



Geodynamical investigations in Serbia

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Geological structure of the territory of Serbia is result of influence of several factors, first of all: 1. *sedimentation and geodynamics within this part of Mediterranean geosyncline*; 2. *underthrusting of African tectonic plate under Eurasian one*; 3. *intensive neotectonic movements*; 4. *forming of very expressed exogenous relief*. That is why the study area is characterized not only by different lithostratigraphic content and complex tectonic structure, but also by unique geomorphologic, engineering-geological, hydrogeological and seismotectonic conditions.

At the northern Mediterranean, the lateral strain from the contact zone between African and Eurasian plate are transferred through the Adriatic micro-plate to the Dinarides – in the NE direction. Strain concentration within lithosphere of Dinarides is performed by complex process of the segments moving through the Adriatic micro-plate (bellow the sediment complex, covering silicate and basalt rocks and the rest of lithosphere, in the direction of subducting Apennine plate – to the Tyrrhenian Sea).

Strong lateral stresses are also produced by thick sediment complex of Adriatic plate (up to the level of Triassic clastite), which is resistant to the horizontal deformation in the Adriatic region, simultaneously generating strong tectonic processes in the outer and inner Dinarides. As a result, horst and graben structures are formed, as well as mountain massifs, tectonic depressions, trenches, nappes and faults (normal, reverse and transform). System of normal and reverse fault structures are predominantly oriented parallelly to Dinarides. These faults are mostly with regional dimensions, with dipping angle toward land 20-50 degrees. Transcurrent faults are mostly generated perpendicularly to the previous ones, with small dimensions and steep slope of the fault plane.

In the paper, complex geodynamic investigations in Serbia are presented. Inventory of

faults and faults systems, which is underway, is discussed.