



20. February 2011

ANNUAL REPORT 2009: INTERNATIONAL ASSOCIATION OF CRYOSPHERIC SCIENCES (IACS)

This report covers the period of February 2009 to January 2010.

GENERAL ACTIVITIES OF THE BUREAU

Members of the IACS Bureau comprise:

- Ian Allison (President: P Allison)
- Georg Kaser (Past-President: PP Kaser)
- Kumiko Goto- Azuma (Vice President: VP Goto- Azuma)
- Gino Casassa (Vice President: VP Casassa)
- Peter Jansson (Vice President: VP Jansson)
- Manfred Lange (Secretary General; SG Lange)
- Julian Dowdeswell (Division Head; Glaciers and Ice Sheets: DH Dowdeswell)
- Charles Fierz (Division Head; Snow and Avalanches: DH Fierz)
- Claude Duguay (Division Head; Marine and Freshwater Ice: DH Duguay)
- Ralf C (Division Head; Planetary and Other Ices of the Solar System: DH Duguay)
- Valérie Masson Delmotte (Division Head; Cryosphere, Atmosphere and Climate: DH Masson Delmotte)

Bureau Meetings/Work by the Bureau during the Reporting Period

We utilized the Joint IAMAS-IAPSO-IACS Assembly MOCA09 in Montreal in July of 2009 (see below) for two Bureau Meetings and one IACS Plenary, in accordance with the IACS Statutes and Bylaws.



The International Association of Cryospheric Sciences (IACS) aims to promote the study of the Cryosphere in all of its aspects. IACS is an Association under the International Union of Geodesy and Geophysics (IUGG). More information can be found under <http://www.cryosphericciences.org/>

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The **first Bureau meeting** took place at the Auberge Bonaparte, Montreal, Canada on July 18 and 19, 2009. It was devoted to internal matters and attended by IACS Bureau members only (except for IUGG President Tom Beer and Ross Brown from the MOCA09 local organizing Committee), while the meeting on the 19th was an open meeting with a number of delegates from other Associations or organizations present. The meeting on July 18th also saw the change in the Presidency of the Association from P Kaser to PE Allison. After reviewing action items that arose from the Perugia and Vienna Bureau meetings, then-P Kaser delivered the President's Report. This was followed by President Elect Ian Allison to take over the position of IACS President. The Treasurer's Report was delivered by SG Lange and subsequently accepted; the Budget Plan for 2010 and beyond was briefly discussed.

Details of the publication procedures for the new Snow Classification, which was prepared under the leadership of DH Fierz (see below), were presented.

An important issue was the forthcoming of resignation of W. Haeberli as Director of the World Glacier Monitoring Service (WGMS) and the role that IACS may/will play in facilitate the appointment of his successor.

The second day (19 July) was an open meeting with a relatively large number of guests present:

- Tom Beer, President, IUGG
- Gordon Young, President elect, IAHS
- Richard Essery, SnowMIP2
- John Pomeroy, President, ICSI-H
- Volker Rachold, Secretary General, IASC
- Lawrence Mysack, President, IAPSO
- Anette Rinke, CLiC
- Liz Thomas,, APECS
- Graham Cogley, Glacier Mass Balance Terminology
- Hans Volkert, SG, IAMAS
- Jo Jacka, Chief Editor, IGS
- Wilfried Häberli, Director, WGMS
- Guoxiong Wu, President, IAMAS
- Shichuang Kang, Chinese IACS National Committee
- Peter Bebi, Coordinator, IUFRO Working Group on Snow and Avalanches
- Andy Käab, ..., GLIMS, WG IAVCEI

After being welcomed by P Allison, IUGG President Tom Beer gave a brief address on behalf of IUGG. The Director of the WGMS, W. Haeberli presented a report on WGMS and its present status. ICSI, UCCS and IACS have been for a long time and are currently advisory bodies to the WGMS. P Allison expressed his gratitude to W. Haeberli for his work as WGMS Director. He also thanked him for securing continued funding from the Swiss government.

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More details of this meeting can be found in the Minutes which will be posted on our web-site shortly.

The second Bureau Meeting, chaired by P Allison took place at the Palais des Congr s, Montreal, Canada on July 24, 2009. Items discussed included:

- The auditing of the IACS Budget and its approval;
- The IACS web-site and its maintenance;
- The IACS Assembly 2013, particularly in light of possibly joining forces with IAMAS;
- The possible enhancement of educational activities within IACS and in collaboration with other organizations;

Again, more details of this meeting can be found in the respective Minutes which will be posted on our web-site shortly.

In addition to the Bureau meetings, members of the Bureau have been in regular e-mail contact with each other during the reporting period.

IACS Plenary

The Second IACVS Plenary Meeting took place at the Palais des Congr s de Montr al, Canada, on July 23, 2009. After welcoming the participants, P Allison gave a brief introduction into IACS and its predecessors. PP Kaser presented an account of past activities after IACS' official inauguration at the IUGG General Assembly in Perugia, Italy. The main results of the 3rd IACS Bureau Meeting, which took place prior to the opening of MOCA09 in Montreal on July 18 and 19, 2009 were briefly reviewed by SG Lange. This was followed by P Allison addressing a number of future activities related to IACS and of relevance for those interested in Cryospheric Sciences. In the open discussion on "Gaps and new directions" that took place as the next point on the agenda, a number of items were put forward and were lively discussed by participants present. Detailed Minutes of the Plenary will be posted on our web-site shortly

ACTIVITIES OF IACS DURING THE REPORTING PERIOD

During the relatively short reporting period, IACS has taken up a number of activities. These comprise:

Book on Snow and Climate published

The book *Snow and Climate* has recently been completed by the editors Richard L. Armstrong and Eric Brun and has been published at Cambridge University Press (see <http://www.cambridge.org/uk/catalogue/catalogue.asp?isbn=9780521854542> for more details). This is the result of a former Working Group within IACS' predecessors ICSI/UCCS.

IACS Snow Classification

Led by DH Fierz, a Working Group on Snow Classification has finalized the work on a comprehensive classification of snow in all its natural appearances. This is an update on an earlier version of the Snow Classification that was also put together by the IACS predecessor ICSI under the chairmanship of Sam Colbeck. The new Classification (*International Classification for Seasonal Snow on the Ground*) has been published by the International Hydrological Programme of the United Nations Educational, Scientific and Cultural Organization (UNESCO-IHP), Paris, as *IHP-VII Technical Documents in Hydrology No 83, IACS Contribution No 1*, and is already available as an electronic IACS publication at http://www.cryosphericosciences.org/snow_class.html.

Standing Group on Mass Balance Terminology

Under the leadership of Prof. Graham Cogley, a Working Group on Mass Balance Terminology has been making impressive progress (for more details, see http://www.cryosphericosciences.org/wg_mb.html). One of the major products derived from this Group will be a *Glossary of Mass-balance Terms*, which is largely finalized. Starting from about 250 entries in July 2009, about 30 additional ones are expected before a complete draft of the whole Glossary will be available. During the Bureau meeting on July 18, PP Kaser addressed the possible publication options for the Glossary and explained that a consensus had evolved for having both a PDF- as well as a printed version.

Joint IAMAS-IAPSO-IACS Assembly MOCA09 "Our Warming Planet"

IACS together with IAMAS and IAPSO was one of the partners in the Joint Assembly MOCA09 "Our Warming Planet" (www.moca-09.org), which was convened in Montreal, Canada from July 19 to 29, 2009 (IACS Symposia were limited to July 19 to 24). The topic of the Assembly ("Our Warming Planet") has attracted a large number of contributors (appr. 2000 abstracts have been submitted). A total of **1339** delegates of whom 129 were registered as IACS delegates participated in the Assembly.

As somewhat of an innovative element of the Assembly, most of the symposia were organized jointly between the three Associations. A total of 21 joint symposia on topics from embracing "Tropical Cyclones" to "Ice-cores in Paleoclimate" were organized and carried out.

In addition, IACS will organized five symposia that were specially geared towards the Cryospheric community (http://www.moca-09.org/e/02-symposia_iacs_e.shtml).

During the Assembly, 1871 papers were presented of which 1061 (62) were oral presentations, 586 (339) were poster presentations and 221 (25) were invited presentations (numbers in parentheses represent IACS presentations).

IUGG General Assembly in Melbourne, Australia, 2011

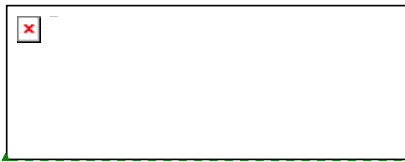
Preparations for the next IUGG General Assembly are well underway. IACS together with the other IUGG Associations, is one of the organizers of the event. SG Lange is part of the Scientific Program Committee, which is chaired

by Dr. Peter Manins. In October of 2009, an organizational meeting took place in Melbourne, which was attended by P Allison.

Similar to MOCA09, an emphasis of the General Assembly will lie on joint Inter-Association Symposia. As a full Union Assembly this meeting will also include Union symposia which will forge interdisciplinary links across many Associations. IACS has a particular interest in Union Symposia on sea level and on climate change. The scientific program for the Assembly is almost complete. IACS involvement will include two Union Symposia, 22 Inter-Association Symposia and six IACS-only symposia. In addition, there will be about ten IUGG Union Symposia during the General Assembly.

Joint IAMAS-IACS Scientific Assembly 2013

IACS and IAMAS have agreed to hold jointly their next Scientific Assembly in Switzerland. The event will take place in Davos, 7-12 July 2013 (dates to be confirmed). The Swiss National Organizing Committee SNOC is chaired by Heini Wernli (IAMAS, ETH Zurich), Werner Schmutz (IAMAS(IRC), WRC/PMOD Davos), and Michael Lehning (IACS, WSL/SLF Davos).



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