



## **The Galathea 3 expedition combining results from satellite and ship**

C. B. Hasager, M. B. Christiansen, L. L. Soerensen

Risoe National Laboratory, Wind Energy Department, Roskilde, Denmark,  
charlotte.hasager@risoe.dk

The circum-global Galathea 3 research expedition is being observed from space by Earth observing satellites. Satellite image are ordered, processed, archived and made publicly available in near-real-time for the entire cruise. The expedition started 11 August 2006 from Copenhagen and it will return 27 April 2007 after visiting Greenland, Africa, Australia, Antarctica, South and North America. Scientists from many research projects are onboard the ship. Combining results from the Satellite Eye project (collecting satellite images) and the Carbon Cycle project (observing CO<sub>2</sub> air-sea exchange onboard) are presented with an example near Namibia. On the 11 October 2006 the Envisat satellite with the MERIS instrument onboard collected an image showing very large chlorophyll values along the coast. The following days Galathea 3 cruised through the areas with the most intense biological activity in the surface waters. Observations of chlorophyll from the ferry-box showed high levels as well. The data are accessible at <http://galathea.oersted.dtu.dk>. The Carbon Cycle project observed extremely high values of CO<sub>2</sub> emission in the same area. It is assumed to be a result of cold carbon rich water upwelling locally. The Galathea 3 expedition is on-going and examples from Australia and Chile will also be presented.