



Neotectonic Structures Between Hatay (Antakya) - Samandag Corridor, Southern Turkey

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In this study, Hatay (Antakya)-Samandağ corridor, SE Anatolia, have been studied. This area is under the effects of Dead Sea Fault Zone, Eastern Anatolian Fault Zone and Cyprus Arc. Ancient settlements within this deformation zone (Antiokheia and Seleukeia Piereia) was effected by destructive earthquakes during the historical period. There is no information about which active faults have caused these earthquakes and whether these earthquakes have produced any surface ruptures. During the instrumental period, no earthquakes that may cause surface rupture occur in this region.

The Asi (Orontes) River passes through the center of the Hatay-Samandağ corridor. Tectonic movements have an important role in the emplacement of the Asi River into this region.

Within the scope of this study, stratigraphy of the Antakya–Samandağ corridor and its neighbourhood have been defined. Visible base of the study area is made up of Cretaceous Kızıldağ ophiolites that emplaced onto the Arabian Platform during the Maastrichtian. Overlying are sedimentary units including Eocene neritic carbonates (Midyat group), Miocene clastics (Gildirli formation), and neritic carbonates (Karaisalı limestones) and evaporites (Sebenoba formation). Pliocene is represented by shallow marine to terrestrial clastics (Samandağ formation) that only deposited within the Antakya-Samandağ corridor.

Stratigraphic and structural data imply that the Antakya-Samandağ corridor started to open during the Pliocene as a half-graben along the Hatay-Samandağ fault zone. This fault zone is still active. In this study we examined these active faults, in addition to geological mapping of some part of the region, by using Ground Penetrating Radar (GPR). Radargram sections that were obtained after data processing techniques were used to determine exact locations of the faults.