



Modeling of gravity and magnetic anomalies across the area interested by the 2016-2017 seismic sequence in central Italy

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In this work we present results of gravity and magnetic modeling across several sections in the area interested by the 2016-2017 seismic sequence in central Italy. The models have been created using the available datasets of the bouguer anomaly and the magnetic anomaly maps of Italy. The modeling was carried out considering the geometries of the crustal bodies as resulting from seismic data interpretation calibrated by well data. The physical properties of the volume interested by the modeling – i.e. density and magnetic susceptibility – have been tested among the data available for the region. The depth to the Curie isotherm was constrained to the available heat flow data for the area. Resulting models represent a valid support to the geological and geophysical understanding of the area, as well as to evaluate the rheology of the area interested by the seismic sequence. Preliminary results from the models highlight a general correspondence between the results of the gravity and magnetic modeling and the interpretation of the seismic data. In particular, we observe the eastward deepening of the top of the basement and of the Moho. We also report a good fit of the gravity signatures of the Norcia and Castelluccio di Norcia basins.