Corrected data processing for the 10-day EIGEN-GRGS models

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With a delay of a few months due to the GRACE data policy the CNES/GRGS team of Space Geodesy continues to process GRACE level-1b data to achieve variable gravity field models besides those ones of project teams.

These CNES/GRGS models are developed up to spherical harmonic degree 50 on a 10-day basis. Degrees 51 through 160 are kept fixed to the coefficients of the mean field, EIGEN-GRGS_RL02_MEAN-FIELD. This global mean-periodic model was computed from updated standards over almost 5 years from 2003 to 2007.

Since, we have improved our processing method still, correcting for a mean apparent satellite misalignement, which induces non-constant antenna phase centre corrections on level-1b KBRR data (see poster from M. Horwath et al. on Improved GRACE science results after adjustment of geometric biases in the level-1b K-band ranging data).

Models from September 2009 onwards take these antenna-offset corrections applied to KBRR data into account. Improvements are shown and discussed in comparison with other models.