Proceedings of the
Second International GOCE User Workshop

“GOCE, The Geoid and Oceanography”

8 – 10 March 2004
ESA-ESRIN, Frascati, Italy
Scientific Organising Committee

C. Hughes          Proudman Oceanographic Laboratory (UK)
J. Johannessen     Nansen Environmental & Remote Sensing Centre (NO)
P. Legrand          IFREMER (F)
R. Rummel          Technical University of Munich (D)
F. Sansò            Polimi (I)
J. Schröter         Alfred Wegener Institute (D)
D. Stammer          University of Hamburg (D)
P. Touboul          ONERA (F)

Local Organising Committee

J. Benveniste (ESA/ESRIN), M. Drinkwater (ESA/ESTEC), R. Floberghagen (ESA/ESTEC), R. Haagmans (ESA/ESTEC), D. Muzi (ESA/ESTEC), A. Popescu (ESA/ESTEC), & Veronica Arpaia (Workshop Secretary)


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**List of Participants**
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:
- Satellite and its payload
- Ground Segment up to Level 1
- Level 1-2 Data Processing
- Level 3 Data Product developments
- GOCE Data Exploitation preparations
- 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
Earth Observation Science and Applications Department
Workshop Local Organiser
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.
Jonas Aagren  
Royal Institute of Technology  
Division of Geodesy  
Drottning Kristinas Vag 30  
SE-100 44 Stockholm  
Sweden  
jonag@kth.se

Oleg Abrikosov  
GeoForschungsZentrum Potsdam  
Dept. 1 - Geodesy and Remote Sensing  
Telegrafenberg A-17  
14473 Potsdam  
Germany  
abrik@gfz-potsdam.de

Babagana Abubakar  
Nigerian Ports Authority - Traffic  
No.27,Aralile Street  
Surulere  
Lagos  
Nigeria  
babaganaabubakar2002@yahoo.com

József Ádám  
Budapest University of Technology and Economics  
Department of Geodesy and Surveying  
P.O.Box 91.  
H-1521 Budapest  
Hungary  
jadam@epito.bme.hu

Boudewijn Ambrosius  
Delft University of Technology  
DEOS  
Kluyverweg 1  
2629 HS Delft  
Netherlands  
boudewijn.ambrosius@lr.tudelft.nl

Ole Andersen  
KMS  
Rentemestervej 8.,no  
DK-2400 Copenhagen  
Denmark  
oa@kms.dk

Harrison akowuah Antwi  
World Spaceweek Volunteers  
Box Ct2495-Accra  
C/O.Ashanti Space Agency  
23321-Accra  
Ghana  
ashantispace@excite.com

Dimitris Arabelos  
University of Thessaloniki  
Dept. of Geodesy and Surveying  
Univ. Box 474  
Thessaloniki  
Greece  
arab@eng.auth.gr

Ama Balorbey Baako  
Bossamy Enterprise Limited  
P. O. Box GP 18234  
Accra  
Ghana  
lucybaako@hotmail.com

Georges Balmino  
CNES  
GRGS  
18, Av. Edouard Belin  
31401 Toulouse Cedex 4  
France  
georges.balmino@cnes.fr

Virginie Belleguic  
Institut de physique du globe de Paris  
Dépt. de géophysique spatiale et planétaire  
4, Av. de Neptune  
94107 Saint Maur  
France  
bellegui@ipgp.jussieu.fr

Jérôme BENVENISTE  
European Space Agency  
ESRIN  
via Galileo Galilei  
00044 Frascati  
Italy  
Jerome.Benveniste@esa.int
Rory Bingham  
Reading University - ESSC  
3 Earley gate  
whiteknights  
RG6 6AL Reading  
United Kingdom  
rjb@mail.nerc-essc.ac.uk

Kwaku Antwi Bonsu  
World Spaceweek  
Volunteers  
Box Ct2495-Accra  
23321-Accra  
Ghana  
ashantispace@excite.com

Henno Boomkamp  
ESOC  
TOS-GN  
Robert-Bosch-Strasse 5  
64293 Darmstadt  
Germany  
Henno.Boomkamp@esa.int

Johannes Bouman  
SRON  
Sorbonnelaan 2  
3584 CA Utrecht  
Netherlands  
J.Bouman@sron.nl

Alexander Braun  
Ohio State University  
Lab. for Space Geodesy and Remote Sensing  
2070 Neil Av.  
43210 Columbus, Ohio  
United States  
braun.118@osu.edu

Alessandra Buongiorno  
ESA/ESRIN  
EOP  
V. galileo galilei  
00044 Frascati  
Italy  
alessandra.buongiorno@esa.int

Sean Bruinsma  
CNES  
18, Avenue E. Belin  
31401 Toulouse  
France  
sean.bruinsma@cnes.fr

Bruno Buongiorno Nardelli  
ISAC-CNR  
via del fosso del cavaliere 100,  
00133 Roma  
Italy  
bruno@gos.ifa.rm.cnr.it

Sarah Crisp  
School of Civil Engineering and Geosciences  
Newcastle University  
Newcastle, NE1 7RU  
United Kingdom  
sarah.crisp@ncl.ac.uk

William Cann  
World Spaceweek  
Volunteers  
Box Ct2495-Accra  
C/O.Ashanti Space Agency  
23321-Accra  
Ghana  
ashantispace@excite.com

Alexander Braun  
Byrd Polar Research Center  
CEEGS, Ohio State University  
1090 Carmack Rd  
Scott Hall  
Columbus, OH 43210  
United States  
braun.118@osu.edu

Franz-Josef Demond  
ESA-ESTEC  
EOP-PEP  
Keplerlaan 1  
2200 AG Noordwijk  
Netherlands  
franz.demond@esa.int
S Kenyon
NIMA
3838 Vogel Rd., St. Louis MO.
USA
Denmark
kenyomns@nima.mil

Roland Klees
Delft University of Technology
Physical, Geometrical and Space Geodesy (FMR)
Kluverweg 1
2629 HS Delft
Netherlands
r.klees@citg.tudelft.nl

Per Knudsen
Kort & Matrikelstyrelsen
Geodesy
Rentevestervej 8
2400 Copenhagen NV
Denmark
pk@kms.dk

Radboud Koop
SRON National Institute for Space Research
Sorbonnelaan 2
3584 CA UTRECHT
Netherlands
r.koop@sron.nl

Chung-yen Kuo
Lab. for Space Geodesy and Remote Sensing
CEEGS, Ohio State University
2070 Neil Ave.
Columbus, OH 43210
United States
kuo.70@osu.edu

Magdalena Kuzmicz-Cieslak
Space Research Centre
Polish Academy of Sciences
Borowiec Astrogeodynamic Observatory
Borowiec ul. Drapalka 4
62-035 Kornik
POLAND
magdak@cbk.poznan.pl

Paula Landart
ESA
Via Galileo Galilei
00044 Frascati
Italy
paula@uranus.esrin.esa.it

Gilles Larnicol
CLS Space Oceanography Division
8-10 rue Hermes
Parc Technologique du Canal
31526 Ramonville St Agne
France
gilles.larnicol@cls.fr

Jan Latka
Space Research Centre
Polish Academy of Sciences
Planetary Geodesy
ul. Bartycka 18A
00-716
Poland
jkl@cbk.waw.pl

Pierre-Yves Le Traon
CLS Space Oceanography Division
8-10 rue Hermes
Parc Technologique du Canal
31526 Ramonville St Agne France
France
pierre-yves.letraon@cls.fr

Pascal LeGrand
IFREMER
Physical Oceanography Laboratory
BP 70
29280
France
plegrand@ifremer.fr

Jean-Michel Lemoine
GRGS
14 avenue Edouard Belin
31400 Toulouse
France
Jean-Michel.Lemoine@cnes.fr
Marie-Francoise Lequentrec-Lalancette
EPSHOM
Section Geodesie-geophysique
BP 31316
29603 Brest CEDEX
France
lalancette@shom.fr

Philippe Lognonné
Institut De Physique Du Globe De Paris
Dépt. De Géophysique Spatiale Et Planétaire
4, Av. de Neptune
94107 Saint Maur
France
lognonne@ipgp.jussieu.fr

Dagny I. Lysaker
Agricultural University of Norway
Dept. Of Mathematical Sciences And Technology
P O Box 5003
N-1432 Ås
Norway
dagny.lysaker@imt.nlh.no

Gabriele Marquart
SRON & Utrecht University
Dep. of Geoscience
Postbox 80021
Budapestlaan 4
3508 TA Utrecht
Netherlands
marquart@geo.uu.nl

Juan Jose Martinez-Benjamin
Universitat Politecnica de Catalunya
Fisica Aplicada/ETSECCPB
Gran Capitan s/n
08034 Barcelona
Spain
benjamin@fa.upc.es

Jean-Charles Marty
CNES
18, Avenue E. Belin
31410 Toulouse
France
jean-charles.marty@cnes.fr

Dominik Michel
Geomathematics Group, K-Tech
P.O.Box 3049
67653 Kaiserslautern
Germany
dmichel@mathematik.uni-kl.de

Volker Michel
Geomathematics Group, K-Tech
P.O.Box 3049
67653 Kaiserslautern
Germany
michel@mathematik.uni-kl.de

Federica Migliaccio
Politecnico di Milano
DIIAR - Sez. Rilevamento
Piazza Leonardo da Vinci, 32
20133 MILANO
Italy
federica.migliaccio@polimi.it

Martino Montagna
University of Ferrara
via Gorizia n.41
45100 Rovigo
Italy
martinomontagna@virgilio.it

Philip Moore
School of Civil Engineering and Geosciences
Newcastle University
Newcastle, NE1 7RU
United Kingdom
philip.moore@ncl.ac.uk

Jürgen Müller
University of Hannover
Institut für Erdmessung
Schneiderberg 50
30167 Hannover
Germany
mueller@ife.uni-hannover.de
Carl Christian Tscherning
University of Copenhagen
Dep. of Geophysics
Juliane Maries Vej 30
DK-2100 Copenhagen Oe
Denmark
cct@gfy.ku.dk

Ilias N. Tziavos
Aristotle University of Thessaloniki
Department of Geodesy and Surveying
Univ. Box 440
54124 Thessaloniki
Greece
tziavos@olimpia.topo.auth.gr

Pascale Ultre-Guerard
CNES
Delegation a l'Etude et a l'Observation de la Terr
2, Place Maurice Quentin
75039 Paris Cedex 01
France
Pascale.Ultre-Guerard@cnes.fr

Alexis Van Eck van der Sluijs
Delft University of Technology
Physical, Geometrical and Space Geodesy (FMR)
Kluyverweg 1
2629 HS Delft
Netherlands
S.vanEck@citg.tudelft.nl

Sander Van Eck van der Sluijs
Delft University of Technology
P.O. Box 5058
2600GB Delft
Netherlands
s.vaneck@citg.tudelft.nl

Peter Jan Van Leeuwen
IMAU
Princetonplein 5
3584 CC Utrecht
Netherlands
P.J.vanLeeuwen@phys.uu.nl

Manuela Vasconcelos
Instituto Geografico Portugues
Departamento para a Geodesia
Rua Artilharia Um, 107
1099-052 Lisboa
Portugal
mvasconcelos@igeo.pt

Bert Vermeersen
DEOS, Delft University of Technology
Kluyverweg 1
2629 HS Delft
Netherlands
b.vermeersen@lr.tudelft.nl

A L Vest
KMS
Rentemestervej 8
DK2400 Copenhagen NV
Denmark
alv@kms.dk

Pieter Visser
Delft University of Technology
DEOS
Kluyverweg 1
2629 HS Delft
Netherlands
pieter.visser@lr.tudelft.nl

Femke Vossepoel
IMAU/SRON
Princetonplein 5
3584 CC Utrecht
Netherlands
F.C.Vossepoel@phys.uu.nl

Neil Wallace
Qinetiq Ltd
Space
Cody Technology Park
Ively Road
Farnborough, Gu14 0lx
United Kingdom
ncwallace@space.qinetiq.com