

JERS-1 D-InSAR monitoring of active volcanoes in the central Kyushu, Japan

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The D-InSAR (Differential Interferometric Synthetic Aperture Radar) technique is very useful to monitor the ground movement associated with volcanic activities. We applied JERS-1 D-InSAR to monitor the active volcanoes in the central Kyushu, Japan, for the period between 1992 and 1998. Most important one is the Mt. Kuju, which erupted on October 1995 in the period concerned. D-InSAR image clearly depicted ground movement (Line of sight increased several to ten centimetres in 4 months) at the eruption site when the volcano was very active and much amount of gas emission was observed (Saito et al., 2003). L-band D-InSAR monitoring is suitable for the region, because it maintains relatively high coherence even on vegetated area. We tried to obtain time series of D-InSAR images to distinguish timing of the occurrence of the ground motion at the eruption site. However, poor accuracy of JERS-1 orbit data and severe atmospheric disturbance in D-InSAR images prevent us from obtaining enough number of good D-InSAR images. Some improved D-InSAR images after tentative atmospheric correction will be shown. The ALOS PALSAR (L-band) with better orbit accuracy and better S/N in SAR data will enable us to perform more detailed D-InSAR monitoring of volcanoes, Kyushu, Japan, in future.

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[References]

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