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Receiver function analysis in the Eastern Alps – Pannonian Basin transition zone

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We perform receiver function analysis to determine a detailed map of the crust-mantle boundary and the crustal velocity structure of the transition zone between the Eastern Alps and the Carpathian Basin. We use data from the AlpArray temporary seismic network, the permanent stations of the Hungarian National Seismological network, stations of a private network operated by Georisk Ltd. as well as permanent seismological stations in the neighbouring countries for the time period between 1996 and 2017. Altogether some 200 seismological stations are used in the analysis. Owing to the dense station coverage we can achieve so far unprecedented resolution, thus extending our previous work on the region. We apply three different quality assurance procedures for the waveforms and the obtained receiver functions. Receiver functions are calculated by the iterative time domain deconvolution approach. We present the quality controlled P receiver functions (radial and transversal component) and preliminary results for the Moho map obtained by H-K analysis. We also compare our results to previous active and passive seismological results in terms of Moho depth and crustal velocities.