

## ESA CRYOSAT-AO Project

ID	2673
Title	Cryosat-Envisat measurements and Mesoscale Eddy structure of Phytoplankton Blooms in the Marginal Ice Zone (MIZ)
Type	CryoSat Data Announcement of Opportunity
Class	Peer Review
Cost	Free of Charge
Primary Application Domain	Oceanography
Location	Arctic/Anctartic/Grenland

## Principal Investigator

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## Executive Summary and Schedule

Executive Summary	<p>Combined CRYOSAT and ENVISAT (AATSR and ASAR) data are used to analyse the mesoscale eddy field associated to the seasonal retreat of the Marginal Ice Zone. The development of phytoplankton blooms resulting of these phenomena is investigated using simultaneous chlorophyll measurements from the MERIS (Envisat) and MODIS satellite colour sensors. The structure and evolution of the mesoscale eddies is characterized by the CRYOSAT Sea Level Anomaly signature as shown before in previous altimetric investigations of mesoscale eddies (e.g. Garcia-Soto et al., 2002). Envisat ASAR and AATSR data coincident with the CRYOSAT altimeter data also provide additional relevant information on the mesoscale dynamics.</p>
Schedule	<p>(a) Preparation: A preliminary study have already started with the analysis of the long-term archive of SeaWiFS chlorophyll observations (1998-2004). This study is establishing the climatological timing and structure of the ice margin blooms in the study region with the strength of 7 full years of satellite measurements. This large-scale analysis also complements the future meso-scale and small-scale studies of the Project.</p> <p>(b) Data acquisition and analysis: The acquired CRYOSAT data will cover the spring-summer period of seasonal ice retreat in the northern latitudes. The acquisition of data will be orientated towards dates and regions when and where MERIS and AATSR data are cloud-free. Analysis of the data will start not later than three months after the data acquisition.</p> <p>(c) Reporting: The first Report is expected one year after reception of Cryosat level 2 data. A final report will be submitted three years after the Cryosat data has been received. The final CRYOSAT results will be published in International Journals.</p>