

University of Ljubljana
Astronomical and Geophysical Observatory

**PRELIMINARY
SEISMOLOGICAL BULLETIN**

I—III 1969

Ljubljana 1970

University of Ljubljana
Astronomical and Geophysical
Observatory,
61001 Ljubljana, P.O.B. 20
Yugoslavia

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/ January - March 1969 /

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PRELIMINARY SEISMOLOGICAL BULLETIN
from January 1, to March 31, 1969

Station: Ljubljana /LJU/ - Coordinates: $46^{\circ} 02.6' N$ Lat.
 $14^{\circ} 32.0' E$ Long.
Geocentric direction cosines: $a = + 6743$, $b = + 1748$, $c = + 7175$
 $d = - 8$, $h = - 4$
Height above sea level: 396 m.
Lithologic Foundation: sandstone /carbon/.

Instruments:

Wiechert, horizontal astatic seismograph, $M = 200$ kg, mechanical registration, 16-18 mm/min.

Constants / 31.1.1966 /:	To	v:1	r/T_0^2	V
N-S	5.0	2.20	0.0043	69
E-W	4.9	2.37	0.0058	67

Hiller-Stuttgart, vertical component with galvanometrical recording. $T_0 = 1.5$ sec, $T_g = 1.5$ sec. $D_1 = D_2 = 1$, $V_{max} = 10150x$.

Note: Periods of seismic waves are given in seconds, the amplitudes in microns. Sign. + means compression or movement of ground towards north or east, sign. - means dilatation or movement of ground towards south or west. All times are given in GMT. Time signals are received one or two times daily and are registered on a chronograph. Wherever possible time readings up to one tenth of a second are given. Macroseismic rays are given in kilometers. Macroseismic data refer to Mercalli - Cancani - Sieberg scale / MCS /. Abbreviation DECM means: Determination was made by electronic computer.

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- 1 eZ PKP 09 44 42, USCGS: H= 09 25 00.5, 16.2S, 178.4E, h=N, Fiji Islands, Mb= 5.3 SD 1.5 /CGS/.
- 2 eZ P 00 44 34, USCGS: H= 00 36 11.7, 30.5N, 41.9W, h=N, North Atlantic ridge. Mb= 4.7 SD 1.0 /CGS/.

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- 2 eZ P 15 21 01, BCIS: H= 15 17 31 /DECM/, 35.3N, 28.1E, Eastern Mediterranean Sea, south of Rhodes, USCGS: H= 15 1733.9, 35.5N, 28.4E, h= N, Eastern Mediterranean Sea, Mb=4.5 SD 1.2 /CGS/.
- 2 eZ PKP 17 51 54, USCGS: H= 17 32 09.8, 15.2S, 173.6W, h=N, Tonga Islands, Mb= 4.7 SD 1.3 /CGS/.
- 2 eZ Pn 19 28 /41/, eZ 19 28 56,
- 3 eZ P 03 23 17, BCIS: H= 03 16 42 /DECM/, 37.1N, 57.7E, Khorassan, northeastern Iran. Strongly felt in the region of Asfrain northwest of Mashad. Damage and victims at Dahane Oyack /a range of mountains Mihrabi/. Many foreshocks and aftershocks registered at Mashad, M= 5.1 /Roma/, USCGS: H= 03 16 38.1, 37.1N, 57.9E, h= 11 km. Iran - USSR border region, 50 killed and 300 injured in northeast Khorassan Province, Iran. Mb= 5.6 Ms= 5.2 SD 1.2 /CGS/.
- 3 eZ P 13 40 34, USCGS: H= 13 28 12.8, 51.2N, 179.4W, h=29 km, Andreanof Islands, Aleutian Islands. Felt on Adak, M= 5.6 /BRK/, Mb= 5.8 Ms= 5.2 SD 1.0 /CGS/.
- 4 eZ /Pn/ 09 34 32, eZ Sn 09 34 50, /D= 160 km/.
- 5 eZ Pg 11 55 /36/, eZ Sg 11 55 50, D= 110 km.
- 5 eZ PKP 13 45 /48/, iZ PKIKP 13 45 52.0, eZ PP 13 18 10, D= 14700 km, USCGS: H= 13 26 39.9, 8.0S, 158.9E, h= 47 km, Solomon Islands, slight damage on Santa Isabel Island, also felt at Honiara. M= 7.5 /PAS/, 6 3/4 - 7 /BRK/, 6 1/2 /PAL/, Mb= 6.4 Ms= 7.1 SD 1.2 /CGS/.
- 5 eZ Pn 19 53 45, eZ 19 53 59, eZ 19 54 42,
- 6 eZ PKHKP 15 58 14, iZ PKIKP 15 58 24.0, USCGS: H= 15 39 00.9 10.5S, 164.5E, h= 32 km. Santa Cruz Islands region. M= 7.1 /PAS/, 6 3/4 - 7 /BRK/, 6.0 /PAL/, Mb= 6.2 Ms= 6.8 SD 1.1 /CGS/.
- 6 eZ 17 28 32, iZ Sn 17 28 38.0,
- 6 iZ Pn 22 04 18.8, iZ Pg 22 04 29.1, iZ Sn 22 05 01.1, iZ Sg 22 05 18.7, D= 380 km. BCIS: H= 22 03 25 /DECM/, 44.0N, 10.8E, Appenin Toscan /Italy/. Slightly damage at S. Marcello Pistoiese, Mammiano Basso, Piteglio, felt in Prov. of Pistoia, Massa, Luca da Pisa /Roma/, M= 4.3, ML= 3.6 /Prunonice/, USCGS: H= 22 03 24.7 /DECM/, 44.1N, 10.7E, h= 7 km, Northern Italy, minor damage at San Marcello Pistoiese, Mammiano Basso and Piteglio. M= 4.5 SD 1.2 /CGS/.
- 6 eZ 22 30 47, traces.
- 7 iZ Pn 00 52 52.5, eZ /Sn/ 00 54 31, D= 960 km, BCIS: H= 00 50 46 /DECM/, 38.2N, 20.1E, Ionian Sea, west of Island Ce-

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- /cont./ phalonia, ML= 4.2 /Athens/. USCGS: H= 00 50 45.8, 38.5N, 20.1E, h= 15 km, Greece, Mb= 4.3 SD 1.1 /CGS/.
- 7 eZ /Pn/ 01 56 15, eZ 01 57 15,
- 7 eZ 02 30 /00/, Z /Sn/ 02 31 /00/, traces.
- 7 eZ PKP 04 59 48, USCGS: H= 04 40 21.4, 16.0S, 167.5E, h=45 km, New Hebrides Islands, felt at Lamap, Mb= 4.7 Ms= 5.3 SD 1.2 /CGS/.
- 7 eZ P 07 14 36, USCGS: H= 07 01 55.2, 26.1N, 129.5E, h= 61 km, Ryukyu Islands, Mb= 5.3 SD 1.0 /CGS/.
- 7 eZ 17 28 31, eZ /Sn/ 17 29 24, traces.
- 7 eZ PKP 18 06 16, USCGS: H= 17 46 45.8, 10.8S, 164.4E, h= 29 km, Santa Cruz Islands region, Mb= 5.3 SD 1.0 /CGS/.
- 8 eZ P 06 11 48 USCGS: H= 06 03 16.5, 17.4N, 60.3E, h= 33 km, Arabian Sea, Mb= 4.7 SD 1.3 /CGS/.
- 8 eZ Pn 07 02 /03/, eZ 07 02 35, eZ 07 03 21,
- 8 eZ /Pn/ 09 12 54, eZ 09 13 32,
- 8 eZ 13 36 45, iZ Sg 13 36 49.0,
- 10 iZ Pg 01 06 57, iZ Sg 01 06 58.6, D= 18 km,
- 10 iZ Pn 04 33 57.9, eZ Sn 04 35 24, D= 820 km, BCIS: H= 04 32 03 /DECM/, 39.2N, 19.8E, Ionian Sea, south of Island Karkira, USCGS: H= 04 32 03.6, 39.4N, 20.4E, h= N, Greece-Albania border region, Mb= 4.5 SD 1.3 /CGS/.
- 10 iZ Pn 16 18 09.6, iZ Pg 16 18 15.4, iZ Sn 16 18 39.3, iZ Sg 16 18 47.8, F 16 27 30, D= 270 km. BCIS: H= 16 17 33 /DECM/, 44.5N, 12.0E, Romagna, Italy. Io= 5⁰1/4 - 5⁰1/2 /Roma/, M= 4.05 /Roma/, MLH= 3.8 /Moxa/, 3.6 /Prunonice/, USCGS: H= 16 17 31.1, 44.6N, 12.0E, h= 11 km, Northern Italy, felt at Forli, Italy, Mb= 4.5 SD 0.9 /CGS/.
- 11 eZ PKP 04 46 /56/, USCGS: H= 04 26 26.8, 28.4S, 177.0W, h= 68 km. Kermadec Islands. M= 6 1/2 - 6 3/4 /PAS/, 5 3/4 - 6 /GOL/, Mb= 5.4 SD 1.2 /CGS/.
- 11 eZ PKP 06 46 20, USCGS: H= 06 27 29.0, 17.7S, 178.8W, h=529 km, Fiji Islands region, Mb= 4.6 S 0.9 /CGS/.
- 11 iZ Pn 10 23 57.5, eZ /Sn/ 10 25 39, D= 980 km, BCIS: H= 10 21 52 /DECM/, 38 1/4 N, 20 1/4 E, Ionian Sea, west of Island Kefalonia, M= 4.35 /Roma/, ML= 4 /Athens/.
- 11 eZ 12 08 49, eZ 12 09 01,
- 12 eZ 11 43 09, iZ Sg 11 43 11.5, local, weak.

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- 12 iZ Pn 13 56 42.2, eZ Pg 13 56 48, iZ Sn 13 57 23.0, iZ Sg 13 57 37.6, D= 380 km.
- 13 eZ Pg 20 24 17, eZ Sg 20 24 20, D= 24 km, local.
- 13 eZ P 05 49 05, eZ 05 50 03, BCIS: H= 05 46 38 /DECM/, 38.ON, 22 1/2E, North of Peloponnese, ML= 4.4 /Athens/.
- 13 eZ Pn 08 00 /21/, eZ 08 00 44, BCIS: H= 07 57 00 /DECM/, 34.3N, 24.6E, south of Crete, ML= 4.8 /Helwan/, 4.4 /Athens/, USCGS: H= 07 57 07.0, 34.7N, 25.2E, h= 47 km, Crete. Mb= 4.6 SD 1.4 /CGS/.
- 14 iZ Pg 00 59 38.5, iZ Sg 00 59 54.7, D= 140 km, BCIS: H= 00 59 19 /DECM/, 46.3N, 13.0E, Venetian Alps, Italy. USCGS: H= 00 59 24.4, 46.8N, 12.9E, h= N, northern Italy.
- 14 eZNE P 23 15 37, eZNE S 23 18 06, eZNE 23 20 09, D= 1670 km, BCIS: H= 23 12 09 /DECM/, 36.2N, 29.1E, h= 50 km, cca. South of Anatolia. Important damage at Kas/Anatolia//36°10'N, 29°45'E/. Felt in SW Anatolia/Istanbul/. m= 6.8 /Uppsala/, MLH= 6.5/Wien-H/, 6.4/Uppsala/, MSH=6.4/Collm/, M= 6.3 /Athens/, 6.2 /Roma/, MLH= /Collm/, MLH=MLV= 6.2 /Moxa/, MLH= 6.1 /Pruhonice, Strasbourg/, ML=6. /Athens/, 5.8 /Istanbul-K/, USCGS: H= 23 12 07.9, 36.2N, 29.2E, h=N, Turkey. Damage at Kas and Kalkan. Felt in southwestern Anatolia, M= 6 1/4 -6 1/2 /PAS/, 6-6 1/4 /GOL/, Mb= 5.5 Ms = 6.0 SD 1.2 /CGS/.
- 15 eZ-P 08 48 30, BCIS: H= 08 46 29 /DECM/, 45.7N, 26.7E, h= 140 km, cca. Vrancea region. Rumania. USCGS: H= 08 46 29.4, 45.6N, 26.4E, h= 135 km, D, Rumania, Mb= 4.5 SD 1.0 /CGS/.
- 15 eZ Pn 21 37 58, eZ /Sn/ 21 38 03, /D=45 km/,
- 16 eZ 08 59 44, iZ /Sg/ 08 59 46.3,
- 16 eZ 18 44 54, eZ 18 45 12, traces.
- 16 eZ Pn 19 18 23, iZ Sn 19 19 14.8, D= 470 km.
- 19 iZ+P 07 13 45.0, eZ S 07 23 16, D= 8600 km, USCGS: H= 07 02 04.4, 45.ON, 143.2E, h= 204 km, Hokkaido, Japan region, felt in northern Hokkaido. M= 7 /PAS/, 6 1/2- 6 3/4 /GOL/, Mb= 6.4 SD 1.0 /CGS/.
- 19 eZ PKHKP 19 10 05, eZ PKIKP 19 10 15, eZ PP 19 13 39, D= 15800 km, USCGS: H= 18 50 52.1, 14.9S, 167.2E, h= 112 km, New Hebrides Islands, Felt at Port Vila and Lamap. M= 6 3/4 /PAS/, 6 1/4-6 1/ /GOL/, Mb= 6.2 SD 1.0 /CGS/.
- 20 eiz Pn 06 00 27.5, iZ Pg 06 00 36.1, iZ Sn 06 01 01.7, iZ Sb 06 01 09.3, iZ Sg 06 01 18.0, D= 310 km, BCIS: H= 05 59 40 /DECM/, 43 1/4N, 15 1/4E, Adriatic Sea.
- 20 eZ 12 28 37, traces.

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- 20 eZ 12 44 02, eZ PKIKP 12 44 07, USCGS: H= 12 24 35.2, 10.3 S, 164.6E, h= 4 km, Santa Cruz Islands region. Mb= 5.6 Ms= 5.8 SD 1.1 /CGS/.
- 20 eZ P 14 32 01, eZ PP 04 34 53, D= 8440 km, USCGS: H= 14 20 11.5, 54.9N, 166.0E, h= 23 km, Komandorsky Islands region, Mb= 6.1 SD 0.9 /CGS/.
- 21 eZ P or PKP 02 00 26, eZ 02 00 43,
- 21 iZ Pg 07 12 03.9, iZ Sg 07 12 11.2, D= 60 km.
- 21 eZ-PKP 20 57 46.5, USCGS: H= 20 38 00.7, 21.9S, 169.9E, h= 33 km, Loyalty Islands region, Mb= 4.9 Ms= 5.2 SD 1.1 /CGS/.
- 22 eZ+P 17 26 43, USCGS: H= 17 14 42.8, 49.4N, 155.5E, h= 50 km, G, Kurile Islands, Mb= 5.4 Ms= 4.7 SD 0.9 /CGS/.
- 23 eZ Pg 03 39 20, iZ Sg 03 39 22.1, D= 20 km, local.
- 24 iZ-PKIKP 02 51 46, iZ! PKHKP 02 51 56.0, iZ! PKP2 02 52 11.6 eZ pPKP 02 54 08, D= 17000 km, USCGS: H= 02 33 03.5, 21.9S, 179.6W, h= 595 km D, Fiji Islands region, M= 7.0 /PAS/, Mb= 5.9 SD 1.0 /CGS/.
- 25 eZ P 05 33 22, eZ 05 36 45, eZ 05 37 19, USCGS: H= 05 19 17.1, 00.8N, 126.1E, h= 24 km, Molucca Passage, h= 24 km, M= 6.2 /PAS/, Mb= 5.9 Ms= 5.7 SD 0.9 /CGS/.
- 25 eZ Pg 10 45 31, iZ Sg 10 45 35.8, D= 45 km, weak.
- 25 Z 11 40 /00/, eZ 11 40 40, traces,
- 25 eZ 16 15 36, iZ Sg 16 15 40.3,
- 25 eZ Pn 21 00 17, eZ 21 01 50, weak,
- 25 eZ P 23 45 10, eZ pP 23 45 23, USCGS: H= 23 34 28.4, 22.9N 92.3E, h= 50 km, G, India - east Pakistan border region, Mb = 5.2 SD 1.1 /CGS/.
- 26 eZ PKP 00 12 23, USCGS: H= 23 52 42.4, 54.4S, 143.8E, h= N, West of Macquarie Island.
- 26 eZ Pg 00 54 02, iZ Sg 00 54 12, D= 80 km,
- 26 eZ P 02 32 14, USCGS: H= 02 25 55.8, 36.8N, 54.5E, h= 48 km, Iran. Felt in northwestern Iran, Mb= 4.8 SD 1.1 /CGS/.
- 26 eZ P 10 07 06, eZ pP 10 07 39, USCGS: H= 09 59 12.1, 38.2 N, 73.8E, h= 138 km, Tadjik-Sinkiang border region, Mb=5.1 SD 0.8 /CGS/.
- 26 eZ P 14 29 15, BCIS: H= 14 26 17 /DECM/, 36.4N, 6.0E, Algeria, Mb= 4.7 SD 0.9 /CGS/.

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- 26 eZ+P 15 17 15.5, USCGS: H= 15 05 32.7, 55.8N, 162.9E, h= 16 km, Near east coast of Kamchatka, M= 5 1/2 -5 3/4/GOL/, Mb= Ms= 5.5 SD 0.9 /CGS/.
- 27 eZ-P 06 46 31, iZ 06 46 39.5, USCGS: H= 06 37 57.6, 80.8N, 121.9E, h= 37 km, East of Severnaya Zemlya, Mb= 5.0 Ms= 4.8 SD 0.8 /CGS/.
- 27 eZ PKP 10 21 17, USCGS: H= 10 01 05.7, 30.9S, 179.7W, h= 300 km, G, Kermadec Islands, Mb= 4.9 SD 1.1 /CGS/.
- 27 eZ PKP 10 25 24, USCGS: H= 10 06 27.6, 15.0S, 177.5W, h= 420 km, G, Fiji Islands region, Mb= 4.6 SD 0.6 /CGS/.
- 27 eZ P 11 07 20, eZ pP 11 07 44, USCGS: H= 10 59 27.2, 37.3 N, 71.5E, h= 49 km, Afghanistan - USSR border region, Mb= 5.2 SD 0.7 /CGS/.
- 27 eZ-P 14 52 47, USCGS: H= 14 39 58.3, 12.5N, 114.4E, h=N, South China Sea, Mb= 5.3 SD 0.7 /CGS/.
- 27 eZ PKP 18 43 34, USCGS: H= 18 24 23.0, 13.2S, 166.9E, h= 130 km, G, New Hebrides Islands. Mb= 5.1 SD 1.0 /CGS/.
- 27 eZ PKP 19 01 22, eZ 19 01 43, USCGS: H= 18 41 45.1, 20.5 S, 169.6E, h= 46 km, New Hebrides Islands, Mb= 4.6 SD 0.8 /CGS/.
- 28 eZ PKP 00 47 20, USCGS: H= 00 27 31.2, 14.8S, 173.4W, h= 13 km, Samoa Islands region; M= 5 1/2-5 3/4 /GOL/, Mb= 5.2 Ms= 5.4 SD 1.3 /CGS/.
- 28 iZ Pn 04 38 40.0, iZ Sn 04 38 02.9, D= 200 km,
- 29 eZ PKP 08 53 47, USCGS: H= 08 34 51.3, 4.7S, 153.2E, h=70 km, New Ireland region, Mb= 4.0 SD 0.8 /CGS/.
- 29 eZ 13 12 48, eZ 13 13 08, traces.
- 29 eZ PKP 13 54 38, USCGS: H= 13 35 38.3, 18.8S, 178.1W, h= 455 km, G, Fiji Islands region, Mb= 4.3 SD 1.2 /CGS/.
- 29 eZ+PKIKP 18 04 15.5, iZ! PKHKP 18 04 21, eZ PKP2 18 04 28, USCGS: H= 17 44 31.1, 17.2S, 171.6W, h=n, Tonga Islands. Felt at Apia. Mb= 6.0 Ms= 5.6 SD 0.9 /CGS/.
- 30 eZ P 10 43 31, eZpP 10 43 57, eZ PP 10 47 08, eZ S 10 54 34 D= 10000 km, USCGS: H= 10 29 40.%, 4.8N, 121.4E, h= 70km G, Talaud Islands, Felt on Mindanao and the Visayan Islands M= 7.2 /PAS/, 7-7 1/4 /BRK/, Mb= 5.9 SD 1.2 /CGS/.
- 31 eZ P 00 58 11, eZ PKP 01 02 29, D= 11400 km, USCGS: H= 00 44 13.3, 4.2N, 128.1E, h= N, North of Halmahera, M= 6.6 /PA S/, 6 1/4-6 1/2 /BRK/, Mb= 5.7 Ms= 6.3 SD 1.1 /CGS/.

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- 31 eZ P 04 22 03.4, USCGS: H= 04 10 26.3, 53.5N, 158.7E, h= 145 km, Near east coast of Kamchatka, Mb= 5.2 SD 0.8 /CGS/.
- 31 eZ PKP 09 14 58, USCGS: H= 08 56 42.8, 4.3N, 128.1E, h=N, North of Halmahera, Mb= 5.4 Ms= 5.0 SD 0.9 /CGS/.
- 31 eZ PKHKP 12 24 55, USCGS: H= 12 06 00.4, 4.6S, 153.3E, h= 71 km, New Hebrides Islands region, Mb= 4.7 SD 1.0 /CGS/.
- 31 eZ PKP 14 06 06, eZ 14 06 38, USCGS: H= 13 48 22.2, 4.3N, 128.1E, h= N, North of Halmahera, M= 5 1/2-5 3/4/BRK/, Mb= 5.4 Ms= 5.7 SD 1.4 /CGS/.
- 31 eZ PKP 14 11 /04/, USCGS: H= 13 52 52.5, 4.3N, 128.3E, h=N, North of Halmahera, Mb= 5.2 SD 1.1 /CGS/.
- 31 eZ Pn 14 43 35, eZ 14 46 16, BCIS: H= 14 40 04 /DECM/, 34.1 N, 26.0E, h=normal, Mediterranean Sea, south of Crete, ML= 3.9 /Athens/. USCGS: H= 14 40 03.8, 34.3N, 26.3E, h=34 km, Crete, Mb= 5.1 SD 1.0 /CGS/.
- 31 eZ PKIKP 15 18 46, iZ PKHKP 15 18 51, iZ PKP2 15 18 55, US CGS: H= 14 59 34.3, 15.5S, 175.0W, h= 262 km, D, Tonga Islands, Mb= 5.4 SD 0.9 /CGS/.
- 31 eZ Pn 15 36 27, Z Sn 15 38 /00/, D= 900 km, BCIS: H= 15 34 31, /DECM/, 39.0N, 20 1/4E, north of Ionian Islands, Greece ML= 3.8 /Athens/, USCGS: H= 15 34 30.9, 39.1N, 20.2E, h=N, Greece-Albania border region, Mb= 4.5 SD 1.4 /CGS/.
- 31 eZ PKP 23 20 30, eZpPKP 23 51 20, USCGS: H= 23 31 16.2, 321 S, 179.6E, h= 391 km, D, south of Kermadec Islands, Mb= 5.2 SD 1.3 /CGS/.

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- 1 eZ PKP 16 37 32, traces, USCGS: H= 16 19 13.3, 4.0N, 128.1 E, h=N, North of Halmahera, Mb= 5.2 Ms= 5.5 SD 1.2 /CGS/.
- 1 eZ P or PKP 16 41 21,
- 2 Z PKP 01 57 /00/, USCGS: H= 01 38 44.2, 3.9N, 128.2E, h=N, North of Halmahera, M= 6 /PAS/, Mb= 5.4 Ms= 5.8 SD 1.1 /CGS/.
- 3 eZ PKIKP 08 10 09.8, eZ PKHKP 08 10 18, eZ pPKP 08 12 34, US CGS: H= 07 51 25.4, 25.8S, 178.1E, h= 629 km D, south of Fiji Islands, Mb= 5.3 SD 1.3 /CGS/.
- 3 eZ PKP 08 33 /00/, USCGS: H= 08 13 44.2, 25.6S, 178.1E, h= 610 km, south of Fiji Islands, Mb= 4.9 SD 0.8 /CGS/.
- 3 eZ PKIKP 08 36 57, iZ PKHKP 08 37 07.0, iZ PKP2 08 37 28.3, USCGS: H= 08 18 14.7, 25.7S, 178.3E, h=654 km, south of Fi-

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- /cont./ ji Islands, Mb= 5.3 Ms= - SD 1.0 /CGS/,
- 3 eZ+P 09 09 9.5, USCGS: H= 08 57 06.8, 49.4N, 155.6E, h= N, Kurile Islands, Mb= 5.4 SD 0.7 /CGS/.
- 3 eZ P 21 55 36, eZ 21 58 47, iZ PP 21 59 52.0, eZ SKS 22 06 12, eZ S 22 07 17, D= 11200 km, USCGS: H= 21 41 41.9, 4.9N, 127.4E, h= N, Talaud Islands, M= 6.8 /PAS/, 6 3/4 /BRK/, Mb= 6.1 Ms= 6.4 SD 1.1 /CGS/.
- 6 iZ Pn 13 04 44.4, eZ 13 06 15, eZ /Sn/ 13 06 29, D= 1030 km,
- 7 eZ Pn 18 13 /42/, eZ Sp 18 15 21. D= 1000 km cca, Athens: H= 18 11 27, 38°1N, 21°LE, ML= 3.7,
- 8 eZ 17 53 02, eZ 17 53 37, traces.
- 9 eZ Pn 23 09 10.0, iZ Pg 23 09 19.5, iZ Sg 23 10 03.2, D= 350 km. BCIS: H= 23 08 26 /DECM/, 47.3N, 18.2E; 47.1N, 17.9E /Pruhonice/, Hungary, MLH= 3.9 /Collm/, 3.4 /Pruhonice/, USCGS: H= 23 08 27.7, 47.7N, 18.1E, h= N, Hungary, Mb= 4.6 SD 0.9 /CGS/.
- 10 eZ P 07 28 47, USCGS: H= 07 16 12.9, 2.1N, 96.8E, h= N, Northern Sumatra, Mb= 5.4 SD 1.0 /CGS/,
- 10 eZ-PKIKP 23 16 42, iZ PKHKP 23 16 46.3, iZ PKP2 23 17 07.0 eZ pPKP 23 19 17, iZ PP 23 20 33, eZ SKS 23 24 21, D=16100 km, USCGS: H= 22 58 05.8, 22.7S, 178.6E, h= 673 km, G, South of Fiji Islands, M= 6.9 /PAS/, 6.7 /BRK/, Mb= 6.0 SD 1.0 /CGS/,
- 11 eZ Pn 04 12 44, iZ 04 12 56.4, iZ Sn 04 13 31.6, iZ Sg 04 13 52.2, D= 430 km.
- 11 eZ+P 22 17 15, iZ! 22 17 19.3, iZ PP 22 19 06.2, D= 5060 KM, USCGS: H= 11 08 54.7, 41.4N, 79.2E, h=N, Kirgiz-Sinkiang border region, felt. Mb= 5.8 SD 1.3 /CGS/.
- 11 eZ P 22 30 08, Z PKP 22 34 /00/, USCGS: H= 22 16 13.5, 6.7S, 126.8E, h= 450 km, G, Banda Sea, M= 7/PAS/, 6.7 /BRK/, Mb= 6.0 SD 1.4 /CGS/.
- 11 eZ P 22 45 /02/, obscured by preceding shock.
- 11 eZ P 22 52 23, obscured by preceding shock.
- 12 eZ P 00 30 59, USCGS: H= 00 22 37.4, 41.3N, 79.3E, h=N, Kirgiz-Sinkiang border region, Mb= 4.9 SD 1.6 /CGS/,
- 12 eZ 15 32 24, eZ Sg 15 32 28, traces.
- 12 eZ Pn 16 05 09, iZ Sn 16 06 11.2, eZ Sg 16 06 47, D=570 km.

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- 13 eZ 15 14 49, eZ 15 15 00, traces, USCGS: H= 15 09 33.1, 34.7N, 22.6E, h= N, Mediterranean Sea, Mb= 4.6 SD 1.1 /CGS/
- 14 eZ 02 56 31, eZ 02 56 51, traces.
- 14 eZ PKP 03 23 51, USCGS: H= 03 04 04.1, 16.1S, 173.0W, h= N, Tonga Islands, Mb= 5.3 SD 0.9 /CGS/,
- 15 eZ Pn 08 55 28, iZ Sn 08 56 04.0, eiz 08 56 12, D= 330 km, BCIS: H= 08 54 42 /DECM/, 43.9N, 11.6E, Etruscan Apennin, Italy. Strongly felt on higher leveled parts of Florence /Pess/.
- 15 eZ PKHKP 14 08 14, eZ PKIKP 14 08 20, USCGS: H= 13 49 13.6 S, 167.2E, h= 205 km D, New Hebrides Islands, Mb= 5.3 SD 0.8 /CGS/.
- 17 eZ PKP 01 01 /26/, USCGS: H= 00 42 59.2, 3.8N, 128.4E, h= 14 km, North of Halmahera, M= 6 1/2 /PAS/, Mb= 5.6 Ms=6.5 SD 1.3 /CGS/,
- 18 eZ PKP 05 34 53, eZ 05 35 09, USCGS: H= 05 14 55.9, 24.0S, 176.7W, h= 99 km, D, south of Fiji Islands, Mb= 5.4 SD 1.3 /CGS/.
- 18 Z PKP 21 02 /00/, eZ pPKP 21 04 21, USCGS: H= 20 43 13.6, 17.9S, 178.6W, h= 569 km, Fiji Islands region, Mb= 5.2 SD 0.9 /CGS/.
- 20 eZ PKP 10 13 48, eZ 10 13 54, USCGS: H= 09 55 33.8, 3.5N, 128.2E, h= 33 km, North of Halmahera, M= 6 1/2 /PAS/, Mb= 5.7 Ms= 6.4 SD 1.6 /CGS/.
- 20 eZ P 10 48 34, USCGS: H= 10 30 22.1, 3.5N, 128.4E, h= 77 km, North of Halmahera. Mb= 6.0 SD 1.2 /CGS/.
- 21 eZ 15 51 47, traces.
- 21 Z Pn 18 42 /00/, BCIS: H= 18 39 57 /DECM/, 39.1N, 21.9E, Barrier of Cremasta region, /Greece/, ML= 4.2 /Athens/, USCGS: H= 18 39 56.6, 39.2N, 22.0E, h= 41 km, Greece, Mb= 4.6 SD 1.2 /CGS/.
- 21 eZ-PKP 21 06 15, USCGS: H= 20 46 27.1, 16.1S, 173.0W, h= 38 km, D, Tonga Islands, Mb= 5.4 SD 0.7 /CGS/.
- 22 eZ Pn 00 36 57, eZ Sn 00 38 26, D= 800 km, Athens: H= 00 35 13, 40.6N, 20.1E, ML= 4.0 /CGS/.
- 22 eZ 12 51 20, eZ 12 52 34, traces.
- 22 eZ-PKIKP 18 30 41, iZPKP2 18 31 10.6, USCGS: H= 18 11 01.2, 24.8S, 177.0W, h= 138 km, D, south of Fiji Islands, Mb= 5.0 SD 1.1 /CGS/.
- 23 eZ 00 11 03, eZ 00 11 27, traces.

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- 23 eZ P 00 50 53, iZ PP 00 55 11.5, D= 11300 km, USCGS: H= 00 36 56.6, 3.1S, 118.9E, h= 13 km, Celebes at least 20 persons dead at Madjene due to earthquake. Local causes at least 600 deaths and demolished 4 villages. M=6 3/4-7 /PAS/, 7.2 /BRK/, Mb= 6.1 Ms= 6.9 SD 1.1 /CGS/.
- 23 iZ Pg 18 42 37.6, iZ Sg 18 42 49.7, D= 100 km, Ogulin-Karlovac region, Yugoslavia.
- 24 eZ Pn 00 27 20, eZ 00 27 48,
- 25 eZ P 01 38 42, USCGS: H= 01 30 08.0, 14.3N, 56.3E, h= N, Arabian Sea.
- 25 eZ P 02 14 32, USCGS: H= 02 01 44.0, 15.3N, 87.5W, h= 13 km G, Honduras, Mb= 4.8 SD 1.1 /CGS/.
- 25 eZ-P 07 51 48, USCGS: H= 07 39 00.6, 15.2N, 87.5W, h=15km G, Honduras, felt at Tegucidalpa. Mb= 5.4 Ms= 5.0 SD 1.0 /CGS/.
- 25 eZ P 13 15 55, USCGS: H= 13 04 45.8, 19.6S, 12.2W, h=N, South Atlantic ridge,
- 25 eZ P 14 17 05, USCGS: H= 14 05 59.8, 19.3S, 12.1W, h=N, South Atlantic ridge, Mb= 5.3 SD 1.3 /CGS/.
- 25 eZ /Pn/ 15 00 37, eZ 15 01 41, weak, BCIS: H= 14 59 53.5, 47.3N, 15.4E, /Wien-K/, Austria Io= 4° MCS, Felt at Mixnitz /Styr/.
- 26 eZ Pn 01 29 08, iZ Pg 01 29 23.4, iZ Sn 01 29 56.2, iZ Sb 01 30 06.5, iZ Sg 01 30 19.5, D= 450 km, BCIS: H= 01 28 01 /DECM/, 48.3N, 9.0E; 48°17'N, 9°01'E/ Stuttgart/, Schwäbische Jura /Germany/, MLH= 5.8, MLV= 5.5/Wien-H/, Mloc= 4.9 /Bensberg/, MLH= 4.5 /Collm/, Hohenzollerngraben: felt VII at Onstmettingen, IV at Karlsruhe, III at Strasbourg and in department of Bas - Rhin, II at Luneville /Meurthe and Moselle/. Felt up to Darmstadt, München and in Switzerland, region of Zürich. USCGS: H= 01 28 01.3, 48.4N, 9.1 E, h= 27 km, Germany, slight damage in Stuttgart, felt in the states of Baden - Württemberg and Bavaria, the department of Bas-Rhin, France, and the Canton of Zürich, Switzerland.
- 27 eZ PKP 19 56 33, USCGS: H= 19 36 55.4, 18.4S, 175.3W, h= 145 km, G, Tonga Islands, Mb= 4.5 SD 1.4 /CGS/.
- 28 iZ!+P 02 45 20.4, BCIS: H= 02 40 33, 36.2N, 10.5W, "Transatlantic" seismic zone, southwest of Portugal. MPV= MLV= 8.3 /Wien-H/, MPH= 8.1 /Strasbourg/, 8 cca/Moxa/, M= 8.0 /Uppsala/, MLH= 8.0 /Bensberg/, MPH= 7 3/4 /Pruhonic/, 7.7 /Collm/, MPV= 7.2 /Bensberg/, felt VI-VII at Lisboa, damage and victims/ 60 injured/ south of Portugal. Largely felt in Morocco. 2 dead and 5 injured at Rabat-Salé,

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- /cont./ damage at Rabat, Azemmour, Essouira, Marrakesh /3 injured/, Taza. VII-VIII along Atlantic coast of Morocco up to Agadir, VI at Ifrane, IV at Alhoceima, III at Oujda /Rabat/, tsunami 1.10 m. at Casablanca. Strongly felt in Spain, particularly in Abadajoz, Sevilla and dt Madrid. Felt II in France at Toulouse and Bordeaux. USCGS: H= 02 40 32.5 36.ON, 10.6W, h= 22 km, North Atlantic Ocean. 4 killed /3 Morocco, 1 Portugal/, 74 injured /61 Portugal, 5 Spain, 8 Morocco/, a number of heart attacks attributed to quake. Damage in Portugal, Morocco and Spain. Felt throughout Portugal, Morocco, Spain and Canary Islands, also felt in France and on ships on high Seas. Tsunami of 1.20 m. at Casablanca. Less than 1 m. at Canaries and Gulf of Cadiz. Max. int. VII, M= 8/PAS/, 7.9 /BRK/, 8.2 /GOL/, 7 1/4/PAL/, Mb= 7.3 Ms= 8.0 SD 1.2 /CGS/.
- 28 iZ!+P 04 30 22.3, BCIS: H= 04 25 35 /DECM/, felt III at Rabat and Casablanca. USCGS: H= 04 25 36.9, 36.2N, 10.5W, h= N, North Atlantic Ocean, felt at Rabat and Casablanca. Mb= 5.7 SD 1.4 /CGS/.
- 28 eZ+P 10 04 37, BCIS: H= 09 59 50 /DECM/, felt at Lisbon II-III, III at Casablanca, II at Rabat, M= 4.3 /Lisbon/, USCGS: H= 09 59 48.0, 35.9N, 10.8W, h= 28 km, North Atlantic Ocean. Felt at Lisbon, Rabat and Casablanca. Mb= 4.6 SD 1.0 /CGS/.
- 28 eZ 15 13 04, eZ 15 13 13, traces.
- 28 eZ P 15 25 28, USCGS: H= 15 20 38.6, 35.9N, 10.7W, h= 27 km. North Atlantic Ocean, felt at Casablanca, Morocco, Mb= 4.2 SD 1.1 /CGS/.
- 28 eZ Pn 23 26 55, eZ /Sn/ 23 27 49, /D= 500 km/.
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- 2 eZ 13 15 06, eZ 13 15 25, traces.
- 2 eZ P 18 05 46, USCGS: H= 18 00 55.2, 36.ON, 10.9E, h= 18 km, North Atlantic Ocean, Mb= 4.4 SD 0.9 /CGS/.
- 3 eZ P 01 01 53, eZ S 01 04 04, D= 1310 km, BCIS: H= 00 59 14 /DECM/, 40.2N, 27.4E, h=normal. Western Anatolia, 20 houses destroyed, 1 injured at Gönen/40°06'N, 27°39.3'E/, Strongly felt at Balikesir, Bursa and Istanbul /Istanbul-K/, MLH= 5.9-6.1 /Wien-H/, 6.0/Strasbourg/, 5.9/Skopje, Uppsala/, MLV= 5.7-5.8/Wien-H/, M= 5.8/Athens/, ML= 5.5/Athens/, MLH= 5.5/Moxa/, MLH= 5.1/Tirana/, ML= 4.9/Istanbul-K/.
- 3 eZ+P 06 29 35, USCGS: H= 06 20 21.8, 30.2N, 79.9E, h=20km, Tibet-India border region, Mb= 5.3 SD 0.8 /CGS/.

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- 3 iZ!Pg 11 17 41.9, local.
- 3 eZ PKP 13 32 33, USCGS: H= 13 12 44.8, 16.7S, 172.8W, h= 54 km, Samoa Islands region. Mb= 4.6 SD 0.8 /CGS/.
- 3 eZ P 15 01 28, USCGS: H= 14 49 28.0, 51.6N, 159.3E, h=12 km, Off east coast of Kamchatka. Mb= 5.3 Ms= 5.3 SD 0.9 /CGS/.
- 3 eZ PKIKP 16 50 04, iZ PKHKP 16 50 06.3, eZ PKP2 16 50 16, USCGS: H= 16 30 13.8, 16.9S, 172.5W, h= N, Samoa Islands region, Mb= 5.1 SD 1.1 /CGS/.
- 3 eZ Pn 18 23 19, eZ Sn 18 24 21, eZ 18 24 33, D= 580 km,
- 3 eZ 22 27 56, eZ 22 28 52, traces.
- 4 Z P 01 51 /00/, BCIS: H= 01 47 29 /DECM/, 37.2N, 31.0E, h= 120 km cca, Central Anatolia, felt at Antalya /Istanbul -T.U./, USCGS: H= 01 47 25.5, 37.0N, 31.1E, h= 109 km, Felt at Antalya, Mb= 5.0 SD 0.9 /CGS/.
- 5 eZ P 14 43 57, eZ/S/ 14 46 18, /D= 1400 km/, BCIS: H= 14 41 16 /DECM/, 40.1N, 27.5E, western Anatolia. ML= 4.7 /Athens/, felt at Istanbul /Istanbul-T.U./,
- 5 Z! P 19 41 /00/, iZ pP 19 41 45.0, eZ PP 19 42 41, iZ 19 43 24, D= 4800 km, USCGS: H= 19 33 23.0, 36.4N, 70.7E, h= 208 km, D, Hindukush region, felt at Kabul, Afghanistan. Mb= 5.9 SD 1.0 /CGS/.
- 6 eZ Pn 05 17 21, iZ Sn 05 17 48.4, D= 230 km,
- 6 iZ+P 19 28 31, BCIS: H= 19 23 43, 36.2N, 10.7W, Transatlantic seismic zone, southwest of Portugal. Felt II at Salè, Kenitra, Casablanca /Rabat/, USCGS: H= 19 23 44.1, 36.0 N, 10.6 W, h = N, North Atlantic Ocean. Felt at Casablanca, Marocco, M= 4.8 SD 1.2 /CGS/.
- 7 eZ+P 08 34 49, BCIS: H= 08 27 00, 50.0N, 78.0E, Kzakhstan, Semipalatinsk region, probably artificial /Uppsala/, M= 6.0 /Uppsala/, MPH= MPV= 5.8 /Moxa/, USCGS: H= 08 26 57.5, 49.8N, 78.1E, h= 0 km G, eastern Kazakh, SSR, M= 5 1/2 Mb /BRK/, Mb= 5.5 SD 1.0 /CGS/.
- 8 eZ P 03 40 50, BCIS: H= 03 35 59 /DECM/, 35.9N, 10.3W, Transatlantic seismic zone, southwest of Portugal, felt at Porto /Porto/, USCGS: H= 03 35 59.9, 35.9N, 10.4W, h=N, Mb= 4.2 SD 1.0 /CGS/.
- 8 eZ P 10 32 02, eZ PP 10 35 09, USCGS: H= 10 20 09.3, 41.3 N, 139.6E, h= 169 km, Hokkaido, Japan region, M= 5.3 Mb /BRK/, Mb= 5.7 SD 0.9 /CGS/.
- 3 eZ PKP 18 28 33, USCGS: H= 18 09 01.8, 15.6S, 173.7W, h=

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- /cont./ 154 km, Tonga Islands, M= 4 1/2 /BRK/, Mb= 5.1 SD 1.0 /CGS/.
- 8 eZ Pg 19 17 46, iZ Sg 19 17 57.8, D= 90 km.
- 9 eZ P 13 13 03, BCIS: H= 13 08 16 /DECM/, 36.2N, 10.6W, Transatlantic Seismic zone. Southwest of Portugal. USCGS: H= 13 08 16.5, 36.2N, 10.5W, h= N, North Atlantic Ocean, Mb= 4.5 SD 1.3 /CGS/.
- 9 eZ PKP 14 06 45, USCGS: H= 13 47 59.4, 4.1S, 135.5E, h= 14 km, West New Guinea region. M= 6.7 Ms/BRK/, Mb= 5.5 Ms= 6.6 SD 1.4 /CGS/.
- 9 eZ 14 39 14, eZ 14 39 27, traces. USCGS: H= 14 26 18.9, 31.2N, 141.5E, h= N, south of Honshu, Japan. Mb= 5 /BRK/, Mb= 5.2 SD 0.9 /CGS/.
- 9 eZ PKP 14 57 31, USCGS: H= 14 39 04.2, 4.1S, 135.6E, h= N, West New Guinea region. Mb= 0.0 SD 1.0 /CGS/.
- 10 eZ P 05 47 15, eZ 05 47 46, USCGS: H= 05 35 15.1, 22.8N, 121.0E, h= 37 km. Taiwan region, Mb= 4.8 SD 1.5 /CGS/.
- 10 eZ PKP 07 12 50.5 USCGS: H= 06 54 17.6, 5.6 S, 147.2E, h= 206 km D, East New Guinea region. Mb= 6 /BRK/, Mb= 5.8 SD 1.1 /CGS/.
- 10 eZ P 10 01 36, USCGS: H= 09 56 49.1, 35.9N, 10.4W, h=N, North Atlantic Ocean, felt at Casablanca. Mb= 3.9 SD 1.3 /CGS/.
- 10 eZ /Pn/ 14 20 16, iZ 14 20 19.2, traces.
- 10 eZ P 18 58 38, traces. USCGS: H= 18 50 52.5, 37.1N, 71.5E, h= 142 km, Afghanistan - USSR border region, Mb= 4.4 SD 0.3 /CGS/.
- 10 eZ P 19 11 41, USCGS: H= 19 04 02.9, 36.4N, 71.0E, h=201 km, Afghanistan -USSR border region, felt at Kabul. Mb= 5.1 SD 0.8 /CGS/.
- 11 eZ 09 06 50, eZ Sn 09 07 04, traces,
- 11 iZ Pg 12 51 54, iZ Sg 12 51 56.0, D= 10-15 km, local, weak.
- 12 eZ P 17 50 29, USCGS: H= 17 43 34.1, 28.3N, 53.1E, h=16 km, Southern Iran. Mb= 4.5 SD 0.7 /CGS/.
- 13 eZ /P/ 16 48 41,
- 14 eZ P 08 59 48, eZ pP 09 00 34, eZ PP 09 03 27, D= 10100km, USCGS: H= 08 47 16.3, 12.9N, 86.8W, h= 178 km D, felt in El Salvador and Nicaragua. M= 5.8 /PAS/, Mb= 5.6 SD 1.0 /CGS/.

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- 15 eZ P 08 31 29, USCGS: H= 08 26 08.4, 42.4N, 49.0E, h=46km, Caspian Sea, Mb= 5.0 SD 0.7 /CGS/.
- 15 eZ P 13 47 54, USCGS: H= 13 35 35.3, 51.2N, 179.1W, h=46 km, Andreanof Islands, Aleutian Islands. Felt on Adak. Mb= 4 1/2 /BRK/, Mb= 5.6 Ms= 5.2 SD 1.1 /CGS/.
- 15 eZ /Pn/ 21 33 26, eZ Sn 21 33 38,
- 15 eZ /Pn/ 23 18 42, Z 23 19 /00/, traces.
- 16 eZ PKP 03 42 51, USCGS: H= 03 23 05.7, 21.6S, 169.8E, h= N, Loyalty Islands region.
- 16 eZ P 14 19 58, USCGS: H= 14 10 52.2, 9.8N, 57.8E, h=N, Carlsberg ridge, Mb= 4.9 SD 1.1 /CGS/.
- 16 eZ P or PKP 15 10 40, traces.
- 16 eZ P 16 06 43.5, USCGS: H= 15 54 17.2, 38.5N, 142.7E, h= 40 km. Near east coast of Honshu, Japan. M= 5 1/2 /BRK/, Mb= 5.4 Ms= 5.5 SD 0.9 /CGS/.
- 17 eZ PKP 01 14 47, eZ pPKP 01 17 28, USCGS: H= 00 56 06.2 17.7S, 179.9E, h= 614 km D. Fiji Islands. M= 5 3/4-6/BRK/, Mb= 5.4 SD 1.0 /CGS/.
- 17 eZ PKIKP 01 20 33, eZ PKHKP 01 21 37, USCGS: H= 01 01 55.6 17.8S, 180.0E, h= 625 km, G. Fiji Islands, Mb= 4.5 SD 1.0 /CGS/.
- 17 eZ PKIKP 01 48 45, iZ PKHKP 01 48 48.4, USCGS: H= 01 30 07.e, 17.6S, 179.8E, h= 615 km, D. Fiji Islands. Mb= 4.8 SD 0.8 /CGS/.
- 17 eZ Pg 07 28 50, iZ Sg 07 28 52.3, D= 24 km, local, weak.
- 18 eZ P or PKP 03 38 3.5,
- 18 eZ PKP 03 45 16, iZ PKP2 03 45 20.5, USCGS: H= 03 25 31.8, 21.4S, 171.1E, h= 15 km, Loyalty Islands region. M= 5 3/4 /BRK/, Mb= 5.5 SD 1.1 /CGS/.
- 18 eZ PKP 03 52 35, USCGS: H= 03 32 50.8, 21.4S, 170.9E, h= N, Loyalty Islands region. Mb= 5.3 Ms= 5.8 SD 1.4 /CGS/.
- 18 eZ PKHKP 04 01 17, eZ PKIKP 04 01 22, USCGS: H= 03 41 22.7, 15.2S, 173.5W, h= 39 km, Tonga Islands, Mb= 5.1 /CGS/.
- 18 eZ P 04 22 22, BCIS: H= 04 17 35/DECM/, 36.ON, 10.6W, Atlantic Ocean, southwest of Portugal, felt II at Casablanca. USCGS: H= 04 17 34.6, 36.ON, 10.5W, h= 23 km, North Atlantic Ocean. Mb= 4.2 SD 1.2 /CGS/.
- 19 eZ+P 14 11 42.5, eZ pP 14 12 22, USCGS: H= 13 59 22.7,

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- /cont./ 28.8N, 128.2E, h= 136 km. Ryukyu Islands, Mb= 5.8 SD 1.0 /CGS/.
- 20 eZ P 16 32 36, eZ PP 16 36 28, USCGS: H= 16 18 56.4, 8.7 N, 127.3E, h= N, Philippine Islands region, M= 6.1 /PAS/, 5.8 /GOL/, Mb= 5.1 Ms= 6.1 SD 1.0 /CGS/.
- 20 eZ P 10 37 08, USCGS: H= 16 56 18.0, 61.6N, 151.4W, h=57 km, Southwestern Alaska.
- 21 iZ Pg 00 12 57, iZ Sg 00 12 03.4, D= 50 km, weak.
- 22 eZ P 05 00 19, Z 05 02 /00/, D= 4700 km. USCGS: H= 04 52 32.6, 38.9N, 70.6E, h= 8 km, Afghanistan-USSR border region, Mb= 5.3 SD 0.9 /CGS/.
- 22 eZ PKP 06 03 45.5, USCGS: H= 05 43 57.5, 15.5S, 176.1W, h= N, Fiji Islands region, M= 5.5 /GOL/, Mb= 5.4 SD 1.1 /CGS/.
- 22 eZ PKP 12 33 13, USCGS: H= 12 13 15.8, 15.1S, 173.9W, h= 46 km, Tonga Islands, Mb= 4.6 SD 0.5 /GOL/.
- 22 eZ PKP 13 50 55, USCGS: H= 13 31 07.8, 16.5S, 177.5W, h= N, Fiji Islands region. Mb= 5.0 SD 1.2 /CGS/.
- 22 Z PKP 15 44 /00/, USCGS: H= 15 24 14.5, 15.3S, 176.3W, h= N, Fiji Islands region, Mb= 4.9 SD 1.0 /CGS/.
- 23 eZ P 12 02 22, USCGS: H= 11 49 35.6, 6.2N, 77.8W, h= 24 km. Near west coast of Colombia, Mb= 5.0 SD 1.3 /CGS/.
- 23 eZ P 21 11 42, BCIS: H= 21 08 41/DECM/, 39.1N, 28.4E, western Anatolia, Important damage. 1100 houses destroyed in the region of Demirci, Gordes and Sindirgi. Largely felt in western Anatolia up to Istanbul. MSH= 6.8 /COLIM/, MLH= 6.4 cca/Strasbourg/, M= 6.3 /Uppsala/, 6.2 /Athens/, MLV= 6.0 /Wien/, MLH= 6.0 /Collm/, 5.9 /Prahá, Pruhonice, Skopje/, ML= 5.8 /Athens/, 5.5 /Istanbul-K/, MLH= 5.4 /Tirana/, MPV= 5.1 /Collm/. USCGS: H= 21 08 42.6, 39.2N, 28.5E, h= 12 km. Turkey, 1100 houses destroyed in Demirci, Gordes, Sindirgi and at Istanbul. M= 5.8 /GOL/, Mb= 5.6 Ms= 5.6 SD 1.1 /CGS/.
- 24 eZ P 02 02 34, BCIS: H= 01 59 31/DECM/, 39.1N, 28.5E, western Anatolia, aftershock. MLH= 5.2 /Skopje/, MLV= 5.1 /Wien-H/, M= 5.1 /Uppsala/, ML= 5.0 /Athens/, MLH= 5.0 /Pruhonice/, 4.9 /Collm, Prahá, Tirana/, USCGS: H= 01 59 30.6, 39.1N, 28.5 E, h= 6 km, Turkey, Mb= 5.0 SD 1.0 /CGS/.
- 25 eZ Pn 08 43 27, eZ /Sn/ 08 43 58.7, /D= 280 km./,
- 25 eZ P 13 24 21.8, BCIS: H= 13 21 09 /DECM/, premonitory shock of the seisms of March 25, 1969 at 13 21 35.
- 25 eZ P 13 24 43, eZ 13 24 29, eZ 13 27 35, BCIS: H= 13 21 35 /DECM/, 39.2N, 28.4E, western Anatolia. Damage at Sindirgi

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- /cont./ and at Demirci /Istanbul-K/, MSH= 6.8/Collm/, M= 6.4/Uppsala/, MLH= 6.1/Collm/, MLV= 6.1/Wien-H/, MLH= MLV= 6.0/Moxa/, MLH= 6.0/Skopje/, 5.9/Pruhonic/, 5.8/Praha/ ML= 5.8/Athens/, MLH= 5 3/4/Tirana/, MPV= 5.5/Collm/, USCGS: H= 13 21 32.4, 39.2N, 28.4E, h= 23 km, Turkey. Further damage at Sindirgi and Demirci. M= 6.4/PAS/, Mb= 5.6 Ms= 5.5 SD 1.0 /CGS/.
- 25 eZ P 14 21 50, BCIS: H= 14 18 47 /DECM/, 39.1N, 28.3E, western Anatolia. Largely felt. MLV= 4.6/Wien/, MLH= 4.4 /Pruhonic/, 4.3/Tirana/, ML= 4.3/Istanbul-K/, USCGS: H= 14 18 50.8, 39.2N, 28.4E, h= 23 km, Turkey. Mb= 4.9 SD 0.8 /CGS/.
- 27 eZ P 05 04 29, USCGS: H= 04 46 26.1, 3.9N, 128.5E, h= N, h= N, North of Halmahera. Mb= 5.7 Ms= 5.7SD 1.4 /CGS/.
- 27 eZ 05 19 50, eZ 05 20 32,
- 27 eZ /P/ 06 20 39.
- 27 eZ P 11 27 20, USCGS: H= 11 19 29.3, 39.ON, 71.9E, h= 37 km, Tadzhik SSR, Mb= 4.9 SD 0.9 /CGS/.
- 27 Z Pg 12 49 /00/, iZ Sg 12 49 04.3,
- 27 eZ P 12 55 30, eZ PP 12 59 43, eZ PPP 13 01 55, eZ SKS 12 06 17, eZ PS 13 08 44, D= 11300 km, USCGS: H= 12 41 35.9, 4.8N, 127.5E, h= 32 km, Talaud Islands, M= 7.0 /PAS/, 6.8 /BRK/, Mb= 6.1 Ms= 6.7 SD 1.1 /CGS/.
- 28 eZ PKP 01 39 29, USCGS: H= 01 19 43.7, 21.8N, 169.8E, h= N, Loyalty Islands region, Mb= 4.9 SD 1.2 /CGS/.
- 28 eZ 01 51 35, BCIS: H= 01 48 29 /DECM/, 38.6N, 28.4E, Western Anatolia, 53 dead, 350 injured, more than 1000 homes damaged. Important damage at Alasehir/Sarigol, Kiraz. MPV= 7.1/Wien/, M= 6.8/Uppsala/, m= 6.8/Tirana/, MLH= 6.7/Wien/, 6.6/Moxa/, MS= 6.6/Athens/, MLH= 6.5/Collm, Praha/ 6.4/Pasadena/, MLV= 6.4/Moxa/, MLH= 6.3/Strasbourg/, ML= 6.2/Athens/, MPH= 6.1/Collm/, MLH= 6-6 1/4/Tirana/, MPV= 5.9/Moxa/, 5.8/Collm/, M= 5.6/Helwan/, ML= 5.5/Istanbul-K/, USCGS: H= 01 48 30.4, 38.6N, 28.4E, h= 9 km, Turkey, 13 killed and heavy damage at Alasehir, Sarigol and Kiraz. Felt throughout western Anatolia and at Istanbul. M= 6.4 /PAS/, 6 1/4 /BRK/, 6 1/2-6 3/4 /GOL/, Mb= 6.0 Ms= 6.4 SD 1.2 /CGS/.
- 28 eZ P 10 05 16, eZ 10 08 34, BCIS: H= 10 02 17 /DECM/, 39.1N, 28.4E, western Anatolia. ML= 4.8/Athens/, MLV= 4.8 /Wien/, MPV= MLH= 4.6/Moxa/, MLV= 4.6/Moxa/, MLV= 4.4/Tirana/, USCGS: H= 10 02 16.7, 39.1N, 28.4E, h= N, Turkey, Mb= 4.9 SD 1.1 /CGS/.
- 28 iZ Pg 18 31 27.5, iZ Sg 18 31 48.8, D= 170 km.

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- 29 iZ Pn 01 45 09, eZ Sn 01 46 17, D= 760 km, BCIS: H= 01 43 38 /DECM/, 39.9N, 15.1E, h= 320 km. + 10 km, Tyrrhenian Sea, felt along north coast of Sicilia. Slight damage at Patti /Press/, USCGS: H= 01 43 39.0, 40.ON, 15.2E, h= 310 km, Southern Italy, Mb= 4.0 SD 0.9 /CGS/.
- 29 eZ P 09 23 35, eZ PP 09 25 10, D= 4300 km, BCIS: H= 09 16 00 /DECM/, 12.ON, 41.3E, Ethiopia, triangle of Afar. Desert of Danakil. Important damage in oasis of Sardo/11.6N, 41.1E/, 24 killed, 163 injured; Fissures in ground/Gouin, Adis Abeba/, MPV= 6.8/Praha/, MSH= 6.4/Collm/, MLH= 6.3 /Strasbourg/, MLH= 6.2/Praha/, MLH= 6.2/Pruhonic/, US CGS: H= 09 15 54.1, 12.ON, 41.2E, h= N, Ethiopia, 24 killed and 165 injured at Sardo. Sardo completely destroyed. M= 6 1/4-6 1/2 /GOL/, Mb= 5.8 Ms= 6.3 SD 1.1 /CGS/.
- 29 eZ P 11 12 32, eZ PP 11 12 11, D= 4400 km, BCIS: H= 11 04 58 /DECM/, 12.ON, 41.3E, Ethiopia, triangle of Afar, aftershock, MSH= 6.3/Praha/, MLH= 6.1/Praha/, MLH= 5.9/Collm/, MLH= 5.9/Strasbourg/, MLH= 5.8/Pruhonic/, USCGS: H= 11 04 47.9, 12.ON, 41.3E, h= 4 km, Mb= 5.6 SD 1.4 /CGS/.
- 29 eZ P 13 16 03, USCGS: H= 13 08 11, 11.9N, 41.5E, h= 4 km, Ethiopia, Mb= 5.1 SD 0.7 /CGS/.
- 29 iZ+P 13 57 55.2, iZ 13 58 02.8, eZ PP 13 59 53, D= 5600km, USCGS: H= 13 48 57.6, 10.4N, 56.8E, h=N, Carlsberg ridge, Mb= 5.6 SD 1.1 /CGS/.
- 30 eZ PKP 08 13 18, USCGS: H= 07 55 07.5, 4.4N, 128.0E, h=N, North of Halmahera, Mb= 5.4 Ms= 5.2 SD 1.2 /CGS/.
- 31 eZ Pn 00 21 18, e/Sn/ 00 22 22.6, /D=620 km/.
- 31 eZ 01 52 57, eZ 01 53 28, traces.
- 31 eZ 03 25 57, eZ 03 27 31, traces, BCIS: H= 03 24.9, 37.7 N, 15.2E, /epicenter macroseismic!/, Sicilia, Italy. Strongly felt /VI/ on eastern hillside of Etna and particularly at Giarra and Catania, slight damage. /Press/.
- 31 iZ-P 07 21 08.2, BCIS: H= 07 15 51 /DECM/, 27.7N, 33.9E, depth normal, Northern Red Sea, on way in Gulf of Suez. Epicenter on the prolongation of median rift of Red Sea. Destruction in Egypt, one mosque damaged, 1 killed at Beni-Souef, 5 injured at Cairo, some houses destroyed; felt at Alexandria, Port Said, Ismailia, Suez, Assuan. III-IV felt in Israel. Also felt in Liban; macroseismic ray: 450-500 km. M= 7-7 1/2 /Pasadena/, m= 7.1 /Uppsala/, 7 /Tirane/, M= 7.0 /Ksara/, MLH= 7.0 /Pruhonic/, 6.6/Praha/, M= 6.4 /Uppsala/, MLH= 6.3 /Tirana/, USCGS: H= 07 15 54.4, 27.7 N, 34.0E, h= N, Red Sea, 2 killed 16 injured, heavy property damage in United Arab Republic, felt in Israel and Saudi Arabia, M= 7-7 1/4 /PAS/, 6 1/2-6 3/4 /GOL/, Mb= 6.0 Ms= 6.8 SD 1.4 /CGS/.

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- 31 eZ P 09 06 24, USCGS: H= 09 01 12.7, 28.4N, 34.4E, h= N, United Arab Republic, Mb= 4.9 SD 1.2 /CGS/.
- 31 eZ P 19 36 53, iZ!-P 19 36 56.6, iZ pP 19 38 38.4, eZ/PP/ 19 39 43, eZ S 19 46 22, D= 910 km, USCGS: H= 19 25 27.2, 38.3N, 134.6E, h= 417 km, D, Sea of Japan, two shock apparently occurred within extremely small intervals of time and space. The smaller event of magnitude 4.2 Mb occurred about 3.5 sec before the larger quake of magnitude 5.9 Mb. The epicenter is based on data from the earlier shock, while the depth obtained from /pP - P/ intervals pertains to the larger quake. M= 6.5 /PAS/, 6.4 /BRK/, 5 1/2 /GOL/, Mb = 5.9 SD 1.5 /CGS/.
- 31 eZ P 21 49 /46/, eZ 21 50 15, USCGS: H= 21 44 27.3, 27.5N, 34.0E, h= 6 km, Red Sea, Mb= 5.0 SD 1.0 /CGS/.
- 31 Z P 22 46 /00/, USCGS: H= 22 40 47.0, 27.4N, 34.1E, h= N, Red Sea, Mb= 4.7 SD 1.1 /CGS/.

Ljubljana, February 1, 1971

Interpretation: M. Hržič
Redaction: V. Ribarič

University of Ljubljana
Astronomical and Geophysical Observatory

VI JUN 1971

**PRELIMINARY
SEISMOLOGICAL BULLETIN**

IV — VI 1969

Ljubljana 1970

University of Ljubljana
Astronomical and Geophysical
Observatory,
61001 Ljubljana, P.O.B. 20
Yugoslavia

1969

PRELIMINARY SEISMOLOGICAL

BULLETIN

/ April - June 1969 /

University of Ljubljana
Astronomical and Geophysical
Observatory,
61001 Ljubljana, P.O.B. 20
Yugoslavia

1969

PRELIMINARY SEISMOLOGICAL BULLETIN
from April 1, to June 30, 1969

Station: Ljubljana /LJU/ - Coordinates: $46^{\circ} 02.6'N$, Lat.
 $14^{\circ} 32.0'E$, Long.
Geocentric direction cosines: $a = + 6743$, $b = + 1748$, $c = + 7175$
 $d = - 8$, $h = - 4$
Height above sea level: 396 m.
Lithologic Foundation: sandstone /carbon/.

Instruments:

Wiechert, horizontal astatic seismograph, $M = 200$ kg, mechanical registration, 16-18 mm/min.

Constants / 31.1.1966/:				
Component	To	v:l	r/T_0^2	V
N-S	5.0	2.20	0.0043	69
E-W	4.9	2.37	0.0058	67

Hiller-Stuttgart, vertical component with galvanometrical recording. $T_0 = 1.5$ sec, $T_g = 1.5$ sec, $D_1 = D_2 = 1$, $V_{max} = 10150x$.

Note: Periods of seismic waves are given in seconds, the amplitudes in microns. Sign. + means compression or movement of ground towards north or east, sign. - means dilatation or movement of ground towards south or west. All times are given in GMT. Timesignals are received one or two times daily and are registered on a chronograph. Wherever possible time readings up to one tenth of a second are given. Macroseismic data refer to Mercalli-Cancani-Sieberg scale / MCS/. Macroseismic rays are given in kilometers. Abbreviation DECM means : Determination was made by electronic computer.

April 1969

APRIL 1969

1 eZ 00 50 18, eZ /Sn/ 00 51 11, traces.

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- 1 eZ 14 12 54, traces.
- 1 eZ Pg 14 38 46, iZ Sg 14 38 56.5, D= 90 km.
- 2 iZ=Pn 01 39 45.6, eZ Sn 01 41 07, D= 790 km. BCIS: H= 01 38 01 /DECM/, 38.9N, 15.3E, h= 275+ 10 km. Tyrrhenian Sea. USCGS: H= 01 38 01.9, 39.0N, 15.3E, h= 258 km. Southern Italy, Mb= 4.8 SD 1.2 /CGS/.
- 2 eZ Pn 04 59 39, eZ Sn 05 00 15, USCGS: H= 04 57 29.5, 38.0 N, 20.2E, h= N, Greece, Mb= 4.5 SD 1.4 /CGS/.
- 3 iZ! Pn 22 14 00.5, iZ Pb 22 14 18, iZ Pg 22 14 31, iZ Sn 22 15 16.0, D= 730 km. BCIS: H= 22 12 53.6, /DECM/, 40.7N, 20.0E, Albania. MallaKastras zone, Important damage on the region of Fieri, Tepelena, Berati, Vlora Skrapari, and Permeti, 1000 houses damaged or destroyed. 2000 other houses slightly damaged. 1 dead, 61 injured; macroseismic epicenter north of Tepelena. VI-VII at Tepelena, VI+ at Fieri, Berati, Corodova, V-VI at Vlora/Tirana/. Felt on Island Corfu /Greece/ and at Bari, Taranto, Brindisi/Italy/, Felt in Macedonia, IV-V at Ohrid and Struga, III-IV at Skopje. MLH= 5.9/Wien/, M= 5.8/Roma/, MLH= 5.5/Pruhonice/. M= 5.5 /Uppsala/, ML= 5.3 /Athens/, USCGS: H= 22 12 23.0, 40.7N, 19.9E, h=N, Albania. 1 killed, 65 injured and considerable damage in southern Albania. Mb= 5.1, Ms= 5.5 SD 1.3 /CGS/.
- 3 eZ Pn 22 26 /00/, eZ 22 27 25,
- 3 eZ Pn 23 46 48, eZ Sn 23 48 06, D= 740 km. BCIS: H= 23 45 42 /DECM/, aftershock. USCGS: H= 23 45 09.9, 40.6N, 19.9E, h= N, Albania, Mb= 4.6 SD 0.9 /CGS/.
- 4 eZ Pn 00 28 00.5, eZ 00 29 37, BCIS: H= 00 26 58 /DECM/, aftershock.
- 4 eZ+Pn 04 22 22, eZ /Sn/, 04 23 35, BCIS: H= 04 21 17/DECM/ aftershock, USCHS: H= 04 20 46.8, 40.6N, 19.8E, h= N, Albania, Mb= 4.3 SD 1.4 /CGS/.
- 4 eZ Pn 08 28 45, eZ 08 30 48, Athens: H= 08 27 04, 40.4N, 20.0 E, ML= 3.9
- 4 eZ P 08 57 34, USCGS: H= 08 45 18.7, 51.2N, 173.7E, h= N, Near Islands, Aleutian Islands. Mb= 5.6 SD 1.3 /CGS/.
- 4 eZ P 12 24 /00/, USCGS: H= 12 18 47.2, 27.7N, 34.1E, h= N, Red Sea, Mb= 4.7 SD 1.1 /CGS/.
- 4 eZ Pn 17 03 41, eZ 17 04 58, Athens: H= 17 01 55, 40.8N, 19.5E, ML= 4.0
- 4 eZ P 23 09 12.5, USCGS: H= 22 57 16.8, 54.5N, 169.4E, h= 27 km. D. Mb= 5.4 SD 0.7 /CGS/, Komandorsky Islands region.

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- 5 eZ P 02 26 14, BCIS: H= 02 18 48 /DECM/, 12.1N, 41.6E, Ethiopia, triangle of Afar. Aftershock of the seisms of March 29, 1969. Formation of new fissures and slides of ground /P.Gouin, Addis Ababa/. MLH= 6.3 /Skopje/, MLH= 6.3 /Tirana/, MPV= 6.2 /Colim/, MLH= 6.1 /Pruhonice/, MLV= 6.0 /Wien/, MLH= 6.0 /Colim/, MLH= 5.9 /Praha/, USCHS: H= 02 18 29.9, 12.2N, 41.2E, h= 17 km. Ethiopia. Felt. M= 6-6 1/4 /PAS/, Mb= 6.2 Ms= 6.1 SD 1.1 /CGS/.
- 5 iZ 07 13 28.2, iZ 07 13 46.6, traces.
- 6 eZ-P 03 52 20.5, eZ 03 54 42, 2.6, BCIS: H= 03 49 33 /DECM/, 38.5N, 26.5E, Western Anatolia. 443 houses destroyed at Karaburum /38°37'N, 26°30'E/ and Sesme /38 18N, 26 19 E/, /Istanbul-K./, Some damage on Island Chios, 3 injured /Press/, M= 6 /Uppsala/, M= 5.6/Moxa/, MLH= 5.6 /Praha/, ML= 5.5 /Athens/. USCGS: H= 03 49 33.5, 38.5N, 26.4E, h= 14 km, Aegean Sea. Mayor damage in Karaburum area, Turkey. Felt on Chios, Greece. Mb= Ms= 5.5 SD 0.8 /CGS/.
- 6 eZ 10 30 11, eZ 10 30 47, traces.
- 6 eZ P 16 59 27, eZ S 17 05 37, D= 4500 km, BCIS: H= 16 51 52 /DECM/, 11.8N, 41.6E, Ethiopia, triangle of Afar. USCGS: H = 16 51 45.5, 12.0N, 41.1E, h= 20 km. Ethiopia. Felt. Mb= 5.2 SD 1.1 /CGS/.
- 6 eZ PKIKP 23 38 44, iZ PKHKP 23 38 48.6, eZ PKP2 23 38 59; USCGS: H= 23 19 46.2, 20.9S, 178.5W, h= 505 km. Fiji Islands region, Mb= 4.8 SD 0.7 /CGS/.
- 7 eZ PKIKP 05 30 18, eZ PKHKP 05 30 25, eZ PKP2 05 30 32, US CGS: H= 05 10 40.3, 16.2S, 177.8W, h= 62 km. Fiji Islands region Mb= 5.0 SD 0.6 /CGS/.
- 7 eZ P 20 35 33, USCGS: H= 20 26 29.9, 76.5N, 130.8E, h=N h= N, Laptev Sea. Mb= Ms= 5.5 SD 1.0 /CGS/.
- 7 eZ Pn 21 34 27, eZ /Sn/ 21 36 13, D= 1020 km. Athens: H= 21 32 17, 38.5N, 20.5E, ML= 3.7
- 8 eZ P 10 37 09, BCIS: H= 10 31 50 /DECM/, 27.5N, 33.8E, h= surface, north of Red Sea, aftershock of the seisms of March 31, at 07 15, ML= 5.0 /Helwan/, MLH= 4.2 /Pruhonice/, USCGS: H= 10 31 52.2, 27.5N, 33.7E, h= 15 km. United Arab Republic. Mb= 5.2 SD 1.2 /CGS/.
- 8 iZ+Pn 15 50 29.2, eZ Sn 15 51 37, D= 645 km, BCIS: H= 15 48 50 /DECM/, 40.6N, 19.8E, 40°30'N? 19°56'E/macros.epic. Tirana, Albania, slight damage, VI+ in the epic. region: Izvor, Rabijs, Luftinje and Gllave /dep. of Tepelena/, V at Tepelena and Berati /Tirana/, MLH= 4.5 /Pruhonice/, MLH= 4.4 /Skopje/, USCGS: H= 15 48 51.8, 40.7N, 19.8E, h= N, Albania, Mb= 5.1 SD 1.4 /CGS/.

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- 9 eZ P 13 09 41 USCGS: H= 12 57 24.8, 36.8N, 139.6E, h=116 km, Honshu, Japan. Felt in Tokyo area. Mb= 5.5 SD 0.8 /CGS/
- 9 Z Pn 16 30 /00/, eZ Sn 16 31 39, BCIS: H= 16 27 47/DECM/, D= 960 km. 38.1N, 19.9E, Ionian Sea. MLH= 4.4 /Athens/. USCGS: H= 16 27 52.4, 38.2N, 20.1E, h= N, Greece Mb= 4.5 SD 0.7 /CGS/.
- 10 iZ P 15 04 53.5, eZ pP 15 06 51, USCGS: H= 14 54 03.9, 42.0 N, 130.9E, h= 555 km. D. Eastern Russia - NE China border region. M= 5.4 Mb /BRK/, Mb= 5.6 SD 1.0 /CGS/.
- 10 Z P 22 10 /00/, USCGS: H= 21 57 40.4, 25.8N, 124.9E, h= 141 km. Northeast of Taiwan, Mb= 5.3 SD 1.2 /CGS/.
- 11 eZ /P/ 04 19 20,
- 11 iZ Pn 19 28 33.2, eZ Sn 19 28 49, D= 140 km.
- 11 eZ 20 34 09, Traces.
- 12 eZ Pn 20 40 34, Z Sn 20 42 /00/, D= 840 km. BCIS: H= 20 38 41 /DECM/, 45.3N, depth normal. Carpathes, Campulung region /Rumania/. Felt VI on the region of Campulung. Bronzed and light phenomena, numerous aftershocks /Campulung/, MLV= 5.3/Wien/, MLH= 5.2/Skopje/, MLH= 5.2 /Wien/, MLH= 5.0 /Tirana/, M= 5.0/Beograd/, MLH= 4.9 /Pruhonice/. USC GS: H= 20 38 39.6, 45.3N, 25.0E, h= 8 km. Rumania. Felt in Campulung area. Mb= 5.2 SD 0.8 /CGS/.
- 13 eZ Pn 05 47 28, USCGS: H= 05 45 43.2, 38.8N, 14.8E, h= 27 km, Sicily, Mb= 4.1 SD 0.9 /CGS/.
- 13 eZ PKP 07 33 08, USCGS: H= 07 14 26.4, 17.3S, 179.3W, h= 616 km, Fiji Islands region. Mb= 4.3 SD 0.6 /CGS/.
- 13 eZ PKP 23 51 34, eZ pP 23 52 22, USCGS: H= 23 33 15.4, 6.1 S, 129.9E, h= 152 km. Banda Sea, Mb= 5.9 SD 1.0 /CGS/.
- 14 eZ Pn 05 13 53, eZ Sn 05 15 32, D= 980 km. BCIS: H= 05 11 49 /DECM/, 31.9N, 21.9E, h= 80 km+ 25 km. Greece, MLV= 4.5 /Pruhonice/, MLH= 4.3 /Athens/, USCGS: H= 05 11 45.8, 39.1 N, 21.8E, Greece, h= N, Mb= 4.6 SD 1.2 /CGS/.
- 15 eZ /P/ 17 12 39,
- 15 eZ P 17 43 21, USCGS: H= 17 03 55.8, 39.8N, 143.4E, h= 20 km. Off east coast of Honshu, Japan. Mb= 5.3 SD 1.1 /CGS/.
- 15 eZ PKIKP 20 26 05, eZ PKHKP 20 26 10, USCGS: H= 20 06 22.6 22.2S, 169.7E, h= N, /CGS/.
- 15 eZ P 22 27 56, USCGS: H= 22 15 09.6, 5.9S, 113.2E, h= 575 km, Java Sea. Mb= 5.6 SD 1.0 /CGS/.

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- 15 eZ 22 30 03, eZ 22 31 58,
- 16 eZ 00 56 02, eZ /Sn/ 00 56 31, eZ 00 56 40, traces.
- 16 eZ PKP 01 41 41, eZ PP 01 43 26, USCGS: H= 01 22 47.5, 03.5S, 151.0E, h= 39 km. New Ireland region. Felt at Kavieng, Lassul and Rabaul, New Britain, M= 6 1/4 /PAS/, 6- 6 1/4 /BRK/, Mb= 5.7 Ms= 6.5 SD 1.1 /CGS/.
- 16 eZ 01 53 15, eZ /Sn/ 01 53 55, traces.
- 16 eZ+Pn 04 57 38, eZ Sn 05 00 21, D= 1610 km. BCIS: H= 04 54 13 /DECM/, 35.3N, 27.9E, h= 60 km cca. Eastern Mediterranean Sea. Near Island Karpathos. MLV= 5.1/Moxa, Pruhonice/, MLH= 4.9 /Tirana/, MPV= 4.7 /Moxa/, ML= 4.6 /Athens/, Premonitory shock of the seisms of April 16, at 23 21. USCGS: H= 04 54 06.3, 35.2N, 27.9E, h= 8 km. Dodecanese Islands, Mb= 4.8 SD 1.1 /CGS/.
- 16 eZ P 08 18 14, eZ 08 19 47, USCGS: H= 08 12 54.6, 27.6N, 34.0E, h= N, Red Sea. Mb= 5.0 SD 1.4 /CGS/.
- 16 eZ 12 33 03, eZ 12 33 13, traces.
- 16 eZ PKHKP 12 38 46, iZ PKIKP 12 38 52.5, eZ PP 12 41 51, D= 15540 km. USCGS: H= 12 19 40.1, 13.6S, 166.9E, h= 153 km. USCGS: H= 12 19 40.1, New Hebrides Islands, Mb= 5.7 SD 0.9 /CGS/.
- 16 eZ Pn 13 43 25, eZ 13 43 31.4, eZ /Sn/ 13 43 58, D= 290km.
- 16 eZ 14 31 09, eZ 14 31 14,
- 16 iZ Pg 15 33 58.5, iZ Sg 15 34 02.3, D= 35 km.
- 16 eZ Pn 17 34 43, eZ 17 35 20, D= 330 km.
- 16 eZ 20 29 30, eZ Sn 20 30 /00/, weak.
- 16 eZ Pn 21 23 55, iZ 21 24 01.0, eZ Sn 21 24 31, D= 330 km.
- 16 eZ Pn 21 45 20, eZ Sn 21 46 29, D= 620 km.
- 16 eZ P 22 59 04, iZ+ 22 59 06.3, eZ S 23 01 50, D= 1640 km. BCIS: H= 22 55 39 /DECM/, 35.2N, 27.8E, Eastern Mediterranean Sea, near Island Karpathos, MLH= 5.3 /Moxa/, MLH= 5.2 /Skopje/, MLH= 5.1 /Collm, Pruhonice/, MLV= 5.1 /Wien-Moxa/, MLH= 5.0/Moxa/, MLH= 4.9/Tirana/, ML= 4.7 /Athens/, USCGS: H= 22 55 37.2, 35.3N, 27.9E, h= 25 km, Dodecanese Islands, Mb= 5.2 SD 1.1 /CGS/.
- 16 eZ P 23 24 31, eZ S 23 26 15, D= 1620 km. BCIS: H= 23 21 03/DECM/, 35.1N, 27.9E, Eastern Mediterranean Sea, near Island Karpathos. MLH= 5.4 /Pruhonice/, /Strasbourg, Skopje/, MLV= 5.4 /Moxa/, MLH= 5.3 /Collm/, MLV= 5.3 /Wien/.

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- /cont./ MLH= 5.2 /Moxa/, MLH= 5.0 /Tirana/, MPV= 4.9/Moxa/
ML= 4.8 /Athens/. USCGS: H= 23 21 04.9, 35.3N, 27.8E, h=45
km, Dodecanese Islands, Mb= 5.2 SD 1.1 /CGS/.
- 17 eZ P 00 58 04, eZ S 01 00 48, D= 1620 km. USCGS: H= 00 54
39 /DECM/, 35.2N, 27.9E, Eastern Mediterranean Sea, near
Island Karpathos. Aftershock of the seisms of April 16, at
23 21, MLV= 5.0 /Moxa/, MLH= 4.9 /Moxa/, MLH= 4.8 /Stras-
bourg/, MLH= 4.7 /Collm/, MPV= 4.7 /Moxa/, ML= 4.6/Athens/
MLH= 4.5 /Tirana/, USCGS: H= 00 54 35.7, 35.1N, 27.7E,
h= 54 km, Mb= 4.8 SD 1.1 /CGS/.
- 17 eZ P 05 08 41, USCGS: H= 04 56 15.9, 39.5N, 143.4E, h=33
km, Off east coast of Honshu, Japan. Mb= 5.0 Ms= 5.1 SD 1.1
/CGS/.
- 17 eZ Pn 08 16 58, iZ 08 17 04.6, iZ Sn 08 17 35.4, D= 330 km.
- 17 eZ Pn 08 37 46.1, iZ 08 37 53.0, eZ Sn 08 38 24, D= 330 km.
- 17 eZ Pn 09 13 40, iZ 09 14 00, BCIS: H= 09 12 33 /DECM/
41.5N, 13.7E, Campania, Italy. Felt on the region of Ca-
ssino. Important damage at Cassino, Belmonte Castello and
Terelle. Slight damage at Pontecorvo, Roccasecca, Arce,...
/Press/, /ING Roma/, M= 4.6 /Roma/, MLV= 4.4 /Wien/, USC
GS: H= 09 12 28.9, 41.6N, 13.8E, h= 6 km, southern Italy.
2 houses collapsed at Terelle. Felt at Cassino and surro-
unding villages. Mb= 4.6 SD 1.0 /CGS/.
- 17 eZ /Pn/ 14 25 05.6, eZ Sn 14 25 43, weak.
- 17 eZ 23 18 50, eZ /Sn/ 23 20 14,
- 18 eZ 09 17 20, weak.
- From April 18 at 16 19 to April 19, at 08 22 station not
operated.
- 19 eZ P 08 58 33, USCGS: H= 08 45 16.0, 6.2S, 103.9E, h=40
km, Southwest of Sumatra. Mb= 5.7 SD 1.3 /CGS/.
- 20 eZ P 16 16 57, BCIS: H= 16 12 13 /DECM/, 35.8N, 9.2W,
Transatlantic seismic zone, southwest of Portugal, USCGS:
H= 16 12 01.5, 36.ON, 10.4W, h= 29 km. North Atlantic O.
Mb= 4.6 SD 1.3 /CGS/.
- 21 Z P 02 32 /00/, USCGS: H= 02 19 07.1, 14.1N, 91.0W, h=82
km, Guatemala, felt at San Salvador, El Salvador. M= 6 /PA
S/, 6 1/4 /BRK/, Mb= 5.5 SD 1.0 /CGS/.
- 21 eZ+P 07 31 53, Z 07 37 /00/, USCGS: H= 07 19 27.5, 32.2N,
131.9E, h= 41 km. D. Kyushu, Japan. 4 injured and slight
damage at Miyazaki, M= 6 1/4 /PAS/, 5 3/4 /GOL/, Mb= 6.1
Ms= 6.3 SD 1.3 /CGS/.

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- 21 eZ- Pn 20 39 09.5, eZ 20 42 04, BCIS: H= 20 36 45 /DECM/
39.4N, 25.3E, Aegean Sea, near the Island St. Eustrathios.
MLH= 4.9 /Wien/, MLH= 5.1 /Skopje/, MLH= 4.7 /Tirana/, MLH=
4.7 /Pruhonice/, ML= 4.6 /Athens/, USCGS: H= 20 36 43.4,
39.5N, 25.2E, h= N, Aegean Sea. Mb= 4.8 SD 1.5 /CGS/.
- 21 eZ 21 00 50, eZ 21 01 06, traces.
- 21 eZ P 22 33 53, BCIS: H= 22 27 54 /DECM/, 74.4N, 8.7E, north
Atlantic. Central ridge SW of Spitzberg. USCGS: H= 22 57
59.5, 74.2N, 9.7E, h= N, Greenland Sea. Mb= 5.0 SD 1.7 /CG
S/.
- 21 eZ /Pn/ 23 00 56, eZ Sn 23 01 38, weak.
- 21 eZ 23 49 12, eZ /Sn/ 23 49 38, traces.
- 22 eZ PKP 06 51 13, USCGS: H= 06 31 57.5, 26.8S, 114.1W, h= N,
Easter Islands region, M= 6 1/4 /PAS/, Mb= 5.6 Ms= 6.2 SD
1.2 /CGS/.
- 22 eZ PKP 07 58 17, eZ pPKP 07 59 06, USCGS: H= 07 37 51.2,
15.4S, 174.1W, h= 164 km. Tonga Islands region. Mb= 5.0 SD
0.9 /CGS/.
- 22 eZ+P 08 23 44, eZ PP 08 26 46, D= 8800 km, USCGS: H= 08 11
21.6, 39.8N, 143.0E, h= 36 km. Off east coast of Honshu, Ja-
pan. Mb= 5.5 SD 0.9 /CGS/.
- 22 eZ /Pn/ 05 55 13, eZ 05 56 53, traces.
- 22 iZ - P 22 43 27.5, eiZ PP 22 45 25, D= 5450 km, USCGS: H=
22 34 38.4, 13.ON, 58.2E, h= 33 km, Arabian Sea, Mb= 5.7
SD 1.1 /CGS/.
- 22 eZ Pn 15 55 14, eZ /Sn/ 15 56 53, D= 1000 km. Athens: H=15
52 58, 38.ON, 19.9E, ML= 4.0
- 23 eZ 08 42 36, eZ 08 43 06, traces.
- 23 eZ 13 42 35, eZ 13 43 20, traces.
- 23 eZ Sg 16 20 09, traces.
- 24 eZ PKIKP 07 45 42, eZ PKHKP 07 45 50, USCGS: H= 07 26 20.4
21.2S, 177OW, h= 250 km. G. Mb=4.9 SD 0.7 /CGS/, Fiji Islands
region.
- 24 eZ P 14 49 13, eZ S 14 51 54, D= 1620 km. BCIS: H= 14 45 51
/BCIS/, 36.2N, 28.5E, h= 90 km+ 20 km, Eastern Mediterranean
Sea, east of Rhodos. MPV= 4.7 /Moxa/, MLH= 4.6 /Pruhonice/
ML= 4.6/Athens/, MLH= 4.5 /Moxa/, MLV= 4.4 /Moxa/. USCGS: H
= 14 45 48.0, 36.4N, 28.7E, h= 48 km. Dodecanese Islands.
Mb= 4.7 SD 1.4 /CGS/.
- 25 eZ P 03 47 15, USCGS: H= 03 34 17.7, 7.5N, 82.1W, h= 25km,

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- /cont./ G, Mb= Ms= 5.4 SD 1.2 /CGS/, South of Panama.
- 25 eZ P 07 44 55, USCGS: H= 07 36 36.2, 30.8N, 70.3E, h=23 km, West Pakistan, Mb= 4.9 SD 0.8 /CGS/.
- 25 eZ Pn 07 52 13, iZ 07 52 19.5, iZ Sn 07 52 52.5, D= 370km
- 25 Z Pn 08 30 /00/, eZ /Sn/ 08 30 30, D= 270 km.
- 26 eZ Pn 00 22 /10/, iZ 00 22 26.6, eZ Sn 00 23 24, D= 690km
- 26 eZ PKP 06 17 25, eZ PP 06 17 54, D= 12000 km, USCGS: H= 05 58 49.0, 30.6S, 71.4W, h= 23 km, near coast of Central Chile, Mb= 5 3/4 /BRK/, Mb= 5.6 Ms= 6.0 SD 1.2 /CGS/.
- 26 eZ PKP 06 21 15, eZ PP 06 21 49, D= 11100 km. USCGS: G= 06 02 49.0, 30.6S, 71.5W, h= N, near coast of Central Chile. M= 6.0-6.2/BRK/, Mb= 5.9 Ms= 6.3 SD 1.0 /CGS/.
- 26 eZ P 11 36 41, USCGS: H= 1123 43.7, 3.9S, 102.8E, h= 110 km, Southern Sumatra, Mb= 5.2 SD 1.4 /CGS/.
- 26 eZ 17 18 30, traces.
- 26 eZ P 20 30 /00/, eZ pP 20 30 27, USCGS: H= 20 17 10.2, 3.0 S, 102.3E, h= 127 km, Southern Sumatra. Mb= 5.1 SD 0.8 /CGS/.
- 26 eZ Pn 23 26 30, eZ Sn 23 28 19, D= 1000 km, Athens: 23 24 22, 39.1N, 21.8E, ML= 3.6 /reduced/.
- 27 eZ 08 59 06, traces.
- 27 eZ /P/ 06 33 36,
- 27 eZ P 11 01 43, BCIS: H= 10 58 21 /DECM/, 36.5N, 28.4E, Eastern Mediterranean Sea. Near the coast of Turkey. MLV= 5.0 /Wien/, ML= 4.6 /Athens/, USCGS: H= 10 58 22.0, 36.5N 28.4E, h= 15 km, Dodecanese Islands, Mb= 4.7 SD 0.9 /CGS/.
- 27 eZ 12 16 54, eZ 12 17 19, traces.
- 27 eZ PKP 14 09 54.4, USCGS: H= 13 50 19.9, 22.8S, 171.3E, h= 86 km. Loyalty Islands region, Mb= 4.3 SD 1.4 /CGS/.
- 27 eZ 15 03 33, eZ 15 03 57, traces.
- 27 eZ 15 15 46, Z Sn 15 16 /00/, traces.
- 28 eZ 02 44 51, eZ Sn 02 44 51, eZ Sn 02 45 07,
- 28 eZ PKIKP 07 44 48, eZ PKHKP 07 44 57, eZ /PP/ 07 47 55, USCGS: H= 07 25 29.7, 22.4S, 177.7W, h= 296 km, D, South of Fiji Islands, M= 6 1/4 /BRK/, Mb= 5.9 SD 1.0 /CGS/.

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- 28 eZ Pg 11 17 54, iZ Sg 11 17 56, very weak.
- 28 eZ-P 13 00 56, eZ pP 13 01 16, USCGS: H= 12 50 15.2, 25.9N, 95.3E, h= 50 km, Burma-India border region. Mb= 5.2 SD 0.9 /CGS/.
- 28 eZ PKP 19 58 12, eZ PKP2 19 58 30, USCGS: H= 19 39 05.5, 7.9S, 158.8E, h= 77 km. D, Solomon Islands. Felt at Honiara, M= 5 3/4 /BRK/, Mb= 5.7 SD 1.1 /CGS/.
- 28 eZ P 23 33 44, USCGS: H= 23 20 42.9, 33.4N, 116.4W, h=20 km, Southern California. 33°21'N, 116°21'W, Hypocenter by Pasadena. Rock slide and minor damage at Borrago Springs. Felt throughout southern California and in southern Nevada and northern Baja California, Mexico. M= 5.9 /PAS/, 6.1 /BRK/, Mb= 5.7 Ms= 5.2 SD . /CGS/.
- 29 eZ+P 04 44 17, iZ 04 44 22.7, USCGS: H= 04 37 40.7, 29.6N, 51.1E, h= 36 km, Southern Iran, Mb= 5.6 SD 0.8 /CGS/.
- 29 eZ P 21 30 22, USCGS: H= 21 18 09.3, 46.5N, 153.1E, h= N, Kurile Islands, Mb= 5.1 SD 1.0 /CGS/.
- 30 eZ P 20 23 32, eZ /S/ 20 25 50, D= 1350 km, BCIS : H= 20 20 30 /DECM/, 39.1N, 28.7E, western Anatolia, some injured, 50 houses damaged in Demirci /39°03'N, 28°40'E/. Strongly felt in western Anatolia and at Istanbul /Istanbul-K./, numerous aftershocks. MLV= 5.4 /Wien/, MLH= 5.3 /Collmburg/, ML= 5.2 /Athens/, MLH= 5.1 /Pruhonice/, MLH= 4.5-5 /Strasbourg/, USCGS: H= 20 20 31.8, 39.2N, 28.6E, h= 9 km, Turkey. 15 injured and 50 houses destroyed at Demirci. Felt strongly throughout western Anatolia and at Istanbul, Mb= 5.1 SD 1.0 /CGS/.

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- 1 eZ PKIKP 03 31 49, eZ PKHKP 03 31 57, USCGS: H= 03 11 58.3, 21.0S, 174.6W, h=N, Tonga Islands. Mb= 5.0 Ms= 5.6 SD 0.7 /CGS/.
- 1 eZ 10 59 10, eZ 10 59 41, traces.
- 1 eZ P 18 05 40, iZ 18 05 44.4, eZ /S/ 18 08 08, BCIS: H= 18 02 16 /DECM/, 35.3N, 27.8E, Eastern Mediterranean Sea, near Karpathos. ML= 5.1 /Athens/, MLH= 4.9 /Pruhonice/, MLH= 4.9 /Collmburg/, MLV= 4.7 /Wien/, MLH= 4.6 /Strasbourg/, USCGS: H= 18 02 14.6, 35.4N, 27.7E, h= 37 km, Dodecanese Islands, Mb= 5.2 SD 1.2 /CGS/.
- 1 eZ-PKIKP 19 24 48, iZ PKHKP 19 24 52.8, iZ PKP2 19 25 00, iZ pPKP 19 25 46.5, eZ /PP/ 19 29 05, USCGS: H= 19 05 24.7, 16.8S, 174.7W, h= 205 km. D. Tonga Islands, M= 6.4/PAS/, 6 /BRK/, Mb= 6.0 SD 0.8 /CGS/.

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- 1 eZ P 20 10 07, eZ S 20 12 48, D= 1650 km, BCIS: H= 20 06 36 /DECM/, 35.2N, 27.7E, Eastern Mediterranean Sea, near Karpathos, MLH= 5.2 /Collmberg/, MLH= 5.2 /Strasbourg/, MLV= 5.2 /Wien/, MLH= 5.1 /Pruhonice/, ML= 4.8 /Athens/, USCGS: H= 20 06 40.9, 35.3N, 27.6E, h= 32 km. Dodecanese Islands, Mb= 4.7 SD 1.0 /CGS/.
- 1 eZ P 20 47 45, BCIS: H= 20 44 10 /DECM/, 34 3/4N, 27 1/2 E, Mediterranean Sea, east of Crete, USCGS: H= 20 44 15.8, 35.0N, 27.5E, h= N, Mb= 4.4 SD 1.4 /CGS/.
- 1 iZ Pg 21 27 18.0, iZ Sg 21 27 19.3, local.
- 2 eZ 01 31 05, traces.
- 2 eZ PKP 11 04 24, USCGS: H= 10 45 35.9, 17.9S, 178.7W, h= 554 km, Fiji Islands region, Mb= 3.9 SD 0.5 /CGS/.
- 2 eZ Pn 17 08 28, iZ Sn 17 09 04.6, D= 320 km.
- 3 Z /P/ 03 14 /00/.
- 3 eZ P 20 34 42, BCIS: H= 20 31 10 /DECM/, 35.1N, 27.6E, Mediterranean Sea, near Kaphathos, USCGS: 20 31 13.6, 35.2N, 27.8E, h= 44 km, Dodecanese Islands Mb= 4.6 SD 1.2 /CGS/.
- 4 eZ PKIKP 07 26 42, iZ PKHKP 07 26 47.5, eZ PKP2 07 26 56, eZ pPKP 07 29 53, USCGS: H= 07 08 01.4, 17.6S, 178.9W, h= 589 km, D. Fiji Islands region, Mb= 5.0 SD 0.7 /CGS/.
- 4 eZ P 12 56 10, USCGS: H= 12 36 33.4, 17.4S, 168.9E, h=11 km, New Hebrides Islands. Felt at Port Vila, Mb= 5.5 Ms= 5.6 SD 1.0 /CGS/.
- 4 eZ PP 17 36 40, USCGS: H= 17 18 38.8, 0.ON, 123.3E, h=165 km, Northern Celebes, Mb= 5.5 SD 1.3/CGS/
- 5 eZ PKP 02 28 48, USCGS: H= 02 08 57.2, 57.8S, 147.6E, h= N, West of Macquarie Island, Mb= 4.9 SD 1.2 /CGS/.
- 5 eZ P 02 53 21, BCIS: H= 02 45 38 /DECM/, 11.9N, 41.5E, Ethiopia, triangle of Afar. MLH= 4.9 /Pruhonice/, USCGS: H= 02 45 38.9, 11.9N, 41.3E, h= 102 km, Ethiopia. Mb= 5.2 Ms=5.0 SD 0.9 /CGS/.
- 5 eZ PKP 05 37 09, USCGS: H= 05 17 16.6, 58.1S, 148.4E, h=N, West of Macquarie Island. Mb= 4.9 SD 1.1 /CGS/.
- 5 eZ!+ P 05 39 09.3, BCIS: H= 05 34 25 /DECM/, 36.ON, 10.3W, Transatlantic seismic zone. Southwest of Portugal. After-shock of seisms of February 28, at 02 40. Felt IV-V at Casablanca and Mohammedia, IV at Rabat, Salé, Kenitra, Safi, III at interior of Morocco. Felt in Portugal, MPV= 6.2 /Wien/, MPV= 5.8 /Moxa/, MLV= 5.5 /Wien/, MLH= 5.1 /Moxa/, MPV= 5.1 /Moxa/, M= 4.6 /Lisboa/, USCGS: H= 05 34 23.5, 36.ON,

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- /cont./ 10.4W, h= 29 km, north Atlantic Ocean. Felt in Morocco, Portugal and Spain. Mb= 5.5 Mb= 4.9 SD 1.0 /CGS/.
- 5 eZ PKP 14 24 30, USCGS: H= 14 15 16.9, 44.2S, 141.4E, h= 25 km, D, South of Australia.
- 5 iZ Pn 16 25 17.6, iZ Sn 16 25 33.2, D= 130 km.
- 5 eZ Sn 18 34 04.5,
- 5 eZ P 21 53 16, BCIS: H= 21 47 30 /DECM/, 67.ON, 19W, Island MLH= 5.2 /Moxa/, MLV= 5.2 /Moxa/, MLH= 5.1 /Pruhonice/, MPV = 4.8 /Moxa/.
- 7 eZ P 13 57 42, USCGS: H= 13 45 00.0, 37.3N, 116.5W, h= 0 km, Southern Nevada. 37°16'58"N, 116°30'02"W, Nevada Test Site, "Purse" /AEC/, M= 5.6-5.8 /BRK/, Mb= 5.8 /CGS/.
- 7 eZ 22 35 13, eZ Sn 22 36 33, Athens: H= 22 30 57, 37.6N, 21.5E, ML= 3.7
- 8 iZ Pg 08 51 15.7, iZ Sg 08 51 33.8, D= 140 km.
- 9 eZ Pn 07 11 53, eZ /Sn/ 07 13 29, D= 960 km. USCGS: H= 07 09 43.6, 38.4N, 20.4E, h= 13 km, Greece, Mb= 4.6 SD 1.3 /CGS/.
- 9 eZ 15 24 42, eZ 15 25 17, BCIS: H= 15 22 05 /DECM/, premonitory shock of the seisms of May 10, at 21 10,
- 10 eZ P 09 33 13, USCGS: H= 09 27 57.0, 27.5N, 34.2E, h= N, Red Sea, Mb= 4.8 SD 1.1 /CGS/.
- 10 eZ Pn 14 26 03, eZ /Sn/ 14 26 41,
- 10 eZ P 13 36 04, BCIS: H= 13 31 10 /DECM/, 36.2N, 10.9W, Transatlantic seismic zone, SW of Portugal, USCGS: H= 13 31 15.2, 36.1N, 10.8W, h= N, North Atlantic Ocean. Mb= 4.3 SD 0.9 /CGS/.
- 10 eZ Pn 21 12 09, iZ 21 13 31.5, eZ 21 14 09.5, BCIS: H= 21 10 37 /DECM/, 41.2N, 20.3E, 41°10'N, 20°18'E, /macroseismic epicenter - Tirana/, Albania, felt V-VI on the region of Librazhd, IV-V at Elbasan, III at Tirana/Tirana/, Felt on the region of Debar /Skopje/, MLV= 4.3 /Wien/, MLH= 4.2 /Pruhonice/, MLH= 4.1 /Tirana/, MLH= 4.0 /Skopje/, M= 3.8 /Beograd/, USCGS: H= 21 10 37.0, 41.3N, 20.3E, h= 42 km, Albania, felt in Librazhd, Elbasan and Tirana. Felt also in Debar, Yugoslavia area. Mb= 4.4 SD 1.5 /CGS/.
- 11 eZ-P 00 27 16, USCGS: H= 00 18 41.9, 14.3N, 56.7E, h= 32 km, Arabian Sea. Mb= 5.1 SD 1.1 /CGS/.
- 11 eZ Pn 01 17 22, eZ 01 18 08, traces.

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- 11 eZ PKP 14 37 03, USCGS: H= 14 17 11.9, 21.8S, 175.1W, h= N, Tonga Islands, Mb= 5.1 Ms= 5.1 SD 0.6 /CGS/.
- 11 eZ /P/ 16 26 39, traces. BCIS: H= 16 23 08 /DECM/, 35.2N, 27.8E, Mediterranean Sea. East of Crete, ML= 4.0 /Athens/
- 12 iZ Pg 06 34 09.4, iZ Sg 06 34 12.6, D= 24 km.
- 12 eZ PKP 07 44 30, USCGS: H= 07 25 16.4, 16.0S, 175.1W, h= 302 km, Mb= 4.6 SD 0.5 /CGS/.
- 12 eZ 16 40 03, eZ /Sn/ 16 41 35, traces.
- 12 eZ P 17 27 55, USCGS: H= 17 16 28.1, 22.2S, 12.1W, h= N, South Atlantic ridge. Mb= 4.6 SD 1.2 /CGS/.
- 12 eZ P 19 16 22, traces, USCGS: H= 19 09 09.0. 27.8N, 56.5E h= 50 km, Southern Iran, Mb= 4.9 SD 1.1 /CGS/.
- 13 eZ Pn 11 20 28, eZ Sn 11 22 15, D= 1040 km, Athens: H=11 18 30, 36.4N, 24.6E, ML= 3.5
- 13 eZ P or PKP 14 29 42,
- 13 eZ P 14 32 11, USCGS: H= 14 19 44.8, 36.4N, 140.5E, h= 75 km, near east coast of Honshu, Japan. Felt. Mb= 5.4 SD 1.0 /CGS/.
- 13 eZ /P/ 14 43 32, traces,
- 13 eZ 14 46 40 eZ PKP 14 47 37, eZ PP 14 48 04, USCGS: H= 14 30 19.6, 7.2S, 120.9N, h= 616 km, Flores Sea, Mb= 5.6 SD 1.0 /CGS/.
- 13 eZ /P/ 14 49 18, traces.
- 13 eZ P 16 00 05,
- 13 iZ Pg 16 36 34.0, iZ Sg 16 36 36.5, D= 20 km, local,
- 13 eZ P 17 51 09, BCIS: H= 17 48 03 /DECM/, 39.1N, 28.6E, Western Anatolia, aftershock of April 30, at 20 20, ML= 4.1 /Athens/, USCGS: H= 17 48 02.4, 39.1N, 28.5E, h= 38 km, Turkey, Mb= 4.5 SD 1.2 /CGS/.
- 14 eZ P 10 08 43, eZ 10 11 51, BCIS: H= 10 05 15 /DECM/, 35.4 N, 27.7E, h= 70 km, Eastern Mediterranean Sea, east of Crete. MLH= 5.2 /Strasbourg/, MLH= 5.1 /Collmburg/, MLH= 5.1 /Tirana/, Fürstenfeldbruck/, MLV= 5.1 /Wien/, MLH= 5.0 /Praga/, MLV= 5.0 /Moxa/, ML= 5.0 /Athens/, MLH=4.9 /Pruhonice, Moxa/, USCGS: H= 10 05 15.8, 35.3N, 27.8E, h= 34 km, Dodecanese Islands, Mb= 5.1 SD 1.1 /CGS/.
- 14 eZ+P 19 45 15.4, eZ S 19 55 36, D= 9200 km, USCGS: H= 19 32 54.2, 51.3N, 179.9W, h= 21 km, Andreanof Islands, Ale-

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- /cont./ utian Islands, felt on Adak and Amchitka. Mb= 6.2 Ms= 7.0 SD 1.2 /CGS/.
- 14 eZ P 20 23 /00/, USCGS: H= 20 10 39.3, 51.3N, 179.9W, h= 15 km, Andreanof Islands, Aleutian Islands. Felt on Adak, Mb= 5.3 SD 1.0 /CGS/.
- 14 eZ P 20 46 24, USCGS: H= 20 34 09.7, 43.3N, 146.5E, h= N, Kurile Islands, Mb= 5.0 SD 1.0 /CGS/.
- 15 eZ /P/ 00 00 37, eZ 00 04 35, BCIS: H= 23 57 37 /DECM/, 39.2N, 28.6E, Western Anatolia, ML= 4.2 /Istanbul-K./ USC GS: H= 23 57 34.8, 39.2N, 28.4E, h= 39 km, Turkey. Mb= 4.6 SD 0.6 /CGS/.
- 15 eZ Pn 04 50 48, eZ /Sn/ 04 51 55,
- 15 Z Pn 05 01 /00/, iZ Sn 05 01 31.7, D= 290 km,
From May 15, at 10 36 to May 16, at 06 49 station not operated.
- 16 eZ Pn 07 29 04, iZ 07 29 19.8, iZ 07 29 42.2, iZ Sn 07 30 42.5, iZ 07 31 01.8, D= 950 km, BCIS: H= 07 26 58 /DECM/, 38.8N, 21.6E, Northwestern Greece, M= 5.5 /Tirana/, MLV= 5.1 /Wien-H/, MLH= 5.0 /Pruhonice/, USCGS: H= 07 26 58.7, 39.2N, 21.8E, h= 20 km, Greece, Felt at Trikala, Lamia and Irlisa. Mb= 5.2 SD 1.1 /CGS/.
- 17 eZ /P/ 13 35 16, eZ 13 35 37,
- 21 eZ /Pn/ 09 05 54, eZ 09 07 21,
- 21 iZ Pg 19 38 20, iZ Sg 19 38 22.5, very weak, local.
- 23 eZ -P 13 16 49, USCGS: H= 13 04 36.6, 53.4N, 160.2W, h= 32 km, D, south of Alaska, M= 5 /BRK/, Mb= 5.6 Ms= 5.3 SD 1.2 /CGS/.
- 23 eZ P 17 19 55, USCGS: H= 17 07 42.2, 3.7N, 95.7E, h= 47km, D, Off west coast of northern Sumatra, Mb= 5.2 SD 1.2 /CGS/.
- 23 eZ PKP 22 13 33, USCGS: H= 21 54 21.5, 14.6S, 167.4E, h= 177 km, New Hebrides Islands, Mb= 4.7 SD 1.0 /CGS/.
- 23 eZ P or PKP 23 58 18,
- 24 eZ P 06 04 26, BCIS: H= 05 59 12 /DECM/, 28.0N, 34.0E, northern Red Sea, felt /Helwan/. Aftershock of the seisms of March 31, at 07 15,
- 24 eZ 11 25 36, eZ Sn 11 25 49,
- 24 eZ P 11 53 37, BCIS: H= 11 49 28 /DECM/, 36.8N, 35.4E, Adana region, Turkey. Strongly felt at Adana. USCGS: H= 11 49

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- /cont./ 27.0, 36.9N, 35.4E, h= 43 km, Turkey, strongly felt at Adana, Mb= 4.3 SD 0.6 /CGS/.
- 24 Z Pn 19 55 /00/, eZ Sn 19 55 21, D= 180 km,
- 25 eZ P 11 37 53, BCIS: H= 11 32 37 /DECM/, 27.5N, 33.9E, north of Red Sea, aftershock of the seisms of March 31, 1969 at 07 15,
- 25 eZ /Pg/ 11 57 22, eZ Sg 11 57 29, traces.
- 25 eZ PKP 20 38 24, USCGS: H= 20 18 30.0, 32.0S, 178.8W, h= 70 km, D, South of Kermadec Islands Mb= 5.4 SD 1.3 /CGS/.
- 26 iZ -Pg 04 14 38.9, iZ Sg 04 14 43.7, D= 42 km, Wien: Ep.: 46.5N, 14.4E E, Io= 4°, Zell-Pfarre, Carinthia, Austria.
- 26 eZ P or PKP 11 05 07,
- 26 eZ Pg 14 16 18, iZ Sg 14 16 20.8,
- 26 eZ P 15 50 44,
- 27 eZ 03 59 08, eZ 03 59 59, traces.
- 28 eZ P 03 54 31, eZ 03 54 40, eZ /PP/ 03 58 29, USCGS: H= USCGS: H= 03 41 01.8, 11.8N, 125.8E, h= 6 km, Samar, Philippine Islands. Felt at Catarman, Mb= 5.3 SD 1.0 /CGS/.
- 28 eZ P 04 03 06, BCIS: H= 03 57 14 /DECM/, 73.5N, 7.7E, Central ridge, Greenland Sea, southwest of Spitzberg. USCGS: H= 03 57 19.4, 73.5N, 8.2E, h=N, Greenland Sea, Mb= 4.9 SD 1.0 /CGS/.
- 28 Z P 13 43 /00/, eZ SKS 13 53 24, USCGS: H= 13 30 08.9, 21.1 S, 76.9W, h= 177 km, D, Peru-Ecuador border region, Mb= 5.5 SD 1.1 /CGS/, M= 5.4 /BRK/,
- 28 eZ Pn 21 55 /56/, eZ Sn 21 57 33, /D= 980 km/, BCIS: H= 21 53 56 /DECM/, 38.8N, 21.6E, northwestern Greece, aftershock of the seisms of May 16, 1969 at 07 26. USCGS: H= 21 53 56.6 38.8N, 21.7E, h= 21 km, Greece, Mb= 4.5 SD 1.6 /CGS/.
- 29 eZ P 07 37 13
- 29 eZ PKP 10 41 35, traces. USCGS: H= 10 22 38.0, 20.3S, 177.7 W, h= 510 km. G. Fiji Islands region. Mb= 4.6 SD 0.9 /CGS/.
- 29 eZ PKP 17 12 46, traces. USCGS: H= 16 52 32.1, 19.9S, 174.7 W, h= N, Tonga Islands, Mb= 4.9 SD 1.0 /CGS/.
- 30 eZ /P/ 04 35 16, traces.
- 30 Z PKP 15 35 /00/, USCGS: H= 15 16 10.6, 21.1S, 178.8W, h= 583 km, Fiji Islands region, Mb= 4.8 SD 1.1 /CGS/.

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- 30 eZ PKIKP 16 15 38, eZ PKP2 16 16 26, USCGS: H= 15 55 37.1, 32.2S, 178.1W, h= 34 km, South of Kermadec Islands, M= 6.1 /BRK/, Mb= 5.2 Ms= 5.9 SD 1.6 /CGS/.
- 30 eZ PKIKP 16 42 18, eZ PKP2 16 43 37, USCGS: H= 16 22 47.8, 32.3S, 178.1W, h= N, South of Kermadec Islands, M= 6.2/PAS/, 6.4 /BRK/, Mb= 5.5 Ms= 6.2 SD 1.5 /CGS/.
- 31 eZ P 05 09 47, BCIS: H= 05 02 00 /DECM/, 50.5N, 77.8E, Kazakhstan. Region of Semipalatnsk, probably artificial /Uppsala/, m= 6.0 /Uppsala/.
- 31 eZ P or PKP 11 10 13,
- 31 eZ Pn 14 22 31, eZ 14 24 26, Athens: H= 14 20 23, 41.2N, 23.6E, ML= 3.8,
- 31 eZ Pg 17 02 18, iZ Sg 17 02 28.4, D= 90 km,
- 31 eZ P 22 29 06, weak. USCGS: H= 22 09 19.5, 16.0S, 173.0W, h= N, Tonga Islands, Mb= 4.5 SD 1.2 /CGS/.
- 31 eZ PKP 22 44 22, eZ PKP2 22 44 27, USCGS: H= 22 24 32.0, 16.0S, 172.9W, h= 15 km, Samoa Islands region, M= 5.2/BRK/, Mb= 5.2 Ms = 5.4 SD 1.2 /CGS/.

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- 1 eZ - PKP 00 15 37.8, eZ pPKP 00 16 24, USCGS: H= 23 56 21.6 4.9S, 154.2E, , h= 403 km, D, Solomon Islands, Mb= 5.5 SD 1.0 /CGS/.
- 1 eZ PKP 20 13 19, eZ 20 14 13, USCGS: H= 19 53 12.4, 31.7S, 178.2W, h= 17 km, Kermadec Islands, Mb= 5.0 SD 1.3 /CGS/.
- 1 eZ PKP 21 45 56, USCGS: H= 21 26 24.5, 15.9S, 173.4W, h= 253 km, Tonga Islands, Mb= 4.1 SD 0.8 /CGS/.
- 1 iZ- Pg 23 20 47.7, iZ Sg 23 21 02.7, D= 130 km, BCIS: H= 23 20 29 /DECM/, 47.0N, 14.25E, Felt at Charinthia and Styria, Io= 5° - 6° /Wien/, M= 4.5 /Bensberg/, MLH= 3.7 /PRU-honice/, USCGS: H= 23 20 30.8, 47.1N, 14.3E, h= N, Austria Felt in Charinthia and Styria. Mb= 4.4 SD 1.2 /CGS/.
- 2 iZ - Pg 03 57 47.5, iZ Sg 03 58 02.9, D= 130 km, BCIS: H= 03 57 29 /DECM/, 47°04'N, 14°15'E, 47.0N, 14 1/4E/macroseismic epicenter/ /Wien/, Felt Io= 4° - 5° /Wien/, M= 4.3 /Bensberg/, MLH= 3.2 /Pruhonice/, USCGS: H= 03 57 30.1, 47.0N, 14.3E, Austria, h= 29 km, Felt Mb= 4.1 SD 0.9/CGS/.
- 2 eZ 14 51 08, eZ /Sn/ 14 51 17, traces.
- 3 eZ 05 23 24, eZ 05 23 56, traces.

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- 3 Z 09 03 /00/, traces.
eZ P or PKP 09 04 45,
eZ P 10 31 04, USCGS: H= 10 19 15.9, 6.7N, 94.8E, h= 134km, Nicobar Islands region, Mb= 4.5 SD 1.0 /CGS/.
- eZ P 22 05 28, USCGS: H= 21 53 06.5, 40.2N, 143.7E, h= N, Off east coast of Honshu, Japan, Mb= 4.8 SD 1.1 /CGS/.
- eZ P 00 48 19, iZ 00 48 26.0, USCGS: H= 00 39 57.5, 41.4N, 79.5E, Kirgiz - Sinkiang border region, Mb= 4.9 SD 0.8 /CGS/.
- 4 eZ Pn 14 11 /10/, eZ 14 11 35,
4 eZ PKP 14 36 10, eZ 14 36 12, USCGS: H= 14 16 26.0, 16.3S, 172.7W, h= 43 km, Samoa Islands region, Mb= 4.9 Ms= 5.1 SD 0.9 /CGS/.
- 4 eZ P 16 29 27, USCGS: H= 16 21 34.7, 25.6N, 61.1E, h= N, Southern Iran, Mb= 4.7 SD 1.0 /CGS/.
- 4 eZ PKP 16 41 18, USCGS: H= 16 21 31.4, 16.2S, 173.0W, h= 42 km, Tonga Islands, Mb= 4.9 SD 0.8 /CGS/.
- 4 eZ Pn 18 23 55, eZ 18 24 52,
4 eZ P 20 45 14, USCGS: H= 20 35 10.1, 11.9N, 43.8W, h= N, north Atlantic ridge. Mb= 4.9 Ms= 4.2 SD 1.1 /CGS/.
- 5 eZ P 00 42 34, USCGS: H= 00 22 45.9, 16.2S, 172.9W, h= N, Samoa Islands, Mb= 4.8 SD 0.7 /CGS/.
- 5 eZ P 10 57 56, USCGS: H= 10 45 43.5, 4.9N, 96.3E, h= N, Northern Sumatra, Mb= 5.3 Ms= 4.8 SD 1.3 /CGS/.
- 7 eZ Pn 15 33 20, eZ Sn 15 35 /00/, D= 1000 km, BCIS: H= 15 31 12 /DECM/, 37.9N, 20.2E, Ionian Islands, MLV= 5.1/Wien-H./, M= 5-5 1/4 /Roma/, MLH= 4.9 /Collmberg, Tirana/, USCGS: H= 15 31 12.4, 38.ON, 20.1E, h= 39 km, Mb= 4.6 SD 1.5 /CGS/.
- 7 eZ-Pn 16 00 11, eZ Sn 16 01 50, D= 1000 km, Athens: H= 18 01 00, 37.9N, 19.9E, ML= 3.9,
7 iZ Pg 21 23 16.7, iZ Sg 21 23 27.9, D= 95 km, Felt: 4° Rijeka, Yugoslavia,
7 eZ P 22 59 31, USCGS: H= 22 47 15.4, 52.5N, 169.1W, h=42 km, Fox Islands, Aleutian Islands, Mb= 5.2 SD 1.0 /CGS/.
- 8 iZ Pg 01 34 19.4, iZ Sg 01 34 30.3, D= 95 km, Felt: 3° Rijeka, Yugoslavia,

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- 8 eZ PKP 12 01 16, USCGS: H= 12 01 16.8, 15.1S, 173.6W, h= N, Tonga Islands, Mb= 4.8 SD 0.6 /CGS/.
- 8 eZ P 15 01 18, USCGS: H= 14 49 31.6, 53.3, 159.7E, h= 60 km, D, Near coast of Kamchatka. Mb= 5.4 SD 0.9 /CGS/.
- 9 Z 00 42 /00/, eZ Sn 00 43 31.6, Athens: H= 00 39 41, 38.0 N, 20.7E, ML= 3.9
9 eZ Pg 06 44 47, iZ Sg 06 44 58.0, D= 95 km,
9 eZ P 09 45 30, USCGS: H= 09 35 38.2, 7.0S, 12.7W, h= N, Ascension Island region, Mb= 4.9 SD 1.1 /CGS/.
- 9 eZ 17 56 45, iZ Sg 17 56 48.0, very weak. Local.
9 eZ PKP 22 12 54, USCGS: H= 21 53 01.8, 23.5S, 175.0W, Tonga Islands region, Mb= 5.5 Ms= 5.6 SD 1.1 /CGS/.
- 9 eZ P 23 21 57, USCGS: H= 23 09 43.6, 44.ON, 148.9E, h= 50 km, D. Kurile Islands, Mb= 5.1 SD 1.3 /CGS/.
- 9 eZ 23 57 28, traces.
10 iZ Pg 06 43 44.4, iZ Sg 06 43 55.7, D= 95 km, Felt: 3° Rijeka, Yugoslavia.
- 10 eiZ+ P 22 59 49.9, eZ pP 23 00 34, BCIS: H= 22 52 07 /DECM/, 36.1N, 71.3E, h= 200 km cca, Hindu-Kush, USCGS: H= 22 52 12.1, 36.4N, 70.7E, h= 203 km, D. Hindu-Kush region, Mb= 5.4 SD 0.9 /CGS/.
- 10 iZ+ P 23 38 29.5, eZ pP 23 39 14, BCIS: H= 23 30 46 /DECM/, 36.1N, 71.3E, h= 200 km cca, Hindu-Kush, USCGS: H= 23 30 53.7, 36.3N, 70.4E, h= 213 km, Hindu-Kush region, Mb= 5.2 SD 0.9 /CGS/.
- 11 eZ P 01 09 44, USCGS: H= 00 58 10.1, 59.6N, 144.8W, h= 5 km, Gulf of Alaska, felt at Cordova. M= 5 /BRK/, Mb= 5.3 SD 0.9 /CGS/.
- 11 eZ P 01 16 38, USCGS: H= 01 05 01.3, 59.6N, 144.8W, h= 12 km, Gulf of Alaska. Felt at Cordova, Mb= 4.9 SD 0.9 /CGS/.
- 11 eZ- P 05 00 53, USCGS: H= 04 48 20.3, 1.1N, 98.8E, h= 53 km, Northern Suamatra, Mb= 5.3 SD 1.2 /CGS/.
- 11 eZ P 07 00 33, USCGS: H= 06 51 10.9, 2.5S, 12.2W, h= Nkm, North of Ascension Island, Mb= 5.0 SD 0.9 /CGS/.
- 11 eZ P 15 23 31, USCGS: H= 15 11 17.4, 27.4N, 139.9E, h=500 km, Bonin Islands region, Mb= 4.8 SD 0.9 /CGS/.
- 12 eZ P 07 53 47, USCGS: H= 07 41 25.1, 40.3N, 143.7E, h=N, Off east coast of Honshu, Japan. Mb= 5.1 Ms= 5.1 SD 0.9

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/cont./ /CGS/.

- 12 eZ Pn 09 56 47, eZ Sn 09 58 29, D= 1000 km, Athens: 09 54 35, 37.9N, 20.1E, ML= 4.1,
- 12 eZ P 15 16 48, iZ! 15 16 58.5, iZ S 15 19 29.5, D= 1600 km, BCIS: H= 15 13 33 /DECM/, 34.6N, 25.0E, h= normal, south of Crete, felt at Alexandria /Helwan/, m= 6.4 /Uppsala/, MLV= 6.25 /Wien-H./, MLH= 6.2 /Wien-H./, M= 6.2 /Uppsala/, MPV= 6.2 /Bensberg/, M= 6 /Titograd/, M= 6 /Tirana, Roma/, ML= 5.8 /Athens/, MLH= 5 3/4 -6 /Strasbourg/, USCGS: H= 15 13 31.1, 34.4N, 25.1E, h= 25 km, D. Crete. Felt at Alexandria, Egypt, Mb= Ms= 5.8 SD 1.0 /CGS/.
- 12 eZ P 18 03 56, BCIS: H= 18 00 29 /DECM/, 34.2N, 25.2E, h= 40+ 10 km, Mediterranean Sea. South of Crete. USCGS: H= 18 00 29.6, 34.2N, 25.2E, h= 56 km, Crete. Mb= 4.5 SD 1.0 /CGS/.
- 12 eZ P 18 19 34, USCGS: H= 18 10 16.7, 8.2N, 58.3E, h= N, Carlsberg ridge, Mb= 4.8 SD 1.0 /CGS/.
- 12 eZ P 19 11 39.5, USCGS: H= 18 59 08.1, 24.ON, 122.4E, h=N Taiwan region, Mb= 5.3 SD 0.9 /CGS/.
- 13 eZ Pn 01 26 40, eZ Sn 01 29 21, BCIS: H= 01 23 15 /DECM/, 34.4N, 25.0E, h= normal. Mediterranean Sea, south of Crete, ML= 4.2 /Athens/, USCGS: H= 01 23 13.8, 34.3N, 25.1E, h= 38 km, Crete, Mb= 4.4 SD 1.4 /CGS/, D= 1600 km.
- 13 eiz+ P 09 00 28, eZ S 09 10 47, D= 9300 km, USCGS: H= 08 48 29.5, 49.4N, 155.5E, h= 64 km, D. Kurile Islands, M= 6 1/4 /PAS/, 6 1/4 /BRK/, 6 1/4-6 1/2 /GOL/, Mb= 5.9 SD 1.0 /CGS/.
- 13 eZ Pn 19 44 28, eZ Sn 19 46 10, Athens: 19 42 16, 38.ON, 20.2E, ML= 3.9,
- 14 eZ P 03 38 46, USCGS: H= 03 28 29.6, 31.7N, 94.6E, h=N, Tibet, Mb= 5.3 SD 1.2 /CGS/.
- 14 eZ PKP 03 42 /00/, eZ PKP2 03 42 /21/, eZ 03 45 26, USCGS: H= 03 22 56.8, 7.9S, 159.0E, h= 62 km. D. Solomon Islands. Felt at Honiara, M= 6 1/2 - 6 3/4 /PAS/, 5.8-6.0 /BRK/, Mb= 6.0 SD 1.1 /CGS/.
- 14 eZ Pn 05 56 46, eZ Sn 05 58 26, D= 980 km, Athens: 05 54 32, 38.ON, 20.1E, ML= 3.9,
- 14 eZ P 13 50 45, iZ! /P/ 13 50 55, iZ S 13 53 22, BCIS: H= 13 47 28 /DECM/, 34.4N, 25.0E, h= normal. Mediterranean Sea, south of Crete, MLH= 4.8 /Skopje/, ML= 4.7 /Athens/, M= 4.6 /Tirana/, MLH= 4.5 /Pruhonice/, USCGS: H= 13 47 24.2, 34.3N, 25.1N, h= 9 km, Crete, Mb= 5.0 SD 1.1 /CGS/.
- 14 eZ P 14 36 24, Z S 14 39 /00/, D= 1550 km, BCIS: H= 14 33

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- /cont./ 01 /DECM/, 34.4N, 25.5E, h= possible cca 100 km + 20 km, Mediterranean Sea, south of Crete. USCGS: H= 14 32 56.3, 34.3N, 25.1E, h= 36 km, Crete, Mb= 4.4 SD 1.0 /CGS/.
- 14 eZ P 17 49 47, BCIS: H= 17 45 03 /DECM/, 41.1N, 43.1E, h= normal. Armenia, Turkey-USSR border region. USCGS: H= 17 45 01.8, 41.4N, 43.2E, h= 26 km, Turkey- USSR border region, Mb= 4.7 SD 1.3 /CGS/.
- 15 eZ Pg 05 39 35, eZ Sg 05 39 50.7, D= 130 km.
- 15 eZ P 06 02 10, eZ S 06 04 54, weak, D= 1640 km, BCIS: H= 05 58 44 /DECM/, 34.3N, 25.1E, h= 50 km + 20 km, Eastern Mediterranean Sea, south of Crete, USCGS: H= 05 58 41.8, 34.4N, 25.2E, h= 24 km, Crete, Mb= 4.5 SD 1.2 /CGS/.
- 15 eZ P 17 09 37, iZ! 17 09 52.6, USCGS: H= 16 56 32.0, 4.7S, 102.2E, h= 38 km, D, Southern Sumatra. Mb= 5.3 SD 1.1 /CGS/.
- 16 eZ Pn 04 55 33, eZ Sn 04 57 15, D= 1000 km, Athens: H= 04 53 15, 37.6N, 20.0E, ML= 4.0,
- 16 eZ Pn 07 52 12, eZ Sn 07 53 54, D= 980 km, BCIS: H= 07 52 02 /DECM/, 38.ON, 20.3E, ML= 3.5 /Athens/, Premonitory shock of the seisms of June 16, at 16 06,
- 16 eZ Pn 15 17 41, eZ Sn 15 19 19, D= 960 km, BCIS: H= 15 15 26 /DECM/, ML= 3.8 /Athens/, Premonitory shock of the seisms of June 16, at 16 06,
- 16 eZ Pn 16 08 31, iZ Sn 16 10 15.0, D= 1000 km, BCIS: H= 16 06 25 /DECM/, 38.ON, 20.3E, h= normal. Ionian Islands, MLV= 5.1 /Wien-H./, M= 5.1 /Tirana/, M= 5.0 /Roma/, ML= 4.1 /Athens/, USCGS: H= 16 06 25.5, 38.2N, 20.1E, h= 42 km, Greece. Mb= 4.5 SD 1.1 /CGS/.
- 17 eZ /P/ 03 45 08, trces.
- 17 iZ Pn 05 20 53.2, iZ Sn 05 22 32.8, D= 990 km, BCIS: H= 05 18 46 /DECM/, M= 4.75 /Tirana/, MLV= 4.7 /Wien-H./, M= 4.5 /Roma/. Aftershock of the seisms of June 16, at 16 06, USCGS: H= 05 18 46.5, 38.5N, 20.2E, h= N, Greece, Mb= 4.5 SD 1.4 /CGS/.
- 17 eZ P 19 39 58, eZ PKP 19 44 12, eZ PKS 19 47 29, D= 11200 km, USCGS: H= 19 26 28.9, 19.ON, 145.5E, h= 206 km, D, Mariana Islands, M= 5.9 /PAS/, 5.9 /BRK/, Mb= 5.8 SD 1.1 /CGS/.
- 17 eZ 19 56 05, eZ 19 56 29,
- 17 eZ Pn 20 50 40, eZ Sn 20 51 02, D= 180 km.
- 17 eZ+P 23 29 39, BCIS: H= 23 24 41 /DECM/, 43.3N, 45.3E, Caucasus /USSR/, MPV= 5.6 /Wien-H./, MLH= 5.1, /Collmberg/, MLH= 5.0 /Pruhonice/, MLV= 5.0 /Moxa, Wien-H./, MLH= 4.9 /Moxa/

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- /cnt./ MPV= 4.7 /Moxa/. USCGS: H= 23 24 41.7, 43.2N, 45.3 E, h= 6 km, Eastern Caucasus, Mb= 5.1 SD 1.0 /CGS/.
- 17 eZ P 23 59 /09/, eZ /S/ 00 01 40, Athens: H= 23 56 22, 37.ON, 20.7E, ML= 3.9,
- 18 Z PKIKP 00 18 /00/, eZ PKP2 00 18 33, eZ PP 00 22 12, eZ SKKS 00 29 16, D= 17300 km, USCGS: H= 23 58 10.1, 52.6S, 109.7E, h= N, Macquarie Islands region, M= 6-6 1/2 /BRK/, Mb= 6.1 SD 1.5 /CGS/.
- 18 eZ P 01 50 17, USCGS: H= 01 38 46.4, 59.5N, 145.0W, h= N, Gulf of Alaska, felt at Cordova. Mb= 5.2 SD 1.4 /CGS/.
- 18 eZ Pn 04 15 30, eZ Sn 04 17 11, D= 990 km, Athens: H= 04 13 18, 37.9N, 20.3E, ML= 3.8,
- 18 eZ P 17 22 17, USCGS: H= 17 11 48.0, 1.6N, 66.7E, h= 23 km, D, Carlsberg ridge, Mb= 5.0 SD 1.1 /CGS/.
- 18 eZ /Sn/ 19 30 47, traces.
- 18 eZ P 20 20 35, USCGS: H= 20 08 36.4, 5.9N, 94.7E, h= 69 km, Northern Sumatra, Mb= 5.1 SD 1.0 /CGS/.
- 18 eZ P 23 56 29, USCGS: H= 23 44 11.2, 52.6N, 167.9W, h= 18 km, Fox Islands, Aleutian Islands. M= 5.2 /BRK/, Mb= 5.4 Ms= 5.6 SD 1.1 /CGS/.
- 19 eZ Pn 06 56 03, eZ 06 58 20, BCIS: H= 06 52 38/DECM/, 34.3 N, 25.3E, h= 60 km + 20 km, Eastern Mediterranean Sea, south of Crete, ML= 4.2 /Athens/, USCGS: H= 06 52 33.5, 34.3N, 25.1E, h= 16 km, Crete, Mb= 4.6 SD 1.2 /CGS/.
- 19 eZ P 07 15 42, iZ 07 15 55.0, USCGS: H= 07 03 04.9, 28.1N, 130.0E, h= 45 km, G, RyuKyu Islands, Mb= 5.5 Ms= 4.9 SD 1.2 /CGS/.
- 19 eZ PKIKP 13 55 30, iZ PKHKP 13 55 36.3, eZ PKP2 13 55 42, USCGS: H= 13 36 45.9, 18.0S, 178.3W, h= 545 km, G, Fiji Islands region, Mb= 5.0 SD 0.9 /CGS/.
- 19 eZ Pn 13 19 /31/, eZ Sn 13 20 07, /D= 320 km. /, BCIS: H= 13 18 55/7.3N, 11.4E, /Wien-K./. Tyrol /Austria/, felt at Innsbruck /Wien-K./.
- 20 Z P 02 50 /00/, USCGS: H= 02 37 51.5, 53.2N, 162.4W, h= 44 km, D, South of Alaska, M= 5 1/4 /PAL/, Mb= 5.7 Ms= 5.1 SD 1.1 /CGS/.
- 20 eZ P 06 53 26, eZ pP 06 53 47, USCGS: H= 06 41 06.2, 38.6N, 141.8E, h= 86 km, D, Near east coast of Honshu, Japan. Felt on northeastern Honshu. Mb= 5.4 SD 0.8 /CGS/.
- 20 iZ Pg 08 26 40.3, iZ Sg 08 26 43.4, D= 24 km, weak.

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- 20 eZ P 15 50 03, USCGS: H= 15 37 50.2, 40.8N, 142.1E, h= 67 km, D, Near east coast of Honshu, Japan, felt on Hokkaido, Mb= 5.4 SD 1.0 /CGS/.
- 20 eZ /Sn/ 21 54 25, weak.
- 21 eZ 13 59 46, eZ /Sg/ 14 00 08, traces.
- 21 eZ /Sn/ 14 14 35, traces.
- 21 iZ P 15 24 45.5, eZ 15 28 40, USCGS: H= 15 12 10.0, 5.5S, 109.6E, h= 561 km, D, Java Sea, Mb= 5.6 DS 1.1 /CGS/.
- 21 eZ Pn 15 42 /19/, eZ 15 44 43, Athens: H= 15 40 35, 42.1N, 25.1 E, ML= 4.2,
- 21 eZ Pn 16 19 44, eZ Sn 16 21 19, D= 910 km, Athens: H= 16 18 00, 40.6N, 19.4E, ML= 4.2,
- 21 iZ-P 16 42 26.5, eZ S 16 48 21, D= 4330 km, BCIS: H= 16 35 04 /DECM/, 27.2N, 57.9E, h= 50+ 12 km, Central Iran, USCG S: H= 16 35 08.3, 27.4N, 57.5E, h= 65 km, Southern Iran, Mb= 5.3 SD 0.9 /CGS/.
- 21 eZ 17 03 13, eZ Sn 17 03 56,
- 22 eZ P 01 42 32, USCGS: H= 01 33 24.1, 30.6N, 79.4E, h= 19 km, Tibet-India border region. Felt in central and northern Punjab, Mb= 5.4 SD 1.1 /CGS/.
- 22 eZ P 02 46 /00/ USCGS: H= 02 33 52.8, 49.2N, 158.5E, h= N, Kurile Islands region, Mb= 5.6 /BRK/, Mb= 5.6 Ms= 5.1 SD 0.9 /CGS/.
- 22 iZ +P 10 57 40.0, USCGS: H= 10 45 24.5, 51.5N, 179.9W, h= 56 km, Andreanof Islands. Felt on Amchitka, Aleutian Islands, M= 5 1/4 /BRK/, Mb= 6.1 SD 1.0 /CGS/.
- 23 eZ PKP 00 36 52, eZ PKP2 00 37 31, USCGS: H= 00 17 56.5, 19.3S, 164.2E, h= 27 km, Auckland Islands region, Mb= 5.3 Ms= 5.3 SD 1.6 /CGS/.
- 23 eZ 00 55 25, traces, BCIS: H= 00 54 03 /DECM/, H= 00 54 03.2 /Stuttgart/, 48.3N, 9.1E /BCIS/, 48 17.5N, 9 02.5E, /Stuttgart/, Jura, felt 4 on the region of Onstmeethingen,
- 23 eZ P or PKP 02 06 54, eZ 02 07 05,
- 23 eZ 05 16 10, traces.
- 23 eZ P 06 09 36, USCGS: H= 05 57 06.9, 37.4N, 141.5E, h= N, h=N, near east coast of Honshu, Japan, Mb= 5.0 SD 1.0 /CGS/.
- 23 eZ P 07 21 51, eZ PP 07 25 43, USCGS: H= 07 08 27.7, 18.4N, 104.5W, h= 36 km, near coast of Jalisco, Mexico, M= 4 3/4

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- /cont./ /BRK/, 5 1/4- 5 1/2 /PAL/, Mb= 5.3 Ms= 5.1 SD 1.1 /CG/.
- 23 eZ P 08 04 15, USCGS: H= 07 54 46.4, 0.9S, 17.5W, h= N, North of Ascension Islands, Mb= 4.6 SD 1.6 /CGS/.
- 23 eZ 09 37 48, traces.
- 24 eZ /P/ 00 47 50, traces, eZ PP 00 51 27, USCGS: H= 00 35 05.5 11.7N, 85.7W, h= 100 km. G. Nicaragua, M= 5 /PAL/, Mb= 5.3 SD 1.2 /CGS/. D= 10980 km,
- 24 eZ Pn 13 26 11, eZ 13 26 21, BCIS: H= 13 25 20 /DECM/, 44.8 N, 10.2E, Emilia, Italy. USCGS: H= 13 25 20.3, 44.9N, 10.2 E, h= 45 km, northern Italy. Mb= 4.2 SD 0.7 /CGS/.
- 27 eZ P 02 27 57, USCGS: H= 02 15 46.3, 42.4N, 142.9E, h= 32 km, Hokkaido, Japan region, felt in northern Japan. Mb= 4.9 Ms= 4.7 SD 1.0 /CGS/.
- 27 eZ PKHKP 08 00 48, eZ 08 00 51, USCGS: H= 07 41 22.2, 14.7 S, 167.7E, h= 39 km, New Hebrides Islands, Mb= 5.3 Ms= 4.8 SD 0.9 /CGS/.
- 27 eZ P 09 11 44, USCGS: H= 09 00 32.7, 21.0S, 11.6W, h= N, South Atlantic ridge, Mb= 5.0 SD 1.3 /CGS/.
- 27 eZ PKP 12 29 41, USCGS: H= 12 09 50.9, 16.6S, 172.6W, h=N, Samoa Islands region, Mb= 4.7 SD 1.0 /CGS/.
- 27 eZ PKIKP 15 49 50, Z PKHKP 15 50 /OO/, USCGS: H= 15 31 07.8 19.9N, 178.3W, h= 562 km, Fiji Islands, Mb= 5.0 SD 0.9 /CGS/.
- 28 eZ Pn 10 46 51, iZ 10 47 03.6, iZ 10 47 44.1,
- 29 eZ PKP 08 15 57, USCGS: H= 07 57 11.2, 17.7S, 178.7W, h= 585 km. D. Fiji Islands region, M= 5 1/4-5 1/2 /BRK/, Mb= 5.1 SD 0.9 /CGS/.
- 29 eZ 10 54 02, USCGS: H= 10 34 06.5, 30.5S, 178.2W, h= 43km, Kermadec Islands region, M= 5 3/4-6 /BRK/, Mb= Ms= 5.6 SD 1.2 /CGS/.
- 30 iZ Pg 06 01 46.2, eZ Sg 06 01 53, weak. D= 60 km.
- 30 eZ P 09 02 20, USCGS: H= 08 51 56.7, 26.9N, 92.6E, h=64km, Eastern India. Mb= 5.1 SD 0.9 /CGS/.
- 30 eZ P 18 47 26, USCGS: H= 18 36 24.2, 20.0N, 64.1W, h= 17km, North Atlantic Ocean, Mb= 5.3 SD 0.9 /CGS/.

Ljubljana, March 31, 1971

 Interpretation: M. Hržič
Redaction: V. Ribarič

18 MAR 1970

University of Ljubljana
Astronomical and Geophysical Observatory

**PRELIMINARY
SEISMOLOGICAL BULLETIN**

VII—IX 1969

Ljubljana 1970

University of Ljubljana
Astronomical and Geophysical
Observatory,
Ljubljana, Trg revolucije 11,
P.O.B. 01-20, Yugoslavia

1969

PRELIMINARY SEISMOLOGICAL
BULLETIN

/ July - September 1969 /

University of Ljubljana
Astronomical and Geophysica.
Observatory,
Ljubljana, Trg revolucije 11,
P.O.B. 01-20, Yugoslavia

1969

PRELIMINARY SEISMOLOGICAL BULLETIN
from July 1, to September 30, 1969

Station: Ljubljana / LJU / - Coordinates: $46^{\circ} 02.6' N$ Lat.
 $14^{\circ} 32.0' E$ Long.
Geocentric direction cosines: $a = +6743$, $b = +1748$, $c = +7175$
 $d = -8$, $h = -4$
Height above sea level: 396 m.
Lithologic fundation: sandstone /carbon/.

Instruments:

Wiechert, horizontal astatic seismograph, M= 200 kg, mechanical registration, 16-18 mm/min.

Component	31.1.1966 To	/: v:l	r/T_0^2	V
N-S	5.0	2.20	0.0043	69
E-W	4.9	2.37	0.0058	67

Hiller-Stuttgart, vertical component Z with galvanometrical recording. $T_0=1.5$ sec, $T_g=1.5$ sec. $D_1=D_2=1$, $V_{max}=10150x$, registration velocity: 60 mm/min.

Note: Periods of seismic waves are given in seconds, the amplitudes in microns. Sign. + means compression or movement of ground towards north or east, sign. - means dilatation or movement of ground towards south or west. All times are given in GMT. Time signals are received one or two times daily and are registered on a chronograph. Wherever possible time readings up to one tenth of a second are given. Macroseismic data refer to Mercalli-Cancani-Sieberg scale / MCS /, macroseismic rays are given in kilometers. Abbreviation DECM means: Determination was made by electronic computer.

July 1969

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- 1 iZ Pg 12 42 19.5, iZ Sg 12 42 22.5, D= 24 km, local, weak.
- 2 eZ P 00 20 17, USCGS: H= 00 10 27.6, 6.8S, 11.6W, h= N. Ascension Island region. M= 4.8 SD 1.0 /CGS/.

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- 2 eZ P 00 38 06, USCGS: H= 00 28 13.4, 7.1S, 12.0W, h= N, Ascension Island region. M= 4.8 SD 1.0 /CGS/.
- 2 eZ Pn 07 56 51, iZ! 07 57 05, iZ Sn 07 57 42.7, D= 490 km. BCIS: H= 07 55 45 /DECM/, 42.1N, 11.9E, felt on the region of Civitavecchia and at Tolfa /Roma/. USCGS: H= 07 55 45.5, 42.3N, 12.1E, H= N, Central Italy. Minor damage at Civitavecchia and Tolfa. Felt in Viterbo-Lake, Bracciano area. M= 4.4 SD 1.3 /CGS/.
- 2 eZ Pn 08 04 04, iZ! 08 04 16.7, iZ Sn 08 04 55.0, D= 490km, BCIS: H= 08 02 53, aftershock of the seisms of July 7, at 07h 55m. USCGS: H= 08 02 59.4, 42.3N, 12.2E, h= N, Central Italy. Felt.
- 2 eZ 08 09 23, traces.
- 2 eZ 08 22 45, traces.
- 2 eZ P 10 11 15.5, USCGS: H= 09 59 53.4, 20.7N, 99.4E, h= N, Burma. M= 5.0 SD 1.0 /CGS/.
- 2 eZ Pn 10 32 59.4, iZ 10 33 13.8, eZ /Sn/ 10 34 12, /D=700 km/.
- 3 eZ Pn 09 44 16, eZ Sn 09 46 09, D= 1100 km. BCIS: H= 09 42 05 /DECM/, 38 1/2N, 22 1/4E, h more than normal. Gulf of Corinthe /Greece/. M= 4.5 /Tirana/, ML= 4.1 /Athens/. USCGS: H= 09 42 02.3, 38.5N, 22.1E, h= 26 km. Greece, M= 4.6 SD 1.3 /CGS/.
- 3 eZ PKIKP 14 03 09, eZ PKP2 14 03 36, USCGS: H= 13 43 22.2, 16.8S, 173.7W, h= 50 km, Tonga Islands, M= 4.5 SD 0.5/CGS/.
- 4 eZ 10 17 17, eZ 10 17 24, traces. USCGS: H= 10 13 51.8, 35.3N, 27.8E, h=N, Dodecanese Islands. M= 4.3 SD 1.3 /CGS/. BCIS: H= 10 13 48, /DECM/, 35.2N, 27.7E, h= normal. Eastern Mediterranean Sea. Near Island Karpathos. M= 4.4 /Athens/.
- 4 eZ P 11 28 58, USCGS: H= 11 16 01.0, 7.4N, 82.7W, H= N, South of Panama. M= 4 3/4 + 5/PAL/, MB= 5.2 MS= 4.9 SD 1.0 /CGS/.
- 4 eZ PKP 23 14 06.6, USCGS: H= 22 54 18.0, 55.9S, 147.2E, h= N, west of Macquarie Island. MB= 4.9, MS= 5.6 SD 1.3 /CGS/.
- 5 eZ PKIKP 01 52 17, eZ PKHKP 01 52 24, iZ PKP2 01 52 34, D= 16900 km, USCGS: H= 01 32 50.8, 19.3S, 175.9W, h= 187 km. Tonga Islands, M= 4.6 SD 0.6 /CGS/.
- 5 eZ PKP 02 02 34, USCGS: H= 01 44 01, 3.8S, 131.5E, h= N, West New Guinea region. M= 5.5 MS= 5.2 SD 1.2 /CGS/.

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- 5 eZ PKIKP 06 27 35, eZ PKHKP 06 27 43, eZ PKP2 06 27 57, D= 16900 km, USCGS: H= 06 08 42.4, 21.2S, 178.8W, h= 500 km. Fiji Islands region, M= 4.7 SD 06 /CGS/.
- 6 eZ Pn 12 53 38, iZ Sn 12 54 15.1, D= 330 km.
- 6 eZ PKP 14 48 06, USCGS: H= 14 28 21.9, 15.3S, 173.1W, h= N, Tonga Islands, M= 5.0 SD 0.8 /CGS/.
- 6 eZ PKHKP 14 50 59, iZ PKP2 14 50 10.7, D= 16500 km. USCGS: H= 14 31 16.7, 15.3S, 173.4W, h= N, Tonga Islands. MB= 5.3 MS= 5.2 SD 0.9 /CGS/.
- 6 iZ /Sg/ 16 23 19.3, traces.
- 7 iZ Pg 17 55 06.3, iZ Sg 17 55 13.0, D= 60 km, epicenter in the fault sistem of eastern Julian Alps. Felt: Koprivnik near Bohinj, 3° MCS / 46° 18' N, 13° 59' E /.
- 7 eZ Pn 18 14 05, eZ Sn 18 15 33, D= 730 km. BCIS: H= 18 12 23, /DECM/, 40 1/4N, 19 1/2E, Albania. Felt 5⁺ at Tepelena, 5⁺ at Memaliaj, Buz, Krakas, 4⁺ at Berat, Ballsh, Kelejrë. M= 4.0 /Tirana/, MLH= 3.5 /Skopje/. USCGS: H= 18 12 23.5, 40.6N, 19.8E, h= 2 km. Albania. Felt in Tepelena area. M= 4.2 SD 0.5 /CGS/.
- 8 eZ Pn 07 56 32.6, eZ Sn 07 58 29.4, D= 1150 km. USCGS: H= 08 09 17.5, 37.6N, 20.3E, h= N, Ionian Sea. Felt on Zante. M= 5.5 /GOL/, MB= 5.4 MS= 5.4 /CGS/. BCIS: H= 08 09 15 /DECM/, 35.6N, 20.3E, Ionian Islands. Felt on Island Zante. M= 6.1 /Uppsala/, MLH= 5.8 /Collm/, MLV= 5.9 /Wien H./, ML= 5.8 /Athens/, M= 5.7 /Messina/, MLH= 5.6 /Pruhonice/, MLH= 5.5 /Strasbourg/, MLV= 5.5 /Moxa/, M= 5 1/2 - 5 1/4 /Tirana/.
- 9 eZ Pn 17 29 34, Z Sn 17 31 /00/, D= 720 km, BCIS: H= 17 27 53 /DECM/, 40.3N, 19.8E, Albania. Felt 4⁺ - 5⁺ at Tepelena, Kahas, Buz, Progonat, 4⁺ at Roskovec, 3⁺ - 4⁺ at Përmeti /Tirana/, M= 3.7 /Skopje/, ML= 3.7 /Athens/, USCGS: H= 17 27 55.9, 40.6N, 19.8E, h=N, Albania, felt. M= 4.5 SD 1.2 /CGS/.
- 12 eZ Pn 00 21 44, eZ Sn 00 23 36, BCIS: H= 00 19 36 /DECM/, 38.8N, 21.5E, Greece. Near barrier of Kremasta. USCGS: H= 00 19 39.0, 38.9N, 21.7E, h= 45 km, Greece, M= 4.3 SC 1.5 /CGS/.
- 12 eZ P 03 09 /31/, weak. BCIS: H= 03 05 40 /DECM/, 45.1N, 37.1E, Caucasus. mB= 4.6 /Nurmijaervi/, mB= 4.5 /Banqui/, mB= 4.3 /Kajaani/, M= 4.3 /USSR/. USCGS: H= 03 05 44.5, 44.8N, 37.1E, h= 39 km, Western Caucasus, M= 4.4 SD 1.2 /CGS/.
- 12 P 06 08 35, USCGS: H= 05 55 40.1, 6.0S, 71.4E, h= N, Chagos Archipelago region. M= 5.3 SD 0.7 /CGS/.

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- 22 Z 16 49 /00/, iZ Sn 16 49 49.4, traces.
- 22 eZ PKP 17 33 22, eZ PP 17 36 47, D= 15800 km. USCGS: H= 17 14 13.0, 11.8S, 166.5E, h= 144 km. Santa Cruz Islands, M= 5.4 SD 0.9 /CGS/.
- 22 eZ PKP 20 15 13, USCGS: H= 19 55 37.0, 26.1S, 177.5W, h= 180 km. South of Fiji Islands, M= 5.1 SD 1.2 /CGS/.
- 22 eZ PKP 23 41 12, USCGS: H= 23 22 26.7, 18.9S, 178.7W, h= 562 km. Fiji Islands region, M= 4.6 SD 1.0 /CGS/.
- 23 Z PKP 00 25 /00/, USCGS: H= 00 05 23.3, 19.2S, 169.8E, h=N, New Hebrides Islands. M= 4.8 SD 1.1 /CGS/.
- 23 eZ P 02 54 50, BCIS: H= 02 47 00, 50.0N, 78.0E, Kazakhstan, Semipalatinsk region. Probably artificial. m= 5.7 /Uppsala/. USCGS: H= 02 46 58.1, 49.9N, 78.3E, h=0km. Eastn Kazakh SSR, M= 5.5 SD 1.1 /CGS/.
- 23 eZ PKIKP 08 20 41, eZ PKHKP 08 20 50, iZ PKP2 08 21 07.5, USCGS: H= 08 01 50.6, 23.7S, 179.2E, h= 545 km. South of Fiji Islands. M= 5.0 SD 1.1 /CGS/.
- 23 iZ Pg 13 22 55.5, iZ Sg 13 22 58.4, D= 20 km.
- 23 eZ P 13 27 03, USCGS: H= 13 14 35.1, 37.3N, 141.5E, h= 53km. Near east coast of Honshu, Japan. M= 5.2 SD 0.9 /CGS/.
- 23 eZ Pn 22 36 /58/, eZ Sn 22 38 57, Athens: 22 34 47, 38.0N, 20.3 E, ML= 4.0 /Athens/.
- 24 eZ Pn 00 43 /56/, eZ 00 44 28, eZ 00 45 35, Athens: 00 41 23, 38.1N, 21.8E, felt in Achaia / 4° at Patras /, ML= 3.6 /Athens/.
- 24 eZ P 03 13 /00/, eZ PP 03 16 58, D= 10800 km. USCGS: H= 02 59 21.0, 11.9S, 75.1W, h= 1 km. Peru. Extensive property damage at Huancayo. Landslides locally. Felt at Ayacucho, Huancavelica and Tarma. M= 5.6 /BRK/, 5 1/2- 5 3/4 /GoL/, MB= 5.9 MS= 5.7 SD 0.9 /CGS/.
- 24 eZ 04 15 18, traces.
- 24 eZ Pn 23 24 /51/, eZ Sn 23 27 29, /D= 1550 km/. BCIS: H= 23 21 20 /DECM/, 34.9N, 26.0E, h= 75 km± 25 km. Crete.
- 25 eZ P 06 19 29, eZ pP 06 21 11, eZ PP 06 23 40, eZ PPP 06 25 30, D= 11200 km. USCGS: H= 06 06 42.4, 25.6S, 63.3W, h= 579 km. Salta Province, Argentina. M= 5.5 SD 0.9 /CGS/.
- 25 eZ 11 07 17, eZ /Sn/ 11 07 44, BCIS: H= 11 06 00, 47.7N, 11.2E, explosion. Eschenlohe region, Germany.
- 25 eZ- P 13 06 40, USCGS: H= 12 54 27.6, 53.3N, 167.0W, h=42

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- /cont./ km. Fox Islands Aleutian Islands. M= 5.1 /BRK/, 6 1/4 /GOL/, MB= 5.0, MS= 5.2 SD 0.8 /CGS/.
- 25 eZ P 13 48 08, USCGS: H= 13 34 09.8, 2.6N, 126.6E, h= N, Molucca Passage, MB= 5.6, MS= 4.9 SD 1.1 /CGS/.
- 25 eZ PP 13 52 24, USCGS: H= 13 34 09.8, 2.6N, 126.6E, h= N, Molucca Passage. MB= 5.6, MS= 4.9 SD - /CGS/.
- 25 eZ P 23 01 48, eZ PP 23 04 47, USCGS: H= 22 49.41.3, 21.6 N, 111.9E, h= N, Eastern China. Slight damage at Hong Kong, 3000 reported killed in China. MB= 5.4, MS= 5.9 SD 1.4 /CGS/.
- 26 eZ Pn 02 46 10, Z Sn 02 47 /00/, D= 460 km.
- 26 eZ P 12 29 10, BCIS: H= 12 24 30 /DECM/, 43.5N, 13.9W, eastern Atlantic. USCGS: H= 12 24 29.5, 43.7N, 14.6W, h= N, North Atlantic Ocean, M= 4.8 SD 1.3 /CGS/.
- 26 eZ Pn 22 06 54, eZ 22 08 33,
- 26 eZ On 23 30 /40/, eZ 23 30 48, weak.
- 27 Z PKP 02 34 /00/, eZ PP 02 37 43, D= 16000 km. USCGS: H= 02 14 28.1, 19.4S, 168.8E, h= 70 km. New Hebrides Islands. M= 5.6 /BRK/, 5.4 SD 1.0 /CGS/.
- 27 eZ PKIKP 09 08 21, eZ PKHKP 09 08 26, eZ PKP2 09 08 34, USCGS: H= 08 49 37.6, 17.6S, 178.3W, h= 552 km. Fiji Islands region. M= 4.0 SD 1.2 /CGS/.
- 27 eZ P 21 33 11, USCGS: H= 21 21 40.6, 59.4N, 145.3W, h= N, Gulf of Alaska, M= 5.5 /PAS/, 5.4 /BRK/, MB= 5.3, MS= 5.3 SD 1.2 /CGS/.
- 27 eZ P 22 39 14, iT pP 22 39 44.0, USCGS: H= 22 26 54.2, 24.9 N, 122.5E, h= 105 km. Taiwan region. M= 5.4 SD 1.1 /CGS/.
- 28 eZ P 00 00 50, USCGS: H= 23 49 50.3, 20.0N, 64.3W, h= N, SD 0.9 /CGS/.
- 28 eZ /Pn/ 12 14 22, eZ Sn 12 14 42, / D= 170 km /.
- 28 eZ- P 13 15 53, USCGS: H= 13 03 17.6, 30.7N, 132.5E, h= 24 km. Southeast of Shikoku, Japan. M= 5.6 SD 1.0 /CGS/.
- 28 eZ Pg 18 30 42, Z Sg 18 30 /00/, D= 160 km.
- 28 eZ Sg 23 32 35, traces.
- 29 eZ PKP 06 43 33, eZ pPKP 06 44 10, USCGS: H= 06 24 21.6, 14.6S, 167.2E, h= 124 km. New Hebrides Islands, M= 5.4 SD 1.0 /CGS/.

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- 30 eZ Pg 17 01 /08/, iZ Sg 17 01 10.4, D= 15 km. Local.
- 31 eZ PKP 20 39 /06/, USCGS: H= 20 19 31.4, 19.3S, 168.7E, h= 52 km. New Hebrides Islands. M= 4.5 SD 1.1 /CGS/.

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- 1 eZ PKP 12 25 19, USCGS: H= 12 05 34.6, 23.4S, 177.5W, h= 189 km, South of Fiji Islands. M= 5.0 SD 1.0 /CGS/.
- 1 eZ-P 23 55 57, eZ 23 56 09, USCGS: H= 23 43 44.9, 45.6N, 150.9E, h= 38 km. Kurile Islands. M= 5.8 /PAS/, 5 3/4- 6 /GOL/, MB= 5.6, MS= 5.9 SD 1.1 /CGS/.
- 2 eZ P 00 46 33, USCGS: H= 00 34 16.9, 45.3N, 151.1E, h= 21 km, Kurile Islands. MB= 5.3, MS= 5.7, SD 0.8 /CGS/.
- 2 eZ P 04 49 27, USCGS: H= 00 36 55.5, 6.3 N, 126.7E, h=223 km. Mindanao, Philippine Islands. M= 5.1 SD 0.6 /CGS/.
- 2 eZ P 04 57 03, USCGS: H= 04 43 50.9, 5.6S, 104.5E, h= 79 km. Southern Sumatra. M= 5.4 SD 1.2 /CGS/.
- 2 eZ PP 20 31 29, USCGS: H= 20 12 44.4, 2.6S, 126.6E, h= 28 km. Ceram Sea. M= 5.6 SD 1.3 /CGS/.
- 3 eZ+ P 00 41 26, eZ PP 00 43 13, eZ PPP 00 45 /00/, D= 139000 km. USCGS: H= 00 22 32.0, 4.2S, 153.0E, h= 65 km. New Ireland region. Felt in Rabaul - Kieta area. M= 5.6 /PAS/, 5 3/4 /GOL/, 5.3 SD 1.2 /CGS/.
- 3 eZ 02 47 45, traces.
- 3 eZ + P 04 32 08, USCGS: H= 04 19 41.4, 24.9N, 123.2E, h= 62 km. South western Ryukyu Island. M= 5.3 SD 0.9 /CGS/.
- 3 eZ Pn 05 03 /26/, eZ Sg 05 04 29.
- 3 eZ P 08 00 29, USCGS: H= 07 48 11.4, 45.4N, 151.8E, h= 13 km. Kurile Islands. MB = 5.3, MS= 4.9 SD 0.9 /CGS/.
- 3 eZ /P/ 09 32 56, eZ 09 33 52, traces.
- 4 eZ P 10 35 47, USCGS: H= 10 23 28.9, 51.4N, 179.6 W, h=41 km. Andreanof Islands. Aleutian Islands. Felt on Amchitka. M= 5.1 /PAS/. 5 1/4- 5 1/2 /GOL/, 5.3, MS= 5.2 SD 0.9 /CGS/.
- 4 eZ P 17 32 48, eZ PKP 17 36 05, iZ PP 17 36 50.2, iZ 17 37 29.0, D= 12100 km. USCGS: H= 17 19 19.6, 5.7S, 125.3E, h= 521 km. Banda Sea. M= 6.2 SD 1.0 /CGS/.
- 5 eZ + P 02 27 01, eZ PP 02 31 42, eZ S 02 38 38, D= 11550

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- 5 /cont./ km. USCGS: H= 02 13 09.6, 1.3N, 126.2E, h= 34 km. Molucca Passage, felt at Manado, Celebes. M= 7.2 /PAS/, 6 1/2 /BRK/, MB= 6.1, MS = 7.0 SD 1.2 /CGS/.
- 5 iZ Pg 12 44 15.2, eZ Sg 12 44 19.1, D= 40 km.
- 5 eZ PKHKP 16 51 24, eZ PKIKP 16 51 39, USCGS: H= 16 32 25.8 5.2S, 153.8E, h= 69 km. New Ireland region. Felt in Rabaul -Kieta area. M= 6- 6 1/4 /BRK/, 5.4 SD 1.1 /CGS/.
- 5 eZ PKP 18 03 38, eZ PKP2 18 03 50, USCGS: H= 17 44 01.1, 20.6S, 169.4E, h= 66 km. New Hebrides Islands. M= 4.7 SD 0.9 /CGS/.
- 5 eZ P 18 31 06, USCGS: H= 18 18 19.6, 29.9N, 140.8E, h=124 km. South of Honshu, Japan. M= 4.2 SD 0.9 /CGS/.
- 6 iZ P 15 51 56, BCIS: H= 15 41 49 /DECM/, 11.ON, 43.0W, Central Atlantic ridge. MLH= 5.1 /Pruhonic/. USCGS: H= 15 41 50.4, 10.8N, 43.2W, h= N, North Atlantic ridge. MB= 5.2 MS= 4.7 SD 1.0 /CGS/.
- 7 iZ+ P 06 57 57.7, USCGS: H= 06 46 08.3, 52.2N, 158.9E, h= 69 km. Near east coast of Kamchatka. M= 5.1 SD 0.8 /CGS/.
- 7 eZ 09 21 34, eZ /Sn/ 09 21 54.
- 8 iZ P 06 38 35.3, iZ pP 06 39 19.0, D= 4550 km. USCGS: H= 06 30 57.1, 36.4N, 70.9E, h= 198 km. Hindu-Kush region. Felt. M= 5.8 SD 1.0 /CGS/. BCIS: H= 06 31 10 /DECM/, 36.5N, 70.5 E, h= 320 km ± 25 km. Hindu-Kush.
- 8 eZ P 11 21 45, eZ PP 11 25 39, D= 10400 km. USCGS: H= 11 08 14.8, 47.7S, 15.8W, h= N, South Atlantic ridge. M= 5.9 /PAS/, MB= 5.9, MS= 6.0 SD 1.3 /CGS/.
- 8 iZ- P 20 07 29.5, BCIS: H= 20 02 34 /DECM/, 35.9N, 10.5W, Transatlantic seismic zone, southwest of Portugal, USCGS: H= 20 02 36.6, 35.9N, 10.7W, h= N, North Atlantic Ocean. M= 4.2 SD 1.1 /CGS/.
- 8 eZ PKP 21 02 34, eZ PP 21 03 24, USCGS: H= 20 44 21.0, 6.1 S, 129.7E, h= 196 km. Banda Sea. M=6 /PAS/, 6 /GOL/, 5.9 SD 1.0 /CGS/.
- 9 eZ 00 54 25, eZ /Sn/ 00 54 37, felt at Titograd.
- 9 eZ P or PKP 09 11 50.
- 9 eZ+ Pn 09 21 47.1, iZ Sn 09 22 35.5, D= 450 km. BCIS: H= 09 21 03 /DECM/, 44.ON, 12.OE, Italy, felt on the region of Florence. MLV= 4.1 /Wien H /. USCGS: H= 09 21 07.0, 44.2N, 11.9E, h= N, Northern Italy. felt in Florence area. M= 4.1 SD 1.1 /CGS/.

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- 9 eZ Pn 16 26 52, iZ Pg 16 27 11.3, iZ Sn 16 27 51.5, iZ Sg 16 28 17.8, D= 560 km. BCIS: H= 16 25 36 /DECM/, 42.3N, 19.2E, h= 50 ± 7 km. Near the border of Albania-Yugoslavia. Felt 6 on the region of Titograd, 5+ at Skodra, 5 on the region of Boka Kotorska, 3 at Tirana. M= 5 /Beograd/, MLV= 4.9 /Wien H/, MLH= 4.1 /Skopje/, MLH= 4 /Pruhonice/, USCGS: H= 16 25 35.2, 42.4N, 19.4E, h= 25 km. Yugoslavia. Felt in Titograd. M= 5.0 SD 1.1 /CGS/.
- 9 eZ- Pn 17 02 21.0, eZ Pg 17 02 44, iZ Sn 17 03 20, D= 560 km. BCIS: H= 17 01 04 /DECM/, 42.3N, 19.2E, h= 50 km. + 25 km. Yugoslavia-Albania border region, Yugoslavia. M= 4.2 /Beograd/, MLV= 4.1 /Wien H/, MLH= 3.5 /Skopje/, MLH= 3.4 /Pruhonice/. USCGS: H= 17 01 01.3, 42.2N, 19.3E, h= 20 km. Yugoslavia. M= 4.6 SD 1.1 /CGS/.
- 10 eZ P 08 01 48, weak.
- 10 eZ- P 15 51 04, USCGS: H= 15 41 48.5, 8.4N, 57.8E, h= N, Carlsberg ridge. M= 5.0 SD 1.3 /CGS/.
- 10 eZ Pn 21 17 08.1, iZ Pg 21 17 13.6, iZ Sn 21 17 38.4, D= 270 km. USCGS: H= 21 16 24.7, 44.0N, 12.1E, h= 33 km. Northern Italy, M= 4.0 SD 0.6 /CGS/.
- 10 eZ Pn 21 25 03, eZ Sn 21 25 39, D= 310 km.
- 11 Z P 13 43 /00/, USCGS: H= 13 33 04.1, 1.0N, 28.5W, h= N, Central Mid-Atlantic ridge. M= 5.0 SD 1.0 /CGS/.
- 11 iZ Pn 13 56 04.6, iZ Pg 13 56 17.0, iZ Sn 13 56 45.0, iZ Sg 13 57 02.9, D= 370 km. BCIS: H= 13 55 09 /DECM/, 43.2N, 12.2E, Umbria, Central Italy. Strongly felt /I = 6-7 / at Perugia, Tavernelle, Mugnano, Fontignano. MLH= 4.3 /Tirana/, 4.7 /Roma/. USCGS: H= 13 55 12.3, 43.2N, 12.4E, h= N, Central Italy. 4 injured and damage in Perugia area. M= 4.6 SD 1.1 /CGS/.
- 11 eZ+ P 21 38 53, Premonitory shock. USCGS: H= 21 26 37.6, 43.4N, 147.9E, h= 43 km. Kurile Islands. Felt at Nemuro. This event which was preceded by at least 5 teleseismic foreshocks in 25 hours, was the initial shock of a series of clustered quakes of successively larger magnitude, which occurred within an interval of about 63 seconds. M= 5.7 SD 0.8 /CGS/.
- 11 iZ! P 21 39 50.1, USCGS: H= 21 27 25.8, 43.6N, 147.8E, h= 14 km. Kurile Islands. M= 5.9 SD 1.0 /CGS/.
- 11 iZ!! P 21 39 57.0, USCGS: H= 21 27 36.0, 43.5N, 147.8E, h= 45 km. Kurile Islands. The computed locations of these 3 lesser shocks may be a more accurate indication of the location of the following main event than the computed coordinates, due to the paucity of associated data. M= 6.2 SD 1.3 /CGS/.

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- 11 eZ P 21 40 /00/, USCGS: H= 21 27 39.4, 43.5N, 147.4E, h= 28 km. Kurile Islands. Damage on Shikotan. Shouthern Kurile Islands. Felt widely on Hokaido and on Honshu at least as far as Tokyo, 1100 km to the southwest. Tsunami heights /crest to trough in meters/. Nemuro 2.60, Urakawa 1.32, Hachinohe 1.10, Midway 0.49, Kahului, Hawaii 0.43, Wake Island 0.24, not more than 1 meter in Kurils. M= 7.8 /PAS/, 7.6 /BRK/, MB= 7.1, MS= 7.8 SD 1.1 /CGS/.
- 11 eZ P 21 53 10, USCGS: H= 21 40 55, 43.8N, 147.5E, Kurile Islands. h= N, M= 6.0 SD 0.8 /CGS/.
- 11 eZ P 23 06 12, USCGS: H= 22 54 00.4, 44.0N, 148.3E, h= 59 km. Kurile Islands. M= 5.3 SD 0.9 /CGS/.
- 11 eZ P 23 15 11, USCGS: H= 23 02 53.8, 43.1N, 147.8E, h= N, Kurile Islands. M= 5.5 SD 0.9 /CGS/.
- 11 eZ P 23 34 04, USCGS: H= 23 21 43.1, 43.4N, 147.5E, h= N, Kurile Islands. M= 5.2 SD 0.9 /CGS/.
- 12 eZ P 00 06 57, iZ PKP 0011 19.8, eZ PP 00 11 37, eZ /S/ 00 17 35, D= 11700 km. USCGS: H= 23 52 56.9, 1.7N, 126.5E, h= 34 km. Molucca Passage. Felt at Manado, Celebes. M= 6.1, MS= 7.0 SD - /CGS/.
- 12 Z P 01 03 /00/, USCGS: H= 00 53 45.0, 32.3N, 83.0E, h= 39 km. Tibet. M= 4.7 SD 0.8 /CGS/.
- 12 eZ P 01 15 42, USCGS: H= 01 03 07.3, 43.5N, 147.2E, h= N, Kurile Islands. M= 4.8 SD 1.3 /CGS/.
- 12 eZ P or PKP 01 55 32,
- 12 eZ P 02 49 07, USCGS: H= 02 36 51.5, 43.9N, 148.3E, h= N, Kurile Islands. M= 5.1 SD 1.3 /CGS/.
- 12 eZ P 03 45 55, USCGS: H= 03 33 37.2, 43.1N, 147.6E, h= N, Kurile Islands. M= 5.5 SD 1.3 /CGS/.
- 12 eZ P 05 05 53, USCGS: H= 04 53 36.5, 43.3N, 147.5E, h= N, Kurile Islands. M= 5.7 SD 1.1 /CGS/.
- 12 iZ+ P 05 15 43.7, eZ PP 05 18 51, eZ S 05 26 08, D= 9100km. USCGS: H= 05 03 26.9, 43.6N, 148.0E, h= N, Kurile Islands region. MB= 6.0 SD 6.5 /CGS/.
- 12 eZ P 07 16 05, USCGS: H= 07 03 45.2, 43.2N, 147.6E, h= N, Kurile Islands. M= 4.8 SD 1.0 /CGS/.
- 12 eZ P 07 22 58, USCGS: H= 07 10 41.4, 43.7N, 147.9E, h= N, Kurile Islands. M= 5.3 SD 0.9 /CGS/.
- 12 eZ+ P 09 37 56, USCGS: H= 09 25 38.7, 43.1N, 147.6E, h= N, Kurile Islands. MB= 5.3 MS= 5.4 SD 1.1 /CGS/.

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- 18 eZ+ P 11 55 45.5, USCGS: H= 11 43 30.5, 43.8N, 148.6E, h= 39 km, Kurile Islands region. MB= 5.4 MS=5.1 SD 0.9 /CGS/.
- 18 iZ- P 17 28 10.4, USCGS: H= 17 15 24.7, 2.4S, 102.2E, h= 142 km, Southern Sumatra. M= 5.2 SD 0.9 /CGS/.
- 19 eZ P 01 52 27, USCGS: H= 01 39 08.3, 6.1S, 105.3E, h= 50 km. Sunda Strait. MB= 5.1 MS= 5.4 SD 1.3 /CGS/.
- 19 eZ- P 09 02 10, iZ PcP 09 02 20.8, USCGS: H= 08 49 54.8, 43.8N, 148.2E, h= 39 km. Kurile Islands region. M= 6.1/BRK/, 6 1/2 /PAL/, MB= 5.7, MS= 5.8 SD 1.0 /CGS/.
- 19 eZ PKP 17 46 15, traces. USCGS: H= 17 26 07.3, 56.7S, 142.1 W, h=N, South Pacific Cordillera. MB= 4.4, MS= 5.5 SD 1.9 /CGS/.
- 19 iZ Pn 18 06 21.1, iZ Sn 18 06 45.2, D= 200 km.
- 19 eZ 20 26 53, eZ Sn 20 27 08, weak.
- 20 eZ 05 26 51, eZ 05 27 08, traces.
- 20 eZ+ P 08 02 07, eZ PP 08 05 11, eZ S 08 12 05, D= 8900 km. USCGS: H= 07 50 05.5, 47.9N, 153.6E, h= 73 km. Kurile Islands, M= 6 /PAS/, 5 1/2 /PAL/, MB= 5.8 SD 0.8 /CGS/.
- 20 eZ PKP 17 41 16, eZ 17 41 26, eZ /PP/ 17 43 31, traces. USCGS: H= 17 22 13.7, 5.3S, 149.7E, h= 27 km. New Britain region. Felt at Talasea and Bali. MB= 4.8, MS= 5.2 SD 1.5 /CGS/.
- 21 eZ P 00 40 53, weak. USCGS: H= 00 28 36.8, 43.2N, 148.2E, h= 50 km. Kurile Islands region. M= 4.8 SD 0.8 /CGS/.
- 21 eZ P 02 56 18, USCGS: H= 02 44 01.3, 43.0N, 147.3E, h= 36 km. Kurile Islands. M= 5.0 SD 0.8 /CGS/.
- 21 eZ P 03 44 28, traces. USCGS: H= 03 32 11.5, 43.2N, 147.0E, h= 35 km. Kurile Islands. MB= 5.1 MS= 5.2 SD 1.0 /CGS/.
- 21 eZ PKP 19 41 30, USCGS: H= 19 22 20.9, 18.1S, 177.7W, h= 385 km. Fiji Islands region. M= 4.0 SD 1.3 /CGS/.
- 22 iZ Pg 13 45 46.4, iZ Sg 13 46 11.3, D= 122 km.
- 22 eZ PKP 17 53 52, USCGS: H= 17 34 20.1, 16.1S, 174.1W, h=152 km, Tonga Islands. M= 4.9 SD 0.9 /CGS/.
- 23 eZ PKP 00 13 43, USCGS: H= 23 54 11.9, 18.4S, 168.4E, h= 41 km. New Hebrides Islands. Felt at Port Vila. M= 4.7 SD 1.2 /CGS/.
- 25 eZ Pn 23 41 04, eZ Sn 23 42 06, D= 580 km.
- 26 iZ Pn 02 17 05.2, iZ Pg 02 17 27.0, iZ Sn 02 18 23.4, iZ 02 18 50.8, D= 730 km. BCIS: H= 02 15 33 /TECM/, 41.5N, 20.5E

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- /cont./ Albania. Felt 6° at Peshkopi /Tirana/, 5°- 6° at Debar /Skopje/, 5° + Kukës and Bulgizë, 5° at Burrel, 3°- 4° at Tirana, Kruja, Librazhdi, Elbasani, 3° at Shkodëra, Pogradeci, Puka /Tirana/, 3° on the region of Titograd. M= 5.1 /Beograd/, MLV= 4.8 /Wien/, 4.6 /Tirana/, ML= 4.6 /Athens/, MLH= 4.5 /Pruhonice/, MLH= 4.4 /SKopje/, USCGS: H= 02 15 38.8, 41.8N, 20.1E, h= 42 km. Albania. M= 4.9 SD 1.2 /CGS/.
- 26 eZ /Sn/ 09 46 29,
- 26 eZ 11 34 15, eZ Sn 11 34 33, weak.
- 26 iZ PKP 17 16 58.0, USCGS: H= 16 58 02.3, h= 59 km. 5.8S, 151.2E, New Britain region. Felt at Rabaul, Kilengi and Bialla. M= 5.6 SD 1.1 /CGS/.
- 26 eZ PKP 20 47 48, eZ 20 48 14, USCGS: H= 20 28 05.6, 15.4S, 173.3W, h= 55 km. Tonga Islands. Felt at Apia Samoa Islands. M= 5.4 SD 1.2 /CGS/.
- 28 eZ P 04 06 39, eZ PP 04 08 12, D= 4770 km. USCGS: H= 03 58 34, 39.1N, 73.6E, h= 20 km. Tadzhik - Sinkiang border region. M= 5.1 SD 1.1 /CGS/.
- 28 eZ P 04 14 24, USCGS: H= 04 06 21.9, 39.2N, 73.9E, h= 26km. Tadzhik - Sinkiang border region. M= 5.1 SD 1.1 /CGS/.
- 28 eZ P 14 14 16, USCGS: H= 13 54 11.0, 31.5S, 177.9W, h= 29 km. Kermadec Islands. M= 6 /PAS/, MB= 5.3, MS= 5.9 SD 1.2 /CGS/.
- 28 eZ PKP 17 09 58, USCGS: H= 16 49 56.8, 31.8S, 177.8W, h= 23 km, Kermadec Islands. MB= 5.1, MS= 5.4 SD 1.2 /CGS/.
- 29 eZ 10 13 30, eZ /Sn/ 10 13 54.
- 29 eZ Pn 14 22 21, eZ /Sn/ 14 23 25.
- 30 eZ P 07 23 55, USCGS: H= 07 11 39.5, 43.7N, 147.8E, h= N, Kurile Islands M= 5.4 SD 1.0 /CGS/.
- 30 Z P 07 54 /OO/, USCGS: H= 07 41 43.4, 43.7N, 147.9E, h= N, Kurile Islands. M= 5.0 SD 1.1 /CGS/.
- 30 eZ+ P 08 06 42, USCGS: H= 07 54 29.5, 43.4N, 146.5E, h= 43 km. Kurile Islands. M= 5.5 SD 1.0 /CGS/.
- 30 eZ+ P 08 40 22, USCGS: H= 08 28 06.5, 43.6N, 147.8E, h= N, Kurile Islands. MB= 5.4, MS= 5.8 SD 1.1 /CGS/.
- 30 eZ PKP 13 10 35, USCGS: H= 12 51 57.9, 5.7S, 148.3E, h=167 km. New Britain region. M= 5.2 SD 0.9 /CGS/.
- 31 eZ PKP 11 12 10, eZ pPKP 11 13 03, eZ 11 13 12.4, USCGS:

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- /cont./ at Rabaul. M= 5.2 , MS= 5.4 SD 1.2 /CGS/.
- 8 iZ Pg 08 55 27.4, iZ Sg 08 55 33.5, D= 56 km.
- 9 eZ P 05 28 04, eZ PcP 05 28 10.0, eN S 05 38 28, D= 9170km, USCGS: H= 05 15 37.7, 35.7N, 137.0E, h= 29 km. Honshu, Japan. 10 injured and minor property damage in Gifu Prefecture M= 6 /PAS/, MB= 5.5 MS= 6.0 SD 1.3 /CGS/.
- 9 | iZ /Sg/ 20 53 07.5, local. Hrastnik, landslip. Felt 4° at Hrastnik. 46°08'N, 15°07'E,
- 10 eZ P 07 59 07, traces. USCGS: H= 07 46 57.9, 44.0N, 148.1E, h= 54 km. Kurile Islands. M= 4.9 SD 0.9 /CGS/.
- 10 eZ /Pn/ 09 42 30, Z Sg 09 43 /00/, traces.
- 10 iZ Pg 12 14 15.4, iZ Sg 12 14 20, D= 50 km.
- 10 eZ P 12 18 40, eZ S 12 21 30, D= 1710 km. BCIS: H= 12 14 /00/, /DECM/, 39.3N, 41.3E, h= normal. North Anatolien fault on the region of Varto. Turkey. MLH= 5.4 /Skopje/, MLV= 5.1 /Wien/, USCGS: H= 12 14 00.4, 39.2N, 41.4E, h= 50 km. Turkey. M= 5.2 SD 0.9 /CGS/.
- 11 eZ /Pn/ 00 32 23, eZ Sn 00 32 59, very weak. /D= 330 km/.
- 11 eZ P 03 29 41, USCGS: H= 03 17 00.1, 26.1N, 128.5E, h= 25 km. Ryukyu Islands. M= 5.3 SD 1.0 /CGS/.
- 11 eZ P 08 06 24, eZ 08 08 16, weak.
- 12 eZ PKIKP 03 34 18, iZ! PKHKP 03 34 24.9, USCGS: H= 03 14 44.9, 18.6S, 174.9W, h= 131 km. Tonga Islands. M= 5.1 SD 0.9 /CGS/.
- 12 eZ P 09 09 25, eNS 09 19 41, D= 9200 km. USCGS: H= 08 57 0.7.3, 51.2N, 179.2W, h= 48 km. Andreanof Islands, Aleutian Islands. Felt on Adak and Amchitka. M= 6.2 /PAS/, 5.9-6.1 /BRK/. 7 /PAL/, 6.5 /GOL/, ML= 6.3, MS= 6.6 SD 1.2 /CGS/.
- 12 eZ /PKP/ 15 06 32, eZ 15 07 17,
- 12 eZ P 15 09 36, USCGS: H= 15 00 18.8, 51.3N, 179.2W, h= 53 km. Andreanof Islands, Aleutian Islands. M= 4.5-4.7 /BRK/, 5 /GOL/, 5.6 SD 0.9 /CGS/.
- 13 eZ PKIKP 00 53 29, iZ PKP2 00 53 57.5, D= 17000 km. USCGS: H= 00 34 38.4, 24.5S, 179.9E, h= 579 km. South of Fiji Islands. M= 4.9 SD 0.8 /CGS/.
- 13 eZ 07 17 47, eZ 07 18 06, traces.
- 13 eZ+ P 12 04 29.2, USCGS: H= 11 52 15.3, 43.5N, 147.6E, h= 52 km. Kurile Islands. M= 5.5 SD 1.0 /CGS/.

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- 14 iZ /Sg/ 02 03 29.3,
- 14 iZ+ P 14 54 25.0, BCIS: H= 14 46 21 /DECM/, 39.6N, 74.8E, Western Sinkiang /China/. MLH= 5.4 /Collmberg/, USCGS: H= 14 46 21.1, 39.6N, 74.9E. h= N, Suothern Sinkiang Prov., China. MB= 5.1 MS4.9 SD 0.9 /CGS/.
- 14 iZ+ P 16 23 28.8, BCIS: H= 16 15 25 /DECM/, 39.6N, 75.0E, Western Sinkiang Prov., China., MLH= 5.8 /Collmberg/, USC GS: H= 16 15 24.8, 39.7N, 74.9E, h= N, Southern Sinkiang Prov., China. M= 5.5, MS= 5.6 SD 1.1 /CGS/.
- 16 eZ Sn 02 12 04, traces.
- 16 eZ P 14 42 42, eZ PP 14 45 47, D= 9200 km. USCGS: H= 16 30 00.0, 37.3N, 116.5W, h= 0km. Southern Nevada. 37°18'51"N, 116°27'38"W, Nevada Test Site. "Jorum" /AEC/, M= 6.3/PAS/, 6.1 /BRK/, MB= 6.2 MS= 5.1 SD - /CGS/.
- 17 eZ Pn 01 26 54, iZ Sn 01 27 21.6, iZ Sg 01 27 26.0, D=220 km, weak.
- 17 Z Sn 11 48 /00/, eZ 11 48 06, BCIS: H= 11 46 26 /DECM/, 47.8N, 11.1E, Peissenberg region, Bavaria, Germany.
- 17 eZ P 18 53 19, eZ 18 55 25, eZ S 19 03 39, D= 9300 km. US CGS: H= 18 40 45.8, 31.1N, 131.3E, h= 8 km. Kyushu, Japan. M= 5 1/2 /BRK/, MB= 6.2 MS= 5.9 SD 0.9 /CGS/.
- 17 eZ P 19 03 50, USCGS: H= 18 51 07.8, 31.2N, 131.4E, h= 23 km. Kyushu, Japan. M= 5.5 SD 0.9 /CGS/.
- 18 iZ Pg 02 22 49.4, iZ Sg 02 23 04.0, D= 120 km.
- 18 eZ /Pn/ 17 25 20, iZ Sn 17 25 49.6, /D= 270 km./.
- 19 eZ PP 01 47 22, eZ 01 47 36, obscured by microseisms. USC GS: H= 01 29 37.4, 6.1N, 125.4E, h= 95 km. Mindanao, Philippine Islands. Felt at Davao, General Santos, Cagayan de Oro, and Hinatuan. M= 5.7 SD 1.4 /CGS/.
- 20 eZ P 01 13 50, BCIS: H= 01 07 36 /DECM/, premonitory shock of the seisms of September 20, at 05 08. USCGS: H= 01 07 28.8, 58.2N, 32.1W, h= N, North Atlantic Ocean. M= 5.0 SD 1.3 /CGS/.
- 20 eZ P 01 19 15, BCIS: H= 01 13 00, /DECM/, premonitory shock of the seisms of September 20, at 05 08, USCGS: H= 01 13 04.6, 58.1N, 32.1W, h= N, North Atlantic Ocean. M= 5.2 SD 1.2 /CGS/.
- 20 eZ P 05 15 08, eZ S 05 20 23, D= 3660 km. BCIS: H= 05 08 54 /DECM/, 58.3N, 32.6W, h= - Central Atlantic ridge, southwest of Island. MPV= 6.5 /Bensberg/, MPV= MLV= 6.4/ Wien/, MLH= 6.3 /Collmberg/, /Strasbourg/, MLH= 6.2 /Pru-

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- /cont./ honice/, m= 6 1/2 /Tirana/, MPH= MPV= 6.1 /Collmberg/, MLH= 6.1 /Tirana/, MSH= 6.0 /Collmberg/, USCGS: H= 05 08 57.6, 58.3N, 32.2W, h= N, North Atlantic Ocean. M= 6 /BRK/, 6 1/4- 6 1/2 /GOL/, MB= 5.6 MS= 6.0 SD 1.0 /CGS/.
- 20 Z P 08 55 /00/, USCGS: H= 08 43 42.2, 59.9N, 148.5W, h= 17 km. Kenai Peninsula, Alaska. M= 4.2 SD 1.0 /CGS/.
- 20 eZ- P 14 15 37, USCGS: H= 14 07 57.8, 38.4N, 69.8E, h= 52 km. Tadzhik SSR, M= 5.1 SD 0.9 /CGS/.
- 21 eZ PKIKP 07 31 13, iZ PKHKP 07 31 18.8, iZ pPKP 07 32 19.4, USCGS: H= 07 11 53.6, 17.5S, 174.7W, h= 235 km. Tonga Islands, M= 5.5 SD 0.8 /CGS/.
- 21 eZ P 21 41 41, USCGS: H= 21 29 21.7, 2.7N, 95.8E, h= N, Off west coast of northern Sumatra, M= 4.9 SD 1.1 /CGS/.
- 21 eZ P 21 46 26, USCGS: H= 21 34 06.7, 2.7N, 95.9E, h= N, Off west coast of northern Sumatra. M= 5.2 SD 0.6 /CGS/.
- 22 eZ P 01 51 33, USCGS: H= 01 40 20.8, 5.6S, 68.1E, h= 14 km, Chagos Archipelago region. M= 5.1 SD 0.9 /CGS/.
- 22 eZ P 01 58 31, USCGS: H= 01 46 13.5, 2.9N, 95.9E, h= N, Off west coast of northern Sumatra. M= 5.3 MS= 5.8 SD 1.2 /CGS/.
- 22 eZ P or PKP 02 47 59.
- 22 eZ P 04 04 55, USCGS: H= 03 52 37.4, 2.9N, 95.9E, h= N, Off west coast of northern Sumatra. M= 5.3 MS= 5.6 /CGS/.
- 22 eZ 08 20 58, eZ 08 21 31, traces.
- 22 eZ P 13 57 40, eN S 14 05 50, D= 6330 km. USCGS: H= 13 47 52.2, 5.0N, 32.6W, h= N, Central Mid-Atlantic ridge. M= 5.7 MS= 5.4 SD 1.2 /CGS/.
- 23 eZ 12 08 52, iZ Sg 12 08 56.7.
- 24 eZ P 04 05 07, BCIS: H= 03 58 50, premonitory shock of the seisms of September 24, at 03 58 55.
- 24 iZ P 04 05 12.0, BCIS: H= 03 58 55 /DECM/, 52.8N, 32.0W, Mid-Atlantic ridge. Southwest of Island. MPV= 6.2 /Bensberg/, MLH= 6.0 /Strasbourg/, MLH= 5.8 /Skopje/, MLH= 5.7 /Pruhonice/, MLV= 5.6 /Wien/, MLH= 5.4 /Collmberg/. USCGS: H= 03 58 56.5, 52.5N, 31.8W, h= N, North Atlantic ridge. MB= 5.2 MS= 5.2 SD 1.4 /CGS/.
- 24 iZ+ P 04 27 04.5, BCIS: H= 04 20 48 /DECM/, MPV= 5.7 /Bensberg/, MLV= 5.2 /Wien/. USCGS: H= 04 20 52.9, 52.6N, 31.8W, h= N, North Atlantic ridge. M= 5.2 SD 0.9 /CGS/.
- 24 iZ Pg 17 17 33.5, iZ Sg 17 17 35.4, local, D= 15 km.

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- 24 eZ P 18 13 15, eZ S 18 21 16, D= 6510 km. USCGS: H= 18 03 19.0, 15.2N, 45.8W, h= N, North Atlantic ridge. M= 6.2 /PAS/, 6 /BRK/, 6 1/2 /GOL/, MB= 5.8 MS= 6.2 SD 1.1 /CGS/.
- 24 eZ PKP 20 40 12, USCGS: H= 20 21 14.6, 18.2S, 178.0W, h= 475 km. Fiji Islands region, M= 4.7 SD 1.0 /CGS/.
- 25 eZ Pn 11 47 54, eZ /Sn/ 11 48 36, BCIS: H= 11 45 39 /DECM/, 37.2N, 20 1/2E, Ionian Sea. ML= 4,6 /Athens/, MLH= 4.0/Skopje/.
- 25 eZ 13 19 44, iZ Sg 13 19 45.5, local.
- From September 25, at 19 30 to September 26, at 5 58 station not operated.
- 26 eZ P 07 04 26.5, eZ 07 08 42, BCIS: H= 07 00 00 /DECM/, 46.0N, 42.4E, USSR, Caspian Sea. Probably artificial. m=5.8 /Uppsala/, MPV= 5.0 /Wien/, MLV= 4.6/Wien/. USCGS: H= 06 59 55.8, 45.9N, 42.5E, h= 0 km. Southwestern Russia. M= 5.6 SD 1.2 /CGS/.
- 26 eZ PKIKP 20 47 15, iZ PKHKP 20 47 20.4, USCGS: H= 20 27 44.7, 22.3S, 171.1E, h= 120 km. Loyalty Islands region. M= 4.7 SD 1.1 /CGS/.
- 26 eZ Pn 23 41 40, iZ Pg 23 41 54.0, iZ Sn 23 42 20.0, iZ Sg 23 42 38.1, D= 370 km.
- 27 eZ /Pn/ 00 10 09, eZ 00 11 04, traces.
- 27 eZ P 04 14 27, USCGS: H= 04 02 16.3, 43.9N, 147.0E, h= 47 km. Kurile Islands. M= 5.4 SD 1.1 /CGS/.
- 27 eZ PKP 09 22 53, eZ PP 09 24 18, D= 13300 km. USCGS: H= 09 04 02.8, 60.9S, 56.0W, h= N. South Shetland Islands. MB= 5.8 MS= 5.9 SD 1.1 /CGS/.
- 27 eZ P 17 01 33, eZ 17 02 28, USCGS: H= 16 56 25.2, 38.6N, 75.1E, h= N. Southern Sinkiang Prov., China. M= 4.9 SD 1.3/CGS/.
- 27 eZ P 19 27 29, eZ 19 27 38, eZ PP 19 31 31, USCGS: H= 19 13 48.6, 9.4S, 107.8E, h= N, South of Java, M= 5.6 SD 1.6/CGS/.
- 28 eZ 01 57 14, eZ 01 57 35, traces.
- 28 eZ PKIKP 10 37 04, eZ PKHKP 10 37 12, eZ PKP2 10 37 22, USCGS: H= 10 17 08.3, 23.8S, 176.7W, h= 78 km. South of Fiji Islands. M= 4.3 /BRK/, MB= 5.0 SD 1.3 /CGS/.
- 28 eZ P 19 01 24, USCGS: H= 18 53 28.6, 39.3N, 73.6E, h= 62 km. Tadzhik-Sinkiang border region. M= 5.0 SD 0.9 /CGS/.
- 28 eZ P 22 57 27, eZ 22 57 37.0, eZ S 22 59 50, D= 1420 km. BCIS: H= 22 54 09 /DECM/, 34.3N, 25.1E, Eastern Mediterra-

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- /cont./ nean Sea. South of Crete. MLV= 5.9 /Moxa/, MPV=5.7
 /Bensberg/, MLH= 5.7/Moxa/, MLH= 5.6 /Tirana/, MLV= 5.6
 /Wien/, MLH= 5.5 /Collberg, Skopje/, USCGS: H= 22 54
 06.6, 34.3N, 25.1E, h= 19 km. Crete. M= 5.4, MS= 5.5 SD
 1.2 /CGS/.
- 29 eZ P 10 32 21, BCIS: H= 10 27 35 /DECM/, 66.3W, 6.5E, Nor-
 wegian Sea. USCGS: H= 10 27 49.1, 65.1N, 6.6E, h= 6 km.
 Norwegian Sea. M= 4.8 SD 1.3 /CGS/.
- 29 eZ PKP 16 38 20, eZ pPKP 16 39 09, USCGS: H= 16 20 00.4,
 7.2S, 128.8E, h= 145 km. Banda Sea. Felt at Darwin. M=
 5.7 SD 1.1 /CGS/.
- 29 eZ P 18 10 55, USCGS: H= 17 58 38.8, 43.4N, 147.7E, h= 32
 km. Kurile Islands. M= 5.4, MS= 5.3 SD 1.0 /CGS/.
- 29 eZ P 20 15 34, eZ PP 20 18 30, eZ S 20 25 26, eZ SKS 20 25
 53, D= 8760 km. USCGS: H= 20 03 32.8, 32.9S, 19.7E, h= N,
 Republic of South Africa. 12 death, dozens injured. Hundreds
 homeless at Tulbagh and Wolseley. Felt widely throughout
 Cape Province. Foreshock preceded computed origin time by
 approximately 5 seconds. M= 6.1 /BRK/, MB= 5.9, MS= 6.3 SD
 1.2 /CGS/.
- 30 eZ PKIKP 04 31 16, eZ PKP2 04 31 52, USCGS: H= 04 11 16.1,
 31.9S, 177.9W, h= N, Kermadec Islands. MB= 5.4 MS= 5.5 SD
 1.3 /CGS/.
- 30 eZ P 15 06 37, USCGS: H= 14 53 38.1, 2.8S, 102.2E, h= N,
 Southern Sumatra.
- 30 eZ PKIKP 18 11 40, eZ PKP2 18 12 29, D= 17100 km. USCGS:
 H= 17 51 41.8, 31.9S, 178.0W, h= N, Kermadec Islands re-
 gion. M= 6.3 /PAS/, 6-6 1/4 /GOL/, MB= 5.4, MS= 6.1 SD
 1.4 /CGS/.
- 30 eZ PKP 19 12 35, USCGS: H= 18 52 52.4, 16.1S, 172.6W, h=
 75 km. Samoa Islands region. M= 5.1 SD 0.9 /CGS/.
- 30 eZ P 23 24 25, USCGS: H= 23 13 28.8, 25.6N, 94.7E, h= 20
 km. Burma-India border region. M= 5.4 SD 1.2 /CGS/.

Ljubljana, January 30, 1970

 Interpretation: M.Hržič
 Redation: V.Ribarič


Epic

University of Ljubljana
Astronomical and Geophysical Observatory

**PRELIMINARY
SEISMOLOGICAL BULLETIN**

X — XII 1969

Ljubljana 1970

1969

University of Ljubljana
Astronomical and Geophysical
Observatory,
Ljubljana, Trg revolucije 11,
P.O.B. 01-20, Yugoslavia

PRELIMINARY SEISMOLOGICAL
BULLETIN

/ October - December 1969 /

University of Ljubljana
 Astronomical and Geophysical
 Observatory,
 Ljubljana, Trg revolucije 11,
 P.O.B. 01-20, Yugoslavia

1969

PRELIMINARY SEISMOLOGICAL BULLETIN
 from October 1, to December 31, 1969

Station: Ljubljana / LJU / - Coordinates: $46^{\circ} 02.6' N$ Lat.
 $14^{\circ} 32.0' E$ Long.
 Geocentric direction cosines: $a = + 6743$, $b = + 1748$, $c = + 7175$
 $d = - 8$, $h = - 4$
 Height above sea level: 396 m.
 Lithologic fundation: sandstone /carbon/.

Instruments:

Wiechert, horizontal astatic seismograph, M= 200 kg, mechanical
 registration, 16-18 mm/min.

Constants / 31.1.1966 /:				
Component	To	v:1	r/T ₀ ²	V
N-S	5.0	2.20	0.0043	69
E-W	4.9	2.37	0.0058	67

Hiller-Stuttgart, vertical component Z with galvanometrical re-
 cording. To=1.5 sec, Tg=1.5 sec. D1=D2=1, Vmax=10150x,

Note: Periods of seismic waves are given in seconds, the
 amplitudes in microns. Sign. + means compression or movement of
 ground towards north or east, sign. - means dilatation or move-
 ment of towards south or west. All times are given in GMT. Time
 signals are received one or two times daily and are registered on
 a chronograph. Wherever possible time readings up to one tenth
 of a second are given. Macroseismic data refer to Mercalli - Can-
 cani - Sieberg scale / MCS /. Macroseismic rays are given in ki-
 lometers. Abbreviation DECM means: Determination was made by ele-
 ctronic computer.

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1 eZ PKP 00 17 /36/, eZ 00 18 25, USCGS: H= 23 57 36.4, 32.2
 S, 177.6W, h= 37 km. South of Kermadec Islands. Mb= 5.3 SD
 1.3 /CGS/.

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- 1 eZ P 04 10 49, BCIS: H= 04 03 00, 50.ON, 78.OE, Kazakhstan, region of Semipalatinsk. Probably artificial. /Uppsala/. m= 5.7 /Uppsala/. USCGS: H= 04 02 57.6, 49.8N, 78.2E, h= 0 km. Eastern Kazakh SSR, Mb= 5.3 SD 1.0 /CGS/.
- 1 eZ P 05 19 23, eZ PP 05 22 22, D= 10800 km. USCGS: H= 05 05 43.2, 11.9S, 75.1W, h= 4 km. Peru. 136 killed 216 injured. Villages of Lampa and Chilifruta destroyed. Extensive damage at Comas. Reverse faulting produced vertical and horizontal components of displacement of 1.6m. and 0.7m. respectively in addition to the 0.4m. vertical displacement of July 24, 1969 shock. M= 6.4 /PAS/, 6.1 /BRK/, Mb= 5.9 SD 1.2 MS= 6.2 /CGS/.
- 1 eZ P 06 11 52, eZ PP 06 15 46, D= 10700 km. USCGS: H= 05 58 12.7, 11.7S, 75.1W, h= 5 km. Peru. Mb= 5.7 SD 1.2 /CGS/.
- 1 eZ P 08 41 54, eZ PP 08 45 51, D= 10700 km. Traces. USCGS: H= 08 28 14.0, 11.8S, 75.0W, h= 3 km. Peru. Mb= 5.8 SD 0.8 /CGS/.
- 1 eZ P 17 24 22, eZ 17 28 14, USCGS: 17 10 56.5, 0.8N, 85.0W, h= N, Off coast of Ecuador. M= 6.1 /PAS/, 6.0 /BRK/, Mb= 5.5 Ms= 5.9 SD 1.2 /CGS/.
- 1 eZ+P 17 55 51, USCGS: H= 17 46 29.4, 0.ON, 17.4W, h= N, North of Ascension Islands. Mb= 5.0 SD 0.9 /CGS/.
- 1 eZ P 20 38 16, BCIS: H= 20 33 39 /DECM/, 39.4N, 40.5E, Eastern Turkey. North-Anatolian fault, south of Erzerum. USCGS: H= 20 33 39.3, 39.2N, 40.5E, h= 39 km. Turkey, Mb= 4.8 SD 1.0 /CGS/.
- 1 eZ /P/ 22 36 55,
- 1 eZ PKIKP 22 55 49, eZ PKHKP 22 55 55, USCGS: H= 22 37 03.7, 21.1S, 174.1W, h= N, Tonga Islands. Mb= 5.0 SD 0.7 /CGS/.
- 1 eZ /Pn/ 23 33 46, eZ Sn 23 35 35, BCIS: H= 23 31 28 /DECM/, 37.8N, 22.2E, Greece, ML= 4.0 /Athens/, USCGS: H= 23 31 29.9 37.9N, 22.2E, h= N, Southern Greece.
- 2 eZ P 22 18 20, USCGS: H= 22 06 00.0A, 51.4N, 179.2E, h= 1km, Rat Islands, Aleutian Islands. 51° 25' 01.6" N, 179° 10' 56.3" Amchitka Island Milrow Elevation 1177.1M. /AEC/. Felt on Adak. Mb= 6.5 Ms= 5.0 SD 0. /CGS/.
- 2 eZ Pn 23 15 54, eZ /Sn/ 23 17 40, /D= 1120 km./ BCIS: H= 23 13 41 /DECM/, 38.6N, 22.6E, Greece. MLH= 4.7 /Skopje/, ML= 3.7 /Athens/. USCGS: H= 23 13 41.1, 38.5N, 22.5E, h= 59 km. Greece, Mb= 4.5 SD 1.5 /CGS/.
- 3 eZ PKP 01 53 21, eZ 01 54 13, USCGS: H= 01 33 19.8, 32.9S, 178.0W, h= 26 km. South of Kermadec Islands. Mb= 5.7 SD 1.3 /CGS/.

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- 3 eZ PKP 15 39 20, eZ 15 39 32, USCGS: H= 15 19 43.9, 19.2S, 168.8E, h= 43 km. New Hebrides Islands, Mb= 4.8 SD 1.3 /CGS/.
- 3 iZ+P 15 52 38.5, USCGS: H= 15 39 43.5, 3.7S, 101.9E, h= 95 km. Southern Sumatra, Mb= 5.6 SD 1.2 /CGS/.
- From October 4, at 17 40 to October 5, at 08 52 station not operated.
- 5 iZ-PKP 21 06 09.2, eZ pPKP 21 06 31, USCGS: H= 20 46 32.5, 21.8S, 170.7E, h= 107 km. Loyalty Islands region. Mb= 5.3 SD 1.1 /CGS/.
- 6 iZ Pg 13 24 37.3, iZ Sg 13 24 56.0, D= 190 km.
- 7 eZ P 05 12 09, eZ 05 12 21, eZ /S/ 05 15 /OO/, BCIS: H= 05 09 13 /DECM/, 39.2N, 28.4E, Western Anatolia /Turkey/, strongly felt at Anatolia /Istanbul-K./, MLH= 5.6 /Srobarova/, ML= 5.0 /Istanbul-K./, ML= 4.9 /Athens/, MLV= 4.6 /Wien/. USCGS: H= 05 09 11.3, 39.2N, 28.4E, h= 14 km. Turkey Felt strongly in northwestern Anatolia. Mb= 5.0 SD 1.1 /CGS/.
- 7 eZ Pn 21 12 47, eZ /Sn/ 21 14 11,
- 8 eZ PKP 22 17 /39/, obscured by microseisms. USCGS: H= 21 57 51.9, 55.8S, 147.4E, h= N, West of Macquarie Islands. Mb= 5.2 SD 1.2 /CGS/.
- 9 eZ Pn 03 32 55, iZ /Sg/, 03 34 07, BCIS: H= 03 31 35, 45.0 N, 7.3E, Piemontian Seismic Arc, north of Pinerolo. Felt. ML= 3.9-4.0 /Genova/. USCGS: H= 03 31 35.5, 45.ON, 7.7E, h= N, Northern Italy. Felt in Turin. Mb= 4.2 SD 1.2 /CGS/.
- 9 iZ-Pg 07 38 45.2, iZ Sg 07 38 51.0, D= 45 km. BCIS: H= 07 38 38 /DECM/, 45.8N, 14.1E, 45° 50' N, 14° 10' E /Ljubljana/. Felt 3 at Postojna /Ljubljana/, 2 at Trieste /Trieste/.
- 12 iZ+Pn 13 36 09.7, iZ Pg 13 36 37.4, iZ /Sn/ 13 37 31.4, /D= 780 km./ BCIS: H= 13 34 20 /DECM/, 39.8N, 20.7E, h= normal. Ioannina region, Epirus /Greece/, Premonitory shock of the seisms of October 13, 1969 at 01 02. M= 5.2 /Titograd/, MLV= 5.1 /Wien/, MLH= 4.9 /Athens/, MLH= 4.7 /Skopje/. USCGS: H= 13 34 15.8, 39.7N, 20.4E, h= 14km. Greece-Albania border region. 1 injured and damage in Greece. Mb= 5.1 SD 1.3 /CGS/.
- 13 eZ Pn 01 04 21, iZ 01 05 06.0, eZ /Sn/ 01 05 50, BCIS: H= 01 02 32 /DECM/, 39.8N, 20.7E, h= normal. Ioannina region, Epirus /Greece/, Damage in the villages on Ioannina region /Press/. MLH= 6.1 /Skopje/, MLV= 6.0 /Wien/, MLH= 5.8 /Wien/, ML= 5.6 /Helwan/, MLH= 5.4 /Moxa/. M= 5.2 /Titograd/. USCGS: H= 01 02 28.5, 39.9N, 20.6E, h= 8 km. Greece-Albania border region. 2 injured and damage in area of Ioannina

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- /cont./ Greece, Mb= 5.6 Ms= 5.0 SD 1.1 /CGS/.
- 13 iZ Pn 01 51 43.0, eZ 01 52 49, eZ 01 53 20, Ioannina region aftershock.
- 13 eZ Pn 01 45 25, eZ /Sn/ 01 46 17, /D= 500 km./
- 13 eZ PKP 07 15 11, eZ PP 07 18 29, eZ SKS 07 22 16, D=16100 km. USCGS: H= 06 56 01.6, 18.9S, 169.3E, h= 246 km. New Hebrides Islands. Felt at Port Vila. M= 6.5/PAS/, 6.2 /BR K/, Mb= 5.9 SD 1.1 /CGS/.
- 14 iZ-PKP 00 52 39.8, USCGS: H= 00 33 00.6, 21.9S, 170.5E, h= 79 km. Loyalty Islands region, Mb= 4.8 SD 0.9 /CGS/.
- 14 iZ+P 07 06 44.5, eZ PP 07 07 39, iZ PcP 07 09 27.8, BCIS: H= 07 00 00 /DECM/, 73.5N, 55.0E, Novaya Zemlya, D= 3700km. Probably artificial, MPV= 6.2 /Wien/, MLV= 5.25 /Wien/, MPV= 6.6/Bensberg/, m= 6.5/Uppsala/, mB= 6.5/Strasbourg/, MPV=6.4 /Pruhonice/, MPV= 6.2 /Collm/, MLH= 5.4 /Pruhonice/, MLH= 5.2 /Collm/, USCGS: H= 07 00 06.2, 73.4N, 54.8 E, h= 0 km. Novaya Zemlya. Mb= 6.1 SD 1.0 /CGS/.
- 15 eZ PKP 00 19 18, USCGS: H= 23 59 26.0, 27.0S, 176.5W, h=61 km. Kermadec Islands. Mb= 5.3 SD 1.1 /CGS/.
- 15 eZ Pn 12 07 15, iZ 12 07 33.2, Ez 12 07 49,
- 16 Pn 22 57 28, eZ /Sn/ 22 58 /00/, /D= 890 km./ Athens: H= 22 55 40, 39.5N, 20.9E, ML= 4.0 Felt in Thesprotia / 4° at Eugomenitsa/.
- 17 eZ+P 01 35 53, iZ! pP 01 36 29.5, eZ PP 01 38 23, eZ S 01 44 33, D= 7250 km. USCGS:H= 01 25 12.4, 23.1N, 94.7E, h= 134 km. Burma-India border region. Mb= 6.0 SD 1.2 /CGS/.
- 17 eZ Pg 14 17 17.2, iZ Sg 14 17 19.4, D= 15-20 km, local.
- 18 eZ P 01 26 09, USCGS: H= 01 13 59.7, 39.3N, 141.4E, h=107 km. Honshu, Japan, Mb= 5.3 SD 0.9 /CGS/.
- 18 eZ P 08 56 10, USCGS: H= 08 44 00.0, 52.5N, 173.5E, h= 24 km. Near Islands, Aleutian Islands, Mb= 5.6 Ms= 5.3 SD 0.9 /CGS/.
- 20 iZ Pg 10 57 25.7, iZ Sg 10 57 28.5, local. D= 20 km.
- 20 eZ P 13 23 40.3, iZ! PcP 13 23 45.8, USCGS: H= 13 11 37.0, 10.8N, 72.5W, h= 40 km. Venezuela. Felt at Maracaibo and Lagunillas. Mb= 5.7 Ms= 5.5 SD 1.1 /CGS/.
- 20 eZ P 15 33 32, USCGS: H= 15 20 36.5, 17.3N, 95.2W, h= 87km, Oaxaca, Mexico. Felt strongly at Ixtotec, Mb= 5.4 SD 1.0 /CGS/.

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- 21 eZ+P 21 06 05, USCGS: H= 20 53 47.5, 51.3N, 179.2W, h= 48 km. Andreanof Islands. Aleutian Islands. M= 6 /PAS/, 5.9 /PAL/, 5 1/4 /GOL/, Mb= 5.9 Ms= 5.4 SD 0.9 /CGS/.
- 22 eZ PKP 07 31 02, USCGS: H= 07 12 07.7, 4.8S, 152.5E, h= 71 km. New Britain region. Mb= 5.3 SD 0.8 /CGS/.
- 22 eZ P 12 23 41, USCGS: H= 12 11 21.3, 52.2N, 169.5W, h= N, Fox Islands, Aleutian Islands. Mb= 5.1 Ms= 4.7 SD 1.1 /CGS/.
- 22 eZ+P 13 03 47, eZ-pP 13 04 07.8, USCGS: H= 12 52 22.0, 10.9 N, 62.6W, h= 79 km. Near coast of Venezuela. Felt at Carupano and Guiria and Port of Spain, Trinidad. Mb= 5.4 SD 1.1 /CGS/.
- 24 eZ P 00 58 47, USCGS: H= 00 46 14.6, 52.5N, 168.6W, h= N, Fox Islands, Aleutian Islands. Mb= 5.2 SD 1.0 /CGS/.
- 24 eZ+ P 11 54 53, USCGS: H= 11 45 52.7, 24.8N, 72.4E, h= 15 km. Northern India, Mb= 5.3 SD 0.8 /CGS/.
- 24 eZ 14 06 13, eZ 14 06 35, traces, BCIS: H= 14 04 59.86s /Fürstfeldbruck/, 47°37'901 N, 11°08'901 E, Quarry of Eschenlohe /explosion/.
- 24 eZ PKP 22 02 25, USCGS: H= 21 44 06.7, 7.5S, 127.7E, h=149 km. Banda Sea. Mb= 5.6 SD 1.1 /CGS/.
- 24 eZ PKIKP 22 50 46, eZ PKHKP 22 50 55, USCGS: H= 22 30 57.7 20.5S, 172.8W, h= N, Tonga Islands region. Mb= 5.3 SD 0.8 /CGS/.
- 26 eZ-PKP 04 35 35, USCGS: H= 04 15 49.7, 21.7S, 169.9E, h= N, Loyalty Islands region. Mb= 4.8 SD 1.2 /CGS/.
- 26 iZ PKP 06 57 36.8, iZ! 06 57 41.4, iZ PKP2 06 57 48.3, USC GS: H= 06 38 03.4, 16.2S, 174.0W, h= 127 km. Tonga Islands. Felt at Apia. M= 6.7 /PAS/, Mb= 5.8 SD 1.1 /CGS/.
- 26 iZ Pn 15 37 26.7, BCIS: H= 15 36 50 /DECM/, 44.9N, 17.3E, 44°57'N, 17°05'E, /Beograd/, Yugoslavia. 1 dead, 200 injured. Important damage. Felt 7^o-8^o at Banja Luka, 4^o at Zagreb and Krško /Ljubljana/, 4^o at Trieste /Trieste/, 3^o at Beograd, Jesenice, Ljubljana /Ljubljana/, MLH= 6.5 /Wien/, M= 6.4 /Uppsala/, MLH= 6.3 /Bensberg/, MLH= 6.0 /Collmberg/, MLg= 5.9 /Bensberg/, ML= 5 3/4 /Athens/, M= 5.7 /Uppsala/, MLH= 5.6 /Skopje/, M= 5.3 /Titograd/, USCGS: H= 15 36 51.8, 44.9N, 17.3N, h= N, Yugoslavia. 14 dead, 1100 injured /figures include the effect of the shock of October 27, at 08 10 58.3/. Intensity 7^o - 8^o at Banja Luka. Felt at Beograd, Zagreb Ljubljana, Trieste and Budapest Mb= 5.3 Ms= 5.6 SD 1.6 /CGS/.
- 26 iZ Pn 15 43, Banja Luka region. Aftershock.

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- 26 iZ Pn 15 48 48.5, Banja Luka region.
- 26 iZ Pn 15 53 46.6, eZ 15 54 12.8, Banja Luka region.
- 26 iZ Pn 16 04 44, Banja Luka region.
- 26 iZ Pn 16 48 42, eZ 16 49 09, Banja Luka region.
- 26 iZ Pn 16 51 00, iZ Sn 16 51 28.3, D= 250 km. Banja Luka region.
- 26 Z Pn 17 48 /00/, Banja Luka region.
- 26 iZ Pn 20 41 30, Banja Luka region.
- 26 iZ Pn 22 26 23.3, eZ Sn 22 26 56, D= 290 km. Banja Luka region.
- 26 iZ Pn 22 34 50, eZ Sn 22 35 19, D= 260 km. Banja Luka region.
- 27 iZ Pn 00 24 27, Banja Luka region.
- 27 iZ Pn 02 32 43, eZ Sn 02 33 12, D= 270 km. Banja Luka region.
- 27 iZ Pn 02 34 05.3, Banja Luka region.
- 27 iZ Pn 04 27 48, Banja Luka region.
- 27 iZ 07 16 48, traces.
- 27 iZ+ Pn 08 11 32.6, BCIS: H= 08 10 56 /DECM/, 44.8N, 17.2E, Yugoslavia, main shock. 10 dead 460 injured, 60% houses damaged at Banja Luka./Press/. Felt 8^o at Banja Luka /Beograd/ 5^o at Trieste/Trieste/, 3^o - 4^o at Beograd /Beograd/, MLH= 6.1 /Wien/, ML= 6 3/4/Athens/, M= 6.6 /Uppsala/, MLH= 6.4 /Bensberg/, M= 6.3 /Titograd/, MLH= 6.2 /Collmberg/, MLH= 6.2 /Skopje/, MLg= 5.9 /Bensberg/, m= 5.9 /Uppsala/, MLH= 5.7 /Pruhonice/, M= 5.7 /Praha/, USCGS: H= 08 10 58.3, 44.9N, 17.2E, h= N, Yugoslavia. Intensity 8^o - 9^o at Banja Luka. Property damage at Banja Luka, Kakaši, Jablan, Bukovica and Bakanci. Felt at Beograd, Trieste /Italy/, and Budapest /Hungary/, M= 6 /PAS/, 6.3 /GOL/, Mb= 5.3 Ms= 6.1 SD 1.3 /CGS/.
- 27 iZ+ Pn 08 44 08, USCGS: H= 08 42 17.5, 39.8N, 20.5E, h=40 km. Greece - Albania border region. Mb= 4.5 SD 0.9 /CGS/.
- 27 iZ Pn 08 54 17.4, BCIS: H= 08 53 42 /DECM/, 44.9N, 17.2E, Yugoslavia, felt 2^o + 3^o at Trieste /Trieste/, MLH= 5.8 /Wien/, M= 5.3 /Praha/, MLH= 4.3 /Pruhonice/. USCGS: H= 08 53 42.7, 44.9N, 17.0E, h=N, Yugoslavia. Felt. Mb= 4.8 SD 1.3 /CGS/.

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- 27 eZ Pn 10 27 30, Banja Luka region.
- 27 eZ Pn 11 08 33, eZ Sn 11 09 05, D= 290 km. Banja Luka region. USCGS: H= 11 08 00.6, 45.2N, 16.8E, h= N, Yugoslavia, Mb= 4.1 SD 1.5 /CGS/.
- 27 eZ Pn 13 42 54, iZ 13 43 18, traces.
- 27 eZ Pn 13 46 47, eZ Sn 13 47 17, D= 270 km. Banja Luka region.
- 27 eZ Pn 19 11 04, eZ Sn 19 11 34, D= 270 km. Banja Luka region.
- 27 iZ Pn 21 14 32, iZ Sn 21 15 02.1, D= 270 km. Banja Luka region.
- 28 iZ Pn 01 43 04, eZ Sn 01 43 34, D= 270 km. Banja Luka region.
- 28 eZ Pn 08 33 24, eZ Sn 08 33 52, D= 260 km. Banja Luka region.
- 28 eZ 09 03 18, traces.
- 28 eZ 09 10 18, traces.
- 28 eZ Pn 14 42 25, eZ Sn 14 42 54, D= 260 km. Banja Luka region.
- 28 iZ- P 18 52 46.8, eZ pP 18 53 34, BCIS: H= 18 45 10, /DECM/, 36.6N, 70.9E, h= 230 km. + 12 km. Hindu Kush, m= 5.7 /Uppsala/. USCGS: H= 18 45 10.6, 36.5N, 70.9E, h= 229 km. Hindu Kush region. Mb= 5.0 SD 0.8 /CGS/.
- 28 iZ- P or PKP 18 58 02,
- 29 eZ 00 08 21, iZ /Sn/ 00 08 52.0, traces.
- 29 eZ 06 28 55, traces.
- 29 eZ Pn 07 04 09, eZ 07 04 41.
- 29 eZ P 12 17 20, USCGS: H= 11 58 12.2, 14.9S, 177.5W, h= 309 km. Fiji Islands region. Mb= 4.3 SD 1.2 /CGS/.
- 29 eZ Pn 15 28 54, eZ 15 29 15, eZ 15 29 44, eZ 15 30 28.
- 29 Z Pn 16 51 /00/, iZ 16 51 20.
- 29 iZ Pn 18 18 32, iZ Sn 18 19 22, iZ Sg 18 19 41, D= 460 km. Felt 3^o at Mostar, Hercegovina, Yugoslavia.
- 29 eZ /Sn/ 21 07 30, traces.
- 29 eZ P 22 14 35, USCGS: H= 22 01 51.4, 37.1N, 116.1W, h=0km. Southern Nevada. 37^o08'35.9" N, 116^o03'49.8" W, Nevada. Test Site. "Calabash" AEC. Mb= 5.7 SD 0. /CGS/.
- 30 eZ P 00 17 53, USCGS: H= 00 05 39.4, 37.6N, 140.1E, h=151 km. Honshu, Japan. Mb= 5.0 SD 1.1 /CGS/.

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- 30 eZ- P 01 00 35, USCGS: H= 00 47 59.8, 22.4N, 121.4E, h=48 km. Taiwan region. Mb= 4.4 SD 1.1 /CGS/.
- 30 eZ 02 02 17, eZ /Sn/ 02 02 25,
- 30 eZ P 08 43 44, USCGS: H= 08 37 38.4, 45.5N, 27.5W, h= N, North Atlantic ridge. Mb= 4.4 SD 1.0 /CGS/.
- 30 eZ 11 02 45, eZ Sn 11 03 02, traces.
- 30 eZ P 12 26 05, traces. USCGS: H= 12 17 22.3, 52.3N, 95.8E, h= N, Central Russia. Mb= 4.8 SD 0.9 /CGS/.
- 30 Z 15 14 /00/, eZ 15 15 34.
- 30 eZ Pn 15 16 46, eZ Sn 15 17 17, D= 270 km. Banja Luka region.
- 30 eZ Pn 22 52 35, eZ Sn 22 53 05.6, D= 270 km. Banja Luka region.
- 31 iZ Pn 03 57 20, iZ Sn 03 57 49.5, D= 260 km. Banja Luka region.
- 31 eZ PKHKP 07 47 37, eZ PKIKP 07 47 45, USCGS: H= 07 27 55.9, 17.3S, 174.2E, h= 56 km. Fiji Islands region. Mb= 5.1 SD 1.1 /CGS/.
- 31 eZ PKHEP 07 53 56, USCGS: H= 07 34 15.9, 17.3S, 174.3E, h= 57 km. Fiji Islands. Mb= 5.0 SD 0.8 /CGS/.
- 31 eZ P 03 59 18, BCIS: H= 08 53 30 /DECM/, 33.2N, 48.3E, h= 120 km ± 8 km. Western Iran. USCGS: H= 08 53 26.3, 33.2N, 47.9E, h= 51 km. Western Iran. Moderate damage at Malavi, Pole-Dukhtar, Ku-I-Dasht and Haft Gel. Mb= 5.0 SD 0.8 /CGS/.
- 31 iZ+ P 11 45 22.4, eZ S 11 56 40, D= 10830 km. USCGS: H= 11 33 04.8, 51.3N, 179.0W, h= 49 km. Andreanof Islands, Aleutian Islands. Felt on Adak. M= 6.5 /PAS/, 5.9-6.1 /BRK/, Mb= 6.0 SD 1.0 /CGS/.
- 31 iZ 1500 24, eZ /Sn/ 15 00 40.

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- 1 eN P 11 22 00, USCGS: H= 11 08 20.9, 23.1N, 107.9W, h= N, Gulf of California, M= 6 1/2 /PAS/, 6 3/4 /BRK/, Mb= 5.6 Ms= 6.6 S^u 1.1 /CGS/.
- 1 eZ Pn 15 18 07, eZ Sn 15 18 34, iZ 15 19 22, D= 250 km.
- 1 iZ Pg 15 40 36.2, iZ! Sg 15 40 40, D= 20 km. Local.

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- 2 eZ 00 46 58, eZ 00 48 21, traces.
- 2 eZ Pn 01 18 09, iZ Sn 01 18 40, D= 260 km. Banja Luka region.
- 2 eZ Pn 15 35 04, eZ 15 35 47.
- 2 eZ PKP 16 45 45, USCGS: H= 16 25 54.0, 17.4S, 173.5W, h= N, Tonga Islands. Mb= 4.6 SD 1.1 /CGS/.
- 2 eZ P 19 16 32, USCGS: H= 18 53 06.6, 6.5N, 107.1E, h= 57 km Java, felt at Djakarta. Mb= 5.4 SD 1.3 /CGS/.
- 2 eZ P 20 07 23, USCGS: H= 19 53 58.7, 6.6S, 107.0E, h= 63 km. Java, Mb= 5.2 SD 1.6 /CGS/.
- 3 iZ Pn 01 55 02, eZ Sn 01 55 31, D= 260 km. Banja Luka region.
- 3 eZ 02 51 03, traces.
- 3 eZ Pn 15 35 04, eZ 15 35 47.
- 3 eZ Pn 16 46 32.6, iZ Sn 16 46 01.4, D= 260 km. I₀ = 4° - 5°, Banja Luka region.
- 3 eZ P or PKP 16 58 59.
- 3 eZ P 22 00 23, USCGS: H= 21 53 16.1, 26.7N, 53.7E, h= 8km. Southern Iran. Mb= 5.0 SD 0.3 /CGS/.
- 4 eZ Pn 03 25 30, eZ Sn 03 26 /00/, D= 270 km. Banja Luka region. BCIS: H= 03 24 51, 45.2N, 17.9E, Yugoslavia.
- 4 eZ 11 09 42, traces.
- 4 Z Pn 12 09 /00/, iZ 12 09 35.
- 4 eZ P 20 23 25, USCGS: H= 20 17 47.7, 40.3N, 50.3E, h= 29 km. Caspian Sea. Mb= 5.0, SD 1.3 /CGS/, BCIS: H= 20 17 57 /D ECM/, 39.8N, 49.9E, Caspian Sea, south of Baku.
- 4 iZ Pg 23 01 40.4, iZ Sg 23 01 47.4, D= 70 km. Yugoslavia, felt: Celje 3^o - 4^o, Domžale, Laško, Brežice 3^o /Ljubljana/.
- 4 eZ P 22 18 14, USCGS: H= 22 04 11.9, 0.1S, 125.0E, h=normal, Molucca Sea, Mb= 5.4 SD 1.1 /CGS/.
- 4 eZ PKIKP 23 59 05, eZ PKHKP 23 59 14, eZ pPKP 00 01 23, US CGS: H= 23 40 22.7, 22.2S, 179.2W, h= 610 km. South of Fiji Islands. Mb= 5.1 SD 1.0 /CGS/.
- 5 eZ P 07 52 /23/, BCIS: H= 07 47 43 /DECM/, 36.0N, 9.3W, Transatlantic seismic zone, southwest of Portugal. USCGS: H= 07 47 34.3, 35.9N, 10.7W, h= N, North Atlantic Ocean. Mb=

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/cont./ 4.6 SD 0.8 /CGS/.

- 5 eZ P 18 07 12, eZ PP 18 10 44, D= 10000 km. USCGS: H= 17 54 13.6, 34.8N, 121.2W, h= N, Off coast of California. Felt in Santa Barbara and San Luis Obispo Counties. M= 5.5 /PAS/ 5.7 /BRK/, Mb= 5.8 Ms= 5.8 SD 1.3 /CGS/.
- 5 eZ P 19 09 43, USCGS: H= 19 02 18.1, 26.5N, 53.6E, h= N, Southern Iran.
- 6 eZ P 11 45 52, USCGS: H= 11 33 16.1, 5.2N, 76.2W, h= 110km. Colombia. Felt at Cali, Manizales and Pereira. Mb 4.8 SD 1.4 /CGS/.
- 6 eZ /P/ 15 51 04, traces.
- 7 iZ Pn 01 19 45.2, eZ Sn 01 20 13, D= 250 km.
- 7 eZ Pn 01 47 11, Z Sn 01 47 /00/, D= 470 km. Yugoslavia, I₀= 5°, Višegrad region.
- 7 eZ 03 51 20, eZ Sn 03 51 49, weak.
- 7 eZ P 12 21 11, USCGS: H= 12 11 46.5, 3.1S, 12.0W, h= N, North of Ascension Island. Mb= 4.9 SD 1.0 /CGS/.
- 7 eZ P 12 55 03, USCGS: H= 12 45 35.3, 2.9S, 12.0W, h= N, North of Ascension Island. Mb= 5.2 SD 1.0 /CGS/.
- 7 eZ P 13 13 49, USCGS: H= 13 04 24.9, 02.9S, 12.0W, h= N, North of Ascension Island, Mb 5.0 1.1 /CGS/.
- 7 eZ P 13 25 47, USCGS: H= 13 18 44.4, 26.7N, 53.3E, h= N, Southern Iran. Mb= 4.6 SD 1.1 /CGS/.
- 7 eZ /P/ 13 29 41, eZ 13 30 27,
- 7 eZ- P 13 53 35, USCGS: H= 13 41 13.4, 26.6N, 126.3E, h= 123 km. Ryukyu Islands. Mb= 5.3 SD 1.0 /CGS/.
- 7 eZ P 15 23 09, USCGS: H= 15 16 04.4, 26.6N, 53.7E, h= N, Southern Iran. Mb= 5.0 SD 0.8 /CGS/.
- 7 eZ P 16 37 32, USCGS: H= 16 30 29.5, 26.6N, 53.3E, h=N, Southern Iran. Mb= 5.0 SD 1.1 /CGS/.
- 7 eZ P 16 50 30, USCGS: H= 16 41 06.7, 2.8S, 12.1W, h= N, North of Ascension Island, Mb= 5.3 SD 0.8 /CGS/.
- 7 Z P 18 30 00, USCGS: H= 18 20 35.8, 2.9S, 12.0W, h= N, North of Ascension Island, Mb =5.2 SD 1.3 /CGS/.
- 7 eZ+ P 18 41 33, eZ S 18 47 31, eZ! 18 51 31, D= 4400 km. BCIS: H= 18 34 07 /DECM/, 28.0N, 60.1E, h= 105 km ± 18 km. Central Iran. North of BampurMSH= 7.1 /Tirana/, m= 6.7

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- /cont./ /Uppsala/, M= 6.6 /Roma/, MLH= 6.5 /Tirana/, M=6.5 /Athens/, MLH= 6.1 /Pruhonice/, M= 6.0 /Uppsala/, USCGS: H= 18 33 59.9, 27.9N, 60.1E, h= 35 km. Southern Iran. Felt in southern Iran. M= 7 /GOL/, Mb= 6.1 Ms= 6.7 /CGS/.
- 7 eZ Pn 19 24 /27/, iZ Sn 19 24 56.0, /D= 260 km./
- 7 eZ Pg 22 04 46, Z Sg 22 05 /00/, D= 130 km.
- 8 eZ P 20 37 50, USCGS: H= 20 28 23.9, 3.0S, 12.1W, h=N, North of Ascension Island. Mb =5.2 SD 1.0 /CGS/.
- 9 iZ+ P 09 30 25.2, USCGS: H= 09 15 48.3, 61.9N, 151.9W, h= 115 km. Southern Alaska.
- 9 Z PKP 09 27 /00/, USCGS: H= 09 07 50.9, 16.3S, 167.9E, h= 185 km. New Hebrides Islands. Felt. Mb = 5.3 SD 1.0 /CGS/.
- 10 iZ Pg 05 54 09.5, iZ Sg 05 54 13.3, D= 30 km.
- 10 eZ PKP 09 32 39, USCGS: H= 09 12 50.0, 15.2S, 172.5W, h=65 km. Samoa Islands region, felt at Apia. Mb= 4.6 SD 1.6 /CGS/.
- 11 eZ Pn 13 17 44, eZ Sn 13 18 14, D= 270 km.
- 11 eZ PKP 15 43 53, USCGS: H= 15 23 59.2, 5.7S, 151.4E, h= 73 km. New Britain region. Mb= 5.3 SD 1.0 /CGS/.
- 12 eZ /Pn/ 14 58 44,
- 12 eZ P 19 21 13, USCGS: H= 19 09 02.0, 53.0N, 168.3W, h= 53 km. Fox Islands, Aleutian Islands. M= 5.7-5.9 /BRK/, 5 3/4 -6 /PAL/, Mb= 5.4 SD 0.7 /CGS/.
- 13 eZ Pn 04 43 46, eZ Sn 04 44 25, D= 260 km.
- 14 eZ- Pn 06 49 30, eZ 06 49 52, eZ Sn 06 50 30, D= 560 km. USCGS: H= 06 48 04.4, 40.7N, 15.7E, h= 15 km. Southern Italy, M b= 4.7 SD 0.9 /CGS/.
- 14 eZ PKIKP 07 57 11, iZ PKHKP 07 57 18.5, eZ pPKP 07 58 14, USCGS: H= 07 37 45.7, 19.7S, 175.9W, h= 209 km. Tonga Islands, M= 5.6-5.8 /BRK/, Mb= 5.5 SD 1.0 /CGS/.
- 14 eZ Pn 13 51 45, eZ Sn 13 53 20, D= 1030 km. Athens: H= 13 49 39, 41.2N, 19.8E.
- 16 eZ P 00 05 55, USCGS: H= 23 58 25.1, 26.8N, 53.5E, h= 42km. Southern Iran. Mb =4.9 SD 0.8 /CGS/.
- 16 eZ Pn 09 35 38, eZ 09 37 37, Athens: 09 33 39, 40.2N, 20.8 E, Felt in Ioannina / 3° at Pirsoghianni/.
- 16 eZ 14 18 09, eZ 14 18 20, traces.

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- 17 eZ P 00 51 /36/, eZ 00 52 50, Athens: H= 00 49 30, 40.4N, 20.5E.
- 17 eZ 01 02 37, eZ 01 03 19, traces.
- 17 eZ P 13 45 22, USCGS: H= 13 25 31.1, 17.4S, 173.6W, h= N, Tonga Islands. Mb= 4.8 SD 0.6 /CGS/.
- 18 eZ Pn 07 33 35, eZ Sn 07 34 01, D= 235 km. BCIS: H= 07 32 56, /DECM/, 45.1N, 18.0E, Yugoslavia. Banja Luka region.
- 18 eZ Pn 08 33 55, eZ Sn 08 34 23, D= 250 km.
- 18 eZ Pn 13 11 33, Z Sn 13 12 /00/,
- 18 eZ PKP 21 05 34, USCGS: H= 20 45 41.6, 22.3S, 175.3W, h= N, Tonga Islands. Mb= 4.9 Ms= 5.3 SD 0.9 /CGS/.
- 18 eZ Pn 21 24 /37/,
- 18 eZ 23 05 18, eZ Sn 23 05 35, traces.
- 19 eZ Pn 04 32 30, eZ Sn 04 32 /58/,
- 19 eZ 16 17 34, eZ /Sn/ 16 17 41, traces.
- 19 eZ- P 08 56 13, eZ 08 56 19, USCGS: H= 08 45 03.3, 41.8N, 133.7E, h= 423 km. Sea of Japan. Mb= 5.0 SD 0.8 /CGS/.
- 19 eZ- P 13 24 18, USCGS: H= 13 11 45.8, 0.9N, 97.8E, h= 33km. Northern Sumatra. Mb= 5.3 SD 1.0 /CGS/.
- 20 eZ PKP 12 00 34, weak. USCGS: H= 11 40 52.0, 18.3S, 167.5E, h= N, New Hebrides Islands. Mb= 4.8 SD 1.2 /CGS/.
- 20 eZ P 21 12 /42/, traces. USCGS: H= 21 00 29.0, 43.3N, 147.9 E, h= 53 km. Kurile Islands region. Mb= 5.1 SD 1.1 /CGS/.
- 20 eZ P 23 58 07, USCGS: H= 23 46 11.6, 56.6N, 153.2W, h= N, Kodiak Islands region. M= 5.6, ML/CGS/, 5.3 /GOL/, Mb= 5.1 Ms= 5.5 SD 1.3 /GOL/,
- 21 eZ-P 02 17 53, iZ! PcP 02 18 02, eiZ PP 02 21 07, D= 9100km USCGS: H= 02 05 35.3, 2.1N, 94.6E, h= 20 km Off coast of northern Sumatra. M= 7.5 /PAS/, 8.2 /GOL/, Mb= 6.4 Ms= 7.7 /CGS/.
- 21 eZ P 02 41 46, USCGS: H= 02 29 27.0, 1.7N, 94.5E, h= N, Off western coast of northern Sumatra.
- 21 eZ Pn 10 55 /28/, eZ Sn 10 55 57, /D= 160 km/, traces.
- 21 eZ 15 04 27, eZ 15 05 23, eZ Sg 15 05 42, weak.
- 22 eZ 19 47 45, Z 19 48 /00/, traces.

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- 22 Z Pn 20 37 /00/, eZ Sn 20 38 56, D= 1140 km. Athens: H= 20 34 40, 38.4N, 23.3E, ML= 3.8, USCGS: H= 20 34 41.2, 37.8N 23.4E, h= 61 km. Southern Greece. Mb= 4.4 SD 2.2 /JGS/.
- 23 eZ 05 48 43, eZ 05 49 16, traces.
- 23 eZ Pn 09 01 42, eZ /Sn/ 09 02 15, D= 300 km.
- 23 Z P 11 47 00, BCIS: H= 11 40 45 /DECM/, 38.4N, 55.3E, Western Turkestan. /Kopet - Dagh/. USCGS: H= 11 40 45.1, 38.3 N, 55.5E, h= 38 km. Iran-USSR border region. Mb= 4.9 SD 1.1 /CGS/.
- 24 eZ Pn 08 10 24, iZ Sn 08 10 53.4, D= 260 km.
- 24 eZ /Pn/ 09 10 22, eZ Sn 09 10 56,
- 24 iZ /Pn/ 13 50 53, iZ Sn 51 23.2,
- 24 iZ P 17 31 08.0, iZ pP 17 31 35.3, iZ PP 17 32 48, D=4800 km. BCIS: H= 17 23 16 /DECM/, 37.2N, 71.7E, h= 90 km + 10 km. Hindu - Kush. USCGS: H= 17 23 20.2, 37.2N, 71.7E, h= 123 km. Afghanistan-USSR border region. Felt in Tadzhikistan. Mb= 5.6 SD 0.9 /CGS/.
- 24 eZ PKP 21 49 57, USCGS: H= 21 31 17.6, 18.0S, 178.4W, h= 593 km. Fiji Islands region. Mb= 5.4 SD 0.9 /CGS/.
- 25 eZ Pn 10 56 47, eZ Sn 10 57 15, D= 260 km. Banja Luka region.
- 25 iZ Pn 16 46 18.0, iZ Sn 16 46 49.2, D= 270 km. Banja Luka region. BCIS: H= 16 45 36 /DECM/, 44.7N, 17.1E, Yugoslavia.
- 26 eZ PKP 13 03 36, obscured by microseisms. USCGS: H= 12 44 04.716.8S, 167.7E, h= 33 km. New Hebrides Islands, felt in Port Vila. M= 6.3 /PAS/, 6 /BRK/, 6.3 /GOL/, Mb= 5.4 Ms= 6.0 SD 1.3 /CGS/.
- 26 iZ 19 55 08.8, iZ Sn 19 55 33.4,
- 26 iZ 22 29 54, obscured by microseisms.
- 27 iZ PKP 03 27 07.5, eZ pPKP 03 27 44, USCGS: H= 03 07 42.4, 19.6S, 169.3E, h= 135 km. New Hebrides Islands. Mb= 5.0 SD 01.1 /CGS/.
- 28 eZ PKP 14 05 38, eZ 14 06 28, USCGS: H= 13 47 08.9, 6.9S, 129.7E, h= 75 km. Banda Sea, Mb= 5.6 SD 1.3 /CGS/.
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- 4 eZ- P 00 45 30, USCGS: H= 00 34 58.6, 12.4N, 93.7E, h= N,

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- /cont./ Andaman Islands region. Mb= 5.3 SD 0.8 /CGS/.
- 4 iZ Pn 03 06 31, iZ Sn 03 07 00.5, D= 270 km.
- 4 eZ-P 05 56 /28/, eZ Sn 05 57 33, /D= 620 km/. Sandjak, Yugoslavia./Beograd/.
- 4 eZ P 09 02 46, USCGS: H= 08 50 21.6, 40.7N, 144.7E, h= 20 km. Off east coast of Honshu, Japan. Felt. Mb = 5.7 Ms=5.5 SD 1.1 /CGS/.
- 6 eZ P 07 08 55.5, BCIS: H= 07 03 00 /DECM/, 43.8N, 54.8E, USSR, east of Caspian Sea. Epicenter unusual, artificial? m= 6.4 /Uppsala/, M= 5.0 /Uppsala/. USCGS: H= 07 02 57.4, 43.8N, 54.8E, h=0 km. Western Kazakh SSR. Mb= 5.8 SD 0.9 /CGS/.
- 6 eZ Pn 21 30 28, eZ 21 31 05, weak.
- 7 eZ+ P 04 15 02, USCGS: H= 03 55 31.1, 18.1S, 168.2E, h= 49 km. New Hebrides Islands. Mb =5.2 SD 0.9 /CGS/.
- 9 eZ Pg 05 47 43, iZ Sg 05 47 55.5, D= 110 km.
- 10 eZ Pn 02 45 20, iZ Sn 02 45 49.0, felt at Banja Luka 4⁰-5⁰, D= 260 km. Yugoslavia.
- 10 eZ PKP 20 13 31, eZ 20 13 51, USCGS: H= 19 53 58.2, 14.8 S, 167.0E, h= 21 km. New Hebrides Islands. Mb= 5.4 Ms= 6.3 SD 1.3 /CGS/.
- 11 eZ /Fn/ 18 03 19, eZ 18 03 58,
- 12 Z 22 14 /00/, eZ 22 14 18, traces.
- 13 eZ P 03 16 38, USCGS: H= 03 06 40.0, 1.ON, 27.9W, h= N, Central Mid-Atlantic ridge, Mb= 4.8 SD 1.1 /CGS/.
- 13 iZ+ P 03 29 52.3, USCGS: H= 03 19 58.3, 1.ON, 28.0W, h=N, Mid-Atlantic ridge. Mb= 5.6 SD 1.0 /CGS/.
- 14 eZ P 02 55 45, eZ /PP/ 03 00 30, eZ SKS 03 06 43, eZ 03 09 23, D= 11550 km. USCGS: H= 02 42 09.4, 2.ON, 126.9E, h= 42 km. Molucca Passage, Mb= 6.0 SD 1.0 Ms= 5.7 /CGS/.
- 14 iZ P 18 46 27.3, eZ PcP 18 47 35, eZ PP 18 48 20, eZ S 18 54 /00/, D= 5900 km. USCGS: H= 18 37 09.5, 8.2N, 58.5E, h= Carlsberg ridge, Mb= 6.0 Ms= 5.6 SD - /CGS/.
- 16 eZ Pn 11 49 24, iZ 11 49 33.8, eZ Sn 11 50 53, d= 850 km. BCIS: H= 11 47 33 /DECM/, 39.5N, 20.7E, Western Greece, ML= 3.6 /Athens/, USCGS: H= 11 47 31.6, 39.3N, 20.6E, h= 64 km. Greece-Albania border region. Mb= 4.5 SD 1.1 /CGS/.
- 16 iZ Pn 18 21 00 iZ Sn 18 21 47.0, D= 430 km.
- 17 eZ P 02 42 11, USCGS: H= 02 29 42.0, 2.9N, 98.6E, h= 52

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- /cont./ km, Northern Sumatra, Mb= 4.9 SD 0.9 /CGS/.
- 17 eZ PKP 07 49 39, USCGS: H= 07 30 22.4, 15.4S, 167.6E, h= 134 km. New Hebrides Islands, Mb= 4.9 SD 0.9 /CGS/.
- 18 eZ 07 15 18, eZ Sn 07 16 58, traces. Athens: H= 07 13 09, 31.1N, 20.4E, ML= 3.9, felt on cephalonia Island. Greece.
- 18 eZ P 13 43 23.6, eZ pP 13 44 43, USCGS: H= 13 32 05.2, 46.3 N, 142.5E, h= 344 km. Sakhalin Island, felt widely on Hokkaido. Max. Int. 3 /JMA/, M= 6.5 /PAS/, Mb= 5.9 SD 1.0 /CGS/.
- 19 eZ Pg 01 12 58.4, Z Sg 01 13 00, D= 20 km. Local.
- 20 eZ 16 47 59, iZ Sn 16 48 56.8, traces,
- 20 eZ Pn 17 43 17, eZ /Sn/ 17 45 22, D= 1240 km. BCIS: H= 17 40 35, /DECM/, 36.5N, 23.6E, h more than normal. Greece, southeast of Peloponissos. ML= 4.3 /Athens/, USCGS: H= 17 40 36.3, 36.6N, 23.5E, h= 88 km. Southern Greece, Mb= 4.6 SD 1.2 /CGS/.
- 23 eZ Pn 02 16 /09/, eZ 02 18 24 eZ 02 19 26, Athens: H= 02 13 49, 39.3N, 23.9E, ML= 3.9, USCGS: H= 02 13 56.3, 39.ON 23.9E, h= 55 km. Mb= 4.4 SD 1.2 /CGS/.
- 23 eZ P 13 34 26, USCGS: H= 13 22 54.2, 57.4N, 163.1E, h= N, Near east coast of Kamchatka. Mb= 5.4 Ms= 5.5 SD 0.9 /CGS/.
- 24 eZ+ P 05 09 29, BCIS: H= 05 04 45 /DECM/, 35.9N, 10.4W, Transatlantic seismic zone, southwest of Portugal. Felt at Rabat and Casablanca/Rabat/, and in Portugal /Press/, US CGS: H= 05 04 44.5, 36.ON, 10.4W, h= N, North Atlantic Ocean. Felt at Rabat and Casablanca. Mb= 5.1 SD 0.9 /CGS/.
- 25 iZ- PKP 16 42 10.3, USCGS: H= 16 22 36.9, 21.2S, 170.2E, h= 124 km. Loyalty Islands region. Mb= 4.8 SD 1.2 /CGS/.
- 25 eZ P 21 43 28, USCGS: H= 21 32 27.3, 15.8N, 59.7W, h= 7 km. Leeward Islands. Felt on Guadeloupe, Dominica and Martinique/6/, St Vincent /5/, and on Antigua and Barbados /4/. Felt as far as San Juan, P.R. and Caracas, Venezuela. Tsunami heights /crest to trough in meters/, Barbados 0.46, Antigua 0.30, Dominica 0.12, M= 7.2 /PAS/, 7.6 /GOL/, Mb= 6.4 Ms= 7.2 /CGS/.
- 25 eZ P 22 11 50,
- 25 Z P 22 41 00, USCGS: H= 22 31 02.3, 16.1N, 59.8W, Mb= 6.0, Ms= 6.5 SD 1.0 /CGS/.
- 25 eZ P 23 10 29,
- 26 eZ /P/ 10 44 56, obscured by microseisms. USCGS: H=

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- /cont./ 10 33 59.8, 16.1N, 59.8W, h= 16 km. Leeward Islands, Mb= 5.4 SD 0.9 /CGS/.
- 26 iZ P 20 14 25.7, iZ 20 14 39.9, USCGS: H= 20 03 28.8, 15.8 N, 59.6W, h= N, Leeward Islands. Mb= 5.4 SD 0.8 /CGS/.
- 26 iZ Pg 21 15 13.6, iZ Sg 21 15 15.6, D= 20 km.
- 27 eZ Pn 07 34 /24/, eZ 07 36 20, Obscured by microsisms. BC IS: H= 07 31 52 /DECM/, 39.ON, 23.7E, Aegean Sea. Ms= 4.8 /Athens/. USCGS: H= 07 31 52.1, 39.1N, 23.9E, h= 31 km. Aegean Sea. Mb= 4.6 SD 1.3 /CGS/.
- 28 eZ Pn 22 04 12, eZ Sn 22 05 /43/, /D= 890 km/, BCIS: H=22 02 32 /DECM/, 40.75N, 19.75E, Albania, felt 5⁰-6⁰ at Fieri and Lushnje /Tirana/, MLH= 4.5 /Tirana/, MLH= 3.7 /Skopje/. USCGS: H= 22 02 34.3, 40.7N, 19.8E, h= N, Albania. Felt at Fieri and Lushnje /5⁰-6⁰/, Mb= 4.6 SD 1.6 /CGS/.
- 29 eZ P 01 02 46, USCGS: H= 00 51 47.2, 16.2N, 59.7W, h= 17 km. Leeward Islands. M= 5.8 SD 1.0 /CGS/.
- 31 eZ Pn 05 40 35, weak. BCIS: H= 05 36 57 /DECM/, 34.ON, 25.7E, Mediterranean Sea. South of Crete. ML= 4.7 /Athens/. USCGS: H= 05 37 02.5, 34.4N, 26.1E, h= 27 km. Crete. Mb=5.5 SD 1.2 /CGS/.
- 31 eZ Pn 13 19 09, BCIS: H= 13 18 32 /DECM/, 44.8N, 17.2E, Yugoslavia. Felt on the region of Banja Luka /6⁰-7⁰/ /Ljubljana/. MLH= 5.3 /Skopje/, MLH= 5.6 /Bensberg/, MLH= 5.4 /Collm /, MLH= 5.2 /Moxa/, MLH= 5 /Pruhonice/, M= 5 /Zagreb/, MLH= 4.9 /Wien/, M= 4.9 /Beograd/, M= 4.6 /Bratislava/, USCGS: H= 13 18 32.8, 44.9N, 17.2E, h= N, Yugoslavia. Felt at Banja Luka. Mb= 5.1 SD 1.4 /CGS/.

Ljubljana, June 8, 1970

 Interpretation: M. Hržič
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