

## Preliminary Results of Satellite Radar Differential Interferometry for the Co-seismic Deformation of the 12 May 2008 Ms8.0 Wenchuan Earthquake

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### Abstract

Satellite differential SAR interferometry has been widely accepted as a powerful tool to map co-, post- and inter-seismic deformation since its successful application to the 1992 Landers Earthquake. As soon as the Ms8.0 Wenchuan Earthquake occurred on 12 May 2008 in the Sichuan Province of southwestern China, the Japan Aerospace Exploration Agency tasked its Advanced Land Observing Satellite (ALOS) to respond to the disaster by collecting images. This paper presents the preliminary DInSAR results of co-seismic deformation of the quake observed from two satellite paths of the onboard ALOS/PALSAR sensor with post-seismic images acquired on 19 and 24 May. Results from pixel offset analysis and difference of coherence will also be discussed. The radar mapping is still on-going because the ruptured seismic fault is more than 300km in length. Each swath of the PALSAR fine beam covers only about a 75km segment of the fault, and it takes 46 days for ALOS to revisit the same site.

### Keywords

Sichuan Earthquake, SAR, ALOS/PALSAR, co-seismic deformation

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