 27 49 D $\Delta = 75^\circ$. Aleutian Islands.
4	<i>iP·Z'Z</i> 4 04 59 C. Z: 5 ^s , 2.6 μ . <i>eS·E</i> 14 41 <i>ePS·NE</i> 15 41 <i>eSS·NE</i> 19.8 <i>L·NE</i> 31 $\Delta = 78^\circ$. $h = 100$ km. Japan.
4	<i>eP·Z'Z</i> 16 29 29 <i>L·NE</i> 34.4 $\Delta = 17^\circ$. Jan Mayen.
4	<i>iP·Z'</i> 21 17 56 $\Delta = 79^\circ$. Nicobar Islands.
5	<i>eP·Z'</i> 11 34 33 <i>L·NE</i> 58 $\Delta = 55^\circ$. Nepal.
5	<i>ePP·Z</i> 14 08.0 <i>ePPP·ZE</i> 10.0 <i>e·NE</i> 14.8 <i>e·E</i> 21.6 <i>L·NE</i> 37 $\Delta = 104^\circ$. Halmahera.
6	<i>L·NE</i> 3 15
6	<i>L·NE</i> 4 53
7	<i>L·NE</i> 12 18
8	<i>iPKP·Z</i> 16 52 36 5 ^s , - 17 μ . <i>epPKP·Z</i> 53 39 <i>iPP·Z</i> 55 25 5 ^s , - 6 μ . <i>iSKP·Z</i> 55 47 7 ^s , + 13 μ . <i>iPKS·NE</i> 56 12 7 ^s , N: - 7 μ , E: - 7 μ . $\Delta = 137^\circ$. $h = 250$ km. New Hebrides Islands.

March		March	
10	L·NE 0h36 ^m	23	eP·Z'Z 0h35 ^m 12 ^s iS·NE 45 07 E: + L·NE 1 01 M·NE 07 20 ^s . N: 90 μ, E: 110 μ. Δ = 76°. M = 7 ¹ / ₄ . Japan.
12	eP·ZNE 11 57 38 i·Z' 57 50 C eS·NE 12 00 21 L·NE 01.5 i·Z 02 46 Δ = 15°. Yugoslavia.	23	iP·Z' 1 19 08 D Δ = 76°. Japan.
12	ePKP·Z'Z 20 49 37 ePP·ZNE 51 06 eSKS·E 56 46 eSKKS·NE 58 12 ePS·E 21 00 34 e·E 01 06 ePPS·ZNE 02 18 eSS·NE 08.2 L·NE 28 Δ = 120°. New Britain.	23	eP·Z' 2 03 31 Δ = 76°. Japan
14	iP·Z' 1 04 33 D epP·Z' 04 50 Δ = 73°. h = 60 km. Japan.	23	iP·Z' 2 21 00 D Δ = 76°. Japan.
14	iP·Z' 20 21 59 D i·Z' 22 11 Δ = 38°. Persian Gulf.	23	eP·Z' 8 58 34 Δ = 76°. Japan.
15	eP·Z' 9 32 34 e·Z' 32 47 eS·NE 42 08 L·NE 59 Δ = 74°. Aleutian Islands.	23	eP·Z' 22 34 29 eS·E 44 16 Wiechert L·NE 23 03 - No Gal.-records. Δ = 76°. Japan.
16	ePP·ZN 18 01 44 ePKS·NE 02 32 L·NE 53 Δ = 139°. Samoa Islands.	23	ePn·Z' 23 11 13 iP*·Z' 11 33 iPg·Z' 12 01 i·Z' 12 04 i·Z' 12 05 iRg·Z' 14 34 Δ = 9 ¹ / ₂ °. Switzerland.
20	L·NE 14 17	24	eP·Z' 6 05 57 Δ = 73°. Kurile Islands.
20	iP·Z'ZNE 17 19 18 C i·Z 19 25 D, 12 ^s , 24 μ. iS·NE 29 01 N: +, E: +. iSKS·N 29 25 + iScS·NE 29 31 N: -, E: - L·NE 41 M·NE 50 20 ^s , N, E ∞ 340 μ. Δ = 76°. M = 8. Japan.	27	ePP·ZN 4 10 15 ePKS·ZNE 11 18 i·E 11 37 eSKS·E 14 40 L·NE 55 Δ = 133°. New Hebrides Islands.
21	iP·Z'Z 0 46 41 C L·NE 1 13 Δ = 76°. Japan.	27	iPP·ZN 9 19 47 C iPKS·ZNE 20 50 Z: -, N: -, E: -. L·NE 10 01 Δ = 133°. New Hebrides Islands.
21	eP·Z' 9 30 13 eS·NE 40.0 L·NE 57 Δ = 76°. Japan.	27	iPKP2·Z' 23 48 38 D e·Z' 49 16 Δ = 159°. h = 250 km. New Zealand.
		28	iP·Z'Z 0 26 23 C i·Z'Z 26 30 eSKS·E 36 47 iS·NE 37 08 E: + ePS·E 38 04 L·NE 53 Δ = 87°. Panama.

March		April	
28	iPKP·Z' 12h57 ^m 34 ^s C	13	L·NE 13h20 ^m
28	L·ZNE 21 01	15	ePKS·ZNE 22 28 01 L·NE 23 15 Δ = 133°. New Hebrides Islands.
29	ePKP·Z'Z 6 50 27 ePKS·NE 54.0 L·NE 7 33 Δ = 137°. New Hebrides Islands.	17	iPKP·Z' 22 08 08 D Δ = 143°. h = 500 km. Fiji Islands.
29	L·NE 23 11	20	iP·Z' 19 30 55 D Δ = 44°. h = 200 km. Hindu Kush.
30	ePKP·Z' 11 09 12 ePP·Z 11 36 ePKS·NE 12 40 L·NE 53 Δ = 133°. New Hebrides Islands.	24	ePPP·ZE 3 42 33 iSKS·E 45 00 ePS·E 49 04 Δ = 102°. h = 600 km. Java Sea.
30	eP·Z'Z 13 03 19 L·NE 07 Δ = 19°. Greenland Sea.	24	iP·Z'Z 12 22 15 D eS·E 28 21 L·NE 34 Δ = 41°. Lar, Iran.
30	ePKP·Z'Z 15 39 06 ePP·Z 42 24 L·NE 16 32 Δ = 144°. Loyalty Islands.	26	L·NE 7 20
31	iP·Z' 3 13 56 D L·NE 45 Δ = 76°. Japan.	28	L·NE 19 54.8
31	e(S)·NE 20 19 24 N: 10 ^s , 3 μ. L·NE 32 Δ = 85°. Gulf of California.	29	iP·Z'Z 19 46 03 C iPP·Z'ZE 50 16 iSKS·E 56 41 L·NE 20 21 Δ = 102°. Celebes.
		30	ePP·Z'ZE 4 19 36 iSKS·E 26 03 ePS·ZE 28.5 L·NE 53 Δ = 102°. Celebes.
		30	L·NE 10 25
		30	iPKP·Z' 15 31 57 Δ = 137°. Fiji Islands.
			Maj
		2	L·NE 18 49
		3	L·NE 8 25.3
		3	iP·Z' 22 34 48 epP·Z' 35 28 Δ = 82°. h = 150 km. Japan.
		5	eP·Z' 11 37 07 L·NE 12 02 Δ = 69°. Kamchatka.
		6	iP·Z' 18 58 26 D Δ = 68°. Kamchatka.
1	ePKP·Z' 3 13 39 Δ = 145°. h = 650 km. Fiji Islands.		
1	L·NE 14 42		
2	iP·Z' 22 42 32 D L·NE 54 Δ = 32°. Iran.		
2	eP·Z' 23 39 48 L·NE 53 Δ = 33°. Iran.		
7	iPKP·Z' 14 06 19 Δ = 147°. h = 500 km. Fiji Islands.		
8	iPKP·Z' 0 15 12 D Δ = 144°. h = 200 km. Tonga Islands.		
10	L·NE 0 49		
13	L·NE 8 33		

København 1960

May		May	
11	<i>ePP·Z</i> 18 ^h 55 ^m 0	20	<i>ePKP·Z'Z</i> 11 ^h 32 ^m 19 ^s
	<i>e·E</i> 19 02 09		<i>i·ZNE</i> 32 23 <i>D</i>
	<i>eSS·N</i> 10.2		<i>iPP·N</i> 35 53
	<i>L·NE</i> 30		<i>L·NE</i> 12 22
	$\Delta = 108^\circ$. Ceram Sea.		$\Delta = 148^\circ$. Norfolk Island.
12	<i>eP·Z'Z</i> 22 45 09	21	<i>eS·E</i> 6 49 06
	<i>eSKS·NE</i> 55 39		<i>L·NE</i> 52
	<i>eS·NE</i> 55 52		$\Delta = 19^\circ$. Greece.
	<i>L·NE</i> 23 08	21	<i>eP·Z</i> 10 18 00
	$\Delta = 86^\circ$. Panama.		<i>ePKP·Z'Z</i> 21 41
13	<i>iP·Z'ZN</i> 16 18 25 <i>C. Z: 6^s, 2.6 μ.</i>		<i>iPP·ZNE</i> 22 47
	<i>iPcP·ZN</i> 18 40		<i>eSKS·NE</i> 28 43
	<i>eS·NE</i> 27 30		<i>eSKKS·N</i> 30 07
	<i>eScS·NE</i> 28 21		<i>ePS·NE</i> 32 42
	<i>L·NE</i> 38		<i>i·Z</i> 32 54
	$\Delta = 70^\circ$. $M = 6\frac{1}{4}$. Alaska Peninsula.		<i>ePKPPKP·Z</i> 40 38
13	<i>e·ZN</i> 16 46 41		<i>L·NE</i> 53
			$\Delta = 118^\circ$. $M = 8\frac{1}{4}$. Chile.
14	<i>iP·Z'Z</i> 22 30 57 <i>Z': D. Z: C.</i>	22	<i>L·NE</i> 4 52
	<i>ePcP·Z</i> 31 20	22	<i>L·NE</i> 7 05
	<i>L·NE</i> 56	22	<i>eP·Z</i> 10 45 50
	$\Delta = 68^\circ$. Kamchatka.		<i>ePP·Z</i> 50 27
15	<i>L·NE</i> 14 13		<i>eSKS·N</i> 56 34
			<i>ePS·NE</i> 11 00 10
18	<i>iP·Z'ZNE</i> 6 47 14 <i>C</i>		<i>L·NE</i> 20
	<i>epP·Z</i> 47 35		$\Delta = 118^\circ$. Chile.
	<i>e·ZNE</i> 53 29 <i>10^s, very regular.</i>	22	<i>eP·Z</i> 10 47 51
	<i>eS·NE</i> 57.2		<i>ePKP·Z'</i> 51 32
	<i>iSKS·E</i> 57 29		<i>ePP·ZNE</i> 52 37
	<i>L·NE</i> 7 15		<i>eSKS·NE</i> 58 42
	$\Delta = 80^\circ$. $h = 100$ km. Ryukyu Islands.		<i>ePS·ZNE</i> 11 02 44
18	<i>eP·Z'Z</i> 8 48 46		$\Delta = 118^\circ$. Chile.
	<i>eS·NE</i> 54 55	22	<i>iP·Z</i> 19 11 09 <i>C</i>
	<i>L·NE</i> 9 04		<i>ePKP·Z'Z</i> 14 44
	$\Delta = 41^\circ$. Persian Gulf.		<i>iPP·Z'Z</i> 15 49
19	<i>iP·Z'ZE</i> 2 14 52 <i>C</i>		<i>i·Z</i> 16 15 <i>D</i>
	<i>epP·ZE</i> 15 27		<i>eSKS·NE</i> 21 42
	<i>ePP·E</i> 16 59		<i>ePS·NE</i> 25 56
	<i>iS·NE</i> 21 19		$\Delta = 118^\circ$. Chile.
	<i>eSS·NE</i> 24 35	22	<i>eP·Z</i> 19 25 47
	$\Delta = 43^\circ$. $h = 200$ km. Hindu Kush.		$\Delta = 118^\circ$. Chile.
19	<i>eP·Z'Z</i> 10 24 49	22	<i>eP·Z</i> 19 26 27
	<i>eSKS·E</i> 35 25		<i>ePKP·Z'Z</i> 29 59
	$\Delta = 85^\circ$. Mascarene Islands.		<i>ePP·NE</i> 31 24
20	<i>iP·Z'</i> 4 22 07		<i>L_R 20^s, Z'</i> 20 33 <i>abt. 700 μ.</i>
	<i>eS·E</i> 28 17		$\Delta = 118^\circ$. $M = 8.4$. Chile.
	<i>L·N</i> 35.3	22	<i>ePKP·Z'</i> 22 32 50
	$\Delta = 41^\circ$. Persian Gulf.		$\Delta = 119^\circ$. Chile.

May		May	
23	<i>iPKP·Z'</i> 0 ^h 15 ^m 00 ^s <i>D</i>	26	<i>L·NE</i> 21 ^h 03 ^m
	$\Delta = 122^\circ$. Chile.	28	<i>L·NE</i> 0 09
23	<i>ePP·Z</i> 0 45 52	28	<i>L·NE</i> 4 17
	<i>e·Z'Z</i> 47 43	28	<i>L·NE</i> 12 56
	<i>L·NE</i> 1 20	29	<i>ePP·ZNE</i> 7 59 16
	$\Delta = 120^\circ$. Chile.		<i>ePPP·ZE</i> 8 01 57
23	<i>ePP·Z</i> 3 06 57		<i>eSKS·NE</i> 05 18
	<i>ePS·ZE</i> 17.0		<i>eSKKS·E</i> 06 50
	<i>L·NE</i> 46		<i>ePS·ZNE</i> 09 27
	$\Delta = 120^\circ$. Chile.		<i>L·NE</i> 38
23	<i>ePP·Z</i> 5 33 36		$\Delta = 118^\circ$. Chile.
	<i>iSKS·NE</i> 39 37	29	<i>L·N</i> 22 28
	<i>ePS·E</i> 43 31	31	<i>eP·Z'Z</i> 0 33 02
	<i>L·NE</i> 6 12		<i>eS·NE</i> 40 32
	$\Delta = 118^\circ$. Chile.		$\Delta = 53^\circ$. Deeper than normal. Gulf of Aden.
23	<i>ePP·Z</i> 7 30 20	31	<i>ePKP·Z'</i> 2 58 55
	<i>eSKP·ZE</i> 31 40		<i>ePPP·ZE</i> 3 03 09
	<i>eSKKS·E</i> 37 24		<i>ePS·ZE</i> 10 21
	<i>e·N</i> 38 34		<i>L·NE</i> 36
	<i>ePPS·NE</i> 42 02		$\Delta = 120^\circ$. Chile.
	<i>L·NE</i> 8.2	31	<i>eP·Z'ZE</i> 11 13 11
	$\Delta = 128^\circ$. Chile.		<i>i·ZNE</i> 13 19
23	<i>eSKS·E</i> 10 18.1		<i>iS·NE</i> 21 59
	<i>ePS·E</i> 22.2		<i>ePS·NE</i> 22 15
	<i>L·NE</i> 53		<i>eSKS·NE</i> 23 04
	$\Delta = 118^\circ$. Chile.		<i>L·ZNE</i> 34
23	<i>L·NE</i> 11 42		$\Delta = 66^\circ$. Leeward Islands.
23	<i>L·NE</i> 15 06	June	
23	<i>L·NE</i> 21 13	1	<i>L·NE</i> 6 03
24	<i>ePKP1·Z</i> 15 06 42	2	<i>ePKP·Z</i> 6 17 10
	<i>ePKP2·Z</i> 07 29		<i>L·NE</i> 57
	<i>eSS·N</i> 31 19		$\Delta = 125^\circ$. Chile.
	<i>L·NE</i> 55	2	<i>ePP·ZNE</i> 8 07 29
	$\Delta = 160^\circ$. New Zealand.		<i>ePS·NE</i> 17.2
24	<i>L·NE</i> 21 36		<i>L·NE</i> 45
25	<i>L·NE</i> 5 43		$\Delta = 120^\circ$. New Britain.
25	<i>L·NE</i> 9 28	2	<i>L·NE</i> 18 42
	Forerunners in the papershift.	2	<i>iPKP·Z</i> 19 17 41 <i>D</i>
26	<i>iP·ZNE</i> 5 14 02 <i>C</i>		$\Delta = 144^\circ$. $h = 550$ km. Fiji Islands.
	<i>iS·ZE</i> 16 57	2	<i>iPKP·Z'</i> 20 07 05
	<i>L·NE</i> 18.8		$\Delta = 144^\circ$. $h = 550$ km. Fiji Islands.
	$\Delta = 16\frac{1}{2}^\circ$. Albania.		
26	<i>iP·Z'Z</i> 20 15 37 <i>Z': -, Z: +.</i>		
	<i>i·Z'Z</i> 15 57 <i>Z': +, Z: -.</i>		
	$\Delta = 63^\circ$. Two shocks? Assam.		

København 1960

June		
3	<i>eP·Z'Z</i>	16 ^h 29 ^m 36 ^s
	<i>ePP·Z</i>	32 23
	<i>eS·N</i>	39 03
	<i>L·NE</i>	55
	$\Delta = 73^\circ$. Japan.	
4	<i>L·NE</i>	3 13
4	<i>L·NE</i>	8 25
4	<i>L·NE</i>	11 20
5	<i>ePP·Z</i>	19 54 34
	<i>L·NE</i>	20 55
	$\Delta = 155^\circ$. Kermadec Islands.	
6	<i>iP·Z'Z</i>	1 29 47 <i>D</i>
	<i>eS·NE</i>	39 40
	<i>L·NE</i>	57
	$\Delta = 77^\circ$. California.	
6	<i>ePKP·Z'</i>	6 14 44
	<i>i·Z</i>	14 50
	<i>i·Z</i>	17 51
	<i>iPPP·ZE</i>	19 06
	<i>iPPS·NE</i>	27 37
	<i>M·NE</i>	7 09
	20 ^s . <i>N</i> : 80 μ , <i>E</i> : 180 μ .	
	$\Delta = 124^\circ$. <i>M</i> = 7 ³ / ₄ . Chile.	
6	<i>L·NE</i>	18 21
6	<i>ePKP·Z'</i>	23 48 53
	$\Delta = 147^\circ$. <i>h</i> = 600 km. Fiji Islands.	
7	<i>iP·Z'Z</i>	13 08 17 <i>C</i>
	$\Delta = 67^\circ$. Kamchatka.	
7	<i>eP·Z</i>	15 44 17
	$\Delta = 53^\circ$. Arabian Sea.	
8	<i>iP·Z'Z</i>	16 27 10 <i>D</i>
	<i>ePP·ZE</i>	28 29
	<i>eS·E</i>	33 08 +
	<i>L·NE</i>	38
	$\Delta = 39^\circ$. North Atlantic Ocean.	
8	<i>L·NE</i>	22 50
9	<i>L·NE</i>	2 57
9	<i>L·NE</i>	8 32
9	<i>iPKP·Z</i>	11 43 26 <i>D</i>
	<i>ePP·ZNE</i>	46 16
	<i>ePKS·NE</i>	47 02
	<i>ePPP·E</i>	49 45
	<i>L·NE</i>	12 34
	$\Delta = 139^\circ$. New Hebrides Islands.	

June		
9	<i>iP·Z</i>	17 ^h 54 ^m 07 ^s <i>D</i>
	<i>eS·E</i>	59 14
	<i>L·NE</i>	18 02
	$\Delta = 31^\circ$. Azores Islands.	
10	<i>ePKP·Z</i>	21 31 39
	<i>ePP·Z</i>	34 32
	<i>ePKS·ZN</i>	35 13
	<i>eSS·E</i>	52.7
	<i>L·NE</i>	22 27
	$\Delta = 140^\circ$. Samoa Islands.	
11	<i>ePKP·Z</i>	15 33 13
	<i>ePP·ZNE</i>	34 58
	<i>L·NE</i>	16 12
	$\Delta = 129^\circ$. New Guinea.	
11	<i>ePKP·Z</i>	16 56 44
	<i>L·NE</i>	17 38
	$\Delta = 129^\circ$. New Guinea.	
12	<i>L·NE</i>	23 18.5
13	<i>L·NE</i>	6 52
15	<i>iP·Z</i>	15 48 36 <i>C</i>
	<i>ipP·ZE</i>	48 49
	<i>iPP·ZN</i>	51 25
	<i>eS·N</i>	58 15
	<i>L·NE</i>	16 13
	$\Delta = 76^\circ$. <i>h</i> about 50 km. Japan.	
15	<i>ePKP·Z</i>	23 51 21
	<i>ePP·Z</i>	55 21
	$\Delta = 149^\circ$. <i>h</i> = 600 km. Fiji Islands.	
16	<i>L·NE</i>	0 14
16	<i>L·NE</i>	0 21
17	<i>iP·Z'Z</i>	16 47 06 <i>Z': D, Z: C.</i>
	<i>i·Z'</i>	49 09
	<i>eS·N</i>	56 31
	<i>L·NE</i>	17 12
	$\Delta = 73^\circ$. Aleutian Islands.	
20	<i>eP·Z</i>	2 16 16
	<i>ePP·ZE</i>	21 12
	<i>ePPP·Z</i>	23.5
	<i>eSKS·E</i>	27 01
	<i>eSKKS·E</i>	28 20
	<i>iPS·ZE</i>	31 06
	<i>ePPS·ZN</i>	32.4
	<i>L·NE</i>	55
	<i>M·NE</i>	3 10
	20 ^s . <i>N</i> : 35 μ , <i>E</i> : 80 μ .	
	$\Delta = 118^\circ$. <i>M</i> = 7 ¹ / ₂ . Chile.	

June		
20	<i>ePKP·Z</i>	13 ^h 18 ^m 32 ^s
	<i>iPP·ZNE</i>	19 47
	<i>iPPP·ZNE</i>	22 23
	<i>iSKS·E</i>	25 31
	<i>iPS·E</i>	29 43
	<i>L·NE</i>	56
	<i>M·NE</i>	14 10
	20 ^s . <i>N</i> : 18 μ , <i>E</i> : 40 μ .	
	$\Delta = 119^\circ$. <i>M</i> = 7. Chile.	
21	<i>L·NE</i>	22 33
22	<i>e(P)·ZNE</i>	14 02 53
	<i>L·NE</i>	10
	$\Delta = 18^\circ$. Denmark Strait.	
22	<i>iP·Z'Z</i>	16 21 44 <i>Z': D, Z: C.</i>
	<i>eS·NE</i>	29 30
	<i>L·NE</i>	46
	$\Delta = 57^\circ$. Arabian Sea.	
23	<i>e·Z'</i>	23 41 59
	Kamchatka?	
24	<i>i·Z'</i>	3 50 03
	Possibly earlier phases in the microseisms.	
	$\Delta = 6^\circ$. Sweden.	

June		
25	<i>ePKP·Z'</i>	2 ^h 22 ^m 38 ^s
	$\Delta = 154^\circ$. Kermadec Islands.	
25	<i>eP·Z'</i>	14 06 01
	$\Delta = 83^\circ$. Columbia.	
25	<i>e(S)·Z'</i>	14 31 45
	<i>i·Z'</i>	31 52
	<i>L·NE</i>	33.2
	$\Delta = 6^\circ$. Belgian-Netherlands border.	
25	<i>ePKP·Z'Z</i>	15 01 48 <i>C</i>
	<i>ePP·ZN</i>	15 34
	<i>L·NE</i>	53
	$\Delta = 154^\circ$. Kermadec Islands.	
25	<i>L·NE</i>	20 21
27	<i>ePP·Z</i>	17 14 27
	<i>L·NE</i>	18 17
	$\Delta = 155^\circ$. Kermadec Islands.	
29	<i>L·NE</i>	3 00
29	<i>L·NE</i>	10 36
	January 1962.	

Bulletin of the seismological station

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

Lithologic foundation: chalk

InstrumentsGalitzin-Wilip. N , E , and Z . $T_p = T_g = 12\frac{1}{2}$ sec, $\mu^2 = 0$, $\frac{Ak}{\pi l} = 260$ sec.⁻¹ or $V_{\max} = \text{abt. } 1000$.Benioff. Z' . $T_p = 1$ sec, $T_g = \frac{1}{4}$ sec, $V_{\max} = \text{abt. } 30000$.Wiechert 1000 kg. N and E . $T = 8\frac{1}{2}$ sec, $\nu = 6:1$, $\rho = 0.3$ mm, $V_0 = 210$.Wiechert 1300 kg. Z . $T = 6$ sec, $\nu = 4:1$, $\rho = 0.3$ 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 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. C means compression and D dilatation. Unless otherwise stated, the periods and amplitudes are due to readings on the Galitzin instruments. Magnitudes have been computed from the following formulas:

$$M = 1.6 \left(3.9 + \log \left(\frac{A}{T} \right)_{PZ} + \frac{\Delta}{200} \right), \quad 20^{\circ} < \Delta < 90^{\circ}.$$

$$M = 2.1 + \log A_H^{20} + 1.66 \cdot \log \Delta, \quad 15^{\circ} < \Delta < 130^{\circ}$$



July.	July.
2 <i>ePP·ZN</i> 12 ^h 15 ^m 30 ^s	10 <i>iP·Z'</i> 13 ^h 57 ^m 07 ^s <i>D</i>
<i>eSKKS·N</i> 22 24	<i>eS·E</i> 14 03 13
<i>ePS·ZNE</i> 25 12	$\Delta = 41^\circ$. Persian Gulf.
<i>eSS·E</i> 31 22	11 <i>ePKP·Z</i> 12 14 37
<i>L·NE</i> 50	<i>i·Z</i> 14 44
$\Delta = 116^\circ$. Sandwich Group.	<i>ePP·Z</i> 17 36
3 <i>eP·Z'Z</i> 20 32 26 <i>Z: 5μ, 10 μ.</i>	<i>ePKS·NE</i> 18 22
<i>i·Z</i> 32 31	$\Delta = 140^\circ$. Tonga Islands.
<i>iPP·Z</i> 35 12	13 <i>eS·NE</i> 10 27 46
<i>iS·NE</i> 42 02	<i>L·NE</i> 31
<i>L·NE</i> 57	$\Delta = 17^\circ$. Greece. No <i>Z'</i> -record.
<i>L</i> 20 ^s · <i>NE</i> 21 01 <i>N: 7 μ, E: 7 μ.</i>	13 <i>P·ZNE</i> 13 04 59 in the time-break.
$\Delta = 74^\circ$. <i>M(P) = 7.3</i> . <i>M(L) = 6.3</i> . Aleutian Islands.	<i>eS·NE</i> 08 09
3 <i>eP·Z</i> 23 03 59	<i>L·NE</i> 12
Repetition.	$\Delta = 17^\circ$. Greece. No <i>Z'</i> -record.
4 <i>iP·Z</i> 4 39 41	14 <i>eP·Z</i> 10 40 43
<i>i·ZNE</i> 39 46 <i>C</i>	<i>ePP·Z</i> 45 03
<i>iPP·Z</i> 42 03	<i>L·NE</i> 11 22
4 <i>iP·Z</i> 4 39 41	$\Delta = 100^\circ$. Molucca Strait.
<i>i·ZNE</i> 39 46 <i>C</i>	17 <i>iP·Z'Z</i> 5 22 39
<i>iPP·Z</i> 42 03	<i>eS·NE</i> 29.0
<i>iS·NE</i> 48 51	<i>L·NE</i> 38
<i>L·NE</i> 5 02	$\Delta = 43^\circ$. <i>h = 200 km.</i> Hindu Kush.
<i>L</i> 20 ^s · <i>NE</i> 07 <i>N: 11 μ, E: 20 μ.</i>	18 <i>ePP·Z</i> 2 03 20
$\Delta = 69^\circ$. <i>M = 6.4</i> . Queen Charlotte Islands.	<i>L·NE</i> 44
4 <i>eP·Z</i> 13 21 17	$\Delta = 119^\circ$. <i>h = 200 km.</i> New Britain.
<i>eS·E</i> 30.2	20 <i>iP·Z'Z</i> 9 42 03
<i>L·NE</i> 44	<i>i·Z'</i> 42 09
Repetition.	<i>iPcP·Z'</i> 42 20
6 <i>iP·Z'Z</i> 5 24 31 <i>C</i>	<i>iS·NE</i> 51 24
<i>epP·Z'Z</i> 25 16	<i>L·NE</i> 10 08
<i>i·Z</i> 27 22	$\Delta = 72^\circ$. Kurile Islands.
<i>iS·NE</i> 30 43	20 <i>ePKP·Z</i> 21 18 37
<i>esS·NE</i> 32 02	<i>ePP·ZNE</i> 21 39
<i>i·E</i> 34 09	<i>L·NE</i> 22 03
$\Delta = 43^\circ$. <i>h = 200 km.</i> Hindu Kush.	$\Delta = 141^\circ$. Deep. New Hebrides Islands.
8 <i>iP·Z'Z</i> 13 03 26 <i>C</i>	24 <i>eP·Z'Z</i> 9 59 47
$\Delta = 79^\circ$. Japan.	<i>eS·NE</i> 10 08 34
9 <i>eP·Z</i> 0 54 50	<i>eSS·N</i> 12 31
<i>ePP·Z</i> 57 54	<i>L·NE</i> 20
<i>eS·N</i> 1 05.1	$\Delta = 66^\circ$. Kamchatka.
<i>L·NE</i> 26	25 <i>iP·Z'Z</i> 3 51 58
$\Delta = 82^\circ$. Ryukyu Islands.	<i>eS·NE</i> 4 00 51
10 <i>iP·ZNE</i> 0 18 10 <i>C</i>	<i>eSS·E</i> 05 06
<i>ePP·ZE</i> 21 35	<i>L·NE</i> 14
<i>iSKS·NE</i> 28 47 <i>N: +, E: +.</i>	<i>L</i> 20 ^s · <i>NE</i> 21 <i>N: 16 μ, E: 21 μ.</i>
<i>eS·NE</i> 29 05	$\Delta = 67^\circ$. <i>M = 6.5</i> . Kamchatka.
<i>L·NE</i> 44	
$\Delta = 88^\circ$. Sumatra.	



July.	July.	July.
25 <i>iP·Z'Z</i> 11 ^h 22 ^m 50 ^s <i>Z': +, Z: -.</i>	31 <i>iP·Z'Z</i> 22 ^h 34 ^m 38 ^s	
<i>i·ZNE</i> 22 52 <i>D. Z: 7μ, 30 μ.</i>	<i>eS·NE</i> 40 49	
<i>epP·Z</i> 23 26	<i>L·NE</i> 48	
<i>i·ZNE</i> 23 39	$\Delta = 40^\circ$. Iran.	
<i>iS·NE</i> 31 39	August.	
<i>isS·NE</i> 32 36	1 <i>iP·Z'Z</i> 2 28 26 <i>C</i>	
<i>L·NE</i> 45	<i>eS·NE</i> 34 35	
$\Delta = 67^\circ$. <i>h = 150 km.</i> Kamchatka.	<i>L·NE</i> 42	
26 <i>eP·Z'ZNE</i> 12 41 18	$\Delta = 40^\circ$. Iran.	
<i>eS·NE</i> 45 27	2 <i>iPKP·Z'Z</i> 5 26 43 <i>C</i>	
<i>L·NE</i> 51	<i>iPP·Z</i> 29 58	
$\Delta = 23^\circ$. Turkey.	<i>eSKP·Z</i> 30 30	
27 <i>ePP·ZE</i> 10 25 32	<i>ePPP·Z</i> 33 05	
<i>ePPP·Z</i> 28 16	<i>eSKSP·NE</i> 40 08	
<i>eSKS·E</i> 31 02	<i>L·NE</i> 6 10	
<i>eSKKS·E</i> 32 43	$\Delta = 142^\circ$. Loyalty Islands.	
<i>ePS·E</i> 35 41	2 <i>ePKP·Z</i> 9 50 18	
<i>L·NE</i> 11 06	$\Delta = 152^\circ$. Kermadec Islands.	
$\Delta = 125^\circ$. Chile.	4 <i>iP·Z</i> 7 46 18 <i>C</i>	
29 <i>ePKP·Z</i> 0 43 32	<i>eS·NE</i> 55 41	
<i>ePP·ZN</i> 46 39	<i>L·NE</i> 8 10	
<i>ePKS·NE</i> 47 30	$\Delta = 72^\circ$. Aleutian Islands.	
<i>L·NE</i> 1 26	5 <i>eP·Z</i> 22 39 04	
$\Delta = 141^\circ$. Loyalty Islands.	<i>L·NE</i> 23 06	
29 <i>eS·N</i> 11 01 34	Repetition.	
<i>L·NE</i> 14	9 <i>eP·Z</i> 7 51 26	
$\Delta = 62^\circ$. India.	<i>eS·NE</i> 8 01 29	
29 <i>eP·Z'Z</i> 14 42 01	<i>L·NE</i> 16	
<i>eS·NE</i> 48 38	$\Delta = 79^\circ$. California.	
<i>L·NE</i> 56	9 <i>iPKP·Z</i> 17 06 09 <i>C</i>	
$\Delta = 45^\circ$. Afghanistan.	<i>L·NE</i> 56	
29 <i>iP·Z'ZNE</i> 17 43 21 <i>C</i>	$\Delta = 148^\circ$. <i>h = 100 km.</i> Tonga Islands.	
<i>iPP·ZNE</i> 46 12 <i>C</i>	9 <i>ePKS·NE</i> 23 59 26	
<i>iS·NE</i> 52 56	<i>L·NE</i> 24 43	
<i>iPS·ZNE</i> 53 15	$\Delta = 131^\circ$. Santa Cruz Islands.	
<i>L·NE</i> 18 08	11 <i>ePP·ZE</i> 3 11 16	
<i>L</i> 20 ^s · <i>NE</i> 19 <i>N: 90 μ, E: 135 μ.</i>	<i>L·NE</i> 44	
$\Delta = 75^\circ$. <i>M = 7.3</i> . Japan.	$\Delta = 101^\circ$. Celebes.	
31 <i>ePP·ZNE</i> 3 16 08	12 <i>iP·Z'Z</i> 13 24 31 <i>C</i>	
<i>ePS·ZNE</i> 26 10	<i>ePP·Z</i> 27 29	
<i>L·NE</i> 46	<i>eS·E</i> 34 23	
<i>L</i> 25 ^s · <i>NE</i> 4 08 <i>N: 18 μ, E: 45 μ.</i>	<i>eSKS·NE</i> 34 41	
$\Delta = 119^\circ$. <i>h = 100 km.</i> New Britain.	<i>L·NE</i> 54	
31 <i>ePP·Z</i> 15 15 44	$\Delta = 78^\circ$. Japan.	
<i>ePS·Z</i> 25 39		
<i>L·NE</i> 55		
$\Delta = 123^\circ$. Chile.		



August.	
13 <i>iP·Z'Z</i>	7 ^h 22 ^m 46 ^s
<i>i·Z</i>	22 58
<i>iPP·Z'Z</i>	25 35
<i>eS·N</i>	32 24
<i>eSKS·N</i>	32 48
<i>L·NE</i>	50
$\Delta = 75^\circ$. Japan.	
13 <i>iPKP·Z'Z</i>	14 33 45 D
<i>ePP·ZNE</i>	35 12
<i>iPPP·ZNE</i>	37 45
<i>iSKS·E</i>	40 47
<i>iSKKS·NE</i>	42 14
<i>e·E</i>	43 13
<i>iSKSP·Z</i>	45 04
<i>i·Z</i>	47 46
<i>L·NE</i>	15 07
<i>L 20^s·NE</i>	23 N: 12 μ , E: 16 μ .
$\Delta = 121^\circ$. $M = 7$. Chile.	
17 <i>eP·Z</i>	11 36 17
<i>eS·N</i>	46 08
<i>L·NE</i>	12 05
$\Delta = 79^\circ$. South Atlantic Ocean.	
18 <i>iP·Z'Z</i>	20 58 34
<i>L·NE</i>	21 26
$\Delta = 74^\circ$. Kurile Islands.	
20 <i>eSKS·NE</i>	20 32 48
<i>eS·NE</i>	33 20
<i>L·NE</i>	51
$\Delta = 95^\circ$. Tristan da Cunha.	
24 <i>eS·NE</i>	2 03 45
<i>L·NE</i>	16
$\Delta = 66^\circ$. Kamchatka.	
25 <i>eP·Z</i>	17 53 21
<i>eS·NE</i>	18 02 57
<i>L·NE</i>	18
$\Delta = 72^\circ$. Aleutian Islands.	
26 <i>ePKP·Z'Z</i>	18 46 31
<i>ePKS·E</i>	50 03
$\Delta = 133^\circ$. New Hebrides Islands.	
27 <i>eP·ZN</i>	10 22 26
<i>eS·NE</i>	26 36
<i>L·NE</i>	32
$\Delta = 24^\circ$. Crete.	
31 <i>eP·Z'</i>	22 16 58
<i>eS·NE</i>	21 03
<i>L·NE</i>	27
$\Delta = 23^\circ$. Turkey.	

September.	
1 <i>eP·ZN</i>	15 ^h 48 ^m 15 ^s C
<i>iS·NE</i>	57 16
<i>L·NE</i>	16 08
$\Delta = 68^\circ$. Kodiak Island.	
2 <i>eP·Z</i>	14 56 49
<i>eS·NE</i>	15 05 26
<i>L·NE</i>	17
$\Delta = 65^\circ$. Tibet.	
2 <i>iP·Z</i>	22 14 16
<i>PS·NE</i>	23 33
<i>L·NE</i>	36
$\Delta = 73^\circ$. Aleutian Islands.	
3 <i>ePKP·Z</i>	6 01 18
<i>e·Z</i>	01 38
$\Delta = 145^\circ$. Tonga Islands.	
3 <i>ePKP·Z</i>	12 59 45
<i>e·Z</i>	13 01 06
<i>iPP·ZNE</i>	01 21
<i>eSKS·NE</i>	06 07
<i>e·NE</i>	07 41
<i>iSS·NE</i>	17 30
$\Delta = 122^\circ$. $h = 450$ km. Solomon Islands.	
3 <i>eP·ZNE</i>	23 57 58 in the time-break.
<i>i·ZNE</i>	58 13
<i>eS·NE</i>	24 07 28
<i>eSKS·E</i>	08 05
<i>L·NE</i>	22
$\Delta = 73^\circ$. Kurile Islands.	
6 <i>iP·Z'Z</i>	15 36 09 C
<i>i·Z'</i>	36 13
$\Delta = 74^\circ$. Japan.	
7 <i>eP·Z</i>	1 31 07
<i>iSKS·NE</i>	41 48
<i>L·NE</i>	2 08
$\Delta = 95^\circ$. Tristan da Cunha.	
8 <i>iP·Z'</i>	14 43 03 C
$\Delta = 68^\circ$. Kamchatka.	
9 <i>eP·Z'ZNE</i>	16 23 21
<i>L·ZNE</i>	28
$\Delta = 18^\circ$. Jan Mayen.	
9 <i>iP·Z'ZN</i>	20 08 37 Z': D.
<i>L·NE</i>	13
$\Delta = 18^\circ$. Jan Mayen.	
10 <i>eS·NE</i>	0 28 31
<i>L·NE</i>	33
$\Delta = 24^\circ$. Crete.	

September.	
12 <i>iP·Z'Z</i>	12 ^h 29 ^m 22 ^s C. Z: 5 ^s , 2 μ .
<i>L·NE</i>	13 00
$\Delta = 81^\circ$. $M = 6.2$. Ryukyu Islands.	
13 <i>iP·Z'</i>	3 21 07 C
$\Delta = 87^\circ$. $h = 450$ km. Bonin Islands.	
14 <i>eP·Z'</i>	0 47 12
$\Delta = 87^\circ$. Philippine Islands.	
15 <i>iPKP·Z'</i>	0 38 16 C
$\Delta = 145^\circ$. Tonga Islands.	
17 <i>iP·Z</i>	8 04 07
<i>L·NE</i>	30
$\Delta = 71^\circ$. Kurile Islands.	
17 <i>iP·Z</i>	8 16 47
<i>eS·E</i>	26 04
Repetition.	
17 <i>ePKP·Z'Z</i>	20 15 49
<i>L·NE</i>	21 07
$\Delta = 145^\circ$. Tonga Islands.	
19 <i>eP·Z</i>	3 52 20
<i>eSKS·NE</i>	4 02 45
<i>e·E</i>	05 17
<i>L·NE</i>	23
$\Delta = 86^\circ$. Philippine Islands.	
19 <i>eP·Z'Z</i>	19 13 58
<i>eSKS·NE</i>	24 25
<i>L·NE</i>	41
$\Delta = 85^\circ$. Columbia-Panama border.	
20 <i>iPKP (2)·Z'</i>	3 25 16
$\Delta = 158^\circ$. $h = 200$ km. New Zealand.	
21 <i>iP·Z'</i>	16 20 05 D
$\Delta = 80^\circ$. $h = 200$ km. China Sea.	
21 <i>iP·Z'</i>	23 12 02 D
$\Delta = 36^\circ$. Iran.	
22 <i>iP·Z'Z</i>	5 48 27
<i>eS·N</i>	56 43
<i>L·NE</i>	6 12
$\Delta = 61^\circ$. Congo.	
22 <i>iP·Z'Z</i>	9 15 48 D
<i>eS·E</i>	24 07
<i>L·NE</i>	37
$\Delta = 61^\circ$. Congo.	
22 <i>iP·Z'Z</i>	9 25 08 D
$\Delta = 61^\circ$. Congo.	
22 <i>iP·Z'</i>	22 58 32 D
$\Delta = 73^\circ$. Aleutian Islands.	

September.	
23 <i>iPKP·Z'Z</i>	23 ^h 22 ^m 06 ^s D
$\Delta = 145^\circ$. Tonga Islands.	
29 <i>iP·Z'Z</i>	11 31 31 D
<i>iPP·Z'ZNE</i>	35 31 D
<i>ePPP·ZNE</i>	37 36
<i>iS·E</i>	42 09
<i>iSP·ZNE</i>	43 28
<i>e·N</i>	44 27
$\Delta = 95^\circ$. $h = 450$ km. Mariana Islands.	
October.	
1 <i>iP·Z'Z</i>	16 22 25 D
<i>iS·E</i>	32 04
<i>L·NE</i>	45
$\Delta = 73^\circ$. Aleutian Islands.	
2 <i>ePP·Z</i>	12 14 51
<i>L·NE</i>	56
$\Delta = 128^\circ$. Easter Island.	
6 <i>e·Z'</i>	16 43 07
6 <i>L·NE</i>	16 44
$\Delta = 52^\circ$. Lake Baikal.	
6 <i>iP·Z'Z</i>	6 00 56 C
<i>iS·NE</i>	05 19
<i>L·NE</i>	07
$\Delta = 24^\circ$. North Atlantic Ocean.	
7 <i>iP·Z</i>	3 20 49 D
<i>eS·NE</i>	25 06
<i>L·NE</i>	27
$\Delta = 24^\circ$. North Atlantic Ocean.	
7 <i>eP·Z</i>	15 33 19
<i>ePKP·Z'</i>	37 08
<i>ePP·ZE</i>	37 44
<i>iPPP·ZE</i>	40 17
<i>iSKS·E</i>	43 48
<i>eSKKS·E</i>	44 53
<i>ePS·ZE</i>	47 16
<i>i·ZE</i>	48 20
<i>eSS·E</i>	53 11
<i>L·NE</i>	16 08
$\Delta = 112^\circ$. Banda Sea.	
8 <i>iP·Z'ZNE</i>	6 03 22 D
<i>ip·ZNE</i>	05 26
<i>iPP·ZNE</i>	06 13
<i>iS·NE</i>	11 46
<i>iSeS·NE</i>	12 24
<i>iSP·Z</i>	12 28
<i>is·E</i>	15 27
<i>iSS·E</i>	16 40
$\Delta = 71^\circ$. $h = 600$ km. Japan Sea.	

October.

8	<i>eP·Z</i>	20 ^h 52 ^m 03 ^s	
	<i>eS·NE</i>	21 02 04	
	<i>L·NE</i>	18	
$\Delta = 78^\circ$. Nicobar Islands.			
9	<i>iP·Z'Z</i>	9 12 10	<i>D. Z: 4^s, 3 μ.</i>
	<i>ipP·Z</i>	12 42	
	<i>iS·NE</i>	21 35	<i>7^s. N: + 5 μ, E: - 6 μ.</i>
$\Delta = 75^\circ$. <i>h = 150 km.</i> Japan.			
13	<i>iP·Z'Z</i>	2 24 26	<i>C</i>
	<i>eS·N</i>	26 56	
	<i>L·NE</i>	30	
$\Delta = 14^\circ$. Rumania.			
13	<i>iP·Z'Z</i>	15 03 27	
	<i>i·Z'Z</i>	03 30	<i>C. Z: 5^s, 5 μ.</i>
	<i>ePP·Z</i>	06 03	
	<i>iS·NE</i>	12 21	
	<i>L·NE</i>	25	
$\Delta = 67^\circ$. <i>M = 6.7.</i> Kamchatka.			
14	<i>eP·Z'Z</i>	21 30 39	
	<i>i·Z'</i>	30 40	<i>D</i>
	<i>iS·E</i>	40 07	
	<i>L·NE</i>	52	
$\Delta = 73^\circ$. Aleutian Islands.			
14	<i>iP·Z'Z</i>	23 01 18	
	<i>i·Z'Z</i>	01 26	
	<i>L·NE</i>	24 08	
$\Delta = 27^\circ$. North Atlantic Ocean.			
15	<i>eP·Z</i>	1 59 47	
	<i>eS·NE</i>	2 04 25	
	<i>L·NE</i>	07	
Repetition.			
20	<i>ePP·ZN</i>	11 27 23	
	<i>ipKS·ZN</i>	28 35	
	<i>L·NE</i>	12.2	
$\Delta = 130^\circ$. Santa Cruz Islands.			
27	<i>iP·Z</i>	15 43 30	<i>C. Z: 6^s, 1 μ.</i>
	<i>eS·NE</i>	46 59	
	<i>L·E</i>	48.3	
$\Delta = 18^\circ$. Jan Mayen.			
28	<i>iP·Z'ZNE</i>	4 22 54	<i>C. Z: 6^s, 10 μ.</i>
	<i>iS·NE</i>	26 23	
	<i>L·NE</i>	27.5	
Repetition.			

October.

28	<i>iP·Z'Z</i>	7 ^h 50 ^m 49 ^s	<i>C. Z: 6^s, 1 μ.</i>
	<i>eS·NE</i>	54 17	
	<i>L·NE</i>	56.1	
Repetition.			
28	<i>iP·Z'ZNE</i>	13 29 12	<i>D. Z: 5^s, 12 μ.</i>
	<i>ipP·ZNE</i>	29 52	
	<i>ippP·Z'ZN</i>	31 46	<i>D</i>
	<i>iS·NE</i>	38 07	
	<i>iScS·ZNE</i>	38 54	
	<i>L·E</i>	47	
$\Delta = 69^\circ$. <i>h = 100 km.</i> Kamchatka.			
28	<i>eP·Z'Z</i>	22 41 30	
	<i>ipP·Z'</i>	41 44	<i>C</i>
	<i>iS·NE</i>	51 34	
	<i>esS·N</i>	51 50	
	<i>L·NE</i>	23 08	
$\Delta = 80^\circ$. <i>h = 100 km.</i> Japan.			
30	<i>eP·Z</i>	8 38 09	
	<i>eS·E</i>	42 46	
	<i>L·NE</i>	46	
$\Delta = 27^\circ$. North Atlantic Ocean.			
30	<i>eP·Z</i>	12 28 44	
	<i>ePP·Z</i>	32 58	
	<i>eSKS·E</i>	39 24	
	<i>iS·N</i>	40 42	
	<i>ePS·ZE</i>	42 12	
	<i>L·NE</i>	13 01	
$\Delta = 105^\circ$. Chile.			
30	<i>ePP·Z</i>	21 51 03	
	<i>iSKS·NE</i>	57 22	
	<i>iSKKS·E</i>	58 05	
	<i>ePS·E</i>	22 00 18	
$\Delta = 104^\circ$. Chile-Bolivia border.			

November.

1	<i>ePP·ZE</i>	9 06 07	
	<i>iSKS·E</i>	12 00	
	<i>iSKKS·NE</i>	13 22	
	<i>ipS·ZNE</i>	16 08	
	<i>L·NE</i>	40	
	<i>L 20^s·NE</i>	54	<i>N: 22 μ, E: 22 μ.</i>
$\Delta = 120^\circ$. <i>M = 7.1.</i> Chile.			
5	<i>eP·Z'ZN</i>	20 24 56	
	<i>eS·ZNE</i>	28 13	
	<i>L·NE</i>	29.5	
$\Delta = 17^\circ$. Greece.			
6	<i>iP·Z'Z</i>	4 49 20	<i>C</i>
	<i>iS·NE</i>	58 19	
	<i>L·NE</i>	5 13	
$\Delta = 68^\circ$. Kamchatka.			

November.

6	<i>eP·Z'Z</i>	22 ^h 21 ^m 30 ^s	
	<i>L·NE</i>	49	
$\Delta = 72^\circ$. Aleutian Islands.			
9	<i>ePKP·Z</i>	3 36 49	
	<i>ePP·Z</i>	38 28	
	<i>ePS·ZNE</i>	48-09	
	<i>L·NE</i>	4 14	
$\Delta = 120^\circ$. Sandwich Group.			
9	<i>eP·Z'Z</i>	10 54 20	
	<i>eS·NE</i>	11 03 00	
	<i>L·NE</i>	15	
$\Delta = 64^\circ$. China.			
9	<i>ePP·Z</i>	20 24 37	
	<i>eSKS·E</i>	31 10	
	<i>eP·S·E</i>	33 56	
	<i>L·NE</i>	54	
$\Delta = 105^\circ$. Chile.			
13	<i>iSKS·NE</i>	7 01 29	
	<i>eS·N</i>	02 45	
	<i>L·NE</i>	24	
$\Delta = 102^\circ$. Molucca Passage.			
13	<i>iP·Z'ZNE</i>	9 32 07	<i>D. Z: 10^s, 35 μ.</i>
	<i>iS·NE</i>	41 37	
	<i>L·NE</i>	53	
	<i>L 20^s·NE</i>	10 05	<i>N: 35 μ, E: 35 μ.</i>
$\Delta = 73^\circ$. <i>M(L) = 6.9</i> Aleutian Islands.			
16	<i>iP·Z'</i>	23 09 05	
	<i>i·Z'</i>	09 09	
	<i>L·NE</i>	27	
$\Delta = 53^\circ$. Sinkiang Province, China.			
20	<i>eP·Z</i>	22 15 29	
	<i>iSKS·E</i>	26 13	
	<i>eS·NE</i>	27 00	
	<i>L·NE</i>	46	
	<i>L 20^s</i>	56	<i>N: 12 μ, E: 12 μ.</i>
$\Delta = 97^\circ$. <i>M = 6.5.</i> Peru.			
23	<i>ePKP·Z'Z</i>	14 32 11	<i>6^s, 7 μ.</i>
	<i>i·Z</i>	32 17	
	<i>L·NE</i>	15 16	
$\Delta = 148^\circ$. Tonga Islands.			
24	<i>ePKP·Z'Z</i>	7 12 26	<i>6^s, 20 μ.</i>
	<i>i·Z</i>	12 34	
	<i>L·NE</i>	56	
$\Delta = 148^\circ$. Tonga Islands.			
25	<i>eP·Z'</i>	22 05 53	
	<i>eS·NE</i>	15 29	
	<i>L·NE</i>	34	
$\Delta = 76^\circ$. Japan.			

November.

27	<i>iP·Z'</i>	15 28 39	<i>C</i>
	<i>ipP·Z'</i>	29 06	
$\Delta = 73^\circ$. <i>h = 100 km.</i> Japan.			

December.

2	<i>ePS·ZNE</i>	9 38 31	
	<i>L 20^s·NE</i>	10 03	<i>N: 35 μ, E: 45 μ.</i>
$\Delta = 106^\circ$. <i>M = 7.5.</i> Chile. Strong microseisms.			
3	<i>iP·Z'Z</i>	4 34 01	<i>D. Z: 10^s, 20 μ.</i>
$\Delta = 57^\circ$. <i>M = 7.</i> Outer Mongolia. Strong microseisms.			
13	<i>e(PKP2)·Z</i>	7 56 50	
	<i>L·NE</i>	8 47	
$\Delta = 160^\circ$. Macquarie Islands.			
13	<i>iP·Z'Z</i>	10 18 08	
	<i>i·Z'</i>	18 22	
	<i>L·NE</i>	51	
$\Delta = 87^\circ$. Bonin Islands.			
15	<i>iSKS·E</i>	0 15 59	
	<i>L·NE</i>	40	
$\Delta = 101^\circ$. Molucca Passage.			
17	<i>eP·Z'</i>	16 56 15	
$\Delta = 73^\circ$. Kurile Islands.			
21	<i>iP·Z'</i>	21 50 11	<i>C</i>
	<i>e·Z</i>	50 48	
	<i>eS·E</i>	58 27	
	<i>iScS·E</i>	59 51	
$\Delta = 63^\circ$. <i>h = 100 km.</i> Alaska.			
22	<i>eP·Z'</i>	3 14 22	
	<i>i·Z'</i>	14 25	
	<i>eS·N</i>	24 16	
	<i>L·N</i>	47	
$\Delta = 77^\circ$. Nicobar Islands.			
22	<i>eSKS·N</i>	21 27 18	
	<i>eSS·NE</i>	38 51	
$\Delta = 123^\circ$. <i>h = 450 km.</i> Solomon Islands.			
28	<i>eP·Z'</i>	5 44 33	
$\Delta = 22^\circ$. Crete.			
29	<i>eP·Z'</i>	18 24 30	
	<i>L·NE</i>	32	
$\Delta = 22^\circ$. Crete.			

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