



Deep Europe: Highlights of the lithospheric structure from multidisciplinary geophysical data

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We present a summary of geophysical models of the subcrustal lithosphere for the entire Europe. It includes a set of maps showing compositional and structural heterogeneity of the European lithosphere as reflected in (a) regional and large-scale P- and S-wave seismic tomography models, (b) V_p to V_s ratio at 100 km, 150 km and 200 km depths, (c) mantle residual gravity anomalies, (d) density variations in the lithospheric mantle as constrained by lithospheric buoyancy and surface topography, as well as (e) variations in lithospheric temperatures in the upper 250 km of the European lithosphere and (f) a map of lithospheric thickness. Three profiles down to a 250 km depth and crossing the European continent from N to S and from E to W summarise all available geophysical data on the lithospheric structure of Europe and illustrate major tectonic processes over the past 3.5 Ga as reflected in its lithospheric structure. (Artemieva, Thybo, Kaban, Geol. Soc. London Sp. Publ., 2006, v. 32, 11-41).