



Basin architecture and lithosphere structure of Western Central Asia –Uzbekistan: from geophysical studies

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The Western Central Asia domain is still poorly investigated, taking into account the complexity of the geological evolution. The tectonic evolution of this domain is also complex, includes several phases of basin opening and inversion, and of collisions of blocks with the Eurasian margin since Late Paleozoic. In the Western Central Asia during the last twenty years a significant number of new works and new ideas developed on the tectonic and stratigraphic evolution. The state of art reveals a very heterogeneous set of data. These data commonly deal either with particular basins or mountain belts, or specific domains of investigation. Our aim is to combine all available seismic, gravimagnetic and geothermal data with the revealed peculiarities of the tectonically objects, geological structures, and to show their interrelated temporal and spatial development for general understanding of the regional tectonic and geodynamic evolution in Western Central Asia. All the final products will be created using ArcGIS&RS methodologies: the spatial database will be combine: 1) DEM on the base of the Shuttle Radar Topographic Mission (SRTM) dataset with spatial resolutions of 30" and 3' respectively; 2) 3-D models of crustal basement associated with basins and intrabasinal areas and Mohorovičić surface, using the reinterpretations of seismic reflection and refraction sections of DSS and MRW profiles; 3) 3-D potential (gravimagnetic) fields modeling; 4) tabular database of tectonic, stratigraphical, boreholes and geochronological data; 5) various types of original geological information concerning the Paleozoic to Present geological evolution of the region.