

SC 2.4f: Gravity and Geoid in Antarctica (AntGG)

Chair: Mirko Scheinert (Germany)

Terms of Reference and Objectives

Antarctica is the region which still possesses the largest data gaps in terrestrial gravity. Especially with regard to the latest satellite gravity field mission GOCE the polar data gap in terrestrial gravity deteriorates the model solutions. Generally, also the existing Antarctic gravity data coverage is heterogeneous and exhibits inconsistencies. However, globally distributed gravity data are needed for the global high-resolution determination of the Earth's gravity field. Regionally densified Antarctic gravity data shall be used for a validation of global gravity field models and, finally, for a regional improvement of the Antarctic geoid. Nevertheless, due to the vast extension of the Antarctic continent, its hostile environment and the difficult logistic conditions it is a long-lasting task to close the Antarctic data gaps in terrestrial gravity. AntGG shall pursue this objective and shall facilitate the necessary coordination to release gridded gravity datasets for Antarctica. It plays an important role to improve the cooperation between all interested scientists of geodesy and of neighboring disciplines, mainly geophysics.

Program of Activities

- Promoting the collection of surface and airborne gravity data in Antarctica
- Promoting new gravity surveys in Antarctica, especially airborne gravimetry
- Promoting the establishment and (re-)measurement of reference gravity stations utilizing absolute gravity meters
- Promoting the scientific exchange of latest developments in technology (esp. airborne gravimetry) and data analysis
- Evaluation of existing and new surface and airborne gravity data, validation of global gravity field models in Antarctica
- Investigation of optimum strategy for the combination of gravity data of different sources, release of gridded gravity anomaly dataset(s) for Antarctica
- Focus group for all scientists interested in Antarctic gravity and geoid, and cooperation with similar data initiatives, especially within the Scientific Committee on Antarctic Research (SCAR)

Delegates

Chair: Mirko Scheinert (Germany)
Don Blankenship (USA)
Alessandro Capra (Italy)
Dettef Damaske (Germany)
Fausto Ferraccioli (UK)
Christoph Förste (Germany)

René Forsberg (Denmark)
Larry Hothem (USA)
Wilfried Jokat (Germany)
Gary Johnston (Australia)
Steve Kenyon (USA)
German L. Leitchenkov (Russia)
Jaakko Mäkinen (Finland)
Yves Rogister (France)
Kazuo Shibuya (Japan)
Michael Studinger (USA)
Yuande Yang (China)

Associates

Matt Amos (New Zealand)