Time Series Analysis for Sinabung Volcano in Indonesia using InSAR Technique

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Sinabung volcano erupted August 29, 2010 at Sumatera Island in Indonesia. After about 400-year dormancy, Sinabung volcano erupted on August 29, 2010. Small BAseline Subsets (SBAS) technique can measure time series surface deformation between 2007 and 2011 Advanced Land Observing Satellite (ALOS) PALSAR data precisely. Sinabung volcano has gradually inflation of volcano crater for around 3 years and drastically uplifts transition to top of the mountain during the 6 months before the eruption. The source of inflation is located about 0.3-1.3 km below sea level directly underneath the crater. This remote sensing method to detect dynamic volcano monitoring is one of efficient way for acquiring results of characteristics and surface deformation with time of active volcanoes.