



Preliminary results of the receiver functions from the EGELADOS network

F. Sodoudi, R. Kind, and the EGELADOS working Team

Helmholtz Centre Potsdam, GFZ German Research Centre for Geosciences, Global Seismology, Potsdam, Germany
(foroug@gfz-potsdam.de, 0049 331 2881277)

Using converted Ps and Sp seismic waveforms from the EGELADOS network, a dense, temporary network of broad-band ocean-bottom and land seismographs to be deployed on the Peloponnes peninsula, the South-Aegean Sea and adjacent Turkey, we will perform a detailed investigation of the structure of the subducted African lithosphere as well as the overlying Aegean mantle, including crust and uppermost lithosphere. We show our preliminary results obtained from the western part of the network. The EGELADOS network will allow to even map the subducted African slab down to 100 km beneath western Turkey. High-resolution P receiver function images reveal a reversed velocity contrast at the Moho boundary of the Aegean plate at stations located in the forearc, whereas they indicate a normal velocity contrast at the Moho boundary for the other stations. A relatively thicker crust (26-30 km) is found beneath the stations located in western and southwestern Turkey. Island stations show a thinner crust ranges between 21-24 km. The thinnest crust of 20 km is estimated beneath the central Aegean. The Moho of the subducting African plate is imaged to be at depths ranging from 48 km beneath the southern Aegean and southwestern Turkey to about 100 km beneath the stations located in the western part of the central Aegean.