

## Relation between 2016 Kumamoto Earthquake-induced landslide surface deformation and 3-D surface deformation detected by Pixel Offset method using InSAR image

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2016 Kumamoto Earthquake triggered many slope failures. In the previous study the authors have produced SAR (Synthetic Aperture Radar) interferometry image from ALOS-2/PALSAR-2 data observed on 15 and 29 Apr 2016, next, applied 2.5-D analysis on the image, then, detected EW component and Up-down component of surface deformation by the earthquake. And they investigated the relation between slope aspect of the failures and direction of surface deformation by the earthquake, and found the coincidence between them. However, 2.5-D analysis could not yield 3-D deformation by the earthquake. This study applied Pixel Offset method on the image and revealed the 3-D deformation, then, tried to investigate the relation between slope aspect and 3-D deformation. In this study result of the investigation will be shown in the latter half of the poster and in the previous half, the authors discuss the image dependent on the look number and window size set in calculating Pixel Offset method.

Keywords: earthquake, slope failure, landslide, SAR, Pixel Offset