



## **Routine analysis of focal mechanism – moment tensor solutions of moderate, small magnitude events in Greece: An example of the Gulf of Corinth region**

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In the present study we demonstrate a routine analysis of focal mechanisms and seismic moment tensor solutions for a group of moderate/small magnitude seismic events recorded during a five year period 2000-2004 in the Gulf of Corinth region, central Greece. The waveform data used were recorded by the Hellenic Broadband Seismic Network (HL) of the Institute of Geodynamics, National Observatory of Athens.

Seismic moment tensor inversion of the first P-wave phase amplitudes in the time domain was performed for all selected events by a software package which is routinely used in Polish copper mines and was adapted to perform with waveform data recorded in a regional network. An application of this type to regional analysis required also an extension which was achieved by using the Spectral Ray Tracer for calculation of the take-off and incidence ray path angles for a standard 1D velocity model of the Gulf of Corinth region.

As an example, a number of 43 middle-sized earthquakes with local magnitude ranging from 3.0 to 4.4 are investigated. The maximum focal depth of the analyzed events was 121km, but about 30% were very shallow, i.e. top 5km. The goal of the analysis was to demonstrate the gain of a more detail insight into the pattern and mechanism of small-moderate magnitude events in the highly seismic active area of the Gulf of Corinth.