



Western Central Asia - Uzbekistan: new insights into the basin architecture and lithosphere structures from geophysical data

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This report was prepared as one part of joint Uzbekistan's Working Group results by DARIUS programme, provided in Uzbekistan during the 2009-2013 years. The special attention is devoted to potential geophysical fields and results of interpretation of seismic profiles, which was the base for conclusions about deep lithosphere structure of the DARIUS domains in Uzbekistan. For four last years 12 field expeditions in Uzbekistan were organized by the DARIUS projects - were studied new geological sections and now the new ideas developing about geodynamical evolution in Western Central Asia. The state of art reveals a very heterogeneous set of data. These data commonly deal either with particular basins or mountain belts, or specific basin investigations. Our aim was to combine all available seismic, magnetic and geothermal data with the revealed of the tectonically objects, geological structures, and to show their interrelated temporal and spatial development for general understanding of the inner structure of lithosphere and upper layers of Earth's crust. In link of this, the detailed studying structure of Paleozoic crystal basement on representative basic sites and the crossing faults, accompanied by drawing up of level-by-level and summary sections, large-scale geological and geophysical mapping was conducted. Our study elucidated the lithosphere-scale processes driving forces for kinematic of blocks between southern Tien Shan and Pamir. All our data were integrated in the DARIUS database GEOLIS.