The IUGG Electronic Journal

Volume 11 No. 9 (1 September 2011)

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.

Contents

- 1. XXV IUGG General Assembly Scientific Program
- 2. National Reports
- 3. Geosciences and the Future of Planet Earth
- 4. Report on the Workshop "Vertical Coupling in the Atmosphere/Ionosphere System"
- 5. International Geophysical Research Group Europe-Africa/Asia (IGRGEA)
- 6. IUGG-related meetings occurring during September November 2011

1. XXV IUGG General Assembly Scientific Program

The Scientific Program of the XXV IUGG General Assembly ran from 28 June through to 7 July 2011. It involved about 3600 scientists from 91 countries. Over the 10 days of the Assembly delegates participated in 198 Symposia and Workshops comprised of 2831 oral and 1926 poster presentations. The Program comprised of 12 Union Symposia, 52 Inter-Association Symposia, and 128 Symposia sponsored by the individual Associations, and several specialty workshops. Nine eminent Earth and space scientists were invited by the IUGG President to deliver prestigious Union Plenary Lectures. More information on the General Assembly can be found on the IUGG2011 website: http://www.iugg2011.com/.

2. National Reports

National Reports of activities in geodesy and geophysics are requested from each IUGG Adhering Body before each quadrennial General Assembly. These reports are useful to reference the expertise resident in each country and the unique opportunities for research and collaboration that may be available. National Reports were received from Argentina, Bulgaria, China, Hungary, India, Japan, Romania, Russia, the Slovak Republic, Thailand, and Turkey. The National Report from Hungary is a special issue (Vol. 46, No. 2, 2011) of Acta Geodaetica et Geophysica Hungarica; the National Report from the Slovak Republic is a special issue (Vol. 41) of Contributions to Geophysics & Geodesy published by the Geophysical Institute of the Slovak Academy of Sciences. The reports that were provided in electronic form will be posted on the IUGG website soon. The IUGG website is currently undergoing a major update.

3. Geosciences and the Future of Planet Earth

IUGG continued its tradition to run a Union symposium dedicated specifically to the vision of early career scientists of the future of our planet. The Union symposium "Geosciences and the Future of Planet Earth" was held at the XXV IUGG General Assembly in Melbourne on 28 June 2011. Organized and convened by Harsh Gupta (Vice-President IUGG; currently IUGG President), the aim of this symposium was to invite early to mid-career scientists to make suggestions as to how IUGG and its Associations could enhance the role of earth and space sciences in the service of mankind. The very international array of speakers addressed the remit in a variety of ways. Kate Heal (UK, IAHS) and Avelina Geyer Traver (Spain, IAVCEI) focussed on communication between scientists, policymakers and the public. In their talks, Kusumita Arora (India, IAGA), Abdul Azeez K. K. (India, IAGA), Endawoke Yisengaw (Ethiopia/USA, IAGA), Alexandra Yahn (USA, IAPSO), Rima Chatterjee (India, IASPEI), Gulam Babayev (Azerbaijan, IAG) and Claudia Emde (Germany, IAMAS) demonstrated the relevance of different areas of the geosciences to mankind, ranging from identifying alternative energy sources, mineral prospecting and hazard risk assessment to satellite-based communications and aviation. Claudia's talk was extremely topical given the disruption to aviation caused by the ongoing eruption of the Chilean volcano, Puyuhue, and illustrated how basic science - in this case the development of new methods using polarised radiance fields for assessing mass concentration of ash - is of relevance to society. The presentations by James Wookey (UK, IASPEI) and Craig Rodger (New Zealand, IAGA) focussed more on the benefits of collaboration within the scientific community. James stressed the need to share and publish datasets requiring standards, which IUGG could play a role in endorsing and promoting. Craig emphasised that large international experimental collaborative networks are incredibly important to scientists in small countries and developing countries. He presented an example of such a network, the World Wide Lightning Location Network (wwlln.net), which operates on the principles of no exchange of funds and free exchange of data. The network is yielding many, and some unexpected applications, including early warning of volcanic eruptions and predicting tropical storm intensity. Scientific collaboration and networks were also the subject of the talk by Inga May (Germany, IACS). She introduced the highly successful APECS (Association of Polar Early Career Scientists, www.apecs.org) which facilitates research, career development and outreach activities for 2500 members in more than 45 countries and is run by enthusiastic, dedicated volunteers with only one full-time paid staff member. The symposium was very well attended and there was plenty of time between the talks for lively discussion. Many suggestions were made as to how to improve communication between scientists, the public and policy makers. They included an IUGG blogspace and using IUGG Assemblies to offer lectures to schools and colleges and engage with the media. Examples were given of how scientists in Australia have improved communications with policy makers through scientists meeting parliamentarians on a regular basis and also the production of a National Strategy for Geosciences. Some participants emphasised the need to use professional communicators, but also the role of scientists in defining the messages to be communicated. A further point stressed during the talks and discussion was that a strategic approach by scientific organisations and also incentives for early and mid-career scientists are both required to fully address the immense challenge of more effectively communicating our science. Overall the Symposium formed a stimulating and multidisciplinary start to the Assembly and it is hoped that the discussion engendered will be of benefit to IUGG activities.

Received from Kate Heal, School of GeoSciences, The University of Edinburgh, UK

4. Report on the Workshop "Vertical Coupling in the Atmosphere/Ionosphere System"

The 4th IAGA/ICMA/CAWSES-II TG4 Workshop "Vertical Coupling in the Atmosphere / Ionosphere System" was held in Prague, Czech Republic, 14-18 February 2011. 75 scientists from 16 countries attended the meeting presenting 79 papers, from which 16 were solicited presentations. Before the official opening of the workshop there were two public/educational lectures attended mainly by students from Prague schools and universities. The meeting brought together research experts from both the middle and upper neutral atmospheric and ionospheric communities in order to present their work and assess/debate ongoing issues relating to the theoretical, modeling and observational aspects of all kind of processes that transfer energy and momentum from the lower atmosphere to the upper atmosphere and ionosphere and vice versa. The aim of this workshop was not only to address the physics behind the forcing mechanisms that originate in the lower atmosphere and play an important role on the upper atmosphere and ionosphere, but also to show the solutions of some of the problems, which were identified during the 3rd IAGA/ICMA Workshop held five years ago in Varna, Bulgaria. The program focused on various aspects and topics of neutral dynamics as well as ionospheric electrodynamics and plasma physics including coupling processes in the middle atmosphere and in the atmosphere/ionosphere system. The meeting provided an excellent opportunity for the research communities to interact to review and debate the progress to date in the field of upper atmosphere-ionosphere research and come up with suggestions and ideas for further research on the vertical coupling of the atmosphere-ionosphere system as the workshop brought together scientists working in the independent research areas of the mesosphere and lower thermosphere and the ionosphere, that is, on two collocated "spheres" of the near-earth environment which remain closely coupled and continuously interact. Co-sponsors of the workshop were the International Association of Geomagnetism and Aeronomy (IAGA), the International Commission on the Middle Atmosphere (ICMA), the International Union of Geodesy and Geophysics (IUGG), the International Union of Radio Science (URSI), and the Scientific Committee on Solar-Terrestrial Physics (SCOSTEP).

Received from Petra Koucká Knížová, Chair of the Workshops Organizing Committee

5. International Geophysical Research Group Europe-Africa/Asia (IGRGEA)

At the Vancouver Scientific Assembly of IAGA in 1987 the Interdivisional Commission on Developing Countries (ICDC) requested to intensify International Electrojet studies in the framework of the International Equatorial Electrojet Year 1992-1994 (IEEY). After the International Geophysical Year (IGY) and programs that followed it, IEEY was, for the first time, a planetary experiment to be handled largely by scientists from developing countries. In 1995, at the end of the IEEY, the Groupe International de Recherche en Géophysique Europe/Afrique (GIRGEA), or in English the International Geophysical Research Group Europe Africa (IGRGEA) was organized to follow the research work initiated during IEEY. The IGRGEA is a laboratory without borders, a worldwide network of scientists. The IGRGEA main objectives are to develop research in geophysics and build research teams of excellence in developing countries. To reach these objectives, scientific programs are defined in the framework of international projects, involving senior scientists from the whole world and students mainly from developing countries. The IGRGEA was involved in the International Heliophysical Year (IHY http://ihy2007.org) and is presently involved in the International Space Weather Initiative (ISWI http://www.iswisecretariat.org). IEEY, IHY and ISWI programs are part of the UNBSS initiative to develop Basic Space Science in developing countries (http://www.oosa.unvienna.org). The IGRGEA is based on the respect of ethical rules; the original data collected in a given country are used by the students of the country for their training in order to obtain their PhD and a position in their country. From 1995 until 2010, 18 PhD were defended by students from different countries (Benin, Burkina Faso, Côte d'Ivoire, Egypt, Spain, France, Senegal, Vietnam), 16 have a position in their country, there are 7 new positions (the other have the position during their PhD). Two young scientists left geophysical research after their PhD for computer sciences. Currently 32 PhD theses are under development, 8 students have already a position in their country. In the near future all the scientific results of IGRGEA will be described on the website More information on the website www.girgea.org.

Received from Christine Amory-Mazaudier, IGRGEA International Committee

6. IUGG-related meetings occurring during September – November 2011

A calendar of meetings of interest to IUGG disciplines (especially those organized by IUGG Associations) is posted on the IUGG web site (http://www.IUGG.org/calendar). Specific information about these meetings can be found there. Individual Associations also list more meetings on their web sites according to their disciplines.

September

- 1-3, IAHS, Besançon, France, H2Karst, the 9th Conference on Limestone Hydrogeology
- 3-5, WDS, ICSU, Kyoto, Japan, 1st ICSU World Data System Conference Global Data for Global Science
- 5-8, IAHS, Gdansk, Poland, WMHE 2011, 12th International Symposium on Water Management and Hydraulic Engineering
- 5–9, IACS, Kirovsk, Murmansk region, Russia, Avalanches and Related Subjects IV International Conference: The contribution of theory and practice to avalanche safety
- 6-8, IAHS, Moscow, Russia, EngeoPro-2011, Environmental Geosciences and Engineering Survey for Territory Protection and Population Safety
- 6-9, IAHS, Lima, Peru, Hydrology and present geodynamic of South American basins. 4th HYBAM Scientific Meeting
- 11-14, IAHS, Vienna, Austria, Water Policy 2011 Harmonizing water management strategies at multiple scales to sustain ecological, agricultural, and urban/industrial needs
- 11-16, IAGA, Borovets, Bulgaria, International Symposium on Recent Observations and Simulations of the Sun-Earth System II (ISROSES II)
- 12-16, IACS, Fairbanks, Alaska, USA, Fifth International Conference on Mars Polar Science and Exploration
- 13-16, IAHS, Manaus, Brazil, International Workshop on Hydrometry
- 18-22, IAHS, Leipzig, Germany, ModelCare 2011 "Models Repositories of Knowledge"
- 18-22, IUSS, Wageningen, The Netherlands, Soil Science in a Changing World
- 19-21, IACS, Dushanbe, Tadjikistan, MOUNTAINHAZARDS 2011: Climate Changes and Natural Hazards in Mountain Areas
- 19-23, IAHS, Johannesburg, South Africa, Hydropower Africa
- 20-25, IAHS, Bari, Italy, GEOMED 2011, 4th International Conference on Medical Geology
- 21-23, IAHS, São Paulo, Brazil, International Conference on the Management of the Guarani Aquifer System: An Example of Cooperation
- 23-24, IACS, Siena, Italy, Research Urgencies in the Polar Regions and their links to the ICSU Grand Challenges in Global Sustainability
- 26-29, IAHS, Brisbane, Australia, 14th International River symposium: The Value of Rivers
- 26-30, ICSU, Rome, Italy, General Assembly

- 26 September 8 October, IASPEI, IUGG, Trieste, Italy, ICTP Advanced School on Understanding and Prediction of Earthquakes and other Extreme Events in Complex Systems
- 27-29, IAHS, UNESCO, WMO, Tsukuba, Japan, 5th International Conference on Flood Management (ICFM5)
- 27-30, IAHS, Madurai, Tamil Nadu, India, Forth International Groundwater Conference (IGWC-2011)

October

- 3-5, IAHS, Bled, Slovenia, V International Symposium on Transboundary Waters Management
- 5-8, IAHS, Kalavrita, Greece, 9th International Hydrogeological Congress
- 15-23, IAHS, Tehran, Iran, 21st International Congress on Irrigation and Drainage & 8th International Micro Irrigation Congress
- 17-19, IAHS, Prague, Czech Republic, HYDRO 2011 Practical Solutions for a Sustainable Future
- 18-21, IAHS, Jeju Island, Korea, the Second Asia-Pacific Coastal Aquifer Management Meeting
- 21-23, IAHS, Xi'an, China, International Symposium on Impacts of Climate Change on Water Resources in Arid and Semi-arid Regions
- 24-28, WCRP, Denver, CO, USA, WCRP Open Science Conference: Climate Research in Service to Society
- 31 October 2 November, IRDR, ICSU, ISSC, UNISDR, Beijing, China, IRDR Conference 2011 on Disaster Risk: Integrating Science and Practice
- 31 October 4 November, IAHS, Austin, TX, USA, 14th World Lake Conference. Lakes, Rivers, Groundwater and Coastal Areas: Understanding Linkages

November

- 13-17, IAGA, Luxor, Egypt, IAGA-3: Heliospheric physics during a deep solar minimum.
- 14-18, IGU, Santiago, Chile, UGI2011 Regional Geographic Conference
- 20-23, IAHS, Cairo, Egypt, Second Arab Water Forum
- 21-24, IAHS, Panama, HELP International Symposium 2011
- 23-26, IAGA, Tandil, Argentina, Second Latin-American Association of Paleomag /Geomag
- 30 November 3 December, IAHS, Irvine, CA, USA, Groundwater Resources Management: Adaptations to Water Scarcity. Science and Policy Responses

End of IUGG Electronic Journal Volume 11 Number 9 (1 September 2011)

A.T. Ismail-Zadeh, Secretary General (http://www.IUGG.org)
E-mail: Alik.Ismail-Zadeh@kit.edu Fax: +49 721 71173.

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 by the Editor.