

## Application of InSAR data from ALOS/PALSAR to detect the crustal deformation caused by 2006/11/15 earthquake at Kuril Islands

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The Japan Aerospace Exploration Agency (JAXA) launched the Advanced Land Observing Satellite (ALOS), which is commonly called Daichi, on 24 January 2006. This satellite has the Phased Array type L-band Synthetic Aperture Radar (PALSAR) following the mission of the Japanese Earth Resources Satellite-1 (JERS-1). The PALSAR is a advanced SAR sensor with up to 10 m of spatial resolution and variable off-nadir angle, and it is expected to get much better coherent SAR images than the other previous C-band SAR satellites and JERS-1. Actually, several outstanding results have been reported for the period after the launch.

Remote sensing technique like ALOS/PALSAR has advantage to observe a remote location like the case of an earthquake on 15 November 2006 at Kuril Island (46.6N, 153.2E). This large earthquake (M8.3) was accompanied by tsunami and more than 10 meter of faulting at epicenter, and crustal deformation around the area caused by the faulting are presumed without difficulty. Simushir Island is situated about 200 km west of the epicenter, and has been observed by ALOS/PALSAR with same mode (same orbital track, and same look angle) before and after the earthquake. In this study, we try to process these SAR data and detect the crustal deformation on the island using an interferogram of them. Then we try to compare the deformation to those induced from a fault model (Yamanaka et al, 2006). In the preliminary results, both observed and calculated data are consistent but we can not rule out the possibility of remaining fringes by orbital error.