



Seismic characterization of the Albstadt Shear Zone, Germany

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The region around the town of Albstadt, SW Germany, is one of the most seismically active regions in Central Europe. In the last century alone three earthquakes with a magnitude greater than five happened and caused major damage. The ruptures occur along the Albstadt Shear Zone (ASZ), an approx. 20-30 km long, N-S striking fault with left-lateral strike slip. As there is no evidence for surface rupture the nature of the Albstadt Shear Zone can only be studied by its seismicity.

To characterize the ASZ we currently complement the earthquake catalog of the earthquake service of the state of Baden-Württemberg with additional seismic phase onsets. For the latter we use the station network of AlpArray as well as five additional recently installed seismic stations from the Karlsruhe BroadBand Array. We use all seismic stations in the region to search for small magnitude earthquakes. In addition, we invert for a new seismic minimum 1D-velocity model of the study region. All this information is used to determine the potential rupture planes and a possible segmentation of the ASZ. We thank the Landeserdbebendienst in Freiburg for using their data (Az. 4784//18_3303).