



Post-seismic deformation of the Mw 6.4 Shonbeh earthquake (south western Iran) of April 9th, 2013

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The study of post-seismic deformation within a region is of high significance to have a better understanding of the kinematic behavior of a seismogenic fault. We perform the Small Baseline Subset (SBAS) method to process a large number of X-Band, COSMO-SkyMed images to measure the post-seismic deformation due to the Shonbeh earthquake (Iran) of 9th April 2013 (Mw 6.4). The meizoseismal zone of the earthquake and following aftershocks' epicenters cover an area in the frontal edge of the Zagros Simply Folded Zone, in the southwest of Iran, between Kaki and Kangan anticlines. Exploiting the available dataset of images from the beginning of 2013 to mid 2014, we observe the concentration of the deformation along at least two NW- striking, southwest-dipping fault segments arranged in right-step pattern and parallel to the trend of the folds. The preliminary InSAR results illustrate the migration of the post-seismic deformation and stress relaxation from the southeastern toward the northwestern fault segments.