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Regional Gravity fields from GRACE observations

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Within the TOPO-EUROPE project RESEL-GRACE (Refined European sea level estimations by combining different data sets with regional GIA modeling and regional GRACE gravity field models) regional mean and time-variable gravity models are derived from GRACE instrument data. By means of isotropic base functions the multi-resolution representation (MRR) transforms the GRACE in situ observations into resulting gravity structures for selected regions of interest.

The primary goal of this contribution is to validate the new regional fields whether they are an improvement to existing or upcoming global gravity fields (e.g. GFZ EIGEN-GRACE06S). Thus a rigorous statistic evaluation is done within the framework of this study which shows the reliability of our new regional gravity field solutions with the aid of external in situ data. This includes also
the validation of the new regional gravity fields by project partners of project RESEL-GRACE.

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