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The *IAG Newsletter* is under the editorial responsibility of the *Communication and Outreach Branch (COB)* of the IAG.

It is an open forum and contributors are welcome to send material (preferably in electronic form) to the IAG COB (newsletter@iag-aig.org). These contributions should complement information sent by IAG officials or by IAG symposia organizers (reports and announcements). The *IAG Newsletter* is published monthly. It is available in different formats from the IAG new internet site: <http://www.iag-aig.org>

Each *IAG Newsletter* includes several of the following topics:

- I. general information
- II. reports of IAG symposia
- III. reports by commissions, special commissions or study groups
- IV. symposia announcements
- V. book reviews
- VI. fast bibliography

Books for review are the responsibility of:

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General Announcements

IUGG Booth at EGU 2004

With the kind help of the Secretary General of IUGG, Jo Ann Joselyn, IAG related information could be displayed at the IUGG Booth at EGU 2004, Nice. Posters, information materials, brochures are welcomed from

the field of geodesy. The aforementioned materials can be taken to the IUGG Booth (Booth No. 60) personally, or can be posted to the address of the IAG Communication and Outreach Branch. For details, please visit http://www.iag-aig.org/index.php?tpl=text&id_c=6&id_t=191.

New Editorial Board for the Journal of Geodesy

A new Editorial Board has been established for Journal of Geodesy, the IAG's official journal. The new Editorial Office is located at Curtin University of Technology, Perth, Australia. In an attempt to decrease the time to publication, Journal of Geodesy will now handle all manuscripts electronically. Manuscripts, preferably in PDF format, set in double-spaced, single-column text, with figures and tables at the end of the manuscript, should be emailed to spatial@curtin.edu.au.

Please note that Springer's J Geod website has not yet been updated to reflect this new information. An editorial by the new Editor-in-Chief (W.Featherstone@curtin.edu.au), outlining the new procedures, will appear in vol 78 of Journal of Geodesy.

New Journal of Geodesy Editorial Board

Editor-in-Chief: Will Featherstone (Australia)

Editorial Assistant: Meredith Mulcahy (Australia)

IAG Information Editor: Gyula Tóth (Hungary)

Book Review Editor: Christian C. Tscherning (Denmark)

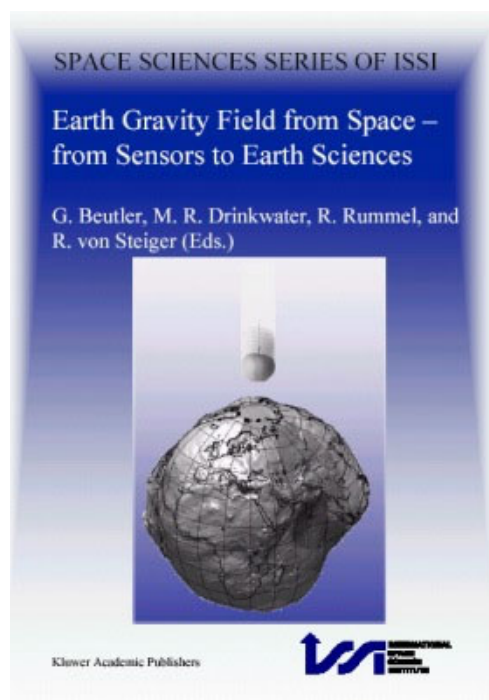
Past Editor-in-Chief: P.J.G. Teunissen (The Netherlands)

International Editorial Board members: Claudio Brunini (Argentina), Yong-Qi Chen (Hong Kong), Paul Cross (UK), Alan Dodson (UK), Gunnar Elgered (Sweden), Willi Freeden (Germany), Ramon Hanssen (The Netherlands), Tom Herring (USA), Cheinway Hwang (Taiwan), Karl-Heinz Ilk (Germany), Roland Klees (The Netherlands), Pavel Novák (Czech Republic), Harald Schuh (Austria), Nico Sneeuw (Canada), He-Ping Sun (China), Ilias Tziavos (Greece), Peiliang Xu (Japan)

IAG individual membership

IAG has recently introduced the individual membership as one of the new elements of the new IAG structure. The rights and privileges of individual members are listed in the IAG By-Laws. The Membership Application Form in PDF can be downloaded from the IAG website: <http://www.iag-aig.org>.

New book on gravity field research



G. Beutler, M.R. Drinkwater, R. Rummel, R. von Steiger (Eds), Earth Gravity Field from Space - from Sensors to Earth Sciences. In the Space Sciences Series of ISSI, Vol. 18, Kluwer Academic Publishers, Dordrecht, Netherlands, 2003, 460pp. ISBN: 1-4020-1408-2.

Earth Gravity Field from Space - from Sensors to Earth Sciences assesses the latest developments in research on the Earth's gravity field from space. The book is relevant to graduate students, postgraduate researchers, and research specialists in the fields of gravity field modelling, precise orbit determination, geodesy, solid Earth physics; ocean circulation, sea level, and future gravity mission satellite concepts.

This new publication assembles contributions from premier scientists in the fields of satellite geodesy and Earth sciences. It provides an extremely valuable snapshot of the current state of the art in making satellite gravity measurements, and in terms of the benefits of gravity data in the study of our planet Earth.

This compilation of peer reviewed scientific articles is a result of a workshop held in Switzerland in 2002, where around 50 invited experts from the fields of satellite geodesy, gravity field

modelling, solid Earth physics and oceanography gathered to assess new developments in gravity field research as a consequence of the space missions currently in orbit or soon to be launched. The satellite gravity missions CHAMP (2000-present) and GRACE (2002-present), both currently in orbit, have already made significant advances in the global gravity field model, and GRACE is, for the first time, 'weighing' month-to-month variations in the Earth's gravity field. The European Space Agency's GOCE mission, due for launch in 2006, will further enhance our knowledge of the Earth's gravity field and geoid by orders of magnitude. Together, these exciting new data open up a whole range of fascinating new possibilities for solid Earth physics, oceanography, geodesy and sea-level research. This new generation of Earth gravity missions each combine new sensor concepts for gravity field measurement, orbit and attitude control and orbit determination.

Earth Gravity Field from Space - from Sensors to Earth Sciences is the latest publication (vol. 18) in the well known ISSI Space Science Series. The book contains more than 37 peer reviewed scientific papers and is divided into 7 sections: Precise Orbit Determination and Gravity Field Modelling; Solid Earth Physics; Ocean Circulation, Geodesy, Sea Level, and Future Concepts. The final section is dedicated to ESA's GOCE mission and the new era in Earth Sciences that is made possible by the new gravity missions.

Ordering Details:

Copies can be ordered by individual scientists at 40% of the list price via the ISSI website under <http://www.issi.unibe.ch/sss> of issi.html or by email to ursula.pfander@issi.unibe.ch. Institutions order directly from Kluwer at <http://www.wkap.nl/prod/s/SSSI>.

Meeting Announcements

IAG Sponsored Meetings

EGU 1st General Assembly

25-30 April 2004 Nice, France

The 1st General Assembly of the European Geosciences Union (EGU) is held at the Nice - Acropolis Congress Centre in Nice, France, from 25 - 30 April 2004.

visit <http://www.copernicus.org/EGU/ga/egu04/index.html> for more information.

EUREF - 2004, The EUREF 2004 Symposium of the IAG Subcommittee for Europe

2-5 June 2004, Bratislava, Slovakia

visit <http://web.gku.sk/euref2004/> for more information.

15th International Symposium on Earth Tides

2-6 August 2004, Ottawa, Canada

The website has been updated with "Call for Session Proposals," "Registration," "Accommodation" and "Travel" information. visit <http://www.yorku.ca/ets/ets.html> for more information.

Gravity, Geoid and Space Missions – GGSM2004

30 August –3 September 2004, Porto, Portugal

IAG International Symposium

visit <http://www.fc.up.pt/ggsm2004/> for more information.

12th General Assembly of the WEGENER project

21-23 September, 2004, Tangier, Morocco

For details, please visit: <http://www.fstt.ac.ma/wegener2004/>.

IAG Related Meetings

14th Workshop on Laser Ranging

07-11 June 2004, San Fernando, Cadiz, Spain

The 14th International Workshop on Laser Ranging and International Laser Ranging Service General Assembly will be held at San Fernando (Cadiz, Spain) between June 07-11 2004. The Workshop is organized

by "Real Instituto y Observatorio de la Armada" (ROA) and International Laser Ranging Service" (ILRS). For more information please visit the workshop web site at <http://www.roa.es/14workshop-laser>.

CCCT '04 Conference

14-17 August 2004, Austin, Texas, USA

2nd. International Conference on Computing, Communication and Control Technologies: CCCT '04. For details, please visit: <http://www.iiisci.org/ccct2004/WebSite/Default.asp>.

Laser Scanner Conference

3 - 6 October 2004, Freiburg im Breisgau, Germany

International Conference "Laser-Scanners for Forest and Landscape Assessment - Instruments, Processing Methods and Applications". For details, visit: <http://www.natscan.de/conference/>.

19th CODATA International Conference

7-10 November 2004, Berlin, Germany

CODATA - Committee on Data for Science and Technology of the International Council of Science – ICSU
Title: "The Information Society: New Horizons for Science". Visit <http://www.CODATA.org/04conf> for more information.

IAG Sister Societies' General Assemblies

FIG Working Week and General Assembly

22-27 May Athens, Greece

The next FIG General Assembly will be held in conjunction to the FIG Working Week in Athens. For details, please visit <http://www.fig2004.gr>.

1st FIG International Symposium on Engineering Surveys for Construction Works and Structural Engineering

28 June –1 July 2004, Nottingham, United Kingdom

This Symposium is organized by FIG Commission 6 and includes a workshop "Measurements and Analysis of Cyclic deformations and Structural Vibrations". More information available at: <http://www.fig.net/figtree/nottingham>.

XXth Congress of the ISPRS

12-23 July 2004, Istanbul, Turkey

The XXth Congress of the International Society for Photogrammetry and Remote Sensing will be held in Istanbul, Turkey. Visit <http://www.isprs2004-istanbul.com> for more information.

ICC2005 Conference

9-16 July 2005, A Coruña, Spain

The XXII International Cartographic Conference (ICC) is the most important event in the International Cartographic Association (ICA) calendar. Please visit <http://www.icc2005.org> for details.

Meeting Reports

Workshop on ESA's gravity mission

18 March 2004

Last week, more than 120 scientists from 16 different countries gathered at ESA-ESRIN in Frascati, Italy to take part in a workshop dedicated to ESA's Gravity Field and Steady-State Ocean Circulation Explorer (GOCE) mission.

'GOCE, the Geoid and Oceanography – the Second International GOCE User Workshop' provided the unique forum to present the very latest mission developments and discuss how the eventual data would be best delivered for scientific research and application.

GOCE, scheduled for launch in 2006, is the second Earth Explorer satellite to be developed as part of ESA's Living Planet Programme. Over just 20 months this mission will provide unprecedented high-resolution and high-accuracy global models of the Earth's gravity field and of the geoid.

Because the Earth is not a homogeneous sphere, the force of gravitational acceleration 'g' varies significantly from place to place on the surface of the planet. This irregular gravity field shapes a virtual surface at mean sea level called the 'geoid'. The GOCE mission will provide a better understanding of the Earth's gravity field and its associated geoid, significantly advancing our knowledge in areas of oceanography, solid-Earth physics, geodesy, glaciology and climate-change research. The data resulting from this high-accuracy gravity field mission will also have numerous practical applications, for instance, an improved geoid model will be used for surveying and the construction industry.

The workshop held last week heralded an important milestone in the development of the GOCE mission. During the two and a-half-day event around 60 presentations, covering many aspects of the mission, were given and discussed in depth. In particular, the impact of the recently modified drag-compensation and attitude-control system of the satellite was assessed by the community. Last year, the design of the satellite was modified slightly in order to reduce the risk of a launch delay. It was confirmed at the workshop that these design changes would also significantly improve the robustness of the mission whilst having only a marginal impact on the quality of the derived gravity and geoid models. The workshop concluded that all of the mission objectives would still be met.

The main area of application for the GOCE mission is associated with ocean circulation, which was one of the main themes of the workshop. Presentations at the workshop revealed that although the US-German GRACE satellite, launched in 2002, is currently providing gravity field data, there is much potential for improving ocean circulation models. Data from GOCE will complement that from GRACE since the GOCE will provide higher resolution. It is now felt that the impact of the use of a high-resolution geoid may be even larger than that which was estimated when GOCE was originally selected for development. The contribution of GOCE data to the field of oceanography is considered to be so important that existing altimetry records may need to be reprocessed with the latest state-of-the-art models ready for the match-up with GOCE data.

The workshop highlighted the need for special and dedicated care of how the GOCE data is to be processed to ensure that the best gravity field model can be delivered to the scientific users. A strong recommendation was made to conceive a so-called 'User Toolbox' to help users in specific application areas best exploit GOCE data. In addition, the EU GOCINA project will support the mission by educating and preparing the community in using GOCE data for oceanography.

The Second International GOCE User Workshop proved to be an extremely informative and stimulating event that paves the way for the final stages of development for the GOCE mission.

SOURCE: ESA PORTAL
<http://www.esa.int>