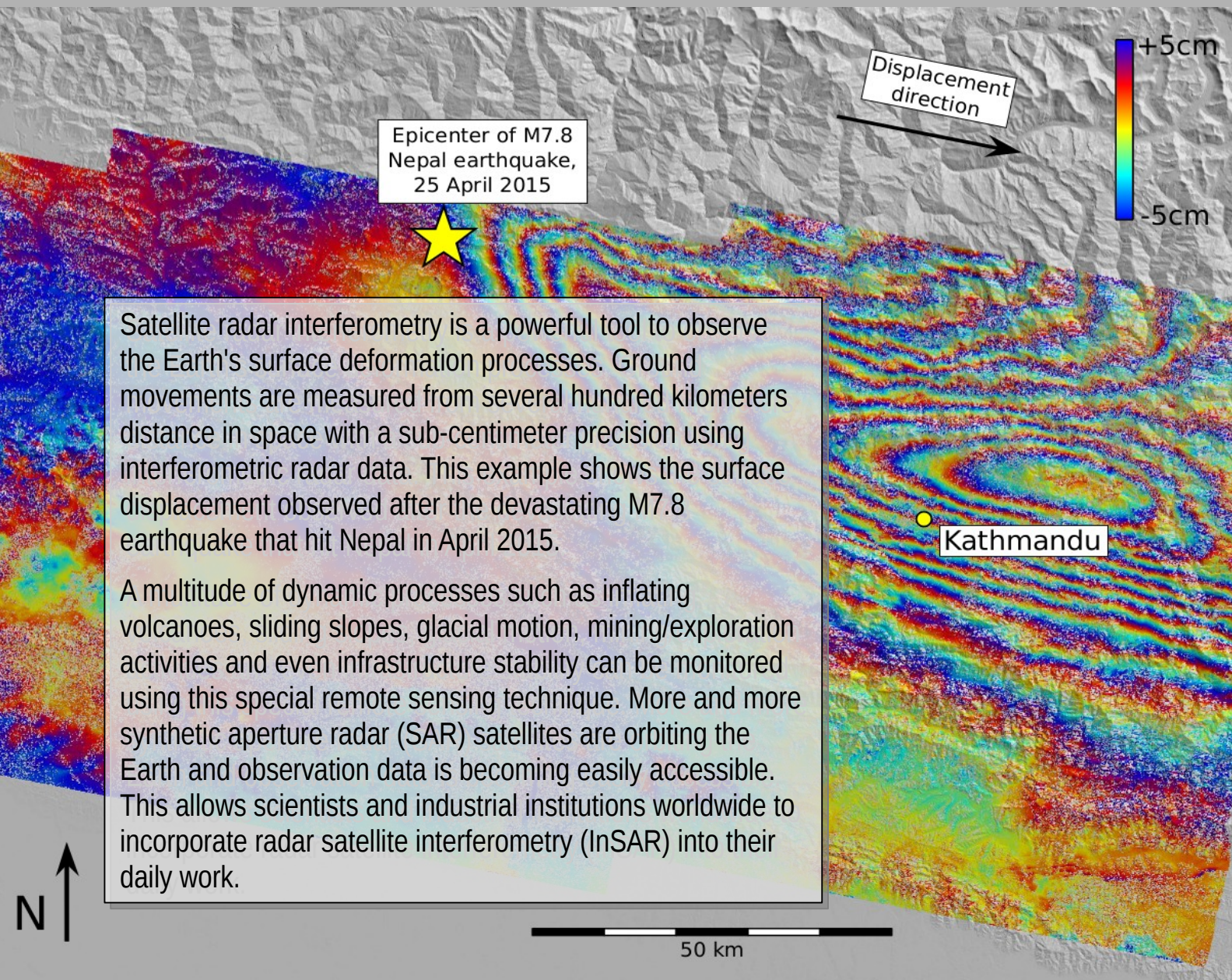


## Crustal deformation measured with radar satellite interferometry InSAR

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Satellite radar interferometry is a powerful tool to observe the Earth's surface deformation processes. Ground movements are measured from several hundred kilometers distance in space with a sub-centimeter precision using interferometric radar data. This example shows the surface displacement observed after the devastating M7.8 earthquake that hit Nepal in April 2015.

A multitude of dynamic processes such as inflating volcanoes, sliding slopes, glacial motion, mining/exploration activities and even infrastructure stability can be monitored using this special remote sensing technique. More and more synthetic aperture radar (SAR) satellites are orbiting the Earth and observation data is becoming easily accessible. This allows scientists and industrial institutions worldwide to incorporate radar satellite interferometry (InSAR) into their daily work.

This coming semester, we offer a block course with computer practicals to teach master students of geosciences the observational principles, data processing, different applications and interpretation of InSAR with hands-on experience using different case studies. A strong focus is put on earthquake and volcanic applications, for which we also present modeling techniques. We will work in a LINUX environment with the command-line based SAR processor and MATLAB to model the observations. The students should bring along previous knowledge or at least a certain enthusiasm for script-and-terminal-based computer handling.

The block course takes place on October 10-14, 2016 on Golm campus, Potsdam university. Additional 2-3 meetings during the semester are planned. Updated course information can be found in the [Potsdam University semester program](#) of the coming winter semester. The number of participants is limited to 15. Students of Potsdam university enroll via a list in the secretariat (House 27, Golm Campus). External students apply by email ([metzger@gfz-potsdam.de](mailto:metzger@gfz-potsdam.de)) with a small motivational letter.

**Application deadline: September 26, 2016**