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# Newsletter



ISSUE 3

MARCH 2006

## President's Message

### Greetings for 2006

While there will not be an IAMAS Scientific Assembly in 2006, this is still a very active time for IAMAS. Secretary General Roland List and his deputy John Turner have been leading the effort to organize scientific symposia for the IUGG General Assembly to be held in Perugia, Italy from 2-13 July 2007. The Program Committee for this assembly met following the IUGG Executive Committee meeting in Perugia this past September, and planning got underway for a wide variety of inter-association and intra-association/commission symposia. Conveners are being sought and planning is well along so that the first call for papers for the assembly can be issued in the next few months.

While at the IUGG EC meeting in Perugia, we were taken on a tour of the facilities that will be provided by the university, which will be celebrating its 700<sup>th</sup> anniversary. We also were able to tour the wonderful mountaintop town that looks out over the Umbrian valley to Assisi.

This will be a really wonderful spot for the assembly, and the program will surely be very interesting.

All of this activity has barely given time to reflect back on the very successful IAMAS assembly held in Beijing this past August. The Local Organizing Committee for IAMAS2005, led by Dr. Guoxiong Wu and supported by the Conference Secretariat led by Dr. Jianping Li and Ms. (Jenny) Zheng Lin (and the wonderful cast of dozens of younger scientists), did a terrific job of not only making everything run smoothly, but also arranging for various tours and special events such as the banquet. We also had two very interesting special symposia, one honoring the 90<sup>th</sup>

birthday of Senior Academician Professor Ye Duzheng (which provided a 70-year overview of Chinese research in atmospheric sciences) and one describing the results of atmospheric and climate-related studies and workshops forming the basis of the IPCC's Fourth Assessment Report.

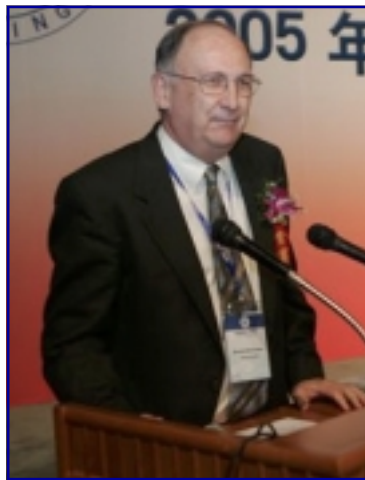
A special treat in Beijing was the opportunity for a few of us to participate in outreach efforts to two groups of Chinese science students, one a discussion with science students about the role of scientists in society, and the second with students from four of Beijing's science focused secondary schools. We had some very interesting interactions with the students and saw indications of their work (e.g., of their modeling of winds and ocean waves in the area where the Olympic sailing will take place). The abilities of the students to speak in both Chinese and English and to prepare animated Powerpoint talks was most impressive—our talks with only colorful graphs and pictures need a bit of their creativity.

At the IAMAS Executive Committee meeting in Beijing, we also appointed the nominating committee for the elections that will take place at Perugia.

The chair is past-president Huw Davies, and the additional members are Amanda Lynch (of Australia), Hajime Akimoto (of Japan) and, on an ex officio basis, myself. Requests for nominations will be going out in the future per the timetable in the IAMAS statutes. Nominees will be sought for President, Secretary General, Deputy Secretary General, one Vice-President, and two (or more) Members-at-Large; please be thinking of potential nominees, and feel free to ask Huw or myself or others about requirements and responsibilities.

Again, my best wishes for the New Year—and onward to Perugia.

Mike MacCracken  
([mmaccrac@comcast.net](mailto:mmaccrac@comcast.net))



## The IAMAS 2005 Assembly in Beijing

As noted earlier by the President, IAMAS held a very successful assembly in the Beijing International Convention Centre over 2-11 August 2005. A total of 841 scientists attended the meeting and gave oral and poster presentations in 45 symposia. The final programme consisted of 1377 papers, which split into 992 full oral presentations and 385 posters with brief oral presentations.

The meeting had a true international flavour with scientists from 54 countries attending. The largest number of participants came from



Senior Academician Prof. Ye Duzheng addressing the special symposium held at IAMAS 2005 to celebrate his 90th birthday.

China (202), the USA (198), Japan (108), Canada (47), the UK (35) and Germany (27). IAMAS was able to give financial assistance to 93 scientists to enable them to attend the meeting. Of these 50 were students and 11 younger scientists.

As is usual with meetings of this size, some problems were experienced with scientists not turning up to give their presentations. This problem is certainly not unique to IAMAS and the Executive are giving a lot of thought to how this problem might be overcome at future meetings.

The assembly was deemed a great success and many complimentary remarks were heard from the participants about the venue, the efficiency of the Local Organising Committee and the quality of the scientific presentations. As can be seen elsewhere in this newsletter, the planning is well advanced for the next IUGG Assembly (2-13 July 2007) and even the next IAMAS Assembly, which will be held in Montreal, Canada over 19-29 July 2009. The latest information on these and other meetings can be found on the IAMAS web site ([www.IAMAS.org](http://www.IAMAS.org)).

Dr. John Turner  
IAMAS Deputy Secretary General

## IAMAS Symposia at Perugia 2007

### IAMAS SYMPOSIA

- M01: Overview of the Findings of the IPCC's Fourth Assessment Report
- M02: Global Observing Systems, Past, Present and Future
- M03: Aerosols, Radiation and Clouds
- M04: Mineral Dust Cycle and its Impact on Clouds and Radiation
- M05: Biological Ice Nucleators in the Atmosphere – at the Crossroads of Physics and Biology
- M06: Ice Microphysics: Theory and Measurement
- M07: Theoretical advances in atmospheric dynamics
- M08: Ensembles and Probabilistic Forecasting
- M09: Dynamics and Predictability of Severe Weather Events
- M10: Dynamics of Convectively-Coupled Equatorial Waves and the Madden-Julian Oscillation
- M11: The Dynamics of Eastern Tropical Oceans and Sub-tropical Highs
- M12: Impacts of Biosphere-Atmosphere Interaction on Atmospheric Composition from Synoptic to Annual and Decadal Timescales
- M13: Topographic Effects on Weather and Climate
- M14: Interactions of Land Cover and Climate
- M15: Extreme Weather and Climate Events: Past Occurrences and Future Likelihoods
- M16: Downscaling to Local and Regional Scales
- M17: Climate Sensitivity and Climate Feedbacks: Progress and Remaining Questions
- M18: The Role of the Stratosphere in the Climate System
- M19: Middle Atmosphere Science
- M20: Solar Activity and its Influences on the Earth's Weather and Climate

### IAMAS WORKSHOP

- MWS 01: The Definitions of Atmospheric Ice Particles

### UNION SYMPOSIA, IAMAS-LEAD

- U1: Our Changing Planet
- U10: Earth System Interactions

### JOINT SYMPOSIA WITH OTHER SCIENTIFIC UNIONS

- JM01: Our Changing Planet
- JM02: Earth System Interactions
- JM03: Satellite Observations: Products and Applications
- JM04: Intercontinental Transport of Substances and its Consequences
- JM05: Aerosols, Biomass Burning and Precipitation
- JM06: Glacial-Interglacial Cycles: New Records, Analyses, and Modelling
- JM07: Stable Water Isotopes: from Basin to Global Scale
- JM08: Clouds and Radiation and Air-Sea-Ice Interactions
- JM09: Hydrological Cycle, Precipitation and Precipitation Systems
- JM10: Tropical Cyclones
- JM11: Monsoon Systems
- JM12: Planetary Atmospheres and Their Evolution
- JM13: Aeronomy of Planetary Atmospheres: Comparative Planetology
- JM14: Ocean-Atmosphere Coupling
- JM15: Mid-latitude Droughts in a Changing Climate
- JM16: Cryospheric Change and Sea Level
- JM17: The Holocene-Anthropocene Transition: From Natural to Human-Dominance of the Earth System
- JM18: High Latitude Modes of Climate Variability
- JM19: Toward Bridging the Gap Between Weather and Inter-Annual Climate Variability: Processes, Phenomena and Prediction
- JM20: Assessing & Exploiting Re-analysis Data Sets
- JM21: Energetic Particles and Geomagnetic Storm Influence on Chemical and Dynamical Processes in the Polar Stratosphere and Mesosphere
- JM22: Solar Impact on the Mesosphere-Stratosphere-Troposphere System
- JM23: Instabilities in the Neutral Atmosphere, Ionosphere and Magnetosphere
- JM24: Data Assimilation for the Atmosphere, Ocean and Land Surface
- JM25: 3D Radiative Transfer in Complex Geophysical Media Including Clouds, Vegetation, Ice and Snow
- JM26: Ice Cores and Climate
- JM27: Glacier Fluctuations in the Asian High Mountains
- JM28: Consequences of Large Scale Circulation Variability on Snow and Ice Extent
- JM29: Snow Avalanches – Field Observations and Modelling
- JM30: Extraterrestrial Ice

## Featured Commission: The International Commission on Planetary Atmospheres and their Evolution (ICPAE)

The International Commission on Planetary Atmospheres and their Evolution (ICPAE) is one of the ten commissions of the International Association of Meteorology and Atmospheric Sciences (IAMAS), which is in turn part of the International Union of Geodesy and Geophysics (IUGG). ICPAE focuses its activity on the study of environmental conditions in the gaseous envelopes of planetary objects and their evolution. Its scope also includes tenuous planetary atmospheres (exospheres) and cometary comas.

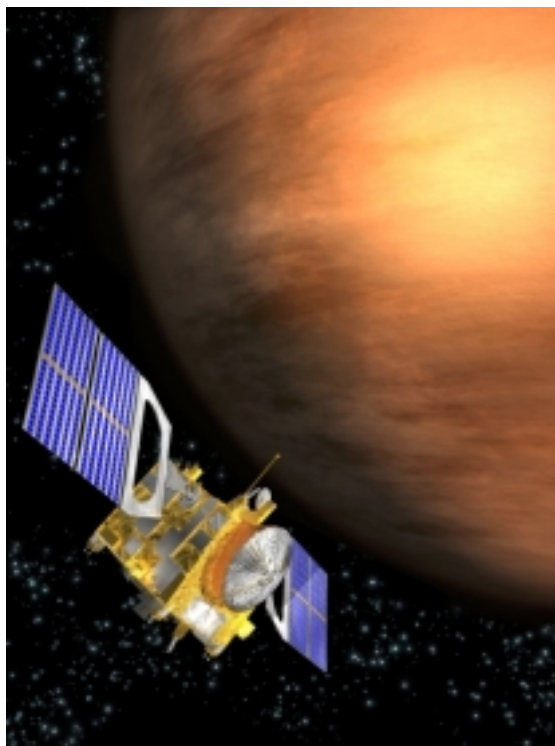
Planetary science has made an impressive progress in recent years. The main breakthrough was achieved thanks to the spacecraft missions. The orbiting spacecraft, landers and rovers carried out extensive studies of Mars and provided deep insight in the current climate and geological history of the planet. The Galileo and Cassini/Huygens missions to Jupiter and Saturn systems brought us a detailed look at the realm of giant planets and their satellites. The spacecraft investigations were strongly supported by the ground-based observations and numerical modeling. New data about our closest neighbours in the Solar System are expected from the Mars Reconnaissance and Venus Express orbiters in the near future.

A great portion of results obtained in the past



*Cassini Jupiter portrait: this true colour mosaic was constructed from images acquired on December 29th 2000 at a distance of approximately 10 million kilometres*

NASA/JPL/Space Science Institute



*Artists impression of the Venus Express orbiting Venus*

decade is related to the planetary atmospheres. The research aims at investigation of current conditions on the planets, at unveiling the processes that govern observed phenomena, and eventually at understanding of the evolution of planetary atmospheres and their climate. The variety of new data feeds comparative planetology – a quickly growing field of science that studies the conditions and processes on various planets and eventually aims at understanding of the Earth climate, its evolution and stability. This research also provides an important contribution to the field of exobiology. It is anticipated that the comparative planetology will soon expand its scope to extrasolar planets and their atmospheres.

The ICPAE primary functions are embedded in these science goals as follows: (1). to promote scientific work in the field of planetology in general and atmospheric sciences in particular by maintaining liaison between active research workers; (2). to organize symposia on the ICPAE subjects at the biennial meetings of IAMAS; (3). to co-ordinate contacts and research exchange among related associations such as the Division of Planetary Sciences (DPS of AAS), the European Geophysical Union (EGU), the Asia and Oceania Geophysical Society (AOGS) and to co-sponsor meetings and workshops during the Assemblies.

The ICPAE activity is essentially devoted to all aspects of our current understanding of the



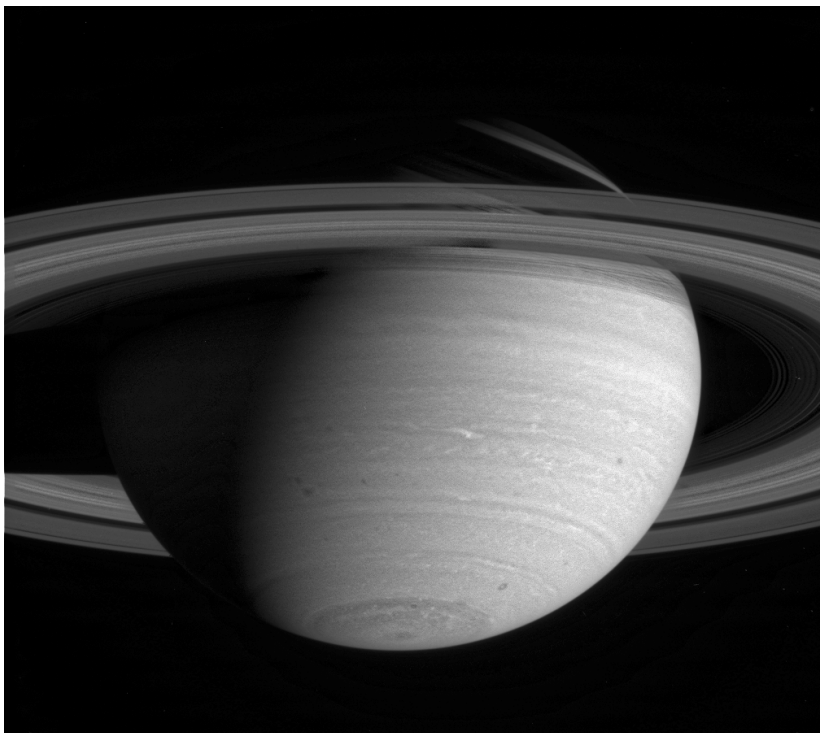
## The ICPAE (contd.)

planetary, cometary and satellite atmospheres and their evolution including the Earth when considered as a member of the Solar System. The fact that ICPAE is imbedded in the IAMAS body helps the commission to keep tight contacts with the science community involved in the study of the Earth atmosphere that provides an extensive exchange of knowledge and expertise. Due to its international nature ICPAE coordinates and expands national efforts in the field of planetary atmospheres research.

The biennial ICPAE meetings are the part of IUGG/IAMAS Assemblies during which ICPAE organizes topical symposia and business activity. The most recent meeting was held at the IUGG Assembly in Beijing, China, on 2-11 August 2005 where ICPAE organized two symposia: 11. "Planetary Atmospheres and their Evolution" and 12. "Aeronomy of planetary Atmospheres: comparative planetology".

The new results obtained in the recent planetary missions and ground-based observations as well as the progress in numerical modeling. The ICPAE tries to keep highly and interdisciplinary spirit and to allow broad discussions at its symposia. The next ICPAE meeting will be held on 2-13 July 2007 in Perugia, Italy. ICPAE also co-sponsors the session on outer planets and satellites with atmospheres at the EGU (European Geophysical Union) and AOGS (Asia and Oceania Geophysical Society) Assemblies.

The ICPAE consists of the scientists actively working on the field of planetary atmospheric physics. It currently includes more than 40 members including the President, the Vice-President, and the Secretary (A. Coustenis, D. Titov, D. Strobel).



*Cassini Saturn portrait: Saturn shows white feathery clouds near 45 degrees south latitude. Note the disturbances around the eastern edge of the south polar collar. Image taken in the near-infrared on 10th May 2004 at a distance of 27.2 million kilometres.*

*NASA/JPL/Space Science Institute*

## The IAMAS newsletter

The newsletter editor welcomes short reports from the individual IAMAS Commissions. Furthermore, conveners for the forthcoming IUGG General Assembly in 2007 are invited to 'trail' their symposia in the newsletter. Ideally these should be 300-500 words long with the addition of a couple of figures or images.

In addition, I would also welcome a 'featured commission' piece similar to that kindly supplied by the ICPAE for this issue.

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Editor IAMAS newsletter