Geophysical Research Abstracts
Vol. 20, EGU2018-18536-1, 2018
EGU General Assembly 2018

Interferometric study using DinSAR technique in the hillside of the municipality of Independencia (Cochabamba, Bolivia)

Wilder Sanchez, Abel Cruz Chuquichambi, and Julio Torres
San Simon, Geotechnics Laboratory, Cochabamba, Bolivia, Plurinational State Of

The interferometric technique of radar images has multiple applications in the study and monitoring of hillside and slopes in areas susceptible to mass movements.
The monitoring of surface movements is a very important task for taking preventive measures in the study of stability analysis of hillsides and slopes, in this sense a histological interferometric analysis of the hillside of Municipality of Independencia (Cochabamba, Bolivia) has been carried out. This hillside presents problems of mass movements both in the urban area and the surroundings of this municipality.
In the analysis, the DinSAR (Differential Interferometric Radar Apertura Sinthétic) technique was used with SENTINEL-1 radar images (November 2014 to the present), which have been processed and analysed through the SNAP Software from ESA (European Space Agency), this technique has allowed to find maps of superficial deformation with centimetric precision in areas that are susceptible to movements.
Radar images as well as software can be obtained free of charge, which makes the inteferometric technique becomes a very useful and economical tool in the study and prevention of mass movements.