

International Workshop

„Airborne Geodesy and Geophysics with Focus on Polar Applications“

Dresden (Germany), 19 – 21 April 2017

FIRST CIRCULAR

The polar regions with their continental ice sheets and partly ice-covered oceans play a crucial role in the Earth system. They are critical to understanding and predicting climate evolution and global sea level change. Antarctica, however, confronts us with an especially hostile environment and a vast extension that make huge areas inaccessible to any ground-based research.

On global to continental scales artificial satellites of the Earth measure a variety of quantities related to all fields of polar science. However, satellite-based measurements are limited in resolution, sensitivity and accuracy. Observables related to the gravity field and inner structure of the Earth or to the geometry and properties of the ice sheet need to be inferred on sub-continental to local scales and with high resolution though.

In that context, airborne platforms provide access to most powerful methods to survey the vast and mostly inaccessible polar areas. Airborne surveys enable to adapt to scientific demands in a flexible way, bridging the gap between sparse ground-based point observations and satellite measurements. Different requests on resolution and areal extension can be met by the huge variety of airborne platforms available today.

In succession to previous workshops held 2009 in Dresden (“Aerogravimetry: Technology and Application”) and 2012 in Potsdam (“Geodesy and Geophysics on Airborne Platforms, in particular HALO”) we would like to invite you to the **International Workshop “Airborne Geodesy and Geophysics with Focus on Polar Applications”**, to be held in **Dresden** from **19 to 21 April 2017**.

One focus will be on the new German research aircraft HALO that is planned to be operated in Antarctica. However, we solicit contributions on all kinds of airborne geodetic, geophysical and glaciological measurement techniques applied in polar regions, from airborne gravimetry and magnetometry to radio-echo sounding of the ice sheets and glaciers, from GNSS reflectometry, scatterometry and occultation to radar and laser altimetry. We solicit contributions on the state-of-the-art of airborne geoscientific observation techniques and their analyses to improve our understanding of processes that interlink the potential fields with the cryosphere, the geosphere and the oceans. Presentations are very much welcome on innovative methods and engineering solutions to adopt airborne platforms of different size and endurance, from jet aircraft to turboprop aircraft, helicopters and UAV for measurements in the polar regions.

As for preliminary planning, the workshop should begin at 13:00 on 19 April 2017, and close at 15:00 on 21 April 2017. We welcome oral presentations as well as poster presentations. The time slot for oral presentation will be 15 or 20 minutes (including discussion) depending on the number of submitted abstracts. The participation fee will be kept at a very moderate level (€30 to €40).

If you plan to attend the EGU General Assembly 2017 in Vienna, that will begin on Sunday, 23 April 2017, you can easily travel from Dresden to Vienna by direct bus link (6 to 6.5 hours) or train (7 to 8 hours, with change in Prague) or by airplane (one stop, at Frankfurt or Munich).

More detailed information (on the venue, accommodation, participation fee, deadlines, etc.) will be sent by the end of November / beginning of December this year.

The workshop is supported by the German Research Foundation (DFG) Priority Program (SPP 1158) “Atmospheric and Earth System Research with HALO”, by the International Association of Geodesy (IAG), the Scientific Committee on Antarctic Research (SCAR), and the German Society of Polar Research (DGP).

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