

## **JWG2.7: Land hydrology from gravimetry**

(Joint with commission 3)

**Chair:** Annette Eicker (Germany)

### **Terms of Reference**

The working group will be dedicated to the development of new strategies and algorithms for using time-variable gravity data from GRACE and data from complimentary sensors in the understanding of the terrestrial water cycle. This includes the development of tools and products to encourage adoption of geodetic data by the hydrological community, application and validation of GRACE to investigate water storage changes and the improvement of model reliability and predictability (calibration, assimilation). This Working group was proposed by SC2.6 (Gravity and Earth System).

### **Goals**

The following, non-restrictive list of goals is proposed (to be discussed in the WG):

- to tailor GRACE products towards the specific requirements of hydrological applications (regional solutions, spatial/temporal constraints,...)
- to review existing approaches and develop new strategies for GRACE post-processing (filtering issues, bias correction associated with the leakage problem)
- to discuss the separation of the GRACE mass signal into different storage compartments
- to compare the satellite data with model output and complementary data sets (super-conducting gravimeters, ground water observation,...)
- to review and develop strategies to compare and combine heterogeneous data sets given on different temporal and spatial scales
- to compare and develop approaches to use GRACE and alternative sensor data to calibrate hydrological modeling and to assimilate the observations into the models
- to develop strategies for innovative use of GRACE products for hydrometeorology

### **Members**

Annette Eicker (Germany)

Petra Döll (Germany)

Jean-Paul Boy (France)

Andreas Güntner (Germany)

Laurent Longuevergne (France)

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