



Paleoseimology study on Pishva fault (South Tehran), Iran

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Pishva fault with about 35km length is located between Alborz and Central Iran structural zones in southeast of Varamin. General trend of the fault is NW-SE (N38W, 33NE) which has reverse mechanism accompanied by sinistral component. Achieved Morphotectonic studies along the Pishva fault reveal its activity. In addition, presence of the fault, around abundant historical and archaeological earthquake zones shows the necessity of research in this case. 3-5 seismic events with recurrence time of 3265 years are identified by studying on two Paleoseismic trenches T1 and T2. The youngest and oldest events are 0.87 Ka and 29 Ka respectively. According to Wells and Coppersmith equations (1994), the biggest and smallest computed earthquake magnitudes are respectively 7.08 and 5.9. Slip rate amount is estimated 0.12-0.14 mm/yr while NS horizontal shortening is assessed 0.10-0.12 mm/yr. It would be possible to assign Shahr-e-Rey 1384 AD earthquake to this fault, since Event 1 is 870 years old.