Impact of estimating geodetic parameters on gravity field coefficients

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Based on an approximately 15-year long time series of gravity field coefficients up to degree and order 6 from satellite laser ranging data, we want to elaborate on the impact of simultaneously estimated geodetic parameters such as Earth rotation parameters and station coordinates on the recovered gravity field coefficients. We will also discuss the results of an experiment where range biases are set up not only for a few specific stations as suggested by the International Laser Ranging Service, but for all stations. Thanks to the long time span it is especially interesting to look at the correlation coefficients between pairs of gravity field coefficients as well as correlation coefficients between other geodetic parameters and gravity field coefficients and how they evolve over time when data to more satellites become available.