



First steps towards a new crustal model of South and Central Asia.

A. Baranov (1,2), M.K. Kaban (1,2)

(1) GeoForschungsZentrum, Potsdam (baranov@gfz-potsdam.de, kaban@gfz-potsdam.de), (2) Inst. Phys. Earth, Moscow

The continental crust, which is the most heterogeneous layer within the Earth, produces strong effects in all fields, which mask the effects of deep horizons. Therefore it is important in to reduce the crustal effect beforehand, e.g. in gravity and geothermal modelling and seismic tomography, to exclude a trade off between crustal and mantle structures. Previous crustal models of Central and Southern Asia are very coarse and do not meet present-day requirements. A lot of new seismic data and regional compilations became available during last years. These data provide a basis for a new model, which could be used in various applications. We use data of deep seismic reflection, refraction and receiver functions studies as well as existing regional models (e.g. for China, Li et al., 2006) from published papers and integrate them in a new model at a uniform grid with resolution 1x1 degree. The existing data were verified and cross-checked. As the first result, we demonstrate a new Moho map for the region. The new map demonstrates significant differences with previous models (e.g. CRUST2.0). It turns out that many regions are more heterogeneous than it is demonstrated by the previous compilations. India represents a clear example, being characterized by strong variations of the Moho depth (30-52 km).