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BULLETIN OF THE SLOVAK SEISMOGRAPHIC STATIONS

BRATISLAVA
ŠROBÁROVÁ
HURBANOVO
AND
SKALNATÉ PLESO

FOR THE YEAR 1967

Slovak Academy of Sciences
Geophysical Institute

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Bulletin of the Slovak Seismographic Stations Bratislava, Šrobárová, Hurbanovo and Skalnaté Pleso for the Year 1967

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Contents

Introduction

The seismological bulletin for the year 1967 contains the results of the interpretation of records from the network of seismograph stations on the territory of Slovakia: Bratislava (central station), Šrobárová, Hurbanovo and Skalnaté Pleso. The seismographic station at Skalnaté Pleso was not operational until June 1967, because the building of the Astronomical Observatory, where the seismograph station is situated, was under reconstruction.

The records from the network are collected at the Geophysical Institute of the Slovak Academy of Sciences in Bratislava, where they are analysed. The preliminary results of the interpretation were published in ten-day preliminary bulletins for stations Bratislava and Šrobárová, and in monthly preliminary bulletins with readings of the seismograms from station Hurbanovo. The ten-day preliminary bulletins were exchanged with about twenty seismological institutions from various parts of the world. The times of the onsets of the important earthquake phases appearing on the Bratislava and Šrobárová seismograms were sent to the seismological centres in Washington, Strasbourg and Moscow twice a week. The earthquake data obtained from the Bratislava seismograms were also punched on cards which were supplied regularly to the International Seismological Centre in Edinburgh.

This annual bulletin contains the final analysis of the records, and the completed and revised parameters of earthquakes and explosions. The sources of information regarding epicentres, origin times or shock magnitudes, frequently quoted are as follows: Bulletin of ISC, Vol. 4, 1967; Bulletin of BCIS, 1967, and Ten-day Bulletin of the Academy of Sciences of the U.S.S.R., Institute of Physics of the Earth, Moscow, 1967. The time standard used throughout is Greenwich Mean Time.

The epicentres of almost all earthquakes or explosions occurring in Czechoslovakia were determined at the Geophysical Institute of the Czechoslovak Academy of Sciences in Prague or at the Geophysical Institute of the Slovak Academy of Sciences in Bratislava.

The analysis of earthquakes from small epicentral distances, explosions and rockbursts was realized by means of special travel-time curves published in the

papers (1, 2, 3, 4). The analysis of earthquakes with $\Delta > 10°$ was realized by means of travel time tables published in the papers (5, 6, 7, 8, 9).

For calculating the magnitudes on the basis of the relation

$$M = \log \left(\frac{A}{T}\right) + \sigma\,(\Delta) + S$$

measurements of the amplitudes and periods of P (horizontal or vertical), PP (horizontal or vertical), S (horizontal), or surface waves (horizontal components) were used. The standard calibrating functions (10) were used for PV, PH, PPH and SH body waves of shallow earthquakes ($h < 60$ km), and for their surface waves ($h < 100$ km). The value of magnitude for PPV waves as well as for all the other body waves of earthquakes with focal depth ($h > 60$ km) were calculated on the basis of Q-function (11). No magnitudes were calculated from the surface waves of earthquakes with $h > 100$ km. The station correction S was not yet taken into consideration.

For the measurements of microseisms were used the records of the Mainka horizontal seismograph, 210 kg pendulum, at the station Hurbanovo. The maximum microseismic ground-amplitudes on the N–S and E–W components four times per day at 0 h, 06 h, 12 h, and 18 h G. M. T. and tabulated. The period was determined by measuring the length to 0.1 mm of 2–4 whole periods in a well developed maximum group. The periods are given in whole seconds. The trace amplitudes were measured from peak to peak, halved and the corresponding ground motion given to 0.1 μm.

Beginning with the year 1967 the Geophysical Institute of the Slovak Academy of Sciences will publish in the seismological bulletin abstracts of papers written by Slovak authors dealing with seismology.

The ten-day preliminary bulletins for Bratislava and Šrobárová were prepared by Mrs. K. Mrázová and Mrs. A. Weihsová. The monthly bulletin and the measuring of microseisms for the station Hurbanovo were prepared by Mrs. A. Weihsová. The investigation of macroseismic observations of earthquakes felt on the territory of Slovakia was carried out by Mr. I. Brouček.

In preparing this bulletin the authors have been in different parts assisted by Mrs. A. Weihsová, Mrs. B. Miková and Mrs. I. Bochníčková.

Bratislava, October 1972

K. Mrázová

List of Abbreviations Used in this Bulletin

Ts	seismograph free period
Tg	galvanometer free period
Vo	static magnification
Vm	max. dynamic magnification
ϵ : 1	damping ratio
Ds	seismograph damping
Dg	galvanometer damping
r	max. deviation due to friction
σ^2	coupling factor
D	epicentral distances determined according to the time differences between S and P phases
Dc	epicentral distances calculated with regard to geocentric coordinates by computer
Az	azimuth of stations with respect to the epicentre, measured round the station from North through East; determined by computer
h	depth of focus in km
H	origin time, expressed in G. M. T.
i	impulsive beginning of a phase
e	poorly defined beginning of a phase
+ and –	compressional or dilatational motion in a longitudinal wave
K	characteristics of microseisms:
1	disturbance showing microseisms in groups
2	continuous disturbance
3	disturbance of a mixed and irregular character
0	no microseismic movement
0.0	very weak microseismic movement: amplitude less than 0.1 micron
tt	disturbance could not be measured because of earthquake
v	disturbance could not be measured because of gusts of wind
. . .	disturbance could not be measured for other reasons

MLH, MLV — magnitudes based on body wave amplitudes
mPH, mPV, mPPH, mPPV, mSH — magnitudes based on surface wave amplitudes

Station Instrumentation

Coordinates of the Seismographic Stations

Station	Latitude	Longitude	Altitude (above mean sea level)	Lithologic foundation
Bratislava	48°10' 06'' N	17°06' 18'' E	270 m	Granite
Šrobárová	47°48' 48'' N	18°18' 48'' E	150 m	Bed of sand
Hurbanovo	47°52' 25'' N	18°11' 34'' E	115 m	Bed of sand
Skalnaté Pleso	49°11' 20'' N	20°14' 32'' E	1772 m	Granite

Instrumental Constants for 1967

Bratislava: "VEGIK", electromagnetic seismograph with galvanometric registration

Contants

Component	Ts	Tg	Ds	Dg	σ^2	Tm	Vm	Paper speed
Z	1.8	1.9	0.8	1.1	0.11	1.1	4110	20 mm/min
N	2.0	1.9	0.9	1.0	0.10	1.1	2260	20 mm/min
E	2.0	1.9	0.9	1.1	0.10	1.1	2190	20 mm/min

Šrobárová: "VEGIK", electromagnetic seismograph with galvanometric registration, two vertical seismographs

Constants

Component	Ts	Tg	Ds	Dg	σ^2	Vm	Paper speed
Z	1.25	1.25	1.0	1.0	0.08	4500	60 mm/min
Z	1.2	0.4	0.5	2.5	0.08	15000	60 mm/min

Hurbanovo: "MAINKA", horizontal seismograph, M = 210 kg, air damping, mechanical registration, component N and E

Constants

Month	Component	Ts	Vo	r (mm)	ϵ : 1	Paper speed
January	N	8.8	41	0.1	3.9	30 mm/min
	E	10.4	51	0.2	4.8	
February	N	8.8	41	0.1	3.9	
	E	10.4	51	0.2	4.8	
March	N	8.2	45	0.2	4.4	
	E	10.5	53	0.3	3.8	
April	N	7.7	46	0.0	5.5	
	E	10.7	54	0.1	3.7	
May	N	7.7	44	0.2	4.5	
	E	10.7	51	0.1	3.9	
June	N	7.7	46	0.3	4.1	
	E	11.0	56	0.2	4.2	
July	N	7.4	50	0.7	4.2	
	E	11.0	49	0.6	4.6	
August	N	7.4	50	0.7	4.2	
	E	11.0	49	0.6	4.6	
September	N	7.4	48	0.1	3.6	
	E	10.8	53	0.6	4.1	
October	N	7.4	52	0.1	5.0	
	E	10.9	51	0.9	4.1	
November	N	7.4	52	0.1	5.0	
	E	10.9	51	0.9	4.1	
December	N	7.4	45	0.3	3.9	
	E	10.8	49	0.8	4.2	

Skalnaté Pleso: "VEGIK", electromagnetic seismograph with galvanometric registration

Constants

Component	Ts	Tg	Ds	Dg	σ^2	Vm	Paper speed
Z	1.9	1.9	0.97	0.90	0.12	3860	60 mm/min

List of Seismic Phases Used in this Bulletin

Phase	
Pn, Sn	longitudinal and transverse waves refracted below the crust
Pg, Sg	waves in the upper crust
Pb, Sb	waves in the lower crust
P, S	direct longitudinal or transverse waves propagating in the mantle
PKP	direct longitudinal waves transversing the Earth's core without detailed identification
PKIKP	direct longitudinal wave propagating through the inner core [Travel-time branch DF (5)]
PKHKP	direct longitudinal wave refracted in the intermediate zone between the inner and outer core. Phase symbol according to Bolt (9) [Travel-time branch GH]
PKP2	direct longitudinal wave propagating only through the outer core [Travel-time branch AB (5)]
PP, PPP, SS, SSS	P or S waves reflected once or twice at the Earth's surface
PcP, ScS	P or S waves reflected at the Earth's core boundary
PcS, ScP	P or S waves transformed on reflection at the Earth's core boundary
PKKP	P waves reflected from the inner surface of the core, thereby passing twice through the core
PKPPKP	PKP waves reflected from the Earth's surface, passing twice through the core
SKS	S waves passing through the core as P waves, transformed back into S waves in the mantle
SKKS	S waves transformed on refraction in the core into P waves, reflected from the inner surface of the core and then transformed back into S waves

PS, SP, PPS, SPP PSPS, PPSS, SPSP etc.	P and S waves reflected and transformed at the Earth's surface
SKP	S wave transfomed into P on refraction into the core
PKS	P wave transformed into S on the refraction when leaving the core
pP, sP, sPP etc.	P or S waves reflected from the surface as P waves, supposing deep focus earthquake
pS, sS, pSS etc.	P or S waves reflected from the surface as S waves
PH, PPH, SH	amplitude of the horizontal component of corresponding body waves
PV, PPV, SV	amplitude of the vertical component of corresponding body waves
LmV, LmH	waves of maximum amplitude in the surface wave group (on the vertical or horizontal component)

List of Quoted Agencies Reporting Epicentral Parameters

Code	Agency
ATH	Athens. Seismological Institute, National Observatory, Athens
BEO	Belgrade. Seismological Institute, Belgrade
BCIS	Bureau Central International de Seismologie, Strasbourg
ICS	International Seismological Centre, Edinburgh
LJU	Ljubljana. Astronomical and Geophysical Observatory, University of Ljubljana, Ljubljana
MOS	Academy of Sciences of the U.S.S.R., Institute of Physics of the Earth, Moscow
PAS	Seismological Laboratory, California, Institute of Technology, Pasadena
PRU	Průhonice, Geophysical Institute, Czechoslovak Academy of Sciences, Prague, Czechoslovakia
UPP	Uppsala, Seismological Institute, Uppsala
USAEC	U. S. Atomic Energy Commission, Washington
USCGS	U. S. Coast and Geodetic Survey, U. S. Department of Commerce, Washington Science Centre
VIE	Vienna, Zentralanstalt für Meteorologie und Geodynamik, Wien
WAR	Warsaw, Geophysical Institute of the Polish Academy of Sciences, Warsaw

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Earthquake Observations at the Station Bratislava

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	+iPKIKP	07	25	27.5	+2.5	Tonga
	iPKP2		25	29	+1.0	15.16° S 173.64° W
	ipPKIKP		25	41	–6.0	H = 07 05 48 s, h = 23 km,
						Mag = 5.9 (ISC). MLH (MOS) = 6½,
						Dc = 145.91°, Az = 18.74°.
1	iPKIKP	09	04	21.2	+2.8	West of Tonga
						20.55° S 178.15° W
						H = 08 45 36.6 s, h = 553 km,
						Mag = 4.6 (ISC).
						Dc = 149.82°, Az = 29.38°.
1	iPKIKP	22	18	16.5	+2.5	Santa Cruz Islands
						11.07° S 165.57° E
						H = 21 58 54.1 s, h = 5 km,
						Mag = 5.3 (ISC). MLH (MOS) = 5¾,
						Dc = 134.57°, Az = 46.11°.
2	eP	08	23	27	+2.7	Near Coast of Libya
						32.44° N 22.62° E
						H = 08 19 37 s, h = 33 km,
						Mag = 4.6 (ISC). MLH (MOS) = 5,
						Dc = 16.26°, Az = 163.12°.
2	iPKIKP	20	19	18.6	+2.3	Santa Cruz Islands
	iSKP		22	51.6	–1.6	12.36° S 166.39° E
						H = 19 59 58.3 s, h = 34 km,
						Mag = 5.3 (ISC). MLH (MOS) = 5¾,
						Dc = 105.28°, Az = 91.50°.
3	ePKIKP	05	55	11	+8.5	Santa Cruz Islands
						11.07° S 165.67° E
						H = 05 35 44.8 s, h = 18 km,
						Mag = 5.2 (ISC).
						Dc = 134.62°, Az = 45.99°.
3	ePKIKP	21	42	40	+0.2	Santa Cruz Islands
	ePP		45	22	–1.8	12.40° S, 166.41° E
	iPKS		46	14	–1.0	H = 21 23 22.2 s, h = 37 km,
						Mag = 5.1 (ISC). MLH (MOS) = 5½,
						Dc = 136.13°, Az = 46.02°.
4	eP	06	01	25	–1.1	Greece
	iPP		01	28	–6.0	38.37° N 22.04° E
	eS		03	27	–0.7	H = 05 58 52.5 s, h = 1 km,
	Lm		05	30		MLH (BRA) = 4.0,
						Dc = 10.43°, Az = 158.07°,
						LmH: 3.0 s 0.37 μm.

Date	Phase	h	m	s	Res. (O–C)	Remarks
4	+iP	20	27	31	–1.0	Near Coast of Venezuela 10.93° N 62.52° W H = 20 15 59.0 s, h = 94 km, Dc = 75.03°, Az = 269.69°.
5	iP iS Lm	00 01	24 31 30	05 35	–0.3 –4.0	Mongolia 38.22° N 102.90° E H = 00 14 40.1 s, h = 24 km, Mag = 6.1 (ISC). MLH (MOS) = 7 ½, Dc = 54.19°, Az = 55.33°.
5	eiP eiPP eiPcP	10	15 17 17	38 14 44	+0.1 –1.0 +3.0	Kirgiziya 39.31° N 72.74° E H = 10 08 02.6 s, h = 41 km, Mag = 5.1 (ISC). MLH (MOS) = 5½, Dc = 40.37°, Az = 81.38°.
6	eP	00	07	45	–0.8	Mongolia 48.16° N 102.93° E H = 23 58 18 s, h = 11 km, Mag = 5.4 (ISC). MLH (MOS) = 5 ½, Dc = 54.24°, Az = 55.38°.
6	+iP isP	00	16 16	46 20.7	+1.3 +0.8	Hokkaido, Japan Region 41.80° N 143.39° E H = 00 04 03.9 s, h = 41 km, Mag = 5.6 (ISC). MLH (MOS) = 5 ½, Dc = 78.64°, Az = 37.94°.
7	ePKIKP	00	46	25	–0.8	Southeast Indian Ridge 48.80 ° S 112.76° E H = 00 27 23 s, h = 15 km, Mag = 5.4 (ISC). MLH (MOS) = 5 ½, Dc = 126.94°, Az = 124.59°.
7	ePKIKP	17	00	20	–0.5	Santa Cruz Islands 11.92° S 166.04° E H = 16 41 03.9 s, h = 37 km, Mag = 4.9 (ISC). MLH (MOS) = 5 ½, Dc = 135.53°, Az = 46.14°.
9	+iP	02	02	11	+0.4	Southern Persia 27.64° N 54.48° E H = 01 55 14 s, h = 23 km, Mag = 5.2 (ISC). MLH (MOS) = 5, Dc = 35.44°, Az = 111.75°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
10	e	10	43	56		
10	e	11	02	29		
11	iP ipP iPP	11	26 26 26	12 23.4 57	–0.6 +0.3	Persia-Iraq Border Region 34.09° N 45.67° E H = 11 20 46.1 s, h = 39 km, Mag = 5.6 (ISC). MLH (MOS) = 5 ¼, Dc = 25.53°, Az = 112.94°.
12	iPg iSg	10	58 58	40.2 43.7		Slovakia Explosion. Δ = 30 km.
13	ePKIKP	14	07	22	–0.8	Solomon Islands 10.59° S 161.37° E H = 13 48 08 s, h = 9 km, Mag = 5.6 (ISC). MLH (MOS) = 5 ¾, Dc = 132.06°, Az = 50.66°.
14	e	07	39	10		
14	e	10	16	31		
14	e	11	02	30		
14	eP	12	16	49	+0.6	Rat Islands, Aleutian Islands 52.10° N 175.40° E H = 12 04 50.4 s, h = 35 km, Mag = 5.2 (ISC). MLH (MOS) = 5, Dc = 78.41°, Az = 13.47°.
15	eP	20	08	08	–0.2	Lake Baikal Region 55.65° N 110.85° E H = 19 58 42.6 s, h = 13 km, Mag = 5.1 (ISC). MLH (MOS) = 5 ¼, Dc = 54.04°, Az = 44.33°.
16	eiPKIKP	14	45	47	+3.8	Santa Cruz Islands 11.27° S 165.72° E H = 14 26 22 s, h = 2 km, Mag = 5.3 (ISC). MLH (MOS) = 6, Dc = 134.81°, Az = 46.07°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
17	iPP	01	25	17	–6.2	Santiago del Estero Prov., Arg. 27.32° S 63.24° W H = 01 07 54.2 s, h = 586 km, Mag = 5.6 (ISC). Dc = 103.84°, Az = 244.60°.
17	–iP epP ePP Lm	12	11 11 14 21.5	44.6 57 21	+1.0 –3.5 –1.0	Near East Coast of Honshu, Japan 38.33° N 142.20° E H = 11 59 31.5 s, h = 39 km, Mag = 5.9 (ISC). MLH (MOS) = 6 ¾, mPV (BRA) = 6.2, MLH (BRA) = 7.1, Dc = 81.02°, Az = 40.65°. PV: 1.6 s 0.52 μm, LmH: 18 s 79 μm.
18	+iP iPcP iPPP eS Lm	05 06	44 45 47 52 06.5	28.5 21 57 27	+1.4 +0.7 –2.8 +1.0	Eastern Russia 56.68° N 120.95° E H = 05 34 32 s, h = 5 km, Mag = 6.0 (ISC). MLH (MOS) = 7, mPV (BRA) = 6.5, MLH (BRA) = 6.7, Dc = 57.92°, Az = 39.23°. PV: 1.6 s 0.67 μm, LmH: 8.0 s 25 μm.
18	–iP isP	08	30 30	27 42	+0.1 0.0	Fox Islands, Aleutian Islands 52.55° N 168.24° W H = 08 18 22.3 s, h = 33 km, Mag = 5.7 (ISC). MLH (MOS) = 5 ¾, mPH (BRA) = 5.9. Dc = 79.56°, Az = 3.32°. PH: 1.6 s 0.1 μm.
18	eP	21	58	50	–0.4	Mongolia 48.10° N 102.96° E H = 21 49 22 s, h = 5 km, Mag = 5.2 (ISC). MLH (MOS) = 5 ¾, Dc = 54.29°, Az = 55.43°.
19	ePb ePn iSg	09	01 01 01	43 48 51		Slovakia (Little Carpathians) MLgH (BRA) = 2.5. LgH: 1.4 s 2.5 μm.
19	ePKIKP epPKIKP esPKIKP	12	57 58 58	33 09 31	+0.2 –6.2 –3.4	Santa Cruz Islands 11.83° S 166.45° E H = 12 38 31.4 s, h = 158 km, Mag = 5.5 (ISC). MLH (MOS) = 6 ¾, Dc = 135.66°, Az = 45.57°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
19	iPKIKP	12	59	45	–2.2	Fiji Region 14.83° S 178.75° W H = 12 40 14.7 s, h = 33 km, Mag = 6.3 (ISC). Dc = 144.27°, Az = 26.90°.
19	–iP	14	53	50	+0.3	Fox Islands, Aleutian Islands 52.37° N 169.57° W H = 14 41 34.6 s, h = 34 km, Mag = 5.2 (ISC). Dc = 79.68°, Az = 4.15°.
20	+iP i iPPP Lm	02	06 07 10 27.5	48 35 15	–0.3 +10.0	Mongolia 48.08° N 103.02° E H = 01 57 21.6 s, = 21 km, Mag = 6.3 (ISC). MLH (MOS) = 7, mPV (BRA) = 6.6, MLH (BRA) = 7.2, Dc = 54.34°, Az = 55.42°. PV: 1.6 s, 0.78 μm, LmH: 9.0 s 83 μm.
21	ePKIKP	03	13	42	–10.2	Easter Island Cordillera 49.71° S 114.9° W H = 02 54 12 s, h = 32 km, Mag = 5.4 (ISC). Dc = 148.86°, Az = 248.87°.
24	+iP iPcP ipP	03	17 17 17	35 41 53	+1.5 –2.2 +2.0	Hokkaido, Japan Region 41.53° N 142.08° E H = 03 05 39.0 s, h = 64 km, Mag = 5.7 (ISC). MLH (MOS) = 5½, mPV (BRA) = 5.9, Dc = 78.32°, Az = 38.92°. PV: 1.6 s 0.18 μm.
24	+eP ipP iPcP iPP ePS Lm	09 10	39 39 40 41 47 10	09 21 06 32 33	–4.5 –4.1 +4.0 +6.0 0.0	Central Mid-Atlantic Ridge 0.8° S 20.8° W H = 09 29 17.1 s, h = 43 km, Mag = 5.2 (ISC). MLH (MOS) = 6¾, mPV (BRA) = 5.7, MLH (BRA) = 6.5, Dc = 58.81°, Az = 225.90°. PV: 1.4 s 0.1 μm. LmH: 12.0 s 22 μm.

Date	Phase	h	m	s	Res. (O–C)	Remarks
25	iP	01	57	37	–0.2	Afghanistan-USSR Border Region
	ipP		58	29	+1.0	36.71° N 71.60° E
	i!sP		59	06	+1,0	H = 01 50 19.4 s, h = 275 km,
	iPP		59	23	–0.9	Mag = 5.7 (ISC). mPV (BRA) = 5.8,
	i!sPP	02	00	41	–2.0	Dc = 41.01°, Az = 85.48°.
						PV: 1.6 s 0.78 μm.
26	eP	20	31	37	–1.8	Near Coast of Michoacan, Mexico
						19.0° N 103.1° W
						H = 10 18 24 s, h = 60 km,
						Mag = 4.2 (ISC).
						Dc = 94.51°, Az = 304.90°.
27						The apparatus was not operational.
28	–iP	14	05	01.5	–0.8	Fox Islands, Aleutian Islands
	ipP		05	19	+1.7	52.40° N 169.54° W
	iS		15	03	+1.7	H = 13 52 58.3 s, h = 42 km,
	Lm		32.5			Mag = 6.0 (ISC). MLH (MOS) = 7,
						mPV (BRA) = 6.1,
						Dc = 79.65°, Az = 4.13°.
						PV: 1.2 s 0.24 μm.
28	eP	14	18	01		Fox Islands, Aleutian Islands
						52.29° N 169.51° W
						H = 14 05 57 s, h = 39 km,
						Mag = 5.1 (ISC).
						Dc = 79.76°, Az = 4.12°.
28	iP	14	19	18		No determination of epicentre.
28	eP	14	35	29	–1.4	Fox Islands, Aleutian Islands
						52.45° N 169.58° W
						H = 14 23 26 s, h = 47 km,
						Mag = 5.1 (ISC).
						Dc = 79.60°, Az = 4.15°.
28	eP	14	42	30	–2.6	Fox Islands, Aleutian Islands
						52.61° N 169.48° W
						H = 14 30 26.8 s, h = 44 km,
						Mag = 4.9 (ISC).
						Dc = 79.44°, Az = 4.08°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
28	+iP	16	43	25	–2.1	Fox Islands, Aleutian Islands
	iPcP		43	34	–1.1	52.32° N 169.33° W
						H = 16 31 21.6 s,h = 32 km,
						Mag = 5.3 (ISC). MLH (MOS) = 5½,
						mPV (BRA) = 5.9,
						Dc = 79.74°, Az = 4.01°.
						PV: 1.4 s 0.18 μm.
28	iP	17	31	39	+1.1	Fox Islands, Aleutian Islands
						52.27° N 169.50° W
						H = 17 19 32.5 s, h = 36 km,
						Mag = 5.0 (ISC). MLH (MOS) = 5½,
						Dc = 79.78°, Az = 4.12°.
28	+iP	17	54	05	0.0	Fox Islands, Aleutian Islands
	ipP		54	19.8		52.36° N 169.38° W
						H = 17 42 01.6 s, h = 49 km,
						Mag = 5.5 (ISC). MLH (MOS) = 6,
						mPV (BRA) = 6.1,
						Dc = 79.70°, Az = 4.04°.
						PV: 1.6 s 0.41 μm.
29	iPn	00	12	45.4	–0.5	Austria
	i		12	52.9		47.89° N 14.20° E
	iSn		13	10.8	–3.7	H = 00 12 13.0 s, h = 17 km,
						Mag = 4.6 (ISC). MLH (BRA) = 4.6,
						Dc = 1.97°, Az = 262.95°.
						LmH: 3.0 s 21 μm.
29	eP	08	03	46	+0.6	Southern Persia
						26.54° N 55.21° E
						H = 07 56 40 s, h = 34 km,
						Mag = 5.1 (ISC). MLH (MOS) = 5¾,
						Dc = 36.68°, Az = 112.25°.
30	eP	01	25	09	–0.6	Western Caucasus
	ePP		25	30	–1.0	41.09° N 44.31° E
						H = 01 20 28.7 s, h = 11 km,
						Mag = 5.0 (ISC). MLH (MOS) = 5¼–5½,
						mPV (BRA) = 5.2,
						Dc = 20.55°, Az = 100.03°.
						PV: 1.6 s 0.21 μm.
30	eP	12	29	27	–1.5	Turkey
						39.41° N 41.49° E
						H = 12 25 04.1 s, h = 76 km,
						Dc = 19.59°, Az = 107.50°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
31	e	11	01	44		
31	eP	13	50	59	+0.5	Off Coast of Central America 2.78° N 84.37° W H = 13 37 34.7 s, h = 36 km, Mag = 5.4 (ISC). Dc = 95.58°, Az = 280.41°.
31	eP	17	55	55	+0.5	Hokkaido, Japan Region 42.87° N 145.48° E H = 17 43 57.2 s, h = 51 km, Mag = 5.2 (ISC). MLH (MOS) = 4½, Dc = 78.58°, Az = 36.02°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	eP	01	14	27	+0.2	Southern Persia 26.58° E 55.27° E H = 01 07 20.0 s, h = 22 km, Mag = 4.9 (ISC). MLH (MOS) = 5, Dc = 36.68°, Az = 112.14°.
1	eP epP	15	32 33	59 14	+1.0 −0.6	Southern Sumatra 4.80° S 103.11° E H = 15 19 59.6 s, h = 60 km, Mag = 5.3 (ISC). Dc = 90.87°, Az = 96.16°.
2	eP eP	07	45 47	41 22	−2.3 −1.3	Southern Sinkiang Province, China 39.76° N 75.33° E H = 07 37 57.3 s, h = 52 km, Mag = 5.2 (ISC). MLH (MOS) = 5½, Dc = 41.84°, Az = 79.21°.
2	eP	16	36	15	−0.3	Hokkaido, Japan Region 41.56° N 139.84° E H = 16 24 39.7 s, h = 182 km, Mag = 5.3 (ISC). Dc = 77.33°, Az = 40.32°.
3	eP	08	29	26	−0.6	Honshu, Japan 36.52° N 138.14° E H = 08 17 04.6 s, h = 19 km, Mag = 4.6 (ISC). MLH (MOS) = 5, Dc = 80.67°, Az = 44.39°.
3	eP ePP	13	00 04	39 39	−0.9 −6.6	Java Sea 5.58° S 110.53° E H = 12 48 08.1 s, h = 543 km, Mag = 5.5 (ISC). Dc = 96.41°, Az = 91.18°.
3	iPg	13	46	00		Slovakia Explosion.
4	eP	18	02	09	+0.2	Volcano Islands Region 25.55° N 142.68° E H = 17 49 02.6 s, h = 33 km, Mag = 5.0 (ISC). MLH (MOS) = 5, Dc = 91.90°, Az = 47.32°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
5	eP ePP	19	05 07	46 58	–0.5 –1.0	Ascension Island Region 5.52° S 11.46° W H = 18 55 45.7 s, h = 23 km, Mag = 5.1 (ISC). Dc = 59.05°, Az = 213.71°.
7	eP epP	15	04 05	52 08	0.0 +1.0	Alaska Peninsula 56.63° N 157.24° W H = 14 53 12.6 s, h = 52 km, Mag = 5.6 (ISC). MLH (MOS) = 5½, Dc = 75.46°, Az = 356.78°.
8	e	15	28	20		Small local shock.
9	ePn	12	00	19		Czechoslovakia 50.48° N 13.95° E Explosion of 5.8 Tons. H = 12 00, PRU. Dc = 3.10°, Az = 319.45°.
9	iPn i i i iSg i! Lm	14	10 10 11 11 13 13 14	25.3 43 01.5 31 10 33	–0.8 +7.7	Greece-Albania Border Region 39.92° N 20.26° E H = 14 08 18.2 s, h = 1 km, Mag = 5.6 (ISC). MLH (MOS) = 5½, MLH (BRA) = 5.2, Dc = 8.55°, Az = 163.46°. LmH: 3.0 s 6.5 μm.
9	iP iPcP iScS Lm	15 16	37 37 48 17	37 55 25	–1.4 –1.0 –1.0	Colombia 2.93° N 74.83° W H = 15 24 45.3 s, h = 36 km, Mag = 6.3 (ISC). MLH (MOS) = 7, MLH (BRA) = 7.2, Dc = 89.13°, Az = 273.39°. LmH: 20.0 s 95 μm.
10	ePb e eSb	06	48 48 48	18 24 25		Austria 47.7° N 16.0° E H = 06 48 (VIE). Dc = 0.88°, Az = 238.17°.
10	e	12	22	01		

Date	Phase	h	m	s	Res. (O–C)	Remarks
11	eP	02	51	32	+0.7	Off East Coast of Kamchatka 51.70° N 159.50° E H = 02 39 49.2 s, h = 34 km, Mag = 5.0 (ISC). Dc = 75.44°, Az = 23.10°.
11	eP	09	37	01	+4.5	Lake Baikal Region 56.16° N 106.48° E H = 09 27 34.0 s, h = 26 km. Dc = 53.87°, Az = 49.70°.
11	eP	15	37	49	–1.8	Greenland Sea 79.56° N 3.8° E H = 15 31 27.9 s, h = 41 km, Mag = 5.0 (ISC). Dc = 31.87°, Az = 355.44°.
13–14						The apparatus was not operational.
14	iP	14	44	43	–0.3	Sicily 38.45° N 15.06° E H = 14 42 26.2 s, h = 258 km, Mag = 4.2 (ISC). Dc = 9.83°, Az = 189.44°.
14	ePKIKP	18	33	03	+6.3	Tonga 18.89° S 173.09° W H = 18 13 24 s, h = 101 km, Mag = 4.7 (ISC). Dc = 149.65°, Az = 19.36°.
15	e	02	53	03		
15	eP epP	06	08 08	16 29	–0.8 –2.5	Burma 20.33° N 93.99° E H = 05 57 30.5 s, h = 51 km, Mag = 5.4 (ISC). MLH (MOS) = 5½, Dc = 66.48°, Az = 85.43°.
15	ePg	13	55	07		Slovakia Probably explosion.
15	ePg eSg	15	34 34	54 57		Slovakia Probably explosion. D = 30 km.

Date	Phase	h	m	s	Res. (O–C)	Remarks
15	+iP	16	23	33.5	–1.8	Peru-Brazil Border Region
	ipP		25	43	–2.7	9.05° S 71.34° W
	ePP		27	37	–2.0	H = 16 11 11.8 s, h = 598 km,
	isPP		30	39	0.0	Mag = 6.1 (ISC).
	eS		33	54	–3.6	Dc = 95.63°, Az = 262.81°.
17	+iPKIKP	10	30	40.6	–0.6	Tonga Region
	iPKP2		31	00	–5.0	23.79° S 175.14° W
	iPP		34	30	–10.0	H = 10 10 52 s, h = 21 km,
						Mag = 6.1 (ISC). MLH (MOS) = 6½,
						Dc = 153.79°, Az = 26.11°.
19	eP	22	28	23	+6.8	South of Java
						9.12° S 113.04° E
	ePP		32	21	–5.0	H = 22 14 36.4 s, h = 88 km,
	epPP		32	53	0.0	Mag = 5.9 (ISC). MLH (MOS) = 5¾–6,
						Dc = 100.68°, Az = 91.72°.
20	eP	15	26	57	+0.2	Eastern Kashmir
						33.63° N 75.33° E
						H = 15 18 39.0 s, h = 20 km,
						Mag = 5.5 (ISC). MLH (MOS) = 5½,
						Dc = 45.29°, Az = 86.56°.
21	eP	04	27	45	–1.8	Mona Passage
						19.14° N 67.97° W
						H = 04 16 21.4 s, h = 44 km,
						Mag = 5.2 (ISC).
						Dc = 72.76°, Az = 279.52°.
21	e	11	58	32		
22	e	10	58	10		
22	ePKIKP	18	46	09	–0.5	New Hebrides
	iPKP2		46	12	+2.0	19.53° S 169.03° E
	iPKS		49	42	–3.0	H = 18 26 47.5 s, h = 96 km,
						Mag = 5.7 (ISC). MLH (MOS) = 5½,
						Dc = 143.51°, Az = 48.28°.
23	ePn	22	39	58	–1.6	Yugoslavia
						43.85° N 16.0° E
						H = 22 38 54 s, h = 63 km,
						Mag = 4.0 (BEO).
						Dc = 4.38°, Az = 190.51°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
24	ePn	15	22	18	+0.7	Yugoslavia
						43.8° N 17.9° E
						H = 15 21 11 s, h = 55 km,
						Mag = 4.4 (BEO).
						Dc = 4.40°, Az = 172.48°.
26	–iP	04	05	28	–0.3	Eastern Kazakhstan
						49.79° N 78.14° E
						H = 03 57 57.8 s, h = 0 km,
						Mag = 6.0 (ISC).
						Dc = 39.12°, Az = 63.99°.
27	ePn	21	02	35	+1.0	Romania
	e		05	14		44.86° N 26.69° E
						H = 21 00 42 s, h = 32 km,
						Mag = 5.0 (ISC). MLH (MOS) = 5,
						Dc = 7.39°, Az = 113.03.
28	eP	09	49	56	+0.6	South of Honshu, Japan
	esP		50	07	+1.0	32.68° N 141.67° E
						H = 09.37 19 s, h = 25 km,
						Mag = 5.3 (ISC). MLH (MOS) = 6,
						Dc = 85.47°, Az = 44.15°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	eP	10	19	52	−1.7	Southern Persia 28.09° N 56.90° E H = 10 12 53.3 s, h = 80 km, Mag = 5.1 (ISC). MLH (MOS) = 4½, Dc = 36.64°, Az = 108.64°.
1	eP	22	28	36	−0.9	Andreanof Islands, Aleutian Islands 51.24° N 179.28° W H = 22 16 35 s, h = 71 km, Mag = 5.2 (ISC). MLH (MOS) = 4½, Dc = 79.98°, Az = 10.37°.
2	eP esP	03	00 01	36 24	−1.5 +1.0	Ecuador 0.16° S 78.60° W H = 02 47 32.5 s, h = 122 km, Mag = 5.8 (ISC). mPV (BRA) = 5.6, Dc = 93.93°, Az = 274.14°. PV: 1.2 s 0.04 μm.
2	eP ePcP	20	59 59	22.6 32	+2.3 −5.0	Off East Coast of Kamchatka 52.34° N 160.64° E H = 20 47 38 s, h = 17 km, Mag = 4.9 (ISC). MLH (MOS) = 5, Dc = 75.15°, Az = 22.16°.
2	eP ePcP	23	15 15	16 43	+1.8 +2.3	Near East Coast of Kamchatka 53.69° N 160.56° E H = 23 03 44.2 s, h = 57 km, Mag = 5.2 (ISC). Dc = 73.90°, Az = 21.63°.
3	iP_g	12	02	41		Slovakia Probably explosion. Vienna: iPg 12 02 57.6.
4	eP i	05	21 21	36 40.5	0.0	Taiwan Region 21.40° N 121.89° E H = 05 09 24.6 s, h = 134 km, Mag = 5.4 (ISC). Dc = 83.67°, Az = 65.03°.
4	−iPKIKP iPKP2 epPKP2 ePP	06	35 35 36 39	40.3 47.8 42 24	+1.6 −1.0 −2.0 +7.0	Tonga 18.45° S 175.38° W H = 06 16 21.8 s, h = 219 km, Mag = 5.4 (ISC). MLH (MOS) = 5½, Dc = 148.66°, Az = 23.24°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
4	iPn Lm	18	00 07.5	36.6	−1.6	Aegean Sea 39.25° N 24.60° E H = 17 58 09.0 s, h = 60 km, Mag = 6.0 (ISC). MLH (MOS) = 6¾, MLH (BRA) = 6.7, Dc = 10.43°, Az = 145.98°. Lm: 8.0 s 430 μm.
4	eP e (Sg)	18	40 43	45 54	+10.0	Aegean Sea 38.99° N 24.80° E H = 18 38 1.0 s, h = 15 km, Mag = 4.7 (ISC). Dc = 10.73°, Az = 145.92°.
5	iPn	17	24	36	−0.7	Roumania 45.80° N 26.78° E H = 17 22 55.2 s, h = 140 km, Mag = 4.4 (ISC). Dc = 7.03°, Az = 106.11°.
6	eP epP	04	52 53	01 52	−3.4 0.0	South of Honshu, Japan 30.64° N 137.82° E H = 04 40 17.9 s, h = 486 km, Mag = 5.1 (ISC). Dc = 85.30°, Az = 48.03°.
6	ePKIKP ePKP2	08	31 31	29 40	+8.9 −1.2	South of Fiji 22.91° S 177.31° W H = 08 11 59.1 s, h = 232 km, Mag = 4.7 (ISC). Dc = 152.30°, Az = 29.59°.
6	−iP ipP	11	40 41	53 06	+0.5 −1.0	Off West Coast of Northern Sumatra 3.82° N 95.82° E H = 11 28 49 s, h = 54 km, Mag = 5.2 (ISC). Dc = 79.64°, Az = 95.88°.
7	ePn ePg eSn eSg	08	01 02 02 03	47 03.5 46.6 12.5	−3.6 −6.0 −17.6 +0.5	Yugoslavia 43.52° N 17.43° E H = 08 00 36.7 s, h = 53 km, Mag = 4.6 (ISC). Dc = 4.66°, Az = 177.09°.
9	iPg iSg	15	34 37	57.6 09.1		Slovakia Probably explosion. D = 20 km.

Date	Phase	h	m	s	Res. (O–C)	Remarks
9	iPg	15	36	27.6		Slovakia Probably explosion. D = 20 km.
9	ePKP2	18	18	11	+4.2	Tonga 15.7° S 175.3° W H = 17 58 25 s, h = 17 km, Mag = 4.5 (ISC). Dc = 146.05°, Az = 21.74°.
9	ePKP2	18	47	05	+15.7	Tonga 15.8° S 175.4° W H= 18 27 10.8 s, h = 37 km, Mag = 4.5 (ISC). Dc = 145.93°, Az = 21.86°.
10	iPg i i	04	22 22 22	01.4 02.8 06		Near Earthquake Vienna: eiPn 04 22 15.3.
11	eP	14	58	00	+1.1	Veracruz State, Mexico 19.23° N 95.74° W H = 14 44 56 s, h = 4 km, Mag = 5.3 (ISC). Dc = 90.14°, Az = 299.45°.
12	eP	03	03	50.3	–2.9	Hokkaido, Japan Region 42.67° N 143.19° E H = 02 52 04.6 s, h = 114 km, Mag = 5.2 (ISC). Dc = 77.83°, Az = 37.57°.
12–13						The apparatus was not operational.
13	eP	07	34	47	+3.8	Red Sea 19.60° N 38.74° E H = 07 28 05 s, h = 31 km, Mag = 5.5 (ISC). Dc = 33.45°, Az = 140.91°.
13	iSg	11	24	31.3		Czechoslovakia 50.58° N 14.05° E H = 11 22(PRU) Explosion of 37.7 Tons. Dc = 3.13°, Az = 321.55°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
13	iP	19	28	56.6	–0.6	Red Sea 19.68° N 38.75° E H = 19 22 20 s, h = 31 km, Mag = 5.6 ISC. MLH (MOS) = 6, mPV (BRA) = 5.9, Dc = 33.38°, Az = 140.82°. PV: 1.6 s 0.26 μm.
14	+iP	07	08	19	+3.0	India-China Border Region 28.41° N 94.29° E H = 06 58 4.4 s, h = 20 km, Mag = 5.7 (ISC). Dc = 60.16°, Az = 78.70°.
14	eP	07	57	10	+1.6	Franz Joseph Land 82.38° N 39.1° E H = 07 50 14.9 s, h = 13 km, Mag = 4.7 (ISC). MLH (MOS) = 5½, MLH (BRA) = 5.2, Dc = 35.01°, Az = 4.99°. LmH: 3.0 s 0.7 μm.
15	eSn	03	41	24		Yugoslavia 44° N 17.50° E H = 03 39.5 (BCIS). Dc = 4.18°, Az = 176.08°.
16	ePKIKP	12	29	16	+5.9	Loyalty Islands Region 22.10° S 170.56° E H = 12 09 37.8 s, h = 64 km, Mag = 5.4 (ISC). Dc = 146.44°, Az = 48.56°.
17	e	01	53	13		
19	iPKIKP iPP	01	29 29	11 49	+0.7 +1.8	Banda Sea 6.73° S 129.84° E H = 01 10 48.2 s, h = 80 km, Mag = 6.0 (ISC). Dc = 110.09°, Az = 77.25°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
19	iP	04	13	36.0	–0.1	Kurile Islands
	i		13	39		45.53° N 151.11° E
	ePcP		13	46	–0.8	H = 04 01 38.5 s, h = 38 km,
	eS		23	31.4	+4.0	Mag = 5.8 (ISC). MLH (MOS) = 7,
						MLH (BRA) = 7.0, mPH (BRA) = 6.2,
						Dc = 78.38°, Az = 31.08°.
						PH: 1.6 s 0.22 μm.
						LmH: 16.0 s 63 μm.
20	iP	13	43	33	+1.8	Kurile Islands
						45.51° N 151.39° E
						H = 13 31 33.8 s, h = 46 km,
						Mag = 5.6 (ISC). MLH (MOS) = 6.
						Dc = 78.49°, Az = 30.91°.
20	iP	13	52	49	–1.5	Kurile Islands
						45.46° N 151.58° E
						H = 13 40 51.2 s, h = 35 km,
						Mag = 5.4 (ISC). MLH (MOS) = 5½,
						Dc = 78.60°, Az = 30.82°.
20	iP	14	04	06	+1,2	Kurile Islands
						45.39° N 151.59° E
						H = 13 52 03.7 s, h = 23 km,
						Mag = 5.8 (ISC). MLH (MOS) = 5¾,
						Dc = 78.67°, Az = 30.85°.
20	eP	14	56	16	+0.3	Kurile Islands
						45.37° N 151.60° E
						H = 14 44 17.3 s, h = 46 km,
						Mag = 4.9 (ISC). MLH (MOS) = 5,
						Dc = 78.69°, Az = 30.85°.
20	iP	17	23	35	+0.8	Kurile Islands
						45.40° N 151.55° E
						H = 17 11 33 s, h = 23 km,
						Mag = 5.0 (ISC). MLH (MOS) = 5,
						Dc = 78.64°, Az = 30.87°.
20	iPKIKP	19	27	04	+1.8	Loyalty Islands Region
						22.05° S 170.47° E
						H = 19 07 26.1 s, h = 49 km,
						Mag = 5.3 (ISC). MLH (MOS) = 5¼,
						Dc = 146.35°, Az = 48.64°.

Date	Phase	h	h	s	Res. (O–C)	Remarks
21	ePKIKP	11	44	31	–1.0	Tonga Region
						23.97° S 175.01° W
						H = 11 24 49 s, h = 65 km,
						Mag = 5.2 (ISC).
						Dc = 154.0°, Az = 25.98°.
222	ePg	19	16	00	–1.6	Northern Italy
	eSg		16	51	+2.3	46.33° N 12.54° E
						H = 19 14 49.8 s, h = 0 km (ISC).
						Dc = 3.61°, Az = 241.09°.
23	ePKP2	00	55	27	+1.0	West of Tonga
						16.84° S 177.05° N
						H = 00 35 38 s, h = 8 km,
						Mag = 4.6 (ISC).
						Dc = 146.67°, Az = 25.23°.
24	eP	09	12	50	–3.0	Java
	epP		15	02	–2.5	6.01° S 112.33° E
	iPP		17	02	–3.3	H = 09 00 20 s, h = 606 km,
	ipPP		18	58	+1.0	Mag = 5.9 (ISC).
	ePS		26	38	+14.0	Dc = 97.93°, Az = 90.14°.
24	e	12	28	44		
	e		32	06.5		
24	iPn	17	39	53	–5.3	Switzerland
	iPg		40	23	–7.5	46.50° N 7.45° E
	iSb		41	29	–11.7	H = 17 38 14.8 s, h = 13 km,
	iSg		41	50	–9.5	Mag = 4.8 (ISC). MLgH (BRA) = 4.4,
	Lg		42	00		Dc = 6.77°, Az = 259.31°.
						LgH: 2.5 s 1.4 μm.
25	iP	22	59	58	+0.4	Kurile Islands
	ipP	23	00	13	+1.6	45.15° N 151.50° E
						H = 22 47 58.4 s, h = 47 km,
						Mag = 5.6 (ISC). MLH (MOS) = 6¼,
						Dc = 78.84°, Az = 31.02°.
27	eP	08	38	58	+0.8	Western Brazil
	i		41	09		8.88° S 71.31° W
						H = 08 26 35.0 s, h = 609 km,
						Mag = 5.3 (ISC).
						Dc = 95.49°, Az = 262.90°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
27	eP epP Lm	09	09 09 35.5	21 33	+0.4 +0.8	Northeastern China 38.56° N 116.61° E, H = 08 58 23.9 s, h = 40 km, Mag = 5.5 (ISC). MLH (MOS) = 6¼, MLH (BRA) = 6.0, Dc = 68.01°, Az = 56.5°. LmH: 6.0 s 3.0 μm.
27	ePKIKP	10	21	12	–0.3	New Hebrides 16.38° S 168.07° E H = 10 01 41.9 s, h = 5 km, Mag = 5.4 (ISC). MLH (MOS) = 6¼, Dc = 140.36°, Az = 46.91°.
27	–iP	20	00	15	–1.5	Red Sea 19.98° N 38.46° E H = 19 53 44 s, h = 50 km, Mag = 5.1 (ISC). MLH (MOS) = 5, mPH (BRA) = 5.7, Dc = 32.99°, Az = 141.03°. PV: 1.6 s 0.15 μm.
28	eSb eSg	15	53 54	57 06	+10.0 –6.0	Belgium 50.54° N 4.24° E H = 15 49 24.8 s, h = 21 km (ISC), Dc = 8.73°, Az = 290.57°.
28	eP	19	45	07	–0.9	Luzon, Philippine Islands 17.02° N 122.43° E H = 19 32 28.3 s, h = 76 km, Mag = 5.1 (ISC). MLH (MOS) = 5, Dc = 87.32°, Az = 67.48°.
30	iPP	02	26	19	–3.0	South of Bali Island 11.14° S 115.36° E H = 02 08 02.7 s, h = 33 km Mag = 6.0 (ISC). MLH (MOS) = 6¼, Dc = 103.71°, Az = 91.41°.
30	eP	08	48	47	+0.9	North of Severnaya Zemlya 85.63° N 85.0° E H = 08 41 05 s, h = 2 km, Mag = 4.7 (ISC). Dc = 40.54°, Az = 6.28°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
30	ePn	13	50	32	–0.6	Yugoslavia 43.49° N 20.95° E H = 13 49 08.0 s, h = 0 km, Mag = 4.5 (BEO). Dc = 5.40°, Az = 148.73°.
30	ePg eSg	15	37 37	44 47		Slovakia Probably explosion.
30	ePKP2	23	24	26	–0.3	West of Tonga 16.96° S 177.02° W H = 23 04 52 s, h = 94 km, Mag = 4.9 (ISC). MLH (MOS) = 5½, Dc = 146.79°, Az = 25.24°.
31	iP	02	24	25	–0.8	Fox Islands, Aleutian Islands 52.08° N 169.70° W H = 02 12 15.2 s, h = 7 km, Mag = 5.2 (ISC). MLH (MOS) = 5, Dc = 79.96°, Az = 4.26°.
31	eP	03	24	58	+0.6	Red Sea 20.03° N 38.41° E H = 03 18 29.2 s, h = 86 km, Mag = 4.9 (ISC). MLH (MOS) = 4½, Dc = 32.93°, Az = 141.06°.
31	+iPKIKP ePP	20	24 27	31 32	+0.8 +3,0	New Hebrides 15.34° S 167.52° E H = 20 05 18.9 s, h = 133 km, Mag = 5.2 (ISC). Dc = 139.20°, Az = 46.80°.
31	ePb	23	23	40		Austria 47.7° N 16.0° E H = 23 23 00 (VIE). Dc = 0.88°, Az = 238.17°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	iP	06	06	16.2	–0.6	Kurile Islands
	epP		06	31.2	–0.6	45.65° N 151.69° E
	esP		06	46.2	–8.4	H = 05 54 19.8 s, h = 49 km,
	iPP		09	04.2	–12.6	Mag = 5.7 (ISC). MLH (MOS) = 6¼,
						mPV (BRA) = 6.8,
						Dc = 78.47°, Az = 30.65°.
						PV: 1.5 s 1.2 μm.
1	eP	08	00	26	+0.7	Kurile Islands
	i		01	04		45.60° N 151,91° E
	i		01	19		H = 07 48 26.3 s, h = 37 km,
						Mag = 4.9 (ISC). MLH(MOS) = 5½,
						Dc = 78.59°, Az = 30.54°.
1	–iP	12	35	34.0	+0.7	Kurile Islands
	ipP		35	43	–1.4	45.56° N 151.62° E
	isP		35	49	+1.2	H = 12 23 34.6 s, h = 36 km,
	i		36	43		Mag = 5.8 (ISC). MLH (MOS) = 6¼,
	iPP		38	37	+5.0	mPV (BRA) = 7.0,
	eS		45	19	–8.0	Dc = 78.53°, Az = 30.74°.
						PV: 1.5 s 1.7 μm.
1	eP	12	47	07	–0.8	Iceland
						63.64° N 19.06° W
						H = 12 41 41.0 s, h = 2 km,
						Mag = 4.8 (ISC).
						Dc = 25.04°, Az = 321.51°.
1	–iP	14	12	33.0	–0.9	Kurile Islands
						45.61° N 151.76° E
						H = 14 00 33.5 s, h = 24 km,
						Mag = 5.2 (ISC). MLH (MOS) = 5½,
						mPV (BRA) = 6.0,
						Dc = 78.53°, Az = 30.63°.
						PV: 1.5 s 0.2 μm.
1	eP	17	33	11	+2.7	Kurile Islands
						45.51° N 151.92° E
						H = 17 21 08 s, h = 29 km,
						Mag = 4.7 (ISC).
						Dc = 78.67°, Az = 30.58°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
3	eP	07	45	04	+0.7	Red Sea
	epP		45	10	–0.6	20.00° N 38.40° E
						H = 07 38 28 s, h = 23 km,
						Mag = 5.1 (ISC). MLH (MOS) = 4¾,
						mPV (BRA) = 5.9,
						Dc = 32.95°, Az = 141.10°.
						PV: 1.4 s 0.2 μm.
3	ePKIKP	08	23	13	+0.6	New Britain Region
	ePKHKP		23	34	–0.4	6.03° S 151.45° E
						H = 08 04 14 s, h = 5 km,
						Mag = 5.2 (ISC). MLH (MOS) = 5¾,
						Dc = 122.88°, Az = 57.88°.
3	ePKIKP	13	18	25	+4.0	Tonga
	ePKP2		18	34	0.0	20.40° S 173.57° N
						H = 12 58 39 s, h = 27 km,
						Mag = 5.4 (ISC). MLH (MOS) = 6,
						Dc = 150.98°, Az = 20.99°.
3	iPn	16	37	42.5	–0.5	Northern Italy
	iPb		38	02.5	+7.5	44.87° N 10.68° E
	iPg		38	14	+6.0	H = 16 36 18 s, h = 10 km (ISC).
	eSn		38	46	–3.0	Mag = 4.7 (USCGS).
	iSg		39	19	–1.0	Dc = 5.52°, Az = 235.72°.
4	iP	04	06	26	+0.2	Kurile Islands Region
	ePcP		06	38	+2.6	45.40° N 152.14° E
						H = 03 54 20 s, h = 3 km,
						Mag = 5.1 (ISC). MLH (MOS) = 5½,
						mPV (BRA) = 5.7,
						Dc = 78.84°, Az = 30.50°.
						PV: 1.5 s 0.1 μm.
4	eP	17	02	20	+4.9	Crete
						35.59° N 23.56° E
						H = 16 59 06.2 s, h = 73 km,
						Mag = 4.7 (ISC).
						Dc = 13.45°, Az = 156.80°.
4	iP	18	07	44.7	+0.1	Roumania
						45.72° N 26.32° E
						H = 18 06 06.7 s, h = 161 km,
						Mag = 4.5 (ISC).
						Dc = 6.77°, Az = 107.80°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
5	iP ePP	02	47 51	46 52	–1.4 +1.0	Marianas Region 20.00° N 147.27° E H = 02 34 07 s, h = 12 km, Mag = 5.8 (ISC). MLH (MOS) = 6, mPV (BRA) = 6.2, Dc = 98.83°, Az = 46.66°. PV: 1.6 s 0.1 μm.
5	ePP	03	05	31	–7.4	Marianas Region 19.97° N 147.28° E H = 02 47 50 s, h = 6 km, Mag = 5.5 (ISC). MLH (MOS) = 5¾, Dc = 98.86°, Az = 46.67°.
5	ePKIKP	22	49	05	–0.8	West of Macquarie Island 53.31° S 140.6° E H = 22 29 32 s, h = 23 km, Mag = 5.0 (USCGS). Dc = 144.68°, Az = 120.05°.
6	eP	06	29	57	+1.9	Near South Coast of Honshu, Japan 34.29° N 139.13° E H = 06 17 28.9 s, h = 10 km, Mag = 5.1 (ISC). MLH (MOS) = 5½, Dc = 82.96°, Az = 45.02°.
6	eP	09	02	05	+0.9	Near South Coast of Honshu, Japan 34.28° N 139.16° E H = 08 49 39 s, h = 15 km, Mag = 4.9 (ISC). MLH (MOS) = 5, Dc = 82.98°, Az = 45.00°.
6	eP eiPP	12	35 39	35 44	–1.5 +5.0	Marianas Region 20.05° N 147.24° E H = 21 18 36 s, h = 42 km, Mag = 5.3 (ISC). MLH (MOS) = 5¾, Dc = 98.77°, Az ω 46.66°.
6	+iP eiPP	13	03 04	38 33	–0.8 +2.0	Southern Persia 29.91° N 51.02° E H = 12 57 15 s, h = 20 km, Mag = 5.2 (ISC). MLH (MOS) = 5½, mPV (BRA) = 5.6, Dc = 31.69°, Az = 112.76°. PV: 1.4 s 0.1 μm.

Date	Phase	h	m	s	Res. (O–C)	Remarks
6	eP ePcP ePP	23	41 41 44	17 26 26	+0.2 –0.2 –3.0	Near South Coast of Honshu, Japan 34.29° N 139.15° E H = 23 28 52.2 s, h = 20 km, Mag = 5.1 (ISC). MLH (MOS) = 5½, Dc = 82.96°, Az = 45.00°.
7	eP epP	17	11 11	20 29	+1.0 –2.1	Turkey 37.43° N 36.17° E H = 17 07 15.4 s, h = 38 km, Mag = 4.8 (ISC). MLH (MOS) = 5, mPV (BRA) = 4.8, Dc = 17.58°, Az = 120.60°. PV: 1.4 s 0.1 μm.
7	–eP iPP ei Lm	18	37 38 39 45.5	37 17.5 21.5	+1.0 –2.0	Turkey 37.36° N 36.24° E H = 18 33 31.2 s, h = 32 km, Mag = 4.9 (ISC). MLH (MOS) = 5½, mPV (BRA) = 4.8, Dc = 17.67°, Az = 120.64°. PV: 1.4 s 0.1 μm.
8	iPKIKP iPKP2 ipPKIKP	05	53 54 56	51 06 16	–1.0 0,0 +4.0	West of Tonga 19.94° S 178.50° W H = 05 35 16.2 s, h = 605 km, Mag = 5.2 (ISC). Dc = 149.14°, Az = 29.56°.
9	ePP	00	24	25	–7 0	Western New Guinea Region 3.97° S 135.73° E H = 00 05 08.2 s, h = 14 km, Mag = 5.2 (ISC). MLH (MOS) = 5¾, Dc = 111.78°, Az = 70.56°.
9	+iPKIKP	09	16	00	+1.2	Solomon Islands 7.30° S 155.88° E H = 08 56 59.8 s, h = 40 km, Mag = 5.1 (ISC). Dc = 126.39°, Az = 54.30°.
9	ePKIKP	21	37	34	–0.3	Solomon Islands 7.35° S 155.81° E H = 21 18 36 s, h = 42 km, Mag = 5.3 (ISC). Dc = 126.39°, Az = 54.41°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
10	ePKIKP epPKIKP epPKP2	00	17 17 18	02 21 37	+0.8 –7.0 +1.2	Tonga Region 17.68° S 172.94° W H = 23 57 28 s, h = 96 km, Mag = 4.9 (ISC). MLH (MOS) = 5½, Dc = 148.50°, Az = 18.56°.
10	ePKIKP	05	18	56	+1.6	Solomon Islands 7.35° S 155.76° E H = 04 59 54.7 s, h = 42 km, Mag = 5.4 (ISC). MLH (MOS) = 5¾, Dc = 126.36°, Az = 54.46°.
10	+iPKIKP	15	21	44	–0.2	Solomon Islands 7.27° S 155.80° E H = 15 02 44.5 s, h = 47 km, Mag = 5.7 (ISC). MLH (MOS) = 6, Dc = 126.32°, Az = 56.36°.
10	iPb iSg	15	51 51	02 05.6		Slovakia Small local shock or explosion. D = 30 km.
10	ePKP2	17	08	47	+1.6	South Pacific Cordillera 63.71° S 167.5° W H = 16 47 49.8 s, h = 33 km, Mag = 5.4 (USCGS). MLH (MOS) = 6, Dc = 164.22°, Az = 172.45°.
10	eiP	20	08	59	+0.3	Alaska Peninsula 58.50° N 154.26° W H = 19 57 33.6 s, h = 75 km, Mag = 5.3 (ISC). Dc = 73.46°, Az = 172.45°.
10	eiPKP1	22	08	20	+4.3	Solomon Islands 7.31° S 155.88° E H = 21 49 21.3 s, h = 52 km, Mag = 5.0 (ISC). MLH (MOS) = 5, Dc = 126.40°, Az = 54.31°.
11	ePP	05	27	14	0.0	Celebes 3.36° S 119.19° E H = 05 09 14 s, h = 30 km, Mag = 5.3 (ISC). MLH (MOS) = 5½, Dc = 100.55°, Az = 83.21°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
12	iP iS	05	03 13	39 34	–1.4 +1.0	Northern Sumatra 5.16° N 96.31° E H = 04 51 41.8 s, h = 63 km, Mag = 6.1 (ISC). MLH (MOS) = 6¾, Dc = 78.97°, Az = 94.60°.
12	ePKIKP	14	05	03	–0.9	Solomon Islands 7.42° S 155.73° E H = 13 46 04.6 s, h = 38 km, Mag = 5.2 (ISC). MLH (MOS) = 5, Dc = 126.4°, Az = 54.54°.
12	ePKIKP	14	13	54	–0.4	Solomon Islands 7.45° S 155.73° E H = 13 54 58.2 s, h = 62 km, Mag = 5.2 (ISC). MLH (MOS) = 5½, Dc = 126.43°, Az = 54.56°.
12	ePKIKP	15	10	51	–0.6	Solomon Islands 7.54° S 155.83° E H = 14 51 51 s, h = 30 km, Mag = 5.2 (ISC). Dc = 126.56°, Az = 54.51°.
12	eP	19	45	46	–1.8	Northern Sumatra 5.25° N 96.75° E H = 19 33 48 s, h = 62 km, Mag = 5.2 (ISC). Dc = 79.20°, Az = 94.21°.
13	ePKIKP	04	33	51	–3.0	New Hebrides 18.69° S 168.85° E H = 04 14 33.6 s, h = 121 km, Mag = 5.2 (ISC). Dc = 142.71°, Az = 47.79°.
13	eP	08	37	43	+0.7	Northern Sumatra 5.30° N 96.46° E H = 08 25 44 s, h = 67 km, Mag = 5.1 (ISC). MLH (MOS) = 5, Dc = 78.97°, Az = 94.40°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
13	–iP ipP	20	06 06	06 18	+0.3 –2.3	Ryukyu Islands 27.32° N 128.66° E H = 19 53 44.3 s, h = 51 km, Mag = 5.9 (ISC). MLH (MOS) = 5½, mPV (BRA) = 5.7, Dc = 83.09°, Az = 56.46°. PV: 1.6 s 0.1 μm.
13	iP	20	12	58	+0.9	Guerrero Mexico 18.58° N 100.08° W H = 19 59 52.9 s, h = 87 km, Mag = 5.5 (ISC). Dc = 93.14°, Az = 302.33.
14	ePP	15	02	16	–4.7	Solomon Islands 7.21° S 155.4° E H = 14 41 18 s, h = 84 km, Mag = 4.9 (ISC). Dc = 126.05°, Az = 54.73°.
15	iPn iPg iSn iSg i	02	09 09 09 10 11	03 18 51 12 18	–1.8 –2.0 –0.9 +0.9	Yugoslavia 44.32° N 16.12° E H = 02 08 02.2 s, h = 0 km (ISC). Dc = 3.91°, Az = 190.43°.
16	ePKP2	07	37	53	+2.0	South of Fiji 19.33° S 175.89° E H = 07 18 10 s, h = 22 km, Mag = 5.2 (ISC). Dc = 146.49°, Az = 38.23°.
16	ePKIKP	07	49	34	+10.0	South of Tonga 24.5° S 175.48° W H = 07 29 35.7 s, h = 33 km, Mag = 5.2 (ISC). MLH (MOS) = 5, Dc = 154.36°, Az = 27.31°.
16	eP	10	04	40	–3.4	North of Ascension Island 0,0° N 17.6° W H = 09 55 01 s, h = 33 km, Mag = 4.8 (ISC). Dc = 56.61°, Az = 222.99°.

Date	Phase	h	m	s	Res (O–C)	Remarks
16	iP iPcP	10	22 22	07 19	+0.4 +0.4	Kurile Islands 46.40° N 153.39° E H = 10 10 05 s, h = 12 km, Mag = 5.2 (ISC). MLH (MOS) = 5¼, Dc = 78.38°, Az = 29.23°.
17	ePKIKP ePP	11	37 40	37 19	+0.3 –6.0	Santa Cruz Islands 12.50° S 166.24° E H = 11 18 20 s, h = 51 km, Mag = 5.1 (ISC). MLH (MOS) = 5¼, Dc = 136.13°, Az = 46.30°.
17	e e	15	05 05	14 28		
19	e	04	39	10		
19	e	10	05	50		
19	eP epP esP	22	08 08 09	39 56 08.5	–0.6 –1.7 0.0	Dominican Republic Region 18.73° N 69.64° W H = 21 57 05.3 s, h = 108 km, Mag = 5.2 (ISC). Dc = 74.15°, Az = 280.40°.
21	e ePP ePPP	08	32 33 35	28 19 13	 +5.0 –12.0	Banda Sea 5.45° S 126.77° E H = 08 14 24.5 s, h = 25 km, Mag = 5.4 (ISC). Dc = 107.12°, Az = 78.79°.
21	ePKP2	18	07	24	+8.5	Fiji 15.49° S 179.6° E H = 17 47 58 s, h = 170 km, Mag = 4.2 (ISC). Dc = 144.36°, Az = 29.85° .
22	–iP ePcP e	13	19 19 20	39 45 39	–0.6 –3.0	Northern Sumatra 5.12° N 96.39° E H = 13 07 38 s, h = 44 km, Mag = 5.4 (ISC). MLH (MOS) = 5¾, mPV (BRA) = 5.5, Dc = 79.06°, Az = 94.57°. PV: 1.4 s 0.06 μm.
22	e	13	46	21		

Date	Phase	h	m	s	Res. (O–C)	Remarks
22	e	15	13	00		
23	eP ePP	09	34 34	05 11	–2.2 –8.4	Algeria 36.21° N 2.47° E H = 09 30 21 s, h = 28 km, Mag = 4.8 (ISC). Dc = 16.10°, Az = 227.45°.
24	+iP ePP	08 09	58 00	55 33	–0.4 –1.0	Tadzhikistan 37.34° N 72.59° E H = 08 51 11.0 s, h = 29 km, Mag = 5.2 (ISC). MLH (MOS) = 5¼, mPV (BRA) = 5.3, Dc = 41.32°, Az = 84.02°. PV: 1.2 s 0.04 μm.
24	–iP	11	57	34	–1.2	Mid-Indian Rise 23.91° S 69.61° E H = 11 44 56.6 s, h = 22 km, Mag = 4.9 (ISC). Dc = 85.78°, Az = 133.28°.
25	+iP ipP	10	39 39	12 21	+0.6 –1.0	Northern Sinkiang Province, China 43.34° N 87.06° E H = 10 30 36.3 s, h = 22 km, Mag = 5.2 (ISC). MLH (MOS) = 5¼, mPV (BRA) = 5.5, Dc = 47.51°, Az = 68.35°. PV: 1.2 s 0.03 μm.
26	eP	13	23	50	+2.8	South Indian Ocean 1.10° S 89.47° E H = 13 11 44.2 s, h = 33 km, Mag = 4.9 (ISC). MLH (MOS) = 5½, Dc = 79.13°, Az = 104.01°.
26	ePKIKP	22	06	08	0.0	Fiji Region 16.53° S 175.92° E H = 21 46 35 s, h = 56 km, Mag = 4.9 (ISC). Dc = 143.98°, Az = 36.11°.
27	eSg	21	37	54	+17.0	Austria 46.50° N 14.0° E H = 21 36 08 s (BCIS). Dc = 2.69°, Az = 232.82°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
27	eP ePP	23	23 25	39 33	+2.9 +9.0	Southern Sinkiang Province, China 41.85° N 82.09° E H = 23 15 17 s, h = 3 km, Mag = 5.0 (ISC). MLH (MOS) = 5, Dc = 45.15°, Az = 72.75°.
27	e	09	01	09		Czechoslovakia Explosion of 14.3 Tons. 48.55° N 15.65° E H = 09 00 (PRU). Dc = 1.04°, Az = 292.03°.
28	e	10	24	33		
28	ePKIKP	10	32	53	+0.3	Fiji Region 15.45° S 177.1° W H = 10 13 18.4 s, h = 33 km, Mag = 4.5 (ISC). Dc = 145.33°, Az = 24.58°.
28	ePP	19	46	56	+0.7	Southern Persia 28.93° N 57.31° E H = 19 38 31 s, h = 54 km, Mag = 4.5 (ISC). MLH (MOS) = 4¾, Dc = 36.32°, Az = 107.20°.
29	eP ePcP	00	15 16	42 48	+2.8 –2.0	Queen Charlotte Islands Region 41.10° N 130.41° W H = 00 04 43.1 s, h = 6 km, Mag = 5.1 (ISC). MLH (MOS) = 5, Dc = 77.26°, Az = 339.68°.
29	–eP iPcP ePP	04	07 07 10	25.6 39 41	+0.1 +2.7 +13.0	Andreanof Islands, Aleutian Islands 51.47° N 178.32° W H = 03 55 21.0 s, h = 48 km, Mag = 6.0 (ISC). MLH (MOS) = 5½, mPV (BRA) = 6.3, Dc = 77.26°, Az = 9.73°. PV: 1.4 s 0.36 μm.
29	eP	12	37	37	–0.5	Andreanof Islands, Aleutian Islands 51.46° N 178.25° W H = 12 25 34.7 s, h = 63 km, Mag = 5.6 (ISC). Dc = 79.88°, Az = 9.69°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
29	ePKP2	12	50	45	–1.0	Tonga 15.53° S 173.73° W H = 12 31 11 s, h = 69 km, Mag = 5.0 (ISC). Dc = 146.25°, Az = 19.04°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	iP i iSn Lm	07	11 11 13 16	12 48 05 00	–3.0 +2.0	Greece 39.60° N 21.29° E H = 07 09 03.0 s, h = 34 km, Mag = 5.5 (ISC). MLH (MOS) = 6½, MLH (BRA) = 5.8. Dc = 9.08°, Az = 159.06°. LmH: 6 s 47 μm.
1	eP	08	17	51	–5.8	Greece 39.75° N 21.42° E H = 08 15 46.9 s, h = 38 km, Mag = 4.6 (ISC). MLH (MOS) = 4¾, Dc = 8.97°, Az = 158.16°.
1	eP Lm	09	52 57.5	21	–0.6	Greece 39.51° N 21.30° E H = 09 50 08.2 s, h = 33 km, Mag = 4.8 (ISC). MLH (MOS) = 4½, Dc = 9.17°, Az = 159.19°.
1	eP	14	40	16	–2.0	Greece 39.36° N 21.31° E H = 14 38 02.1 s, h = 21 km, Mag = 4.5 (ISC). Dc = 9.31°, Az = 159.44°.
2	eP	08	14	08	–1.3	Greece 39.45° N 21.29° E H = 08 11 55.9 s, h = 39 km, Mag = 4.5 (ISC). Dc = 9.22°, Az = 159.36°.
2	e	15	03	54		
2	e	15	03	54		
2	ePP	17	30	75	+1.5	Eastern New Guinea Region 5.59° S 147.24° E H = 17 10 04.5 s, h = 146 km, Mag = 5.2 (ISC). Dc = 120.09°, Az = 61.58°.
3	e	14	35	16		

Date	Phase	h	m	s	Res. (O–C)	Remarks
3	iPb iSg iLm iSn	16	02 02 02 02	25.5 29.5 30.5 37		Slovakia Small local shock or explosion. D≐ 38 km, MLgH (BRA) = 1.8. LgH: 1.2 s 1.15 μm.
3	eP eSg	18	44 46	03 48	+3.1 −3.2	Greece 39.53° N 21.34° E H = 18 41 47.2 s, h = 37 km, Mag = 4.8 (ISC). MLH (MOS) = 4½, Dc = 9.16°, Az = 158.97°.
4	e	12	39	30		
4	eP eSg	13	33 36	18 03	−1.0 −2.0	Greece 39.63° N 21.26° E H = 13 31 07.8 s, h = 39 km, Mag = 4.7 (ISC). Dc = 9.05°, Az = 159.15°.
5	eP	06	28	53	+4.0	Greece 39.56° N 21.29° E H = 06 26 37.9 s, h = 57 km, Mag = 4.7 (ISC). Dc = 9.12°, Az = 159.15°.
6	eP ePcP	14	12 12	15 27	0.0 −2.5	Dominican Republic Region 19.25° N 70.01° W H = 14 00 40 s, h = 30 km, Mag = 5.4 (ISC). Dc = 161.11°, Az = 281.04°.
8	ePKIKP	19	04	54	+1.4	South of Kermadec Islands 33.28° S 178.37° W H = 18 44 56 s, h = 47 km, Mag = 5.1 (ISC). Dc = 161.11°, Az = 43.67°.
9	eP	04	07	52	−1.6	Turkey 39.61° N 27.15° E H = 04 05 13.0 s, h = 37 km, Mag = 4.4 (ISC). Dc = 11.20°, Az = 136.09°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
9	iP iPcP i	06	26 27 27	58 10 22.5	+0.5 +3.0	Kurile Islands 44.02° N 149.08° E H = 06 14 51.0 s, h = 0 km, Mag = 5.3 (ISC). MLH (MOS) = 5¾, Dc = 78.96°, Az = 33.12°.
9	eP	08	02	55	−2.2	Greece 39.72° N 21.39° E H = 08 00 47.3 s, h = 53 km, Mag = 4.7 (ISC). Dc = 8.99°, Az = 158.36°.
9	ePKP2 epPKP2	20	33 33	06 34	+0.8 +2.4	Tonga 15.54° S 173.39° W H = 20 13 32.9 s, h = 91 km, Mag = 4.7 (ISC). Dc = 146.33°, Az = 18.46°.
11	–iP iPP ePPP Lm	14 15	58 00 00 16.5	47 18 44	+3.7 −3.0 −6.0	Tadzhikistan-Sinkiang Border Region 39.33° N 73.74° E H = 14 50 57 s, h = 2 km, Mag = 5.5 (ISC). MLH (MOS) = 6, mPV (BRA) = 5.7. Dc = 41.02°, Az = 80.73°.
11	ePP	15	23	17	−4.0	Chile-Bolivia Border Region 20.25° S 68.83° W H = 11 15 05 s, h = 109 km, Mag = 5.9 (ISC). Dc = 102.18°, Az = 253.37°.
12–16						The apparatus was not operational.
16	ePKP2	16	34	02	−1.3	Tonga 15.26° S 173.32° W H = 16 14 24 s, h = 36 km, Mag = 5.1 (ISC). Dc = 146.07°, Az = 18.24°.
16	eP	19	37	35	+0.8	South of Honshu, Japan 32.56° N 141.40° E H = 19 24 59.9 s, h = 41 km, Mag = 5.1 (ISC). MLH (MOS) = 5, Dc = 85.46°, Az = 44.42°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
16	ePn eSg	21	18 19	08 46.5	+6.0 +4.3	Yugoslavia 42.9° N 20.3° E H = 21 16 34 s (BCIS), Dc = 5.73°, Az = 155.77°.
17	eP	00	44	26	−1.2	Southern Alaska 60.78° N 143.59° W H = 00 33 12.9 s, h = 13 km, Mag = 5.2 (ISC). MLH (MOS) = 4½, Dc = 70.29°, Az = 350.07°.
17	eP	04	33	47	+4.7	Turkey-Persia Border Region 38.69° N 44.29° E H = 04 28 53 s, h = 54 km, Mag = 4.7 (ISC). MLH (MOS) = 4½, Dc = 21.80°, Az = 105.69°.
17	iPg Lm	09	58 59	59 02		Small local shock or explosion.
17	ePKIKP	16	33	05	+0.7	Fiji Region 16.68° S 175.90° E H = 16 13 33.4 s, h = 38 km, Mag = 4.9 (ISC). Dc = 144.10°, Az = 36.25°.
17	–iP	17	57	18.6	+1.9	Red Sea 19.67° N 38.7° E H = 17 50 42.2 s, h = 61 km, Mag = 5.2 (ISC). MLH (MOS) = 5¼, mPV (BRA) = 5.6, Dc = 33.37°, Az = 140.89°. PV: 0.16 μm 2.0 s.
18	–iP	04	18	56	+0.1	Hokkaido, Japan Region 41.88° N 144.95° E H = 04 06 50 s, h = 9 km, Mag = 5.1 (ISC). MLH (MOS) = 5¼, Dc = 79.21°, Az = 36,89°.
18	eP	11	34	34.1	+0.6	Hokkaido, Japan Region 41.91° N 144.86° E H = 11 22 27 s, h = 6 km, Mag = 5.2 (ISC). Dc = 79.14°, Az = 36.94°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
18	iP	14	12	59	+1.0	Hokkaido, Japan Region 41.91° N 144.92° E H = 14 00 52 s, h = 8 km, Mag = 5.0 (ISC). MLH (MOS) = 5¼, Dc = 79.16°, Az = 36.90°.
18	e	15	44	49		
18	iP	23	51	28.5	0.0	Kyushu, Japan 30.91° N 130.90° E H = 23 39 16.7 s, h = 64 km, Mag = 5.5 (ISC). MLH (MOS) = 5, Dc = 81.51°, Az = 52.67°.
19	e	01	10	00		
19	ePKIKP	12	22	28	+12.3	Kermadec Islands 30.49° S 177.71° W H = 12 02 21.4 s, h = 29 km, Mag = 4.8 (ISC). Dc = 159.02°, Az = 38.05°.
19	+iP	15	59	59	−2.0	Ethiopia 14.62° N 40.17° E H = 15 52 39 s, h = 43 km, Mag = 4.9 (ISC). Dc = 38.50°, Az = 142.47°.
20	ePP	08	56	37	+1.0	Kirgiziya 39.26° N 72.76° E H = 08 47 22.6 s, h = 46 km, Mag = 4.8 (ISC). MLH (MOS) = 4¾, Dc = 40.41°, Az = 81.43°.
20	eSg	11	46	46		Czechoslovakia Explosion of 20.7 Tons, 50.57° N 14.01° E H = 11 45, (PRU), Dc = 3.14°, Az = 321.08°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
20	iP	15	12	40.6	+0.3	Southern Nevada Nuclear explosion "COMMODORE". 37.16° N 116.06° W H = 15 00 01.7 s, h = 16 km, Mag = 5.8 (ISC). mPV (BRA) = 6.2, Dc = 85.36°, Az = 324.22°. PV: 0.26 μm 1.6 s.
20	eP i	23	22 29	50 23	+0.6	Western Russia 66.48° N 33.9° E H = 23 18 11.7 s, h = 17 km, Mag = 4.4 (ISC). MLH (MOS) = 4, Dc = 20.34°, Az = 19.45°.
21	–iP ipP isP ePP iSKS ePS	18 19 	57 58 58 01 07 09	38 23 42 03 45 27	0.0 –1.0 –2.0 –3.0 0.0 –1.0	Southern Sumatra 0.96° S 101.39° E H = 18 45 13.2 s, h = 184 km, Mag = 6.2 (ISC). mPV (BRA) = 6.5, Dc = 86.89°, Az = 94.89°. PV: 1.6 s 1.3 μm.
23	eP	01	34	25	+1.4	Kurile Islands Region 44.72° N 150.23° E H = 01 22 21 s, h = 18 km, Mag = 4.8 (ISC). Dc = 78.77°, Az = 32.04°.
23	+iP ēPcP	02	04 04	42 59	+0.2 +5.0	Kurile Islands Region 44.68° N 150.30° E H = 01 52 38 s, h = 10 km, Mag = 5.1 (ISC). Dc = 78.83°, Az = 32.01°.
23	e	09	59	36		
23	eP	12	07	47	+2.1	Greenland Sea 73.01° N 5.9° E H = 12 02 19.2 s, h = 33 km, Mag = 4.7 (ISC). Dc = 25.43°, Az = 352.35°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
23	+iP	14	12	39	–1.0	Southern Nevada Nuclear explosion "SCOTCH". 37.27° N 116.35° W H = 14 00 02.6 s, h = 20 km, Mag = 5.7 (ISC). mPV (BRA) = 5.9, Dc = 85.37°, Az = 324.48°. PV: 1.4 s 0.12 μm.
25	e	12	31	35		Near Earthquake Vienna: e Sb 12 31 31, i Sg 12 31 35.
26	e	02	40	26		
26	e	03	01	47		
26	eSg	08	26	48	+3.3	Austria 47.5° N 14.0° E H = 08 25 32 s (BCIS). Dc = 2.2°, Az = 253.42°.
27	iP	01	58	34	–1.0	Algeria 35.71° N 0.26° W H = 01 54 23 s, h = 2 km, Mag = 4.6 (ISC). Dc = 17.89°, Az = 232.26°.
27	–iP iPcP iPP ePS	17	35 35 38 45	00 10 02 33	–2.6 –0.4 0.0 –8.0	Rat Islands, Aleutian Islands 51.86° N 176.09° E H = 17 22 56 s, h = 11 km, Mag = 5.9 (ISC). MLH (MOS) = 6½, mPV (BRA) = 6.3, Dc = 78.74°, Az = 13.11°. PV: 1 s 0.24 μm.
27	eP epP eiPP eiPPP	19	14 14 15 16	06 11 55 25	+0.3 –4.0 +2.0 –8.0	Kashmir-Sinkiang Border Region 36.07° N 77.66° E H = 19 05 48.1 s, h = 28 km, Mag = 5.4 (ISC). MLH (MOS) = 5½, Dc = 45.4°, Az = 82.21°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
28	iP	01	43	55	+1.2	Rat Islands, Aleutian Islands 52.20° N 175.01° E H = 01 31 56 s, h = 29 km, Mag = 5.2 (ISC). MLH (MOS) = 5, Dc = 78.24°, Az = 13.68°.
28	iP	04	15	31	+3.0	Eastern Kazakhstan 49.81° N 78.11° E H = 04 07 57.7 s. Underground explosion, Mag = 5.4 (ISC). Dc = 39.09°, Az = 63.98°.
29	e	09	03	18		
29	ePKIKP ePKP2	11	29 29	08 27	−2.7 +3.2	West of Tonga 19.75° S 176.16° W H = 11 09 52.7 s, h = 244 km, Mag = 5.0 (ISC). Dc = 149.68°, Az = 25.35°.
29	iP ePP	21	13 16	38 34	+1.7 −2.0	Hokkaido, Japan Region 43.29° N 145.74° E H = 21 01 45.8 s, h = 97 km, Mag = 5.3 (ISC). Dc = 78.33°, Az = 35.62°.
30	iP	10	06	53	−0.2	Andreanof Islands, Aleutian Islands 50.10° N 176.60° W H = 09 54 38.5 s, h = 30 km, Mag = 5.0 (ISC). Dc = 81.40°, Az = 8.88°.
31	iP	11	50	01	+0.6	Windward Islands 12.48° N 60.31° W H = 11 38 39.8 s, h = 70 km, Mag = 5.2 (ISC). Dc = 72.42°, Az = 269.14°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	−iP epP	03	48 48	19 32	+3.7 0.0	Fox Islands, Aleutian Islands 53.60° N 165.64° W H = 03 36 18.0 s, h = 49 km, Mag = 5.7 (ISC). MLH (MOS) = 5¼, Dc = 78.58°, Az = 1.67°.
1	+iP	10	27	46	+4.1	Near East Coast of Kamchatka 53.95° N 160.58° E H = 10 16 11.7 s, h = 43 km, Mag = 5.0 (ISC). MLH (MOS) = 5, Dc = 73.67°, Az = 21.51°.
1	+iP iPP ePPP	10	42 43 43	51 00 18	+4.2 +1.0 +10.0	Turkey 36.81° N 29.26° E H = 10 39 23.5 s, h = 43 km, Mag = 5.0 (ISC). MLH (MOS) = 4½, Dc = 14.44°, Az = 137.35°.
1	eP	11	05	18	−7.2	Turkey 36.7° N 29.3° E H = 11 01 56 s, h = 0 km (ISC). Dc = 14.55°, Az = 137.49°.
1	e e	13	18 20	27 08		
3	−iP iPcP	09	20 20	27 37	+0.3 −6.0	Kodiak Island Region 58.35° N 151.31° W H = 09 08 54 s, h = 13 km, Mag = 5.4 (ISC). Dc = 73.42°, Az = 353.66°.
5	ePKIKP ePKP2 e e	01	41 41 41 41	06.5 20 29 41	+2.2 −2.0	Tonga 21.23° S 174.48° W H = 01 21 24 s, h = 59 km, Mag = 5.3 (ISC). MLH (MOS) = 5¾, Dc = 151.55°, Az = 23.16°.
5	−iP ePcP	16	50 50	21 32	+2.4 0.0	Off East of Kamchatka 51.52° N 159.16° E H = 16 38 38.6 s, h = 51 km, Mag = 4.8 (ISC). MLH (MOS) = 5, Dc = 75.51°, Az = 23.38°.
6	e	09	01	39		

Date	Phase	h	m	s	Res. (O–C)	Remarks
7	iPn iPb iPg	16	19 20 20	58 00 05	−2.4 −1.7 +0.7	Austria 47.88° N 14.29° E H = 16 19 26.4 s, h = 33 km (ISC). Dc = 1.91°, Az = 262.32°.
7	ePKIKP i ipPKIKP	13	41 41 42	42 53 07.6	+0.7 −0.1	Loyalty Islands Region 21.42° S 170.26° E H = 13 22 13.8 s, h = 92 km, Mag = 5.3 (ISC). MLH (MOS) = 5¼, Dc = 145.72°, Az = 48.33°.
8	iPg i iSg iLm	15	50 50 50 50	30.1 31.6 33.1 33.7		Slovakia Explosion, D = 30 km.
9	+iP	11	35	36	−0.5	Talaud Islands 4.13° N 126.21° E H = 11 21 59 s, h = 59 km, Mag = 5.2 (ISC). Dc = 99.52°, Az = 72.87°.
9	i	12	01	24.4		Czechoslovakia Explosion of 11.2 Tons. 50.42° N 13.83° E (BCIS). Dc = 3.11°, Az = 317.66°.
10	−iP	05	55	44.5	−0.3	North of Ascension Island 3.55° S 12.20° W H = 05 45 54.5 s, h = 20 km, Mag = 5.2 (ISC). Dc = 57.52°, Az = 215.39°.
10	e	12	17	59		
10	iPKIKP iPKP2 epPKP2	14	17 17 19	37 43 58	+7.6 +0.5 −4.5	West of Tonga 19.40° S 178.24° W H = 13 58 54.2 s, h = 608 km, Mag = 5.2 (ISC). Dc = 148.72°, Az = 28.76°.
11	iPb i iSg eLm	10	38 38 39 39	56.6 59.2 02.9 07.1		Czechoslovakia (Little Carpathians) D = 50 km.

Date	Phase	h	m	s	Res. (O–C)	Remarks
11	iP	12	02	13	+1.1	Kurile Islands 47.50° N 154.47° E H = 11 50 16.1 s, h = 26 km. Mag = 4.9 (ISC). MLH (MOS) = 4½, Dc = 77.75°, Az = 28.03°.
11	e	18	48	12		
12	eP eS	00	15 23	15 24	+0.3 −0.5	North Atlantic Ridge 16.63° N 46.62° W H = 00 05 09 s, h = 52 km, Mag = 5.2 (ISC). Dc = 60.30°, Az = 261.73°.
12	ePKIKP	01	08	56	+10.0	Tonga 21.13° S 174.38° W H = 00 48 58.9 s, h = 13 km, Mag = 5.0 (ISC). MLH (MOS) = 5, Dc = 151.48°, Az = 22,92°.
12	eP	01	31	45	−1.0	Greece 38.08° N 22.90° E H = 01 29 09.5 s, h = 47 km, Mag = 4.6 (ISC). MLH (MOS) = 4, Dc = 10.93°, Az = 155.15°.
12	eP eS	02	53 55	40 49	−1.5 +8.0	Greece 38.15° N 22.77° E H = 02 51 05.8 s, h = 35 km, Mag = 5.0 (ISC). MLH (MOS) = 4¾, Dc = 10.83°, Az = 155.53°.
12	eP	05	34	29	−1.1	Prince Edward Islands Region 44.76° S 35.70° E H = 05 21 09 s, h = 19 km, Mag = 5.5 (ISC). MLH (MOS) = 6, Dc = 93.97°, Az = 166.84°.
12	e	08	38	55		
12	eP	18	15	02	−2.8	Greece 39.06° N 21.27° E H = 18 12 46.6 s, h = 46 km, Mag = 4.6 (ISC). Dc = 9.59°, Az = 160.16°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
12	eP	21	30	38	+1.4	Southern Sumatra 3.01° S 100.53° E H = 21 17 48.5 s, h = 28 km, Mag = 5.4 (ISC). MLH (MOS) = 5½, Dc = 87.84°, Az = 96.89°.
12	–iP iPcP ePP Lm	23 00	34 34 37 14.5	38 50 35	+0.4 –0.3 +1.0	Kurile Islands 47.57° N 154.28° E H = 23 22 42.2 s, h = 24 km, Mag = 5.6 (ISC). MLH (MOS) = 5¾, mPV (BRA) = 6.0, Dc = 77.64°, Az = 28.11°. PV: 1.0 s 0.12 μm.
13	eP	01	22	53	–0.3	Southern Sumatra 3.11° S 100.54° E H = 01 10 05.6 s, h = 33 km, Mag = 5.1 (ISC). MLH (MOS) = 5, Dc = 87.91°, Az = 96.95°.
13	iPg	10	29	02		Slovakia Small local shock.
13	e	12	01	54		Czechoslovakia Explosion of 10.2 Tons. 50.68° N 14.66° E H = 12 00 00 s (ISC). Dc = 2.98°, Az = 328.50°.
13	ePKIKP ePP	15	57 59	59 29	+3.4 –1.7	New Britain Region 5.60° S 148.10° E H = 15 39 30.5 s, h = 222 km, Mag = 5.2 (ISC). Dc = 120.60°, Az = 60.78°.
13	ePn ePg eSn iSg	17	40 40 40 40	21.6 24.5 44 50	+2.6 +2.6 +2.2 +5.8	Austria 47.9° N 14.6° E H = 17 39 48 s, h = 0 km (ISC). Dc = 1.70°, Az = 261.86°.
13	eP ePP	23	14 14	32 59	–1.0 +4.0	Eastern Caucasus 41.96° N 45.30° E H = 23 09 52.4 s, h = 33 km, Mag = 4.5 (ISC). MLH (MOS) = 4½, Dc = 20.79°, Az = 96.86°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
14	eP	03	57	14	+1.2	Near E. Coast of Eastern Russia 45.39° N 136.84° E H = 03 46 19.4 s, h = 345 km, Mag = 4.9 (ISC). Dc = 72.95°, Az = 39.79°.
14	ePKIKP ePKP2 i!pPKP2 e e ePPP	05	25 26 26 26 26 32	56 01 11 32 50 42	–0.3 +1.1 –1.0 +4.0	Tonga 15.33° S 173.48° W H = 05 06 20.6 s, h = 39 km, Mag = 5.8 (ISC). MLH (MOS) = 6, Dc = 146.11°, Az = 18.53°.
14	–iP ePcP	08	17 18	50 09	–0.8 +4.0	Kurile Islands 47.58° N 154.43° E H = 08 05 54.5 s, h = 19 km, Mag = 5.3 (ISC). MLH (MOS) = 5¾, mPV (BRA) = 5.4, Dc = 77.67°, Az = 28.02°. PV: 2.0 s 0.06 μm.
14	–iP ePcP	08	24 25	53 10	+1.8 +1.6	Kurile Islands 47.49° N 154.48° E H = 08 12 57.5 s, h = 15 km, Mag = 5.4 (ISC). MLH (MOS) = 5.6, Dc = 77.77°, Az = 28.03°. PV: 1.2 s 0.06 μm.
15	iP	07	30	05	+0.3	Central Mid-Atlantic Ridge 1.05° N 29.56° W H = 07 19 46 s, h = 29 km, Mag = 4.5 (ISC). Dc = 61.78°, Az = 235.62°.
15	ePKIKP	09	43	23	+4.2	Tonga 15.20° S 173.21° W H = 09 23 43.1 s, h = 33 km, Mag = 4.4 (ISC). Dc = 146.04°, Az = 18.02°.
15	+iP epP	18	52 52	15 23	–1.6 –2.5	Central Mid-Atlantic Ridge 9.18° N 40.52° W H = 18 41 58 s, h = 34 km, Mag = 4.8 (ISC). Dc = 61.86°, Az = 251.03°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
16	ePb	00	20	40.3		Czechoslovakia
	e		20	41.5		48.4° N 17.5° E
	eSg		20	46.3		H = 00 20 37 s (BCIS).
						Dc = 0.35°, Az = 48.55°.
16	ePb	04	36	56		Czechoslovakia (Little Carpathians)
						D≐ 50 km.
16	ePKIKP	06	03	48	+5.7	West of Macquarie Island
						55.65° S 146.86° E
						H = 05 44 04.2 s, h = 39 km,
						Mag = 5.1 (ISC). MLH (MOS) = 5,
						Dc = 148.72°, Az = 122.93°.
16	ePKIKP	06	22	56	+3.2	West of Macquarie Island
						55.52° S 147.2° E
						H = 06 03 22 s, h = 102 km,
						Mag = 4.9 (ISC). MLH (MOS) = 5,
						Dc = 148.90°, Az = 122.63°.
16	iPg	12	07	55		Czechoslovakia
						Explosion.
						D≐ 15 km.
16	e	20	31	55		Tonga
						19.44° S 175.18° W
						H = 20 12 19 s, h = 129 km,
						Mag = 4.8 (ISC).
						Dc = 149.66°, Az = 23.42°.
16	e	22	58	21		Yugoslavia
						44.2° N 20.0° E
						H = 22 56 57 s (BCIS).
						Dc = 4.63°, Az = 153.16°.
17	Pdiff	05	14	48		South Sandwich Islands Region
	e		15	25		58.36° S 26.83° W
	e		17	54		H = 05 00 12 s, h = 136 km,
	e		18	54		Mag = 5.9 (ISC).
	ePP		19	18	−3.0	Dc = 112.17°, Az = 203.26°.
	eSKS		24	54	−5.3	
	eSKKS		26	00	−1.0	
	eSP		28	37	+4.0	

Date	Phase	h	m	s	Res. (O–C)	Remarks
17	+iPb	17	45	45.3		Czechoslovakia
	e		46	46.8		48.2° N 17.6° E
	eSg		45	51.3		H = 17 45 41 s, h = 0 km (ISC).
						Dc = 0.33°, Az = 84.35°.
18	iPb	21	47	50.9		Czechoslovakia
	i		47	53		48.3° N 17.4° E
	iSg		47	56.9		H = 21 47 43 s, h = 0 km (ISC).
	iLm		47	58.4		Dc = 0.24°, Az = 56.14°.
	iSn		48	02.9		
19	iPb	00	23	05		Czechoslovakia
	i		23	07.5		48.2° N 17.4° E
	iSg		23	10.6		H = 00 22 59.5 s, h = 0 km (ISC).
	iLm		23	13.6		Dc = 0.20°, Az = 80.77°.
	iSn		23	16.7		
19	eP	14	41	50	+1.1	Red Sea
						20.68° N 38.14° E
						H = 14 35 22 s, h = 34 km,
						Mag = 4.9 (ISC). MLH (MOS) ≐ 5,
						Dc = 32.23°, Az = 140.94°.
19	iP	17	19	51.7	+0.4	Fox Islands, Aleutian Islands
	ipP		20	02	−1.1	52.76° N 166.90° W
	esS		30	17	+9.0	H = 17 07 47.1 s, h = 44 km,
	Lm	18		04.5		Mag = 5.9 (ISC). MLH (MOS) = 6¼,
						mPH (BRA) = 6,
						Dc = 79.39°, Az = 2.48°.
						PH: 1.2 s 0.12 μm.
20	e	03	42	36		
20	eP	05	37	28	+1.7	Fox Islands, Aleutian Islands
						52.75° N 167.05° W
						H = 05 25 22 s, h = 31 km,
						Mag = 4.9 (ISC).
						Dc = 79.39°, Az = 2.57°.
20	eP	06	32	59	+2.2	Fox Islands, Aleutian Islands
						52.82° N 167.01° W
						H = 06 20 49.9 s, h = 9 km,
						Mag = 4.9 (ISC).
						Dc = 79.33°, Az = 2.54°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
20	eP	07	47	51	+2.0	Fox Islands, Aleutian Islands 52.78° N 167.01° W H = 07 35 46 s, h = 40 km, Mag = 4.4 (ISC). Dc = 79.37°, Az = 2.54°.
20	eP ePcP	07	50 51	54 03	+1.9 +0.3	Fox Islands, Aleutian Islands 52.79° N 167.06° W H = 07 38 50.0 s, h = 45 km, Mag = 5.4 (ISC). MLH (MOS)= 6¼, Dc = 79.36°, Az = 2.57°.
21	iP i	07	03 03	15.2 18	−0.5	Peru-Ecuador Border Region 2.25° S 77.75° W H = 06 49 58.7 s, h = 62 km, Mag = 5.4 (ISC). Dc = 94.91°, Az = 272.11°.
21	eP	15	58	27	−0.7	Luzon, Philippine Islands 12.75° N 122.98° E H = 15 45 24 s, h = 16 km, Mag = 5.3 (ISC). MLH (MOS) ≐ 6, Dc = 90.90°, Az = 69.81°.
21	ePKP2	16	05	48	−2.6	West Macquarie Island 55.48° S 146.5° E H = 15 46 01.8 s, h = 33 km, Mag = 4.9 (ISC). Dc = 148.50°, Az = 122.66°.
21	iP	18	15	42	+0.4	Central Alaska 64.91° N 147.59° W H = 18.04 40.5 s, h = 15 km, Mag = 5.4 (ISC). MLH (MOS) = 6, Dc = 66.63°, Az = 352.96°.
21	eP ePP	18	24 26	00 30	+3.5 +5.0	Central Alaska 64.70° N 147.66° W H = 18 13 04.9 s, h = 21 km, Mag = 5.5 (ISC). MLH (MOS) = 6, Dc = 66.85°, Az = 352.95°.
21	ePKIKP ePKP2	19	29 29	29 38	+2.0	South of Fiji +13.8 23. 23.40° S 179.96° W H = 19 10 29.2 s, h = 521 km, Mag = 5.0 (ISC). Dc = 151.80°, Az = 34.79°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
21	ePP	20	27	55	−18	Near Coast of Northern Chile 25.18° S 70.54° W H = 20 09 29 s, h = 28 km, Mag = 5.8 (ISC). MLH (MOS) = 5, Dc = 106.82°, Az = 251.05°.
22	e	11	01	34		Greece-Albania Border Region 39.28° N 20.95° E H = 10 58 34.2 s, h = 0 km, Mag = 4.0 (ATH). Dc = 9.31°, Az = 161.23°.
23	iPKP2 isPKP2	00	45 45	10 25	+0.4 −1.0	Samoa Region 15.18° S 172.15° W H = 00 25 29.8 s, h = 33 km, Mag = 5.1 (ISC). MLH (MOS) = 5½, Dc = 146.23°, Az = 16.22°.
23	iPKIKP	01	01	52	+3.3	Samoa Region 15.16° S 172.09° W H = 00 42 12.9 s, h = 30 km, Mag = 5.0 (ISC). Dc = 146.22°, Az = 16.11°.
23	ePKIKP	05	23	29	+3.9	Banda Sea 5.85° S 130.42° E H = 05 05 05.3 s, h = 89 km, Mag = 5.7 (ISC). MLH (MOS) = 5½, Dc = 109.80°, Az = 76.18°.
23	iPP	10	10	25	+0.9	Turkey 40.85° N 33.65° E H = 10 06 55.1 s, h = 20 km, Mag = 5.0 (ISC). MLH (MOS) = 4½, Dc = 13.87°, Az = 115.71°.
23	ePKP2	14	57	23	−7.0	West of Tonga 21.40° S 179.29° W H = 14 38 35.4 s, h = 600 km, Mag = 5.1 (ISC). Dc = 150.22°, Az = 31.98°.
23	ePKIKP e	21	49 50	42 00	+2.4	New Hebrides Region 19.13° S 167.65° E H = 21 30 12.0 s, h = 36 km, Mag = 5.3 (ISC). MLH (MOS) ≐ 5, Dc = 142.48°, Az = 49.76°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
25	eP ePP	23	32 36	05 16	+8.1 +7.0	South of Marianas 12.43° N 141.75° H = 23 18 07 s, h = 65 km, Mag = 5.5 (ISC). Dc = 102.29°, Az = 55.35°.
26	eP	02	35	58	−2.2	Off Coast of Jalisco, Mexico 18.61° N 105.14° W H = 02 22 37 s, h = 41 km, Mag = 5.2 (ISC). Dc = 95.92°, Az = 306.22°.
28	−iP	01	22	00	−0.3	Kurile Islands 45.92° N 151.49° E H = 01 10 06.2 s, h = 58 km, Mag = 5.3 (ISC). MLH (MOS) = 5, mPV (BRA) = 5.6, Dc = 78.17°, Az = 30.64°. PV: 1.0 s 0.08 μm.
28	+iPKIKP	05	53	42	+2.9	Samoa 14.74° S 172.56° W H = 05 34 05.0 s, h = 41 km, Mag = 4.9 (ISC). Dc = 145.72°, Az = 16.76°.
28	ePKIKP	14	53	42	−17.0	Off West Coast of South Island, N. Z. 46.96° S 165.77° E H = 14 34 04.7 s, h = 37 km, Mag = 5.5 (ISC). Dc = 158.89°, Az = 98.48°.
29	iP	03	04	28	+0.2	Eastern Kazakhstan (UPP) Underground explosion. 49.87° N 78.10° E H = 02 56 57.8 s, h = 0 km, Mag = 5.3 (ISC). Dc = 39.07°, Az = 63.89°.
29	eP	08	27	22	+0.3	Turkey-USSR Border Region 41.60° N 43.93° E H = 08 22 47 s, h = 20 km, Mag = 4.7 (ISC). MLH (MOS) = 4¾, Dc = 20.05°, Az = 99.14°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
29	ePKIKP	09	45	30	+4.7	Samoa Region 15.5° S 172.8° W H = 09 25 46.1 s, h = 14 km, Mag = 4.8 (ISC). Dc = 146.41°, Az = 17.45°.
29	ePKIKP	16	54	15		Banda Sea 7.29° S 128.59° E H = 16 36 16.8 s, h = 130 km, Mag = 5.4 (ISC). MLH (MOS) = 6, Dc = 109.69°, Az = 78.63°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	ePg	02	04	54	+4.0	Yugoslavia
	eSn		05	28	–6.0	43.75° N 19.80° E
						H = 02 03 30.1 s (ISC).
						Dc = 4.75°, Az = 157.60°.
1	ePn	02	56	37	–0.9	Yugoslavia
	ePg		56	57	+2.0	43.97° N 19.17° E
	eSn		57	30	–3.0	H = 02 55 33.3 s, h = 33 km (ISC).
	e		57	45		Mag = 4.5 (USCGS). MLH (BRA) = 4.0,
	Lm		59.5			Dc = 4.44°, Az = 160.35°.
						LmH: 1.8 s 0.4 μm.
1	+iP	07	41	31	–0.9	Southern Sumatra
	ePcP		41	55	+15.0	0.82° S 98.66° E
	e		43	18		H = 07 28 57.6 s, h = 26 km,
						Mag = 5.3 (ISC). MLH (MOS) = 5¾,
						Dc = 84.97°, Az = 96.84°.
1	e	20	45	35		Slovakia
	e		46	03		Local shock.
						Traces.
1	eP	21	34	12	+3.0	Alaska Peninsula
	ePcP		34	24	–1.4	54.12° N 160.88° W
	e		34	34		H = 21 22 13.4 s, h = 40 km,
						Mag = 4.8 (ISC).
						Dc = 78.07°, Az = 358.79°.
1	+iP	23	22	04	+1.6	South of Alaska
	iPcP		22	15	–3.5	54.44° N 157.94° W
	i		23	00		H = 23 10 08.6 s, h = 38 km,
	i		23	52		Mag = 6.2 (ISC). M (MOS) = 6½,
	iPP		24	58	–1.0	MLH (BRA) = 6,
	iS		31	44	–6.0	Dc = 77.68°, Az = 357.04°.
	e		34	15		LmH: 15 s 5.5 μm.
	Lm	00	05.5			
2	ePn	00	32	51	+2.8	Yugoslavia
						43.78° N 20.05° E
						H = 00 31 42.5 s,
						M = 4.2 (BEO).
						Dc = 4.51°, Az = 153.86°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
2	iPn	01	15	13.5	0.0	Yugoslavia
	iPb		15	22	+2.9	44.0° N 19.10° E
	i		15	48		H = 01 14 08.1 s, h = 33 km,
	iSg		16	32	+ 6.4	Mag = 4.5 (ISC).
	Lm		17.0			Dc = 4.36°, Az = 160.86°.
2	ePn	07	11	13	–4.2	Yugoslavia
						43.98° N 19.22° E
						H = 07 10 09.1 s,
						M = 3.9 (BEO).
						Dc = 4.51°, Az = 159.87°.
2	eP	07	15	27	–3.4	Nicobar Islands Region
	i		15	32		8.65° N 93.59° E
	i		16	27		H = 07 03 54 s, h = 44 km,
	e		16	47		Mag = 5.7 (ISC).
	e		17	16		Dc = 74.59°, Az = 94.26°.
	ePP		18	25	+4.0	
2	eP	07	50	47	–1.9	South of Honshu, Japan
						32.94° N 141.71° E
						H = 07 38 13 s, h = 25 km,
						Mag = 5.1 (ISC).
						Dc = 85.28°, Az = 43.98°.
2	eP	14	21	16	+0.2	Nicobar Islands Region
						8.65° N 94.01° E
						H = 14 09 44 s, h = 94 km,
						Mag = 4.6 (ISC).
						Dc = 74.88°, Az = 93.94°.
2	eP	16	28	27	+1.7	Off East Coast of Honshu, Japan
						33.01° N 141.83° E
						H = 16 15 46 s, h = 3 km,
						Mag = 5.0 (ISC). M (MOS) = 5,
						Dc = 85.27°, Az = 43.86°.
3	iPn	02	54	53	+0.4	Yugoslavia
	iSn		55	43	+5.0	44.02° N 19.18° E
	i		56	20.5		H = 02 53 43 s, h = 1 km,
	Lm		56.3			Mag = 5.1 (ISC). MLH (BRA) = 5.0,
						Dc = 4.39°, Az = 160.06°.
						LmH: 2.8 s 3.7 μm.

Date	Phase	h	m	s	Res. (O–C)	Remarks
3	eP	21	59	07	–1.0	Ascension Island Region 7.47° S 13.42° W H = 21 48 54 s, h = 56 km, Mag = 4.9 (ISC). Dc = 61.58°, Az = 214.94°.
4	e	14	36	31		Near Coast of Central Chile 38.10° S 73.43° W H = 14 16 49 s, h = 7 km, Mag = 5.3 (ISC). Dc = 117.48°, Az = 242.78°.
	ePP		36	50	–2.5	
	e		37	26		
4	eP	23	53	50	–0.5	Hokkaido, Japan Region 43.10° N 142.58° E H = 23 42 12.9 s, h = 157 km, Mag = 5.6 (ISC). Dc = 77.22°, Az = 37.71°.
	i		53	53		
	epP		54	20	–9.0	
	esP		54	47	+1.0	
	e		55	20		
	e		56	35		
5	eP	00	56	00	–6.1	Southern Greece 36.73° N 21.50° E H = 00 53 16.8 s, h = 50 km, Mag = 4.7 (ISC). M (MOS) = 4¾, MLH (BRA) = 4.6, Dc = 11.88°, Az = 162.60°, LmH: 9 s 7.1 μm.
	ePP		56	10	–7.0	
	ePPP		56	21	+0.7	
	e		56	52		
	eS		58	20	+2.0	
	Lm	01	01.5			
5	eP	16	52	20	–3.2	Southern Greece 36.85° N 21.35° E H = 16 49 37.5 s, h = 46 km, Mag = 4.3 (ISC). Dc = 11.74°, Az = 163.02°.
6	eP	05	17	16	+1.6	Central Alaska 62.41° N 147.33° W H = 05 06 13.1 s, h = 55 km, Mag = 5.1 (ISC). Dc = 69.07°, Az = 352.31°.
	e		17	33		

Date	Phase	h	m	s	Res. (O–C)	Remarks
6	eP	08	24	37	–4.4	Southern Greece 36.67° N 21.43° E H = 08 21 51.3 s, h = 43 km, Mag = 4.7 (ISC). Dc = 11.92°, Az = 162.93°.
	ePP		24	53	+1.0	
	Lm		30.5			
6	e	12	02	41		Poland Probably explosion.
6	+iP	13	54	31	+0.9	Fox Islands, Aleutian Islands 52.58° N 168.13° W H = 13 42 27 s, h = 49 km, Mag = 5.9 (ISC). M (MOS) = 6, MPV (BRA) = 6.5, Dc = 79.53°, Az = 3.24°. PV: 2.4 s 1.5 μm.
	iPcP		54	38	–0.2	
	i		55	20		
	e		56	45		
	e		58	31		
	ePPP		59	22	–2.0	
6	eP	18	43	17	0.0	Leeward Islands 18.96° N 61.94° W H = 18 32 11 s, h = 15 km, Mag = 5.2 (ISC). M (MOS) = 5¼, Dc = 68.88°, Az = 275.08°.
6	eP	19	30	04	–0.3	Central Mid-Atlantic Ridge 8.19° N 38.52° W H = 19 19 50.2 s, h = 41 km, Mag = 5.1 (ISC). M (MOS) = 5, Dc = 61.36°, Az = 248.58°.
	ePP		32	22	–2.2	
7	eP	01	18	12	+2.2	Eastern Gulf of Aden 13.32° N 50.72° E H = 01 10 00 s, h = 46 km, Mag = 4.6 (ISC). Dc = 44.54°, Az = 129.80°.
7	e	08	01	33		Traces.
	e		01	48		
7	ePKIKP	10	00	57	+5.5	West of Tonga 20.25° S 177.58° W H = 09 42 07.6 s, h = 530 km, Mag = 4.5 (ISC). Dc = 149.72°, Az = 28.17°.
7	e	11	00	50		Traces.

Date	Phase	h	m	s	Res. (O–C)	Remarks
8	–iPKIKP	01	18	08	+2.6	New Hebrides
	i		18	14		15.37° S 167.50° E
	ipPKIKP		18	41	–10.5	H = 00 58 54.0 s, h = 132 km,
	e		20	26		Mag = 5.2 (ISC).
	ePP		21	04		Dc = 139.22°, Az = 46.85°.
	epPP		21	32		
8	ePKIKP	06	42	24	+2.4	New Hebrides
						16.30° S 166.72° E
						H = 06 22 54 s, h = 15 km,
						Mag = 5.1 (ISC). M (MOS) = 5,
						Dc = 139.62°, Az = 48.57°.
8	ePn	09	54	17	–2.0	Yugoslavia
						44.9° N 17.0° E
						H = 09 53 25 s (BCIS).
						Dc = 3.27°, Az = 181.31°.
8	ePKIKP	13	32	20	+7.1	West of Tonga
						20.10° S 177.98° W
						H = 13 13 29.1 s, h = 546 km,
						Mag = 4.3 (ISC).
						Dc = 149.45°, Az = 28.77°.
9	eP	03	20	44	–3.6	Hokkaido, Japan Region
						43.70° N 155.70° E
						H = 03 09 07.7 s, h = 154 km,
						Mag = 4.7 (ISC).
						Dc = 77.57°, Az = 36.05°.
10	ePKIKP	06	48	15	+5.6	West of Tonga
						17.66° S 178.86° W
						H = 06 29 32.4 s, h = 556 km,
						Mag = 4.7 (ISC).
						Dc = 146.90°, Az = 28.69°.
11	ePKIKP	04	35	57	–1.5	Solomon Islands
						7.2° S 155.7° E
						H = 04 17 03.2 s, h = 62 km,
						Mag = 5.1 (ISC).
						Dc = 126.22°, Az = 54.42°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
11	–iPn	12	42	14.8	–1.3	Yugoslavia
	iPb		42	23.8	–1.8	44.58° N 17.12° E
	iPg		42	29.8	–3.3	H = 12 41 21.2 s, h = 0 km,
	i		42	38.8		Mag = 4.5 (ISC). MLH (BRA) = 4.4,
	iSg		43	17.8	–2.3	Dc = 3.59°, Az = 179.83°.
	Lm		43.5			LmH: 0.5 s 1.3 μm.
11	e	13	33	49		Local shock.
						Traces.
12	iPn	11	58	56		Local shock.
	iPb		59	02		
	iPg		59	06.5		
	e		59	20		
12	ePn	15	44	05		Local shock.
	e		44	07		
	iPb		44	11		
	ePg		44	17		
12	eP	21	13	32	+1.0	South of Panama
	ePcP		13	38	+1.8	5.73° N 82.72° W
	e		13	50		H = 21 00 22.2 s, h = 29 km,
	e		14	31		Mag = 5.3 (ISC). M (MOS) = 6,
	ePP		17	16	+2.0	Dc = 92.29°, Az = 281.10°.
12	ePKIKP	21	34	27	+1.1	Fiji
	e		34	50		16.12° S 178.30° E
						H = 21 14 50 s, h = 15 km,
						Mag = 5.3 (ISC).
						Dc = 144.49°, Az = 32.24°.
13	ePKIKP	01	11	36	+16.8	South of Kermadec Islands
	ePKP2		12	06	+4.3	32.25° S 178.1° W
						H = 00 51 19 s, h = 53 km,
						Mag = 4.5 (ISC).
						Dc = 160.36°, Az = 41.42°.
						Traces.
13	+eP	02	14	32	+0.4	Algeria
	ePP		14	34	–12.3	35.49° N 0.14° W
						H = 02 10 22 s, h = 23 km,
						Mag = 4.9 (ISC). M (MOS) = 4½–5,
						Dc = 17.99°, Az = 231.55°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
13	ePKIKP e	07	55 56	41 30	+3.4	Fiji 16.12° S 178.09° E H = 07 36 09.7 s, h = 69 km, Mag = 5.0 (ISC). Dc = 144.42°, Az = 32.56°.
13	+ePKIKP epPKIKP esPKP ePP eSKP	10	23 24 24 27 27	51 04 38 20 39	+1.6 −12.0 +13.5 +2.0 −6.0	New Hebrides 20.43° S 169.25° E H = 10 04 20.2 s, h = 57 km, Mag = 4.9 (ISC). Dc = 144.38°, Az = 48.79°.
13	eP eS Lm	14	40 42 44.0	48 19	−2.4 +3.3	Albania 40.66° N 19.67° E H = 14 38 58.4 s, h = 73 km, Mag = 4.7 (ISC). MLH (BRA) = 4.8, Dc = 7.73°, Az = 165.33°. LmH: 3 s 1.0 μm.
14	eP	03	18	07	+0.6	Red Sea 19.55° N 38.75° E H = 03 11 32 s, h = 71 km, Mag = 4.8 (ISC). Dc = 33.50°, Az = 140.93°.
14	eP e	11	52 52	03 24	+2.4	Persia-Iraq Border Region 35.0° N 46.3° E H = 11 46 43 s, h = 108 km, Mag = 4.6 (ISC). Dc = 25.31°, Az = 110.55°.
15	eP	03	34	32	+4.1	Eastern Kazakhstan 49.88° N 78.16° E H = 03 26 57.6 s, h = 0 km, Mag = 5.4 (ISC). Dc = 39.10°, Az = 63.85°.
15	eP	08	27	05	+2.1	Rat Islands, Aleutian Islands 51.48° N 176.92° E H = 08 15 00 s, h = 35 km, Mag = 4.9 (ISC). M (MOS) = 5, Dc = 79.24°, Az = 12.69°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
16	e ePP e e	13	52 53 54 57	25 25 41 09	+2.8	Western New Guinea Region 0.96° S 132.73° E H = 13 34 30.1 s, h = 30 km, Mag = 5.4 (ISC). M (MOS) = 6¼, Dc = 107.57°, Az = 71.02°.
16	e Lm	14	08 08	24 30		France 46.9° N 5.3° E H = 14 04 14 s, h = 20 km (ISC). MLH (BRA) = 4.9, Dc = 8.09°, Az = 265.37°. LmH: 0.5 s 0.7 μm.
16	ePn eSg Lm	19	02 03 04.2	49 33	−5.0 +7.0	Yugoslavia 46.0° N 15.5° E H = 19 02 13 s, h = 0 km (ISC). MLH (BRA) = 4.0, Dc = 2.42°, Az = 207.41°. LmH: 0.4 s 0.5 μm.
17	eP	11	40	27	+7.7	Fox Islands, Aleutian Islands 51.18° N 169.23° W H = 11 28 14.3 s, h = 32 km, Mag = 4.8 (ISC). Dc = 80.88°, Az = 4.03°.
18	iPg iPn	15	47 47	23.4 29		Local shock.
19	eP e ePP e eS e Lm	09	09 09 09 10 12 13 14.5	31 38 48 10 00 08	+1.4 +1.8 −2.2	Turkey 38.10° N 28.87° E H = 09 06 22.2 s, h = 41 km, Mag = 4.8 (ISC). M (MOS) ≐ 5, MLH (BRA) = 5.0, Dc = 13.22°, Az = 135.28°. LmH: 4.5 s 3.5 μm.
19	ePKIKP	13	00	20	+6.8	West of Tonga 20.48° S 178.14° W H = 12 41 29.8 s, h = 535 km, Mag = 4.6 (ISC). Dc = 149.77°, Az = 29.31°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
20	eP	14	38	20	+1.1	Rat Islands, Aleutian Islands
	iPcP		38	32	+0.2	51.31° N 178.32° E
	i		38	35		H = 14 26 13 s, h = 26 km,
	i		39	32		Mag = 5.3 (ISC). M (MOS) = 5½,
	ePP		41	02	−19.0	Dc = 79.60°, Az = 11.86°.
20	eP	15	50	10	+1.5	Western Caroline Islands
	e		50	31		7.64° N 134.75° E
	e		50	35		H = 15 36 20.5 s, h = 8 km,
	e		53	34		Mag = 5.7 (ISC). M (MOS) = 7,
	ePP		54	33	+2.0	Dc = 102.11°, Az = 63.90°.
	e		54	41		
	ePS	16	03.5		−5.0	
	Lm		21.5			
20	ePn	16	21	08	+0.6	Yugoslavia
	eSn		21	30	−7.0	45.5° N 14.6° E
	Lm		21.9			H= 16 20 20.4 s, h = 22 km,
						Mag = 4.4 (BEO).
						Dc = 3.18°, Az = 213.71°.
20	ePn	19	05	25	−5.6	Albania
	e		05	45		40.72° N 19.88° E
	Lm		06.0			H = 19 03 30.4 s, h = 58 km,
						Mag = 4.5 (ISC). MLH (BRA) = 4.9,
						Dc = 7.70°, Az = 164.07°
						LmH: 0.5 s 1.1 μm.
20	ePKIKP	23	31	38	+0.2	South of Fiji
	e		32	07		26.46° S 178.43° E
						H = 23 12 55.9 s, h = 609 km,
						Mag = 5.1 (ISC).
						Dc = 153.86°, Az = 40.66°.
21	ePKHKP	13	05	32		Tonga
	ePKP2		05	49	−1.5	21.4° S 176.69° W
						H = 12 45 42 s, h = 54 km,
						Mag = 4.8 (ISC).
						Dc = 151.37°, Az = 27.36°.
22	ePKIKP	04	17	59	+1.4	South of Kermadec Islands
	e		18	16		36.67° S 178.88° W
	ePKP2		18	45	−1.4	H = 03 58 02.7 s, h = 43 km,
	e		19	15		Mag = 5.1 (ISC). M (MOS) = 5¼,
						Dc = 161.20°, Az = 45.44°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
222	+iP	16	59	53.9	+1.0	Turkey
	i	17	01	02.9		40.67° N 30.69° E
	iSS		02	27.4	−2.6	H = 16 56 58.0 s, h = 33 km,
	iSSS		02	40	−1.0	Mag = 6.0 (ISC). M (MOS) = 7¼,
	i		03	04.4		MLH (BRA) = 6.4,
	i		03	34.4		Dc = 12.26°, Az = 122.69°.
	L		03	52		LmH: 9 s 270 μm.
	Lm		11	40		
	Lm		14.5			
	Lm		20.5			
23	ePKIKP	03	28	10.5	+2.7	New Hebrides
	e		28	27		15.65° S 167.17° E
	ePKS		32	06	+19.0	H = 03 08 43.6 s, h = 27 km,
						Mag = 5.0 (ISC). M (MOS) ≐ 5,
						Dc = 139.30°, Az = 47.49°.
23	ePKP2	14	08	27	+4.0	Macquarie Island Region
						56.16° S. 158.0° E
						H = 13 48 06.9 s, h = 33 km (ISC),
						Mag = 5.1 (USCGS).
						Dc = 155.03°, Az = 123.36°.
23	ePKIKP	19	03	57	+7.2	Tonga
						20.03° S 175.27° W
						H = 18 44 17 s, h = 110 km (ISC).
						Mag = 4.7 (ISC).
						Dc = 150.20°, Az = 23.92°.
24	e	13	57	02		Traces.
25	ePn	08	39	19	−8.6	Greece-Bulgaria Border Region
	e		39	34		41.9° N 25.0° E
	e		40	14		H = 08 37 26 s, h = 53 km,
	eSn		41	00	−1.0	Mag = 4.3 (ISC).
	Lm		42	27		Dc = 8.40°, Az = 135.38°.
25	eSn	11	24	07	−7.2	Yugoslavia
	e		24	28		45.1° N 14.8° E
	Lm		24	43		H = 11 22 43 s, h = 0 km (ISC).
						MLH (BRA) = 4.0,
						Dc = 3.46°, Az = 208.20°.
						LmH: 0.4 s, 0.4 μm.
						Traces.

Date	Phase	h	m	s	Res. (O–C)	Remarks
26	ePKIKP	03	41	42	–8.2	Loyalty Islands Region
	e		42	06		21.86° S 169.6° E
	e		43	14		H = 03 22 10 s, h = 0 km,
						Mag = 4.7 (ISC).
						Dc = 145.76°, Az = 49.67°.
26	+ePKIKP	08	34	35	+2.8	Loyalty Islands Region
	ePKP2		34	49	+5.0	21.94° S 169.99° E
	e		34	58		H = 08 14 59.3 s, h = 53 km,
						Mag = 4.9 (ISC).
						Dc = 146.01°, Az = 49.20°.
26	e	09	23	27		Turkey
	Lm		24	54		40.61° N 30.67° E
						H = 09 16 06 s, h = 21 km,
						Mag = 4.4 (ISC) M (MOS) = 4½,
						Dc = 12.29°, Az = 122.95°.
						Traces.
26	+iP	18	57	20.4	–0.4	Turkey
	i		57	31		39.54° N 40.38° E
	iPP		57	55.8	+15.8	H = 18 53 01.1 s, h = 30 km,
	i		58	35.4		Mag = 5.6 (ISC). M (MOS) = 6,
	i		59	00		MLH (BRA) = 6.0,
	eS	19	01	00	+10.0	Dc = 18.81°, Az = 108.67°.
	Lm		06.5			
	Lm		09.5			
27	+iP	05	23	25.2		Iceland
	e		23	40		64.00° N 20.78° W
	e		23	50		H = 05 17 54.5 s, h = 33 km,
	e		24	00		Mag = 5 (ISC). M (MOS) = 4½,
	e		25	09		Dc = 25.88°, Az = 321.68°.
	e		26	10		
	Lm		29.5			
27	eP	11	48	29	+1.4	Atlantic-Indian Ridge
	ePcP		48	36	+2.0	35.04° S 53.84° E
	e		49	05		H = 11 35 34.7 s, h = 33 km,
	e		49	36		Mag = 5.0 (ISC).
	e		51	36		Dc = 89.10°, Az = 150.60°.
28	iPKIKP	05	36	08.1	+3.3	Loyalty Islands Region
	iPKP2		36	26.1	+11.0	22.00° S 170.1° E
	e		36	37		H = 05 16 30 s, h = 30 km(ISC).
	e		36	45		Mag = 4.1 (USCGS).
						Dc = 146.13°, Az = 49.11°.

Date	Phase	h	m	s	Res. (O–C).	Remarks
29	–iP	10	36	44	+0.3	Northern Colombia
	i		36	47		6.84° N 73.09° W
	ipP		37	27	+3.0	H = 10 24 24.7 s, h = 160 km,
	i		38	21.6		Mag = 5.9 (ISC). mPV (BRA) = 6.5,
	e		39	29		Dc = 85.09°, Az = 274.70°.
	epPP		40	40	–5.1	PV: 3.1 s 2.7 μm.
	e		43	17		
	eS		46	55	+3.0	
	esS		48	10	+7.8	
30	–iP	00	12	01.2	–2.1	Near Coast of Venezuela
	iPcP		12	22.5	+5.8	10.68° N 67.40° W
	i		13	38.7		H = 00 00 02.7 s, h = 26 km,
	e		14	30		Mag = 5.7 (ISC). M (MOS) = 6½,
	i		14	52.2		MLH (BRA) = 6.5,
	iPP		15	07.5	+0.8	Dc = 78.47°, Az = 273.12°.
	i		21	04.7		LmH: 18 s 23 μm.
	Lm		51.5			
30	iPn	01	33	58.3	+1.5	Turkey
	i		34	37.5		40.72° N 30.52° E
	i		35	02.8		H = 01 31 01.8 s, h = 18 km,
	eS		36	11	–1.0	Mag = 5.4 (ISC). M (MOS) = 5¼,
	i		37	40.3		MLH (BRA) = 5.6, mPV (BRA) = 5.0,
	Lm		41.0			Dc = 12.13°, Az = 122.93°.
						LmH: 6 s 21.0 μm. PV: 1.0 s 0.7 μm.
30	ePKIKP	11	09	20	+7.9	West of Macquarie Island
	e		09	53		56.19° S 146.95° E
						H = 10 49 33.0 s, h = 33 km,
						Mag = 5.3 (ISC). M (MOS) = 6,
						Dc = 148.84°, Az = 123.95°.
30	ePKIKP	13	54	11	+3.9	New Ireland Region
						5.24° S 153.49° E
						H = 13 35 10 s, h = 13 km,
						Mag = 5.2 (ISC). M (MOS) = 5¾,
						Dc = 123.37°, Az = 55.34°.
30	ePKIKP	17	43	26	+6.9	West of Tonga
	epPKIKP		45	42	+4.0	17.85° S 178.73° W
						H = 17 24 43.4 s, h = 572 km,
						Mag = 5.3 (ISC).
						Dc = 147.11°, Az = 28.60°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
31	e	07	15	03		Turkey
	eS		16	35	–0.1	40.60° N 27.62° E
	e		17	29		H = 07 12 05 s, h = 4 km,
	Lm		18	22		Mag = 4.2 (ISC).
						Dc = 10.66°, Az = 131.33°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	e	09	26	22		Macquarie Island Region 59.89° S 159.6° E H = 09 05 48.6 s, h = 33 km, Mag = 5.5 (ISC). Dc = 155.40°, Az = 132.47°. Traces.
2	eP	00	56	28	+4.7	Kurile Islands
	e		56	31		44.50° N 146.61° E
	epP		56	53	–2.0	H = 00 44 39.4 s, h = 131 km, Mag = 5.0 (ISC). Dc = 77.64°, Az = 34.42°.
2	iP	11	12	13.5	+4.0	Jan Mayen Island Region
	i		12	19.5		71.18° N 8.14° W
	iPP		12	45	–6.0	H = 11 06 39.4 s, h = 33 km,
	iS		16	27	–9.0	Mag = 5.1 (ISC). M (MOS) = 5¼,
	Lm		23.5			MLH (BRA) = 5.2, Dc = 25.95°, Az = 341.56°. LmH: 16 s 5.6 μm.
2	+iP	14	11	43	–6.3	Jan Mayen Island Region
	i		11	59		71.26° N 8.34° W
	iPP		12	24.5	–6.0	H = 14 06 16.5 s, h = 23 km,
	iPPP		12	36	–7.0	Mag = 5.3 (ISC). M (MOS) = 5,
	i		13	32		MLH (BRA) = 4.9,
	i		14	48		Dc = 26.05°, Az = 341.57°.
	eS		16	12	–2.0	LmH: 12 s 4.3 μm.
	e		16	48		
	Lm		26.5			
3	ePKIKP	00	28	11	+15.6	Tonga 20.02° S 174.04° W H = 00 08 12.5 s, h = 43 km, Mag = 4.7 (ISC). Dc = 151.47°, Az = 21.67°.
4	eP	06	11	19	–1.2	Central Mid-Atlantic Ridge 7.47° N 36.32° W H = 06 01 10.6 s, h = 33 km, Mag = 4.9 (ISC). Dc = 60.56°, Az = 246.12°.
4	e	09	00	25		Local shock.

Date	Phase	h	m	s	Res. (O–C)	Remarks
4	ePn	14	55	53	+0.1	Adriatic Sea
	eSn		56	46	–6.0	42.81° N 17.62° E
	e		56	53		H = 14 54 32 s, h = 22 km,
	e		57	21	0.0	Mag = 4.6 (ISC). M (MOS) = 4½,
	Lm		57			MLH (BRA) = 4.4,
						Dc = 5.37°, Az = 175.95°.
						LmH: 2.0 s 1.4 μm.
4	ePKIKP	22	54	34	+6.7	Tonga Region
						17.7° S 172,8° W
						H = 22 34 47.5 s, h = 33 km,
						Mag = 4.7 (ISC).
						Dc = 148.59°, Az = 18.34°.
8	iPb	09	47	50		Local shock.
	i		47	53		D = 40 km.
	i		48	09		Traces.
	eL		48	09		
9	–iP	13	37	11	+1.3	Colorado
						40.00° N 104.69° W
						H = 12 25 06.7 s, h = 5 km,
						Mag = 5.0 (ISC).
						Dc = 78.19°, Az = 318.16°
10	–iP	11	33	21	+1.2	Kurile Islands
	iPcP		33	34.5	–1.5	45.21° N 150.39° E
	i		34	21		H = 11 21 22.7 s, h = 44 km,
	e		35	50		Mag = 5.6 (ISC).
						Dc = 78.41°, Az = 31.69°.
12	eP	04	42	49	+1.4	Near East Coast of Honshu, Japan
						38.39° N 142.02° E
						H = 04 30 40.5 s, h = 75 km,
						Mag = 5.3 (ISC). M (MOS) = 4½,
						Dc = 80.89°, Az = 40.74°

Date	Phase	h	m	s	Res. (O–C)	Remarks
12	–iPKIKP	09	59	22	+2.7	South of Fiji
	iPKP2		59	44	+5.0	24.79° S 177.38° W
	ipPKIKP	10	00	00	–3.7	H = 09 39 45.7 s, h = 144 km,
	isPKP		00	20	+0.3	Mag = 5.7 (ISC).
	i		01	26		Dc = 154.01°, Az = 31.25°.
	i		02	26		
	ipPPP		07	27.5		
	i		10	09.5		
	Lm		18.5			
12	eP	10	52	19	+1.4	Near East Coast of Kamchatka
						53.67° N 160.36° E
						H = 10 40 47.3 s, h = 53 km,
						Mag = 5.1 (ISC).
						Dc = 73.87°, Az = 21.75°.
12	ePKIKP	12	50	23	+2.8	New Hebrides
						14.83° S 166.73° E
						H = 12 30 56 s, h = 17 km,
						Mag = 5.3 (ISC). M (MOS) = 5,
						Dc = 138.37°, Az = 47.41°.
13	ePP	16	50	48	–7.0	South of Africa
						50.86° S 29.1° E
						H = 16 33 05.4 s, h = 46 km,
						Mag = 5.3 (ISC).
						Dc = 99.18°, Az = 172.33°.
13	iP	20	18	25.5	+1.0	Southern Honshu, Japan
	i		18	52.5		35.43° N 135.49° E
	i		19	28		H = 20 06 52.3 s, h = 367 km,
	i!pP		19	51	+11.4	Mag = 6.0 (ISC). mPV (BRA) = 6.5,
	iPP		21	49.5	+7.2	Dc = 80.28°, Az = 46.80°.
	eS		28	00	–2.0	PV: 1.8 s 1.6 μm.
	e		31	21		
13	eP	22	10	57	–2.3	Pyrenees
	ePP		11	08	–2.0	43.20° N 0.67° W
	e		11	38		H = 22 07 47.8 s, h = 15 km,
	e		11	51		Mag = 5.3 (ISC). M (MOS) = 5¼,
	e		12	15		MLH (BRA) = 5.2,
	eSS		13	17	–12.0	Dc = 13.38°, Az = 254.79°
	eSS		13	39	–8.8	LmH: 6 s 6.0 μm.
	e		14	31.5		
	eL		15	21		
	Lm		20.3			

Date	Phase	h	m	s	Res. (O–C)	Remarks
13	ePKIKP	22	34	12	+10.1	New Britain Region
	e		34	17		4.40° S 152.44° E
	e		35	15		H = 22 15 11.2 s, h = 39 km,
						Mag = 5.4 (ISC). M (MOS) = 6,
						Dc = 122.10°, Az = 55.83°.
13	eP	23	54	24	+0.9	Ascension Island Region
	e		55	08		6.91° S 12.51° W
	ePP		56	45	+5.7	H = 23 44 08 s, h = 3 km,
						Mag = 5.0 (ISC).
						Dc = 60.73°, Az = 214.23°.
13	ePn	10	17	33	−7.0	Northern Italy
	e		17	48		46.90° W 10.41° S
	e		17	57		H = 10 16 17 s, h = 9 km,
	e		18	09		Mag = 4.5 (ISC). M (MOS) = 4,
	eSn		18	20	−1.0	MLH (BRA) = 4.2,
	eSb		18	29	−6.0	Dc = 4.71°, Az = 256.85°.
	Lm		19.1			LmH: 1.7 s 1.4 μm.
15	ePn	07	08	47	−4.7	Sicily
	e		09	38		38.71° N 15.28° E
	eSn		10	30	−4.3	H = 07 06 30.3 s, h = 2 km,
	eSg		11	42	+3.7	Mag = 4.5 (ISC). M (MOS) = 4¼,
	Lm		14.5			Dc = 9.54°, Az = 188.64°.
15	eP	09	31	00	−1.3	Tibet
	e		31	19		31.05° N 93.56° E
	e		32	32		H = 09 21 03.3 s, h = 36 km,
	ePP		33	14	+1.0	Mag = 5.5 (ISC). M (MOS) = 5¼,
						Dc = 58.95°, Az = 76.89°.
15	eP	15	47	28	+2.5	E Russia-NE China Border Region
						44.66° N 132.43° E
						H = 15 36 07.9 s, h = 48 km,
						Mag = 5.3 (ISC). M (MOS) = 5,
						Dc = 71.58°, Az = 42.84°.
16	+iP	19	31	26	−0.2	Northern Sumatra
	ipP		31	47	+3.0	0.86° N 98.90° E
	i		32	04		H = 19 19 02 s, h = 61 km,
	i		32	49		Mag = 5.6 (ISC).
	e		35	08		Dc = 83.88°, Az = 95.54°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
17	eP	12	59	05	+1.6	Central Mid-Atlantic Ridge
	e		59	23		0.67° S 21.14° W
						H = 12 49 07 s, h = 19 km,
						Mag = 4.6 (ISC).
						Dc = 58.86°, Az = 226.32°.
18	eP	03	47	50	−2.2	Ryukyu Islands
						27.70° N 127.61° E
						H = 03 35 40.5 s, h = 100 km,
						Mag = 5.4 (ISC). M (MOS) ÷ 5,
						Dc = 82.21°, Az = 56.95°.
18	eP	06	01	44	+1.8	Southern Alaska
	e		01	50		61.67° N 151.0° W
						H = 05 50 27 s, h = 3 km,
						Mag = 4.6 (ISC).
						Dc = 70.10°, Az = 353.99°.
18	ePg	15	45	32		Local shock.
	e		45	35		
	e		45	38		
19	ePg	10	59	57		Local shock.
	e	11	00	01		
19	−eP	15	41	23	−1.7	Leyte, Philippine Islands
	ePP		45	11	−4.0	10.36° N 125.87° E
						H = 15 28 08.5 s, h = 60 km,
						Mag = 6.0 (ISC). M (MOS) = 6½,
						Dc = 94.54°, Az = 69.15°.
19	−ePKIKP	16	01	04	−0.5	Santa Cruz Islands
	epPKIKP		01	32	−0.2	12.41° S 166.66° E
	ePP		03	46	−3.0	H = 15 41 55.3 s, h = 106 km,
	esPP		04	32	−1.5	Mag = 5.5 (ISC). M (MOS) = 5,
						Dc = 136.26°, Az = 45.72°.
20	iP	02	10	04	+4.7	Kazakhstan-Sinkiang Border Region
						45.36° N 80.52° E
						H = 02 02 05 s, h = 21 km,
						Mag = 5.2 (ISC). M (MOS) = 5¾,
						Dc = 42.44°, Az = 69.13°.
20	e	14	56	10		
	e		57	22		

Date	Phase	h	m	s	Res. (O–C)	Remarks
20	e	15	21	28		
21–23						The apparatus was out of order.
24	eP	03	33	22	+7.6	Kurile Islands 43,54° N 147.66° E H = 03 21 17.0 s, h = 63 km, Mag = 5.4 (ISC). M (MOS) = 5¾, Dc = 78.85°, Az = 34.27°.
24	ePKIKP	05	48	40	+2.1	West of Tonga 21.14° S 179.02° W H = 05 30 01.5 s, h = 612 km, Mag = 4.7 (ISC). Dc = 150.08°, Az = 31.31°.
24	e^DKIKP e	10	52 54	00 45	−16.7	New Hebrides 14.97° S 166.83° E H = 10 32 54.7 s, h = 37 km, Mag = 5.2 (ISC). M (MOS) = 5¾, Dc = 138.54°, Az = 47.39°.
25	e	15	17	10		Rat Islands, Aleutian Islands 51.52° N 177.17° E H = 15 03 25 s, h = 37 km, Mag = 5.0 (ISC). M (MOS) = 4¾, Dc = 79.23°, Az = 12.52°. Traces.
26	ePP ePPP Lm	01	54 56 45.5	41 52	−5.4 −7.4	Western Caroline Islands 12.18° N 140.80° E H = 00 36 47.4 s, h = 78 km, Mag = 6.1 (ISC). M (MOS) = 6½, MLH (BRA) = 6.2, Dc = 101.97°, Az = 56.26°.
26	eP	14	21	29	+4.1	Turkey 37.59° N 30.44° E H = 14 18 02 s, h = 49 km, Mag = 4.5 (ISC). Dc = 14.38°, Az = 132.45°.
26	eP e	15	37 37	34 50	−0.7	Mid-Indian Rise 20.18° S 67.06° E H = 15 25 19.8 s, h = 33 km, Mag = 4.7 (ISC). Dc = 81.38°, Az = 133.34°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
26	iPKIKP i i e	18	39 39 40 41	38 49 02 04	+3.1	Samoa Region 15.20° S 172.64° W H = 18 19 58 s, h = 24 km, Mag = 5.1 (ISC). M (MOS) = 5½, Dc = 146.15°, Az = 17.06°.
27	eP epP e ePP epPP	13	21 22 24 25 25	34 19 45 13 59.4	−0.1 −6.0 −6.0 −0.9	Nicaragua 12.18° N 86.31° W H = 13 08 57.3 s, h = 201 km, Mag = 5.4 (ISC). Dc = 89.78°, Az = 287.99°.
27	+eP ePcP	13	46 46	49 55	−0.7 −7.0	Vancouver Island Region 50.25° N 130.01° W H = 13 34 53 s, h = 25 km, Mag = 4.9 (ISC). M (MOS) = 5, Dc = 77.96°, Az = 339.12°.
27	eSb eSg	21	29 29	04 19	+4.0 0.0	Switzerland 46.6° N 6.9° E H = 21 25 31 s, h = 0 km (ISC). Dc = 7.10°, Az = 261.03°.
27	e	22	29	30		West of Tonga 20.34° S 178.16° W H = 22 10 12.6 s, h = 557 km, Mag = 4.5 (ISC). Dc = 149.63°, Az = 29.25°. Traces.
28	eP e	15	37 38	51 42	+2.9	Vancouver Island Region 50.30° N 129.91° W H = 15 25 52.6 s, h = 33 km, Mag = 5.0 (ISC). M (MOS) = 5, Dc = 77.89°, Az = 339.08°.
28	e	16	31	38		Vancouver Island Region 50.35° N 129.83° W H = 16 20 07.3 s, h = 33 km, Mag = 5.0 (ISC). Dc = 77.82°, Az = 339.05°.
28	−eP iPP e e e	21	20 21 21 22 25	52 22 46 41 30	+1.4 −6.0	Morocco 31.49° N 6.06° W H = 21 15 35.9 s, h = 33 km, Mag = 4.7 (ISC). Dc = 24.23°, Az = 234.98°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
29–30						The apparatus was out of order.
30	ePKIKP	12	15	30	+1.8	Kermadec Islands 30.45° S 178.63° W H = 11 55 47.1 s, h = 131 km, Mag = 4.9 (ISC). M (MOS) = 5½, Dc = 158.60°, Az = 39.92°.
30	iP iPcP i e	13	45 45 46 47	27 33 17 39	+0.8 −5.0	Kurile Islands 45.36° N 151.51° E H = 13 33 24.2 s, h = 17 km, Mag = 5.5 (ISC). mPV (BRA) = 5.8, Dc = 78.66°, Az = 30.91°. PV: 1.5 s 0.3 μm.
30	eP	18	26	57	−2.0	Morocco 31.41° N 5.83° W H = 18 21 44 s, h = 23 km, Mag = 4.1 (ISC). Dc = 24.16°, Az = 234.49°.
31	i	14	40	12		Traces.
31	–iPKIKP i i ipPKIKP esPKP e e	19	12 12 12 13 14 16 19	37 39 47 04 18 09 24	+3.0 0,0 +1.0	Tonga 17.45° S 175.17° W H = 18 53 25.1 s, h = 275 km, Mag = 5.2 (ISC). Dc = 147.76°, Az = 22.36°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	iPKIKP e ePP	03	49 51 51	40.5 08 31	+0.3 −1.0	Eastern New Guinea Region 5.56° S 147.18° E H = 03 31 10.9 s, h = 184 km, Mag = 5.5 (ISC). Dc = 120.03°, Az = 61.21°.
1	e	11	17	29		Local shock. Traces.
1	–iP e e	22	53 54 54	43.9 36 53	−0.9	Kurile Islands 44.51° N 147.11° E H = 22 41 59.5 s, h = 126 km, Mag = 5.5 (ISC). M (MOS) = 5, Dc = 77.81°, Az = 34.10°.
2	eP e	03	51 52	48 18	−0.7	Jan Mayen Island Region 71.57° N 8.5° W H = 03 46 14.7 s, h = 33 km, Mag = 4.7 (ISC). Dc = 26.32°, Az = 341.94°.
3	–iP i i iPP Lm Lm	21 22 	21 22 22 25 05 08.5	24.7 01.8 48.8 36.8 30 	+0.6 −2.0 	Off Coast of Peru 10.59° S 79.67° N H = 21 07 30 s, h = 29 km, Mag = 6.2 (ISC). M (MOS) = 7, MLH (BRA) = 6.3, Dc = 102.31°, Az = 267.88°.
4	e	03	29	20		Central Mid-Atlantic Ridge 1.3° S 23.8° W H = 03 18 53.1 s, h = 30 km, Mag = 4.6 (ISC). Dc = 60.72°, Az = 228.64°. Traces.
4	–iPKIKP i . iPP	04	11 12 15	29.5 08 50.5	+0.7 +5.5	Kermadec Islands Region 31.39° S 179.37° W H = 03 51 58.3 s, h = 223 km, Mag = 5.6 (ISC). Dc = 159.07°, Az = 42.76°.
5	–iPg	02	47	06.5		Local shock. Traces.

Date	Phase	h	m	s	Res. (O–C)	Remarks
5	iPn	11	38	02	+5.7	Yugoslavia
	iPg		38	08	+4.0	45.4° N 14.3° E
	i		38	17		H = 11 37 03.0 s, h = 38 km,
	eSn		38	29	−3.0	Mag = 4.0 (USCGS). MLH (BRA) = 3.9,
	iSg		38	47	−1.0	Dc = 3.37°, Az = 215.87°.
	Lm		38	54		LmH: 15 s 0.7 μm.
	Lm		39	11		
5	ePn	15	19	15	+6.9	Yugoslavia
	eSg		20	00	+4.0	45.7° N 14.2° E
	e		20	08		H = 15 18 16 s (BCIS).
	e		20	18		Dc = 3.17°, Az = 219.94°.
5	ePn	15	21	47	−2.3	Yugoslavia
	ePg		21	59	+4.0	45.6° N 14.2° E
	eSn		22	22	−1.0	H = 15 20 57 s, h = 9 km (ISC).
	eSg		22	46	+7.0	MLH (BRA) = 3.7,
	Lm		22	50		Dc = 3.26°, Az = 218.86°.
						LmH: 1.2 s 0.4 μm.
6	eP	03	31	11	+0.8	Kurile Islands
						46.58° N 153.90° E
						H = 03 19 12.1 s, h = 33 km,
						Mag = 5.0 (ISC). M (MOS) = 4¾–5,
						Dc = 78.39°, Az = 28.82°.
6	eP	05	02	38	−2.4	Crete
	e		03	32		35.06° N 23.09° E
	e		08	38		H = 04 59 23 s, h = 20 km,
						Mag = 4.8 (ISC).
						Dc = 13.83°, Az = 159.03°.
6	+iP	07	41	21.5	−0.7	Andaman Islands Region
	i		41	32		14.65° N 93.55° E
	iPcP		41	43.5	−6.5	H = 07 30 11.0 s, h = 36 km,
	e		42	26		Mag = 5.5 (ISC).
	e		43	35		Dc = 70.21°, Az = 90.02°.
	ePP		44	17	+11.0	
6	−iP	17	36	44	−0.8	Fox Islands, Aleutian Islands
	ePcP		36	50	0.0	52.43° N 168.59° W
						H = 17 24 39.6 s, h = 31 km,
						Mag = 5.0 (ISC).
						Dc = 79.66°, Az = 3.54°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
7	eP	07	25	47	−1.9	Celebes Sea
	ePP		30	02	+4.0	2.66° N 124.27° E
	e		30	29		H = 07 12 37.7 s, h = 288 km,
						Mag = 5.6 (ISC).
						Dc = 99.39°, Az = 75.33°.
7	ePKIKP	09	54	00	+1.7	Kermadec Islands
						30.64° S 177.59° W
						H = 09 34 11.2 s, h = 27 km,
						Mag = 4.7 (ISC).
						Dc = 159,20°, Az = 38.00°.
7	ePKIKP	11	27	20	+0.6	Kermadec Islands Region
	e		27	58		31.35° S 179.85° E
	ePP		31	42	+11.5	H = 11 08 13.2 s, h = 430 km,
						Mag = 5.0 (ISC).
						Dc = 158.68°, Az = 44.26°.
7	iPn	13	36	47.6		Local shock.
	i		36	50.6		
	i		36	52		
	i		36	53.6		
7	e	13	57	39		Southern Nevada
						Nuclear explosion "YARD".
						37.07° N 116.07° W
						H = 13 45 03.1 s, h = 29 km,
						Mag = 5.0 (ISC).
						Dc = 85.44°, Az = 324.19°.
7	eP	14	11	30	−2.7	Sicily
						37.85° N 15.24° E
						H = 14 09 03.6 s, h = 53 km,
						Mag = 4.4 (ISC).
						Dc = 10.40°, Az = 188.20°.
8	e	02	02	51		Greece-Albania Border Region
						40.82° N 20.3° E
						H = 02 00 26.4 s, h = 0 km (ISC).
						Dc = 7.69°, Az = 161.58°.
						Traces.

Date	Phase	h	m	s	Res. (O–C)	Remarks
8	+ePn	02	06	45	–6.2	Greece-Albania Border Region
	iPb		06	51	–5.0	40.60° N 20.08° E
	e		07	08		H = 02 04 45 s, h = 1 km,
	e		07	35		Mag = 5.1 (ISC). M (MOS) = 4.5,
	eSn		08	03	–2.0	MLH (BRA) = 4.8,
	eSg		08	59	0.0	Dc = 7.86°, Az = 163.20°.
	Lm		11.5			LmH: 4.5 s 5 μm.
8	ePn	09	54	00	–1.4	Greece
	e		54	18		39.08° N 21.40° E
	eSn		55	43	–6.0	H = 09 51 42.8 s, h = 40 km,
	eSg		56	48	–3.0.	Mag = 4.5 (ISC).
	e		57	32		Dc = 9.60°, Az = 159.54°.
	Lm		59.5			
8	iPg	12	41	40.6		Czechoslovakia, Explosion.
	i		42	15		48.25° N 17.08° E
						H = 12 41.6 s (BRA).
						Dc = 0.08°, Az = 355.15°.
8	eP	22	51	30	–2.0	Western Caroline Islands
	e		51	42		12.19° N 140.75° E
	e		55	29		H = 22 37 40.5 s, h = 37 km,
	ePP		55	48	–3.0	Mag = 5.6 (ISC). M (MOS) = 6.5,
						Dc = 101.93°, Az = 56.30°.
9	e	10	18	12		Santiago del Estero Prov., Arg.
	e		19	47		27.62° S 63.15° W
	e		22	25		H = 10 06 44.5 s, h = 577 km,
	e		23	53		Mag = 5.9 (ISC).
	iPP		24	09	–7.0	Dc = 104.01°, Az = 244.33°.
	e		26	19		
9	e	12	50	49		Traces.
9	iPg	16	34	03.7		Local shock.
	i		34	15.5		Traces.
9	ePKIKP	17	12	04	+5.5	South Pacific Cordillera
	ePKP2		12	55	+1.7	54.8° S 136.0° W
	e		13	43		H = 16 52 01.8 s, h = 31 km,
	ePKS		14	52	–14.0	Mag = 5.1 (ISC).
	ePP		15	22	+1.0	Dc = 162.08°, Az = 238.23°.
	e		17	16		
	Lm		26.5			

Date	Phase	h	m	s	Res. (O–C)	Remarks
11	ePKIKP	04	56	53	–0.5	Loyalty Islands Region
	i		56	54		21.22° S 169.55° E
	e		57	40		H = 04 37 22.7 s, h = 59 km,
						Mag = 4.9 (ISC).
						Dc = 145.19°, Az = 49.12°.
11	eP	07	04	14	+4.1	Algeria
	ePP		04	23	0.0	36.42° N 2.85° E
	e		11	58		H = 07 00 29.1 s, h = 33 km,
	e		12	17		Mag = 4.6 (ISC).
						Dc = 15.75°, Az = 227.03°.
11	ePKIKP	10	34	14	+5.0	New Hebrides Region
	ePKP2		34	24	+4.3	21.61° S 173.81° E
	e		34	47		H = 10 14 30.6 s, h = 31 km,
						Mag = 4.8 (ISC).
						Dc = 147.59°, Az = 43.35°.
11	eP	13	03	00	+1.9	Mongolia
	ePcP		04	17	+7.0	44.99° N 99.33° E
						H = 12 53 37 s, h = 46 km,
						Mag = 4.7 (ISC). M (MOS) = 5,
						Dc = 54.01°, Az = 60.34°.
11	eP	20	04	54	+0.5	Red Sea
						20.05° N 38.10° E
						H = 19 58 22.9 s, h = 33 km,
						Mag = 4.6 (ISC).
						Dc = 32.78°, Az = 141.53°.
12	eP	00	35	05	–1.6	South Atlantic Ridge
	ePcP		35	20	–2.7	22.56° S 10.62° W
	e		35	43		H = 00 23 25.7 s, h = 13 km,
	e		36	20		Mag = 4.9 (ISC).
	e		38	29		Dc = 74.67°, Az = 206.48°.
12	–iP	02	55	33.9	–1.3	Kurile Islands
	iPcP		55	49.9	+0.9	44.59° N 149.79° E
	e		56	14		H = 02 43 34 s, h = 30 km,
	e		57	53		Mag = 5.2 (ISC). M (MOS) = 5.3,
						Dc = 78.73°, Az = 32.38°.
12	eP	11	21	27	–0.2	North of Ascension Island
	e		21	36		4.91° S 11.47° W
	e		21	45		H = 11 11 28 s, h = 7 km,
						Mag = 4.8 (ISC).
						Dc = 58.49°, Az = 213.98°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
12	ePn	14	49	01	+0.9	Greece
	e		49	19		39.23° N 21.46° E
	e		49	48		H = 14 46 42 s, h = 25 km,
	eSn		50	57	+12.5	Mag = 4.7 (ISC).
	Lm		52.5			Dc = 9.48°, Az = 159.00°,
12	ePKIKP	22	08	40	+2.1	New Britain Region
						5.40° S 151.62° E
						H = 21 49 48 s, h = 51 km,
						Mag = 5.2 (ISC). M (MOS) ≐ 6,
						Dc = 122.47°, Az = 57.29°.
13	–iP	18	53	07.8	–0.2	Near Islands Aleutian Islands
	iPcP		53	15	–5.7	52.73° N 172.42° E
	i		53	27.3		H = 18 41 12 s, h = 6 km,
	e		54	45		Mag = 5.6 (ISC). M (MOS) = 5.6,
	e		55	33		mPV (BRA) = 5.9,
						Dc = 77.30°, Az = 15.09°.
						PV: 1 s 0.1 μm.
14	ePKIKP	15	54	28	+0.8	New Hebrides
	e		54	56		15.37° S 167.50° E
						H = 15 35 17.9 s, h = 149 km,
						Mag = 4.8 (ISC).
						Dc = 139.22°, Az = 46.85°.
15	–eP	00	40	58	+0.6	Near East Coast of Honshu, Japan
	e		41	12		35.68° N 140.67° E
	e		41	30		H = 00 28 39.2 s, h = 53 km,
	e		42	57		Mag = 5.2 (ISC). M (MOS) = 5.7,
	ePP		44	09	0,0	Dc = 82.53°, Az = 43.17°.
15	–iP	10	42	51	–2.2	Bhutan
	i		42	57		27.42° N 91.86° E
	e		44	27		H = 10 32 44.2 s, h = 19 km,
	e		45	07		Mag = 5.8 (ISC). M (MOS) = 5.5,
	ePP		45	21	+13.0	Dc = 60.22°, Az = 81.18°.
16	iPg	20	19	49.5	–8.6	Hungary
	i		19	50.6		48.0° N 17.1° E
	iSg		19	53		H = 20 19 49 s, h = 0 km.
						MLH (BRA) = 2.6,
						Dc = 0.20°, Az = 181.14°,
						LmH: 0.5 s 1.9 μm.

Date	Phase	h	m	s	Res. (O–C)	Remarks
17	++eP	08	09	23	+0.8	Chiapas, Mexico
	e		09	35		17.24° N 94.10° W
	e		09	41		H = 07 56 23.6 s, h = 51 km,
	e		12	20		Mag = 5.3 (ISC).
						Dc = 90.72°, Az = 297.00°.
18	ePKIKP	15	52	05	+11.9	Eastern New Guinea Region
	e		52	14		5.97° S 146.59° E
	ePP		53	32	+10.0	H = 15 33 06.6 s, h = 41 km,
	e		54	28.5		Mag = 5.6 (ISC).
	ePKS		55	32	–4.5	Dc = 120.01°, Az = 62.44°.
18	ePKP2	19	32	39	+6.1	West of Tonga
						20.76° S 178.33° W
						H = 19 13 54.5 s, h = 590 km,
						Mag = 4.2 (ISC).
						Dc = 149.96°, Az = 29.84°.
19	ePKP2	01	05	29	–1.5	South of Fiji
						24.76° S 176.9° W
						H = 00 45 26 s, h = 92 km,
						Mag = 4.8 (ISC).
						Dc = 154.14°, Az = 30.30°.
19	–eP	03	41	11	–0.3	Near East Coast of Honshu, Japan
	e		41	32		37.38° N 141.75° E
						H = 03 28 26.4 s, h = 40 km,
						Mag = 4.8 (ISC).
						Dc = 81.61°, Az = 41.49°.
19	iP	11	08	07.7	+6.1	Hokkaido, Japan Region
	ipP		08	22.7	–1.0	42.92° N 145.33° E
	i		09	43.7		H = 10 56 08.8 s, h = 85 km,
	i		10	41		Mag = 5.9 (ISC). MLH (BRA) = 6.2,
	i		12	31.7		mPV (BRA) = 6.1,
	iS		17	49.7	+3.7	Dc = 78.48°, Az = 36.08°.
	i		19	40.7		LmH: 15 s 8 μm. PV: 1.5 s 0.25 μm.
19	ePKIKP	13	04	05	+0.7	South Sandwich Islands Region
	e		14	40		57.82° S 23.54° W
						H = 12 45 35.8 s, h = 34 km,
						Mag = 6.0 (ISC).
						Dc = 110.84°, Az = 201.90°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
19	–iP	19	14	23	–0.4	Southern Sumatra
	epP		14	37	–6.6	1.52° S 100.51° E
	e		16	35		H = 19 01 46 s, h = 73 km,
						Mag = 5.2 (ISC). M (MOS) = 5,
						Dc = 86.72°, Az = 95.92°.
19	eP	19	41	38	–2.9	Atlantic-Indian Ridge
						36.29° S 52.14° E
						H = 19 28 45.2 s, h = 33 km,
						Mag = 5.2 (ISC).
						Dc = 89.70°, Az = 152.37°.
19	eP	19	41	38	–2.9	Atlantic-Indian Ridge
						36.29° S 52.14° E
						H = 19 28 45.2 s, h = 33 km,
						Mag = 5.2 (ISC).
						Dc = 89.70°, Az = 152.37°.
20	eP	00	44	56	+0.9	Near East Coast of Honshu, Japan
						35.96° N 140.11° E
						H = 00 32 42.3 s, h = 78 km,
						Mag = 4.9 (ISC).
						Dc = 82.04°, Az = 43.39°.
20	–iPn	06	10	09.9	–1.8	Yugoslavia
	iPg		10	23	+1.0	44.40° N 17.59° E
	i		10	32		H = 06 09 12.4 s, h = 11 km,
	iSn		10	50	–1.6	Mag = 4.1 (ISC). MLH (BRA) = 4.0,
	i		10	53		Dc = 3.78°, Az = 174.73°.
	Lm		11.0			LmH: 1.5 s 1.4 μm.
	Lm		11.3			
20	ePKIKP	09	59	08	–0.1	Auckland Islands Region
						49.57° S 163.93° E
	e	10	00	47		H = 09 39 15.7 s, h = 34 km,
	e		01	32		Mag = 5.8 (ISC). M (MOS) = 6.5,
	ePKS		02	35	–6.0	Dc = 158.23°, Az = 106.17°.
	iPP		03	29	+2.0	
	eSKS		06	11	+2.0	
	Lm		12	30		
	Lm		20.5			
20	ePKIKP	10	50	47	–0.1	Auckland Islands Region
	ePKP2		51	31	+3.0	49.67° S 163.82° E
	ePP		55	06	–1.5	H = 10 30 52.6 s, h = 19 km,
	i		56	41		Mag = 5.6 (ISC).
						Dc = 158.17°, Az = 106.47°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
20	e	12	27	16		Auckland Islands Region
	e		27	42		49.80° S 163.90° E
						H = 12 06 51.4 s, h = 33 km,
						Mag = 5.3 (ISC).
						Dc = 158.24°, Az = 106.79°.
20	–iPKIKP	18	58	12.7	–5.0	Kermadec Islands Region
						28.64° S 175.82° W
						H = 18 38 26 s, h = 40 km,
						Mag = 4.9 (ISC).
						Dc = 158.09°, Az = 31.79°.
20	eP	19	59	21	–3.2	Tristan da Cunha Region
	e		59	48		34.06° S 14.58° W
						H = 19 46 43.2 s, h = 33 km,
						Mag = 4.9 (ISC).
						Dc = 86.63°, Az = 205.90°.
20	e	20	37	26		Auckland Islands Region
						49.80° S 163.6° E
						H = 20 16 56.0 s, h = 33 km (ISC).
						Dc = 158.07°, Az = 106.87°.
						Traces.
20	iPn	22	44	17.9		Czechoslovakia
	i		44	19.7		48.3° N 17.2° E
	iSg		44	21		H = 22 44 14 s, h = 0 km (ISC).
	Lm		44			MLH (BRA) = 3.0,
						Dc = 0.15°, Az = 25.70°.
						LmH: 0.3 s 1.2 μm.
22	eP	05	11	28	+2.6	Eastern Kazakhstan
						50.02° N 77.72° E
						H = 05 03 57.8 s, h = 0 km,
						Mag = 5.2 (ISC).
						Dc = 38.78°, Az = 63.81°.
22	–iP	08	17	59	+0.6	Central Mid-Atlantic Ridge
	i		18	27.7		0.54° S 20.09° W
	i		19	12.7		H = 08 08 04.4 s, h = 28 km,
	ePP		20	04	–6.0	Mag = 5.3 (ISC). M (MOS) = 5.5,
						Dc = 58.24°, Az = 225.31°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
22	–iP	10	29	57.6	0.0	Kurile Islands
	i		30	01		44.56° N 149.60° E
	i		30	44		H = 10 17 55.4 s, h = 17 km,
	i		31	15.6		Mag = 5.7 (ISC). M (MOS) = 6.3,
	e		32	28		MLH (BRA) = 6.2,
	ePP		33	13	+16.0	Dc = 78.69°, Az = 32.52°.
	e		37	13		LmH: 15 s 7 μm.
	e		39	55		
	Lm	11	08.5			
22	–iP	12	46	51.4	+0.8	Kurile Islands
	e		47	18		44.52° N 149.55° E
						H = 12 34 51.4 s, h = 41 km,
						Mag = 5.0 (ISC). M (MOS) = 4.5,
						Dc = 78.70°, Az = 32.56°.
23	iPKIKP	07	15	21.7	–0.7	West of Tonga
	i		15	29.2		22.00° S 179.53° W
	iPKP2		15	38.2	–3.8	H = 06 56 42.0 s, h = 580 km,
	ipPKP2		17	47.2	–2.0	Mag = 5.5 (ISC). M (MOS) = 5.5,
	e		22	32		Dc = 150.68°, Az = 32.86°.
23	ePKIKP	07	58	29	+2.0	South of Fiji
	ePKP2		58	43	–5.3	22.00° S 179.48° W
						H = 07 39 46.7 s, h = 583 km,
						Mag = 4.7 (ISC).
						Dc = 150.71°, Az = 32.77°.
23	eP	09	25	08	–0.6	Near Islands, Aleutian Islands
						51.64° N 172.52° E
						H = 09 13 12.5 s, h = 49 km,
						Mag = 4.8 (ISC).
						Dc = 78.37°, Az = 15.35°.
23	e	12	50	10		Banda Sea
						7.8° S 128.6° E
						H = 12 32 07 s, h = 151 km (ISC).
						Dc = 110.07°, Az = 78.98°:
						Traces.
24	iPg	11	49	40.7		Local shock.
	e		49	47.		

Date	Phase	h	m	s	Res. (O–C)	Remarks
24	eP	17	13	48	0.0	Morocco
						32.44° N 5.84° W
						H = 17 08 41.6 s, h = 33 km,
						Mag = 4.4 (ISC).
						Dc = 23.38°, Az = 236.15°.
24	iPn	22	13	00.5	–9.6	Albania
	i		13	22.5		40.86° N 19.70° E
	iPg		13	40.5	–3.5	H = 22 11 20.4 s, h = 35 km,
	eSn		14	34	–9.0	Mag = 4.6 (ISC). M (MOS) = 4.5,
	e		15	52		MLH (BRA) = 4.2,
	Lm		16.5			Dc = 7.54°, Az = 164.82°.
						LmH: 2.7 s 0.6 μm.
24	iPg	22	29	28.5	–5.5	Northern Italy
	eSg		30	40		45.75° N 9.39° E
	e		31	27		H = 22 27 44.6 s, h = 0 km,
						Mag = 5.0 (ISC).
						Dc = 5.81°, Az = 248.25°.
25	eP	09	02	55	–0.4	Leeward Islands
	e		03	10		17.63° N 61.61° W
						H = 08 51 50.3 s. h = 57 km,
						Mag = 5.0 (ISC).
						Dc = 69.60°, Az = 273.85°
26	e	05	07	34		Albania
	eSg		09	40	+11.0	41.53° N 20.94° E
	e		10	31		H = 05 05 27.4 s, h = 30 km,
						Mag = 4.4 (ISC). M (MOS) ≐ 4,
						Dc = 7.17°, Az = 156.29°.
26	e	16	29	34		Near Coast of Central Chile
	iPP		30	40	+5.0	30.10° S 71.59° W
	e		31	15		H = 16 11 22.4 s, h = 40 km,
	e		32	22		Mag = 5.6 (ISC). M (MOS) = 6,
						Dc = 110.95°, Az = 248.08°.
26	iPKIKP	17	24	46	–0.9	Solomon Islands
						7.08° S 155.82° E
						H = 17 05 54.9 s, h = 92 km,
						Mag = 5.2 (ISC).
						Dc = 126.18°, Az = 54.21°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
27	–iP	17	12	38	–2.2	Southern Nevada
	i		12	46		37.10° N 116° W
	e		13	07		Nuclear explosion "ZAZA".
						H = 17 00 02.4 s, h = 23 km,
						Mag = 5.7 (ISC).
						Dc = 85.41°, Az = 324.15°.
28	eP	03	01	49	–1.3	Alma-Ata Region
	e		03	37		42.13° N 79.68° E
						H = 02 53 45 s, h = 2 km,
						Mag = 4.8 (ISC). M (MOS) = 5.5,
						Dc = 43.46°, Az = 73.72°.
28	eP	03	12	36	–0.4	Fox Islands, Aleutian Islands
						52.18° N 171.09° W
						H = 03 00 31.0 s, h = 54 km,
						Mag = 5.0 (ISC).
						Dc = 79.79°, Az = 5.11°.
28	+iPKIKP	05	15	51	–0.4	New Britain Region
	i		16	03		6.59° S 153.47° E
	i		16	15		H = 04 56 53.3 s, h = 20 km,
	iPP		17	43	+1.0	Mag = 5.8 (ISC). M (MOS) = 6,
	e		28	30		Dc = 124.47°, Az = 56.26°.
	e		29	30		
28	–iP	15	56	18	–0.2	Gulf of Alaska
	i		56	30		59.43° N 147.12° W
	i		56	48		H = 15 44 52 s, h = 4 km,
	ePP		59	08	+9.0	Mag = 5.4 (ISC). M (MOS) = 6,
	e	16	00	29		Dc = 71.99°, Az = 351.60°.
29	eP	05	32	03	+2.8	Off Coast of Central America
						12.39° N 91.17° W
						H = 05 18 49 s, h = 21 km,
						Mag = 5.2 (ISC).
						Dc = 92.68°, Az = 291.76°.
29	e	11	54	36		Salta Province, Argentina
						24.6° N 65.1° W
						H = 11 42 39 s, h = 33 km (ISC).
						Dc = 67.03°, Az = 281.61°.
						Traces.

Date	Phase	h	m	s	Res. (O–C)	Remarks
29	–i	15	30	32.6		New Britain Region
	i		30	49.1		6.34° S 153.4° E
						H = 15 13 27 s, h = 51 km,
						Mag = 4.7 (USCGS).
						Dc = 124.23°, Az = 56.17°.
						Traces.
29	eP	17	42	27	+1.8	Atlantic-Indian Ridge
	e		42	31		31.87° S 57.30° E
	e		42	38		H = 17 29 39.3 s, h = 26 km,
						Mag = 4.8 (ISC).
						Dc = 87.43°, Az = 146.66°.
30	+eP	08	09	41	0.0	Ryukyu Islands
	e		09	55		29.01° N 129.94° E
	e		10	01		H = 07 57 22.9 s, h = 53 km,
	e		10	26.4		Mag = 5.5 (ISC). M (MOS) = 5.5,
						Dc = 82.48°, Az = 54.52°.
30	e	09	18	12		New Britain Region
						6.44° S 153.4° E
						H = 09 09 35.6 s, h = 41 km,
						Mag = 4.9 (ISC).
						Dc = 124.31°, Az = 56.23°.
						Traces.
30	e	15	46	30		West of Gibraltar
						36.6° N 8.9° W
						H = 15 45 07 s, h = 33 km (ISC).
						Dc = 22.31°, Az = 248.37°.
						Traces.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	iPKIKP	12	15	36	+4.6	Tonga 15.10° S 173.99° W H = 11 56 01.5 s, h = 75 km, Mag = 4.5 (ISC). Dc = 145.77°, Az = 19.30°.
1	ePn	22	47	09	−0.3	Northern Italy 44.57° N 10.95° E H = 22 45 46.9 s, h = 50 km, Mag = 4.1 (ISC). Dc = 5.57°, Az = 232.07°.
	e		48	15		
2	+iPKIKP	00	31	31.3	+0.3	West of Tonga 20.87° S 178.77° W H = 00 12 51.3 s, h = 579 km, Mag = 5.3 (ISC). Dc = 149.91°, Az = 30.68°.
	i		31	37.3		
	i		31	48		
	iPKP2		31	53.2	0,0	
	ipPKP2		34	00	+4.0	
2	ePKIKP	15	13	07	+1.5	New Britain Region 6.68° S 153.37° E H = 14 54 09 s, h = 32 km, Mag = 5.2 (ISC). Dc = 124.50°, Az = 56.43°.
2	ePn	20	14	53	−1.2	Southern Italy 41.55° N 14.10° E H = 20 13 01 s, h = 18 km, Mag = 4.5 (ISC). Dc = 6.95°, Az = 198.97°.
	ePg		15	10	−1.3	
	eSn		16	00	−1.0	
	eSg		16	44	−1.8	
	Lm		17.0			
3	−iP	18	22	04.9	−0.3	Costa Rica 10.94° N 85.92° W H = 18 16 05.8 s, h = 35 km, Mag = 5.6 (ISC). M (MOS) = 6.2, Dc = 90.46°, Az = 286.90°.
	e		29	18		
	i		29	27.4		
	ePP		32	47	+5.0	
4	i	15	34	04.7		Local shock. Traces.
	i		34	08		
4	ePKIKP	17	40	20	+5.9	New Ireland Region 5.66° S 153.92° E H = 17 21 20.4 s, h = 44 km, Mag = 5.8 (ISC). M (MOS) = 6.9, Dc = 123.95°, Az = 55.19°.
	e		40	43		
	e		41	10		
	e		41	23		
	ePP		42	15	+12.0	
	e		42	36		
	Lm	18	36			

Date	Phase	h	m	s	Res. (O–C)	Remarks
5	i	10	40	22.6		Local shock. Traces.
5	eP	12	03	21	−7.4	Ionian Sea 37.74° N 20.80° E H = 12 00 53.7 s, h = 37 km, Mag = 5.0 (ISC). M (MOS) = 4.9, Dc = 10.76°, Az = 164.13°.
5	eP	16	07	02	+1.3	Kurile Islands 45.42° N 150.71° E H = 15 55 04.2 s, h = 46 km, Mag = 5.3 (ISC). Dc = 78.34°, Az= 31.38°.
7	−iP	08	39	52	+1.3	Kurile Islands 49.15° N 156.23° E H = 08 27 59.5 s, h = 22 km, Mag = 5.4 (ISC). M (MOS) = 5.2, Dc = 76.82°, Az = 26.19°.
	i		39	56.9		
	iPcP		40	07	+2.0	
	e		41	37		
7	−iP	09	18	41.9	+0.1	Kurile Islands 49.16° N 156.26° E H = 09 06 50.9 s, h = 23 km, Mag = 5.1 (ISC). M (MOS) = 5, Dc = 76.83°, Az = 26.19°.
	iPcP		18	50.9	−6.0	
	e		19	28		
7	−iPKIKP	10	51	46	+1.6	West of Tonga 17.15° S 178.92° W H = 10 33 07.7 s, h = 549 km, Mag = 4.9 (ISC). Dc = 146.39°, Az = 28.48°.
	i		51	49		
8	ePKIKP	17	18	32	−0.3	Eastern New Guinea Region 9.49° S 148.84° E H = 16 59 35.3 s, h = 23 km, Mag = 5.5 (ISC). M (MOS) = 5, Dc = 124.14°, Az = 62.81°.
8	ePKIKP	18	27	11	+1.8	New Ireland Region 5.60° S 153.98° E H = 18 08 17.5 s, h = 60 km, Mag = 5.4 (ISC). M (MOS) = 5.7, Dc = 123.94°, Az = 55.09°.
	e		27	47		
	e		29	29		

Date	Phase	h	m	s	Res. (O–C)	Remarks
8	eP	21	21	03	+0.8	Kurile Islands 49.19° N 156.26° E H = 21 09 13.0 s, h = 35 km, Mag = 4.9 (ISC). Dc = 76.80°, Az = 26.15°.
9	+iP	14	21	42.5	+1.2	Kamchatka 53.93° N 155.23° E H = 14 10 57.9 s, h = 401 km, Mag = 5.1 (ISC). Dc = 72.28°, Az = 24.48°.
9	+iPKIKP	17	40	23	−0.2	West of Tonga 21.10° S 179.18° W H = 17 21 46.2 s, h = 605 km, Mag = 6.2 (ISC). Dc = 149.99°, Az = 31.56°.
	i		40	29		
	i		41	28		
	ipPKIKP		42	38	−11.0	
	iSKP2		43	05	+5.0	
	isPP		47	26	−5.0	
	i		49	26		
	Lm	18	09.5			
9	ePKIKP	18	51	44	−0.3	West of Tonga 21.15° S 179.20° W H = 18 33 08.2 s, h = 624 km, Mag = 4.9 (ISC). Dc = 150.02°, Az = 31.63°.
10	e	14	50	11		Local shock.
	e		50	17		Traces.
12	ePKIKP	06	53	41	−0.1	West of Tonga 21.10° S 179.13° W H = 06 35 06.7 s, h = 633 km, Mag = 5.5 (ISC). Dc = 150.00°, Az = 31.48°.
	e		53	49		
	ePKP2		53	55	+7.0	
	epPKP2		56	21	+5.0	
	e		57	48		
12	ePg	09	12	25		Local shock.
12	iPg	09	48	00		Local shock.
	i		48	01		
12	+iP	13	04	28	−0.3	Northwest of Kurile Islands 52.15° N 152.57° E H = 12 53 45.9 s, h = 466 km, Mag = 5.5 (ISC). Dc = 73.08°, Az = 26.85°.
	i		04	36		
	i		04	42		
	epP		06	14	0.0	
	iPP		07	21	+1.0	
	epPP		09	25		

Date	Phase	h	m	s	Res. (O–C)	Remarks
12	ePg	13	20	12		Local shock.
12	ePKIKP	18	49	59	−5.4	Banda Sea 7.15° S 129.83° E H = 18 31 39.0 s, h = 60 km, Mag = 6.0 (ISC). Dc = 110.39°, Az = 77.55°.
	e		50	06		
	ePP		50	45	0.0	
	e		51	45		
	e		52	27		
14	eP	03	42	11	−0.8	Leeward Islands 17.33° N 60.89° W H = 03 31 06.7 s, h = 42 km, Mag = 5.3 (ISC). Dc = 69.33°, Az = 273.10°.
	e		42	23		
	ePcP		42	35	−2.2	
15	−iP	08	13	30.2	−1.6	Nicaragua 11.91° N 85.98° W H = 08 00 52.6 s, h = 181 km, Mag = 6.2 (ISC). M (MOS) = 6, mPV (BRA) = 6.4, Dc = 89.77°, Az = 287.50°. PV: 9 s 0.25 μm.
	i		14	10.7		
	isP		14	42.2	+4.0	
	iPP		17	07	+2.0	
	e		18	42		
	e		23	15		
	e		24	30		
15	ePKIKP	23	23	06.3	+12.2	Tonga 17.57° S 173.26° W H = 23 03 15.3 s, h = 40 km, Mag = 4.5 (ISC). Dc = 148.33°, Az = 19.08°.
16	e	11	53	48		Local shock. Traces.
16	eP	13	39	46	+8.6	Vancouver Island Region 49.21° N 129.93° W H = 13 27 37.7 s, h = 32 km, Mag = 5.4 (ISC). M (MOS) = 5, Dc = 78.66°, Az = 338.68°.
18	eP	01	18	10	−1.1	Greenland Sea 79.81° N 2.9° E H = 01 11 45.8 s, h = 42 km, Mag = 5.7 (ISC). M (MOS) = 6, Dc = 32.16°, Az = 355.29°.
	ePP		19	21	0.0	
	e		27	31		
	e		35	31		
	ePKKP		43	15	+2.0	
	Lm		46			

Date	Phase	h	m	s	Res. (O–C)	Remarks
18	eP	08	00	35	+7.0	Oaxaca, Mexico
	e		02	22		16.7° N 97.59° W
	e		03	13		H = 07 47 16 s, h = 79 km,
						Mag = 3.8 (ISC).
						Dc = 93.20°, Az = 299.30°.
18	iPg	18	57	29.7	+6.0	Austria
	iSn		57	32.7		47.9° N 16.3° E
	i		57	37.2		H = 18 57 12 s (BCIS).
	e		57	43		Dc = 0.60°, Az = 243.87°.
18	ePKIKP	22	26	19	–1.9	South of Kermadec Islands
						33.90° S 179.36° W
						H = 22 06 23.4 s, h = 24 km,
						Mag = 5.3 (ISC).
						Dc = 161.15°, Az = 46.86°.
20	ePKHKP	16	15	24		West of Tonga
						20.52° S 178.03° W
						H = 15 56 33.5 s, h = 556 km,
						Mag = 4.8 (ISC).
						Dc = 149.83°, Az = 29.15°.
21	iP	05	06	12.3	+0.1	Novaya Zemlya
	i		07	37.8		Underground explosion (UPP).
	e		08	18		73.40° N 54.42° E
	eS		11	11	–1.0	H = 04 59 58.4 s, h = 0 km,
	eSSS		13	11	+2.0	Mag = 5.9 (ISC). MLH (BRA) = 5.6,
	eL		18	24		Dc = 30.17°, Az = 20.29°.
						LmH: 2.4 s, 0.6 μm.
21	ePn	16	56	11	–1.9	Yugoslavia
	ePg		56	37	–1.3	43.1° N 16.9° E
	eSn		57	07	0,0	H = 16 54 56 s, h = 16 km,
	Lm		58.5			Mag = 4.3 (USCGS).
						Dc = 5.06°, Az = 181.70°.
22	e	06	55	47		Ecuador
	e		56	40		0.72° S 78.7° W
						H = 06 39 05.3 s, h = 33 km,
						Mag = 3.9 (ISC).
						Dc = 94.41°, Az = 273.84°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
22	eP	18	57	15	–0.7	North Atlantic Ridge
						30.95° N 41.49° W
						H = 18 48 44.7 s, h = 33 km,
						Mag = 4.9 (ISC).
						Dc = 47.17°, Az = 270.78°.
23	eP	03	05	32	+0.9	Kurile Islands
						43.34° N 146.98° E
						H = 02 23 32.9 s, h = 51 km,
						Mag = 5.0 (ISC). M (MOS) = 5,
						Dc = 78.76°, Az = 34.81°.
23	iP	08	39	04.5	+0.3	Bonin Islands Region
	i		39	15		28.87° N 139.27° E
	i		39	52.5		H = 08 27 07.3 s, h = 475 km,
	epP		40	50	–2.0	Mag = 5.3 (ISC).
	ePP		42	30	–3.0	Dc = 87.47°, Az = 48.00°.
24	+iPKIKP	03	32	53	–0.6	Kermadec Islands Region
	iPKP2		33	32	–2.0	31.48° S 179.65° W
						H = 03 12 24.1 s, h = 231 km,
						Mag = 5.1 (ISC).
						Dc = 159.02°, Az = 43.46°.
24	e	07	34	44		Poland
						50.27° N 18.97° E
						H = 07 33 07 s (ISC),
						M = 2.5 (WAR).
						Dc = 2.43°, Az = 29.47°.
24	–iP	11	04	03.3	+1.1	Southern Sumatra
	iPcP		04	17	+10.0	3.09° S 101.47° E
	i		04	36		H = 10 51 14.9 s, h = 63 km,
						Mag = 5.3 (ISC). M (MOS) = 5.7,
						Dc = 88.52°, Az = 96.24°.
24	ePg	16	18	35	+2.0	Yugoslavia
	eSn		18	59	–1.0	45.0° N 16.6° E
	Lm		19	11		H = 16 17 35 s, h = 0 km (ISC).
						Dc = 3.21°, Az = 186.46°.

Date	Phase	h	m	s	Res.. (O–C)	Remarks
25	–iP	01	11	33.8	–0.6	Taiwan Region
	i		11	41.3		24.43° N 122.25° E
	i		12	56		H = 00 59 23.3 s, h = 73 km,
	i		13	14.3		Mag = 6.0 (ISC). MLH (BRA) = 6.8,
	iSKS		21	44.3	+1.0	mPV (BRA) = 6.4,
	Lm		53.5			Dc = 81.60°, Az = 62.80°.
						LmH: 15 s 40 μm.
						PV: 2.7 s 1 μm.
25	+eP	09	33	53	+1.6	Rat Islands, Aleutian Islands
	e		34	34		51.49° N 176.40° E
						H = 09 21 47 s, h = 19 km,
						Mag = 4.7 (ISC).
						Dc = 79.15°, Az = 13.01°.
26	–eP	00	34	34	–0.2	Taiwan Region
	epP		34	52	–2.7	24.45° N 122.34° E
	e		35	34		H = 00 22 21.7 s, h = 64 km,
	e		36	08		Mag = 5.5 (ISC). M (MOS) = 5.5,
						Dc = 81.64°, Az = 62.72°.
26	eP	04	58	55	–1.8	Turkey
	ePP		59	04	–4.0	37.22° N 29.05° E
	e		59	36		H = 04 55 39.3 s, h = 46 km,
	e	05	00	43		Mag = 4.9 (ISC). M (MOS) = 5,
	eS		01	16	–16.0	Dc = 14.01°, Az = 136.97°.
	Lm		05.5			
26	eP	12	32	33	–5.2	Leeward Islands
	e		33	19		17.72° N 60.98° W
	e		33	35		H = 12 21 34.7 s, h = 46 km,
						Mag = 5.3 (ISC).
						Dc = 69.12°, Az = 273.46°.
26	eP	13	55	53	+3.4	Leeward Islands
						17.63° N 61.08° W
						H = 13 44 47.8 s, h = 59 km,
						Mag = 5.3 (ISC).
						Dc = 69.25°, Az = 273.46°.
26	iP	17	35	55.3	–1.5	Molucca Sea
	e		36	09		0.18° S 125.14° E
						H = 17 22 05 s, h = 42 km,
						Mag = 5.4 (ISC). M (MOS) = 5.5,
						Dc = 102.10°, Az = 76.52°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
26	eP	20	29	52	+4.2	North Atlantic Ridge
						17.34° N 46.57° W
						H = 20 19 43.3 s, h = 28 km,
						Mag = 4.7 (ISC).
						Dc = 59.77°, Az = 262.26°.
27	eP	08	10	40	+0.2	Western Persia
	e		10	45		34.34° N 46.18° E
	epP		11	01	0.0	H = 08 05 16.4 s, h = 86 km,
						Mag = 4.9 (ISC). M (MOS) = 4.1,
						Dc = 25.68°, Az = 111.86°.
28	eP	18	51	37	–0.8	North Atlantic Ridge
	i		51	42.5		24.94° N 45.89° W
	e		53	10		H = 18 42 15 s, h = 38 km,
						Mag = 4.9 (ISC).
						Dc = 54.02°, Az = 268.19°.
30	ePKIKP	02	56	24	+2.5	Loyalty Islands Region
	e		56	45		22.01° S 170.16° E
	e		56	53		H = 02 36 45.9 s, h = 34 km,
						Mag = 4.6 (ISC).
						Dc = 146.16°, Az = 49.03°.
31	ePKIKP	10	34	23	+1.8	South of Fiji
	e		34	41		19.75° S 177.37° E
	e		35	12		H = 10 14 43.6 s, h = 36 km,
						Mag = 5.4 (ISC).
						Dc = 147.46°, Az = 36.25°.
31	ePn	21	10	46		Sicily
	Lm		20.5			37.84° N 14.60° E
						H = 21 08 07.6 s, h = 38 km,
						Mag = 5.0 (ISC). M (MOS) = 5,
						Dc = 10.48°, Az = 190.96°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
3	–ePKIKP	07	51	56	+1.6	New Hebrides
	e		52	05		18.67° S 169.07° E
	e		52	35		H = 07 32 49.0 s, h = 216 km,
	e		53	19		Mag = 5.3 (ISC).
	e		53	35		Dc = 142.80°, Az = 47.48°.
	esPKIKP		55	11	–3.0	
3	ePn	13	21	20	–5.2	Yugoslavia
	e		21	32		45.5° 14.6° E
	Lm		22.5			H = 13 20 33 s (BCIS).
						Dc = 3.18°, Az = 213.71°.
3	iPg	15	35	26.2		Local shock.
	i		35	29.2		
	i		35	34		
	i		35	47.2		
4	–iPKIKP	10	35	55	+4.6	West of Tonga
	i		35	58		17.81° S 178.99° W
	i		36	04		H = 10 17 14.5 s, h = 568 km,
	i		36	29		Mag = 5.3 (ISC).
	i		38	41		Dc = 146.99°, Az = 29.00°.
	iPP		39	29	+2.0	
4	–iP	13	39	03	+1.0	Near East Coast of Honshu, Japan
	i		39	15.4		37.39° N 141.71° E
	e		40	11		H = 13 26 47.6 s, h = 43 km,
	iPP		42	08	–2.0	Mag = 5.5 (ISC). M (MOS) = 5.9,
						Dc = 81.59°, Az = 41.51°.
4	–iP	14	42	32	+0.4	Hokkaido, Japan Region
	i		42	47		43.35° N 144.19° E
	e		47	25		H = 14 30 39.2 s, h = 50 km,
	eSKS		52	29	–6.0	Mag = 5.7 (ISC). M (MOS) = 6.5,
	Lm	15	22.5			MLH (BRA) = 6.1, mPV (BRA) = 6.5,
						Dc = 77.66°, Az = 36.56°.
						LmH: 10 s 3.9 μm. PV: 1 s 0.5 μm.
4	eP	14	58	00	+2.5	Hokkaido, Japan Region
	e		58	19		43.53° N 144.02° E
						H = 14 46 02.5 s, h = 39 km,
						Mag = 5.5 (ISC).
						Dc = 77.45°, Az = 36.57°,

Date	Phase	h	m	s	Res. (O–C)	Remarks
4	iP	16	40	03.3	+1.0	Peru-Ecuador Border Region
	i		40	29		2.73° S 77.69° W
						H = 16 26 48.0 s, h = 94 km,
						Mag = 5.7 (ISC).
						Dc = 95.22°, Az = 271.74°.
6	ePn	10	35	22	+3.5	Greece-Albania Border Region
	e		36	29		39.05° N 20.61° E
						H = 10 32 58 s, h = 1 km,
						Mag = 4.6 (ISC).
						Dc = 9.46°, Az = 163.17°.
7	–iPKIKP	04	08	55	+3.5	Samoa
	i		09	04		14.85° S 172.90° W
	e		09	13		H = 03 49 16 s, h = 32 km,
	e		10	13		Mag = 5.5 (ISC).
						Dc = 145.77°, Az = 17.37°.
7	e	15	21	30		Near shock.
						Traces.
7	e	20	05	30		Afghanistan-USSR Border Region
	e		07	20		37.14° N 71.70° E
						H = 19 57 25.9°, h = 126 km,
						Mag = 5.0 (ISC).
						Dc = 40.84°, Az = 84.87°.
8	eP	17	21	37	+2.7	Rat Islands, Aleutian Islands
						51.13° N 178.52° E
						H = 17 09 23 s, h = 1 km,
						Mag = 5.4 (ISC). M (MOS) ≐ 6,
						Dc = 79.81°, Az = 11.77°.
8	eP	17	34	43	+1.1	Rat Islands, Aleutian Islands
						51.12° N 178.47° E
						H = 17 22 36.9 s, h = 41 km,
						Mag = 5.1 (ISC). M (MOS) = 5.5,
						Dc = 79.81°, Az = 11.81°.
8	e	17	44	40		Northern Italy
						45.5° N 10.4° E
						H = 17 42 15 s, h = 0 km (ISC).
						Dc = 5.32°, Az = 242.36°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
9	eP	18	31	41	–9.9	Near East Coast of Honshu, Japan
	e		32	15		35.54° N 140.12° E
						H = 18 19 35.3 s, h = 69 km,
						Mag = 5.3 (ISC).
						Dc = 82.40°, Az = 43.62°.
10	eP	18	49	58	–1.4	Chagos Archipelago Region
	e		50	03		6.03° S 71.34° E
	e		50	22		H = 18 38 34 s, h = 9 km,
	e		51	00		Mag = 5.2 (ISC). M (MOS) = 5.4,
	ePP		52	45	+4.0	Dc = 71.84°, Az = 121.87°.
	e		53	30		
11	–eP	02	37	18	0.0	Uganda
						2.02° N 31.48° E
						H = 02 28 44.4 s, h = 33 km,
						Mag = 5.3 (ISC).
						Dc = 47.62°, Az = 160.37°.
11	–e	11	21	11		Czechoslovakia
	e		21	23		Explosion of 30.8 Tons.
						50.58° N 14.05° E
						H = 11 19 00 s (PRŮ).
						Dc = 3.13°, Az = 321.55°.
						Traces.
11	+eP	12	07	14	–2.5	Chagos Archipelago Region
	e		07	20		6.01° S 71.36° E
	e		08	23		H = 11 55 56 s, h = 36 km,
						Mag = 5.3 (ISC). M (MOS) ≐ 6,
						Dc = 71.85°, Az = 121.87°.
11	eP	18	11	20	–2.4	Chagos Archipelago Region
	e		12	08		6.10° S 71.32° E
	e		13	37		H = 17 59 57 s, h = 11 km,
						Mag = 5.4 (ISC). M (MOS) = 5.7,
						Dc = 71.89°, Az = 121.93°.
12	–iP	02	39	13	–1.9	Kurile Islands
						44.81° N 149.83° E
						H = 02 27 20.0 s, h = 70 km,
						Mag = 5.2 (ISC).
						Dc = 78.55°, Az = 32.24°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
12	iPKIKP	10	56	28.5	–2.3	Tonga Region
	iPKP2		56	41.5	+2.0	17.19° S 171.98° W
	i		57	27		H = 10 36 51 s, h = 28 km,
	i		58	13.5		Mag = 5.6 (ISC).
	e		59	14		Dc = 148.22°, Az = 16.65°.
12	iP	12	44	28.7	–1.5	Northern Sumatra
	i		44	45.2		5.54° N 94.79° E
						H = 12 23 46 s, h = 131 km,
						Mag = 4.5 (ISC).
						Dc = 77.68°, Az = 95.49°.
12	ePKIKP	17	44	11	+0.7	Loyalty Islands Region
	e		44	53		22.82° S 170.74° E
	e		45	20		H = 17 24 34.2 s, h = 43 km,
						Mag = 4.9 (ISC).
						Dc = 147.13°, Az = 49.02°.
14	ePKIKP	05	47	04	+2.0	Eastern New Guinea Region
	e		48	36		5.46° S 147.05° E
						H = 05 28 36.4 s, h = 194 km,
						Mag = 5.6 (ISC).
						Dc = 119.87°, Az = 61.67°.
15	ePn	15	37	40		Local shock.
	e		37	44		
	ePg		37	47		
	e		37	54		
15	e	21	49	50		Near Coast of Central Chile
	e		50	15		28.78° S 71.19° W
	ePP		51	00	–3.0	H = 21 31 54.5 s, h = 35 km,
	e		52	14		Mag = 5.9 (ISC). M (MOS) = 6.3,
	e		53	44		Dc = 109.77°, Az = 248.82°.
17	eP	05	07	53	+0.1	North Atlantic Ridge
	e		08	02		28.51° N 43.83° W
	ePP		09	43	–6.0	H = 04 58 54 s, h = 9 km,
	e		11	05		Mag = 5.2 (ISC). M (MOS) = 5.4,
						Dc = 50.29°, Az = 270.02°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
19	–iP	12	19	17.3	+0.2	Near East Coast of Honshu, Japan
	iPcP		19	32.3	+7.0	36.47° N 141.17° E
	i		19	49		H = 12 07 00.4 s, h = 48 km,
	ePP		22	22	–5.0	Mag = 5.7 (ISC). M (MOS) = 5.8,
	e		23	26		mPV (BRA) = 6.1,
						Dc = 82.10°, Az = 42.39°.
						PV: 1.8 s 0.3 μm.
19	iPKIKP	17	49	02	+3.3	Loyalty Islands Region
	i		49	20		22.56° S 170.84° E
	i		49	35		H = 17 29 22.1 s, h = 37 km,
	i		49	40.9		Mag = 5.3 (ISC). M (MOS) = 6.3,
	e		50	22		Dc = 146.96°, Az = 48.62°.
	ePP		52	24	–5.0	
	e		53	29		
	Lm	18	04.5			
19	ePKIKP	18	09	02	+4.8	Loyalty Islands Region
	e		09	20		22.51° S 170.83° E
						H = 17 49 23 s, h = 54 km (ISC),
						Mag = 4.5 (USCGS).
						Dc = 146.91°, Az = 48.58°.
20	ePKIKP	02	31	06	+4.7	Tonga
	e		31	19		15.33° S 174.05° W
	e		31	28		H = 02 11 25.8 s, h = 33 km,
						Mag = 4.7 (ISC).
						Dc = 145.98°, Az = 19.49°.
20	eP	10	26	31	–1.1	Sea of Okhotsk
						51.06° N 151.42° E
						H = 10 15 43.3 s, h = 434 km,
						Mag = 4.8 (ISC).
						Dc = 73.67°, Az = 28.07°.
20	eP	11	01	06	+1.7	South of Honshu, Japan
	e		01	24		32.06° N 140.95° E
	i		02	43		H = 10 48 31.1 s, h = 59 km,
						Mag = 5.1 (ISC).
						Dc = 85.65°, Az = 45.01°.
21	eP	09	03	00	–2.3	North of Ascension Island
	e		03	13		0.07° N 16.99° W
	e		03	31		H = 08 53 23.0 s, h = 5.0 (ISC),
						Mag = 5.0 (ISC).
						Dc = 56.28°, Az = 222.38°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
21	–iP	17	07	47.5	+0.9	Norvegian Sea
	i		07	53.5		72.66° N 8.14° E
	iPP		08	17.5	–5.0	H = 17 02 25.8 s, h = 33 km,
	i		08	44.5		Mag = 5.4 (ISC). M (MOS) = 5,
	iS		12	00	+5.0	MLH (BRA) = 5.1, mPH (BRA) = 5.7,
	i		14	20.5		Dc = 24.91°, Az = 353.63°.
	Lm		16	30.5		LmH: 4 s 1 μm. PH: 3.5 s 0.7 μm.
21	eP	21	56	27	–1.7	North Atlantic Ridge
						48.10° N 27.78° W
						H = 21 50 25 s, h = 40 km,
						Mag = 4.8 (ISC).
						Dc = 29.64°, Az = 286.93°.
22	ePKIKP	15	39	04	+0.7	Loyalty Islands Region
	e		39	10		22.67° S 170.96° E
	e		39	37		H = 15 19 26.1 s, h = 34 km,
	e		40	28		Mag = 5.5 (ISC). M (MOS) = 6,
	ePP		42	19	–15.0	Dc = 144.86°, Az = 51.72°.
	e		43	25		
22	ePKIKP	17	00	17	+4.4	Loyalty Islands Region
						22.85° S 170.94° E
						H = 16 40 36.7 s, h = 46 km. (ISC).
						Mag = 4.5 (NOU).
						Dc = 145.00°, Az = 51.92°.
23	iP	08	44	02	–2.0	Eastern Gulf of Aden
	i		44	17		14.48° N 51.98° E
	i		44	26		H = 08 35 54.7 s, h = 28 km,
	iPP		45	50	+2.0	Mag = 5.9 (ISC). M (MOS) = 6.5,
	i		46	02		mPV (BRA) = 6.3,
	i		50	44		Dc = 44.23°, Az = 131.99°.
						PV: 2.1 s 0.4 μm.
23	+iP	13	48	35.2	–0.9	North of Svalbard
	iPP		49	37	–9.0	80.20° N 0.7° W
	iPPP		50	10	+6.0	H = 13 42 02.6 s, h = 16 km,
	i		51	26		Mag = 5.7 (ISC). M (MOS) = 6,
	iS		54	00	+8.0	MLH (BRA) = 5.8,
	i		56	16		Dc = 32.75°, Az = 353.35°.
	L	14	00	47		LmH: 10 s 10 μm.
	Lm		10.5			

Date	Phase	h	m	s	Res. (O–C)	Remarks
24	e	09	02	12		Czechoslovakia Explosion. 50.76° N 14.43° E H = 09 00 00 s (PRŮ). Dc = 4.07°, Az = 294.94°.
26	eP e Lm	00 01	20 21 00.5	39 09	+6.7	Ryukyu Islands 28.55° N 130.00° E H = 00 08 08.9 s, h = 25 km, Mag = 5.6 (ISC). M (MOS) = 6.1, Dc = 82.87°, Az = 54.76°.
26	ePn e e e	03	27 28 30 31	09 24 36 24	−0.2	Greece-Albania Border Region 39.40° N 20.49° E H = 03 24 57.4 s, h = 37 km, Mag = 4.9 (ISC). Dc = 9.10°, Az = 163.19°.
26	iPKIKP ipPKIKP e	12	15 15 16	32.7 46.7 18	+4.5 −10.0	Loyalty Islands Region 22.80° S 171.36° E H = 11 55 54.7 s, h = 67 km, Mag = 4.6 (ISC). Dc = 147.42°, Az = 51.31°.
27	iPKIKP ePKP2 e	08	38 38 39	27 49 11	−0.4 +6.0	Tonga 21.23° S 174.22° W H = 08 18 43.7 s, h = 39 km, Mag = 5.3 (ISC). M (MOS) = 5.5, Dc = 149.81°, Az = 21.61°.
27	eP	13	12	34	+7.5	Eastern Gulf of Aden 14.11° N 51.89° E H = 13 04 17 s, h = 36 km, Mag = 4.7 (ISC). Dc = 43.55°, Az = 132.37°.
28	eP epP e e	02	48 49 49 52	59 29 59 36	+5.5 +1.0	Kyushu, Japan 32.13° N 130.84° E H = 02 36 55.3 s, h = 137 km, Mag = 5.3 (ISC). M (MOS) = 5.3, Dc = 78.25°, Az = 54.22°.
30	−iPn i	07	25 25	35.8 43.3	−0.6	Albania 41.41° N 20.44° E H = 07 23 50.4 s, h = 21 km, Mag = 5.9 (ISC). Dc = 7.77°, Az = 178.92°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
30	iPn i i	07	44 44 44	34 43 49.3	−3.6	Albania 41.43° N 20.49° E H = 07 42 52 s, h = 21 km, Mag = 4.7 (ISC). Dc = 7.76°, Az = 178.63°.
30	iPn	07	55	37.5	+2,1	Albania 41.38° N 20.60° E H = 07 53 49.6 s, h = 39 km, Mag = 4.3 (ISC). Dc = 7.81°, Az = 178.03°.
30	iP i	11	25 25	05 21.5	−1.1	Central Mid-Atlantic Ridge 0.4° N 25.9° W H = 11 14 57.8 s, h = 33 km, Mag = 4.8 (ISC). Dc = 62.63°, Az = 234.29°.
30	ePKIKP	16	06	15	+0.5	West of Tonga 17.99° S 178.24° W H = 15 47 45.3 s, h = 646 km, Mag = 4.7 (ISC). Dc = 145.47°, Az = 32.17°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1–4						The apparatus was out of order.
4	iPg i iPn iSg iSn	08	54 55 55 55 55	59 04 07 16 20.5		Little Carpathians Aftershock of earthquake on December 3, 1967. Time relative. 48.7° N 17.5° E H = 08 54 48 s (BCIS). Dc = 0.6°, Az = 26.16°.
5	+iP	09	17	20	–0.5	Andreanof Islands 51.64° N 173.48° W H = 09 05 13.4 s, h = 39 km, Mag = 5.3 (ISC). Dc = 80.16°, Az = 80.16°.
6	iPKIKP iPKP2	05	22 22	27 36		West of Tonga Time relative. 21.26° S 178.75° W H = 05 03 40.9 s, h = 558 km, Mag = 5.0 (ISC). Dc = 150.28°, Az = 30.93°.
7	iPKIKP	10	00	43	–2.0	Tonga 16.77° S 174.00° W H = 09 41 11.8 s, h = 103 km, Mag = 5.1 (ISC). Dc = 147.39°, Az = 20.02°.
7	iPKIKP	10	08	44.4	+1.9	New Hebrides 14.61° S 167.21° E H = 09 49 37.1 s, h = 152 km, Mag = 5.2 (ISC). Dc = 138.42°, Az = 46.64°.
7	iPg	11	34	30.5		Local shock.
7	ePn i iPg iSn Lm	18	05 05 05 06 07.6	22 35 52 40	–0.7 0.0 –1.0 0.0	Albania 41.27° N 20.24° E H = 18 03 35 s, h = 32 km, Mag = 4.7 (ISC). Dc = 7.25°, Az = 160.93°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
9	iPn i iPg i iSn Lm	03	11 11 11 12 12 14.2	31 37 55 11.9 38	+4.3 +4.0 +1.0 +2.0	Adriatic Sea 42.00° N 16.41° E H = 03 09 56.0 s, h = 66 km, Mag = 4.6 (ISC). MLH (BRA) = 4.4, Dc = 6.19°, Az = 184.81°. LmH: 2.7 s 1.7 μm.
9	e	05	47	43		South of Fiji 22.28° S 179.26° W H = 05 28 37.4 s, h = 571 km,. Mag = 4.9 (ISC). Dc = 151.04°, Az = 32.61°.
9	iPKIKP e e e	08	13 14 14 15	57.7 08 16 04	+1.6	Tonga 15.23° S 173.16° W H = 07 54 20.4 s, h = 33 km, Mag = 4.9 (ISC). Dc = 146.08°, Az = 17.95°.
9	ePn	09	19	20	–6.8	Yugoslavia 45.3° N 14.6° E H = 09 18 32 s, h = 0 km (ISC). Dc = 3.34°, Az = 211.90°.
9	ePP e	11	12 12	31 55	–3.0	Santa Cruz Islands Region 10.88° S 164.21° E H = 10 50 46.9 s, h = 33 km, Mag = 5.5 (ISC). M (MOS) = 5.5, Dc = 133.74°, Az = 47.60°.
10	iP iPcP i i iPP	12	19 19 20 20 22	30.2 38 00 08 57	–0.1 +2.0 +5.0	Near Coast of Northern California 40.58° N 124.53° W H = 12 06 52.2 s, h = 10 km, Mag = 5.5 (ISC). M (MOS) = 5.6, Dc = 85.32°, Az = 331.68°.
10	+iP i iPP i i iS i eSS Lm	23	00 01 02 03 04 06 08 12 32.5	52.6 20 58 27 09 30 06 16	–2.1 –1.0 –1.0	India 17.54° N 73.84° E H = 22 51 23.3 s, h = 27 km, Mag = 5.9 (ISC). M (MOS) = 6.7, MLH (BRA) = 6.7, mPV (BRA) = 6.2, Dc = 55.05°, Az = 103.28°. LmH: 15 s 70 μm. PV: 1 s 0.2 μm.

Date	Phase	h	m	s	Res. (O–C)	Remarks
11	eP	19	56	55	–0.2	Eastern Gulf of Aden
	epP		57	14	–4.0	13.61° N 51.58° E
	e		57	19		H = 19 48 49 s, h = 85 km,
						Mag = 5.0 (ISC). M (MOS) = 5,
						Dc = 44.75°, Az = 128.57°.
11	–iP	22	38	29	–1.1	Eastern Gulf of Aden
	i		38	32		13.65° N 51.56° E
	ipP		38	47	+4.0	H = 22 30 21 s, h = 57 km,
	iPP		40	21.5		Mag = 5.4 (ISC). M (MOS) = 5.5,
	i		42	35		Dc = 44.70°, Az = 128.56°.
12	eP	03	31	12	–1.0	Carlsberg Ridge
	e		32	12		5.69° N 61.48° E
						H = 03 22 32.2 s, h = 33 km,
						Mag = 5.0 (ISC).
						Dc = 56.69°, Az = 123.60°.
12	iPKIKP	08	25	58	+3.1	Loyalty Islands Region
	iPKP2		26	07.8	+4.0	22.84° S 171.16° E
	i		26	29.7		H = 08 06 18 s, h = 41 km,
	i		27	08.2		Mag = 5.1 (ISC).
	i		27	23.2		Dc = 147.35°, Az = 48.44°.
13	eSg	10	43	58	+4.0	Yugoslavia
						45.88° N 14.82° E
						H = 10 42 28 s (LJU).
						Dc = 2.77°, Az = 215.17°.
13	iP	10	50	02.7	–0.9	Kurile Islands
	i		50	05.2		47.65° N 152.65° E
	i		50	18.8		H = 10 38 25.3 s, h = 142 km,
						Mag = 5.5 (ISC).
						Dc = 77.04°, Az = 29.07°.
13	iP	11	09	54.8	–0.1	Kurile Islands
						49.36° N 154.46° E
						H = 10 58 22.2 s, h = 144 km,
						Mag = 5.1 (ISC).
						Dc = 76.11°, Az = 27.15°.
16	eP	21	05	41	–1.0	Near East Coast of Kamchatka
	e		05	20		51.21° N 157.72° E
	e		06	16		H = 20 54 03.7 s, h = 69 km,
						Mag = 5.5 (ISC). mPV (BRA) = 5.8,
						Dc = 75.40°, Az = 24.36°.
						PV: 2 s 0.16 μm.

Date	Phase	h	m	s	Res. (O–C)	Remarks
17	–iP	00	32	52	+0.4	Afghanistan-USSR Border Region
	iPP		34	32.2	+2.0	36.51° N 71.41° E
						H = 00 25 15.8 s, h = 86 km,
						Mag = 5.2 (ISC). mPV (BRA) = 5.4,
						Dc = 41.00°, Az = 85.86°.
						PV: 2 s 0.1 μm.
18	e	11	03	08		Nepal
						29.46° N 81.71° E
						H = 10 51 36.4 s, h = 42 km,
						Mag = 5.0 (ISC).
						Dc = 52.13°, Az = 86.39°.
18	e	12	00	46		Weak near shock.
19	ePn	08	34	17	+0.4	Albania
	i		34	28	-	41.49° N 20.43° E
	ePg		34	47	–1.0	H = 08 32 32.3 s, h = 29 km,
	i		35	15		Mag = 4.9 (ISC). MLH (BRA) = 5.0,
	eSn		35	38	+1.5	Dc = 7.08°, Az = 159.31°.
	iSg		36	21	0.0	LmH: 8 s 16 μm.
	Lm		37.5			
20	iP	11	45	42.2	–2.5	Andaman Islands Region
	i		45	52.7		11.80° N 93.09° E
	ipP		46	03.2	+3.0	H = 11 34 25.9 s, h = 61 km,
	isP		46	12.2	+1.0	Mag = 5.4 (ISC). M (MOS) = 5.5,
	i		46	36.3		Dc = 71.96°, Az = 92.42°.
20	iP	11	45	42.2	–2.5	Andaman Islands Region
	i		45	52.7		11.80° N 93.09° E
	ipP		46	03	+3.0	H = 11 34 25.9 s, h = 61 km,
	isP		46	12.2	+1.0	Mag = 5.4 (ISC). M (MOS) = 5.5,
	i		46	36.3		Dc = 71.96°, Az = 92.42°.
21	ePn	00	11	15	–1.7	Yugoslavia
	e		11	32		42.16° N 20.62° E
	eSg		13	14	+3.0	H = 00 09 40 s, h = 26 km,
	e		14	29		Mag = 4.6 (ISC).
						Dc = 6.50°, Az = 156.26°.
21	e	02	38	22		Near Coast of Northern Chile
	e		39	18		21.89° S 70.07° W
	ePP		43	46	+3.0	H = 02 25 21 s, h = 20 km,
	e		43	55		Mag = 6.0 (ISC). MLH (BRA) = 7.7,
	Lm	03	30			Dc = 104.17°, Az = 253.08°.
						LmH: 18 s 230 μm.

Date	Phase	h	m	s	Res. (O–C)	Remarks
21	iP	16	24	17	–1.1	Kurile Islands
	i		24	19.6		49.15° N 156.15° E
	iPcP		24	25.4	–3.0	H = 16 12 28.6 s, h = 32 km,
	i		24	42.6		Mag = 4.9 (ISC).
						Dc = 76.80°, Az = 26.24°.
21	eP	23	54	30	–4.4	Andaman Islands Region
						11.77° N 93.09° E
						H = 23 43 13 s, h = 48 km,
						Mag = 5.0 (ISC).
						Dc = 71.98°, Az = 317.44°.
22	ePn	07	23	52	+3.2	Albania
	Lm		26.3			41.21° N 20.4° E
						H = 07 21 57.8 s, h = 0 km,
						M = 4.2 (ATH).
						Dc = 7.34°, Az = 160.16°.
22	ePKIKP	23	28	54	+0.4	Kermadec Islands
	iPKP2		29	29	–6.0	29.80° S 177.36° W
	e		30	21		H = 23 09 01.3 s, h = 42 km,
						Mag = 5.2 (ISC).
						Dc = 158.55°, Az = 36.42°.
23	ePKIKP	13	42	06	+1.0	New Britain Region
						5.20° S 151.88° E
						H = 13 23 16.2 s, h = 68 km,
						Mag = 5.4 (ISC). M (MOS) = 5.5,
						Dc = 122.44°, Az = 56.90°.
24	ePKIKP	02	43	54		West of Tonga
						21.08° S 177.86° W
						H = 02 24 58.4 s, h = 426 km,
						Mag = 5.0 (ISC).
						Dc = 150.41°, Az = 29.24°.
24	eP	08	45	10	–1.1	Sakhalin Island
						54.82° N 142.55° E
						H = 08 34 10.7 s, h = 3 km,
						Mag = 5.0 (ISC). M (MOS) = 5.6,
						Dc = 67.60°, Az = 30.66°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
24	+iP	20	14	19.2	–1.7	Leeward Islands
	i		14	23.7		17.42° N 61.19° W
	i		14	50		H = 20 03 13.8 s, h = 42 km,
	e		17	10		Mag = 6.1 (ISC). M (MOS) = 6.5,
	Lm	20	41.5			MLH (BRA) = 6.7, mPV (BRA) = 6.2,
						Dc = 69.47°, Az = 273.39°.
						LmH: 18 s 55 μm. PV: 1.5 s 0.3 μm.
24	+iP	21	43	40.5	–0.2	Leeward Islands
	i		43	43		17.61° N 61.26° W
	e		43	47		H = 21 32 30 s, h = 5 km,
	e		44	21		Mag = 5.9 (ISC). mPV (BRA) = 5.8,
						Dc = 69.38°, Az = 273.58°.
						PV: 1 s 0.25 μm.
25	ePKIKP	01	42	27	+2.3	New Ireland Region
	i		42	47.8		5.25° S 153.70° E
	i		43	10.3		H = 01 23 33.3 s, h = 55 km,
	e		44	10		Mag = 5.8 (ISC). MLH (BRA) = 7.5,
	Lm	02	38.5			Dc = 123.50°, Az = 55.14°.
						LmH: 20 s 150 μm.
25	e	10	59	15		Near Coast of Northern Chile
	ePP	11	00	04	+2.0	21.67° S 70.68° W
	e		00	10		H = 10 41 31.6 s, h = 48 km,
						Mag = 5.7 (ISC).
						Dc = 104.40°, Az = 253.66°.
26	eP	09	42	03	+0.5	Off Coast of Oregon
						44.54° N 129.88° W
						H = 09 29 38.5 s, h = 33 km,
						Mag = 5.1 (ISC). M (MOS) = 5,
						Dc = 83.23°, Az = 336.90°.
26	eP	10	53	05	–0.2	Off Coast of Oregon
						44.53° N 129.77° W
						H = 10 40 41.2 s, h = 33 km,
						Mag = 4.9 (ISC).
						Dc = 83.21°, Az = 336.82°.
26	ePKIKP	14	54	34	+11.2	South of Kermadec Islands
	ePKP2		55	04	–3.0	32.25° S 177.8° W
						H = 14 34 27.2 s, h = 33 km,
						Mag = 4.8 (ISC).
						Dc = 160.50°, Az = 40.77°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
27	ePKIKP	16	42	37	+2.6	Tonga Region
	ePKP2		42	56	+3.0	22.46° S 174.61° W
	e		43	14		H = 16 22 48.4 s, h = 33 km,
	e		43	50		Mag = 5.8 (ISC). M (MOS) = 6.2,
	e		44	12		Dc = 152.69°, Az = 24.17°.
	e		44	35		
28	eP	06	38	43	+2.2	Off Coast of Oregon
	e		39	13		44.21° N 128.99° W
						H = 06 26 16.7 s, h = 33 km,
						Mag = 5.3 (ISC).
						Dc = 83.30°, Az = 336.18°.
28	eP	07	14	05	+2.4	Off Coast of Oregon
	ePcP		14	16	+5.0	44.29° N 129.00° W
	e		14	28		H = 07 01 38.7 s, h = 33 km,
						Mag = 5.0 (ISC).
						Dc = 83.23°, Az = 336.21°.
26	iPg	11	15	07.2		Local weak shock.
	i		15	09.6		
	i		15	13.6		
	e		15	22		
28	e	17	06	41		Jan Mayen Island Region
						72.17° N 0.4° W
						H = 16 57 40.2 s, h = 33 km,
						Mag = 4.1 (ISC).
						Dc = 25.39°, Az = 347.52°.
28	eP	22	23	57	−1.9	Off Coast of Oregon
						44.32° N 128.90° W
						H = 22 11 35.3 s, h = 33 km,
						Mag = 4.9 (ISC).
						Dc = 83.17°, Az = 274.71°.
29	ePn	19	51	06	−2.3	Albania
	i		51	18.5		41.41° N 20.27° E
	i		51	24.5		H = 19 49 24.1 s, h = 46 km,
	i		51	35.9		Mag = 4.8 (ISC). MLH (BRA) = 4.7,
	i		52	02.3		Dc = 7.12°, Az = 160.43°,
	i		52	14		LmH: 2.7 s 2.7 μm.
	iSn		52	24.5	−3.0	
	i		52	32		
	Lm		53.6			

Date	Phase	h	m	s	Res. (O–C)	Remarks
29	ePKIKP	20	49	28	+9.1	Tonga Region
	ePKP2		49	40	0.0	22.85° S 175.08° W
						H = 20 29 32.3 s, h = 30 km,
						Mag = 5.3 (ISC). M (MOS) = 5.6,
						Dc = 152.93°, Az = 25.33°.
29	ePKIKP	22	42	58	+5.0	Tonga Region
	ePKP2		43	16		22.99° S 174.94° W
	e		43	22		H = 22 23 05.9 s, h = 33 km,
						Mag = 5.0 (ISC).
						Dc = 153.10°, Az = 25.17°.
29	ePn	22	56	46	+4.3	Albania
	e		56	53		41.44° N 20.10° E
	e		57	25		H = 22 54 59 s, h = 56 km,
						Mag = 4.3 (ISC).
						Dc = 7.06°, Az = 161.35°.
30	+iPn	04	20	33.6	−1.4	Northern Italy
	i		20	43	0.0	44.63° N 12.01° E
	iSn		21	28	−2.0	H = 04 19 20.5 s, h = 33 km,
	i		22	14		Mag = 5.2 (ISC). M (MOS) = 5.5,
	Lm		22.6			MLH (BRA) = 5.5,
						Dc = 4.99°, Az = 226.76°.
						LmH: 3 s 42 μm.
30	ePn	12	20	37	−4.4	Adriatic Sea
	e		20	54	+1.0	41.3° N 18.9° E
	ePg		21	05	−1.0	H = 12 18 55 s, h = 0 km (ISC).
	e		21	29		Dc = 6.99°, Az = 168.81°.
30	ePn	21	29	24	+5.3	Greece
	e		29	32		40.66° N 21.47° E
	e		29	38		H = 21 27 20.3 s, h = 34 km,
	eSg		31	42	0.0	Mag = 4.6 (ISC).
	Lm		32.2			Dc = 8.13°, Az = 155.83°.
30	ePKIKP	15	24	37	+5.0	Solomon Islands
	e		24	47		7.10° S 154.77° E
	e		27	05		H = 15 05 36.7 s, h = 49 km,
						Mag = 5.2 (ISC).
						Dc = 125.61°, Az = 55.30°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
31	ePn	20	04	31	+1.5	Albania
	e		04	47	+4.0	41.3° N 20.1° E
	eSn		05	41	–2.0	H = 20 02 43 s, h = 33 km,
						Mag = 4.5 (ISC).
						Dc = 7.19°, Az = 161.67°.

Earthquake Observations at the Station Šrobárová

Date	Phase	h	m	s	Res. (O–C)	Remarks
1–31						The apparatus was not operational.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1–14						The apparatus was not operational.
15	iP	01	52	55.5	–0.2	Western Persia 34.55° N 47.59° E H = 01 47 30.3 s, h = 51 km, Mag = 4.9 (ISC). Dc = 25.54°, Az = 110.55°.
15	iP ipP	06	08 08	12 27	+0.2 +1.0	Burma Dc = 65.69°, Az = 86.14°.
15	ePg iSg	12	12 12	32 40		Near Earthquake D ≒ 0.7°.
15	ePn iPcP epP ePP	16	23 23 25 27	39 41.5 52 42	+0.3 +1.5 +2.3 –3.0	Peru-Brazil Border Region Dc = 96.40°, Az = 263.65°.
17	iPKIKP iPKP2	10	30 31	44 06	+2.8 +3.7	Tonga Region Dc = 153.74°, Az = 28.79°.
17	iPg	11	47	28		Near Earthquake
19	eP i	22	28 28	13 25	+0.5	South of Java Dc = 99.86°, Az = 92.68°.
20	iP	15	26	51	+0.5	Eastern Kashmir Dc = 44.50°, Az = 87.05°.
22	ePKIKP	18	46	09	+0.7	New Hebrides Dc = 143.12°, Az = 50.25°.
23	iP	19	02	45	+0.5	Southern Nevada Nuclear explosion "AGILE". 37.13° N 116.07° W H = 18 50 00 s (USAEC), Mag = 5.6 (ISC). Dc = 86.15°, Az = 325.08°.
23	iP	22	39	59	–1.0	Yugoslavia Dc = 4.28°, Az = 203.03°.
24	eP	15	22	11	–0.9	Yugoslavia Dc = 4.02°, Az = 184.27°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
26	iP iPP	04	05 06	25 53	+1.5 –0.2	Eastern Kazakhstan Underground explosion (UPP). Dc = 38.54°, Az = 64.05°.
27	ePn	21	02	20	–1.3	Roumania Dc = 6.51°, Az = 113.91°.
28	eP	09	49	55	+1.7	South of Honshu, Japan Dc = 85.16°, Az = 44.98°.
28	eP	14	24	18	–4.5	Southern Greece 37.53° N 21.18° E H = 14 21 51.3 s, h = 46 km, Mag = 4.7 (ISC). Dc = 10.49°, Az = 167.39°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	eP	10	19	49	+4.9	Southern Persia Dc = 35.76°, Az = 109.44°.
2	eP	23	15	14	–0.3	Near East Coast of Kamchatka Dc = 73.92°, Az = 22.27°.
3	iPg iSg	11	28 28	32.4 36.4		Slovakia Probably explosion. D ≐ 33 km/
4	eP iS Lm	18	00 02 05	28 18	–0.2 +1.0	Aegean Sea Dc = 9.70°, Az = 149.68°.
5	ePn eSg	10	22 23	47 07		Near Earthquake? D ≐ 160 km.
5	eP eS	17	24 25	24 27	–0.8 –8.7	Roumania Dc = 6.15°, Az = 105.99°.
5	eP	18	55	54	+6.0	Roumania 45.32° N 26.1° E H = 18 54 21.1 s, h = 59 km, Mag = 4.1 (USCGS). Dc = 5.92°, Az = 112.05°.
6	iP	11	40	49	+1.1	Off West Coast of Northern Sumatra Dc = 78.79°, Az = 96.72°.
7	iP eS Lm	08	01 02 03	42.6 29	+0.8 –1.7	Yugoslavia Dc = 4.34°, Az = 188.53°.
9	iPg	19	36	21		Small local shock.
9	iPg	19	41	45		Small local shock.
9	iPg	20	02	43		Small local shock.
10	iPg	08	33	12		Small local shock.
10	iPg	19	00	21		Small local shock.
10	iPg	20	51	32		Small local shock.

Date	Phase	h	m	s	Res. (O–C)	Remarks
11	eP	14	58	05	+1.7	Veracruz State, Mexico Dc = 91.02°, Az = 300.35°.
11	e	15	57	20		
13	iP	19	28	52.1	+1.7	Red Sea Dc = 32.60°, Az = 142.36°.
13	eP epP	07	08 08	16 26	+1.3 +5.3	India-China Border Region Dc = 60.43°, Az = 79.31°.
14	e	08	07	10		
15	iPn iSg	03	40 41	35 48	+2.5 0.0	Yugoslavia 44° N 17.50° E H = 03 39.5 s (BCIS). Dc = 3.86°, Az = 188.76°.
16	eP	03	18	32	+0.1	Red Sea 19.52° N 38.72° E H = 03 12 03 s, h = 59 km, Mag = 5.0 (ISC). Dc = 32.73°, Az = 142.54°.
16	ePKP2	12	29	14	+1.2	Loyalty Islands Region Dc = 146.05°, Az = 50.65°.
18	eP	18	01	53	–4.7	Near East Coast of Honshu, Japan 36.30° N 140.01° E H = 17 49 49.0 s, h = 85 km, Mag = 5.0 (ISC). Dc = 81.41°, Az = 44.04°.
19	ePKIKP ePP	01	29 29	11 44	+0.8 0.0	Banda Sea Dc = 109.37°, Az = 78.34°.
19	e	16	49	54		
20	iP	13	43	30	–0.6	Kurile Islands Dc = 78.38°, Az = 31.63°.
20	eP	13	52	49	–0.9	Kurile Islands Dc = 78.49°, Az = 31.53°.
20	iP	14	04	04	–0.2	Kurile Islands Dc = 78.55°, Az = 31.56°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
20	eP	17	23	34	+0.4	Kurile Islands Dc = 78.53°, Az = 31.58°.
20	iPKIKP	19	27	03	+1.5	Loyalty Islands Region Dc = 145.96°, Az = 50.72°.
21	ePKP2	11	44	56	−1.0	Tonga Region Dc = 153.95°, Az = 28.69°.
22	ePg eSg	19	16 17	10 29	−3.6 +11.4	Northern Italy Dc = 4.21°, Az = 251.52°.
23	ePKP2	00	55	28	+3.4	West of Tonga Dc = 146.63°, Az = 27.47°.
.24	ipP iPP	09	15 16	00 56	0.0 −1.7	Java Dc = 97.11°, Az = 91.08°.
24	ePn iSg	117	40 42	13 22.6	+4.9 +0.4	Switzerland Dc = 7.52°, Az = 263.96°.
25	iP iPcP	22 23	59 00	59 09	+2.0 +1.1	Kurile Islands Dc = 78.73°, Az = 31.74°.
27	eP	09	09	18	+0.4	Northeastern China Dc = 67.53°, Az = 57.09°.
27	eP	20	00	07	−2.7	Red Sea Dc = 32.21°, Az = 142.58°.
28	eP	00	07	13	+10.5	Aegean Sea 38.44° N 25.42° E H = 00 04 28 s, h = 29 km, Mag = 4.6 (ISC). Dc = 10.71°, Az = 148.47°.
28	eSg	15	54	41	−1.0	Belgium Dc = 9.61°, Az = 291.71°.
28	eP	19	45	06	+2.7	Luzon, Philippine Islands Dc = 86.70°, Az = 68.34°.
30	iPP	02	26	13	−2.9	South of Bali Island Dc = 102.88°, Az = 92.38°.
30	ePKP2	23	24	27	+0.7	West of Tonga Dc = 146.75°, Az = 27.49°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
31	iP	02	24	28	+0.6	Fox Islands, Aleutian Islands Dc = 80.25°, Az = 5.01°.
31	eP	03	24	51	+0.4	Red Sea Dc = 32.15°, Az = 142.61°.
31	eiPKIKP	20	24	31	+1.5	New Hebrides Dc = 138.84°, Az = 48.63°.
31	e	23	24	12		Austria Dc = 1.57°, Az = 266.70°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	eP	08	00	23	–1.7	Kurile Islands Dc = 78.48°, Az = 31.26°.
1	iP iPP i	12	35 35 36	34 46 41	+1.3 +1.0	Kurile Islands Dc = 78.41°, Az = 31.46°.
1	eP	12	47	08	–6.8	Iceland Dc = 25.82°, Az = 321.53°.
1	iP	14	12	33	–0.3	Kurile Islands Dc = 78.42°, Az = 31.35°.
1	eP	17	33	08	+0.4	Kurile Islands Dc = 78.56°, Az = 31.30°.
2	iPg	10	56	18		Explosion?
2	e	13	05	27		
3	ePKP2	13	18	31	–7.1	Tonga Dc = 151.01°, Az = 23.49°.
3	ePn iSb iSg	16	37 39 39	47 19 39	–3.3 –2.6 0.0	Northern Italy Dc = 6.05°, Az = 243.69°.
4	ePn	03	49	34	+1.2	Turkey 40.32° N 26.20° E H = 03 47 17 s, h = 32 km, Mag = 4.5 (ISC). Dc = 9.39°, Az = 140.00°.
4	iP iPcP	04	06 06	25 39	–0.2 +4.2	Kurile Islands Region Dc = 78.73°, Az = 31.22°.
4	eP eS	17	02 04	12 29	+5.1 +3.0	Crete Dc = 12.82°, Az = 160.38°.
4	iP	18	07	34.6	+1.6	Roumania Dc = 5.89°, Az = 107.89°.
5	eP ePP	02	47 51	46 44	+0.2 –7.8	Marianas Region Dc = 98.48°, Az = 47.68°.
6	eP	13	03	32	+1.0	Southern Persia Dc = 30.80°, Az = 113.65°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
6	eSn	13	48	41	–2.4	Yugoslavia 42.75° N 19.0° E H = 13 46 08 s (BCIS). Dc = 5.09°, Az = 174.29°.
6	eP	23	44	27	+1.6	Near East Coast of Honshu, Japan Dc = 82.17°, Az = 43.88°.
7	eP	17	11	10	+6.9	Turkey Dc = 16.71°, Az = 121.88°.
7	eP	18	37	26	+0.7	Turkey Dc = 16.79°, Az = 121.92°.
7	eP	19	50	25	+1.1	Northwest of Kurile Islands 46.74° N 146.07° E H = 19 39 16.3 s, h = 342 km, Mag = 4.9 (ISC). Dc = 75.38°, Az = 34.19°.
8	iPg	11	28	36.5		Explosion.
9	eiPKIKP	09	16	01	+2.5	Solomon Islands Dc = 125.93°, Az = 55.75°.
10	ePKP2	00	17	07	–2.4	Tonga Region Dc = 148.56°, Az = 20.90°.
10	ePKIKP	15	21	43	+1.6	Solomon Islands Dc = 125.86°, Az = 55.81°.
10	iP	20	09	01	–0.2	Alaska Peninsula Dc = 73.87°, Az = 355.95°.
10	ePKIKP	22	08	19	+1.1	Solomon Islands Dc = 125.93°, Az = 55.75°.
11	eP	12	53	58	+0.2	Leeward Islands 18.96° N 62.59° W H = 12 42 42 s, h = 4 km, Mag = 5.1 (ISC). Dc = 70.16°, Az = 276.54°.
12	e	19	45	44		Northern Sumatra Dc = 78.36°, Az = 95.05°.
13	iPg	16	35	18		Probably explosion.

Date	Phase	h	m	s	Res. (O–C)	Remarks
13	iPg	17	07	59		Probably explosion.
13	iP	20	06	05	+1.7	Ryukyu Islands Dc = 82.60°, Az = 57.27°.
13	iP	20	13	05	+2.7	Guerrero, Mexico 18.58° N 100.08° W H = 19 59 52.9 s, h = 87 km, Mag = 5.5 (ISC). Dc = 94.02°, Az = 303.23°.
15	iPn iPg iSg Lm	02	09 09 10 10	02 17 08 25	–1.3 –1.0 +0.2	Yugoslavia Dc = 3.81°, Az = 204.40°.
15	iP	23	47	47	+4.0	Hokkaido, Japan Region 41.95° N 142.34° E H = 23 35 51.9 s, h = 70 km, Mag = 4.8 (ISC). Dc = 77.84°, Az = 39.23°.
16	iPKIKP	07	37	51	+3.7	South of Fiji Dc = 146.25°, Az = 40.41°.
16	iP	10	22	7.5	+1.4	Kurile Islands Dc = 78.29°, Az = 29.94°.
10	iPg	10	41	57		Explosion?
22	iP	13	19	36	+1.0	Northern Sumatra Dc = 78.22°, Az = 95.41°.
23	iP eSS	09	34 37	12 41	0.0 +2.5	Algeria Dc = 16.49°, Az = 231.08°.
24	iP epP	08	58 58	51 56	–4.0 –4.0	Tadzhikistan Dc = 40.55°, Az = 84.41°.
24	eP	11	57	31	–0.1	Mid-Indian Rise Dc = 84.95°, Az = 134.20°.
24	iPg	16	16	03		Explosion?
25	iP	10	39	07	+0.6	Northern Sinkiang Province, China Dc = 46.89°, Az = 68.69°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
25	iPg	15	57	08		Explosion?
25	iPg	17	29	00		Explosion?
26	iPg	10	17	17		Explosion?
26	iPg	10	50	05		Explosion?
26	iPg	11	12	51		Explosion?
26	iPg	11	42	59		Explosion?
26	iPg	12	37	50		Explosion?
26	iPg	13	06	48		Explosion?
26	iPg	13	19	09		Explosion?
26	iPg	14	46	59		Explosion?
26	iPg	15	25	54		Explosion?
27	iPg	11	58	06		Explosion?
27	iPg	12	32	41		Explosion?
27	iPg	14	27	18		Explosion?
27	iPg	14	49	01		Explosion?
27	eP	23	23	31	+0.2	Southern Sinkiang Province, China Dc = 44.48°, Az = 73.06°.
28	iPg iSg	09	03 03	21 23		Explosion.
28	iPg iSg	10	00 00	18 19.5		Explosion.
29	eP	12	37	41	+3.3	Andreanof Islands, Aleutian Islands Dc = 80.09°, Az = 10.43°.

Date	Phase	h	m	s	Res. O–C	Remarks
3	iP eSn	18	43 45	53 22	+1.3 –12.8	Greece 39.53° N 21.34° E H = 18 41 47.2 s, h = 37 km. Mag = 4.8 (ISC). Dc = 8.57°, Az = 164.09°.
4	iPg iSg	10	23 23	47 49		Explosion. D ≐ 20 km.
4	ePg iSg	11	15 15	22 24		Explosion. D ≐ 20 km.
4	iPg iSg	11	52 52	09 11		Explosion. D ≐ 20 km.
4	eP	13	33	11	+0.4	Greece 39.63° N 21.26° E H = 13 31 07.8 s, h = 39 km. Mag = 4.7 (ISC). Dc = 8.45°, Az = 164.33°.
4	iPg iSg	13	42 42	12 13.5		Explosion. D ≐ 20 km.
4	iPg iSg	15	52 52	07 08		Explosion. D ≐ 15 km.
5	eP	17	51	27	+0.1	Java 7.98° S 107.30° E H = 17 38 07.3 s, h = 47 km, Mag = 5.2 (ISC). Dc = 95.17°, Az = 96.10°.
6	eP	20	00	17	+1.9	Hokkaido, Japan Region 42.93° N 139.29° E H = 19 48 31.7 s, h = 34 km, Mag = 4.9 (ISC). Dc = 75.73°, Az = 40.52°.
8	eP	18	55	17	+1.9	Hindu Kush Region 36.49° N 70.14° E H = 18 48 05.3 s, h = 216 km, Mag = 4.8 (ISC). Dc = 39.37°, Az = 87.18°.
9	eP	08	02	51	+2.1	Greece Dc = 8.39°, Az = 163.52°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
9	eP	21	43	36	–0.7	Philippine Islands Region 5.15° N 127.51° E H = 21 30 07.6 s, h = 110 km, Mag = 5.4 (ISC). Dc = 98.91°, Az = 72.20°.
11	eP iPP	14	58 00	42 20	+3.1 +6.0	Tadzhikistan-Sinkiang Border Region Dc = 40.28°, Az = 81.07°.
12	eP	17	55	18	+5.7	Northern Italy 44.76° N 10.37° E H = 17 53 24.7 s, h = 39 km, Mag = 4.2 (ISC). Dc = 6.29°, Az = 243.90°.
15	eP	08	16	25	+0.5	Crete 34.53° N 26.64° E H = 08 12 57.9 s, h = 35 km, Mag = 4.9 (ISC). Dc = 14.67°, Az = 337°.
15	ePg	10	05	48	+11.3	Central Italy 43.7° N 11.0° E H = 10 03 25 s, h = 0 km, Mag = 4.4 (ISC). Dc = 6.56°, Az = 233.88°.
16	ePKIKP	16	34	01	+1.8	Tonga Dc = 146.14°, Az = 20.45°.
16	iP	19	37	34	+1.3	South of Honshu, Japan Dc = 85.13°, Az = 45.24°.
16	ePn	21	17	49	–4.6	Yugoslavia Dc = 5.11°, Az = 163.38°.
17	eP.	17	57	11	+1.1	Red Sea Dc = 32.59°, Az = 142.43°.
18	iP	04	18	55	–2.3	Hokkaido, Japan Region 41.88° N 144.95° E H = 04 06 50 s, h = 9 km, Mag = 5.1 (ISC). Dc = 78.99°, Az = 37.62°.

Dade	Phase	h	m	s	Res. (O–C)	Remarks
18	iP	11	34	33	+0.6	Hokkaido, Japan Region Dc = 78.93°, Az = 37.66°.
18	eP	14	12	58	–1.3	Hokkaido, Japan Region 41.91° N 144.92° E H = 14 00 52 s, h = 8 km, Mag = 5.0 (ISC). Dc = 78.95°, Az = 37.63°.
18	iP	23	51	27	+0.7	Kyushu Japan Dc = 81.08°, Az = 53.45°.
19	eP	15	59	53	+0.2	Ethiopia Dc = 37.73°, Az = 143.92°.
20	iP	15	12	44	–0.1	Southern Nevada Dc = 86.12°, Az = 325.08°.
21	e	10	18	44		Near Earthquake?
21	iP ipP	18	57 58	34 18	–0.3 –4.7	Southern Sumatra Dc = 86.05°, Az = 95.77°.
23	iP	01	34	24	+1.2	Kurile Islands Region Dc = 78.64°, Az = 32.76°.
23	iP	02	04	41	0.0	Kurile Islands Region Dc = 78.70°, Az = 32.74°.
23	iP	14	12	44	+0.2	Southern Nevada Nuclear explosion "SCOTCH". Dc = 86.13°, Az = 325.34°.
26	iP iS	17	34 35	27 46	0.0 +13.9	Roumania 45.43° N 26.17° E H = 17 33 00.6 s, h = 163 (ISC). Dc = 5.91°, Az = 110.88°.
27	eP	01	58	40	+0.3	Algeria Dc = 18.33°, Az = 235.49°.
27	iP	17	35	01	+1.1	Rat Islands, Aleutian Islands Dc = 78.90°, Az = 13.83°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
27	iP iPP	19	14 15	01 52	+1.3 +1.9	Kashmir-Sinkiang Border Region Dc = 44.65°, Az = 82.64°.
29	ePKIKP	11	29	14	+3.4	West of Tonga Dc = 149.64°, Az = 27.76°.
29	i	21	13	37	+1.8	Hokkaido, Japan Region Dc = 78.14°, Az = 36.34°.
30	iPg	15	41	04.5		Probably explosion.
30	iPg	16	21	22		Probably explosion.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	iP	03	48	10	+1.9	Fox Islands, Aleutian Islands Dc = 78.91°, Az = 2.40°.
3	eP i	09	20 20	31 39	+1.7	Kodiak Island Region Dc = 73.86°, Az = 354.33°.
4	iP	06	35	26	+1.7	Off East Coast of Kamchatka 51.46° N 159.29° E H = 06 34 26 s, h = 29 km, Mag = 4.5 (ISC). Dc = 75.60°, Az = 24.00°.
5	iP ipP	16	50 50	20 32	+1.4 −0.6	Off East Coast of Kamchatka Dc = 75.51°, Az = 24.05°.
7	iPn iPb iSg	16	20 20 21	09 15 00	−2.9 −0.4 +4.4	Austria Dc = 2.71°, Az = 272.90°.
8	iPKIKP	13	41	42	+1.3	Loyalty Islands Region Dc = 145.33°, Az = 50.38°.
12	iP	18	14	57	+0.1	Greece Dc = 9.01°, Az = 165.14°.
12	iP	21	30	33	+0.5	Southern Sumatra Dc = 86.99°, Az = 97.77°.
12	iP iPcP	23	34 34	38 45	+0.8 −1.6	Kurile Islands Dc = 77.56°, Az = 28.82°.
13	eP	01	22	50	+0.8	Southern Sumatra Dc = 87.06°, Az = 97.83°.
13	ePn iSg	17	40 41	34 23	+3.4 +12.4	Austria Dc = 2.50°, Az = 273.36°.
13	eP	23	14	28	+3.9	Eastern Caucasus Dc = 19.94°, Az = 97.07°.
14	eP	08	17	51	+0.6	Kurile Islands Dc = 77.60°, Az = 28.72°.
14	iP	08	24	56	+1.5	Kurile Islands Dc = 77.70°, Az = 28.73°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
15	iP	18	52	21	0.0	Central Mid-Atlantic Ridge Dc = 62.52°, Az = 252.24°.
16	ePn eSn	00	20 21	56 07	+0.7 −1.0	Czechoslovakia Dc = 0.80°, Az = 317.42°.
16	ePKP	20	31	56		Tonga 19.44° S 175.18° W H = 20 12 19 s, h = 129 km, Mag = 4.8 (ISC). Dc = 149.64°, Az = 25.83°.
17	eP	15	44	45	+10.8	Southern Italy 41.7° N 15.9° E H = 15 43 01 s, h = 51 km, Mag = 4.3 (ISC). Dc = 6.35°, Az = 196.57°.
17	iPg	17	45	56	+1.0	Czechoslovakia Dc = 0.62°, Az = 309.19°.
18	ePn	09	57	27	−0.3	Yugoslavia 45.9° N 15.4° E H = 09 56 40 s, h = 0 km (ISC). Dc = 2.82°, Az = 228.32°.
18	iPn	21	48	02	+0.4	Czechoslovakia Dc = 0.78°, Az = 308.82°.
19	iPn	00	23	17	0.0	Czechoslovakia Dc = 0.73°, Az = 302.58°.
19	iP	14	41	43	+1.0	Red Sea Dc = 31.45°, Az = 142.51°.
19	iP	17	19	52	+0.8	Fox Islands, Aleutian Islands Dc = 79.71°, Az = 3.22°.
20	iP	07	50	53	−0.8	Fox Islands, Aleutian Islands Dc = 79.67°, Az = 3.31°.
21	eP	18	15	44	−0.5	Central Alaska Dc = 67.08°, Az = 353.53°.
21	eP	18	24	01	+1.6	Central Alaska Dc = 67.29°, Az = 353.52°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
21	eP	18	35	44	–0.8	Central Alaska Dc = 67.22°, Az = 353.55°.
23	ePKIKP	00	45	00	+3.1	Samoa Region Dc = 146.33°, Az = 18.44°.
23	ePKIKP	01	01	49	–0.4	Samoa Region Dc = 146.32°, Az = 18.33°.
23	eP	10	10	04	+3.0	Turkey Dc = 12.98°, Az = 116.79°.
23	ePKP2	12	07	37	+11.8	Balleny Islands Region 62.5° S 155.0° E H = 11 47 30.0 s, h = 33 km, Mag = 5.3 (USCGS). Dc = 151.88°, Az = 137.50°.
23	iPKIKP	14	57	19	+5.9	West of Tonga Dc = 150.07°, Az = 34.40°.
25	ePP	23	36	07	–2.4	South of Marianas Dc = 101.82°, Az = 56.39°.
28	iP	01	22	00	+0.3	Kurile Islands Dc = 78.06°, Az = 31.35°.
28	ePKP2	14	54	41	+7.5	Off West Coast of South Island, N. Z. 46.96° S 165.77° E H = 14 34 04.7 s, h = 37 km, Mag = 5.5 (ISC). Dc = 158.03°, Az = 99.94°.
29	iP	03	04	24	+1.0	Eastern Kazakhstan Dc = 38.49°, Az = 63.95°.
29	eP	08	27	13	+0.8	Turkey-USSR Border Region Dc = 19.19°, Az = 99.41°.
29	ePKP2	09	45	38	+5.7	Samoa Region Dc = 146.49°, Az = 19.67°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
29	ePP	16	55	07	+5.2	Banda Sea 7.29° S 128.59° E H = 16 36 16.8 s, h = 130 km, Mag = 5.4 (ISC). Dc = 108.96°, Az = 79.71°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	ePn	02	04	29	–6.7	Yugoslavia Dc = 4.16°, Az = 167.04°.
1	iPn iPg iSg	02	56 56 57	31 48 40	–2.5 –0.8 +1.0	Yugoslavia Dc = 3.89°, Az = 170.84°.
1	iP ipP	23	22 22	06 15	+0.1 –1.0	South of Alaska Dc = 78.07°, Az = 357.76°.
2	ePn eSg	00	32 33	37 53	–3.2 +3.8	Yugoslavia Dc = 3.96°, Az = 170.68°.
2	ePn ePg eSn eSg	01	15 15 16 16	07 30 09 18	–3.5 +4.2 +1.2 +1.0	Yugoslavia Dc = 3.85°, Az = 171.52°.
2	iPn ePg eSb	01	18 18 19	15 38 17	–1.9 +5.2 +1.3	Yugoslavia 43.9° N 19.2° E H = 01 17 13 s (BCIS), M = 4.6 (BEO). Dc = 3.96°, Az = 170.68°.
2	ePn eSg	07	11 12	04 15	–5.9 –3.5	Yugoslavia Dc = 3.96°, Az = 170.68°.
2	eP	07	15	27	+0.2	Nicobar Islands Region Dc = 73.75°, Az = 95.08°.
2	iP	07	50	48	+1.7	South of Honshu, Japan Dc = 84.96°, Az = 44.81°.
2	iP	08	40	53	–0.7	Eastern Kashmir 33.21° N 75.71° E H = 08 32 39.7 s, h = 42 km, Mag = 4.8 (ISC). Dc = 45.00°, Az = 87.26°.
2	e	11	27	50		
2	eP	16	28	25	+0.5	Off East Coast of Honshu, Japan Dc = 84.96°, Az = 44.67°.
3	eP	21	59	09	–3.1	Ascension Island Region Dc = 61.77°, Az = 216.30°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
4	iP ePcP ipP	23	53 53 54	51 57 32	+1.5 –3.0 +2.5	Hokkaido, Japan Region Dc = 77.00°, Az = 38.41°.
5	eP	00	55	56	–2.9	Southern Greece Dc = 11.33°, Az = 166.85°.
6	eP	12	03	02		
6	iP	13	54	33	–1.6	Fox Islands, Aleutian Islands Dc = 79.83°, Az = 3.99°.
6	eP	19	06	42	–1.5	Eastern Gulf of Aden 13.32° N 50.79° E H = 18 58 40 s, h = 46 km, Mag = 4.9 (ISC). Dc = 43.73°, Az = 130.87°.
6	iP	19	30	07	–2.4	Central Mid-Atlantic Ridge Dc = 61.99°, Az = 249.81°.
8	ePKIKP ipPP	01	18 21	06 30	+4.7	New Hebrides Dc = 138.85°, Az = 48.68°.
8	ePn	09	55	19	+2.9	Yugoslavia Dc = 3.05°, Az = 197.76°.
8	ePn	19	22	14	–0.3	Yugoslavia 46.75° N 16.0° E H = 19 21.6 s (BCIS). Dc = 2.23°, Az = 225.73°.
11	iPn i! iPg iSg	12	42 42 42 43	11.7 13.7 24 11	–0.9 –0.8 +0.8	Yugoslavia Dc = 3.34°, Az = 194.81°.
12	e	21	13	43		South of Panama Dc = 93.16°, Az = 282.00°.
12	ePKIKP	21	34	26	+3.2	Fiji Dc = 144.35°, Az = 34.36°. Traces.

Date	Phase	h	m	s	Res. (O–C)	Remarks
13	eP	02	14	37	0.0	Algeria Dc = 18.43°, Az = 234.79°.
13	iPKIKP	10	23	47	–2.2	New Hebrides Dc = 143.99°, Az = 50.79°.
13	eP	14	40	42	–0.8	Albania Dc = 7.22°, Az = 71.76°.
14	eP	03	18	01	+1.0	Red Sea Dc = 32.72°, Az = 142.46°.
14	eP	18	47	39	+2.7	Mid-Indian Rise 16.35° S 66.80° E H = 18 35 44 s, h = 22 km, Mag = 5.0 (ISC). Dc = 77.16°, Az = 132.49°.
16	e	13	52	21		Western New Guinea Region Dc = 106.91°, Az = 72.10°. Traces.
16	eSg	14	09	10		France Dc = 8.88°, Az = 268.90°.
16	iPn	19	02	49	–9.5	Yugoslavia Dc = 2.65°, Az = 227.79°.
17	iPg	11	02	00		Local shock.
19	eP	09	09	20	+1.0	Turkey Dc = 12.40°, Az = 137.69°.
19	ePKIKP	13	00	18	+5.3	West of Tonga Dc = 149.66°, Az = 31.71°.
20	eP	15	50	16	+0.4	Western Caroline Islands Dc = 101.53°, Az = 64.94°.
20	ePn	16	21	05	+4.2	Yugoslavia Dc = 3.45°, Az = 229.22°.
20	eiPn	19	05	15	–0.4	Albania Dc = 7.18°, Az = 170.43°.
22	iP iSSS	16 17	59 03	41 23	–0.7 –2.0	Turkey Dc = 11.38°, Az = 124.31°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
23	ePKP2	14	08	24	+5.0	Macquarie Island Region Dc = 154.13°, Az = 123.93°.
23	ePKIKP	19	03	57	+5.7	Tonga Dc = 150.17°, Az = 26.36°.
25	e	08	40	11		Greece-Bulgaria Border Region Dc = 7.58°, Az = 138.79°. Traces.
26	ePKIKP	08	34	34	+2.7	Loyalty Islands Region Dc = 145.62°, Az = 51.26°.
26	iP	18	57	11	+2.0	Turkey Dc = 17.93°, Az = 109.35°.
27	eP	11	48	24	–0.6	Atlantic-Indian Ridge Dc = 88.40°, Az = 151.51°.
28	ePKIKP	14	44	37	+8.0	West of Tonga 20.65° S 178.48° W H = 14 25 52.3 s, h = 578 km, Mag = 4.9 (ISC). Dc = 149.69°, Az = 32.42°.
29	iP ipP	10	36 37	47 31	–0.6 +4.0	Northern Colombia Dc = 85.93°, Az = 275.62°.
30	eP	00	12	06	–0.4	Near Coast of Venezuela Dc = 79.31°, Az = 274.08°.
30	eP	01	33	46	–1.4	Turkey Dc = 11.25°, Az = 124.58°.
30	ePKIKP	11	09	16	+4.2	West of Macquarie Island Dc = 147.97°, Az = 124.58°.
30	ePKIKP	13	54	14	+5.7	New Ireland Region Dc = 122.90°, Az = 326°.
30	iPKP2	17	43	24	–3.7	West of Tonga Dc = 147.02°, Az = 30.85°.
31	eSn	07	16	27	+4.7	Turkey Dc = 9.83°, Az = 133.81°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	ePKP2	09	25	56	–6.4	Macquarie Island Region Dc = 154.57°, Az = 132.75°.
2	iP	00	56	22	+0.6	Kurile Islands Dc = 77.46°, Az = 35.12°.
2	eP epP	11	12 12	16 23	+0.5 –2.0	Jan Mayen Island Region Dc = 26.55°, Az = 341.13°.
2	eP ipP	14	11 12	56 00	+1.2 –2.0	Jan Mayen Island Region Dc = 26.65°, Az = 341.14°.
3	ePKIKP	00	28	08	+11.3	Tonga Dc = 151.47°, Az = 24.74°.
3	eP	21	49	33	+1.7	Fox Islands, Aleutian Islands 52.99° N 166.85° W H = 21 37 26 s, h = 21 km, Mag = 4.7 (ISC). Dc = 79.48°, Az = 3.17°.
4	iPg	12	42	16		Explosion. D ≐ 66 km.
4	iPn ePb ePg eSn eSg	14	55 56 56 56 57	48 02 09 52 21	–2.1 +1.7 +2.8 –2.5 –2.8	Adriatic Sea Dc = 5.03°, Az = 185.83°.
4	epPKP2		54	50	+5.2	Tonga Region Dc = 148.61°, Az = 20.68°.
9	eP	13	37	15	+1.0	Colorado 40.00° N 104.69° W H = 13 25 6.7 s, h = 5 km, Mag = 5.0 (ISC). Dc = 78.99°, Az = 318.98°.
10	iP	11	33	20.5		Kurile Islands Dc = 78.28°, Az = 32.40°.
12	iPKIKP iPKP2 ipPKIKP ipPKP2	09 10 10	59 59 00 00	21 46 02 27	+1.8 +4.2 +0.2 +2.5	South of Fiji Dc = 153.87°, Az = 33.94°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
12	ePKIKP	12	50	22	–0.9	New Hebrides Dc = 138.00°, Az = 49.20°.
12	eP	23	02	04	+2.5	Afghanistan-USSR Border Region 37.15° N 71.32° E H = 22 54 36.5 s, h = 96 km, Mag = 5.1 (ISC). Dc = 39.80°, Az = 85.55°.
14	ePg	10	18	02	–4.7	Northern Italy Dc = 5.45°, Az = 263.26°.
14	eLm	20	16	30		Turkey 40.74° N 30.37° E H = 20 09 25 s, h = 25 km, Mag = 4.6 (ISC). Dc = 11.16°, Az = 124.90°.
15	eP	07	08	49	–0.2	Sicily Dc = 9.36°, Az = 194.74°.
15	iP	09	30	58	+1.7	Tibet Dc = 58.23°, Az = 77.47°.
15	iP	15	47	25	+1.2	E Russia-NE China Border Region Dc = 71.28°, Az = 43.45°.
16	iP	19	31	23	+1.0	Northern Sumatra Dc = 83.04°, Az = 96.41°.
17	iPg iSg	10	24 25	55 04		Explosion. D ≐ 75 km.
19	iP	15	41	22	+1.2	Leyte, Philippine Islands 10.36° N 125.87° E H = 15 28 08.5 s, h = 60 km, Mag = 6.0 (ISC). Dc = 93.90°, Az = 70.10°.
19	iPKIKP	16	01	06	+2.1	Santa Cruz Islands Dc = 155.91°, Az = 47.46°.
20	iP	02	09	58	+3.9	Kazakhstan-Sinkiang Border Region Dc = 41.80°, Az = 69.34°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
21	iP ipP	07	45 45	02 14	–0.1 0.0	Off West Coast of Northern Sumatra 3.72° N 95.74° E H = 07 33 01.6 s, h = 40 km, Mag = 6.1 (ISC). Dc = 78.81°, Az = 96.85°.
22	ePKIKP	13	20	42	+1.2	South Sandwich Islands Region 60.84° S 24.33° W H = 13.02 06.8 s, h = 33 km, Mag = 6.1 (ISC). Dc = 113.65°, Az = 201.24°.
22	ePdiff. ePKIKP	13	31 35	34 32	–11.2	South Sandwich Islands Region 60.90° S 23.20° W H = 13 17 03.1 s, h = 19 km, Mag = 5.6 (ISC). Dc = 113.43°, Az = 200.68°.
24	iP ipP iSp	03	33 33 33	14 33 41	+0.5 +2.5 +2.5	Kurile Islands Dc = 78.68°, Az = 34.99°.
24	eP epP	10	54 54	21 32	–1.2 +1.0	Mozambique Channel 17.1° S 40.3° E H = 10 43 26.8 s, h = 31 km, Mag = 5.0 (ISC). Dc = 67.55°, Az = 157.21°.
26	iP	00	50	32	+0.2	Western Caroline Islands 12.18° N 140.80° E H = 00 36 47.4 s, h = 78 km, Mag = 6.1 (ISC). Dc = 101.49°, Az = 57.31°.
26	iPKIKP isPKP2	18	39 39	39 50	+4.0 +1.0	Samoa Region Dc = 146.24°, Az = 19.27°.
27	iP	10	50	21		
27	eP	13	21	40	+1.8	Nicaragua Dc = 90.66°, Az = 288.88°.
28	eP	21	20	56	+0.7	Morocco Dc = 24.71°, Az = 237.51°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
30	eP	11	19	12	+1.0	Szechwan Province, China 31.57° N 100.31° E H = 11 08 50 s, h = 35 km, Mag = 5.2 (ISC). Dc = 62.29°, Az = 72.69°.
30	iP ePcP	13	45 45	26 32	–3.0 –6.6	Kurile Islands Dc = 78.55°, Az = 31.63°.
30	eP	20	15	32	–0.1	Kurile Islands 45.42° N 151.47° E H = 20 03 32.7 s, h = 17 km, Mag = 5.5 (ISC). Dc = 78.55°, Az = 31.62°.
31	iPKIKP iPKP2	19	12 12	41 45	–6.8 –10.8	Tonga Dc = 147.76°, Az = 24.65°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	eP	11	17	13		Poland H = 11 16.7 s (BCIS).
1	iP	22	53	44	–0.5	Kurile Islands Dc = 77.65°, Az = 34.81°.
3	eP ePP	21	21 25	29 47	+2.5 +2.0	Off Coast of Peru Dc = 103.12°, Az = 268.69°.
5	ePb eSb	11	38 38	14 59	+3.9 +0.2	Yugoslavia Dc = 3.67°, Az = 230.36°.
5	ePg	15	19	25	–0.8	Yugoslavia Dc = 3.53°, Az = 234°.
6	iP ipP	07	41 41	17 30	–0.5 +3.0	Andaman Islands Region Dc = 69.40°, Az = 90.78°.
6	eP	15	12	17		Andaman Islands Region H = 15 01 00 s
6	iP	17	36	47	–0.2	Fox Islands, Aleutian Islands Dc = 79.96°, Az = 4.29°.
7	ePn	00	34	10	+0.3	Albania 40.75° N 19.58° E H = 00 32 22 s, h = 13 km, Mag = 4.4 (ISC). Dc = 7.12°, Az = 172.21°.
7	iP ePP	07	25 29	46 56	0.0 +3.4	Celebes Sea Dc = 98.69°, Az = 76.31°.
7	iP	14	11	29	–1.7	Sicily Dc = 10.21°, Az = 193.85°.
8	ePn ePg eSn eSg	02	06 07 08 08	36 09 00 46	+0.5 –1.6 –3.0 –0.2	Greece-Albania Border Region Dc = 7.32°, Az = 169.39°.
8	ePn	09	53	51	–2.4	Greece Dc = 9.01°, Az = 164.48°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
8	ePn	12	41	55		Czechoslovakia Explosion. 48.25° N 17.08° E H = 12 41.6 m (BRA). Dc = 0.93°, Az = 297.63°.
9	ePP	10	24	16	–2.5	Santiago del Estero Prov., Arg. 27.62° S 63.15° W H = 10 06 44.5 s, h = 577 km, Mag = 5.9 (ISC). Dc = 104.59°, Az = 245.06°.
11	eP	07	04	15	+0.5	Algeria Dc = 16.13°, Az = 230.73°.
11	ePKP2	10	34	14	–0.2	New Hebrides Region Dc = 147.27°, Az = 45.54°.
12	eP	00	35	07	–2.1	South Atlantic Ridge Dc = 74.72°, Az = 207.62°.
13	iP	18	53	10	–0.5	Near Islands, Aleutian Islands Dc = 77.43°, Az = 15.79°.
15	eP	00	40	56	–0.2	Near East Coast of Honshu, Japan Dc = 82.23°, Az = 43.95°.
15	eP	08	16	27	+13.6	Bonin Islands Region 28.05° N 139.62° E H = 08 04 02.4 s, h = 425 km, Mag = 4.8 (ISC). Dc = 87.94°, Az = 49.08°.
15	iP	10	42	49	–2.5	Bhutan Dc = 59.46°, Az = 81.81°.
15	e	13	04	08		
16	ePg eSn	20	20 20	05 22		Hungary Dc = 0.84°, Az = 283.34°.
19	iP iPcP epP eS	11	08 08 08 17	01.8 08 26 54	+1.3 –1.0 +3.0 –4.6	Hokkaido, Japan Region Dc = 78.28°, Az = 36.80°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
19	iP	19	14	21.8	+5.5	Southern Sumatra Dc = 85.87°, Az = 96.80°.
20	eP	00	44	55.8	+2.2	Near East Coast of Honshu, Japan Dc = 81.74°, Az = 44.17°.
20	iPn iPg eSn eSg	06	10 10 10 11	07 24 57 07	−2.2 +1.8 +5.0 −0.5	Yugoslavia Dc = 3.45°, Az = 188.65°.
20	ePKIKP ePKP2 ePP	09 10	59 59 03	06 42 25	−0.2 +0.5 +3.1	Auckland Islands Region Dc = 157.35°, Az = 107.33°.
20	ePKIKP iPKP2	10	50 51	47 21	+1.8 −2.6	Auckland Islands Region Dc = 157.29°, Az = 107.61°.
20	iPg eSg	16	34 34	04 18		Czechoslovakia H = 16 33.9 m (BCIS). D = 0.80°.
20	iPg eSn	22	44 44	33.7 50		Czechoslovakia 48.3° N 17.2° E H = 22 44 14 s, h = 0 km (ISC). Dc = 0.89°, Az = 303.52°.
22	iP	10	29	59	+2.2	Kurile Islands Dc = 78.54°, Az = 33.24°.
22	eP	12	46	52	+2.2	Kurile Islands Dc = 78.56°, Az = 33.29°.
23	ePKIKP iPKP2	07	15 15	30 40	+10.0 +2.1	West of Tonga Dc = 150.53°, Az = 35.31°.
24	eP	17	13	54	+1.2	Morocco Dc = 23.88°, Az = 238.73°.
24	ePn	22	13	03	−0.4	Albania Dc = 7.02°, Az = 171.37°.
26	ePKIKP ePP	16	29 30	54 32	+1.9 −7.4	Near Coast of Central Chile Dc = 111.57°, Az = 248.73°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
26	iPg	18	05	14		Slovakia (near Nitra) Explosion of 1.2 Tons. 48.28° N 17.92° E (PRU). Dc = 0.56°.
26	iPKIKP	17	24	48	+2.0	Solomon Islands Dc = 125.72°, Az = 55.66°.
27	iP	17	12	43	−1.0	Southern Nevada Dc = 86.15°, Az = 325.01°.
28	eP	15	23	22		USSR-Poland Border Region (BCIS)
28	eP	15	56	20	−1.0	Gulf of Alaska Dc = 72.45°, Az = 352.25°.
30	eP	08	09	37	−4.0	Ryukyu Islands Dc = 82.02°, Az = 55.31°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	ePKIKP	12	15	31	–0.5	Tonga Dc = 145.83°, Az = 21.5°.
2	ePn	20	14	41	–3.2	Southern Italy 41.55° N 14.10° E H = 20 13 01 s, h = 18 km, Mag = 4.5 (ISC). Dc = 6.94°, Az = 207.14°.
3	eP	18	29	09	–0.4	Costa Rica Dc = 91.34°, Az = 287.79°.
4	iPn	10	30	19	–1.9	Poland 50.4° N 18.9° E H = 10 29 29 s (BCIS). M = 3.6 (WAR). Dc = 2.62°, Az = 8.26°.
4	iPg iSg	10	52 52	41 49		Probably explosion. D ≐ 70 km,
4	ePKIKP	17	40	19	+5.8	New Ireland Region Dc = 123.48°, Az = 56.59°.
5	iPg	02	30	10		Slovakia Explosionof 1.2 Tons. 48.11° N 18.30° E (PRU). Dc = 0.29°.
5	eP	12	03	20	–0.8	Ionian Sea Dc = 10.23°, Az = 168.83°.
5	iP	16	07	02	+2.0	Kurile Islands Dc = 78.21°, Az = 32.10°.
6	e	01	33	09		Near Coast of Central Chile 29.55° S 71.08° W H = 01 14 2.5 s, h = 28 km, Mag = 5.4 (ISC). Dc = 110.87°, Az = 248.82°.
7	iP	08	39	51	+0.6	Kurile Islands Dc = 76.78°, Az = 26.87°.
7	iP	09	18	43	+1.3	Kurile Islands Dc = 76.79°, Az = 26.85°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
7	iPKIKP	10	51	48	+3.7	West of Tonga Dc = 146.30°, Az = 30.70°.
8	ePKIKP	18	27	16	+7.5	New Ireland Region Dc = 123.47°, Az = 56.49°.
8	iP	21	21	04	+2.1	Kurile Islands Dc = 76.75°, Az = 26.84°.
9	iPKIKP iPKP2 ipPKP2	17	40 40 43	23 32 04	0.0 –7.0 –12.0	West of Tonga Dc = 149.84°, Az = 33.97°.
10	iPg iSg	18	00 00	10 16		Slovakia Explosion. D ≐ 50 km.
11						The apparatus was out of order.
12	iP	13	04	29		Northwest of Kurile Islands Dc = 73.02°, Az = 27.48°.
12	iPg iSg	18	15 15	10 15		Slovakia Explosion. D ≐ 40 km.
12	e iPP	18	49 50	39 43	+3.1	Banda Sea Dc = 109.67°, Az = 78.64°.
15	iP iPP iPKKP iPKPPKP	08	13 17 31 39	36 15 04 06	+0.2 –0.2 +11.4 –3.3	Nicaragua Dc = 90.65°, Az = 288.47°.
15	iPg iSg	09	58 58	08 12		Slovakia Probably explosion. D ≐ 30 km.
16	eP	20	28	54	–0.7	Mascarene Islands Region 17.18° S 66.68° E H = 20 17 01 s, h = 49 km, Mag = 5.1 (ISC). Dc = 77.81°, Az = 133.03°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
16	eP	23	43	05	+3.0	Kurile Islands 44.21° N 149.90° E H = 23 31 01.6 s, h = 42 km. Mag = 4.7 (ISC). Dc = 78.96°, Az = 33.23°.
17	eP	21	18	02	+0.1	Luzon, Philippine Islands 17.27° N 121.83° E H = 21 05 23.9 s, h = 41 km, Mag = 5.5 (ISC). Dc = 86.13°, Az = 68.61°.
18	iP	01	18	16	–0.4	Greenland Sea Dc = 32.58°, Az = 354.96°.
18	ePKIKP	22	26	20	–0.5	South of Kermadec Islands Dc = 160.78°, Az = 50.09°.
19–20						The apparatus was out of order.
20	ePKIKP	16	15	21	+6.0	West of Tonga 20.52° S 178.03° W H = 15 56 33.5 s, h = 556 km, Mag = 4.8 (ISC). Dc = 149.73°, Az = 31.55°,
20	iPg iSg	18	09 09	10 15		Slovakia (Radava) Explosion. D ≐ 40 km.
21	iPn iPg iSn	16	56 56 57	06 26 02	–5.3 –5.8 –6.5	Yugoslavia Dc = 4.82°, Az = 192.42°.
22	eP	18	57	22	–0.1	North Atlantic Ridge Dc = 47.99°, Az = 271.98°.
23	eP	08	39	02	–0.4	Bonin Islands Region Dc = 87.09°, Az = 48.86°. Masked by microseisms.
24	iP epP	11	03 04	57 14	–0.8 –0.8	Southern Sumatra Dc = 87.67°, Az = 97.13°.
24	iPg iSg	17	30 30	10 16		Slovakia Explosion. D ≐ 50 km.

Date	Phase	h	m	s	Res. (O–C)	Remarks
25	iP iPP	01	11 14	32.6 35	+2.3 –4.3	Taiwan Region Dc = 81.04°, Az = 63.59°.
26	eP	00	34	31	–0.3	Taiwan Region Dc = 81.07°, Az = 63.51°.
26	eP	17	35	54	–0.4	Molucca Sea Dc = 101.39°, Az = 77.53°.
28	eP	18	51	42	–1.7	North Atlantic Ridge Dc = 54.83°, Az = 269.36°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1–30						The apparatus was not operational.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	iP	14	08	35.3	0.0	Kurile Islands 49.45° N 145.40° E H = 13 57 03.4 s, h = 144 km, Mag = 5.9 (ISC). Dc = 75.95°, Az = 27.81°.
2	iP	12	46	26.3	+2.8	Albania 41.32° N 20.29° E H = 12 44 42.7 s, h = 16 km, Mag = 5.3 (ISC). Dc = 6.64°, Az = 167.02°.
3	iPg iSg	22	11 11	14.2 24.2	−0.8 −1.5	Czechoslovakia 48.6° N 17.45° E H = 22 10 54 s, h = 7 km (ISC). Dc = 0.99°, Az = 324.75°.
4–17						The apparatus was not operational.
18	eP	22	54	58	+0.3	Persia-Iraq Border Region 33.46° N 46.95° E H = 22 49 28.7 s, h = 49 km, Mag = 4.6 (ISC). Dc = 25.85°, Az = 113.25°.
19	iP	03	31	19.3	+0.5	Afghanistan-USSR Border Region 37.49° N 71.85° E H = 03 23 52.1 s, h = 106 km, Mag = 4.9 (ISC). Dc = 39.98°, Az = 84.71°.
20	iP ipP	11	45 45	39.8 56.8	0.0 0.0	Andaman Islands Region Dc = 71.13°, Az = 317°.
21	iP iPb iPg iSn	00	11 11 11 12	08 15 35 22	+0.7 +1.3 −2.5 +1.9	Yugoslavia Dc = 5.88°, Az = 163.03°.
21	eP	02	39	30	+2.7	Near Coast of Northern Chile Dc = 104.84°, Az = 253.83°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
21	iP	16	15	09	+0.4	Kurile Islands 49.10° N 156.23° E H = 16 03 20.0 s, h = 42 km, Mag = 4.7 (ISC). Dc = 76.82°, Az = 26.90°.
21	iP	16	24	19	+1.1	Kurile Islands Dc = 76.76°, Az = 26.92°.
21	ePKP2	18	06	29	+0.4	Kermadec Islands Region 31.89° S 179.0° W H = 17 45 54.0 s, h = 21 km, Mag = 5.0 (ISC). Dc = 159.35°, Az = 45.87°.
21	eP isP	23	54 54	28 46	−0.5 −2.0	Andaman Islands Region Dc = 71.15°, Az = 93.23°.
22	iP	07	23	39	−1.7	Albania Dc = 6.77°, Az = 166.52°.
22	iPKP2	23	29	27	−3.3	Kermadec Islands Dc = 158.33°, Az = 39.49°.
23	eP	16	16	35	+0.9	Kurile Islands Region 48.29° N 157.19° E H = 16 04 37.5 s, h = 23 km, Mag = 5.1 (ISC). Dc = 77.84°, Az = 26.70°.
24	eP	08	45	09	−0.4	Sakhalin Island Dc = 67.48°, Az = 31.19°.
24	eP	20	14	24	−1.0	Leeward Islands Dc = 70.30°, Az = 274.39°.
24	eP	21	43	45	+0.7	Leeward Islands Dc = 70.21°, Az = 274.58°.
25	ePKIKP	01	42	25	+1.2	New Ireland Region Dc = 123.02°, Az = 56.53°.
27	eP	07	20	07	−5.0	Albania 41.25° N 20.25° E H = 07 18.5 m (BCIS). Dc = 6.71°, Az = 167.40°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
27	eP iPP	09	31 35	40 55	−0.6 −3.8	Chile-Bolivia Border Region 21.29° S 08.20° W H = 09 17 50.3 s, h = 91 km, Mag = 6.3 (ISC). Dc = 103.20°, Az = 252.97°.
27	iPKIKP ePKP2 ipPKP2	16	42 42 43	37 52 2.4	+2.7 −2.5 −0.2	Tonga Region Dc = 152.66°, Az = 26.78°.
29	eP iSn iSb	19	51 52 52	01 21.0 41	−0.5 −0.7 −3.0	Albania Dc = 6.56°, Az = 166.99°.
29	ePKIKP iPKP2 ipPKP2	20	49 49 49	29 41 52	+10.2 +1.6 +2.0	Tonga Region Dc = 152.88°, Az = 27.95°.
29	ePKP2	22	43	14	+0.2	Tonga Region Dc = 153.06°, Az = 27.81°.
29	ePn	22	56	34	−0.5	Albania Dc = 6.50°, Az = 168.05°.
30	ePn	21	29	10	−0.1	Greece 40.66° N 21.47° E H = 21 27 20.3 s, h = 34 km, Mag = 4.6 (ISC). Dc = 7.50°, Az = 161.28°.
31	iPn	20	04	21	+0.3	Albania Dc = 6.64°, Az = 168.27°.

Earthquake Observations
at the Station Hurbanovo

Date	Phase	h	m	s	Res. (O–C)	Remarks
4	eSg e Lm	06	04 05 08	26 19	+6.3	Greece Dc = 9.90°, Az = 162.14°.
5	eP eS Lm	00	24 31 44	09 50	+7.8 +17.2	Mongolia MLH (HRB) = 8.5. Dc = 53.75°, Az = 55.66°. LmH: 14 s 3205 μm.
17	Lm	12	50			Near East Coast of Honshu MLH (HRB) = 7.1. Dc = 80.30°, Az = 104.70°. LmH: 14 s 65 μm.
18	eP Lm	05 06	44 09	30	+3.2	Eastern Russia MLH (HRB) = 7. Dc = 57.69°, Az = 39.56°. LmH: 10 s 69 μm.
20	eP Lm	02	06 27	47	+0.8	Mongolia Dc = 53.90°, Az = 55.75°. LmH: 6 s 146 μm.
28	eS Lm	14	15 42	12	+5.2	Fox Islands, Aleutian Islands MLH (HRB) = 6.0. Dc = 79.89°, Az = 4.8°. LmH: 20 s 7.0 μm.
29	iSb iSg Lm	00	13 13 14.5	36 44	–1.1 +1.8	Austria Dc = 2.69°, Az = 271.83°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
9	Lm	14	13.5			Greece-Albania Border Region MLH (HRB) = 5.5. Dc = 8.09°, Az = 168.63°. LmH: 8 s 39 μm.
9	eS Lm	15 16	48 18	44	+13.9	Colombia Dc = 89.88°, Az = 274.19°.
13	eP ePP Lm	23	21 22 36.5	06 12	+3,0 −1.8	North Atlantic Ocean 52.82° N 34.25° W H = 23 14 22.3 s, h = 17 km, Mag = 5.6 (ISC). MLH (HRB) = 7.3, Dc = 33.18°, Az = 281.16°. LmH: 12 s 340.8 μm.
27	eSg	21	04	32.4	−0.9	Roumania Dc = 7.02°, Az = 112.56°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
4	iP i iS Lm	18	00 01 02 05	32 40 18	+3.0 −1.0	Aegean Sea Dc = 9.79°, Az = 149.36°. MLH (HRB) = 7.2. LmH: 12 s 2250 μm.
7	eSg	08	03	08	+6.0	Yugoslavia Dc = 4.39°, Az = 187.27°.
19	Lm	04	49			Kurile Islands MLH (HRB) = 6.8. Dc = 78.25°, Az = 31.72°. LmH: 16 s 37.8 μm.
24	eSg	17	42	35	−16.4	Switzerland Dc = 7.45°, Az = 263.34°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
12	e eS Lm	05	05 13 50	27 30	+9.7	Northern Sumatra Dc = 78.22°, Az = 95.36°.
28	iPg iSg	10	00 00	09 11		Explosion. D = 25 km.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	i iSn iSg Lm	07	12 12 13 15	38 50 44	 –0.6 –3.1	Greece MLH (HRB) = 6.5. Dc = 8.57°, Az = 163.73°. LmH: 8 s 330 μm.
11	Lm	15	15			Tadzhikistan-Sinkiang Border Region MLH (HRB) = 5.9. Dc = 40.35°, Az = 81.07°. LmH: 8 s 52 μm.
21	e	18	57	37		Southern Sumatra Dc = 86.13°, Az = 95.68°. Traces.

Date	Phase	h	m	s	Res. (O–C)	Remarks
14	e e	05	26 26	04 24		Tonga Dc = 146.14°, Az = 20.51°. Traces.
17	e e	05	26 29	02 58		South Sandwich Islands Region Dc = 112.18°, Az = 203.75°. Traces.
17	iSn	17	46	11		Czechoslovakia Dc = 0.51°, Az = 309.60°.
19	iSn	00	23	30		Czechoslovakia Dc = 0.62°, Az = 301.84°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	eP ePP	23	22 25	10 10	+5.1 +6.1	South of Alaska Dc = 78.01°, Az = 357.69°.
2	eSg	01	16	22	−2.4	Yugoslavia Dc = 3.93°, Az = 170.39°.
3	eSg Lm	02	55 57	55	−3.0	Yugoslavia Dc = 3.92°, Az = 169.51°.
11	eSg	12	43	11	−2.5	Yugoslavia Dc = 3.38°, Az = 193.13°.
19	Lm	09	14			Turkey Dc = 12.50°, Az = 137.51°. Traces.
22	eP i Lm	16 17	59 02 04	44 15	+1.2	Turkey MLH (HRB) = 7½. Dc = 11.49°, Az = 124.24°. LmH: 10 s 2800 μm.
26	eP iS Lm	18 19	57 00 06	14 45.5	+3.2 +18.5	Turkey MLH (HRB) = 6½. Dc = 18.03°, Az = 109.35°. LmH: 13 s 140 μm.
30	Lm	01	40			Turkey MLH (HRB) = 5.9. Dc = 11.36°, Az = 124.51°. LmH: 6 s 42 μm.

Date	Phase	h	m	s	Res. (O–C)	Remarks
12	e	09	59	25		South of Fiji Islands Dc = 153.87°, Az = 33.64°. Traces.
13	eP	20	18	28	+3.4	Southern Honshu, Japan Dc = 79.95°, Az = 47.50°.
13	Lm	22	17			Pyrenees MLH (HRB) = 5.8. Dc = 14.01°, Az = 257.49°. LmH: 6 s 25 μm.
21	eP i	07	45 55	20 06	+0.3	Northern Sumatra 3.72° N 95.74° E H = 07 33 01.6 s, h = 40 km (ISC). Dc = 81.93°, Az = 93.38°.
30	eP ePS Lm	04	32 41 58	31 05	+5.3 –3.9	Szechwan Province, China 31.61° N 100.26° E H = 04 22 05.1 s, h = 24 km, Mag = 6.1 (ISC). Dc = 62.23°, Az = 72.69°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
5	eSg	11	39	04	+2.7	Yugoslavia Dc = 3.64°, Az = 228.73°.
5	Lm	02	10			Greece-Albania Border Region Dc = 7.40°, Az = 168.77°. Traces.
19	eS	11	17	50	+4.7	Hokkaido, Japan Region Dc = 78.28°, Az = 36.73°.
26	ePKIKP	16	29	53	–0.2	Near Coast of Central Chile Dc = 111.51°, Az = 248.67°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
9	ePKIKP	17	40	24	+0.6	West of Tonga Dc = 149.86°, Az = 33.62°.
15	ePP ePS	08	17 25	19 32	+2.4 −17.6	Nicaragua Dc = 90.56°, Az = 288.38°.
18	eP	01	18	19	+3.5	Greenland Sea Dc = 32.52°, Az = 354.99°.
25	eP eS Lm	01	11 21 44	26 39	−3.3 +9.7	Taiwan Region Dc = 81.08°, Az = 63.51°.
31	Lm	21	15			Sicily Dc = 10.38°, Az = 196.00°. Traces.

Date	Phase	h	m	s	Res. (O–C)	Remarks
4	eS Lm	14 15	52 22	25	+15.0	Hokkaido, Japan Region Dc = 77.24°, Az = 37.20°.
21	eP	17	07	54	+3.3	Norvegean Sea Dc = 25.29°, Az = 352.96°.
23	eS Lm	08 09	50 09	35	+12.3	Eastern Gulf of Aden Dc = 43.47°, Az = 128.47°.
23	eP	13	48	39	+3.2	Nord of Svalbard Dc = 33.11°, Az = 354.17°.
30	ePn iSn iSg Lm	07	25 26 27 28.5	36 56 36	+3.3 +5.6 +5.2	Albania MLH (HRB) = 6.9. Dc = 6.66°, Az = 165.26°. LmH: 8 s 1350 μm.

Date	Phase	h	m	s	Res. (O–C)	Remarks
2	ePn i	12	46 48	28 50	+3.2	Albania 41.32° N 20.29° E H = 12 44 42.7 s, h = 16 km, Mag = 5.3 (ISC). Dc = 6.72°, Az = 166.38°.
9	e	03	13	20		Adriatic Sea Dc = 6.01°, Az = 192.80°. Traces.
19	eSg	08	36	27	+16.6	Albania Dc = 6.58°, Az = 165.17°. Masked by microseisms.
21	eSg	00	12	53	–5.2	Yugoslavia Dc = 5.96°, Az = 162.37°.
21	ePP ePS Lm	02 03	43 53 22	51 07	–2.4 +3.0	Near Coast of Northern Chile MLH (HRB) = 7.4. Dc = 104.78°, Az = 253.76°. LmH: 22 s 111 μm.
21	ePKIKP	16	42	42	+9.6	Tonga Region Dc = 152.64°, Az = 26.49°. Traces.
30	iSg Lm	04	22 24	24	+5.1	Northern Italy MLH (HRB) = 5.6. Dc = 5.38°, Az = 253.16°. LmH: 6 s 75.2 μm.

Earthquake Observations at the Station Skalnaté Pleso

Date	Phase	h	m	s	Res. (O–C)	Remarks
27	eP	17	34	54	+0.1	Rat Islands, Aleutian Islands Dc = 77.25°, Az = 15.08°.
27	eP	19	13	52	+4.5	Kashmir-Sinkiang Border Region Dc = 43.23°, Az = 85.37°.
29	iP ipP	21	13 13	20 38	−5.8 −12.8	Hokkaido, Japan Region Dc = 76.26°, Az = 37.73°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	eP	10	27	35	+0.6	Near East Coast of Kamchatka Dc = 71.93°, Az = 23.38°.
2–3						The apparatus was not operational.
3	iP	09	20	12	–10.0	Kodiak Island Region Dc = 72.60°, Az = 355.35°.
5	ePKIKP	01	41	10	+8.5	Tonga Dc = 149.73°, Az = 28.07°.
5	eP	16	50	08	0.0	Off East Coast of Kamchatka Dc = 73.73°, Az = 25.35°.
8	ePKIKP	13	41	30	–6.9	Loyalty Islands Region Dc = 143.47°, Az = 51.47°.
10	eP	05	56	02	+4.5	North of Ascension Island Dc = 59.59°, Az = 218.38°.
11–18						The apparatus was not operational.
19	eP	17	19	38	–6.1	Fox Islands, Aleutian Islands Dc = 78.24°, Az = 4.43°.
20–22						The apparatus was not operational.
23	ePKIKP	00	45	00	–2.9	Samoa Region Dc = 144.60°, Az = 20.86°.
23	ePKIKP	01	01	37	–9.0	Samoa Region Dc = 144.59°, Az = 20.86°.
23	ePKP2	14	57	18	–3.6	West of Tonga Dc = 148.21°, Az = 36.26°.
23	ePKIKP	21	49	36	–1.4	New Hebrides Region Dc = 140.21°, Az = 52.74°.
25–27						The apparatus was not operational.
28	eP	01	21	44	–5.6	Kurile Islands Dc = 76.21°, Az = 32.72°.
28	eP	14	53	58	–7.0	Off West Coast of South, N.Z. Dc = 156.97°, Az = 97.62°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
29	iP ePP	03	04 05	10 20	+0.9 –14.0	Eastern Kazakhstan Underground explosion (UPP). Dc = 36.75°, Az = 66.31°.
29–30						The apparatus was not operational.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	eP	07	41	21	+5.3	Southern Sumatra Dc = 83.05°, Az = 99.33°.
1	iP ePP	23	21 24	59 57	+0.7 −5.2	South of Alaska Dc = 76.73°, Az = 358.91°.
2	ePn	01	15	22	−7.0	Yugoslavia Dc = 5.25°, Az = 189.07°.
2	iP	07	15	15	+1.1	Nicobar Islands Region Dc = 72.62°, Az = 96.97°.
2	eP	07	50	31	−5.7	South of Honshu, Japan Dc = 83.08°, Az = 46.26°.
2	eP	16	28	16	+1.1	Off East Coast of Honshu, Japan Dc = 83.08°, Az = 46.14°.
3	iPn iSg	02	55 56	07 35	+3.1 +0.2	Yugoslavia Dc = 5.22°, Az = 188.47°.
3	eP	21	59	24	+3.4	Ascension Island Region Dc = 63.64°, Az = 217.84°.
4	iP ipP	23	53 54	40 19	+1.1 0.0	Hokkaido, Japan Region Dc = 75.12°, Az = 39.82°.
5	eP Lm	00 01	56 01.5	12	−2.0	Southern Greece Dc = 12.49°, Az = 175.33°.
6	eP	05	17	10	+0.8	Central Alaska Dc = 68.31°, Az = 353.81°.
6	ePg iSg	12	02 02	29 40		Probably Poland D ≐ 100 km.
6	iP	13	54	22	−0.2	Fox Islands, Aleutian Islands Dc = 78.36°, Az = 5.21°.
6	eP	19	30	21	0.0	Central Mid-Atlantic Ridge Dc = 63.67°, Az = 250.81°.
7	eP	01	18	04	+0.5	Eastern Gulf of Aden Dc = 43.68°, Az = 134.37°.
10	ePKP2	06	48	12	+0.6	West of Tonga Dc = 144.95°, Az = 32.92°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
11	ePg	12	43	06	−7.0	Yugoslavia Dc = 5.08°, Az = 206.09°.
12–21						The apparatus was not operational.
22	iP	16	59	34	−6.1	Turkey Dc = 11.28°, Az = 135.15°.
25	ePb	08	39	44	−1.6	Greece-Bulgaria Border Region Dc = 8.01°, Az = 153.65°.
26	iP iS Lm	18 19	57 00 08	13 29	0.0 +18.0	Turkey Dc = 17.28°, Az = 116.36°.
27–31						The apparatus was not operational.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	ePKP2	09	26	04	+1.6	Macquarie Island Region Dc = 154.52°, Az = 130.24°.
2	iP	00	56	10	+1.6	Kurile Islands Dc = 75.60°, Az = 36.51°.
2	iP eS Lm	11	12 16 24	09 31	+1.1 −0.9	Jan Mayen Island Region Dc = 25.69°, Az = 339.15°.
2	iP Lm	14	11 23	49	+3.1	Jan Mayen Island Region Dc = 25.79°, Az = 339.18°.
3	ePKIKP	00	28	00	−6.0	Tonga Dc = 149.67°, Az = 27.16°.
4	ePn eSg	14	56 58	08 10	−4.7 −0.1	Adriatic Sea Dc = 6.64°, Az = 196.96°.
4	ePKIKP	22	54	26	+1.5	Tonga Region Dc = 146.86°, Az = 23.19°.
13	iP ipP iPP	20	18 19 21	13 30 14	−1.5 −5.5 −4.1	Southern Honshu, Japan Dc = 78.05°, Az = 49.03°.
13	eP	22	11	22	−7.8	Pyrenees Dc = 15.65°, Az = 255.40°.
13	eP	23	54	39	+1.1	Ascension Island Region Dc = 62.77°, Az = 217.17°.
14	Lm	10	20			Northern Italy Dc = 6.98°, Az = 254.56°.
15	iP	09	30	39	−6.8	Tibet Dc = 56.70°, Az = 79.61°.
15	eP	15	47	13	−1.4	E Russia-NE China Border Region Dc = 69.40°, Az = 44.91°.
16	eP	19	31	15	+2.8	Northern Sumatra Dc = 81.93°, Az = 98.05°.
19	iP	15	41	14	−2.0	Leyte, Philippine Islands Dc = 92.24°, Az = 71.49°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
19	ePKIKP epPKIKP	16	01 01	04 29	+2.6 +1.2	Santa Cruz Islands Dc = 134.04°, Az = 48.74°.
20	eP ePP	02	09 11	38 07	−1.0 −9.0	Kazakhstan-Sinkiang Border Region Dc = 40.13°, Az = 71.79°.
20–24						The apparatus was out of order.
26	eP iPP	00	50 54	24 30	−0.7 −2.0	Western Caroline Islands Dc = 99.67°, Az = 58.66°.
27	eP epP ePP	13	21 22 25	39 25 24	−3.6 −5.6 +4.5	Nicaragua Dc = 91.41°, Az = 290.36°.
27	eP	13	46	42	−6.4	Vancouver Island Region Dc = 77.71°, Az = 340.97°.
28	eP	15	37	47	+0.2	Vancouver Island Region Dc = 77.64°, Az = 340.93°.
30	iP	04	32	19	+4.0	Szechwan Province, China 31.61° N 100.26° E H = 04 22 5.1 s, h = 24 km, Mag = 6.1 (ISC). Dc = 60.61°, Az = 74.66°.
30	iP i	13	45 46	18.5 37	−0.6	Kurile Islands Dc = 76.70°, Az = 33.00°.
31	iPKIKP ipPKP2	19	12 13	31 45	+1.3 +4.9	Tonga Dc = 145.96°, Az = 26.96°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1	ePKIKP	03	49	33	–5.0	Eastern New Guinea Region Dc = 117.71°, Az = 63.99°.
1	iP	22	53	30	–6.8	Kurile Islands Dc = 75.78°, Az = 36.19°.
2	eP	03	51	45	–1.3	Jan Mayen Island Region Dc = 26.04°, Az = 339.61°.
3	eP ePP	21	21 25	34 48	+1.4 –6.2	Off Coast of Peru Dc = 104.41°, Az = 270.47°.
4	ePKIKP ipPKIKP ipPKP2	04	11 12 12	25 00 58	–1.2 0.0 +2.6	Kermadec Islands Region Dc = 156.88°, Az = 46.98°.
5–6						The apparatus was not operational.
6	eP	05	02	55	+10.0	Crete Dc = 14.27°, Az = 170.49°.
6	eP	17	36	38	–1.3	Fox Islands, Aleutian Islands Dc = 78.48°, Az = 5.51°.
7	iP	07	25	35	–3.4	Clebes Sea Dc = 97.13°, Az = 77.61°.
7	ePKIKP	11	27	17	–1.9	Kermadec Islands Region Dc = 156.47°, Az = 48.31°.
7	eP	14	11	56	+2.6	Sicily Dc = 11.90°, Az = 199.57°.
8	iP Lm	02	06 10	45	–8.7	Greece-Albania Border Region Dc = 8.58°, Az = 180.84°.
9–18						The apparatus was not operational.
19	ePKIKP	01	05	10	+6.8	South of Fiji Dc = 152.16°, Az = 35.03°.
19	iP i	11	07 08	51 14	+1.6 –2.0	Hokkaido, Japan Region Dc = 76.41°, Az = 38.20°.
19	eP	19	14	13	+2.3	Southern Sumatra Dc = 84.78°, Az = 98.36°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
19	eP	19	41	39	–2.4	Atlantic-Indian Ridge Dc = 89.69°, Az = 154.73°.
20	eP	00	44	40	–2.0	Near East Coast of Honshu, Japan Dc = 79.85°, Az = 45.62°.
20	ePKIKP	09	59	07	+0.2	Auckland Islands Region Dc = 156.49°, Az = 104.83°.
20	ePKIKP	10	50	42	–4.4	Auckland Islands Region Dc = 156.45°, Az = 105.12°.
20	iPn eSg	22	44 45	44.3 18	–8.0 –8.7	Czechoslovakia Dc = 2.20°, Az = 247.34°.
21–24						The apparatus was not operational.
24	eP	22	13	20	–4.9	Albania Dc = 8.34°, Az = 182.85°.
26	eP	05	07	32	+2.0	Albania Dc = 7.67°, Az = 176.09°.
26	ePKIKP	17	24	46	+4.0	Solomon Islands Dc = 123.88°, Az = 56.80°.
27	iP	17	12	37	–7.4	Southern Nevada Nuclear explosion "ZAZA" Dc = 85.73°, Az = 326.33°.
28	eP	03	01	31	–1.9	Alma-Ata Region Dc = 41.19°, Az = 76.56°.
28	ePKIKP	05	15	44	–0.9	New Britain Region Dc = 122.17°, Az = 58.78°.
28	ePn ePb eSn	15	22 22 22	23 28 53		USSR-Poland Border Region (BCIS)
28	eP	15	56	13	–2.3	Gulf of Alaska Dc = 71.25°, Az = 353.22°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1–5						The apparatus was not operational.
5	eP	12	03	38	–0.8	Ionean Sea Dc = 11.45°, Az = 177.78°.
5	eP	16	06	48	–4.1	Kurile Islands Dc = 76.36°, Az = 33.46°.
7	eP	08	39	37	–2.3	Kurile Islands Dc = 74.97°, Az = 28.19°.
7	eP	09	18	34	+3.3	Kurile Islands Dc = 74.97°, Az = 28.17°.
7	ePKIKP	10	51	36	–6.1	West of Tonga Dc = 144.46°, Az = 32.68°.
8	ePKIKP	17	18	29	+2.7	Eastern New Guinea Region Dc = 121.83°, Az = 65.16°.
8	e	18	27	44		New Ireland Region Dc = 121.64°, Az = 57.64°. Traces.
9–31						The apparatus was out of order.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1–8						The apparatus was out of order.
8	eP	17	21	28	+1.0	Rat Islands, Aleutian Islands Dc = 78.35°, Az = 13.78°.
10	eP	18	49	56	+2.4	Chagos Archipelago Region Dc = 70.67°, Az = 124.89°.
11	eP	12	07	12	+1.4	Chagos Archipelago Region Dc = 70.66°, Az = 124.87°.
11	iP	12	26	12	+2.4	Chagos Archipelago Region Dc = 70.67°, Az = 124.90°.
12	eP	02	39	05	+2.6	Kurile Islands Dc = 76.56°, Az = 34.34°.
12	ePKIKP	10	56	30	+2.5	Tonga Region Dc = 146.57°, Az = 21.56°.
13–30						The apparatus was not operational.

Date	Phase	h	m	s	Res. (O–C)	Remarks
1–8						The apparatus was not operational.
9	iPKIKP	05	48	01	–12.8	South of Fiji Dc = 149.01°, Az = 36.92°.
9	iPg eSg	09	30 30	20 53		Probably Poland D ≐ 150 km.
10	eP	12	19	22	–10.7	Near Coast of Northern California Dc = 85.37°, Az = 333.85°.
10	iP Lm	23	00 32	45	+3.9	India Dc = 53.30°, Az = 106.73°.
13	iP	10	49	40	–11.2	Kurile Islands Dc = 75.12°, Az = 31.10°.
14–15						The apparatus was not operational.
17	iP	00	32	34	+0.6	Afghanistan-USSR Border Region Dc = 38.87°, Az = 89.33°.
17–23						The apparatus was not operational.
24	ePKIKP	02	43	52	–0.7	West of Tonga Dc = 148.46°, Az = 33.69°.
24	eP	08	44	55	–3.3	Sakhalin Island Dc = 65.64°, Az = 32.48°.
24	iP	20	14	32	–1.1	Leeward Islands Dc = 71.45°, Az = 275.32°.
24	iP	21	43	49	+0.3	Leeward Islands Dc = 71.38°, Az = 275.51°.
25	iP	01	42	24	+1.0	New Ireland Region Dc = 121.20°, Az = 57.68°.
26	eP	09	42	04	+1.8	Off Coast of Oregon Dc = 83.07°, Az = 338.97°.
27	iPKIKP	16	42	36	+4.2	Tonga Region Dc = 150.84°, Az = 29.13°.
28	eP	06	38	43	+7.2	Off Coast of Oregon Dc = 83.17°, Az = 338.25°.

Date	Phase	h	m	s	Res. (O–C)	Remarks
28–29						The apparatus was not operational.
29	eP	19	51	18	0.0	Albania Dc = 7.78°, Az = 179.86°.
29	ePKIKP	20	49	23	+7.2	Tonga Region Dc = 151.05°, Az = 30.25°.
29	ePKIKP	22	42	59	+9.3	Tonga Region Dc = 151.23°, Az = 30.12°.
30	iPn iPg Lm	04	21 21 24.5	03 40	–8.4 –6.1	Northern Italy Dc = 7.25°, Az = 234.13°.
30–31						The apparatus was not operational.

Observations of Microseisms at the Station Hurbanovo

Microseismic activity
Apparatus: Mainka NS

January 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			1	3	2.2	1	3	2.2
2	1	3	2.2	0.0			2	6	3.7	2	4	4.3
3	1	3	4.5	1	4	6.3	1	4	4.3	1	4	4.3
4	1	3	2.2	tt			1	4	4.3	1	3	4.5
5	tt			1	3	2.2	2	4	4.3	0.0		
6	0.0			2	3	4.5	2	3	2.2	2	4	4.3
7	2	4	4.3	2	4	4.3	0.0			0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			2	6	3.7	2	6	3.7
10	2	4	2.1	2	4	4.3	2	6	5.9	2	6	3.7
11	0.0			0.0			0.0			0.0		
12	0.0			0.0			2	6	5.9	2	6	3.7
13	2	6	3.7	2	6	3.7	2	6	7.3	2	6	5.9
14	2	6	5.9	2	6	5.9	2	6	5.9	2	6	5.9
15	2	4	2.1	2	4	2.1	2	3	4.5	2	3	4.5
16	2	4	4.3	2	4	4.3	2	6	5.9	2	6	5.9
17	2	6	5.9	2	6	9.3	tt			2	6	9.3
18	2	4	9.3	2	6	9.3	2	6	9.3	2	6	9.3
19	2	6	9.3	2	6	9.3	2	6	9.3	2	6	9.3
20	2	6	9.3	2	6	9.3	2	6	9.3	2	6	9.3
21	2	6	9.3	2	6	9.3	2	6	9.3	2	6	3.7
22	2	3	4.5	2	4	4.3	2	6	5.9	2	4	4.3
23	2	4	4.3	2	4	4.3	2	6	9.3	2	6	9.3
24	2	4	4.3	2	6	5.9	2	6	3.7	2	6	3.7
25	2	6	5.9	2	6	5.9	2	6	9.3	2	6	9.3
26	2	6	9.3	2	6	9.3	2	6	9.3	2	6	9.3
27	2	3	2.2	2	3	2.2	2	6	3.7	2	4	4.3
28	2	4	2.1	2	4	4.3	2	4	4.3	2	4	4.3
29	tt			2	3	2.2	0			0		
30	0			0			0			0		
31	0			0			0			0		

Microseismic activity
Apparatus: Mainka EW

January 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			1	3	1.8	1	3	1.8
2	1	3	1.8	0.0			1	3	1.8	1	3	1.8
3	0.0			0.0			2	6	5.6	2	6	5.6
4	1	3	1.8	tt			2	3	1.8	2	3	5.6
5	tt			1	3	1.8	0.0			0.0		
6	0.0			0.0			1	3	1.8	0.0		
7	0.0			1	4	3.6	2	4	3.6	0.0		
8	0.0			2	4	3.6	0.0			0.0		
9	0.0			0.0			2	4	1.8	0.0		
10	2	4	1.8	0.0			2	6	1.6	2	6	1.6
11	0.0			0.0			2	3	1.8	0.0		
12	0.0			0.0			2	3	1.8	2	3	1.8
13	0.0			2	3	3.6	2	4	3.6	2	4	3.6
14	2	4	3.6	2	4	3.6	2	4	3.6	2	4	3.6
15	0.0			2	4	3.6	0.0			0.0		
16	2	4	3.6	2	4	3.6	2	4	3.6	2	4	3.6
17	2	6	5.0	2	6	8.2	tt			2	6	3.3
18	2	6	1.8	tt			2	4	3.6	2	4	3.6
19	2	6	5.0	2	6	3.3	2	6	3.3	2	4	3.6
20	2	4	3.6	2	4	3.6	2	4	3.6	0.0		
21	2	4	3.6	2	4	3.6	2	4	3.6	2	4	3.6
22	2	4	3.6	2	4	3.6	2	4	3.6	2	4	3.6
23	2	4	3.6	2	3	1.8	2	3	1.8	2	3	1.8
24	2	3	1.8	2	3	1.8	2	4	3.6	2	4	3.6
25	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8
26	2	3	1,8	2	3	1.8	2	6	3.3	2	6	3.3
27	2	4	1.8	2	4	1.8	2	4	3.6	2	6	3.3
28	2	4	3.6	2	4	3.6	2	4	3.6	2	4	3.6
29	tt			2	4	3.6	2	6	3.3	2	6	3.3
30	2	6	3.3	2	6	3.3	2	4	3.6	2	4	3.6
31	2	3	1.8	0			0			0		

Microseismic activity
Apparatus: Mainka NS

February 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	0			0			0			0		
2	0			0			0.0			0		
3	0			0			0			0		
4	0			0			0			0		
5	0			0			0			0		
6	0			0			0.0			0.0		
7	0.0			0.0			0.0			1	3	2.2
8	0.0			0.0			1	3	2.2	1	3	2.2
9	0.0			0.0			1	3	2.2	1	3	2.2
10	0.0			0.0			0			0		
11	0			0			0			0		
12	0			0			0			0		
13	0			0			0.0			0.0		
14	0.0			0.0			0			0		
15	0			0			0			0		
16	0			0			0.0			0.0		
17	0			0			0			0		
18	0			0			0			0		
19	0			0			0			0		
20	0			0			0			0		
21	0			0			0			0		
22	0			0			0.0			0.0		
23	0			0			0.0			0.0		
24	0			0			0.0			0.0		
25	0.0			0.0			0.0			0.0		
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			0.0			0.0		

Microseismic activity
Apparatus: Mainka EW

February 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	0			0			0			0		
2	0			0			0.0			0		
3	0			0.0			0.0			0.0		
4	0.0			0.0			2	3	1.8	3	3	1.8
5	0.0			0.0			3	3	1.8	3	3	1.8
6	2	4	5.2	2	4	5.2	2	6	7.8	2	6	7.8
7	2	6	7.8	2	6	6.2	2	6	6.2	2	6	6.2
8	2	6	6.2	2	4	3.4	2	4	3.4	2	4	3.4
9	0.0			2	4	3.4	2	4	3.4	0.0		
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			2	4	3.4	2	3	1.8
12	0.0			0.0			2	4	3.4	2	4	3.4
13	2	4	3.4	2	4	3.4	2	6	4.7	2	6	4.7
14	2	4	3.4	2	6	3.1	2	6	3.1	2	6	4.7
15	2	6	7.8	2	6	7.8	2	6	7.8	2	6	7.8
16	2	6	7.8	2	6	7.8	2	6	7.8	2	6	7.8
17	2	4	3.4	2	4	3.4	2	6	7.8	2	6	7.8
18	2	4	3.4	2	4	3.4	2	4	3.4	2	4	3.4
19	2	4	3.4	2	4	3.4	2	6	3.1	2	6	,3.1
20	2	6	3.1	2	6	3.1	2	6	3.1	2	6	3.1
21	2	6	3.1	2	6	3.1	2	4	3.4	2	4	3.4
22	2	4	3.4	2	4	3.4	2	6	4.7	2	6	4.7
23	2	6	6.2	2	6	6.2	2	4	3.4	2	4	3.4
24	2	4	3.4	2	4	3.4	2	3	3.5	2	3	3.5
25	0.0			0.0			2	3	3.5	2	3	3.5
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			2	3	3.5	2	4	3.4

Microseismic activity
Apparatus: Mainka NS

March 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			0.0			0.0		
2	0.0			0.0			0.0			0.0		
3	0.0			2	3	2.4	0			0		
4	0			0			0			0		
5	0			0			0			0		
6	0			0			0			0		
7	0			0			0			0		
8	0			0			1	3	2.4	0		
9	3	3	2.4	3	3	2.4	3	4	4.1	0.0		
10	0.0			3	4	4.1	3	3	2.4	0		
11	0			0			0			0		
12	0			0			0			0		
13	0			0			3	3	2.4	0		
14	0			3	3	2.4	3	3	2.4	0		
15	0			0			3	3	2.4	0.0		
16	0.0			0.0			3	3	2.4	0.0		
17	0.0			2	3	2.4	2	3	4.1	2	3	2.4
18	2	3	2.4	2	3	2.4	2	3	2.4	0.0		
19	2	3	2.4	0.0			0			0		
20	0			0			0.0			0.0		
21	0.0			0.0			0.0			0.0		
22	0.0			0.0			0.0			0.0		
23	0.0			0.0			2	6	8.5	2	6	8.5
24	2	4	4.1	2	4	5.8	2	6	3.5	2	6	3.5
25	0.0			2	3	4.1	2	3	4.1	2	3	4.1
26	2	3	4.1	2	3	4.1	2	3	4.1	2	3	4.1
27	2	3	4.1	2	3	4.1	2	3	4.1	2	3	4.1
28	2	3	4.1	2	3	4.1	2	3	4.1	2	3	4.1
29	2	3	4.1	2	3	6.1	2	3	4.1	2	3	4.1
30	2	3	4.1	2	3	4.1	2	3	4.1	2	3	4.1
31	2	3	4.1	2	3	4.1	2	3	4.1	2	3	4.1

Microseismic activity
Apparatus: Mainka EW

March 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	1	4	3.4	2	4	3.4	2	3	3.6	2	4	3.4
2	2	4	3.4	2	4	3.4	2	6	3.1	2	6	3.1
3	2	3	1.8	2	3	1.8	2	6	3.1	0.0		
4	0.0			0.0			0.0			0.0		
5	0.0			0.0			2	6	1.8	2	6	1.8
6	0.0			2	4	1.7	2	6	3.1	2	6	3.1
7	2	3	1.8	2	4	1.7	2	4	3.4	0.0		
8	0.0			0.0			2	3	3.6	2	3	3.6
9	2	3	3.6	2	4	3.4	2	4	3.4	2	4	3.4
10	2	3	1.8	2	3	3.6	2	6	7.7	2	6	7.7
11	2	6	7.7	2	6	7.7	2	6	10.8	2	6	8.5
12	2	4	3.4	2	4	3.4	2	4	3.4	2	4	3.4
13	2	4	3.4	2	4	3.4	2	6	3.1	2	6	3.1
14	2	3	3.6	2	4	3.4	2	6	3.1	2	6	3.1
15	2	3	3.6	2	3	1.8	2	4	3.4	2	4	3.4
16	2	4	3.4	2	3	1.8	2	6	3.1	2	4	3.4
17	2	4	3.4	2	4	3.4	2	6	7.7	2	6	7.7
18	2	6	7.7	2	6	7.7	2	6	7.7	2	6	7.7
19	2	6	4.6	2	6	4.6	2	6	3.1	2	4	3.4
20	2	4	3.4	2	4	3.4	2	6	7.7	2	6	7.7
21	2	4	5.2	2	4	3.4	2	6	7.7	2	6	7.7
22	2	6	4.6	2	6	7.7	2	6	7.7	2	6	7.7
23	2	6	7.7	2	6	7.7	2	6	4.6	2	6	4.6
24	2	3	3.6	2	3	1.8	2	6	3.1	2	6	3.1
25	0.0			2	3	3.6	2	3	3.6	2	3	3.6
26	2	3	3.6	2	3	3.6	2	3	3.6	2	3	3.6
27	2	3	3.6	2	3	3.6	2	3	3.6	2	3	3.6
28	2	3	3.6	2	3	3.6	2	3	3.6	2	3	3.6
29	2	3	3.6	2	3	3.6	2	3	3.6	2	3	3.6
30	2	3	3.6	0.0			0.0			2	3	3.6
31	2	3	3.6	0.0			2	3	3.6	2	3	3.6

Microseismic activity
Apparatus: Mainka NS

April 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	4.0	2	3	4.0	2	3	4.0	2	3	4.0
2	0.0			2	3	4.0	0.0			0.0		
3	0.0			0.0			0.0			0.0		
4	0.0			0.0			2	3	4.0	2	3	4.0
5	2	3	4.0	2	3	4.0	2	6	7.0	2	6	7.0
6	2	4	5.0	2	4	5.0	2	3	4.0	2	3	4.0
7	0.0			0.0			2	3	4.0	2	3	4.0
8	0.0			0.0			2	3	4.0	2	3	4.0
9	2	3	2.0	2	3	2.0	0.0			0.0		
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			0.0			0.0		
12	0.0			0.0			2	3	2.0	2	3	2.0
13	2	3	2.0	2	3	2.0	2	4	5.0	2	3	2.0
14	2	3	2.0	2	3	2.0	0.0			0.0		
15	0.0			0.0			2	3	2.0	2	3	2.0
16	2	3	2.0	2	3	2.0	2	4	5.0	2	4	5.0
17	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
18	2	4	5.0	2	4	5.0	2	4	5.0	2	4	5.0
19	2	4	5.0	2	4	5.0	2	4	5.0	2	4	5.0
20	0.0			2	3	2.0	2	3	2.0	2	3	2.0
21	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
22	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
23	2	3	2.0	0.0			0.0			0.0		
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			0.0			0.0		
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			0.0			0.0		
29	0.0			0.0			0.0			0.0		
30	2	4	5.0	0.0			0.0			0.0		

Microseismic activity
Apparatus: Mainka EW

April 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	1.8	2	3	3.5	2	3	3.5	2	3	3.5
2	2	3	3.5	2	3	3.5	0.0			0.0		
3	0.0			0.0			0.0			0.0		
4	0.0			0.0			0.0			0.0		
5	0.0			0.0			2	6	3.0	2	6	3.0
6	2	4	3.4	2	4	3.4	2	3	1.8	2	3	1.8
7	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8
8	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8
9	2	3	1.8	2	3	1.8	0.0			0.0		
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			0.0			0.0		
12	0.0			0.0			2	3	1.8	2	3	1.8
13	2	3	1.8	2	3	1.8	2	4	1.8	2	3	1.8
14	2	3	1.8	2	3	1.8	0.0			0.0		
15	0.0			0.0			2	3	1.8	2	3	1.8
16	2	3	1.8	2	3	1.8	2	4	3.4	2	4	3.4
17	2	3	1.8	2	3	1.8	2	6	4.5	2	6	3.4
18	2	6	4.5	2	6	4.5	2	4	3.4	2	4	3.4
19	2	4	3.4	2	4	3.4	2	4	3.4	2	4	3.4
20	2	4	3.4	2	4	3.4	2	4	3.4	2	4	3.4
21	2	3	1.8	2	3	1.8	2	3	1.8	0.0		
22	0.0			0.0			2	4	3.4	2	4	3.4
23	0.0			0.0			2	4	3.4	2	4	3.4
24	0.0			0.0			2	4	3.4	2	4	3.4
25	0.0			0.0			2	3	1.8	2	3	3.4
26	2	3	1.8	2	3	1.8	0.0			0.0		
27	0.0			0.0			2	3	1.8	2	3	1.8
28	2	3	1.8	2	3	1.8	2	3	1,8	2	3	1.8
29	0.0			0.0			0.0			0.0		
30	0.0			0.0			0.0			0.0		

Microseismic activity
Apparatus: Mainka NS

May 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8
2	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8
3	0.0			0.0			2	6	3.0	2	6	3.8
4	2	4	5.0	2	6	3.0	2	3	1.8	2	3	1.8
5	2	3	1.8	2	4	3.3	2	4	3.3	2	3	1.8
6	0.0			0.0			2	3	1.8	2	3	1.8
7	0.0			0.0			0.0			0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			0.0			0		
12	0			0			1	3	1.8	0		
13	0			1	3	1.8	1	3	1.8	0		
14	0			0			0.0			0.0		
15	1	3	1.8	1	3	1.8	0.0			0.0		
16	0.0			0.0			1	3	1.8	0.0		
17	0.0			0.0			1	3	1.8	0.0		
18	0.0			0.0			1	4	1.6	1	4	3.3
19	1	4	3.3	1	4	3.3	2	4	1.6	2	4	3.3
20	2	4	3.3	2	4	3.3	2	4	3.3	2	4	1.6
21	2	3	1.8	2	3	1.8	2	3	1.8	tt:		
22	2	3	1.8	2	3	1.8	2	4	3.3	2	3	1.8
23	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8
24	2	3	1.8	2	3	1.8	2	3	1.8	0.0		
25	0.0			0.0			0.0			0.0		
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			0.0			0.0		
29	0.0			0.0			0.0			0.0		
30	0.0			0.0			0.0			0.0		
31	0.0			0.0			0.0			0.0		

Microseismic activity May 1967 Hurbanovo
Apparatus: Mainka EW

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	1.8	2	3	2.1	2	3	1.8	2	3	1.8
2	2	3	1.8	2	3	2.1	0.0			0.0		
3	0.0			0.0			2	3	1.8	2	3	1.8
4	2	6	1.6	2	6	3.1	2	3	1.8	0.0		
5	0.0			0.0			0.0			0.0		
6	0.0			0.0			0.0			0.0		
7	0.0			0.0			0.0			0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			0.0			0.0		
12	0.0			0.0			0.0			0.0		
13	0.0			0.0			2	3	1.8	2	3	1.8
14	0.0			0.0			0.0			0.0		
15	1	3	1.8	0.0			1	4	3.5	0.0		
16	1	3	1.8	0.0			1	3	1.8	1	3	1.8
17	1	3	1.8	1	3	1.8	1	3	1.8	0.0		
18	0.0			0.0			0.0			0.0		
19	2	3	1.8	1	4	3.5	2	4	3.5	2	4	3.5
20	2	4	3.5	2	4	3.5	2	4	3.5	2	4	3.5
21	2	4	3.5	2	4	3.5	2	3	1.8	2	3	1.8
22	2	3	1.8	2	3	1.8	2	3	1.8	tt		
23	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8
24	2	3	1.8	2	3	1.8	0.0			2	3	1.8
25	0.0			0.0			2	3	1.8	2	3	1.8
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			0.0			0.0		
29	0.0			0.0			0.0			0.0		
30	0.0			0.0			0.0			0.0		
31	0.0			0.0			0.0			0.0		

Microseismic activity June 1967 Hurbanovo
Apparatus: Mainka NS

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	1	3	1.8	1	3	1.8	1	3	1.8	0.0		
2	0.0			0.0			1	3	1.8	0.0		
3	0.0			0.0			0.0			0.0		
4	0.0			0.0			0.0			0.0		
5	0.0			0.0			0.0			0.0		
6	0.0			0.0			1	3	1.8	1	3	1.8
7	0.0			0.0			1	3	1.8	0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			0.0			0.0			0		
11	0			0			0.0			0.0		
12	0.0			0.0			2	3	1.8	2	3	1.8
13	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8
14	2	3	1.8	2	3	1.8	0.0			0.0		
15	0.0			0.0			0.0			0.0		
16	0.0			0.0			0.0			0.0		
17	0.0			0.0			0.0			0.0		
18	0.0			0.0			0.0			0.0		
19	0.0			0.0			0.0			0.0		
20	0.0			0.0			2	3	1.8	0.0		
21	0.0			0.0			0.0			0.0		
22	0.0			0.0			2	3	1.8	2	3	1.8
23	0.0			0.0			0.0			0.0		
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			2	3	1.8	2	3	1.8
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			2	3	1.8	2	3	1.8
29	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8
30	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8

Microseismic activity
Apparatus: Mainka EW

June 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			0.0			0.0		
2	0.0			0.0			0.0			0.0		
3	0.0			0.0			0.0			0.0		
4	0.0			0.0			0.0			0.0		
5	0.0			0.0			0.0			0.0		
6	0.0			0.0			1	3	1.6	1	3	1.6
7	0.0			0.0			1	3	1.6	0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			0.0			1	3	1.6
10	0.0			0.0			0.0			0.0		
11	0			0			0.0			0.0		
12	0.0			0.0			2	3	1.6	2	3	1.6
13	2	3	1.6	2	3	1.6	2	3	1.6	2	3	1.6
14	2	3	1.6	2	3	1.6	0.0			0.0		
15	0.0			0.0			0.0			0.0		
16	0.0			0.0			0.0			0.0		
17	0.0			0.0			0.0			0.0		
18	0.0			0.0			0.0			0.0		
19	0.0			0.0			0.0			0.0		
20	0.0			0.0			0.0			0.0		
21	0			0.0			0.0			0.0		
22	0.0			0.0			2	3	1.6	2	3	1.6
23	0.0			0.0			0.0			0.0		
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			0.0			2	3	1.6
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			2	3	1.6	2	3	1.6
29	2	3	1.6	2	3	1.6	2	3	1.6	2	3	1.6
30	2	3	1.6	2	3	1.6	2	3	1.6	2	3	1.6

Microseismic activity
Apparatus: Mainka NS

July 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
2	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
3	2	3	2.0	2	3	2.0	0.0			0.0		
4	0.0			0.0			0.0			0.0		
5	2	3	2,0	2	3	2.0	0.0			0.0		
6	0.0			0.0			0.0			0		
7	0			0			0.0			0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			0.0			0.0		
12	0.0			0.0			2	3	2.0	2	3	2.0
13	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
14	0.0			0.0			2	3	2.0	2	3	2.0
15	2	3	2.0	0.0			2	3	2.0	2	3	2.0
16	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
17	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2,0
18	2	3	2.0	2	3	2.0	2	3	2.0	2	3	4.0
19	2	3	2.0	2	3	2.0	2	3	2.0	0.0		
20	0.0			0.0			2	3	2.0	2	3	2.0
21	2	3	2.0	2	3	2.0	0.0			0.0		
22	0.0			0.0			2	3	2.0	tt		
23	2	3	2.0	0.0			0.0			0.0		
24	0.0			0.0			2	3	2.0	2	3	2.0
25	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
26	2	3	2.0	2	3	2.0	0.0			0.0		
27	0.0			0.0			2	4	3.4	2	3	2.0
28	0.0			0.0			0.0			0.0		
29	0.0			0.0			0.0			2	3	2.0
30	tt			0.0			2	3	2.0	2	3	2.0
31	2	3	2.0	0.0			2	3	2.0	2	3	2.0

Microseismic activity
Apparatus: Mainka EW

July 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
2	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
3	2	3	1.7	2	3	1.7	0.0			0.0		
4	0.0			0.0			0.0			0.0		
5	2	3	1.7	2	3	1.7	0.0			0.0		
6	0.0			0.0			0.0			0.0		
7	2	3	1.7	2	3	1.7	0.0			0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			0.0			0.0		
12	0.0			0.0			2	3	1.7	2	3	1.7
13	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
14	0.0			0.0			2	3	1.7	2	3	1.7
15	0.0			0.0			2	3	1.7	2	3	1.7
16	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
17	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
18	2	3	1.7	2	3	1.7	2	4	1.6	2	4	1.6
19	2	3	1.7	2	3	1.7	2	4	1.6	2	4	1.6
20	0.0			2	3	1.7	2	3	1.7	2	3	1.7
21	2	3	1.7	2	3	1.7	0.0			0.0		
22	0.0			0.0			2	3	1.7	tt		
23	0.0			0.0			0.0			0.0		
24	0.0			0.0			2	3	1.7	2	3	1.7
25	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
26	2	3	1.7	2	3	1.7	2	3	1.7	0.0		
27	0.0			0.0			2	4	3.2	2	3	1.7
28	0.0			0.0			0.0			0.0		
29	0.0			0.0			0.0			0.0		
30	tt			0.0			2	3	1.7	2	3	1.7
31	0.0			0.0			2	3	1.7	2	3	1.7

Microseismic activity
Apparatus: Mainka NS

August 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	3.6	2	3	3.6	2	3	1.5	2	3	1.5
2	2	3	3.6	2	3	3.6	2	3	1.5	2	3	1.5
3	2	3	1.5	2	3	1.5	2	3	1.5	0.0		
4	2	3	1.5	2	3	1.5	2	3	1.5	2	3	1.5
5	2	3	1.5	2	3	1.5	2	3	1.5	2	3	1.5
6	2	3	1.5	2	3	1.5	2	3	1.5	2	3	1.5
7	2	3	1.5	2	3	1.5	2	3	1.5	0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			2	3	1.5	2	3	1.5
12	2	3	1.5	2	3	1.5	0.0			0.0		
13	0.0			0.0			2	3	1.5	2	3	1.5
14	2	3	1.5	2	3	1.5	2	3	1.5	2	3	1.5
15	2	3	1.5	2	3	1.5	...			...		
16	...			...			2	3	1.5	2	3	1.5
17	2	3	1.5	2	3	1.5	2	3	1.5	2	3	1.5
18	...			2	3	1.5	...			...		
19	2	3	1.5	2	3	1.5	...			...		
20	...			...			0.0			0.0		
21	0.0			0.0			0.0			2	3	1.5
22	2	3	1.5	2	3	1.5	2	3	3.6	2	3	3.6
23	2	3	3.6	2	3	3.6	2	4	3.3	2	4	1.5
24	2	4	3.3	2	4	3.3	2	4	3.3	2	3	1.5
25	2	3	1.5	2	3	1.5	2	3	1.5	2	3	1.5
26	2	3	1.5	2	3	1.5	2	3	1.5	2	3	1.5
27	2	3	1.5	2	3	1.5	2	3	1.5	2	3	1.5
28	2	3	1.5	2	3	1.5	2	3	1.5	2	3	1.5
29	2	3	1.5	2	3	1.5	2	3	1.5	2	3	1.5
30	2	3	1.5	2	3	1.5	2	3	1.5	2	3	1.5
31	2	3	1.5	2	3	1.5	2	3	1.5	2	3	1.5

Microseismic activity
Apparatus: Mainka EW

August 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			0.0			0.0		
2	0.0			0.0			2	3	1.9	2	3	1.9
3	2	3	1.9	2	3	1.9	2	4	1.8	2	4	1.8
4	2	4	1.8	2	4	1.8	2	4	3.7	2	4	3.7
5	2	4	3.7	0.0			2	4	3.7	2	4	3.7
6	2	4	3.7	2	4	3.7	2	3	1.8	2	3	1.9
7	2	3	1.9	2	3	1.9	0.0			0.0		
8	2	3	1.9	0.0			0.0			0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			0.0			0.0		
12	0.0			0.0			0.0			0.0		
13	0.0			0.0			2	3	1.9	2	3	1.9
14	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
15	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
16	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
17	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
18	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
19	2	3	1.9	2	3	1.9	2	4	3.7	2	3	1.9
20	2	3	1.9	2	3	1.9	2	4	3.7	2	3	1.9
21	2	3	1.9	2	3	1.9	2	3	1.9	0.0		
22	0.0			0.0			2	3	1.9	2	3	3.9
23	2	3	1.9	2	3	1.9	2	3	1.9	2	3	3.9
24	2	3	1.9	2	3	1.9	2	3	1.9	0.0		
25	0.0			0.0			2	3	1.9	2	3	1.9
26	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
27	2	3	1.9	2	3	1.9	0.0			2	3	1.9
28	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
29	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
30	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
31	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9

Microseismic activity
Apparatus: Mainka NS

September 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
2	0.0			2	3	1.9	0.0			0.0		
3	0.0			0.0			2	3	1.9	2	3	1.9
4	0.0			2	3	1.9	2	3	3.7	2	3	3.7
5	2	3	3.7	2	3	3.7	2	4	6.8	2	4	3.4
6	2	3	1.9	2	3	3.7	2	3	3.7	2	3	1.9
7	0.0			0.0			0.0			0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			2	3	1.9	2	3	1.9
10	0.0			0.0			2	3	1.9	0.0		
11	0.0			0.0			2	3	1.9	0.0		
12	0.0			0.0			0.0			0.0		
13	0.0			0.0			2	3	3.7	2	3	3.7
14	2	4	3.4	2	4	3.4	2	3	3.7	2	4	3.7
15	2	4	3.4	2	4	3.4	2	4	3.4	2	4	3.7
16	2	3	1.9	2	3	1.9	0.0			2	3	1.9
17	0.0			0.0			0.0			0.0		
18	0.0			0.0			0.0			0.0		
19	0.0			0.0			0.0			0.0		
20	0.0			0.0			0.0			0.0		
21	0.0			0.0			0.0			0.0		
22	0.0			0.0			0.0	3	1.9	0.0		
23	0.0			0.0			2	3	1.9	2	3	1.9
24	0.0			0.0			2	3	1.9	2	3	1.9
25	0.0			0.0			2	4	3.4	2	4	3.4
26	0.0			0.0			2	3	1.9	0.0		
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			2	3	1.9	2	3	1.9
29	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
30	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9

Microseismic activity
Apparatus: Mainka EW

September 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8
2	0.0			2	4	1.7	2	4	3.9	2	4	1.7
3	2	4	1.7	2	4	3.9	2	4	3.9	0.0		
4	2	4	3.9	2	4	3.9	2	3	3.4	2	3	3.4
5	2	3	3.4	2	3	3.4	2	4	3.9	2	3	3.4
6	2	3	3.4	2	3	1.8	2	3	3.4	2	3	3.4
7	2	3	1.8	0.0			0.0			0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			2	3	3.4	3	3	3.4
10	2	4	3.9	2	3	1.8	0.0			0.0		
11	0.0			0.0			0.0			0.0		
12	0.0			0.0			0.0			0.0		
13	0.0			0.0			2	3	1.8	2	3	1.8
14	2	3	3.4	2	3	3.4	2	4	3.9	2	4	3.9
15	2	3	1.8	2	3	1.8	2	3	3.4	2	3	3.4
16	2	3	3.4	2	3	3.4	2	3	1.8	2	3	1.8
17	2	3	1.8	0.0			0.0			0.0		
18	0.0			0.0			0.0			0.0		
19	0.0			0.0			0.0			0.0		
20	0.0			0.0			2	3	1.8	2	3	1.8
21	0.0			0.0			0.0			0.0		
22	0.0			0.0			2	3	1.8	0.0		
23	0.0			0.0			2	3	1.8	0.0		
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			2	4	3.9	2	4	3.9
26	0.0			0.0			2	3	1.8	0.0		
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			2	3	1.8	2	3	1.8
29	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8
30	2	3	1.8	2	3	1.8	2	3	1.8	2	3	1.8

Microseismic activity
Apparatus: Mainka NS

October 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
2	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
3	2	4	1.5	2	4	1.5	2	3	3.5	2	3	1.7
4	2	3	1.7	2	3	1.7	2	5	3.1	2	5	4.9
5	2	4	3.2	2	4	3.2	2	4	1.5	2	3	1.7
6	0.0			2	3	1.7	2	4	1.5	2	4	1.5
7	0.0			2	3	3.5	2	4	3.2	2	4	3.2
8	0.0	4	3.2	2	4	3.2	...			...		
9	...			...			...			...		
10	...			...			1	3	1.7	...		
11	...			...			1	4	3.2	2	3	3.5
12	...			...			2	3	3.5	...		
13	0			2	3	3.5	2	4	3.2	2	4	3.2
14	2	4	3.2	2	4	3.2	2	6	3.2	2	6	3.2
15	2	6	3.1	2	6	3.2	2	5	4.9	2	5	4.9
16	2	6	3.1	2	6	3.2	2	5	4.9	2	5	4.9
17	2	4	3.2	2	4	3.2	2	6	3.2	2	4	3.2
18	2	4	3.2	2	4	3.2	2	5	4.9	2	5	4.9
19	2	5	4.9	2	5	4.9	2	5	4.9	2	5	4.9
20	2	6	4.7	2	4	3.2	2	4	3.2	2	3	1.7
21	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
22	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
23	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
24	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
25	2	3	1.7	2	3	1.7	2	4	3.2	2	3	1.7
26	2	4	3.2	2	4	3.2	2	6	3.2	2	4	3,2
27	2	5	4.9	2	6	4.7	2	6	3.2	2	5	3.1
28	2	5	3.1	2	5	3.1	2	4	3.2	2	3	1.7
29	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
30	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
31	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7

Microseismic activity
Apparatus: Mainka EW

October 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	1.0	2	3	1.9	2	3	1.9	2	3	1.9
2	2	3	1.9	2	3	1.9	2	6	4.7	2	4	1.9
3	0.0			2	4	1.9	2	3	3.7	2	3	1.9
4	2	3	1.9	2	3	1.9	2	4	3.6	2	6	1.6
5	2	3	3.7	2	4	3.6	2	4	1.8	0.0		
6	0.0			2	3	1.9	2	6	1.6	2	6	3.3
7	2	3	1.9	2	4	1.9	2	3	1.9	2	4	3.6
8	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
9	2	3	1.9	2	3	1.9	2	4	1.9	2	3	1.9
10	0.0			0.0			2	4	1.9	2	3	1.9
11	0.0			0.0			2	4	3.6	2	4	3.6
12	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
13	2	3	1.9	2	3	1.9	2	4	3.6	2	4	3.6
14	2	4	3.6	2	4	3.6	2	6	3.3	2	6	3.3
15	2	6	3.3	2	6	3.3	2	6	3.3	2	6	3.3
16	2	6	3.3	2	6	3.3	2	6	3.6	2	6	6.5
17	2	4	3.6	2	4	3.6	2	6	4.7	2	6	4.7
18	2	6	3.3	2	6	3.3	2	6	4.7	2	5	5.4
19	2	6	3.3	2	6	3.3	2	6	3.3	2	6	3.3
20	2	6	3.3	2	6	3.3	2	4	3.6	2	4	3.6
21	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
22	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
23	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
24	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
25	2	3	1.9	2	3	1.9	2	4	3.6	2	4	3.6
26	2	4	3.6	2	4	3.6	2	4	3.3	2	4	3.6
27	2	4	3.6	2	4	3.6	2	6	4.7	2	6	6.5
28	2	6	5.1	2	6	4.7	2	4	3.6	2	3	1.9
29	2	3	1.9	2	3	1,9	2	3	1.9	2	3	1.9
30	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
31	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9

Microseismic activity
Apparatus: Mainka NS

November 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	1.7	2	3	1.7	2	4	3.3	2	4	5.0
2	2	4	5.0	2	4	3.3	2	6	4.7	2	6	4.7
3	2	6	5.3	2	4	3.3	2	3	1.7	2	3	1.7
4	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
5	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
6	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
7	2	3	1.7	2	3	1.7	2	3	1.7	2	4	3.3
8	2	3	1.7	2	3	1.7	2	4	1.7	2	4	3.3
9	2	4	3.3	2	4	3.3	2	3	1.7	2	3	1.7
10	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
11	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
12	2	3	1.7	2	3	1.7	2	4	3.3	2	6	3.4
13	2	6	3.4	2	6	3.4	2	6	4.2	2	6	4.7
14	2	6	4.7	2	6	4.7	2	6	5.3	2	4	3.3
15	2	4	3.3	2	4	3.3	...			...		
16	...			...			2	4	3.3	...		
17	...			...			2	4	3.3	2	4	3.3
18	2	4	3.3	2	4	3.3	2	4	3.3	2	4	3.3
19	2	4	3.3	2	4	3.3	2	4	3.3	2	4	3.3
20	2	4	3.3	2	4	3.3	2	3	1.7	2	3	1.7
21	2	3	1.7	2	3	1.7	2	4	1.7	2	3	1.7
22	2	3	1.7	2	4	3.3	2	6	3.4	2	6	3.4
23	2	4	1.7	2	4	1.7	2	4	3.3	2	4	3.3
24	2	4	3.3	2	4	3.3	0.0			0.0		
25	0.0			0.0			2	3	1.7	2	3	1.7
26	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
27	2	3	1.7	2	3	1.7	2	3	1.7	2	3	1.7
28	2	3	1.7	2	6	3.4	2	6	3.4	2	6	3.4
29	2	6	3.4	2	6	3.4	2	6	3.4	2	6	3.4
30	2	6	3.4	2	6	3.4	2	6	3.4	2	6	3.4

Microseismic activity
Apparatus: Mainka EW

November 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	3	1.9	2	3	1.9	2	4	3.8	2	4	3.8
2	2	4	3.8	2	4	3.8	2	6	3.5	2	6	5.2
3	2	3	1.9	2	4	3.8	2	4	1.9	2	3	1.9
4	0.0			0.0			2	3	1.9	2	3	1.9
5	2	3	1.9	2	3	1.9	2	3	1.9	2	2	1.9
6	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
7	2	3	1.9	2	3	1.9	2	3	1,9	2	3	1.9
8	2	3	1.9	2	3	1.9	2	4	3.8	2	4	3.8
9	2	4	3.8	2	4	3.8	2	3	1.9	2	3	1.8
10	2	3	1.9	2	3	1,9	2	3	1.9	2	3	1.9
11	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
12	2	3	1.9	2	3	1.9	2	6	3.5	2	6	3.5
13	2	4	3.8	2	6	3.5	2	6	5.5	2	6	5.5
14	2	6	3.5	2	6	3.5	2	6	3.5	2	4	1.7
15	2	6	1.7	2	6	1.7	2	6	3.5	2	6	1.7
16	2	4	3.8	2	4	3.8	2	6	3.5	2	4	3.8
17	2	4	3.8	2	4	3.8	2	4	3.8	0.0		
18	0.0			2	3	1.9	2	4	3.8	2	4	3.8
19	2	4	3.8	2	4	3.8	2	3	1.9	2	3	1.9
20	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
21	2	3	1.9	2	3	1.9	2	3	1.9	2	5	3.6
22	2	4	1.9	2	4	1.9	2	4	3.8	2	4	3.8
23	2	4	1.9	2	4	3.8	2	4	3.8	2	4	3.8
24	2	4	3.8	2	4	3.8	0.0			0.0		
25	0.0			0.0			2	4	1.9	2	3	1.9
26	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
27	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
28	2	3	1.9	2	3	1.9	2	4	3.8	2	6	3.5
29	2	6	3.5	2	6	3.5	2	6	3.5	2	6	3.5
30	2	6	3.5	2	6	3.5	2	6	3.5	2	6	3.5

Microseismic activity
Apparatus: Mainka NS

December 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	6	3.2	2	6	3.2	2	6	3.2	...		
2	...			...			2	6	4.5	2	6	8.1
3	2	6	4.5	2	6	4.5	2	6	3.2	2	6	3.2
4	2	6	3.2	2	6	3.2	2	6	8.1	2	6	8.1
5	2	6	8.1	2	6	8.1	2	6	8.1	2	6	8.1
6	2	6	3.2	2	6	4.5	2	6	3.2	2	4	3.9
7	2	3	2.0	2	3	2.0	2	6	4.5	2	6	4.5
8	2	4	3.9	2	4	3.9	2	3	3.8	2	3	3.8
9	2	3	3.8	2	3	3.8	2	3	2.0	2	3	3.8
10	2	3	3.8	2	3	3.8	2	4	3.9	2	4	3.9
11	2	3	3.8	2	3	3.8	2	3	3.8	2	3	3.8
12	2	4	3.9	2	4	3.9	2	3	3.8	2	4	3.9
13	2	4	3.9	2	4	3.9	2	4	3.9	2	3	3.8
14	2	3	2.0	2	4	2.0	2	4	2.0	2	3	2.0
15	2	6	4.5	2	6	8.1	2	6	4.5	2	6	8.1
16	2	6	4.5	2	6	8.1	2	5	5.1	2	5	3.6
17	2	4	3.9	2	4	3.9	2	4	3.9	2	4	3.9
18	2	4	3.9	2	4	3.9	2	4	3.9	2	3	3.8
19	2	4	3.9	2	4	3.9	2	4	3.9	2	4	3.9
20	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
21	2	3	2.0	2	3	2.0	2	4	3.9	2	4	3.9
22	2	4	3.9	2	4	3.9	2	4	3.9	2	3	2.0
23	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
24	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
25	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
26	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
27	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
28	2	3	2.0	2	3	2.0	2	4	3.9	2	4	2.0
29	2	4	3.9	2	4	3.9	2	3	2.0	2	3	2.0
30	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0
31	2	3	2.0	2	3	2.0	2	3	2.0	2	3	2.0

Microseismic activity
Apparatus: Mainka EW

December 1967

Hurbanovo

GMT	00 h			06 h			12 h			18 h		
Date	K	T	A	K	T	A	K	T	A	K	T	A
1	2	6	3.4	2	6	3.4	2	6	3.4	...		
2	...			...			2	6	5.2	2		
3	2	6	5.2	2	6	5.2	2	6	8.4	2	6	8.4
4	2	6	5.2	2	6	8.4	2	6	8.4	2	6	8.4
5	2	6	8.4	2	6	7.4	2	6	8.4	2	4	3.6
6	2	4	3.9	2	4	3.9	2	6	8.4	2	4	3.9
7	2	4	3.9	2	4	3.9	2	6	5.2	2	6	5.2
8	2	4	3.9	2	3	1.9	2	3	3.9	2	3	1.9
9	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
10	2	4	3.9	2	3	1.9	2	3	3.9	2	3	1.9
11	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
12	2	3	1.9	2	3	1.9	2	4	3.9	2	4	3.9
13	2	4	3.9	2	4	3.9	2	4	1.9	2	4	1.9
14	2	4	1.9	2	4	1.9	2	3	1.9	2	3	1.9
15	2	4	3.9	2	5	3.6	2	5	3.6	2	5	3.6
16	2	4	3.4	2	6	8.4	2	6	8.4	2	6	5.2
17	2	6	5.2	2	6	5.2	2	4	3.9	2	4	3.9
18	2	3	1.9	2	3	1.9	2	4	3.9	2	3	3.9
19	2	3	3.0	2	3	3.9	2	3	1.9	2	3	1.9
20	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
21	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
22	2	3	3.9	2	3	3.9	2	3	1.9	2	3	1.9
23	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
24	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
25	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
26	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
27	2	3	1.9	2	3	1.9	2	3	3.9	2	3	3.9
28	2	3	3.9	2	3	3.9	2	4	3.9	2	4	3.9
29	2	4	3.9	2	4	3.9	2	3	1.9	2	3	1.9
30	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9
31	2	3	1.9	2	3	1.9	2	3	1.9	2	3	1.9

Macroseismic Observations of Earthquakes on the Territory of Slovakia in the Year 1967

Macroseismic Observations 1967

Date	Origin Time	Location	Latitude North	Longitude East	Focal Depth (km)	Shaken Area (km²)	Epicentral Int. (MCS)	Felt at
January 29	00 12 14 (BCIS)	Austria	47.9°	14.3°		98000	6¾	I = 3° Bratislava
June 17	17 45 41 (BCIS)	Czechoslovakia (Little Carpathians)	48.4°	17.5°			6°	I = 5° Bínovce, Buková, Holič, Prievaly, Závod
September 16	20 19 43 (BCIS)	Czechoslovakia (Little Carpathians)	48.4°	17.2°			3½°	I = 3½° Jabloňové, Kuchyňa, Malacky, Pernek, Sološnica
September 20	22 44 14 (BCIS)	Czechoslovakia (Little Carpathians)	48.4°	17.2°	5–10	800	4½°	I = 4½° Kuchyňa, Rohožník I = 4° Borinka, Bratislava (north part), Častá, Jabloňové, Jur, Kuchyňa, Lamač, Limbach, Malacky, Modra, Pezinok, Plavecký Štvrtok, Vajnory
								I = 3½° Bratislava (south part), Ivanka pri Dunaji, Petržalka, Prievoz, Plavecké Podhradie, Rovinka, Sološnica, Stupava, Trnava

Date	Origin Time	Location	Latitude North	Longitude East	Focal Depth (km)	Shaken Area (km²)	Epicentral Int. (MCS)	Felt at
December 3	22 10 54 (BCIS)	Czechoslovakia (Little Carpathians)	48.7°	17.5°	7	3500	6½°	I = 6° Buková, Cerová, Lieskové, Prievaly, Rozbehy I = 5½° Dehtice, Dobrá Voda, Jabloňové, Plavecký Mikuláš
								I = 5° Brezová pod Bradlom, Čachtice, Chtelnica, Podolie, Trstín
								I = 4½° Horná Krupá, Krajné, Naháč, Senica, Smolenice, Veľké Kostoľany, Vrbové
								I = 4° Borovec, Borský Mikuláš, Bošany, Dolné Orešany, Dolná Krupá, Modra, Myjava, Nové Mesto n/Váhom, Trnava
								I = 3½° Bratislava, Hlohovec
								I = 3° Nitra, Partizánske, Sedinské Rovné, Sládkovičovo

Abstracts of Papers Dealing with Seismology

Author: Ivan Brouček

Title: Earthquakes in Little Carpathians

Address: Geophysical Institute of the Slovak Academy of Sciences, Bratislava, Czechoslovakia

Published in (or presented at):
Contributions of the Geophysical Institute of the Slovak Academy of Sciences, 1 (1969)

Abstract:

The presented paper deals with the investigation of 16 earthquakes observed in the territory of Little Carpathians. From the macroseismic data it is derived the surface distribution of seismic energy released during the last 80 years. From relatively increasing density of the energy, bands of higher mobility were plotted which were in relation with geologically and geophysically detected tectonic dislocations. (The paper is written in German, with Russian abstract, 4 fig., 2 tab., 14 ref.)

Author: Alexander Molnár

Title: Determination of the Prediction Coefficients of the Wiener-Kolmogorov Linear Extrapolation Formula tor a Random Sequence of Earthquake Activity in Komárno

Address: Geophysical Institute of the Slovak Academy of Sciences, Bratislava, Czechoslovakia

Published in (or presented at):
XII[th] General Assembly of the ESC, Luxemburg, 21–29 September, 1970

Abstract:

Earthquake activity is considered to be a stationary, random sequence of earthquake. The argument of the sequence is taken to be time with steps of ten years. The earthquake activity in the focus considered is known for an interval of 370 years. This pattern of the random process is used to make a forecast of m steps in advance, using the Wiener-Kolmogorov theory of extrapolating stationary, random processes. The prediction coefficient a_k of the linear extrapolation formula:

$$\xi(t + m) = a_1 \xi(t - 1) + a_2 \xi(t - 2) + \ldots + a_n \xi(t - n),$$

where ξ are centred values of the observed intensities of earthquakes in the focus in the past, are derived from the correlation theory of stationary, random processes and from the spectral formulations, based on the elementary concepts of the Hilbert space and on the fundaments of the theory of functions of the complex variable.

As the occurrence of an earthquake phenomenon is very rare, the step of the random sequence is chosen as a decade and therefore, m in the extrapolation formula has values 0, 1, 2, etc. In the case considered, the forecast is made for three values of the argument, for m = 0, 1, 2, i. e. for the decades 1970–79, 1980–89, 1990–1999, drawing on the earthquakes intensities observed over a period of 220 years, which leads to the solution of a system of linear equations of 22 unknowns and, as a check, the compulation was carried out for the whole known sequence of earthquakes, i. e. for an interval of 370 years, which lead to the solution of a system of linear equations of 37 unknowns. Also the mathematical expectation of the mean square error of the extrapolation was determined. (The paper is written in English, with English abstract, 2 fig., 3 tab., 3 ref.)

Author: Alexander Molnár

Title: On the Possibilities of the Representation of Seismic Activity via Oriented Graphs and their Boolean Matrices

Address: Geophysical Institute of the Slovak Academy of Sciences, Bratislava, Czechoslovakia

Published in (or presented at):
Bull. (Izv.) Acad. Sci. USSR, Earth Physics, No. 11 (1972)

Abstract:

As it is known, the seismic activity can be represented by chronological list of earthquakes and by maps of seismic activity. These methods of representing the seismic activity could be completed by oriented graph and his Boolean matrix. In the presented paper the transmissions amongst the seismic regions (Balkan, Italy and Alpine-Carpathian zone) are represented by the oriented graphs and their Boolean matrices. (The paper is written in Russian, with Russian abstract, 8 fig., 2 tab., 3 ref.)

Author: Alexander Molnár

Title: Stochastic Sequential Model for Forecasting Earthquakes

Address: Geophysical Institute of the Slovak Academy of Sciences, Bratislava, Czechoslovakia

Published in (or presented at):
Contributions of the Geophysical Institute of the Slovak Academy of Sciences, 3 (1972)

Abstract:

The paper is an attempt at forecasting earthquakes by means of a stochastic sequential model. Random signals on the inputs are represented by deformations observed in the epicentral region of the focus. The model responds to these signals in a statistically optimum manner by forecasting the intensity of the earthquake in the sense of the law of averages. It may happen that in the given case a phenomenon will occur which was expected only with a small probability, in which case a different model would be more suitable.

However, under the given assumptions the selected method in the sense of optimum deciding will prove to be the best. Apart from the conditions built into the model, there are also many factors, which affect the occurrence of an earthquake phenomenon and which are not known. The model is only designed for the activity of a single tectonic fault but one may cause larger deviations in forecasting. (The paper is written in English, with English abstract, 6 fig., 5 tab., 6 ref.)

Author: Alexander Molnár

Title: Absolute Probability Distribution of Stress in an Earthquake Focus

Address: Geophysical Institute of Slovak Academy of Sciences, Bratislava, Czechoslovakia

Published in (or presented at):
Contributions of the Geophysical Institute of the Slovak Academy of Sciences, 3 (1972)

Abstract:

This paper presents a method of approach to solving the probabilities of different stress source states in an earthquake focus under an absolute probability distribution. The mechanism of Markov chains has been applied under the assumption of the ergodicity of the accumulation process of stress sources in the focus. The chains are considered to be homogeneous with a constant matrix of transition probabilities. (The paper is written in English, with English abstract, 1 fig., 4 ref.)

BULLETIN OF THE SLOVAK SEISMOGRAPHIC STATIONS BRATISLAVA, ŠROBÁROVÁ, HURBANOVO AND SKALNATÉ PLESO FOR THE YEAR 1967

Obálku navrhol Pavol Amena
Redaktorky publikácie Eva Zikmundová a Klára Moravcová
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