

1962

University of Ljubljana
Astronomical and Geophysical
Observatory
L j u b l j a n a
Trg revolucije 11, P.O.B. 20
Yugoslavia

P R E L I M I N A R Y S E I S M O L O G I C A L
B U L L E T I N
(January-March 1962)



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PRELIMINARY SEISMOLOGICAL BULLETIN
from January 1 to March 31, 1962

Station Ljubljana : 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: 396 m;

Lithologic foundation: sandstone (carbon);

Instruments:

Wiechert, horizontal astatic seismograph, $M= 200$ kg,
mechanical registration, 14-16 mm/min;

Constants (15.II.1962):

Component	T_0	v:1	r/T_0^2	V
N-S	4.9	2.7:1	0,014	62
E-W	4.9	2.9:1	0,013	65

Hiller-Stuttgart, vertical component Z with galvanometrical
recording; $T_0=1.5$ sec, $T_g=1.5$ sec, $D_1=D_2 =1$,
 $V_{max} =10\ 150 \times$, 60 mm/min;

Note: Periods of seismic waves are given in seconds, the
amplitudes in microns; sign + means compression
or movement towards north or east, sign - means
dilatation or movement towards south or west.
All times given mean G.M.T. Time signals are
received one or two times daily from Pontoise,
Potsdam or Moscow and are registered on a
chronograph. Wherever possible time readings up
to one tenth of a second are given.

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1 eiZ P 02 53 30.6, eiZ 02 53 36.2, eZ 02 53 59.4,
USCGS: H= 02 41 06.0, 52.3 N, 177.9 E, h about 26 km,

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- 1 (cont.) Rats Islands, Aleutian Islands.
- 1 eiZ PKP 15 50 50.1, traces, USCGS: H= 15 31 10.5, 22.3 S, 171.6 E, h about 83 km, Loyalty Islands region.
- 1 eZ P 23 52 40, eZ 23 52 56, USCGS: H= 23 40 20.3, 52.4 N, 177.7 E, h about 27 km, Rats Islands, Aleutian Isl.
- 2 iZ Pn 04 48 10.6, iZ Sg 04 48 52.8, weak, D= 290 km.
- 2 eiZ 06 12 45.6, traces.
- 2 eiZ PKP 12 07 13.9, eiZ 12 07 16.1, USCGS: H= 11 47 31.0, 21.8 S, 169.8 E, h about 56 km, Loyalty Islands region.
- 2 iZ P 12 29 43.6, eiZ 12 29 48.9, eZ 12 30 22.1, eZ M 12 41 36: Tz=3.5, Az=0.5, eZ M 12 42 33, USCGS: H= 12 22 58.7, 80.0 N, 24.3 E, h about 48 km, North-east from Spitzberg, Svalbard region. Strasbourg: H= 12 22 58, 80.0 N, 20 E;
- 3 iZ PKP 07 09 29.5, iZ 07 09 36.4, USCGS: H= 06 49 50.9, 21.7 S, 170.0 E, h about 120 km, Loyalty Islands.
- 3 iZ P or PKP 11 44 42.1, eiZ 11 44 48.5;
- 3 iZ P or PKP 11 59 39.0, traces.
- 4 eiZ PKP 00 10 11.6, eiZ 00 10 16.8, iZ 00 10 39.9, USCGS: H= 23 50 28.8, 21.5 S, 169.9 E, h about 75 km, Loyalty Islands.
- 4 eiZ P 04 28 21.1, USCGS: H= 04 16 01.7, 35.1 N, 138.9 E, h about 178 km, Near coast of Honshu, Japan. Felt.
- 4 iZ! P 04 48 11.0, iZ 04 48 23.6, iZ! 04 48 27.6, eZ PP 04 51 28.7, eZ S 04 58 30, obscured by microseisms, USCGS: H= 04 35 42.6, 33.9 N, 135.2 E, h about 56 km, Near Shikoku, Japan. Mag.= 6 (Berk), D= 9300 km.
- 4 eiZ (Pn) 21 15 03.5, iZ Pg 21 15 14.3, eZ Sn 21 15 45.3, Z Sg 21 16 (00) in minute interruption, D= 370 km, very weak. Foreshock Makarska region?
- 5 eiZ PKP₁ 00 43 16.8, eiZ! PKP₂ 00 43 22.2, iZ 00 43 46.4, eZ 00 44 15, USCGS: H= 00 23 32.1, 15.5 S, 177.7 W, h about 24 km, Fiji Islands region. Mag.= 6 1/4 (Pas), 6 1/4- 6 1/2 (Berk). D= 16 450 km.
- 5 eiZ - P 04 34 53.9, eiZ pP 04 35 29.9, eiZ PP 04 36 32.8, disturbed by microseisms. USCGS: H= 04 27 05.4, 36.4 N, 71.2 S, h about 182 km, Hindu Kush. Quetta: H= 04 27 04, 36 N, 71 1/2 E, h about 150 km. D= 4750 km.
- 5 eiZ PKP₁ 08 27 51.2, iZ 08 27 54.9, iZ! PKP₂ 08 28 05.7, eiZ 08 28 12.0. USCGS: H= 08 08 07.5, 15.5 S, 172.5 W, h about 60 km, Tonga Islands region.
- 5 eiZ P 14 14 30.5, eZ 14 14 41, USCGS: H= 14 01 41.7, 1.6 S, 100.0 E, h about 25 km, Near south coast of Sumatra.
- 6 (e)Z 21 28 22, iZ (Sg) 21 28 38.7, traces, weak.

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- 7 eiZ P 01 26 16.3, USCGS: H= 01 14 12.5, 55.2 N, 154.1 W, h about 27 km, Near Kodiak Island.
- 7 eZ P 01 42 52, traces, weak. USCGS: H= 01 30 34.5, 52.0 N, 177.8 E, h about 55 km, Rat Islands, Aleutian Islands.
- 7 eiZ Pn 07 50 31.2, eiZ Pg 07 50 44.1, eiZ Sn 07 51 11.8, iZ 07 51 21.8, iZ! Sg 07 51 26.9!, iZ 07 51 34.2, D= 370 km, Foreshock Makarska region?
- 7 iZ! Pn 10 04 06.1!, eE Pn 10 04 08.6, iN Pn 10 04 08.7, iZNE! Sg 10 05 02.8, partly underexposed. D= about 370 km. Press: felt in Dalmatia and Hercegovina (Makarska, Mostar, Sarajevo, Čapljina, Goražde). Maximal intensity 7° MCS in Makarska region near Biokovo mountain. About 400 buildings damaged in the suburbs of Makarska near Dalmatian coast. Moderate damage in Mostar, Čapljina, Ljubuški, Metković. Felt in Peč and Priština, about 250 km from macroseismic epicenter. Felt II-III at Trieste. BCIS: H= 10 03 12, 43°15'N, 17° 07' E, Yugoslavia, Dinaric Alps, near Makarska. USCGS: H= 10 03 12.8, 43.4 N, 17.4 E, h about 32 km, Yugoslavia. 2 killed, 19 injured, heavy damage centering around Makarska. Mag(LH) = 6.2 (Praha).
- 7 iZ! Pn 10 22 14.3, iZ Pg 10 22 25.5, iZ Sn 10 22 55.8, iZ Sg 10 23 10.9, D= 370 km, aftershock, weak.
- 7 iZ Pn 10 42 17.4, iZ Pg 10 42 28.6, iZNE Sn 10 42 59.1, iZ Sg 10 43 14.2, D= 370 km, Makarska aftershock.
- 7 eiZ Pn 11 03 24.4, iZ 11 03 47.5, iZ 11 04 12.6, iZ Sg 11 04 24.5, D= about 370 km, Makarska aftershock.
- 7 iZ Pn 13 49 08.8, iZ Pg 13 49 19.3, iZ 13 49 59.6, iZ Sg 13 50 07.6, D= about 370 km, aftershock.
- 7 iZ Pn 16 12 04.6, iZ (Pg) 16 12 17.3, iZ 16 12 50.5, iZ Sg 16 12 58.9, D= about 370 km, aftershock Makarska.
- 7 (e)Z Pn 17 12 32, eiZ Sg 17 13 26.4, D= 370 km, aftershock, very weak.
- 7 eiZ Pn 17 18 40.8, iZ Sg 17 19 34.2, D= about 370 km, weak, aftershock.
- 7 iZ Pn 18 08 25.8, iZ Pg 18 08 36.8, iZ X1 18 08 49.5, iZ Sn 18 09 07.6, iZ Sx 18 09 15.3, iZ! Sg 18 09 23.2, D= 370 km, Makarska aftershock. Remarkable.
- 7 eiZ(Sg) 18 30 43.8, traces.
- 7 iZ Pn 18 47 11.4, iZ Sg 18 48 06.0, weak, aftershock.
- 7 Z 19 00-01, traces, near, aftershock?
- 7 eiZ Pn 19 25 29.0, iZ Pg 19 25 40.1, iZNE Sg 19 26 25.1, D= 370 km, aftershock Makarska, remarkable.
- 7 eiZ Pn 20 22 49.4, eiZ Sg 20 23 42.1, D= about 360 km, aftershock, weak.
- 7 (e)Z Pn 20 58 13, eiZ Sg 20 59 04.8, D= 370 km, aftershock.

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- 7 Z Pn 22 51 (00) in minute interruption, iZ Sg 22 51 55.3, D= about 360 km, aftershock, weak.
- 7 (ei)Z Pn 23 21 09.7, eiZ Sg 23 22 03.8, D= about 370 km, aftershock.
- 7 iZ Pn 23 54 48.3, iZ (Sg) 23 55 40.3, D= about 370 km, aftershock.
- 7 eiZ Pn 23 56 47.0, iZ Sg 23 57 41.6, D= 370 km, aftershock.
- 8 iZ P 01 11 54.9, iZ! 01 11 57.7, iZ! PcP 01 12 05.8, iZ 01 12 19.4, eiZ PP 01 14 29, USCGS: H= 01 00 24.2, 18.5 N, 70.5 W, h about 63 km, Near south coast of Dominican Republic. 1 killed, 6 injured. Damage at San José, Ocoa and Azua. Mag.= 6 1/2 (Pas), 6 1/4- 6 1/2 (berk). D= 8100 km.
- 8 eiZ PKP₁ 06 02 46.2, iZ 06 02 54.9, iZ! PKP₂ 06 03 14.6, USCGS: H= 05 43 02.2, 24.2 S, 177.7 W, h about 133 km, Tonga Islands region.
- 8 eiZ+ P 22 32 48.3, eiZ 22 33 37.4, Quetta: H= 22 25 16, 35 3/4 N, 71 1/4 E, h about 200 km, Hindu Kush. Mag.= 6 (Quetta).
- 9 eiZ P 12 53 00.0, eZ! 12 53 04.0, eiZ 12 53 26.7, eZ 12 54 00.2, USCGS: H= 12 40 49.3, 42.9 N, 144.8 E, h about 78 km, Near coast of Hokkaido, Japan.
- 9 eiZ P or PKP 22 46 16.1, iZ 22 46 24.0, traces.
- 10 (ei)Z PKP 00 14 43.7, iZ 00 15 00.5, USCGS: H= 23 55 49.2, 22.2 S, 179.5 W, h about 603 km, Fiji Islands region.
- 10 Z 02 14-18 traces, weak.
- 10 eiZ+ Pn 06 37 00.4, iZ Pg 06 37 13.2, iZ! Sg 06 37 55.1, D= 370 km, Makarska region?
- 10 iZ Pn 12 39 17.4, eiZ 12 39 32.5, eiZ 12 40 07.0, eZ Sn 12 41 23.7, iZ! 12 41 27.2, D= about 1 220 km.
- 11 eiZ+ NE !! Pn 05 05 54.9!, iZ! 05 05 55.8, iE! 05 06 22, iZNE!! Sg 05 06 51.1, Z comp. major parts underexposed. D= 370 km. Felt in Ljubljana II-III^o MCS, Dekani near Koper: II^o MCS, Ankarani near Koper: II^o MCS, Sežana near Trieste: II^o MCS. Macro seismic radius: about 380 km. Heavy damage in southern Dalmatia and Hercegovina. Many buildings destroyed in Makarska region. (Podgora, Drašnice, Tučepi). Damage at Vrgorac, Mostar, Metković, Ploče, Dubrovnik and Lopud. BCIS: first determination: H₁=05 05 02, 43° 15' N, 17° 07' E, Yugoslavia. Dinaric Alps around Makarska. BCIS: second determination by electronic calculating machine: H₂ = 05 05 03, 43° 18' N, 17° 02' E, Yugoslavia. Dinaric Alps, near Makarska. Destructive at Makarska, 4 killed, several wounded. Numerous aftershocks (35 recorded at Titograd on Jan. 11). USCGS: H= 05 05 01.6, 43.5 N, 17.7 E, h about 25 km, Near coast of Central Yugoslavia. 2 killed, 20 injured. Moderate property damage at Podgora

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- 11 (cont.) Place and Makarska. Mag.= 5 3/4 (Pas), Mag. (LM)= 6.4 (Praha). Macro seismic epicenter: 43° 14' N, 17° 04' E. I₀ = 8.5° MCS scale.
- 11 iZ Pn 05 17 18.1, aftershock, obscured by the main shock.
- 11 iZ Pn 05 18 45, aftershock.
- 11 (ei)Z Pn 05 27 28, disturbed by previous shock.
- 11 iZ Pn 05 33 59.3, iZ 05 34 51.1, iZ Sg 05 34 55.8, D= 370 km, aftershock.
- 11 iZ Pn 05 43 14.3, iZ Pg 05 43 23, iZNE Sg 05 44 10.5, BCIS: H= 05 42 20, aftershock Makarska.
- 11 iZ! Pn 05 50 55.4, iZ! Pg 05 51 05.3, iZ Sn 05 51 37.6, iZ! NE Sg 05 51 52.3!, BCIS: H= 05 50 06, aftershock Makarska, D= 370 km.
- 11 eiZ Sg 05 59 23;
- 11 iZ Pn 06 01 07.0, Z Sg 06 02 (00) in minute interruption, D= 370 km, aftershock.
- 11 iZ Pn 06 15 21.0, iZ Pg 06 15 31.5, iZ Sg 06 16 17.1, iZ! 06 16 20.6, D= 370 km, aftershock Makarska.
- 11 Z 06 30-32, traces, aftershock ?
- 11 (ei)Z Pn 06 32 21.7, iZ Sg 06 33 18.0, iZ! 06 33 33.6, D= 370 km, aftershock.
- 11 Z 06 37-38, traces, near.
- 11 (e)Z Pn 06 40 29.8, eiZ Pg 06 40 40.7, iZ Sg 06 41 25.6, D= 370 km, aftershock.
- 11 Z 06 49-51, traces of the maximal phases of an aftershock, initial phases lost while changing records.
- 11 iZ+ Pn 06 51 32.2, iZ Pg 06 51 43.8, iZ X 06 52 03.3, iZ Sn 06 52 11.6, iZ! Sg 06 52 27.3, D= 370 km, aftershock.
- 11 eiZ Pn 06 54 41.3, iZ Pg 06 54 52.4, iZ Sg 06 55 37.4, Aftershock Makarska, D= 370 km.
- 11 (e)Z (Pg) 07 37 24.4, eiZ Sg 07 38 11.1, aftershock.
- 11 eiZ Pn 07 58 15.3, iZ Pg 07 58 26.1, iZ Sg 07 59 12.0, iZ! 07 59 25.0!, D= 370 km, aftershock Makarska.
- 11 iZ (Sg) 08 00 04.3, aftershock ?
- 11 eiZ 08 05 35.1, obscured by microseisms, aftershock?
- 11 eiZ (Pn) 08 07 47.6, eiZ Sg 08 08 36.8, aftershock, D= about 370 km.
- 11 Z 08 34 (00) in minute interruption, iZ Sg 08 34 48.5,
- 11 eZ 08 37 43, traces, near.
- 11 eiZ Pn 08 46 05.8, iZ! Sg 08 46 59.3, aftershock Makarska.
- 11 Z 08 58-59, traces, near.

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- 11 iZ Sg 09 21 52.5, traces, aftershock.
- 11 eiZ Pg 09 31 30.2, iZ Sg 09 32 16.4, D= 370 km, weak, aftershock.
- 11 iZ Sg 09 34 00.1, aftershock.
- 11 eiZ Sg 09 50 46.5, aftershock.
- 11 eiZ Pn 10 03 31.2, iZ Pb 10 03 35.2, iZ! Pg 10 03 41.4, eNE Pg 10 03 42, iZNE Sg 10 04 26, iNE M 10 04 50, BCIS: H= 10 02 38, D= 370 km, Makarska aftershock.
- 11 iZ Pg 10 16 11.5, eiZ Sg 10 16 59.3, D= 380 km, weak.
- 11 eiZ Pn 10 38 55.9, iZ(Pb) 10 39 00.3, iZ Pg 10 39 08.7, iZ! Sg 10 39 50.3, iZ! 10 39 55.8, D=370 km, aftershock.
- 11 Z 10 42-43, traces, near.
- 11 Z(Pn) 11 04 (00) in minute interruption, iZ Pg 11 04 11.1, iZ Sg 11 04 57.3, D= 370 km, aftershock.
- 11 iZ Sg 11 47 36.7, aftershock.
- 11 Z 12 15-16, traces, near.
- 11 (e)Z (Pn) 13 40 (18), eiZ Sg 13 41 13.2, D= about 370 km, aftershock.
- 11 eiZ Sg 13 42 35.1, disturbed by previous shock, near, aftershock ?
- 11 eiZ Sg 14 10 18.5, aftershock.
- 11 eZ 14 23 28.8, iZ Pg 14 23 38.0, iZ! Sg 14 24 23.8, D= 370 km, aftershock.
- 11 eiZ Sg 15 15 55.1, aftershock.
- 11 (ei)Z Pn 15 36 36.1, iZ Sg 15 37 31.8, D= 370 km, aftershock.
- 11 (ei)Z Pn 16 03 35, iZ Sg 16 04 28.8, D= 370 km.
- 11 Z 16 09-10, traces, near.
- 11 eiZ Pn 16 50 56.3, iZ Sg 16 51 53.7, D= 370 km.
- 11 (e)Z (Sg) 17 12 (50)
- 11 eiZ Pn 17 42 28.5, iZ Pg 17 42 40.0, iZ Sg 17 43 25.2, D= 370 km, aftershock.
- 11 eiZ Pn 18 01 15.2, iZ Pg 18 01 25.4, iZ Sg 18 02 25.2, D= 370 km, aftershock.
- 11 eiZ Sg 19 10 04, aftershock.
- 11 iZ+ Pn 19 45 05.4, iZ! Pg 19 45 15.8, iZ X 19 45 35.0, iZ Sn 19 45 45.7, iZ! Sg 19 46 00.4, BCIS: H= 19 44 13, D= 370 km, remarkable. Aftershock Makarska region.
- 11 (e)Z (Pn) 19 54 38, eiZ Pg 19 54 49.6, eiZNE Sg 19 55 33.3, D= 370 km, aftershock.
- 11 (e)Z Pn 19 59 44, iZ Pg 19 59 55.6, iZ Sg 20 00 41.4, D= 380 km, aftershock, weak.
- 11 Z 20 46-47, traces, near.

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- 12 iZ+ Pn 00 08 54.5, iZ! 00 08 59.1, iZ! Pg 00 09 (00) in minute interruption, iZ PgPg 00 09 07.8, iZ Sn 00 09 33.2, iZ!NE Sg 00 09 51.4, BCIS: H= 00 08 02, D= 370 km, aftershock, Makarska region.
- 12 iZ Sg 01 08 23.1
- 12 eiZ Pn 03 06 29.1, eiZ (Pg) 03 06 40.0, eiZ Sn 03 07 07.4, iZ 03 07 20.7, iZ Sg 03 07 28.4, D= 370 km, aftershock.
- 12 eiZ Sg 06 28 35.2, obscured by strong microseisms.
- 12 Z 06 42-43, traces, obscured by microseisms.
- 12 iZ! Pn 10 55 48.7, eiZ Sg 10 56 44.5, disturbed by strong microseisms, D= 370 km, aftershock.
- 12 eiZ Pn 11 56 39.9, eiZ Sg 11 57 35.2, D= 370 km.
- 12 Z 12 41-42, traces.
- 12 (e)Z Pn 16 24 38, eiZ Sg 16 25 34.0, D= 370 km, aftershock.
- 12 eiZ Pn 17 12 55.4, iZ Pg 17 13 08.4, iZ Sg 17 13 51.6, D= 370 km, aftershock.
- 12 eiZ Pn 17 39 50.0, iZ! Pg 17 39 (01)!, iZ Sn 17 40 28.6, iZ! Sg 17 40 44.1, iZ SgSg 17 40 49.0, D= 370 km, aftershock.
- 12 eiZ (Sg) 18 05 (24), traces, disturbed by microseisms.
- 12 Z 20 16-17 traces, near, aftershock.
- 12 eiZ Pn 20 21 55.3, eiZ Sg 20 22 50.7, D= 370 km, aftershock.
- 12 eiZ+ Pn 20 49 26.6, iZ! 20 49 28.9, iZ! Pb 20 49 32.0, iZ!! Pg 20 49 37.0, iZ PgPg 20 49 40.0, iZ X 20 49 47.5, iZ Sn 20 50 07.4, iZ! Sg 20 50 23.5, iZ!NE 20 50 31, BCIS: H= 20 48 36, D= 370 km, Aftershock in Makarska region.
- 12 iZ Pn 21 09 26.4, iZ Pg 21 09 36.5, eiZ Sg 21 10 21.2, D= 370 km, aftershock.
- 12 iZ (Pg) 21 15 36.3, iZ Sg 21 16 25.1, D= 370 km,
- 12 Z 21 38 (00) traces, near.
- 12 iZ Pn 21 38 57.0, iZ Pg 21 39 08.5, iZ X 21 39 29.5, iZ (Sn) 21 39 38.0, iZ! Sg 21 39 52.1, D= 370 km, aftershock.
- 12 Z 21 55-56, traces.
- 12 eiZ Pn 21 58 37.9, iZ Sg 21 59 29.4, D= 370 km, aftershock.
- 12 iZ Sg 22 14 47.5, aftershock.
- 12 (ei)Z Pn 22 21 55.2, iZ Sg 22 22 51.3, D= 370 km.
- 12 (ei)Z Pg 22 31 44, iZ Sg 22 32 35.1, D= 370 km, aftershock.
- 12 iZ Pn 22 40 13.4, iZ Pg 22 40 24.1, iZ! X 22 40 34.1,

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- 12 (cont.): iZ Sg 22 41 08.5, D= 370 km, aftershock.
- 12 eiZ (Sg) 22 44 19.8;
- 12 Z 23 56-57, traces, near.
- 13 eiZ Pn 00 23 37.3, eiZ (Pg) 00 23 47.1, iZ Sg 00 24 31.6, D= 370 km, aftershock.
- 13 iZ+ Pn 00 56 06.2, iZ! Pg 00 56 16.3, iZ X 00 56 36.4, iZ Sn 00 56 48.8, iZ Sg 00 56 55.6, iZ! Sg 00 57 00.5, D= 370 km, aftershock.
- 13 Z 01 54-55, traces.
- 13 Z 03 17-18, traces.
- 13 eiZ PKP 03 23 48.8, USCGS: H= 03 04 55.7, 19.1 S, 177.5 W, h about 542 km, Fiji Islands.
- 13 eiZ+ Pn 04 48 54.3, iZ! Pg 04 49 04.1, iZ X 04 49 22.9, iZ Sn 04 49 35.2, iZ Sg 04 49 43.6, iZ! NE Sg 04 49 50.1, D= 370 km, BCIS: H= 04 48 03, Makarska aftershock.
- 13 iZ! Sg 04 53 26.1, traces, disturbed by the previous shock.
- 13 eiZ Pg 05 08 22.1, iZ Sg 05 09 06.5, D= 370 km.
- 13 iZ Pn 07 25 10.0, iZ Pg 07 25 22.6, iZ Sg 07 26 04.9, D= 370 km, aftershock.
- 13 Z 07 33-34, traces.
- 13 iZ Pn 09 18 25.2, iZ! Sg 09 19 19.8, D= 370 km, aftershock.
- 13 iZ+ Pn 13 02 17.9, iZ! 13 02 22.4, iZ! Pg 13 02 27.0, iZ X1 13 02 37.9, iZ X2 13 02 46.6, iZ Sn 13 03 00.7, iZ! Sg 13 03 12.4, D= 370 km, BCIS: H= 13 01 29, Makarska aftershock.
- 13 Z 13 37-39 traces, weak aftershock.
- 13 eiZ (Sg) 13 53 35, disturbed by microseisms.
- 13 Z (Pg) 17 11 (00) in minute interruption, iZ Sg 17 11 47.1, aftershock.
- 13 iZ Sg 17 12 57.6, iZ 17 13 11.5, iZ 17 13 29.5, superimposed aftershocks.
- 13 eiZ 17 51 41.4, near, obscured by microseisms.
- 14 eiZ 03 09 56.6, iZ! Sg 03 10 51.4, D= 370 km, aftershock.
- 14 iZ+ Pn 04 17 15.2, iZ 04 17 18.4, iZ Pg 04 17 25.6, iZ! 04 17 27.9, iZ Sn 04 17 53.3, iZ Sg 04 18 11.4, D= 370 km, aftershock.
- 14 iZ Pg 10 00 13.5, eiZ (Sg) 10 00 57.6, (D= about 370 km, obscured by microseisms)
- 14 iZ 12 00 05, traces, near.
- 14 iZ Pn 13 22 47.6, iZ Pg 13 22 57.3, iZ Sg 13 23 42.7, iZ! 13 23 46.5, iZ! 13 23 50.4, D= 370 km, aftershock.

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- 14 eiZ (Pg) 13 32 16.4, Z Sg 13 33 (00) in minute interr. D= 370 km, aftershock.
- 14 Z 15 06-07, weak traces, near.
- 14 iZ+ Pn 16 44 05.6, iZ! 16 44 06.6, iZ Pg 16 44 17.1, iZ PgPg 16 44 22.0, iZ X2 16 44 37.0, iZ Sn 16 44 43.4, iZ! Sg 16 44 59.5, D= 370 km, Makarska aftershock.
- 14 iZ Pg 17 01 55.0, iZ Sg 17 02 39.8, D= 370 km, aftershock.
- 14 (ei)Z Pn 17 54 49.2, iZ Pg 17 54 59.9, iZ Sg 17 55 42.6, D= 370 km, aftershock.
- 14 Z 18 32 (00) in minute interruption, traces, near.
- 14 iZ Sg 21 32 41.0, aftershock?
- 15 eiZ (Sg) 01 21 54.4, aftershock?
- 15 Z 01 28-29 traces, near.
- 15 iZ (Sg) 02 04 51.0, traces, near.
- 15 iZ+ Pn 08 37 15.2, iZ Pg 08 37 25.3, iZ PgPg 08 37 28.3, iZ X1 08 37 44.0, iZ! 08 37 52.4, iZ Sn 08 37 54.9, iZ! Sg 08 38 08.6, iZ!! SgSg 08 38 14.1, iZ M 08 38 19.3, NE traces: 08 38.3, D= 370 km, Makarska aftershock.
- 15 (ei)Z Pn 11 09 49.9, iZ Sg 11 10 42.5, D= 370 km, aftershock.
- 15 iZ (Sg) 11 56 46.1, iZ 11 56 54.9.
- 15 eiZ 12 16 50 traces.
- 16 eiZ (Sg) 03 51 22, near traces, disturbed by microseisms.
- 16 eiZ Pg 04 39 38.0, iZ Sg 04 40 24.3, D= 380 km, aftershock Makarska ?
- 16 eZ! PKP₁ 11 55 38.8, eiZ 11 55 45.1, iZ 11 55 56.6, eiZ PKP₂ 11 56 22.8, USCGS: H= 11 35 41.3, 30.5 S, 177.9 W, h about 39 km, Kermadec Islands. Mag.= 6 1/2 (Pas), D= 17 900 km.
- 16 (ei)Z Pg 11 56 30.6, iZ Sn 11 56 59.2, iZ! Sg 11 57 15.9, iZ SgSg 11 57 20.1, D= 370 km, aftershock.
- 16 Z 17 48-49, traces, near.
- 16 eiZ+ P 18 26 20.9, iZ 18 26 34.1, USCGS: H= 18 17 29.7, 7.8 N, 36.0 W, h about 30 km, Mid-Atlantic Ocean.
- 17 eZ Pg 00 47 40, iZ Sg 00 48 26.0, iZ! M 00 48 36.9, D= 370 km, aftershock.
- 17 Z 00 51-52 traces, near.
- 17 eiZ Pn 01 03 18.2, iZ Sg 01 04 12.1, D= 370 km, aftershock Makarska.
- 17 eiZ (Sg) 01 31 16.1, traces.
- 17 Z 02 55,5 traces, near, eiZ (Sg) 02 56 25.0, aftershock?
- 17 (ei)Z Pn 03 15 36.1, iZ Pg 03 15 48.7, iZ Sg 03 16 30.8,

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- 17 (cont.): D= 380 km, aftershock Makarska.
- 17 iZ (Sg) 03 44 20.1, weak traces.
- 17 iZ Pn 03 56 49.1, iZ! (Pb) 03 56 54.1, iZ 03 56 59.0, iZ X1 03 57 16.3, iZ Sn 03 57 29.3, iZ Sb 03 57 35.5, iZ! Sg 03 57 44.3, D= 370 km, aftershock Makarska, remarkable.
- 17 eiZ Pg 04 01 19.0, iZ! Sg 04 02 02.1, D= 370 km, aftershock.
- 17 eiZ (Sg) 04 03 54.9.
- 17 eiZ 08 20 16, traces.
- 17 eiZ 14 34 20, traces.
- 17 eZ 19 40 06, iZ 19 40 38.2, iZ (Sg) 19 41 (00).
- 17 eiZ (Sg) 22 36 25.0, eiZ 22 36 32.3,
- 17 Z 23 19-21 traces.
- 18 (e)Z 02 58 (32), near.
- 18 eiZ 08 03 05.6, eiZ Sg 08 03 49.8, aftershock
- 18 eiZ Pg 10 31 05.8, iZ Sg 10 31 13.0, D= 55 km, weak, not felt.
- 19 eiZ Pn 05 02 28.4, iZ 05 02 36.4, iZ X 05 02 50.6, (iZ) Sn 05 03 00, iZ Sg 05 03 22.9, D= 370 km, Makarska aftershock, remarkable.
- 19 eZ 10 07 12, traces, near.
- 19 iZ Pn 16 50 15.1, iZ Sg 16 51 18, D= 370 km, aftershock.
- 19 eiZ Pn 19 40 17.0, eZ (Sn) 19 41 59, eiZ 19 42 26, eiZNE SgSg 19 43 09, BCIS: H= 19 38 00, Greece. Athens: 38 1/2 N, 22 E, USCGS: H= 19 38 04.1, 38.5 N, 22.1 E, h about 38 km, Greece. D= 1040 km.
- 19 eiZ+ Pn 20 14 15.2, iZ 20 14 27.1, iZ! Sg 20 15 12.7, D= 370 km, aftershock Makarska.
- 19 eiZ Pn 22 20 39.0, eiZ PgPg 22 21 26, eZ Sg 22 23 24, BCIS: H= 22 18 22, Aftershock Greece. USCGS: H= 22 18 27.3, 38.2 N, 22.1 E, h about 60 km, Greece, D=1020 km.
- 20 Z 04 58-59 traces, weak, aftershock Makarska.
- January 20 from 06 33 to 15 12 no Z records (repair of registration apparatus).
- 20 eiZ (Pg) 18 41 57.2, iZ Sg 18 42 38.0, D= 370 km, aftershock.
- 21 iZ+ Pn 02 52 27.5, iZ Pb 02 52 33.4, iZPg 02 52 38.0, iZ PgPg 02 52 42.7, iZ PgPgPg 02 52 51.4, eNE Sn 02 53 07.5, Z Sn 02 53 (09) underexposed, iZNE! Sg 02 53 20.9, iZ! M 02 53 30, partly underexposed. D= 380 km. BCIS: H= 02 51 32, 43.3 N, 17.1 E, Yugoslavia. Aftershock Makarska region. Felt on the Dalmatian coast. USCGS: H= 02 51 36.2, 43.2 N, 16.6 E, h about 33 km, Near coast of Central Yugoslavia. Minor damage

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- 21 (cont.): at Makarska. At Baška voda, 20 km from macroseismic epicenter near Podgora (Makarska) felt V⁰ MCS (Ljubljana).
- 21 iZ Pn 03 48 39.9, iZ Pg 03 48 49.9, iZ Sn 03 49 18.1, iZ (Sg) 03 49 30.6, iZ! 03 49 42.5. D= about 360 km, aftershock Makarska, weak.
- 21 eiZ (Sg) 06 53 05.3
- 21 iZ 07 29 49.8, iZ 07 31 26.6, traces, near.
- 21 Z 08 58 -59 traces.
- 21 iZ- PKP₁ 13 10 44.2, eiZ PKP₂ 13 10 53.3, iZ 13 10 55.3, USCGS: H= 12 51 52.1, 17.7 S, 178.8 W, h about 558 km, Fiji Islands.
- 21 Z 19 36-39 traces.
- 21 iZ Pn 19 44 (01) in minute interruption, iZ! (Pb) 19 44 09.5, iZ! Pg 19 44 12.0, iZ PgPg 19 44 15.8, iZ X1 19 44 22.7, iZ X2 19 44 30.3, iZ Sn 19 44 41.0, iZ Sb 19 44 50.4, iZ! Sg 19 44 57.6, iZ M 19 45 13.0, D= 370 km, Makarska aftershock. At Podgora, near Makarska felt VI⁰ MCS (Ljubljana).
- 21 Z 22 45-46 traces.
- 22 eiZ P or PKP 00 04 22.3, traces.
- 22 Z 00 19-20, traces.
- 22 eZ (Pn) 01 12 52, eiZ Sg 01 13 47.5, D= 370 km, aftershock Makarska.
- 22 eiZ (Pn) 13 35 35.0, eiZ Sg 13 36 30.9, D= 370 km, aftershock Makarska.
- 22 eiZ+ Pn 15 08 26.4, iZ! 15 08 31.0, eiZ Pg 15 08 36.5, iZ PgPg 15 08 39.3, eiZ Sn 15 09 04.1, iZ 15 09 10.8, iZ! 15 09 20.4, iZ SgSg 15 09 28.8, NE: 15 09-10 weak traces. D= 370 km, aftershock Makarska.
- 22 eiZ (Sg) 17 29 38.6, traces, aftershock?
- 22 Z 21 47-49 traces, near.
- 22 Z 21 55-56, traces, near.
- 23 From 07 51-10 09 no Z records.
- 23 (ei)Z Pn 11 15 53.4, iZ Sg 11 16 47.0, D= 360 km, aftershock Makarska.
- 23 From 11 32 to 11 59 no Z records.
- 23 eiZ Pg 13 00 22.8, iZ Sg 13 01 08.0, D= 370 km, aftershock Makarska, weak.
- 23 iZ- Pn 17 32 12.9, iZ!! Pg 17 32 17.8, Z partly underexposed, eNE Sn 17 32 40, iZ Sn 17 32 42.4, iZ! Sg 17 32 48.5, eNE M 17 32 50, BCIS: H= 17 31 37, 44.1 N, 12.8 E, Felt Rimini and Ancona. Felt IV⁰ MCS at Trieste, felt III-IV⁰ MCS at Koper (Capodistria). USCGS: H= 17 31 39.7, 44.6 N, 12.3 E, h about 61 km, Near coast of Emilia, Romagna, Italy. Felt Ancona, Rimini, Trieste. D= 255 km.

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- 24 eiZ- PKP 05 05 48.0, iZ 05 05 50.5, USCGS: H= 04 46 29.1, 15.6 S, 167.6 E, h about 133 km, New Hebrides, felt at Lamap and Santo.
- 24 Z 09 59-10 00 traces.
- 24 eiZ P or PKP 15 52 11.6, eiZ 15 52 35.2,
- 24 iZ Pn 18 36 22.8, iZ Pg 18 36 31.2, iZ Sn 18 37 (00) in minute interruption, iZ Sg 18 37 16.6, D= 370 km, aftershock Makarska.
- 24 eiZ (Sg) 20 05 52.5, traces, weak.
- 25 eiZ (Sg) 02 09 51.8, traces, weak.
- 25 Z 03 29-31, traces, weak.
- 25 Z 06 40-41, traces, weak.
- 25 eiZ+ P or PKP 10 22 28.3, eiZ 10 22 34.6.
- 26 eiZ P or PKP 05 34 59.0.
- 26 eiZ+ P 08 20 32.9, iZ! 08 20 36.3, iZ PP 08 20 44.2, iZ 08 20 47.3, iZ PgPgPg 08 21 30.0, iZ Sn 08 22 42.8, iZ!NE 08 22 58.3, iZ!! 08 23 10.4!, iZ! M₁ 08 23 27.8: Tz=1.5, Az=4, iZ M₂ 08 25 10, eNE M₃ 08 25 49, F= 08 36 - ; BCIS: H= 08 17 44, 35.5 N, 22.5 E, Depth: about 50 km. Determination was made by using an electronic calculating machine. Mediterranean Sea, west of Crete. USCGS: H= 08 17 37, 35.1 N, 22.7 E, h about 32 km, Mediterranean Sea, west of Crete. Mag.= 5-5 1/4 (Pal), D= about 1 300 km.
- 27 eZ (P) 05 44 47, eiZ 05 46 29.6, eiZ (S) 05 46 46.5, weak.
- 28 Z 00 55-58, traces.
- 28 iZ+ PKP₁ 05 59 53.1, iZ+ PKP₂ 05 59 59.0, iZ 06 00 10.0, iZ 06 00 24.3, deep?
- 28 eiZ Pg 07 57 16.5, Z (Sg) 07 58 (00) in minute interruption, (D=370 km, aftershock ?)
- 28 eZ PP 16 59 21.5, traces. USCGS: H= 16 41 13.8, 0.0 N, 123.9 E, h about 101 km, Northern Celebes region.
- 28 eiZ 17 09 10.6
- 30 eiZ Pn 01 04 56.7, iZ! Pg 01 05 07.0, iZ! 01 05 49.3, iZ! SgSg 01 05 54.7, D= 370 km, Makarska aftershock, obscured by microseisms.
- 30 Z 17 23-24, traces, disturbed by microseisms.
- 30 eiZ PKP₂ 18 50 23.4, eZ 18 50 34.9, iZ! 18 50 40.9, Noméa: H= 18 30 37, 19.0 S, 168.5 E, New Hebrides, Tanna Islands region. Felt at Port Vila.
- 31 eiZ P or PKP 00 14 08.1, obscured by microseisms.

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- 1 eiZ PKP₁ 00 59 56.7, eiZ 01 00 08.5, eiZ PKP₂ 01 01 (00) in minute interruption, obscured by microseisms, USCGS: H= 00 39 54.6, 31.7 S, 177.3 W, h about 30 km, Kermadec Islands region.
- 2 iZ+ P 08 07 50.3, eiZ 08 07 54.2, USCGS: H= 07 59 58.5, 49.9 N, 78.2 E, Kazakh S.S.R.
- 2 (ei)Z P 17 32 33.8, traces, disturbed by microseisms, USCGS: H= 17 20 11.1, 43.7 N, 148.5 E, h about 49 km, Kurile Islands.
- 3 (e)Z 00 57 48, eiZ PP 00 57 59.8, disturbed by microseisms, USCGS: H= 00 37 53.6, 1.2 S, 137.8 E, h about 17 km, North of New Guinea.
- 3 eiZ Pn 12 05 43.4, iZ Pg 12 05 54.7, iZ Sg 12 06 40.8, D= 380 km, Makarska region aftershock ?
- 4 eiZ P or PKP 00 00 45.9, traces, obscured by microseisms.
- 4 eiZ 01 12 57.7, iZ (Sg) 01 13 06.5,
- 4 eiZ+ P 21 39 12.0, iZ 21 39 58.6, eiZ PcP 21 40 11.0, eiZ PP 21 41 09.7, eZ PPP 21 42 17, eZ! 21 42 32.2, USCGS: H= 21 29 33.2, 0.5 S, 20.2 W, h about 17 km, South Atlantic Ocean, D= 6 100 km.
- 5 eiZ Pn 13 56 45.8, eiZ Pg 13 56 55.6, iZ 13 57 31.1, iZ! 13 57 36.0, eiZ Sg 13 57 44.8, D= 380 km.
- 5 iZ+ P 23 08 10.1, iZ 23 08 26.6, eiZ pP 23 08 43.9, eZ 23 08 56.6, eZ (PP) 23 11 27.8, USCGS: H= 22 55 49.6, 35.9 N, 138.8 E, h about 151 km, Central Honshu, Japan. Felt. D= about 9 350 km.
- 7 eiZ 02 38 08.7, traces.
- 7 eiZ Pn 13 44 06.9, iZ Pb 13 44 18.5, iZ 13 44 26.3, eiZ Pg 13 44 32.2, iZ Sn 13 45 17.7, iZ! Sg 13 45 52.4, iZ SgSgSg 13 46 05.8, iZ! 13 46 15.6, D= 650 km.
- 8 eiZ 01 28 41.8, traces.
- 8 eiZ+ PKP₁ 17 01 41.8, iZ 17 01 54.6, Noméa: H= 16 42 05, 19.0 S, 168.8 E, Tanna Island region, New Hebrides, felt at Santo. USCGS: H= 16 42 04.4, 19.2 S, 169.1 E, h about 43 km, New Hebrides Islands region.
- 8 eiZ+ P or PKP 19 53 02.7, eiZ 19 53 15.5, eiZ 19 53 35.7, deep?
- 9 Z 06 27-28, traces.
- 10 eiZ 17 08 40.4, eiZ 17 08 52.0, traces.
- 10 eiZ 18 42 34.9, iZ 18 42 48.7, iZ 18 43 18.0.
- 10 eiZ (Pn) 23 43 11.6, iZ Sg 23 44 08.7, (D= about 370 km, weak).

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- 11 eiZ- P or PKP 02 54 49.5, iZ 02 55 17.9, eZ 02 56 36;
11 Z 06 12-13 traces.
- 11 eZ P 11 17 28.5, eiZ 11 17 33.8, eZ 11 18 08, USCGS:
H= 11 06 44.3, 0.9 S, 67.2 E, h about 25 km, Maldives
Islands region.
- 11 eiZ P or PKP 19 14 21.9, iZ 19 14 47.2, iZ 19 14 51.0,
iZ 19 15 (00) in minute interruption, eiZ 19 15 18.7,
- 12 eiZ Pn 16 04 06.1, iZ(Pg) 16 04 18.1, Z (Sg) 16 05 (00),
D= about 370 km.
- 12 Z 23 47-48, traces.
- 13 eZ P 02 34 18.6, traces. USCGS: H= 02 22 15.2, 49.0 N,
156.2 E, h about 45 km, Kurile Islands.
- 13 iZ(Pn) 12 15 (03), iZ Pg 12 15 10.6, iZ Sn 12 15 39.0,
iZ Sg 12 15 55.8, D= 370 km, weak.
- 13 iZ Pg 13 04 22.1, iZ Sg 13 04 29.1, D= 55 km, very
weak, not felt.
- 14 eZNE PP 06 55 54, eNE 07 01 44, eNE SS 07 11 46, eNE
L 07 29 - , eZNE M 07 44-45, obscured by strong
microseisms, USCGS: H= 06 36 01.3, 38.1 S, 73.1 W,
h about 44 km, Near coast of Chile. Moderate property
damage in Central Chile. Mag.= 7 1/4 (Pas), 7 1/2 (Berk),
D= about 12 800 km.
- 14 eiZ Pn 13 07 47.1, iZ Pg 13 07 57.9, iZ Sg 13 08 43.0,
disturbed by microseisms. D= about 370 km.
- 14 (ei)Z (Pn) 13 19 54, iZ Sn 13 20 34.2, iZ Sg 13 20
45.3, D= about 360 km.
- 15 From Febr. 15, 23^h 45^m to Febr. 16, 05^h 59^m no Z records.
- 16 eiZ- Pn 13 47 35.1, iZ! 13 47 42.0, iZ! 13 47 52.2,
iZ!(Sn) 13 48 45.0, iZ! 13 48 56.4, iZ (SgSg) 13 49
27.6, Beograd: Albania. D= 670 km.
- 16 eiZ P 16 06 40.0, iZ 16 06 49.9, USCGS: H= 15 54 32.3,
49.4 N, 156.0 E, h about 24 km, Kurile Islands.
- 17 eiZ P or PKP 15 53 19.6, iZ 15 53 27.0.
- 18 eiZ- P 07 02 44.8, eiZ 07 02 48.8, iZ 07 03 (00).
- 18 eiZ- P 17 37 42.1, iZ 17 37 55.8, iZ! pP 17 38 01.9,
iZ 17 38 08.1, eZ PP 17 40 43.4, USCGS: H= 17 25 17.3,
8.1 N, 74.6 W, h about 70 km, Northern Colombia. Felt:
Bogotá and Medellin. D= about 9 300 km.
- 19 eiZ PKP 11 24 35.8, iZ 11 24 58.4, USCGS: H= 11 04 46.6,
20.2 S, 175.1 W, h about 95 km, Tonga Islands.
- 20 eiZ PKP 06 10 47.6, eZ 06 10 53.8, USCGS: H= 05 51 06.5,
16.1 S, 178.1 E, h about 35 km, Fiji Islands region.
- 20 eiZ (Pg) 07 37 05.6, eiZ Sg 07 37 15.5, iZ 07 37 24.3,
D= about 80 km.
- 20 eiZ P 09 27 49.1, iZ 09 28 (00), eiZ 09 28 28.8, USCGS:
H= 09 15 55.1, 6.8 N, 92.5 E, h about 29 km, Nicobar Isl.

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- 20 eZ PKP₁ 10 26 08.8, eiZ 10 26 19.4, iZ! PKP₂ 10 26
40.8, eiZ pPKP₁ 10 26 49.9, eiZ 10 27 41.7, USCGS:
H= 10 07 26.6, 25.9 S, 178.4 E, h about 655 km, South
of Fiji Islands region. D= about 17 200 km.
- 20 iZ+ P 16 17 55.1, iZ! 16 17 56.5, iZ pP 16 18 16.4,
eiZ PP 16 21 25.3, Z 16 22 (00), USCGS: H= 16 05 44.6,
43.0 N, 144.9 E, h about 60 km, Near coast of
Hokkaido, Japan. Felt. D= 9 200 km.
- 20 eiZ P 22 13 29.0, iZ 22 13 39.0, eiZ 22 13 49.9,
eiZ PP 22 15 58.7, USCGS: H= 22 02 38.2, 26.1 N,
96.8 E, h about 25 km, Northern Burma. D= 7 350 km.
- 20 eiZ (Pn) 23 01 56.6, eZ (Sg) 23 02 31
- 21 Z 12 28-31, traces.
- 21 eiZ 13 48 29.3, traces, weak.
- 22 eiZ P 16 51 42.5, eiZ 16 51 52.5, USCGS: H= 16 38
01.4, 29.4 N, 131.1 E, h about 25 km, Ryukyu Islands.
- 24 eiZ P 12 34 52.5, traces. USCGS: H= 12 12 48.1, 49.0
N, 156.2 E, h about 62 km, Kurile islands.
- 25 Z 12 44-45, traces, near.
- 25 eiZ Pn 17 42 30.5, iZ Pg 17 42 41.9, eiZ Sg 17 43
24.3, D= about 370 km, weak.
- 27 iZ Pn 05 09 15.1, iZ Pb 05 09 20.7, iZ! Pg 05 09 23.5,
iZ PgPg 05 09 26.5, eiZ Sn 05 09 50.3, iZ! Sg 05 10
03.7, iZ! 05 10 09.9, obscured by microseisms,
Beograd: felt IV⁰ MCS at Zenica (44° 12' N, 17° 55' E)
Yugoslavia. D= 330 km.
- 27 Z 13 00.4, traces, obscured by microseisms.
- 27 iZ+ P 21 37 10.7, eiZ 21 37 38.3, USCGS: H= 21 34
11.8, 46.1 N, 26.3 E, h about 115 km, Romania.
Febr. 28 from 06^h 48^m to 11^h 39^m no Z records.

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- 1 eiZ Pn 09 51 43.7, obscured by microseisms, eZ Sn 09
53 22.2, eZ 09 53 41.2, eiZ 09 54 05.9, D= about
990 km.
- 1 eZ P 12 33 23.6, disturbed by microseisms, USCGS: H=
12 21 16.6, 49.4 N, 155.3 E, h about 86 km, Kurile
Islands.
- 1 iZ P 22 24 02.1, iZ 22 24 10.8, BCIS: H= 22 20.0,
37 1/4 N, 4 W, Mediterranean Sea, south of Malaga.
USCGS: H= 22 20 03.5, 37.3 N, 4.9 W, h about 25 km.
- 2 eiZ PKP 00 00 43.6, eZ 00 00 48.5, eiZ 00 00 54.9,
iZ 00 01 36.5, USCGS: H= 23 41 14.5, 14.0 S, 172.5 E,

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- 2 (cont.): h about 73 km, Samoa Islands, Mag.= 6 (Pas).
- 2 eZ P or PKP 11 31 24.2, traces.
- 3 iZ PKP₁ 16 33 37.5, iZ 16 33 42.1, eiZ PKP₂ 16 33 48.0, iZ 16 34 02.8, USCGS: H= 16 13 56.9, 16.1 S, 174.2 W, h about 129 km, Tonga Islands. D= about 16 600 km.
- 4 eiZ 06 37 35.7, traces, near.
- 6 (ei)Z 06 06 51.3, :very weak vibrations preceding P wave, iZ+ P 06 07 12.3, eiZ 06 07 18.9, iZ 06 07 50.5, USCGS: H= 05 55 42.3, 13.7 N, 93.7 E, h about 18 km, Andaman Islands.
- 7 iZ- P 11 13 45.0, Z 11 14 (00), iZ 11 17 11.8, iZ PP 11 17 58.2, iZ! 11 18 08.7, obscured by microseisms. USCGS: H= 11 01 00.4, 19.3 N, 145.3 E, h about 680 km, Mariana Islands. Mag.= 7 (Pas), 6 (Berk), D= about 11 300 km.
- 8 Z 09 07-09 traces, weak.
- 8 eiZ P 10 59 18.3, eZ 10 59 47.8, USCGS: H= 10 47 03.9, 46.0 N, 152.7 E, h about 48 km, Kurile Islands.
- 8 eiZ P 21 47 36.4, iZ 21 47 40.3, eiZ 21 48 53.7, USCGS: H= 21 38 35.4, 3.4 S, 29.2 E, h about 25 km, Congo.
- 9 iZ- PKP₂ 07 16 12.8, iZ 07 16 17.1, iZ! 07 16 21.7, eiZ 07 18 56.3, USCGS: H= 06 57 08.7, 18.4 S, 178.7 W, h about 472 km, Fiji Islands.
- 9 eiZ 13 00 42.3, traces.
- 9 eiZ PKP 17 48 53.0, eiZ 17 49 22.5, USCGS: H= 17 30 02.0, 24.5 S, 179.6 W, h about 586 km, Fiji Islands region.
- 9 eiZ 21 01 19.4, weak traces.
- 9 eiZ(PKP) 22 26 24.6, eZ 22 26 54, USCGS: H= 22 07 35.6, 5.8 S, 146.4 E, h about 76 km, Near east coast of New Guinea.
- 10 eiZ P 03 13 39.3, eiZ 03 13 45.1, USCGS: H= 03 01 17.5, 3.8 N, 97.7 E, h about 25 km, Sumatra.
- 10 (e)Z 06 56 24.5, iZ 06 57 43.9, iZ 06 58 08.9, traces.
- 10 iZ Pg 15 29 50.6, iZ Sg 15 29 53.8, iZ 15 30 28.6, D= 22 km, weak, not felt.
- 11 eiZ(P) 08 30 08.6, obscured by microseisms.
- 11 eiZ+ P 15 35 48.0, iZ 15 36 04.2, disturbed by microseisms, USCGS: H= 15 23 40.7, 52.3 N, 178.0 E, h about 135 km, Rat Islands, Aleutian Islands.
- 11 (e)Z P 19 32 51, obscured by microseisms, eiZ 19 33 08.4, eZ PP 19 36 54, USCGS: H= 19 19 05.6, 9.0 N, 126.7 E, h about 25 km, Near east coast of Mindanao, P.I., D= about 10 900 km.
- 12 eiZ+ P 02 19 14.1, eiZ 02 19 19.2, eZ 02 19 27.6, Z

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- 12 (cont.): 02 20 (00), USCGS: H= 02 11 09.6, 34.1 N, 70.9 E, h about 44 km, Hindu Kush.
- 12 eiZ P 09 54 30.3, iZ 09 54 34.4, iZ 09 54 57.8, iZ pP 09 55 02.6, USCGS: H= 09 41 45.7, 9.0 N, 83.0 W, h about 113 km, Costa Rica.
- 12 eZ- P 11 53 09.2, iZ! 11 53 16.5, eZ PP 11 56 41, eZ S 12 03 58, USCGS: H= 11 40 12.8, 8.1 N, 83 W, h about 58 km, Near south coast of Panama and Costa Rica. Mag.= 6 3/4 (Pas), 6 1/4- 6 1/2 (Pal), D= about 10 000 km.
- 12 Z 22 29-31, traces.
- 14 Z 09 38-39, traces, disturbed by microseisms.
- 14 iZ Pn 21 47 19.4, disturbed by microseisms, iZ Pg 21 47 29.1, iZ(Sb) 21 48 03.0, iZ Sg 21 48 12.3, iZ! 21 48 20.7, D= 360 km, Makarska region. Felt V⁰ MCS at Mostar (43° 22' N, 17° 50' E)-Yugoslavia.
- 15 eiZ P or PKP 14 17 56.1, obscured by microseisms.
- 15 Z 15 47 (05), disturbed by microseisms, weak trace.
- 16 eiZ+ PKP 15 45 32.1, iZ 15 45 38.8, USCGS: H= 15 26 00.6, 21.7 S, 173.0 E, h about 216 km, New Hebrides.
- 16 eiZ PKP 20 02 14.1, eZ 20 02 16.6, iZ 20 02 43.2, USCGS: H= 19 42 39.2, 10.8 S, 165.7 E, h about 25 km, Santa Cruz Islands region.
- 17 iZ P or PKP 04 05 37.9, eiZ 04 05 42.6,
- 17 iZ P or PKP 06 19 52.3, weak trace.
- 17 eiZ 13 36 15.7, traces.
- 17 eiZ P 18 10 36.0, iZ 18 10 39.4, USCGS: H= 17 58 38.6, 51.4 N, 159.2 E, h about 25 km, Kurile Islands region.
- 17 eZ P or PKP 18 16 16.3.
- 17 iZ+ P 20 57 35.2, iZ! 20 57 41.7, iZ!NE 20 57 44.6: Tz=1.9, Az=2.3, eZ PP 20 59 42.8, eZ PPP 21 00 55, eZNS 21 05 44, e!E 21 06 02, USCGS: H= 20 47 31.7, 10.6 N, 43.7 W, h about 25 km, North Atlantic Ocean. D= 6 550 km.
- 17 eiZ 21 27 09.6, traces.
- 17 iZ Pg 21 40 02.2, iZ Sg 21 40 22.3, iZ SgSg 21 40 25.4, iZ! 21 40 29.3, iZ 21 40 51.6, D= 160 km.
- 17 eiZ PKP 21 48 42.9, eiZ! 21 48 46.5, eiZ 21 48 49.6, eiZ 21 49 06.8, USCGS: H= 21 29 14.2, 22.3 S, 169.7 E, h about 100 km, Loyalty Islands region.
- 18 eiZ PKP 03 25 54.0, Z 03 26 (00), eiZ 03 26 08.2, USCGS: H= 03 06 39.4, 16.1 S, 167.2 E, h about 200 km, New Hebrides Islands region.
- 18 eiZ+ P 05 40 41.1, eiZ 05 40 55.9, USCGS: H= 05 28 21.3, 40.6 N, 142.4 E, h about 33 km, Off coast of northern Honshu, Japan.

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- 18 eiZ+ PKP 13 58 23.3, eZ 13 58 28.5, USCGS: H= 13 38 40.8, 22.3 S, 173.7 E, h about 100 km, New Hebrides Islands region.
- 18 iZ- Pn 15 32 07.7, iZ! NE 15 32 13.5, iZ Pb 15 32 21.8, iZNE Pg 15 32 36.8, iZ! 15 32 40.1, iZNE (Sn) 15 33 23(cont.underexposed), iNE 15 33 32, iZ Sb 15 33 45, iNE (Sg) 15 34 04, iNE 15 34 14, D= about 730 km. BCIS: H= 15 30 33.6, 40°43'16"N, 19° 35'53"E, h=33 km. Determination was made by using electronic calculating machine. 15 dead, 154 wounded, 689 inhabitations destructed in Fiori and Wlora region. 123 buildings damaged in Tepolene region. Press: felt in Italy in Brindisi region and in Lecce. In Yugoslavia felt till Skopje. USCGS: H= 15 30 31.6, 40.6 N, 19.6 E, h about 25 km. Southern Albania. 15 dead, 154 injured, moderate damage. Ljubljana: macroseismic radius: 240 km.
- 18 eiZ (Pn) 17 46 10.3, weak, eZ Sn 17 47 18.5, eZ 17 48 12.6, D= about 630 km, weak.
- 19 iZ+ P 06 08 19.7, eiZ 06 08 33.5, eiZ 06 12 35.3, iZ! PP 06 12 40.9, eZ 06 13 16.7, USCGS: H= 05 54 24.4, 0.3 N, 123.5 E, h =about 53 km, Near south coast of Minahossa Peninsula, Celebes Islands. D= 11 450 km.
- 19 eiZ+ Pn 07 59 44.6, eZ Pg 08 00 13.2, iZ Sn 08 00 58.9, iZ 08 01 22.6, eiZ Sg 08 01 44.2, iZ M 08 01 53.0, D= about 730 km, aftershock Albania?
- 19 eiZ+ P 21 10 23.3, iZ 21 10 38.2, USCGS: H= 20 57 24.2, 4.3 S, 103.1 E, h about 100 km, Near south coast of Sumatra.
- 20 eiZ Pn 01 01 56.4, eiZ Sn 01 03 08.7, eZ 01 03 21.7, eiZ Sg 01 03 48.5, Z! 01 04 (00), weak, D= about 730 km, Aftershock Albania?
- 20 iZ Pn 09 42 54.2, eiZ Sg 09 44 46.3, very weak, aftershock Albania?
- 20 iZ Pn 17 50 59.8, iZ Pg 17 51 06.6, eiZ Sg 17 51 38.9, D= 275 km, weak.
- 21 eiZ PKP 02 50 07.8, iZ 02 50 18.2, USCGS: H= 02 30 18.5, 22.2 S, 170.4 E, h about 25 km, Loyalty Islands.
- 21 iZ Pn 08 26 16.3, iZ Pg 08 26 25.4, iZ X1 08 26 40.0, iZ Sn 08 26 55.3, iZ! Sg 08 27 11.7, iZ! 08 27 22.1, D= 370 km, Makarska region?
- 21 eiZ- P 23 10 35.5, obscured by microseisms, eZ 23 10 43.8, eZ PP 23 14 50.0, USCGS: H= 22 57 51.2, 5.9 S, 113.0 E, h about 631 km, Java Sea. h about 560 km, D= 11 150 km.
- 22 (e)Z PP 00 36 (25), eiZ 00 36 44.0, eiZ 00 38 31.4, Z 00 39 (00), USCGS: H= 00 19 43.1, 5.9 S, 119.9 E, h about 611 km, Java Sea.
- 22 eiZ PKP 15 31 52.2, Z 15 32 (00), eiZ 15 32 23.6, eZ PP 15 33 06.8, eZ 15 33 16, eZ PPP 15 35 43.8, USCGS: H= 15 13 03.9, 3.2 S, 142.3 E, h about 25 km,

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- 22 (cont.): Near north coast of New Guinea. Mag.= 5 3/4 (Berk), D= 13 050 km.
- 23 eiZ Pn 11 40 43.4, iZ 11 40 56.3, iZ! 11 41 22.8, iZ (Sg) 11 41 34.4, iZ 11 41 50.0, D= about 340 km, very weak.
- 24 Z PKP 01 54 (00) in minute interruption, eiZ 01 54 18.7, USCGS: H= 01 34 07.9, 17.8 S, 173.0 W, h about 25 km, Fiji Islands.
- 24 eiZ- PKP 13 18 16.0, iZ! 13 18 17.6, eiZ 13 18 25.2, eiZ! pPKP 13 18 45.1, eiZ 13 19 05.0, eiZ 13 20 21.5, USCGS: H= 12 59 30.9, 5.7 S, 145.0 E, h about 111 km, Near north coast of New Guinea.
- 25 iZ Pn 11 16 24.3, iZ!(Sg) 11 17 11, obscured by microseisms, (D=about 315 km).
- 25 iZ Pg 14 46 57.2, iZ! Sg 14 47 07.1, D= 80 km.
- 25 iZ- P 21 40 08.7, iZ 21 40 14.3, iZ PP 21 40 20.3, iZ! 21 40 34.8, iZ!! 21 41 33.2, obscured by microseisms, USCGS: H= 21 37 36.1, 36.5 N, 16.7 E, h about 25 km, Mediterranean Sea, east of Sicily. D= 1 130 km.
- 26 eiZ - Pn 09 24 12.1, iZ! 09 24 15.2, iZ 09 25 48.5, iZ Sn 09 25 54.4, eiZ 09 25 58.2, iZ! 09 27 24.8, eZ! 09 27 46.5, USCGS: H= 09 22 06.7, 38.7 N, 20.6 E, h about 25 km, Ionian Islands. D= 960 km.
- 26 iZ- P 12 14 29.6, eiZ 12 14 46.4, eiZ 12 15 10.4, eiZ! 12 15 39.6, eiZ PP 12 16 41.6, USCGS: H= 12 04 54.6, 0.5 S, 19.2 W, h about 25 km, Mid-Atlantic Ocean. D= 6 100 km.
- 26 eZ PP 16 52 12, eiZ 16 52 58.5, USCGS: H= 16 32 43.6, 40.6 S, 73.3 W, h about 32 km, Near coast of southern Chile.
- 27 eiZ Pn 10 00 58.5, iZ Sg 10 01 27.5, D= 220 km, weak.
- 28 eiZ P 00 59 45.2, iZ! 00 59 47.1, eZ 01 00 21.5, USCGS: H= 00 51 54.7, 36.6 N, 71.6 E, h about 108 km, Hindu Kush.
- 28 iZ+ P 04 17 48.4, iZ! 04 17 58.9, eiZ 04 18 12.4, USCGS: H= 04 05 24.6, 1.4 N, 97.5 E, h about 74 km, Near south coast of Sumatra.
- 28 eiZ Pn 07 20 09.5, iZ 07 20 36.1, iZ Pg 07 20 42.9, iZ Sn 07 21 32.3, iZ 07 22 (00), iZ Sg 07 22 15.3, D= 780 km, weak.
- 28 eiZ 18 16 06.3, eiZ 18 16 15.7, traces.
- 29 eiZ P or PKP 15 30 17.2, iZ 15 30 19.8.
- 29 eiZ PKP 22 58 06.0, iZ 22 58 16.7, USCGS: H= 22 38 27.8, 20.1 S, 169.0 E, h about 51 km, Loyalty Islands.
- 31 eiZ Pn 01 50 10.0, iZ! 01 50 11.7, iZ! 01 50 13.8, iZ! Pb 01 50 16.9, iZ! Pg 01 50 22.2, iZ X 01 50 30.6, iZ Sn 01 50 50.1, iZ Sg 01 51 07.9, iZ! 01 51 11.8!, iZ 01 51 19.6, eiZ 01 51 27.0, D= 380 km.

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31 iZ+ P or PKP 23 38 16.5, eZ 23 38 27.5.

Ljubljana, July 16, 1962

V. Ribarič