



Source Parameters Determination for Earthquakes in Greece using Regional Data

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Many moderate size earthquakes occur in the broader area of Greece which are recorded by the Seismological Network belonging to the Department of Geophysics and Geothermics of the University of Athens. These records are combined with data recorded from other Institutes in order to calculate source parameters. An inversion approach is applied, using only good quality broadband data, in order to quickly calculate the focal mechanism, the moment magnitude and the source depth. By the time the waveforms are available and the epicenter is known, the inversion procedure can be performed in near real time. Most of the records are modeled using data coming from a significant number of three component stations. This fact is very significant as it allows succeeding the best possible azimuthal coverage which is a first priority in waveform inversion studies. More than 280 earthquakes have been processed during the time period from January 2003 to April 2008. Before 2003 there are no solutions since there are no available regional data. For the largest earthquakes the source parameters calculated with regionally recorded waveforms are compared with those obtained by teleseismic results and are in good agreement. The catalogue and the inversion figures are available through the site of the Department of Geophysics and Geothermics.