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ISSUE 6

Newsletter



NOVEMBER 2007



President's Message

Dear members of the IAMAS community,

It was a great honour to be elected as the new President of IAMAS in the final Plenary Session of the IAMAS Ordinary General Assembly in Perugia, Italy earlier this year. It is also my privilege to continue to serve the IAMAS community with my new and old colleagues who were also elected in the assembly. The current IAMAS officers are:

IAMAS Bureau:

Dr. Guoxiong Wu, President, 2007-2011;
Dr. Anne Thompson, Vice-President, 2007-2011;
Dr. Maria Assuncao Faus Silva Dias, Vice-President 2007-2011;
Dr. Hans Volkert, Secretary General. 2007-2015;

Dr. John Turner, Deputy Secretary General, 2003-2011.

Members at Large:

Dr. Philippe Bougeault, 2003-2011
Prof. Dr. Sabina Stefan, 2005-2011
Dr. Mike MacCracken, 2007-2011
Prof. Ernest Hugo Berbery, 2007-2015
Dr. Vladimir Kattsov, 2007-2015
Prof. Tetsuzo Yasunari, 2007-2015

In addition, the IAMAS Commissions have held or will hold their elections for their new Presidents and other officers. The information on the new officers will be posted on the IAMAS website as soon as it is available. The new Bureau Members and the Members at Large, together with the Past President, Dr. Michael MacCracken, and the Presidents of the ten IAMAS Commissions compose the new Executive Committee for the period from 2007 to 2011. I would like to congratulate these Executive Committee members on their new (or continuing) jobs.

I would also like to take this opportunity to thank the past Bureau and Executive Committee headed by Dr. Michael MacCracken, the President, and Professor Roland List, the Secretary General, for their outstanding service and comprehensive efforts devoted to the development of IAMAS. I consider myself lucky to have worked in both the past and the new Bureaus and believe that with the continuing support from "old" Bureau members IAMAS can continue to be active and successful.

The objectives of IAMAS are to promote the study of the science of the atmosphere; to initiate, facilitate, and co-ordinate international co-operation; to stimulate discussion, presentation and publication of scientific results; and to promote education and public awareness. These long-term goals require the continuous endeavour and collective responsibility of various members of the IAMAS Executive Committees to lead the operation of IAMAS over the coming four years. Following the IAMAS Statutes, the Bureau of the Association will direct and co-ordinate all scientific and related activities of the Association, and it will function on a continuing basis, as required in the interval between Ordinary General Assemblies.

(continued on next page)

President's Message (contd.)

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Over the last few years, there have been extensive discussions on how to further increase the visibility of IAMAS, and to have greater transparency and improved efficiency. The Bureau considered these questions very carefully and agreed to assign special responsibilities to the two Vice-Presidents. Dr. Anne Thompson will take charge of the IAMAS out-reach activities and financial audit issues, and Dr. Maria Assuncao Faus Silva Dias will pay particular attention to the co-ordination amongst the IAMAS Commissions. There will also be greater co-ordination and communication between all the Bureau members in the interests of efficiency.

The Earth's climate is incontrovertibly getting warmer and extreme weather and climatic events are occurring more frequently. Today, meteorology and the atmospheric sciences are facing new challenges and rapid changes. The World Weather Research Programme (WWRP) has launched a series of large-scale research campaigns. The World Climate Research Programme (WCRP) has also initiated the ten-year strategic framework "Coordinated Observation and Prediction of the Earth System (COPES)" for the period 2005-2015, enhancing the two major objectives of WCRP: *to determine the extent to which climate can be predicted, and to determine the extent of human influence on climate.* Our cli-

mate system also includes interactions with the chemical and biological systems, as well as human activities. During the past few years significant progress has been made in our understanding of the Earth System under the banner of the Earth System Science Partnership (ESSP). As a consequence, there are many existing and arising cross-cutting issues within the scope of IAMAS. The Ordinary General Assemblies, Extraordinary General Assemblies, and Scientific Assemblies of IAMAS can therefore be used as fora for the discussion of these cross-cutting issues. In particular, IAMAS does its utmost to promote the development of meteorology and atmospheric sciences in developing or less developed countries. In the past decade, each IAMAS Assembly provided funding to about one hundred outstanding young scientists or scientists from the developing countries. This enabled scientists from across the world to join the IAMAS meetings, and this policy will be continued and strengthened during the new term of IAMAS.

In this newsletter there is also an approximate timetable of preparations for the next big event – the IAMAS/IAPSO/IACS Assembly in Montréal during 2009, which has been provided by the LOC. Let us work together to make it another outstanding Assembly.

Guoxiong Wu
President, IAMAS

IAMAS Commemorative Plates



A collection of seven commemorative plates as a token of gratitude for all recently outgoing IAMAS officers for their outstanding services to the Association: Mike MacCracken (President 2003-2007), Roland List (Secretary General 1995-2007), Huw Davies (President 1999-2003), Bob Vincent (Vice-President 1999-2007), Leonard Barrie (Bureau Member 1999-2007), Igor Mokhov (Bureau member 1999-2007) and Akimasa Sumi (Bureau Member 1999-2007).

The plates were created by the Chinese home institution of the current IAMAS President, Guoxiong Wu. Among the symbolic elements in the golden background are birds — cranes for long-life and magpies for good fortune — as well as trees thriving even during winter; the pines, bamboos and plums stand for personal characteristics like friendship, perseverance and optimism. This group of plates signifies that IAMAS could in the past safely rely on voluntary co-operation across the globe. The current Bureau is ready to follow this route for the further advancement of meteorology and the atmospheric sciences.

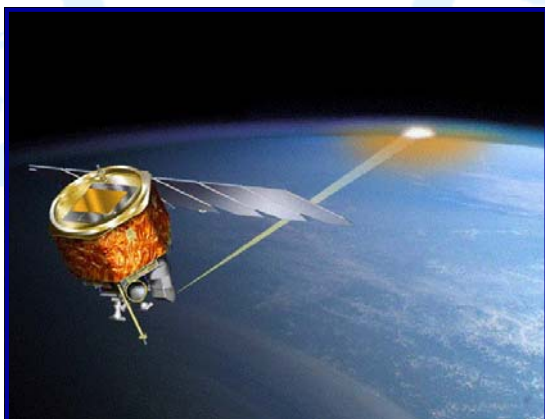
Featured Commission: The International Commission on the Middle Atmosphere (ICMA)

The International Commission on the Middle Atmosphere (ICMA) is one of the ten Commissions making up IAMAS. ICMA exists to foster research into the science of the middle atmosphere, a region defined loosely as stretching from the tropopause into the lowermost thermosphere. ICMA sponsors and co-sponsors several symposia at each IUGG General Assembly and at the IAMAS Scientific Assemblies. The ICMA-sponsored "Middle Atmosphere Science" symposium at the IUGG Assembly in Perugia provided an opportunity for discussion of the most recent observational and modelling advances related to the middle atmosphere.

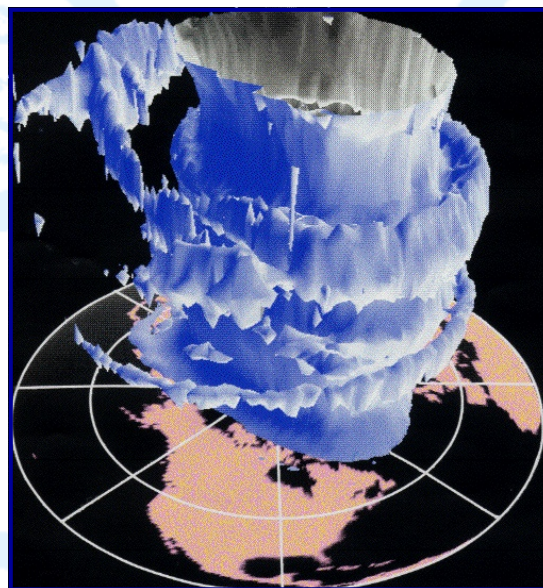
The interests of ICMA at the upper altitudes of the middle atmosphere overlap with those of Division II of IAGA, and ICMA maintains a close relationship with IAGA as well, notably by sponsoring and co-sponsoring symposia at the IAGA Scientific Assemblies. ICMA and IAGA have also cosponsored numerous workshops over the last few years including an ongoing series on "Vertical Coupling in the Atmosphere-Ionosphere System", with the third in the series being held last September in Varna, Bulgaria.

ICMA's interests also overlap with those of the Scientific Committee on Solar-Terrestrial Physics (SCOSTEP). ICMA, IAGA and SCOSTEP jointly cosponsor a working group on "Trends in the Mesosphere, Thermosphere and Ionosphere". A paper assessing observed mesospheric temperature trends produced by this working group won the prestigious Gerbier-Mumm International Award of the World Meteorological Organization in 2005.

Understanding the dynamics, chemistry and physics of the middle atmosphere continues to present an exciting range of challenges. Work on understanding the anthropogenic contribu-



Artist's conception of the recently-launched AIM satellite in the process of measuring properties of noctilucent clouds by a solar occultation method (NASA).



Visualization of the stratospheric winter polar vortex as simulated in a fine-resolution General Circulation Model. Specifically, an instantaneous picture of a surface that surrounds the air with low nitrous oxide concentration relative to the mean value at each horizontal level. The altitude extent of the surface shown is roughly 16-40 km. The main vase-like sheath outlines the polar vortex, while the ribbons wrapping around the vortex represent air that has recently eroded from the vortex..

tions to stratospheric ozone chemistry made great strides in the 1970's and 80's and led to worldwide adoption of regulations strictly controlling the manufacture of ozone-depleting chemicals. This basic work has been followed up with ever more detailed and comprehensive observational and modelling research on the coupled dynamical-chemical system of the middle atmosphere. Recently deployed satellites such as ENVISAT, TIMED and AURA are providing remote-sensing observations of temperatures, winds and atmospheric constituents at unprecedented resolution and accuracy. On April 25 of this year another exciting space-based mission began with the launching of the NASA AIM satellite, which is the first dedicated to exploring noctilucent clouds located near the summer mesopause.

Advances in computer power in recent years have enabled more complete and much higher resolution General Circulation Models (GCMs) to be run that simulate the atmosphere from the ground to the lower thermosphere. Notably, a number of global GCMs have now been developed that include a sophisticated treatment of ozone chemistry that runs interactively with the dynamical component of the model.

Kevin Hamilton,
ICMA President

A Welcome from the New IAMAS Secretary General



IAMAS obtained a new Bureau during the General Assembly of IUGG that took place in early July in Perugia, Italy. During the years to come it will be my task to link scientific and administrative matters within

the Meteorological and Atmospheric Sciences Association of the still larger International Union of Geodesy and Geophysics. It will not be easy to follow in the footsteps of my predecessor Roland List, who held the position for a full dozen of years during the presidencies of Robert A. Duce, Huw C. Davies and Michael MacCracken. However, I remain confident that the new, truly intercontinental Bureau headed by Guoxiong Wu of China has great potential to advance our science, to further increase its visibility and to contribute to an enhanced quality of scientific communication. The significant experience of my deputy, John Turner, will ensure continuity in practical administrative matters.

Having previously observed IAMAS only from some distance, I want to enhance the profile of the IAMAS community of researchers and academics that exist in a large variety of institutions in many countries. It is worth remember-

ing that IUGG and IAMAS were created by far-sighted scientists after the end of WWI in close relation with the League of Nations, a fore-runner of the current United Nations. Geophysical sciences and their atmospheric branches underwent dramatic changes during these past nine decades, but individual endeavours in voluntary cooperation can still be important catalysts for further development. The bulk of the work will be done within the ten international commissions of IAMAS, while the culmination of scientific exchange is to take place during large symposia. The next one is scheduled for July 2009 in Montréal together with our partner associations for oceans (IAPSO) and ice (IACS) (see page 5).

The quantity of the large symposia in terms of participants and the number of individual presentations in form of talks and posters is impressive indeed. Yet the quality of well coordinated programmes and of central services for all convenors still leaves room for further improvement. Therefore it will be among my foremost targets to confer as much community spirit from single session conferences into the Montréal event, and to also give the presentation of posters all the attention that this interactive format deserves. Furthermore, talented newcomers to our field, be they young or not yet experienced in the international arena, will continue to remain a central focus. I am looking forward to getting acquainted with many of you by electronic and possibly personal contact in order to cooperate with you in a true partnership.

Hans Volkert
IAMAS, Secretary General 2007-2015



Putting faces to names: IAMAS Bureau members past and present at the Perugia Assembly. From left to right at back are Dr. Guoxiong Wu (current President), Dr. John Turner (current Deputy Secretary General) and Dr. Hans Volkert (current Secretary General); at front are Prof. Roland List (past Secretary General) and Dr. Mike MacCracken (past President).

(photo: Z. Lin)

IAMAS-IAPSO-IACS Joint Assembly in Montréal

Preparations are now well underway for the forthcoming IAMAS-IAPSO-IACS Joint Assembly in Montréal, Québec, Canada. The dates are official: from Sunday July 19th to Wednesday July 29th, 2009.

The Assembly will be held at the Palais des Congrès de Montréal, a major congress centre that can easily accommodate all oral and poster presentations on the same floor. It is located in the heart of downtown Montréal, close to major shopping and tourist areas, including the Old Montréal and the Old Port. Blocks of hotel rooms have already been reserved, all within 10 minute walking distance from the Palais des Congrès. Reasonably priced student accommodations are also reserved in a nearby university.

On the program side, the theme of the Assembly, "Our Warming Planet", will help unite the atmospheric, oceanographic and cryospheric communities. The three Associations are well advanced in identifying the various symposia. A meeting is scheduled in late November between the Secretary Generals of the three Associations and the National Organising Committee, to refine the scientific program, in particular Joint Symposia, and to review various logistical aspects.

Final decisions have not yet been made regarding the timeline leading up to the Assembly; here is an indication of what the National Organising Committee is considering:

- First Circular issued in January 2008 (general information)
- Second Circular issued in April 2008 (call for papers)
- Deadline for abstract submission: January 2009
- Paper acceptance: March 2009
- Final detailed program on the Internet: April 2009

A preliminary Assembly website is already up and running, where you can express your interest in receiving more information as it becomes available. Visit it today, at

www.IAMAS-IAPSO-IACS-2009-Montreal.ca

You can also send any specific question to the Assembly E-mail address:
Montreal2009@nrc.gc.ca

Pierre Dubreuil
Executive Secretary of the National Organising Committee

The Perugia Assembly: A Postscript

It is now several months since the IUGG Assembly in Perugia and it's interesting to look back at the meeting that gave us a number of highs and lows. Scientifically, the general feeling was that the meeting was very successful, with the atmospheric sciences having a very high profile. There were 29 IAMAS-led Joint Symposia, along with 20 IAMAS-only symposia covering a very wide range of science. There were also two Union Symposia in the field of atmospheric science, organized by Prof. Richard Peltier (Canada) and Dr. Guy Brasseur (USA).

According to the preliminary report of the LOC, a total of 4067 scientists were present in Perugia, which included 1205 students. Those registering were asked to indicate the association they were affiliated with, if any. While 1096 indicated their association as 'other', some 594 were aligned with IAMAS, which was only a little behind the 668 linked to IAGA. However, IAMAS did have 163 students present, which was the most of any association. As usual, IAMAS was heavily involved in trying to get scientists and students in the atmospheric sciences from developing countries to the assembly. A total of 284 grants were requested and 168 were offered free registration, 107 the bus fare from Rome to Perugia, 92 accommodation and food for six days, and 55 a contribution to travel — for a total of €117,700 or US \$156,000. Scientists were awarded €65,200, young scientists

€30,200, and students €22,300.

In terms of scientific papers, 1735 abstracts were accepted in IAMAS-led symposia with 1170 being assigned to oral presentation, and 565 to short oral and posters.

While the science was of a very high standard, there were many problems of an organisational nature, including difficulties liaising with the LOC, the submission of abstracts, organisation of the programme and the accommodation. Those fortunate enough to have a hotel room in the centre of town enjoyed the vibrant atmosphere, food, wine and museums of Perugia, as well as the jazz festival. Unfortunately, many attendees had rooms in villages tens of kilometres away and spent long hours travelling. Some distinguished attendees found themselves assigned to shared rooms, which was unacceptable. A number of IAMAS officers have documented the problems in a letter to IUGG (<http://www.iamas.org/Concerns.html>). Lets all hope that in the future the standard of the organisation is as high as that of the science.

For a full report on the Perugia assembly written by Prof. Roland List see <http://www.iamas.org/Perugia.html>.

John Turner
IAMAS Deputy Secretary General

The 17th International Conference on Nucleation and Atmospheric Aerosols (ICNAA)

The conference was held at the National University of Ireland, Galway, from 13th August to 17th August, 2007. This is the third time the conference has been held in Ireland: the first ICNAA was held in Dublin in 1955 and the ninth was held in Galway thirty years ago.

At the 17th ICNAA, approximately 255 papers were submitted in the following categories:

- Nucleation: Experiment & Theory
- Nucleation: Binary, homogeneous and heterogeneous
- Nucleation: Ion and cluster properties
- Ice Nucleation
- Air Quality – Climate
- Aerosol - Cloud Interactions
- Aerosol Characterisation & Properties Aerosols
- Aerosol Formation, Dynamics & Growth
- Marine Aerosol Production
- Remote Sensing of Aerosols & Clouds
- Chemical Composition & Cloud Drop Activation

The following leading scientists presented Ple-

nary Lecture invitations on the current state-of-the-art in their respective fields of nucleation and atmospheric aerosols: Paul DeMott, Terry Deshler, Maria Cristina Facchini, Markku Kulmala, Surabi Menon, Kikuo Okuyama, Spyros Pandis, V. Ramanathan, Yinon Rudich, Gerald Wilemski and Barbera E. Wyslouzil.

Approximately 220 delegates attended the meeting, which started with a warm ice-breaker and registration on Sunday afternoon and ended on Friday afternoon with a trip to the Mace Head Global Atmosphere Watch Research Station.

The general feedback was that the delegates enjoyed an efficient and stimulating meeting, the relaxed but vibrant hospitality of Galway and its surroundings, and the wonderful west-of-Ireland cuisine accompanied by the local music and, of course, the Guinness.

The proceedings are published by Springer and conference photos are available from www.icnaa.org.

On a sad note, we remember Dr Anthony Hollingsworth who was scheduled to give a

Plenary Lecture on chemical (aerosol) weather forecasting and to summarise the progress being made in this area in terms of aerosol forecasting under the GEMS Project. Tony passed away 2 weeks before the conference. He is a great loss to atmospheric science.

Colin O'Dowd
LOC

Some Thoughts on IAMAS from Past Presidents

"I have always felt that IAMAS/IUGG should be supported because it provides the truly international forum for the involvement of scientists from all countries and for the discussion of our science. My 30-year association with it has been a source of both scientific stimulation and many personal friendships." - Sir Brian Hoskins

"For me IAMAS is a treasure of special value, distinct benefit and personal pleasure: (i) value as a truly international organisation run by the atmospheric science community for the well-being of the science and of society; (ii) benefit as its Assemblies are an opportunity for the community to present and learn of latest developments in a distinctive multi-national setting; and (iii) pleasure from meeting and making friends with a wide range of individuals." - Huw Davies

"IAMAS/IUGG scientific assemblies provide an opportunity to learn about research at the forefront of not only atmospheric sciences, but also our sister disciplines of oceanography, hydrology, and more, which seems to me absolutely vital as we try to understand the workings of the interconnected Earth system." - Mike MacCracken

The Nobel Peace Prize 2007 to IPCC

One half of this year's Peace Prize goes to the Intergovernmental Panel on Climate Change. IAMAS congratulates all the contributors to the IPCC assessment reports for the special recognition of their voluntary hard work. It is reassuring to note that ICSU/IUGG/IAMAS helped to establish IPCC 20 years ago (cf. www.ipcc.ch/about/about.htm).

The IAMAS Newsletter

The newsletter editor welcomes short reports from the individual IAMAS Commissions at any time.

Gareth Marshall (gjma@bas.ac.uk)
Editor IAMAS newsletter