



Questioning strain accumulation in the southwest part of North Anatolian Fault Zone

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North Anatolian Fault Zone (NAFZ), as one of the world's most active fault zones, is a result of continental collision. As a boundary fault, migrating of NAFZ to the west has caused enormous earthquakes through this boundary for ages. The last consecutive earthquakes, August 17, 1999 Izmit earthquake ($M_w = 7.4$) and November 12, 1999 Duzce earthquake ($M_w = 7.2$) were the burst of strain accumulation in the western part of NAFZ. We have been continually carried out GPS campaign observations in three networks in the southwest of NAFZ since 1994 and gathered a significant time series data. One of these networks is located on the Iznik-Mekece fault segment. Analyzing 10 years GPS data between 2004–2014 showed that the Iznik-Mekece fault segment moves westward at about 22 ± 1 mm/yr with respect to the Eurasia fixed reference frame. We discuss the results showing that there is no strain accumulation in this area.