

Detection of slow slip event at Bungo Strait by InSAR time series analysis

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Geospatial Information Authority (GSI) of Japan have conducted InSAR analysis of ALOS/PALSAR data and detected crustal deformation caused by earthquakes, volcanic activities and land subsidence. Slow slip, which causes gradual crustal deformation between tectonic plates without apparent tremors, is also detected by ALOS/PALSAR data at Bungo Strait from 2009 to 2011, and the detected deformation is consistent with deformation detected by GPS continuous observation (Noguchi et al., 2011). However, deformation caused by slow slip is sometimes not large enough to be detected by InSAR, because InSAR images sometimes contain large noises such as atmospheric and ionospheric delay. InSAR time series analysis enables us to reduce such noises and makes it easier to detect "true" crustal deformation such as slow slip. We report an attempt to detect much robust signals of slow slip at Bungo Strait from ALOS/PALSAR data by InSAR time series analysis. Also, detected deformation is evaluated by comparing with GEONET (GNSS Earth Observation Network System) coordinate time series.

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