



Re-analysis of temporal GRACE gravity solutions from CNES/GRGS

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The GRACE mission, already more than 6 years in operation, has provided a large-scale vision of temporal gravity variations on the Earth surface. It is presently profitable to entirely reprocess the GRACE data thanks to more accurate a priori models as well as improved computation strategies.

In this context the CNES/GRGS team has undertaken a full reiteration of the GRACE and LAGEOS data processing, based on upgraded models for generating: 1) a time-series of truly 10-day gravity field models from spherical harmonic degree 1 to 50 and 2) a static satellite-only gravity field model up to degree and order 160, but in which annual and semi-annual periodic components as well as drift are modelled up to degree 50.

Particular attention has been given to the stability of the inversion process and therefore the solutions can be interpreted without additional filtering. Selected geographical areas of very low mass variability, or on the opposite very large water variations, have been analysed and results have been compared with other available solutions.

"Release 2" CNES/GRGS solutions are available on the <http://bgi.cnes.fr> web site. Together with RL02, new additional products are now provided: dealiasing products, averaged over 10 days, in separate files for atmosphere and ocean ; grid of the reference atmospheric pressure.