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Recent Seismotectonics Implications Of The East Anatolian Fault Zone Close to Van, Eastern Turkey

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One of most prominent and active faults in eastern Turkey is the NE-SW oriented left-lateral strike-slip East Anatolian Fault Zone (EAFZ) with a length of approximately 500 km. In this study, we have examined the recent seismicity of EAFZ that was obtained from the records of 34 3D broad-band earthquake stations established around the fault zone within TURDEP project since 2006. Further the seismicity and fault mechanism solutions of EAFZ, eastern Turkey have been examined. The new fault mechanism solutions in addition to previously published 220 earthquakes that occurred on the EAFZ between 1951 and 2010 were studied to understand the principal stress field and the seismo-tectonic characteristics along the fault zone. The new mechanism solutions of the earthquakes, with a magnitude of M_L=2.0 or more were determined by a local moment tensor solution and P-wave first motion data. The study area is close to Van where The 23 October 2011 Van Earthquake had occurred. It is suggested that the recent tectonic deformation of EAFZ south of Turkoglu is taken up by the left-lateral strike-slip active faults in between Amik and Adana Basins where young trans-tensional stress regime is also active.