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InSAR Satellite Data – Application for Earthquake Deformations in the Balkan Peninsula

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The use of synthetic aperture radar (SAR) data is a powerful and well established method for remote sensing that enables high resolution measurement of important geophysical parameters such as surface topography, deformation or subsidence of the surface as a result of various processes (earthquakes, tectonic activity, movements of glaciers, mining activity, etc.). The present study illustrates the InSAR technique applied for recent M6+ earthquakes in the region of south-east Europe including Greece and Turkey. Data from both Sentinel-1A and -1B is used. This constellation shares the same orbit plane and include C band imaging operating in four exclusive imaging modes with different resolution (down to 5 m). As a results interferograms and deformation maps are build using SNAP and ArcGIS software. For each deformation map a profile plot of the displacement is depicted. The obtained results can be used in the evaluation of the earthquake deformations supplemented with geological and geophysical information.

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E-mail

lyuba_dimova@phys.uni-sofia.bg

Promotional text

The present study illustrates the InSAR technique applied for recent M6+ earthquakes in the region of south-east Europe including Greece and Turkey.

Oral preference format

Primary authors: DIMOVA, Lyuba (Sofia University "St. Kliment Ohridski"); RAYKOVA, Reneta (Sofia University "St. Kliment Ohridski"); Ms ATANASOVA-ZLATAREVA, Mila (National Institute of Geophysics, Geodesy and Geography, Bulgarian Academy of Sciences)

Presenter: DIMOVA, Lyuba (Sofia University "St. Kliment Ohridski")

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