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ABSTRACT:

It was carried many conventional geodetic observations in the western part of NAF until mid-1990s. Then scientists discerned the importance of episodic GPS observations on the assessment of seismic hazard. We accumulated very significant time-series GNSS data around this region over than 20 years.
GNSS technique provides very valuable supports to have information about earthquakes in each step of seismic cycle. Co-seismic movements depend on the amount of slip and the depth of the earthquake. GPS observations enable us to get strain accumulating across locked faults and to help us better evaluate the seismic potential of the region of interest.
Southern branch of western part of the North Anatolian Fault is accepted as a seismic gap and some areas of this region has not well studied. One of them, Iznik-Gemlik segment is seismically active than the east of area. In this study, we planned to monitor the area by GNSS technique with fault-normal/fault-parallel directions through the Iznik-Gemlik segment and to determine the velocities and strain accumulation arising from crustal deformation. With 4 permanent GNSS station, in total 11 points will be observed and whole area will give us lots of data to have information about tectonics of the region.