

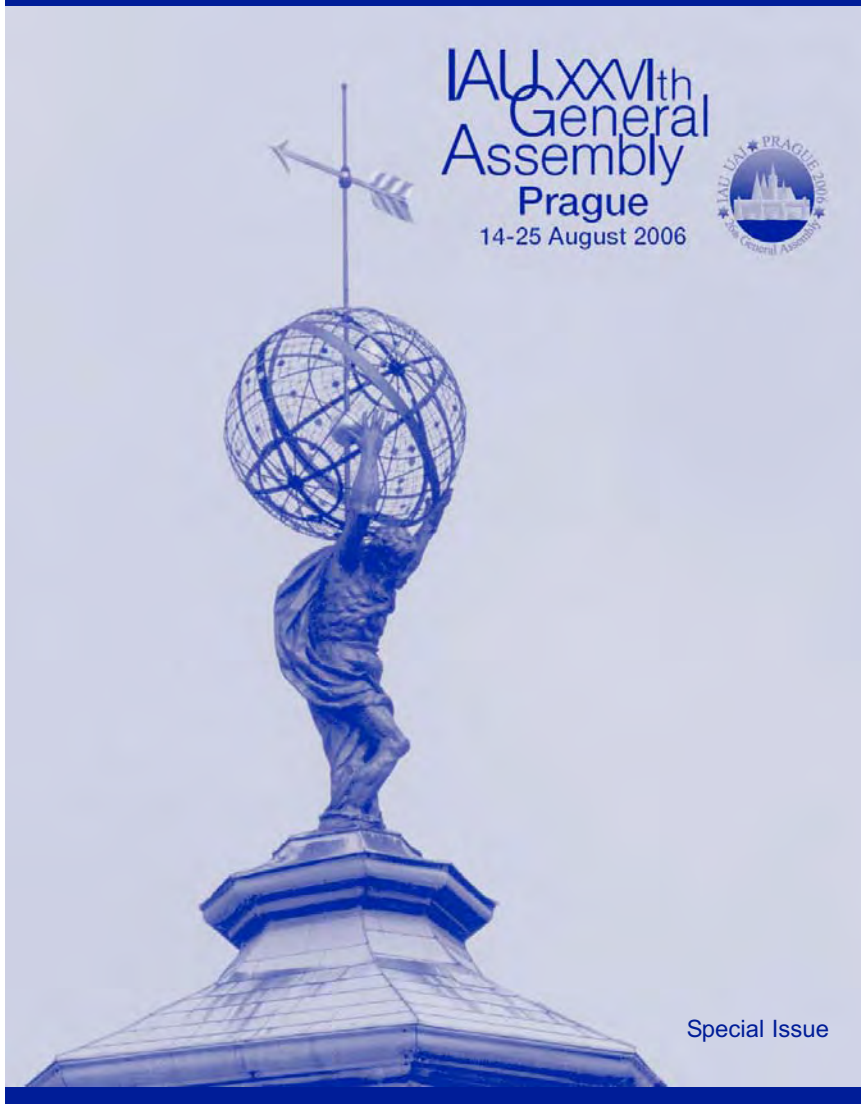


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# INTERNATIONAL ASTRONOMICAL UNION

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INFORMATION BULLETIN NOVEMBER 2005 69



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## PREFACE

This issue of the IAU Information Bulletin (IB) combines information for the XXVI<sup>th</sup> General Assembly (GA) and the regular IB. The next IB will give updated information on the events of this GA as well as the IAU home page: <http://www.iau.org/> and the home page of the XXVI<sup>th</sup> General Assembly organizers: <http://www.astronomy2006.com>.

The XXVI<sup>th</sup> General Assembly will take place at the Prague Conference Center, August 14-25, 2006. Some of our more senior members will recall the XIII<sup>th</sup> IAU General Assembly previously held in Prague, August 22-31, 1967, at a time of different political constellations.

I am happy to present to you a rich scientific menu of the XXVI<sup>th</sup> General Assembly. As a participant of the GA you will be able to pick and choose from a palette of six symposia, 17 Joint Discussions and 7 Special Sessions organized by foremost experts over the wide field of astronomy. Last but not least, 4 Invited Discourses held by outstanding scientists and Members of the Union will be presenting overviews from a broad range of fascinating, active research areas. The calendar for these meetings and talks is given at pp. 10-11 of this IB. GAs are usually also the unique occasions for the Division's and Commission's leaderships and Members to meet person-to-person to conduct their business meetings and individual science sessions. The calendar for these meetings and sessions is given at [pp. 32-36 of this IB](#).

I am pleased to announce a special service to our young astronomers at this General Assembly. A Session for Young Astronomers is scheduled for the first day of the GA (Tuesday August 15). I refer you to Michèle Gerbaldi's presentation of this session on [p. 37 of this IB](#). In addition, following the successful lunch organized for "Status of Women in Astronomy" at the Sydney GA, and the establishment of the corresponding Working Group, a similar lunch is prepared during this on Monday August 21.

As always in large meetings with a number of parallel sessions, conflicting overlaps are hard to avoid. I am deeply grateful for Monique Léger-Orine's invaluable help with the organization of the overall programme. Also, her careful checking and cross-checking of the time and places for the numerous sessions have served to minimize the number of frustrating session overlaps.

The Commissions, Working Groups (WGs) and Program Groups (PGs) are the bodies upon which the Union's scientific research and educational activities are based. In accordance with the Statutes and Bye-Laws, these bodies are therefore reviewed by their parent Division(s) every three years. Based on the result of these reviews the Divisions will forward their recommendations to the IAU Executive Committee about necessary changes in the current structure in order to meet the demand and challenges for the next triennium and beyond. This may imply that some Commissions, WGs and PGs, may be subject to notable changes, or even be discontinued, and that entirely new bodies may be needed to deal with new fields or activities of concern to IAU. Since all Commissions and the large majority of WGs and PGs have existed for more than 6 years already, these decisions will be made at the first meeting of the EC at the XXVI<sup>th</sup> General Assembly, in consultation with the IAU Division Presidents.

Changes of the Statutes and Bye-Laws made by the General Assembly in Sydney included the voting on scientific issues at General Assemblies. The Executive Committee has since received constructive advice on the issue from Union Members, and proposes a modification of the voting rules to restore this voting right, as shown in the enclosed copy of the Statutes and Bye-Laws (pp. 41-49). Individual and National Members are encouraged to let us know if they have comments on these modifications. The proposed modifications will be put forward for decision by the IAU National Members at the first session of the General Assembly.

An upgrading of the IAU website has been due for quite some time and this work started early this year. The IAU secretariat has thereby been deeply involved in a painstaking detailed planning of the structure and layout of the new database and website, and the follow-up and checking as the work progressed. I like to thank Claire Vidonne, in particular, for her conscientious and invaluable work over many months with the website and database that has led to the results that I hope you will be pleased with. Individual Members of the Union are urged to make good use of the "Individual Member's Identity Form" available on the website with a *username* and *password*, which will enable them to check their personal profiles and notify the Secretariat about necessary changes and corrections.

At its General Assembly in Sydney in July 2003, the IAU voted unanimously a resolution asking that the year 2009 be declared the Year of Astronomy by the United Nations (UN), in recognition of the significance of Galileo's introduction of the astronomical telescope in 1609. The proclamation was subsequently prepared by the "2009: Year of Astronomy" Working Group, and forwarded to the UNESCO Executive Board earlier this year. We were very happy to learn that UNESCO General Conference in October, 2005, recommended that the United Nations General Assembly at its 60<sup>th</sup> session adopt a resolution declaring 2009 as the International Year of Astronomy. In its recommendations to the UN General Assembly, the General Conference of UNESCO recognizes "that the study of the universe has led to numerous scientific discoveries that have great influence not only on humankind's understanding of the universe but also on the technological, social and economic development of society" and "that astronomy proves to have great implications in the study of science, philosophy, religion and culture". We hope and believe that by having declared 2009 the International Year of Astronomy, universities, schools, museums, observatories, societies and others will be encouraged to make even greater efforts to reach the public, especially young people, and to enthuse them about astronomy, in particular, and about science, in general.

Finally, the very best wishes of the IAU Officers and Secretariat to all readers for a happy and rewarding 2006!

*Oddbjørn Engvold, General Secretary, November 10, 2005.*

**PART I**  
**THE XXVI<sup>th</sup> IAU GENERAL ASSEMBLY**  
**PRAGUE, Czech Republic**  
**August 14-25, 2006**

**INVITATION BY THE IAU PRESIDENT**

The XXVI<sup>th</sup> General Assembly of the IAU will take place in Prague, the Czech Republic from August 14 to 25, 2006. Returning to Prague after almost 40 years this will be a memorable re-union for some of our more senior Members. I take great pleasure in inviting all IAU Members to join us in Prague.

Following the now established pattern we will have an extensive scientific programme of six Symposia, seventeen Joint Discussions and seven Special Sessions, as well as four Invited Discourses, on essentially all topics of contemporary Astronomy. A new feature in the Prague GA will be the "hot topics" sessions to capture the excitement of the most recent astronomical activities.

This scientific programme has been selected by the Division Presidents and now truly reflects the scientific interests of the membership. As a result, whether your interest is the solar system, stellar or interstellar, galactic or extra, there is something for everyone. The IAU General Assemblies are unique in offering not only a large variety of specialised scientific meetings, but also the freedom to attend meetings in other fields to gain new perspectives on our science. Just as important, the General Assembly will give Astronomers from around the world an opportunity to meet to discuss common interests, to organize co-operative ventures or to renew old friendships. All of this will be much facilitated by an excellent social programme organized by our Czech hosts.

Our hosts in Prague will be organizing an exhibition including scientific companies, institutions, publishers, etc., and I encourage you to promote this activity in your community.

We also welcome students and others involved in astronomy who are not IAU Members. Invitations may be extended by the relevant National Committee for the IAU or in special circumstances by the President through the IAU Secretariat in Paris. Participants of the General Assembly Symposia and Joint Discussions may be invited by the corresponding Scientific Organizing Committee Chairperson.

Our special Information Bulletin and the GA website <http://www.astronomy2006.com> give you the details of the programme, how to get your registration, and how to organize your trip to Prague. I am looking forward to meeting many of you there.

*Ron Ekers, IAU President, November 11, 2005*

## MESSAGE FROM THE NATIONAL ORGANIZING COMMITTEE

Welcome to Prague, capital of the Czech Republic, where the next XXVI<sup>th</sup> General Assembly of the International Astronomical Union will take place in August 2006. The astronomical community in the Czech Republic is proud to host such major event in astronomy and astrophysics for the second time after 39 years since the General Assembly in 1967.

The GA will be run by the National Organizing Committee (NOC), which was established by the Committee for Astronomy of the Czech Republic. The preparations go full steam forward and the actual information is available through the web pages of the GA:

<http://www.astronomy2006.com>

The scientific programme, which will be hosted completely in the Prague Congress Center (PCC) located near the town center, consists of 4 Invited Discourses, 6 Symposia, 17 Joint Discussions, 7 Special Sessions, a meeting of Women in Astronomy and a meeting of Young Astronomers. The registration and all lecture halls are located in one building, which is convenient to move from one meeting to another. The PCC is connected to a Metro line providing an easy access to other places in the town. The Opening Ceremony will be held in the PCC on Tuesday August 15, followed by a welcome reception. The General Assembly dinner will be organized in the Prague Industrial Palace on Wednesday August 23 and the Closing Ceremony will take place in the PCC on Thursday August 24, 2006.

The scientific programme will be complemented with public lectures delivered by some GA participants to a broad audience of non-specialists. A rich history of astronomy and physics in Prague will be presented during special talks and walking tours in the town. The social programme includes a concert of the Prague Philharmonia. Many different visits to historical sites in Prague and other places in the Czech Republic and Central Europe will also be offered.

The Registration, booking of accommodation, social programme and other events are or will be available through the GA web page. All these functions are operated by the agency Congress Business Travel (CBT) providing the GA Secretariat. CBT is accessible at the following address:

GA IAU 2006 Secretariat	E-mail: <a href="mailto:astro2006@cbttravel.cz">astro2006@cbttravel.cz</a>
CBT Astro 2006 Ltd.	Tel: + 420 224 942 575/579
Lidická 43/66	Fax: + 420 224 942 550
150 00 Praha 5 – Smíchov	
CZ – Czech Republic	

We hope that all the participants and guests will enjoy the IAU XXVI<sup>th</sup> General Assembly and use this opportunity to get in touch with a deep rooted tradition of Prague originating from Tycho and Kepler, providing fundamentals for the future of astronomy and astrophysics.

*Jan Palouš & Jan Vondrák, on behalf of the National Organizing Committee*



## NATIONAL ORGANIZING COMMITTEE (NOC)

Jiri Bicak	Vladimir Karas
Jiri Borovicka	Marian Karlicky
Sona Ehlerova	Zdenek Mikulášek
Frantisek Fárník	Jan Palouš, Chair (*)
Jiri Grygar	Martin Solc
Petr Hadrava	Jana Ticha
Petr Harmanec	Jan Vondrák, Vice-Chair (**)
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## LOCAL ORGANIZING COMMITTEE (LOC)

At a meeting in October 2004, the NOC appointed the LOC for the XXVI<sup>th</sup> General Assembly of the IAU. It consists of the following persons:

Ladislav Cervinka	Monika Senderova
Zuzana Dienstbierova	Zuzana Tesarova
Jan Palous	Jana Ticha
Richard Placek	Jan Vondrák
Pavel Suchan	Marek Wolf
Cyril Ron (Chair) (*)	

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## IMPORTANT DATES

### 2005

- Beginning of on-line registration  
<http://www.astronomy2006.com> ..... November
- Beginning of on-line submission of abstracts  
<http://www.astronomy2006.com> ..... November

### 2006

- **Application for travel grants closes** ..... **Sunday April 9**
- Notification of travel grants ..... End of April
- **End of early registration** ..... **Monday May 15**
- **End of abstract submission** ..... **Monday June 26**
- End of on-line registration ..... Monday August 7
- Start of on-site registration ..... Saturday August 12, p.m.
- IAU XXVI<sup>th</sup> GA starts ..... Monday August 14

## FINANCIAL SUPPORT TO ATTEND THE GENERAL ASSEMBLY

A limited number of grants to attend the XXVI<sup>th</sup> General Assembly will be available for participants who cannot obtain necessary funds from national sources. Those who plan to contribute actively to the General Assembly should fill in the form which is on-line at <http://www.astronomy2006.com>.

**The deadline for grant applications is Sunday April 9, 2006.**

## SCIENTIFIC PROGRAMME

### CONTACT ADDRESSES

Questions related to the Scientific Programme of the General Assembly should be addressed either:

- to the organizers of the different scientific events (contact information is given for each event in this Information Bulletin under its description) or
- to the IAU General Secretary, Oddbjørn Engvold, oengvold@astro.uio.no with a copy to iau@iap.fr.

### ABSTRACT SUBMISSION

The abstract server for all scientific sessions of the IAU XXVI<sup>th</sup> GA (Symposia, Joint Discussions and Special Sessions) is available at:

<http://iau.conference-services.net/authorlogin.asp?conferenceID=609>

The server can be accessed from the home page of the XXVI<sup>th</sup> GA:

<http://www.astronomy2006.com/>

All submitters of abstracts are requested to register as users with login and password, the first time they enter. The server provides instructions needed for abstract submissions.

An abstract may be modified and changed up to the submission deadline of June 26, 2006. After that date the session organizers of the individual sessions will check and decide which abstracts shall be accepted. Since the session organizers can continuously monitor and check incoming abstracts for their specific sessions, they will also be in position to answer questions about submitted abstracts.

All accepted abstracts will be contained in the Abstract Book for the attendees of the General Assembly.

**CALENDAR OF SCIENTIFIC EVENTS**  
**Invited Discourses, Symposia, Joint Discussions & Special Sessions**

Monday August 14	09:00-10:30	S235											
	11:00-12:30	S235	S236										
	14:00-15:30	S235	S236	S237									
	16:00-17:30	S235	S236	S237									
Tuesday August 15	09:00-10:30	S235	S236	S237									
	11:00-12:00	S235	S236	S237									
	14:00-17:30	General Assembly, Session 1											
Wednesday August 16	09:00-10:30	S235	S236	S237	JD1	JD2	JD3	JD4	JD5	SPS1	JD5		
	11:00-12:30	S235	S236	S237	JD1	JD2	JD3	JD4	JD5	SPS1	JD5		
	14:00-15:30	S235	S236	S237	JD1	JD2	JD3	JD4	JD5	SPS1	JD5		
	16:00-17:30	S235	S236	S237	JD1	JD2	JD3	JD4	JD5	SPS1	JD5		
	18:15	Invited Discourse - Jill Tarter											
Thursday August 17	09:00-10:30	S235	S236	S237	JD1	JD2	JD3	JD4	JD5	SPS1	SPS2		
	11:00-12:30	S235	S236	S237	JD1	JD2	JD3	JD4	JD5	SPS1	SPS2		
	14:00-15:30	S235	S236	S237	JD6	JD7	JD8	JD9	JD5	SPS3a	SPS2		
	16:00-17:30	S235	S236	S237	JD6	JD7	JD8	JD9	JD5	SPS3a	SPS2		
18:15	Invited Discourse - Alan Title												
Friday August 18	09:00-10:30		S236	S237	JD6	JD7	JD8	JD9	JD5	SPS3a	SPS2		
	11:00-12:30		S237		JD6	JD7	JD8	JD9	JD5	SPS3a	SPS2		
	14:00-15:30				JD6	JD7	JD8	JD9	JD5	SPS3a	SPS2	SPS4a	
16:00-17:30				JD6	JD7	JD8	JD9	JD5	SPS3a	SPS2	SPS4a		



## PROGRAMME OVERVIEW

### *Invited Discourses*

- ID 1** Jill Tarter ..... End of April  
The evolution of life in the Universe.
- ID 2** Alan Title ..... August 17, 2006  
The magnetic field and its effects on the solar atmosphere  
as observed at high resolution.
- ID 3** Shuang Nan Zhang ..... August 21, 2006  
Similar phenomena at different scales: black holes, sun,  
supernovae, galaxies and galaxy clusters.
- ID 4** Reinhard Genzel ..... August 22, 2006  
The power of new experimental techniques in  
astronomy: Zooming in on the black hole in the center of the Milky Way.

### *Symposia* ..... pp. 13-16

- S 235** Galaxy Evolution across the Hubble Time ..... p. 13
- S 236** Near Earth Objects, our Celestial Neighbors: Opportunity and Risk ..... p. 14
- S 237** Triggered Star Formation in a Turbulent ISM ..... p. 14
- S 238** Black Holes: from Stars to Galaxies - across the Range of Masses ..... p. 15
- S 239** Convection in Astrophysics ..... p. 15
- S 240** Binary Stars as Critical Tools and Tests in Contemporary Astrophysics ... p. 16

### *Joint Discussions* ..... pp. 17-27

- JD 01** Cosmic Particle Acceleration: from Solar System to AGN ..... p. 17
- JD 02** On the Present and Future of Pulsar Astronomy ..... p. 17
- JD 03** Solar Active Regions and 3D Magnetic Structure ..... p. 18
- JD 04** The Ultraviolet Universe: Stars from Birth to Death ..... p. 18
- JD 05** Calibrating the Top of the Stellar M-L Relation ..... p. 19
- JD 06** Neutron Stars and Black Holes in Star Clusters ..... p. 20
- JD 07** The Universe at  $z > 6$  ..... p. 20
- JD 08** Solar and Stellar Activity Cycles ..... p. 21
- JD 09** Supernovae: One Millennium after SN1006 ..... p. 21
- JD 10** Progress in Planetary Exploration Missions ..... p. 22
- JD 11** Pre-Solar Grains as Astrophysical Tools ..... p. 22
- JD 12** Long Wavelength Astrophysics ..... p. 23
- JD 13** Exploiting Large Surveys for Galactic Astronomy ..... p. 24
- JD 14** Modelling Dense Stellar Systems ..... p. 24

<b>JD 15</b>	New Cosmology Results from the Spitzer Space Telescope	p. 25
<b>JD 16</b>	Nomenclature, Precession and New Models in Fundamental Astronomy	p. 26
<b>JD 17</b>	Highlights of Recent Progress in the Seismology of the Sun and Sun-like Stars	p. 26
<b>Special Sessions</b>		pp. 27-31
<b>SPS 1</b>	Astronomical Facilities of the Next Decade	p. 27
<b>SPS 2</b>	Innovation in Teaching/Learning Astronomy Methods	p. 28
<b>SPS 3 a &amp; b</b>	The Virtual Observatory in Action: New Science, New Technology and Next Generation Facilities	p. 28
<b>SPS 4 a &amp; b</b>	"Hot Topics"	p. 29
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## SYMPOSIA

### IAU Symposium 235

#### GALAXY EVOLUTION ACROSS THE HUBBLE TIME

<http://astro.cas.cz/iaus235/>

From Monday 14 through Thursday 17 August 2006

*Coordinating Division/Commissions:* VIII, 28, 33, 34 & 47

***Scientific Organizing Committee:***

Roberto Abraham (Canada), Ronald J. Buta (USA), Catherine J. Cesarsky (IAU, Ex Officio), Françoise Combes (France, Co-Chair), Mark Dickinson (USA), Michael A. Dopita (Australia), Marijn Franx (The Netherlands), Kenneth C. Freeman (Australia), Uta Fritze-von Alvensleben (Germany), Masataka Uragita (Japan), Gerhard Hensler (Austria), Simon J. Lilly (Switzerland), Jan Palouš (Czech Republic, Co-Chair), Ian Smail (UK) & Roberto J. Terlevich (Mexico).

***Local Organizing Committee Chair:*** Cyril Ron.

***Preliminary Scientific Programme Topics:***

- Morphology and dynamics of galaxies
- Gas-stars cycle
- Stellar populations
- Galaxies in clusters
- Galaxies in early universe

***Editors:*** Françoise Combes (Chief Editor) & Jan Palouš.

***Contact address:*** Jan Palouš

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**IAU Symposium 236**  
**NEAR EARTH OBJECTS, OUR CELESTIAL NEIGHBORS:**  
**OPPORTUNITY AND RISK**

*<http://adams.dm.unipi.it/iaus236/>*

**From Monday 14 through Friday 18 August 2006**

**Coordinating Division/Commissions:** III, 15, 16, 20 & 22

**Scientific Organizing Committee:**

Guy J. Consolmagno (Vatican City State), Syuzo sobe (Japan), Zoran Knezevic (Serbia & Montenegro), Ingrid Mann (Germany), Andrea Milani (Italy, Co-Chair), David Morrison (USA), Petr Pravec (Czech Republic), Hans Rickman (IAU, Ex Officio), Hans Scholl (France), Timothy B. Spahr (USA), Edward F. Tedesco (USA), Giovanni B. Valsecchi (Italy, Co-Chair), David Vokrouhlicky (Czech Republic, Co-Chair), Iwan P. Williams (UK), Donald K. Yeomans (USA) & Jin Zhu (China, Nanjing).

**Local Organizing Committee Chair:** Cyril Ron.

**Preliminary Scientific Programme Topics:**

- Origin and dynamics of NEOs
- Physical properties of NEOs, including internal structure
- Next generation surveys and synergies with other astronomical communities
- Spacecraft exploration of NEOs
- Interactions of NEOs with planets: cratering, meteors and meteorites
- The astronomical aspects of the impact hazard

**Editors:** Andrea Milani (Chief Editor) & Giovanni B. Valsecchi, and David Vokrouhlicky.

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**IAU Symposium 237**  
**TRIGGERED STAR FORMATION IN A TURBULENT ISM**

*<http://astro.cas.cz/iaus237/>*

**From Monday 14 through Friday 18 August 2006**

**Coordinating Division/Commissions:** VI, 34 & 37

**Scientific Organizing Committee:**

Philippe André (France), Leo Blitz (USA), Bruce G. Elmegreen (USA, Co-Chair), Yasuo Fukui (Japan), Pavel Kroupa (Germany), Sally Oey (USA), Eve C. Ostriker (USA), Jan Palouš (Czech Republic, Co-Chair), Monica Rubio (Chile), Steve Shore (Italy), Guillermo Tenorio-Tagle (Mexico), Anthony P. Whitworth (UK), Robert E. Williams (IAU, Ex Officio) & Hans Zinnecker (Germany).

**Local Organizing Committee Chair:** Cyril Ron.

**Preliminary Scientific Programme Topics:**

- General ISM related to cloud formation
- GMC cores and small-scale triggering
- Clusters, associations, and large-scale triggering
- Galaxy-wide triggering

**Editors:** Bruce G. Elmegreen (Chief Editor) & Jan Palouš.



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**IAU Symposium 238**

**BLACK HOLES: FROM STARS TO GALAXIES - ACROSS THE RANGE OF MASSES**

<http://astro.cas.cz/iaus238/index.php?section=1>

**From Monday 21 through Friday 25 August 2006**

**Coordinating Division/Commissions:** XI, 28, 30, 40 & 42

**Scientific Organizing Committee:**

Roger D. Blandford (USA), Annalisa Celotti (Italy), Bozena Czerny (Poland), Philip A. Charles (South Africa), Andrew C. Fabian (UK), Reinhard Genzel (Germany), Günther Hasinger (Germany), Vladimir Karas (Czech Republic, Co-Chair), Kazuo Makishima (Japan), Giorgio Matt (Italy, Co-Chair), Felix Mirabel (Chile), Kenneth A. Pounds (IAU, Ex Officio), Martin J. Rees (UK), Jean H. Swank (USA), Tahir Yaqoob (USA) & Shuang Nan Zhang (China, Nanjing).

**Local Organizing Committee Chair:** Cyril Ron.

**Preliminary Scientific Programme Topics:**

- Observational evidence for stellar-mass black holes. Formation and evolution of stellar-mass black holes, connection with gamma-ray bursts
- Matter accretion and ejection in stellar mass black holes. Observational evidence for intermediate mass black holes: ultraluminous X-ray sources
- The Galactic Center. Observational evidence for supermassive black holes, connection with the host galaxies
- Formation and evolution of supermassive black holes, black hole binary merging. Matter accretion and ejection in supermassive black holes
- Common phenomenology in black holes of all masses. Strong-gravity effects: spectra, timing, polarimetry

**Editors:** Vladimir Karas (Chief Editor) & Giorgio Matt.

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**IAU Symposium 239**

**CONVECTION IN ASTROPHYSICS**

<http://www.astro.keele.ac.uk/iaus239/>

**From Monday 21 through Friday 25 August 2006**

**Coordinating Division/Commissions:** IV, 10, 12, 16, 27, 29, 34, 35, 36 & 37

**Scientific Organizing Committee:**

Beatriz Barbay (IAU, Ex Officio), Kwing Lam Chan (China, Nanjing), Francesca D'Antona (Italy), Thomas L. Duvall (USA), Andrew P. Ingersoll (USA), Jiri Kubat (Czech Republic), Friedrich Kupka (Germany, Co-Chair), Aake Nordlund (Denmark), Ian W. Roxburgh (UK, Co-Chair), Barry Smalley (UK), Sami K. Solanki (Germany), Juri Toomre (USA) & Sylvie D. Vauclair (France).

**Local Organizing Committee Chair:** Cyril Ron.

**Preliminary Scientific Programme Topics:**

- Modelling and simulation techniques of convection
- Observing convection
- Convection and radiation
- Convection in planets and brown dwarfs
- Convection and nuclear reactions
- Convective mixing
- Convection, pulsation and mass loss
- Convection, rotation and discs
- MHD convection and dynamos

**Editors:** Friedrich Kupka (Chief Editor), Ian W. Roxburgh & Kwing Lam Chan.

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**IAU Symposium 240  
BINARY STARS AS CRITICAL TOOLS AND TESTS  
IN CONTEMPORARY ASTROPHYSICS**

*<http://ad.usno.navy.mil/iaus240/>*

**From Tuesday 22 through Friday 25 August 2006**

**Coordinating Division/Commissions:** IV, 26 & 42

**Scientific Organizing Committee:**

Christine Allen (Mexico), Dmitrij V. Bisikalo (Russian Federation), John Davis (Australia), Edward F. Guinan (USA, Co-Chair), Petr Harmanec (Czech Republic, Co-Chair), William I. Hartkopf (USA, Co-Chair), Patricia Lampens (Belgium), Josefina F. Ling (Spain), Katalin Olah (Hungary), Terry D. Oswalt (USA), Kresimir Pavlovski (Croatia), Geraldine J. Peters (USA), Slavek M. Rucinski (Canada), Colin D. Scarfe (Canada), Brian Warner (IAU, Ex Officio), Marek Wolf (Czech Republic) Hans Zinnecker (Germany).

**Local Organizing Committee Chair:** Cyril Ron.

**Preliminary Scientific Programme Topics:**

- New observing and reduction techniques: long-baseline interferometry; precision photometry & spectroscopy; automatic searches; amateurs; light-curve modelling; simultaneous solutions
- Improving calibrations of distance, Teff: new results from classical methods; theories of rotating stars and binary formation; nomenclature
- Binaries as critical tests: tidal potential of Galaxy; theories of gravitation and mass exchange; asteroseismology for pulsating stars in binaries; influence of binarity on stellar activity
- Confronting needs of observers and theoreticians, dealing with flood of data expected from planned surveys; the Virtual Observatory

**Editors:** William I. Hartkopf (Chief Editor), Petr Harmanec & Edward F. Guinan.

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## JOINT DISCUSSIONS

### Joint Discussion 01

#### COSMIC PARTICLE ACCELERATION: FROM SOLAR SYSTEM TO AGNs

<http://wave.asu.cas.cz/iaujd01/>

Wednesday 16 (full day) & Thursday 17 (a.m.) August 2006

**Coordinating Divisions:** II & XI

**Participating Divisions/Commissions:** VIII, X & XI/10, 12, 28, 40, 44 & 49

**Scientific Organizing Committee:**

Jonathan Arons (USA), Roger D. Blandford (USA), John C. Brown (UK, Co-Chair), Mary K. Hudson (USA), Marian Karlicky (Czech Republic, Co-Chair), John Kirk (Germany, Co-Chair), Robert P. Lin (USA), Donald B. Melrose (Australia), Kazunari Shibata (Japan), Nicole Vilmer (France) & Alan M. Watson (UK).

**Preliminary Scientific Programme Topics:**

- Overview of cosmic particle acceleration
- Production and role of solar energetic solar particles
- Acceleration in planetary magnetospheres and the ISM
- Pulsars/pulsar winds and supernova remnants
- Active stars and colliding stellar winds
- Gamma-ray bursters
- AGNs, jets and clusters of galaxies
- Theory of acceleration mechanisms and their diagnostics
- Particle in cell and other simulations

**Editors:** Marian Karlicky (Chief Editor) & John C. Brown.

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GB - Glasgow G12 8QQ, UK

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### Joint Discussion 02

#### ON THE PRESENT AND FUTURE OF PULSAR ASTRONOMY

[http://www.mpe.mpg.de/IAU\\_JD02](http://www.mpe.mpg.de/IAU_JD02)

Wednesday 16 (full day) & Thursday 17 (a.m.) August 2006

**Coordinating Division:** XI

**Participating Commissions:** 31, 33, 40 & 44

**Scientific Organizing Committee:**

Jonathan Arons (USA), Werner Becker (Germany, Co-Chair), Kwong Sang Cheng (China, Nanjing), Ocker C. de Jager (South Africa), Janusz A. Gil (Poland, Co-Chair), Nobuyuki Kawai (Japan), Michael Kramer (UK), H. Jan M.E. Kuijpers (The Netherlands), Roger W. Romani (USA), Bronislaw Rudak (Poland), David J. Thompson (USA) & Vladimir V. Usov (Israel/Russian Federation).

**Preliminary Scientific Programme Topics:**

- Global properties and internal structure on neutron stars
- Structure and evolution of neutron star magnetic field
- The evolution of rotation-powered pulsars
- Pulsar electrodynamics

- Non-thermal emission from pulsars
- Collective plasma processes
- Thermal emission from neutron stars and anomalous X-ray pulsars
- General relativity effects and gravitational waves from binary and fast spinning pulsars

**Editors:** Werner Becker (Chief Editor), Janusz A. Gil & Bronislaw Rudak.

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#### **Joint Discussion 03**

#### **SOLAR ACTIVE REGIONS AND 3D MAGNETIC STRUCTURE**

<http://www.csun.edu/physicsandastronomy/IAUJD3/>

**Wednesday 16 (full day) & Thursday 17 (a.m.) August 2006**

**Coordinating Division:** II

**Participating Commission:** 49

**Scientific Organizing Committee:**

Subramanian Ananthakrishnan (India), Thomas E. Berger (USA), John M. Davis (USA), Oddbjorn Engvold (Norway), Dale E. Gary (USA), Axel Hofmann (Germany), Hongqi Zhong (China, Nanjing), Donald B. Melrose (Australia), Debi Prasad Choudhary (USA, Co-Chair), Eric R. Priest (UK), Robert J. Rutten (The Netherlands), Takashi Sakurai (Japan), Brigitte Schmieder (France), Michal Sobotka (Czech Republic, Co-Chair), Sami K. Solanki (Germany) & Jan O. Stenflo (Switzerland).

**Preliminary Scientific Programme Topics:**

- Photospheric magnetic field: observation and inversion techniques
- Chromospheric magnetic field: observation and inversion techniques
- Coronal magnetic field: observation and inversion techniques
- Magnetic field below the photosphere
- Extrapolation of the photospheric field for modelling of 3-D magnetic field structure
- Small-scale structures and magnetic field
- Coronal and chromospheric heating theory
- Eruptions, filaments, CMEs, and space weather implications
- Instrumentation and measuring techniques

**Editors:** Debi Prasad Choudhary (Chief Editor) & Michal Sobotka.

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#### **Joint Discussion 04**

#### **THE ULTRAVIOLET UNIVERSE: STARS FROM BIRTH TO DEATH**

dedicated to Prof. Cornelis de Jager (85), pioneer in UV studies

<http://www.mat.ucm.es/~aig/investigacion/IAUPrague/index.htm>

**Wednesday 16 (full day) & Thursday 17 (a.m.) August 2006**

**Coordinating Division:** XI

**Participating Commissions:** 14, 30 & 36

**Scientific Organizing Committee:**

Thomas R. Ayres (USA), Martin A. Barstow (UK), William P. Blair (USA), Domitilla de Martino (Italy), Michael A. Dopita (Australia), Ana I. Gómez de Castro (Spain), Jiri Grygar (Czech Republic), John B. Hutchings (Canada), Carole Jordan (UK), Yoji Kondo (USA), Elia M. Leibowitz (Israel), Andrzej Niedzielski (Poland), Boris M. Shustov (Russian Federation), Jorge Sahade (Argentina), Willem Wamsteker (†) (Spain, Chair) & Zhen-Ru Wang (China, Nanjing).

**Preliminary Scientific Programme Topics:**

- Newly formed stars and their direct violent environment
- Mass loss phases in massive stars
- Different levels of interaction in binary stars
- The white dwarf sequence
- Differences and similarities in classical novae
- Different ways to become a supernova

**Editors:** Ana I. Gómez de Castro (Chief Editor) & Willem Wamsteker (†).

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**Joint Discussion 05****CALIBRATING THE TOP OF THE STELLAR M-L RELATION**

<http://www.stsci.edu/science/starburst/Prague/>

Wednesday 16 (full day) August 2006

**Coordinating Division:** IV

**Participating Divisions/Commissions:** VI & VIII/26, 28, 29, 34, 35, 36, 37, 42, 45 & 47

**Scientific Organizing Committee:**

Norbert Langer (The Netherlands), Claus Leitherer (USA, Chair), Anthony F.J. Moffat (Canada), Stanley P. Owocki (USA), and Joachim Puls (Germany).

**Preliminary Scientific Programme Topics:**

- Empirical mass determinations of the most massive single stars
- Models for massive stars on and off the main sequence
- Stability near the Eddington limit with and without rotation
- Comparisons of atmospheric and evolutionary masses
- Efforts to detect, monitor and analyze massive binaries
- Mass and energy return to the interstellar medium from massive stars
- Extrapolation to the first generation of stars with ultra-high mass
- The role of hot massive stars during the epoch of re-ionization in the early universe

**Editors:** Claus Leitherer (Chief Editor), Anthony F.J. Moffat & Joachim Puls.

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**Joint Discussion 06**  
**NEUTRON STARS AND BLACK HOLES IN STAR CLUSTERS**  
<http://www.astro.northwestern.edu/IAUJD6/>

**Thursday 17 (p.m.) & Friday 18 (full day) August 2006**

**Coordinating Division:** XI

**Participating Commissions:** 26, 28, 30, 31, 33, 35, 37, 40, 42 & 44

**Scientific Organizing Committee:**

Tomasz Bulik (Poland), V. Jorge Casares (Spain), Philip A. Charles (South Africa), Monica Colpi (Italy), Robert P. Fender (UK), Pranab Ghosh (India), Eric Gourgoulhon (France), Jonathan E. Grindlay (USA), Victoria M. Kaspi (Canada), Andrew R. King (UK), Richard N. Manchester (Australia), I. Felix Mirabel (Chile), Frederic A. Rasio (USA, Co-Chair), Hans Ritter (Germany), Masura Shibata (Japan) & Ingrid H. Stairs (Canada, Co-Chair).

**Preliminary Scientific Programme Topics:**

- X-ray binaries in the Milky Way and other galaxies
- Radio and X-ray millisecond pulsars
- X-ray transients
- Optical reprocessing and fast variability
- X-ray sources and radio pulsars in globular clusters
- Compact objects in massive binaries and starbursts
- Connection to gamma-ray bursts
- Modelling of accretion disks
- Quasi-periodic oscillations
- Ultra-luminous X-ray sources
- Formation and evolution of massive binaries
- Supernovae and kicks in binaries
- Compact binaries as sources of gravitational waves
- Relativistic binaries and tests of general relativity

**Editors:** Frederic A. Rasio (Chief Editor), Victoria M. Kaspi & Robert P. Fender.

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**Joint Discussion 07**  
**THE UNIVERSE AT  $z > 6$**   
<http://obswww.unige.ch/~schaerer/jd07/>

**Thursday 17 (p.m.) & Friday 18 (full day) August 2006**

**Coordinating Division:** VIII

**Participating Commissions:** 28 & 47

**Scientific Organizing Committee:**

Andrea Ferrara (Italy, Co-Chair), Esther M. Hu (USA), Matthew D. Lehnert (Germany), Roser D. Pello (France), Daniel Schaerer (Switzerland, Co-Chair) & Yoshiaki Taniguchi (Japan).

**Preliminary Scientific Programme Topics:**

- Galaxies at  $z > 6$
- Interstellar and intergalactic medium at  $z > 6$
- Quasars at  $z > 6$

- Observational approaches to  $z > 6$ :  
  deep fields, search techniques, use of gravitational lensing
- Gamma-ray bursts to probe the early Universe
- Star formation in the early Universe, simulations
- Feedback mechanisms at high- $z$  at various scales, galactic and IGM including galaxy outflows
- Early chemical evolution of the Universe
- Cosmic re-ionization, simulations, observational constraints

**Editors:** Daniel Schaerer (Chief Editor) & Andrea Ferrara.

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**Joint Discussion 08**  
**SOLAR AND STELLAR ACTIVITY CYCLES**

[http://www.aip.de/iau2006\\_jd8/](http://www.aip.de/iau2006_jd8/)

**Thursday 17 (p.m.) & Friday 18 (full day) August 2006**

**Coordinating Division:** II

**Participating Divisions/Commissions:** IV/10, 12, 29, 35, 36 & 49

**Scientific Organizing Committee:**

Pavel Ambroz (Czech Republic), Martin Asplund (Australia), Svetlana V. Berdyugina (Switzerland), Andrew C. Cameron (UK), Dainis Dravins (Sweden), Lidia van Driel-Gesztelyi (France), Cheng Fang (China, Nanjing), Alexander Kosovichev (USA, Co-Chair), John D. Landstreet (Canada), Valentin I. Makarov (Russian Federation), Gautier Mathys (Chile), Roberto Pallavicini (Italy), Fernando Moreno-Insertis (Spain), Takashi Sakurai (Japan), Klaus G. Strassmeier (Germany, Co-Chair) & P. Venkatakrisnan (India).

**Preliminary Scientific Programme Topics:**

- Observations and models of the physical processes responsible for stellar magnetic cycles
- Advances in understanding the dynamo mechanism, generation, transport and dissipation of magnetic fields
- Recent results of observations of almost a complete 11-year solar cycle from SOHO and ground-based observatories
- Multi-wavelength observations of the solar-type activity on other stars
- Compare and contrast properties of stellar and solar cycles with theories
- Planning for future observations and modelling

**Editors:** Klaus G. Strassmeier (Chief Editor) & Alexander Kosovichev.

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**Joint Discussion 09**  
**SUPERNOVAE: ONE MILLENNIUM AFTER SN1006**

**Thursday 17 (p.m.) & Friday 18 (full day) August 2006**

**Coordinating Division/Working Group:** VIII, WG Supernovae

**Participating Divisions/Commissions:** VI & XII/34, 41 & 47

**Scientific Organizing Committee:**

Gloria Dubner (Argentina), Claes Fransson (Sweden), Wolfgang Hillebrandt (Germany, Co-Chair), Katsuji Koyama (Japan), Ken'ichi Nomoto (Japan), Robert Petre (USA), Pilar Ruiz-Lapuente (Spain), Brian P. Schmidt (Australia, Co-Chair), Virginia L. Trimble (USA), J. Graig Wheeler (USA) & P. Frank Winkler (USA, Co-Chair).

**Preliminary Scientific Programme Topics:**

- The history of SN 1006 and other historical supernovae
- SNR 1006 and other young supernova remnants
- The physics of supernovae: observations and theory
- Cosmological applications of supernovae

**Editors:** P. Frank Winkler (Chief Editor), Wolfgang Hillebrandt & Brian P. Schmidt.

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**Joint Discussion 10****PROGRESS IN PLANETARY EXPLORATION MISSIONS**

<http://www.oal.ul.pt/~roos/IAU06/index.html>

*Monday 21 (full day) & Tuesday 22 (a.m.) August 2006*

**Coordinating Commission:** 16

**Participating Division/Commission:** III/15

**Scientific Organizing Committee:**

Michael F. A'Hearn (USA), Carlo Blanco (Italy), Guy J. Consolmagno (Vatican City State, Chair) Régis Courtin (France), Dale P. Cruikshank (USA), Walter F. Huebner (USA), Petrus M.M. Jenniskens (The Netherlands), H. Uwe Keller (Germany), Leonid V. Ksanfomality (Russian Federation), Mikhail Ya. Marov (Russian Federation), Melissa A. McGrath (USA), Keth S. Noll (USA), Maarten C. Roos-Serote (Portugal), Edward F. Tedesco (USA) & Iwan P. Williams (UK).

**Preliminary Scientific Programme Summary:**

Results of planetary spacecraft missions that have returned results in the last triennium will be summarized by the project scientists and other principal investigators of the missions. The new results will be related to highlight the body of work in Planetary Sciences, which has proceeded in parallel with the spacecraft missions Spirit/Opportunity, Mars Express, Cassini, Stardust, Genesis.

**Editors:** Guy J. Consolmagno (Chief Editor) & Melissa A. McGrath.

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**Joint Discussion 11****PRE-SOLAR GRAINS AS ASTROPHYSICAL TOOLS**

<http://www.maths.monash.edu.au/~johnl/wgarg/JD.shtml>

*Monday 21 (full day) August 2006*

**Coordinating Division:** IV

**Participating Division/Commissions:** VI/22, 34 & 35



**Scientific Organizing Committee:**

Anja C. Andersen (Denmark, Co-Chair), W. David Arnett (USA), Martin Asplund (Australia), Suchitra C. Balachandran (USA), John P. Bradley (USA), Mounib El Eid (Lebanon), Roberto Gallino (Italy), Sunetra Giridhar (India), John C. Lattanzio (Australia, Co-Chair), Jacobus Th. van Loon (UK), Nami Mowlavi (Switzerland), Takashi Yoshida (Japan) & Ernst Zinner (USA).

**Preliminary Scientific Programme Topics:**

- Introduction and Overview: Overview: Opportunities from Grains; Grain Measurements in Space and in the Lab; Abundances in Grains, Stars and the Galaxy
- Forming Grains: Condensation of Grains; Mass-loss: the role of Grains; Life Story of a Grain: Formation to the Lab
- Measuring Grains: Recent results on IR Grain Spectroscopy; The Nano-SIMS; The RIMS
- Solar grains and nucleosynthesis: Pre-solar grains and novae; Pre-solar grains and supernovae; Pre-solar grains and AGB stars; Overview: Agenda for the Future

**Editors:** Anja C. Andersen (Chief Editor) & John C. Lattanzio.

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**Joint Discussion 12****LONG WAVELENGTH ASTROPHYSICS**

<http://lwa.nrl.navy.mil/IAU/>

**Monday 21 (full day) August 2006**

**Coordinating Division:** X

**Participating Divisions/Commissions:** VI, VII & VIII/9 & 40

**Scientific Organizing Committee:**

Franklin Briggs (Australia), Gloria Dubner (Argentina), Luigina Feretti (Italy), Jacqueline N. Hewitt (USA), Namir E. Kassim (USA, Co-Chair), T. Joseph W. Lazio (USA, Co-Chair), A.V. Megn (Ukraine), Alexander A. Konovalenko (Ukraine), Alain Lecacheux (France), A. Pramesh Rao (India) & Huub J.A. Röttgering (The Netherlands).

**Preliminary Scientific Programme Summary:**

The greatest discoveries in astronomy have accompanied technological innovations that have opened new windows of the electromagnetic spectrum. One of the last poorly explored regions lies between 100 MHz and the ionospheric cutoff at 10 MHz. In the past, variations in the ionosphere have limited ground-based instruments to small (< 5 km) apertures and hence relatively coarse angular resolution and sensitivity. Ever-increasing computing power combined with new calibration and imaging techniques make it possible to overcome this restriction. New instruments such as the Long Wavelength Array (LWA) in the southwest US and the Low Frequency Array (LOFAR) in The Netherlands are being proposed for development. As a preparation for these new instruments and as a result of new technologies, many exciting scientific results have been obtained at long wavelengths (< 1 GHz) in the past several years and continue to be generated, even with the very limited capabilities presently available. Since the last extensive discussion of long wavelength astrophysics was held in 2004 September, and that was a relatively local meeting, it is a good time to bring the world community of interested astronomers together to discuss new results and plan for advanced instruments to fully open this poorly studied wavelength range.

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**Joint Discussion 13**  
**EXPLOITING LARGE SURVEYS FOR GALACTIC ASTRONOMY**  
<http://clavius.as.arizona.edu/vo/jd13/>

*Tuesday 22 (full day) & Wednesday 23 (a.m.) August 2006*

**Coordinating Division:** IV

**Participating Divisions/Commissions:** I, V, VII & IX /8, 25, 27, 30, 33, 35 & 45

**Scientific Organizing Committee:**

Christopher Corbally (Vatican City State/USA, Co Chair), Coryn Bailer-Jones (Germany, Co-Chair), Sunetra Giridhar (India, Co-Chair), Laurent Eyer (Switzerland), Thomas H. Lloyd-Evans (UK), Dante Minniti (Chile), Heather Morrison (USA), Birgitta Nordström (Denmark), Imants Platais (USA) & Patricia A. Whitelock (South Africa).

**Preliminary Scientific Programme Topics:**

- Review of major surveys: photometric, spectroscopic, radial velocity, astrometric, variable star
- Impact of these data on models of the formation and evolution of the Galaxy and its substructures
- Limitations of surveys: photometric accuracy, spectroscopic discrimination, calibration, parameterization, population synthesis
- Future strategies for space- and ground-based surveys
- Contributed proposals for optimizing surveys and discussion

**Editors:** Christopher Corbally (Chief Editor), Coryn Bailer-Jones & Sunetra Giridhar.

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**Joint Discussion 14**  
**MODELLING DENSE STELLAR SYSTEMS**  
<http://www.astro.northwestern.edu/IAUJD14>

*Tuesday 22 (p.m.) & Wednesday 23 (full day) August 2006*

**Coordinating Division:** VII

**Participating Commissions:** 26, 33, 35 & 37

**Scientific Organizing Committee:**

Christian M. Boily (France), Melvyn B. Davies (Sweden), Douglas C. Heggie (UK), Piet Hut (USA), Ralf S. Klessen (Germany), Junichiro Makino (Japan), Rosemary A. Mardling (Australia), Stephen L.W. McMillan (USA), Georges Meylan (Switzerland), Giampaolo Piotto (Italy), Simon F. Portegies Zwart (The Netherlands), Alison I. Sills (Canada, Co-Chair), Rainer Spurzem (Germany) & Ladislav Subr (Czech Republic, Co-Chair).

**Preliminary Scientific Programme Topics:**

- Current observations of star clusters and galactic nuclei
- Modelling local interactions, e.g., direct stellar collisions, perturbed binary evolution
- Modelling global interactions, e.g., whole cluster models, star formation in crowded regions

- The most complete models of dense stellar systems, including feedback between stellar evolution, stellar dynamics, and stellar hydrodynamics, and confrontation with observed systems

**Editors:** Alison I. Sills (Chief Editor), Ladislav Subr & Simon F. Portegies Zwart.

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#### Joint Discussion 15

#### NEW COSMOLOGY RESULTS FROM THE SPITZER SPACE TELESCOPE

<http://ssc.spitzer.caltech.edu/mtgs/iau2006-JD15/>

Tuesday 22 (full day) & Wednesday 23 (a.m.) August 2006

**Coordinating Division:** XI

**Participating Commissions:** 28, 44 & 47

**Scientific Organizing Committee:**

J. Bergeron (France), C. Cesarsky (France), V. Charmandaris (Greece), T. Courvoisier (Switzerland), G. Helou (USA, Chair), M. Im (Republic of South Korea), L. Infante (Chile), R. Ivison (UK), H. Okuda (Japan), Jan Palouš (Czech Republic), C. Steidel (USA), and R. Sunyaev (Russian Federation). Additional invitations have been issued, but no confirmation obtained.

**Preliminary Scientific Programme Topics:**

- Overview of Spitzer Space Telescope mission and related science
- The Modern Universe,  $z \sim 0$  out to  $z \sim 1$ 
  - Local Universe results (e.g. SINGS), wide-area surveys (e.g. FLS, SWIRE),
- The Middle Universe,  $z \sim 1$  to 3
  - Deep mid- and far-IR surveys, e.g. Groth Strip, GOODS, S-COSMOS
- The Distant Universe,  $z \sim 3$  to 5 and beyond
  - Ultra-deep surveys (GOODS, GTO), lensing surveys
  - The Earliest Denizens of the Universe,  $z > 5$
- Integrated phenomenological and theoretical perspectives
  - Galaxy populations from various wavelength surveys, their evolution and their inter-relations
  - Cosmic star formation history, galaxy merger history
  - Consistency with metallicity data, cosmic background data, other constraints
  - AGN versus starburst fraction and its evolution
  - Local analogs to early universe objects, e.g., low metallicity, emergent starbursts
  - ULIRGs and their role in the big picture, e.g., duty cycle, evolutionary paths

**Editors:** George Helou (Chief Editor) & TBD.

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**Joint Discussion 16**  
**NOMENCLATURE, PRECESSION AND NEW MODELS**  
**IN FUNDAMENTAL ASTRONOMY**

*<http://synte.obspm.fr/iauJD16/>*

*Tuesday 22 (full day) & Wednesday 23 (a.m.) August 2006*

**Coordinating Division:** I

**Participating Division/Commissions:** X/4, 5, 7, 8, 19, 31 & 40

**Scientific Organizing Committee:**

Nicole Capitaine (France, Co-Chair), Aleksander Brzezinski (Poland), Mark R. Calabretta (Australia), Veronique Dehant (Belgium), Toshio Fukushima (Japan), James L. Hilton (USA, Co-Chair), Kenneth J. Johnston (USA), Irina I. Kumkova (Russian Federation), Andrea Milani (Italy), Robert A. Nelson (USA), Kenneth P. Seidelmann (USA), Michael Soffel (Germany) & Jan Vondrák (Czech Republic, Co-Chair).

**Preliminary Scientific Programme Topics:**

- State of the art in both the nomenclature in fundamental astronomy and in high-accuracy models for precession, the ecliptic and other astrometric models for reducing high-accuracy observations
- New definitions, methods, high-accuracy models and newly proposed terminology and their implementation
- Scientific applications of high-accuracy astrometric observations, models and accurate realizations of reference systems for ephemerides, celestial mechanics, astrometry, Earth rotation, time and radio-astronomy
- Work and recommendations of the Division I Working Groups on Nomenclature for Fundamental astronomy, Precession and the Ecliptic and Relativity for Celestial mechanics, astrometry and metrology
- The most recent astrometric models for precession, nutation, light deflection, relativistic transformation to the Solar system and the Earth, etc.
- Science with high-accuracy astronomy

**Editors:** Nicole Capitaine (Chief Editor), Jan Vondrák & James L. Hilton.

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**Joint Discussion 17**  
**HIGHLIGHTS OF RECENT PROGRESS**  
**IN THE SEISMOLOGY OF THE SUN AND SUN-LIKE STARS**

*<http://www.soho18.org/JD17/>*

*Wednesday 23 (full day) August 2006*

**Coordinating Division:** II

**Participating Divisions/Commissions:** IV, V/12, 27 & 35

**Scientific Organizing Committee:**

Bo N. Andersen (Norway), H.M. Antia (India), Annie Baglin (France), Paul S. Cally (Australia), Fabien Carrier (Switzerland), Hans Kjeldsen (Denmark), John W. Leibacher (USA, Co-Chair), Jaymie Matthews (Canada), Maria P. Di Mauro (Italy), Mario J.P.F.G. Monteiro (Portugal), Pere L. Pallé (Spain), Philip H. Scherrer (USA), Michael J. Thompson (UK, Co-Chair), Sylvaine Turck-Chieze (France), Hiromoto Shibahashi (Japan) & Yousef Zhugzda (Russian Federation).

***Preliminary Scientific Programme Summary:***

The seismology and physics of localized structures beneath the surface of the Sun takes on a special significance with the completion of a solar cycle of high quality observations in 2006, at the same time that the testing of models of stellar structure moves into high gear with the extension of deep probes from the Sun to other solar-like stars and other multi-mode pulsators. This JD will provide the forum for practitioners in these various fields to synthesize and summarize the current state of these two closely related and rapidly developing fields.

**Editors:** John W. Leibacher (Chief Editor) & Michael J. Thompson.

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## SPECIAL SESSIONS

### Special Session 1

#### ASTRONOMICAL FACILITIES OF THE NEXT DECADE

<http://www.ivoa.net/twiki/bin/view/IVOA/VoscienceIAUPrague>

**Wednesday 16 (full day) & Thursday 17 (a.m.) August 2006**

**Coordinating WG:** Future Large Scale Facilities

**Participating Division:** IX

***Scientific Organizing Committee:***

Xiangqun Cui (China, Nanjing), Raymond G. Carlberg (Canada), Michel Dennefeld (France), Ewine F. van Dishoeck (The Netherlands), Gerard F. Gilmore (UK, Co-Chair), Günther Hasinger (Germany), Masanori Iye (Japan), Peter Quinn (Germany), Richard T. Schilizzi (The Netherlands, Co-Chair), Peter Stockman (USA), Nicholas A. Walton (UK) & Patricia A. Whitelock (South Africa).

***Preliminary Scientific Programme Summary:***

Astronomy will soon have available an exciting and powerful range of new facilities. This Discussion will present the status and scientific programme of those facilities which are under development and/or definition, and so (probably) will become real in the near future to the medium term. The programme will provide an overview of those projects which will become naturally complementary facilities in both implementation date and wavelength (or non-electromagnetic) coverage, and in which there is currently significant effort and new developments. Space missions of direct relevance include JWST, Herschel, Planck, Gaia and LISA, and planned far-IR and high-energy missions; Ground-based facilities include the newest 8-10m telescopes (SALT, GTC, LAMOST); ALMA; large survey facilities (VST, VISTA, PANSTARRS, LSST); Radio facilities, especially SKA; Extremely Large optical/infrared telescopes; Cosmic Ray facilities (HESS, PierreAuger); neutrino astronomy (IceCube, km<sup>3</sup>net); and the International Virtual Observatory.

**Editors:** Gerard F. Gilmore (Chief Editor) & Richard T. Schilizzi.

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Tel.: +44 122 333 7548 - Fax: +44 122 333 7523 - E-mail: gil@ast.cam.ac.uk

**Special Session 2**  
**INNOVATION IN TEACHING/LEARNING ASTRONOMY METHODS**  
<http://www.communicatingastronomy.org/innovation2006>

*Thursday 17 & Friday 18 (full days) August 2006*

**Coordinating Division:** XII

**Participating Commissions:** 41 & 46

**Scientific Organizing Committee:**

Michael A. Bennett (USA), Julieta Fierro (Mexico), Michèle Gerbaldi (France), Petr Heinzel (Czech Republic), Bambang Hidayat (Indonesia), Syuzo Isobe (Japan), Edvard V. Kononovich (Russian Federation), Margarita Metaxa (Greece), Jay M. Pasachoff (USA, Co-Chair), John R. Percy (Canada), Rosa M. Ros (Spain, Co-Chair), Magdalena Stavinschi (Romania) & Richard M. West (Germany).

**Preliminary Scientific Programme Summary:**

Astronomy educates people, and gives very important opportunities to young people: In astronomy, we find a special relationship between science and technology, both the technology used in obtaining observations and the technology used in teaching. Astronomy also leads to an understanding of the history and the nature of science, distinguishing science from pseudo sciences. Since astronomy attracts young people to education in science and technology, we should struggle to make maximum advantage of the situation. But in many countries, astronomy is not in the standard curricula and teachers do not receive adequate education and support. Still, many scientific and educational societies and government agencies have produced materials and educational resources in astronomy for all educational levels. The aims of the proposed Special Session will be to contribute to the implementation of these recommendations, introducing some innovative points of view in teaching/learning methods. Astronomers from all countries developed or developing will be equally interested.

**Preliminary Scientific Programme Topics**

- General strategies for effective teaching
- Effective Use of Instruction and Information Technology
- Learning Science by Doing Science
- Astronomy Worldwide Education
- Practical issues connected with the implementation of the 2003 IAU Resolution

**Editors:** Jay M. Pasachoff (Chief Editor) & Rosa M. Ros.

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**Special Session 3**

**THE VIRTUAL OBSERVATORY IN ACTION: NEW SCIENCE,  
 NEW TECHNOLOGY, AND NEXT GENERATION FACILITIES**  
<http://www.ivoa.net/pub/VOScienceIAUPrague>

*SPS 3a: Thursday 17 (p.m.) & Friday 18 (full day) August 2006*

*SPS 3b: Monday 21 (full day) & Tuesday 22 (a.m.) August 2006*

**Coordinating Division:** XII

**Participating Division/Commissions:** XI/40 & 44

**Participating WG:** Future Large Scale Facilities

**Scientific Organizing Committee:**

Giuseppina Fabbiano (USA), Françoise Genova (France), Robert J. Hanisch (USA), Ajit K. Kembhavi (India), Andrew Lawrence (UK, Chair), Oleg Yu. Malkov (Russian Federation), Atilla Meszaros (Czech Republic), Raymond P. Norris (Australia), Masatoshi Ohishi (Japan), Peter Quinn (Germany), Isabelle F. Scholl (France), Enrique Solano (Spain), Alexander Szalay (USA), Nicholas A. Walton (UK), Roy Williams (USA) & Yongheng Zhao (China, Nanjing).

**Preliminary Scientific Programme Topics**

- Cosmology and galactic structure with very large databases
- Rare object multi-wavelength searches: the universe at 10 pc and  $z = 10$
- Serendipitous discoveries with the VO the Sun-Earth connection
- Population analysis: stars, galaxies, quasars, solar system bodies
- Data mining with SDSS, WFCAM, VISTA and the LSST
- Data management for ALMA, ELT, GAIA, and SKA
- Technical progress on the VO infrastructure
- New data mining algorithms
- The semantic web and the future VO

**Editors:** Nicholas A. Walton (Chief Editor), Andrew Lawrence & Roy Williams.

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**Special Session 4  
OPEN FOR "HOT TOPICS"**

**SPS 4a: Friday 18 (p.m.) August 2006**

**SPS 4b: Tuesday 22 (a.m.) August 2006**

To be announced later

**Special Session 5  
ASTRONOMY FOR THE DEVELOPING WORLD  
<http://sps5.sao.ac.za>**

**Monday 21 & Tuesday 22 (full days) August 2006**

**Coordinating Division:** XII

**Participating Division/Commission:** II/46

**Scientific Organizing Committee:**

Abdul A. Alsabti (UK/Iraq), Julieta Fierro (Mexico), Michèle Gerbaldi (France), Hans J. Haubold (Germany), John B. Hearnshaw (New Zealand, Chair), Barrie W. Jones (UK), Ajit K. Kembhavi (India), Hugo Levato (Argentina), Peter Martinez (South Africa), Jayant V. Narlikar (India), Jay M. Pasachoff (USA), John R. Percy (Canada), Boonrucksar Soonthornthum (Thailand), A. Peter Willmore (UK) & James C. White (USA).

**Preliminary Scientific Programme Topics**

- Coordination of the work of IAU Commission 46 with that of other organizations, such as UNOOSA, COSPAR and IHY2007
- Exploring the feasibility of a Third World Astronomy Institute (or Network) and encourage the participation of young astronomers from developing countries
- Training of astronomers
- Public outreach programmes in developing countries

- The virtual observatory in developing countries
- Progress of astronomy in various regions of the world
- The work of IAU Commission 46 through its various Program Groups

**Editors:** John B. Hearnshaw (Chief Editor) & Peter Martinez.

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**Special Session 6**  
**ASTRONOMICAL DATA MANAGEMENT**  
<http://www.ivoa.net/twiki/bin/view/Astrodata/SpecialSession>

*Tuesday 22 (p.m.) August 2006*

**Coordinating Division:** XII

**Participating Commission:** 5

**Scientific Organizing Committee:**

Giuseppina Fabbiano (USA), Françoise Genova (France), Robert J. Hanisch (USA), Ajit K. Kembhavi (India), Andrew Lawrence (UK), Oleg Yu. Malkov (Russian Federation), Atilla Meszaros (Czech Republic), Raymond P. Norris (Australia, Chair), Masatoshi Ohishi (Japan), Peter Quinn (Germany), Isabelle F. Scholl (France), Enrique Solano (Spain), Alexander Szalay (USA), Nicholas A. Walton (UK), Roy Williams (USA) & Yongheng Zhao (China, Nanjing).

**Preliminary Scientific Programme Topics**

- Alignment with OECD, ICSU, and IAU recommendations regarding open access to astronomical data.
- Recognition of the importance of considering data processing, storage, and management needs from the conception stage of a new project.
- Provisions to ensure equitable access to data and information by scientists in developing countries.
- Development of better processes to enable data in journals to be integrated in to data centres and the VO.
- Development of protocols for the long-term curation, preservation, and migration (between formats or media) of data, including validation and quality flagging.
- Recognition of the special role of the data centres, which are currently in the vanguard of data management activities, and of the VO, which will be the key access mechanism to astronomical data in the future, and which will be able to provide the tools and infrastructure for facilitating the framework.
- Close collaboration with colleagues in ICSU, CODATA, and other branches of science, especially when developing strategies to prevent excessive legal or IP ownership constraints being imposed on astronomical data.

**Editor:** Raymond P. Norris.

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Special Session 7  
ASTRONOMY IN ANTARCTICA  
<http://www.phys.unsw.edu.au/jacara/iau>

Tuesday 22 (p.m.) & Wednesday 23 (full day) August 2006

**Coordinating Division:** IX

**Participating Division/Commission:** X/40

**Scientific Organizing Committee:**

Michael G. Burton (Australia, Chair), Maurizio Busso (Italy), Eric Fossat (France), James P. Lloyd (USA), Mark J. McCaughrean (UK), Christian Spiering (Germany) & Shoji Tori (Japan).

**Preliminary Scientific Programme Summary**

Antarctica offers a range of remarkable conditions that provide a superlative environment for the conduct of astronomy from the visible to the millimetre wavebands, as well as for high energy astrophysics experiments. This meeting will discuss the current state of Antarctic astronomy, especially following the winter-time opening of a new high plateau facility, Concordia Station at Dome C.

The status of facilities at the South Pole and Concordia will be reviewed, and new science results presented. This will be followed by a discussion on future plans for facilities. Finally, the meeting will provide an opportunity for discussing plans for the International Polar Year in 2007, including a possible site testing expedition to Dome A, the summit of the Antarctic plateau.

**Editor:** Michael G. Burton.

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## CALENDAR OF EVENTS: Business & Science Meetings

Last updates: April 28, 2006

Sessions: Session 1: 09:00-10:30, Session 2: 11:00-12:30, Lunch: 12:30-14:00, Session 3: 14:00-15:30, Session 4: 16:00-17:30

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### EXECUTIVE COMMITTEE (EC) / DIVISION (D) / INTER DIVISION (ID) / Commission (C) / Working Group (WG) / Program Group (PG) / Task Force (TF)

	Date				Session(s)
	1	2	*	3	4

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#### EC WORKING GROUPS

EC-WG Publishing, jointly with				18 (Friday)	.....4
C 05 WG Libraries					
EC-WG Women in Astronomy				21 (Monday)	.....*
EC-WG Year of Astronomy				18 (Friday)	.....2

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#### D I - FUNDAMENTAL ASTRONOMY

D WG Nomenclature for Fundamental Astronomy (NEA)				18 (Friday)	.....1	.....2
ID WG Cartographic Coordinates & Rotational Elements				23 (Wednesday)	.....3	.....4
C 04 <i>Ephemerides</i>				16 (Wednesday)	.....4	
C 07 <i>Celestial Mechanics &amp; Dynamical Astronomy</i>				17 (Thursday)	.....3	.....4
C 08 <i>Astrometry</i>				21 (Monday)	.....1	.....2
C 19 <i>Rotation of the Earth</i>				22 (Tuesday)	.....2	.....3
C 31 <i>Time</i>				21 (Monday)	.....1	.....2

**D II - SUN & HELIOSPHERE** . . . . .

D WG Solar Eclipses . . . . . 21 (Monday) . . . . . 1 . . . . . 2 . . . . . 3

D WG International Collaboration on Space Weather . . . . . 21 (Monday) . . . . . 4

**C 10 Solar Activity** . . . . . 24 (Thursday) . . . . . 1 . . . . . 2

**C 12 Solar Radiation & Structure** . . . . . 22 (Tuesday) . . . . . 3 . . . . . 4

22 (Tuesday) . . . . . 1 . . . . . 2

**D III - PLANETARY SYSTEMS SCIENCES** . . . . .

D Committee on Small Bodies Nomenclature (CSBN) . . . . . 18 (Friday) . . . . . 2 . . . . . 3 . . . . . 4

D WG Planetary System Nomenclature (WGPSN) . . . . . 22 (Tuesday) . . . . . 3

D WG Extrasolar Planets (WGESF) . . . . . 23 (Wednesday) . . . . . 3

ID WG Cartographic Coordinates & Rotational Elements . . . . . 23 (Wednesday) . . . . . 1 . . . . . 2

**C 15 Physical Studies of Comets & Minor Planets** . . . . . 23 (Wednesday) . . . . . 4

C 15 WG Physical Studies of Comets . . . . . 17 (Thursday) . . . . . 3 . . . . . 4

C 15 WG Physical Studies of Minor Planets . . . . . 22 (Tuesday) . . . . . 1 . . . . . 2

**C 16 Physical Study of Planets & Satellites** . . . . . 18 (Friday) . . . . . 3

**C 20 Positions & Motions of Minor Planets, Comets & Satellites** . . . . . 24 (Thursday) . . . . . 1 . . . . . 2

C 20 WG Natural Satellites . . . . . 23 (Wednesday) . . . . . 3

**C 21 Light of the Night Sky** . . . . . 22 (Tuesday) . . . . . 3 . . . . . 4

**C 22 Meteors, Meteorites & Interplanetary Dust** . . . . . 21 (Monday) . . . . . 3

**C 51 Bioastronomy: Search for Extraterrestrial Life** . . . . . 24 (Thursday) . . . . . 1 . . . . . 2

18 (Friday) . . . . . 1

<b>D IV - STARS</b> .....	21 (Monday) .....	1	.....2
D WG Abundancies in Red Giants .....	22 (Tuesday) .....		.....4
ID WG Active B Stars .....	18 (Friday) .....	1	.....2
ID WG Ap & Related Stars .....	17 (Thursday) .....	1	.....2
<i>C 26 Double &amp; Multiple Stars</i> .....	17 (Thursday) .....	1	.....2
<i>C 29 Stellar Spectra</i> .....	16 (Wednesday) .....	1	.....2
<i>C 35 Stellar Constitution</i> .....	16 (Wednesday) .....	1	.....3
<i>C 36 Theory of Stellar Atmospheres</i> .....	16 (Wednesday) .....	2	.....1
<i>C 45 Stellar Classification</i> .....	16 (Wednesday) .....		.....3
C 45 WG Standard Stars .....	16 (Wednesday) .....		.....4
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<b>D V - VARIABLE STARS</b> .....	17 (Thursday) .....	1	.....2
D WG Variable & Binary Stars in Galaxies .....	21 (Monday) .....	1	.....3
ID WG Active B Stars .....	18 (Friday) .....	1	.....2
ID WG Ap & Related Stars .....	17 (Thursday) .....	1	.....2
<i>C 27 Variable Stars</i> .....	16 (Wednesday) .....		.....3
<i>C 42 Close Binary Stars</i> .....	{ 16 (Wednesday) .....	1	.....2
	{ 22 (Tuesday) .....	1	.....2
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<b>D VI - INTERSTELLAR MATTER</b> .....	23 (Wednesday) .....		.....3
D WG Star Formation .....	23 (Wednesday) .....		.....2
<i>C 34 Interstellar Matter</i> .....	23 (Wednesday) .....		.....2
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<b>D VII - GALACTIC SYSTEM</b> .....	21 (Monday) .....	1	.....2
<i>C 37 Star Clusters &amp; Associations</i> .....	17 (Thursday) .....		.....3
			.....4

<b>D VIII - GALAXIES &amp; THE UNIVERSE</b>	
D WG Supernovae	18 (Friday) .....1 .....2
C 28 <i>Galaxies</i>	21 (Monday) .....1
C 47 <i>Cosmology</i>	18 (Friday) .....3
	18 (Friday) .....4
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<b>D IX - OPTICAL &amp; INFRARED TECHNIQUES</b>	
D WG Optical & Infrared Interferometry	18 (Friday) .....3
ID WG Encouraging International Development of Antarctic Astronomy	21 (Monday) .....1 .....2
C 09 <i>Instrumentation &amp; Techniques</i>	17 (Thursday) .....4
C 09 WG <i>Detectors, jointly with</i>	18 (Friday) .....1 .....4
C 09 WG <i>Sky Surveys</i>	18 (Friday) .....2
C 25 <i>Stellar Photometry &amp; Polarimetry</i>	18 (Friday) .....2 .....4
C 25 WG <i>Infrared Astronomy</i>	22 (Tuesday) .....3 .....4
C 30 <i>Radial Velocities</i>	18 (Friday) .....1
C 30 WG <i>Radial-Velocity Standard Stars, jointly with</i>	
C 30 WG <i>Stellar Radial Velocity Bibliography, &amp;</i>	21 (Monday) .....1
C 30 WG <i>Catalog of Orbital Elements of Spectroscopic Binary Systems</i>	
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<b>D X - RADIO ASTRONOMY</b>	
D WG Astrophysically Important Spectral Lines	18 (Friday) .....3 .....4
ID WG Encouraging International Development of Antarctic Astronomy	18 (Friday) .....2
ID WG Historic Radio Astronomy	17 (Thursday) .....1 .....2
	23 (Wednesday) .....3 .....4
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<b>D XI - SPACE &amp; HIGH ENERGY ASTROPHYSICS</b>	
D WG Astronomy from the Moon	17 (Thursday) .....4
D WG Particle Astrophysics	23 (Wednesday) .....3 .....4
	24 (Thursday) .....1 .....2

**D XII - UNION-WIDE ACTIVITIES** . . . . .

D WG Communicating Astronomy with the Public . . . . . 23 (Wednesday) . . . . .1 . . . . .2

ID WG Historic Radio Astronomy . . . . . { 16 (Wednesday) . . . . .1 . . . . .2  
17 (Thursday) . . . . .1 . . . . .2  
23 (Wednesday) . . . . .3 . . . . .4

**C 05 Documentation & Astronomical Data** . . . . . 23 (Wednesday) . . . . .1

C 05 WG Astronomical Data . . . . . 16 (Wednesday) . . . . .2 . . . . .3 . . . . .4

C 05 WG Libraries, jointly with EC-WG Publishing . . . . . } 18 (Friday) . . . . .4

C 05 WG FITS . . . . . 17 (Thursday) . . . . .1

C 05 WG Designations . . . . . 24 (Thursday) . . . . .1 . . . . .2

C 05 WG Virtual Observatories, Data Centers & Networks . . . . . 16 (Wednesday) . . . . .1

C 05 TF Preservation & Digitization of Photographic Plates . . . . . 24 (Thursday) . . . . .1 . . . . .2

**C 06 Astronomical Telegrams** . . . . . 16 (Wednesday) . . . . .4

**C 14 Atomic & Molecular Data** . . . . . 17 (Thursday) . . . . .2 . . . . .3 . . . . .4

**C 41 History of Astronomy** . . . . . 22 (Tuesday) . . . . .1 . . . . .2 . . . . .3

C 41 WG Archives . . . . . 23 (Wednesday) . . . . .1 . . . . .2

C 41 WG Astronomical Chronology . . . . . 22 (Tuesday) . . . . .1 . . . . .2

C 41 WG Historical Instruments . . . . . 23 (Wednesday) . . . . .3 . . . . .4

C 41 WG Transits of Venus . . . . . 17 (Thursday) . . . . .1 . . . . .2

**C 46 Astronomy Education & Development** . . . . . { 16 (Wednesday) . . . . .1 . . . . .2 . . . . .3 . . . . .4  
24 (Thursday) . . . . .1 . . . . .2

**C 50 Protection of Existing & Potential Observatory Sites** . . . . . 23 (Wednesday) . . . . .1 . . . . .2 . . . . .3 . . . . .4

## OTHER IAU EVENTS

### WOMEN IN ASTRONOMY MEETING

The Working Group on the Status of Women in Astronomy is holding a Women in Astronomy Meeting (WAM) luncheon at the XXVI<sup>th</sup> IAU GA. The WAM will be held on Monday August 21 from 12:30pm to 2:00pm and all IAU delegates are invited. The meeting will include invited speakers and breakout sessions to discuss strategies to improve the status of women in astronomy and recommend future actions that will better the environment for all astronomers. Please tick the corresponding box if you are interested to participate in this meeting at the time you register to XXVI<sup>th</sup> IAU GA. Further information to be found at:

*<http://astronomy.swin.edu.au/IAU-WIAWG/>*

*Sarah Maddison & Anne Green (WG Co-Chairs)*

### YOUNG ASTRONOMER MEETINGS (\*)

(\*) Young Astronomer: Someone with a Ph.D., obtained less than 3 years ago, or being accepted in a Ph.D. programme

Two specific events are planned during the General Assembly, August 2006.

- The first one: a "Young Astronomer Lunch-Debate" will be organized on Tuesday August 15, just before the Opening Ceremony of the GA. Pre-registration for this event is required through the IAU GA Official website:

*<http://www.astronomy2006.com/>*

- The second initiative is to hold a "Young Astronomer Consulting Service" during the all GA. The purpose is to have a clearly identified office where Young Astronomers may by arranged appointments meet with senior astronomers to seek advices on their CV, thesis, jobs, etc. during one-to-one discussions.

Please tick the corresponding box if you are interested to participate in these events at the time you register to XXVI<sup>th</sup> IAU.

*Michèle Gerbaldi, Chairperson, October 2005, [gerbaldi@iap.fr](mailto:gerbaldi@iap.fr)*

## OTHER EVENTS IN CONJUNCTION WITH THE IAU GENERAL ASSEMBLY

### EAS: JENAM 2006

The JENAM (Joint European and National Astronomical Meeting) 2006 of the European Astronomical Society (EAS) will take place in conjunction with the IAU General Assembly in Prague. Although no specific scientific session will be organized in addition to the IAU events, a special day will be reserved to deal with European matters (Initiatives from the EU Commission, Actions from the EAS, reports from various EU Networks and Integrated Infrastructure Initiatives, possibly a Job Market, and, of course, the EAS General Assembly).

The date for this European day has been fixed on Monday August 21 (afternoon), Meeting Room 1.1. of the Convention Center. Reserve your day, and check regularly the EAS website for more information:

*<http://www2.iap.fr/eas/>*

*Michel Dennefeld, November 5, 2005*

**ESA: GAIA****Monday 21 August, 15:30-17:30, in the Chamber Room**

The European Space Agency's GAIA mission will be launched in 2011. Early in 2006 the prime contractor for the construction of the spacecraft was selected and the mission has now entered the detailed design phase. In parallel, preparations for the data processing aspects of the mission are underway. The new spacecraft and payload design will be presented at this fringe meeting along with the current status of the data processing preparations. Members of the GAIA Science Team and the Data Analysis Coordination Committee will be available to answer questions.

More information from:

[http://www.rssd.esa.int/index.php?project=GAIA&page=Gaia\\_at\\_IAU\\_GA\\_2006](http://www.rssd.esa.int/index.php?project=GAIA&page=Gaia_at_IAU_GA_2006)

*Karen O'Flaherty <koflaher@rssd.esa.int>*

**ESO: ALMA****Thursday August 24, 09:00-12:30, in Dressing Room 225**

The Atacama Large Millimeter Array (ALMA) is a large international project which will be finished by 2012 in northern Chile on a site at 5 km elevation. The site provides excellent atmospheric transmission in the millimeter and sub-millimeter wavelength ranges. The project consists of two parts: (1) the 12m Array, composed of between fifty (present construction plan) to sixty-four (project plan) 12-meter antennas that can be placed on 175 different stations for baselines up to 14.5 km and (2) the 'Atacama Compact Array', or ACA, that consists of twelve 7 meter telescopes placed in a compact configuration, and four 12 meter telescopes for measuring source total power. In addition to high sensitivity, frequency coverage and dynamic range, ALMA will record both interferometric and the complete source flux density. At the shortest planned wavelength,  $\lambda=0.3$  mm, and longest baseline, the angular resolution will be  $0.005''$ . ALMA will be able to image dust enshrouded or cold material. As such, it is the appropriate complement to 8-10 meter optical/near-IR telescopes namely the Very Large Telescope (VLT), Gemini, Subaru, LBT and Keck, and to the Hubble Space Telescope and its successor, the James Webb Space Telescope, matching or exceeding the angular resolution of any of these facilities.

*Thomas Wilson <twilson@eso.org>*

**IUCAF: Spectrum Management****Friday August 18, 09:00-10:30 in Dressing Room 225**

The (radio) spectrum is a finite, and increasingly precious, resource for astronomical research. In order to obtain astronomical data of sufficiently high quality, our observations must be free of harmful interference emitted by other spectrum users. To attain this goal, regulatory protection measures (such as limits on interference levels) need to be determined and introduced into legislation. The IAU-sponsored organization that represents the requirements of the worldwide astronomical community in these regulatory matters is IUCAF, the Scientific Committee on Frequency Allocations for Radio Astronomy and Space Science. The 11 IUCAF members are active at different levels: local, national, regional and global (at the International Telecommunication Union, ITU).

At the open IUCAF meeting scheduled Wednesday August 16, first session of the afternoon, an overview will be given of its various activities and current and future issues in frequency protection, and the list of IAU representatives will be reviewed. More information at:

<http://www.iucaf.org/>

*Wim van Driel, Chair, November 9, 2005, Wim.vanDriel@obspm.fr*



## ADMINISTRATIVE MATTERS

### DEADLINES & MEETINGS

#### XXVI<sup>th</sup> GENERAL ASSEMBLY

- General Assembly, Session 1 ..... Tuesday August 15, 14:00-17:30
- General Assembly, Session 2 ..... Thursday August 24, 14:00-17:30

#### NATIONAL MEMBERS

##### Deadlines 2005

- Submission of Resolutions type A  
(Resolutions with financial implications) ..... November 15
- Motion(s) to amend Statutes and/or Bye-Laws ..... November 15

##### Deadlines 2006

- Communication of motion(s) to amend Statutes and/or Bye-Laws ..... February 15
- Motion(s) concerning the administration of the Union,  
not affecting the budget ..... February 15
- Motion(s) of a scientific character to be placed on the agenda  
of the GA ..... February 15
- Proposals for new Individual Members due to IAU Secretariat  
through the website ..... March 15
- Submission of Resolutions type B  
(Resolutions without financial implications) ..... May 15
- Appointment of National Representatives ..... July 10
- Appointment of Finance Committee Representatives ..... July 10
- Appointment of Nominating Committee Representatives ..... July 10

##### Meetings 2006

#### *National Representatives*

- National Representative Meeting ..... Monday August 14, 14:00-14:45
- General Assembly, Session 1 ..... Tuesday August 15, 14:00-17:30
- National Representative Meeting ..... Wednesday August 23, 16:00-16:45
- General Assembly, Session 2 ..... Thursday August 24, 14:00-17:30

#### *Finance Committee Representatives*

- Finance Committee Meeting ..... Monday August 14, 15:00-15:45
- General Assembly, Session 1 ..... Tuesday August 15, 14:00-17:30
- Finance Committee Meeting ..... Wednesday August 23, 15:00-15:45
- General Assembly, Session 2 ..... Thursday August 24, 14:00-17:30

#### *Nominating Committee Representatives*

- Nominating Committee Meeting ..... Monday August 14, 16:00-16:45
- General Assembly, Session 1 ..... Tuesday August 15, 14:00-17:30

Nominating Committee Meeting .....Wednesday August 23, 14:00-14:45  
 General Assembly, Session 2 .....Thursday August 24, 14:00-17:30

#### **DIVISION PRESIDENTS**

##### **Deadlines 2006**

- Motion(s) concerning the administration of the Union,  
 not affecting the budget ..... February 15
- Division Recommendations for creation, continuation,  
 change or discontinuation of Commissions ..... February 15
- Division Recommendations for appointment or re-appointment  
 of Division WG(s) ..... February 15
- Commission/Division submission of candidates for Division Pt, VPt(s),  
 Secretary, & OC for next triennium in consultation with Division  
 OC, CPs & WGs ..... February 15
- Proposals for new Individual Member(s) .....March 15
- Communication to the IAU Secretariat of title(s) for Division,  
 Commission & Working Group Meetings at the XXVI<sup>th</sup> GA ..... May 15
- Submission of Resolutions type B  
 (Resolutions without financial implications) ..... May 15
- Contributions for Transactions XXVIB due at IAU Secretariat .....October 1

##### **Meetings 2006**

**Outgoing Division Presidents** are invited to attend the

81<sup>st</sup> Executive Committee Meeting .....Sunday August 13, 14:00-17:30  
 81<sup>st</sup> Executive Committee Meeting .....Monday August 14, 09:00-10:30  
 General Assembly, Session 1 .....Tuesday August 15, 14:00-17:30  
 81<sup>st</sup> Executive Committee Meeting .....Wednesday August 23 09:00-12:30  
 General Assembly, Session 2 .....Thursday August 24, 14:00-17:30

**Incoming Division Presidents** are invited to attend the

General Assembly, Session 1 .....Tuesday August 15, 14:00-17:30  
 General Assembly, Session 2 .....Thursday August 24, 14:00-17:30  
 82<sup>nd</sup> Executive Committee Meeting .....Friday August 25, full day

#### **COMMISSION PRESIDENTS**

##### **Deadlines 2006**

- Commissions/WGs remitting their triennial report to DPs  
 for submission to the EC ..... January 15
- Commission/Division submission of candidates for  
 Division Pt, VPt(s), Secretary, & OC for next triennium .....February 15
- Submission of Resolutions type B  
 (Resolutions without financial implications) ..... May 15
- Communication to the IAU Secretariat of title(s) for  
 Division, Commission & Working Group Meetings at the XXVI<sup>th</sup> GA ..... May 15

### Meegtings 2006

**Outgoing Commission Presidents** are invited to attend the

Meeting of the Commission Presidents .....Monday August 14, 17:00-17:45  
 General Assembly, Session 1 .....Tuesday August 15, 14:00-17:30  
 General Assembly, Session 2 .....Thursday August 24, 14:00-17:30

**Incoming Commission Presidents** are invited to attend the

General Assembly, Session 1 .....Tuesday August 15, 14:00-17:30  
 Meeting of the Commission Presidents .....Wednesday August 23, 17:00-17:45  
 General Assembly, Session 2 .....Thursday August 24, 14:00-17:30

## PROPOSAL TO CHANGE STATUTES & BYE-LAWS

The revised IAU Statutes & Bye-Laws will be submitted to the vote of the National Member Representatives during the first Session of the XXVI<sup>th</sup> General Assembly in Prague on August 15, 2005. The changes compared to the current Statutes are in bold, either underlined (for additions) or struck out (for deletions).

### STATUTES

#### I. OBJECTIVE

1. The International Astronomical Union (referred to as the Union) is an international non-governmental organisation. Its objective is to promote the science of astronomy in all its aspects.

#### II. DOMICILE AND INTERNATIONAL RELATIONS

2. The legal domicile of the Union is Paris.
3. The Union adheres to, and co-operates with the body of international scientific organisations through ICSU: The International Council for Science. It supports and applies the policies on the Freedom, Responsibility, and Ethics in the Conduct of Science defined by ICSU.

#### III. COMPOSITION OF THE UNION

4. The Union is composed of:
  - a. National Members (adhering organisations)
  - b. Individual Members (adhering persons)

#### IV. NATIONAL MEMBERS

5. An organisation representing a national professional astronomical community, desiring to promote its participation in international astronomy and supporting the objective of the Union, may adhere to the Union as a National Member. Exceptionally, a National Member may represent the community in the territory of more than one nation, provided that no part of that community is represented by another National Member.
6. An organisation desiring to join the Union as a National Member while developing professional astronomy in the community it represents may do so on an interim basis, on the same conditions as above, for a period of up to nine years. After that time, it will either become a National Member on a permanent basis, or its membership in the Union will terminate.

7. A National Member is admitted to the Union on a permanent or interim basis by the General Assembly. It may resign from the Union by so informing the General Secretary, in writing.
8. A National Member may be either:
  - a. the organisation by which scientists of the corresponding nation or territory adhere to ICSU or:
  - b. an appropriate National Society or Committee for Astronomy, or
  - c. an appropriate institution of higher learning.
9. The adherence of a National Member is suspended if its dues have not been paid for five years; it resumes, upon the approval of the Executive Committee, when the arrears have been paid. After five years of suspension of a National Member, the Executive Committee may recommend to the General Assembly to terminate the membership.
10. A National Member is admitted to the Union in one of the categories specified in the Bye-Laws.

#### **V. INDIVIDUAL MEMBERS**

11. A professional scientist who is active in some branch of astronomy may be admitted to the Union by the Executive Committee as an Individual Member. An Individual Member may resign from the Union by so informing the General Secretary, in writing.

#### **VI. GOVERNANCE**

12. The governing bodies of the Union are:
  - a. The General Assembly;
  - b. The Executive Committee; and
  - c. The Officers.

#### **VII. GENERAL ASSEMBLY**

13. The General Assembly consists of the National Members and of Individual Members. The General Assembly determines the overall policy of the Union.
  - 13.a. The General Assembly approves the Statutes of the Union, including any changes therein.
  - 13.b. The General Assembly approves Bye-Laws specifying the Rules of Procedure to be used in applying the Statutes.
  - 13.c. The General Assembly elects an Executive Committee to implement its decisions and to direct the affairs of the Union between successive ordinary meetings of the General Assembly. The Executive Committee reports to the General Assembly.
  - 13.d. The General Assembly appoints a Finance Committee, consisting of one representative of each National Member having the right to vote on budgetary matters according to Article 14.a., to advise it on the approval of the budget and accounts of the Union. The General Assembly also appoints a Finance Sub-Committee to advise the Executive Committee on its behalf on budgetary matters between General Assemblies.
  - 13.e. The General Assembly appoints a Special Nominating Committee to prepare a suitable slate of candidates for election to the incoming Executive Committee.
  - 13.f. The General Assembly appoints a Nominating Committee to advise the Executive Committee on the admission of Individual Members.

14. Voting at the General Assembly **on issues of a primarily scientific nature, as determined by the Executive Committee, is by Individual Members. Voting on all other matters** is by National Member. Each National Member authorises a representative to vote on its behalf.
  - 14.a. On questions involving the budget of the Union, the number of votes for each National Member is one greater than the number of its category, referred to in article 10. National Members with interim status, or which have not paid their dues for years preceding that of the General Assembly, may not participate in the voting.
  - 14.b. On questions concerning the administration of the Union, but not involving its budget, each National Member has one vote, under the same condition of payment of dues as in 14.a.
  - 14.c. National Members may vote by correspondence on questions concerning the agenda for the General Assembly.
  - 14.d. A vote is valid only if at least two thirds of the National Members having the right to vote by virtue of article 14.a. participate in it.
15. The decisions of the General Assembly are taken by an absolute majority of the votes cast. However, a decision to change the Statutes can only be taken with the approval of at least two thirds of the votes of all National Members having the right to vote by virtue of article 14.a. Where there is an equal division of votes, the President determines the issue.
16. Changes in the Statutes or Bye-Laws can only be considered by the General Assembly if a specific proposal has been duly submitted to the National Members and placed on the Agenda of the General Assembly by the procedure and deadlines specified in the Bye-Laws.

#### **VIII. EXECUTIVE COMMITTEE**

17. The Executive Committee consists of the President of the Union, the President-Elect, six Vice-Presidents, the General Secretary, and the Assistant General Secretary, elected by the General Assembly on the proposal of the Special Nominating Committee.

#### **IX. OFFICERS**

18. The Officers of the Union are the President, the General Secretary, the President-Elect, and the Assistant General Secretary. The Officers decide short-term policy issues within the general policies of the Union as decided by the General Assembly and interpreted by the Executive Committee.

#### **X. SCIENTIFIC DIVISIONS**

19. As an effective means to promote progress in the main areas of astronomy, the scientific work of the Union is structured through its Scientific Divisions. Each Division covers a broad, well-defined area of astronomical science, or deals with international matters of an interdisciplinary nature. As far as practicable, Divisions should include comparable fractions of the Individual Members of the Union.
20. Divisions are created or terminated by the General Assembly on the recommendation of the Executive Committee. The activities of a Division are organised by an Organising Committee chaired by a Division President. The Division President and a Vice-President are elected by the General Assembly on the proposal of the Executive Committee, and are ex-officio members of the Organising Committee.

#### **XI. SCIENTIFIC COMMISSIONS**

21. Within Divisions, the scientific activities in well-defined disciplines within the subject matter of the Division may be organised through scientific Commissions. In special cases, a Commission may cover a subject common to two or more Divisions and then becomes a Commission of all these Divisions.
22. Commissions are created or terminated by the Executive Committee upon the recommendation of the Organising Committee(s) of the Division(s) desiring to create or terminate them. The activities of a Commission are organised by an Organising Committee chaired by a Commission President. The Commission President and a Vice-President are appointed by the Organising Committee(s) of the corresponding Division(s) upon the proposal of the Organising Committee of the Commission.

#### **XII. BUDGET AND DUES**

- 23.a. For each ordinary General Assembly the Executive Committee prepares a budget proposal covering the period to the next ordinary General Assembly, together with the accounts of the Union for the preceding period. It submits these, with the advice of the Finance Sub-Committee, to the Finance Committee for consideration before their submission to the vote of the General Assembly.
- 23.b. The Finance Committee examines the accounts of the Union from the point of view of responsible expenditure within the intent of the previous General Assembly, as interpreted by the Executive Committee. It also considers whether the proposed budget is adequate to implement the policy of the General Assembly. It submits reports on these matters to the General Assembly before its decisions concerning the approval of the accounts and of the budget.
- 23.c. The amount of the unit of contribution is decided by the General Assembly as part of the budget approval process.
- 23.d. Each National Member pays annually a number of units of contribution corresponding to its category. The number of units of contribution for each category shall be specified in the Bye-Laws.
- 23.e. National Members having interim status pay annually one half unit of contribution.
- 23.f. The payment of contributions is the responsibility of the National Members. The liability of each National Member in respect of the Union is limited to the amount of contributions due through the current year.

#### **XIII. EMERGENCY POWERS**

24. If, through events outside the control of the Union, circumstances arise in which it is impracticable to comply fully with the provisions of the Statutes and Bye-Laws of the Union, the Executive Committee and Officers, in the order specified below, shall take such actions as they deem necessary for the continued operation of the Union. Such action shall be reported to all National Members as soon as this becomes practicable, until an ordinary or extraordinary General Assembly can be convened.

The following is the order of authority: The Executive Committee in meeting or by correspondence; the President of the Union; the General Secretary; or failing the practicability or availability of any of the above, one of the Vice-Presidents.

**XIV. DISSOLUTION OF THE UNION**

25. A decision to dissolve the Union is only valid if taken by the General Assembly with the approval of three quarters of the National Members having the right to vote by virtue of article 14.a. Such a decision shall specify a procedure for settling any debts and disposing of any assets of the Union.

**XV. FINAL CLAUSES**

26. These Statutes enter into force on August 15, 2006.
27. The present Statutes are published in French and English versions. In case of doubt, the French version is the only authority.

**BYE-LAWS****I. MEMBERSHIP**

1. An application for admission to the Union as a National Member shall be submitted to the General Secretary by the proposing organisation at least eighteen months before the next ordinary General Assembly.
2. The Executive Committee shall examine the application and resolve any outstanding issues concerning the nature of the proposed National Member and the category of membership. Subsequently, the Executive Committee shall forward the application to the General Assembly for decision, with its recommendation as to its approval or rejection.
3. The Executive Committee shall examine any proposal by a National Member to change its category of adherence to a more appropriate level. If the Executive Committee is unable to approve the request, either party may refer the matter to the next General Assembly.
4. Individual Members are admitted by the Executive Committee upon the nomination of a National Member ~~or, if the individual in question is not represented by a National Member, by the President of a Division.~~ The Executive Committee shall publish the criteria and procedures for membership, and shall consult the Nominating Committee before approving applications for admission as Individual Members.

**II. GENERAL ASSEMBLY**

5. The ordinary General Assembly meets, as a rule, once every three years. Unless determined by the previous General Assembly, the place and date of the ordinary General Assembly shall be fixed by the Executive Committee and be communicated to the National Members at least one year in advance.
6. The President may summon an extraordinary General Assembly with the consent of the Executive Committee, and must do so at the request of at least one third of the National Members. The date, place, and agenda of business of an extraordinary General Assembly must be communicated to all National Members at least two months before the first day of the Assembly.
7. Matters to be decided upon by the General Assembly shall be submitted for consideration by those concerned as follows, counting from the first day of the General Assembly:
  - 7.a. A motion to amend the Statutes or Bye-Laws may be submitted by a National Member or by the Executive Committee. Any such motion shall be submitted

to the General Secretary at least nine months in advance and be forwarded, with the recommendation of the Executive Committee as to its adoption or rejection, to the National Members at least six months in advance.

- 7.b. The General Secretary shall distribute the budget prepared by the Executive Committee to the National Members at least eight months in advance. Any motion to modify this budget, or any other matters pertaining to it, shall be submitted to the General Secretary at least six months in advance. Any such motion shall be submitted, with the advice of the Executive Committee as to its adoption or rejection, to the National Members at least four months in advance.
- 7.c. Any motion or proposal concerning the administration of the Union, and not affecting the budget, by a National Member, or by the Organising Committee of a Scientific Division of the Union, shall be placed on the Agenda of the General Assembly, provided it is submitted to the General Secretary, in specific terms, at least six months in advance.
- 7.d. Any motion of a scientific character submitted by a National Member, a Scientific Division of the Union, or by an ICSU Scientific Committee or Programme on which the Union is formally represented, shall be placed on the Agenda of the General Assembly, provided it is submitted to the General Secretary, in specific terms, at least six months in advance.
- 7.e. The complete agenda, including all such motions or proposals, shall be prepared by the Executive Committee and submitted to the National Members at least four months in advance.
8. The President may invite representatives of other organisations, scientists in related fields, and young astronomers to participate in the General Assembly. Subject to the agreement of the Executive Committee, the President may authorise the General Secretary to invite representatives of other organisations, and the National Members or other appropriate IAU bodies to invite scientists in related fields and young astronomers.

### III. SPECIAL NOMINATING COMMITTEE

9. The Special Nominating Committee consists of the President and past President of the Union, a Member proposed by the retiring Executive Committee, and four Members selected by the Nominating Committee from among twelve Members proposed by Presidents of Divisions, with due regard to an appropriate distribution over the major branches of astronomy.
  - 9.a. Except for the President and immediate past President, present and former Members of the Executive Committee shall not serve on the Special Nominating Committee. No two Members of the Special Nominating Committee shall belong to the same nation or National Member.
  - 9.b. The General Secretary and the Assistant General Secretary participate in the work of the Special Nominating Committee in an advisory capacity.
10. The Special Nominating Committee is appointed by the General Assembly, to which it reports directly. It assumes its duties immediately after the end of the General Assembly and remains in office until the end of the ordinary General Assembly next following that of its appointment, and it may fill any vacancy occurring among its Members.



#### IV. OFFICERS AND EXECUTIVE COMMITTEE

- 11.a. The President of the Union remains in office until the end of the ordinary General Assembly next following that of election. The President-Elect succeeds the President at that moment.
- 11.b. The General Secretary and the Assistant General Secretary remain in office until the end of the ordinary General Assembly next following that of their election. Normally the Assistant General Secretary succeeds the General Secretary, but both officers may be re-elected for another term.
- 11.c. The Vice-Presidents remain in office until the end of the ordinary General Assembly following that of their election. They may be immediately re-elected once to the same office.
- 11.d. The elections take place at the last session of the General Assembly, the names of the candidates proposed having been announced at a previous session.
- 12. The Executive Committee may fill any vacancy occurring among its Members. Any person so appointed remains in office until the end of the next ordinary General Assembly.
- 13. The past President and General Secretary become advisers to the Executive Committee until the end of the next ordinary General Assembly. They participate in the work of the Executive Committee and attend its meetings without voting rights.
- 14. The Executive Committee shall formulate Working Rules to clarify the application of the Statutes and Bye-Laws. Such Working Rules shall include the criteria and procedures by which the Executive Committee will review applications for Individual Membership; standard Terms of Reference for the Scientific Commissions of the Union; rules for the administration of the Union's financial affairs by the General Secretary; and procedures by which the Executive Committee may conduct business by electronic or other means of correspondence. The Working Rules shall be published electronically and in the Transactions of the Union.
- 15. The Executive Committee appoints the Union's official representatives to other scientific organisations.
- 16. The Officers and Members of the Executive Committee cannot be held individually or personally liable for any legal claims or charges that might be brought against the Union.

#### V. SCIENTIFIC DIVISIONS

- 17. The Divisions of the Union shall pursue the scientific objects of the Union within their respective fields of astronomy. Activities by which they do so include the encouragement and organisation of collective investigations, and the discussion of questions relating to international agreements, cooperation, or standardization. They shall report to each General Assembly on the work they have accomplished and such new initiatives as they are undertaking.
- 18. Each Scientific Division shall consist of:
  - 18.a. An Organising Committee, **normally** of 6-12 persons, including the Division President and Vice-President, and a Division Secretary appointed by the Organising Committee from among its Members.
  - 18.b. Members of the Union appointed by the Organising Committee in recognition of their special experience and interests. The Committee is responsible for conducting the business of the Division.

19. Normally, the Division President is succeeded by the Vice-President at the end of the General Assembly following their election, but both may be re-elected for a second term. Before each General Assembly, the Organising Committee shall organise an election from among the membership, by electronic or other means suited to the Commission structure of the Division, of a new Organising Committee to take office for the following term. Election procedures should, as far as possible, be similar among the Divisions and require the approval of the Executive Committee.
20. Each Scientific Division may structure its scientific activities by creating a number of Commissions. In order to monitor and further the progress of its field of astronomy, the Division shall consider, before each General Assembly, whether its Commission structure serves its purpose in an optimum manner. It shall subsequently present its proposals for the creation, continuation or discontinuation of Commissions to the Executive Committee for approval.
21. With the approval of the Executive Committee, a Division may appoint Working Groups to study well-defined scientific issues and report to the Division. Unless specifically re-appointed by the same procedure, such Working Groups cease to exist at the next following General Assembly.

#### **VI. SCIENTIFIC COMMISSIONS**

22. A Scientific Commission shall consist of:
  - 22.a. a President and an Organising Committee consisting of 4-8 persons elected by the Commission membership, subject to the approval of the Organising Committee of the Division;
  - 22.b. Members of the Union, appointed by the Organising Committee, in recognition of their special experience and interests, subject to confirmation by the Organising Committee of the Division.
23. A Commission is initially created for a period of six years. The parent Division may recommend its continuation for additional periods of three years at a time, if sufficient justification for its continued activity is presented to the Division and the Executive Committee. The activities of a Commission is governed by Terms of Reference, which are based on a standard model published by the Executive Committee and are approved by the Division.
24. With the approval of the Division, a Commission may appoint Working Groups to study well-defined scientific issues and report to the Commission. Unless specifically re-appointed by the same procedure, such Working Groups cease to exist at the next following General Assembly.

#### **VII. ADMINISTRATION AND FINANCES**

25. Each National Member pays annually to the Union a number of units of contribution corresponding to its category as specified below; National Members with interim status pay annually one half unit of contribution:

*Categories as defined in article 10 of the Statutes:*

I	II	III	IV	V	VI	VII	VIII	IX	X
1	2	4	6	10	14	20	27	35	45

*Number of units of contribution*

If further Categories of Adherence are required in the future, the step in the number of units shall be 10 units/category.

26. The income of the Union is to be devoted to its objects, including:
- 26.a. the promotion of scientific initiatives requiring international co-operation;
  - 26.b. the promotion of the education and development of astronomy world-wide;
  - 26.c. the costs of the publications and administration of the Union.
27. Funds derived from donations are reserved for use in accordance with the instructions of the donor(s). Such donations and associated conditions require the approval of the Executive Committee.
28. The General Secretary is the legal representative of the Union. The General Secretary is responsible to the Executive Committee for not incurring expenditure in excess of the amount specified in the budget as approved by the General Assembly.
29. The General Secretary shall consult with the Finance Sub-Committee (Statutes 13.d.) in preparing the accounts and budget proposals of the Union, and on any other matters of major importance for the financial health of the Union.
- The comments and advice of the Finance Sub-Committee shall be made available to the Officers and Executive Committee as specified in the Working Rules.
30. An Administrative office, under the direction of the General Secretary, conducts the correspondence, administers the funds, and preserves the archives of the Union.
31. The Union has copyright to all materials printed in its publications, unless otherwise arranged.

#### VIII. FINAL CLAUSES

32. These Bye-Laws enter into force on August 15, 2006.

## PRACTICAL INFORMATION

### CONFERENCE ORGANIZERS

#### CBT ASTRO 2006

will handle GA registration, exhibition, accommodation, tours and social programme

CBT Astro 2006 Ltd.

Lidická 43/66

150 00 Praha 5

CZ - Czech Republic

Tel: .....+ 420 224 942 575, 224 942 579

Fax: .....+ 420 224 942 550

E-mail: .....astro2006@cbttravel.cz

#### ICARIS CONFERENCE MANAGEMENT

will handle the GA newspaper printing, internet room equipment, etc..."

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### WEBSITE

All information, scientific programme, contacts, updates, on-line forms, hot news etc. regarding the XXVI<sup>th</sup> IAU GA is available on the website

<http://www.astronomy2006.com>.

### GENERAL ASSEMBLY NEWSPAPER

Jiří Grygar is the Chief Editor of "Nuncius Sidereus". Any proposal for communication in the GA newspaper should be sent at the following e-mail address: grygar@fzu.cz

### VENUE OF THE GA

The XXVI<sup>th</sup> IAU GA will be held from Monday 14 to Friday 25, 2006 at the Prague Congress Centre (PCC), which is situated close to the city centre, in a unique location with a beautiful panoramic view of Prague with its large parks, the Vltava river and Prague Castle, next to the underground stop "Vyšehrad". Prague Congress Centre is one of the modern architectural landmarks of Prague and the largest convention and cultural centre in the Czech Republic. The former building was built in the 80's and in 1981 it was opened as one of the largest and the most modern cultural centers in Europe. In 1998-2000 the building has gone through an exacting reconstruction. New multifunctional building with large hotel and office capacities has also been built.

Note: No child care facilities will be available at any of the GA venues. Please enquire your hotel or registration desk for assistance if needed.

### VISA INFORMATION

Visitors from non-EU Countries must possess a passport valid for at least the next 3 months. Participants requiring a visa should apply immediately to a consular office or a diplomatic mission of the Czech Republic in their country in order to avoid a delayed arrival to the Conference. Please note that the visa application procedure can take up to two months. It is not possible to obtain visa at the Prague Airport.

For more information and address of the Czech embassy in your country visit the website of Ministry of Foreign Affairs of the Czech Republic, <http://www.mzv.cz> (English version). The "Application Form for the Czech Visa" is available on this website in electronic version, too.

Updated list of countries whose citizens DO NOT NEED visa (July 2005): Andorra, Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Brunei, Bulgaria, Canada, Costa Rica, Croatia, Cyprus, Denmark, Eritrea, Estonia, Finland, France, Germany, Great Britain, Greece, Guatemala, Honduras, Hong Kong(\*), Hungary, Chile, Iceland, Ireland, Israel, Italy, Japan, Korea – Republic of Korea, Latvia, Lichtenstein, Lithuania, Luxembourg, Macao(\*), Malaysia, Malta, Mexico, Monaco, The Netherlands, Nicaragua, New Zealand, Norway, Paraguay, Poland, Portugal, Romania, Salvador, San Marino, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, Uruguay, USA, Vatican, Venezuela

(\* ) for SAR passport holders only

We can assist the delegates by processing the official invitations on request. These letters do not commit the National and Local Organizing Committee to any financial obligation.

**Kindly contact the Czech embassy in your country in time and ask which one of the following documents is required to issue a visa for you for the XXVI<sup>th</sup> IAU General Assembly:**

- an official invitation by conference organizers (LOC/NOC/Conference Secretariat) or
- a special official invitation by the Foreigners' Department of the Czech Police

**1. Official invitation by conference organizers  
(LOC/NOC/ Conference Secretariat)**

This invitation will be issued for the respective participants by LOC/NOC/ Conference Secretariat and will be sent either by e-mail or by regular mail.

Information needed:

- Your full name
- Date of birth
- Place of birth
- Country of citizenship  
(country which issued your passport)
- Number of your passport
- Date & place of issue of passport
- Date of expiry of passport

Kindly note if e-mail version is enough or if you need the original letter to be sent by regular mail. This procedure will take approximately one or two weeks and is free of charge for the registered participants.

**2. Special Official invitation by the Foreigners' Department of the Czech Police**

In some special cases the Czech Embassy requires the Official invitation by the Foreigners' Department of the Czech Police. This invitation costs 80 EUR (DHL delivery service included) and could be arranged only for registered participants. As soon as the required data and payment (contact the Conference Secretariat) are received we will start the procedure of issuing the official invitation for you. The procedure usually takes a few weeks. When the official invitation is ready, it will be sent to you by express delivery service. Providing this official invitation Conference Secretariat (Congress Business Travel) does not overtake any financial obligations as regards the travel, hotel and registration costs of the respective delegate.

Information needed:

- Your full name
- Date of birth
- Place of birth
- Date & place of issue of passport
- Date of expiry of passport
- Country of citizenship (country which issued your passport)
- Number of your passport
- Full permanent address (street, number, city, state, country)

In case you have any questions concerning visa procedures or if you face any problems in your country, please contact the Conference Secretariat. Please note that the Conference Secretariat can only help with getting the visa to those people who are going to take part in the XXVI<sup>th</sup> IAU General Assembly.

As soon as the required data are received, the Conference Secretariat will start the procedure of issuing the official invitation for you. The procedure usually takes a few weeks. When the official invitation is ready, it will be sent to you by express delivery service. You shall then present it at the Czech embassy in your country and get visa for the IAU GA. The official invitation by the Foreigners' Department of the Czech Police costs EUR 80 (DHL delivery service included).

In case you have any questions concerning visa procedures or if you face any problems in your country, please contact the Conference Secretariat. Please note that the Conference Secretariat can only help with getting the visa to those people who are going to take part in the XXVI<sup>th</sup> IAU General Assembly.

## REGISTRATION

### PARTICIPATION

Attendance at the XXVI<sup>th</sup> General Assembly is open to all Members of the IAU and to non Members invited by the IAU. Invitations can be provided by the National Members/National Committees for Astronomy for the IAU, the Scientific Organization Committees of the Symposia, Joint Discussions and Special Session or, if necessary, by the President of the Union through the IAU Secretariat. Please note that an invitation to attend the General Assembly does not imply any financial commitment towards the participant by the IAU or the Local Organizing Committee.

Each participant (IAU Member of Invited Participant) may register one adult and/or child(ren) as guest(s). Registered guests cannot attend the scientific meetings (except for the Invited Discourses), but otherwise enjoy the same privileges as participants.

### HOW TO REGISTER

Participants should complete the Registration Form and return it to CBT (Conference Secretariat) no later than **August 7, 2006**. Registration Forms received after August 7, 2006 will not be confirmed and will be considered as on-site registrations.

On-line registration will be a preferred method or you might download the Registration Form from <http://www.astronomy2006.com> and send it by fax to Conference Secretariat. Registrations by telephone are not accepted.

	<b>Early Registration</b>	<b>Late Registration</b>
	<b>by 15 May</b>	<b>from 16 May</b>
IAU Members & Invited Participants .....	CZK 16 500	CZK 20 500
Students (1) .....	CZK 4 500	CZK 5 500
Seniors (above 70 years) (2) .....	CZK 4 500	CZK 5 500
Registered Guests & Children above 11 years .....	CZK 4 500	CZK 6 000
Children up to 11 years .....	.free	.free

- (1) To apply for Student fee, the applicant must be under 35 years of age and his/her Registration Form must be sent together with a personalized letter signed by the head of the relevant university or institutional department and stamped with the official stamp to the Conference Secretariat.
- (2) Copy of the ID card is requested to be sent by fax or e-mail to the Conference Secretariat.

Early registration fee will be confirmed if both Registration Form and the payment are received by Conference Secretariat on May 15, 2006 at the latest. After this date, late registration fee will apply. No registration will be confirmed until payment has been received.

#### ***Confirmation of registration***

If your completed Registration Form together with payment or proof of payment are received by the Conference Secretariat you will get a written confirmation of your registration either by mail, fax or e-mail. Please bring this Confirmation Letter with you to the General Assembly, as it will be requested at the Registration Desk in order to receive the Conference Material and Conference Badge.

#### ***Registration cancellations, refunds & name changes***

The Conference Secretariat must be notified of a cancellation of the registration in the written form. The appropriate refunds will be made after the Conference. The following

cancellation conditions apply:

- Cancellations before 14 July 2006:  
full refund of the registration fee minus a handling fee of CZK 900 (~ EUR 30)
- Cancellations on or after 14 July 2006:  
no refund

The Conference Secretariat reserves the right to charge a handling fee of CZK 600 (~EUR 20) per any name change in the registration.

## **ACCOMMODATION**

### **HOW TO BOOK THE ACCOMMODATION**

A variety of hotels from luxurious to economy categories and student hostels will be available for participants of the XXVI<sup>th</sup> IAU GA.

INDIVIDUAL BOOKING (for Group booking, see below)

#### ***Reservation of hotel accommodation***

Participants are advised to make a room reservation through the Conference Secretariat at reduced rates. To book a hotel room it is necessary to complete the on-line Accommodation Form and submit it to the Conference Secretariat before June 1, 2006.

Rooms will be allocated on a first-come first-served basis. In case the hotel of your choice is full, the Conference Secretariat reserves the right to accommodate you in a hotel of similar category. Hotel Accommodation Form received after June 1, 2006 will be accepted although accommodations are not guaranteed.

#### ***Confirmation of hotel reservation***

*One night's deposit* will be required to guarantee the booking in hotels of higher categories. After this deposit is received, your hotel reservation will be confirmed in writing by mail, fax or e-mail. The hotel bill must be covered in full to the hotel upon departure. Hotel might require credit card as a guarantee at check-in.

*Full prepayment* of the accommodation will be required for reservations in hostels, student dormitories, tourist hotels and most hotels of moderate category.

#### ***Accommodation cancellation policy for individuals***

Please make sure you have read the cancellation policy for individuals.

The Conference Secretariat must be notified in writing on any changes or cancellation of a hotel booking. Please do not contact the hotel directly in case of any reservation changes or cancellation.

The following cancellation conditions will be applied:

- Cancellation before and on July 1, 2006: full refund less EUR 30 administration fee
- Cancellation after July 1, 2006 and No Show: no refund

In case of No Show the room is kept for you until 12:00 hours of the day following the day of expected arrival. Afterwards the room is offered as freely available.

The Conference Secretariat reserves the right to charge a handling fee of EUR 10 for any change in confirmed reservation.

Mentioned conditions are valid only for individual bookings (up to 5 rooms in total).

**GROUP BOOKINGS**

In case you are interested in making hotel reservations for a group (more than 5 rooms in total), please contact the Conference Secretariat.

**List of selected hotels**

CBT has negotiated special rates with the following hotels for bookings made through them. You are advised to check the prices for each hotel listed at

<http://www.astronomy2006.com>

Prices are given in EUR per room/night, including VAT and breakfast, with the exception of student hostels where the price does **NOT** include the breakfast.

HOTEL	Price Range Single	Price Range Double
<b>5 star category</b>		
Boscolo Carlo IV ...Hilton	<b>130-227</b>	<b>130-227</b>
Corinthia Towers ...President		
<b>4 star category</b>		
Adria . . . . .Julis	<b>103-150</b>	<b>105-169</b>
Corinthia Panorama .Ramada Grand Symphony		
Holiday Inn . . . . .Rokoko		
Jalta		
<b>3 star category</b>		
Abri . . . . .Ibis City	<b>59-110</b>	<b>78-130</b>
Amadeus . . . . .ILF		
Beranek . . . . .Legie		
City Club . . . . .Lunik		
Èechie . . . . .Machova City		
Da Vinci . . . . .Melantrich		
Extol Inn . . . . .Otar		
Green Garden . . . . .Oya		
Harmony . . . . .Pension Bøezina		
<b>2 star category</b>		
Extol Inn . . . . .Pankrac	<b>24-77</b>	<b>49-82</b>
Junior . . . . .Pivovar		
<b>Dormitories/Student hostels</b>		
Facilities: Some are equipped with kitchen and fridge	<b>15-26</b>	<b>25-35</b> Every two room share

**SOCIAL EVENTS & TOURS**

Participants should complete the Social and Tourist Programme on-line Form at

<http://www.astronomy2006.com>

and return it to CBT (Conference Secretariat) no later than June 1, 2006. The Conference Secretariat cannot guarantee requests received after this date and could offer an alternative programme.



## SOCIAL EVENTS

### *Opening & Inaugural Ceremonies*

Will be held on Tuesday, August 15, 2006 at the Prague Congress Centre. The Opening Ceremony starts at 14:00 and will be held at the Congress Hall and will be immediately followed by the first Session of the General Assembly. After this session a cocktail will follow at the Congress Hall and Forum Hall Foyer (approx. from 17:30). Registration is to be done through the Registration Form at <http://www.astronomy2006.com>. The cost of this event is included in the registration fee. Extra tickets available at the cost of CZK 400 per person.

### *Concert*

Will be held on Friday, August 18, 2006 at the Prague Congress Centre from 18:30. The Prague Philharmonia will perform the most famous Czech composers. Registration is to be done through the Registration Form. The cost of this event is included in the registration fee. Extra tickets available at the cost of CZK 400 per person.

### *Farewell Dinner*

A standing buffet with wide-range of meals and drinks will be organized on Wednesday, August 23, 2006 at the Prague Industrial Palace (subject to confirmation). An interesting culture programme will be prepared. Further information will be given beginning of February 2006.

## TOUR

Out and about Prague: an interesting programme of one day, half-day, pre/post tours etc. is being prepared for the participants and their families and is to be found, as well as the on-line Form at <http://www.astronomy2006.com>. All tours will depart from and arrive back to the Prague Congress Centre. The meeting point for all tours will be located in the Hall, on the ground floor of the Prague Congress Centre.

You will find hereafter some examples of tours (prices per participant are given in EUR and are indicative, VAT is included):

TOUR	DURATION	EUR
Grand City Tour .....	4 hours .....	.28
Jewish Ghetto .....	4 hours .....	.42
Prague Boat .....	4 hours / dinner .....	.29
Palaces in the Lesser Town .....	4 hours .....	.15
Karštejn Castle & Ni bor Glass Factory ....	all day / lunch .....	.64
Konopišti Chateau .....	.6 hours / lunch .....	.56
Milník Chateau & Wine Tasting .....	.7 hours / lunch .....	.53
Ěeský Šternberk & Glass Factory .....	all day / lunch .....	.59
Pilsner Urquell Brewery .....	all day / lunch .....	.60
West Bohemian Spas .....	all day / lunch .....	.63
Southern Bohemia .....	.2 days .....	.190
Bohemian Paradise .....	.2 days .....	.180
etc.		

### HOW TO MAKE THE PAYMENTS

Credit card payments and bank transfers/drafts to CBT Astro 2006 Ltd will be accepted for all payments made for the XXVI<sup>th</sup> IAU GA (no checks).

- **Credit cards:** .....MCC/ECC, VISA, American Express, Diners
- **Bank transfers/drafts:**
  - Bank name .....Ceska sporitelna
  - Bank address .....Vaclavske namesti 16, Prague 1, Czech Republic, 110 00
  - SWIFT/BIC .....GIBA CZ PX
  - Account number .....1942928309
  - Bank code .....0800
  - Account name .....CBT Astro 2006 Ltd.
  - IBAN .....CZ30 0800 0000 0019 4292 8309
  - Detail of payment .....GA IAU registration/610

**Please note that all bank charges must be fully covered by the participant(s).**

A copy of the bank transfer must be sent by fax or e-mail to Conference Secretariat.

### GENERAL INFORMATION ABOUT THE CZECH REPUBLIC

Full country name	.....Czech Republic
Area	.....78,866 km <sup>2</sup>
Population	.....10.3 million
Capital City	.....Prague (population: 1.2 million)
People	.....Czech with minorities of Slovaks, Poles, Germans, Romanies and Hungarians
Language	.....Czech
Religion	.....40% Roman Catholic, 10% Protestant
Government	.....Parliamentary democracy
Head of State	.....President: Vaclav Klaus
Head of Government	.....Prime Minister: Jiri Paroubek
GDP	.....USD 69.9 billion
GDP per capita	.....USD 15,800
Annual Growth	.....4%
Inflation	.....1.5%
Major Industries	.....Machinery, transport, steel, armaments, vehicles, cement, ceramics, beer, cotton
Major Trading Partners	.....Germany, Austria, Slovakia, Russian Federation, Italy
Member of EU	.....Yes

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## PART II

### INFORMATION BULLETIN N° 97

#### 1. MAIN DEADLINES AND MEETINGS

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- 1.1.2. Other Deadlines  
 Proposals for IAU Symposia and co-sponsored 2007 meetings ... Dec. 15, 2005  
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##### 1.2. MEETINGS

- 1.2.1. Scientific Meetings ..... see § 2. hereafter
- 1.2.2. Officers Meeting ..... March 27-28, 2006
- 1.2.3. Executive Committee Meetings  
 - 81<sup>st</sup> Executive Committee Meeting ..... Sunday August 13, full day  
 81<sup>st</sup> Executive Committee Meeting ..... Monday August 14, full day  
 81<sup>st</sup> Executive Committee Meeting ..... Wednesday, August 23, 14:00-17:30  
 - 82<sup>nd</sup> Executive Committee Meeting ..... Friday August 25, full day
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#### 2. SCIENTIFIC MEETINGS

Proposals for IAU Symposia and co-sponsored meetings planned for 2007 must reach the Assistant General Secretary via the IAU Proposal website:

<http://solarphys.uio.no/IAU/>

**no later than December 15, 2005!**

##### 2.1. FUTURE SYMPOSIA

- IAUS 233: Solar Activity and its Magnetic Origin**  
*March 31-April 3, 2006, Cairo, Egypt*  
<http://www.iaus233.edu.eg/>

**Scientific Organizing Committee:**

Volker Bothmer (Germany, Co-Chair), Dirk K. Callebaut (Belgium), Kenneth P. Dere (USA), Bernhard Fleck (USA/Germany), Ahmed Abdel Hady (Egypt, Co-Chair), Serge Koutchmy (France), Donald B. Melrose (Australia), Jay M. Pasachoff (USA), V. Martinez Pillet (Spain), Cheng Fang (China, Nanjing, Ex Officio), Eric R. Priest (UK), Mosalam A.M. Shaltout (Egypt), Kazunari Shibata (Japan), Sami Solanski (Germany), Alexander V. Stepanov (Russian Federation), Jingxiu Wang (China, Nanjing) & David F. Webb (USA).

**Local Organizing Committee Chair:** Ahmed Abdel Hady (Egypt)

**Principal Topics:**

- Generation of magnetic fields inside the sun, its transport and coupling to the solar atmosphere
- Structure of the solar corona
- Magnetic origins of coronal dynamics
- Transport and interactions of magnetic fields, plasmas and energetic particles in space
- Outlook on new instrumentations/missions for the sun and heliosphere
- Field theory studies during total eclipse, and eclipse coronal studies
- Training of young Egyptian astronomers, Mediterranean countries and those of nearby countries

**Editors:** Volker Bothmer, Ahmed Abdel Hady & Mosalam A.M. Shaltout.

**Contact address:** Ahmed Abdel Hady,

Astronomy Department, Cairo University, El gamaa Street, EG-12613 Giza, Cairo, Egypt  
Tel/Fax: +202 734 5588 - Email: aahady@yahoo.com

**IAUS 234: Planetary Nebulae in our Galaxy and Beyond**

*April 3-7, 2006, Waikoloa Beach, HI, USA*  
<http://www.ifa.hawaii.edu/iau234/>

**Scientific Organizing Committee:**

Agnès Acker (France), Michael J. Barlow (UK, Co-Chair), You-Hua Chu (USA), Shuji Deguchi (Japan), George H. Jacoby (USA), Sun Kwok (China, Taipei/Canada), A. Lopez (Mexico), Walter J. Maciel (Brazil), Arturo T. Manchado (Spain), Roberto H. Méndez (USA, Co-Chair), Mario Perinotto (Italy), Stuart R. Pottasch (The Netherlands), Detlef Schoenberner (Germany), Silvia Torres Peimbert (Mexico, Ex Officio), Romuald Tylenda (Poland) & Peter R. Wood (Australia).

**Local Organizing Committee Chair:** Roberto H. Méndez (USA)

**Principal Topics:**

- PN surveys and their distribution in galaxies
- Planetary Nebulae and stellar evolution
- Central stars and their atmospheres
- Planetary Nebulae as astrophysical laboratories
- Planetary Nebulae as probes of galaxies

**Editors:** Michael J. Barlow & Roberto H. Méndez.

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Tel: +44 20 76797 160 - Fax: +44 20 76797 145 - E-mail: mjb@star.ucl.ac.uk

**IAUS 235 Galaxy Evolution across the Hubble Time**

*Aug. 14-17, Prague, Czech Republic*  
[see p. 13 of this IB](#)

- IAUS 236 Near Earth Objects, our Celestial Neighbors: Opportunity and Risk**  
*Aug. 14-18, Prague, Czech Republic*  
[see p. 14 of this IB](#)
- IAUS 237 Triggered Star Formation in a Turbulent ISM**  
*Aug. 14-18, Prague, Czech Republic*  
[see p. 14 of this IB](#)
- IAUS 238 Black Holes: from Stars to Galaxies across the Range of Masses**  
*Aug. 21-25, Prague, Czech Republic*  
[see p. 15 of this IB](#)
- IAUS 239 Convection in Astrophysics**  
*Aug. 21-25, Prague, Czech Republic*  
[see pp. 15-16 of this IB](#)
- IAUS 240 Binary Stars as Critical Tools and Tests in Contemporary Astrophysics**  
*Aug. 22-25, Prague, Czech Republic*  
[see p. 16 of this IB](#)
- IAUS 241 Stellar Populations as Building Blocks of Galaxies**  
*December 10-14, 2006, La Palma, Canary Islands, Spain*  
<http://www.astro.rug.nl/~peletier/IAUS241.html>

**Scientific Organizing Committee:**

Antonio Aparicio (Spain), Nobuo Arimoto (Japan), Beatriz Barbuy (Brazil, Ex Officio), Alessandro Bressan (Italy), Gustavo A. Bruzual (Venezuela), Roger L. Davies (UK), G. Javier Gorgas (Spain), Timothy M. Heckman (USA), Guinevere Kauffmann (Germany), Reynier F. Peletier (The Netherlands, Co-Chair), James A. Rose (USA), Donald A. Vandenberg (Canada) & Alexandre Vazdekis (Spain, Co-Chair).

**Local Organizing Committee Chair:** Alexandre Vazdekis (Spain)

**Principal Topics:**

- Stellar tracks and isochrones
- Theoretical and empirical stellar spectral libraries
- Simple and complex stellar population models and their calibration
- Stellar populations in our Galaxy
- Resolved stellar populations
- Unresolved stellar populations in nearby early-type galaxies
- Unresolved stellar populations in nearby late-type galaxies
- Stellar Populations at higher redshifts
- New observing facilities and the network, and their implication for stellar populations

**Editors:** Alexandre Vazdekis & Reynier F. Peletier.

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Instituto de Astrofísica de Canarias, Via Lactea s/n, ES 38200 La Laguna, Tenerife, Spain  
 Tel: +34 922 605 264 - Fax: +34 922 605 210 - E-mail: vazdekis@ll.iac.es

**2.2. COLLOQUIA**

As of December 31, 2005, the IAU Colloquium Series will end, or rather, will be up-graded to IAU Symposia. The IAU EC encourages those who wish to propose IAU meetings for 2007 to propose those as IAU Symposia. About nine IAU Symposia will be approved for 2007.

### 2.3. FUTURE REGIONAL MEETINGS

#### 11th Latin-American Regional IAU Meeting (LARIM-2005)

December 12-16, 2005, Pucon, Chile

<http://www.sochias.cl/larim2005.html>

##### *Scientific Organizing Committee:*

Beatriz Barbuy (Brazil), Gustavo Bruzual (Venezuela), Gloria Dubner (Argentina), Julio Fernandez (Uruguay), Wolfgang Gieren (Chile), Mario Hamuy (Chile), Leopoldo Infante (Co-Chair Chile), Rene Mendez (Chile), Dante Minniti (Chile), Monica Rubio (Co-Chair, Chile), Maria Teresa Ruiz (Chile), & Silvia Torres (Mexico).

*Local Organizing Committee:* Paulina Lira (Chair).

##### *Principal Topics:*

- The solar system
- Extra-solar planets
- Star formation
- Galactic structure
- Interstellar medium
- The Local Group
- Stellar populations
- Active galaxies
- Galaxy formation and evolution
- Clusters of galaxies
- Large scale structure
- The early universe

*Editors:* Monica Rubio, Leopoldo Infante & Silvia Torres-Peimbert

*Contact address:* Monica Rubio <[mrubio@das.uchile.cl](mailto:mrubio@das.uchile.cl)>

Email: [larim2005@sochias.cl](mailto:larim2005@sochias.cl)

## 3. DIVISION MATTERS

3.1. DIVISION PRESIDENT DEADLINES IN CONJUNCTION  
WITH THE XXVI<sup>th</sup> GA ..... p. 40

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3.2.2. Incoming Division Presidents Deadlines in conjunction  
with the XXVI<sup>th</sup> GA ..... p. 40

3.3. REPORT OF DIVISION III (PLANETARY SYSTEMS SCIENCES)

##### *The IAU and Near Earth Objects*

From time to time, we have all seen stories in the Press about Near Earth Objects that are about to hit the Earth on some date in the not-too-distant future. Sometimes the IAU is mentioned in the story. The aim here is to briefly describe what the normal practice is when a NEO is discovered and what part the IAU might be seen to play in this process. In fact, the basic procedure is the same whether the discovery is of a comet, a Kuiper belt object, a Main belt asteroid or any other minor body in the Solar System. When an observer discovers a body that is moving relative to the background, the information is

always sent to the IAU Minor Planet Center (MPC) located at the Smithsonian Astrophysical Observatory in Cambridge, MA, USA. This information should always give the position of the body (Right Ascension and Declination) and the time of the observation (using UT) for each observation made. Most observers will try to obtain at least three such sets of observations during the night. Though observers may try to derive an orbit for the object from their observations, this orbit is not usually sent to the MPC, the orbit that is made public comes from calculations made at the MPC. With data from a single night, only the crudest of orbits can be determined. Mostly, the initial discoverers have further nights scheduled at the telescope, or know of colleagues who have telescope time, so that additional observations of the body come about as a matter of course. This usually is sufficient information to allow the MPC to generate a reasonable orbit and the discovery is announced, in general as part of the MPC Electronic Circular system. In order to obtain a more reliable orbit, further observations, well separated in both space and time from the discovery observations are required. For most bodies in the Solar System, these observations are obtained as part of other programmes, usually on a time scale of months, and this is perfectly adequate to allow the body to be permanently recorded.

The initial discoverers may, for a number of reasons, be unable to obtain additional observations themselves. To aid the process of obtaining additional observations, the MPC produces a list that is generally available of objects that need further observations and are currently visible so that observers with telescope time can make a special effort to observe these objects, thus ensuring that the elements of the orbit are secure. The Near Earth Objects are peculiar in that they are far easier to detect when close to the Earth and thus appear to move very fast against the background and, unless additional observations are obtained very quickly, the body may be lost. In this event, the MPC may become proactive and solicit observations from known observers, or release a preliminary orbit, with large error bars, so that other observers will know roughly where on the sky this particular object is so that they can conduct a search for it. Sometimes it is found in archival records.

The problem that I alluded to in the first sentence appears when predictions for the future motion of the body, based on the rather poor initial orbit, indicate that collision with the Earth is a very remote possibility sometime in the distant future. The dilemma is obvious.

If the rough orbit is not released, there is little chance of further observations being obtained. If the orbit is released, it is inevitable that somebody will compute into the future and find that there is a small probability of an Earth collision.

The IAU Minor Planet Center is central to the process as it currently operates, and so it is not surprising that the press often state that "the IAU announces that an asteroid may hit the Earth in 20XX".

In addition to being co-sponsors of the MPC, IAU Division III also has a Working Group on Near Earth Objects (Chair D. Morrison). It is not as a WG directly involved in observations (though Individual Members may of course be observers), its role is to further the science and understanding of Near Earth Objects. It consists of a number of experts in the field and so many of its Members, quite naturally, also often are approached by the Press for comment.

*Iwan Williams, President Division III, October 2005*



## 4. COMMISSION MATTERS

- 4.1. COMMISSION PRESIDENT DEADLINES IN CONJUNCTION WITH THE XXVI<sup>th</sup> GA ..... p. 40
- 4.2. COMMISSION PRESIDENT MEETINGS AT THE XXVI<sup>th</sup> GA
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### 4.3. REPORTS OF COMMISSIONS

#### 4.3.1. Commission 5 - Documentation and Astronomical Data

##### *Libraries and Publishing in the VO Era*

The WG on Libraries and WG on Publishing will have a joint meeting at the XXVI<sup>th</sup> General Assembly, Friday August 18 p.m. The following programme is being planned:

- Report on LISA V conference .....D. Coletti, B. Corbin & U. Grothkopf
- The switch from print to online .....D. Coletti
- Overview on observatory archives .....B. Corbin
- Cooperation between ADS and libraries .....G. Eichhorn
- Use and validation of the Astronomy Thesaurus in ontologies .....F. Genova
- The new structure of IAU publications .....K.A. van der Hucht
- Usage of bibliometrics in observatories .....U. Grothkopf

Information communicated by *Uta Grothkopf and Fionn Murtagh*

#### 4.3.2. Commission 6 - Astronomical Telegrams

##### *2004 Annual Report of the Central Bureau for Astronomical Telegrams (CBAT)*

A total of 198 IAU Circulars were issued in 2004, down slightly from the 220 published in 2003 and the 259 published in 2002. Forty-six preliminary "Central Bureau Electronic Telegrams" (CBETs) were also issued in 2004 (compared to 54 in 2003), the second full year of implementation of this new feature that permits easier dissemination of urgent information than the *Circulars* (see the 2002 and 2003 annual reports in [IB 93, pp. 8-10](#) & [IB 95, pp. 14-16](#), respectively).

As has been the case in recent years, the most common topics covered were supernovae, for which 204 designations for 2004 discoveries and 22 designations for 2003 discoveries were announced on the year's Circulars (though one of those new 2003 designations, 2003lr, was found later to be 2 separate minor planets observed in nearly the same location on two different nights). Separately titled follow-up text on supernovae amounted to an additional 107 titles during 2004.

The brightest supernova of the year, SN 2004dj in NGC 2403 (found in late July at  $V \sim 11.2$  by Japanese amateur K. Itagaki), was heavily observed, with reports in the *IAUCs* including much discussion of a possible progenitor as well as radio and x-ray detections. The second brightest supernova of the year, SN 2004et in NGC 6946, reached magnitude  $R = 12.2$  in late September, and it also was detected at radio wavelengths. Fully 10 supernovae were reported as brighter than mag 15 at discovery during 2004, and another 13 as brighter than mag 16; the bulk of supernovae were in the magnitude range 17-19 upon discovery.

Some 68 supernovae were discovered or co-discovered by amateur astronomers during the year (led by the British trio of R. Arbour, M. Armstrong, and T. Boles with 37) -or fully 30 percent of the total number of supernovae designated on *IAUCs* during 2004!- showing the continuing highly useful impact of amateurs on supernova astronomy. The Lick Observatory Supernova Search, led by Weidong Li, made the most supernova discoveries in 2004, with a total of 85. Only 35 (or under 16 percent) of the supernovae did not have spectroscopic classification published on the Circulars the brightest of these being SN 2004de at mag 14.5 (with  $\Delta = \sim 26$ ) way down from the number in 2003 (where a full third had no spectroscopic confirmation).

A gamma-ray source known as GRB 031203, which had an optical afterglow, was given the supernova designation 2003lw on *IAUC* 8308.

The ongoing discussion by the CBAT Director with the "supernova community" (see the 2003 annual report) has continued, resulting in the establishment of a temporary "Possible Supernovae" CBAT website to handle particularly the fainter objects for which spectroscopic confirmation is not possible, awaiting the (long-delayed) establishment of a new website that will be hosted jointly by the new IAU Supernova Working Group and the CBAT.

A preliminary-designation "PSN" scheme based on date of discovery was established with this temporary CBAT website (see [http://cfa-www.harvard.edu/iau/CBAT\\_PSN.html](http://cfa-www.harvard.edu/iau/CBAT_PSN.html)), and 28 such objects were designated and posted at this page in 2004.

Five Galactic novae reported on *IAUCs* during 2003 (the same number as in 2003), the brightest being V574 Pup, which reached visual mag 7.0 in November (V1187 Sco was only slightly fainter at mag 7.4 when discovered on Aug. 3). Seven titled items during 2004 covered novae in other galaxies, including three on novae in M31. A new CBAT website was established during the year to handle novae in M31, which now lists all such novae reported to the Central Bureau from 2004 Jan. 1 onwards (see [http://cfa-www.harvard.edu/iau/CBAT\\_M31.html](http://cfa-www.harvard.edu/iau/CBAT_M31.html)). As novae in M31 are relatively common (unlike their counterparts in the Magellanic Clouds or the Milky Way, which have only a few observed novae each year) there being roughly a couple dozen novae to be discovered (brighter than about mag 20) in M31 each year it has been suggested that the *IAUCs* only publish information on M31 novae that reach visual mag  $\sim 15$  or brighter. Amateur astronomers continue to dominate the discovery of novae, whether in the Milky Way or in other galaxies - this being the last area where discoveries are still often made on Technical Pan film, though CCD cameras are beginning to dominate this amateur area of observation, as well.

Also during 2004, separately titled items appeared more than two dozen times concerning other unusual Galactic variables, including transients observed at radio and high-energy wavelengths. Numerous *IAUC* reports during the year involved the outburst of what is evidently a young T-Tau-type star (brightening its association reflection nebular in Orion), for which *IAUC* 8354 announced the permanent variable-star designation V1647 Ori (via the on-going CBAT collaboration with N. N. Samus and the GCVS team at the Institute for Astronomy in Moscow).

Comets continued in 2004 to have a standard presence in the CBAT publications, with non-spacecraft discoveries and recoveries appearing under 52 titles, and follow-up information appearing under 60 additional titles. Three naked-eye comets produced a number of reports of observations at various wavelengths published on the *IAUCs* including comets C/2002 T7 (which peaked at total visual mag  $\sim 2.5$  in May), C/2001 Q4 (which peaked at mag  $\sim 3$  in May), and C/2004 F4 (which peaked at mag  $\sim 4$  with a  $10^\circ$  tail

as seen by ground-based observers after perihelion in late April, though it was much brighter when it appeared in the SOHO field-of-view near its April 17 perihelion date).

After a lull due to staffing problems at the Naval Research Laboratory, SOHO near-sun discoveries again appeared under 37 separate titles during the year (including the posting of 162 such backlogged comets from 1996, 2002, and 2003, plus 154 new objects observed in 2004). During 2004, an additional two comets were found by amateur astronomers viewing website SOHO/SWAN ultraviolet images, which were then confirmed by ground-based observations and announced on *IAUCs*. As noted with the announcement of the first of these on *IAUC* 8346, there have been numerous never-confirmed reports to the Central Bureau over the last couple of years of possible SWAN comets, and despite a great exertion of effort to have them confirmed by ground-based observers, C/2004 H6 was the first SWAN comet to have been confirmed since C/2002 O6 (cf. *IAUC* 7944).

The LINEAR CCD-search project again netted by far the most ground-based comet discoveries in 2004, with 25 credited finds on Circulars published during the year. The continuing close collaboration of the CBAT with the Minor Planet Center (MPC) resulted in near-simultaneous announcements on *IAU Circulars* and *Minor Planet Electronic Circulars* of most of the professional-survey comets, many of which are initially reported as asteroidal but found to show cometary appearance elsewhere by follow-up observers (many of whom again are amateurs) who monitor the MPC's "Near-Earth-Object Confirmation" website. The annual Edgar Wilson Award for comet discovery by amateurs was also announced by the Central Bureau in July, with only two recipients in 2004. The CBAT Director took the lead, in his role with comets names within the IAU Committee on Small Bodies Nomenclature, in getting final votes for several problematic names during the year (the results of which were announced on the *IAU Circulars*).

What appears to be the two largest transneptunian objects after Pluto were also noted on Circulars during the year: 2003 V<sub>12</sub>, now known as (90377) Sedna, on *IAUC* 8304 and 2004 DW, now known as (90482) Orcus, on *IAUC* 8291. The first known southern-hemisphere feature observed on Uranus at 2.2  $\mu\text{m}$  was reported on *IAUC* 8368, and transits of Mars I and II across the sun as viewed from the martian surface by the Mars Rover were reported on *IAUC* 8298. Several *IAUCs* during 2004 again covered the discoveries of numerous satellites of both major and minor planets, plus some purported binary nature reports of other minor planets. All of these satellites (together with novae, supernovae, and comets) are listed conveniently in chronological order (as announced on the *IAUCs*) at the Central Bureau's "Headlines" website (<http://cfa-www.harvard.edu/iau/Headlines.html>).

The CBAT has continued its notable presence on the World Wide Web, with most of its *Circulars* posted freely for some years until late 2004, but in November it was decided (following consultation with the officers of Commission 6) that, due to the falling revenue to the Central Bureau from falling subscriptions due to the Internet (and to the increasing expectations of the astronomical community that things be provided freely), there would be imposed immediately a block on the web-based *Circulars* so that they would be readable only by paying subscribers. This resulted in a dramatic spike in renewals and even new subscribers, but it also yielded much unhappiness in the astronomical community. Other sources of income are being actively sought to make up for the revenue shortfalls, and it is anticipated that older *Circulars* will be very soon made freely available at the CBAT website again now after a short delay (certainly those older than a year, and possibly older than several months -noting that paying subscribers are expecting that the most recent *Circulars* **not** be made available freely). (All *CBETs* are also available now at the CBAT website.)

The number of paid subscribers to the printed edition of the *IAU Circulars* continued to fall, from 179 at the end of 2003 to 158 at the end of 2004. In addition, there were 36 free (complimentary or exchange) subscriptions to the printed *IAUCs* at the end of 2004. The printed *IAUCs* go to 66 addresses within North America and 128 outside of North America. The number of subscribers to the Computer Service (shared by the CBAT with the MPC) remained very stable, at around 464.

Assistant Director G.V. Williams has continued to serve as joint MPC/CBAT webmaster (and has been responsible for the web CS dissemination of the *IAUCs*). All of the year's *Circulars* were prepared by the undersigned, with very helpful editorial backup by Director Emeritus B.G. Marsden, who prepared numerous *CBETs* during the Director's absence from Cambridge during the year (and helped to proofread many *IAUCs* prior to issuance and to discuss many CBAT matters from his decades of experience as CBAT Director). Aided by widespread use of "Secure Shell" (or ssh) connectivity worldwide via the Internet, the Director has been increasingly able to handle much CBAT work during his international travels.

Numerous referees worldwide, especially some who are Commission 6 Members, are also to be thanked for their great help with many items published on it in 2004 (causing, unfortunately, quite a number of contributions to be rejected), continuing the long practice of the *IAUCs* being a refereed publication. At SAO, Muazzez Lohmiller has continued to handle the accounts, addressing of envelopes, and other administrative matters. Dan Wooldridge continues, as he has for years, with the fine printing of the *IAUC* cards.

*Daniel W.E. Green, Director of the Bureau dgreen@cfa.harvard.edu*

#### **4.3.3. Commission 50 - Protection of Existing and Potential Observatory Sites**

##### ***Recent progress in the control of light pollution***

We present hereby a brief summary of recent developments in the area of light pollution control and reduction, with the emphasis of what is happening in the north of Chile, and with contributions from the UK, Spain and Hawaii.

##### ***Chile***

Much progress has recently been made in the application of the so-called "Decreto Supremo 686" which is the legal norm that controls the outdoor lighting in the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> regions of northern Chile in which all the major observatories are located. DS686 was promulgated in 1998 and became law in 1999, with a grace period of 5 years for commercial and private outdoor lighting, and 6 years for public lighting. This October that period finally runs out and, in principle, all outdoor lighting should now comply with the legislation.

The status at present is that most municipalities are in the process of changing their street lighting or have applied for government funds to start the change-over. Some are ready and comply fully, others not at all. Out of a total of about 110 thousand street luminaires in these three astronomically important regions, about 50% have already been changed to models that comply with the requirements of the law, producing a major reduction in light pollution and some reduction in energy consumption. About 25% more are in 11 municipalities that have now collectively obtained 2000 million pesos (~4 million US dollars) from the central government to bear 80% of the total cost, the remaining 20% having to be paid by the local authorities themselves. It is expected that these 26000 luminaires will have all been replaced within 2-3 years from now. Then there is 25% left

in towns that have not yet decided how to finance the change-over, or have not applied for funding for this fiscal year and those municipalities run the risk of being fined by the SEC (Superintendencia de Electricidad y Combustibles), the government organization that has to oversee and enforce the implementation of the DS686.

Given that many municipalities, especially the more rural ones, are financially quite restricted and have other pressing priorities of a much more basic kind, the progress on light pollution control is remarkably good.

Recent developments in Chile and the world such as the unexpected cuts in the natural gas supply from Argentina and the steep rise in crude oil prices have had as a result that there suddenly is much more awareness in the country of energy saving in general and electricity in particular. This has had a positive influence on our efforts to control light pollution, especially our attempts to promote the idea that by changing over to luminaries with lower power one can pay for the investment from the savings in electricity costs.

During the next few months there will be a conference held involving the SEC and CONAMA (National Commission for the Environment), the observatories, the OPCC, and mayors of all municipalities of the regions involved to discuss ways of making progress not only in the implementation of the DS686, but on how to combine this with lowering the installed power of street lighting installations. There is even the distinct possibility to extend the DS686 to the whole country as a "strong recommendation" from the central government, more cast in terms of energy savings than controlling light pollution ... but called by any name this would be progress for astronomy in Chile especially for amateur astronomy, a fast growing activity in the country!

The other big owner of outdoors lighting fixtures is the mining industry, one of Chile's economic mainstays. We estimate that Chilean mining as a whole has about 40-50 thousand luminaires in operation and among the big mines about 60% have already been changed to fixtures that comply with the law. The many small and very small mines are much more difficult to track; we really do not have much of an idea what their situation is with respect to compliance with the DS686, but it is likely much less than the big mines' 60%.

For more information on what is happening in Chile please visit the websites of the Office for the protection of the skies in the north of Chile, or the OPCC at:

<http://www.opcc.cl> (mainly in Spanish) or

<http://www.ctio.noao.edu> (mainly in English)

**Hawaii** (A note from Richard Wainscoat)

A high-resolution night-time image of the island of Hawaii was obtained by astronaut Ed Lu on the International Space Station. This image has allowed the major light sources to be identified, and allowed quantitative measures of the amount of light emitted at all locations across the island. The brightest sources of light included the airports, ports, and car sales areas. Efforts are underway at the Federal, State and County level to improve shielding of lights on the island of Hawaii.

**United Kingdom** (Based on a note from Nigel Pollard)

The UK now has legislation that makes light pollution a "Statutory Nuisance" bringing it into the same category and other accepted nuisances such as noise, chemical, or other pollutions. This makes it far easier to enforce compliance with regulations regarding light trespass etc..

The UK-based ILE (Institution of Lighting Engineers) have updated their "Guidance Notes for the Reduction of Obtrusive Light 2005" on their website at:

*<http://www.ile.org.uk/light-pollution/htm>*

They have other interesting .pdf (free) downloads: "Light Pollution and New Legislation" and "Domestic Security Lighting".

### ***Spain***

Spain has already since 1988 the "Ley del Cielo" or "Law of the heavens" which protects the Canarian observatories from excess light pollution.

Recently, in April 2005, the autonomous government of the Balearic Islands approved a law called "Protection against light pollution" with the stated aims of:

- Maintaining as much as possible the natural night time environment.
- To promote energy efficient street lighting.
- To avoid obtrusive light in the domestic environment, and
- To prevent and reduce the negative effects of light pollution on the view of the night sky.

The autonomous governments of Andalucia and Cantabria are working on similar legislation.

The autonomous government of Cataluña has now approved the Light pollution protection law of 2002 albeit with strong controversy regarding its content.

The President of the island government in La Palma has asked the night sky above La Palma to be included in the status of (part of) the island as "World biosphere reserve". No outcome yet...

*Hugo E. Schwarz, Chair of "WG on Controlling Light Pollution" of IAU C50,  
hschwarz@ctio.noao.edu*

## **5. INTERNATIONAL ORGANIZATIONS**

### **5.1. INTERNATIONAL COUNCIL FOR SCIENCE (ICSU)**

#### **5.1.1. Report on the 28<sup>th</sup> General Assembly**

The 28<sup>th</sup> General Assembly of the International Council for Science was held in Suzhou, China, October 18-22, 2005. The conference was attended by about 250 delegates representing National Members and Union representatives. The discussions at these meetings are usually wide ranging and include a large number of essentially administrative matters, but also focus on capacity building, sustainable development and environment, hazards and the universality of science, which all are major issues of ICSU's Strategy Plan 2006–2011.

#### ***The ICSU Regional Offices***

ICSU is establishing Regional Offices (ROs) with the objective to strengthen capacity building in developing countries. One thereby aims to enhance participation of scientists and regional organizations from developing countries in capacity building programmes of ICSU and ICSU Unions. So far, two Regional Offices have been established in, respectively, Mexico City, Mexico, for Latin America and Pretoria, South Africa for Africa (see the following report by Peter Martinez, § 5.1.2.). An additional Regional Office for South East Asia and the Pacific is under way in Malaysia. Rio de Janeiro, Brazil, has offered to host a Regional Office for South America. A fifth Regional Office for the Arabic Region is being considered.

### ***Natural and Human-Induced Hazards***

ICSU has identified Natural and Human-Induced Hazards as a new, high priority area. The initiative was welcome in light of recent disasters including the 2004 Indian Ocean tsunami, 2005 Hurricane Katerine and just a few days earlier the tragic Pakistan earthquake. The GeoUnions and the IAU strongly recommended that the initiative be developed using these Unions as the core constituents of this programme.

### ***International Polar Year 2007-2008***

The planning for the International Polar Year 2007-2008, which is part of the ICSU strategy for 2006-2011, is progressing well.

### ***Astronomical and Geophysical Data Analysis Services***

The General Assembly decided to extend ICSU's sponsorship of the present Interdisciplinary Service called "Federation of Astronomical and Geophysical Data Analysis Services" (FAGS) for an additional period of three years, during which FAGS will continue to fulfill its role of coordination among the Services, while ICSU examines integration of this function within its activities in data and information.

### ***The Principle of Universality***

The future challenges and role of the "Standing Committee on Freedom in the Conduct of Sciences" (SCFCS) are transferred to a new committee with broader responsibilities, under the name "Committee on Freedom and Responsibility in the Conduct of Science".

In this context the delegates discussed a resolution from the US National Academy of Sciences about "Intelligent Design". The conclusion was to condemn the teaching of Intelligent Design or Creationism and dismiss it as a rational alternative to the Theory of Evolution.

Related to the above is the continuing problem of obtaining in time visa for scientists from Asian and Arabic countries, in particular, to attend scientific meetings in some countries. The problem is gradually becoming more wide-spread and ICSU follows the situation closely and it plans to provide an overview of the necessary lead time for visa applications to various countries. It is advised that all meetings organizers must ensure sufficient time for visa applications.

### ***ICSU Clusters***

This General Assembly decided that the 27 Unions should be grouped in a somewhat loose cluster structure to stimulate Inter-Unions collaboration and coordination on issues of common interest. Such contacts have already been established between several of the Unions. IAU will belong to an Earth and Space Science Cluster, together with IGU, IUGG, IUGS, IUSS and URSI. Each of the four Clusters will be guaranteed one Member on the Executive Board (EB) of ICSU.

### ***The ICSU Grants Programme***

Due to a currently difficult financial situation of ICSU, the Grant Programmes had been significantly reduced in 2005. ICSU will suspend its Grants Programme during 2007 and carry out a review of its past impact and potential future structure.

*Oddbjørn Engvold, IAU representative to ICSU, October 2005*

### **5.1.2. Report on the Opening of the Regional Office in South Africa**

The first Regional Office of the International Council for Science (ICSU) was officially opened in Pretoria on September 1, 2005. Over 200 guests from all over the world,

including ministers from several African countries, Members of the diplomatic corps, and representatives of ICSU scientific unions and businesses attended the event.

In 2002, the International Council for Science (ICSU) decided to establish four regional offices around the world. The goal of each regional office is to strengthen science in that region to benefit the people of that region, and to contribute to the general advancement of science in the world. The first of these four regional offices is the African office. This office is situated in Pretoria and is hosted by the National Research Foundation of South Africa. Other offices will be established in the Arab Region, Asia and the Pacific, and Latin America and the Caribbean.

The ICSU Regional Office for Africa will promote the development of all fields of science throughout sub-Saharan Africa. The office will facilitate capacity building, including quality science education, training and research. Core objectives are to facilitate networks within Africa and increase participation of African scientists in international programmes.

The office was officially opened by the Minister of Science and Technology of South Africa, the Hon. Mr Mosibudi Mangena. The Minister stated that the South African government was deeply honoured to be part of this milestone event and that by hosting the office, it "re-affirmed South Africa's commitment to the common and global effort to bring science solutions closer to the African people".

The newly appointed Director of the Regional Office, Prof. Sospeter Muhongo, said that the office would focus on:

- Health and human well-being;
- Sustainable energy;
- Natural and human-induced hazards;
- Global climate change.

In establishing the Regional Office, he would concentrate on the establishment of a database of African experts, on capacity building, gender balance and outreach activities. The Regional Office has set a target of doubling the number of African countries adhering to ICSU within the first year (from 16 to 32) as an initial vehicle for mobilizing and empowering scientists within the region.

Professor Jane Lubchenco, President of ICSU, expressed ICSU's high hopes for the key role this office will play in enabling African scientists to serve society. ICSU Executive Director Professor Rosswall remarked the opening of this Regional Office was timely, since it would support the attainment of the Millennium Development Goals and the G8 focus on Africa. The ICSU Regional Office could play an important role in building capacity of individuals and institutions on the continent.

South Africa was chosen to host the Regional Office by a committee composed of ICSU's African National Members. The National Research Foundation satisfied numerous selection criteria, which included the host being based in a scientific institution with good links to similar institutions in the region, long-term financial support from the host institution and its national government, and ease of access for scientists from the region served by the office.

More information about the African Regional Office of ICSU may be obtained at:

<http://www.icsu-africa.org/news.htm>.

*Peter Martinez Member PGWWDA, SAAO, November 2005*



### 5.2. INTERNATIONAL HELIOPHYSICAL YEAR (IHY)

The International Heliophysical Year (IHY) is an international programme of scientific research and collaboration to understand the external drivers of the space environment and climate. It is being planned for the time period centered on 2007, the 50<sup>th</sup> anniversary of the International Geophysical Year. The IHY will involve the deployment of new instrumentation, new observations from the ground and in space, and public education.

Building on the results of IGY 1957, the IHY will study universal physical processes in the solar system that affect all interplanetary and terrestrial environments. Specific objectives of the IHY are to:

1. Provide measurements of the response of the magnetosphere, ionosphere, lower atmosphere and Earth surface to identify global processes and drivers that affect the terrestrial environment and climate;
2. Globally study the Sun-heliopause system outward to the heliopause to understand the external and historic drivers of geophysical change;
3. Foster international scientific cooperation in study of Heliophysical phenomena now and in the future;
4. Communicate these results to the interested scientific community and to the general public.

The IHY is being organized through science working groups that coordinate analysis and modeling efforts, and are responsible for planning IHY meetings, symposia and workshops through three major thrusts: coordinated scientific observing campaigns, scientific meetings and publications, and public outreach responsible for increasing public awareness of IHY activities. This committee produces newsletters, maintains the website(s), writes articles, coordinates media affairs, and develops outreach products.

The coordination of IHY activities within the IAU is led by the Solar and Heliosphere Division (II), whose President, David Webb, is also the IAU representative to the IHY. Hans Haubold is leading the IHY effort for the United Nations under the auspices of COPUOS and the UN Basic Space Science Initiatives programme.

*David Webb, IAU Representative to IHY, David.Webb@hanscom.af.mil*

### 5.3. INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS (IUPAP)

The Commission on Astrophysics of the International Union of Pure and Applied Physics expects to present a prize to an outstanding young astrophysicist in December, 2006 at the 23<sup>rd</sup> Texas Symposium on Relativistic Astrophysics in Melbourne, Australia. Candidates for the prize must not have completed more than 8 years of post-PhD research and related activities at the time the prize is awarded. The prize will consist of a IUPAP Medal, travel expenses to the meeting where the prize is presented, and possibly a small cash award.

The winner will probably be asked to give a short talk about the work for which the prize is awarded.

Nominations can come from any astrophysicist who knows the nominee's work well. A nomination should consist of a letter explaining the nominee's qualifications, a complete CV and list of publications, and two letters of support, at least one of which must come from someone who is not at the nominee's institution, is not a past mentor, and is not a frequent co-author or other close collaborator. Materials must arrive by June 1, 2006 for full consideration. Nominations should be sent to the Chair and the Secretary of the Commission and to the Chair of the Selection Committee:

**Commission Chair:** Alexei M. Fridman (Institute of Astronomy, Pyatnitskaya Ul. 48, 109017 Moscow, Russia, flexa@online.ru)

**Commission Secretary:** Patricia A. Whitelock (SAAO, PO Box 9, 7935 Observatory, South Africa, paw@sao.ac.za)

**Selection Committee Chair:** Virginia Trimble (Physics Dept, Univ of California, Irvine CA 92697 USA, vtrimble@uci.edu)

*Virginia Trimble IAU Representative to IUPAP Commission 19 on Astrophysics, November 11, 2005*

#### 5.4. INTERNATIONAL VLBI SERVICE (IVS) FOR GEODECY AND ASTROMETRY

The IVS (<http://ivscc.gsfc.nasa.gov/>) is a collaboration of 36 organizations in 17 countries that uses VLBI as a global Earth observing system, providing services that support geodetic, geophysical, and astrometric research and operational activities. It operates as a service of the International Association of Geodesy (IAG) and of the IAU, and works closely with the International Earth Rotation and reference frame Service (IERS). The IVS products include a Terrestrial Reference Frame (TRF), the International Celestial Reference Frame (ICRF), Earth Orientation Parameters (EOP), and TROspheric Parameters (TROP).

Since IAU IB 96, the IVS Directing Board has met twice, first in April 2005 at Noto Observatory, Italy, immediately before the Sixth IVS Analysis Workshop and a Working Meeting on European VLBI for Geodesy and Astrometry, and then in September 2005 in Washington DC. The next IVS DB meeting will be in Concepción, Chile, after the Fourth IVS General Meeting that takes place during January 9-13, 2006.

The key development during this period has been the completion of the report "VLBI2010: Current and future requirements for geodetic VLBI Systems" by IVS Working Group 3. The WG reviewed the scientific goals of the communities served by the IVS and considered what technological advances and new procedures are needed to address those goals. The VLBI2010 report is aimed at the geodetic and astrometric community plus funding agencies and is available at:

[ivscc.gsfc.nasa.gov/about/wg/wg3/IVS\\_WG3\\_report\\_050916.pdf](http://ivscc.gsfc.nasa.gov/about/wg/wg3/IVS_WG3_report_050916.pdf)

*Patrick Wallace, IAU Representative to IVS, ptw@star.rl.ac.uk*

## 6. EXECUTIVE COMMITTEE MEETINGS

### 6.1. 80<sup>th</sup> MEETING OF THE EXECUTIVE COMMITTEE

April 18-20, 2005, INAF, Rome, Italy

The 80<sup>th</sup> meeting of the EC was held at the venue of Istituto Nazionale di Astrofisica (INAF), Rome, on April 18-20, 2005. All Members of the EC were in attendance, and all 12 IAU Division Presidents were present and attended parts of the EC meeting. The Division Presidents held a separate session for reviewing of the 2006 meetings proposals, while the EC conducted its internal business. The IAU Executive Assistant, Monique Léger-Orine and Administrative Assistant Claire Vidonne, attended the meeting. Also, the NOC Chair of the forthcoming XXVI<sup>th</sup> IAU General Assembly in Prague, Jan Palouš, attended parts of the meeting. IAU President, Ron Ekers, thanked Piero Benvenuti, President INAF, for his kind invitation to hold this meeting at the historic Monte Mario Osservatorio.

The EC business concerning financial matters of the Union, included such as National membership payments, accounts of 2004 and draft budget for the triennium 2007-2009.

A major agenda item was the selection of IAU sponsored scientific meeting in 2006. The great majority of the proposed meetings would constitute the science programme for the XXVI<sup>th</sup> IAU General Assembly in August 14-25, 2006. Based on the evaluation and advice of the IAU Division Presidents, the EC decided to offer IAU support to six Symposia, seventeen Joint Discussions and seven Special Sessions, which all will be held at the XXVI<sup>th</sup> IAU GA venue in Prague (see pp. 12-31 of this IB). In addition, three Symposia will be held, respectively, in the spring and winter of 2006 (§ 2.1, pp. 58-60 of this IB). Invited Discourses (IDs) are generally rated among the highlights in the programmes of IAU General Assemblies. A total of four IDs were selected for the GA in Prague (p. 12 of this IB).

Given the large number of international meetings every year of the size of IAU Colloquia, the EC decided that it would serve the astronomical community better by upgrading its Colloquia to the level of Symposia. Hence, the IAU support for international meetings will from now on be given to, on the average, nine international Symposia every year. The support for two IAU Regional Meetings, in years between General Assemblies, will remain a high priority.

The EC resolved to prepare a modification of the current voting rules on primarily scientific nature at General Assemblies. The resulting modification, which can be viewed in the enclosed copy of the IAU Statutes (§ 14, p. 43 of this IB), will be forwarded to the National Committees for their review and comments, and subsequently be presented for decision by the XXVI<sup>th</sup> GA.

The ongoing preparation of the IAU General Assembly in Prague in 2006, was presented by the NOC Chair, Jan Palouš.

The EC reviewed the new guidelines for future hosting of IAU General Assemblies.

The EC reviewed and took note of reports from IAU Divisions and Commissions, and from its representatives to international collaborating organizations.

Educational programmes under IAU Commission 46 represent a high priority activity and responsibility of the IAU. The EC took note of the many successful and promising results from its Program Groups.

The EC agreed with the necessity for an update of the current IAU database and website. A call for tender for this work had been issued and the EC accepted what it considered to be the best offer.

*Oddbjørn Engvold, IAU General Secretary, November 10, 2005*

## **6.2. 81<sup>st</sup> MEETING OF THE EXECUTIVE COMMITTEE**

This meeting will be held at the time of the XXVI<sup>th</sup> IAU General Assembly in Prague:

- Sunday August 13, full day
- Monday August 14, full day
- Wednesday, August 23, 14:00-17:30

## **6.3. 82<sup>nd</sup> MEETING OF THE EXECUTIVE COMMITTEE**

This meeting will be held just after the second session of the XXVI<sup>th</sup> IAU General Assembly in Prague:

- Friday August 25, full day

## 7. PREPARATION OF THE XXVII<sup>th</sup> GENERAL ASSEMBLY

The National Organizing Committee (NOC) for the XXVII<sup>th</sup> IAU General Assembly in Rio de Janeiro 2009 was initially formed in August 2003 and enlarged during the Annual Meeting of Brazilian Astronomical Society (SAB) on August 2004. The NOC composition is now as follows:

- Daniela Lazzaro (Chair) (Observatório Nacional, Rio de Janeiro)
- Beatriz Barbuy (Co-Chair) (IAG-Universidade de São Paulo, São Paulo)
- Licio da Silva (Observatório Nacional, Rio de Janeiro, and the President of the Brazilian Astronomical Society)
- Renan de Medeiros (Universidade Federal do Rio Grande do Norte, Natal, and representing the Brazilian Committee for Astronomy)
- Miriani G. Pastoriza (Universidade Federal do Rio Grande do Sul, Porto Alegre)
- Walter Maciel (IAG-Universidade de São Paulo, São Paulo)
- Luiz Paulo Vaz (Universidade Federal de Minas Gerais, Belo Horizonte)
- Francisco X. de Araujo (Observatório Nacional, Rio de Janeiro)

The NOC has held four meetings since it was formed. The first one, on December 2003, defined the need to select the Agency for the Organization of the Conference. This process started on March 2004 with the call for proposals to which five competitors responded. During the second meeting of the NOC, on June 2004, the decision was taken that the "JZ Congressos" (JZC) will be the official organizer of the XXVII<sup>th</sup> IAU General Assembly. It will be responsible for registration, accommodations, social and cultural events, excursions, etc. During the third meeting of the NOC, on August 2004, it was decided that the contract with the JZC must be signed by the Board of Directors of SAB, which has already given its agreement. Discussions were also held on how to seek for financial support to the organization of the GA in 2009.

The most recent meeting of the NOC was during the visit of an IAU Executive Committee (EC) commission to Rio de Janeiro, occurred on September 2005. The IAU-EC commission was formed by the President-Elect, Dr. Catherine Cesarsky, the General Secretary, Dr. Oddbjørn Engvold, and the Assistant General Secretary, Dr. Karel van der Hucht. Many issues regarding the organization of the General Assembly were discussed during two meetings and a Memorandum of Understanding should be signed between the IAU and the Board of Directors of SAB. The EC commission and the NOC visited the probable venue of the XXVII<sup>th</sup> GA, the RioCentro Convention Center, as well as the nearby hotels facilities, with an agenda organized by the JZC. The possibility to held the XXVII<sup>th</sup> IAU GA in a new convention center that is now under construction was discussed and a final decision will be taken, in agreement with the IAU EC, by March 1, 2006.

*Daniela Lazzaro, NOC Chairperson, September 30, 2005*

## 8. EDUCATIONAL ACTIVITIES

### 8.1. PG ON INTERNATIONAL SCHOOL FOR YOUNG ASTRONOMERS (ISYAs) 28<sup>th</sup> ISYA, INAOE in Tonantzintla, Puebla, Mexico, July 25-August 12, 2005

The Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE) in Tonantzintla, Puebla, Mexico, hosted the 28<sup>th</sup> International School for Young Astronomers (ISYA) from July 25 to August 12, 2005. The school was financially supported primarily by the IAU and INAOE, with an additional contribution from the Instituto de Astronomía de la

Universidad Nacional Autónoma de México (IA-UNAM).

The 28<sup>th</sup> ISYA was a great success due to the organization and careful planning by the Local Organizing Committee (LOC) and the general support offered by many departments at INAOE including the computing technical department, the Public Relations Office, and the Secretary of the Guillermo Haro Programme at INAOE. The LOC included Itziar Aretxaga (INAOE-LOC Chair), Alberto Carramiñana (INAOE-Head of the Astrophysics Dept.), Esperanza Carrasco (INAOE), Jose Franco (IA-UNAM-Director), José Guichard (INAOE-General Director) and Francisco Soto (INAOE-Research and Teaching Director).

A total of 154 applications to attend the school were received, out of which 47 were selected from the following countries: 20 (6 female, 14 male) from Brazil, Chile, Colombia, Cuba, Honduras, Peru, Salvador, Trinidad and Tobago, and Venezuela; and 27 (11 female, 16 male) from Mexican institutions (IA-UNAM Ensenada, Universidad de Guanajuato, CRYA-UNAM, IA-UNAM Mexico City, INAOE and Universidad de Sonora). The students had very mixed academic backgrounds and experience ranging from final-year undergraduates to PhD students.

Although English is the official language of the ISYA, the majority of the students were Spanish-speaking. The Latin American ISYA students however observed the policy to speak English to ensure that their fellow students from Brazil and Trinidad & Tobago were not excluded from both casual conversations and more formal discussions.

The Faculty Members and lectures were:

- Rodolfo Barba, Universidad de La Serena, Chile  
*Astronomical Databases and Virtual Observatories: Surfing the Tsunami of Data*
- Enrique Gaztañaga, Institut d'Estudis Espacials de Catalunya, Spain  
*Cosmology and Large-Scale Structure*
- Michèle Gerbaldi, Institut d'Astrophysique de Paris, France  
*Stellar Atmospheres: from Observations to Theoretical Challenges*
- Edward Guinan, University of Villanova, USA  
*Extrasolar Planets: Properties and Future Possibilities*
- Rafael Guzman, University of Florida, USA  
*The Universe According to Optically-Selected Galaxies*
- David Hughes, INAOE, Mexico  
*The Hidden Universe Revealed at Millimetre Wavelengths*
- Susana Lizano, Universidad Nacional Autonoma de Mexico, Mexico  
*Theory of Galactic Star Formation*
- Claudia Mendes de Oliveira, Universidade de Sao Paulo, Brazil  
*Groups and Clusters of Galaxies*
- Manuel Peimbert, Universidad Nacional Autonoma de Mexico, Mexico  
*The Chemical History of the Universe*
- Massimo Turatto, Osservatorio di Padova, Italy  
*Supernovae: from Stellar Evolution to Cosmology*
- Guillermo Tenorio-Tagle, INAOE, Mexico  
*Feedback and Hydrodynamics of the Interstellar Medium*
- Elena Terlevich and Vahram Chavushyan, INAOE, Mexico  
*Optical/IR Observational Techniques*

- William Wall and David Hughes, INAOE, Mexico  
*Millimetre-Wavelength Observational Techniques*

Three of these topics were designed to be taught through practical laboratories, with more than 30 hours devoted to data mining, reduction and analysis. These practical classes were based on access to real data and fully-equipped PCs with all the necessary data-reduction and image processing software pre-installed. The students had 24-hour daily access to the PCs. As part of the practical assignments, the students also had to conduct optical observations with the 1m telescope of the Observatorio Astronómico Nacional in Tonantzintla (which is operated by IA-UNAM on an adjacent campus to INAOE). The ISYA students were divided into small groups and had two opportunities to make optical imaging and spectroscopic observations.

In addition to the practical classes, several scientific tours were also arranged during the ISYA. During the 3-week school groups of about 20 students and lecturers rotated visits to the Large Millimetre Telescope (LMT), which is operated by INAOE and the University of Massachusetts in Amherst (USA) and which is currently being built on top of Sierra Negra at an elevation of 4600m, and also to the INAOE Schmidt Camera and Solar Telescope, and to the INAOE optical aspheric laboratory and workshop.

The ISYA students were encouraged to describe their current research interests in poster format: 35 scientific posters were presented, from which 8 were selected to give 15-min short oral presentations during a general session.

Apart from the intensive academic programme, the students also had the opportunity to experience the archeological, artistic and scientific environment of the central valleys of Mexico through a series of cultural visits to local towns and historical sites at the week-ends, and through public lectures and films during the weekday evenings at the INAOE auditorium.

ISYA 2005, see:

<http://www.inaoep.mx/~isya28/>

*Itziar Aretxaga, INAOE, Organizer of the 28<sup>th</sup> ISYA, and  
 Michèle Gerbaldi, Chairperson for the ISYA program (IAU), September 26, 2005*

## **8.2. PG ON WORLD WIDE DEVELOPMENT OF ASTRONOMY (PGWWDA)**

Prof. Athem Alsabti has recently visited Iraq and we are pleased to present the following report on the present state of Iraqi Astronomy.

In a presentation to the IAU regional meeting in Bali in July 2005, Professor Athem Alsabti presented the results of his recent visits to Iraq, and the contacts he made with Iraqi universities and the Ministry of Higher Education. He showed that there was considerable damage to the Observatory at Mount Korek in Iraqi Kurdistan. The Observatory consists primarily of two optical telescopes (3.5-meter and 1.25-meter) and a 30-meter radio telescope. The sanctions on Iraq during the 1990's have also had a devastating effect on astronomy teaching and research in Iraqi universities, and in Baghdad in particular. Professor Alsabti has been asked by the Iraqi government to help coordinate efforts to rebuild the Observatory, and to develop research and higher education activities in Iraqi astronomy. The IAU have responded positively by putting forward a proposal for an international meeting, to discuss ways to assist the development of astronomy in Iraq.

*John Hearnshaw, Chair of PGWWDA, October 28, 2005*

## 9. PETER GRUBER FOUNDATION

### 9.1. PETER GRUBER FOUNDATION COSMOLOGY PRIZE

#### 9.1.1. James Gunn wins the 2005 Cosmology Prize

The 2005 Cosmology Prize of The Peter Gruber Foundation is presented to James Gunn, Eugene Higgins Professor of Astronomy at Princeton University Observatory, for his central contributions to the theoretical, observational and instrumental development of modern cosmology. From his pioneering early work on the intergalactic medium and on gravitational lensing, through his use of new technology to study distant objects with the world's largest telescopes, to his design of the instruments used to carry out definitive cosmological surveys both from the ground and from space, he has set the highest standards for the field and provided the ideas and the data to inspire new generations of cosmologists.

Professor Gunn has played a central role in several observational projects. He was Deputy Principal Investigator for the design and construction of the Wide Field/Planetary Camera (WF/PC) on the Hubble Space Telescope. In addition to its many scientific contributions, WF/PC captured the incredibly beautiful images that cemented respect for the Hubble Telescope in the minds of the public and the astronomy community. He also conceived of, and was the primary force behind, the Sloan Digital Sky Survey (SDSS), the most extensive project ever for three-dimensional mapping of the universe, and he designed and built the innovative and unique camera that allowed the project to go forward. The SDSS has discovered an astonishing variety of astronomical objects ranging from nearby brown dwarfs to the most distant quasars. Gunn's career has continually broken new ground and offered unprecedented opportunities to other cosmologists.

Professor Gunn, 66, was born in Livingstone, Texas, and received a B.A. in Physics and Mathematics from Rice University and a Ph.D. in Astronomy and Physics from California Institute of Technology.

The Cosmology Prize is awarded annually by the Peter Gruber Foundation following advice from a Board nominated by the International Astronomical Union and other scientific unions. The Prize includes a cash sum of USD 200,000, and this year's award has been presented on November 4, 2005 at the Jagiellonian University in Krakow, Poland, where Nicholas Copernicus completed his early education.

#### 9.1.2. Past Awardees for the Cosmology Prize

- 2004 Alan Guth (USA) & Andrei Linde (USA)
- 2003 Rashid A. Sunyaev (Russian Federation/Germany)
- 2002 Vera C. Rubin (USA)
- 2001 Martin J. Rees (United Kingdom)
- 2000 Allan R. Sandage (USA) & James E. Peebles (USA)

### 9.2. PETER GRUBER FOUNDATION FELLOWSHIPS

Two research fellowships will be awarded during the year 2006, with funding from the Peter Gruber Foundation. Each fellowship amounting to USD 37,500 will be offered to promising, young astrophysicists working in any field of astrophysics either theoretical, observational or experimental.

There are no limitations on nationality, but preference will be given to applicants from

countries in difficult economic conditions. Please, consult the IAU website for detailed information.

Applications for fellowships to be awarded in 2006 should be submitted to the IAU General Secretary by April 30, 2006.

## 10. MEMBERSHIP

### 10.1. NATIONAL MEMBERSHIP

In accordance with the Statutes of the Union, an organization that duly represents a national professional astronomical community, may apply for a full National Membership, alternatively, an interim status based membership.

We are pleased to report that the IAU Secretariat has received applications for interim membership for Mongolia and Thailand from, respectively, the Mongolian Academy of Sciences and from the Thai Ministry of Science and Technology. The membership applications will be presented for decision at the XXVI<sup>th</sup> IAU General Assembly in August, 2006.

These membership applications are both recommended by the IAU Program Group on World Wide Development of Astronomy (PGWWDA) chaired by John Hearnshaw. Members of PGWWDA are, through personal visits in recent past, well acquainted with current astronomical activities in these countries and have offered opinion on how IAU may serve to assist and promote teaching and research in astronomy in these regions.

There is a precedence for admitting former Soviet Union states for IAU membership without going via an IAU General Assembly. The first such case was Tajikistan that was re-admitted in 1993. On this background the Republic of Kazakhstan was re-admitted with interim status membership by the IAU Executive Committee, in April 2005.

*Oddbjørn Engvold, IAU General Secretary, November 11, 2005*

### 10.2. INDIVIDUAL MEMBERSHIP

The General Secretary regrets to report the names of former and current IAU Members and Consultants whose death has been communicated to the Secretariat since the previous list published in IB 96:

Last updates: April 13, 2006

John G. <b>Ables</b>	Tateos A. <b>Agekjan</b>	John N. <b>Bahcall</b>
James Gilbert <b>Baker</b>	Norman H. <b>Baker</b>	Richard G. <b>Bingham</b>
J. G. <b>Bolton</b>	Hermann <b>Bondi</b>	Nina M. <b>Bronnikova</b>
Bruno <b>Caccin</b>	Alastair G.W. <b>Cameron</b>	John H. <b>Carver</b>
Joseph W. <b>Chamberlain</b> *	G. <b>Colombo</b>	N. <b>Dallaporta</b>
John Alan <b>Dawe</b> *	Juan J. <b>de Orus</b>	Geoffrey G. <b>Douglass</b> *
Richard B. <b>Dunn</b>	Nikolai <b>Dzubenko</b>	Walter A. <b>Feibelman</b> *
Michel C. <b>Festou</b>	Mikhail S. <b>Frolov</b>	Igor A. <b>Gerasimov</b> *
Robert <b>Glebocki</b> *	S. I. <b>Gopasyuk</b>	Anton <b>Hajduk</b>
R. Glenn <b>Hall</b> *	Emilios <b>Harlaftis</b>	Charles Latif <b>Hyder</b> *
George R. <b>Isaak</b>	Tadeusz <b>Jarzebowski</b>	Henry Emil <b>Kandrup</b> *
Boris L. <b>Kashcheev</b>	Michael J. <b>Klein</b>	I. G. <b>Kolchinskij</b>
N. S. <b>Komarov</b>	Vladimir A. <b>Kotelnikov</b> *	L. <b>Kresak</b>
Barry James <b>LaBonte</b>	Janet Akyz <b>Mattei</b> *	Cornell H. <b>Mayer</b>
Marie-Odile <b>Mennessier</b>	Harry C. <b>Minnet</b>	Philip <b>Morrison</b>
Andreas B. <b>Muller</b>	Sergij <b>Musatenko</b>	Saken O. <b>Obashev</b>



J. Beverley <b>Oke</b> *	Mikhail <b>Orlov</b>	John L. <b>Perdrix</b>
Charles L. <b>Perry</b> *	A. Keith <b>Pierce</b>	John <b>Polygiannakis</b>
Jason G. <b>Porter</b>	John M. <b>Porter</b>	Neil A. <b>Porter</b>
Helen Dodson <b>Prince</b>	Tamara B. <b>Pyatunina</b>	Gibson <b>Reaves</b>
James <b>Ring</b> *	Ralph Robert <b>Robbins</b>	Brian J. <b>Robinson</b>
Marcello <b>Rodonó</b>	William M. <b>Sinton</b> *	George M. <b>Sisson</b>
Mattheus A.J. <b>Snijders</b> *	Arnold A. <b>Stepanian</b>	Ronald Cecil <b>Stone</b>
Winardi <b>Sutantyo</b>	Peter A. <b>Sweet</b> *	J. T.I. <b>Tavares</b>
Richard Q. <b>Twiss</b>	Seppo I. <b>Urpo</b>	Franco <b>Verniani</b>
Jean-Pierre <b>Vigier</b>	Richard L. <b>Walker Jr</b>	Dennis <b>Walsh</b>
Willem <b>Wamsteker</b>	James A. <b>Westphal</b> *	Raymond E. <b>White</b> *

\* Death announced in IB96's web version, after its paper issue.

## 11. IAU PUBLICATIONS

### 11.1. SYMPOSIA

As of 2004, the IAU Symposium Proceedings Series is being published by Cambridge University Press (CUP), Cambridge, UK

For hardback volumes, see: <http://uk.cambridge.org/series/sSeries.asp?code=IAUP>,

For e-version, see [http://journals.cambridge.org/jid\\_IAU](http://journals.cambridge.org/jid_IAU)

#### IAUS 216 **Maps of the Cosmos**

Sydney, Australia, July 14-17, 2003

Eds. M. Colless, L. Staveley-Smith & R. Stathakis

San Francisco: ASP, ISBN: 1-58381-202-4, 2005

#### IAUS 225 **Impact of Gravitational Lensing on Cosmology**

Lausanne, Switzerland, July 19-23, 2004

Eds. Y. Mellier & G. Meylan

Cambridge: CUP, ISBN: 0-521-85196-3, 2005

#### IAUS 226 **Coronal and Stellar Mass Ejections**

Beijing, China, September 13-17, 2004

Eds. K. Dere, J. Wang, Y. Yan

Cambridge: CUP, ISBN: 0-521-85197-1, 2005

(E-version: [http://journals.cambridge.org/jid\\_IAU](http://journals.cambridge.org/jid_IAU) )

#### IAUS 227 **Massive Star Birth: A Crossroads of Astrophysics**

Catania, Sicily, Italy, May 16-20, 2005

Eds. R. Cesaroni, E.B. Churchwell, M. Felli & C.M. Walmsley

Cambridge: CUP, ISBN: 0-521-82198-X, 2005

#### IAUS 228 **From Lithium to Uranium: Elemental Tracers of Early Cosmic Evolution**

Paris, France, May 23-27, 2005

Eds. V. Hill, P. François & F. Primas

Cambridge: CUP, ISBN: 0-521-85199-8, 2005

For a complete list of IAU Symposium Proceedings and updates, please check:

<http://www.iau.org/>

## 11.2. COLLOQUIA

As of 2004, the IAU Colloquium Proceedings Series is being published by Cambridge University Press (CUP), Cambridge, UK.

For hardback volumes, see: <http://uk.cambridge.org/series/sSeries.asp?code=IAUP>,

For e-version, see [http://journals.cambridge.org/jid\\_IAU](http://journals.cambridge.org/jid_IAU).

**IAUC 196 Transits of Venus : New Views of the Solar System and Galaxy**

Preston, U.K., June 7-11, 2004

Ed. D.W. Kurtz

Cambridge CUP, ISBN: 0-521-84907-1, 2004

**IAUC 197 Dynamics of Populations of Planetary Systems**

Belgrade, Serbia & Montenegro, August 31-September 4, 2004

Eds. Z. Knezevic & A. Milani

Cambridge CUP, ISBN: 0-521-85203-X, 2005

**IAUC 198 Near-Field Cosmology with Dwarf Elliptical Galaxies**

Les Diablerets, Switzerland, March 14-18, 2005

Eds. H. Jerjen & B. Binggeli

Cambridge CUP, ISBN 0-521-85204-8, 2005

**IAUC 199 Probing Galaxies through Quasar Absorption Lines**

Shanghai, China PR, March 14-18, 2005

Eds. P.R. Williams, Chenggang Shu & B. Ménard

Cambridge CUP, ISBN: 0-521-85205-6, 2005

**IAUC 200 Direct Imaging of Exoplanets: Science and Techniques**

Nice, France, October 3-7, 2005

Eds. C. Aime & F. Vakili

Cambridge CUP, ISBN 0-521-85607-8, due by 2006

For a complete list of IAU Colloquim Proceedings and updates, please check:

<http://www.iau.org/>

## 12. OTHER PUBLICATIONS RECEIVED

**ASP Conference Series:** <http://www.astrosociety.org/pubs/cs/confseries.html>

**217 Imaging at Radio through Submillimeter Wavelengths**

Loews Ventatna Canyon Resort, Tucson, Arizon, USA, June 6-9, 1999

Eds. J.G. Mangum & S.J.E. Radford

ISBN 1-58381-049-8, 2000.

**316 Order and Chaos in Stellar and Planetary Systems**

Saint Petersburg, Russia, August 17-24, 2003

Eds. G.G. Byrd, K. V. Kholshevnikov, A.A. Myllari, I. I. Nikiforov & V.V. Orlov

ISBN 1-58381-172-9, 2004.

**317 Milky Way Surveys. The Structure and Evolution of our Galaxy**

Boston, Massachusetts, USA, June 15-17, 2003

Eds. D. Clemens, R.Y. Shah & T. Brainerd

ISBN 1-58381-177-X, 2004.

**318 Spectroscopically & Spatially Resolving the Components of Close Binary Stars**

Dubrovnik, Croatia, October 20-24, 2003

Eds. R.W. Hilditch, H. Hensberge & Kresimir Pavlovski

ISBN 1-58381-179-6, 2004.

- 319 **NASA Office of Space Science Education and Public Outreach Conference**  
Chicago, Illinois, USA, June 12-14, 2002  
Eds. C. Narasimhan, B. Beck-Winchatz, I. Hawkins & C. Runyon  
ISBN 1-58381-181-8, 2004.
- 320 **The Neutral ISM In Starburst Galaxies**  
Carlsten Fortress, Marstrand, Sweden, June 24-27, 2003  
Eds. S. Aalto, S. Huttemeister & A. Pedlar  
ISBN 1-58381-182-6, 2004.
- 321 **Extrasolar Planets: Today and Tomorrow**  
Paris, France, June 30- July 4, 2003  
Eds. J.-P. Beaulieu, A. Lecavelier des Etangs & C. Terquem  
ISBN 1-58381-183-4, 2004.
- 322 **The Formation and Evolution of Massive Young Star Clusters**  
Cancun, Mexico, November 17-21, 2003  
Eds. H.J.G.L.M. Lamers, L.J. Smith & A. Nota  
ISBN 1-58381-184-2, 2004.
- 323 **Star Formation in the Interstellar Medium**  
Lake Tahoe, California, USA, June 30 - July 3, 2003  
Eds. D. Johnstone, F.C. Adams, D.N.C. Lin, D.A. Neufeld & E.C. Ostriker  
ISBN 1-58381-185-0, 2004.
- 324 **Debris Disks and the Formation of Planets**  
Tucson, Arizona, USA, April 11-13, 2002  
Eds. L. Caroff, L. J. Moon, D. Backman & E. Praton  
ISBN 1-58381-186-9, 2004.
- 325 **The Solar-B Mission & the Forefront of Solar Physics**  
Tokyo, Japan, November 12-14, 2003  
Eds. T. Sakurai & T. Sekii  
ISBN 0-58381-1187-7, 2004.
- 327 **Satellites and Tidal Streams**  
Los Cancajos, La Palma, Spain, May 26-30, 2003  
Eds. F. Prada, D. Martinez Delgado & T.J. Mahoney  
ISBN 1-58381-190-7, 2004.
- 329 **Nearby Large-Scale Structures and the Zone of Avoidance**  
Cape Town, South Africa, March 28-April 2, 2004  
Eds. A.P. Fairall & P.A. Woudt  
ISBN 1-58381-192-3, 2005.
- 330 **The Astrophysics of Cataclysmic Variables & Related Objects**  
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Eds. J.-M. Hameury & J.-P. Lasota  
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- 331 **Extra-Planar Gas**  
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- 337 The Nature and Evolution of Disks around Hot Stars**  
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- 339 Observing Dark Energy**  
Tucson, Arizona, USA, March 18-20, 2004  
Eds. Sidney C. Wolff & Tod R. Lauer  
ISBN 1-58381-206-7, 2005.

**ASP:** <http://www.astrosociety.org/pubs.html>

**Ultraviolet Atlas of the Arcturus Spectrum, 1150–3800 Å**  
Eds. K. Hinkle, L. Wallace, J. Valenti & T. Ayres  
ISBN 1-58381-204-0, 2005

### 13. OTHER MEETINGS ON ASTRONOMICAL TOPICS

please see:

<http://cadwww.dao.nrc.ca/meetings/>

### 14. THE INTERNATIONAL GEOPHYSICAL CALENDAR 2006

The Secretariat has received the International Geophysical Calendar for 2006. This Calendar is issued under the auspices of the International Space Environment Service (ISES) of the International Council for Science (ICSU).

Observations for solar phenomena and the climate and Weather of the Sun-Earth System (CAWSES) project are covered in this calendar.

The complete Calendar and all explanatory files are available on-line at:

<http://www.ises-spaceweather.org/>

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## INTERNATIONAL ASTRONOMICAL UNION UNION ASTRONOMIQUE INTERNATIONALE

The mission of the International Astronomical Union (IAU), founded in 1919, is to promote and safeguard the science of astronomy in all its aspects through international co-operation. The IAU, through its 12 Scientific Divisions and 37 Commissions covering the full spectrum of astronomy, continues to play a key role in promoting and coordinating worldwide co-operation in astronomy. Strong emphasis is placed on the personal involvement of its 9,041 Individual Members from 62 National Members worldwide. The IAU is integrated into the international Community through its membership in the International Council for Science (ICSU).

The tasks of the IAU range from the definition of fundamental astronomical and physical constants and unambiguous astronomical nomenclature, rapid dissemination of new discoveries, organization of international observing campaigns, and promotion of educational activities in astronomy, to early informal discussions of possible future international large-scale facilities.

The IAU is also the sole internationally recognized authority for giving designations and names to celestial bodies and their surface features.

The organization of scientific meetings is a key activity. The triennial General Assemblies feature a rich scientific program, recorded in the Highlights of Astronomy, administrative business is documented in the IAU Transactions. In addition, the IAU sponsors about a dozen carefully selected, high-profile Symposia and Colloquia each year. Proceedings of these meetings are published under the auspices of the IAU as important records of the status of their scientific fields.

The IAU works to promote astronomical education and research in developing countries through the International Schools for Young Astronomers and Teaching for Astronomy Development programs, and through joint initiatives with other ICSU and UN organizations.

Contact with the membership is maintained through this Bulletin, published twice a year and available on the IAU website. Nevertheless, for the time being, a paper version is sent to those who have not access to the web. In addition to the Information Bulletin, an electronic IAU Newsletter will be issued at semi-regular intervals. The IAU website provides on-line information about and news from the Union and direct links to Divisions, Commissions, Working Groups, and related organizations.

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