



International Association of Geodesy

Newsletter

December 2013

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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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Meeting Announcements

Meetings Calendar

50th Annual Convention of IGU

January 8-12, 2014, CSIR-NGRI, Hyderabad, India

50th Annual Convention of IGU will be held during 8-12 January 2014 at CSIR-NGRI, Hyderabad, India.

URL: <http://www.igu.in>

17. Internationaler Ingenieurvermessungskurs

January 14-17, 2014, Zurich, Switzerland

URL: <http://www.igp.ethz.ch/iv2014/>

EVN Technical and Operations Group Meeting

January 23-24, 2014, Bad Kötzing, Germany

URL: <http://www.fs.wetzell.de/veranstaltungen/vlbi/tog2014/index.html>

ION International Technical Meeting (ITM) 2014

January 27-29, 2014, San Diego, CA, USA

URL: <http://www.ion.org/meetings/?conf=itm>

SPACOMM 2014

February 23-27, 2014, Nice, France

URL: <http://www.iaria.org/conferences2014/SPACOMM14.html>

IVS General Meeting

March 2-7, 2014, Shanghai, China

URL: <http://ivs2014.csp.escience.cn/>

GEOProcessing 2014

March 23-27, 2014, Barcelona, Spain

URL: <http://www.iaria.org/conferences2014/GEOProcessing14.html>

Munich Satellite Navigation Summit 2014

March 25-27, 2014, Munich, Germany

URL: <http://www.munich-satellite-navigation-summit.org/>

Third International School on "The KTH Approach to Modeling the Geoid"

March 31-April 4, 2014, Johor Bahru, Malaysia

URL: <http://www.infra.kth.se/geo/events/geoidschool.html>

INGEO 2014

April 3- 4, 2014, Prague, Czech Republic

6th International Conference on Engineering Surveying

URL: https://www.svf.stuba.sk/generate_page.php?page_id=5061

European Navigation Conference ENC GNSS 2014

April 15-17, 2014, Rotterdam, The Netherlands

URL: <http://www.enc-gnss2014.com/>

SARAL International Science and Applications Meeting

April 22-24, 2014, Ahmedabad, India

URL: http://smc.cnes.fr/SARAL/GP_actualite.htm

European Geosciences Union General Assembly 2014

April 27 – May 2, 2014, Vienna, Austria

URL: <http://www.egu2014.eu/>

GNSS : Principles, Augmentation and Evolutions of EGNOS

May 12- 23, 2014, Toulouse, France

URL: <http://www.formationcontinue-enac.fr/co/WORKGNSSEXT.html>

EUREF Symposium 2014

June 4- 6, 2014, Vilnius, Lithuania

URL: http://www.euref.eu/euref_symposia.html

ICC&GIS 2014

June 15-21, 2014, Riviera, Bulgaria

5th Jubilee International Conference on Cartography & GIS

URL: www.iccgis2014.cartography-gis.com

IGS Workshop 2014

June 23-27, 2014, Pasadena, CA, USA

URL: <http://igsweb.jpl.nasa.gov/pipermail/igsmail/2013/008013.html>

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/>

INTERGEO / Geodätische Woche

September 7-9, 2014, Berlin, Germany

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

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

September 15-19, 2014, TBD, Germany

URL: <http://www.massentransporte.de/index.php?id=28>

European VLBI Network (EVN) Symposium

October 7-10, 2014, Cagliari, Italy

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

REFAG2014

October 13-17, 2014, Luxembourg

IAG Commission 1 Symposium 2014 "Reference Frames for Applications in Geosciences"
URL: <http://www.iers.org/TERS/EN/NewsMeetings/ForthcomingMeetings/forthcoming.html>

ILRS Technical Workshop

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

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

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

November 18-21, 2014, Madrid, Spain

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

AGU 2014 Fall Meeting

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

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

European Geosciences Union General Assembly 2015

April 12 – 17, 2015, Vienna, Austria

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

XXVI IUGG General Assembly

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

URL: <http://www.iugg.org/assemblies/>

XXIXth IAU General Assembly

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

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

41th COSPAR Scientific Assembly

July 30 – August 7, 2016, Istanbul, Turkey

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

Reports

Scientific Assembly of the International Association of Geodesy: Some Observations on Modern Geodesy

2-6 September 2013, Potsdam, Germany

In 1862, the Prussian General Johann Jacob Baeyer initiated the Central European Arc Measurement ("Mitteleuropäische Gradmessung") project. By the end of that year fifteen countries had affirmed their participation, and in 1864 the first General Conference was held in Berlin. General Baeyer's project is considered the forerunner to today's International Association of Geodesy (IAG). The IAG celebrated its 150th anniversary with a Scientific Assembly in Potsdam, Germany, 2-6 September 2013 – as reported in the November 2013 article in the GIM magazine.

A programme of 241 presentations and 234 posters were presented under the following themes: (1) Definition, Implementation & Scientific Applications of Reference Frames; (2) Gravity Field Determination & Applications; (3) Observing, Understanding & Assessing Earth Hazards; (4) Science and Applications of Earth Rotation & Dynamics; (5) Observation Systems & Services; and (6) Imaging & Positioning Techniques & Applications. The breadth of topics highlighted the contributions of Modern Geodesy to science and society, and a number of observations can be made:

- The most popular theme was Gravity Field Determination & Applications. The recent gravity field mapping satellites (first CHAMP, then the GRACE & GOCE missions) continue to produce exciting results in support of a wide range of geoscience applications, including geoid determination, physical

oceanography, hydrology, geophysical and atmospheric sciences. *The gravimetric community waits eagerly for the GRACE follow-on mission.*

- On the other hand, the value of Reference Frames to the broader navigation, geospatial and global change communities continues to rise. The International Terrestrial Reference Frame (ITRF) is a highly valued “product” of modern geodesy. The ITRF is increasingly recognised as the fundamental datum for national & regional mapping, as well as global change studies. *The current ITRF2008 will soon be superseded by ITRF2013.*
- GNSS continues to be the workhorse of geodesy, not only as the quintessential 3D (and also 4D) geodetic positioning technology, but also provides invaluable measurement data for the determination & maintenance of the ITRF, easy “connection” to the ITRF, and supports precise orbit determination for many Earth Observation satellite missions. *High precision GNSS is by far the most advanced, and accessible, geodetic tool ever developed.*
- Modern geodesy is very dependent on the satellite missions launched by a handful of space agencies. In addition to GNSS and gravity field mapping missions, there are many Earth Observation satellites including those for magnetic field mapping, topographic, sea & ice surface mapping, timing, relativity probes, and Earth imaging. *The challenge is to “operationalize” what are often once-off science missions, so as to ensure long time series of observations of many Earth system parameters.*
- The IAG is fortunate to have launched a range of services in the 1990s, and is now reaping the reward in terms of increased accuracy and resolution in the geometric and gravimetric mapping of the dynamic Earth. The challenge for the IAG in the coming decade is the realisation of an integrated Global Geodetic Observing System (GGOS). Such a synoptic observing system will contribute to unified measurement modelling and analysis –that will deliver a *quantum increase in accuracy and stability for the time, gravitational and spatial reference frames underpinning today’s geodetic enterprises.*
- The International GNSS Service (IGS) is the most visible of the IAG services because its products and expertise support the ever-growing range of GNSS applications in science and engineering. *In 2014 the IGS will be celebrating the 20th anniversary of its founding.*

In summary, after 150 years we can proudly claim that “geodesy matters, now more than ever”.



Participants at the IAG Scientific Assembly

CHRIS RIZOS
IAG President