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ITG-Grace2010: the new GRACE gravity field release computed in Bonn

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The next GRACE gravity field release computed at Bonn University will be presented.

This release consists of three parts: the high resolution static model, unconstraint monthly solutions and daily snapshots derived by using a Kalman smoother. The innovations compared to the last release include the use of improved background models and the processing of GPS phase measurements. Furthermore, the daily snapshots are applied as de-aliasing product in the calculation of the monthly and static gravity field models. As will be shown in the presentation, this procedure appears to be a very important step towards reaching the GRACE baseline accuracy.

The results are validated by comparision with independent data sets such as daily time series of GPS station height variations and in-situ ocean bottom pressure data. It will be shown that large parts of the variations in these sensors can be explained by the daily ITG-GRACE Kalman solutions.