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Coda quality factors of P and S Waves in West Bohemia/Vogtland

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We used coda normalization method to analyze the attenuation properties (quality factors) of the fault zone of the West Bohemian/Vogtland earthquakes. Three mainshock-aftershock series of 2014 with more than 3000 located events and maximum magnitude of 4.4 were analyzed.
The method itself was slightly improved – we tried to use only the events with similar seismograms (events with high cross-correlation coefficient) in order to derive the real relative amplitudes and to avoid the biasing influence of the differences in the focal mechanisms and radiation patterns. We also focused on the temporal stability of the quality factors within the focal area and studied eventual temporal variations, since the area itself exhibits strong temporal changes of rheological properties during the seismic activity (Vp/Vs, Poisson ratio) as a result of dynamic fluid activity in the focal depths.
The first tests and trials show promising results and suggest the successful applicability of the method in its modified version. With proper dataset and careful data processing it should be able to analyze the quality factors with improved spatial resolution and allow to analyze the temporal changes and Q anisotropy as well.