

Application of SAR Interferometry with ALOS/PALSAR in Syowa Station region, Antarctica

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<http://vldb.gsi.go.jp/sokuchi/sar/>

Geographical Survey Institute (GSI) has been joined to Japanese Antarctic Research Expedition (JARE) from the beginning for mapping, control point survey, observations of gravity, GPS, VLBI and so on at Syowa Station and surrounding areas. GSI is investigating the application of SAR Interferometry (InSAR) analysis to support and to expand the survey fields with ALOS/PALSAR, which has been moved into a regular operation period since the end of October, 2006.

Applications of InSAR method in Antarctica has been carried out by researchers with various purposes such as ice sheet motion monitoring (Goldstein et al., 1993), deriving topography and ice shelf information around Syowa Station region (Doi et al., 1999; Ozawa et al., 2000). These studies show broad availability of InSAR method. We expect to utilize quality ALOS/PALSAR data for geodetic survey in this region.

We will show preliminary InSAR analysis results of surrounding of Syowa Station and other outcrop areas in Antarctica and the comparison with past and current local geodetic survey results.