

# GOCESeaComb

External calibration/validation of ESA's GOCE mission and contribution to DOT and SLA determination through stochastic combination with heterogeneous data



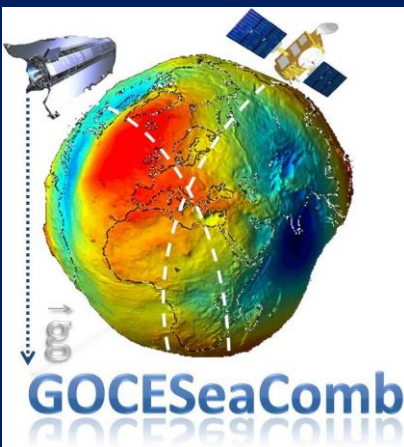
Newsletter Issue 2/31.10.2012

## GOCESeaComb

The **GOCESeaComb** project is funded by the European Space Agency (ESA) within its Scientific Experiment Development Program (PRODEX) following a successful application to the General Secretariat for Research & Technology (GSRT) after an invitation to the Greek scientific community in response to the 1st PRODEX Programme Call for Greece.

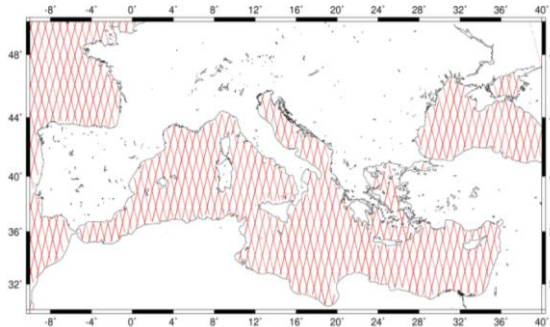
Contract: C4000106380

Duration: July 2012 – July 2014

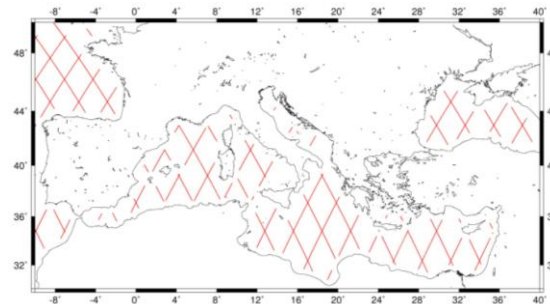


The GOCESeaComb Project Logo

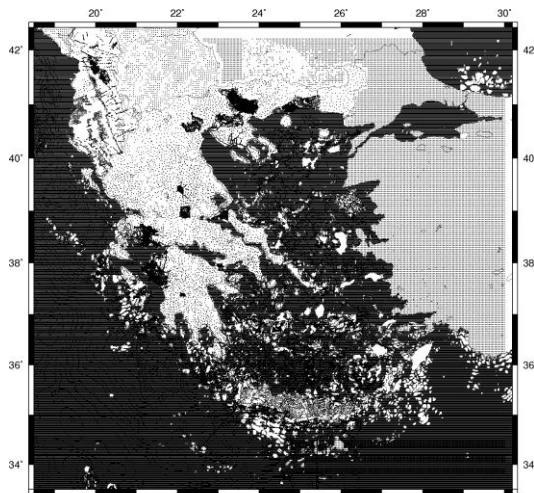
## THE GOCESEA COMB PROJECT AREA UNDER STUDY & DATA



The GOCESeaComb area under study (ENVISAT tracks in red)



The GOCESeaComb area under study (Jason-1/2 tracks in red)



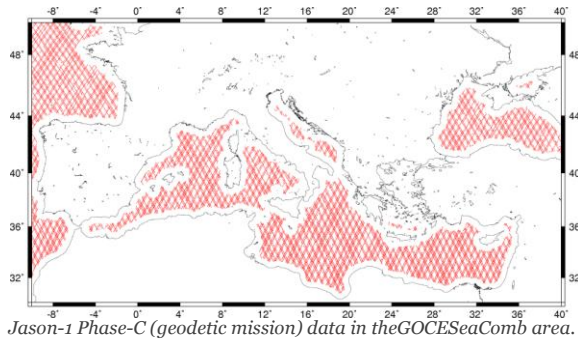
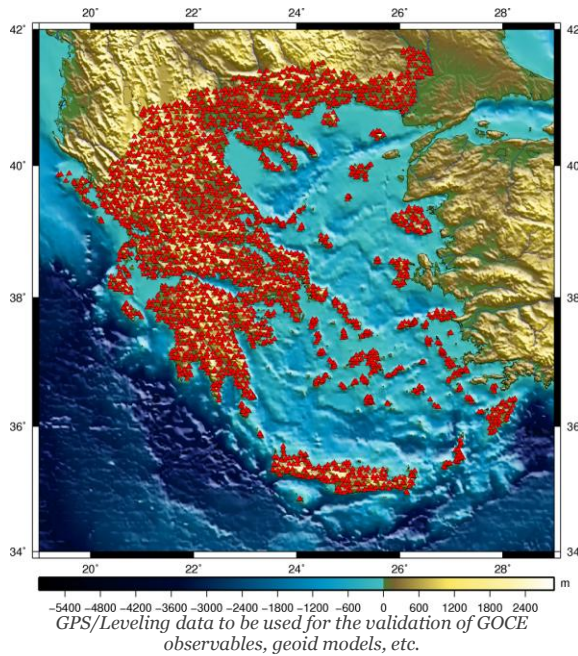
Gravity data to be used for the validation of GOCE observables, geoid models, etc.

During the period of this newsletter and since the first GOCESeaComb newsletter in August 2012, all project activities are going according to schedule. The First part refers to the determination of the area under study as well as the data prerequisites.

Within this frame, the entire Mediterranean Basin has been selected for the project experiments. The Mediterranean Sea may be characterized as a “natural laboratory” for geosciences, which is justified by the plurality of phenomena and processes, the alternating morphology and the temporal variations found. Additionally, it connects three continents and more than twenty countries and hence it has a significant geopolitical role.

Within the GOCESeaComb project, local gravity, GPS/Leveling, satellite altimetry, GRACE and GOCE data will be utilized to tackle its objectives. The gravity

data consist of ~200k free-air gravity anomalies over land and marine areas unified in terms of the reference ellipsoid, tide system used and gravity reference system. The GPS/Leveling data refer to 2430 collocated BMs where leveling and GPS observations have been carried out. The first by the Hellenic Military Geographic Service and the latter during the HEPOS project.



As far as satellite altimetry data are concerned, the missions of Jason-1, Jason-2, ERS-1, ERS-2 and ENVISAT will be used. Especially for Jason-1 the latest Phase C (geodetic mission) SSHs will be incorporated as well for as long as the mission remains operational.

### **GOCESeaComb @ THE ESA/CNES “20 YEARS OF PROGRESS IN RADAR ALTIMETRY CONFERENCE”**

The GOCESeaComb team has participated in the ESA/CNES "20 years of progress in radar altimetry conference" in Lido, Venice between September 23-29, 2012. A presentation has been given under the title "*Sea level anomaly and dynamic ocean topography analytical covariance functions in the Mediterranean Sea from ENVISAT data*". Both the presentation and the paper submitted to the proceedings can be downloaded in PDF format from the GOCESeaComb project web-site (<http://olimpia.topo.auth.gr/GOCESaComb/index.html>)

### **GOCESeaComb @ IAG Symposium on “Gravity, Geoid and Height Systems – GGHS 2012”.**

The GOCESeaComb team has participated to the IAG International Symposium on Gravity, Geoid and Height Systems GGHS 2012 in Venice. Two presentations have been given under the titles: "*Evaluation of GOCE/GRACE Global Geopotential Models over Greece with collocated GPS/Levelling observations and local gravity data*" & "*Estimation of the geopotential value  $W_0$  for the local vertical datum of continental Greece using EGM08 and GPS/leveling data*". Both the presentation and the paper submitted to the proceedings can be downloaded in

PDF format from the GOCESeaComb project web-site (<http://olimpia.topo.auth.gr/GOCESaComb/index.html>).

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## **Contact Us**

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