No. 11 **Jan.–Jun. 1961**

GEODÆTISK INSTITUT

Proviantgården · Copenhagen · Denmark

Bulletin of the seismological station

NORD

$\varphi = 81°36'$ N. $\lambda = 16°41'$ W. $h = 35$ m.

Lithologic foundation: calcareous greywacke

Instruments.

Willmore. Z. $T_p = 1$ sec, $T_g = {}^1/_4$ sec. No attenuation.

Strobach. N and E. $T = 6$ sec, $\nu = 15{:}1$, $V_0 = 500$. (Belongs to Geophysikalisches Institut, Hamburg.)

Seismological Readings. Distant quakes.

Phases are indicated by the symbols used in ISS. Times are given in GMT. Positions of epicenters are those given by BCIS. The periods given are periods of full oscillations. For Z trace amplitudes are given. C means compression, D dilatation. + means movement towards N or E respectively.

Seismological Readings. Local shocks.

Distances less than 5°. Some tremors of not-seismic origin may be included.

Nord 1961

January

1 *eP·Z* 13h35m32s
e(S)·Z 37 30

1 *ePKP·Z′* 20 41 51
Δ = 146°. South of Australia.

2 *ePKP·Z* 10 30 14
Δ = 111°. *h* = 150 km. Santa Cruz Islands.

3 *e·Z* 9 33 54

4 *eP·Z* 12 15 54
e·Z 16 05
Δ = 72°. Mexico.

5 *e·Z* 6 14 37

5 *iP·Z* 14 14 55
eS·N 22 00
eSS·E 25 33
L·NE 29
Δ = 47°. Aleutian Islands.

5 *eP·Z* 15 18 55
Δ = 53°. Kurile Islands.

5 *eP·Z* 16 07 44
Δ = 101°. New Guinea.

5 *e·Z* 16 23 44

5 *ePKP·Z* 18 33 22
Δ = 119°. *h* = 100 km. Loyalty Islands.

5 *e·Z* 21 51 05

6 *eP·Z* 1 30 07
Δ = 56°. Japan.

6 *eP·Z* 6 30 02
Δ = 47°. Aleutian Islands.

6 *eP·Z* 7 14 06
Δ = 45°. Kamchatka.

6 *eP·Z* 11 00 05
Δ = 74°. Mexico.

6 *e·Z* 15 28 22

7 *iP·Z* 10 39 30 *C*.
Δ = 48°. *h* = 100 km. Dodecanese Islands.

7 *iP·Z* 16 01 17 *C*
Δ = 46°. Westcoast of Greece.

9 *eP·Z* 3 17 32
Δ = 51°. North Atlantic Ocean.

January

9 *iP·Z* 11h17m48s *D*
e·Z 21 59

9 *iP·Z* 19 35 46 *C*
Δ = 67°. Leeward Islands.

10 *iP·Z* 10 32 07 *C*
i·Z 32 27

10 *iP·Z* 14 31 01 *C*
iPP·Z 32 28 *D*
iS·NE 38 00
L·N 46,5
Δ = 49°. Kurile Islands.

11 *eP·Z* 12 08 17
LQ·E 22
LR·N 26
Δ = 46°. Aleutian Islands.

14 *iP·Z* 16 29 11 *C*

14 *iP·Z* 16 47 01 *D*
Δ = 44°. Aleutian Islands.

16 *iP·Z* 7 30 29 *C*
i·ZNE 30 33
iS·NE 38 55
L·NE 50
Δ = 62°. *h* = 150 km. Japan.

16 *iP·Z* 11 29 56 *C*
Δ = 62°. *h* = 150 km. Japan.

16 *iP·Z* 12 22 45 *C*
iS·NE 31 09 *N*:-, *E*:-
L·E 40
L·N 44
Δ = 62°. *h* = 100 km. Japan.

16 *eP·Z* 13 19 29 *D*
Δ = 62°. *h* = 150 km. Japan.

16 *iP·Z* 14 14 14 *D*
Δ = 62°. *h* = 150 km. Japan.

16 *e·Z* 15 49 28

16 *iP·Z* 15 51 29 *C*
eS·NE 59 50 in the timebreak.
i·NE 16 00 12
L·E 08
L·N 12
Δ = 62°. *h* = 150 km. Japan.

16 *e·Z* 18 46 23

19 *eP·Z* 17 31 01

Nord 1961

January

20 $eP \cdot Z$ 17h16m49s
$e \cdot Z$ 17 03
$\Delta = 40°$. Kodiak Island.

20 $eP \cdot Z$ 21 45 02
$\Delta = 40°$. Kodiak Island.

20 $eP \cdot Z$ 22 44 57
$\Delta = 60°$. Japan.

22 $ePS \cdot N$ 3 52 40
$L \cdot NE$ 4 19
$\Delta = 110°$. Santa Cruz Islands.

23 $eP \cdot Z$ 4 57 52
$\Delta = 56°$. Japan.

24 $eP \cdot Z$ 23 24 43
$\Delta = 78°$. $h = 100$ km. Panama.

25 $eP \cdot Z$ 1 07 39
$\Delta = 99°$. $h = 150$ km. Sumatra.

26 $iP \cdot Z$ 1 58 56 *D*
$\Delta = 78°$. Burma.

28 $iP \cdot Z$ 7 26 22 *D*
$\Delta = 44°$. Greece.

28 $eP \cdot Z$ 8 22 29
$\Delta = 57°$. California.

28 $i \cdot Z$ 11 29 10 *D*

29 $eP \cdot Z$ 13 32 17
$i \cdot Z$ 32 20
$e \cdot Z$ 32 33
$\Delta = 46°$. Aleutian Islands.

30 $eP \cdot Z$ 12 18 59
$\Delta = 31°$. Alaska.

31 $iP \cdot Z$ 0 56 18 *C*
$eS \cdot NE$ 1 02 31
$L \cdot NE$ 07
$\Delta = 41°$. Alaska.

February

3 $e \cdot Z$ 2h35m36s

3 $eP \cdot Z$ 2 38 54
$\Delta = 90°$. Sumatra.

3 $eP \cdot Z$ 13 41 56
$\Delta = 62°$. $h = 100$ km. Japan.

February

4 $iP \cdot Z$ 9h02m39s *C*
$ipP \cdot Z$ 03 11
$\Delta = 69°$. $h = 150$ km. Burma.

4 $eP \cdot Z$ 12 58 05
$\Delta = 48°$. $h = 150$ km. Kamchatka.

4 $eP \cdot Z$ 19 20 40
$\Delta = 72°$. Formosa.

5 $eP \cdot Z$ 15 50 33
$eS \cdot N$ 16 00 38
$\Delta = 79°$. Panama.

6 $e \cdot Z$ 11 45 18

6 $eP \cdot Z$ 18 24 41
$iPcP \cdot Z$ 25 50
$\Delta = 54°$. Kurile Islands.

6 $iP \cdot Z$ 21 59 17 *C*
$iSKS \cdot N$ 22 09 53
$ePS \cdot N$ 12 57
$L \cdot E$ 29
$\Delta = 105°$. Solomon Islands.

7 $e \cdot Z$ 3 09 22

7 $iP \cdot Z$ 5 26 16 *C*
$\Delta = 98°$. Sumatra.

7 $eP \cdot Z$ 21 11 02
$\Delta = 55°$. Kurile Islands.

8 $iP \cdot Z$ 8 16 34 *D*
$epP \cdot Z$ 18 46
$\Delta = 95°$. $h = 600$ km. Brazil/Peru.

9 $iPKP \cdot Z$ 2 27 14 *C*
$\Delta = 126°$. Kermadec Islands.

11 $e \cdot Z$ 6 22 54

11 $iPKP \cdot Z$ 21 20 05 *C*
$ipPKP \cdot Z$ 20 24
$\Delta = 126°$. $h = 75$ km. Kermadec Islands.

12 $iP \cdot Z$ 22 03 07 *C*
$eS \cdot N$ 10 39
$iScS \cdot E$ 12 55
$i \cdot E$ 13 17
$L \cdot NE$ 18
$\Delta = 54°$. Kurile Islands.

12 $iP \cdot Z$ 23 36 00 *C*
$L \cdot NE$ 53
Aftershock.

February
13 *iP·Z* 16h20m39s
Δ = 62°. Nepal/Tibet.

13 *eP·Z* 16 36 48
Δ = 54°. Kurile Islands.

14 *iP·Z* 3 31 28 *C*
Δ = 55°. Kurile Islands.

14 *ePKP·Z* 6 03 25
Δ = 128°. Chile.

15 *eP·Z* 10 54 37
eS·N 11 02 17
L·E 11
Δ = 55°. Kurile Islands.

15 *eP·Z* 11 39 05
Δ = 62°. Tibet.

16 *eP·Z* 3 52 42
Δ = 42°. *h* = 150 km. Albania.

16 *eP·Z* 15 04 15
Δ = 55°. Kurile Islands.

17 *e·Z* 5 40 17

18 *eP·Z* 1 13 25
Δ = 54°. Kurile Islands.

18 *eP·Z* 17 14 35 *D*
Δ = 83°. Ascension Island.

18 *eP·Z* 20 13 33
Δ = 92°. Philippine Islands.

20 *eP·Z* 13 12 49
Δ = 40°. Kodiak Island.

20 *iP·Z* 13 16 14
Δ = 85°. Galapagos Islands.

20 *eP·Z* 22 39 49
Δ = 88°. Ecuador.

21 *iP·Z* 3 10 27 *D*
Δ = 47°. Greece.

22 *ePKP·Z* 22 12 29
Δ = 126°. Kermadec Islands.

23 *iP·Z* 4 26 22 *C*
Δ = 60°. *h* = 100 km. Japan.

23 *iP·Z* 10 59 45 *D* *T:* 0s.7. *A:* 5 mm
iS·Z 11 00 15 *T:* 0s.5. *A:* 8 mm
Local.

February
23 *eP·Z* 21h54m22s
Δ = 47°. Dodecanese Islands.

23 *eP·Z* 22 05 19
Δ = 46°. Turkey.

24 *eP·Z* 3 15 27
Δ = 71°. Ryukyu Islands.

26 *ePP·Z* 6 09 22
Δ = 123°. Easter Island.

26 *iP·Z* 18 21 31 *C*
iS·NE 30 17
iSKS·N 31 27
eSS·NE 34 43
L·NE 40
Δ = 66°. Japan.

27 *eP·Z* 1 19 36
Δ = 79°. *h* = 200 km. Columbia.

27 *eP·Z* 12 25 39
eS·Z 27 26
Δ = 10°. Jan Mayen.

27 *eP·Z* 13 14 51
Δ = 45°. Aleutian Islands.

27 *eP·Z* 21 48 36
Δ = 48°. Aegean Sea.

27 *eP·Z* 22 03 07
Repetition.

28 *e·Z* 2 12 18

28 *e·Z* 16 59 15
e·Z 17 01 14

March
4 *iP·Z* 22h36m07s *C*
Δ = 60°. Japan.

7 *ePKP·Z* 10 29 36
iPP·N 31 31
L·NE 11 09
Δ = 126°. Kermadec Islands.

7 *ePKP·Z* 19 27 46
Δ = 129°. Indian Ocean.

8 *eP·Z* 0 26 14
Δ = 46°. Aleutian Islands.

9 *eP·Z* 4 10 30
Δ = 72°. Atlantic Ocean.

March

11 $eP \cdot Z$ 1h40m26s
$\Delta = 50°$. Kurile Islands.

11 $eP \cdot Z$ 8 52 41
$\Delta = 75°$. British Somaliland.

13 $eP \cdot Z$ 8 15 01
$L \cdot NE$ 41
$\Delta = 71°$. Mexico.

13 $e \cdot Z$ 12 39 54

13 $eP \cdot Z$ 17 54 47 *D*

13 $eP \cdot Z$ 18 07 56
$e(S) \cdot ZE$ 09 01
$e(L) \cdot Z$ 09 27

13 $e(P) \cdot Z$ 18 13 58

13 $e(P) \cdot Z$ 18 44 10

13 $eP \cdot Z$ 19 26 05
$\Delta = 50°$. Crete.

16 $eP \cdot Z$ 5 06 28
$\Delta = 47°$. Aleutian Islands.

16 $ePP \cdot Z$ 14 03 54
$\Delta = 105°$. Flores Sea.

18 $ePKP \cdot Z$ 15 14 40
$\Delta = 149°$. New Zealand.

19 $eP \cdot Z$ 5 01 41
$\Delta = 58°$. Japan.

19 $iP \cdot Z$ 8 04 48 *C*
$\Delta = 95°$. $h = 100$ km. Molucca Passage.

19 $iP \cdot Z$ 9 28 59 *C*
$\Delta = 61°$. $h = 100$ km. Japan.

20 $iP \cdot Z$ 3 39 42 *C*
$i(S) \cdot Z$ 40 47
Compare March 13d18h.

20 $eP \cdot Z$ 6 08 01
$\Delta = 76°$. $h = 100$ km. Nicaragua.

20 $iP \cdot Z$ 11 47 15 *C*
$\Delta = 52°$. $h = 350$ km. Sakhalin Island.

20 $iP \cdot Z$ 14 10 01 *C*
$\Delta = 56°$. $h = 100$ km. India.

20 $iPKP \cdot Z$ 16 11 37 *C*
$ePP \cdot Z$ 12 39
$\Delta = 116°$. $h = 200$ km. Tonga Islands.

March

22 $iP \cdot Z$ 1h20m09s *D*
$e(S) \cdot Z$ 20 38

22 $e \cdot Z$ 20 24 05

24 $iP \cdot Z$ 23 07 30 *C*
$\Delta = 63°$. $h = 100$ km. Japan.

26 $eP \cdot Z$ 1 33 37
$\Delta = 76°$. Philippine Islands.

26 $iP \cdot Z$ 14 42 16 *C*
$\Delta = 91°$. $h = 150$ km. Philippine Islands.

26 $iP \cdot Z$ 20 18 20 *C*
$\Delta = 42°$. $h = 200$ km. Alaska.

26 $iP \cdot Z$ 23 21 56 *D*
$\Delta = 62°$. Tibet.

27 $e \cdot Z$ 21 09 37

28 $iP \cdot Z$ 9 49 18 *C*
$ePP \cdot ZNE$ 53 16
$iSKS \cdot E$ 59 42
$eS \cdot E$ 10 00 24
$\Delta = 96°$. $h = 100$ km. Celebes.

28 $iP \cdot Z$ 12 37 37 *C*
$iS \cdot N$ 44 42
$L \cdot N$ 52
$\Delta = 47°$. Aleutian Islands.

28 $eP \cdot Z$ 14 07 25
$\Delta = 46°$. Aleutian Islands.

28 $e \cdot Z$ 21 19 52

29 $eP \cdot Z$ 6 54 21
$\Delta = 65°$. $h = 100$ km. Japan.

31 $e \cdot Z$ 5 31 02

April

1 $eP \cdot Z$ 2h51m29s
$\Delta = 67°$. $h = 100$ km. Japan.

1 $eP \cdot Z$ 15 27 28
$iPf \cdot ZNE$ 27 32 *D*
$iS \cdot NE$ 34 45
$iScS \cdot NE$ 37 20
$\Delta = 52°$. Sinkiang Province, China.

3 $e \cdot Z$ 0 29 54

3 $iP \cdot Z$ 1 22 14 *C*
$\Delta = 79°$. $h = 200$ km. Columbia.

April

3 $eP \cdot Z$ $8^h06^m51^s$
$\Delta = 70°$. Caribbean Sea.

4 $iP \cdot Z$ 1 27 01 *C*
$\Delta = 52°$. Sinkiang Province, China.

4 $eP \cdot Z$ 1 35 11
Repetition.

4 $eP \cdot Z$ 9 55 43
$\Delta = 52°$. Sinkiang main shock.

5 $ePKP \cdot Z$ 21 49 46
$\Delta = 152°$. Macquarie Islands.

6 $eP \cdot Z$ 1 42 53
$\Delta = 52°$. Sinkiang Province, China.

6 $eP \cdot Z$ 4 13 56
$\Delta = 53°$. California.

6 $iP \cdot Z$ 14 18 40 *C*
$\Delta = 92°$. Sumatra.

6 $eP \cdot Z$ 18 22 42
$\Delta = 60°$. $h = 100$ km. Iran.

6 $eP \cdot Z$ 22 39 35
$\Delta = 92°$. Sumatra.

7 $eP \cdot Z$ 4 49 59
$\Delta = 54°$. Hindu Kush.

7 $e \cdot Z$ 6 58 27

7 $eP \cdot Z$ 10 20 06
$\Delta = 94°$. Sumatra.

7 $iP \cdot Z$ 21 26 47 *C*
$\Delta = 51°$. Kirghiz/Tadzlik.

8 $eP \cdot Z$ 4 34 59
$\Delta = 88°$. Ecuador.

8 $eP \cdot Z$ 4 59 53
Repetition.

8 $eP \cdot Z$ 9 16 40
Repetition.

8 $iPKP \cdot Z$ 18 18 39
$\Delta = 123°$. Chile.

8 $eP \cdot Z$ 21 49 00
$\Delta = 84°$. $h = 100$ km. Mariana Islands.

9 $eP \cdot Z$ 7 33 01
$\Delta = 57°$. California.

April

9 $eP \cdot Z$ $15^h46^m32^s$
$eS \cdot N$ 55 57
$eSKS \cdot N$ 56 37
$\Delta = 73°$. Formosa.

10 $eP \cdot Z$ 7 08 39
Repetition.

12 $iP \cdot Z$ 22 32 02 *C*
$iS \cdot NE$ 41 27
$\Delta = 74°$. $h = 100$ km. El Salvador.

13 $iP \cdot Z$ 16 43 46 *C*
$\Delta = 52°$. Sinkiang Province, China.

16 $eP \cdot Z$ 11 48 57
$\Delta = 45°$. Kamchatka.

17 $eP \cdot Z$ 16 32 10
$\Delta = 78°$. Mid Atlantic Ocean.

19 $iP \cdot Z$ 5 09 27 *C* 10 mm
$e(S) \cdot Z$ 09 46
Near.

19 $eP \cdot Z$ 16 21 49 *C*
$\Delta = 54°$. Kurile Islands.

19 $eP \cdot Z$ 18 21 54
$\Delta = 44°$. Kamchatka.

19 $iP \cdot Z$ 20 29 08 *C*
$\Delta = 54°$. Kurile Islands.

19 $eP \cdot Z$ 22 17 09
$\Delta = 54°$. Kurile Islands.

20 $iP \cdot Z$ 14 27 39 *C* 5 mm
$e(S) \cdot Z$ 27 59
Near.

21 $eP \cdot Z$ 20 19 37
$\Delta = 51$. Kurile Islands.

21 $eP \cdot Z$ 21 35 08
$ePcP \cdot Z$ 36 43
$\Delta = 47°$. Aleutian Islands.

22 $eP \cdot Z$ 19 14 09
$e \cdot Z$ 14 29
$\Delta = 84°$. Ecuador.

23 $iP \cdot Z$ 5 25 41 *D*
$\Delta = 71°$. $h = 100$ km. Ryukyu Islands.

23 $iP \cdot Z$ 9 11 00 *C*
$eS \cdot NE$ 18 31
$iScS \cdot NE$ 20 52 *N*: +, *E*: +.
$L \cdot NE$ 27.3
$\Delta = 54°$. Kurile Islands.

April
23 $eP \cdot Z$ $12^h27^m14^s$
$\Delta = 54°$. $h = 100$ km. Kurile Islands.

23 $iP \cdot Z$ 17 00 20 *D*
$\Delta = 54°$. $h = 100$ km. Kurile Islands.

24 $eP \cdot Z$ 5 01 04
$\Delta = 47°$. Aleutian Islands.

24 $eP \cdot Z$ 12 36 56 *C*
$\Delta = 54°$. $h = 100$ km. Kurile Islands.

24 $iP \cdot ZNE$ 14 10 19 *C*. *Z:* 10 mm
Near.

25 $iP \cdot Z$ 1 20 33 *C*
$\Delta = 74°$. $h = 150$ km. Guatemala.

25 $eP \cdot Z$ 1 26 58
$\Delta = 54°$. $h = 100$ km. Kurile Islands.

25 $iP \cdot Z$ 23 51 42 *C*
$\Delta = 69°$. Ryukyu Islands.

26 $iP \cdot Z$ 7 48 17 *C*
$\Delta = 54°$. Kurile Islands.

26 $eP \cdot Z$ 19 41 52
$\Delta = 54°$. Kurile Islands.

28 $iP \cdot Z$ 22 12 48
$i \cdot Z$ 12 51 10 mm
Near.

29 $eP \cdot Z$ 9 28 46 *D*
$\Delta = 53°$. California.

29 $iP \cdot ZNE$ 9 31 45 *C*
$iS \cdot NE$ 33 37
$L \cdot NE$ 34.4
$\Delta = 10°$. Jan Mayen.

29 $eP \cdot Z$ 10 54 59
$\Delta = 53°$. Outher Mongolia.

29 $eP \cdot Z$ 21 52 41
$e(S) \cdot Z$ 54 34
Jan Mayen aftershock?

30 $ePKP \cdot Z$ 0 29 55
$\Delta = 144°$. Southern Indian Ocean.

30 $eP \cdot Z$ 0 56 01
$iPf \cdot Z$ 56 02 *C*
$eS \cdot Z$ 57 54
$\Delta = 10°$. Jan Mayen aftershock.

April
30 $eP \cdot Z$ $7^h39^m59^s$
$\Delta = 30°$. North Atlantic Ocean.

30 $eP \cdot Z$ 11 24 36
$\Delta = 54°$. $h = 100$ km. Kurile Islands.

May
1 $eP \cdot Z$ $12^h28^m20^s$
$\Delta = 53°$. California.

2 $eP \cdot Z$ 3 14 18
$eS \cdot Z$ 16 11
$\Delta = 10^1/_2°$. Jan Mayen.

2 $eP \cdot Z$ 8 32 49
$eS \cdot Z$ 34 42
Repetition.

2 $ePKP \cdot Z$ 23 03 43 *C*
$\Delta = 126°$. Kermadec Islands.

3 $eP \cdot Z$ 0 38 32
$\Delta = 81°$. Mid-Atlantic Ocean.

3 $eP \cdot Z$ 14 14 30 *C*
$\Delta = 71°$. Mexico.

4 $eP \cdot Z$ 2 26 (45)
$\Delta = 53°$. California.

4 $eP \cdot Z$ 7 11 16
$\Delta = 65°$. Atlantic Ocean.

5 $eP \cdot Z$ 12 32 43
$eS \cdot Z$ 34 35
$\Delta = 10°$. East of Jan Mayen (74 N, 2 W, $H = 30^m23^s$).

6 $eP \cdot Z$ 16 12 47
$\Delta = 45°$. Mediterranean Sea.

6 $eP \cdot Z$ 19 50 (34)
$\Delta = 83°$. Ascension Island.

6 $eP \cdot Z$ 22 45 44
$\Delta = 90°$. Philippine Islands.

7 $e(PKP) \cdot Z$ 0 00 (45)
($\Delta = 150°$. Macquarie Island.)

7 $eP \cdot Z$ 2 08 38
$\Delta = 74°$. Atlantic Ocean.

7 $iP \cdot Z$ 4 46 07 *C*
$\Delta = 104°$. $h = 100$ km. Japan.

7 $eP \cdot Z$ 10 35 40
$\Delta = 91°$. $h = 100$ km. Philippine Islands.

May
7 *eP·Z* 12h24m40s
Δ = 62°. Japan.

7 *eP·Z* 15 14 17
eS·Z 16 00
Δ = 10°. Foreshock?

7 *eP·Z* 15 43 20
eS·Z 45 15
Δ = 10°. Jan Mayen.

7 *eP·Z* 17 45 46

9 *eP·Z* 21 34 20
e(S)·Z 36 12
Δ = 10°. Jan Mayen?

9 *eP·Z* 22 00 25

10 *iP·Z* 1 57 09 *C* 5 mm
i(S)·Z 57 27
Near.

11 *ePKP·Z* 8 57 18
Δ = 122°. Chile.

11 *e·Z* 14 27 40

13 *ePKP·Z* 15 10 36
ePP·Z 11 46
Δ = 115°. *h* = 550 km. Fiji Islands.

13 *eP·Z* 15 58 57
Δ = 55°. Japan.

13 *eP·Z* 19 30 29
Δ = 71°. *h* = 250 km. Formosa.

14 *eP·Z* 15 11 19
L·NE 15
Δ = 14°. Iceland.

14 *eP·Z* 15 41 26
L·NE 45
Repetition.

14 *eP·Z* 19 40 45
Δ = 53°. California.

16 *eP·Z* 3 40 34
Δ = 46°. Aleutian Islands.

16 *iP·Z* 21 56 18 *D*
Δ = 68°. Ryukyu Islands.

17 *eP·NE* 19 37 45 No *Z*-record.
ePP·N 39 40
iS·NE 44 30
eSS·E 47 40
L·NE 52.5
Δ = 46½°. Aleutian Islands.

May
18 *iP·Z* 20h50m56s *D*
Δ = 92°. *h* = 100 km. Philippine Islands.

19 *eP·Z* 1 03 29 *C*
Δ = 93°. *h* = 100 km. Philippine Islands.

19 *eP·Z* 9 37 14 *C*
Δ = 76°. Nicaragua.

19 *iP·Z* 16 48 52 *C*
Δ = 72°. Ryukyu Islands.

19 *iP·Z* 21 39 28 *D*
Δ = 52°. Tadzhik S.S.R.

20 *eP·Z* 17 49 38
Δ = 10°. Arctic Ocean.

22 *ePKP·Z* 17 51 10
Δ = 121°. Tonga Islands.

23 *iP·ZNE* 2 53 52 *C*
iS·NE 3 00 46
Δ = 48°. Dodecanese Islands.

23 *eP·Z* 3 52 09
ePP·Z 54 52
Δ = 77°. *h* = 150 km. Costa Rica.

23 *iP·Z* 16 56 28 *C*
epP·Z 56 59
Δ = 75°. *h* = 150 km. Nicaragua.

25 *eP·Z* 13 42 32
Δ = 50°. China.

26 *iP·Z* 5 17 42 *C*
Δ = 72°. *h* = 100 km. Guatemala.

26 *eP·Z* 22 59 49 *C*
Δ = 60°. Japan.

27 *iP·Z* 5 23 57 *C*
Δ = 53°. *h* = 100 km. Hindu Kush.

27 *iP·Z* 7 27 45 *C*
Δ = 57°. *h* = 150 km. Japan.

29 *eP·Z* 17 03 45 *C*
Δ = 80°. Philippine Islands.

29 *eP·Z* 19 52 09
Δ = 75°. Ethiopia.

30 *e·Z* 5 57 30

31 *L·NE* 14 18

June

1 *eP·Z* 10h13m25s
$\Delta = 67°$. Dominican Republic.

1 *eP·Z* 23 41 00
eS·N 50 49
L·NE 24 05
$\Delta = 75°$. Ethiopia.

2 *eP·Z* 0 13 27
Repetition.

2 *eP·Z* 0 20 37
Repetition.

2 *iP·Z* 5 02 55 *D*
Repetition.

2 *eP·Z* 5 34 11
Repetition.

2 *eP·Z* 5 56 35
Repetition.

2 *iP·Z* 11 07 43 *C*
$\Delta = 5°$. Spitzbergen.

2 *e·Z* 20 55 22

3 *iP·Z* 1 21 21 *D*
$\Delta = 42°$. Kamchatka.

3 *iP·Z* 15 35 01 *D*
$\Delta = 76°$. Ethiopia.

4 *iP·Z* 1 17 19 *D*

4 *iP·Z* 7 42 55 *D*
iPPP·E 46 16
$\Delta = 58°$. Tibet.

4 *iP·Z* 7 53 34 *D*
Repetition.

4 *eP·Z* 14 01 21 *D*
Repetition.

7 *iP·Z* 14 28 06 *C*
$\Delta = 88°$. Ascencion Island.

9 *eP·Z* 4 05 23 *C*
iPcP·Z 06 21
$\Delta = 56°$. $h = 100$ km. India.

9 *iP·Z* 9 45 16 *D*
$\Delta = 47°$. Caspian Sea.

9 *iP·Z* 15 30 36 *C*
$\Delta = 88°$. $h = 100$ km. Sumatra.

June

10 *eP·Z* 9h04m18s *D*
$\Delta = 82°$. Mexico.

11 *eP·Z* 5 20 29 *C*
eS·NE 28 33
L·NE 38.4
$\Delta = 59°$. Iran.

11 *eP·Z* 5 40 15
Repetition.

11 *eP·Z* 6 01 25
$\Delta = 47°$. Kamchatka.

11 *eP·Z* 12 40 26
$\Delta = 60°$. Iran.

11 *iP·Z* 12 41 31 *C*
Repetition.

11 *eP·Z* 14 08 02 *C*
Repetition.

12 *ePKP·Z* 7 55 04
i·Z 55 08 *D*
$\Delta = 148°$. New Zealand.

12 *iP·Z* 10 09 48 *C*
$\Delta = 73°$. North Viet-Nam.

12 *e·Z* 11 42 54

13 *eP·Z* 2 32 46
e·Z 33 11
$\Delta = 46°$. Aleutian Islands.

13 *iP·Z* 12 34 04 *C* 2 mm
e·Z 34 25
Near.

13 *iP·Z* 17 35 43 *C* 10 mm
e·Z 36 03
Near.

13 *ePKP·Z* 21 56 29
$\Delta = 120°$. $h = 150$ km. Tonga Islands.

14 *eP·Z* 0 52 12
$\Delta = 69°$. Burma.

14 *eP·Z* 20 44 00 *D*
$\Delta = 75°$. Ethiopia.

15 *e·Z* 16 53 51

15 *eP·Z* 23 33 55 *D*
$\Delta = 53°$. Kurile Islands.

June
16 $iP \cdot Z$ $10^h43^m37^s$ D
$\Delta = 77°$. $h = 125$ km. Colombia.

17 $eP \cdot Z$ 8 15 47
$\Delta = 59°$. Iran.

17 $e \cdot Z$ 10 45 57 D

17 $eP \cdot Z$ 14 45 16
$\Delta = 87°$. Philippine Islands.

17 $iP \cdot Z$ 15 19 01 C
$\Delta = 74°$. $h = 150$ km. Mexico/Guatemala.

17 $eP \cdot Z$ 18 51 18
$\Delta = 74°$. $h = 100$ km. Guatamala.

18 $iP \cdot Z$ 3 25 23 D
$\Delta = 102°$. $h = 650$ km. Java Sea.

18 $eP \cdot Z$ 6 35 55
$\Delta = 58°$. Tibet.

18 $ePKP \cdot Z$ 14 13 36
$eSKP \cdot Z$ 16 17 C
$\Delta = 130°$. $h = 450$ km. Kermadec Islands.

18 $ePKP \cdot Z$ 22 33 11
$\Delta = 150°$. $h = 100$ km. South Pacific Ocean.

19 $iP \cdot Z$ 1 57 50 D
$\Delta = 84°$. $h = 100$ km. Philippine Islands.

19 $eP \cdot Z$ 2 55 54
$\Delta = 59°$. $h = 100$ km. Japan.

19 $eP \cdot Z$ 7 48 21
Repetition.

19 $eP \cdot Z$ 8 09 35
$\Delta = 59°$. Japan.

19 $iP \cdot Z$ 17 13 40 C
$ipP \cdot Z$ 14 26 D
$\Delta = 53^1/_2°$. $h = 200$ km. Hindu Kush.

20 $eP \cdot Z$ 3 33 06
$\Delta = 75°$. Gulf of Aden.

20 $eP \cdot Z$ 10 00 22
$\Delta = 71°$. Honduras.

21 $iP \cdot Z$ 4 09 00 D
$\Delta = 72°$. $h = 100$ km. Honduras.

June
21 $eP \cdot Z$ $6^h49^m27^s$
$\Delta = 60°$. Iran.

21 $eP \cdot Z$ 16 13 13
$\Delta = 46°$. Turkey.

21 $eP \cdot Z$ 20 38 27
$eS \cdot E$ 45 29
$\Delta = 48°$. Kamchatka.

21 $eSKS \cdot E$ 20 49 09
$\Delta = 103°$. $h = 150$ km. Java.

22 $iP \cdot Z$ 1 03 46 C
$\Delta = 41°$. Albania/Yugoslavia.

23 $eP \cdot Z$ 9 04 49
$eS \cdot NE$ 12 00
$eSS \cdot NE$ 15 30
$L \cdot NE$ 20
$\Delta = 50°$. Oregon.

23 $eP \cdot Z$ 11 15 13
$\Delta = 63°$. $h = 150$ km. Japan.

23 $eP \cdot Z$ 16 46 29
$\Delta = 59°$. Iran.

24 $eP \cdot Z$ 5 19 24
$\Delta = 74°$. $h = 100$ km. El Salvador.

24 $eP \cdot Z$ 9 48 53
$\Delta = 90°$. $h = 150$ km. Sumatra.

25 $eP \cdot Z$ 2 39 15
$\Delta = 57^1/_2°$. Japan.

25 $eP \cdot Z$ 16 58 24
$\Delta = 77°$. Mariana Islands.

26 $e \cdot Z$ 4 06 49

26 $iP \cdot Z$ 14 55 51 C

27 $eP \cdot Z$ 3 30 09
$\Delta = 44°$. $h = 100$ km. Unimak Island.

27 $eP \cdot Z$ 7 14 27
$e \cdot Z$ 14 32
$\Delta = 66°$. China.

27 $eP \cdot Z$ 8 00 35
$ePcP \cdot Z$ 02 17
$\Delta = 44°$. $h = 300$ km. Kamchatka.

Nord 1961

June				
27	$e \cdot Z$	$8^h09^m26^s$		
27	$e \cdot Z$	13 09 15		
27	$e \cdot Z$	16 15 37		
28	$e \cdot Z$	5 32 02		
28	$e \cdot Z$	17 02 26		
June				
29	$eP \cdot Z$	$14^h10^m57^s$		
	$epP \cdot Z$	11 19		
	$iPcP \cdot Z$	12 34	D	
	$\Delta = 46°$. $h = 100$ km. Aleutian Islands.			
29	$eP \cdot Z$	22 04 11		
	$e \cdot Z$	04 15		
	$\Delta = 11^1/_2°$. North of Severnaya Zemlya.			
30	$eP \cdot Z$	5 14 09		
	$\Delta = 50°$. Crete.			

December 1964 HENRY JENSEN

Local shocks.

		(P)		(S)		
January						
1	17h	*i* 13m20s		*e* 13m56s		
2	04	*e* 51	53			
2	19	*e* 48	14			
4	19	*i* 19	25	*e* 19	52	
5	5	*e* 50	27			
6	0	*e* 57	01	*e* 57	06	
6	7	*e* 26	55	*e* 27	20	
7	1	*e* 47	00			
7	6	*e* 37	27			
8	9	*e* 50	00	*e* 50	09	
8	13	*e* 58	35	*e* 59	02	
8	20	*e* 11	35	*e* 12	20	
9	8	*e* 50	09	*e* 50	36	
9	11	*e* 28	57	*e* 29	24	
9	19	*e* 32	29			
9	20	*e* 47	15			
9	22	*e* 50	56			
10	10	*i* 32	07	C! *i* 32	27	
10	17	*e* 02	06			
11	17	*e* 13	10	*e* 13	37	
13	0	*i* 37	49	*e* 38	04	
19	17	*e* 01	48			
20	17	*e* 24	59			
21	3	*e* 29	06			
21	17	*i* 45	57	*i* 46	18	
22	1	*i* 52	54	C		
23	9	*i* 25	54	C!		
24	1	*i* 31	22	D! *i* 31	33	
25	7	*e* 12	34			
25	12	*e* 25	58			
25	13	*e* 55	53			
26	9	*i* 57	57			
27	8	*i* 37	13			
27	14	*e* 07	08	*e* 07	30	
28	14	*e* 25	15			
29	18	*i* 47	48	C		
31	0	*e* 46	58			
February						
1	15h	*e* 13m10s		*e* 13m47s		
2	7	*e* 56	29	*e* 56	49	
2	23	*e* 15	30	*e* 15	56	
2	23	*e* 47	40			
8	10	*e* 45	25	*e* 45	55	
9	10	*e* 30	26	*e* 30	29	
9	15	*e* 40	35	*e* 40	45	
10	16	*e* 40	49	*e* 41	19	
10	21	*e* 17	18	*e* 17	26	
11	0	*e* 30	32			
11	17	*e* 42	14			
11	18	*e* 51	23			
11	23	*e* 27	23			
12	5	*e* 34	46			
12	6	*e* 39	48			

		(P)			(S)	
February						
12	14h	*e* 42m43s				
12	21	*e* 42	55			
13	1	*e* 35	55			
13	8	*e* 41	37			
14	5	*e* 42	28			
15	8	*e* 09	37		*e* 09m42s	
16	2	*e* 09	24		*e* 10	43
17	8	*i* 16	48		*i* 16	56
18	4	*i* 09	59	D	*e* 10	28
18	15	*e* 14	30			
20	0	*e* 44	50		*e* 45	10
20	3	*e* 28	25			
20	8	*e* 23	02			
20	11	*e* 00	14		*e* 00	23
20	23	*i* 40	33		*e* 40	41
23	10	*i* 59	45	D	*i* 60	15
		$T = 0^s.7$, $A = 5$ mm			$T = 0^s.5$, $A = 8$ mm	
23	17	*i* 23	22			
27	23	*e* 17	56		*e* 18	16
28	3	*e* 00	21			
March						
1	1h	*e* 15m00s				
2	21	*e* 21	38		*e* 21m47s	
5	15	*e* 32	39			
8	3	*e* 31	08		*e* 31	13
10	16	*e* 26	52		*e* 27	22
12	12	*i* 19	00	D		
18	16	*e* 51	21			
22	1	*i* 20	09	D	*e* 20	38
23	19	*i* 01	56	C		
25	16	*e* 59	27		*e* 59	47
26	8	*e* 09	22		*e* 09	42
29	11	*e* 59	16		*e* 59	40
29	14	*e* 08	09		*e* 08	24
30	5	*e* 32	14		*e* 32	53
April						
1	19h	*e* 27m43s				
4	10	*e* 43	38			
6	12	*e* 27	03		*e* 27m31s	
7	10	*e* 50	44		*e* 51	06
9	20	*e* 16	55			
10	10	*e* 09	22			
11	4	*e* 12	15		*e* 12	22
11	6	*e* 20	20		*e* 20	41
11	6	*e* 30	06			
12	2	*e* 11	40		*i* 11	59
12	18	*e* 01	36			
15	19	*e* 31	15			
15	19	*e* 33	03			
17	6	*i* 24	45	C	*i* 24	49
17	8	*i* 17	16	C	*i* 17	20
18	19	*e* 46	36		*e* 47	04
19	5	*i* 09	27	C	*e* 09	46