



## Seismicity of the Gargano area (Italy)

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The Gargano Promontory is located East of the Southern Apennine Chain and represents an east-west elevated segment of the Adriatic Block, which extends across the Adriatic Sea and the front of the Dinarides. A severe earthquake of macroseismic magnitude 6.7 struck the area in 1627 causing a tsunami whose effects were particularly significant along the northern coast of the Promontory. Since 1975 the instrumental catalogue reports for the area two important events: a Mw 5.2 earthquake occurred in 1975 and the 2002 Molise earthquake (Mw 5.7), this latter located a few tens of kilometers toward east. The earthquake-causative fault of this last event would appear to connect the Mattinata fault system, a major active strike-slip structure cutting the Gargano promontory, with east-west structures known beneath the axial part of the Southern Apennines.

We investigate the spatial and temporal seismicity parameters of the Gargano area before and after the 2002 Molise mainshock and the strain of the area. We select seismic events occurred in the last six years. Accurate re-picking of the seismic events allows to obtain a reliable earthquakes location. The spatial distribution of the events shows that the seismicity of the area is sparse and the depth of the events falls in the upper crust with only few events deeper than 20 km. The accurate re-picking of the seismic events leads also to compute the focal mechanisms of the events with  $M_D > 2.5$ . The fault plane solutions show different types of solutions but a prevalence of strike-slip can be recognized. T-axes mainly align along a NE-SW direction, in agreement with the larger scale stress field recognized in the neighbour sectors of Apennines.