



## **Sea level altimetry from Sentinel-3A in the arctic region**

Carsten Ankjær Ludwigsen, Ole Baltazar Andersen, and Per Knudsen

Technical University of Denmark, National Space Institute, Geodesy, Lyngby, Denmark (caanlu@space.dtu.dk)

For ocean and climate research, long-term altimetric sea level data is an important parameter which is needed as accurate as possible. Estimating sea level trends from satellite altimetry in the Arctic Ocean is challenging due to varying ice cover with sparse data in many regions. By reprocessing altimetry-data from RADS (Scharroo et al, 2013) and adding a tailored editing, DTU Space has extended the amount of data and hence the spatial coverage significantly (Cheng, Andersen & Knudsen, 2014). Sentinel-3A was launched in February 2016 and has a similar orbit as the ERS-1/2 and Envisat-satellites up to 82 degrees latitude. By integrating Sentinel-3A in the DTU improved sea level product we extend the product in the arctic with 2 years of Sentinel-3A data, which allows for more accurate estimates of the sea level trend in the region. Of particular interest is the Beaufort Gyre, where different retracking methods of CryoSat-2 data has shown varying results.