



1-D velocity models of the upper crust of the central part of the Corinth gulf

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The high seismic activity in the Corinth Gulf was in its central part monitored in detail by the local seismic network of the Corinth Rift Laboratory (CRL) project. Several thousands of events were recorded by this network during the year 2001. We selected from them a subset of 156 events based on following rather strong conditions: Event has a magnitude 2 or greater, was recorded at least on 3 stations of the northern and on 3 stations of the southern part of the network and its epicenter is situated inside the network. Using the mentioned subset, we looked for two optimum 1-D models. The first one composed from homogeneous layers, the second one from layers with constant velocity gradients, both based on the minimum of the misfit function – the sum of square of travel time residuals of P and S waves. For the inversion of the model the Neighbourhood Algorithm was used, the events were located by the grid search. The obtained simple 1-D models may serve as the minimum 1-D velocity models or can be used as improved models for the routine location for the area under consideration.