Large area observation of land subsidence by PSInSAR and determination of the cause of local land subsidence

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Abstract PSInSAR is a technology that measures the change of ground level by the reflection characteristic of the micro wave irradiated from a space satellite. In this research, the observation of the change of ground level of the Nobi Plain was done by using PSInSAR. Also, the observation accuracy of PSInSAR was confirmed by comparing the observation result of PSInSAR and the levelling results. Moreover, the determination of the cause of the change of ground level was tried. As a result, PSInSAR had the high observation density, and showed almost the same ground deformation tendency as the levelling. It has been understood to be able to presume the factor of the change of ground level by arranging the geological structure, the pumping discharge, the land use, etc. with GIS.

Key words land subsidence; satellite; GIS; PSInSAR