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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 Web site (<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. Happy New Year!

The Year 2010 went down in history. The Union was involved in various activities during the year and showed its strength in international cooperation and science promotion. A few major activities and events in the life of the Union for this year are highlighted below.

This year was marked by severe natural hazards and disasters (e.g. Haiti and Chile earthquakes, Icelandic volcano eruption, flooding in Pakistan, wildfires in Russia). As a response to the Haiti earthquake disaster, IUGG adopted the special resolution on “Science on Natural Hazards and Environmental Disasters” (29 January). The statement was highlighted by ICSU as an important scientific issue related to societal needs. Two statements related to the eruptions of Eyjafjallajökull volcano in Iceland were issued by IUGG: the first statement on Volcanic Ash Clouds (20 April) was distributed at the Congressional Briefings on Reducing Volcano Risks in the U.S. Senate and the House of Representatives, and the second statement on Volcanological and Meteorological Support for Volcanic Ash Monitoring (28 May) was welcomed by the Executive Board of the World Meteorological Organization (WMO) and the International Civil Aviation Organization (ICAO).

IUGG issued a statement on Freedom to Conduct Science and Responsibilities of Scientists (28 June) highlighting the Principle of the Universality of Science of the International Council for Science (ICSU). This principle encompasses freedom in relation to the expression of scientific ideas, hypotheses and forecasts, to the conduct of research using data, information, experiments and

theories, and to the communication of scientific results to the public through open publications and scientific conferences.

IUGG and Union Association have been involved in the preparation of the comprehensive scientific program for the XXV General Assembly of IUGG to be held from 27 June to 8 July 2011 in Melbourne, Australia. The assembly's program consists of twelve Union symposia, nine keynote Union speakers, Inter-Association and Association symposia, several workshops and open forums (*see more information in this issue of the E-Journal*).

IUGG co-sponsored 16 international scientific meetings worldwide in 2010 and awarded grants to four international research projects. IUGG strengthened further its relationship with the ICSU GeoUnions, UNESCO and the American Geophysical Union through a cooperation in the ICSU project "Extreme Natural Hazards and Societal Implications – ENHANS" (*see the report on the second ENHANS symposium in this issue of the E-Journal*)

Azerbaijan and F.Y.R. Macedonia joined IUGG as Regular Members and Costa Rica as an Associate Member.

The IUGG Bureau met on 30 October – 2 November in Cairo, Egypt and prepared background materials for the forthcoming Council meeting of the Union.

The IUGG Bureau and Secretariat thank the Union Associations and Commissions as well as individuals who helped making the year 2010 exciting and productive in strengthening international Earth and space sciences to benefit society.

Best wishes to everyone for a happy, healthy, and prosperous year 2011!

2. IUGG Yearbook for 2011

The 2011 Yearbook is now electronically available in PDF format at the IUGG web site (<http://www.iugg.org/publications/yearbooks/yearbook2011.pdf>). The IUGG web site maintains the directory of Union and Association officials and the archive of IUGG memberships and General Assemblies. Thanks to all of the National Committees and the Associations for helping to update the information in the IUGG Yearbook! During 2011, updates on addresses and other information in the Yearbook should be sent to the Secretariat (secretariat@iugg.org) as soon as they are known. Our aim is to update the Yearbook as needed throughout the year. The Yearbook will be published together with the 2010 Annual Report and sent to the National Members in May 2011.

3. IUGG President met with the Hungarian National Committee

IUGG President Tom Beer attended the business meeting of the Hungarian National Committee for IUGG at the Secretariat of the Hungarian Academy of Sciences on 27 October 2010. The forthcoming IUGG General Assembly was the major agenda item. Tom Beer gave a summary of the preparations to date – pointing out that abstract submission and registration are now open. The Hungarian National Committee discussed the preparation of a special issue of *Acta Geodetica et Geophysica Hungarica* to incorporate the quadrennial national communication to the General Assembly.



The lunchtime meeting of the Hungarian National Committee for IUGG chaired by Jozsef Adam, the President of the National Committee. IUGG President Tom Beer is on Dr. Adam's right side. Dr. Laszlo Bozo, Secretary-General of the National Committee, is seated on Dr. Adam's left side.

4. Abstract Deadline for the XXV IUGG General Assembly

The Local Organizing Committee and the Scientific Program Committee of the XXV IUGG General Assembly announced the following revised abstract submissions dates:

- **17 January 2011**, due date for the abstract submission in case of an application for a travel grant award; and
- **1 February 2011**, due date for the abstract submission.

Other important dates to be marked in your calendar:

- 28 March 2011, due date for the notification of paper acceptance and successful grant application;
- 11 April 2011, early bird registration deadline.

All abstracts (oral or poster presentation) must be submitted by the author presenting the paper, even if the author is not the first author. The presenting author is responsible for submitting the abstract and paying the abstract submission fee. All presenters are limited to two oral presentations, except for the invited Union Plenary Lecturers, who may present two oral presentations in addition to their Union lectures. For all abstract submission and registration details, and the scientific program outline, go to: www.iugg2011.com.

5. News from the International Council for Science (ICSU)

Forging a New Global Initiative: Earth System Research for Global Sustainability

In the 12 November issue of *Science*, the Visioning Task Team made the case for an unprecedented global initiative to address the Grand Challenges and deliver the knowledge society needs to simultaneously reduce global environmental risks and meet economic development goals. The Visioning Task Team, along with the global change programs, the co-sponsors, user communities and other stakeholders, will meet in Paris, 10–11 February 2011, to discuss the proposed plans for the initiative, including the establishment of a high-level governing body. This will be followed by an intensive 18-month period to design, establish and transition to the new structure. “Earth System Science for Global Sustainability: the Grand Challenges” is available online at <http://www.icsu-visioning.org/other/grand-challenges/>.

Hazards and Disasters

The Scientific Committee for the Integrated Research on Disaster Risk (IRDR) programme met in Beijing in November, at the Center for Earth Observation and Digital Earth (CEODE)—the host of

the IRDR International Programme Office (IPO). Discussion focused on the three major initiatives being developed as part of the initial IRDR programme: a series of forensic investigations on previous disaster events (the FORIN project); the Risk Interpretation and Action (RIA) project; and a study on the development of a long-term database, monitoring and tools. Representatives of the three IRDR Sponsors—ICSU, the International Social Science Council and the UN International Strategy for Disaster Reduction—used the occasion to sign the IRDR Constitution. The IRDR IPO was officially launched at a ceremony following the Scientific Committee meeting. The IRDR Executive Director, Dr Jane Rovins, heads the Office, and is currently recruiting professional staff. The IRDR website (www.irdrinternational.org) was recently launched and will continue to grow as the programme develops. IUGG contributes and will continue its contribution to the multi-disciplinary IRDR programme.

Global Observing System of Systems

In November, the Group on Earth Observations (GEO), the institution responsible for developing the Global Earth Observation System of Systems (GEOSS), held its 7th Plenary session in Beijing, followed by a one-day Ministerial Summit. At the plenary, an Action Plan for implementing the GEOSS Data Sharing Principles was agreed, while the summit adopted the GEO Beijing Declaration. ICSU also made a joint statement with the GEO Principals of UN agencies, co-sponsors of the global observing systems for climate (GCOS), oceans (GOOS) and terrestrial (GTOS).

Source: ICSU Insight Newsletter, December 2010, Vol. 8, No. 3

6. Report on the ENHANS Symposium “Natural Extreme Events: Modeling, Prediction and Mitigation” and related events



The Symposium was held on 13 December 2010 at the Fall Meeting of the American Geophysical Union (AGU) and was a part of the activity in the framework of the ICSU project “Extreme Natural Hazards and Societal Implications – ENHANS” (<http://www.enhans.org>) led by IUGG and supported by several ICSU Scientific Unions (namely, IGU, ISPRS, IUGS, IUTAM), AGU, International Program Office of the Integrated Research on Disaster Risk (IRDR), and the UNESCO-IOC Global Oceanic Observing System (GOOS). The symposium consisted of three scientific sessions and was attended by more than 300 experts in various fields of extreme natural hazards. The session was chaired by Ilya Zaliapin (University of Nevada, Reno, USA) and Alik Ismail-Zadeh (Karlsruhe Institute of Technology, Germany; Institut de Physique du Globe de Paris, France; and Russian Academy of Sciences, Moscow, Russia).

Daniel Baker (Colorado University, Boulder, USA) spoke on the predictability and mitigating impacts of extreme space weather events. Storm surge, as a globally distributed risk, was the topic of the talk by Hans von Storch (University of Hamburg, Germany). Upmanu Lall (Columbia University, New York, USA) explained why flooding was severe in 2010. He considered several case studies and discussed whether this is a coincidence or a predictable climate phenomenon and how to respond on these extremes. Thomas Jordan (University of Southern California, Los Angeles,

USA) spoke about new large-scale numerical simulations to forecast extreme earthquake ground motions, whereas Steven Sparks (University of Bristol, UK) gave a talk on extreme volcanic eruptions and discussed their return period, impact and implications. Rowan Douglas (Willis Research Network, London, UK) spoke about how re/insurance and public science interact to manage risk of extreme events for societal benefit. The 2010 AGU Natural Hazards Focus Group Graduate Research Awardee Ning Lin (Massachusetts Institute of Technology, Cambridge, USA) spoke on a hurricane risk assessment related to wind damage and storm surge. Kelly Klima (Graduate Student, Carnegie Mellon University, Pittsburgh) talked about tropical cyclones and presented her approach to a decision-analytic assessment of cyclone hazards. Extreme precipitation in the European Alpine region was the topic of the talk by Nauman Awan (University of Graz, Austria). John Rundle (University of California, Davis, USA) spoke about precursory activation and quiescence prior to major earthquakes. Fausto Guzzetti (University of Perugia, Italy) discussed landslide hazard, vulnerability and risk assessment and emphasized importance of methodology for risk assessment, its limits and challenges. Kenji Satake (University of Tokyo, Japan) spoke about tsunami modeling, forecast and warning. Adam Smith (National Oceanographic Atmospheric Administration, Asheville, USA) examined insurance loss return periods with extreme event intensity thresholds across the United States. The poster session (20 papers) presented a variety of topics related to natural hazards, extreme events, theory, modeling, prediction and mitigation. The culminating event of the symposium was a keynote lecture on “Society’s Growing Vulnerability to Natural Hazards and Implications for Geophysics Research” by Julia Slingo (Met Office, U.K.)

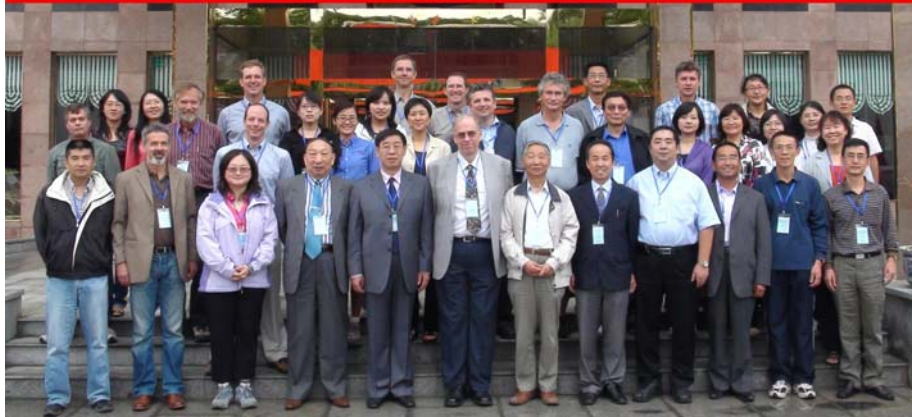
On 14 December Rowan Douglas (Managing Director of Willis Analytics for Willis Re, the world's third largest insurance and re-insurance broker) delivered the invited talk “Natural Hazards Reshape Landscapes in Finance, Public Science & Policy” at the Reception of the AGU Natural Hazards Focus Group. According to Douglas, natural hazard modeling, married to risk, financial and economic modeling, created a new scientific and social organism – a rich and diverse community representing how nature, property and populations perform at the extremes. An urgent need and a common medium are uniting academic disciplines, industries, public/private sectors, and technology in a shared journey. This drives a powerful intellectual fusion, creativity and impact: the shock waves are breaking down the walls.

On 15 December Jane Rovins (Executive Director of the International Program Office for Integrated Research on Disaster Risk, IRDR) attended the Executive Committee meeting of the AGU Natural Hazards Focus Group and presented the IRDR Program to the Focus Group leadership. She explained the mission and vision of the program, its major activities, and welcomed active participation of the AGU scientists in the program.

7. Report on the International Monsoon Workshop

The China National Committee (CNC) for IAMAS/IUGG sponsored and organized an international workshop on “Asian Summer Monsoon and its Role on Global Stratosphere-Troposphere Exchange” in Lhasa, China, on 21-23 July 2010. Daren Lu, President of CNC-IAMAS, chaired the workshop’s scientific advisory committee. The IAMAS President Guoxiong Wu, CNC-IUGG Secretary General Jianping Li and CNC-IAMAS Co-Secretaries General Hongbin Chen and Jianchun Bian have been the organizing committee members. Yingnan Liang, Deputy Director General of Department of International Affairs, China Association for Science and Technology (CAST), in his opening speech acknowledged the efforts of CNC-IAMAS/IUGG in promoting atmospheric sciences in China and the international cooperation. He reiterated the continuous support for CNC-IUGG activities from CAST, the superior and sponsor of CNC-IUGG.

**International Workshop on Asian Summer Monsoon and Its Role in
Global Stratosphere-Troposphere Exchange (ASM-STE)
Lhasa China, July 21-23 2010**



The workshop focused on detailed understanding of Asian monsoon-convection- aerosol-cloud-radiation interactions, stratosphere-troposphere exchange in the Asian monsoon, and the role of Asian monsoon in the global climate and environment. About 40 scientists from China, USA, UK, Germany, France, and Italy gave talks at the workshop. In particular, Georg Kaser, the immediate past President of IACS, was invited by CNC-IUGG to attend the workshop, and he delivered a talk on the potential of glacier research for detecting decadal and decennial monsoon variability. The cooperation between IAMAS and other IUGG associations has always been active and will be continued in the forthcoming XXV IUGG General Assembly (IUGG2011) in Melbourne, Australia, in particular, on the related themes of monsoon studies. IAMAS, IAPSO, IAHS, IACS and other organizations will co-sponsor an IUGG2011 joint symposium JM10 “Monsoons, Tropical Cyclones and Tropical Dynamics”.

More information on the workshop can be found at
<http://lageo.iap.ac.cn/index.php/article/197/289> (circular)
<http://lageo.iap.ac.cn/index.php/article/197/299> (program)

Received from Jianping Li, Secretary General, CNC-IUGG

8. Obituary

Keith Cole (1929-2010)



Keith Cole grew up in Cairns in Queensland, Australia and received BSc. (Hons) [1952]; DipEd [1953]; MSc [1954] and DSc [1967] from the University of Queensland. After a short time as a secondary school teacher, in 1956 Keith was appointed Auroral Physicist on the Australian Antarctic National Research Expedition to Macquarie Island and so began his life-long research into the aurora and other solar-terrestrial phenomena. After the year-long expedition he took up a position as a theoretical physicist with the Australian Antarctic Division where he remained until 1963 when he was seconded to the CSIRO Upper Atmosphere Section, headed by D. F. Martyn.

After periods at University of Chicago and University of Colorado as a Research Associate, in 1966 Keith took up his appointment as a Foundation Professor of Physics at La Trobe University in Melbourne, Australia. By this time he had established himself as a leading theorist in solar-terrestrial physics having shown that red arcs and the pre-dawn enhancement are produced by thermal conduction from above, and having made significant advances in our understanding of geomagnetic storms and particularly the ring current. In 1962 he proposed that the ionosphere is heated via Joule heating, a phenomena now known to be a major energy source for the ionosphere and thermosphere at high latitudes. He formed the Theoretical and Space Physics Group at La Trobe, which he headed until his retirement. Under Keith's leadership the group built the Beveridge Field Station north of Melbourne and developed radio, optical and magnetic instruments for use at Beveridge and at Australian Antarctic Stations. These instruments were used to study a wide range of phenomena in the ionosphere, thermosphere and magnetosphere. Keith also continued his theoretical research into geomagnetic storms, ionospheric irregularities and other phenomena in the magnetosphere-ionosphere system.

Keith did not confine himself to his own research interests and those of his many postgraduate students. He also made major contributions to the organisation of science both nationally and internationally. He served IAGA as Vice-President [1976-79] and President [1980-83] and was President of SCOSTEP [1977-86]. In these roles he was a vigorous promoter of international scientific programs, so essential for the study of global scale phenomena. At La Trobe Keith served terms as Head of Physics and Dean of the School of Physical Sciences. Nationally, he was a very active Fellow of the Australian Academy of Science, serving as Foreign Secretary, Council Member and chair of committees including the National Committee for Solar-Terrestrial Physics. These roles also provided avenues to promote participation by Australian scientists in international programs including the important ICSU International Geosphere-Biosphere Program.

Keith was an outstanding colleague and mentor for many people around the world. He was a person of ideas and was popular as an invited speaker as he would provide a fresh view on topics and challenge people with new ideas. He received many honours recognising his contributions to science, including: the Union of Radio Science International (URSI) Appleton Prize for "Contributions to the understanding of the basic processes taking place in the magnetosphere and the ionosphere," Life Membership of SCOSTEP, Honorary Membership of IAGA, Fellowships of the Australian Academy of Science, the Australian Institute of Physics, the Institute of Physics (UK), the Indian Institute of Geomagnetism, the Explorers Club of New York, and Associate of the Royal Astronomical Society, London. Keith's scientific legacy will live on through his contributions to the basic science of solar-terrestrial physics phenomena and through the many colleagues and students he influenced throughout his career.

Peter L. Dyson, Emeritus Professor, La Trobe University

9. IUGG-related meetings occurring during January – March 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.

January

- 8-14, Geological Society of Africa, IUGG, Johannesburg, South Africa, 23rd Colloquium of African Geology

- 17-20, IUGG, Pretoria, South Africa, International Workshop “Extreme Natural Hazards and Disaster Risk in Africa”
- 22-27, IUGG, Raisan, Gujarat, India, International Symposium “The 2001 Bhuj Earthquake and Advances in Earthquake Science”
- 24-27, AGU, Oxnard, USA, Chapman Conference: Source to Sink Systems Around the World and Through Time
- 26-28, IUGG, IAGA, Uglich, Yaroslavl region, Russia, International Workshop “Artificial Intelligence in the Earth’s Magnetic Field Study”.

February

- 7–9, IAHS, Bern, Switzerland, 6th LISSIG Workshop “Remote Sensing of Snow and Glaciers: Cryosphere, Hydrology and Climate Interactions”.
- 14-18, IUGG, IAGA, Prague, Czech Republic, 4th IAGA/ICMA/CAWSES-II Workshop on "Vertical Coupling in the Atmosphere-Ionosphere System".
- 21-23, IAHS, UNESCO, Algiers, Algeria 4th International Symposium “Water Resources and Sustainable Development (CIRED’4).
- February 27 – March 4, AGU, Fairbanks, USA, Chapman Conference: Relationship Between Auroral Phenomenology and Magnetospheric Processes.
- February 28 – March 4, AGU, Honolulu, USA, Chapman Conference: Atmospheric Gravity Waves and Their Effects on General Circulation and Climate.

March

- 19-23, IUGG, IAGA, Luxor, Egypt, 3rd IAGA Symposium “Heliospheric Physics during and after a deep solar minimum”.
- 21-25, IUGG, IAPSO, SCOR, WCRP, Mauritius, “Towards an Observing System for the Greater Agulhas System: Building links and capacity for East African participation”.
- 21–25, AGU, Santa Fe, USA, Chapman Conference: Climates, Past Landscapes, and Civilizations.
- March 27 – April 1, IAHS, Monaco, International Symposium on Isotopes in Hydrology, Marine Ecosystems, and Climate Change Studies

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

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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 by the Editor.