



**INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS**  
**UNION GEODESIQUE ET GEOPHYSIQUE INTERNATIONALE**

## **The IUGG Electronic Journal**

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This informal newsletter is intended to keep IUGG Member National Committees informed about the activities of the IUGG Associations, and actions of the IUGG Secretariat. Past issues are posted on the IUGG website (<http://www.iugg.org/publications/ejournals/>). Please forward this message to those who will benefit from the information. Your comments are welcome.

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### **1. Next IUGG business meetings**

The IUGG President Harsh Gupta announced the dates of the next IUGG business meetings to take place in Prague, Czech Republic, in 2013: the Bureau will meet on 20-21 September, the Executive Committee on 21-23 September, and the Science Program Committee for the XXVI General Assembly of IUGG on 24 September. The Bureau is comprised of the President, Vice-President, Secretary General, Treasurer and 3 Members at large. The Executive Committee consists of the Bureau members, the immediate Past President, and the Presidents of the eight Union Associations.

The Bureau and Executive Committee will review the activity of the Union and its Associations since the last IUGG General Assembly and will discuss major issues of the all Union's activity for the next two years before the 2015 General Assembly; among them, strengthening links between IUGG Associations and the National Committees for Geodesy and Geophysics, preparing the 2015 assembly, celebrating the 100<sup>th</sup> anniversary of IUGG, improving the visibility of the Union and the linkage to other international programs and activities, and some other topics.

The Science Program Committee is comprised of the Chair and Secretaries General of the Union and its eight Associations. The Executive Committee appointed Eduard Petrovský (Head of the Department of Geomagnetism, Institute of Geophysics, Academy of Sciences of Czech Republic, and Vice President of IAGA) as Chair of the Science Program Committee.

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## **2. Report on the Annual Meeting of the French National Committee for Geodesy and Geophysics**

The Annual Meeting of the French National Committee for Geodesy and Geophysics (CNFGG) was held on 19 March at the Institute de Physique du Globe de Paris (IPGP), in Paris, France. The first part of the Annual Meeting was a scientific colloquium entitled “Les fantaisies du champ magnétique”, and its second part was dedicated to the Committee’s business. The IUGG Secretary General A. Ismail-Zadeh attended the meeting and welcomed the participants at the beginning of the colloquium. Three talks were presented by J.-P. Valet, J. Dymant (both IPGP), and S. Fauve (Ecole Normale Supérieure) on different topics of Earth magnetism: (i) the Laschamps geomagnetic excursion and the demise of Neanderthal; (ii) high resolution deep-sea marine magnetic investigations, and (iii) studies on dynamos. The 2012 CNFGG Doctoral Thesis Prize was presented to Emmanuel Vincent (now a post-doc at MIT, Massachusetts, USA) for his thesis entitled «Interactions between tropical cyclones and ocean». Emmanuel gave a talk on this topic. At the business meeting J. Dymant, CNFGG President, addressed the participants and reported on the activities of the Committee for the last year. Several aspects of the Committee’s activities were discussed, including the reports from the Committee’s Sections, the financial report, and the election of the new members of the Committee.

Received from J. Dymant, CNFGG President

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## **3. GeoUnions meets in Paris**

The Joint Board of GeoUnions met in Paris, France, on 28 April to coordinate scientific activities of the Unions, to exchange ideas, and to promote scientific research of common interest. The meeting was organized by Alik Ismail-Zadeh, IUGG Secretary General and Vice Chair of the Joint Board, with a local support from Jean-Paul Cadet, Honorary President of the Commission for the Geological Map of the World. The meeting was held in the Maison de la Géologie and hosted by the French Geological Survey (BRGM). Representatives of eight Unions attended the meeting and welcomed several distinguished guests: Gordon McBean, President-Elect of the International Council for Science (ICSU); Steven Wilson, ICSU Executive Director; Howard Moore, ICSU Senior Advisor; and Jane Rovins, Executive Director of the Integrated Research on Disaster Risk (IRDR). The meeting was chaired by Ron Abler, IGU Past President and Chair of the Joint Board.

The representatives of GeoUnions updated each other on the activities of the Unions since the last meeting in Istanbul, Turkey, April 2012, and discussed joint actions of the GeoUnions, namely, (i) the International Year for Global Understanding (<http://global-understanding.info/>) led by the International Geographical Union (IGU), (ii) the VALID project (<http://www.un-spider.org/VALID-stakeholder-assessment-I>) led by ISPRS and UN-SPIDER, (iii) the International Year of Deltas (<http://www.iyds-2013.org/>) co-sponsored by IUGG, IGU, ISPRS, IUGS as well as by the International Geosphere-Biosphere Program (IGBP) and the World Climate Research Program (WCRP), and (iv) new ISPRS project proposal on global land cover data and information. GeoUnions discussed the aspects of communication between ICSU and the Unions, the Unions’ role in ICSU committees and interdisciplinary bodies and in the ICSU Regional Scientific programs. Special emphasis was given to the role of GeoUnions in “Future Earth: Research for Global Sustainability” (<http://www.icsu.org/future-earth>), a new ICSU major program. They received a report from the IRDR Executive Director on the new research topics on the assessment of integrated research on disaster risk and FORIN (Forensic Investigation of Disasters), and discussed their involvements in the IUGG-IRDR initiative on negotiations about setting up an

intergovernmental panel on disaster risk assessment. The participants discussed the future of scientific publications and how scientific advice can underpin decision-making.

The Joint Board of GeoUnions was set up in 2004 as an informal forum of the leaders of the ICSU Scientific Unions to coordinate scientific activities in Earth, planetary, space and environmental sciences and to promote geosciences worldwide. The Joint Board is comprised of the officers of the International Astronomical Union (IAU), the International Geographical Union (IGU), the International Union for Quaternary Research (INQUA), the International Society for Photogrammetry and Remote Sensing (ISPRS), the International Union of Geodesy and Geophysics (IUGG), the International Union of Geological Sciences (IUGS), the International Union of Soil Sciences (IUSS), and the International Union of Radio Science (URSI).

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#### **4. 2013 ICSU Grants awarded**

The International Council for Science (ICSU) announced the 2013 awardees to be funded from the ICSU Grants Programme. The project “Mathematics of Climate Change, Related Natural Hazards and Risks”, submitted by the International Mathematical Union and supported enthusiastically by IUGG, was awarded EUR 30,000. The project is also supported by the International Union of Theoretical and Applied Mechanics (IUTAM), the U.S. National Academy of Sciences, Academia Mexicana de Ciencias, IRDR, WCRP, Centro de Investigación en Matemáticas in Mexico, and the ICSU Regional Office for Latin America and the Caribbean (ROLAC). Mathematics and mechanics play an important role in geoscience education, and hence a mathematical training is an essential component for capacity building of the new generation of scientists dealing with climate change and natural hazards. Holding the high-level educational workshop in Latin America in the framework of the 2013 UNESCO-sponsored “Mathematics of Planet Earth Program” will make a great impact on science education in the region and raise the profile of ICSU and its Members. IUGG will be involved in the project through its three Union Commissions on (i) Mathematical Geophysics (CMG), (ii) Climate and Environmental Changes (CCEC), and (iii) Geophysical Risk and Sustainability (GRC). The CMG will contribute to the project by its expertise in mathematical geophysics especially related to fluid components of the Earth system. The CCEC will contribute to the project by its expertise in reducing uncertainties in climate and environmental models. The GRC will provide an expertise in studies of natural hazards.

In 2013 IUGG will be involved also in the project “G@GPS-Africa: Long-term Recharge of Large Groundwater Basins”, led by the International Union for Quaternary Research (INQUA) and supported by IUGS. The project was awarded EUR 20,000 by an ICSU grant. IUGG will be involved in the project through the IAHS International Commission on Groundwater, a commission dealing with research on groundwater basins and associated hydrogeological processes. In the framework of the project, IAHS will undertake an initiative to compare and contrast paleoclimate signals in arid and semi-arid groundwater basins across three continents: the Maputo Groundwater Basin in Mozambique, the Great Artesian Basin in Australia, and the Heihe River Basin in China.

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#### **5. News from Future Earth**

##### ***Final Report of the Transition Team***

The initial design phase of Future Earth is now coming to a close as the Transition Team, tasked with defining frameworks for Future Earth research and governance, put finishing touches on the final report. Key highlights of the report include:

- How Future Earth will adopt an integrated and solutions-oriented approach to global environmental change issues to inform a transition to global sustainability;
- A proposed governance structure to ensure that excellence in research, across the range of natural and social sciences, engineering and humanities, and strategic stakeholder engagement, can be delivered under Future Earth;
- The importance of co-designing research with stakeholders, and initial thinking on how to address capacity building at global and regional levels, how to develop a strategic approach to communications and engagement;
- Funding: current and future perspectives. Ways to open up the funding landscape for global environmental change research;
- Concrete steps towards the implementation of Future Earth.

Recommendations focus on the need for Future Earth to build partnerships, grow with its community, and innovate to deliver on its vision. The report provides the foundation for the development of Future Earth and will inform the next round of consultations and outreach to mobilise scientists and experts, from global to national levels, as well as the work of the Alliance (acting as interim Governing Council), the Science Committee, the Engagement Committee and the Interim Secretariat as they become operational.

#### ***Progress made on nominations for Science Committee***

Future Earth received 134 outstanding nominations for the Science Committee. These nominations were narrowed down to a shortlist through several rounds of evaluation, by a joint ICSU/ISSC selection panel. The panel was delighted to see such a strong line-up of candidates, which made their task tough but rewarding. Based on this evaluation, the ICSU Executive Board and ISSC Executive Council are currently considering and agreeing the proposal for chairmanship and committee membership. Once agreed, the proposal will be forwarded to the Science and Technology Alliance for Global Sustainability for endorsement. The final membership will be announced in May 2013.

***Future Earth*** is being established by a partnership for global sustainability including researchers, funders and users of knowledge. The Science and Technology Alliance for Global Sustainability currently comprises: International Council for Science (ICSU), International Social Science Council (ISSC), Belmont Forum (a high level group of major research funders), UN Educational Scientific Cultural Organization (UNESCO), UN Environment Programme (UNEP), UN University (UNU), and World Meteorological Organization (WMO) as an observer. The vision underpinning Future Earth is one in which the scientific community provides knowledge through open and collaborative processes for society to define pathways towards sustainability and respond effectively to the risks and opportunities of global environmental change.

Source: Future Earth Newsletter (April 2013)

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## **6. IUGG and WMO co-sponsor a scientific meeting on ash dispersal**

The 2<sup>nd</sup> IUGG-WMO workshop on “Ash Dispersal Forecast and Civil Aviation” will be held on 18-20 November 2013 at the Headquarters of the World Meteorological Organization (WMO) in Geneva, Switzerland. The main objectives of the workshop are to (i) review the interaction between meteorological, atmospheric, and volcanological modeling and remote sensing communities; (ii) develop strategies for a closer working relationship and further collaboration between the aviation industry and the scientific community; (iii) document progress from the 2010 Geneva meeting; (iv) identify best practice modeling strategies to support operational implementation; and (v) identify and develop concepts to address current challenges.

The workshop is supported by IAVCEI, the International Civil Aviation Organization (ICAO), University of Geneva, Barcelona Supercomputing Center, British Geological Survey, University of Alaska Fairbanks, U.K. MetOffice, and the World Organization of Volcano Observatories (WOVO). For more detail please visit the workshop webpage:

<http://www.unige.ch/sciences/terre/mineral/CERG/Workshop2.html>

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## 7. Obituary: Hans-Jürgen BOLLE (1929-2013)



Hans-Jürgen Bolle who played an important role in integrating meteorology and atmospheric sciences in Germany and Austria, and who was much engaged in international affairs coordinated by IUGG and COSPAR, died on 13 March 2013 in Munich, Germany. Born in Northern Germany in 1929, Hans-Jürgen Bolle studied physics at the University of Hamburg and earned his PhD in 1958 by comparing measured spectra of infrared atmospheric radiation with effective black body radiation under the tutelage of Rudolf Schulze, then director of Deutscher Wetterdienst's radiation observatory.

Bolle started his academic career in 1958 as an assistant professor with Fritz Möller, a pioneer in atmospheric radiation, working at the University of Mainz. In the 1960s, Bolle followed Möller to the Meteorological Institute at the University of Munich, where he headed the radiation group from 1970 to 1977. During this time, novel instruments were designed to measure radiation on balloons and satellites, e.g. the MIPAS concept which was needed to form a core instrument on the European Envisat satellite. From 1977 to 1986, Bolle worked and taught at the University of Innsbruck. From 1986 until his retirement in the 1990s he worked at the Free University Berlin.

Inspired by his mentor Fritz Möller, Hans-Jürgen Bolle was elected to the International Radiation Commission of IAMAS in 1971, served as its president from 1979-1983, and became honorary member in 1996. From 1983-1987 he took on the responsibility of the IAMAS presidency. On a wider international scene he held important positions within the World Climate Research Programme (WRCP), the International Geosphere-Biosphere Programme (IGBP) and the ICSU-Committee on Space Research (COSPAR).

During five active decades of research and science management, Hans-Jürgen Bolle extended his scope from ground based, single station measurements to global observations, which are of relevance not only for the atmospheric sciences but also for the neighboring geophysical disciplines and beyond. His broad knowledge, combined with an unassuming attitude towards others, enabled him to develop an enduring network of cooperation and friendship to the benefit of many, both nationally and internationally. For this Hans-Jürgen will long be remembered with a sense of loss and warm appreciation.

Hans Volkert, IAMAS Secretary General

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## 8. IUGG-related meetings occurring during May – July

A calendar of meetings of interest to IUGG disciplines (especially those organized by IUGG Associations) is posted on the IUGG website (<http://www.IUGG.org/calendar>). Specific

information about these meetings can be found there. Individual Associations also list more meetings on their websites according to their disciplines.

### **May**

- 6-9, IAG, Westford, Massachusetts, USA, Seventh IVS Technical Operations Workshop. Web: <http://ivscc.gsfc.nasa.gov/meetings/tow2013/>.
- 13-16, IAHS, Rennes, France, HydroEco2013, 4<sup>th</sup> International Multidisciplinary Conference on Hydrology and Ecology: Emerging Patterns, Breakthroughs and Challenges. Web: <http://osur.univ-rennes1.fr/HydroEco2013/>.
- 13-16, WCRP, Toulouse, France, International workshop on seasonal to decadal prediction. Web: <http://www.meteo.fr/cic/meetings/2013/s2d/>.
- 14-17, AGU, Cancun, Mexico, Joint Meeting of the Americas. Web: <http://moa.agu.org/2013>.
- 19-23, UNISDR, Geneva, Switzerland, Global Platform for Disaster Risk Reduction, Fourth Session – Invest Today for a Safer Tomorrow. Web: <http://www.preventionweb.net/globalplatform/2013/>.
- 19-24, IGSO, Wroclaw, Poland, XXVI International Geodetic Students Meeting. Web: <http://www.gislab.up.wroc.pl/igsm2013/index.php?q=node/2>.
- 23-24, SCAR/SCOR, Shanghai, China, SOOS – Southern Ocean Observing System Asian Workshop. Web: <http://www.soos.aq/index.php/calendar?view=event&cid=42>.
- 26-30, CMOS-CGU-CWRA, Saskatoon, Saskatchewan, Canada, 2013 Joint Scientific Congress “Bringing Environmental Science, Policy and Resource Management”. Web: <http://www.cmos.ca/congress2013/index.htm>.
- 27-30, PIK/IASA/ISI-MIP, Potsdam, Germany, Impacts World – International Conference on Climate Change Effects. Web: <http://www.climate-impacts-2013.org/>.
- 29-31, IAG, Budapest, Hungary, European Reference Frame (EUREF) Symposium. Web: <http://euref2013.fomi.hu/>.
- 30 May - 2 June, IAG, Ilulissat, Greenland, International Symposium: Reconciling Observations and Models of Elastic and Viscoelastic Deformation due to Ice Mass Change. Web: <http://www.dtu.dk/subsites/iag.aspx>.

### **June**

- 3-7, IAHS, Koblenz, Germany, Water and Environmental Dynamics - VI International Conference on Water and Environmental Research. Web: <http://www.water-environment.org/frontend/index.php>.
- 9-12, IAMAS, Madison, Wisconsin, USA, 8<sup>th</sup> Antarctic Meteorological Observation, Modeling, and Forecasting Workshop. Web: <http://amrc.ssec.wisc.edu/meetings/meeting2013/>.
- 10-13 IAHS, The Hague, The Netherlands, International Conference on Land Use and Water Quality: Reducing Effects of Agriculture. Web: <http://www.luwq2013.nl>.
- 12-14, IAG, Ottawa, Canada, GNSS Precise Point Positioning Workshop: Reaching Full Potential. Web: <http://pppworkshop2013.apps01.yorku.ca/>.
- 17-21, CTBTO, Vienna, Austria, CTBTO Science and Technology Conference. Web: <http://www.ctbto.org/specials/snt2013/>.
- 17-21, IAG, Rome, Italy, VIII Hotine-Marussi Symposium. Web: <http://w3.dicea.uniroma1.it/hotine-marussi-2013/>.
- 23-28, IAMAS, Fort Collins, Colorado, USA, 19<sup>th</sup> International Conference on Nucleation and Atmospheric Aerosols. Web: <http://chem.atmos.colostate.edu/icnaa/>.
- 24-28, AOGS/AGU/EGU/IUGG, Brisbane, Australia, Asia Oceania Geosciences Society Annual Meeting. Web: <http://www.asiaoceania.org/aogs2013/public.asp?page=home.htm>.

## July

- 1-3, IAHS, Wageningen, The Netherlands, IPC11 - 11th International Precipitation Conference. Web: <http://www.wageningenur.nl/en/show/11th-International-Precipitation-Conference.htm>.
- 1-4, IAG, Shanghai, China, International Symposium on Planetary Sciences (IAPS2013). Web: <http://202.127.29.4/meetings/iaps2013/>.
- 5-6, IAMAS, Zurich, Switzerland, Workshop on Measurement Problems in Ice Clouds.
- 8-12, IAMAS, IACS, Davos, Switzerland, DACA-13 (Davos Atmosphere and Cryosphere Assembly 2013). Web: <http://www.daca-13.org>.
- 20-24, IAVCEI, Kagoshima, Japan, IAVCEI General Assembly - 2013: Forecasting Volcanic Activity: reading and translating the messages of nature for society. Web: <http://www.iavcei2013.com/>.
- 22-26, IAHS, IAPSO, IASPEI, Gothenburg, Sweden, IAHS-IAPSO-IASPEI Joint Assembly: Knowledge for the Future. Web: <http://iahs-iapso-iaspei2013.com/>.
- 29 - August 1, IAMAS, Leeds, UK, 11<sup>th</sup> International workshop on Layered Phenomenon of the Mesopause Region (LPMR). Web: <http://www.lpmr.leeds.ac.uk>.
- 29 - August 2, IMU, IUGG, IUTAM, Guanajuato, Mexico, Workshop on Mathematics of climate change, related hazards and risks. Web: <http://www.mca2013.org/en/workshop-on-mathematics-of-climate-change.html>

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**Note: Contributions to IUGG E-Journal are welcome from members of the IUGG family. Please send your contributions to Alik Ismail-Zadeh by e-mail (insert in Subject line: *contribution to E-Journal*). The contributions will be reviewed and may be shortened.**