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Denoising Gravity data using Spherical smoothing Splines

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Gravity observations are contaminated with noise and blunders. Different denoising and blunder removal techniques have been introduced for detecting and removing blunders and reducing noise level of the measurements. It is clear that the methods with higher compatibility with the physical behavior of the observations yield higher performance.
The spherical splines are the most well-known bases functions for the regional gravity field modeling. In this study, we have modeled the regional gravity field using the spherical splines. The spherical smoothing splines have been used for denoising of terrestrial gravity observations. Performance of the method is investigated both on the simulated and real data sets.