



The EGSIM combination service: final results and further plans

Ulrich Meyer (1), Andreas Kvas (2), Torsten Mayer-Gürr (2), Jean-Michel Lemoine (3), Stephane Bourgogne (3), Christoph Dahle (4), Frank Flechtner (4), Yoomin Jean (1), Daniel Arnold (1), and Adrian Jäggi (1)

(1) University of Bern, Astronomical Institute, Bern, Switzerland (ulrich.meyer@aiub.unibe.ch), (2) Institute of Geodesy of the Graz University of Technology, Graz, Austria, (3) Groupe de Recherche de Géodésie Spatiale, Toulouse, (4) Helmholtz Centre Potsdam, GFZ German Research Centre for Geosciences

The EU-funded phase of the Horizon 2020 project European Gravity Service for Improved Emergency management (EGSIEM) has been completed. We present the final combined products that were generated after three years of development and test-operations of the scientific combination service for GRACE monthly gravity fields. The combined time-series is compared to the official GRACE science data system gravity fields and validated in terms of signal and noise content in the spatial and spectral domains. We review the combination strategy on normal equation level, monitor the relative weights derived by variance component estimation on solution level and introduce the user-friendly gridded and smoothed products derived from the spherical harmonic gravity field coefficients. Finally, we discuss the future perspective of the service, which is in transition to become a combination center of the international association of geodesy (IAG) under the umbrella of the international gravity field service (IGFS).