



Evidence of recent faulting along the NE Adriatic coast

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Seismological and geodetic data provide evidence of shortening at the NE part of the Adriatic, at the boundary between Adria and Eurasia, but no evidence of recent faulting, nor of significant earthquakes exists in this area. Detailed underwater surveys have revealed a rather continuous submerged coastal notch at the constant depth of 55cm along the coast of the Rijeka Bay but up to the depth of 115cm at the Bakar Bay, Croatia. This elevation difference testifies to coastal subsidence of up to 60cm, obviously related to a tectonic dislocation, dated to the post-Roman period by archeological data.

“Blind” elastic dislocation modeling permitted to assign this coastal subsidence to reactivation activity of a NW-trending, NE-dipping thrust along the NE coast of the Bakar Bay. The “blindly” modeled fault correlates with a major thrust and testifies to its reactivation during the last few thousand years. This result provides evidence for a major unknown earthquake in the Rijeka area in the historic period and for significant convergence at the southern front of the Dinarides.