

JWG 2.3: Assessment of GOCE Geopotential Models

(Joint with the IGFS)

Chair: Jianliang Huang (Canada)

Co-Chair: Christopher Kotsakis (Greece)

Terms of Reference and Objectives

The GOCE mission by European Space Agency is mapping the Earth's gravity field with the same level of accuracy as GRACE and a higher spatial resolution. GRACE and GOCE are complementary in terms of spectral sensitivity. A series of GOCE and GRACE&GOCE-based global gravity models have been released since 2010. Assessment of these models is commonly based on comparisons with other independent data that are direct and indirect observations of the Earth's gravity field. Such data include geoid heights from GPS and spirit leveled heights, airborne and surface gravity measurements, marine geoid heights from mean oceanographic sea surface topography models and altimetry observations, orbits from other geodetic and altimetry satellites etc. In response to the call of having an independent, coordinated and inclusive team for the assessment of the new GOCE models, a Joint Working Group (JWG) has been approved by IGFS and the IAG Commission 2 during IUGG 2011 in Melbourne, Australia. Its objectives are to develop new standard validation/calibration procedures, and to perform the quality assessment of GOCE- GRACE&GOCE-based satellite-only and combined solutions for the static Earth's gravity field.

The Joint Working Group reports to IGFS and the Commission 2.

Program of Activities

- The JWG creates opportunities through communication and conferences for international cooperation to develop and propose new standard methods for evaluating global EGMs using external data. A specific research area of interest will be the issue of how to handle the different spectral content of satellite-based global gravity field models and terrestrial gravity data.
- The JWG assesses new GOCE and GRACE&GOCE models.
- The JWG organizes a special session in the next IAG Commission 2 conference in Venice, Italy, in 2012.
- The JWG publishes assessment papers in a dedicated issue of the Newton's Bulletin in 2013.

Membership

- Hussein Abd-Elmotaal (Egypt)
- Jonas Ågren (Sweden)
- Ben Ahmed Daho Sid Ahmed (Algeria)

- Riccardo Barzaghi, on behalf of IGeS (Italy)
- Denizar Blitzkow (Brazil)
- Minkang Cheng (USA)
- Sten Claessens (Australia)
- Artu Ellmann (Estonia)
- Christoph Foerste (Germany)
- Thomas Gruber (Germany)
- Ali Kilicoglu (Turkey)
- Jiancheng Li (China)
- Pavel Novak (Czech Republic)
- Maria Cristina Pacino (Argentina)
- Dan Roman (USA)
- Gabriel Strykowski (Denmark)
- Viliam Vatr (Czech Republic)
- Matthias Weigelt (Germany)

Corresponding members

- P. G. Vipula Abeyratne (Sri Lanka)
- Heiner Denker (Germany)
- Cheinway Hwang (Taiwan)
- Chris Jekeli (USA)
- Jaroslav Klokocnik (Czech Republic)
- Charles Merry (South Africa)
- Peter Morgan (Australia)
- Nikolaos K. Pavlis (USA)
- Marcelo Santos (Canada)
- Claudia Tocho (Argentina)