

## **Characteristics of the Major Splays of the Central North Anatolian Fault**

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The North Anatolian Fault bifurcates into several branches upon its major course bending ~20 degrees from Niksar to Kargi and changing orientation from N110°E to E-W. These splays strikes parallel to the main strand and extends trough inner Anatolia creating a wide wedge shaped deformation zone. Strike-slip deformation inside this zone is remarkable with morphology and seismicity that reduces in terms of activity from east to west.

Geodetical measurements indicate maximum 8 mm/year slip rate inside the deformation zone mostly concentrated on the southern border fault which has ruptured partly at 1939 Erzincan earthquake (Mw: 7.9) named Ezinepazar-Sungurlu Fault. The Upper Miocene-Holocene rhomboidal shaped Suluova basin is the major morphological element of the zone which has a complex evolution with basin fill more than 400 meters formed along the central splay Taşova-Laçın fault zone and cut recently by the Suluova fault.

In this study the geometry and kinematics of these splay faults will be introduced and the evolution of the deformation zone inside the North Anatolian Fault system will be discussed.