Geophysical Research Abstracts
Vol. 13, EGU2011-2109-1, 2011
EGU General Assembly 2011

Mantle structure and dynamic topography in the Mediterranean Basin

Lapo Boschi (1), Claudio Faccenna (2), and Thorsten Becker (3)

(1) ETH Zurich, Switzerland (lapo@erdw.ethz.ch), (2) Università di Roma TRE, Italy (faccenna@uniroma3.it), (3) University of Southern California, L.A., U.S.A. (thorstinski@gmail.com)

We study the contribution of mantle flow to surface deformation within the Mediterranean Basin. Flow is modeled numerically based on lateral changes in mantle temperature estimated from tomography models. We find that modeling results are significantly affected by the properties of the selected tomography models. Shear-velocity models based on surface-wave observations achieve the highest resolution of upper-mantle structure, and, as a result, are most successful in predicting microplate motion and dynamic topography.