

Regional Strike-Slip Structures in the Internal Dinarides: Insights from the Zvornik Fault

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The Dinarides represent a part of a double-vergent Dinaric – Carpatho – Balkan orogenic chain that formed as a response to the closure of a branch of the Tethys ocean in the latest Jurassic and subsequent convergence between the Adriatic microplate and the European continent, which is still active in the recent times. Different in convergence rates, this driving force of tectonics in the Balkans produced different kinematics of the fault structures in the central part of the Balkan Peninsula. General opinion is that from the Cretaceous times up to the Oligocene the fault kinematics in the area acted in a compressional regime, which, after the extensional episode in the Miocene, continued as a strike-slip regime in the neotectonic time. However, some regional structures seem to show evidence of oblique-slip kinematics much earlier, already in the Late Cretaceous times. Some of these pieces of evidence are related to the existence of intracontinental basalts related to the fault structures, asymmetric pull-apart sedimentary basins, tectonic structures, etc.

In this contribution, we will present the most recent results of the study of one of the most prominent tectonic structures of the Internal Dinarides, the well-known Zvornik fault (suture), and its southward continuation in the area of the Jelica Mts. in western Serbia. We will show evidence of the Late Cretaceous activity of this regional fault and discuss its importance in the context of the formation of Late Cretaceous basaltic magmas and specific sedimentary basins in this area.

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