

ESA Category-1 Project

ID	2808
Title	Timing and structure of the Spring Phytoplankton Bloom in the Bay of Biscay (NE Atlantic): Remote Sensing (Envisat MERIS) and Ship measurements.
Type	Category 1
Class	Peer Review
Cost	Reproduction costs
Primary Application Domain	Oceanography
Location	Atlantic Ocean
Status	accepted

Principal Investigator

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Executive Summary and Schedule

Executive Summary	<p>The Project analyses the onset of the Spring Bloom (timing, maximum intensity and duration) in the Bay of Biscay region using MERIS and Cruise measurements and investigates the conditions triggering the bloom (OBJECTIVE 1). Satellite and in situ surface chlorophyll measurements during the Spring Bloom period are also compared with simultaneous altimetric and SST measurements to analyse the role of the physical mesoscale structure in the observed chlorophyll distribution (OBJECTIVE 2). A long-term satellite archive of chlorophyll concentration (SeaWiFS; 1997-2003) is finally analysed in order to describe the seasonal cycles of satellite chlorophyll a concentration in the Bay of Biscay oceanic environment and in adjacent shelf and shelf-break regions. The analysed regions, with highly contrasting hydrodynamic regimes, include the wind induced upwellings along the Galician and Cantabrian coasts, the tidal mixed and tidal frontal regimes of the Western English Channel, the shelf environment of weak tides in the Celtic Sea and the region of internal wave mixing along the Celtic shelf-break.</p> <p>The final Results of the Project will be delivered in Publications in International Journals.</p>
Schedule	<p>The following schedule is foreseen:</p> <p>Months 01-24 Day-to day variability of the Spring Bloom, and Spring Bloom initiation factors using satellite and Cruise data (OBJECTIVE 1) Mesoscale and Fine-scale structure of the Spring Bloom using colour, SST and altimeter sensors (OBJECTIVE 2) Months 24-36 Satellite chlorophyll a seasonalities in the Bay of Biscay using the long-term SeaWiFS archive (OBJECTIVE 3)</p> <p>The satellite data from ESA (MERIS and AATSR) will be retrieved and analysed parallel to the 3 ongoing tasks. Objectives 1 and 2 are linked to oceanographic Cruises in Spring 2004 and Spring 2005 and additional satellite data (archived or new data) can be acquired for those periods.</p> <p>The preparation and analysis of the satellite and in situ data will extend for about 18 months. Annual reports will be submitted at the end of each year. First preliminary results are expected in autumn 2005 and final results in autumn 2007. The analysed results will be finally presented as research articles.</p> <p>The schedule is adequate and practicable within a period of 3 years as the objectives are specific and the Project is technically feasible.</p>

