



International Association of Geodesy

Newsletter

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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. news from the Bureau Members
- II. general information
- III. reports of IAG symposia
- IV. reports by commissions, special commissions or study groups
- V. symposia announcements
- VI. book reviews
- VII. fast bibliography

Books for review are the responsibility of:

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General Announcements

Current Status of the GGOS – the IAG’s Observing System

The Global Geodetic Observing System (GGOS) has as one of its scientific goals the integration of the geometric and gravimetric aspects of geodesy. It also provides a framework within which IAG services and other IAG components can integrate outputs and generate higher-level products in order to address critical requirements for geoscientific research. GGOS is unlike any IAG component in that it is not a Service, but rather an Observing System – and in fact cannot function without the facilities and products of each of the IAG Services.

The vision of GGOS – “*Advancing our understanding of the dynamic Earth system by quantifying our planet’s changes in space and time*” – addresses the substantial task of quantifying Earth’s changes in space and time due to Earth system dynamics. Successful execution of this vision is only possible if the international scientific community and its related governmental agencies are strongly committed to the mission of GGOS. As a complement to these technical efforts, GGOS serves as a vehicle of engagement with international governmental and non-governmental organisations, space agencies, and national mapping/geodetic institutions. Developing and maintaining these relations ensures optimal use of resources for the greatest good – to the benefit of science, and society in general.

GGOS in the IAG

As the observing system of the IAG, GGOS serves a unique and critically important combination of roles related to advocacy, integration, and international relations. GGOS also promotes high-level outcomes, such as the realisation of the International Terrestrial Reference Frame through a variety of internal and external channels. It is envisaged that new reference frames or products for global height systems, absolute gravity values, and instantaneous precision positioning will, in time, also be established.

The IAG relies upon GGOS to advocate for improvements in the ground-based geodetic infrastructure of GNSS and DORIS reference stations, VLBI and SLR space geodetic stations, and gravity observatories; it also supports the development of new satellite missions for altimetry, gravity mapping and earth observation; and promotes the importance of modern geodesy for addressing the needs of science and society for stable spatial, time, and gravimetric reference frames. GGOS focuses attention on how international geodesy needs to evolve in order to deliver an order of magnitude improvement in the quality of its fundamental products – this includes identifying the critical elements of global physical infrastructure, efficient data management, and combined measurement analysis.

The systematic implementation, operation, maintenance, and further development of GGOS must account for the technological challenges of modern geodesy as well as its societal importance. GGOS advocates for the establishment of Earth observing systems, analysis capabilities and stable reference frames, to enable social and economic benefits from the accurate monitoring and prediction of sea level change, rapid measurement of ground displacement following earthquakes, interpretation of mass transport signatures from temporally varying gravity field models, and others. Scientific and organisational skills are required at the highest level in order to ensure that the IAG Services will continue to provide current and new geodetic data products for science and society.

Structure of GGOS

GGOS leadership is headed by a chair and vice-chair, who liaise with the GGOS Consortium, which serves as the steering and election committee. These are then supported by the GGOS Coordinating Board (which acts as the decision-making body of the organisation) and the GGOS Executive Committee (which serves as the management board of GGOS). In turn, all of the aforementioned leadership elements work in concert with the IAG Scientific Services. All GGOS elements are promoted by the GGOS Coordinating Office, which supports outreach, internal and external coordination, and the daily management of GGOS.

At the heart of GGOS are its Bureaus, each containing working groups and other IAG support services. The Bureau of Networks and Observations (BNO) contains working groups on satellite missions, simulations, and data and information systems. BNO also serves as the link with, and the coordinating body for, the IAG observing services. As a complement the Bureau of Products and Standards (BSC) oversees working groups on Earth system modelling and standards, as well as promoting the development of new geodetic products associated with the three GGOS Themes: Unified Height System, Geohazards Monitoring, and Sea Level Change. BSC works closely with the various IAG processing and analysis services. Only when geodetic product

needs cannot be met by any of the existing IAG components will GGOS propose new products or new IAG entities.



Hansjörg Kutterer (Chair GGOS), Ruth Neilan (Vice Chair GGOS)

The mission of GGOS is: (1) to advocate for increased investment in ground-based geodetic infrastructure, and for new space geodetic missions; (2) to ensure that the global reference frames provide the fundamental backbone for consistently interpreting key global change processes, as well as serving the needs for society; (3) to promote improvements in geodetic products, through the integration of geometric and gravimetric aspects of geodesy, and (4) to facilitate the development of new high-level geodetic products and services.

Website: <http://www.ggos.org>

HANSJÖRG KUTTERER
CHRIS RIZOS

Meeting Announcements

REFAG2014

October 13-17, 2017 Kirchberg, Luxembourg

Registration is open for REFAG2014. For more information: <http://iag.uni.lu/?id=189>

Get your hotel reservations soon. Students should contact Tonie van Dam directly about student housing options.

TONIE M. VAN DAM

18th Geodynamics and Earth Tide Symposium 2016

June 5-9, 2016 Trieste, Italy

Recently, the multidisciplinary approach in geodynamics research has been increasing as well as the range of temporal and spatial scales on which geodynamic phenomena can be observed by modern instrumentation and monitoring systems. In order to take this development into account, the name of the “International Symposium on Earth Tides” has been changed to “International Symposium on Geodynamics and Earth Tides” and is organized in this form for the first time.

The symposium will be open for a wide range of scientific problems in geodynamics research. Interactions of geophysical fluids with Earth tides phenomena and observations will be a specific focus and includes:

- Tidal and non-tidal loading in space geodetic and subsurface observations
- Permanent and dynamic effects of Earth tides on the geodetic reference system
- Using tides and ocean tidal loading with modern geodesy to probe Earth structure
- Variations in Earth rotation, gravity field and geocenter due to mass redistributions
- Subsurface fluid movement through geodetic and gravity observation
- Fluid pressure changes due to Earth tides
- Stress and deformation changes due to injected fluids
- Earth tides, mass movements and deformation at volcanoes
- Tidal forcing of plate movement
- Tidal effects on geodetic satellites as GOCE, GRACE, ...
- Innovations in instrumentation for gravity and deformation observation
- Innovations in software, data analyses and prediction methods of loading and tides
- Induced seismicity
- Tides in planets

For more information please see the following website:

<http://www.lithoflex.org/g-et/>

18th Geodynamics and Earth Tide Symposium 2016

VENUE: University of Trieste, Trieste, Italy.

DATE: June 5 (Sunday) to June 9 (Thursday) 2016.

CARLA BRAITENBERG

Meetings Calendar

The 3rd International Gravity Field Service (IGFS) General Assembly

June 30-July 6, 2014, Shanghai, China

URL: <http://202.127.29.4/meetings/igfs2014/index.html>

International Symposium on Certification of GNSS Systems & Services

July 8 - 9, 2014, Dresden, Germany

URL: <http://www.dgon-cergal.org/>

GENAH 2014

July 22-25, 2014, Matsushima, Miyagi, Japan

International Symposium on Geodesy for Earthquake and Natural Hazards

URL: <http://genah2014.jpn.org/index.html>

AOGS 11th Annual Meeting

July 28-August 1, 2014, Sapporo, Japan

URL: <http://www.asiaoceania.org/aogs2014/public.asp?page=home.htm>

40th COSPAR Scientific Assembly

August 2-10, 2014, Moscow, Russia

URL: <http://www.cospar-assembly.org/>

XXXI General Assembly and Scientific Symposium of the IUGG

August 16-23, 2014, Beijing, China

URL: <http://www.chinaursigass.com/>

3rd International School on "Least Squares Approach to Modelling the Geoid"

August 18-22, 2014, Stockholm, Sweden

URL: <http://www.kth.se/en/abe/inst/som/avdelningar/geo/geodesi/handelser-1.78120>

18th WEGENER General Assembly: Measuring and Modelling our Dynamic Planet

September 1-4, 2014, Leeds, UK

URL: <http://see.leeds.ac.uk/wegener/>

Summer school on "GRACE/GRACE-FO applications for the terrestrial water cycle"

September 15-19, 2014, Mayschoss, Germany

URL: <http://www.massentransporte.de/?summerschool>

Journées 2014 "Systemes de reference spatio-temporels"

September 22-24, 2014, Pulkovo Observatory, St. Petersburg, Russia

URL: <http://journées2014.gao.su/>

Eighth FORMOSAT-3/COSMIC Data Users' Workshop

September 30 – October 2, 2014, Boulder, USA

URL: www.cosmic.ucar.edu/workshop_2014/

INTERGEO / Geodätische Woche

October 7-9, 2014, Berlin, Germany

URL: <http://www.intergeo.de>

European VLBI Network (EVN) Symposium

October 7-10, 2014, Cagliari, Italy

URL: <http://www.evbi.org/meetings/meetings.html>

REFAG2014

October 13-17, 2014, Luxembourg

IAG Commission 1 Symposium 2014 "Reference Frames for Applications in Geosciences"

URL: <http://iag.uni.lu/index.php?id=189>

The Climate Symposium 2014

October 13-17, 2014, Darmstadt, Germany

URL: <http://www.theclimatesymposium2014.com>

8th Coastal Altimetry Workshop

October 23-24, 2014, Lake Constance, Germany

URL: <http://www.coastalaltimetry.org/>

SARAL/AltiKa Workshop

October 27, 2014, Konstanz, Germany

URL: <http://www.ostst-altimetry-2014.com/>

IDS Workshop

October 27-28, 2014, Konstanz, Germany

URL: <http://www.ostst-altimetry-2014.com/>

19th International Workshop on Laser Ranging

October 27-31, 2014, Greenbelt, MD, USA

URL: <http://ilrs.gsfc.nasa.gov/about/meetings.html>

Ocean Surface Topography Science Team (OSTST) meeting

October 28-31, 2014, Konstanz, Germany

URL: <http://www.ostst-altimetry-2014.com/>

Digital Earth Summit 2014

November 9-11, 2014, Nagoya, Japan

URL: <http://gis.chubu.ac.jp/summit2014/>

Third International VLBI Technology Workshop

November 10-13, 2014, Groningen/Dwingeloo, Netherlands

URL: <http://www.jive.nl/ivtw2014/>

ISPRS Technical Commission I Symposium Sustaining Land Imaging: UAVs to Satellites

November 17-20, 2014, Denver, Colorado, USA

URL: <http://www.commission1.isprs.org/>

ICSU GRC Conference "Improving Geophysical Risk Assessment, Forecasting and Management"

November 18-21, 2014, Madrid, Spain

URL: <http://www.icsu.org/>

Symposium SIRGAS 2014

November 24-26, 2014, La Paz, Bolivia

URL: <http://www.sirgas.org>

5th GOCE User Workshop

November 25-28, 2014, Paris, France

URL: <http://www.goce2014.org/>

11th International Conference on Location-based Services

November 26-28, 2014, Vienna, Austria

URL: <http://www.lbs2014.org/>

AGU 2014 Fall Meeting

December 15-19, 2014, San Francisco, CA, USA

URL: <http://sites.agu.org/meetings/>

18. Internationale Geodaetische Woche Obergurgl

February 8 – 14, 2015, Obergurgl, Austria

URL: <http://www.mplusm.at/ifg/>

European Geosciences Union General Assembly 2015

April 12 – 17, 2015, Vienna, Austria

URL: <http://www.egu.eu>

SPACOMM 2015

April 19 – 23, 2015, Barcelona, Spain

URL: <http://www.iaria.org/conferences2015/SPACOMM15.html>

22nd Meeting of the European VLBI Group for Geodesy and Astrometry (EVGA)

May 17 – 21, 2015, Ponta Delgada, Azores, Portugal

URL: <http://evga2015.raege.net/>

TransNav 2015

June 17 – 19, 2015, Gdynia, Poland

URL: <http://transnav2015.am.gdynia.pl>

XXVI IUGG General Assembly

June 22 – July 2, 2015, Prague, Czech Republic

Information about registration and accommodation will be available from June 2014. Call for abstracts will be open during summer 2014. Deadline for abstract submission is January 31, 2015.

URL: www.iugg2015prague.com

XXIXth IAU General Assembly

August 3 – 14, 2015, Honolulu, Hawaii, USA

URL: http://www.iau.org/science/meetings/future/general_assemblies/1024/

18th Geodynamics and Earth Tide Symposium 2016

June 6 – 9, 2016, Trieste, Italy

URL: <http://www.lithoflex.org/g-et/>

41th COSPAR Scientific Assembly

July 30 – August 7, 2016, Istanbul, Turkey

URL: <http://www.cospar-assembly.org/>