



Esa Cryovex 2011 Airborne Campaign For Cryosat-2 Calibration And Validation

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SESSION TITLE: C53F. CryoSat-2: Science and Validation During the First Year and the Outlook for Sentinel 3 II

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ABSTRACT BODY: After the successful launch of CryoSat-2 in April 2010, the first direct validation campaign of the satellite was carried out in the April-May 2011. DTU Space has been involved in ESA's CryoSat Validation Experiment (CryoVEx) with airborne activities since 2003. To validate the performance of the CryoSat-2 radar altimeter (SIRAL), the aircraft is equipped with an airborne version of the SIRAL altimeter (ASIRAS) together with a laser scanner. Of particular interest is to study the penetration depth of SIRAL into both land- and sea ice. This can be done by comparing the radar and laser measurements, as the laser reflects on the surface, and by overflight of laser reflectors.

In the spring of 2011 the DTU Space airborne team visited five main validation sites: Devon ice cap (Canada), Austfonna ice cap (Svalbard), the EGIG line crossing the Greenland Ice Sheet, as well as the sea ice north of Alert and sea ice around Svalbard in the Fram Strait. Selected tracks were planned to match CryoSat-2 passes and a few of them were flown in formation flight with the Alfred Wegener Institute (AWI) Polar-5 carrying an EM-bird.

We present an overview of the 2011 airborne campaign together with first results of the CryoSat-2 underflights.

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