BULLETIN OF THE SLOVAK SEISMOGRAPHIC STATIONS FOR THE YEAR 1969

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BULLETIN OF THE SLOVAK SEISMOGRAPHIC STATIONS

BRATISLAVA
ŠROBÁROVÁ
HURBANOVO
AND
SKALNATÉ PLESO
FOR THE YEAR 1969

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 1969

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Contents

Introduction

The seismological bulletin for the year 1969 contains the results of the interpretation of records from the network of seismographic stations on the territory of Slovakia: Bratislava (central station), Šrobárová, Hurbanovo and Skalnaté Pleso. The content of the bulletin is in accordance with the recommendation given in (12, 13) and it contains separately periods and amplitudes of body and surface waves and the time of $(A/T)_{max}$ for body waves.

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 the ten-day preliminary bulletins for stations Bratislava and Šrobárová, and in the monthly preliminary bulletins with readings of the seismograms from station Hurbanovo and Skalnaté Pleso. The ten-day preliminary bulletins have been 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 every tenth day of the month. 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 the epicentres, origin times or shock magnitudes, frequently quoted, are as follows: Bulletin of the ISC, Vol. 6, 1969; Ten-day Bulletin and Quarterly Bulletin of the Academy of Sciences of the U.S.S.R., Institute of Physics of the Earth, Moscow, 1969. 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

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

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. The magnitudes from body waves were calculated only for the station Bratislava and Šrobárová. The amplitudes of the maximum body waves and the maximum amplitudes of surface waves are expressed in micrometers (μm). As regards the magnitudes calculated from the maximum amplitudes of body waves (vertical component, station Bratislava), in the cases, when two remarkable maxima occur within 25 seconds of the P onset, there are declared two magnitudes mPV1, mPV2. The corresponding amplitudes and periods appear in the column 6 and the time of $(A/T)_{max}$ is given in column 4.

Microseisms were measured on 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 were read four times per day, at 0 h, 06 h, 12 h, 18 h, GMT 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.

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

In preparing this bulletin the author has been in different parts assisted by Mrs. I. Bochníčková and Mrs. A. Weihsová.

Bratislava, June 1974

A. Molnár

List of Abbreviations Used in this Bulletin

Ts	seismometer free period
Tg	galvanometer free period
Vo	static magnification
Vm	max. dynamic magnification
ϵ : 1	damping ratio
Ds	seismometer damping constant
Dg	galvanometer damping constant
r	max. deviation due to friction
σ^2	coupling factor
K1	moment of inertia (seismometer)
K2	moment of inertia (galvanometer)
l	reduced pendulum length
D	epicentral distances determined according to the time differences between S and P phases
Dc	epicentral distances calculated with regard to the geocentric coordinates by the use of a computer
Az	azimuth of stations with respect to the epicentre, measured round the station from North through East; determined by the use of a computer
h	depth of focus in km
H	origin time, expressed in GMT
i	impulsive 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 surface wave amplitudes
mPH, mPV, mPV1, mPV2, mPPH, mSH	magnitudes based on body wave amplitudes
MLH (MOS)	surface waves magnitude from the Decade Bulletin, Moscow
mPV(MOS)	body waves magnitude from the Decade Bulletin, Moscow
RES	residual (observed – calculated travel-times)

Station Instrumentation

Coordinates of 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

Bratislava: "VEGIK", electromagnetic seismograph with galvanometric registration

Constants for the year 1969

Component	Ts (s)	Tg (s)	Ds	Dg	σ^2	Tm (s)	Vm	A (m)	l (m)	K1 (kg m^2)	K2(kg m^2) x 10^{-8}	Paper speed
Z	1.78	1.91	0.874	1.05	0.114	0.85–1.70	4896	1.12	0.0940	0.0098	1.34	20 mm/min
N	2.00	1.86	0.905	1.02	0.103	0.87–1.75	2574	1.03	0.0934	0.0101	3.70	20 mm/min
E	2.00	1.92	0.896	1.08	0.104	0.85–1.75	2509	1.03	0.0940	0.0100	3.70	20 mm/min

Šrobárová: "KIRNOS", electromagnetic seismograph with galvanometric registration, class "C" according to (12)

Constants for the period January 1–June 30, 1969

Component	Ts (s)	Tg (s)	Ds	Dg	σ^2	Tm (s)	Vm	A (m)	l (m)	K1 (kg m^2)	K2 (kg m^2) x 10^{-9}	Paper speed
Z	23.0	1.13	0.59	7.30	0.241	4.4	1147	0.98	0.488	0.362	4.28	15 mm/min
N	24.4	1.20	0.49	7.50	0.261	13.0	1144	0.98	0.488	0.358	4.00	15 mm/min
E	25.0	1.20	0.55	7.70	0.242	9.4	1044	0.98	0.499	0.358	4.30	15 mm/min

Constants for the period July 1–December 31, 1969

Component	Ts (s)	Tg (s)	Ds	Dg	σ^2	Tm (s)	Vm	A (m)	l (m)	K1 (kg m^2)	K2 (kg m^2) x 10^{-9}	Paper speed
Z	21.4	1.18	0.46	7.50	0.256	14.0	1209	0.98	0.488	0.362	4.24	15 mm/min
N	23.0	1.19	0.47	7.78	0.260	14.0	1174	0.98	0.488	0.358	4.04	15 mm/min
E	25.5	1.18	0.53	8.00	0.255	11.0	1028	0.98	0.499	0.358	4.26	15 mm/min

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

Constants for the Year 1969

Month	Component	Ts	V_o	r (mm)	ε : 1	Paper speed
January–April	N	7.7	46.6	0.7	4.3	30 mm/min
	E	10.9	56.4	0.4	3.8	
May–August	N	7.7	46.6	0.7	4.3	30 mm/min
	E	10.9	56.4	0.4	3.8	
September–December	N	7.7	46.6	0.7	4.3	30 mm/min
	E	10.9	56.4	0.4	3.8	

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 (5) (Travel time branch DF)
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 (5) (Travel-time branch AB)
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 transformed into P on refraction into the core
PKS	P wave transformed into S on 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
mPH, mPPH, mSH	magnitude of the horizontal component of corresponding body waves
mPV, mPPV, mSV	magnitude of the vertical component of corresponding body waves
LmV, LmH	waves of maximum amplitudes 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 Séismologie, Strasbourg
ISC	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
USAEC	U.S. Atomic Energy Commission, Washington
NEIC	National Earthquake Information Center, U.S. Department of Commerce, Boulder, Colorado
WAR	Warsaw. Geophysical Institute of the Polish Academy of Sciences, Warsaw
UPP	Seismological Institute Uppsala, Sweden
VIE	Vienna – Hohe Warte. Zentralanstalt für Meteorologie und Geodynamik, Wien
VKA	Vienna – Kobenzl. Zentralanstalt für Meteorologie und Geodynamik, Wien

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Earthquake Observations at the Stations Bratislava Šrobárová Hurbanovo Skalnaté Pleso

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
01	BRA	eP	09 19 12	+0.8							80.00	10.42	Andreanof Islands, Aleutian Islands 51.21 N 179.34 W H = 09 07 05.2, h = 41 km, Mag = 5.4 (ISC). MLH (MOS) = 5.
02	BRA	eP e	00 44 48 47 35	+0.6							47.74	270.63	North Atlantic Ridge 30.50 N 41.93 W H = 00 36 11.9, h = 33 km, Mag = 4.6 (ISC).
02	BRA	eP	01 13 29	−12.8							47.68	270.70	North Atlantic Ridge 30.58 N 41.91 W H = 01 05 06.7, h = 33 km, Mag = 4.9 (ISC).
02	BRA	iP	14 18 32	+0.2							73.70	21.55	Near East Coast of Kamchatka 53.90 N 160.54 E H = 14 07 03.6, h = 62 km, Mag = 5.1 (ISC). MLH (MOS) = 4.5, mPV (MOS) = 5.0.
03	BRA SPC	eP ePP e eP ePP	03 23 04 24 10 24 14 03 22 48 23 53	+1.0 +1.9 +1.8 +10							31.59 29.66	95.26 99.78	Persia–USSR Border Region 37.10 N 57.83 E H = 03 16 37.3, h = 4 km, Mag = 5.4 (ISC). MLH (MOS) = 5.4.

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Ds	Az	Remarks
03	BRA	eP	13 40 23	+2.3							80.06	10.46	Andreanof Islands, Aleutian Islands
		e	41 09										
	SPC	iP	13 40 17	+3.3							78.65	12.47	51.14 N 179.39 W
		e	40 20										H = 13 28 14.1, h = 38 km,
													Mag = 5.7 (ISC).
													MLH (MOS) = 5.
05	BRA	ePKIKP	13 45 44	+1.9							128.63	51.57	Solomon Islands
		i!	45.1										8.03 S 158.94 E
		ePP	47 54	−1.5									H = 13 26 42.8, h = 71 km,
		e	49 09										Mag = 6.2 (ISC).
		eSKS2	53 21	+3.6									MLH (MOS) = 7.0,
		Lm	14 47				42	20	60	20			mPV (MOS) = 7.2,
	HRB	ePP	13 48 00	+7							128.24	52.92	MLH (BRA) = 7.3.
		Lm	14 47										
	SPC	iPKIKP	13 45 42	+2.8							126.36	54.26	
		ePP	47 40	+1									
06	BRA	ePKIKP	15 50 11	−0.5							158.77	37.93	Kermadec Islands
													30.25 S 177.80 W
													H = 15 30 20, h = 51 km,
													Mag = 5.3 (ISC).
06	BRA	ePKIKP	15 58 17	+2.1							133.60	47.09	Santa Cruz Islands Region
		ePP	16 00 45	−2.1									10.57 S 164.46 E
		ePKS2	01 48	+2									H = 15 39 01.3, h = 32 km,
		e	08 03										Mag = 6.2 (ISC).
		Lm	17 04				28	20	60	20			mPV (MOS) = 6.6,
	HRB	ePP	16 01	+15							133.26	48.57	MLH (MOS) = 6.9,
		Lm	17 00										MLH (BRA) = 7.3.
	SPC	iPKIKP	15 58 18	+7.5							131.37	50.00	
		ePP	16 00 37	+3									

06	BRA	eP	22 04 55	−1.9							5.95	229.71	Northern Italy
													44.14 N 10.80 E
													H = 22 03 28.9, h = 33 km,
													Mag = 4.1 (ISC).
07	BRA	ePKIKP	04 59 48	+2.7							139.75	47.34	New Hebrides
													16.00 S 167.50 E
													H = 04 40 21.9, h = 43 km,
													Mag = 4.8 (ISC).
10	BRA	ePn	16 18 48	−0.6							5.08	225.11	Northern Italy
		ePg	19 08	−4									44.47 N 12.08 E
		eSg	19 46	+4									H = 16 17 32, h = 22 km,
		Lm	21 18										Mag = 4.4 (ISC).
	HRB	Lm	16 19.7								5.44	233.52	Traces
11	BRA	ePKP2	04 46 48	−11.6							157.45	33.51	Kermadec Islands Region
		e	47 24										28.33 S 176.79 W
													H = 04 26 23, h = 35 km,
													Mag = 5.4 (ISC).
													MLH (MOS) = 5.8.
11	BRA	eP	12 09 20	−1.8							64.16	214.70	Ascension Island Region
													10.20 S 13.17 W
													H = 11 58 43, h = 3 km,
													Mag = 4.9 (ISC).
14	BRA	eP	23 15 41	+2.7							12.86	157.32	Turkey
		eS	17 40	+7									36.11 N 23.19 E
		Lm	21				23	6	32	6			H = 23 12 06.2, h = 22 km,
	SRO	iP	23 15 32.2	+4.3							12.24	161.05	Mag = 5.6 (ISC).
		iS	18 14	+8									mPV (MOS) = 6.3,
		Lm	22.5				49.2	12	47	12			MLH (MOS) = 6.0.
	HRB	eP	23 15 34	+4.5							12.32	160.70	MLH (BRA) = 6,
		eS	18 00	−5									MLH (SRO) = 6.
		Lm	20										

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
15	BRA	ePn	08 48 09	−0.6							6.96	108.00	Romania 45.62 N 26.55 E H = 08 46 29.0, h = 129 km, Mag = 4.6 (ISC). mPV (MOS) = 5.0.
19	BRA	iP	07 13 30.0	+0.2	1.6	2.5	2.3	2.5	2.3	2.5	75.99	36.29	Hokkaido, Japan Region 44.89 N 143.21 E H = 07 02 07.9, h = 238 km, Mag = 6.3 (ISC). mPV (MOS) = 6.8, mPV (BRA) = 6.5, mPH (BRA) = 7.1, mSH (BRA) = 7.5.
		e	13 52										
		ePP	16 28	+3									
		eS	22 56	+3.7	6.5	4	12	4	12	4			
		eSS	27 46	−8.0									
	SRO	iP	07 13 31.5	+2.8							75.79	36.97	
		isP	14 49.5	+6.5									
		iSKS	23 10	−1									
	HRB	iP	07 13 33	+4.3							75.79	36.91	
		ePP	16 30	+5									
		iS	22 53	+3									
		Lm	44.3										
	SPC	iP	07 13 14	−4.8							73.92	38.37	
		iS	22 24	−6									
19	BRA	ePKIKP	19 09 58	−6.9							138.67	46.84	New Hebrides 14.89 S 167.22 E H = 18 50 52.4, h = 114 km, Mag = 6.2 (ISC).
		esPKP	10 52	+4									
		ePP	13 13	+12									
		eSKKS	19 46										
	SRO	e	19 10 29								138.30	48.65	mPV (MOS) = 6.9.
		ePP	12 53	−6									
		ePKS	13 20	−19									
		iSKKS	19 43	+2.8									
		e	31 21										

19	HRB	ePP	19 13 00	+1							138.32	48.45	
		ePKS	13 25	−14									
		eSKKS	19 48	+7.8									
	SPC	iPKIKP	19 09 56	−4.9							136.43	49.87	
		e	10 06										
		ePP	12 48	+1									
		ePKS	13 27	+3									
20	BRA	ePn	06 00 55	−5.3							5.22	202.24	Adriatic Sea 43.3 N 14.5 E H = 05 59 40, h = 4 km (ISC).
20	BRA	ePKP	12 43 51	−2.6							133.51	46.71	Santa Cruz Islands Region 10.35 S 164.66 E H = 12 24 35, h = 5 km, Mag = 5.5 (ISC).
		ePP	46 24	−1									
		e	47 27										
	SRO	e	12 47 21								133.15	48.36	
		e	49 13										
		eSS	13 04 05	+0.5									
		e	13 04 10										
	SPC	ePKIKP	12 43 52	+2.5							131.28	49.63	
20	BRA	–iP	14 31 48	+1.7							74.11	18.12	Komadorsky Islands Region 54.84 N 166.00 E H = 14 20 10.6, h = 17 km, Mag = 6.0 (ISC). MLH (MOS) = 5.8, mPV (MOS) = 6.5.
		ePcP	31 59	−4									
	SPC	iP	14 31 40	+1.7							72.47	19.98	
		e	34 19										

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
21	BRA	eP ePP	08 14 30 16 30	−4.0 0							50.02	270.00	North Atlantic Ridge 28.67 N 43.59 W H = 08 05 42, h = 48 km, Mag = 5.1 (ISC). MLH (MOS) = 5.2.
21	BRA	ePKIKP epPKP e e	20 57 39 57 48 58 00 58 21	+1.4 −9							145.88	49.47	Loyalty Islands Region 21.91 S 169.78 E H = 20 38 04, h = 46 km, Mag = 4.9 (ISC).
22	BRA	iP e	00 53 54 54 11	−0.4							72.49	19.36	Off East Coast of Kamchatka 55.85 N 163.00 E H = 00 42 31.4, h = 46 km, Mag = 5.6 (ISC). MLH (MOS) = 5.5.
22	BRA	eP ePcP e e	17 26 25 26 31 26 58 27 12	−3.3 −10							76.48	26.54	Kurile Islands 49.30 N 155.53 E H = 17 14 43.7, h = 59 km, Mag = 5.4 (ISC).
	SPC	eP	17 26 21	+2.6							74.62	28.54	MLH (MOS) = 5.2.
24	BRA	+iPKIKP iPKHKP ePKP2 epPKP2 e e	02 51 42 51 50 52 13 54 06 59 30 03 04 54	−1.1 +5.6 +13.4 −5							150.56	32.78	Fiji Region 21.87 S 179.54 W H = 02 33 03.4, h = 587 km, Mag = 5.9 (ISC). mPV (MOS) = 6.3.
	SRO	−iPKIKP epPK eSKKS e	02 51 42 54 02 03 01 20 04 50	−0.5 0							150.40	35.21	
	HRB	ePKIKP epPK	02 51 48 54 00	+5.2							150.40	34.95	
25	BRA	eP ePP	05 33 11 37 12	+0.6 −12							101.95	75.21	Molucca Passage 0.77 N 126.02 E
	SPC	eP ePP	05 33 05 37 16	+6 +10							99.69	77.47	H = 05 19 17.1, h = 24 km, Mag = 5.9 (ISC). MLH (MOS) = 6.
25	BRA	eP e	12 21 39 21 47	+1.5							72.40	19.34	Near East Coast of Kamchatka 55.94 N 162.98 E H = 12 10 13.1, h = 31 km, Mag = 4.9 (ISC).
25	BRA	eP e	23 45 08 45 23	+11.8							63.58	84.48	India–East Pakistan Border Region 22.98 N 92.40 E H = 23 34 28.4, h = 49 km, Mag = 5.2 (ISC).
26	BRA	e	00 12 30								146.99	120.90	West of Macquarie Island 54.3 S 144.2 E H = 23 52 42, h = 33 km, Mag = 4.5 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
26	BRA	–iP	15 17 02	+2.3							72.47	19.44	Near East Coast of Kamchatka
		iPP	19 54	+12									55.84 N 162.86 E
		Lm	53.5				6.7	15	33.3	15			H = 15 05 35.3, h = 33 km,
	SRO	eP	15 17 02	+2.0							72.53	20.06	Mag = 5.4 (ISC).
		e	18 11										MLH (MOS) = 6.0,
		Lm	53.5				4.4	16	8.5	16			mPV (MOS) = 6.4,
													MLH (BRA) = 6.7,
													MLH (SRO) = 6.2.
26	BRA	iP	17 00 18	–0.6							72.43	19.40	Near East Coast of Kamchatka
													55.89 N 162.91 E
													H = 16 48 53, h = 25 km,
													Mag = 5.0 (ISC).
27	BRA	ePKIKP	03 29 10	–1.9							159.35	36.52	Kermadec Islands Region
		e	30 10										30.53 S 176.97 W
													H = 03 09 16.1, h = 24 km,
													Mag = 5.0 (ISC).
27	BRA	ePKP2	10 21 06	+1.9							158.78	42.51	Kermadec Islands Region
		e	21 22										31.09 S 179.46 W
													H = 10 01 01.4, h = 263 km,
													Mag = 4.8 (ISC).
27	SRO	ePS	13 42 35	–8.6							102.47	61.76	Western Caroline Islands
		e	14 09 27										8.80 N 137.82 E
		Lm	22.5				1.6	16	4.2	16			H = 13 15 24.8, h = 5 km,
													Mag = 5.5 (ISC).
													MLH (MOS) = 6,
													MLH (SRO) = 6.1.
28	BRA	+iPKIKP	00 47 13	+4.5							145.84	18.02	Tonga
		i	47 28										15.0 S 173.25 W
		i	48 28										H = 00 27 30.8, h = 13 km,
													Mag = 5.1 (ISC).
29	BRA	eP	05 30 31	–1.5							72.34	19.32	Near East Coast of Kamchatka
		e	30 41										56.00 N 162.96 E
													H = 05 19 15, h = 92 km,
													Mag = 4.6 (ISC).
29	BRA	ePg	11 03 37										Local shock
29	BRA	ePKIKP	18 04 12	+1.4							148.26	15.91	Tonga Region
		esPKP	04 24	–2									17.15 S 171.57 W
		e	0442										H = 17 44 31.6, h = 35 km,
		e	05 48										Mag = 6.0 (ISC).
	SRO	ePKIKP	18 04 13	+2.2							148.36	18.23	
		e	04 17										
		e	04 48										
30	SRO	eP	10 43 19	+3.7							99.19	72.45	Talaud Islands
		e	47 47										4.77 N 127.50 E
		eScS	54 39	+2									H = 10 29 40.3, h = 72 km,
		Lm	11 20				52.7	20	86.5	20			Mag = 5.9 (ISC).
	HRB	e	10 43 50								99.25	72.35	mPV (MOS) = 6.6,
		ePP	47 20	–1.6									MLH (MOS) = 7.4,
		Lm	11 28										MLH (BRA) = 7.7,
	BRA	eP	10 43 20	+1.7							99.85	71.46	MLH (SRO) = 7.3.
		ePP	46 30	–2									
		eScS	54 42	+4									
		Lm	11 25.5				100	18	222	18			
	SPC	eP	10 43 20	+8							97.56	73.76	
		i	47 41										

January 1969

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
31	BRA	eP e e	00 58 01 01 02 11 03 53	+1.3							100.71	71.34	North of Halmahera 4.18 N 128.14 E H = 00 44 15.1, h = 49 km, Mag = 5.5 (ISC). mPV (MOS) = 6.6,
31	SRO	eP ePP e Lm	00 58 03 01 02 07 11 39 01 47	+6.3 +2			10.5	20	2.1	20	100.05	72.34	MLH (MOS) = 6.3, MLH (SRO) = 6.35.
31	BRA	eP	04 21 47	+2.4							73.59	22.82	Near East Coast of Kamchatka 53.48 N 158.60 E H = 04 10 23, h = 112 km, Mag = 5.2 (ISC).
31	BRA SPC	ePKIKP e e iPKIKP	15 18 44 18 56 19 53 15 18 41	+2.3 +2							145.91 144.15	21.04 25.55	Tonga 15.47 S 174.94 W H = 14 59 34.3, h = 261 km, Mag = 5.4 (ISC).
31	BRA SPC	ePKIKP ePKIKP e	23 50 27 23 50 28 51 00	−1.2 −2.0							159.12 156.90	45.80 49.75	South of Kermadec Islands 32.03 S 179.60 E H = 23 31 16.4, h = 385 km, Mag = 5.2 (ISC).

February 1969

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
01	BRA	eP ePP	20 13 28 01 15 40	−0.6 −2							59.39	243.79	Central Mid-Atlantic Ridge 7.16 N 33.98 W H = 20 03 28, h = 45 km, Mag = 4.7 (ISC).
02	SRO	ePP e eSS	01 56 43 02 06 39 10 55	−3 +0.5							100.40	72.37	North of Halmahera 3.89 N 128.34 E H = 01 38 47, h = 48 km, Mag = 5.4 (ISC). mPV (MOS) = 6.3, MLH (MOS) = 6.
03	BRA	ePKIKP epPKIKP i i	08 10 12 12 24 12 37 12 46	−0.9 −4.0							153.00	42.64	South of Fiji 25.87 S 178.23 E H = 07 51 24.9, h = 618 km, Mag = 5.3 (ISC).
03	BRA	ePKIKP e e	08 32 24 32 34 32 49	−0.3							153.26	40.30	South of Fiji 25.85 S 178.26 E H = 08 13 45.0, h = 629 km, Mag = 5.0 (ISC).

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
03	BRA	–iP	21 55 23	–1.4							99.85	71.40	Talaud Islands
		e	57 11										4.81 N 127.54 E
		e	58 33										H = 21 41 43.4, h = 46 km,
		iPP	59 33	+1									Mag = 6.1 (ISC).
		e	22 01 38										mPV (MOS) = 7.3,
		eSKS	06 00	–3									MLH (MOS) = 6.8,
		i	08 15										MLH (BRA) = 7.3,
		iSPP	09 06	–5									MLH (SRO) = 6.5.
		Lm	34.5				14	20	104	20			
	SRO	+iP	21 55 22	+1.1							99.19	72.40	
		ePP	59 31	+5									
		eScS	22 06 51	+5									
		Lm	38.5				12.7	20	12.8	20			
	HRB	ePP	21 59 36	+9							99.25	72.29	
		eS	22 06 53	+18									
		Lm	39										
	SPC	iP	21 55 17	+3.2							97.56	73.70	
		iPP	59 17	+2.8									
04	BRA	e	01 53 09								100.17	79.50	Northern Celebes
		e	57 35										0.64 S 121.67 E
													H = 01 38 27, h = 39 km,
													Mag = 5.4 (ISC).
													mPV (MOS) = 6.4,
													MLH (MOS) = 6.0.
	SRO	ePP	01 56 23	+6.7							99.43	80.48	
		e	02 01 15										
		eSS	10 35	+1.3									

04	BRA	eP	04 24 03	–0.3							100.76	269.93	Off Coast of Northern Peru
													8.07 S 80.09 W
													H = 04 10 16, h = 27 km,
													Mag = 5.9 (ISC).
													MLH (MOS) ~ 6.
05	BRA	eP	23 55 38	–3.6							62.15	235.66	Central Mid-Atlantic Ridge
													0.76 N 29.79 W
													H = 23 45 21.3, h = 33 km,
													Mag = 5.0 (ISC).
09	BRA	–iPg	23 08 45.5	–1.2							1.05	138.39	Hungary
		e	08 47										47.38 N 18.13 E
		e	08 50										H = 23 08 27.2, h = 81 km,
		iSg	08 56	+2.0									MLH (BRA) = 3.7.
		Lm	09.5				2.4	1.5	2.9	1.5			
10	BRA	ePKIKP	23 16 37	–1.5							150.72	36.44	South of Fiji
		ePKP2	16 48	–12									22.75 S 178.76 E
		e	17 24										H = 22 58 03.3, h = 635 km,
		e	17 41										Mag = 6.0 (ISC).
		ePP	20 34	+3									mPV (MOS) = 6.6.
		e	24 00	–4									
		eSKKS	26 17	–4									
		eSKSP	29 44	–4									
	SRO	–iPKIKP	23 16 37	–0.6							150.50	38.86	
		iPKP2	16 58	+1									
		i	19 16										
		ePP	20 24	–6									
		ePPP	24 06	+2									
		eSKKS	26 18	–3									
		eSKSP	29 46	–2									
		eSS	39 06	+7									
		eSSS	44 54	+2									
	SPC	iPKIKP	23 16 38	+3.2							148.62	40.49	

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
11	BRA	eP	22 16 57	0.0							43.54	74.85	Kirghiziya–Sinkiang Border Region
		e	17 08										41.42 N 79.24 E
		ePP	18 45	+5									H = 22 08 51, h = 3 km,
		e	18 55										Mag = 5.8 (ISC).
		e	19 16										mPV (MOS) = 6.4,
		eS	23 19	–8									MLH (MOS) = 6.6,
		e	31 30										MLH (BRA) = 6.3,
		Lm	37.2				6	5	7	5			MLH (SRO) = 6.5,
	SRO	+iP	22 16 53	+1.6							42.85	75.15	
		i	18 37										
		eS	23 17	–1									
		i	26 41										
		Lm	36				20.2	18	47	12			
	HRB	eP	22 16 58	+5							42.91	75.15	
		ePP	18 40	+5									
		e	19 00										
		Lm	34.0										
	SPC	iP	22 16 40	+0.5							41.27	77.74	
12	BRA	–iP	15 51 21	+3.2							72.45	19.44	Near East Coast of Kamchatka
	SPC	iP	15 51 11	+1							70.77	21.26	55.86 N 162.86 E
													H = 15 39 53, h = 27 km,
													Mag = 5.1 (ISC).
													MLH (MOS) = 5.
13	BRA	+iP	01 48 02	+0.8							79.90	4.40	Fox Islands, Aleutian Islands
		e	48 11										52.13 N 169.94 W
													H = 01 35 50, h = 2 km,
													Mag = 5.2 (ISC).

15	BRA	e	08 56 46								5.53	232.05	Northern Italy
		e	58 07										44.6 N 11.0 E
		Lm	58.1										H = 08 54 49, h = 84 km (ISC).
15	BRA	ePKIKP	14 08 16	+3.1							137.57	45.98	New Hebrides
		e	11 04										13.65 S 167.17 E
													H = 13 49 14.2, h = 211 km,
													Mag = 5.4 (ISC).
17	BRA	ePP	01 00 44	–13							101.25	71.45	North of Halmahera
		e	01 12										3.69 N 128.40 E
		e	02 58										H = 00 43 03, h = 49 km,
	SRO	eP	00 56 49	+1.7							100.59	72.46	Mag = 5.6 (ISC).
		ePP	01 01 00	+3									mPV (MOS) = 6.4,
		e	08 33										MLH (MOS) = 6.2,
		e	13 27										MLH (SRO) = 6.3.
		ePSS	15 37	+3									
		e	19 25										
		Lm	55				4	18	7.8	18			
18	BRA	ePKIKP	05 34 37	+2.4							153.74	29.07	South of Fiji
		e	35 01										24.18 S 176.51 W
													H = 05 14 56, h = 104 km,
													Mag = 5.4 (ISC).
20	BRA	ePKIKP	03 19 07	+10.2							150.74	21.10	Tonga
		e	19 15										20.17 S 173.69 W
													H = 02 59 13.7, h = 33 km,
													Mag = 5.2 (ISC).
20	BRA	e	10 47 33								101.40	71.56	North of Halmahera
		ePP	48 15	+1.0									3.50 N 128.41 E
													H = 10 30 21.5, h = 74 km,
													Mag = 5.8 (ISC).
													mPV (MOS) = 6.7,
													MLH (MOS) = 6.2.

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
20	BRA	e e	17 16 06 16 30								101.31	71.57	North of Halmahera 3.57 N 128.34 E H = 16 58 15, h = 49 km, Mag = 5.2 (ISC). mPV (MOS) = 6.2, MLH (MOS) = 5.9.
21	BRA	ePn e	18 42 20 43 03	+3.5							9.66	157.36	Greece 39.14 N 21.87 E H = 18 39 57, h = 33 km, Mag = 4.6 (ISC).
21	BRA	–iPKIKP i i	21 06 08 06 20 06 59	+4.2							146.95	18.03	Tonga 16.10 S 173.01 W H = 20 46 26.8, h = 35 km, Mag = 5.4 (ISC).
	SPC	iPKIKP	21 06 06	+4.9							145.27	22.76	
22	BRA	eP i	18 30 35 30 58	–1.0							153.91	30.51	South of Fiji 24.57 S 177.09 W H = 18 11 03.9, h = 157 km, Mag = 4.9 (ISC).
23	BRA	eP e e iPP i i ePPP e e ePS eSS Lm	00 50 50 51 10 54.28 54 46 55 19 56 25 57 01 58 19 01 01 07 03 55 09 19 36.5	+5.9 –7 –1 +3 +9 			0.7	4.5	0.7	4.5	100.23	83.29	Celebes 3.17 S 118.91 E H = 00 37 02, h = 53 km, Mag = 5.8 (ISC). mPV (MOS) = 7.3, MLH (MOS) = 7.0, MLH (BRA) = 7.3, MLH (SRO) = 7.1, mPPH (BRA) = 6.8.
	SRO	eP e ePP eScS Lm	00 50 40 54.36 54 52 01 02 12 43.5	–0.6 +3 +7 			79 33	20 20	79 31.3	20 20	99.46	84.26	
	HRB	e ePS eSS Lm	00 55 00 01 03 45 09 12 42	 +1 +11 							99.53	84.16	
	SPC	eP iPP	00 50 22 54 41	–12 +5							98.06	85.51	
24	BRA	eP e	00 27 15 28 18	+2.6							110.47	75.97	Tanimbar Islands Region 6.23 S 131.01 E H = 00 08 46, h = 48 km, Mag = 5.6 (ISC). mPV (MOS) = 6.3.
24	SPC	iPg iSg Lm	14 49 52 50 11 50.5	+2.0 +4.2 							1.28	329.54	Poland 50.29 N 19.23 E H = 14 49 24.5 (WAR).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
25	BRA	eP	07 51 53	+0.8							88.14	290.81	Honduras 15.28 N 87.42 W H = 07 39 02, h = 24 km, Mag = 5.3 (ISC).
25	SRO	iPg	10 28 11.8										Local shock
25	SRO	ePKP2 e	10 55 48 59 08	+4.8							155.19	32.59	South of Fiji 25.76 S 176.20 W H = 10 35 26.4, h = 55 km, Mag = 5.1 (ISC).
25	BRA SPC SRO	ePn e e ePn	14 17 22 18 07 14 17 36 14 17 24	–1.2 +0.2							12.61 11.38 11.73	115.98 127.58 117.08	Turkey 41.56 N 32.27 E H = 13 43 50.8, h = 31 km, Mag = 4.3 (USPIG).
26	BRA	iPn eSn eSb	01 29 16 30 31 30 47	–7.0 –0.8 –0.1							5.38	275.25	Germany 48.38 N 9.06 E H = 01 28 02.6, h = 27 km, Mag = 4.4 (ISC). MLH (BRA) = 4.9.
	SRO	ePg e e eSg e Lm	01 30 00 30 12 30 32 31 22 31 48 32.1	–6.3 –5 							66.23	278.65	
	HRB SPC	eSg Lm ePn ePg Lm	01 31 18 32.5 01 29 51 30 46 32.3	–7 –4 +16 							6.14 7.44	278.12 267.98	

28	BRA HRB SPC	–iP iS Lm +iP iS Lm iP	02 45 44 50 00 55 02 45 50 50 14 02 46 08	+0.4 +3.8 +0.5 +8 +2.2			490	10	490	10	23.75 24.34 26.06	249.33 251.31 251.13	North Atlantic Ocean 35.97 N 10.58 W H = 02 40 31.2, h = 14 km, Mag = 6.5 (ISC). mPV (MOS) = 8.1, MLH (MOS) = 7.8, MLH (BRA) = 7.5.
28	BRA	eP	04 30 46	+1.1							23.50	249.75	North Atlantic Ocean 36.26 N 10.47 W H = 04 25 37.8, h = 37 km, Mag = 5.6 (ISC).
28	BRA	eP e	15 25 49 26 10	–2.0							23.99	249.50	North Atlantic Ocean 35.87 N 10.86 W H = 15 20 38.8, h = 34 km, Mag = 4.4 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
01	BRA	iPg	16 35 04										Local shock
01	BRA	eSg e e	20 30 08 30 10 30 22	–2							5.36	273.53	Germany 48.22 N 9.09 E H = 20 27 14.9, h = 12 km (ISC).
02	BRA	iP e	18 06 09 06 20	+0.6							23.83	249.84	North Atlantic Ocean 36.08 N 10.81 W H = 18 00 58.4, h = 40 km, Mag = 4.5 (ISC).
03	BRA	–iP iPP i i eS i Lm	01 01 49 01 58 02 07 02 10 03 51 04 40 06.0	–2.3 +12 –5 			0.2 7	1.4 3.5	0.2 7	1.4 3.5	11.00	133.49	Turkey 40.08 N 27.50 E H = 00 59 10.5, h = 6 km, Mag = 5.6 (ISC). MLH (MOS) = 5.8, MLH (BRA) = 5.8, MLH (SRO) = 5.7.
	SRO	eP iPP e e Lm	01 01 35 01 42 02 11 04 03 06.5	–5.0 –5.0 			 15	 7	 33	 7	10.17	136.09	
	HRB	eP eS Lm	01 01 40 03 34 05.5	–1.6 –4.3 							10.27	135.91	
03	BRA	ePKIKP e	13 32 32 33 07	+11.8							147.40	18.02	Samoa Region 16.54 S 172.90 W H = 13 12 45.0, h = 54 km, Mag = 4.6 (ISC).
03	SRO	+iP e Lm	15 01 13.0 30 41 39	–0.1 			 2.1	 17	 3.9	 17	75.50	23.95	Off East Coast of Kamchatka 51.57 N 159.29 E
	BRA	+iP i i i	15 01 14 02 07 02 25 03 51	+1.0 							75.50	23.28	H = 14 49 31.6, h = 38 km, Mag = 5.4 (ISC). MLH (MOS) = 6, MLH (SRO) = 5.8.
	SPC	iP	15 01 05	+1.5							73.72	25.23	
03	BRA	iPKIKP e e e ePP	16 49 51 49 57 50 18 50 40 51 25 53 31	–2.2 +6							147.47	17.84	Samoa Region 16.58 S 172.79 W H = 16 30 15.2, h = 33 km, Mag = 4.9 (ISC).
	SRO	ePKIKP e ePP	16 49 59 50 27 53 15	+5.6 –11							147.54	20.12	
	SPC	iPKIKP	16 49 56	+5.6							145.79	22.62	
04	BRA	iP e	01 50 46 50 33	–8.9 							15.15	132.45	Turkey 36.98 N 31.04 E
	SPC	eP	01 50 51	+4.1							14.51	143.23	H = 01 47 25.8, h = 109 km, Mag = 4.8 (ISC).
04	SRO	ePg	11 29 59										Local shock
05	BRA	eP e	02 03 44 04 04	+2.8							67.06	197.89	Near Coast of Peru 17.4 S 0.13 W H = 01 50 04, h = 136 km, Mag = 3.7 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
05	SRO	ePg	08 14 51										Local shock
05	SRO	ePg	08 36 05										Local shock
05	SRO	ePg	09 20 47										Local shock
05	SRO	ePg	10 02 37										Local shock
05	BRA	eP	14 05 57	+7.2							100.80	71.45	North of Halmahera 4.04 N 128.11 E H = 13 52 08, h = 72 km, Mag = 5.5 (ISC).
		e	06 19										
		e	10 01										
		e	11 31										
	SRO	ePP	14 09 59	−6.0							100.14	72.46	MLH (MOS) = 6.
		ePPP	12 00	−14.0									
		e	13 55										
05	BRA	eP	14 43 49	−6.0							11.04	133.37	Turkey 40.06 N 27.56 E H = 14 41 16.4, h = 33 km, Mag = 4.7 (ISC).
		e	43 57										
		eS	45 58	0									
		e	47 37										
		e	48 04										
	SRO	e	14 46 39								10.22	135.95	
		Lm	48 15										

05	BRA	+iP	19 40 43	+0.7							40.60	86.46	Hindu Kush Region 36.41 N 70.73 E H = 19 33 22.9, h = 206 km, Mag = 5.7 (ISC).
		ipP	41 36	+9									
		isP	41 43	−6									
		iPP	42 23	−2									
		i	43 04										
		isPP	43 22	−8									
		Lm	51										
	SRO	+iP	19 40 38	+1.5							39.81	86.88	
		epP	41 24	+3									
		esP	41 45	+5									
		esPP	43 13	+12									
		e	42 25										
		eS	46 29	+3									
		esS	47 48	+12									
		eSS	49 49	+25									
	SPC	iP	19 40 29	+23							38.49	89.97	
06	BRA	+iP	19 28 52	−2.1							23.72	249.40	North Atlantic Ocean 36.01 N 10.57 W H = 19 23 43, h = 18 km, Mag = 4.9 (ISC).
		i	29 00										
		i	29 07										
		iPP	29 23	−1									
		i	30 29										
		i	31 11										
07	BRA	+iP	08 34 27	−0.6							39.11	63.92	Eastern Kazakhstan 49.84 N 78.15 E H = 08 26 57.6, h = 0 km, Mag = 5.6 (ISC).
		i	34 35										
		i	34 42										
		iPP	36 03	+2									
	SPC	iP	08 34 13	+4.2							36.79	66.33	
		ePP	35 24	+9									
08	BRA	eP	10 31 45	−2.0							77.45	40.52	Hokkaido, Japan Region 41.35 N 139.71 E H = 10 20 09.9, h = 174 km, Mag = 5.5 (ISC).
		ePcP	32 00	+7									
		ePP	34 45	0									
		e	36 33										

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
08	BRA	+iPKIKP	18 28 24	+2.7							146.82	18.99	Tonga
		e	28 43										16.08 S 173.57 W
		esPKP2	29 31	–1									H = 18 09 02, h = 178 km,
	SPC	iPKIKP	18 28 22	+4.0							145.11	23.66	Mag = 5.0 (ISC).
09	BRA	iP	13 13 28	+3.0							23.57	249.60	North Atlantic Ocean
		i	13 37										36.17 N 10.49 W
		e	14 13										H = 13 08 16.7, h = 31 km,
													Mag = 4.5 (ISC).
09	BRA	ePKIKP	14 06 40	+4.3							111.83	70.72	Western New Guinea Region
		e	07 22										4.10 S 135.65 E
													H = 13 48 01.3, h = 14 km,
													Mag = 5.6 (ISC).
													MLH (MOS) = 6.2.
09	BRA	ePKIKP	14 57 40	+4.3							111.80	70.71	Western New Guinea Region
		e	58 22										4.07 S 135.64 E
													H = 14 39 04.1, h = 33 km,
													Mag = 5.4 (ISC).
10	BRA	iPKIKP	07 12 40	–4.1							120.13	61.54	Eastern New Guinea Region
		i	14 14										5.60 S 147.29 E
													H = 06 54 16.3, h = 194 km,
													Mag = 5.7 (ISC).
10	BRA	e	19 13 55								40.69	86.25	Hindu Kush Region
													36.47 N 70.92 E
													H = 19 04 02.7, h = 195 km,
													Mag = 4.8 (ISC).
14	BRA	eP	08 59 49	–5.5							89.69	288.76	Nicaragua
													12.75 N 86.85 W
													H = 08 47 18.4, h = 203 km,
													Mag = 5.5 (ISC).
14	BRA	iPg	11 05 43										Local shock
		i	05 46										
		i	05 49										
14	BRA	iPg	14 01 28										Local shock
		i	01 30										
		i	01 34										
15	BRA	+iP	13 47 41	+0.3							79.94	10.20	Andreanof Islands, Aleutian Islands
		i	47 50										51.31 N 179.02 W
		i	48 08										H = 13 35 35.3, h = 44 km,
		i	49 08										Mag = 5.5 (ISC).
	SPC	iP	13 47 36	+2.8							78.54	12.20	MLH (MOS) = 5.5.
16	BRA	+iP	16 06 29	–0.1							81.09	40.10	Near East Coast of Honshu, Japan
		i	07 04										38.57 N 142.83 E
		i	08 23										H = 15 54 16.7, h = 33 km,
		iPP	09 33	–4									Mag = 5.5 (ISC).
													MLH (MOS) = 6.
17	BRA	ePKIKP	01 14 44	+7.2							146.54	30.72	Fiji
													17.72 S 179.92 E
													H = 00 56 06.4, h = 619 km,
													Mag = 5.3 (ISC).

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
18	BRA	–iPKIKP	03 45 11	–0.2							145.96	47.27	Loyalty Islands Region
		iPKP2	45 15	0									21.31 S 170.94 E
		i	47 31										H = 03 25 36, h = 31 km,
													Mag = 5.3 (ISC).
18	BRA	–iPKIKP	03 52 24	–1.5							146.05	47.10	Loyalty Islands Region
		i	52 44										21.34 S 171.08 E
		i	53 26										H = 03 32 51, h = 40 km,
	SPC	iPKIKP	03 52 30	+8.2							143.82	50.31	Mag = 5.2 (ISC).
													MLH (MOS) = 5.5.
18	BRA	iPKIKP	04 01 11	+13.3							146.01	18.48	Tonga
		i	01 20										15.23 S 173.47 W
													H = 03 41 17, h = 1 km,
													Mag = 5.0 (ISC).
18	BRA	–iP	16 28 43	+0.5							79.51	31.94	Kurile Islands Region
		iPcp	28 47	–3									44.13 N 150.85 E
		i	29 29										H = 16 16 39.4, h = 45 km,
		e	30 31										Mag = 5.6 (ISC).
	SPC	iP	16 28 35	+2.9							77.52	34.05	MLH (MOS) = 5.5.
19	BRA	+iP	14 11 28	+1.2							81.76	55.74	Ryukyu Islands
		i	11 35										28.81 N 128.34 E
		i	12 07										H = 13 59 26.0, h = 168 km,
	SRO	eP	14 11 27	–2.4							81.28	56.53	Mag = 5.6 (ISC).
		e	12 11										
		e	15 11										
		eScS	21 29	–5									
	SPC	iP	14 11 17	+1.9							79.46	58.05	
		e	14 42										

20	BRA	eP	08 30 39	–0.9							89.64	319.98	Gulf of California
		e	30 52										31.32 N 114.18 W
													H = 08 17 45.1, h = 39 km,
													Mag = 5.3 (ISC).
													MLH (MOS) = 5.6,
													MLH (SRO) = 5.8.
	SRO	Lm	09 10				2.2	18.0	2.4	18.0	90.44	320.85	
20	BRA	–iP	16 32 24	–0.4	0.3	2.0					96.75	69.08	Philippine Islands Region
		i	32 38										8.69 N 127.35 E
		e	33 14										H = 16 18 57.5, h = 43 km,
		ePP	36 29	+5									Mag = 6.1 (ISC).
		e	45 23										mPV (BRA) = 6.3,
		Lm	17 34.5										MLH (MOS) = 6,
													MLH (SRO) = 6.0.
	SRO	eP	16 32 35	+13.1							96.11	70.04	
		ePP	36 25	+8									
		e	37 09										
		e	42 57										
		eS	43 45	+11									
		eSS	49 20	+8									
		Lm	17 25				4.5	18	2.4	18			
	SPC	–iP	16 32 17	+2.8							94.45	71.40	
		ePP	36 07	+2									
21	BRA	iP	03 17 20	+0.8							80.00	38.46	Off East Coast of Honshu,
		i	17 29										Japan
		i	19 11										40.37 N 143.81 E
	SPC	iP	03 17 11	+2.7							77.89	40.63	H = 03 05 09.3, h = 14 km,
													Mag = 5.5 (ISC).
													MLH (MOS) = 5.5.

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
21	BRA	eP	04 06 38	–0.1							89.53	319.99	Gulf of California 31.42 N 114.13 W H = 03 53 47.4, h = 69 km, Mag = 5.3 (ISC). MLH (MOS) = 5.5.
21	BRA	eP e	05 09 14 09 29	–2.7							89.76	320.06	Gulf of California 31.26 N 114.34 W H = 04 56 21, h = 36 km, Mag = 5.4 (ISC). MLH (MOS) = 5.6.
21	BRA	eP	06 12 17	+2.9							89.57	319.97	Gulf of California 31.38 N 114.13 W H = 05 59 21, h = 52 km, Mag = 5.0 (ISC).
21	BRA SPC	eP eP	06 47 23 06 47 29	–0.6 +2.7							89.76 90.27	320.04 322.39	Gulf of California 31.25 N 114.31 W H = 06 34 26, h = 23 km, Mag = 5.6 (ISC). MLH (MOS) = 5.5.
21	BRA	iP	10 23 08	–3.4							89.75	320.11	Gulf of California 31.29 N 114.38 W H = 10 10 15, h = 29 km, Mag = 5.4 (ISC).
21	BRA	eP	12 17 02 17 38 17 44	+1.3							76.38	26.25	Kurile Islands 49.52 N 155.83 E H = 12 05 17.6, h = 67 km, Mag = 5.2 (ISC). MLH (MOS) = 5.
22	SPC	iPg iSg	04 44 43 44 50										Near shock
22	BRA	eP e e ePP ePPP e	05 00 02 00 20 00 47 01 34 02 08 02 26	0.0 –1 +10 							39.10	83.44	Afghanistan–USSR Border Region 38.85 N 70.46 E H = 04 52 35, h = 25 km, Mag = 5.2 (ISC). MLH (MOS) = 5.5.
22	BRA SPC	–iPKIKP ePKP2 e e ePKIKP	06 03 32 03 35 04 05 05 38 06 03 34	–1.1 0 +4.2							145.67 143.86	22.93 27.34	Fiji Region 15.51 S 176.07 W H = 05 43 58.0, h = 33 km, Mag = 5.4 (ISC).
22	BRA	ePKIKP	13 50 47	+3.2							146.18	25.71	Fiji Region 16.45 S 177.47 W H = 13 31 07.9, h = 33 km, Mag = 4.9 (ISC).
22	BRA	ePKIKP	15 43 53 44 29	+5.9							145.51	23.60	Fiji Region 15.46 S 176.49 W H = 15 24 32, h = 190 km, Mag = 4.5 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
23	BRA	–iP	21 11 36	–2.7							12.21	133.49	Turkey
		iPP	11 44	+0.9									39.14 N 28.48 E
		i	12 26										H = 21 08 42.1, h = 9 km,
		iS	12 41	+3									Mag = 5.6 (ISC).
		i	13 08										MLH (MOS) = 6,
		i	13 17										MLH (SRO) = 5.
		Lm	17.5										
	SRO	+iP	21 11 35	+7.3							11.38	135.91	
		e	12 29										
		eS	13 39	+3									
		Lm	16				44.5	6	51.5	10			
	SPC	iP	21 11 35	+3.4							11.65	146.52	
24	BRA	ePKIKP	01 13 47	+9.5							149.51	24.06	Tonga
													19.39 S 175.55 W
													H = 00 54 14.7, h = 181 km,
													Mag = 4.7 (ISC).
24	BRA	iP	02 02 26	–3.1							12.24	133.50	Turkey
		e	02 38										39.11 N 28.51 E
		Lm	08.5										H = 01 59 34.0, h = 30 km,
	SRO	eP	02 02 19	+1.1							11.42	135.91	Mag = 5.0 (ISC).
		e	05 25										MLH (MOS) = 5,
		Lm	06.5				6.7	6	6.7	6			MLH (SRO) = 4.9.
	SPC	iP	02 02 25	+3.3							11.69	146.48	
24	BRA	iP	11 59 35	+1.8							24.44	141.73	Egypt
													27.47 N 33.87 E
													H = 11 54 14, h = 16 km,
													Mag = 4.9 (ISC).
													MLH (MOS) = 5.1.

24	BRA	eP	12 56 08	+1.3							24.39	141.88	Egypt
	SPC	eP	12 56 08	+5.9							24.05	149.33	27.49 N 33.78 E
													H = 12 50 51, h = 43 km,
													Mag = 4.8 (ISC).
													MLH (MOS) = 4.5.
24	BRA	iPg	15 34 36										Local shock
25	BRA	iP	13 24 01	–6.2			0.4	1.3	3.7	1.3	12.23	133.93	Turkey
		iPPP	24 23	–2									39.06 N 28.41 E
		i	24 46										H = 13 21 12, h = 28 km,
		iS	26 25	+2									Mag = 4.9 (ISC).
		Lm	28.5				5	3	10	3			MLH (BRA) = 5.6,
	SRO	–iP	13 24 00	+3.9							11.41	136.38	MLH (SRO) = 5.8.
		i!	24 21										
		eS	26 17	+13									
		e	26 59										
		Lm	28.5				37.3	10	41.4	10			
	HRB	e	13 24 20								11.51	136.20	
		eS	26 15	+9									
		Lm	28.5										
	SPC	iPPP	13 24 20	+3							11.69	146.94	
25	BRA	eP	14 21 43	–3.2							12.19	133.38	Turkey
		e	22 25										39.17 N 28.49 E
		Lm	27.5										H = 14 18 52.1, h = 34 km,
	SRO	eP	14 21 29	–6.0							11.36	135.79	Mag = 4.8 (ISC).
		e	25 21										
		e	25 39										
25	BRA	eP	16 16 31	+6.4							12.23	133.78	Turkey
	SRO	e	16.19 41								11.41	136.22	39.08 N 28.44 E
		e	20 17										H = 16 13 30.4, h = 42 km,
													Mag = 4.7 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
26	SRO	e	03 38 13								11.37	136.91	Turkey 39.03 N 28.27 E H = 03 31 26.5, h = 37 km, Mag = 4.6 (ISC).
26	BRA	ePg	08 32 37										Near shock
	SPC	ePg	08 32 02										
		eSg	32 07										
26	BRA	ePKIKP	09 44 15	+9.1							154.79	27.94	South of Tonga
	SPC	ePKIKP	09 44 16	+12.7							152.86	32.90	25.0 S 175.6 W H = 09 24 16, h = 26 km, Mag = 4.9 (ISC).
27	BRA	+eP	12 55 20	+0.3							99.99	71.37	Talaud Islands
		e	55 41										4.72 N 127.65 E
		iPP	59 28	+1			0.8	3	0.6	3			H = 12 41 36.3, h = 32 km,
		i	59 44										Mag = 5.8 (ISC).
		e	13 03 23										mPPH (BRA) = 7.0,
		Lm	36.5				43	20	43	20			MLH (MOS) = 7,
	SRO	eP	12 55 19	+2.4							99.33	72.37	MLH (BRA) = 7.1,
		e	55 41										MLH (SRO) = 6.6.
		ePP	59 05	–17									
		e	59 37										
		esS	13 06 53	–7									
		e	09 25										
		e	14 49										
		Lm	43				13.4	18	9.7	18			
27	SPC	iP	12 55 12	+3.3							97.70	73.67	
		e	59 00										
28	BRA	–iP	01 51 30	–3.2	1.2	2					12.66	135.23	Turkey
		i	52 11										38.55 N 28.46 E
		i	53 20										H = 01 48 29.5, h = 4 km,
		iS	53 39	0.0									Mag = 5.9 (ISC).
		i	55 14										MLH (MOS) = 6.6,
		Lm	57.5				23.3	4	21.5	4			MLH (BRA) = 6.2,
	SRO	–iP	01 51 23	+0.8							11.85	137.71	MLH (SRO) = 6.1.
		i	51 25										
		i	54 17										
		Lm	56.5				57	6	48	6			
	HRB	eP	01 51 27	+3.4							11.94	137.53	
		eS	53 10	+16									
		Lm	56				25	12	2.3	12			
28	BRA	eP	10 05 01	–10.4							12.20	133.61	Turkey
		e	09 02										39.13 N 28.45 E
		Lm	11.2										H = 10 02 17.4, h = 37 km,
													Mag = 4.9 (ISC).
													MLH (MOS) = 4.5.
	SRO	eP	10 05 01	+0.7							11.37	136.04	
		e	08 19										
		e	08 45										
		e	09 03										
		Lm	10.2										

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
29	BRA	–iP	09 23 35	–3.5	1	3	0.5	3	1	3	41.37	142.79	Ethiopia
		i	23 58										11.91 N 41.21 E
		i	24 29										H = 09 15 54, h = 35 km,
		iPP	25 17	+1									Mag = 5.9 (ISC).
		i	27 14										mPV (BRA) = 6.3,
		iS	29 59	+8									mPH (BRA) = 6.6,
		Lm	44.5				16	12	26	12			MLH (MOS) = 6.5,
	SRO	–iP	09 23 33	+0.8							40.61	144.19	MLH (BRA) = 6.4,
		ipP	23 39	–3									MLH (SRO) = 6.1.
		isS	29 49	–7									
		eSS	32 39	+4									
		e	33 45										
		Lm	43				19.5	18	10.6	18			
	HRB	eP	09 23 40	+7.2							40.70	144.07	
		ePP	25 16	+5									
		eS	29 50	+10									
		Lm	43										
	SPC	iP	09 23 36	+0.5							41.03	147.76	
29	BRA	+iP	11 12 35	–1.8	0.8	3					41.43	142.58	Ethiopia
		i	12 44										11.92 N 41.36 E
		iPP	14 15	–1									H = 11 04 52, h = 35 km,
		i	15 14										Mag = 5.5 (ISC).
		Lm	26.5										mPV (BRA) = 6.1,
	SRO	+iP	11 12 33	+2.5							40.66	143.98	MLH (MOS) = 6.
		e	15 09										
		esS	18 49	–6									
		e	21 37										
	SPC	iP	11 12 34	+0.1							41.07	147.54	
29	BRA	iP	13 16 00	–1.2							41.39	142.64	Ethiopia
		i	16 06										11.94 N 41.31 E
		i	17 41										H = 13 08 17, h = 43 km,
													Mag = 5.1 (ISC).
													MLH (MOS) = 5.5.
29	BRA	+iP	13 57 50	–2.6							50.24	125.12	Carlsberg Ridge
		i	58 33										10.38 N 56.83 E
		iPP	59 50	–5									H = 13 49 04, h = 91 km,
	SRO	eP	13 57 47	+1.0							49.38	126.17	Mag = 5.6 (ISC).
		e	59 45										MLH (MOS) = 5.5.
29	BRA	eP	18 38 26	–1.9							41.49	142.56	Ethiopia
													11.87 N 41.4 E
													H = 18 30 49, h = 95 km,
													Mag = 4.6 (NEIS).
31	BRA	iP	07 21 07	–3.1							24.33	141.49	Egypt
		e	25 39										27.61 N 33.91 E
		e	26 45										H = 07 15 54.4, h = 33 km,
		Lm	36.5										Mag = 6.1 (ISC).
	SRO	iP	07 21 03	+0.7							23.56	143.35	MLH (MOS) = 6.9,
		eS	25 21	+10									MLH (BRA) = 6.3,
		Lm	40				42.8	19	60.1	19			MLH (SRO) = 6.2.
	HRB	eP	07 21 06	+2.4							23.66	143.19	
		e	22 00										
		esS	25 26	–3									
		Lm	40										
31	BRA	eP	09 06 27	+1.5							24.53	141.18	Red Sea
													27.5 N 34.14 E
													H = 09 01 10, h = 57 km,
													Mag = 4.8 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
31	BRA	–iP	19 36 42	+1.8							77.38	45.55	Sea of Japan
		i	36 54										38.49 N 134.52 E
		ipP	38 15	–1									H = 19 25 27.0, h = 397 km,
		iS	45 59	+2									Mag = 5.7 (ISC).
		Lm	20 12.5										MLH (SRO) = 6.1.
	SRO	–iP	19 36 39	+1.0							77.04	46.26	
		epP	38 07	–6									
		esP	38 58	+4									
		esPP	41 45	–4									
		e	43 35										
		eS	45 55	+2									
		Lm	57 07				5.7	20	7.4	20			
	HRB	eS	19 45 56	–1							77.06	46.19	
		e	46 46										
31	BRA	eP	21 49 48	–0.8							24.46	141.70	Egypt
													27.46 N 33.89 E
													H = 21 44 32.5, h = 40 km,
													Mag = 4.8 (ISC).
													MLH (MOS) = 4.6.
31	BRA	eP	22 46 15	+10.5							24.37	141.97	Egypt
													27.49 N 33.73 E
													H = 22 40 48.5, h = 33 km,
													Mag = 4.7 (ISC).

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Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
01	BRA	e	04 16 15	+3.5							25.68	328.02	Iceland Region
													66.43 N 17.70 W
													H = 04 10 45.5, h = 33 km,
													Mag = 4.5 (ISC).
02	BRA	iPn	01 40 12	–0.5							9.28	189.05	Sicily
		i	41 54										38.98 N 15.24 E
		e	42 12										H = 01 38 02.2, h = 263 km,
													Mag = 4.7 (ISC).
02	BRA	e	05 01 09								10.27	166.55	Greece
		e	02 21										38.13 N 20.12 E
		Lm	03 45										H = 04 57 30, h = 20 km,
													Mag = 4.4 (ISC).
03	BRA	iPg	15 34 49										Local shock
03	BRA	iPn	22 14 16	–0.6							7.78	163.63	Albania
		iPb	14 37	–1									40.66 N 19.98 E
		iSn	15 37	–8									H = 22 12 21.9, h = 21 km,
		Lm	18 12		5	3	4	3	4	3			Mag = 5.0 (ISC).
	SRO	ePn	22 14 09	–0.2							7.25	169.90	MLH (MOS) = 5.5,
		e	14 59										MLH (BRA) = 5.0,
		eSn	15 33	–3									MLH (SRO) = 5.8.
		Lm	17				30.2	3	30.7	4			
	HRB	ePn	22 14 14	+3.7							7.33	169.28	
		e	15 26										
		e	15 36										
		Lm	18										

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
04	BRA	iP i i	08 57 21 57 33 57 36	+1.0							79.02	14.78	Near Islands, Aleutian Islands 51.17 N 173.67 E H = 08 45 19.1, h = 35 km, Mag = 5.6 (ISC). MLH (MOS) = 5.5.
04	BRA	eP e e	12 24 01 24 13 25 36	−2.4							24.27	141.60	Egypt 27.65 N 33.83 E H = 12 18 48, h = 29 km, Mag = 4.6 (ISC). MLH (MOS) = 5.2.
04	BRA	iP e	23 09 00 09 12	+2.5							75.17	16.28	Komandorsky Islands Region 54.46 N 169.46 E H = 22 57 13, h = 1 km, Mag = 5.5 (ISC). MLH (MOS) = 5.0.
05	BRA	iP i i i i iS Lm	02 26 16 26 33 26 48 27 24 28 00 32 30 48	−0.2 0	1.6	3	0.8	3	1.2	3	41.35	142.54	Ethiopia 12.00 N 41.35 E H = 02 18 30, h = 19 km, Mag = 5.8 (ISC). mPV (MOS) = 6.4, mPV (BRA) = 6.4, mPH (BRA) = 6.7,
	SRO	eP i! ePP e Lm	02 26 11 26 15 27 55 33 17 47	+0.7 +7							40.58	143.94	MLH (MOS) = 6.5.
05	BRA	–eP e	20 22 21 22 36	+0.2							41.30	142.63	Ethiopia 12.02 N 41.28 E H = 20 14 41, h = 70 km, Mag = 4.8 (ISC). MLH (SRO) = 5.6.
	SRO	e e Lm	20 35 12 37 08 59				3.3	14	7.4	16	40.53	144.03	Time relative
06	BRA	iP i i i iS i Lm	03 52 24 52 30 52 45 53 12 54 15 55 07 56.5	−0.5 +2 			3	3	5	3	11.82	141.70	Aegean Sea 38.47 N 26.41 E H = 03 49 33.9, h = 16 km, Mag = 5.6 (ISC). MLH (MOS) = 5.6, MLH (BRA) = 5.3,
	SRO	eP ePP eS e e Lm	03 52 16 52 18 54 10 54 30 55 04 57.5	+1.9 +9 −9 			21.8	4	36.7	10	11.05	144.76	MLH (SRO) = 5.8.
	HRB	eS Lm	03 54 15 56.5	−6							11.14	144.51	
06	BRA	–eP e e e	16 59 35 59 47 17 01 15 02 12	+4.1							41.38	142.48	Ethiopia 11.99 N 41.40 E H = 16 51 47, h = 41 km, Mag = 5.1 (ISC).
	SRO	eP esS e e	16 59 24 17 05 44 09 42 18 20	−0.6 −6							40.61	143.88	

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
07	BRA	–iP	20 35 15	+1.6							48.77	16.55	Laptev Sea
		i	35 19										76.55 N 130.86 E
		i	36 43										H = 20 26 30.5, h = 33 km,
		ePP	37 12	+5									Mag = 5.4 (ISC).
													MLH (MOS) = 5.7.
08	BRA	–iP	02 21 46.5	+2.3							41.49	142.52	Ethiopia
													11.88 N 41.42 E
													H = 02 14 01, h = 56 km,
													Mag = 4.8 (ISC).
													MLH (MOS) = 5.
08	BRA	eP	10 37 12	+1.2							24.39	141.92	Egypt
		e	37 27										27.48 N 33.76 E
		e	38 06										H = 10 31 54, h = 24 km,
		e	38 36										Mag = 5.0 (ISC).
		Lm	44 24										MLH (MOS) = 5.2.
08	BRA	iPn	15 50 45	+0.2							7.74	164.77	Albania
		e	51 36										40.67 N 19.77 E
		eSn	52 27	+10									H = 15 48 50.4, h = 17 km,
		Lm	53 45										Mag = 4.8 (ISC).
	SRO	ePn	15 50 41	+3.4							7.22	171.15	
		e	52 27										
		eSg	52 47	–1									
		Lm	53 57										
09	BRA	–eP	13 09 28	–0.5							81.16	43.12	Honshu Japan
		epP	09 59	0									36.84 N 139.77 E
		e	10 32										H = 12 57 24.8, h = 117 km,
		ePP	12 36	–3									Mag = 5.5 (ISC).
		e	13 03										

10	BRA	–iP	15 04 36	–1.8							72.91	45.36	E Russia–NE China
		i	04 47										Border Region
		ipP	06 33	–0.5									42.10 N 131.06 E
		iPP	07 29	–4									H = 14 54 03.7, h = 547 km,
		e	09 12										Mag = 5.2 (ISC).
													mPV (MOS) = 6.2.
10	BRA	–iP	22 09 44	–2.1							82.04	60.07	Northeast of Taiwan
		i	13 20										25.85 N 124.83 E
													H = 21 57 38.0, h = 120 km,
													Mag = 5.3 (ISC).
													MLH (MOS) = 5.0.
12	BRA	–iPn	20 40 11	–3.3							6.21	114.46	Romania
		i	40 18										45.31 N 25.12 E
		iP	40 26	–2									H = 20 38 41.8, h = 23 km,
		iPg	40 50	+5									Mag = 4.9 (ISC).
		i	41 08										MLH (MOS) = 5.0.
		iS	41 33	–3									
		Lm	43 24										
	SRO	ePn	20 40 03	+1.2							5.32	115.57	
		eSn	41 05	–2									
		eSg	41 27	–10									
		Lm	41 53										
	HRB	ePn	20 40 10	+6.8							5.42	115.69	
		e	40 37										
		eSn	41 07	–2									
		Lm	42.5				3.7	4	1.2	4			
13	BRA	ePKIKP	13 26 40	+9.5							148.18	18.90	Tonga
		e	26 53										17.40 S 173.2 W
		e	27 25										H = 13 06 50, h = 23 km,
													Mag = 4.6 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
13	BRA	eP	15 34 53	–3.9							81.98	287.59	India
		epP	34 05	+1									17.81 N 80.67 E
		e	36 11										H = 15 24 54.7, h = 25 km,
		e	39 23										Mag = 5.3 (ISC).
	SRO	Lm	15 59										mPV (MOS) = 5.9,
													MLH (MOS) = 6.0.
													Traces
13	BRA	e	23 50 53								109.67	76.77	Banda Sea
		e	51 31										6.11 S 129.91 E
		iPP	52 08	+3									H = 23 33 17.3, h = 170 km,
		e	53 05										Mag = 5.8 (ISC).
		e	54 23										mPV (MOS) = 6.4.
	SRO	e	23 51 57								108.95	77.85	
		ePS	00 00 33	+10									
		e	01 25										
		e	02 13										
14	BRA	ePn	05 14 05	–2.8							9.87	158.16	Greece
		eSn	16 09	+5									38.90 N 21.79 E
		Lm	17 44										H = 05 11 45.5, h = 36 km,
	SRO	eSg	05 16 53	+3							9.26	162.90	Mag = 4.5 (ISC).
		e	17 49										
15–16	SRO												The apparatus was not operational
16	BRA	eP	08 18 15	+1.1							24.56	141.71	Egypt
													27.37 N 33.94 E
													H = 08 12 56.0, h = 33 km,
													Mag = 4.9 (ISC).

16	BRA	iPg	11 00 46.5										Local shock
16	BRA	+iPKIKP	12 38 45	–0.8							137.38	46.24	New Hebrides
		i	38 48										13.57 S 166.91 E
		e	39 36										H = 12 19 37.8, h = 132 km,
		ePP	41 29	–7									Mag = 5.6 (ISC).
		ePKS	42 23	+3									
		e	43 14										
		e	44 36										
16	BRA	eP	22 59 12	+0.3							15.08	144.44	Dodecanese Islands
		ePP	59 27	+4									35.32 N 27.77 E
		e	59 36										H = 22 55 40.5, h = 52 km,
		e	23 00 07										Mag = 5.1 (ISC).
		e	00 24										MLH (MOS) = 5,
		eS	01 54	–1									MLH (BRA) = 5.2,
		e	02 27										MLH (SRO) = 5.1.
		Lm	06.5				5	8	6	8			
	SRO	eP	22 59 08	+6.0							14.33	147.13	
		eS	23 01 58	+18									
		Lm	04.5				8.2	14	3.2	14			
	SPC	eP	22 59 18	+8.3							14.92	155.43	
16	BRA	iP	23 24 36	–1.8							15.14	144.74	Dodecanese Islands
		e	24 45										35.23 N 27.72 E
		e	25 45										H = 23 21 06.2, h = 58 km,
		e	26 21										Mag = 5.1 (ISC).
		Lm	34.5				4	8	5	8			MLH (MOS) = 5,
	SRO	eP	23 24 32	+3.8							14.40	147.44	MLH (BRA) = 5.1,
		eS	27 20	+13									MLH (SRO) = 5.5.
		Lm	30.5				18.8	12	7.4	12			
	HRB	Lm	23 30.0								14.49	147.21	
	SPC	iP	23 24 42	+5.9							15.00	155.69	

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
17	BRA	eP	00 58 11	0.0							15.22	144.51	Dodecanese Islands
		e	59 06										35.19 N 27.83 E
		Lm	01 06.5										H = 00 54 38.2, h = 55 km,
	SRO	eP	00 58 04	+2.7							14.47	147.19	Mag = 4.8 (ISC).
		eS	01 00 40	−1									MLH (MOS) = 4.8.
		Lm	03.5										
17	BRA	+eP	05 08 27	+0.7							80.49	39.02	Off East Coast of Honshu, Japan
		e	08 36										39.66 N 143.56 E
		e	09 36										H = 04 56 13, h = 11 km,
													Mag = 5.1 (ISC).
													MLH (MOS) = 5.5.
17	BRA	ePn	09 14 26	+6.6							7.21	201.49	Southern Italy
		eSn	15 46	0									41.4 N 13.6 E
		i	16 16										H = 09 12 34, h = 40 km,
		i	16 46										Mag = 4.6 (ISC).
		Lm	17 42										
	SRO	ePg	09 14 32	+12.3							7.24	209.38	
		e	16 40										
		e	17 28										
19	SRO	ePg	06 52 40										Local shock
19	BRA	eP	08 58 25	+1.0							92.44	96.42	Southwest of Sumatra
		e	58 42										6.15 S 103.96 E
		ePP	09 02 13	+5									H= 08 45 17, h = 49 km,
	SRO	eP	08 58 22	+1.9							91.59	97.33	Mag = 5.4 (ISC).
													MLH (MOS) = 5.5.

19	BRA	eP	19 37 34	−0.7							70.96	351.20	Southern Alaska
		e	38 07										60.36 N 145.98 W
													H = 19 26 15.8, h = 9 km,
													Mag = 5.1 (ISC).
													MLH (MOS) = 5.
20	BRA	eP	16 17 27	+11.4							24.06	249.10	North Atlantic Ocean
													35.7 N 10.8 W
													H = 16 12 02, h = 29 km,
													Mag = 4.5 (ISC).
21	BRA	eP	02 32 05	+0.1							91.24	292.77	Guatemala
													14.15 N 91.03 W
													H = 02 19 06.8, h = 76 km,
													Mag = 5.3 (ISC).
													MLH (MOS) = 6.
21	BRA	+iP	07 31 36	−3.6							81.11	51.16	Kyushu, Japan
		i	31 48										32.15 N 131.98 E
		i	32 21										H = 07 19 27.0, h = 39 km,
		ePP	34 50	+4									Mag = 6.1 (ISC).
		e	39 12										mPV (MOS) = 6.5,
		eS	41 54	+5									MLH (MOS) = 6.8,
		ePS	42 45	+2									MLH (BRA) =7.1,
		Lm	08 10.5						54	13			MLH (HRB) = 6.8.
	SRO	+iP	07 31 37	+0.3							80.70	51.93	
		ePP	34 56	+13									
		ePPP	36 52	+18									
		eSKS	41 48	0									
		e	46 48										
		Lm	08 11				43.7	16	77.2	16			
	HRB	ePP	07 34 48	+5							80.72	51.86	
		eS	41 46	+5									
		Lm	08 12				22	14	45	14			

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
21	BRA	ePn	20 39 21	+6.7							10.47	143.70	Aegean Sea
		e	39 28										39.42 N 25.09 E
		e	39 42										H = 20 36 40, h = 1 km,
		eSg	42 07	–3									Mag = 4.7 (ISC).
		Lm	44 24										MLH (MOS) = 4.6.
	SRO	eP	20 39 08	+4.1							9.72	147.22	
		e	42 55										
21	BRA	iP	22 33 34	–0.7							26.37	355.20	Greenland Sea
		e	33 40										74.23 N 9.3 E
		ePPP	34 33	+3									H = 22 28 00.1, h = 33 km,
													Mag = 4.9 (ISC).
													MLH (MOS) = 4.5.
22	BRA	ePKIKP	07 57 24	+13.8							146.03	19.56	Tonga
		e	57 30										15.38 S 174.08 W
													H = 07 37 51.9, h = 172 km,
													Mag = 5.0 (ISC).
22	BRA	+iP	08 23 33	+3.3							80.14	39.17	Off East Coast of Honshu, Japan
		i	23 42										39.87 N 143.14 E
													H = 08 11 20.3, h = 23 km,
													Mag = 5.4 (ISC).
													mPV (MOS) = 6.4,
													MLH (MOS) = 6.0.
22	BRA	–iP	22 43 22	–2.0							49.06	121.82	Arabian Sea
		iPP	45 23	+5									12.80 N 58.25 E
		e	46 41										H = 22 34 40, h = 51 km,
		e	47 47										Mag = 5.6 (ISC).
	SRO	eP	22 43 17	–0.2							48.18	122.84	MLH (MOS) = 5.2,
		ePP	45 11	+2									MLH (SRO) = 5.4.
		e	56 16										
23	BRA	eP	13 42 44	+7							24.29	141.92	Egypt
		e	43 26										27.57 N 33.71 E
													H = 13 37 20, h = 18 km,
													Mag = 4.8 (ISC).
24	BRA	iPKIKP	07 45 44	+8.1							151.04	27.16	Fiji Region
													21.33 S 176.61 W
													H = 07 26 16.6, h = 217 km,
													Mag = 4.8 (ISC).
24	BRA	e	14 48 14								15.59	139.78	Dodecanese Islands
		e	48 38										36.35 N 28.73 E
		Lm	53 17										H = 14 45 48.8, h = 53 km,
													Mag = 4.7 (ISC).
													MLH (MOS) = 4.4.
25	BRA	eP	03 47 20	+0.5							90.63	281.74	South of Panama
		e	47 35										7.40 N 82.09 W
													H = 03 34 18, h = 25 km,
													Mag = 5.4 (ISC).
26	BRA	eP	06 16 59	–21.5							111.30	247.61	Near Coast of Central Chile
		ePP	18 00	–4									30.66 S 71.53 W
		e	21 08										H = 05 58 48.8, h = 23 km,
		Lm	07 11				11	18	11	18			Mag = 5.5 (ISC).
	SRO	e	06 22 03								111.91	248.25	MLH (MOS) = 6.1,
		e	22 19										MLH (BRA) = 6.6,
		Lm	07 11.5				9.7	18	13.4	18			MLH (SRO) = 6.3.

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
27	BRA	e e e Lm	11 00 45 03 41 05 41 07 06								14.21	140.81	Dodecanese Islands 36.54 N 28.21 E H = 10 58 26, h = 33 km, Mag = 4.7 (ISC).
27	BRA	iPg	12 15 37										Local shock
28	BRA	iPKIKP iPKP2	07 44 45 45 06	+2.2 +6							151.77	29.56	South of Fiji 22.41 S 177.50 N H = 07 25 27.1, h = 268 km, Mag = 5.7 (ISC).
28	BRA	iPg	11 59 42										Local shock
28	BRA	iPKIKP i	19 58 06 58 24	+2.3							128.47	51.59	Solomon Islands 7.90 S 158.84 E H = 19 39 04.5, h = 70 km, Mag = 5.5 (ISC). MLH (MOS) = 5.5.
28	BRA	eP e	23 33 39 34 30	–0.8							88.75	322.55	Southern California 33.37 N 116.30 W H = 23 20 45.4, h = 15 km, Mag = 5.5 (ISC). MLH (MOS) = 5.4.
29	BRA	iP i e	04 44 07 45 24 51 06	+0.8							32.24	112.58	Southern Persia 29.59 N 51.54 E H = 04 37 39, h = 21 km, Mag = 5.5 (ISC). MLH (MOS) = 5.
29	BRA	eP	21 30 08	+0.8							78.36	29.44	Kurile Islands 46.32 N 153.11 E H = 21 18 08, h = 24 km, Mag = 5.1 (ISC). mPV (MOS) = 6.1, MLH (MOS) = 5.4.
30	BRA	eP	17 12 40	–0.2							85.44	324.15	Southern Nevada 37.05 N 116.03 W H = 17 00 02.6, h = 25 km, Mag = 5.2 (ISC).
30	BRA SRO HRB	eP e Lm eP e e Lm Lm	20 23 28 26 37 27 27 20 23 20 24 48 26 16 28 20 27.6	–1.3 +1.9			4.2 13.3	6 8	4.6 11.6	6 8	12.24 11.41 11.51	133.44 135.85 135.68	Turkey 39.12 N 28.52 E H = 20 20 32, h = 8 km, Mag = 5.0 (ISC). MLH (MOS) = 5.2. MLH (BRA) = 5.1, MLH (SRO) = 5.4.

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
01	BRA	ePKIKP	03 04 53	+8.4							148.57	258.53	Eastern Island Cordillera 49.8 S 114.0 W H = 02 45 05.7, h = 33 km, Mag = 4.9 (ISC).
01	BRA	ePKIKP	03 31 50	+7.8							151.29	22.61	Tonga 20.90 S 174.29 W H = 03 12 00, h = 44 km, Mag = 4.9 (ISC).
01	BRA	ePKIKP	05 25 40	−0.9							151.69	22.67	Tonga 21.3 S 174.2 W H = 05 05 59, h = 55 km, Mag = 4.9 (ISC).
01	BRA	eP	18 05 45	−1.2							14.97	144.53	Dodecanese Islands 35.41 N 27.68 E H = 18 02 16.4, h = 51 km, Mag = 5.1 (ISC). MLH (MOS) = 4.7.
		e	05 59										
		e	07 59										
		Lm	13.0										
	SRO	eP	18 05 38	+1.6							14.22	147.24	
		eS	08 28	+15									
		Lm	12 24										
01	BRA	–iPKIKP	19 24 44	+2							147.17	21.13	Tonga 16.71 S 174.66 W H = 19 05 24.5, h = 200 km, Mag = 5.9 (ISC). mPV (MOS) = 6.2.
		i!	25 45										
		ePP	28 18	+4									
	SRO	–iPKIKP	19 24 42.4	+1.0							147.20	23.40	
		i!	24 46.4										
		epPKP	25 28	−5									
		ePP	28 14	0									

01	BRA	eP	20 10 20	+5.0							15.01	144.42	Dodecanese Islands 35.39 N 27.73 E H = 20 06 45.4, h = 67 km, Mag = 4.7 (ISC). MLH (MOS) = 5.2, MLH (SRO) = 5.3.
	SRO	eP	20 10 08	+2.9							14.26	147.12	
		eS	12 48	+6									
		e	12 56										
		Lm	15.5				12.3	12	6.4	14			
02	BRA	ePg	11 05 41										Local shock
04	BRA	ePKIKP	07 26 37	+0.4							146.97	28.45	Fiji Region 17.69 S 178.70 W H = 07 08 00.1, h = 561 km, Mag = 5.0 (ISC).
		e	26 43										
04	BRA	ePKIKP	12 56 10	+3.5							141.60	46.80	New Hebrides 17.42 S 168.79 E H = 12 36 35.1, h = 11 km, Mag = 5.4 (ISC). MLH (MOS) = 5.6.
	SPC	ePKIKP	12 56 05	+2.3							139.37	49.91	
05	BRA	eP	02 53 23	−0.7							41.28	142.51	Ethiopia 12.07 N 41.34 E H = 02 45 40, h = 38 km, Mag = 4.9 (ISC). MLH (MOS) = 5.
05	BRA	+iP	05 39 31	−1.4							23.59	249.06	North Atlantic Ocean 35.99 N 10.34 W H = 05 34 24.4, h = 37 km, Mag = 5.5 (ISC). MLH (MOS) = 5.2, MLH (BRA) = 5.1.
		eS	43 49	+9									
		Lm	48.0				0.5	3	1.0	3			
	SRO	eP	05 39 41	+2.3							24.23	251.33	
		ePP	40 24	+10									
		eS	44 01	+9									
		e	44 25										
		e	44 42										
	HRB	eS	05 44 10	+17							24.18	251.06	
	SPC	iP	05 39 56	+1.3							25.90	250.88	

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
05	BRA	eP	21 53 06	+1.9							26.08	328.79	Iceland Region
		e	54 25										66.91 N 18.17 W
	SRO	eP	21 53 17	+6.3							26.80	328.66	H = 21 47 32.2, h = 33 km,
		esS	57 53	−5									Mag = 5.2 (ISC).
		e	22 03 00										
	SPC	eP	21 53 10	+3.2							26.33	326.46	
06–31	SRO												The apparatus was not operational
07	BRA	eP	09 05 47	−0.7							92.51	69.04	Samar, Philippine Islands
	SPC	iP	09 05 36	−0.9							90.20	71.38	12.01 N 124.64 E
													H = 08 52 51.3, h = 140 km,
													Mag = 5.2 (ISC).
07	SPC	eP	13 57 46	+4.9							85.77	326.72	Southern Nevada
													37.25 N 116.46 W
													H = 13 45 02, h = 20 km,
													Mag = 5.5 (ISC).
09	BRA	iPg	11 02 53										Explosion?
		i	02 55										
10	BRA	eP	09 33 14	−1.0							24.52	141.24	Red Sea
		epP	33 30	−3									27.50 N 34.11 E
		e	34 53										H = 09 27 57.6, h = 33 km,
	SPC	eP	09 33 15	+3.3							24.16	148.66	Mag = 4.7 (ISC).
													MLH (MOS) = 5.

10	BRA	eP	13 09 32	+1.5							75.54	354.66	Kodiak Island Region
		ePcP	09 38	−6									56.37 N 153.57 W
													H = 12 57 48.3, h = 33 km,
													Mag = 4.9 (ISC).
10	BRA	eP	13 36 28	+2.1							23.81	249.96	North Atlantic Ocean
		i	36 37.7										36.13 N 10.83 W
													H = 13 31 14.4, h = 25 km,
													Mag = 4.4 (ISC).
10	BRA	iPn	21 12 27	+4.2							7.21	161.03	Albania
		i	12 40										41.30 N 20.21 E
		i	12 58										H = 21 10 37.1, h = 35 km,
		eSn	13 44	0									Mag = 4.4 (NEIS).
		i	14 07										MLH (BRA) = 4.3.
		Lm	15.5				1.4	6	1.9	6			
	SPC	ePn	21 12 32	−0.3							7.89	180.19	
11	BRA	iPKIKP	14 36 59	+2.0							152.00	24.60	Tonga
		e	37 38										21.86 S 175.04 W
	SPC	ePKIKP	14 37 04	+9.8							150.15	29.47	H = 14 17 12.6, h = 38 km,
													Mag = 5.0 (ISC).
12	BRA	ePKIKP	19 35 18	+15.4								20.11	Fiji
		e	35 30										21.8 S 176.5 E
		e	35 39										H = 19 16 15, h = 524 km,
	SPC	ePKIKP	19 35 15	+15.0								22.94	Mag = 4.4 (ISC).
13	BRA	e	11 23 44								11.83	150.54	Southern Greece
		Lm	24 19										37.6 N 24.4 E
													H = 11 17 46, h = 0 km (ISC).
													Traces

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
13	BRA	eP	14 29 44	–2.6							90.30	287.61	Near Coast of Nicaragua
		e	30 11										11.53 N 86.36 W
		e	30 44										H = 14 16 52.8, h = 75 km,
		ePP	33 28	+5									Mag = 5.5 (ISC).
		e	43 47										MLH (BRA) = 6.6.
		eSSP	46 44	0									
		Lm	58.5				13	15	13	15			
	HRB	e	14 32 30								91.09	288.41	
		Lm	15 11.0										
	SPC	eP	14 30.3	+26							91.94	289.99	
13	BRA	eP	17 51 05	+8							12.34	133.56	Turkey
													39.03 N 28.57 E
													H = 17 48 02.1, h = 35 km,
													Mag = 4.6 (ISC).
14	BRA	iP	10 08 49	+0.6							15.06	144.56	Dodecanese Islands
		i	09 49										35.33 N 27.72 E
		e	09 43										H = 10 05 17.1, h = 43 km,
		eS	11 36	+2									Mag = 5.1 (ISC).
		e	15 28										MLH (MOS) = 4.8.
		Lm	16.0				3	7	4	7			
14	BRA	+iP	19 45 01	–1.4	0.3	1.5	0.15	1.5	0.2	1.5	79.86	10.72	Andreanof Islands,
		i	45 31										Aleutian Islands
		i	46 31										51.29 N 179.85 W
		i	47 21										H = 19 32 55, h = 22 km,
		ePP	48 13	+8									Mag = 6.2 (ISC).
		iSP	55 43	–4									mPV (MOS) = 7.0,
		i	58 10										MLH (MOS) = 6.9,
		Lm	20 24.5				21	14	64	14			MLH (BRA) = 7.1,
	HRB	eP	19 45 10										MLH (HRB) = 6.6.
		Lm	20 27										

15	BRA	eP	02 08 34	+5.6							82.85	44.02	Near East Coast of
		e	09 46										Honshu, Japan
													34.94 N 140.04 E
													H = 01 56 09.4, h = 60 km,
													Mag = 4.4 (ISC).
15	BRA	eP	12 09 34	+5.5							15.10	144.62	Dodecanese Islands
		e	10 19										35.28 N 27.73 E
		Lm	18.5										H = 12 05 56.8, h = 46 km,
	SPC	eP	12 09 34	+7.1							14.95	155.60	Mag = 4.8 (ISC).
													MLH (MOS) = 4.5.
15	BRA	eP	20 47 34	–0.6							41.68	88.62	Afghanistan
		e	48 36										34.62 N 70.82 E
		ePP	49 19	+4									H = 20 39 49.3, h = 49 km,
	SPC	iP	20 47 20	+2.4							39.61	92.18	Mag = 5.4 (ISC).
		ePP	48 55	+1									MLH (MOS) = 5.
15	BRA	iP	20 54 42	–0.3							70.08	273.03	Leeward Islands
		ipP	54 48	–6									16.75 N 61.39 W
		e	55 43										H = 20 43 34.2, h = 57 km,
		i	57 27										Mag = 5.7 (ISC).
		e	58 25										MLH (MOS) = 5.2.
		Lm	21 22										
	SPC	iP	20 54 57	+2.6							72.09	274.99	
		i	55 05										
15	BRA	e	22 55 05								104.19	85.17	Flores Sea
		e	55 59										7.37 S 120.20 E
													H = 22 38 17.9, h = 402 km,
													Mag = 5.0 (ISC).
16	SPC	eP	07 29 29	+2.0							10.12	172.75	Greece
													39.13 N 21.88 E
													H = 07 27 01.1, h = 39 km,
													Mag = 4.3 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
18	BRA	ePKIKP e e	00 34 40 34 49 35 39	+0.2							129.18	52.66	Solomon Islands 8.95 S 158.51 E H = 00 15 31, h = 12 km, Mag = 5.4 (ISC).
18	BRA SPC	+eP e ePcP e iP i	08 55 23 55 28 55 46 56 25 08 55 22 55 27	–0.7 +5 +2.0							70.97 70.25	351.17 352.75	Southern Alaska 60.34 N 145.93 W H = 08 44 04.1, h = 6 km, Mag = 5.4 (ISC). MLH (MOS) = 5.6.
18	BRA	e e	21 10 21 10 39								78.55	38.73	Hokkaido, Japan Region 41.44 N 142.46 E H = 20 56 23.7, h = 64 km, Mag = 4.9 (ISC). Traces
19	BRA SPC	ePKIKP e	05 57 18 05 57 14	–6							151.44 149.61	23.74 28.60	Tonga 21.2 S 174.8 W H = 05 37 22.0, h = 33 km, Mag = 4.8 (ISC).
19	BRA	eP e	18 18 19 18 36	–0.4							16.87	121.42	Turkey 37.75 N 35.31 E H = 18 14 25.7, h = 55 km, Mag = 4.6 (ISC).

21	BRA	eP e e ePP e	03 10 12 10 25 12 34 13 50 14 46	+8.5 –1							93.44	68.33	Samar, Philippine Islands 11.74 N 125.81 E H = 02 56 48, h = 21 km, Mag = 5.2 (ISC). MLH (MOS) = 5.5.
22	BRA	iPg i	09 08 48 08 51										Local shock
23–25	BRA												The apparatus was not operational
23	SPC	iP	13 16 34	+33							72.34	23.91	Alaska 53.36 N 160.12 E H = 13 04 37.0, h = 32 km, Mag = 5.5 (ISC).
23	SPC	iPg iSg	14 16 14 16 21										Near shock
25	SPC	iP	11 37 57	+5.9							23.97	148.90	Egypt 27.63 N 33.93 E H = 11 32 38.9, h = 33 km, Mag = 4.8 (ISC).
28	BRA SPC	eP e eP	03 41 06 41 22 03 41 02	+0.8 +3.8							25.88 25.09	355.04 352.82	Greenland Sea 73.74 N 9.4 E H = 03 35 35.2, h = 33 km, Mag = 4.5 (ISC).
28	BRA	iP epP	03 54 16 54 28	–2.4 +1							93.42	68.28	Samar, Philippine Islands 11.79 N 125.83 E H = 03 41 05, h = 25 km, Mag = 5.3 (ISC).

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
28	BRA	+iP	04 02 49	+1.3							25.69	354.13	Greenland Sea
		i	03 31										73.46 N 8.2 E
	SPC	iP	04 02 42	+0.9							24.93	351.85	H = 03 57 19.6, h = 33 km, Mag = 4.8 (ISC). MLH (MOS) = 5.0.
28	SPC	eP	13 43 14	+10.1							93.10	276.82	Peru
		ePP	47.13	+21									02.14 N 76.94 W
		eSKS	53 50	+29									H = 73 30 07.5, h = 164 km, Mag = 5.4 (ISC).
28–29	BRA												The apparatus was not operational
29	BRA	iPg	15 59 09										Local shock
		i	59 11										
30	BRA	iPg	16 04 33										Local shock
		i	04 35										
30	BRA	ePKIKP	16 15 34	+1.0							160.29	41.47	South of Kermadec Islands
		ePKP2	16 16	−1									39.19 S 178.17 W
		e	16 49										H = 15 55 37.8, h = 34 km, Mag = 5.5 (ISC).
		e	17 17										
	SPC	ePKIKP	16 15 35	+4.0							158.11	45.93	MLH (MOS) = 5.8.
30	BRA	ePKIKP	16 42 44	+0.9							160.46	41.14	South of Kermadec Islands
		ePKP2	43 26	−1									32.28 S 177.95 W
		e	43 43										H = 16 22 47.5, h = 33 km, Mag = 5.7 (ISC).
		e	47 19										
	SPC	ePKIKP	16 42 45	+4.1							158.29	45.65	mPV (MOS) = 6.3, MLH (MOS) = 6.0.
31	BRA	iP	11 20 20	+0.5							94.61	272.52	Ecuador
		e	21 07										1.75 S 77.85 W
													H = 11 07 17.4, h = 174 km, Mag = 5.0 (ISC).
31	BRA	Lm	14 25 34								8.41	160.24	Greece
													41.21 N 24.0 E
													H = 14 20 24.8, h = 0 km. Traces
31	BRA	ePKIKP	22 29 01	+5.1							146.96	17.64	Samoa Region
		e	29 40										16.06 S 172.79W
													H = 22 09 18.7, h = 33 km, Mag = 4.4 (ISC).
31	BRA	–ePKIKP	22 44 15	+2.8							146.99	17.62	Samoa Region
		e	44 28										16.09 S 172.77 W
		e	45 28										H = 22 24 32.2, h = 15 km, Mag = 5.1 (ISC).
	SPC	ePKIKP	22 44 13	+3.7							145.32	22.37	

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
01	BRA	–iPKIKP	00 14 31	–5.0							123.47	54.37	Solomon Islands
		ePP	16 19	–4									4.87 S 154.23 E
		eSKP	17 31	+4									H = 23 56 22.3, h = 411 km,
	SPC	iPKIKP	00 14 31	+3.2							121.18	56.93	Mag = 5.4 (ISC).
01	BRA	ePKIKP	20 13 10	+0.5							160.18	40.48	Kermadec Islands Region
		e	13 49										31.92 S 177.9 W
		e	14 13										H = 19 53 14, h = 30 km,
	SPC	ePKIKP	20 13 22	+1.5							158.01	45.02	Mag = 5.0 (ISC).
01	BRA	ePKIKP	21 45 50	+15.5							146.33	18.64	Tonga
	SPC	ePKIKP	21 45 40	+8.0							144.63	23.27	15.56 S 173.49 W
		e	21 45 49										H = 21 26 25.2, h = 253km,
													Mag = 4.0 (ISC).
01	BRA	iPn	23 21 05	–0.5							2.17	241.46	Austria
		iPg	21 07	–1.5									47.10 N 14.32 E
		i	21 25										H = 23 20 31.1, h = 43 km,
		iSn	21 29	–3									Mag = 4.4 (NEIS).
		iSg	21 44	+6									MLH (BRA) = 4.4.
		Lm	22 30				2.6	1.8	2.6	1.8			
	HRB	Lm	23 22 30								2.74	255.01	
	SPC	ePn	23 21 45	+6.5							4.48	244.45	
		i	21 56										
02	BRA	iPn	03 58 05	–0.9							2.20	240.74	Austria
		iPg	58 09	0									47.06 N 14.30 E
		iSn	58 29	–3									H = 03 57 31, h = 30 km,
		iSg	58 38	0									Mag = 4.1 (NEIS).
		Lm	58 50				1.7	1.8	2.6	1.8			MLH (BRA) = 4.3.
	SPC	ePn	03 58 45	+6.4							4.52	244.10	
		i	58 55.										

02	BRA	eP	09 59 20	–0.2							71.69	350.27	Alaska
	SPC	eP	09 59 19	+2.5							71.01	351.87	59.46 N 144.58 W
													H = 09 47 59.5, h = 27 km,
													Mag = 4.7 (ISC).
													MLH (MOS) = 5.2.
04	BRA	ePKIKP	14 36 06	+4.1							147.18	17.67	Samoa Region
		e	36 18										16.28 S 172.76 W
		e	36 30										H = 14 16 25.6, h = 43 km,
	SPC	ePKIKP	14 36 03	+3.9							145.51	22.44	Mag = 4.8 (ISC).
04	BRA	iPg	15 37 01										Local shock
		i	37 02										
		i	37 05										
04	BRA	ePKIKP	16 41 10	+2.4							146.98	18.08	Tonga
		e	41 42										16.13 S 173.03 W
		e											H = 16 21 31.5, h = 42 km,
	SPC	ePKIKP	16 41 09	+4.0							145.30	22.81	Mag = 4.9 (ISC).
04	BRA	eP	20 45 28	–1.0							61.89	255.82	North Atlantic Ridge
		e	45 36										11.93 N 43.80 W
		e	46 30										H = 20 35 08.5, h = 20 km,
													Mag = 4.8 (ISC).
05	BRA	ePKIKP	00 42 27	+3.2							147.09	17.78	Samoa Region
		e	43 09										16.2 S 172.84 W
	SPC	ePKIKP	00 42 24	+3.1							145.30	22.48	H = 00 22 46.4, h = 33 km,
													Mag = 4.8 (ISC).
05	BRA	–eP	20 50 11	–1.0							61.04	252.56	North Atlantic Ridge
		e	50 29										10.68 N 41.03 W
		e	52 29										H = 20 39 58, h = 25 km,
	SPC	eP	20 50 31								63.33	254.71	Mag = 5.1 (ISC).
													MLH (MOS) = 5.

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
06	BRA	iPg i Lm	11 05 34 05 40 05 44										Local shock
06	BRA	e	22 43 38								103.66	251.47	Northern Chile 22.60 S 68.47 W H = 22 25 35.9, h = 112 km, Mag = 5.0 (ISC).
07	BRA	eP e eS e Lm	15 33 44 33 50 35 39 36 20 39 20	+0.1 −5 							10.56	166.55	Ionian Sea 37.85 N 20.19 E H = 15 31 09, h = 9 km, Mag = 4.6 (ISC). MLH (MOS) = 5.
	SRO	eP e e	15 33 36 36 38 37 36	−1.0 							10.05	171.46	
	HRB	Lm	15 39.5								10.12	170.97	
07	BRA	+iP i i	22 59 24 59 35 59 39	+4.7 							79.60	3.83	Fox Islands, Aleutian Islands 52.47 N 169.06 W H = 22 47 14, h = 29 km, Mag = 5.3 (ISC). MLH (MOS) = 4.8.
08	BRA	e	12 01 17								145.85	18.41	Tonga 15.06 S 173.47 W H = 11 41 16.8, h = 33 km, Mag = 4.7 (ISC).
08	BRA	iP e	15 01 02 01 47	0.0 							74.06	22.29	Near East Coast of Kamchatka 53.28 N 159.70 E H = 14 49 33.0, h = 74 km, Mag = 5.3 (ISC). mPV (MOS) = 5.0, MLH (MOS) = 4.8.
08	BRA	ePKP2	21 59 41	−0.7							153.75	35.78	South of Fiji 25.37 S 179.50 W H = 21 40 14.1, h = 420 km, Mag = 4.9 (ISC).
09	BRA	+ePKIKP ePKP2 ePP	22 12 50 13 13 16 44	+0.9 +1 −5.2							153.65	25.47	Tonga Region 23.56 S 174.90 W H = 21 53 03, h = 39 km, Mag = 5.5 (ISC). MLH (MOS) = 5.5.
	SRO	ePKIKP e	22 12 52 21 13	+2.9 							153.60	28.15	
09	BRA	eP e	23 21 45 22 09	+2.0 							78.85	33.15	Kurile Islands 44.11 N 148.97 E H = 23 09 42, h = 30 km, Mag = 5.1 (ISC). mPV (MOS) = 5.2, MLH (MOS) = 5.
10	BRA	eSg	13 54 33	+2.9							2.39	28.79	Poland 50.25 N 18.90 E H = 13 53 12.8, Mag = 3.5 (WAR).
10	BRA	eP ePP e eS	22 59 33 23 01 09 02 15 05 [illegible]	−0.3 −5 0							40.59	86.46	Hindu Kush Region 36.41 N 70.72 E H = 22 52 12.0, h = 201 km, Mag = 5.2 (ISC). mPV (MOS) = 5.5, MLH (MOS) = 4.7.

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
10	BRA	eP	23 38 12	−0.7							40.40	86.70	Hindu Kush Region
		epP	38 59	−4									36.39 N 70.42 E
		esP	39 21	−1									H = 23 30 54.8, h = 220 km,
		ePP	39 51	−10									Mag = 5.1 (ISC).
		e	40 51										mPV (MOS) = 5.0.
		esPP	41 06	+4									
		e	41 27										
		e	42 08										
11	BRA	iP	01 09 33	−1.1							71.60	350.36	Gulf of Alaska
		e	10 12										59.57 N 144.71 W
		e	10 21										H = 00 58 10.5, h = 5 km,
													Mag = 5.2 (ISC).
													MLH (MOS) = 5.5.
11	BRA	eP	01 16 24	−0.6							71.67	350.42	Gulf of Alaska
													59.51 N 144.84 W
													H = 01 05 01, h = 9 km,
													Mag = 4.9 (ISC).
													MLH (MOS) = 5.5.
12	BRA	+iP	07 53 35	+2.1							79.99	38.48	Off East Coast of Honshu,
		iPcP	53 43	+5									Japan
		e	54 29										40.37 N 143.78 E
	SRO	eP	07 53 34	+2.4							79.76	39.22	H = 07 41 21.3, h = 4 km,
		eS	08 03 36	+2									Mag = 5.2 (ISC).
		Lm	16 40										MLH (MOS) = 5.9.
	SPC	eP	07 53 25	+2.5							77.88	40.65	
12	SPC	ePg	13 30 09										Near shock
		eSg	30 15										
12	BRA	iP	15 16 59	−3.5							14.95	153.75	Crete
		i	17 16										34.43 N 25.04 E
		i	18 18										H = 15 13 30.9, h = 22 km,
		iS	20 00	+8			1.2	2.5	0.6	2.5			Mag = 5.8 (ISC).
		Lm	24.0				4.5	4.0	5.1	4.0			mPV (MOS) = 6.3,
		Lm	26.5										mSH (BRA) = 5.6,
	SRO	eP	15 17 00	+6.1							14.29	156.91	MLH (MOS) = 6,
		e	17 24										MLH (BRA) = 5.5.
		eS	19 36	+3									
	HRB	eS	15 19 38	+1.0							14.38	156.62	
		Lm	25										
	SPC	iP	15 17 09	+4.1							15.17	164.69	
12	BRA	eP	19 11 23	−3.5							82.00	62.90	Taiwan Region
													24.06 N 122.45 E
													H = 18 59 09.8, h = 45 km,
													Mag = 5.2 (ISC).
													MLH (MOS) = 5.4.
13	BRA	+iP	09 00 13	−0.2	0.8	1.5	0.4	1.5	0.4	1.5	76.39	26.48	Kurile Islands
		i	00 17										49.41 N 155.54 E
		ipP	00 47	+6									H = 08 48 28.3, h = 52 km,
		i	01 31										Mag = 6.0 (ISC).
		i	02 46										mPV (MOS) = 6.5,
		iPP	03 08	+3									mPV (BRA) = 6.5,
		i	04 26										MLH (MOS) = 6.3,
		eS	09 40	−13									MLH (BRA) = 6.9,
		Lm	40.5				18	17	17	17			MLH (SRO) = 6.5.
	SRO	+iP	09 00 10	−2.9							76.34	27.16	
		e	00 44										
		e	01 08										
		e	01 40										
		eS	09 56	+4									
		Lm	36.5				15.2	20	22.2	21			
	SPC	iP	09 00 06	+2.0							74.52	28.47	

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
14	BRA	+iPKIKP	03 41 59	+2.5							128.61	51.39	Solomon Islands
		i!pPKP	42 16	−2									7.93 S 159.05 E
		ePP	44 07	0									H = 03 22 57.1, h = 66 km,
	SPC	iPKIKP	03 41 57	+2.9							126.33	54.08	Mag = 5.8 (ISC).
		ipPKP	42 12	+0.9									MLH (MOS) = 5.5.
14	BRA	iP	13 51 00	+0.8							15.04	153.85	Crete
		i	51 17										34.34 N 25.05 E
		i	51 52										H = 13 47 26.4, h = 21 km,
		e	54 19										Mag = 5.0 (ISC).
		Lm	57.0										MLH (MOS) = 4.7.
	SPC	iP	13 51 04	+5.1							15.26	164.73	
14	BRA	eP	17 49 31	−3.1							19.83	100.22	Turkey–USSR Border
		e	50 04										Region
	SPC	eP	17 49 15	+3.0							18.04	106.88	41.38 N 43.44 E
													H = 17 45 00.9, h = 26 km,
													Mag = 4.6 (ISC).
													mPV (MOS) = 4.7,
													MLH (MOS) = 4.5.
15	BRA	iP	17 09 30	+0.6							90.15	96.79	Southern Sumatra
		i	09 54										4.68 S 102.15 E
		e	10 39										H = 16 56 33, h = 47 km,
	SPC	iP	17 09 24	+3.4							88.23	99.16	Mag = 5.3 (ISC).
													MLH (MOS) = 5.0.

16	BRA	e	16 08 23								10.28	166.74	Greece
		e	09 05										38.11 N 20.08 E
		eS	10 45	−3									H = 16 06 25.6, h = 40 km,
		e	12 47										Mag = 4.6 (ISC).
		Lm	14.0				1.3	4	1.6	4			MLH (MOS) = 4.7,
	SRO	e	16 09 20								9.78	171.77	MLH (BRA) = 4.7.
	SPC	eP	16 09 12	+7.3							11.08	180.68	
17	BRA	e	05 21 34								10.19	166.04	Greece
		e	24 52										38.23 N 20.21 E
	SRO	e	05 24 40								9.68	171.08	H = 05 18 43, h = 11 km,
		e	25 36										Mag = 4.5 (ISC).
													MLH (MOS) = 4.5.
17	BRA	eP	19 39 43	−3.1							98.86	48.68	Marianas
		epP	40 34	−7									18.92 N 145.49 E
		e	43 05										H = 19 26 31.5, h = 234 km,
		ePP	43 49	−5									Mag = 5.7 (ISC).
		eSKS	50 02	+2									mPV (MOS) = 6.0,
	SRO	e	19 44 32								98.48	49.69	MLH (MOS) = 5.9,
		e	50 00										
		e	52 18										
		Lm	20 19.5										
17	BRA	+iP	23 29 20	−0.4							20.18	93.42	Eastern Caucasus
		iPP	29 27	+6									43.31 N 45.25 E
		i	29 53										H = 23 24 46, h = 29 km,
		eS	33 03	+2									Mag = 5.0 (ISC).
		e	35 25										mPV (MOS) = 5.4,
		Lm	38 19										MLH (MOS) = 5.0.
	SRO	eP	23 29 12	+0.6							19.35	93.47	
		eS	32 56	+14									
		e	38 12										
	SPC	eP	23 29 00	+1.4							18.22	99.35	
		eS	32 34	+12									

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
18	BRA	ePKIKP	00 18 09	+9.2							155.92	114.54	Macquarie Island Region
		ePP	22 08	+5									52.53 S 159.7 E,
		Lm	01 40				11	18	22	18			H = 23 58 10.4, h = 33 km,
	SRO	ePKIKP	00 18 08	+9.4							155.04	115.39	Mag = 5.8 (ISC).
		e	27 36										MLH (BRA) = 6.8.
		eSKKS	29 00	+2									
		eSKSP	32 28	+1									
18	BRA	eP	01 50 08	+1.0							71.70	350.44	Gulf of Alaska
		e	50 18										59.49 N 144.90 W
		ePP	52 42	–5									H = 01 38 46.6, h = 29 km,
		e	55 24										Mag = 5.2 (ISC).
	SPC	eP	01 50 07	+3.4							71.01	352.05	MLH (MOS) = 5.6.
18	SRO	iPg	13 37 22										Local shock
18	SRO	iP	14 07 06	–0.8							96.12	273.01	Ecuador
													2.51 S 78.03 W
													H = 13 53 52, h = 123 km,
													Mag = 4.3 (NEIS).
18	BRA	eP	20 20 27	+1.6							77.44	95.27	Northern Sumatra
													5.86 N 94.79 E
													H = 20 08 38.2, h = 90 km,
													Mag = 5.0 (ISC).
18	BRA	+iP	23 56 16	–1.6	0.4	1.4					76.46	3.08	Fox Islands, Aleutian Islands
		ipP	56 29	–5									52.66 N 167.87 W
		isP	56 41	0									H = 23 44 14.6, h = 42 km,
		i	57 38										Mag = 5.4 (ISC).
		e	58 02										
	SPC	iP	23 56 14	+1.4							78.30	5.04	mPV (BRA) = 5.9,
													MLH (MOS) = 5.9.
19	BRA	ePKIKP	12 39 07	+2.7							134.43	45.03	Santa Cruz Islands
		e	39 10										10.57 S 166.19 E
													H = 12 19 47.3, h = 119 km,
													Mag = 4.2 (ISC).
19	BRA	ePKIKP	13 55 28	+3.5							147.40	27.87	Fiji Region
	SPC	ePKIKP	13 55 27	+4.9							145.47	32.17	17.99 S 178.24 W
													H = 13 36 45.2, h = 540 km,
													Mag = 4.9 (ISC).
19	SRO	iPg	14 01 32										Local shock
19	BRA	iPg	15 35 40										Local shock
		i	35 43										
19	BRA	e	18 35 19								39.17	83.34	Afghanistan–USSR Border Region
													38.87 N 70.58 E
													H = 18 18 55.2, h = 44 km,
													Mag = 4.8 (NEIS).
													MLH (MOS) = 4.3.
19	BRA	eP	19 08 21	+0.7							74.19	22.19	Near East Coast of Kamchatka
		e	08 31										53.20 N 159.95 E
													H = 18 56 49.2, h = 62 km,
													Mag = 5.2 (ISC).
													mPV (MOS) = 5.2.

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
19	BRA	eP	21 45 25	+1.5							79.51	3.10	Fox Islands, Aleutian Islands 52.61 N 167.89 W H = 21 33 15, h = 6 km, Mag = 4.9 (ISC).
	SPC	eP	21 45 20	+6.0							78.34	5.05	
20	BRA	–iP	02 49 55	+3.2							78.90	359.70	South of Alaska 53.31 N 162.41W H = 02 37 51.8, h = 41 km, Mag = 5.8 (ISC). MLH (MOS) = 5.4.
		isP	50 13	+2									
		i	50 40										
		ePP	52 50	0									
	SRO	eP	02 50 04	+10.3							79.25	0.44	
		e	53.00										
	SPC	iP	02 49 50	+3.5							77.85	1.63	
20	BRA	+eP	15 49 50	+1.8							78.96	39.26	Near East Coast of Honshu, Japan 40.81 N 142.19 E H = 15 37 49.6, h = 59 km, Mag = 5.5 (ISC). MLH (MOS) = 5.5.
20	BRA	e	21 20 24								162.51	61.82	North Island, New Zealand 38.03 S 177.5 E H = 20 52 46, h = 42 km (ISC).
		e	20 42										
21	BRA	e	15 28 36								121.96	56.42	New Britain Region 4.57 S 151.95 E H = 15 15 18.1, h = 77 km, Mag = 4.7 (ISC).
21	BRA	ePn	15 42 39	–1.9							8.38	133.57	Bulgaria 42.08 N 25.26 E H = 15 40 39.4, h = 49 km, Mag = 4.4 (ISC).
		Lm	45 30										
21	BRA	e	16 22 09								7.84	164.19	Albania 40.59 N 19.9 E H = 16 18 05, h = 13 km, Mag = 4.2 (ATH).
21	BRA	+iP	16 42 19	+1.6							37.46	108.72	Southern Persia 27.48 N 57.52 E H = 16 35 08.6, h = 64 km, Mag = 5.2 (ISC).
		e	43 03										
22	BRA	iP	01 42 17	–0.3							49.93	87.01	Tibet–India Border Region 30.50 N 79.40 E H = 01 33 23.0, h = 15 km, Mag = 5.3 (ISC). MLH (MOS) = 5. 2.
		iPP	44 17	0									
22	BRA	–iP	02 45 48	+2.2							77. 39	24.78	Kurile Islands Region 49.24 N 158.49 E H = 02 33 51.9, h = 24 km, Mag = 5.5 (ISC). mPV (MOS) = 6.2, MLH (MOS) = 5.6.
		i	46 00										
	SPC	eP	02 45 39	–3.0							75.57	26.79	
22	BRA	eP	10 57 12	–15.8							79.67	10.81	Andreanof Island 51.46 N 179.95 E H = 10 45 24.8, h = 56 km, Mag = 6.1 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
23	BRA	ePKP2 e	00 38 26 38 47	–2.7							158.38	105.78	Auckland Islands Region 49.45 S 164.19 E H = 00 17 53, h = 5 km, Mag = 5.3 (NEIS).
23	BRA	eSg Lm	00 56 56 57 07.8	–4.6							5.34	274.49	Germany 48.31 N 9.11 E H = 00 54 02.2, h = 9 km (ISC).
23	BRA SPC	eP e eP	06 09 26 09 35 06 09 14	+4.0 +3.0							81.61 79.45	41.61 43.82	Near East Coast of Honshu, Japan 37.31 N 141.62 E H = 05 57 08.5, h = 52 km, Mag = 5.1 (ISC).
23	BRA	iP ePP	07 21 51 25 52	–0.4 +5							95.74	305.70	Near Coast of Jalisco, Mexico 18.44 N 104.55 W H = 07 08 29.1, h = 45 km, Mag = 5.5 (ISC).
24	BRA	e e	00 50 43 51 49								89.98	287.25	Nicaragua 11.54 N 85.87 W H = 00 35 10.9, h = 154 km, Mag = 5.3 (ISC).
24	SPC	eP	11 11 03	+4							88.29	71.60	Luzon 13.36 N 123.22 E H = 10 58 09.6, h = 42 km, Mag = 5.1 (ISC).
24	BRA	ePb eSn eSg e e	13 27 08 27 45 28 24 29 07 30 01	+3.6 –3 0							5.75	239.76	Northern Italy 45.05 N 10.09 E H = 13 25 22.4, h = 45 km, Mag = 4.2 (NEIS).
24	BRA	iPg i i	15 35 05 35 08 35 12										Local shock
25	SPC	eP	00 21 47	+17							86.40	73.69	Philippines 13.46 N 120.33 E H = 00 08 55.9, h = 60 km, Mag = 5.0 (ISC).
25	BRA	ePg e	12 17 22 17 27										Local shock
26	BRA SPC	ePP e	02 48 48 02 48 42	–2.8							100.12 101.84	284.65 287.30	Galapagos Islands Region 2.08 N 90.52 W H = 02 31 03, h = 70 km, Mag = 5.0 (ISC).
26	BRA	iPg i	15 51 45 51 54										Local shock
27	BRA	eP e	02 27 43 28 06	–3.8							78.11	37.85	Hokkaido, Japan Region 42.28 N 143.09 E H = 02 15 49.5, h = 68 km, Mag = 4.9 (ISC). MLH (MOS) = 5.0.

June 1969

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
27	BRA	eP	09 12 03	−1.4							73.48	207.91	South Atlantic Ridge
		e	12 15										20.98 S 11.59 W
													H = 09 00 33.4, h = 33 km,
													Mag = 4.8 (ISC).
28	BRA	ePKIKP	21 44 32	+4.6							146.49	48.74	Loyalty Islands
		ePKIKP2	44 42	−3.5									Region
													22.20 S 170.50 E
													H = 21 24 55, h = 63 km,
													Mag = 4.8 (ISC).
29	BRA	+iPKIKP	10 54 00	+0.7							158.96	39.04	Kermadec Islands
		ipPKP	54 13	−1									30.61 S 178.10 W
		i	54 25										H = 10 34 06.2, h = 40 km,
		ePP	58 24	+3									Mag = 5.7 (ISC).
		e	11 01 22										MLH (MOS) = 5.6.
	SPC	iPKIKP	10 54 00	+3							156.82	43.58	
29	BRA	ePKIKP	17 28 52	−13.4							157.55	141.87	Balleny Islands Region
		ePKP2	29 38	−2									62.74 S 166.3 E
		e	30 13										H = 17 09 11, h = 14 km,
		ePP	33 24	0									Mag = 5.4 (ISC).
	SPC	ePKIKP	17 29 07	−1.2							157.00	138.84	MLH (MOS) = 6.0.
30	BRA	+eP	18 47 35	+0.8							69.59	277.46	North Atlantic Ocean
		epP	47 42										20.03 N 64.14 W
		e	48 10										H = 18 36 25.3, h = 25 km,
	SPC	eP	18 47 43	−2.3							71.50	279.34	Mag = 5.1 (ISC).

July 1969

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
01	BRA	ePKIKP	18 42 05	+4.7							146.32	21.32	Tonga
		e	43 23										15.90 S 174.99 W
													H = 18 22 53.6, h = 275 km,
													Mag = 4.9 (ISC).
02	BRA	eP	00 20 35	−1.3							60.32	213.36	Ascension Island Region
		e	20 46										6.82 S 11.65 W
		e	21 20										H = 00 10 25.9, h = 15 km,
		e	22 23										Mag = 4.8 (ISC).
	SPC	eP	00 20 50	−0.2							62.35	216.32	
02	BRA	eP	00 38 20	−5.4							60.41	213.38	Ascension Island Region
		epP	38 36	−1									6.9 S 11.7 W
		e	41 08										H = 00 28 18, h = 41 km,
	SPC	eP	00 38 40	−0.2							62.44	216.34	Mag = 4.6 (ISC).
02	BRA	ePn	07 57 44	+10.6							7.25	215.19	Central Italy
		e	58 05										42.1 N 11.5 E
		eSn	58 44	−2									H = 07 55 47, h = 33 km,
		eLm	07 59.7				0.12	2	0.18	2			Mag = 4.4 (ISC).
	SRO	eSb	07 59 34	+0.4							7.48	222.70	MLH (BRA) = 3.9.
		e	08 00 58										
		e	07 14										
02	BRA	eP	10 11 05	+2.1							69.79	81.03	Burma
													20.90 N 99.57 E
													H = 09 59 53, h = 28 km,
													Mag = 4.9 (ISC).
													MLH (MOS) = 5.0.

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
02	SRO	e	10 36 00								8.39	188.91	Southern Italy 39.51 N 16.64 E H = 10 31 21, h = 17 km, Mag = 4.3 (NEIS). Traces
03	BRA	eP	09 44 32	−0.5							10.40	157.96	Greece 38.41 N 22.05 E H = 09 42 02, h = 28 km, Mag = 4.5 (ISC).
03	BRA	eP e	17 12 20 16 16	−2.2							93.53	300.03	Near Coast of Guerrero, Mexico 16.88 N 98.40 W H = 16 59 10.4, h = 49 km, Mag = 5.2 (ISC).
03	BRA	eP	18 13 46	+1.2							79.12	11.93	Rat Islands, Aleutian Islands 51.76 N 178.04 E H = 18 01 48.7, h = 86 km, Mag = 5.1 (ISC). MLH (MOS) = 5.
03–04	SRO												The apparatus was out of order
04	BRA	ePKIKP e	23 14 08 14 34	+9.3							148.92	123.03	West of Macquarie Island 55.73 S 147.2 E H = 22 54 19.6, h = 33 km, Mag = 4.9 (ISC). MLH (MOS) = 5.2.
05	BRA	ePKIKP epPKP2 e	01 52 19 53 22 53 34	+6.8 +5							149.49	24.33	Tonga 19.41 S 175.70 W H = 01 32 52.5, h = 207 km, Mag = 4.5 (ISC).
05	BRA	e e	02 02 17 03 14								108.89	74.02	Western New Guinea Region 3.82 S 131.38E H = 01 43 57, h = 9 km, Mag = 5.6 (ISC). MLH (MOS) = 5.2.
05	BRA SPC	ePKIKP e e ePKIKP	06 27 31 27 33 27 46 06 27 35	+0.3 +2.5							150.30 148.31	30.83 35.18	Fiji Region 21.26 S 178.69 W H = 06 08 39.5, h = 469 km, Mag = 4.7 (ISC).
06	BRA SPC	ePKIKP epPKP2 e ePKIKP	14 48 01 48 09 48 36 14 47 57	+3.1 −3 +2.2							146.09 144.41	17.96 22.61	Tonga 15.24 S 173.16 W H = 14 28 22.1, h = 33 km, Mag = 4.9 (ISC). MLH(MOS) = 5.2.
06	BRA	ePKIKP ePKP2 esPKP2 e	14 50 55 51 04 51 15 52 12	+2.3 +11 +4							146.18	18.19	Tonga 15.36 S 173.27 W H = 14 31 16.9, h = 34 km, Mag = 5.2 (ISC). MLH (MOS) = 5.2.
08	BRA	ePKIKP	07 30 15	−5.5							161.62	46.18	South of Kermadec Islands 34.15 S 178.82 W H = 07 10 27, h = 55 km, Mag = 4.5 (NEIS). MLH (MOS) = 5.5.

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
08	BRA	+iP	08 11 49	−3.6							10.92	166.42	Ionian Sea
		e	12 15										37.50 N 20.31 E
		i	12 25										H = 08 09 13, h = 0 km,
		i	13 29										Mag = 5.5 (ISC).
		eS	13 49	−7.5									MLH (MOS) = 5.7.
		Lm	16.0				3.2	3.5	3.0	3.5			MLH (BRA) = 5.0,
	SRO	eP	08 11 44	−2.2							10.41	171.18	MLH (SRO) = 5.7.
		e	12 10										
		eS	13 36	−9									
		Lm	16										
	HRB	eP	08 11 45	−2.6							10.48	170.71	
		eS	13 40	−7									
		Lm	17										
	SPC	iP	08 12 03	−0.9							11.68	179.74	
08	SRO	ePg	21 10 16										Local shock
09	BRA	+iP	02 07 43	+1.0							78.71	13.95	Near Islands, Aleutian Islands
		e	08 13										51.68 N 174.79 E
													H = 01 55 39, h = 11 km,
													Mag = 5.1 (ISC).
													MLH (MOS) = 5.1.
09	BRA	ePKIKP	03 22 55	+0.7							161.50	45.68	South of Kermadec Islands
		ePKP2	23 40	+3									33.96 S 178.75 W
													H = 03 02 56, h = 19 km,
													Mag = 5.1 (ISC).
09	BRA	ePb	17 30 15	+3.1							7.88	164.80	Albania
		eSg	32 09	−6.0									40.52 N 19.81 E
		Lm	33										H = 17 27 54, h = 4 km,
													Mag = 4.5 (NEIS).
10	BRA	iPg	15 35 18										Local shock
		i	35 19										
10	SRO	ePg	20 01 10										Local shock
12	BRA	ePKIKP	13 35 37	−0.6							153.49	40.28	South of Fiji
													26.05 S 178.39 E
													H = 13 16 54.7, h = 594 km,
													Mag = 4.9 (ISC).
12	BRA	eP	19 28 43	+1.4							80.39	30.88	Off East Coast of Honshu, Japan
		ePcP	28 55	+5									39.82 N 143.64 E
		e	31 08										H = 19 16 28.1, h = 5 km,
		Lm	20 09.5				16.0	14	26.7	14			Mag = 5.2 (ISC).
													mPV (MOS) = 6.1,
													MLH (MOS) = 6.1,
													MLH (BRA) = 6.7.
12–15	SRO												The apparatus did not work
15	SRO	ePg	11 34 16										Local shock
15	SRO	e	20 45 16								61.47	259.99	North Atlantic Ridge
													14.56 N 45.01 W
													H = 20 30 03.0, h = 33 km,
													Mag = 4.4 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
15	BRA	eP e	21 45 57 46 11	−1.8							60.88	258.84	North Atlantic Ridge 14.47 N 45.12 W H = 21 35 58, h = 137 km, Mag = 4.3 (ISC).
16	BRA	eP ePcP e	05 34 15 34 30 35 27	+0.9 +6.5							78.74	132.34	Mascarene Islands Region 17.4 S 66.5 E H = 05 22 13.4, h = 36 km, Mag = 4.7 (ISC).
16	BRA	+iP iPcP i i eS Lm	08 28 29 28 36 29 03 29 30 38 00 33 15	+1.6 −6 +7 	0.3	0.8	 6.0	 18	 12.0	 18	74.83	23.20	Near East Coast of Kamchatka 52.21 N 158.95 E H = 08 16 50.4, h = 44 km, Mag = 5.8 (ISC). mPV (MOS) = 6.4,
	SPC	iP	08 28 19	+1.4							73.05	25.12	mPV (BRA) = 6.4, MLH (MOS) = 5.8, MLH (BRA) = 6.3.
16	BRA	ePKIKP e epPKP	12 58 15 58 30 58 40	+1.9 −1.7							122.94	55.11	New Ireland Region 4.77 S 153.42 E H = 12 39 23.7, h = 62 km, Mag = 5.0 (ISC). MLH (MOS) = 5.5.
16	BRA	−iP iPcP	15 07 39 07 42	−1.1 −2.5							85.39	324.22	Southern Nevada 37.13 N 116.07 W H = 14 55 02.3, h = 22 km, Mag = 5.5 (ISC).

16	BRA	eP e	22 11 51 12 21	+0.5							84.49	205.34	South Atlantic Ridge 32.24 S 13.07 W H = 21 59 20.0, h = 33 km, Mag = 4.6 (ISC).
17	BRA	eP	04 15 42	−0.3							79.79	10.63	Andreanof Islands, Aleutian Islands 51.38 N 179.74 W H = 04 03 39, h = 54 km, Mag = 5.0 (ISC).
18	BRA	eP	00 09 30	−2.4							48.90	270.59	North Atlantic Ridge 29.74 N 42.94 W H = 00 00 48.3, h = 37 km, Mag = 4.9 (ISC).
18	BRA	eP ePcP ePP eS eSS Lm	05 35 55 36 27 38 30 45 12 48.3 06 09.5	−1.8 +6.5 −5 +5 −3 	0.9	2.7	 166.5	 12	 199.8	 12	69.68	52.89	Northeastern China 38.43 N 119.47 E H = 05 24 45, h = 6 km, Mag = 5.9 (ISC). mPV (MOS) = 6.7, mPV (BRA) = 6.4, MLH (MOS) = 7.4, MLH (BRA) = 7.6.
18	BRA	eP	23 30 51	+7.7							97.25	250.82	Bolivia 18.29 S 63.34 W H = 23 17 09, h = 8 km, Mag = 5.5 (ISC).
19	BRA	+eP e ePP e Lm	05 08 45 09 17 12 44 15 11 53.5	0.0 −12 			 16	 18	 16	 18	102.41	258.00	Near Coast of Peru 17.30 S 72.48 W H = 04 54 53.6, h = 54 km, Mag = 5.8 (ISC). MLH (MOS) = 6.2, MLH (BRA) = 6.6.

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Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
19	BRA	ePKIKP e ePKP2	05 30 18 30 24 30 33	+1.5 –1							150.38	32.05	Fiji Region 21.56 S 179.26 W H = 05 11 39.8, h = 614 km,
	SPC	ePKIKP	05 30 22	+7.6							148.36	36.34	Mag = 4.9 (ISC).
19	BRA	ePKIKP ePKP2 e	18 16 17 16 46 17 14	+1.2 –3							156.94	31.84	Kermadec IslandsRegion 27.59 S 176.36 W H = 17 56 24.2, h = 32 km, Mag = 5.0 (ISC).
20	SPC	ePg iSg	09 58 04 58 08										Local shock
20	BRA	eP e ePcP	10 56 14 56 38 57 08	–1.7 +3							59.63	244.04	Central Mid-Atlantic Ridge 7.1 N 34.3 W H = 10 46 10, h = 1 km, Mag = 4.7 (ISC).
20	BRA	ePKIKP ePKP2 e	20 09 29 09 35 09 44	+3.6 –1.4 							149.26	25.53	Fiji Region 19.37 S 176.39 W H = 19 49 41.9, h = 15 km,
	SPC	ePKIKP	20 09 31	+8.4							147.38	30.09	Mag = 5.1 (ISC).
20	BRA	ePKIKP e ePP eSKP2	20 23 52 24 50 26 50 27 08	+1.3 –2 0							139.53	46.63	New Hebrides 15.57 S 167.79 E H = 20 04 46.9, h = 199 km, Mag = 5.3 (ISC).

21	BRA	ePKIKP e	02 41 59 42 20	+10.5							149.34	25.21	Fiji Region 19.4 S 176.2 W H = 02 22 05, h = 19 km, Mag = 4.8 (ISC).
21	BRA	eP epP	07 19 59 20 11	–2.9 +4							56.59	264.70	North Atlantic Ridge 21.07 N 45.77 W H = 07 .10 17.9, h = 17 km, Mag = 4.6 (ISC).
21	BRA	eP e	17 46 10 47 29	–0.2							40.88	271.88	North Atlantic Ridge 35.35 N 36.05 W H = 17 38 29.8, h = 33 km, Mag = 4.9 (ISC). MLH (MOS) = 5.2.
21	BRA	eP esP	19 56 23 56 29	–0.7 –9							80.47	39.35	Off East Coast of Honshu, Japan 39.50 N 143.19 E H = 19 44 12.5, h = 22 km, Mag = 5.0 (ISC). MLH (MOS) = 5.0.
21	BRA	ePP epPP	22 24 26 25 24	+2.0 +6							99.54	74.81	Celebes Sea 2.88 N 124.76 E H = 22 06 57.3, h = 226 km, Mag = 5.4 (ISC).
16–18	SRO												Calibration of the instruments
18–22	SRO												The apparatus did not work

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	NS	Remarks
22	BRA	ePKIKP	14 08 18	+1.0							149.10	17.86	Tonga Region
		epPKP	08 24	–3									18.19 S 172.43 W
	SPC	ePKIKP	14 08 21	+7.6							147.42	22.79	H = 13 48 36.0, h = 30 km, Mag = 5.3 (ISC).
22	BRA	ePKIKP	17 33 18	+1.9							135.67	45.52	Santa Cruz Islands
	SPC	ePKIKP	17 33 16	+4.2							133.45	48.54	11.83 S 166.49 E H = 17 14 14.5, h = 159 km, Mag = 5.3 (ISC).
22	BRA	ePKIKP	20 15 09	+1.7							155.19	32.34	South of Fiji
		e	16 18										26.06 S 177.35 W
		e	17 42										H = 19 55 37, h = 185 km, Mag = 5.0 (ISC).
22	BRA	ePKIKP	23 41 06	+6.0							149.25	30.43	Fiji Region
													20.2 S 178.90 W H = 23 22 26.5, h = 630 km, Mag = 4.5 (ISC).
23	SPC	ePKIKP	08 20 41	+11.8							147.27	34.73	South of Fiji
		epPKP	22 45	+1									23.68 S 179.13 W H = 08 01 52.2, h = 561 km, Mag = 5.0 (ISC).
23	BRA	+iP	13 26 50	+1.4							81.58	41.59	Near East Coast of Honshu, Japan
		ipP	27 03	0.0									37.35 N 141.62 E H = 13 14 35.0, h = 49 km, Mag = 5.4 (ISC). MLH (MOS) = 5.2.
	SPC	iP	13 26 39	+1.4							79.42	43.80	
		e	26 51										

24	BRA	–iP	03 13 09	–1.1							100.17	263.67	Peru
		e	13 42										11.84 S 75.10 W
		ePP	17 18	0									H = 02 59 29.9, h = 1 km, Mag = 5.9 (ISC).
		Lm	58.5										
24	BRA	iPg	08 08 45										Local shock
24	BRA	eP	12 55 04	+4.5							94.69	167.50	Prince Edward Islands Region
		e	55 42										45.60 S 35.0 E
	SPC	ipP	12 55 15	+1.2							95.28	169.66	H = 12 41 41.1, h = 33 km, Mag = 5.4 (ISC). mPV (MOS) = 6.1, MLH(MOS) = 5.9.
24	BRA	eP	23 24 51	+4.7							14.79	150.16	Crete
		ePPP	25 06	–1									34.93 N 26.00 E
		e	26 09										H = 23 21 19.3, h = 60 km,
	SPC	eP	23 24 53	+5.6							14.87	161.27	Mag = 4.5 (ISC).
25	BRA	eP	06 19 37	–1.4							102.48	245.85	Salta Province, Argentina
		e	21 04										25.49 S 63.21 W
		e	23 09										H = 06 06 42.1, h = 573 km,
		ePP	23 57	–7									Mag = 5.4 (ISC).
		e	24 18										
25	SRO	–iP	23 01 30	+0.5							76.59	72.72	Eastern China
		e	02 01										21.61 N 111.83 E
		esS	11 23	–1									H = 22 49 39.4, h = 18 km,
		Lm	30 49										Mag = 5.5 (ISC).
	SPC	iP	23 01 23	–4.3									mPV (MOS) = 6.4, MLH (MOS) = 6.0.
26	BRA	ePg	12 01 31										Local shock
		Lm	01 43										

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Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
26	BRA	eP	12 29 36	+9.1							22.38	270.34	North Atlantic Ocean
		ePP	29 51	–3									43.70 N 14.56 W
		e	30 30										H = 12 24 30.4, h = 33 km,
	SPC	eP	12 29 57	+9.6							24.46	270.31	Mag = 4.6 (ISC).
27	SRO	ePg	11 02 01										Local shock
27	BRA	eP	21 33 03	+1.5							71.78	350.50	Gulf of Alaska
		e	33 09										59.42 N 145.04 W
		ePcP	33 30	+9									H = 21 21 44.4, h = 60 km,
		e	34 12										Mag = 5.3 (ISC).
		ePP	35 48	+4									MLH (MOS) = 5.5.
28	BRA	–iP	13 15 39	–0.8	0.3	1.8					82.57	51.67	Japan
		isP	15 54	0									30.69 N 132.56 E
													H = 13 03 19.1, h = 34 km,
													Mag = 5.5 (ISC).
													mPV (BRA) = 6.1.
31	BRA	iP	11 35 03	+0.7							78.99	4.40	Fox Islands, Aleutian Islands
		iPcP	35 15	+3.0									53.04 N 170.06 W
		i	35 24										H = 11 23 02.1, h = 43 km,
		ePP	38 04	0.0									Mag = 5.2 (ISC).
		e	40 09										MLH (MOS) = 5.6.

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Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
01	BRA	ePKIKP	12 25 09	+8.2							152.78	29.85	South of Fiji
		epPKKP	26 00	+1.5									23.41 S 177.24 W
		e	26 17										H = 12 05 35.5, h = 199 km,
													Mag = 4.9 (ISC).
01	BRA	iP	23 55 45	+2.6							78.39	31.26	Kurile Islands
		iPcP	55 51	–0.5									45.43 N 150.89 E
		i	57 12										H = 23 43 43.0, h = 25 km,
		i	58 15										Mag = 5.7 (ISC).
		Lm	00 32						15	16			mPV (MOS) = 6.5,
	SRO	+iP	23 55 40	–1.2							78.27	31.98	MLH (MOS) = 6.3,
		e	00 01 29										MLH (BRA) = 6.4,
		eS	05 36	+2									MLH (SRO) = 6.1.
		Lm	32				5.3	19	9.5	19			
	HRB	eP	23 55 43	+0.7							78.26	31.91	
02	BRA	+eP	00 46 18	–0.4							78.51	31.25	Kurile Islands
		e	46 41										45.33 N 150.99 E
		ePcP	48 28	+1									H = 00 34 17.9, h = 22 km,
													Mag = 5.2 (ISC).
													MLH (MOS) = 5.6.
02	BRA	eP	04 56 55	+0.6							92.47	95.66	Southern Sumatra
													5.66 S 104.55 E
													H = 04 43 51.3, h = 82 km,
													Mag = 5.1 (ISC).
02	BRA	eP	10 29 55	+2.2							78.61	31.30	Kurile Islands
													45.22 N 151.00 E
													H = 10 17 54.3, h = 42 km,
													Mag = 4.8 (ISC).
													MLH (MOS) = 5.

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
03	BRA	+iPKIKP	00 41 23	+3.2							122.31	55.12	New Ireland Region
		i	41 36										4.25 S 153.06 E
		ePKS	44 57	+5									H = 00 22 31.2, h = 59 km,
	SRO	e	00 42 57								121.84	56.49	Mag = 5.4 (ISC).
		e	46 21										MLH (MOS) = 5.5,
		eSKS	48 21	−1									MLH (SRO) = 5.6.
		eSP	52 48	+1									
		Lm	01 26				2.0	26	1.4	26			
	SPC	ePKIKP	00 41 20	−5.3							120.02	57.66	
		e	42 37										
03	BRA	eP	04 31 55	+0.1							82.29	62.18	Southwestern Ryukyu Islands
		e	32 13										24.30 N 123.25 E
													H = 04 19 37.6, h = 52 km,
													Mag = 5.4 (ISC).
03	BRA	+iP	08 00 15	0.0							78.82	30.77	Kurile Islands
		iPcP	00 27	+2									45.29 N 151.79 E
		i	00 36										H = 07 48 11, h = 8 km,
	SRO	+iP	08 00 12	−1.9							78.71	31.49	Mag = 5.2 (ISC).
		e	00 29										mPV (MOS) = 5.1,
	SPC	iP	08 00 07	+1.8							76.86	32.86	MLH (MOS) = 5.3.
		i	00 19										

04	BRA	ePdiff	17 32 40								106.42	80.03	Banda Sea
		epP	34 34	−2									5.71 S 125.42 E
		i	37 01										H = 17 19 20.5, h = 531 km,
		iPP	37 13	+1									Mag = 6.3 (ISC).
		iSKP2	39 34	+5									
		i	40 07										
		iSKS	42 16	0									
		i	43 49										
		iSP	45 31	+4									
		ePPS	46 43	+2									
		ePKKP	48 27	+11									
		ePKPPKP	5628	−2									
	SRO	e	17 34 36								105.68	81.06	
		e	35 48										
		ePP	37 12	+5									
		eSKP2	39 24	−3									
		eSKS	42 24	+2									
		e	43 44										
		eSPP	46 32	0									
	HRB	ePP	17 37 10	+3							105.75	80.95	
		e	40 00										

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
05	BRA	eP	02 27 01	+0.4	0.6	1.8					101.72	74.73	Molucca Passage
		e	30 10										1.26 N 126.23 E
		ePP	31 20	+6									H = 02 13 08, h = 21 km,
		e	32 01										Mag = 6.1 (ISC).
		eSP	33 22	0									mPV (BRA) = 6.8,
		e	34 34										MLH (MOS) = 7.0,
		eSKS	37 44	+7									MLH (SRO) = 6.8,
		e	38 44										MLH (BRA) = 7.2.
		ePS	40 15	+1									
		ePPS	41 06	+2									
		e	44 28										
		Lm	03 20.5				22	18	44	18			
	SRO	eP	02 27 00	+2.5							101.02	75.73	
		ePP	31 24	+15									
		eSKS	37 40	+6									
		esS	38 44	+2									
		e	39 20										
		ePS	40 14	+5									
		e	42 30										
		ePKK:	46 44	+1									
		e	51 00										
		Lm	03 14				35	20	21	20			
	HRB	eSKS	02 37 38	+4							101.08	75.63	
		e	38 40										
		e	41 21										
		Lm	03 13										
05	BRA	ePKIKP	16 51 19	+2.7							123.54	55.18	New Ireland Region
		epPKP	51 34	–3									5.31 S 153.70 E
		e	52 16										H = 16 32 27.6, h = 78 km,
		ePP	53 00	–3									Mag = 5.6 (ISC).
													MLH (MOS) = 6.2.

05	BRA	ePKIKP	18 03 31	+0.2							144.73	48.82	New Hebrides
													20.74 S 169.44 E
													H = 17 44 00.3, h = 55 km,
													Mag = 4.7 (ISC).
06	BRA	eP	15 52 11	–1.8							62.34	254.44	North Atlantic Ridge
		epP	52 15										10.78 N 43.17 W
		e	52 27										H = 15 41 51.5, h = 36 km,
		ePP	54 27	–5									Mag = 5.2 (ISC).
	SRO	eP	15 52 16	–1.4							63.03	255.63	MLH (MOS) = 5.2.
		Lm	16 15										
07	SRO	iPg	11 25 54										Local shock
08	BRA	+iP	06 38 18	–1.1							40.67	86.33	Hindu Kush Region
		i	38 37										36.44 N 70.86 E
		ipP	39 00	0									H = 06 30 56.5, h = 193 km,
		iPP	39 58	0									Mag = 5.8 (ISC).
		ePPP	40 41	+1									mPV (MOS) = 6.6,
		eS	44 18	+12									mPV (BRA) = 6.1.
	SRO	+iP	06 38 13	+0.8							39.88	86.75	
		ipP	38 55	+1.6									
		e	40 40										
		eSS	47 20	+18									
08	BRA	ePP	11 26 00	–4							99.70	201.74	South Atlantic Ridge
		e	26 12										47.76 S 15.66 W
	SRO	ePP	11 26 00	–4							99.68	202.49	H = 11 08 13.2, h = 18 km,
		eS	33 36	+10									Mag = 5.7 (ISC).
		e	35 04										
		eSS	40 32	+10									
08	BRA	eP	20 07 49	+0.8							23.57	249.01	North Atlantic Ocean
		e	08 16										35.99 N 10.3 W
													H = 20 02 39, h = 25 km,
													Mag = 4.3 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
08	BRA	eP	20 58 28	0							109.55	76.96	Banda Sea
		epP	59 18	−7									6.14 S 129.69 E
		e	21 02 34										H = 20 44 20.8, h = 193 km,
		ePP	03 07	0									Mag = 5.8 (ISC).
		epPP	03 52	+1									
		eSP	12 16	+5									
	SRO	eP	20 58 24	0							108.83	78.04	
		epP	59 22	−2									
		e	21 01 40										
		ePP	03 00	−1									
		epPP	03 44	−1									
		e	10 20										
	SPC	eP	20 58 23	+5							107.30	79.13	
		epP	59 11	−4									
		iPP	02 54	+4									
09	BRA												The apparatus was not operational
	SRO	ePg	09 22 59	−2.3							5.84	230.18	Central Italy
		e	24 21										43.90 N 12.11 E
		e	25 27										H = 09 21 04.8, h = 33 km,
													Mag = 4.1 (ISC).
09	BRA	ePn	16 26 59	−6.2							6.03	164.89	Yugoslavia
	SRO	ePn	16 26 59	+0.9							5.52	172.99	42.33 N 19.22 E
		e	27 22										H = 16 25 35.9, h = 30 km,
		eSn	27 57	−2									Mag = 4.5 (ISC).
		e	28 37										MLH (MOS) = 5.0.
		eSg	28 59	+7									
		Lm	29 19										
	HRB	ePn	16 27 00	−0.6							5.59	172.16	
		e	27 44										
		e	28 30										
		Lm	31										
	SPC	iPn	16 27 00	−0.8							6.90	186.34	
		iSn	28 34	−1.9									
09	SRO	ePn	17 02 27	+0.7							5.57	173.67	Yugoslavia
		e	04 40										42.27 N 19.14 E
	HRB	eSn	17 03 30	+2							5.64	172.83	H = 17 01 03, h = 30 km,
		e	04 06										Mag = 4.3 (ISC).
	SPC	ePn	17 02 40	−8.7							6.96	188.78	
10	BRA	eP	15 51 02	+0.2							53.07	124.88	Carlsberg Ridge
													8.12 N 58.58 E
													H = 15 41 44.4, h = 25 km,
													Mag = 4.8 (ISC).
10	SRO	eP	21 21 27	+0.5							78.82	35.05	Kurile Islands
		e	21 52										43.39 N 147.70 E
													H = 21 09 27.4, h = 39 km,
													Mag = 4.3 (ISC).
11	BRA	eP	13 43 19	+0.3							61.25	234.56	Central Mid-Atlantic Ridge
		e	43 56										0.98 N 28.49 W
	SPC	eP	13 43 37	+3.1							63.55	237.08	H = 13 33 04.4, h = 33 km,
													Mag = 4.9 (ISC).

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Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
11	BRA	ePn	13 56 43	+0.4							6.11	215.94	Central Italy
		eSn	57 56	+2									43.11 N 12.21 E
		e	58 37										H = 13 55 09.0, h = 2 km,
		Lm	59										Mag = 4.1 (ISC).
	SRO	ePg	13 57 15	+4.0							6.37	224.61	
		e	57 49	−5									
		eSg	58 39	+5									
		Lm	59 47										
	SPC	ePn	13 57 17	+3.9							8.29	225.92	
11	BRA	eP	20 27 34	−9.0							69.67	277.58	North Atlantic Ocean
		e	40 39										20.06 N 64.29 W
													H = 20 16 35.1, h = 31 km,
													Mag = 4.9 (ISC).
11	BRA	eP	21 38 40	+1.8							79.01	34.16	Kurile Islands
		e	48 02										43.46 N 147.91 E
		ePS	49 22	+7									H = 21 26 33, h = 8 km,
		Lm	22 02				11	17	14	17			Mag = 5.8 (ISC).
	SRO	+iP	21 38 39	+1.7							78.84	34.88	mPV (MOS) = 6.6,
		e	39 37										MLH (BRA) = 6.5,
	HRB	+iP	21 38 36	−2.2			0.4	4	2	4	78.84	34.81	MLH (HRB) = 6.4.
		iS	48 30	−5			5	4	4	4			
		Lm	22 00										
	SPC	iP	21 38 28	−0.1							76.98	36.27	
12	BRA	eP	00 37 54	+9.3							78.58	33.22	Kurile Islands
													44.30 N 148.69 E
													H = 00 25 40, h = 2 km,
													Mag = 5.1 (ISC).

12	BRA	eP	01 05 40	+2.6							79.29	34.77	Off Coast of Hokkaido, Japan 42.91 N 147.40 E H = 00 53 34.3, h = 35 km, Mag = 5.0 (ISC). MLH (MOS) = 5.
12	BRA	eP	02 35 40	+2.2							101.32	74.41	Molucca Passage 1.77 N 126.21 E H = 02 21 53, h = 72 km, Mag = 5.0 (ISC).
12	BRA	eP	02 49 03	+11.1							78.97	33.75	Kurile Islands Region
	SPC	eP	02 48 47	+5.4							76.95	35.86	43.70 N 148.36 E H = 02 36 52.6, h = 52 km, Mag = 5.0 (ISC). MLH (MOS) = 5.2.
12	BRA	eP	03 45 47	+6.3	0.2	1.5					79.23	34.48	Kurile Islands
	SRO	eP	03 45 41	+1.3							79.06	35.20	43.11 N 147.70 E
		esS	55 51	−2									H = 03 33 37.8, h = 35 km,
	HRB	esS	03 55 54	+7							79.06	35.13	Mag = 5.5 (ISC).
	SPC	eP	03 45 34	+4.1							77.19	36.60	mPV (MOS) = 6.4, mPV (BRA) = 5.9, MLH (MOS) = 6.1.
12	BRA	eP	05 00 35	+5.5							79.53	34.42	Off Coast of Hokkaido,
	SPC	iP	05 00 22	+2.9							77.49	36.55	Japan 42.88 N 147.97 E H = 04 48 24, h = 25 km, Mag = 5.0 (ISC). MLH (MOS) = 5.

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
12	BRA	eP	05 05 41	+2.0	0.2	1					79.14	34.38	Kurile Islands
	SRO	eP	05 05 39	+0.9							78.97	35.11	43.24 N 147.74 E
	SPC	iP	05 05 32	+3.6							77.10	36.23	H = 04 53 33, h = 10 km,
													Mag = 5.7 (ISC).
													mPV (MOS) = 6.6,
													mPV (BRA) = 6.2,
													MLH (MOS) = 6.3.
12	BRA	+iP	05 15 31	+2.9	0.25	1.7					79.05	34.12	Kurile Islands
		eSKS	25 32	0									43.45 N 147.98 E
		Lm	05 50				150	15	133	15			H = 05 03 30.5, h = 70 km,
	SRO	+iP	05 15 31	+3.8							78.88	34.84	Mag = 6.0 (ISC).
		eSKS	25 29	−2									mPV (MOS) = 7.0,
	HRB	eP	05 1527	−0.7							78.88	34.77	mPV (BRA) = 6.1,
		e	16 50										MLH (MOS) = 7.0,
		eSKS	25 26	−6									MLH (BRA) = 7.5.
		ePPS	26 40	+8									
		Lm	51										
12	BRA	eP	06 05 35	+4.6							78.97	33.68	Kurile Islands Region
		eSKS	15 33	−4									43.74 N 148.43 E
													H = 05 53 30.2, h = 44 km,
													Mag = 5.6 (ISC).
													mPV (MOS) = 6.7,
													MLH (MOS) = 6.7.

12	BRA	eP	08 06 44	−7.6							79.21	35.22	Off Coast of Hokkaido,
	SPC	eP	08 06 37	−4.1							77.15	37.35	Japan
													42.75 N 146.83 E
													H = 07 54 49, h = 32 km,
													Mag = 4.9 (ISC).
													MLH (MOS) = 5.4.
12	BRA	eP	09 37 36	−5.6	0.2	1.4					79.17	34.46	Kurile Islands
	SRO	+iP	09 37 42	+2.0	0.4	1.2					79.00	35.19	43.17 N 147.67 E
		eS	47 41	+6									H = 09 25 39.8, h = 40 km,
	SPC	iP	09 37 33	+2.1							77.13	36.58	Mag = 5.4 (ISC).
													mPV (MOS) = 6.3,
													mPV (BRA) = 6.1,
													mPV (SRO) = 6.4,
													MLH (MOS) = 6.0.
12	SRO	eP	09 45 46	+2.7							78.74	35.05	Kurile Islands
	SPC	iP	09 45 37	+3.4							76.88	36.44	43.46 N 147.65 E
													H = 09 33 42.2, h = 27km,
													Mag = 5.6 (ISC).
													mPV (MOS) = 6.5,
													MLH (MOS) = 6.0.
12	BRA	eP	11 33 29	+5.3	0.3	1.2					78.89	33.46	Kurile Islands Region
		eS	43 23	+6									43.92 N 148.63 E
		Lm	12 11.5				36	17	60	17			H = 11 21 23.3, h = 39 km,
	SRO	+iP	11 33 23	+0.1							78.73	34.18	Mag = 5.6 (ISC).
		e	34 27										mPV (MOS) = 6.5,
		eS	43 19	+3									mPV (BRA) = 6.2,
		Lm	12 11.5				19.6	19	34.6	19			MLH (MOS) = 6.7,
	HRB	eP	11 33 26	+2.7							78.72	34.11	MLH (BRA) = 7.1,
		eS	43 20	+4									MLH (SRO) = 6.7.
		Lm	17										
	SPC	iP	11 33 15	+1.9							76.87	35.57	

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
12	BRA	eP	12 35 08	−1.2							101.45	74.37	Molucca Passage 1.69 N 126.33 E H = 12 21 19.0, h = 30 km, Mag = 5.7 (ISC). MLH (MOS) = 6.
12	BRA	eP	13 30 14	+3.4							78.99	33.92	Kurile Islands Region
	SRO	eP	13 30 14	+4.3							78.83	34.64	43.60 N 148.17 E
	SPC	iP	13 30 04	+4.0							76.96	36.03	H = 13 18 05, h = 7 km, Mag = 5.5 (ISC). MLH (MOS) = 5.8.
12	SPC	iPg	15 02 14										Local shock
12	BRA	eP	15 40 05	+4.7							78.73	33.10	Kurile Islands 44.23 N 148.94 E H = 15 28 02.1, h = 50 km, Mag = 5.0 (ISC). MLH (MOS) = 5.0.
12	BRA	eP	16 02 03	+5.5							78.55	33.88	Kurile Islands 44.0 N 147.9 E H = 15 50 00, h = 45 km, Mag = 5.0 (ISC).
12	BRA	eP	21 28 20	+6.2							79.08	35.20	Off Coast of Hokkaido, Japan
		e	28 47										
	SRO	+iP	21 28 13	+0.2							78.90	35.92	42.87 N 146.77 E
	SPC	iP	21 28 04	+1.1							77.03	37.32	H = 21 16 11.6, h = 32 km, Mag = 5.5 (ISC). MLH (MOS) = 5.5.

12	BRA	eP	22 08 42	+5.8							79.06	34.39	Kurile Islands
	SPC	eP	22 08 29	+3.4							77.02	36.51	43.30 N 147.67 E H = 21 56 33, h = 24 km, Mag = 4.8 (ISC). MLH (MOS) = 5.2.
12	BRA	eP	23 18 07	+7.1							79.13	34.15	Kurile Islands Region
	SRO	eP	23 18 03	+4.0							78.97	34.87	43.36 N 148.01 E H = 23 05 55, h = 15 km, Mag = 5.0 (ISC). MLH (MOS) = 5.7.
12	BRA	eP	23 27 58	−2.1							79.22	34.19	Kurile Islands Region
	SPC	eP	23 27 44	+2.1							77.18	36.31	43.27 N 148.02 E H = 23 15 48, h = 22 km, Mag = 4.9 (ISC). MLH (MOS) = 5.
13	BRA	eP	02 19 15	+5.7							78.92	33.40	Kurile Islands Region
	SRO	eP	0219 11	+2.6							78.77	34.12	43.92 N 148.73 E
	SPC	iP	02 19 03	+4.4							76.90	35.50	H = 02 07 08.9, h = 41 km, Mag = 4.9 (ISC). MLH (MOS) = 5.4.
13	BRA	eP	03 41 21	+5.7							78.83	34.36	Kurile Islands
	SRO	eP	03 41 15	+0.6							78.66	35.08	43.51 N 147.55 E
		eS	51 11	+1									H = 03 29 12.0, h = 15 km,
	SPC	iP	03 41 07	+3.5							76.80	36.47	Mag = 5.5 (ISC). MLH (MOS) = 5.5.
13	BRA	ePn	04 08 39	+6.2							10.36	159.27	Greece
		Lm	11.0										38.37 N 21.75 E
	SRO	ePn	04 08 27	+2.3							9.77	163.87	H = 04 06 03, h = 24 km,
		eSg	11 19	−2									Mag = 4.5 (ISC).
		e	11 35										
		Lm	11.0										
	SPC	ePn	04 08 46	+5.7							10.87	173.71	

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Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
13	BRA	eP	04 40 24	+3.6							79.01	33.92	Kurile Islands Region
	SPC	eP	04 40 15	+5.1							76.98	36.03	43.58 N 148.19 E
													H = 04 28 16.6, h = 19 km,
													Mag = 5.3 (ISC).
													MLH (MOS) = 5.3.
13	BRA	+iP	08 43 27	−4.8	0.17	1.8					78.60	33.95	Kurile Islands
		e	43 54										43.92 N 147.86 E
		eS	53 32	+8									H = 08 31 33.1, h = 41 km,
		Lm	09 20				9	17	18	17			Mag = 5.6 (ISC).
	SRO	+iP	08 43 30	−0.3							78.44	34.67	mPV (MOS) = 6.4,
		ePcP	43 47	+6									MLH (MOS) = 6.0,
		eS	53 25	+3									MLH (BRA) = 6.4,
		e	09 12 31										MLH (SRO) = 5.96.
		Lm	21.5				3.8	20	4.7	20			
	HRB	eP	08 43 30	−0.9							78.43	34.60	
		Lm	09 23										
	SPC	iP	08 43 23	+2.1							76.57	36.05	
13	BRA	e	09 32 57								78.97	33.52	Kurile Islands
													43.82 N 148.62 E
													H = 09 20 34.8, h = 37 km,
													Mag = 4.7 (ISC).
13	BRA	e	11 24 57								122.21	56.67	New Britain Region
													4.89 S 151.91 E
													H = 11 14 36.2, h = 130 km,
													Mag = 4.6 (ISC).

13	SRO	e	12 11 19										Near shock
		e	12 19										
	BRA	e	12 11 58										
13	BRA	eP	12 42 58	+7.1							79.00	34.28	Kurile Islands
													43.41 N 147.76 E
													H = 12 30 49.6, h = 36 km,
													Mag = 5.0 (ISC).
													MLH (MOS) = 5.0.
13	BRA	eP	17 19 25	+8.2							79.13	35.25	Off Coast of Hokkaido,
	SRO	eP	17 19 17	+1.2							78.95	35.98	Japan
		eScS	29 31	−3									42.80 N 146.74 E
		Lm	58										H = 17 07 11, h = 9 km,
	SPC	eP	17 19 09	+2.7							77.07	37.38	Mag = 4.8 (ISC).
													MLH (MOS) = 5.2.
13	BRZ	eP	19 45 43	+6.7							78.63	33.94	Kurile Islands
	SPC	eP	19 45 28	+2.5							76.60	36.04	43.90 N 147.89 E
													H = 19 33 37.9, h = 44 km,
													Mag = 5.2 (ISC).
													MLH (MOS) = 5.
13	BRA	eP	22 54 20	+11.4							79.13	33.12	Kurile Islands Region
	SPC	eP	22 54 02	+3.6							77.12	35.23	43.88 N 149.20 E
													H = 22 42 06, h = 30 km,
													Mag = 4.7 (ISC).

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Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
13	BRA	+iP	23 09 17	+9.3							78.63	33.58	Kurile Islands
		e	10 05										44.08 N 148.31 E
		e	12 05										H = 22 57 08.3, h = 36 km,
		eSKS	19 14	0									Mag = 5.6 (ISC).
		Lm	47				9	17	18	17			mPV (MOS) = 6.5,
	SRO	+iP	23 09 06	−0.3							78.47	34.30	MLH (MOS) = 6.1,
		e	09 59										MLH (BRA) = 6.4,
		eS	19 05	+6									MLH (SRO) = 6.23.
		eScS	19 23	+2									
		Lm	44.5				8.1	20	8.1	20			
	HRB	eP	23 09 05	−2.3							78.47	34.23	
		eS	19 07	+8									
	SPC	iP	23 09 00	+3.0							76.61	35.68	
14	BRA	eP	09 12 06	+13.3							79.16	34.53	Kurile Islands
	SPC	eP	09 11 45	+2.7							77.12	36.65	43.14 N 147.59 E
													H = 08 59 47, h = 11 km,
													Mag = 4.7 (ISC).
													MLH (MOS) = 4.5.
14	SRO	iPg	09 33 10										Local shock
14	BRA	+ P	14 31 03	−1.3	0.2	1.7	0.3	2.6	0.2	2.6	79.11	34.63	Kurile Islands
		e	32 00										43.14 N 147.44 E
		Lm	15 14				40	16	150	16			H = 14 19 03.6, h = 46 km,
	SRO	+iP	14 31 04	+0.6							78.93	35.35	Mag = 6.2 (ISC).
		e	31 29										mPV (MOS) = 6.8,
		e	31 35										mPV (BRA) = 6.1,
		eS	41.06	+8									mPPH (BRA) = 6.4,
		e	50 43										MLH (MOS) = 7,
		Lm	15 14.5				40.7	6	32.4	6			MLH (BRA) = 7.4,
	HRB	eP	14 31 00	−3.9							78.93	35.28	MLH (SRO) = 7.
		e	32 09										
		eS	41 05	+7									
		Lm	15 13										
	SPC	iP	14 30 54	+0.3							77.06	36.75	
		iS	40 45	+7									
14	BRA	e	15 50 45								79.29	34.39	Kurile Islands
													43.10 N 147.84 E
													H = 15 38 14, h = 2 km,
													Mag = 4.9 (ISC).
													Time relative
14	BRA	eP	21 54 00	+7.2							11.61	134.14	Turkey
		Lm	57 45										39.52 N 27.87 E
	SRO	e	21 56 06								10.79	136.70	H = 21 51 05.3, h = 21 km,
		e	57 18										Mag = 4.7 (ISC).
		Lm	57 30										MLH (MOS) = 4.6.
	HRB	e	21 57.3								10.89	136.52	
15	BRA	eP	00 00 23	+5.6							75.38	22.37	Off East Coast of
													Kamchatka
													52.05 N 160.50 E
													H = 23 48 37.0, h = 41 km,
													Mag = 5.0 (ISC).
													mPV (MOS) = 5.0,
													MLH(MOS) = 5.1.

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
15	BRA	ePKIKP e	03 56 38 58 06	+2.4							116.69	62.74	Near North Coast of New Guinea 3.45 S 144.39 E H = 03 37 52.9, h = 22 km, Mag = 5.3 (ISC).
15	BRA	+iP esS Lm	04 44 03 54 21 05 22	−1.2 +1	0.25	1.8	13	15	19	15	79.21	34.39	Kurile Islands 43.17 N 147.79 E H = 04 32 02.1, h = 40 km, Mag = 5.7 (ISC). mPV (MOS) = 6.6, mPV (BRA) = 6.0, MLH (MOS) = 6.2, MLH (BRA) = 6.3, MLH (SRO) = 6.3.
	SRO	+iP e eS Lm	04 44 06 44 18 54 06 05 22.5	+3.1 +8 			9	16	8	16	79.04	35.11	
	HRB	eS Lm	04 54 05 05 23	+7							79.04	35.05	
	SPC	iP	04 43 57	+3.5							77.18	36.51	
15	BRA	eP epP e ePP eSKS	08 54 44 55 56 57 34 58 37 09 04 53	−0.4 0 −5 +5							95.43	49.16	Marianas Region 21.57 N 143.10 E H = 08 41 54.8, h = 320 km, Mag = 5.9 (ISC).
	SRO	+iP epP ePP iSKS eSP	08 54 42 55 54 58 38 09 04 50 06 44	−0.6 −5 0 +4 −6							95.05	50.12	
	SPC	iP	08 54 37	+2.8							93.18	51.55	

15	SRO	eP eSKS Lm	10 14 22 24 24 10 54.5	+1.5 +2			5.5	14	2.5	14	79.07	35.17	Kurile Islands 43.12 N 147.75 E H = 10 02 25.0, h = 90 km, Mag = 4.6 (ISC). MLH (MOS) = 6.2, MLH (SRO) = 6.0.
15	SPC	eP	20 59 38	0.0							77.20	36.56	Kurile Islands 43.33 N 147.14 E H = 20 47 46, h = 38 km, Mag = 5.1 (ISC).
15	SPC	eP	22 55 41	+2.7							77.20	36.75	Kurile Islands 43.02 N 147.53 E H = 22 43 47.3, h = 44 km, Mag = 5.1 (ISC).
16	SPC	eP	08 59 43	+1.7							77.23	36.62	Kurile Islands 43.06 N 147.70 E H = 08 47 44, h = 2 km, Mag = 4.9 (ISC). MLH (MOS) = 5.
16	SPC	eP	09 15 06	+2.7							76.81	35.64	Kurile Islands 43.93 N 148.51 E H = 09 03 12, h = 25 km, Mag = 5.2 (ISC). MLH (MOS) = 5.3.
16	BRA SPC	eP eP	10 17 42 10 17 47	−1.9 +6.9							85.82 85.05	133.20 135.72	Mid-Indian Rise 23.9 S 69.7 E H = 10 05 06.6, h = 33 km, Mag = 4.9 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
16	BRA	eP	12 56 04	−2.1							78.55	33.62	Kurile Islands
	SPC	eP	12 55 58	+2.4							76.52	35.72	44.13 N 148.20 E
													H = 12 44 08.6, h = 48 km,
													Mag = 4.9 (ISC).
													MLH (MOS) = 5.0.
16	BRA	+iP	15 27 32	+0.8	0.3	2.0					79.09	34.60	Kurile Islands
		e	27 46										43.17 N 147.46 E
		eSKS	37 36	−1									H = 15 15 30.9, h = 49 km,
	SRO	+iP	15 27 30	−0.3							78.92	35.32	Mag = 5.8 (ISC).
		iP	28 01										mPV (MOS) = 6.5,
		iS	37 28	+5									mPV (BRA) = 6.1,
	SPC	iP	15 27 23	+2.5							77.05	36.72	MLH (MOS) = 5.9.
		eS	37.12	+8									
16	BRA	eP	17 25 46	+2.3							79.22	34.58	Kurile Islands
		e	26 01										43.07 N 147.57 E
	SPC	eP	17 25 36	+3.0							77.17	36.70	H = 17 13 42.6, h = 48 km,
													Mag = 5.5 (ISC).
													MLH (MOS) = 5.4.
17	BRA	ePKIKP	10 29 28	+3.9							113.96	46.14	Solomon Islands
													7.07 N 155.51 E
													H = 10 10 33.1, h = 97 km,
													Mag = 5.0 (ISC).
17	BRA	eP	11 48 44	−2.3							79.29	34.19	Kurile Islands Region
	SRO	eP	11 48 46	+0.6									43.21 N 148.07 E
													H = 11 36 39, h = 5 km,
													Mag = 4.9 (ISC).
													MLH (MOS) = 5.1.

17	BRA	eP	12 06 35	−0.1							77.14	38.67	Hokkaido, Japan Region
		epP	07 08	−1.3									42.64 N 141.47 E
		ePP	09 25	−7									H = 11 54 55.1, h = 133 km,
	SRO	+iP	12 06 34	+0.2							76.91	39.36	Mag = 5.6 (ISC).
		ipP	07 06	−2									
		eS	16 18	+9									
17	BRA	ePKIKP	16 26 20	+3.8							147.42	28.16	Fiji Region
													18.06 S 178.39 W
													H = 16 07 42.6, h = 599 km,
													Mag = 4.8 (ISC).
17	BRA	eP	18 21 20	−10.0							78.98	34.61	Kurile Islands
													43.26 N 147.37 E
													H = 18 09 09.3, h = 41 km,
													Mag = 4.5 (ISC).
17	BRA	ePKIKP	18 46 20	+4.3							146.30	49.10	Loyalty Islands Region
													22.15 S 170.21 E
													H = 18 26 40.2, h = 36 km,
													Mag = 5.2 (NEIS).
17	BRA	eP	20 26 18	+0.2							92.53	313.10	Gulf of Califomia
		e	26 41										25.25 N 109.24 W
		ePP	30 02	0									H = 20 13 09.3, h = 38 km,
		eScS	37 32	+14									Mag = 5.6 (ISC).
		ePS	38 37	−1									MLH (MOS) = 6.5,
		e	42 50										MLH (BRA) = 7.4,
		Lm	21 08.5				45	15	100	15			MLH (SRO) = 7.2.
	SRO	eP	20 26 22	+0.4							93.36	314.02	
		e	28 18										
		e	31 22										
		esS	37 38	−5									
		e	39 34										
		Lm	21 09.5				71	20	84	20			
	HRB	eP	20 26 26	+4.8							93.26	313.93	
		e	40 14										
		Lm	21 09										

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
18	BRA	ePKIKP	01 24 17	+24.9							154.77	237.10	Easter Island Cordillera
		ePP	27 53	−4									55.97 S 123.35 W
	SRO	ePKIKP	01 24 18	+25.3							155.25	236.41	H = 01 04 06, h = 44 km,
		eSS	47 58	+20									Mag = 5.3 (ISC).
													MLH (MOS) = 6.3.
18	BRA	eP	03 35 04	−2.3							92.77	312.66	Gulf of California
		ePP	38 47	−4									24.81 N 108.97 W
													H = 03 21 52, h = 7 km,
													Mag = 5.4 (ISC).
18	BRA	eP	05 38 17	+3.2							83.79	43.97	Near East Coast of Honshu, Japan
													34.19 N 140.73 E
													H = 05 25 49.6, h = 56 km,
													Mag = 4.9 (ISC).
													MLH (MOS) = 5.
18	BRA	ePKIKP	07 56 53	+2.0							138.72	46.67	New Hebrides
													14.88 S 167.35 E
													H = 07 37 41.6, h = 141 km,
													Mag = 5.1 (ISC).
18	BRA	eP	11 55 32	+0.6							79.01	33.55	Kurile Islands Region
		e	56 47										43.77 N 148.61 E
	SRO	+iP	11 55 30	−0.6							78.85	34.28	H = 11 43 26, h = 7 km,
		ePcP	55 42	+1.4									Mag = 5.5 (ISC).
		e	57 34										MLH (MOS) = 5.6.
		eS	12 05 30	+2									
	SPC	iP	11 55 24	+3.0							76.98	35.66	
18	BRA	ePKIKP	14 29 35	+0.1							158.17	35.92	Kermadec Islands
		ePKP2	30 08	−2.8									29.37 S 177.37 W
													H = 14 09 45.6, h = 62 km,
													Mag = 5.3 (ISC).
18	BRA	ePg	14 53 35										Local shock
18	BRA	eP	15 05 48	−4.0							42.31	96.82	West Pakistan
	SPC	eP	15 05 40	−3.7							40.41	100.68	29.89 N 67.43 E
													H = 14 57 57, h = 14 km,
													Mag = 4.8 (ISC).
													MLH (MOS) = 5.0.
18	BRA	ePg	15 35 08										Local shock
19	BRA	eP	02 32 33	+3.7							26.38	355.90	Norwegian Sea
													74.30 N 10.4 E
													H = 02 26 59, h = 75 km,
													Mag = 4.3 (ISC).
19	BRA	−iP	09 01 55	−0.2	0.4	2					78.97	33.94	Kurile Islands Region
		ePcP	02 10	+5									43.60 N 148.13 E
		ePP	04 43	−14									H = 08 49 54.3, h = 39 km,
		eS	11 53	+4									Mag = 5.7 (ISC).
		Lm	45.5				22	16	64	16			mPV (MOS) = 6.6,
	SRO	+iP	09 01 54	−0.3							78.81	34.67	mPV (BRA) = 6.2,
		iS	11 54	+6									MLH (MOS) = 6.5,
	HRB	eP	09 01 56	+1.7							78.81	34.60	MLH (BRA) = 6.8,
		eS	11 40	−8									MLH (SRO) = 6.4.
		Lm	41										
	SPC	iP	09 01 45	+0.5							76.94	36.06	
		eS	11 33	+4									

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Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
19	BRA	ePP e	17 47 31 50 52	+3.8							102.88	249.80	Jujuy Province, Argentina 23.15 S 66.6 W H = 17 29 32.6, h = 207 km, Mag = 4.1 (ISC).
20	BRA	+iP e eS	08 01 51 02 24 11 33	−1.4 +2	0.4	1.5	0.2	1.8	0.25	1.8	77.19	28.29	Kurile Islands 47.88 N 153.75 E H = 07 50 09.8, h = 111 km,
	SRO	+iP iPcP eS	08 01 53 01 55 11 33	+1.0 −3 +3							77.12	28.98	Mag = 6.0 (ISC). mPV (MOS) = 6.6, mPV (BRA) = 6.3,
	SPC	iP	08 01 44	+1.7							75.28	30.32	mPH (BRA) = 6.6.
20	SRO	iPg	13 49 00										Local shock
21	BRA	eP e	00 40 40 40 52	+1.8							79.20	34.13	Kurile Islands Region 43.31 N 148.08 E
	SPC	eP	00 40 31	+3.6							77.17	36.25	H = 00 28 35.8, h = 37 km, Mag = 5.1 (ISC).
21	BRA	eP e	02 56 03 56 19	−0.4							79.21	34.78	Off Coast of Hokkaido, Japan
	SPC	eP	02 55 56	+2.7							77.17	36.90	42.97 N 147.34 E H = 02 43 58.4, h = 15 km, Mag = 5.0 (ISC). MLH (MOS) = 5.
21	BRA	eP e	03 44 15 03 44 15	+1.6 +2.4							79.20 79.02	34.84 35.57	Off Coast of Hokkaido, Japan
	SRO	eScS e e	54 27 04 16 38 21 14	−4									42.95 N 147.26 E H = 03 32 08, h = 17 km, Mag = 5.1 (ISC).
	SPC	eP	03 44 05	−0.5							77.15	36.96	MLH (MOS) = 5.7.
21	SRO	iPg	11 24 59										Local shock
21	BRA	ePg	11 25 56										Local shock
21	BRA	ePg e	12 19 50 20 33										Local shock
21	BRA	eP e	13 36 01 36 13	−1.2							78.94	33.96	Kurile Islands Region 43.62 N 148.09 E
	SRO	eP eS	13 36 03 46 03	+1.7 +6							78.78	34.68	H = 13 23 58.3, h = 15 km, Mag = 5.5 (ISC).
	SPC	iP i	13 35 53 36 04	+1.2							76.91	36.07	MLH (MOS) = 5.7.
22	BRA	eP e	04 52 29 53 20	+1.6							79.38	34.17	Kurile Islands Region 43.14 N 148.15 E
	SRO	eP eSKS	04 52 29 05 02 31	+2.5 −2							79.21	34.90	H = 04 40 29.1, h = 46 km, Mag = 4.9 (ISC).
	SPC	eP	04 52 20	+3.3							77.34	36.30	MLH (MOS) = 5.5.
23	SRO	eP e eScS	06 51 37 52 08 07 01 51	+3.0 −2							80.46	39.28	Off East Coast of Honshu, Japan 39.76 N 144.23 E H = 06 39 25.0, h = 38 km, Mag = 5.2 (ISC). MLH (MOS) = 5.2.

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
24	BRA	–eP	22 15 16	+1.8	0.1	1.5					80.71	38.75	Off East Coast of Honshu, Japan
	SRO	eP	22 15 15	+2.1							80.48	39.50	39.62 N 144.00 E
		epP	15 39	+3									H = 22 03 09.8, h = 89 km,
		e	16 31										Mag = 5.2 (ISC).
		e	16 47										mPV (BRA) = 5.6,
	SPC	eP	22 15 09	+6.1							78.60	40.93	MLH (MOS) = 5.4.
25–26	BRA												The apparatus did not work
25	SRO	iPg	16 38 56										Local shock
26	SRO	ePn	02 17 11	+1.8							6.20	168.02	Albania
		e	17 39										41.73 N 20.03 E
		eSn	18 27	+7									H = 02 15 37.1, h = 28 km,
		e	18 39										Mag = 4.9 (ISC).
		e	19 07										MLH (MOS) = 4.5.
		Lm	19 51										
	HRB	ePn	02 17 05	–5.4			4	3	3	3	6.28	167.33	
		eSn	18 15	–7									
		Lm	20										
	SPC	iPn	02 17 30	+3.3							7.46	181.24	
26	BRA	ePKIKP	09 46 24	+5.6							147.94	24.42	Fiji Region
													17.93 S 176.22 W
													H = 09 26 38, h = 19 km,
													Mag = 4.8 (ISC).

26	BRA	ePKIKP	17 16 51	–0.4							122.62	57.88	New Britain Region
		e	17 03										5.82 S 151.30 E
		e	18 42										H = 16 58 01.9, h = 57 km,
	SRO	ePKIKP	17 16 53	+2.6							122.12	59.24	Mag = 5.5 (ISC).
		e	18 43										MLH (MOS) = 5.8.
		Lm	18 10										
	SPC	ePKIKP	17 16 43	+4.2							120.31	60.35	
26	BRA	ePKIKP	20 47 42	+3.1							146.15	18.20	Tonga
		e	47 51										15.33 S 173.28 W
		e	47 59										H = 20 28 03.9, h = 40 km,
	SRO	ePKIKP	20 47 43	+4.0							146.22	20.41	Mag = 5.4 (ISC).
		e	48 11										
		e	49 15										
26	BRA	eP	22 52 54	+0.3							25.64	328.07	Iceland Region
	SPC	eP	22 53 03	+6.2							25.93	325.66	66.43 N 17.59 W
													H = 22 47 25.9, h = 33 km,
													Mag = 4.9 (ISC).
27	BRA	eP	01 22 30	+1.2							79.17	34.35	Kurile Islands
	SRO	eP	01 22 31	+3.1									43.23 N 147.80 E
		Lm	02 01										H = 01 10 24, h = 14 km,
	SPC	eP	01 22 23	+4.1							79.00	35.08	Mag = 5.1 (ISC).
													MLH (MOS) = 5.5.
											77.13	36.47	
27	BRA	eP	01 40 36	+1.0							79.19	34.38	Kurile Islands
	SPC	eP	01 40 27	+2.5							77.15	36.50	43.20 N 147.78 E
													H = 01 28 30, h = 17 km,
													Mag = 4.9 (ISC).
27	BRA	+iP	03 38 19	+3.9							79.20	34.35	Kurile Islands
		e	38 54										43.20 N 147.83 E
	SRO	eP	03 38 15	+0.8							79.03	35.07	H = 03 26 08, h = 2 km,
		e	38 35										Mag = 5.3 (ISC).
	SPC	iP	03 38 08	+3.1							77.17	36.47	MLH (MOS) = 5.5.

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Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
27	BRA	eP	03 44 36	−0.8							79.15	34.43	Kurile Islands
	SPC	iP	03 44 29	+3.0							77.11	36.55	43.20 N 147.69 E
													H = 03 32 30, h = 6 km,
													Mag = 5.1 (ISC).
													MLH (MOS) = 5.
27	SRO	ePg	11 01 54										Local shock
27	SRO	ePg	12 08 54										Local shock
27	BRA	ePg	13 47 16										Local shock
		e	47 40										
		Lm	47 56										
	SRO	ePg	13 47 26										
28	BRA	eP	04 06 22	+2.0							41.07	81.15	Tadzhikistan–Sinkiang
		e	06 46										Border Region
		e	07 37										39.07 N 73.61 E
		ePP	08 03	+4									H = 03 58 36.7, h = 22 km,
		e	16 25										Mag = 5.2 (ISC).
		Lm	23.5				10	12	10	12			mPV (MOS) = 5.7,
	SRO	eP	04 06 18	+4.1							40.32	81.49	MLH (MOS) = 5.7,
		e	07 42										MLH (BRA) = 5 9.
		ePP	07 54	+3									
		esS	12 30	−1									
		e	15 38										
		Lm	22 10				2.2	18	2.9	18			
	HRB	Lm	04 22								40.39	81.49	
28	BRA	ePKIKP	14 14 12	+3.6							160.09	39.40	Kermadec Islands Region
		ePKP2	14 52	+1									31.66 S 177.58 W
		e	15 33										H = 13 54 10, h = 14 km,
		ePP	18 30	−4									Mag = 5.5 (ISC).
	SRO	ePKIKP	14 14 14	+5.9							159.83	42.62	MLH (MOS) = 6.0,
		ePKP2	14 38	−12									MLH (SRO) = 6.1.
		e	19 06										
		Lm	15 51				2.2	18	2.9	18			
	SPC	ePKIKP	14 14 22	+16							157.94	44.04	
28	BRA	ePKIKP	17 09 54	+1.0							160.19	39.93	Kermadec Islands Region
		ePKP2	10 34	−2									31.84 S 177.7 W
		e	15 19										H = 16 49 56.3, h = 23 km,
	SRO	ePKP2	17 10 34	0.0							159.92	43.15	Mag = 5.2 (ISC).
	SPC	ePKIKP	17 09 56	+5.0							158.04	44.52	
28	BRA	eP	21 47 24	0.0							79.06	34.35	Kurile Islands
		e	47 46										43.32 N 147.73 E
	SRO	eP	21 47 26	+2.9							78.89	35.07	H = 21 35 18, h = 7 km,
		eS	57 22	+2									Mag = 5.1 (ISC).
		Lm	22 26				1.6	14	1.4	14			MLH (MOS) = 5.6.
	SPC	iP	21 47 17	+3.6							77.03	36.46	
29	BRA	ePg	14 21 47										Near Earthquake
	SPC	ePn	14 22 03										
30	BRA	eP	07 23 42	+1.1							78.98	34.12	Kurile Islands
		eS	33 39	0									43.50 N 147.93 E
	SRO	+iP	07 23 46	+6.0							78.82	34.85	H = 07 11 35, h = 4 km,
		eS	33 40	+3									Mag = 5.6 (ISC).
		Lm	08 01.5				7.5	18	13.1	18			mPV (MOS) = 6.6,
	SPC	eP	07 23 34	+3.6							76.95	36.24	MLH (MOS) = 6.3,
													MLH (SRO) = 6.4.

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Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
30	BRA	eP	08 40 09	+1.7	0.5	1.5					78.91	34.28	Kurile Islands
		eScS	50 23	+1									43.49 N 147.70 E
	SRO	eP	08 40 10	+3.7							78.74	35.00	H = 08 28 06.7, h = 39 km,
		eScS	50 22	+1									Mag = 5.3 (ISC).
		Lm	09 18										mPV (MOS) = 6.5,
	SPC	iP	08 40 00	+3.5							76.87	36.39	MLH (MOS) = 6.1.
31	BRA	ePP	11 15 18	−1.0							142.86	47.63	New Hebrides
		e	15 24										18.77 S 169.02 E
													H = 10 52 55.2, h = 207 km,
													Mag = 5.0 (ISC).
31	BRA	+iP	13 18 02	−1.0							90.13	96.47	Southern Sumatra
		epP	18 15	−5									4.45 S 102.38 E
		e	18 23										H = 13 05 08.3, h = 61 km,
	SPC	eP	13 17 58	+4.0							88.20	98.84	Mag = 5.4 (ISC).
													MLH (MOS) = 5.

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Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
01	BRA	ePKIKP	08 34 58	+21.6							150.16	129.14	West of Macquarie Island
		e	35 25										58.89 S 149.10 E
	SPC	ePKIKP	08 34 44	+2.6							149.17	127.91	H = 08 14 55.3, h = 33 km,
													Mag = 4.9 (ISC).
01	BRA	eP	10 01 56	+1.7							79.16	34.61	Kurile Islands
		epP	02 12	−6									43.10 N 147.50 E
	SRO	eP	10 01 54	+0.6							78.99	35.34	H = 09 49 53.1, h = 45 km,
	SPC	eP	10 01 48	+3.9							77.12	36.73	Mag = 5.3 (ISC).
													MLH (MOS) = 5.3.
02	BRA	eP	05 05 19	−0.3							24.28	53.65	Western Russia
		e	05 26										57.35 N 54.77 E
	SPC	iP	05 05 00	+5.1							22.00	55.11	H = 04 59 57.4, h = 0 km,
													Mag = 4.8 (ISC).
02	BRA	eP	11 52 00	0.0							61.15	214.85	Ascension Island Region
		e	52 10										7.10 S 13.18 W
		ePP	54 14	−3									H = 11 41 42, h = 2 km,
		e	54 23										Mag = 4.9 (ISC).
		ePPP	55 42	−3									
	SPC	eP	11 52 16	+1.5							63.21	217.77	
03	BRA	eP	16 33 05	+4.4							85.66	45.84	South of Honshu, Japan
		e	33 14										31.59 N 140.15 E
		epP	33 29	−4									H = 16 20 27.6, h = 60 km,
		ePP	36 36	−1.6									Mag = 5.3 (ISC).
		eScS	43 38	+4									MLH (MOS) = 5.8.
	SRO	eP	16 33 02	+3.0							85.32	46.67	
		eS	43 32	+9.0									
	SPC	eP	16 32 57	+7.0							83.44	48.13	

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Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
03	BRA	eP	23 45 41	–0.3							33.54	99.49	Persia 34.11 N 58.16 E H = 23 39 02, h = 31 km, Mag = 4.9 (ISC). MLH (MOS) = 4.5.
04	BRA	+eP	03 20 44	–5.7	0.17	1.5					78.26	29.05	Kurile Islands
		e	20 55										46.59 N 153.53 E
		epP	21 05	+3									H = 03 08 52.9, h = 40 km,
		ePP	23 48	0									Mag = 5.6 (ISC).
		eS	30 40	–1									mPV (BRA) = 5.9,
		Lm	59				22	18	33	18			MLH (MOS) = 6.0,
	SRO	+iP	03 20 50.5	+1.3							78.17	29.76	MLH (BRA) = 6.1.
		epP	21 03	+2									
		e	22 19										
		ePP	23 51	+3									
		eS	30 32	–7									
	SPC	iP	03 20 48	+7.6							76.33	31.11	
04	BRA	ePg	14 04 28										Near shock
04	BRA	eP	17 23 29	+0.1							20.86	120.32	Jordan-Syria Region
	SRO	eP	17 23 19	–0.7							19.98	121.52	35.20 N 39.15 E
		eS	27 00	+1									H = 17 18 48.6, h = 45 km,
	SPC	eP	17 23 18	–2.5							19.71	128.12	Mag = 4.7 (ISC). MLH (MOS) = 4.5.

04	BRA	eP	21 24 37	+1.0							78.67	34.30	Kurile Islands
		e	25 19										43.68 N 147.50 E
		ePP	27 28	+1									H = 21 12 37.1, h = 42 km,
	SRO	+iP	21 24 38	+3.6							78.50	35.02	Mag = 5.7 (ISC).
		e	25 47										MLH (MOS) = 5.8.
		ePP	27 30	–4									
		eS	34 31	+4									
	SPC	iP	21 24 24	–0.5							76.63	36.41	
05	BRA	eP	11 54 36	+1.1							82.48	64.32	Taiwan Region
		epP	54 45	–3									22.77 N 121.63 E
		ePP	57 48	0									H = 11 42 15.2, h = 40 km,
	SRO	+iP	11 54 36	+4.9							81.90	65.13	Mag = 5.5 (ISC).
	SPC	iP	11 54 27	+3.5							80.16	66.68	MLH (MOS) = 5.7.
05	BRA	eP	17 57 58	+10.3							17.21	114.98	Turkey 38.94 N 37.22 E H = 17 53 49.3, h = 47 km, Mag = 4.5 (ISC). MLH (MOS) = 4.1.
06	BRA	eP	07 55 30	+0.6							78.61	34.36	Kurile Islands
		ePP	58 39	–6									43.70 N 147.39 E
	SRO	+iP	07 55 29	+0.6							78.44	35.08	H = 07 43 31.3, h = 46 km,
		e	56 35										Mag = 5.5 (ISC).
		eS	08 05 23	+4									MLH (MOS) = 5.6,
		Lm	30				0.4	17	1.3	17			MLH (SRO) = 5.5.
	SPC	iP	07 55 22	+3							76.57	36.47	
06	BRA	eP	11 53 17	–1.8							75.78	27.73	Kurile Islands
		e	54 05										49.38 N 153.47 E
	SPC	eP	11 53 10	+1							73.89	29.72	H = 11 41 52.7, h = 189 km, Mag = 5.0 (ISC).

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
06	BRA	+iP	14 35 52	+0.5			1.5	1.5	1.0	1.5	23.94	252.81	North Atlantic Ocean
		i	36 17										36.96 N 11.84 W
		iPP	36 30	+2									H = 14 30 43.0, h = 67 km,
		i	37 20										Mag = 5.5 (ISC).
		eS	40 08	+8									mPH (BRA) = 6.4,
		i	40 26										MLH (MOS) = 5.7,
		Lm	44.0				1.5	5	1.5	5			MLH (BRA) = 5.3,
													MLH (SRO) = 5.9.
	SRO	+iP	14 35 59	+0.8							24.62	252.96	
		iPP	36 40	+3									
		e	39 11										
		eS	40 27	+15									
		Lm	46				11	16	29	16			
	HRB	eP	14 36 05	+6							24.56	254.70	
		ePP	36 40	+5									
		eS	40 12	+1									
		Lm	46										
	SPC	iP	14 36 18	+4.4							26.23	254.33	
06	BRA	ePKIKP	15 09 08	+4.1							128.83	53.22	Solomon Islands
													8.89 S 157.95 E
													H = 14 49 59, h = 31 km,
													Mag = 5.8 (ISC).
													MLH (MOS) = 6.3.
06	BRA	eP	16 29 50	−3.0							87.23	46.31	South of Honshu, Japan
													30.02 N 140.73 E
													H = 16 17 15.2, h = 86 km,
													Mag = 5.2 (ISC).

06	BRA	−iPKIKP	17 27 13	+1.5							128.88	53.32	Solomon Islands
		e	29 41										8.98 S 157.91 E
		ePKS2	30 40	+4									H = 17 08 04.4, h = 17 km,
		ePS	39 29	+2									Mag = 5.8 (ISC).
	SPC	iPKIKP	17 27 12	+4							126.60	55.96	
06	BRA	eP	20 34 06	+8.3							14.11	140.00	Dodecanese Islands
		e	35 30										36.73 N 28.35 E
	SPC	iP	20 34 00	+6.2							13.78	151.61	H = 20 30 40.3, h = 72 km,
													Mag = 5.0 (ISC).
07	BRA	eP	00 35 42	−2.0							79.75	50.41	Kyushu, Japan
													33.68 N 131.68 E
													H = 00 23 45.9, h = 101 km,
													Mag = 5.2 (ISC).
07	BRA	ePKIKP	03 25 09	+1.8							128.75	53.45	Solomon Islands
		e	27 15										8.92 S 157.75 E
	SPC	ePKIKP	03 25 06	−1.3							126.46	56.09	H = 03 06 02, h = 27 km,
													Mag = 5.5 (ISC).
													MLH (MOS) = 5.2.
07	BRA	ePKIKP	08 59 15	−0.4							125.74	53.98	Solomon Islands
													6.61 S 155.74 E
													H = 08 40 34.4, h = 174 km,
													Mag = 5.2 (ISC).
07	BRA	EPN	15 20 42	−3.2							3.59	174.34	Yugoslavia
		eSg	21 45	−2									44.6 N 17.6 E
													H = 15 19 48, h = 0 km (ISC).
07	BRA	eP	18 55 54	+13.6							79.13	33.99	Kurile Islands Region
													43.44 N 148.19 E
													H = 18 43 33, h = 3 km,
													Mag = 5.0 (ISC).
													MLH (MOS) = 5.3.

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Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
08	BRA	eP	05 05 18	−2.9							24.53	68.32	Ural Mountains Region 51.31 N 55.03 E H = 04 59 56.4, h = 0 km, Mag = 4.8 (ISC).
08	BRA	ePg	18 04 28										Local shock
06–09	SRO												The apparatus was not operational
09	BRA	eP	05 27 49	−2.5							80.78	45.54	Honshu, Japan 35.77 N 137.08 E H = 05 15 39.7, h = 29 km, Mag = 5.5 (ISC). MLH (MOS) = 6.8, MLH (BRA) = 7.0, MLH (SRO) = 7.
		isP	28 32	−3.4									
		e	29 33										
		ePP	31 02	+5									
		Lm	06 01.5				54	14	27	14			
	SRO	eP	05 27 49	−2.5							80.44	46.30	
		iPcP	27 55	+2									
		isS	38 07	−2									
		Lm	06 00										
	HRB	esS	05 38 06	−2			6.5	16	9.5	16	80.46	46.22	
		e	38 30										
		Lm	06 00										
	SPC	iP	05 27 44	+5							78.56	47.76	
09	BRA	ePg	11 05 46										Local shock
09	BRA	ePg	11 38 04										Local shock
09	SRO	ePg	12 25 29										Local shock
10	BRA	eP	07 58 56	+0.3							78.75	33.84	Kurile Islands Region 43.84 N 148.09 E H = 07 46 54.2, h = 24 km, Mag = 4.8 (ISC). MLH (MOS) = 5.2.
	SPC	iP	07 58 39	−4.2							76.73	35.95	
		ePcP	58 53	−6									
10	BRA	eP	12 18 27	−0.5							19.62	108.04	Turkey 39.25 N 41.38 E H = 12 14 00.8, h = 52 km, Mag = 5.2 (ISC). MLH (MOS) = 5.3.
		e	18 36										
		ePP	18 44	−1									
		e	19 36										
		eS	21 59	−2									
		eSS	22 33	+5									
	SRO	+iP	12 18 19	+1.6							18.73	108.70	
		ePP	18 21	0									
		eS	21 37	−4									
	HRB	e	12 19 20								18.83	108.70	
		eS	21 35	−6									
	SPC	eP	12 18 15	+4							18.06	115.43	
		eS	21 30	+4									
10	BRA	eP	17 54 52	+2.4							95.18	304.83	Near Coast of Michoacan, Mexico 18.4 N 103.47 W H = 17 41 32, h = 60 km, Mag = 4.3 (ISC).
11	BRA	eP	03 29 29	−0.4							83.93	57.32	Ryukyu Islands 26.13 N 128.51 E H = 03 17 01, h = 27 km, Mag = 5.3 (ISC). MLH (MOS) = 5.5.
		eS	38 40	−6									
	SPC	eP	03 29 24	−2							81.62	59.64	
11	SPC	ePg	13 58 35										D = 90 km. Near shock
		iSg	58 46										

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Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
12	BRA SPC	ePKIKP ePKIKP	03 34 16 03 34 10	+3.5 +6							149.09 147.29	22.17 26.90	Tonga 18.71 S 174.70 W H = 03 14 45.7, h = 143 km, Mag = 4.9 (ISC).
12	BRA	eP	07 54 51	+1.2							80.14	10.28	Andreanof Islands, Aleutian Islands 51.10 N 179.08 W H = 07 42 44.5, h = 54 km, Mag = 5.0 (ISC).
12	BRA	eP	08 12 22	−1.0							80.15	10.42	Andreanof Islands, Aleutian Islands 51.06 N 179.30 W H = 08 00 16.0, h = 39 km, Mag = 5.3 (ISC).
12	BRA SPC	eP eP	08 21 31 08 21 29	+0.4 +6							80.09 78.68	10.33 12.34	Andreanof Islands, Aleutian Islands 51.14 N 179.18 W H = 08 09 24.9, h = 48 km, Mag = 5.2 (ISC).
12	BRA SRO SPC	+iP e ePP e eS cS Lm +iP ePP eSKS Lm iP	09 09 13 09 24 12 16 15 30 19 28 51 09 09 15 12 20 19 23 51 09 09 09	−0.1 −1 −3 +1.2 +2 0 +4			111 12	18 18	22 27	18 18	79.96 80.16 78.55	10.30 11.04 12.30	Andreanof Islands, Aleutian Islands 51.27 N 179.17 W H = 08 57 06.9, h = 38 km, Mag = 5.9 (ISC). MLH (MOS) = 7, MLH (BRA) = 7.3, MLH (SRO) = 6.9.
12	BRA SPC	+iP iP	15 12 24 15 12 19	+0.8 +3.0							79.95 78.54	10.28 12.28	Andreanof Islands, Aleutian Islands 51.29 N 179.14 W H = 15 00 18.3, h = 48 km, Mag =5.7 (ISC). MLH (MOS) = 5.5.
13	BRA SPC	ePKIKP ePKIKP	00 53 25 00 53 26	+1.8 +4							152.86 150.78	35.48 39.74	South of Fiji 24.50 S 179.79 W H = 00 34 30.8, h = 491 km, Mag = 4.9 (ISC).
13	BRA e SRO	eP e eP	12 04 14 04 32 12 04 15	−0.1 +1.8	0.15	1.8					79.17 79.00	34.54 35.26	Kurile Islands 43.13 N 147.59 E H = 11 52 13.0, h = 47 km, Mag = 5.5 (ISC). mPV (BRA) = 5.9, MLH (MOS) = 5.2.
14	SRO	eP Lm	14 54 12 15 10 00	+10.4			2.1	9	2.8	9	40.84	79.98	Southern Sinkiang Province, China 39.65 N 74.83 E H = 14 46 22.7, h = 43 km, Mag = 5.1 (ISC). MLH (MOS) = 5.5, MLH (SRO) = 5.5.

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Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
14	BRA	e	16 23 33								41.53	79.61	Southern Sinkiang Province, China
		ePP	24 45	−3									
	SRO	eP	16 23 06	+1.4							40.79	79.94	39.70 N 74.80 E
		ePP	24 44	+1									H = 16 15 25.6, h = 38 km,
		e	39 00										Mag = 5.5 (ISC).
	SPC	iP	16 22 56	+3.0							39.31	82.77	MLH (MOS) = 5.8.
		ePP	24 29	+1.0									
15	BRA	eP	14 57 41	+1.1							78.64	13.48	Rat Islands, Aleutian Islands
	SRO	eP	14 57 42	+1.2							78.79	14.20	51.87 N 175.47 E
													H = 14 45 41.4, h = 42 km,
													Mag = 5.4 (ISC).
													MLH (MOS) = 5.5.
15	BRA	+iP	18 59 41	+1.2							78.57	30.79	Kurile Islands
	SRO	eP	18 59 36	−3.2							78.46	31.50	45.50 N 151.60 E
	SPC	eP	18 59 33	+4.0							76.61	32.87	H = 18 47 40.5, h = 33 km,
													Mag = 5.4 (ISC).
													MLH (MOS) = 5.5.
16	BRA	eP	01 29 12	+1.3							78.50	30.82	Kurile Islands
													45.55 N 151.51 E
													H = 01 17 12.5, h = 39 km,
													Mag = 5.1 (ISC).

16	BRA	+iP	14 42 38	−2.4	0.5	1.5					85.35	324.56	Southern Nevada
		iPcP	42 50										37.33 N 116.43 W
		ePP	46 00	0									H = 14 30 02.2, h = 22 km,
		e	48 21										Mag = 6.1 (ISC).
	SRO	iP	14 42 44	−0.2							86.11	325.43	mPV (BRA) = 6.8,
		i	44 20										MLH (SRO) = 5.8.
		ePP	45 58	−8									
		Lm	15 25.5				1.7	16	2.3	16			
	SPC	iP	14 42 43	+4							85.69	326.74	
		ePP	45 59	−2									
17	BRA	e	11 48 42								3.90	268.21	Austria
													47.90 N 11.3 E
													H = 11 46 25, h = 0 km (ISC).
17	BRA	+iP	18 53 05	−0.8							81.66	52.20	Kyushu, Japan
		i	53 15										31.08 N 131.43 E
		iPP	56 13	−2									H = 18 40 50.3, h = 39 km,
		eScS	19 03 24	−5									Mag = 6.1 (ISC).
		Lm	32.5				17	13	23	13			MLH (MOS) = 6.6,
	SRO	+iP	18 53 04	+0.5							81.23	52.98	MLH (BRA) = 6.8,
		e	53 24										MLH (SRO) = 6.9.
		ePP	56 08	−3									
		e	56 24										
		eSKS	19 03 16	+1									
		Lm	32.5				26.8	14	31.7	14			
19	BRA	ePKP2	01 07 35	+9.7							146.84	25.42	Fiji Region
	SPC	ePKP2	01 07 33	+15							144.98	29.80	17.04 S 177.1 W
													H = 00 47 46, h = 53 km,
													Mag = 4.2 (ISC).
19	BRA	eP	01 43 44								97.48	72.33	Mindanao, Philippine Islands
	SRO	e	01 47 16								96.81	73.29	6.06 N 125.32 E
		e	50 24										
	SPC	epP	01 43 15	−3.1							95.20	74.63	H = 01 29 38.4, h = 105 km,
													Mag = 5.5 (ISC).

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Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
20	BRA	eP	01 13 48	−2.3							30.44	307.97	North Atlantic Ocean
		esS	19 13	+2									58.29 N 32.03 W
													H = 01 07 42, h = 61 km,
													Mag = 5.0 (ISC).
20	BRA	−iP	05 15 09	−0.3							30.47	308.09	North Atlantic Ocean
		isP	15 24	+1									58.35 N 32.08 W
		iPPP	16 12	0									H = 05 08 57.8, h = 33 km,
		e	17 42										Mag = 5.6 (ISC).
		eS	20 10	+2									MLH (MOS) = 6.0,
		Lm	27.5				44	16	33	16			MLH (BRA) = 6.2,
	SRO	+iP	05 15 14	−2.9							31.32	308.61	MLH (SRO) = 6.2.
		i	16 04										
		iPP	16 24	+3									
		i	18 36										
		iS	20 21	+1									
		L	22 32										
		Lm	27.5				34	16	33	16			
	SPC	iP	05 15 22	+3.0							31.50	306.98	
20	BRA	ePP	15 45 30	+2.9							106.94	292.81	East Central Pacific Ocean
	SPC	ePP	15 45 37	−1.0							108.41	295.73	1.84 N 100.98 W
													H = 15 28 51, h = 115 km,
													Mag = 5.5 (ISC).
21	BRA	iPKIKP	07 31 09.0	+1.6							147.82	21.44	Tonga
													17.38 S 174.66 W
													H = 07 11 51.8, h = 218 km,
													Mag = 5.3 (ISC).

21	BRA	eP	21 41 33	−0.6							80.42	96.48	Off West Coast of Northern Sumatra
													2.83 N 95.90 E
													H = 21 29 24, h = 46 km,
													Mag = 4.8 (ISC).
22	BRA	−iP	01 58 24	+1.1	0.15	1.5					80.31	96.43	Off West Coast of Northern Sumatra
		i	58 42										2.95 N 95.86 E
		iPP	02 01 33	+2									H = 01 46 11, h = 14 km,
		eS	08 21	−4									Mag = 5.4 (ISC).
	SRO	eP	01 58 16	−2.4							79.46	97.28	mPV (BRA) = 5.9,
		ePP	02 01 20	−1									MLH (MOS) = 6.0,
		eS	08 10	−8									MLH (BRA) = 5.8.
		Lm	35.5				1.9	20	3.4	20			
	SPC	iP	01 58 16	+4							78.38	99.03	
22	BRA	eP	02 47 45	+0.5							78.98	34.40	Kurile Islands
	SPC	iP	02 47 35	+1.1							76.94	36.51	43.37 N 147.61 E
													H = 02 35 43.1, h = 35 km,
													Mag = 5.0 (ISC).
													MLH (MOS) = 5.3.
22	BRA	+eP	04 04 47	+0.3							80.32	96.47	Off West Coast of Northern Sumatra
		e	05 35										2.92 N 95.84 E
		eS	14 42	−4									H = 03 52 38, h = 43 km,
	SPC	eP	04 04 30	+3							78.39	99.06	Mag = 5.2 (ISC).
													MLH (MOS) = 5.5.
22	BRA	e	10 04 54										No determination of epicentre

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
22	BRA	+iP	13 58 00	–0.6	0.15	1.6					60.35	240.98	Central Mid-Atlantic Ridge
		ipP	58 30	+3									4.92 N 32.60 W
		i	58 51										H = 13 47 53, h = 40 km,
		ePP	14 00 10	–6									Mag = 5.5 (ISC).
	SRO	+iP	13 58 03	+0.7							60.90	242.26	mPV (BRA) = 5.9,
		e	59 12										MLH (MOS) = 5.5.
		ePP	14 00 28	+7									
		eSP	06 28	–5									
	SPC	iP	13 58 19	–3							62.67	243.37	
22	BRA	eP	22 12 21	+3.5							60.42	232.16	Central Mid-Atlantic Ridge
													0.55 N 26.28 W
													H = 22 02 08.8, h = 33 km,
													Mag = 4.7 (ISC).
23	BRA	ePP	01 44 09	+1.0							136.55	280.28	Easter Island Region
													27.36 S 113.36W
													H = 01 22 03.4, h = 33 km,
													Mag = 5.3 (ISC).
23	SRO	e	22 55 26								97.51	308.85	Off Coast of Jalisco, Mexico
		e	57 28										18.94 N 107.03 W
		Lm	23 27.5										H = 22 37 22, h = 6 km,
													Mag = 5.0 (ISC).
24	BRA	eP	04 05 12	–0.1	0.2	1.5					31.09	297.61	North Atlantic Ocean
		i	05 17										52.97 N 32.06 W
		i	05 24										H = 03 58 55, h = 35 km,
		ePP	06 17	+2									Mag = 5.3 (ISC).
		Lm	19				2.8	9	7	9			mPV (BRA) = 5.6,
	SPC	iP	04 05 33	+8.0							32.47	296.96	MLH (BRA) = 5.7.
24	SRO	iP	04 05 24	+0.2							32.02	297.72	North Atlantic Ocean
		iPP	06 36	+5									52.61 N 32.01 W
		i	07 40										H = 03 58 58.0, h = 28 km,
		Lm	16.5				3.5	15	9.1	15			Mag = 5.2 (ISC).
													MLH (MOS) = 5.5,
													MLH (SRO) = 6.
24	BRA	+iP	04 27 09	–0.7							31.02	296.93	North Atlantic Ridge
		iPP	28 15	+3									52.64 N 31.83 W
		Lm	38.5				1.7	10	3.2	10			H = 04 20 51.3, h = 18 km,
	SPC	iP	04 27 26	+3.4							32.42	296.29	Mag = 5.3 (ISC).
													MLH (BRA) = 5.4.
24	BRA	+iP	18 13 31	+0.9	0.5	1.8	0.6	2	0.1	2	60.71	260.02	North Atlantic Ridge
		i	13 36										15.30 N 45.78 E
		ipP	13 54	–1.8									H = 18 03 19.9, h = 37 km,
		esP	14 11	–4									Mag = 5.8 (ISC).
		ePP	15 48	+2									mPV (BRA) = 6.3,
		eS	21 40	–3									MLH (MOS) = 6.5,
		Lm	39.5				60	18	60	18			MLH (BRA) = 6.7,
	SRO	+iP	18 13 32	–3.1							61.45	261.18	MLH (SRO) = 6.7.
		i	14 48										
		iS	22 00	+8									
		Lm	34.5				33	22	42	22			
	HRB	eP	18 13 40	+4							61.38	261.05	
		eS	21 50	+2									
		e	22 38										
		Lm	58										
	SPC	iP	18 13 48	+3							62.92	262.00	
		eS	22 18	+5									

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
25	BRA	iPg iSg	11 05 46 05 48										Local shock
25	BRA	eP	21 45 27	–0.5							79.67	4.15	Fox Islands, Aleutian Islands 52.38 N 169.57 W H = 21 33 18.1, h = 5 km, Mag = 4.8 (ISC).
26	BRA SRO	+iP iP e eS	05 01 48 05 01 40 02 12 07 28	+0.8 –0.6 +9							37.26 36.47	140.01 141.44	Red Sea 16.41 N 41.02 E H = 04 54 38, h = 45 km, Mag = 5.0 (ISC). MLH (MOS) = 5.5.
26	BRA SRO SPC	eP ePP eS eP ePP e iP	07 04 00 04 12 07 15 07 03 57 04 08 05 32 07 03 34	–4.8 –2 –1 +2.2 +2 +5.0							17.44 16.64 15.37	88.06 87.70 94.00	Southwestern Russia 45.88 N 42.49 E H = 06 59 55.9, h = 0 km, Mag = 5.6 (ISC).
26	BRA	ePKIKP e	20 47 12 47 30	+3.1							146.81	47.52	Loyalty Islands Region 22.11 S 171.30 E H = 20 27 44, h = 130 km, Mag = 4.6 (ISC).
26	BRA SRO	ePn eSn e Lm e e Lm	23 42 30 43 30 44 12 44 30 23 43 08 44 40 45 26								5.1		Italy (ROM)
27	BRA	eP	04 14 15	+2.3							78.40	34.55	Kurile Islands 43.78 N 147.02 E H = 04 02 17.1, h = 57 km, Mag = 5.4 (ISC). MLH (MOS) = 5.
27	BRA SRO 	ePKIKP e e Lm	09 23 06 09 24 40 34 44 10 10	+9.4							123.53	214.11	South Shetland Islands 60.90 S 55.9 W H = 09 04 03.6, h = 36 km, Mag = 5.8 (ISC). MLH (MOS) = 5.8.
27	BRA SRO	e e e e	17 01 29 01 50 02 17 17 02 12										Near shock
27	BRA	eP	19 27 29	+8.6							97.42	95.66	South of Java 9.35 S 107.90 E H = 19 13 45, h = 10 km, Mag = 5.4 (ISC). MLH (MOS) = 5.1.
28	BRA	ePKIKP ePKP2 e	10 36 49 37 11 37 17	+0.1 –1							153.46	29.16	South of Fiji 23.93 S 176.66 W H = 10 17 13, h = 117 km Mag = 4.7 (ISC).

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Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
28	BRA	eP	22 57 45	+4.0							15.11	153.60	Crete 34.30 N 25.15 E H = 22 54 08, h = 29 km, Mag = 5.3 (ISC). MLH (MOS) = 5.6, MLH (BRA) = 5.7.
		i	58 09										
		iS	23 00 28	+1									
		Lm	05.5				7.6	6	18.2	6			
	SRO	eP	22 57 39	+6.3							14.44	156.73	
		e	58 20										
		eS	23 00 13	+1									
29	BRA	eP	10 32 00	–0.4							17.90	345.32	Norwegian Sea 65.10 N 6.5 E H = 10 27 49.6, h = 6 km, Mag = 4.8 (ISC).
		e	32 06										
	SPC	eP	10 32 00	+3							17.54	340.50	
29	BRA	ePKIKP	16 38 15	+1.0							109.80	78.47	Banda Sea 7.27 S 128.78 E H = 16 20 01.5, h = 157 km, Mag = 5.5 (ISC).
		e	38 45										
	SPC	ePP	16 38 32	–4.0							107.56	80.61	
29	BRA	+eP	18 10 42	+0.9							79.07	34.28	Kurile Islands 43.35 N 147.81 E H = 17 58 34, h = 1 km, Mag = 5.5 (ISC). MLH (MOS) = 5.8.
		e	11 12										
	SPC	iP	18 10 31	+0.7							77.03	36.40	

29	BRA	iP	20 15 45	+1.1	0.4	1.6					80.92	177.95	Republic of South Africa 33.09 S 19.52 E H = 20 03 32.1, h = 37 km, Mag = 5.6 (ISC). mPV (BRA) = 6.3, MLH (MOS) = 6.8, MLH (BRA) = 6.6. MLH (SRO) = 6.5.
		i	16 13										
		ePP	18 50	–2									
		Lm	52.5				7.2	15	18.2	15			
	SRO	eP	20 15 42	+0.1							80.54	178.97	
		e	16 28										
		ePP	18 50	+3									
		eScS	26 00	–2									
		Lm	21 02				15	16	12	16			
	HRB	eP	20 15 20	+2.2							80.60	178.87	
		Lm	21 00										
	SPC	iP	20 15 50	+0.4							81.91	180.61	
29	BRA	e	22 02 22								5.57	271.35	Germany Traces 48.0 N 8.8 E H = 21 59 30, h = 0 km (ISC).
30	BRA	ePKIKP	04 31 13	+2.1							160.22	40.35	Kermadec Islands Region 31.93 S 177.83 W H = 04 11 15.6, h = 33 km, Mag = 5.5 (ISC). MLH (MOS) = 5.5.
		e	31 24										
30	BRA	ePKIKP	18 11 39	+2.2							160.20	40.49	Kermadec Islands Region 31.94 S 177.89 W H = 17 51 41.5, h = 33 km, Mag = 5.6 (ISC). MLH (MOS) = 6.1.
		e	11 43										
		iPKP2	12 18	–2									
		e	12 47										
		ePP	16 09	+2									
		ePPP	19 36	–10									
	SRO	ePKIKP	18 11 37	+0.5							159.92	43.70	
		ePKP2	12 16	–2.5									
		ePP	16 05	+3									
		ePPS	29 28	+4									

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Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
01	BRA	ePKIKP	00 17 32	+0.3							160.29	40.39	Kermadec Islands Region
		e	17 43										32.00 S 177.8 W
		ePKP2	18 13	–1.7									H = 23 57 36.5, h = 37 km,
		e	18 24										Mag = 5.4 (ISC).
01	BRA	iP	05 19 33	+0.3	0.1	1.5					100.14	263.77	Peru
		i	19 45										11.75 S 75.15 W
		ePP	23 36	–5									H = 05 05 50.0, h = 43 km,
		ePS	32 45	+6									Mag = 5.8 (ISC).
		Lm	53.5				22	18	30	18			mPV (BRA)= 6.2,
	SRO	eP	05 19 40	+3.8							100.91	264.58	MLH (BRA) = 6.9.
		e	30 22										
		ePS	33 00	+13									
		Lm	06 01										
	HRB	ePS	05 32 40	–9							100.84	264.51	
		Lm	06 03										
01	BRA	eP	06 12 00	–0.5							99.96	263.69	Peru
		e	12 36										11.67 S 74.97 W
		e	15 33										H = 05 58 14, h = 9 km,
		ePP	16 08	0									Mag = 5.6 (ISC).
01	BRA	ePP	08 46 16	+5.3							100.10	263.68	Peru
													11.78 S 75.05 W
													H = 08 28 16.9, h = 20 km,
													Mag = 5.7 (ISC).
01	BRA	ePg	10 09 30										Near shock
		e	10 20										
		e	11 21										
	SRO	iPg	10 09 14										
01	BRA	iPg	11 08 02										Explosion
		i	08 05										
		i	08 08										
01	BRA	eP	17 24 27	–1.4							97.50	279.58	Off Coast of Ecuador
		ePP	28 27	–2									0.78 N 85.01 W
		eSP	37 21	+1									H = 17 10 59.0, h = 53 km,
	SRO	eP	17 24 30	–2.3							98.36	280.44	Mag = 5.7 (ISC).
		e	25 32										
		ePP	28 26	–9									
		e	30 32										
		eSP	37 24	+2									
		Lm	59										
01	BRA	eP	20 37 59	–1.4							19.06	108.97	Turkey
		e	39 05										39.32 N 40.56 E
													H = 20 33 37, h = 17 km,
													Mag = 4.7 (ISC).
01	BRA	ePKIKP	20 50 14	+0.4							156.66	31.61	Kermadec Islands Region
		e	51 32										27.30 S 176.39 W
													H = 20 30 24, h = 12 km,
													Mag = 5.2 (ISC).
01	BRA	eP	22 55 29	–3							40.61	86.18	Hindu Kush Region
	SPC	eP	22 55 20	+5							38.50	89.68	36.55 N 70.87 E
		epP	56 30	+6									H = 22 48 12.7, h = 225 km,
													Mag = 4.9 (ISC).
02	BRA	ePKIKP	04 19 00	+3.7							150.55	32.29	Fiji Region
	SPC	ePKIKP	04 19 02	+8							148.53	36.58	21.76 S 179.31 W
													H = 04 00 16.9, h = 589 km,
													Mag = 5.0 (ISC).

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Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
02	BRA	eP	05 09 35	+3.2							86.75	329.47	Northern California 38.35 N 122.73 W H = 04 56 46.4, h = 8 km, Mag = 5.1 (ISC).
02	BRA	eP	06 32 44	+2.3							86.76	329.45	Northern California 38.33 N 122.71 W H = 06 19 57.2, h = 13 km, Mag = 4.9 (ISC).
02	BRA SRO HRB	ePg e iPg i i iPg iSg	12 11 16 11 58 12 11 16 11 44 12 00 12 11 09 11 11										Near shock
02	BRA SRO	+iP iPcP i ePP +iP iPcP i i Lm	22 18 04 18 11 18 21 21 15 22 18 08 18 20 19 08 23 20 23 20	–6.0 –3 +3 –2.8 +5	1.0	1.6					79.44 79.63	11.26 11.99	Rat Islands, Aleutian Islands 51.59 N 179.19 E H = 22 06 01.9, h = 34 km, Mag = 6.4 (ISC). mPV (BRA) = 6.5.

03	BRA	ePKIKP ePKP2 e	01 53 15 54 00 55 27	–2.3 –2							161.12	42.61	South of Kermadec Islands 33.10 S 178.02 W H = 01 33 20.1, h = 26 km, Mag = 5.6 (ISC). MLH (MOS) = 5.5.
03	BRA	eP	02 03 27 04 21	–0.2							74.90	24.03	Near East Coast of Kamchatka 51.80 N 157.83 E H = 01 51 55.8, h = 95 km, Mag = 5.2 (ISC).
03	BRA	+iP e	15 52 30 52 48	–0.2							89.23	96.33	Southern Sumatra 3.68 S 101.88 E H = 15 39 42.8, h = 88 km, Mag = 5.4 (ISC).
05	BRA	eP	16 47 38	–1.4							95.57	72.75	Mindanao, Philippine Islands 7.26 N 123.75 E H = 16 34 18.5, h = 51 km, Mag = 5.4 (ISC).
05	BRA	iPKIKP i	21 06 01 06 12	+2.3							146.17	48.17	Loyalty Islands Region 21.76 S 170.60 E H = 20 46 32.7, h = 107 km, Mag = 5.2 (ISC).
06	BRA	eP	00 57 35	+0.7							60.22	245.83	Central Mid-Atlantic Ridge 7.58 N 35.91 W H = 00 47 26.7, h = 30 km, Mag = 4.2 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
06	BRA	ePKIKP	04 06 29	+16.1							146.29	17.40	Samoa Region 15.37 S 172.8 W H = 03 46 38.1, h = 43 km, Mag = 4.4 (ISC).
06	BRA	+iP	13 00 46	−0.3							87.40	70.49	Luzon, Philippine Islands 14.99 N 120.11 E H = 12 48 05.8, h = 66 km, Mag = 5.6 (ISC). MLH (MOS) = 5.4.
		iPcP	00 49	+6									
		ipP	01 15	−1									
		e	01 36										
		e	03 35										
	SRO	+iP	13 00 44	+0.1							86.75	71.35	
		epP	01 00	−4									
		e	01 24										
		e	02 20										
		eS	11 12	−2									
		Lm	41 40										
	SPC	iP	13 00 38	+2							85.10	72.86	
07	BRA	eP	05 12 04	−2.7							12.12	133.55	Turkey 39.20 N 28.40 E H = 05 09 12, h = 13 km, Mag = 4.9 (ISC). MLH (MOS) = 5.0, MLH (BRA) = 5.1, MLH (SRO) = 5.3.
		iPP	12 11	+9									
		eS	14 01	−2									
		e	15 32										
		Lm	16.5				0.4	4.5	1.0	4.5			
	SRO	eP	06 11 57	+1.5							11.29	135.98	
		eS	14 12	+9									
		e	15 00										
		Lm	16.0				8.4	6	6.7	6			
	HRB	eS	05 14 07	+1							11.39	135.81	
		Lm	16										
	SPC	eP	05 12 02	+3							11.57	146.65	

07	SRO	ePg	11 58 50										Local shock
07	BRA	ePg	15 04 35										Local shock
		e	05 47										
		e	07 17										
	SRO	ePg	15 04 32										
	HRB	ePg	15 04 25										
08	BRA	eP	14 42 47	+6.7							85.44	324.52	Southern Nevada 37.23 N 116.43 W H = 14 30 01.7, h = 17 km, Mag = 5.6 (ISC).
	SPC	eP	14 42 47	+4.8							85.77	326.69	
09	BRA	iP	08 11 51	+2.1							79.86	4.11	Fox Islands, Aleutian Islands 52.19 N 169.48 W H = 07 59 39, h = 5 km, Mag = 5.2 (ISC). MLH (MOS) = 5.5.
		i	12 13										
09	BRA	iPg	10 46 37										Near shock
		iSg	47 47										
10	BRA	eP	00 25 45	+1.8							79.17	33.25	Kurile Islands Region 43.78 N 149.07 E H = 00 13 37, h = 7 km, Mag = 4.9 (ISC).

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
12	BRA	+iPn	13 36 26	–0.2							8.76	162.30	Greece–Albania Border Region
		i	36 36										39.76 N 20.55 E
		iPg	36 50	–4.3									H = 13 34 19.9, h = 46 km,
		i	37 25										Mag = 5.0 (ISC).
		eSn	38 10	+5									MLH (MOS) = 4.9,
		eSg	39 14	+3									MLH (BRA) = 5.6,
		Lm	43 12				36	8	37	8			MLH (SRO) = 5.0.
	SRO	ePn	13 36 17	–2.2							8.21	167.84	
		iPg	36 43	–9									
		iSn	37 50	0									
		iSg	38 39	–5									
		Lm	40.0				5	8	8.5	8			
	HRB	eSn	13 38 39	–5							8.29	167.29	
		e	39 00										
		Lm	40										
	SPC	iPn	13 36 39	+5							9.43	178.56	
		eSn	38 28	+8									
13	BRA	iPn	01 04 35	–2.8							8.75	162.07	Greece–Albania Border Region
		i	04 47										39.78 N 20.59 E
		iPg	05 11	+0.4									H = 01 02 30.8, h = 27 km,
		i	05 22										Mag = 5.4 (ISC).
		i	06 07										MLH (MOS) = 5.4,
		iSn	06 30	+12									MLH (BRA) = 6.1,
		Lm	08.5				71	9	114	9			MLH (SRO) = 5.4.
	SRO	+iPn	01 04 31	+0.1							8.20	167.60	
		i	04 43										
		iPg	05 11	+6									
		iSn	05 59	–1									
		i	06 35										
		Lm	08.5										
	HRB	ePn	01 04 30	–0.1							8.27	167.06	
		e	05 29										
		eSn	05 57	–5									
		Lm	08										
	SPC	iPn	01 04 52	+3							9.41	178.37	
		eSn	06 40	+4									
13	BRA	iPKIKP	07 15 05	–0.2							143.01	47.25	New Hebrides
		i	15 20										18.78 S 169.31 E
		i	16 11										H = 06 56 01.6, h = 244 km,
	SPC	iPKIKP	07 15 03	–0.5							140.78	50.37	Mag = 5.7 (ISC).
13	BRA	ePKIKP	09 48 21	+6.6							149.39	19.78	Tonga
		e	49 27										18.70 S 173.37 W
													H = 09 28 33.3, h = 33 km,
													Mag = 4.9 (ISC).
13	BRA	eP	12 54 24	–1.6							61.38	258.05	North Atlantic Ridge
		e	54 33										13.63 N 44.95 W
													H = 12 44 12, h = 47 km,
													Mag = 4.9 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
14	BRA	ePKIKP	00 52 34	+3.5							146.19	48.14	Loyalty Islands Region 21.77 S 170.63 E H = 00 32 59.9, h = 73 km, Mag = 4.8 (ISC).
14	BRA	ePKIKP	04 23 30	–4							156.61	31.90	Kermadec Islands Region 27.30 S 176.53 W H = 04 03 55.4, h = 134 km, Mag = 4.5 (ISC).
14	BRA	+iP	07 0621	+0.3							30.18	20.33	Novaya Zemlya 73.39 N 54.50 E H = 07 00 06.4, h = 0 km, Mag = 6.3 (ISC). MLH (BRA) = 6.3.
		i	06 42										
		i	06 54										
		iPP	07 13	+3									
		i	09 27										
		eS	11 20	+1									
		Lm	19 24		1.0	3	0.5	3	1.1	3			
	SRO	iP	07 06 20	+9.5							30.24	19.71	
		i	06 32										
		iPP	07 13	–6									
		eS	11 16	–3									
		i	14 19										
		Lm	20.0										
	HRB	eP	07 06 23	+3							30.21	19.79	
		e	08 10										
		eS	11 30	+10									
		Lm	19										
	SPC	iP	07 06 08	+3							28.51	19.83	
14	BRA	eP	22 58 14	+2.0							79.47	359.84	South of Alaska 52.74 N 162.63 W H = 22 46 05.4, h = 15 km, Mag = 5.0 (ISC).
		e	58 24										
	SPC	eP	22 58 09	+2							78.42	1.78	
15	BRA	ePKIKP	00 19 15	+1.7							156.39	31.25	South of Fiji 26.99 S 176.36 W H = 23 59 26.1, h = 61 km, Mag = 5.3 (ISC).
15	BRA	ePKIKP	01 28 06	+3.3							156.67	31.80	Kermadec Islands Region 27.34 S 176.46 W H = 01 08 16, h = 70 km, Mag = 4.8 (ISC).
15	SRO	iPg	10 34 44.6										Near shock
15	SPC	iPg	11 41 35										Near shock
15	SPC	iPg	11 58 30										Near shock
16	BRA	ePg	13 35 42										Local shock
16	BRA	ePKP2	21 05 06	–0.7							150.17	21.84	Tonga 19.72 S 174.22 W H = 20 45 11, h = 39 km, Mag = 4.7 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
17	BRA	–iP	01 35 39	–1.5	0.7	1.6					65.03	82.77	Burma–India Border Region
		i	36 12										23.09 N 94.70 E
		ePP	38 05	–2									H = 01 25 11.5, h = 124 km,
		e	38 42										Mag = 6.1 (ISC).
		ePPP	39 48	+6									mPV (BRA) = 6.5,
		e	40 30										mPV (SRO) = 6.8.
		eS	44 11	0									
	SRO	–iP	01 35 36	+0.8	3	4					64.27	83.45	
		i	36 14										
		ePP	37 58	–2									
		ePPP	39 38	+4									
		eS	43 58	–4									
	HRB	eP	01 35 30	–5							64.34	83.40	
		e	36 13										
		ePP	38 03	+2									
		eS	44 00	–2									
		e	44.7										
	SPC	iP	01 35 29	+2.4							64.86	85.51	
18	BRA	eP	01 26 00	+2.3							79.90	40.60	Honshu, Japan
		epP	26 30	+7									39.29 N 141.46 E
	SPC	iP	01 25 45	0							77.76	42.78	H = 01 14 01.0, h = 119 km,
													Mag = 5.4 (ISC).
18	BRA	eP	08 55 57	+1.0							77.68	14.55	Near Islands, Aleutian
	SRO	+iP	08 55 58	+1.2							77.81	15.26	Islands
		e	56 34										52.52 N 173.42 E
		Lm	09 30										H = 08 43 58, h = 9 km,
	SPC	iP	08 55 49	+1.0							76.14	16.50	Mag = 5.5 (ISC).
													MLH (MOS) = 5.5.

20	BRA	–iP	13 23 51	–2.6							81.73	276.98	Venezuela
		e	24 00										10.87 N 72.49 W
		eS	34 09	+8									H = 13 11 37.1, h = 36 km,
	SRO	–iP	13 23 58	0							82.58	277.91	Mag = 5.7 (ISC).
		ipP	24 10	+1									
		e	25 34										
		e	29 22										
		eS	34 15	+4									
	SPC	iP	13 24 07	+4							83.65	279.16	
20	BRA	+iP	15 33 34	+0.2							91.32	297.89	Oaxaca, Mexico
		i	33 45										17.33 N 95.22 W
		isP	34 12	+3									H = 15 20 35.5, h = 74 km,
		ePP	37 21	+7									Mag = 5.4 (ISC).
21	BRA	+iP	21 05 51	–1.3							79.92	10.33	Andreanof Islands,
		isP	06 10	–1									Aleutian Islands
		i	06 18										51.31 N 179.23 W
	SRO	+iP	21 05 58	+4.7							80.12	11.07	H = 20 53 46.9, h = 43 km,
		Lm	47.5										Mag = 6.0 (ISC).
													MLH (MOS) = 6.0.
22	BRA	+iP	12 23 29	+1.5							79.79	4.04	Fox Islands, Aleutian
		iPcP	23 37	–1									Islands
		ipP	23 41	–3									52.27 N 169.37 W
		esP	24 06	+1									H = 12 11 22.9, h = 39 km,
		e	24 18										Mag = 5.2 (ISC).
	SPC	iP	12 23 25	+2							78.59	6.01	MLH (MOS) = 5.5.
22	BRA	+iP	13 03 56	–0.3							75.06	269.70	Near Coast of Venezuela
		i	04 11										10.92 N 62.55 W
		ipP	04 18	–2									H = 12 52 22.8, h = 87 km,
		esP	04 33	–1									Mag = 5.4 (ISC).
		e	04 45										

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
22	BRA	eP	23 04 31	+0.2							89.47	326.91	Off Coast of California
		e	05 45										34.77 N 121.35 W
		ePP	07 52	–12									H = 22 51 32.1, h = 7 km,
		e	08 33										Mag = 5.9 (ISC).
	SRO	eP	23 04 38	+3.8							90.21	327.80	MLH (MOS) = 5.5.
		e	06 38										
		ePP	08 13	+3									
		ePS	16 42	+5									
		Lm	45.5										
	SPC	eP	23 04 36	+3							89.70	329.24	
23–24	BRA												The apparatus was not operational
23	SRO	iPg	09 31 47										Local shock
24	BRA	ePKIKP	22 50 45	+3.3							151.31	19.58	Tonga Region
		e	51 15										20.55 S 172.78 W
													H = 22 30 57.8, h = 33 km,
													Mag = 5.2 (ISC).
25	BRA	+iP	12 15 44	–1.2							78.54	33.92	Kurile Islands
		ePcP	15 54	–2									43.98 N 147.85 E
		e	16 18										H = 12 03 48.7, h = 49 km,
	SPC	eP	12 15 37	0							76.51	36.03	Mag = 5.3 (ISC).
													MLH (MOS) =5.2.
26	BRA	+iPKIKP	04 04 41	+0.2							156.60	31.20	Kermadec Islands Region
		ipPKIKP	04 47	–6									27.18 S 176.25 W
		iPKP2	05 11	–1									H = 03 44 50.0, h = 30 km,
		isPKP2	05 29	–1									Mag = 5.2 (ISC).

26	BRA	+iPKIKP	04 35 26	+0.8							145.73	49.15	Loyalty Islands Region
		e	35 39										21.68 S 169.85 E
													H = 04 15 50, h = 27 km,
													Mag = 4.7 (ISC).
26	BRA	–iPKIKP	06 57 32	+2.6							146.78	19.51	Tonga
		iPKP2	57 35	+0.5									16.11 S 173.87 W
		i	58 17										H = 06 37 56.1, h = 57 km,
	SPC	iPKIKP	06 57 30	+5							145.06	24.16	Mag = 5.8 (ISC).
													MLH (MOS) = 6.2.
26	BRA	–iPn	15 37 38	–4.7							3.33	177.61	Yugoslavia
	SRO	iPn	15 37 37	–1.9	50.5	2					3.06	193.65	44.84 N 17.30 E
		iPb	37 46	0									H = 15 36 52.4, h = 33 km,
		i	38 08										Mag = 5.1 (ISC).
		iSn	38 16	–4									mPV (SRO) = 5.4,
		iSg	38 38	+5									MLH (MOS) = 6.0.
	HRB	iPn	15 37 37	–2							3.10	191.84	
		i	37 48										
		iSn	38 17	–3									
		i	38 25										
		Lm	40.0										
	SPC	iPn	15 38 06	+4									
26	BRA	iPn	15 54 00										Yugoslavia (LJU)
		i	54 11										
		iSn	54 35										
		i	55 11										
		i	55 30										
		Lm	56 48										
26	BRA	e	16 35 12										No determination
		e	36 06										of epicentre

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
26	BRA	iPn	16 51 10										Yugoslavia (LJU)
		i	51 23										
		iSn	51 45										
		i	52 14										
		i	52 19										
		Lm	53 47										
26	BRA	eP	19 27 42	−11.1							79.08	33.93	Kurile Islands Region
		e	28 12										43.51 N 148.22 E
													H = 19 15 47, h = 9 km,
													Mag = 5.1 (ISC).
													MLH (MOS) = 5.8.
26	BRA	ePKIKP	21 45 07	−14.7							156.53	31.62	Kermadec Islands Region
		e	45 33										27.18 S 176.45 W
		ePKP2	45 06	+10									H = 21 25 33, h = 48 km,
													Mag = 5.0 (ISC).
26	BRA	eP	21 53 15	+4.8							101.31	176.04	South of Africa
		e	53 37										53.37 S 23.6 E
		e	57 33										H = 21 39 21.8, h = 31 km,
													Mag = 5.8 (ISC).
27	BRA	iPn	02 56 23	−0.9							3.19	180.83	Yugoslavia
		iPg	56 32	−4									44.98 N 17.04 E
		i	56 41										H = 02 55 34, h = 18 km,
		Lm	03 01.5										Mag = 4.5 (ISC).
	SRO	iPn	02 56 21	+0.2							2.97	197.73	
		iPg	56 32	+2									
		i	56 38										
		iSn	57 04	+3									
		iSg	57 16	+3									
		Lm	57 30										

27	BRA	iPn	08 11 44	−2.6							3.32	178.59	Yugoslavia
	SRO	iPn	08 11 43	−1.7							3.06	194.73	44.85 N 17.22 E
	HRB	+iPn	08 11 43	−2							3.10	192.91	H = 08 10 58.2, h = 33 km,
		iPg	12 00	+1									Mag = 5.3 (ISC).
		iSn	12 21	−6									MLH (MOS) = 6.4.
		Lm	13.4										
	SPC	iPn	08 12 10	−3							4.81	206.61	
27	BRA	−iPn	08 54 23	−8.7							3.29	180.56	Yugoslavia
	SRO	ePn	08 54 32	+3.0							3.06	196.94	44.88 N 17.06 E
		e	54 50										H = 08 53 40, h = 9 km,
		iSn	55 02	−5									Mag = 4.7 (ISC).
27	BRA	iPn	11 08 44	−4.0							3.15	183.94	Yugoslavia
		iPg	09 02	−2									45.03 N 16.8 E
		i	09 17										H = 11 08 00, h = 35 km (ISC)
		iSn	09 30	−2									
		iSg	09 45	−1									
		Lm	10 24										
	SRO	ePn	11 08 58	+11.9							2.97	201.16	
	HRB	ePn	11 08 45	−4							3.00	199.21	
		eSn	09 25	−2									
		Lm	09.7										
27	BRA	iPn	21 14 41										Yugoslavia (LJU)
		iSn	15 23										
		eSg	15 50										
	SRO	e	21 15 34										
28	BRA	eP	18 52 27	−3.0							40.65	86.19	Hindu Kush Region
		epP	53 15	−4									36.53 N 70.90 E
		ePP	54 09	−2									H = 18 45 10.9, h = 229 km,
		e	55 15										Mag = 5.0 (ISC).

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Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
29	BRA	e	15 31 15								8.78	162.86	Greece–Albania Border Region
		e	32 12										39.72 N 20.45 E
													H = 15 26 55.1, h = 0 km,
													Mag = 4.1 (ATH).
29	BRA	+iP	22 14 29	−2.0							85.32	324.27	Southern Nevada
		i	14 41										37.22 N 116.09 W
	SPC	eP	22 14 35	+3							85.66	326.44	H = 22 01 52, h = 9 km,
													Mag = 5.6 (ISC).
30	BRA	−iP	00 17 35	−1.3							80.77	42.45	Honshu, Japan
	SPC	eP	00 17 35	+10							78.59	44.66	37.54 N 140.16 E
													H = 00 05 39.8, h = 158 km,
													Mag = 5.0 (ISC).
31	BRA	+iP	06 55 19	+1.7							78.27	31.19	Kurile Islands
													45.57 N 150.90 E
													H = 06 43 25.4, h = 80 km,
													Mag = 5.3 (ISC).
31	BRA	eP	07 12 33	+2.4							82.04	41.35	Off East Coast of Honshu,
	SPC	eP	07 12 20	0							79.88	43.56	Japan
													37.10 N 142.19 E
													H = 07 00 13.3, h = 39 km,
													Mag = 5.1 (ISC).
													MLH (MOS) = 5.8.

31	BRA	ePKIKP	07 47 30	+3							143.96	39.02	Fiji Region
													17.25 S 174.30 E
													H = 07 27 54.7, h = 42 km,
													Mag = 5.1 (ISC).
31	BRA	eP	08 59 09	−0.7							27.51	111.62	Western Persia
													33.20 N 47.91 E
													H = 08 53 28.6, h = 77 km,
													Mag = 5.0 (ISC).
													MLH (MOS) = 4.6.
31	BRA	+iP	11 45 10	−0.4							80.00	10.16	Andreanof Islands,
		epP	45 21	+3									Aleutian Islands
		e	45 33										51.26 N 178.95 W
		ePP	48 16	+3									H = 11 33 02, h = 22 km,
		esS	55 24	+1									Mag = 6.0 (ISC).
		Lm	12 29				22	18	55	18			MLH (MOS) = 6.8,
	HRB	eP	11 45 14	+2							80.16	10.83	MLH (BRA) = 7.
		ePP	48 14	−1									
		e	54 26										
		eS	55 30	+6									
		Lm	12 30										
	SPC	iP	11 45 07	−4							78.60	12.17	
		ePP	48 07	+1									
		e	55 30										

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
01	SPC	e	01 16 23										No determination of epicentre
01	BRA	eP	11 21 44	+5.4							93.63	311.03	Gulf of California
		e	22 35										23.19 N 107.99 W
		e	24 47										H = 11 08 24.3, h = 31 km,
		e	25 16										Mag = 5.5(ISC).
		ePP	25 35	+9									MLH (BRA) = 7.0,
		eSKKKS	32 26	0									MLH (SRO) = 6.9.
		Lm	12 02				20	18	77	18			
	SRO	e	11 22 14								94.47	311.94	
		e	27 42										
		eSKKKS	32 26	−2									
		Lm	12 07				26	17	33	17			
	HRB	e	11 31 28								94.37	311.85	
		e	32 30										
		Lm	12 08										
	SPC	eP	11 21 45	+2.4							94.48	313.53	
		ePP	25 40	+7									
02	BRA	e	16 45 55								148.43	18.45	Tonga Region
													17.60 S 172.90 W
													H = 16 25 53.4, h = 33 km,
													Mag = 4.5 (ISC).
03	BRA	ePg	11 06 10										Local shock
03	BRA	ePn	16 46 43										Yugoslavia (LJU)
		ePg	46 59										
		eSg	47 43										
	SRO	ePn	16 46 46										
		e	47 34										
04	BRA	ePn	03 25 39	−2.1							3.38	175.23	Yugoslavia
		e	26 37										44.8 N 17.5 E
													H = 03 24 46, h = 0 km (ISC).
04	SRO	iPg	12 03 38										Near shock
	BRA	e	12 04 40										
04	BRA	eP	20 23 16	+6.3							24.89	96.28	Caspian Sea
	SRO	eP	20 23 02	+0.5							24.05	96.60	40.21 N 50.22 E
	SPC	epP	20 23 10	+6.1							22.99	101.63	H = 20 17 50.3, h = 50 km,
													Mag = 4.8 (ISC).
													MLH (MOS) = 4.3.
04	SRO	eP	22 17 53	−7.9							101.28	77.28	Molucca Sea
													0.14 S 125.03 E
													H = 22 04 11.1, h = 28 km,
													Mag = 5.4 (ISC).
													MLH (MOS) = 5.
04	BRA	ePKIKP	23 59 10	+5.5							150.80	33.05	South of Fiji
		epPKIKP	00 01 13	−1.5									22.14 S 179.57 W
	SRO	ePKIKP	23 58 58	−2.7							150.64	35.49	H = 23 40 19.9, h = 577 km,
		epPKP2	00 01 22	−3.5									Mag = 5.2 (ISC).
	SPC	ePKIKP	23 59 07	+9.3							148.77	37.31	
05	BRA	e	10 53 34								19.39	20.51	Western Russia
	SRO	e	10 53 12								19.45	18.89	65.5 N 33.3 E
													H = 10 51 54 (UPP).
													Time relative

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
05	BRA	eP	18 07 14	+5.2							89.49	326.83	Off Coast of California 34.72 N 121.28 W H = 17 54 10.7, h = 11 km, Mag = 5.8 (ISC). MLH (MOS) = 6.1, MLH (SRO) = 6.1.
		esS	18 10	+7									
	SRO	+iP	18 07 14	+2.3							90.23	327.73	
		e	10 49										
		esS	18 17	+7									
		Lm	51				6	18	3.5	18			
	SPC	iP	18 07 15	+4.7							89.73	329.17	
06	BRA	e	09 58 55								67.77	353.11	Central Alaska 63.82 N 148.4 W H = 08 49 29.7, h = 33 km (ISC).
06	BRA	eP	13 31 33	−0.5							60.95	240.15	Central Mid-Atlantic Ridge 4.01 N 32.36 W H = 13 21 18, h = 11 km, Mag = 4.9 (ISC).
06	BRA	eP	14 45 47	−0.8							25.75	353.76	Greenland Sea 73.48 N 7.6 E H = 14 40 54.5, h = 33 km, Mag = 4.3 (ISC).
06	BRA	eP	20 32 24	−0.9							79.88	10.11	Andreanof Islands, Aleutian Islands 51.39 N 178.90 W H = 20 20 19.0, h = 37 km, Mag = 5.5 (ISC). MLH (MOS) = 5.9.
	SRO	eP	20 32 29	+3.1							80.08	10.85	

07	BRA	iPg	10 12 39										Local shock
07	BRA	eP	16 50 39	−11.1							56.81	215.62	North of Ascension Island 2.81 S 12.10 W H = 16 41 04.0, h = 14 km, Mag = 5.2 (ISC).
07	BRA	eP	18 41 24	+0.5							38.83	105.86	Southern Persia 27.80 N 60.02 E H = 18 34 04.3, h = 74 km, Mag = 6.1 (ISC). MLH (MOS) = 6.5.
	SRO	+iP	18 41 14	−1.7							37.96	106.61	
		iPP	42 55	+7									
		eScP	47 11	0									
	HRB	eP	18 41 12	−5.2							38.05	106.57	
		e	42 00										
		e	45 11										
		eSS	50 10	+25									
		Lm	57 30										
07–19	SRO												The apparatus was not operational
09	BRA	ePP	09 30 11	+3							140.16	47.02	New Hebrides 16.25 S 167.90 E H = 09 07 51.0, h = 186 km, Mag = 5.3 (ISC). MLH (MOS) = 6.
10	BRA	ePKIKP	09 32 31	+11.2							146.18	17.71	Samoa Region 15.3 S 173.0 W H = 09 12 50, h = 80 km, Mag = 4.5 (ISC).
		e	33 43										
		ePP	35 44	−2									
		ePKS	36 10	+16									
		e	37 37										

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
10	BRA	e	10 56 04								78.75	34.52	Kurile Islands 43.5 N 147.3 E H = 10 42 39.1, h = 33 km, Mag = 4.4 (ISC).
12	BRA	ePg iSg	11 06 09 06 12										Local shock
12	BRA	ePg e e	11 57 40 58 03 58 25										Local shock
12	BRA SPC	eP eP	12 41 43 12 41 33	–0.4 +0.7							78.78 76.70	36.54 38.67	Hokkaido, Japan Region 42.42 N 145.04 E H = 12 29 43.5, h = 39 km, Mag = 5.2 (ISC). MLH (MOS) = 5.2.
12	BRA	eSg	14 59 29	+1.9							2.06	241.64	Austria 47.16 N 14.45 E H = 14 58 21.2, h = 0 km (ISC).
12	BRA SPC	+iP e iP	19 21 03 21 35 19 21 00	+1.0 +3.4							79.20 78.03	3.34 5.29	Fox Islands, Aleutian Islands 52.90 N 168.32 W H = 19 09 01.7, h = 50 km, Mag = 5.5 (ISC). MLH (MOS) = 5.9.

13	BRA	ePg e	09 58 42 59 42										Near shock
13	BRA	e	14 53 22										Near shock
14	BRA	–iPKIKP iPKP2 i ipPKP2 e eSKP2 e	07 57 05 57 13 57 22 58 04 59 22 08 00 24 01 49	–0.5 –6 –4 +5 							149.73	24.64	Tonga 19.69 S 175.78 W H = 07 37 43.9, h = 193 km, Mag = 5.3 (ISC).
	SPC	iPKIKP	07 56 57	–5.7							147.88	29.29	
14	BRA	ePKIKP	15 56 52	–2.1							145.82	18.19	Tonga 15.0 S 173.35 W H = 15 37 14.5, h = 33 km, Mag = 4.5 (ISC).
15	BRA	ePg e	11 31 50 32 53										Near shock
17	BRA	ePKIKP esPKP2 e	13 45 11 45 32 46 20	+0.4 –1 							148.39	18.77	Tonga 17.60 S 173.08 W H = 13 25 31.1, h = 33 km, Mag = 4.9 (ISC).
18	BRA	ePg e	12 38 36 39 18										Near shock
18	BRA SPC	ePKP2 ePKIKP	21 05 48 21 05 30	+1.0 +5.4							152.33 150.46	25.12 29.99	Tonga Region 22.25 S 175.18 W H = 20 45 41.9, h = 33 km, Mag = 4.9 (ISC).

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Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
19	BRA	–eP e	08 56 00 56 06	+2.4							74.42	43.87	Sea of Japan 41.83 N 133.82 E H = 08 45 04.7, h = 437 km, Mag = 4.9 (ISC).
19	BRA	eP i Lm	11 02 48 02 54 04 52										Local shock
19	SRO	iPg	12 27 37										Local shock
19	BRA	e e	12 29 09 29 18										Near shock
19	BRA	eP	13 24 09	+1.0							83.15	96.25	Northern Sumatra 0.94 N 97.89 E H = 13 11 50.0, h = 68 km, Mag = 5.0 (ISC).
20	SRO	iPdiff	11 06 04								106.05	76.21	Ceram 2.87 S 129.17 E H = 10 51 12, h = 3 km, Mag = 5.0 (ISC).
20	BRA	eP	21 12 42	+12.3							79.19	34.25	Kurile Islands 43.26 N 147.93 E H = 21 00 24, h = 16 km, Mag = 5.2 (ISC).

20	BRA	eP	23 57 53	–0.5							75.31	354.52	Kodiak Island Region 56.58 N 153.29 W H = 23 46 12.3, h = 30 km, Mag = 5.2 (ISC). MLH (MOS) = 5.9.
21	BRA	eP	00 25 54	–1.3							75.60	354.59	Kodiak Island Region 56.30 N 153.47 W H = 00 14 09, h = 8 km, Mag = 5.1 (ISC).
21	BRA	–iP	02 17 44	–1.4							80.23	98.06	Off West Coast of Northern Sumatra 1.94 N 94.61 E H = 02 05 35.4, h = 20 km, Mag = 6.4 (ISC). mPPH (HRB) = 7.2, MLH (MOS) = 7.7, MLH (BRA) = 7.7.
		i	17 48										
		iPcP	17 52	+2									
		ePP	20 57	+6									
		eS	27 48	–1			1.7	3	1.5	3			
		Lm	52				199	16	239	16			
	SRO	iP	02 17 43	+2.0							79.37	98.91	
	HRB	eP	02 17 45	+3.0							79.46	98.83	
		ePcP	17 49	0									
		ePP	20 50	+6			8	4	3	4			
		eS	27 40	0			12	8	13	8			
		Lm	03 00										
21	BRA	eP	08 24 33	+3.2							79.05	34.11	Kurile Islands Region 43.45 N 148.00 E H = 08 12 27, h = 24 km, Mag = 4.8 (ISC). MLH (MOS) = 5.6.
		e	24 42										
	SPC	eP	08 24 25	+7.5							77.02	36.22	
21	BRA	eP	09 09 18	+0.9							79.11	34.29	Kurile Islands 43.31 N 147.83 E H = 08 57 15.8, h = 42 km, Mag = 4.8 (ISC). MLH (MOS) = 5.2.
		esP	09 32	–2									
		e	10 18										
		ePP	12 30	+12									
		Lm	35										

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
22–23	BRA												The apparatus did not work
22	SRO	+iP	23 20 56	+3							70.98	18.89	Near East Coast of Kamchatka 57.70 N 163.56 E H = 23 09 39.2, h = 51 km, Mag = 6.2 (ISC).
	HRB	iP	23 20 56	+3							70.95	18.83	
		epS	30 19	−2									
		esS	30 49	+7									
		Lm	59				18	8	14	8			
	SPC	iP	23 20 44	+2							69.26	20.06	
24	BRA	–iP	17 30 55	+4.5	0.5	2.8					40.79	84.88	Afghanistan–USSR Border Region 37.16 N 71.64 E H = 17 23 19.1, h = 113 km, Mag = 5.8 (ISC). mPV (BRA) = 5.9.
		ipP	31 19	+2									
		isP	31 31	+5									
		ePP	32 30	+1									
		ePPP	33 21	+20									
		e	34 25										
		e	35 28										
		eS	37 07	+15									
	SRO	iP	17 30 48	+3.8							40.01	85.28	
		ipP	31 12	+2									
		esP	31 28	+8									
		ePP	32 28	+6									
		ePPP	32 52	+1									
		eS	36 54	+13									
		e	39 48										
24	BRA	–iPKIKP	21 49 51	−0.2							147.37	28.15	Fiji Region 18.01 S 178.40 W H = 21 31 18.1, h = 597 km, Mag = 5.4 (ISC).
		i	49 58										
		e	52 16										
	SRO	–iPKIKP	21 4951	−0.1							147.28	30.42	
		e	52 16										
	SPC	ePKIKP	21 49 52	+3.5							145.44	32.43	
24	BRA	+iP	23 03 33	−0.1							75.78	354.68	Kodiak Island Region 56.14 N 153.66 W H = 22 51 49.6, h = 28 km, Mag = 5.4 (ISC).
		iPcP	03 45	+3									
		e	04 22										
		ePP	06 19	−6									
	SRO	+eP	23 03 36	−0.1							76.20	355.38	MLH (MOS) = 6.0.
		eSKS	13 36	−4									
	SPC	iP	23 03 31	+1.3							74.92	356.47	
25–28	SRO												The apparatus was not operational
25	BRA	ePg	13 54 39										Local shock
		e	54 42										
25	BRA	ePn	16 46 28	0.0							3.31	173.89	Yugoslavia 44.88 N 17.6 E H = 16 45 34.0, h = 0 km (ISC).
		eSg	47 27	+4									
		e	47 36										
26	BRA	ePg	08 42 15										Local shock
26	BRA	ePKIKP	13 03 38	+6.3							140.59	47.77	New Hebrides 16.86 S 167.70 E H = 12 44 05, h = 30 km, Mag = 5.3 (ISC). MLH (MOS) = 5.6.
		e	03 55										
27	BRA	ePKIKP	03 27 00	−1.6							143.82	47.93	New Hebrides 19.68 S 169.39 E H = 03 07 41.5, h = 125 km, Mag = 5.0 (ISC).
		e	28 27										
27	BRA	iPg	10 00 44										D = ca 15 km, MLH (BRA) = 2.2.
		iSg	00 45										
		Lm	00 48										

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Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
27	BRA	ePg e	11 51 04 51 10										
27	BRA	ePg eSg	12 41 04 41 06										Local shock
28	BRA	eSg	12 02 42	–0.4							3.11	317.66	Czechoslovakia 50.42 N 13.83 E H = 12 01 00, h = 0 km (ISC). Explosion of 12 tons
28	BRA	ePg e	12 50 51 51 21										Near shock
30	BRA SPC	+iP i iPP e eS iP	03 40 32 40 44 42 04 42 25 46 35 03 40 14	+0.5 –2 0 +1.6							39.57 37.25	63.45 65.85	Eastern Kazakhstan 49.94 N 78.98 E H = 03 32 57.3, h = 0 km, Mag = 6.0 (ISC).
29–30	SRO												The apparatus did not work

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Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
01	BRA	eP	20 21 34	+8.1							14.32	155.69	Crete 34.85 N 24.22 E H = 20 18 03.8, h = 35 km, Mag = 5.1 (ISC).
01	BRA SRO 	eP e ePP eP e ePS Lm	22 25 10 26 22 27 38 22 25 12 25 32 34 48 51.5	+8.4 0 +5.4 –1 			 3	 20	 3	 20	69.74 70.57	272.55 273.56	Leeward Islands 16.68 N 60.80 W H = 22 13 54.5, h = 47 km, Mag = 5.5 (ISC). MLH (MOS) = 5.8, MLH (SRO) = 5.8.
02	BRA	iPg iSg	11 03 26 03 29								1.81	307.87	Czechoslovakia 49.26 N 14.92 W H = 10 59, h = 0 km (ISC). Explosion of 15 tons
04	BRA SRO 	+iP –iP e	09 02 29 09 02 29 02 45	–2.2 –1.0 							80.06 79.84	37.69 38.43	Off East Coast of Honshu, Japan 40.74 N 144.69 E H = 08 50 21.0, h = 14 km, Mag = 5.6 (ISC). MLH (MOS) = 5.6.
04	BRA	iP	18 19 21	+0.7							22.30	246.72	West of Gibraltar 36.12 N 8.4 W H = 18 14 25, h = 42 km, Mag = 4.2 (ISC).

Date	Code	Phase	G M T h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
05	BRA	eP	11 46 55	+0.8							45.04	125.95	Arabian Sea
		e	47 00										14.38 N 53.34 E
		e	47 25										H = 11 38 39, h = 27 km,
		ePcP	48 29	−3									Mag = 4.7 (ISC).
06	BRA	ePKIKP	03 14 01	+5.7							146.13	18.63	Tonga
		e	14 22										15.36 S 173.53 W
		e	14 34										H = 02 54 29, h = 109 km,
													Mag = 4.9 (ISC).
06	BRA	iP	07 08 37	+0.4	0.2	1.2					26.34	85.39	Western Kazakhstan
		i	08 40										43.79 N 54.75 E
		iPP	09 19	0									H = 07 02 57.5, h = 0 km,
		iPPP	09 31	0									Mag = 5.8 (ISC).
		i	10 16										mPV (BRA) = 5.7.
		e	11 04										
		e	16 16										
	SPC	iP	07 08 20	+3.3							24.22	89.72	
10	BRA	ePKIKP	20 13 27	+2.9							138.60	47.12	New Hebrides
		e	13 39										14.93 S 167.02 E
		e	14 14										H = 19 54 02, h = 39 km,
		ePP	16 18	−1									Mag = 5.5 (ISC).
		ePKS	17 03	−2									MLH (SRO) = 6.1.
		eSKS	20 42	+3									
	SRO	ePKIKP	20 13 35	+11.5							138.24	48.93	
		ePP	16 15	−2									
		e	24 11										
		ePPS	28 36	0									
		Lm	21 0.5				3.1	20	3.1	20			
	SPC	ePKIKP	20 13 25	+5.2							136.37	50.14	

11	BRA	ePKIKP	10 52 51	+2.9							148.84	248.07	Easter Island Cordillera
													50.1 S 114.7 W
													H = 10 33 08.9, h = 33 km,
													Mag = 4.8 (ISC).
12	BRA	+eP	01 25 26	+2.9							80.15	38.57	Off East Coast of
		e	25 36										Honshu, Japan
	SRO	eP	01 25 08	−13.8							79.92	39.31	40.19 N 143.80 E
		Lm	02 05.5										H = 01 13 14.7, h = 30 km,
													Mag = 5.1 (ISC).
													MLH (MOS) = 5.6.
13	BRA	+iP	03 30 11	+0.3	0.1	1.4					60.99	234.14	Central Mid-Atlantic
		ipP	30 20	+1									Ridge
		i	30 33										1.00 N 28.04 W
		e	32 21										H = 03 19 57.4, h = 27 km,
	SRO	+iP	03 30 14	+0.2							61.45	235.45	Mag = 5.5 (ISC).
		e	31 16										mPV (BRA) = 5.7,
		e	32 28										MLH (MOS) = 5.5.
		Lm	55 30										
	SPC	eP	30 30 27	+1.0							63.28	236.67	
14	BRA	eP	02 56 00	+1.2							101.62	73.69	Molucca Passage
		e	58 25										1.99 N 126.94 E
		iSKS	03 06 28	−4									H = 02 42 10.4, h = 51 km,
		eSP	09 15	+2									Mag = 6.0 (ISC).
	SRO	eP	02 56 04	+8.2							100.93	74.70	MLH (MOS) = 6.3.
		e	57 52										
		ePP	03 00 08	+1									
		eSKS	06 36	+7									
		e	12 42										
		e	22 44										
		Lm	40 44										
	SPC	eP	02 56 15	+1.2							99.34	75.96	

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
14	BRA	+iP	18 46 23	−2.0	0.3	2.1					52.95	124.92	Carlsberg Ridge
		i	46 47										8.20 N 58.49 E
		iPcP	47 38	+5									H = 18 37 09, h = 31 km,
		iPP	48 35	+9	0.7	2.5	0.2	2.5	0.3	2.5			Mag = 5.9 (ISC).
		iPPP	49 17	−15									mPV (BRA) = 6.0,
		e	50 38										mPPH (BRA) = 6.2,
	SRO	+iP	18 46 20	+1.5							59.09	125.95	MLH (MOS) = 6.0.
		isP	46 32	+8									
		i	47 36										
		iPP	48 29	+11									
		i	50 44										
	SPC	iP	18 46 20	+3.2							51.90	128.86	
17	BRA	ePKIKP	07 49 37	+3.5							139.22	46.77	New Hebrides
													15.35 S 167.55 E
													H = 07 30 22.8, h = 137 km,
													Mag = 4.8 (ISC).
18	BRA	−iP	13 43 09	+0.6	0.2	1.5					74.60	35.98	Sakhalin Island
		i	43 14										46.21 N 142.45 E
		i	43 33										H = 13 32 03.9, h = 329 km,
		epP	44 30	+6									Mag = 5.9 (ISC).
		esP	45 00	+2									mPV (BRA) = 6.0.
		eS	52 15	0									
	SRO	iP	13 43 08	+0.7							74.40	36.64	
		e	45 10										
		eS	52 16	+3									
		Lm	14 01 04										
	SPC	iP	13 43 00	+2.9							72.53	38.03	
		e	44 55										

18	BRA	eP	19 06 09	+3.1							25.24	345.89	Jan Mayen Island
	SRO	e	19 07 24								25.79	345.33	Region
		e	08 20										71.70 N 2.1 W
		e	09 56										H = 19 00 42.0, h = 33 km (ISC).
		e	10 00										
		eS	10 52	+16									
20–24	BRA												The apparatus did not work
21	SPC	ePn	19 07 53	+10.7							5.72	125.32	Romania
		e	09 51										45.68 N 26.91 E
													H = 19 06 23.6, h = 37 km,
													Mag = 4.6 (ISC).
22	SPC	eP	11 31 20	+0.9							78.44	5.21	Alaska Fox Islands
													52.50 N 168.12 W
													H = 11 19 20.1, h = 37 km,
													Mag = 5.3 (ISC).
23	SRO	−iP	13 34 12	+0.7							71.22	19.26	Near East Coast of Kamchatka
		e	34 56										57.34 N 163.14 E
		eS	43 36	+8									H = 13 22 51, h = 11 km,
		Lm	14 10.0										Mag = 5.4 (ISC).
	SPC	iP	13 34 04	+2.5							69.49	20.44	MLH (MOS) = 5.9.
24	SRO	eP	05 10 00	+0.2							24.30	251.31	North Atlantic Ocean
		e	21 16										35.94 N 10.40 W
	SPC	eP	05 10 20	+4.2							25.97	250.87	H = 05 04 44.7, h = 35 km,
													Mag = 5.0 (ISC).

Date	Code	Phase	GMT h m s	RES (O–C)	Z A	Z T	EW A	EW T	NS A	NS T	Dc	Az	Remarks
25	BRA	eP	21 43 44	+4.7	0.2	2					69.59	271.04	Leeward Islands
		ePcP	43 53	−5									15.79 N 59.64 W
		e	44 11										H = 21 32 27, h = 1 km,
		eS	52 53	+6									Mag = 6.4 (ISC).
		Lm	22 10.5						85	16			MLH (MOS) = 7.0,
	SRO	−iP	21 43 45	+0.7							70.42	272.06	MLH (BRA) = 7.0,
		i	43 49										MLH (SRO) = 6.9.
		iS	52 56	−1									
		Lm	22 11 00				57	20	23	20			
	HRB	eP	21 43 46	+1.7							70.33	271.95	
		ePcP	43 56	+10									
		e	44 44										
		e	45 35										
		eS	52 54	−2			7	5	3	5			
		Lm	22 08										
	SPC	iP	21 43 55	+2.9							71.64	273.00	
28	BRA	ePn	22 04 43	+15.1							7.71	165.59	Albania
		e	07 01										40.67 N 19.62 E
													H = 22 02 35.6, h = 51 km (ISC).
29	BRA	eP	01 03 00	+3.7							69.38	271.40	Leeward Islands
		e	03 11										16.18 N 59.74 W
	SPC	eP	01 03 15	+6.3							71.42	273.36	H = 00 51 49.9, h = 33 km,
													Mag = 5.5 (ISC).
													MLH (MOS) = 5.7.
31	BRA	eP	05 40 31	−8.2							15.28	150.60	Crete
	SRO	eP	05 40 33	+2.8							14.58	153.56	34.44 N 26.11 E
		Lm	46 53										H = 05 37 05.6, h = 54 km,
	SPC	e	05 40 13								15.36	161.41	Mag = 5.0 (ISC).
													MLH (MOS) = 4.5.

31	BRA	−iPn	13 19 22	−1.7							3.29	178.45	Yugoslavia
		e	19 30										44.88 N 17.23 E
		ePg	19 39	+6									H = 13 18 33.3, h = 33 km,
		e	19 51										Mag = 4.8 (ISC).
		eSn	20 02	0									MLH (MOS) = 5.0,
		e	20 32										MLH (BRA) = 4.6,
		Lg	20 40										MLH (SRO) = 5.3.
	SRO	−iPn	13 19 14	−6.0							3.03	194.74	
		i	19 20										
		i	19 26										
		i	19 42										
		eSn	20 00	+4.3									
		Lm	21										
	HRB	ePn	13 19 21	+0.9							3.07	192.90	
		e	19 43										
		eSn	20 00	+4.3									
		eSg	20 18	+8									
		Lm	21										
31	BRA	eP	19 14 18	+2.7							82.41	55.35	Ryukyu Islands
		ePcP	14 23	+2									28.55 N 129.15 E
		e	14 54										H = 19 01 58.7, h = 62 km,
		e	16 33										Mag = 5.8 (ISC).
		eScS	24 39	+1									MLH (MOS) = 6.8,
		eSP	25 15	−1									MLH (BRA) = 7.1,
		Lm	57										MLH (SRO) = 7.1.
	SRO	19 14 08	19 14 08	−4.9							81.94	56.14	
		e	17 16										
		e	20 40										
		eSKS	24 28	+5									
		Lm	48				30.6	20	48.3	20			
	HRB	eSKS	19 24 17	−6							81.97	56.07	
		Lm	56										

Observations of Microseisms at the Station Hurbanovo

Microseismic activity
Apparatus: Mainka NS

January 1969

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	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
2	1	3	1.9	1	3	1.9	1	3	1.9	...		
3	...			...			1	3	1.9	1	4	3.6
4	1	4	3.6	1	4	3.6	1	4	3.6	1	4	3.6
5	1	4	3.6	1	4	3.6	1	6	3.2	1	6	3.2
6	1	6	3.2	1	6	3.2	1	6	3.2	1	3	1.9
7	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
8	1	3	1.9	1	3	1.9	1	3	1.9	0.0		
9	0.0			1	3	1.9	1	4	3.6	1	4	3.6
10	0.0			1	3	1.9	1	4	3.6	1	4	3.6
11	0.0			0.0			1	3	1.9	1	3	1.9
12	1	3	1.9	1	3	1.9	1	4	3.6	1	4	5.4
13	1	6	3.2	1	6	3.2	1	6	8.2	1	6	8.2
14	1	6	8.2	1	6	8.2	1	6	8.2	1	6	8.2
15	1	4	3.6	1	4	3.6	1	6	8.2	1	6	8.2
16	1	4	3.6	1	4	3.6	1	6	1.9	1	3	1.9
17	1	3	1.9	1	3	1.9	1	3	3.9	1	3	3.9
18	0.0			1	3	1.9	0.0			0.0		
19	0.0			0.0			0.0			0.0		
20	0.0			0.0			1	3	1.9	1	3	1.9
21	0.0			0.0			1	3	1.9	0.0		
22	0.0			0.0			1	3	1.9	0.0		
23	0.0			0.0			0.0			0.0		
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			1	3	1.9	0.0		
26	0.0			0.0			1	3	1.9	1	3	1.9
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			1	3	1.9	1	3	1.9
29	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
30	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
31	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9

Microseismic activity
Apparatus: Mainka EW

January 1969

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	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
2	1	3	1.7	1	3	1.7	...			...		
3	...			...			1	3	1.7	1	3	1.7
4	1	3	1.7	1	3	1.7	1	4	3.3	1	3	1.7
5	1	4	3.3	1	3	1.7	1	4	3.3	1	4	3.3
6	1	4	3.3	1	6	3.0	0.0			0.0		
7	0.0			0.0			0.0			1	3	1.7
8	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
9	1	3	1.7	1	3	1.7	1	4	3.3	1	3	1.7
10	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
11	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
12	1	3	1.7	1	3	1.7	1	3	3.3	1	6	3.0
13	1	6	3.0	1	6	3.0	1	6	7.3	1	6	7.3
14	1	6	7.3	1	6	7.3	1	6	7.3	1	6	7.3
15	1	6	3.0	1	4	3.3	1	6	3.3	1	6	7.3
16	...			...			0.0			0.0		
17	0.0			0.0			1	4	3.3	1	4	3.3
18	1	4	3.3	1	4	3.3	1	3	1.7	1	3	1.7
19	1	3	1.7	1	3	1.7	0.0			0.0		
20	0.0			0.0			0.0			0.0		
21	0.0			0.0			1	3	1.7	0.0		
22	1	3	1.7	0.0			1	3	1.7	0.0		
23	0.0			0.0			1	3	1.7	1	3	1.7
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	0.0			0.0			1	4	3.3	1	3	1.7
31	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3

Microseismic activity
Apparatus: Mainka NS

February 1969

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	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
2	1	3	1.9	1	3	1.9	1	4	3.6	1	4	3.6
3	1	4	3.6	1	4	3.6	1	4	3.6	1	4	3.6
4	1	4	3.6	1	4	3.6	1	3	1.9	1	3	1.9
5	1	3	1.9	1	4	3.6	1	4	3.6	1	4	3.6
6	1	4	3.6	1	4	3.6	1	4	3.6	1	4	3.6
7	1	4	3.6	1	4	3.6	1	6	5.0	1	6	3.2
8	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
9	1	3	1.9	1	3	1.9	0.0			0.0		
10	0.0			0.0			0.0			1	3	1.9
11	1	3	1.9	1	3	1.9	1	6	3.2	1	6	3.2
12	1	3	1.9	1	3	1.9	1	4	3.6	1	4	3.6
13	0.0			0.0			1	3	1.9	1	3	1.9
14	0.0			0.0			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			1	3	1.9	1	3	1.9
18	0.0			0.0			1	4	3.6	1	3	1.9
10	1	3	1.9	1	6	3.2	1	6	5.0	1	6	5.0
20	1	6	3.2	1	4	5.4	1	6	3.2	1	6	3.2
21	1	4	3.6	0.0			0.0			0.0		
22	0.0			0.0			1	3	1.9	1	3	1.9
23	tt			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	1	3	1.9	0.0			0.0			0.0		

Microseismic activity
Apparatus: Mainka EW

February 1969

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	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
2	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
3	1	3	1.7	1	3	1.7	1	4	1.9	1	3	1.7
4	0.0			0.0			1	3	1.7	0.0		
5	0.0			0.0			1	4	3.3	1	4	3.3
6	1	4	3.3	1	4	3.3	1	6	3.0	1	6	3.0
7	1	6	3.0	1	6	4.4	...			...		
8	...			...			1	3	1.7	1	3	1.7
9	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
10	1	3	1.7	1	3	1.7	1	4	3.3	1	4	3.3
11	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
12	0.0			0.0			1	3	1.7	0.0		
13	0.0			0.0			0.0			0.0		
14	0.0			0.0			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			1	4	3.3	1	4	1.9
19	1	4	3.3	1	6	3.0	1	6	4.4	1	6	4.4
20	1	6	4.4	1	6	4.4	1	4	3.3	1	4	3.3
21	0.0			0.0			1	4	3.3	1	4	3.3
22	1	3	1.7	1	3	1.7	1	3	1.7	0.0		
23	tt			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		

Microseismic activity
Apparatus: Mainka NS

March 1969

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			1	3	1.9	1	3	1.9
4	0.0			0.0			1	3	1.9	1	3	1.9
5	1	3	1.9	1	4	3.6	1	5	3.2	1	6	3.2
6	1	4	3.6	1	4	3.6	1	6	3.2	1	6	3.2
7	1	6	3.2	1	6	3.2	1	6	8.2	1	6	8.2
8	1	4	3.6	1	4	3.6	1	4	3.6	1	4	3.6
9	0.0			1	4	3.6	1	3	1.9	1	3	1.9
10	1	3	1.9	1	3	1.9	1	4	3.6	1	3	1.9
11	0.0			0.0			1	3	1.9	0.0		
12	0.0			0.0			1	3	1.9	1	4	3.6
13	0.0			0.0			1	3	1.9	1	3	1.9
14	0.0			0.0			1	3	1.9	1	3	1.9
15	1	3	1.9	1	3	1.9	0.0			0.0		
16	0.0			0.0			0.0			0.0		
17	1	3	1.9	0.0			1	3	1.9	1	3	1.9
18	0.0			0.0			1	4	3.6	1	4	3.6
19	0.0			0.0			1	3	1.9	1	3	1.9
20	1	3	1.9	1	3	1.9	1	3	1.9	0.0		
21	0.0			0.0			1	3	1.9	1	3	1.9
22	0.0			0.0			1	3	1.9	0.0		
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			0.0		
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			tt			0.0		
28	0.0			0.0			0.0			1	3	1.9
29	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
30	1	3	1.9	1	3	1.9	0.0			0.0		
31	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9

Microseismic activity
Apparatus: Mainka EW

March 1969

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	3	1.7	1	3	1.7	1	3	1.7	0.0		
2	0.0			0.0			0.0			0.0		
3	0.0			0.0			1	3	1.7	0.0		
4	0.0			0.0			1	3	1.7	0.0		
5	1	3	1.7	1	4	3.3	1	4	3.3	1	4	3.3
6	1	4	3.3	1	6	7.3	1	6	7.3	1	6	3.3
7	1	6	7.3	1	6	7.3	1	6	4.4	1	4	3.3
8	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
9	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
10	1	4	3.3	1	4	3.3	1	4	3.3	1	3	1.7
11	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
12	1	3	1.7	1	3	1.7	1	3	1.7	0.0		
13	0.0			0.0			0.0			0.0		
14	0.0			0.0			1	3	1.7	1	3	1.7
15	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
16	1	3	1.7	1	3	1.7	1	3	1.7	1	4	3.3
17	0.0			1	4	3.3	0.0			0.0		
18	0.0			0.0			1	4	3.3	1	4	3.3
19	0.0			0.0			0.0			0.0		
20	0.0			0.0			1	3	1.7	0.0		
21	0.0			0.0			1	3	1.7	0.0		
22	0.0			0.0			0.0			0.0		
23	0.0			0.0			1	4	1.9	0.0		
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			1	3	1.7	0.0		
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			tt			0.0		
28	0.0			0.0			0.0			0.0		
29	0.0			0.0			1	3	1.7	1	3	1.7
30	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
31	1	3	1.7	1	3	1.7	0.0			0.0		

Microseismic activity
Apparatus: Mainka NS

April 1969

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	3	1.9	1	3	1.9	1	3	1.9	0.0		
2	0.0			0.0			1	3	1.9	1	3	1.9
3	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
4	1	3	1.9	1	3	1.9	1	6	3.2	1	6	3.2
5	1	6	3.2	1	6	3.2	1	4	3.6	1	4	3.6
6	1	4	3.6	1	4	3.6	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			1	3	1.9	1	3	1.9
10	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
11	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
12	1	3	1.9	1	3	1.9	0.0			0.0		
13	0.0			0.0			0.0			0.0		
14	0.0			0.0			1	3	1.9	1	3	1.9
15	1	3	1.9	1	3	1.9	0.0			0.0		
16	0.0			0.0			0.0			0.0		
17	0.0			0.0			1	3	1.9	1	3	1.9
18	1	3	1.9	1	3	1.9	0.0			0.0		
19	0.0			0.0			1	3	1.9	1	3	1.9
20	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
21	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1,9
22	0.0			0.0			1	3	1.9	1	3	1.9
23	1.	3	1.9	1	3	1.9	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			tt			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			1	3	1.9	0.0		
30	0.0			0.0			0.0			0.0		

Microseismic activity
Apparatus: Mainka EW

April 1969

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			1	6	3.0	1	6	3.0
5	1	6	3.0	1	6	3.0	1	6	3.0	1	6	3.0
6	1	6	3.0	1	6	3.0	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			1	3	1.7	1	3	1.7
10	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
11	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
12	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
13	0.0			0.0			1	3	1.7	1	3	1.7
14	0.0			0.0			0.0			0.0		
15	0.0			0.0			0.0			0.0		
16	0.0			0.0			1	3	1.7	1	3	1.7
17	1	3	1.7	1	3	1.7	0.0			0.0		
18	0.0			0.0			1	3	1.7	1	3	1.7
19	1	3	1.7	1	3	1.7	0.0			0.0		
20	0.0			0.0			1	3	1.7	1	3	1.7
21	1	3	1.7	1	3	1.7	0.0			0.0		
22	0.0			0.0			0.0			0.0		
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			0.0		
26	0.0			tt			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		

Microseismic activity
Apparatus: Mainka NS

May 1969

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			1	3	1.9	0.0		
5	0.0			1	3	1.9	1	3	1.9	1	3	1.9
6	1	3	1.9	1	3	1.9	1	3	1.9	0.0		
7	0.0			1	3	1.9	1	3	1.9	0.0		
8	0.0			1	3	1.9	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	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
14	0.0			1	3	1.9	1	3	1.9	tt		
15	0.0			1	3	1.9	1	3	1.9	1	3	1.9
16	1	3	1.9	1	3	1.9	0.0			0.0		
17	0.0			0.0			1	3	1.9	1	3	1.9
18	0.0			0.0			1	3	1.9	1	3	1.9
19	1	3	1.9	1	3	1.9	0.0			...		
20	...			...			1	3	1.9	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			0.0			0.0		
24	0.0			0.0			1	3	1.9	1	3	1.9
25	0.0			0.0			1	3	1.9	1	3	1.9
26	0.0			0.0			1	3	1.9	1	3	1.9
27	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
28	1	3	1.9	0.0			0.0			1	3	1.9
29	0.0			0.0			0.0			0.0		
30	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
31	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9

Microseismic activity
Apparatus: Mainka EW

May 1969

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	1	3	1.7	1	3	1.7	0.0			0.0		
6	0.0			1	3	1.7	0.0			0.0		
7	0.0			1	3	1.7	1	3	1.7	1	3	1.7
8	1	3	1.7	1	3	1.7	0.0			0.0		
9	0.0			0.0			1	3	1.7	1	3	1.7
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	1	3	1.7	1	3	1.7	1	3	1.7	0.0		
14	0.0			1	3	1.7	1	3	1.7	1	3	1.7
15	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
16	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
17	1	3	1.7	1	3	1.7	1	3	1.7	0.0		
18	0.0			0.0			1	3	1.7	0.0		
19	1	3	1.7	1	3	1.7	1	3	1.7	0.0		
20	1	3	1.7	0.0			1	3	1.7	0.0		
21	0.0			0.0			1	3	1.7	1	3	1.7
22	0.0			0.0			0.0			0.0		
23	0.0			0.0			1	3	1.7	1	3	1.7
24	1	3	1.7	1	3	1.7	1	4	3.3	0.0		
25	1	4	3.3	1	4	3.3	1	3	1.7	1	3	1.7
26	1	3	1.7	1	3	1.7	1	4	3.3	1	4	3.3
27	1	4	3.3	1	3	1.7	1	3	1.7	1	3	1.7
28	1	4	3.3	1	4	3.3	0.0			0.0		
29	0.0			0.0			1	3	1.7	1	3	1.7
30	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
31	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7

Microseismicactivity
Apparatus: Mainka NS

June 1969

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	3	1.9	0.0			0.0			0.0		
2	0.0			0.0			1	3	1.9	1	3	1.9
3	0.0			0.0			1	3	1.9	1	3	1.9
4	1	3	1.9	1	3	1.9	0.0			0.0		
5	0.0			0.0			0.0			0.0		
6	0.0			0.0			1	3	1.9	1	3	1.9
7	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
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			0.0			1	3	1.9
14	0.0			0.0			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			1	3	1.9	1	3	1.9
18	1	3	1.9	1	3	1.9	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			0.0		
23	0.0			0.0			1	3	1.9	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	0.0			0.0			0.0			0.0		

Microseismic activity
Apparatus: Mainka EW

June 1969

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	1.7	1	3	1.7
2	3	3	1.7	3	3	1.7	1	3	1.7	3	3	1.7
3	3	3	1.7	1	3	1.7	1	3	1.7	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	1.7	1	3	1.7
7	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
8	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
9	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
10	1	3	1.7	1	3	1.7	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			0.0			0.0		
14	0.0			0.0			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			1	3	1.7	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	3	1.7	0.0	3	1.7
22	1	3	1.7	0.0			0.0			0.0		
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			0.0		
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0.0			1	3	1.7
28	1	3	1.7	1	3	1.7	...			...		
29	...			...			0.0			0.0		
30	0.0			0.0			0.0			0.0		

Microseismic activity
Apparatus: Mainka NS

July 1969

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	...			...			0			0		
3	0			0			0			0		
4	0			0			0			0		
5	0			0			0			0		
6	0			0			0			0		
7	0			0			1	3	1.9	1	3	1.9
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			1	3	1.9	1	3	1.9
12	0.0			0.0			0			0		
13	0			0			0			0		
14	0			0			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		
19	0			0			0			0		
20	0			0			0			0		
21	0			0			0			0		
22	0			0			0.0			0.0		
23	1	3	1.9	1	3	1.9	0.0			0.0		
24	0.0			0.0			1	3	1.9	0.0		
25	0.0			0.0			1	3	1.9	0.0		
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0			0		
28	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
Apparatus: Mainka EW

July 1969

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			1	3	1.7	1	3	1.7
3	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
4	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
5	1	3	1.7	1	3	1.7	0			0		
6	0			0			0			0		
7	0			0			1	3	1.7	0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			1	3	1.7	1	3	1.7
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			1	3	1.7	0.0		
12	0.0			1	3	1.7	0.0			0.0		
13	0.0			0.0			0.0			0.0		
14	0.0			0.0			1	3	1.7	1	3	1.7
15	0.0			1	3	1.7	0.0			0.0		
16	0.0			0.0			0.0			0.0		
17	0			0			0			0		
18	0			0			0.0			0.0		
19	0.0			0.0			1	33	1.7	1	3	1.7
20	1	3	1.7	1	3	1.7	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			0.0			1	3	1.7
24	0.0			1	3	1.7	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			1	3	1.7
28	1	3	1.7	1	3	1.7	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
Apparatus: Mainka NS

August 1969

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			1	3	1.9
3	1	3	1.9	1	3	1.9	0.0			0		
4	0			0			0.0			0.0		
5	0.0			0.0			0.0			1	3	1.9
6	0.0			1	3	1.9	0.0			0.0		
7	1	3	1.9	1	3	1.9	0.0			0.0		
8	0.0			0.0			tt			0.0		
9	0.0			0.0			1	3	1.9	1	3	1.9
10	1	3	1.9	1	3	1.9	0.0			0.0		
11	0.0			0.0			1	3	1.9	0.0		
12	1	4	3.6	tt			tt			1	3	1.9
13	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
14	1	3	1.9	1	3	1.9	1	4	3.6	1	4	3.6
15	1	4	3.6	1	4	3.6	0.0			0.0		
16	0.0			0.0			1	3	1.9	0.0		
17	0.0			0.0			tt			1	3	1.9
18	1	3	1.9	1	4	3.6	1	3	1.9	1	3	1.9
19	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
20	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
21	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
22	1	3	1.9	1	3	1.9	0.0			0.0		
23	0.0			0.0			1	3	1.9	1	3	1.9
24	...			...			1	3	1.9	1	3	1.9
25	0.0			0.0			0.0			1	3	1.9
26	0.0			0.0			1	3	1.9	1	3	1.9
27	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
28	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
29	1	3	1.9	1	3	1.9	0.0			0.0		
30	0.0			0.0			0.0			0.0		
31	0.0			0.0			0.0			0.0		

Microseismic activity
Apparatus: Mainka EW

August 1969

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	tt			0.0			0			0		
3	0			0			0			0		
4	0			0			0.0			0.0		
5	0.0			0.0			1	3	1.7	0.0		
6	0.0			1	3	1.7	1	3	1.7	1	3	1.7
7	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
8	1	3	1.7	1	3	1.7	tt			0.0		
9	0.0			0.0			1	3	1.7	1	3	1.7
10	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
11	1	3	1.7	1	3	1.7	0.0			1	3	1.7
12	1	3	1.7	tt			tt			1	3	1.7
13	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
14	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
15	1	3	1.7	1	3	1.7	1	3	1.7	0.0		
16	1	3	1.7	1	3	1.7	1	4	3.3	1	4	3.3
17	1	4	3.3	1	4	3.3	tt			1	3	1.7
18	1	3	1.7	1	3	1.7	1	4	3.3	1	4	3.3
19	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
20	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
21	1	4	3.3	1	3	1.7	0.0			0.0		
22	0.0			1	3	1.7	1	4	3.3	1	4	3.3
23	1	4	3.3	1	4	3.3	1	3	1.7	1	3	1.7
24	1	3	1.7	1	3	1.7	0.0			0.0		
25	0.0			0.0			0.0			0.0		
26	0.0			0.0			0.0			1	3	1.7
27	0.0			0.0			0.0			1	3	1.7
28	0.0			1	3	1.7	1	3	1.7	1	3	1.7
29	1	3	1.7	1	3	1.7	0.0			0.0		
30	0.0			0.0			0.0			0.0		
31	0.0			0.0			0.0			0.0		

Microseismic activity
Apparatus: Mainka NS

September 1969

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	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
2	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
3	1	3	1.9	1	3	1.9	0.0			0.0		
4	0.0			0.0			1	3	1.9	1	3	1.9
5	1	3	1.9	1	3	1.9	0.0			0.0		
6	0.0			0.0			0.0			0.0		
7	0.0			0.0			0.0			0.0		
8	1	3	1.9	1	3	1.9	0.0			0.0		
9	0.0			tt			1	4	3.6	1	4	3.6
10	1	4	3.6	1	4	3.6	1	3	1.9	0.0		
11	0.0			1	3	1.9	0.0			0.0		
12	0.0			0.0			0.0			0.0		
13	0.0			0.0			0.0			0.0		
14	0.0			0.0			...			...		
15	...			...			...			...		
16	...			...			1	3	1.9	1	3	1.9
17	1	3	1.9	1	3	1.9	...			...		
18	...			...			1	3	1.9	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			1	3	1.9	1	3	1.9
22	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
23	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
24	1	3	1.9	1	3	1.9	1	3	1.9	tt		
25	1	3	1.9	1	3	1.9	1	4	3.6	1	4	3.6
26	1	4	3.6	1	4	3.6	0.0			1	3	1.9
27	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
28	1	3	1.9	1	3	1.9	1	6	3.2	1	3	3.2
29	1	6	3.2	1	6	3.2	1	6	3.2	1	6	3.2
30	1	4	3.6	1	4	3.6	1	4	3.6	1	4	3.6

Microseismic activity
Apparatus: Mainka EW

September 1969

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	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
2	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
3	0.0			1	3	1.7	1	3	1.7	1	3	1.7
4	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
5	0.0			1	3	1.7	1	4	3.3	1	4	3.3
6	0.0			1	4	3.3	0.0			0.0		
7	0.0			0.0			1	4	3.3	1	4	3.3
8	1	4	3.3	1	4	3.3	1	3	1.7	0.0		
9	0.0			tt			1	3	1.7	1	3	1.7
10	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
11	1	4	3.3	1	4	3.3	0.0			0.0		
12	1	4	3.3	1	4	3.3	0.0			0.0		
13	0.0			0.0			0.0			0.0		
14	0.0			0.0			1	3	1.7	1	3	1.7
15	1	4	3.3	1	4	3.3	1	6	3.0	1	4	3.3
16	1	3	1.7	0.0			1	3	1.7	1	3	1.7
17	0.0			0.0			1	6	3.0	1	4	3.3
18	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
19	1	3	1.7	1	3	1.7	1	3	1.7	0.0		
20	0.0			0.0			0.0			0.0		
21	0.0			0.0			1	3	1.7	1	3	1.7
22	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
23	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
24	1	4	3.3	1	4	3.3	1	3	1.7	tt		
25	1	3	1.7	1	3	1.7	1	4	3.3	1	4	3.3
26	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
27	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
28	1	4	3.3	1	4	3.3	1	6	3.0	1	6	3.0
29	1	6	3.0	1	6	3.0	1	6	3.0	1	6	3.0
30	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3

Microseismic activity
Apparatus: Mainka NS

October 1969

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	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
2	1	3	1.9	1	3	1.9	1	4	3.6	1	4	3.6
3	1	3	1.9	1	3	1.9	0.0			0.0		
4	0.0			0.0			1	3	1.9	1	3	1.9
5	1	3	1.9	1	3	1.9	1	3	1.9	0.0		
6	0.0			0.0			1	4	3.6	1	4	3.6
7	1	4	3.6	1	4	3.6	1	4	3.6	1	4	3.6
8	1	4	3.6	1	4	3.6	1	3	1.9	3	3	1.9
9	3	3	3.6	3	4	3.6	1	4	3.6	1	4	3.6
10	0.0			1	4	3.6	1	4	3.6	1	3	1.9
11	0.0			1	3	1.9	1	3	1.9	1	3	1.9
12	1	3	1.9	1	3	1.9	0.0			0.0		
13	0.0			0.0			1	3	1.9	1	3	1.9
14	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
15	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
16	1	3	1.9	1	3	1.9	1	4	3.6	1	3	1.9
17	1	3	1.9	1	4	3.6	1	4	3.6	1	3	1.9
18	1	3	1.9	1	3	1.9	0.0			0.0		
19	0.0			0.0			0.0			...		
20	...			...			1	3	1.9	1	3	1.9
21	1	3	1.9	1	3	1.9	1	4	3.6	1	4	3.6
22	1	4	3.6	1	4	3.6	3	4	3.6	3	4	3.6
23	0.0			1	3	1.9	1	3	1.9	3	3	1.9
24	0.0			0.0			1	3	1.9	1	3	1.9
25	0.0			0.0			1	3	1.9	1	3	1.9
26	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
27	1	3	1.9	1	3	1.9	1	6	3.2	1	6	3.2
28	1	6	3.2	1	6	3.2	1	4	3.6	1	4	3.6
29	1	4	3.6	1	4	3.6	1	4	3.6	1	4	3.6
30	1	4	3.6	1	4	3.6	1	3	1.9	1	3	1.9
31	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9

Microseismic activity
Apparatus: Mainka EW

October 1969

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	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
2	1	3	1.7	1	3	1.7	1	4	3.3	1	4	3.3
3	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
4	1	4	3.3	1	4	3.3	1	3	1.7	1	3	1.7
5	1	3	1.7	1	3	1.7	1	4	3.3	1	4	3.3
6	1	3	1.7	1	3	1.7	1	4	3.3	1	4	3.3
7	1	4	3.3	1	4	3.3	2	6	3.0	2	6	3.0
8	1	6	3.0	1	6	3.0	1	6	4.4	1	6	4.4
9	1	6	4.4	1	6	4.4	1	6	3.0	1	4	3.3
10	1	4	3.3	1	4	3.3	0.0			0.0		
11	0.0			0.0			1	3	1.7	1	3	1.7
12	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
13	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
14	1	3	1.7	1	3	1.7	1	3	1.7	0.0		
15	1	4	3.3	1	3	1.7	1	4	3.3	1	4	3.3
16	1	3	1.7	1	4	3.3	1	4	3.3	1	4	3.3
17	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
18	1	4	3.3	1	4	3.3	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			1	6	3.0	1	6	3.0
22	1	6	3.0	1	6	3.0	1	6	3.0	1	4	3.3
23	0.0			1	6	3.0	1	6	3.0	1	6	3.0
24	1	6	3.0	1	6	3.0	1	6	3.0	1	3	1.7
25	1	3	1.7	1	6	3.0	1	6	3.0	1	6	3.0
26	1	6	3.0	1	6	3.0	1	6	3.2	1	6	3.2
27	1	4	3.3	1	4	3.3	1	6	3.0	1	6	3.0
28	1	6	3.0	1	6	3.0	1	6	3.0	1	6	3.0
29	1	6	3.0	1	6	3.0	1	4	3.3	1	4	3.3
30	1	4	3.3	1	4	3.3	1	3	1.7	1	3	1.7
31	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7

Microseismic activity
Apparatus: Mainka NS

November 1969

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	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
2	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
3	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
4	0.0			0.0			1	3	1.9	1	3	1.9
5	0.0			0.0			1	3	1.9	0.0		
6	0.0			0.0			1	4	3.6	1	4	3.6
7	1	4	3.6	1	4	3.6	1	4	3.6	tt		
8	1	4	3.6	1	4	3.6	1	4	3.6	1	4	3.6
9	1	4	3.6	1	4	3.6	1	4	3.6	1	3	1.9
10	1	3	1.9	1	3	1.9	1	4	3.6	0.0		
11	0.0			0.0			1	4	3.6	0.0		
12	0.0			0.0			1	3	1.9	1	3	1.9
13	0.0			0.0			1	3	1.9	1	3	1.9
14	0.0			0.0			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			1	3	1.9	0.0		
18	0.0			0.0			0.0			0.0		
19	0.0			0.0			1	3	1.9	0.0		
20	0.0			1	3	1.9	1	3	1.9	0.0		
21	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
22	0.0			1	3	1.9	0.0			0.0		
23	0.0			0.0			0.0			0.0		
24	tt			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			1	3	1.9	1	3	1.9
28	1	3	1.9	1	3	1.9	tt			0.0		
29	0.0			0.0			1	3	1.9	1	3	1.9
30	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9

Microseismic activity
Apparatus : Mainka EW

November 1969

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	3.3	1	4	3.3	1	4	3.3	1	3	1.7
2	1	3	1.7	1	3	1.7	tt			1	3	1.7
3	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
4	0.0			0.0			1	3	1.7	1	3	1.7
5	0.0			0.0			0.0			0.0		
6	0.0			0.0			1	3	1.7	0.0		
7	0.0			1	4	3.3	1	6	4.4	tt		
8	1	4	3.3	1	6	3.0	1	6	3.0	1	6	4.4
9	1	6	3.0	1	6	3.0	1	6	3.0	1	4	3.6
10	1	4	3.3	1	4	3.3	1	6	3.0	1	6	3.0
11	1	4	3.3	1	4	3.3	1	4	3.3	1	3	1.7
12	1	3	1.7	1	3	1.7	1	4	1.9	0.0		
13	0.0			0.0			0.0			0.0		
14	0.0			0.0			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			1	3	1.7	0.0		
19	0.0			0.0			0.0			0.0		
20	0.0			0.0			1	4	3.3	0.0		
21	0.0			1	4	3.3	0.0			0.0		
22	0.0			0.0			0.0			0.0		
23	0.0			0.0			0.0			0.0		
24	0.0			0.0			1	4	3.3	1	4	3.3
25	0.0			1	4	3.3	0.0			0.0		
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			1	3	3.3	1	4	3.3
28	1	4	3.3	1	4	3.3	tt			1	3	1.7
29	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
30	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7

Microseismic activity
Apparatus: Mainka NS

December 1969

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	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
2	1	3	1.9	1	3	1.9	1	4	3.6	1	4	3.6
3	1	4	3.6	1	4	3.6	1	6	3.2	1	6	3.2
4	1	3	1.9	1	3	1.9	1	6	3.2	1	6	3.2
5	1	6	3.2	1	6	3.2	1	3	1.9	0.0		
6	1	3	1.9	0.0			1	3	1.9	0.0		
7	0.0			0.0			1	3	1.9	1	3	1.9
8	1	4	3.6	1	4	3.6	1	6	5.0	1	4	3.6
9	1	4	3.6	1	3	1.6	1	4	3.6	1	4	3.6
10	1	4	3.6	1	4	3.6	1	3	1.9	1	3	1.9
11	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
12	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
13	1	3	1.9	1	3	1.9	1	3	1.9	1	3	1.9
14	1	3	1.9	0.0			0.0			0.0		
15	1	3	1.9	1	3	1.9	1	6	3.2	1	6	3.2
16	1	6	3.2	1	3	1.9	1	4	3.6	1	3	1.9
17	1	3	1.9	1	3	1.9	1	4	3.6	1	4	3.6
18	0.0			1	3	1.9	0.0			0.0		
19	0.0			0.0			1	4	3.6	1	4	3.6
20	1	4	3.6	1	4	3.6	1	3	1.9	1	3	1.9
21	1	4	3.6	1	3	1.9	1	3	1.9	1	3	1.9
22	1	3	1.9	1	3	1.0	1	3	1.9	0.0		
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			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			1	6	3.2	1	6	3.2
30	0.0			0.0			1	3	1.9	0.0		
31	0.0			0.0			0.0			0.0		

Microseismic activity
Apparatus: Mainka EW

December 1969

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	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
2	1	3	1.7	1	3	1.7	1	4	3.3	1	3	1.7
3	1	3	1.7	1	3	1.7	1	6	3.0	1	6	3.0
4	1	6	3.0	1	6	3.0	1	6	3.0	1	4	3.3
5	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
6	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
7	0.0			0.0			1	4	3.3	1	6	4.4
8	1	6	4.4	1	6	4.4	1	6	4.4	1	4	3.3
9	0.0			1	4	3.3	1	4	3.3	1	4	3.3
10	1	3	1.7	1	4	3.3	1	6	3.0	1	6	3.0
11	1	6	3.0	1	6	3.0	1	6	3.0	1	4	3.3
12	1	4	3.3	1	4	3.3	1	3	1.7	1	3	1.7
13	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
14	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
15	1	3	1.7	1	3	1.7	1	4	3.3	1	4	3.3
16	1	4	3.3	1	4	3.3	1	6	4.4	1	6	4.4
17	1	6	3.0	1	6	3.0	1	6	3.0	1	6	3.0
18	1	3	1.7	1	3	1.7	1	4	3.3	1	4	3.3
19	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
20	0.0			1	3	1.7	1	6	3.0	1	4	3.3
21	1	4	3.3	1	4	3.3	1	6	3.0	1	6	3.0
22	1	6	3.0	1	6	3.0	1	6	3.0	1	4	3.3
23	1	4	3.3	1	4	3.3	1	6	3.0	1	4	3.3
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			0.0			0.0		
26	0.0			0.0			1	3	1.7	1	3	1.7
27	1	3	1.7	1	3	1.7	1	3	1.7	1	3	1.7
28	1	3	1.7	1	3	1.7	1	4	3.3	1	4	3.3
29	1	3	1.7	1	3	1.7	1	6	4.4	1	6	4.4
30	1	4	3.3	1	4	3.3	1	4	3.3	1	4	3.3
31	0.0			0.0			0.0			0.0		

Macroseismic Observations of Earthquakes on the Territory of Slovakia in the Year 1969

Macroseismic Observations 1969

Date	Time	Location	Latitude	Longitude	Intensity (MCS)	Felt at
February 10	23 09	Hungary	47.3°N	18.9°E	4°	Kameničná, Komárno, Gabčíkovo, Horné Mýto, Zemné
					3.5°	Báhoň, Okoč, Šurany, Zemianska Olča,
					3°	Čalovec, Čičov, Patince, Tôň, Veľké Kosihy, Zlatná na Ostrove
October 27	08 15	West Slovakia	48.4°N	17.8°E	3°	Šulekovo

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BRATISLAVA, ŠROBÁROVÁ, HURBANOVO
AND SKALNATÉ PLESO FOR THE YEAR 1969

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