



The low-cost GNSS GEOMON system for monitoring landslide displacements

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Analysis of landslide hazard requires continuous and high frequency ground-based surface displacement monitoring at numerous locations. The low-cost GEOMON GNSS system, developed by Infrsurvey in collaboration with the research institutes HEIG-VD / Geomatics and HEIG-VD / MISC-DC, is currently tested experimentally in France by EOST (Ecole et Observatoire des Sciences de la Terre) for the French Landslide Observatory OMIV. The objective of this work is to present the technical solution of the GEOMON GNSS and the results of a field campaign performed during the summer 2015 at the Super-Sauze landslide (France) and at the Hohberg landslide (Switzerland).

The GNSS GEOMON system is based on low-cost L1 receiver, the transmission of the phase observations by radio to a base station located outside of the landslide or stored internally on SD cards, and a rapid processing with the open source RTKLib processing software.

The performance of the GNSS GEOMON system in real field monitoring conditions will be presented.