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Focal mechanism analysis of seismic swarm recorded during 23 September -12 November 2013 in Galati area, Romania

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The seismic swarm started on 23 September 2013 near the town of Galati, in Izvoarele region (Romania), an extended in time until 12 November 2013: 406 seismic events were recorded in several stages. The magnitude ML was always below 4, with three shocks of magnitude 3.9, accompanied by specific seismicity bursts.
N-W Galati area is crossed in the northern part by the Sf. Gheorghe fault (situated at the limit of the Scythian Platform in North Dobrogea) and in the southern part by Peceneaga Camena fault which separates North Dobrogea block from the Moesian Platform.
The epicentral zone is a very complicated tectonic area in which, sedimentary fault (normal and strike slip fault) is going down into the crystalin basement and linked in to normal fault.
The epicenters of this seismic swarm are aligned on a NE-SW direction, fiting the alignement of a known fault system in the area, which is perpendicular to the dominant fault system lying NE-SW, between the Peceneaga Camena in the southern part and the Sf. Gheorghe fault in the northern part.
The focal mechanisms are determined by SEISAN algorithm (Havskov and Ottemoller 2001) using P-wave polarities. In all cases, they show normal slip with the fault plane oriented on the NE-SW direction , main vertical compression axis (P) and main horizontal extension axis (T), oriented on the NE-SW direction.
The results are discussed and interpreted in correlation with the regional seismotectonics and having in view new elements and implications for seismic hazard evaluation in the Galati area.