



Coseismic deformation and slip model of the 17 November 2015 M=6.5 earthquake, Lefkada Island, Greece

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On November 17, 2015 a strong, shallow earthquake, Mw 6.5, occurred on the island of Lefkada along a strike-slip fault with right-lateral sense of slip. The event triggered widespread environmental effects that were mainly reported at the south and western part of the island while moving towards the eastern part, the intensity and severity of these earthquake-induced deformations were decreased. Coseismic deformation was measured in the order of tens of centimeters of horizontal motion by continuous GPS stations of NOANET (the NOA GPS network) and by InSAR (Sentinel 1A image pairs). Released interferograms from various groups show a large decorrelation area that extends almost along all the western coast of Lefkada, observation which provides strong support of landsliding. We also found extensive landslides during field work and no surface ruptures. A coseismic slip model was produced from the ascending InSAR, which it's cleaner than the GPS only and both data sets have ~90% variance reduction. The fault dips to the east-southeast at an angle of 65-70 degrees.