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PREFACE

As many readers will surely have noticed, the inner cover pages of IB 88 carried outdated information on the IAU Executive Committee and Division Presidents. I am sorry for this mistake. Our printer, ASP has agreed that the IBs be blue-proofed in order to avoid future errors of this type. Consequently, I dare guarantee that the information you'll find here is correct!

The planning for the 25th General Assembly is proceeding within the NOC, and I recommend every member to check the web page <http://www.astronomy2003.com> for updates on the preparations. Also, do not forget to send in the form of interest! At the same time, I hope that a lot of excellent ideas on scientific events during GA25 are now being explored and developed within all parts of our community, so that next year's EC meeting will face a really challenging task of picking out the very best selection.

At GA24 a new rule was implemented concerning the IAU Working Groups to the effect that their setting up or continuation had to be approved by the EC. There was no time to complete that task in Manchester, but after extensive email consultations we have now come to a point where only very few cases remain pending. It is therefore time to publish a list of the WGs, and this will be found in Transactions 24B as well as in this IB. Updates and supplements will be published in future IBs whenever necessary.

A check with Commission Presidents and Vice-Presidents revealed that the list of coordinates in IB 88 needs very many updates. Therefore the whole list is published again here, including all the changes that have come to the attention of the Secretariat. I note in particular that the English name of Commission 46 was listed with a slight error. The correct name, to be read in the present list, is *Astronomy Education & Development*.

The list of Other Meetings on Astronomical Topics is now slimmer with a truly international flavour. However, on the IAU web page

<http://www.iau.org/Activities/meetings/othermeet.html>

a more complete list is maintained by the Assistant General Secretary, Oddbjørn Engvold. Please help him with this task by informing him of meetings that should be listed there!

With warm greetings from the IAU Officers and Secretariat.

Hans Rickman
General Secretary

1. FAITS DIVERS

Last February the IAU Secretariat moved from its premises on the 3rd floor of the Institut d'Astrophysique into offices kindly put at our disposal on the 2nd floor. Of course this meant a lot of extra work and temporary inconvenience for our Assistants, Monique and Jodi but it is paying off in terms of more space and comfort. Our thanks go to the INSU, the CNRS, and the IAP Director, Bernard Fort, for having made this move possible. As always, members passing by are welcome to visit us!

Members surfing on the web are welcome to visit the IAU home page too and will notice that it has had a slight facelift. This happened just after we had moved the web site from Copenhagen Observatory to a new server in Uppsala. There aren't many new features yet, but the material has been sorted into clickable, general topics that are listed in a menu bar-like arrangement on top of the home page. By this time all the IAU Commissions have their own web pages, and these are linked from the IAU page. Unfortunately some of them still reside at the previous Presidents' computers and carry outdated information, but your General Secretary is trying to fulfill his role as IAU web watchdog in this respect.

The next move of the IAU web site is foreseen to occur in 2003, at the end of the present triennium, and I hope that its current nomad life will then be over. The permanent place should be close to the IAU Secretariat in Paris.

It is a gratifying experience to work with astronomical news notes, as I continue to do for the Uppsala Observatory. If you don't have time for your own research because of the administrative duties, you can then at least get a grasp of what's going on at other places and, actually, feel the dynamic evolution and growth of astronomy and astrophysics. The most exciting information for me recently was that the world's two very big optical interferometers have seen first light – both the Keck and the ESO-VLT. Soon we shall be able to see tiny details that are as yet just fascinating dreams, be they truly small things that are nearby or much bigger objects at cosmological distances!

Such experiences act like real facelifts for a tired GS, leading an overworked Secretariat.

2. MAIN DEADLINES AND EVENTS IN 2001–2002

Proposals for IAU Symposia, Colloquia, and co-sponsored meetings planned for 2003 must reach the President of the appropriate Division (or Commission for Commissions not attached to a Division)

no later than February 15, 2002!

in order to be considered at the 76th Executive Committee meeting.
See <http://www.iau.org/Activities/meetings>

Note that this refers in particular to proposals for GA Symposia and Joint Discussions at GA 25!

Date	Action Item/Event	
<u>2001</u>		
14-15	June	75 th Executive Committee Meeting, Copenhagen, Denmark
18-22	June	IAU Colloquium 184, Byurakan, Armenia
10-13	July	IAU Symposium 208, Tokyo, Japan
26-31	July	IAU Colloquium 185, Leuven, Belgium
17-21	Sept.	IAU 10 th Latin-American Regional Meeting, Cordoba, Argentina
*15	Oct.	Contributions due for Information Bulletin 90
19-23	Nov.	IAU Symposium 209, Canberra, Australia
<u>2002</u>		
TBD	Feb.	Officers' Meeting, Paris, France
*15	Feb.	Proposals due for IAU Meetings in 2003
*15	March	Submit matters for discussion at 76 th EC meeting
*01	April	Contributions due for Information Bulletin 91
TBD	May	76 th Executive Committee meeting
17-21	June	IAU Symposium 210, Uppsala, Sweden

*Denotes Final Deadline

3. CORRECTIONS AND CLARIFICATIONS TO IB 88

3.1 Inner Cover Pages

An Apology

Incorrect information appeared on the inside covers of IAU Information Bulletin 88 (January 2001). The correct "IAU Executive Committee" and "The IAU Divisions" information appears here in Information Bulletin 89. The administrative office of the Astronomical Society of the Pacific, publisher of the IAU Bulletins, regrets our error and apologizes for any inconvenience this may have caused.

James C. White II
Executive Director
The Astronomical Society of the Pacific

3.2. Proposals for Meetings in 2003

A clarification may be needed regarding the submission of proposals for IAU Meetings in 2003. In IB 88, Sect. 2, p. 3, it was stated that proposals and ideas for GA Symposia and Joint Discussions at GA 25 were welcome by March 15, 2001 (the deadline for receipt of proposals for meetings in 2002). Such proposals will be preliminarily discussed at the 75th EC meeting in order to optimize the advance planning of GA 25.

However, no decisions will be taken until the full slate of proposals is available for the 76th EC meeting in 2002. Thus proposals and ideas that were not yet sent in will not suffer any disadvantage, and the continued submission of letters of intent or proposals is strongly encouraged, until the deadline of February 15, 2002.

3.3. Resolution B1.3

A typing error occurred in the first paragraph of the 3rd recommendation (see p. 30 of IB 88), which should correctly read:

"3. writing the geocentric metric tensor G_{ab} with geocentric coordinates (T, \mathbf{X}) ($T =$ Geocentric Coordinate Time (TCG)) in the same form as the barycentric one but with potentials $W(T, \mathbf{X})$ and $W^a(T, \mathbf{X})$; these geocentric potentials should be split into two parts - potentials W_E and W_E^a arising from the gravitational action of the Earth and external parts W_{ext} and W_{ext}^a due to tidal and inertial effects; the external parts of the metric potentials are assumed to vanish at the geocenter and admit an expansion into positive powers of \mathbf{X} ,"...

4. SCIENTIFIC MEETINGS

4.1. Future IAU Symposia

IAU SYMPOSIUM 208 ASTROPHYSICAL SUPERCOMPUTING USING PARTICLE SIMULATIONS

July 10-13, 2001, Tokyo, Japan

Scientific Organizing Committee: Lia Athanassoula (France), James Binney (UK), Ken Freeman (Australia), Douglas Heggie (UK), Piet Hut (Co-chair, USA), Jun Makino (Co-chair, Japan), Steve McMillian (USA), Rainer Spurzem (Germany), Matthias Steinmetz (USA), Daiichiro Sugimoto (Japan), Simon White (Germany)

Chair, Local Organizing Committee: Toshiyuki Fukushima

Principal Topics:

- Dynamics of star clusters
- Dynamics of galactic nuclei
- Dynamics of galaxies and clusters of galaxies
- Large-scale N-body simulation of cosmology
- Theory and simulation of planetary formation
- SPH/MHD simulation of star formation
- Direct simulation of gravitational lensing
- Algorithms for N-body simulation

Contact address: Prof. Jun Makino, Department of Astronomy, School of Science, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033, Japan
 Tel: 81 3 5841 4276 Email: makino@astron.s.u.-tokyo.ac.jp
 Fax: 81 3 5841 7644 <http://grape.astron.s.u-tokyo.ac.jp/iau208/>

IAU SYMPOSIUM 209 PLANETARY NEBULAE: THEIR EVOLUTION AND ROLE IN THE UNIVERSE

November 19-23, 2001, Canberra, Australia

Scientific Organizing Committee: Agnès Acker (France), Magda Arnaboldi (Italy), Bruce Balick (USA), Michael Barlow (UK), Shuji Deguchi (Japan), Michael Dopita (Co-chair, Australia), George Jacoby (USA), Sun Kwok (Co-chair, Canada), Walter Maciel (Brazil), Arturo Manchado (Spain), Mario Perinotto (Italy), Stuart Pottasch (Netherlands), Detlef Schönberner (Germany), Yervant Terzian (USA), Silvia Torres-Peimbert (Mexico), Romuald Tyenda (Poland), Peter Wood (Australia)

Chair, Local Organizing Committee: Michael A. Dopita

Principal Topics:

- PN surveys and their distribution in the galaxies
- PN in the scheme of stellar evolution
- Central stars and their atmospheres
- Nebular properties of PN
- PN as galaxy probes

Contact address: Prof. Michael A. Dopita, Research School of Astronomy and Astrophysics, Private Bag, Weston Creek P.O., ACT2611, Australia
 Tel: 61 262 49 0212 Email: michael.dopita@anu.edu.au
 Fax: 61 262 49 0233

IAU SYMPOSIUM 210 MODELING OF STELLAR ATMOSPHERES

June 17-21, 2002, Uppsala, Sweden

Scientific Organizing Committee: France Allard (France), Kwing Lam Chan (China PR), Henny Lamers (Netherlands), Dimitri Mihalas (USA), Nikolai Piskunov (Sweden), Fiorella Castelli (Italy), Sami Solanki (Germany), Kozo Sadakane (Japan), Javier Bueno Trujillo (Spain), Werner W. Weiss (Chair, Austria)

Chair, Local Organizing Committee: Nikolai Piskunov

Principal Topics:

- 3D hydrodynamic calculations with 3D energy transport
- Convection modeling
- Inclusion of magnetic fields
- Surface structures: Doppler and Zeeman-Doppler imaging
- Vertical structures: stratification by diffusion
- N-LTE radiative transfer
- Dynamic atmospheres: pulsations and winds
- Atomic and molecular data
- Observations

Bringing it all together: self-consistent determination of abundances and atmosphere models in Sun and stars

Contact address: Prof. Nikolai Piskunov, Uppsala Astronomical Observatory, Box 515 S-751 20 Uppsala, Sweden
 Tel: 46 471 5958 Email: piskunov@astro.uu.se
 Fax: 46 471 5999 <http://www.astro.uu.se/iau210>

4.2. Future IAU Colloquia

IAU COLLOQUIUM 184 AGN SURVEYS

June 18-22, 2001, Byurakan, Armenia

Scientific Organizing Committee: Francesco Bertola (Italy), Brian Boyle (Australia), Richard Green (USA), Guenther Hasinger (Germany), Edward Khachikian (Co-chair, Armenia), Areg Mickaelian (Armenia), Dieter Reimers (Germany), Brigitte Rocca-Volmerange (France), David Sanders (Co-chair, USA), Govind Swarup (India), Yervant Terzian (USA), Phillipe Véron (France), Daniel Weeman (USA)

Chair, Local Organizing Committee: Areg Mickaelian

Principal Topics:

- Spectral and colorimetric surveys for AGN
- Surveys for UV-excess galaxies
- AGN from IR/submm surveys: IRAS, ISO, SCUBA, SIRTf
- AGN from radio surveys: NVSS, FIRST, and others
- AGN from X-ray surveys: ROSAT, ASCA, BeppoSAX, Chandra, XMM
- AGN statistics and cross-correlation of multiwavelength surveys
- Physics and cosmological evolution of AGN

- Study of unique AGN
- Digital surveys and their advantage
- Future giant projects

Contact address: Dr. Areg M. Mickaelian, Byurakan Astrophysical Observatory, Byurakan 378433, Aragatzotn province, Republic of Armenia

Tel: 374 2 53 2751 Email: aregmick@obs-hp.fr / Iauc184@bao.sci.am
<http://bao.sci.am/iauc184>

IAU COLLOQUIUM 185 RADIAL AND NONRADIAL PULSATIONS AS PROBES OF STELLAR PHYSICS

July 26-31, 2001, Leuven, Belgium

Scientific Organizing Committee: Conny Aerts (Belgium), Tim Bedding (Australia), Mike Berger (Austria), Jørgen Christensen-Dalsgaard (Chair, Denmark), Wojciech Dziembowski (Poland), Joyce Guzik (USA), Steve Kawaler (USA), Eric Michel (France), Ennio Poretti (Italy), Dimitar Sasselov (USA), Hiromoto Shibahashi (Japan), Mike Thompson (UK), Patricia Whitelock (South Africa)

Chair, Local Organizing Committee: Conny Aerts

Principal Topics:

- The importance of pulsating stars as probes of their internal properties
- Hydrodynamic processes
- Stellar pulsations in a broad context
- Stellar pulsations in rotating stars
- Non-linear effect in pulsating stars
- Mass loss in pulsating stars
- The interaction between convection and pulsation
- Asteroseismology from space and from the ground

Contact address: Prof. Conny Aerts, Katholieke Universiteit Leuven, Instituut voor Sterrenkunde, Celestijnenlaan 200 B, B-3001 Leuven, Belgium

Tel: 32 16 327028 Email: conny@ster.kuleuven.ac.be
 Fax: 32 16 327999 <http://www.ster.kuleuven.ac.be/~iauc185/>

4.3. Latin-American Regional Meeting

IAU 10TH LATIN-AMERICAN REGIONAL MEETING

September 17-21, 2001, Cordoba, Argentina

Scientific Organizing Committee: Omar Benvenuto (Argentina), Alberto Carramiñana (Mexico), Juan Jose Claria (Argentina), Irene Cruz Gonzales (Mexico), Pierre Kaufmann (Brazil), Diego Garcia Lambas (Chair, Argentina), Hugo Levato (Argentina), Dante Minniti (Chile), Felix Mirabel (Argentina), Mirinai Pastoriza (Brazil), Antonio Parravano (Venezuela), Monica Rubio (Chile), Gonzalo Tancredi (Uruguay)

Chair, Local Organizing Committee: Carlos J. Donzelli

Principal Topics:

- Dynamics of the solar system
- Stars; binary systems, supernova progenitors and compact stars
- Solar physics
- Interstellar medium; star formation, stellar ejecta and their interaction with ISM
- Stellar systems; stellar populations, clusters and stellar associations

- Extragalactic astronomy; galaxies, clusters, active nuclei
- High energy astrophysics
- Cosmology; formation and evolution of structure
- Instrumentation

Contact address: Dr. Carlos J. Donzelli, Laprida 854, 5000 Cordoba, Argentina

Tel: 56 41 203092 /204500 Email: charly@oac.uncor.edu
 Fax: 56 41 224520 <http://xrp2.oac.uncor.edu/~xrlla/>

5. NEWS FROM DIVISIONS

Division I : Fundamental Astronomy (Nicole Capitaine)

The IAU Division I Working Groups for the triennium 2000–2003 have now been officially approved by the IAU Executive Committee. Some of these WG are the reappointment or the extension of previous ones and new WG have been formed on the "Redefinition of Universal Time Coordinated (UTC)" (chair: D.D.McCarthy, USA) and on "Future developments in ground based Astrometry" (chair: M. Stavinschi, Romania; co-chair: J. Kovalevsky, France). More information on these WG can be found at http://danof.obspm.fr/iaudiv1/Working_Groups.html Information about Commissions 4, 7, 8, 19 and 31 are also available through the Division I homepage.

The International Earth Rotation Service (IERS), which was created in 1988 by the IAU and the IUGG, has got a new structure since January 1, 2001, corresponding to new Terms of Reference. IERS is now composed of a Central Bureau, six Product Centres, ten Combination Research Centres and the Analysis Coordinator. External services like IGS, ILRS and IVS serve as Technique Centres for the IERS. A new Directing Board has been formed (Chair: Jan Vondrák) and the new web site of the IERS, www.iers.org, provides key information on and links to the IERS and its components. The International VLBI Service for Geodesy and Astrometry (IVS), which was created on 1 March 1999 as a Service of IAG and has been recognised as an IAU Service Organisation at the last General Assembly in Manchester (Resolution B1.1), has now become, in 2001, a new member of the Federation of Astronomical and Geophysical Data Analysis Services (FAGS).

Very relevant to the activities of the Division I is the selection on 13 October 2000 of the GAIA mission as cornerstone 6 of the ESA science program. GAIA will analyze the composition, formation and evolution of our Galaxy by mapping with unprecedented precision one billion stars, and is due for launch no later than 2012. GAIA will reach an astrometric accuracy of 10 microarcseconds for star brighter than 15th magnitude, together with photometric measurements in the millimagnitude range and a survey of radial velocity down to magnitude 17. Virtually every branch of the astronomical research will be affected by the GAIA results when they are made available around 2017.

Division II: Sun and Heliosphere (Arnold Benz)

The Working Group on Solar and Interplanetary Nomenclature, chaired by Ed Cliver (USA), has started to operate and produced a first essay written by L. Burlaga on magnetic clouds and flux ropes. The aim of the WG is to look into terms of solar and heliospheric physics that are currently being used differently or are ill-defined. Several other essayists have been found who are currently writing about the origins of such terms and their various usages so that scientists can make informed decisions about how to use them properly.

It has been decided to publish such essays in the Web and in EOS, the Journal of the American Geophysical Union. The web files are stored at ETH Zurich for the moment, but a more permanent place will be sought. The essays on Solar Interplanetary Nomenclature can be accessed through the WG address at the IAU web site <http://www.iau.org/Organization/divcom/div2.htm>.

Division IV: Stars (Beatriz Barbuy)

The Division comprises five Commissions: 26 (Double and Multiple Stars), 29 (Stellar Spectra), 35 (Stellar Constitution), 36 (Theory of Stellar Atmospheres), 45 (Stellar Classification). The Board of Division IV consists of the Past President Lawrence Cram, the President Beatriz Barbuy, and the Presidents of the five Commissions Colin D. Scarfe (26), Gautier Mathys (29), Don A. Vandenberg (35), Dainis Dravins (36) and Tom H. Lloyd Evans (45).

Working Groups under Division IV are under rearrangements.

Division VII: Galactic System (Georges Meylan)

Division VII currently has a web site, reachable via the general IAU web page <http://www.iau.org/>. It contains some information on future IAU activities and on the two constituent Commissions (33: Structure and Dynamics of the Galactic System and 37: Star Clusters and Associations).

The Board elected at Manchester consists of: Gary Da Costa (past President Comm. 37), Ken Freeman (past President Div. VII), Georges Meylan (President Div. VII), Ata Sarajedini (vice-President Comm. 37), David Spergel (President Comm. 33), Patricia Whitelock (vice-President Comm. 33).

Future activities: Please keep us informed about meetings, initiatives, and whatever you are involved in or know about, and we shall try to reciprocate. Quite a few members of Division VII have no or wrong email address. Please, check your addresses on the On-line Membership Directory on the IAU web page at: http://www.iau.org/cgi-iau/iau_mem.cgi and if necessary, send your updated coordinates to the secretariat at iaupdate@iap.fr, otherwise you will remain unreachable.

6. COMMISSION MATTERS

5.1. Address Updates of Presidents and Vice-Presidents 2000–2003

Comm.	President	Vice-President
4	<i>Ephemerides/Ephémérides</i> Jean Chapront Observatoire de Paris DANOF 61 Av Observatoire F 75014 Paris, France Phone 33 1 40 51 2227 Fax 33 1 40 51 2291 jean.chapront@obspm.fr	George A. Krasinsky Institute Applied Astronomy Academy Sciences Kutuzov Quay10 191187 St Petersburg, Russia 7 812 275 09 78 7 812 275 11 19 kra@isida.ipa.rssi.ru
5	<i>Documentation & astronomical data/ Documentation & données astronomiques</i> Olga Dluzhnevskaya Inst of Astronomy Academy of Sciences Pyatnitskaya Ul 48 109017 Moscow, Russia Phone 7 095 951 2735 Fax 7 095 230 2081 olgad@inasan.rssi.ru	Françoise Genova Observatoire de Strasbourg 11 rue de l'Université F 67000 Strasbourg France 33 3 90 24 24 76 33 3 90 24 24 32 genova@astro.u-strasbg.fr
6	<i>Astronomical telegrams/Télégrammes astronomiques</i> Brian G. Marsden CfA HCO/SAO 60 Garden St Cambridge MA 02138 - 1516 USA Phone 1 617 495 7244 Fax 1 617 495 7231 bmarsden@cfa.harvard.edu	Kaare Aksnes Inst Theoretical Astrophysics University of Oslo Box 1029 N 0315 Blindern Oslo 3 Norway 47 22 856 515 47 22 856 505 kaare.aksnes@astro.uio.no
7	<i>Celestial Mechanics & Dynamical Astronomy/ Mécanique céleste & astronomie dynamique</i> John D. Hadjidemetriou Dept of Physics University Thessaloniki GR 540 06 Thessaloniki Greece Phone 30 31 99 8211 Fax 30 31 99 8037 hadjidem@physics.auth.gr	Andrea Milani Dpt Matematica Universita di Pisa Via Buonarroti 2 I 56127 Pisa, Italy 39 050 844 254 39 050 844 224 Milani@dm.unipi.it

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- 12** *Solar Radiation & Structure/Radiation & structure solaires*
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1 303 497 1547
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- 14** *Atomic & Molecular Data/Données atomiques & moléculaires*
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S 223 62 Lund, Sweden
46 46 12 6097
46 46 222 4709
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- 15** *Physical Study of Comets & Minor Planets/
Etude physique des comètes & des petites planètes*
Horst Uwe Keller
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- 16** *Physical Study of Planets & Satellites/
Etude physique des planètes & des satellites*
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- 19** *Rotation of the Earth/Rotation de la Terre*
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32 2 373 0266
32 2 374 9822
veronique.dehant@oma.be
- 20** *Positions & Motions of Minor Planets, Comets & Satellites/
Positions & mouvements des petites planètes, des comètes & des satellites*
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- 21** *Light of the Night Sky/Lumière du ciel nocturne*
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- 22** *Meteors, Meteorites & Interplanetary Dust/
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- 25** *Stellar Photometry & Polarimetry/Photométrie & polarimétrie stellaire*
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- 26** *Double & Multiple Stars/ Etoiles doubles & multiples*
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6.2. Commission Reports

Commission 6 : Annual Report of the Central Bureau for Astronomical Telegrams, 2000

A total of 213 *IAU Circulars* were published in 2000, down from the 261 published in 1999. The most popular topics covered were supernovae, which were mentioned on 71 percent of the *Circulars*, and comets, mentioned on 52 percent of the *Circulars*. These were followed by items involving γ -ray and x-ray transients (25 percent of the year's *IAUCs*) and novae and other unusual galactic variable stars (23 percent).

There were 173 new supernova discoveries made in 2000 that were reported on *IAUCs*. The 2000 designations of extragalactic supernovae represents the second highest number of supernovae in a calendar year (the record year 1999 having some two dozen more). In addition, six supernovae found on images taken in previous years were announced and designated on *IAUCs* in 2000. No known supernovae became brighter than visual mag 14 during the year.

During the year, 87 comets received new 2000 designations, which are announced traditionally on the *IAUCs*. This figure does not include 2000 designations that have been given during the first quarter of the year 2001 to another 26 SOHO comets that were found belatedly in 2000 data, as well as a comet recovery (P/2000 Y10 = P/1992 G3) and to a November 2000 discovery of an apparently asteroidal object that was found in February 2001 to be cometary (P/2000 WT₁₆₈). Four additional objects reported in 1999 as asteroidal (and given minor-planet designations then) were found to be cometary in early 2000 and announced as comets on *IAUCs* during 2000 (C/1999 XS₈₇, P/1999 WJ₇, P/1999 XB₆₉, and P/1999 XN₂₀). And the long-awaited rediscovery of the final 'lost' minor planet, (719) Albert, was announced on May 9 (*IAUC* 7420). Seven additional *IAUCs* during the year contained items regarding other interesting minor planets (and companions or satellites to three such objects). The recoveries (or rediscoveries) of eight short-period comets (including 97P/Metcalf-Brewington in September) were also announced on *IAUCs* in 2000. Comet P/1963 W1 = 1963 IX, discovered by Anderson but lost since November 1963 ($P = 7.9$ yr), was rediscovered by the LINEAR survey in September 2000.

Numerous amateur astronomers were actively involved in searching the Solar and Heliospheric Observatory spacecraft's coronagraph images at the SOHO website, and 118 new comets detected prior to 2000 were announced on *IAUCs* published during 2000. Due to this large number, it was proposed and accepted at the Commission 6 meeting in Manchester (August 2000) that older SOHO comets could henceforth be announced immediately on *Minor Planet Electronic Circulars*, with summary listings given later on *IAUCs* after several SOHO comets could be collected for tabulation therein.

There were no really bright comets in 2000, though comet C/1999 S4 (LINEAR) brightened to total visual mag 6-7 in July before unexpectedly breaking apart and disappearing from view in August. Comets 2P/Encke and C/2000 W1 (Utsunomiya-Jones) reached similar brightness in September and December, respectively (with magnitude estimates given occasionally on *IAUCs* to aid observers). Only one comet

was discovered visually during 2000-C/2000 W1; for this discovery, amateur astronomers Syogo Utsunomiya and Albert Jones qualify as the only recipients of the Edgar Wilson Award during the calendar year 2000. The Edgar Wilson Award for the year 1999-2000 was announced on June 29 (*IAUC* 7445). Despite the incentives of that Award, visual discoveries of comets continue to decline, probably due to a combination of the effects of the CCD surveys for near-earth objects that now net dozens of comet discoveries each year and of increasing light pollution worldwide.

There were also reports of two new Galactic novae (V4642 Sgr and V463 Sct), of one nova in the Large Magellanic Cloud, and of five novae in other nearby galaxies. Continuing a collaboration begun a couple of years ago between the CBAT and IAU Commission 27, N.N. Samus supplies new variable-star designations for novae to be announced on *IAUCs*, so that the permanent designations can be used almost immediately. The new X-ray nova XTE J1118+480 (for which an optical candidate was identified that reached visual mag 13) tallied the most reports among such objects, with information appearing on a dozen *IAUCs* during the year.

The decline in the number of γ -ray bursters mentioned on the *IAU Circulars* continued in 2000, as information on these events is being given in the *GCN* service of NASA's Goddard Space Flight Center. As noted by Marsden in the CBAT report for 1999, this is reasonable, given that this service disseminates the communications - errors and all - automatically, in contrast to the verification and editing that has traditionally been associated with the publication of the *IAU Circulars*.

Sixteen *IAUCs* during the year covered the discoveries or rediscoveries and follow-up information for three satellites of Uranus (first observed in 1999), two satellites of Jupiter (one first observed in 1999 and the second a rediscovery of the lost object S/1975 J 1), and twelve satellites of Saturn.

The number of paid subscribers to the printed edition of the *IAU Circulars* has continued to fall, from 267 at the end of 1999 to 235 at the end of 2000 (the latter number including 83 within North America and 152 outside of North America). In addition, there were 39 free (complimentary or exchange) subscriptions to the printed *IAUCs* at the end of 2000. The reduction in the number of paid subscribers to the e-mail version via the Computer Service that is shared with the Minor Planet Center is implicit in Marsden's report of the latter.

As in recent years, most of the *Circulars* in 2000 were prepared by the undersigned, with backup from Marsden, from Minor Planet Center Associate Director Gareth Williams (who is routinely responsible for the Bureau's presence on the WWW), and from Carl W. Hergenrother (University of Arizona) and Elizabeth O. Waagen (American Association of Variable Star Observers) - these last two helping with CBAT and MPC functions while Marsden, Williams, and the undersigned attended the IAU General Assembly in August. Muazzez Lohmiller has efficiently taken care of the accounts, addressing of envelopes and other administrative matters.

This is my first annual report as Director of the Central Bureau for Astronomical Telegrams (having served as Associate Director since 1988, and as Assistant Director from 1981). At the IAU General Assembly in Manchester, I succeeded Brian G. Marsden in this position; after serving since 1968 as CBAT Director, Marsden was

selected Director Emeritus and President of Commission 6. I take this opportunity to thank Marsden for his advice and encouragement over more than two decades in my own work with the CBAT. I look forward to continuing my service for the astronomical community and especially my involvement with the astronomers who obtain the important observations to which the CBAT attends.

Daniel W. E. Green, Director of the Bureau

Commission 20: Annual Report 2000, Minor Planet Center

The year 2000 was again a record year for Minor Planet Center activity. The number of new numberings of minor planets was 6939, more than 2.2 times the total in 1999. The number of pages of *Minor Planet Circulars (MPCs)*, 4432, was only 12 percent higher than in 1999, but to this it is necessary to add the 7670 pages of the *Minor Planet Circulars Orbit Supplement (MPOs)*, a new series, paginated but not issued in printed form, inaugurated in May to relieve pressure on the *MPCs* themselves, which *are* issued in printed form. The orbital information on minor planets in the *MPC* is now restricted to a summary of the numberings, including full-precision orbital elements (but no residuals) and a listing of new identifications. It is hoped that the number of *MPCs* issued in 2001 will therefore be significantly smaller than in the past couple of years. In addition, the actual astrometric observations of minor planets are contained in the *Minor Planet Circulars Supplement (MPSs)*, of which the year 2000 saw 15142 pages, some *three times* the total in 1999.

The maximum subscript used for the provisional designations in a single halfmonth, which exceeded 100 for the first time in 1998 and 200 in 1999, exceeded 350 in the second half of October 2000 - at least for the observations published by March 2001. Already by the end of 2000 the last designation used in that halfmonth was up to SV₃₄₆, while that in the first half of October 1999 was up to TG₃₂₃.

The total of *Minor Planet Electronic Circulars (MPECs)* issued was 1206, 27 percent more than in 1999. Of these, 300 were "Daily Orbit Update" (DOU) issues listing the new orbits computed and identifications found. The maximum number of *MPECs* during a single halfmonth was 71 in the second half of September. The Apr. 7 DOU contained a record 6553 new orbits, computed during the previous 24 hours. A record 352 new near-earth objects (NEOs) -or, more specifically, near-earth asteroids- were discovered during the year, and "The NEO Confirmation Page" was again an important tool for ensuring that candidate NEOs are confirmed and followed up. Of these 352 NEOs, 74 are defined as potentially hazardous asteroids (PHAs), a more useful subset when it comes to considering objects that might conceivably collide with the earth. As many as 58 of the year's PHAs were found by the LINEAR program of the Massachusetts Institute of Technology. Altogether, this program has yielded 132 of the total of 284 PHAs.

At the opposite extreme, the year produced the discoveries of 158 new transneptunian objects and centaurs, bringing the total to 431. Of this total, just half have been observed at two or more oppositions. Beginning with (15760) 1992 QB₁, the first of the "cubewanos", 16 of the transneptunian objects were judged to have orbit determinations accurate enough to qualify for numbering.

A particular highlight of the year was the identification, by Minor Planet Center Associate Director Gareth Williams in May, of (719) Albert among observations from the University of Arizona's Spacewatch program. This NEO was the last of the 'lost' numbered minor planets, knowingly observed previously only in 1911. Following the rediscovery, images of (719) were also recognized on single nights in 1971, 1988, 1993 and 1997.

Early in the year the decision was made to publish in the *MPCs* observations of the outer satellites of the giant planets. Although the principal motivation for this was the fact that it had been practicable to publish in the *IAU Circulars* only a small selection of the observations of the new Uranian satellites discovered in 1997 and 1999, the move also makes a lot of sense, given that many of the observations of the brighter satellites have routinely been reported to the Minor Planet Center as observations of unidentified minor planets. The timeliness of this decision, which also involved the publication of orbital elements, became evident with the announcement later in the year of the discoveries of no fewer than 12 new outer satellites of Saturn, as well as of new outer satellites of Jupiter.

The number of subscriptions to the printed *MPCs* showed a general decrease from 193 to 173 during the year, and that to the Computer Service (shared with the Central Bureau for Astronomical Telegrams) generally decreased from 550 to 510. The number of subscribers to the Extended Computer Service fluctuated between 61 and 67. Given these reductions, financial support from a contract with the U.S. National Aeronautics and Space Administration is very much appreciated, and this allowed the addition of Tim Spahr to the staff of the Minor Planet Center in May. Williams and Spahr together have made great inroads on the problem of performing automatic night-to-night linkages of unidentified main-belt minor planets, not only in a single observing program, but also between one program and another. This important work has greatly reduced the number of the otherwise rather useless "one-night stands" remaining in the Minor Planet Center's files.

A second, very welcome gift from the Tamkin Foundation permitted the acquisition of another, faster computer and its incorporation into the computer cluster established in 1999. Williams has continued to refine and otherwise improve the now very extensive system of software used in the Minor Planet Center's work, and it has in fact been possible to accommodate the tripling of the rate of data acquisition on minor planets during the past two years. Syuichi Nakano has continued to be the "Liaison in Japan", and Susan Russell has provided *pro bono* service editing the citations for new namings of minor planets. Muazzez Lohmiller was again responsible for the accounts and mailings, and Billy Duggan oversaw the printing, collating and stapling of the *MPCs* in the SAO's print shop.

Brian G. Marsden, Director, Minor Planet Center

7. WORKING GROUPS

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8. 75th MEETING OF THE EXECUTIVE COMMITTEE

The 75th Meeting of the EC will take place on June 14 – 15, 2001 at the Astronomical Observatory, University of Copenhagen, Denmark, at the invitation of former General Secretary J. Andersen. Major items on the agenda will be the preparations for the XXVth GA, including preliminary planning of the scientific program, and the selection of IAU sponsored meetings in 2002. Other topics for discussion include astronomical publishing and abstracting services, updates to the Rules for Scientific Meetings, and new initiatives for increasing the visibility of the IAU to the outside world as well as its usefulness for the younger members and astronomers at large.

9. XXVth AND XXVIth GENERAL ASSEMBLIES

9.1. Report on the Planning of the IAU XXVth General Assembly

The National Organising Committee for IAU 2003 has held two meetings since the last report, in November 2000 and March 2001. As is well known the Assembly is scheduled to take place at the Sydney Convention Centre at Darling Harbour in Sydney, Australia from July 13 – 26, 2003. Work is now in progress to determine the number and sizes of rooms at the centre for which firm bookings need to be made. All scientific and business sessions will be scheduled within the Convention Centre complex. The Committee is looking forward to the visit of the Secretary General in mid April, where he will examine the venue and other arrangements which have been made or are proposed.

Minor modifications have been made to the logo for the assembly to make it more effective. A number of sub-committees have now been established, although there is still some difficulty getting senior persons to take on the responsibility of chairing some of the most important of these. The Associated Events Sub-Committee has moved very swiftly to ensure that there will be a number of exciting scientific and/or cultural events associated with the Assembly which will bring prominence to the congress.

The NOC has authorised the tentative booking of some 600 beds in College accommodation at Sydney University, as well as a similar number in a variety of hotels and apartments in the Darling Harbour vicinity.

29 March 2001

Harry Hyland for the National Organising Committee, IAU 2003, Sydney, Australia
 Professor A R (Harry) Hyland, Deputy Vice-Chancellor
 James Cook University, Townsville, Queensland 4811, Australia
 Tel: 61 7 4781 5451 Fax: 61 7 4781 5452
 Email: Harry.Hyland@jcu.edu.au
 IAU 2003 website: <http://www.astronomy2003.com/>

9.2. IAU XXVIth General Assembly

The National Organizing Committee for the 26th IAU General Assembly in Prague 2006 has been formed and approved by the Czech National Committee for Astronomy. Its composition is as follows:

Jiří Bičák (Institute of Theoretical Physics, Charles University Prague);
 Jiří Grygar (Institute of Physics, Academy of Science, Prague);
 Petr Hadrava (Astronomical Institute, Academy of Sciences, Ondřejov);
 Petr Harmanec (Astronomical Institute, Charles University Prague);
 Petr Heinzel (Astronomical Institute, Academy of Sciences, Ondřejov);
 Vladimír Karas (Astronomical Institute, Charles University Prague);
 Zdeněk Mikulášek (Dept. of Theoretical Physics & Astrophysics, Masaryk University Brno);
 Jan Palouš (Chair, Astronomical Institute, Academy of Sciences, Prague);
 Martin Šolc (Astronomical Institute, Charles University Prague);
 Jan Vondrák (Vice-Chair, Astronomical Inst., Academy of Sciences, Prague);
 Marek Wolf (Astronomical Institute, Charles University Prague).

The competition for the selection of the Conference Agency that will manage the General Assembly has been declared, and the result is expected during May 2001.

April 10, 20001

Jan Palouš, Jan Vondrák

10. EDUCATIONAL ACTIVITIES

10.1. Report on the 25th International School for Young Astronomers (ISYA)

This 25th ISYA took place in Thailand at the University of ChiangMai, January 3 – 22, 2001. All the lectures and practical activities were at the Department of Physics (Faculty of Sciences) and the observations at the Sirindhorn Observatory.

This ISYA could be organized due to the long standing efforts of Prof. B. Soonthornthum (ChiangMai University). The Local Organizing Committee was very efficient due to the active participation of a group of Faculty members from the Department of Physics of ChiangMai University. Prof. Kam Ching Leung (University of Nebraska-Lincoln, USA) also took very active part in the local organization.

Funding for this ISYA was provided, from the international side, by IAU, UNESCO and ICSU. From the Thai side, besides the support given by the Department of Physics of the ChiangMai University, several institutions also supported this ISYA: National Science and Technology Development Agency, the Institute for Promotion in Teaching Science and Technology and the Science Society of Thailand, as well as EGGO (Electricity Generating Public Company Limited).

36 participants attended the ISYA, 19 from Thailand (3 women, 16 men) and 17 from the Asian region [China (mainland): 2 (men), Hongkong (China): 1 (man), Taiwan: 1 (man), India: 3 (men), Indonesia: 3 (1 woman, 2 men), Laos: 1 (man), Nepal: 1 (man), Philippines: 3 (men), Vietnam: 2 (women)].

The faculty members were:

Helmut A. Abt (USA - Stellar physics)
 Kwing L. Chan (Hong Kong - Solar type atmospheres)
 Kwong-Sang Cheng (Hong Kong - Stellar high energy astrophysics)
 Jean-Pierre De Greve (Belgium - Stellar structure, evolution of binary stars)
 Michèle Gerbaldi (France - Stellar atmospheres)
 Ajit Kembhavi (India - Galaxies)
 Kam Ching Leung (USA - Binary stars)
 Sumit Niparaks (Thailand - Stellar observations)
 Nuanwan Sanguansak (Thailand - Stellar dynamics)
 Aniwat Sooksawat (Thailand - Practical astronomy)
 Boonrucksar Soonthornthum (Thailand - Binary stars)
 Donald W. Kurtz (Great Britain - Variable stars, stellar pulsations)

Beside the lectures, several sessions were devoted to practical activities with computers. Sessions on stellar photometry data reduction and image processing took place, as well as specific analysis of the contents of some astronomical data bases.

Several observing sessions were organized at the Sirindhorn observatory using the two telescopes: the 40cm, Cassegrain type and the 50cm Ritchey-Chrétien type. The first one is equipped with a spectrograph and a CCD; some of the spectra thus taken were used for practical activities. During this ISYA half the participants gave short talks on their current research work.

Several institutions or universities from which the participants came have a small telescope. Lively discussions took place, with the faculty members, on which useful observational programmes can be developed in the stellar observational field.

Michèle Gerbaldi
 Chairperson for the ISYA

10.2. Teaching for Astronomy Development (TAD) Report

Vietnam:

The new bilingual text 'Astrophysics' received a final editing for scientific correctness and was published in December 2000. The university teachers now using the text received teaching support at a conference in March 2001. The conference was also used to plan the broadening and increase the influence of astronomy in Vietnam, including a newly approved astronomy course for science-oriented high schools. The first issue of the new quarterly Vietnamese journal 'Popular Astronomy' was published by the Astronomical Society of Vietnam in December 2000. A part is translated from 'Universe in the Classroom' (Astronomical Society of the Pacific). The only Vietnamese planetarium, in Vinh City, obtained two new shows (one donated) from Davis Planetarium (Baltimore, USA), translated and culturally adapted them with help from Vinh University astronomers, and started showing them in January 2001. A member of the astronomy faculty of the Pedagogical Institute of Hanoi attended the UN/ESA workshop in Toulouse and received some training under auspices of the Société Populaire Astronomique de Toulouse as a beginning to enhance the use of the Hanoi telescope. TAD provided educational materials for current and planning of future activities, and, to plan future activities, supported the travel of Prof. Nguyen Dinh Huan (vice-president, Astronomical Society of Vietnam) to the IAU General Assembly.

Morocco:

TAD provided books, slides, and equipment needed for the astronomy educational program and aided the computational capability of Prof. Chamcham's academic program, partly via an interdisciplinary collaboration with the University of Pisa.

Donat Wentzel

Chair for Teaching for Astronomy Development (TAD)

10.3. Report on the Activities of Commission 46

After merging Commission 46 with Commission 38, Exchange of Astronomers, and the Working Group on the Worldwide Development of Astronomy, its activities have rather good harmony. The Programme Group (PG) on Solar Eclipses tries to perform public education during each specific total solar eclipse. When a developing country wants to have a consultant, the PG on Advance Development sends one or two specialist(s) to that country to instruct them. Then, the PG on Teaching for Astronomy Development provides extensive lecture courses within that country. When the country can stand by itself, it may hold an ISYA with attendance of graduate students and young astronomers from countries nearby. If those countries need necessary books and journals, the PG on Exchanges of books, journals, etc. will be able to help them.

However, to proceed further, astronomers in each developing country need to stay for longer periods at some astronomical institute and also to have observational instruments. Since these need a large budget, it is outside our capacity.

There are some ideas to solve these problems, which are to have an "Extensive database of astronomical project" and a "Collection of success (non-success) stories". Also, we should collaborate with other organizations, such as UN/COPUOS, UNESCO, ICSU, COSPAR, IAF, and so on. For this purpose we have the PG on Collaborative Programs which has started to work. With all these activities we can cover all the necessary procedures, if each institute in developed countries tries to invite astronomers from developing countries for periods longer than one year.

Syuzo Isobe

President of Commission 46

11. RELATIONS TO OTHER ORGANIZATIONS

11.1. COPUOS Scientific and Technical Subcommittee

The UN Committee for the Peaceful Uses of Outer Space (COPUOS) invited IAU, ITU and OECD to make presentations on the regulatory mechanisms in radio astronomy to the Scientific & Technical Subcommittee at its meeting in Vienna on 12-23 February, 2001. This session took place on February 15, when speakers were Drs. A. Nalbandian on behalf of ITU ("The radio astronomy service and the current spectrum environment") and Klaus Ruf for the IAU ("Radio astronomy and communication satellites: How can they share a limited natural resource?"). Both talks were well received. Together, they highlighted what happens when ITU regulations or recommendations are not followed.

During a COSPAR/IAF Symposium on "Terrestrial Hazards from Outer Space Objects and Phenomena", held in the same room Feb. 12-13, Comm. 50 Pres. Jim Cohen spoke on "Maintaining a clear sky—effects of space activities on radio astronomy", and GS Hans Rickman on "Collision hazards from Near Earth Objects". The undersigned was asked to summarise the Symposium on behalf of COSPAR, and also read an official statement on behalf of the IAU, which outlined the broader environmental perspective.

As an unexpected windfall, the US delegation announced that Congress had passed a law banning, in quite sweeping terms, all "Obtrusive space advertising" (i.e., visible from the ground with the naked eye), and instructed the President to initiate negotiations towards international agreement to the same end. I of course strongly applauded this initiative and promised the technical and moral support of the IAU.

Johannes Andersen

IAU Representative to UN/COPUOS S & T Subcommittee

11.2. Meeting of ICSU's International Scientific Unions

This meeting, held in Paris, February 18-20, 2001, was arranged with the aim to strengthen the cooperation between the umbrella organization ICSU and its currently 26 Scientific Unions, as well as between the Scientific Unions. ICSU's Interdisciplinary Bodies were invited to take part during the second day of the meeting.

The International Astronomical Union encompasses every scientific branch of astronomy and astrophysics, in comparison to such as the biological, medical and earth sciences that have established several Scientific Unions to deal with more specialized sectors within their fields.

A key topic of the meeting was the concern and need for capacity building in science. The current experience of the various Unions seemed useful to update and improve the ICSU programs aiming to promote capacity building in member countries where such help is needed and wanted.

Another issue of concern is the free access to scientific data, which also ties in with the topic above. ICSU is actively seeking the good cooperation of governments world wide on this matter.

In a separate session of Unions and Organizations for Earth and Space Sciences (IAU, IUGG, IUSS, URSI, SCOSTEP and SCOWAR) one discussed and agreed on high priority issues where good cooperation is urgent and essential. Such inter-union cooperative programs are (1) Water and Resources, (2) Energy Resources, (3) Natural Disasters and Sustainability, and (4) Climate Variability.

Oddbjørn Engvold
IAU Representative to ICSU

11.3. Proposals for ICSU Grants in 2002

The member Unions of the International Council for Science (ICSU) were able to apply for ICSU Grants for 2002 by 31 March, 2001. Such grants were available in two categories, depending on the proposed amount. A new feature with respect to earlier occasions is that it was now necessary for each applicant to be backed by at least one other Union as supporting applicant.

Priority themes identified by ICSU were: *Science and Technology for Sustainable Development, Capacity Building and Science Education, Science/Policy Interface, Dissemination of Information on Science and Technology and Emerging Science and Technology—Creation of New Knowledge*. The IAU submitted an application together with COSPAR, dealing with *Science Development and Capacity Building in Latin America*. This would provide crucial help for a planned ISYA in Argentina in 2002, as well as start a follow-up programme providing assistance and education in order for several Latin American countries to build up a capacity for teaching astronomy and space sciences at both universities and primary/secondary schools. That project would run in parallel with, and as a useful complement to, any efforts developed at the UN Centre for Space Science at INPE in Brazil, which would focus more on technical and engineering skills.

The IAU also supported a proposal by IUPAP, the International Union for Pure and Applied Physics, for ICSU to fund an international conference on "Women in Physics", and moreover expressed its appreciation of the FAGS activities in support of their application for an ICSU Grant.

12. MEMBERSHIP

12.1. Updated Membership Statistics (as of March 28, 2001)

<i>Associate</i> Member Country	No. of Members	% of Total	No. of Women	Women %	Men %
ALGERIA	4	0.0	0	0.0	100.0
ARGENTINA	101	1.2	36	35.6	64.4
ARMENIA	31	0.4	2	6.5	93.5
AUSTRALIA	195	2.2	16	8.2	91.8
AUSTRIA	32	0.4	3	9.4	90.6
BELGIUM	101	1.2	12	11.9	88.1
<i>BOLIVIA</i>	<i>0</i>	<i>0.0</i>	<i>0</i>		
BRAZIL	125	1.4	22	17.6	82.4
BULGARIA	46	0.5	15	32.6	67.4
CAAA *	2	0.0	1	50.0	50.0
CANADA	201	2.3	13	6.5	93.5
CHILE	46	0.5	4	8.7	91.3
CHINA Nanjing	368	4.2	34	9.2	90.8
CHINA Taipei	24	0.3	1	4.2	95.8
CROATIA	12	0.1	1	8.3	91.7
<i>CUBA</i>	<i>5</i>	<i>0.1</i>	<i>0</i>	<i>0.0</i>	<i>100.0</i>
CZECH REPUBLIC	75	0.9	6	8.0	92.0
DENMARK	52	0.6	4	7.7	92.3
EGYPT AR	39	0.4	3	7.7	92.3
ESTONIA	21	0.2	3	14.3	85.7
FINLAND	50	0.6	7	14.0	86.0
FRANCE	643	7.4	169	26.3	73.7
GEORGIA	18	0.2	5	27.8	72.2
GERMANY	455	5.2	26	5.7	94.3
GREECE	99	1.1	12	12.1	87.9
HUNGARY	45	0.5	8	17.8	82.2
ICELAND	4	0.0	0	0.0	100.0
INDIA	237	2.7	12	5.1	94.9
INDONESIA	18	0.2	0	0.0	100.0
IRAN	17	0.2	0	0.0	100.0
IRELAND	34	0.4	6	17.6	82.4
ISRAEL	48	0.6	1	2.1	97.9
ITALY	437	5.0	87	19.9	80.1
JAPAN	471	5.4	15	3.2	96.8
<i>JORDAN</i>	<i>1</i>	<i>0.0</i>	<i>0</i>	<i>0.0</i>	<i>100.0</i>
KOREA RP	66	0.8	4	6.1	93.9
LATVIA	7	0.1	2	28.6	71.4
LITHUANIA	16	0.2	4	25.0	75.0
MACEDONIA	0	0.0	0		

MALAYSIA	5	0.1	0	0.0	100.0
MEXICO	90	1.0	16	17.8	82.2
MOROCCO	7	0.1	0	0.0	100.0
NETHERLANDS	172	2.0	17	9.9	90.1
NEW ZEALAND	29	0.3	3	10.3	89.7
NORWAY	20	0.2	0	0.0	100.0
PERU	1	0.0	1	100.0	0.0
PHILIPPINES	3	0.0	1	33.3	66.7
POLAND	121	1.4	13	10.7	89.3
PORTUGAL	16	0.2	2	12.5	87.5
ROMANIA	38	0.4	15	39.5	60.5
RUSSIA	349	4.0	64	18.3	81.7
SAUDI ARABIA	14	0.2	0	0.0	100.0
SLOVAKIA	29	0.3	5	17.2	82.8
SOUTH AFRICA	55	0.6	4	7.3	92.7
SPAIN	218	2.5	37	17.0	83.0
SWEDEN	100	1.2	12	12.0	88.0
SWITZERLAND	80	0.9	2	2.5	97.5
TAJKISTAN	6	0.1	1	16.7	83.3
TURKEY	52	0.6	6	11.5	88.5
UK	561	6.5	56	10.0	90.0
UKRAINE	151	1.7	27	17.9	82.1
URUGUAY	3	0.0	0	0.0	100.0
USA	2300	26.5	222	9.7	90.3
UZBEKISTAN	11	0.1	0	0.0	100.0
VATICAN CITY ST	4	0.0	0	0.0	100.0
VENEZUELA	13	0.1	3	23.1	76.9
TOTAL	8594	98.9	1041	12.1	87.9

* CAAA: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua & Panama

Other Countries	No. of Members	% of Total	No. of Women	Women %	Men %
ALBANIA	1	0.0	1	100.0	0.0
AZERBAIJAN	8	0.1	0	0.0	100.0
COLOMBIA	3	0.0	0	0.0	100.0
ECUADOR	1	0.0	0	0.0	100.0
IRAQ	6	0.1	0	0.0	100.0
KAZAKSTAN	9	0.1	1	11.1	88.9
KOREA DPR	20	0.2	0	0.0	100.0
LEBANON	1	0.0	0	0.0	100.0
MAURITIUS	1	0.0	0	0.0	100.0
NIGERIA	4	0.0	0	0.0	100.0
PAKISTAN	1	0.0	0	0.0	100.0
PARAGUAY	1	0.0	0	0.0	100.0
SINGAPORE	3	0.0	0	0.0	100.0

SLOVENIA	5	0.1	0	0.0	100.0
SRI LANKA	2	0.0	0	0.0	100.0
THAILAND	3	0.0	0	0.0	100.0
VIETNAM	3	0.0	0	0.0	100.0
YUGOSLAVIA FR	26	0.3	6	23.1	76.9
TOTAL OTHER COUNTRIES	98	1.1	8	8.2	91.8
ALL IAU MEMBERS	8692	100.0	1049	12.1	87.9

12.2. Deceased Members

The General Secretary regrets to report the names of former and current IAU members whose death has been communicated to the Secretariat since the previous list published in IB 87.

A Noel Argue	Christian Friedemann	Branislav M Sevarlic
Richard F Barrow	Karl-Heinz Gebler	Joseph W Siry
Alfred Bohrmann	Heinz Herold	Kaj Å Strand
Vladimir Dermendjiev	Minoru Oda	Max Waldmeier
Jean Delhaye	Reuven Ramaty	W Wenzel
Peter Dobronravin	Johannes Richter	

12.3. Address Updates Needed for IAU Members or Consultants!

David Adams Astronomy Dpt Leicester, UK	Mustafa Akyol Fac of Education Konya, Turkey	Ruben Aldrovandi Inst Fisica Teorica Sao Paulo, Brazil
Paul Atherton Queensgate Instruments Berkshire, UK	Vladimir Belinsky Landau Inst Theor Physics Moscow Russia	Kenneth Bell Appl Maths/Theor Phys Belfast, UK
Steven Bell Royal Greenwich Observ Cambridge, UK	Chris Benn Royal Greenwich Observ Santa Cruz, Spain	Rajaram Bhonsle PRL Ahmedabad, India
Cetin Bolcal Physics Dpt Vezneciler Turkey	Patrice Bouchet ESO Santiago, Chile	Dennis Butler Astronomy Dpt New Haven CT, USA
Lihong Cao Purple Mountain Observ Nanjing, China PR	Miriam Centurion Marin IAC La Laguna, Spain	Zhen Chen Purple Mountain Observ Nanjing, China PR

Dattakumar Chitre
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Maurice Dubin
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Wolfgang Elston
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Theodore Fay
Teledyne Brown Eng
Huntsville AL, USA

Domingo Garcia
Dpt Fisica/Enginyeria
Barcelona, Spain

Charlotte Gordon
Paris France

Dietrich Gutcke
Carl Zeiss Jena GmbH
Jena, Germany

Esat Hamzaoglu
KACST
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Lick Observ
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Vienna, Austria

Truman Parkinson
NOAO/KPNO
Tucson AZ, USA

Winfried Petri
Schliersee, Germany

Mieczyslaw Proszynski
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N Kovar
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Ruediger Kunze
Inst Theor Phys
Kiel, Germany

Jong Lee
Taiwan, China R

Lucrette Losco
Fac des Sciences
Besacon, France

Richard McGee
CSIRO
Epping, Australia

Natalia Merman
Pulkovo Observ
St Petersburg, Russia

Dante Minniti
ESO
Garching, Germany

Jennifer Nicholls
School of Physics
Sydney, Australia

Jamila Oukbir
Observ
Strasbourg, France

Harold Paxton
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Roger Peyturaux
IAP
Paris France

Jeffery Puschell
Lockheed Martin
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K Rao
S Jose dos Campos, Brazil

Newrick Reay
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J Salisbury
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D Schulte
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Joao Steiner
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Jose Taborda
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Valery Terebizh
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Crimea, Ukraine

Fu Tong
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Mo Tsao
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Rene van der Borgh
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R Speer
Physics Dpt
London, UK

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Lubbeek, Belgium

J Tavares
Coimbra, Portugal

Charalambos Terzides
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Latif Topaktas
KACST
Riyadh, Saudi Arabia

Walter Upson
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Th Walraven
South Africa

Peter Wellmann
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Christopher Rogers
DRAO
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Stephen Schoolman
Lockheed Palo Alto Res
Palo Alto CA, USA

Eugene Scott
NASA GSFC
Greenbelt MD, USA

Eric Silverberg
McDonald Observ
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Christopher Stagg
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Peter Sweet
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Yoichi Terashita
Kanazawa Techn Inst
Ishikawa, Japan

Yves Thiry
Université Paris VI
Paris, France

Eleonore Trefftz
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Jun-ichi Yokoyama
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Uji, Japan

Shouzhong Zhang
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Bang-Xin Xu
Astronomy Dpt
Nanjing, China PR

Saad Younis
SARC
Baghdad, Iraq

13. PUBLICATIONS

IAU Symposia

- 198 THE LIGHT ELEMENTS AND THEIR EVOLUTION**
L. da Silva, M. Spite & J.R. de Medeiros,
Astronomical Society of the Pacific, San Francisco CA, USA, 2000
ISBN 1-58381-048-X (HB) USD \$52.00

IAU Colloquia

- 175 THE BE PHENOMENON IN EARLY-TYPE STARS**
M.A. Smith, H.F. Henrichs & J. Fabregat
Astronomical Society of the Pacific, San Francisco CA, USA, 2000
ISBN 1-58381-045-5, (HB) USD\$52.00

Other Publications Received

ASP Conference Series, San Francisco, CA, USA, \$ 52.00

- 212 FROM GIANT PLANETS TO COOL STARS**
C. Griffith & M. Marley, ISBN 1 58381 041 2 (HB)
- 213 BIOASTRONOMY '99: A NEW ERA IN BIOASTRONOMY**
G. Lemarchand & K. Meech, ISBN 1 58381 044 7 (HB)
- 215 COSMIC EVOLUTION AND GALAXY FORMATION: STRUCTURE, INTERACTIONS AND FEEDBACK**
J. Franco et. al., ISBN 1 58381 046 3 (HB)
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N. Manset, C. Veillet & D. Crabtree, ISBN 1 58381 047 1 (HB)
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R. Kraan-Kortweg, P. Henning, H. Andernach, ISBN 1 58381 050 1 (HB)
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F. Garzón, et. al., ISBN 1 5831 051 X (HB)
- 220 **AMATEUR – PROFESSIONAL PARTNERSHIPS IN ASTRONOMY**
J. Percy & J. Wilson, ISBN 1 58381 052 8 (HB)
- 221 **STARS, GAS AND DUST IN GALAXIES: EXPLORING THE LINKS**
D. Alloin, K. Olsen & G. Galaz, ISBN 1 58381 053 6 (HB)

Kluwer Academic Publishers, Dordrecht, The Netherlands

ADVANCES IN SOLAR RESEARCH AT ECLIPSES FROM GROUND AND FROM SPACE
J.-P. Zahn & M. Stavinschi, ISBN 0-7923-6623-9 (HB), USD \$125.00

COSMIC PLASMA PHYSICS
B. Somov, ISBN 0-7923-6521-7 (HB), USD \$ 262.00

CURRENT TOPICS IN ASTROFUNDAMENTAL PHYSICS: THE COSMIC MICROWAVE BACKGROUND
N. Sanchez, ISBN 0-7923-6855-X (HB), USD \$265.00

FROM DUST TO TERRESTRIAL PLANETS
W. Benz, R. Kallenback & G. Lugmair, ISBN 0-7923-6467-8 (HB), USD \$169.00

ORGANIZATIONS AND STRATEGIES IN ASTRONOMY
Ed. A. Heck, ISBN 0-7923-6671-9 (HB), USD \$103.00

STELLAR PULSATION – NONLINEAR STUDIES
M. Takeuti & D. Sasselov, ISBN 0-7923-6818-5 (HB), USD \$79.00

Other Publishers

INTERSTELLAR MEDIUM IN M31 AND M33
E. Berkhuijsen, R. Beck & R. Walterbos, Shaker Verlag, ISBN 3-8265-8191-1 (PB)

THE ROLE OF VISUAL REPRESENTATIONS IN ASTRONOMY: HISTORY AND RESEARCH PRACTICE
P. Hentschel & A. Wittmann, Verlag Harri Dutsch, ISBN 3-8171-1630-6 (PB)

THEORETICAL ASTROPHYSICS: VOLUME I ASTROPHYSICAL PROCESSES
T. Padmanabhan, Cambridge Univ. Press, 2000, ISBN 0-521-56240-6 (HB)

VERY LOW-MASS STARS AND BROWN DWARFS
R. Rebolo & M. Zapatero-Osorio, Cambridge Univ. Press, ISBN 0-521-66335-0 (HB)

14. OTHER MEETINGS ON ASTRONOMICAL TOPICS

The following is an incomplete list of major meetings in 2001 and 2002 spanning a broad range of topics. More detailed information about these meetings is obtained from the respective contact persons and/or URL addresses. A more exhaustive list can be found on the IAU web site at <http://www.iau.org/Activities/meetings/othermeet.html>.

TRACING COSMIC EVOLUTION WITH GALAXY CLUSTERS

July 3 - 6, 2001, Sesto Pusteria, Bolzano, Italy.

Contact: S. Borgani, G. Giuricin, M. Mezzetti, Dipartimento di Astronomia, Università di Trieste, via Tiepolo 11, I - 34131 Trieste Italy.

Tel: 39 040 3199 227 Fax: 39 040 3094 18

Email: sesto@daut.univ.trieste.it <http://www.daut.univ.trieste.it/Sesto>

FIFTH BIENNIAL HISTORY OF ASTRONOMY WORKSHOP

July 5 - 8, 2001, Notre Dame, Indiana, USA.

Contact: Dr. Steven J. Dick, U.S. Naval Observatory, 3450 Massachusetts Ave NW, Washington, DC 20392-5420, USA.

Tel: 1 202 762 0379 or 1 219 631-5000

Fax: 1 202 762 1489 <http://www.nd.edu/histast4>

Email: dick.steve@usno.navy.mil

THE HIGH-ENERGY UNIVERSE AT SHARP FOCUS: CHANDRA SCIENCE

July 16 - 18, 2001, St. Paul, Minnesota, USA.

Contact: James White, The Astronomical Society of the Pacific, 390 Ashton Avenue, San Francisco, CA. 94112, USA.

Tel: 1 415 337 1100 Fax: 1 415 337 5205

Email: directory@aspsky.org

<http://www.aspsky.org/meetings/science2001.html>

STATISTICAL CHALLENGES IN MODERN ASTRONOMY III

July 18 - 21, 2001, Penn State University, Reading PA, USA

Contact: Eric Feigelson, Penn State University, 525 Davey Laboratory, University Park, PA 16802, USA.

Tel: 1 814 865 0162 Fax: 1 814 868 3399

Email: edf@astro.psu.edu <http://www.astro.psu.edu/SCMA>

THE LOWEST-MASS GALAXIES AND CONSTRAINTS ON DARK MATTER

July 29 - August 4, 2001, Ringberg Castle, Germany.

Contact: Eva K. Grebel, Max-Planck Institute for Astronomy, Königstuhl 17 D - 69117 Heidelberg, Germany

Tel.: 49 6221 528 225 Fax: 49 6221 528 246

Email: grebel@mpia-hd.mpg.de

THE 12TH CAMBRIDGE WORKSHOP ON COOL STARS, STELLAR SYSTEMS AND THE SUN

July 30 - August 3, 2001, University of Colorado, Boulder, Colorado, USA.

Contact: Thomas R. Ayres, University of Colorado, Campus box 389 (CASA), Boulder, CO 80309, USA.

Tel: 1 303 492 4051 Fax: 1 303 492 4052
 Email: cs12@casca.colorado.edu <http://casa.colorado.edu/~cs12/>

THE PHYSICS OF CATAclysmic VARIABLES AND RELATED OBJECTS

August 5 - 10, 2001, Universitäts Sternwarte, Göttingen, Germany.
Contact: Klaus Reinsch, Universitäts Sternwarte, Geismarlandstr. 11, D-37083 Göttingen, Germany.
 Tel: 49 551 394037 Fax: 49 551 395043
 Email: CVConference@uni-sw.gwdg.de

THE EARLIEST STAGES OF MASSIVE STAR BIRTH

August 6 - 8, 2001, Boulder Colorado, USA.
Contact: Kelsey Johnson, JILA, University of Colorado, PO Box 0440, Boulder, CO 80309-0440, USA.
 Email: StarBirth@jila.colorado.edu <http://jilaww.colorado.edu/StarBirth>

LIGHTHOUSES OF THE UNIVERSE: MOST LUMINOUS CELESTIAL OBJECTS AND THEIR USE FOR COSMOLOGY

August 6 - 9, 2001, Garching, Germany.
Contact: Marat Gilfanov, Max Planck Institute for Astrophysics, Karl-Schwarzschild Str. 1, Postfach 1317, D - 85741 Garching, Germany
 Tel: 49 89 3299 3219 Fax: 49 89 3299 3235
<http://www.mpa-garching.mpg.de/~gilfanov/lighthouses>

METEORIDS 2001

August 6 - 10, 2001, Swedish Institute of Space Physics, ESA; Swedish Space Corporation-ESRANGE
Contact: Dr. Asta Pellinen-Wannberg, Swedish Institute of Space Physics, Box 812, S - 981 28 Kiruna, Sweden.
 Tel: 46 980 79118 Fax: 46 980 79050
 Email: asta@irf.se <http://www.irf.se/Meteoroids2001/>

OMEGA CENTAURI, A UNIQUE WINDOW INTO ASTROPHYSICS

August 13 - 16, 2001, Institute of Astronomy, Cambridge, UK.
Contact: Floor van Leeuwen, Institute of Astronomy, Cambridge, CB3 0HA, UK.
 Email: ocen@ast.cam.ac.uk <http://www.ast.cam.ac.uk/~ocen>

NEUTRON STARS IN SUPERNOVA REMNANTS

August 14 - 17, 2001, Boston, MA, USA.
Contact: Bryan Gaensler, MIT, 77 Massachusetts Ave., Cambridge, MA 02139, USA.
 Tel: 1 617 258 8523 Fax: 1 617 253 0861
 Email: psr_snr@head-cfa.harvard.edu http://hea-www.harvard.edu/PSR_SNR

THE FOURTH INTERNATIONAL CONFERENCE ON ORIENTAL ASTRONOMY

August 19 - 25, 2001, Nanyang, Henan, China P.R.
Contact: Conference Secretariat, Chinese Institute for Zhang Heng of Nanyang, Administration Building of People's Congress, People North Road, 473000, Nanyang, Henan, China, P.R.
 Tel: 86 377 3311552 Fax: 86 377 3311302
 Email: CPCHS@public2.east.cn.net

VARIABLE STARS-2001

August 20 - 24, 2001, Odessa, Ukraine.
Contact: Valentin G. Karetnikov, Ivan L. Andronov, Astronomical Observatory, Odessa State University, T.G. Shevchenko Park, Odessa, Ukraine 65014.
 Tel: 38 0482 220396 Fax: 38 0482 228442
 Email: astro@paco.odessa.ua

TWO YEARS OF SCIENCE WITH CHANDRA

September 5 - 7, 2001, Washington, DC, USA.
Contact: Harvey Tananbaum, SAO, 60 Garden St., Cambridge, MA 02138, USA.
 Tel: 1 617 495 7248 Fax: 1 617 495 7356
 Email: ht@cfa.harvard.edu http://asc.harvard.edu/symposium_2001.html

A NEW ERA IN COSMOLOGY

September 11 - 15, 2001, Durham University, Durham, UK.
Contact: Tom Shanks, Physics Dept., Durham University, Science Laboratories, South Road, Durham DH1 3LE, UK.
 Tel: 44 191 3742171 Fax: 44 191 3743749
 Email: tom.shanks@durham.ac.uk <http://star-ww.dur.ac.uk/cosmology/newera.html>

MULTI-WAVELENGTH OBSERVATIONS OF CORONAL STRUCTURE AND DYNAMICS

September 17 - 20, 2001, Kailua-Kona, Hawaii, USA.
Contact: Loren Acton and Piet Martens, Dept. of Physics, Montana State University, Bozeman, MT 59717, USA.
 Tel: 1 406 994 6072 Fax: 1 406 994 4452
<http://solar.physics.montana.edu/Y10>

STELLAR ATMOSPHERIC MODELING

September 17 - 21, 2001, University of Tübingen, Germany.
Contact: Klaus Werner, IAAT, University of Tübingen,, Waldhäuser Str. 64, D - 72076 Tübingen, Germany.
 Tel: 49 7071 2978601 Fax: 49 7071 293458
 Email: werner@astro.uni-tuebingen.de

CURRENT THEORETICAL MODELS AND FUTURE HIGH RESOLUTION SOLAR OBSERVATIONS

September 17 - 21, 2001, New Mexico, USA.
Contact: Alexei A. Pevtsov, Han Uitenbroek, National Solar Observatory, P.O. Box 62, Sunspot, NM 88349, USA.
 Tel: 1 505 434 7011 Fax: 1 505 434 7029
 Email: ws21@sunspot.noao.edu
<http://www.sunspot.noao.edu/INFO/MISC/WORKSHOPS/2001/ws21.html>

THE ROLE OF VLBI IN ASTROPHYSICS, ASTROMETRY AND GEODESY

September 17 - 29, 2001, Castel San Pietro Terme Bologna, Italy.
Contact: Franco Mantovani, Istituto di Radioastronomia, CNR, Via Gobetti 101, I - 40129 Bologna, Italy.
 Tel: 39 051 639 9377 Fax: 39 051 639 9431
 Email: fmantovani@ira.bo.cnr.it <http://www.ira.bo.cnr.it/~cspt2001>

FRONTIERS IN PARTICLE ASTROPHYSICS AND COSMOLOGY

September 29 - October 4, 2001, Lenggries (near München), Germany.

Contact: Ms. Rhona Heywood, European Science Foundation, EURESCO Office,
1 quai Lezay-Marnesia, F - 67080 Strasbourg, France.

Tel: 33 388 76 71 35

Fax: 33 388 36 69 87

Email: rheywood@esf.org

<http://www.esf.org/euresco/01/pc01142a.htm>

VTH INTERNATIONAL CONFERENCE ON GRAVITATION AND ASTROPHYSICS

October 1 - 7, 2001, Moscow, Russia.

Contact: M. Yu. Konstantinov, Centre for Gravitation and Fundamental Metrology of
VNIIMS, 3-1 M. Ulyanovoy Str., Moscow 117313, Russia.

Tel: 7 095 1380428

Fax: 7 095 1385446

Email: icga@rgs.phys.msu.su

<http://www.homepage.techno.ru/rgs>

THE EVOLUTION OF GALAXIES. II-BASIC BUILDING BLOCKS

October 16 - 21, 2001, St. Denis de la Réunion, France.

Contact: Laurent Vigroux, CEA, Service d'Astrophysique, F - 91191 Gif-sur-Yvette,
France

Tel: 33 1 69 08 39 12

Fax: 33 1 69 08 65 77

E-mail: lvigroux@cea.fr

<http://www.daec.obspm.fr/ThreeConf.html>

SEEING THROUGH THE DUST: THE DETECTION OF HI AND THE EXPLORATION OF THE ISM IN GALAXIES

October 20 - 26, 2001, Penticton, British Columbia, Canada.

Contact: Dominion Radio Astrophysical Observatory, P.O. Box 248, Penticton, British
Columbia V2A 6K3, Canada.

Tel: 1 250 493 2277

Fax: 1 250 493 7767

Email: hi50@drao.nrc.ca

<http://www.drao.nrc.ca/~kerton/hi50.html>

THE MASS OF GALAXIES AT LOW AND HIGH REDSHIFT

October 24 - 26, 2001, Venice, Italy.

Contact: ESO, Karl-Schwarzschild-Strasse 2, D - 85748 Garching, Germany

Fax: 49 89 3200 6480

Email: gmass2001@eso.org

<http://www.eso.org/gen-fac/meetings/gmass2001/>

GAMMA RAY BURST AND AFTERGLOW ASTRONOMY

November 5 - 9, 2001, Woods Hole, Massachusetts.

Contact: George Ricker, MIT Center for Space Research, 77 Massachusetts Avenue,
Cambridge, MA 02139, USA.

Tel.: 1 617-253-7532.

Fax: 1 617-258-6921.

Email: grr@space.mit.edu

NEW TRENDS IN THEORETICAL AND OBSERVATIONAL COSMOLOGY

November 13 - 16, 2001, Sanjo Conference Hall, University of Tokyo, Tokyo, Japan.

Contact: Tetsuya Shiromizu, RESCEU, Faculty of Science, University of Tokyo,
Hongo, Bunkyo-ku, Tokyo 113-0033.

Tel: 81 3 5841 4191

Fax: 81 3 5841 4224

Email: trend@utap.phys.s.u-tokyo.ac.jp

<http://www-utap.phys.s.u-tokyo.ac.jp/~trend/trend.html>

XXTH INTERNATIONAL CONFERENCE ON NEUTRINO PHYSICS AND ASTROPHYSICS (NEUTRINO 2002)

May 25 - 30, 2002, Munich, Germany.

Contact: Neutrino 2002 Conference Secretaries, Mrs. A. Fuedner and Mrs. S.
Rodriguez, Technical University München, Physics Department E15, D-85747
Garching, Germany.

Fax: 49 89 289 12680

Email: neutrino2002@ph.tum.de

<http://neutrino2002.ph.tum.de>

THE CHEMICAL COMPOSITION OF STARS

Spring, 2002, Seattle, Washington, USA.

Contact: George Wallerstein, Univ. of Washington, Astronomy 351580, Seattle, WA
98195.

Tel: 1 206 543 8098

Fax: 1 206 685 0403

Email: wall@astro.washington.edu

THE EVOLUTION OF GALAXIES. III-FROM SIMPLE APPROACHES TO SELF-CONSISTENT MODELS

July 2002, Kiel, Germany.

Contact: Gerhard Hensler, University of Kiel, Olshausenstr. 40, D - 24098 Kiel,
Germany

Tel: 49 431 88 04 125

Fax: 49 431 88 04 100

E-mail: hensler@astrophysik.uni-kiel.de

<http://www.daec.obspm.fr/ThreeConf.html>

34TH COSPAR SCIENTIFIC ASSEMBLY

October 2002, Houston TX, USA

Contact: COSPAR Secretariat, 51 Bd de Montmorency, F - 75016 Paris, France

Tel: 33 145 250 679

Fax: 33 140 509 827

E-mail: COSPAR@paris7.jussieu.fr