



Uncertainty analysis in seismic tomography

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Velocity field from seismic travel time tomography depends on several factors like regularization, inversion path, model parameterization etc. The result also strongly depends on an initial velocity model and precision of travel times picking. In this research we test dependence on starting model in layered tomography and compare it with effect of picking precision. Moreover, in our analysis for manual travel times picking the uncertainty distribution is asymmetric. This effect is shifting the results toward faster velocities. For calculation we are using JIVE3D travel time tomographic code. We used data from geo-engineering and industrial scale investigations, which were collected by our team from IG PAS.