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## INDUCED SEISMICITY NEARBY THERMALLY LOADED ROCK

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There are placed instruments for seismological and seismo-acoustics monitoring within an experiment simulating a heat-loading of rock in 120 m deep underground laboratory “Josef” in the Central Bohemia. The project is basically focused on quantification of effective heat transport among granite block, heating facility and high conductive geo-polymer and vice versa, and its mathematical modelling. This combination is considered as possible natural energetic accumulator for high energetic peak issues. Seismological monitoring does not fulfil only its primary purpose but can also observe the influences of two near dams – Slapy and Orlik – located on the same side of Vltava River Fault and also is able to record effects regarding the other experiments at the underground laboratory.

All events are recorded by two types of seismological apparatus – RUP and BRS – that are being developed at our institute (Broz, 2011). The first one is operated as classical three components seismic station with short-periodic sensor and the second one records signal from three seismo-acoustic sensors located in small boreholes as close to the heating helix as possible.

All managing works at the laboratory have to be done extremely gently because of experiments’ sensitivity. That is why there were used small blasting capsules as detonation source for underground space enlargement. In this article we would present some interesting fact about this kind of source, its spectral characteristics and its specific effect on surrounding environment.

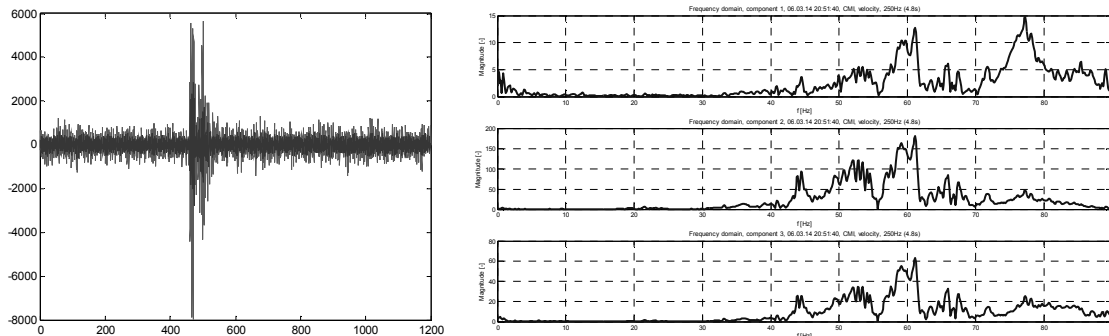


Figure 1. Seismogram (velocity) of very weak induced event

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## REFERENCES

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- Broz M. and Strunc J. (2011) “A New Generation of Multichannel Seismic Apparatus and its Practical Application in Standalone and Array Monitoring”, Acta Geodyn. Geomater., Vol. 8, No. 3 (163), 345–352, ISSN 1214–9705

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