



## **PASSEQ 2006-2008 (Passive Seismic Experiment in TESZ) – new international project to study upper mantle structure around the central part of TESZ.**

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The Tornquist-Teisseyre Zone (TTZ), the central as part of the Transeuropean Suture Zone, is one of the most prominent suture zones in Europe separating the young Palaeozoic platform from the much older Precambrian East European Craton. The knowledge of deep structure of the TESZ is very important for understanding the tectonic processes in Europe. The TTZ is identified as a major change of both the crustal and lithospheric structure in seismic, magnetic and gravity fields. The PASSEQ seismic experiment targets many questions that remain about the geodynamical evolution of central Europe. The main goal of PASSEQ is the detailed investigation of this sharp contact zone between lithospheres of very different thickness and age down to the mantle transition zone, including mapping of upper mantle seismic velocity variations and discontinuities (Moho, lithosphere-asthenosphere boundary, mantle transition zone) using all available techniques. The TTZ is an ideal place to study the physical and compositional properties of adjacent contrasting lithospheres and the interaction of mantle flow and lithosphere topography in detail. Therefore, more than 150 temporary broadband and short-period seismic stations from various institutions in Europe and the USA are installed along a 1100 km long and approximately 300 km wide array spanning from Bavaria (Germany) in the southwest to Lithuania in the northeast. Data analysis will add significantly to other studies of the lithospheric structure of TESZ area. We present the experiment and first data examples.

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