

Seismological Station Network in Hungary (HU)

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Seismological station network of Hungary

There are 15 digital seismological stations – 6 broadband and 9 short-period – in Hungary operated by two different institutions: GGRI and GeoRisk Earthquake Research Institute Ltd. The two institutions share all the measured data. Station PSZ is also belongs to the GEOFON network. Table 1 contains all the important information on the Hungarian seismic stations and Figure 1 shows the areal distribution of them.

Table 1 Seismic stations

Code	Location	Latitude (N)	Longitude (E)	Elev. (m)	Station type (1)	Sensor type (2)	Recording equipment (3)	Recording (4)
BEHE	Becsehely	46.470 2	16.775 5	298	3C BB	STS-2	PS-6-24 + SeisComP PC	C
BUD	Budapest	47.483 6	19.023 9	196	3C BB	STS-2	PS-6-24 + SeisComP PC	C
PENC	Penc	47.790 5	19.281 7	250	3C SP	LE-3D	MARS-88/MC + SeisComP PC	C
PKS2	Kecel	46.492 0	19.213 1	106	3C SP	LE-3D	MARS-88/OC	E
PKS6	Bócsa	46.599 8	19.564 5	120	3C SP	LE-3D	MARS-88/OC	E
PKS7	Kunszentmiklós	47.047 3	19.160 9	95	3C SP	LE-3D	MARS-88/OC	E
PKS9	Tamási	46.587 0	18.278 9	240	3C SP	LE-3D	MARS-88/OC	E
PKSG	Gánt	47.391 8	18.390 7	200	3C SP	LE-3D	MARS-88/MC + SeisComP PC	C
PKSM	Mórág	46.211 9	18.641 3	170	3C BB	STS-2	Q380 + SeisComP PC	C
PKSN	Nyárlőrinc	46.897 2	19.867 3	110	3C SP	LE-3D	MARS-88/OC	E
PKST	Tés	47.259 0	18.034 3	473	3C SP	LE-3D	MARS-88/MC + SeisComP PC	C
PSZ	Piszkéstető	47.918 4	19.894 4	940	3C BB	STS-2	PS-6-24 + SeisComP PC	C
RHK3	Tenkes	45.888 5	18.252 1	420	3C SP	LE-3D	MARS-88/MC + SeisComP PC	C
SOP	Sopron	47.683 3	16.558 3	260	3C BB	STS-2	PS-6-24 + SeisComP PC	C
TRPA	Tarpa	48.130 4	22.539 1	113	3C BB	STS-2	PS-6-24 + SeisComP PC	C

- (1) 3C – three component seismometer
 SP – short period seismometer; BB – broad band seismometer
- (2) STS-2 – Streckeisen broad band seismometer
 LE-3D – Lennartz three directional 1Hz geophone
- (3) MARS-88/OC – Lennartz electronic digital data logger with Magneto-optical disk drive
 MARS-88/MC – Lennartz electronic digital data logger – modem controlled
 PS-6-24 –Earth Data digitizer
 Q-380 – Quanterra data acquisition system
 SeisComP – GEOFON Seismological Communication Processor
- (4) C – continuous recording; E – event recording

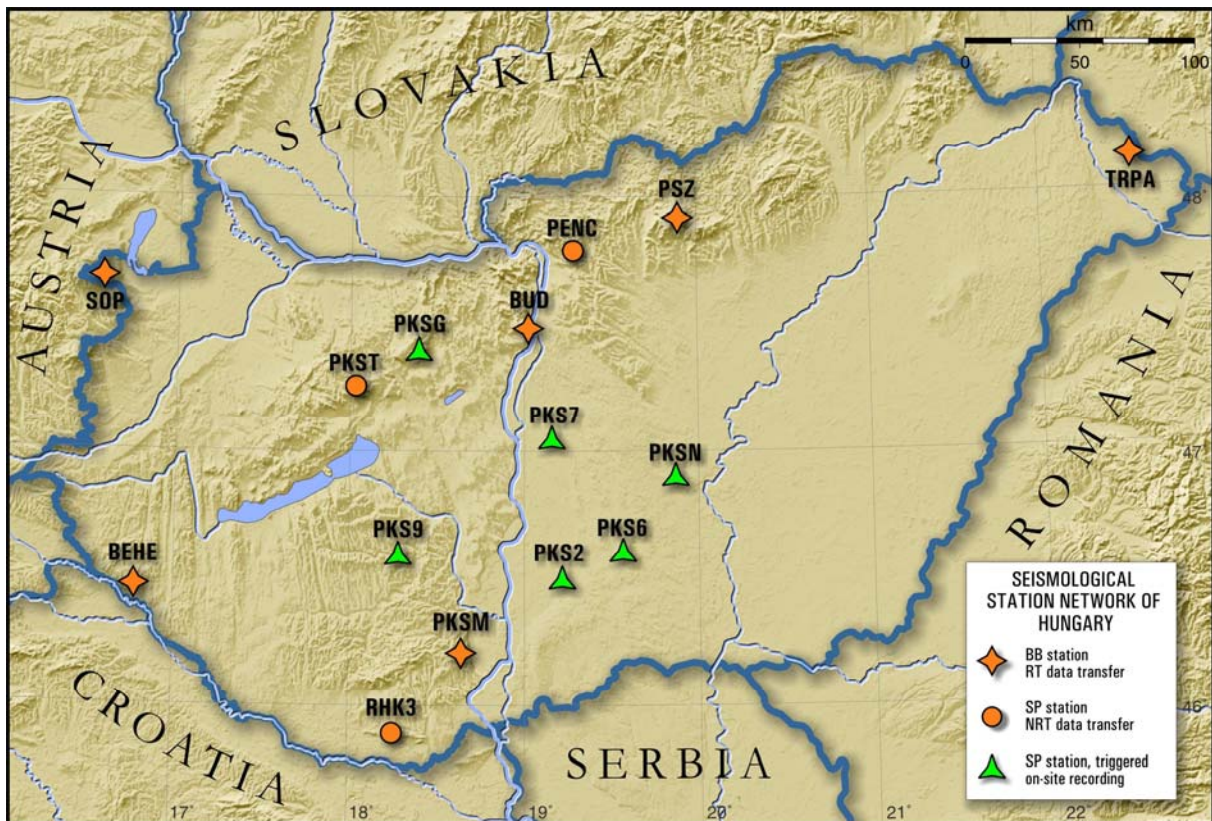


Fig. 1 Seismological stations in Hungary

Data access

All six broadband stations and two of the short period stations (PENC and PKST) have on-line connection between the field site and the Budapest data center (BUD). Data are transferred via Internet with TCP/IP protocol. All stations use SeedLink protocol for data transfer. The BB stations have (near) real-time connection with an average data latency of several seconds. Data latency of short period stations are larger, it can be up to 30 minutes.

Station RHK3 has an even greater latency (up to 60 minutes) as dial-up telephone connection is used.

There are local data recording at the remaining 6 SP stations. Data are collected on a monthly

basis.

Data storage and availability

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

Real-time data of our broadband stations are shared by ORFEUS, GEOFON and also by some partner institutions of neighboring countries.

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 DVDs.

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