



## **GOCE in Ocean Modelling, GUT and the GOCINO project**

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The Gravity and Ocean Circulation Experiment – GOCE satellite mission is a new type of Earth observation satellite that will measure the Earth gravity and geoid with unprecedented accuracy. Combining GOCE geoid models with satellite altimetric observations of the sea surface height substantial improvements in the modelling of the ocean circulation and transport are foreseen.

No ocean circulation products are planned to be delivered as level-2 products as part of the GOCE project so that a strong need exists, for oceanographers, to further process the GOCE level-2 geoid and merge it with Radar Altimetry. The primary requirement of oceanographers is to have access to a geoid and its error covariance at the highest spatial resolution and accuracy possible, although required resolution depends on application. For effective use of the geoid data, knowledge of the error covariance is mandatory. Within the ESA supported GUTS project the user requirements for GOCE User Toolbox associated with geodetic, oceanographic and solid earth applications are consolidated.

The **GOCINO** project is an EU FP-6 Specific Support Action that will support the advance of the capabilities in exploitation of EO data from forthcoming satellite mission GOCE in pre-operational oceanographic services of GMES. GOCINO will dissemination of the scientific results from the EU FP-5 RTD project “Geoid and Ocean

Circulation in the North Atlantic – GOCINA”, and apply GOCINA products and recommendations to develop strategies for implementation of GOCE products in operational ocean models together with the ECMWF, TOPAZ, FOAM, MERCATOR, and MFS operational centres,