

Seismological Station Network in Hungary (HU)

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Seismological station network

There are 16 seismological stations in Hungary operated by two different institutions: GGRI and GeoRisk Earthquake Research Institute Ltd. The two institutions share all the measured data. Table 1 and Table 2 contain all the important data of the Hungarian seismic stations and Figure 1 shows the areal distribution of them.

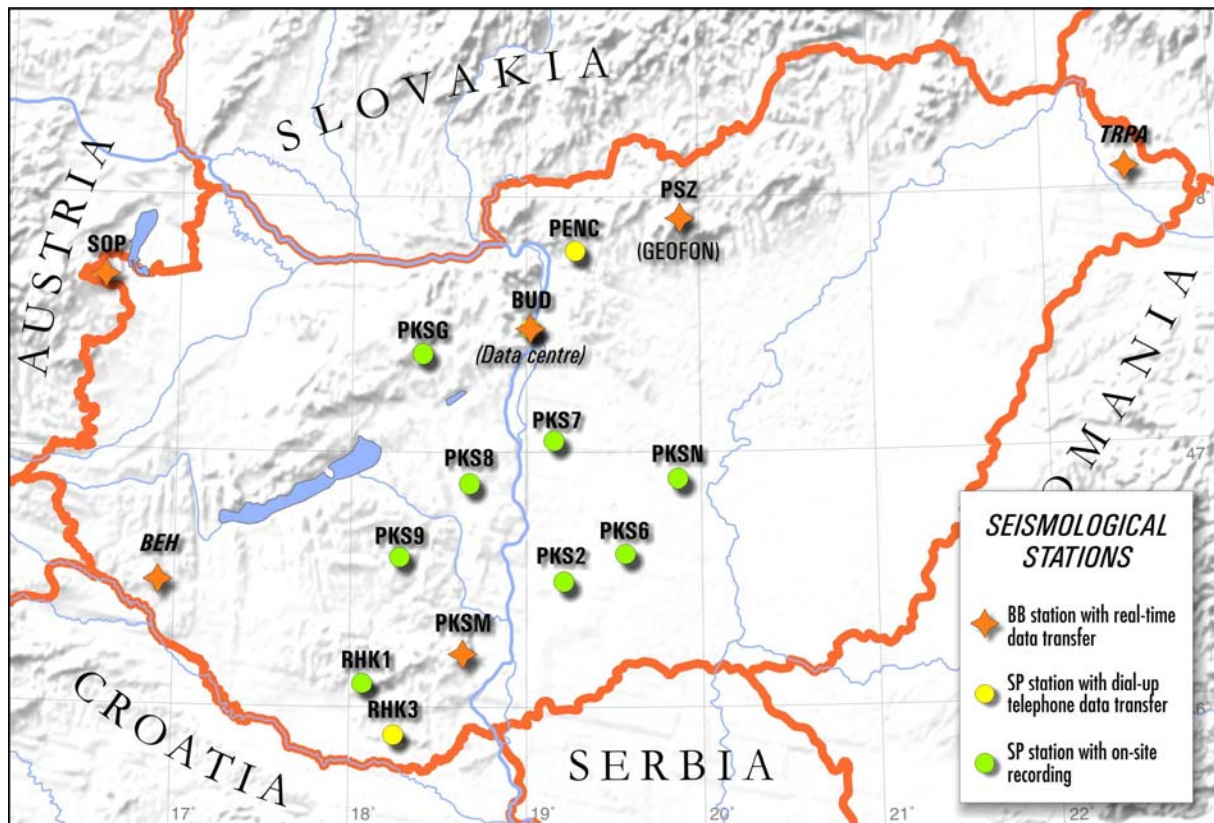


Fig. 1 Seismological stations in Hungary

Table 1 Broadband seismic stations, instrumentation and lithology

Code	Latitude (N)	Longitude (E)	Elev. (m)	Station type (1)	Sensor type (2)	Recording equipment (3)	Recording (4)	Org. (5)	Data streams
BEH	46.4703	16.7756	310	3C BB	STS-2	PS-6-24+ SeisComP PC	D - C	GGKI	SH, BH, LH, VH
BUD	47.4836	19.0239	196	3C BB	STS-2	PS-6-24+ SeisComP PC	D - C	GGKI	SH, BH, LH, VH
PKSM	46.2119	18.6413	170	3C BB	STS-2	Q380+ SeisComP PC	D - C	GGKI	HH (trig.), SH, BH, LH, VH
PSZ	47.9184	19.8944	940	3C BB	STS-2	PS-6-24+ SeisComP PC	D - C	GEOFON-GGKI	SH, BH, LH, VH
SOP	47.6833	16.5583	260	3C BB	STS-2	PS-6-24+ SeisComP PC	D - C	GGKI	SH, BH, LH, VH
TRPA	48.1297	22.5476	154	3C BB	STS-2	PS-6-24+ SeisComP PC	D - C	GGKI	HH (trig.), SH, BH, LH, VH

Table 2 Short period seismic stations, instrumentation and lithology

Code	Latitude (N)	Longitude (E)	Elev. (m)	Foundation	Station type (1)	Sensor type (2)	Recording equipment (3)	Recording (4)	Org. (5)
BUD	47.4836	19.0239	196	dolomite	3C SP	LE-3D	MARS-88/MC	D - E	GGKI-GR
PENC	47.7905	19.2817	250	alluvium	3C SP	LE-3D	MARS-88/MC	D - E	GGKI
PKS2	46.4920	19.2131	106	sand	3C SP	LE-3D	MARS-88/OC	D - E	GR
PKS6	46.5998	19.5645	120	sand	3C SP	LE-3D	MARS-88/OC	D - E	GR
PKS7	47.0473	19.1609	95	mud	3C SP	LE-3D	MARS-88/OC	D - E	GR
PKS8	46.8787	18.6765	135	rhyolite tuff	3C SP	LE-3D	MARS-88/OC	D - E	GR
PKS9	46.5870	18.2789	240	loess	3C SP	LE-3D	MARS-88/OC	D - E	GR
PKSG	47.3918	18.3907	200	dolomite	3C SP	LE-3D	MARS-88/OC	D - E	GR
PKSN	46.8972	19.8673	110	sand	3C SP	LE-3D	MARS-88/OC	D - E	GR
RHK1	46.0948	18.0720	297	limestone	3C SP	SS-1	K2	D - E	GGKI-GR
RHK3	45.8885	18.2521	420	limestone	3C SP	LE-3D	MARS-88/MC	D - E	GGKI-GR

- (1) 1C – one component vertical seismometer; 3C – three component seismometer
 SP – short period seismometer; BB – broad band seismometer; LP – long period seismometer
- (2) STS-2 – Streckeisen broad band seismometer
 LE-3D – Lennartz three directional 1Hz geophone
 SS-1 – Kinematics 1Hz seismometer
 Kirnos – 12 s long period seismometer
- (3) MARS-88 – product of Lennartz electronic
 PS-6-24 – Earth Data digitizer
 Q-380 – Quanterra data acquisition system
 SSR-1 and K2 – product of Kinematics Inc.
 SeisComP – Seismological Communication Processor (GEOFON)
- (4) D – digital; C – continuous recording; E – event recording
- (5) GEOFON – Network of GeoForschungsZentrum (Potsdam, Germany)
 GGKI – Geodetic and Geophysical Research Institute, HAS (Budapest, Hungary)
 GR – GeoRisk Earthquake Research Institute Ltd. (Budapest, Hungary)

(Near) real-time data transfer

All six broadband stations have near real-time data transfer between the remote site and the Budapest data center (BUD). Data are transferred via Internet with TCP/IP protocol. All stations use SeedLink for data transfer.

Data storage and availability

Continuous data of stations BEH, BUD, PKSM, PSZ, SOP and TRPA are archived at Budapest data centre. Data of stations PKSM, PSZ and SOP are archived and distributed also by GEOFON.

At Budapest Data Centre several months of continuous waveform data are on-line and these are available publicly by the means of AutoDRM system (autodrm@seismology.hu).

Live seismograms are provided on the world-wide web. Data are archived on CDs.

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