Inspection of the Programs for Estimating 3D-Velocity Structure. Part 1. Modeling and Travel Time

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In order to find the best method to estimate 3-D velocity anomalies and determine hypocenters of micro earthquakes in geothermal field, the simultaneous inversion programs of 3-D velocity and hypocenter (i.e., SIMUL3 and Zhao's program) and the hypocenter inversion program in horizontally homogeneous stratigraphy (i.e., MEPAS) were examined.

The uniformly tilted layers were adopted as a heterogeneous velocity structure, and the shooting method was used to calculate travel times.