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AlpArray in Hungary: The Hungarian temporary broadband seismic network and its characteristics

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AlpArray is a European initiative to study the structure and geodynamics of the crust and upper mantle in the broader Alpine region. The MTA CSFK GGI, as a Core Member of the AlpArray, contributes to the AlpArray Seismic Network with its entire permanent network as well as with 11 temporary broadband seismic stations deployed in West Hungary. The average station distance together with the permanent stations is around 50 km in the area of interest. The temporary network, founded by the Hungarian Academy of Sciences, has been installed between December 2015 and April 2016. All the temporary stations are equipped with Guralp CMG-3T 120 s seismometers and Guralp DM24S3EAM data acquisition units. The stations provide real-time data access through 3G mobile network connection. The data are collected by the Kövesligethy Radó Seismological Observatory and are archived at the ORFEUS EIDA node. The planned operating period of the temporary network is 4 years. During the site selection process we identified those sites where the average noise power spectral density is below the high noise model through the entire frequency band for the instruments. The state-of-health of the network is continuously monitored in order to provide reliable data availability and quality for the AlpArray project.
In this presentation we describe the site selection process, the location of the stations, the housing and placement of the sensors, the method of data collection and archiving, and the procedure for administering the stations. Additionally, we provide an analysis of the network's noise characteristics.