



The Rotation of the Fault Bounded Block “Almacık Mountain”, in the Northwest Turkey

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The North Anatolian Fault (NAF) is one of the major tectonic entities of Turkey and a dextral transform zone up to 100 km in width. There are several continental blocks delimited by strike-slip faults along the North Anatolian Shear Zone. Almacık Mountain is one of the largest of these blocks and surrounded by two main branches of the NAF. In this study Eocene volcanic rocks of the Almacık Mountain were sampled from 26 palaeomagnetic sites. Following alternating field and thermal demagnetization, and component analysis, a dual polarity axis is resolved which shows that the Almacık Block has rotated $37^{\circ} \pm 7.3^{\circ}$ clockwise relative to the present field direction and $29.1^{\circ} \pm 6.7^{\circ}$ clockwise relative to the predicted field direction at this location in Eocene times. This block rotation is interpreted in terms of dextral motion of a tectonic block bounded by two strands of the NAF. The mean inclination ($58^{\circ} \pm 7.3^{\circ}$) data also indicate that the Eocene volcanics of the Almacık Mountain were emplaced at a palaeolatitude statistically identical to the present day and we conclude that northward movement of this sector of the Anatolides has been below the limits of palaeomagnetic detection since Eocene. Similar palaeomagnetic results had been found in the Eocene volcanics in the Armutlu Peninsula.