

## Evolution of the Eurasia/Anatolia/Arabia triple junction and of the conjugate North Anatolian Fault (NAF) and East Anatolian Fault (EAF)

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In eastern Mediterranean, Anatolia is being extruded westward toward the Hellenic subduction zone as a result of the collision between the Arabian and Eurasian plates. GPS data have shown that the Anatolia block is nearly rigid and that most of the deformation is accommodated between the right-lateral NAF and the conjugate EAF. Using geological and morphological markers we show that this observation has remained valid for the NAF since the beginning of the extrusion process. Using the same technique, we have characterized the NAF total displacement ( $80 \pm 10$  km) and the NAF slip rate over the Holocene ( $18.5 \pm 3.5$  mm/yr), which agrees with recent GPS data ( $22 \pm 3$  mm/yr; Straub et al. 1998, McClusky et al. 2000). Since the movement on the NAF seems to have initiated 13 Ma ago, our total offset estimate yields a long-term slip rate of 6.5 mm/yr. The apparent discrepancy between geological and Holocene slip rates can be interpreted as a sudden slip increase triggered by the eastward shift of the NAF/EAF triple junction. Careful examination of the offset morphology at the triple junction reveals that the total NAF offset in its easternmost part is about 50 km and is younger than 2.6 Ma. These results are fully compatible with the present 15-20 km offset on the EAF and with present plate kinematics.