



## **3D Velocity Structure of the North Evoikos Basin (Central Greece)**

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An on/offshore seismic network consisting of 31 three-component stand-alone digital stations was deployed in the north Evoikos gulf and surrounding region, central Greece, operating from 30 June to 24 October 2003. More than 2000 microearthquakes, ranging from 0.7 to 4.5  $M_L$  were located, using six stations as minimum to define foci parameters. Hypocenters were defined by simultaneous inverting both P and S wave arrivals, using the algorithm HYPOINVERSE, and a local velocity model obtained from active seismic experiments. From the initial set of located events, more than 10000 P and S wave arrivals were inverted, based on the 3D linearized tomography algorithm SIMULPS, in order to determine the 3D velocity structure of the region. The relocation of events gave a clear picture of the active tectonics in the north Evoikos basin and surrounding area. The results are in agreement with the microseismicity distribution, reflecting the progressive change of tectonic stress from the north Aegean trough to the Corinthiakos rift. Seismic deformation intensifies from north to south, while stress is progressively changing from NW-SE to WNW-ESE.

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