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EOF-based filtering of GRACE gravity field solutions: A comparison between spectral and spatial approaches

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One of the most fundamental challenges in spaceborne gravimetry is the separation of the gravitational signal into its individual geophysical sources. Empirical Orthogonal Function (EOF) analysis has been shown to be a valuable tool in support of solving this problem. EOF-based techniques have also been used for purposes of filtering and signal identification.

In this poster we apply EOF filtering gravity solutions from the Gravity Recovery and Climate Experiment (GRACE) both in the spectral and in the spatial domain. The results from these different filter strategies are compared with each other. In the both cases, the principal components are tested for white-noise behaviour.

Key words: GRACE, gravity, EOF, white noise test.