



Applying full waveform inversion algorithm to compute focal mechanisms and magnitudes of shallow earthquakes in several seismic regions of Romania

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The ISOLA iterative deconvolution technique proposed by Sokos and Zahradník (2008) to retrieve seismic moment tensor and moment magnitude of local and regional events was applied to shallow earthquakes selected as representative in various seismic regions of Romania. Moderate size earthquakes recorded by at least four broad-band stations within 100 km epicentral distance were considered in the Southern and Eastern Carpathians, and also in the Vrancea foredeep area. In order to test and validate the proposed algorithm, the inversion results were compared with those published in previous studies and were analyzed in terms of the available seismotectonic information. The successful application of the ISOLA algorithm in case of Romania crustal earthquakes makes it a powerful and reliable tool to retrieve and constrain the scalar seismic moment for small and moderate events.