



Relocation of the seismicity in the Pannonian Basin with a 3D velocity model between 1996 and 2016

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Accurate earthquake locations are a prerequisite for the better understanding of neotectonic activity in the Pannonian Basin driven by the movement of the Adriatic microplate. We relocated the seismicity recorded in the digital instrumental period between 1996 and 2016 using the state-of-the-art iLoc location algorithm. The relative abundance of Ground Truth events (mostly GT0-2 quarry blasts and mine explosions) allowed us to evaluate the performance of various 1D local velocity models as well as the global 3D upper-mantle and crustal regional seismic travel time (RSTT) velocity models. We demonstrate that the 3D velocity model captures the major 3D velocity heterogeneities and provides an improved view of the seismicity in the region.