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*Proceedings of the
Second International GOCE User Workshop*

“GOCE, The Geoid and Oceanography”

8 – 10 March 2004
ESA-ESRIN, Frascati, Italy

**European Space Agency
Agence spatiale européenne**

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Dear Colleagues,

I am very pleased to present the proceedings from the Second International GOCE User Workshop, which took place from Monday 8 to Wednesday 10 March 2004 at ESA-ESRIN in Frascati, Italy.

This Workshop, "GOCE, The Geoid and Oceanography" was a unique opportunity to have first-hand information on latest developments and to discuss the use of GOCE products for scientific research and application.

The Workshop environment offered an ideal opportunity to liaise with ESA and to allow for scientific exchange with colleagues. As the Gravity field and steady-state Ocean Circulation Explorer (GOCE) mission approaches its launch, this workshop was designed to provide a forum for presenting the technical and programmatic status of the GOCE Project and progress in development of the:

- o Satellite and its payload
- o Ground Segment up to Level 1
- o Level 1-2 Data Processing
- o Level 3 Data Product developments
- o GOCE Data Exploitation preparations
- o National and EC GOCE activities.

Preparations are underway in the international scientific community for exploitation of high-resolution GOCE gravity data along with other geodetic and oceanographic data sources. Resulting high-precision geoid data are expected to have an impact in Oceanography, Solid-Earth Physics, Geodesy, Glaciology and Climate-change research. The goal of the GOCE mission is to deliver a high precision and high-resolution global gravity field model as well as global gridded geoid heights and gravity anomalies to the scientific community. ESA is presently co-ordinating efforts to produce a validated high-resolution gravity and geoid model. Various groups and consortia throughout Europe have also expressed an interest in development of either Level 2 or Level 3 products, and in pursuing GOCE-related research.

In particular, this Workshop focused on oceanographic applications, such as derivation of absolute dynamic topography, of GOCE data in conjunction with other space-borne data, such as radar altimetry, and also in-situ data and models. This Workshop provided an opportunity to publicise these higher-level data processing, geophysical validation plans and to coordinate such activities.

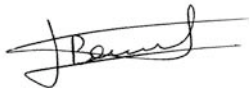
In order to avoid parallel sessions and to facilitate scientific discussion among the participants, the Workshop was organised with dedicated plenary poster sessions. The poster area remained open for the duration of the Workshop.

The "round table" discussions were animated by two moderators and facilitated the discussion on the presentations.

The scientific committee, the session chairs and the session rapporteurs stimulated the debates by preparing seed questions. The round tables also allowed ESA to capture all recommendations for the improvement of GOCE services and products and encourage proposals for new algorithms and products development, including a User Toolbox.

The final programme included more than 60 presentations organised in 4 sessions and round table discussions. Viewgraphs and posters are available on the Workshop web site (www.esa.int/goce04). These proceedings contain papers related to all presentations, both poster and oral, including the national activities fact sheets. These proceedings also contain the session summaries and reports of the round table discussions, conveying the recommendations expressed by the participants.

Finally, I would like to sincerely thank all the speakers, the chairs, and the participants whose valuable contributions made "GOCE, The Geoid and Oceanography" Workshop so successful and wish you an interesting reading.



Jérôme Benveniste
ESA-ESRIN
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*The second International GOCE User Workshop
is dedicated to the memory of*

Christian Le Provost

(1-VI-1943–29-II-2004)



Christian will be remembered for the excellence of his contribution in tide modeling, mean sea level, ocean circulation and for his remarkable and invaluable participation to numerous international ocean observing and modeling programmes, WOCE, GCOS, GOOS, OOPC, GLOSS, GODAE, MERCATOR, FES, CLIPPER... ERS, T/P, Jason, ENVISAT, ESA Living Planet Programme... (and this list is not exhaustive!)

The GOCE community will particularly remember Christian for his conviction of the necessity of a space gravity mission to improve our knowledge of ocean circulation and for his persuasiveness.

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