



Relocation and seismotectonic interpretation of the 2015 Ossa de Montiel (Albacete, Spain) seismic series.

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A moderate earthquake with magnitude M_w 4.7 occurred on February 23, 2015 to the NE of Ossa de Montiel (SE central Spain), in a region with very low seismic activity and poorly monitored by permanent seismic stations. Two days after the event a dense temporary seismic network consisting of 13 stations was deployed in this area until April 6, 2015, allowing to detect more than 500 events inside the network limits. The data gathered from this network along with the data from more distant seismic stations has allowed us to perform a precise hypocentral location of the Ossa de Montiel seismic series. For this location we have manually read the arrival times for all the stations and used relative location techniques based on waveform cross-correlations and a double-difference algorithm. In addition, we have studied the focal mechanism of the main shock and the largest aftershocks using first motion polarities and full waveform inversion. We have found that the mechanism and aftershock distribution is consistent with a NW-SE normal fault with a dip of 40 degrees to the NE at a depth of about 12 km. With these results we analyze the temporal evolution of the seismic sequence and propose a seismotectonic interpretation of a series developed in an area with scarce seismic information to this date.