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INFORMATION BULLETIN No. 83

January 1999

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PREFACE

The activities of the IAU form a sort of tidal-wave pattern, with highs at the General Assemblies and lows midway between. Thus, this Information Bulletin appears at what should be "low ebb". In fact, there has been no noticeable decrease in the workload of the Secretariat, but the direction of the flow is changing perceptibly: With the *Highlights* and *Transactions* volumes from the last GA off to print, and a first Web page and meeting proposal forms for the next GA now in place, the outgoing tide from Kyoto is over and the incoming tide for Manchester picking up.

With a Secretariat staff of only two, those individuals are crucial for the work of the Union in general and the General Secretary in particular. We are fortunate that, with almost no gap since the departure of Julie Saucedo on June 30, we have been able to recruit a very capable successor, *Jodi Greenberg*. Jodi is from the USA, but has lived for long periods in South America, mostly Ecuador and Colombia, as well as in Ukraine, Hungary, and France before settling in Paris. She has integrated very quickly into our little team and, with her excellent language skills, is handling a large part of our contacts with Members. Many readers will already have been in touch with her, as she has put a major effort into the membership data base upgrade that Julie started before her departure (please check the list of *still-incomplete member addresses* in [Sect. 13.3!](#)).

The Executive Committee meeting here in Paris in July was a very productive one. A brief summary of decisions is given in [Sect. 5](#), and much of the rest of the contents of this IB concerns the follow-up of these decisions. The rich programme of approved IAU scientific meetings in 1999

is listed in [Sect. 6](#), and the newly-revised *Working Rules* in [Sect. 9](#). The EC discussed and recognised the need for the IAU to take a more visible stand on significant issues of public concern, and steps are now being taken to set up a procedure for the future selection, preparation, and dissemination of *IAU Press Releases*. As examples of the visible expression of the concerns of the IAU on matters of current importance, the two *Policy Statements* issued by the EC are printed in [Sect. 7](#) and [8](#) of this IB. As public documents, they are also available from our Web site and may be freely quoted provided credit is given to the IAU.

News on the preparation of the 24th General Assembly, August 7-19, 2000, is found in [Sect. 3](#) and maintained at the IAU Web site (**NB:** Only our new URL www.iau.org will be active after the end of 1998!). We look forward to receive a large number of proposals for exciting scientific events in Manchester. These will keep the EC and the Secretariat busy between now and IB 84, which will contain much more information on GA 24. I note that also the organisers of GA 25 in Sydney are already making preparations for another memorable event there in 2003.

Finally, the very best wishes of the IAU Officers and Secretariat to all readers for a happy and rewarding 1999!

November 13, 1998

Johannes Andersen

General Secretary

1. FAITS DIVERS

Fortunately, the second half of 1998 has been somewhat less exciting in terms of disruptions of our work by unexpected outside events in the astronomical and personal spheres: No asteroids, no staff departures, no accidents, etc.! We did spend far more time than expected on a computer upgrade after yet another disk crash of our previous laptop PCs, as well as on a capricious piece of software called Windows NT. However, at the time of writing, all is working fine in the skilled hands of Monique Léger-Orine and Jodi Greenberg. All this, unfortunately, caused delays in the preparation of *Highlights of Astronomy Vol. 11* and *Transactions XXIIIB*, recording our scientific and other business in Kyoto. However, with the strong help of three spirited Copenhagen students, the *Highlights* (two volumes totalling 1200 pages!) went to press in August and should be out before the end of 1998. Also the *Transactions* (another 750 pages) are now in the hands of Kluwer and should be out shortly after you receive this IB. As this is the last IAU volume to be produced by Kluwer in their 30-year period as IAU Publisher, I take the opportunity to thank them for their collaboration over all these years, and to welcome the ASP, the IAU Publishers for the next six years

Much work has been put into consolidating our records of all kinds. Jodi Greenberg has been busy cross-checking, updating, and rationalising the data base of our current members (see address update request in [Sect. 13.3](#)). One result should be an updated [On-Line Directory](#) on the Web by the time you read this. Our apologies to members who find that we have been far too slow in doing this, but we have more tasks than we have hands! With outside help, we are also building up a data base of all IAU members, starting at the first General Assembly in 1922 and ending today; this will help us answer the many questions we receive about the membership of individual

astronomers. Our archives for 1919 have been stored at the Académie des Sciences here in Paris (see [Sect. 10](#) for details). Near-complete lists of past IAU publications have been prepared and posted on the Web. The Secretariat has a complete set of the *Transactions*, *Reports on Astronomy*, *Highlights of Astronomy*, and *Symposium* volumes, but our set of *Colloquium* proceedings is still very incomplete. We will identify the missing volumes in the Web list and hope that readers can help.

Our Web page is continually updated and expanded in response to arising needs. New features are the page on [Frequently Asked Questions](#) (yes, buying star names and dangerous asteroids are among them!), and the [Policy Statements](#) also printed in this IB. As a further means for the IAU to communicate effectively with the public and the media, [Commission 6](#) has prepared a proposal for the preparation and dissemination of *IAU Press Releases in the future*. The idea is not to compete in the flood of daily news, but to have the voice of the IAU heard on issues of major concern to astronomers and/or the public. An *IAU PR Committee* will ensure that topics are of appropriate significance for an IAU PR, that the scientific facts have been properly verified, and that the form of presentation will be suitable with regard to its expected public impact. An *IAU PR Office* will ensure a professional presentation before final release by the General Secretary. The proposal will now be reviewed by the Executive Committee, and the final implementation will be reported in the next IB.

To conclude on a more exotic note, your GS visited Uzbekistan in October at the occasion of the 1200th anniversary of the famous medieval astronomer Al-Farghani. The visit gave a striking impression of the splendors of the past as well as the difficulties of the present. I hope that the IAU may be able to play a constructive role for the future of astronomy also in this region of the world, and trust that the visit will prove helpful in this endeavour.

2. MAIN DEADLINES IN 1999-2000

Date	Action item	By
1999		
15 Mar	Proposals due at AGS for 2000 Symposia (GA) and Colloquia SOC chairs	
15 Mar	Proposals due at GS for JDs at GA XXIV	Div. Presidents
01 Apr	Contributions due to Inf. Bull. 84 (June 1999)	All interested
01 May	Ranking due for 2000 meeting proposals	Div. Presidents
01 May	Other Agenda items due for EC Meeting #72	All concerned
18 Jun	72nd Meeting of the Executive Committee	EC
26 Jun	Science Conference begins in Budapest	UNESCO, ICSU
01 Jul	Notify 2000 Meeting proposers (Symp, Coll, JD)	AGS+GS
19 Jul	UNISPACE III conference begins in Vienna	UN-COPUOS
01 Sep	Submit Preliminary Programmes for GA Symp., JDs	SOC chairs
01 Oct	Camera-ready manuscripts due for "Reports on Astronomy"	Div+Comm. Pres.
01 Oct	Preliminary Announcement of GA XXIV (IB 85)	GS/GA-LOC
01 Oct	Contributions due to Inf. Bull. 86 (January 2000)	All interested

07 Nov	Submit Budget for 2001-2003 to Adhering Organizations	GS
07 Nov	Proposals by Division Presidents for new Members	Division Presidents
07 Dec	Remind Adhering Organizations to propose new Members	GS
2000:		
07 Feb	Submit Resolutions with financial implications	A.O.s, Div, Comm
15 Feb	Submit Abstracts to Symposium/JD SOCs	Participants
15 Feb	Submit Symposium Travel Grant applications to SOC	Participants
15 Feb	Submit GA Travel Grant applications to GS	Participants
01 Mar	Recommendation to AGS on Symposium Travel Grants	SOC chairs
07 Mar	Proposals by Adhering Organizations for new Members	Adhering Org.
07 Mar	Propose Items for Agenda of GA XXIV	Adhering Org.
Mar	Proposals due for Meetings in 2001 (Symp/Coll/JD/JCM)	SOC chairs
01 Apr	Contributions due to Inf. Bull. 87 (June 2000)	All interested
01 Apr	Notify all Symposium and/or GA Travel Grant Applicants	GS/AGS
01 May	Deadline for Early Registration at GA	Participants
07 May	Submit Resolutions without financial implications	AO, Div, Comm.
06 Aug	73rd Meeting of the Executive Committee	EC
07 Aug	Beginning of first GA Symposia	EC
09 Aug	Opening Session of GA XXIV	SOC chairs
16 Aug	Closing Session of GA XXIV	EC
17 Aug	74th Meeting of the Executive Committee	EC
19 Aug	End of last GA Symposia	SOC chairs

3. THE XXIVTH GENERAL ASSEMBLY

As preparations for the XXIVth General Assembly August 7-19, 2000, in Manchester, UK, are ramping up, a preliminary information page has been set up at the IAU Web site with links to meeting proposal guidelines and forms, in particular. Up-to-date information will be provided through this page, including a link to the GA Web site itself when available. The Local Organising Committee reports on the further preparations as follows:

The Local Organizing Committee is moving ahead with arrangements for the XXIVth General Assembly to be held in Manchester, UK during the period 7-19 August 2000. Members will be interested to learn that Manchester International Airport's second runway will be commissioned on this timescale, thereby increasing its capacity to 20 million passengers per year. Many of you will be able to fly directly into Manchester. Others will make use of the Channel Tunnel which is increasingly popular with travellers from Europe. Much information about travel arrangements will be provided in due course.

World Event Management has been contracted to undertake the registration and accommodation booking management for the General Assembly. Arrangements will be in place for electronic as well as paper registration and payment. Accommodation reservations have been secured, including ample provisions of low-cost rooms.

A sub-committee of the LOC is working on an interesting and varied programme of visits during the General Assembly for participants and accompanying persons. Historic and scenic sites abound, ranging from the Wordsworth houses in the Lake District to Chatsworth House (the Cavendish family home) in the Pennines. Opportunities will also be available to view the well-known radio telescopes at Jodrell Bank.

An experienced Editor has been chosen for the daily newspaper of the General Assembly. This is a vital organ of communication during the meeting and has been an indispensable feature of recent General Assemblies.

You are encouraged to put the date 7-19 August 2000 into your diaries. The Preliminary Announcement of details of arrangements for the General Assembly will be in Information Bulletin 85, to be published 1 October 1999. May 1, 2000 will be the deadline for Early Registration. The scientific programme will be decided by the IAU Executive Committee, including the accompanying symposia (see announcement and deadlines in [Sect.6](#) of this IB).

4. NEWS FROM DIVISIONS

An increasing number of Division and Commissions have set up Web pages, as noted below. Links to all of these are provided from the IAU and Divisional Web pages as appropriate.

Division II: Sun and Heliosphere (Peter Foukal)

A recent poll of the Division II OC Members indicates general satisfaction with the current make-up of our division, so no changes are being contemplated.

Some members have suggested that a solar nomenclature sub-committee would be useful. Suggestions are welcome (also volunteers).

The Division sponsors or co-sponsors IAU Symposium 195 on "Highly Energetic Physical Processes and Mechanisms for Emission from Astrophysical Plasmas" in Bozeman, Montana, July 6-10, and Colloquium 179 on "Cyclical Evolution of Solar Magnetic Fields" in Kodaikanal, India, December 13-16 (abstract deadline March 1, 1999). Contact information on these meetings is given in [Sect. 6](#) of this IB and maintained up-to-date at the IAU web site.

It is time to start thinking about ideas for Div II-related symposia or colloquia for the year 2000. To optimize coordination at the Division level, it would be desirable to send drafts of your proposals by mid-February 1999, to the Division President at pfoukal@world.std.com.

Our Working Group on Eclipses is trying to coordinate efforts to observe next year's event in Europe and Asia. Their website is www.williams.edu/Astronomy/IAU_eclipses; you may also contact jay.m.pasachoff@williams.edu.

Inputs to enrich our Division (or Commission) web-sites are welcome! If you have ideas for the Divisional web-site, kindly contact P. Foukal at the e-mail address above. Inputs for the Comm 12 and Comm 49 sites should be sent to: jmariska@aspen.nrl.navy.mil, and to frank.verheest@rug.ac.be respectively. Inputs for an eventual Comm 10 web-site should be sent to aigx@sun10.bao.ac.cn, with a copy to benz@astro.phys.ethz.ch.

Finally, Division II notes that the Editorship of the *Quarterly Bulletin on Solar Activity* (QBSA) has passed from Dr. P. Lantos (Paris) to Dr. K. Shibasaki (Nobeyama, Japan).

Division III: Planetary Systems Sciences (Michael A'Hearn)

The Executive Committee has agreed that the full name of Division III be modified as above to reflect a deliberate emphasis at the creation of the Division which was lost at a later time.

Dr. F. Colomb has resigned as President of Commission 51 (Bioastronomy) due to pressure of other activities. Division III regrets the fact that his other duties prevented him from continuing in office. The Vice President of Commission 51, Dr. Bowyer, is now the Acting President of the commission. Commission 51 also has a newly available web page at URL sag-www.ssl.berkeley.edu/IAUCom51/.

Commissions 20 and 21 have also established web pages recently: Comm. 20: (Positions and Motions of Minor Planets, Comets, and Satellites) is at www.astro.uu.se/IAU/c20, while Comm. 21 (Light of the Night Sky) is at sag-www.ssl.berkeley.edu/IAUCom21/. All Commission web pages are linked from the Divisional and IAU web pages.

The Small Bodies Names Committee (SBNC, a divisional working group) has published its working guidelines for assigning names to comets. They are available through the committee's web page: www.ss.astro.umd.edu/IAU/sbnc/. The SBNC emphasizes that all names are actually decided on a case by case basis and that the guidelines are just that, not rigid rules. The SBNC tries to achieve fairness to all individuals involved and simplicity in the naming - the guidelines being a means to that end.

Division IV: Stars (Lawrence Cram)

Division IV has established a Web page with links to all Commissions, Working Groups and WG Newsletters associated with the Division, at URL www.astrop.physics.usyd.edu.au/IAU. Web sites for Commissions 35 and 36 have also been set up and linked from this page.

Division IX: Optical and Infrared Techniques (Chris Sterken)

The Executive Committee has approved that the name of the Division be modified as above, to better reflect the range of scientific activities covered by the Division.

Division XI: Space and High Energy Astrophysics (Willem Wamsteker)

During the past six months many things have happened in the area of the Division which are considered to be of interest, not only to the members of the Division, but also for the astronomical community as a whole. We will try in these reports to keep you abreast of the developments of interest to all astronomers. We try to collect all relevant information. Since it is the first time that we do this, I would appreciate feedback on the contents of this report, which is not guaranteed to be complete. I thank Drs. Giovanni Fazio, Vincente Domingo and Hajime Inoue for information included below. (Any inaccuracies in the listing below are the full responsibility of the Division President).

Space Astrophysics News

SOHO recovered

On 24 June 1998, after completing its nominal two-year mission, ground controllers lost contact with the Solar and Heliospheric Observatory, which went into a spin around its principal axis of inertia. On 3 August, contact was re-established, and on 16 September, Sun pointing was achieved. By 23 October, 10 out of the 12 instruments on board had been tested and were found to be working nominally again, a great accomplishment by the SOHO recovery team. Further information: sohowww.estec.esa.nl/operations/Recovery/

ROSAT in-orbit problems

This X-ray satellite, in orbit since 1997, suffered a startracker failure on 28 April 1998. During the testing of the reconfigured spacecraft, a suspected sun-pointing caused significant damage to the instruments. As a consequence the deadline for the 9th AO has been delayed indefinitely. Further information: heasarc.gsfc.nasa.gov/docs/rosat/roskof.html

DEEP SPACE 1 launched

NASA's DS1 mission was successfully launched from Cape Canaveral and will fly by the near-Earth asteroid 1992 KD on 28 July 1999, with the possibility of an extended mission to the dormant comet Wilson-Harrington in January 2001 and comet Borrelly in September 2001. Further information: nmp.jpl.nasa.gov/ds1/

XMM Launch delayed

ESA's X-ray Multi-Mirror Mission, originally scheduled for launch in the middle of 1999, has been delayed to 21 January, 2000. Further information: sci.esa.int/xmm/

AXAF launch delayed

NASA's Advanced X-Ray Astrophysics Facility, originally scheduled for launch in late 1998, has been delayed for an unspecified time; decision on a new launch date is foreseen for late January 1999. Further information: xrtpub.harvard.edu/Axaf/home.html

ABRIXAS schedule

The DLR Broad-band Imaging X-Ray All-Sky Survey has been scheduled for launch in the spring of 1999. Further information: www.dlr.de/pressestelle/mi22_98abrixas.htm

SIRTF launch scheduled

NASA's Space Infrared Telescope Facility has passed its Critical Design Review and is now scheduled for launch on 1 December 2001. Further information: ssc.ipac.caltech.edu/sirtf

SWAS launch scheduled

NASA' Submillimeter Wave Astronomy Satellite, a Small Explorer Mission to investigate the composition of dense interstellar clouds, has been scheduled for launch in December 1998. Further information: sunland.gsfc.nasa.gov/smex/swas/

SOFIA on schedule

The NASA/DLR 2.5m Stratospheric Observatory for Infrared Astronomy, is scheduled to make its first flights in 2001. Further information: sofia.arc.nasa.gov/

Astro-E schedule

ISAS's fifth X-ray astronomy satellite is scheduled for launch in January or February, 2000. Further information: www.astro.isas.ac.jp/xray/mission/astroe/astroeE.html

IRIS schedule

The ISAS Infrared Imaging Surveyor was approved in April 1997 and is scheduled for launch in 2003. Its main purpose is an infrared sky survey at high sensitivity. Further information: koala.astro.isas.ac.jp/Astro-F/index-e.html

5. EXECUTIVE COMMITTEE

The 71st Meeting of the Executive Committee

The 71st meeting of the EC took place in the Council Room of Observatoire de Paris, France, on July 3 and 4, 1998, at the invitation of Vice-President Catherine Cesarsky. From the many topics discussed and decisions taken, the following highlights are mentioned here:

On administrative matters, the EC approved a set of draft Statutes and By-Laws, revised to clarify the procedure for admitting several countries represented by a single Adhering Body (see IB 81, p. 45) and to reflect the reorganization of ICSU (IB 82, p.13). These will be submitted to the next General Assembly for decision. New Working Rules were approved by the EC (reproduced in [Sect. 9](#) of this IB), including a simple provision for Members to resign from the Union if they so wish, and an explicit procedure for Resolutions proposed by Working Groups. Decisions on national membership are reported in [Sect. 13](#) of this IB.

The IAU was found to be in good financial health, the normal GA-year deficit in 1997 being actually some 20% smaller than budgeted. Grant income from ICSU/UNESCO shows a declining trend from the forecast in the approved 1998-2000 Budget, a trend that is expected to continue. The EC discussed possibilities for modifying the IAU's traditionally conservative investment policy, but decided to await the introduction of the Euro before considering major changes (later events seem to confirm the wisdom of this decision!). The Finance Sub-Committee is providing continuing advice and oversight on the Union's financial affairs.

On matters related to the Divisions and Commissions, the EC approved a change of the name of Division IX to *Optical **and Infrared** Techniques*, to better reflect the true activities of the Division. The EC also approved the proposal to appoint an Acting President of Commission 50 (see [Sect. 4](#) above). (Subsequently, the EC has also agreed that Division III be named *Planetary Systems Sciences*, a correction of an earlier mistake). The communications between Division Presidents (DP) and the EC was discussed at length. The direct personal interaction at the Kyoto EC meetings was felt by all to have been very fruitful, but the cost of inviting the DPs to all EC meetings was considered to be prohibitive. As an interim measure, the present strong involvement of the DPs in the selection of the scientific meeting programme for 1999 would be further strengthened and optimised in collaboration between DPs and AGS. DPs already receive copies of the Agendas for EC and Officers' meetings and are invited to comment or propose additional items.

The EC received a Final Report on the 23rd General Assembly and reiterated its thanks to the

organisers. Preparations for the 24th GA are proceeding smoothly (see [Sect. 3](#) of this IB).

The approved programme of scientific meetings in 1999 is listed in [Section 6](#) of this IB. The joint IAU-COSPAR-UN Educational Workshop, to be held at the UNISPACE III conference in 1999 is part of our initiative to join forces with sister organisations to achieve a more effective use of our scarce manpower and external funding. The joint IAU-UN Environmental Symposium (Symp. 196), also at UNISPACE III, is part of our strategy for obtaining a form of international protection of the night sky, following up on Resolution A1 of the Kyoto GA (IB 81, p. 27, and IB 82, p. 2). The EC approved the action plans of the GS in these areas.

In addition to these meetings, the EC approved the 24th *International School for Young Astronomers* (ISYA), to be held in Romania in 1999, and the 25th ISYA to be held in Thailand in 2001. The EC also approved an increased activity level for the TAD programme in Central America and exploratory activities in Morocco (see [Sect. 11](#)).

The EC recognised an increasing need for effective communication with the public and the media on matters of international concern. The EC therefore requested that Commission 6 (Astronomical Telegrams) prepare a set of guidelines and procedures for such an IAU service. As examples of subjects that would be suitable for public announcements, the EC issued two IAU Policy Statements on *Environmental Challenges to Astronomy* and *Research on Near Earth Objects (NEOs)*. The text of these statements is reproduced as [Sect. 7](#) and [8](#) of this IB. Recognising the key role of the IAU, through its Minor Planet Center (MPC), in maintaining the international character of and coordination in NEO research, the EC approved the reinstatement of its previous financial support for the MPC, at a significantly increased level.

The 72nd Meeting of the Executive Committee

The 72nd EC meeting will take place at Universidad de Chile, Santiago, Chile, June 18-20, 1999. Items for the Agenda should reach the General Secretary before May 1, 1999. 1 "The 72nd EC meeting will take place at Universidad de Chile, Santiago, Chile, June 18-20, 1999. Items for the Agenda should reach the General Secretary before May 1, 1999

6. SCIENTIFIC MEETINGS IN 1999

Proposals for Joint Discussions at GA XXIV should be submitted to the General Secretary, and proposals for GA symposia, Colloquia, Regional Meetings, and Co-sponsored Meetings in 2000 to the Assistant General Secretary (*cf. Rules for Scientific Meetings*)

No later than March 15, 1999

Proposals should be submitted via the appropriate Division President, complete with all supporting documents, and with copies to all Commissions concerned, by the above date.

6.1 Future IAU Symposia

[IAU Symposium 195](#) **Highly Energetic Physical Processes and Mechanisms For Emission**

from Astrophysical Plasmas

6 - 10 July, 1999, Bozeman MT, USA

Scientific Organizing Committee: G. Ai (China), R. Blandford (USA), T. Courvoisier (Switzerland), L. Culhane (UK, Chairperson), G.G. Fazio (USA), K. Nomoto (Japan), Å. Nordlund (Denmark), F. Pacini (Italy), M.J. Rees (UK), R. Romani (USA), G. Srinivasan (India), J. Trümper (Germany), S. Tsuruta (USA, Chairperson), L. Woltjer (France).

Chairperson, Local Organizing Committee: L. Acton, S. Tsuruta.

Principal Topics:

- Results from Recent Related Satellite Observations
- Effects of Magnetic Fields on Highly Energetic Processes and Emission from Astrophysical Plasmas
- Physical Processes in Relativistic Astrophysical Plasmas
- Particle Acceleration in Astrophysical Plasmas
- High Energy Emission from Astrophysical Plasmas
- Future Major High Energy Satellite Missions
- Panel Discussion: on common physical processes and mechanisms for high energy emission from astrophysical plasmas
- Summary and Concluding Remarks

Contact address: Sachiko Tsuruta, Physics Department, Montana State Univ., Bozeman MT 59717, USA

Tel: 1 406 994 6779 Fax: 1 406 994 4452

E-mail: iau195@physics.montana.edu

IAU Symposium 196 Preserving the Astronomical Sky

12 - 16 July, 1999, Vienna, Austria

Scientific Organizing Committee: J. Andersen (IAU), W. Baan (Netherlands), R.J. Cohen (UK, Chairperson), D.L. Crawford (USA, Chairperson), P. Encrenaz (France), W. Flury (Germany), S. Isobe (Japan), D. McNally (UK), M. Smith (Chile), W.T. Sullivan (USA, Chairperson), G. Swarup (India).

Chairperson, Local Organizing Committee: H. Haubold.

Principal Topics:

- Issues of the harm to astronomy from light pollution, radio frequency interference, and space debris
- Documentation of present status and trends in various countries and regions
- Techniques for successful observations in a hostile environment
- Regulatory strategies on international, national, and local scales
- Alliances between astronomers and others concerned about these issues (environmentalists,

lighting engineers, radio spectrum managers, space agencies)

Contact address: W.T. Sullivan III, Dept of Astronomy, Box 351580, Univ. of Washington, Seattle WA 98195, USA

Tel: 1 206 543 7773 Fax: 1 206 685 0403

E-mail: woody@astro.washington.edu WWW: <http://www.darksky.org/ida/iau196>

IAU Symposium 197 Astrochemistry: From Molecular Clouds to Planetary Systems

23 - 27 August, 1999, Sogwipo, Republic of Korea

Scientific Organizing Committee: J.H. Black (Sweden), A. Dalgarno (USA), W.M. Irvine (USA), J.P. Maier (Switzerland), K.M. Menten (Germany), Y.C. Minh (Rep. Korea), M. Ohishi (Japan), B. Rowe (France), P.D. Singh (Brasil), E.F. van Dishoeck (Netherlands), D.A. Williams (UK, Chairperson), Qin Zeng (China).

Chairperson, Local Organizing Committee: Y.C. Minh.

Principal Topics:

- Physics and chemistry of star-forming regions: shocks, jets, PDRs, hot cores
- Chemistry in the envelopes and disks around young stars
- Solar-system connection: comets, meteorites and IDPs
- Chemistry in the inner and outer solar nebula
- Atmospheres of planets and brown dwarfs
- Basic molecular processes: gas-phase and gas-grain interactions
- Molecules in diffuse and translucent clouds
- Molecules and dust formation in envelopes around late-type stars

Contact address: Y.C. Minh, Korea Astronomy Observatory, Hwaam Yusong, Taejeon 309-348, Rep. of Korea

Tel: 82 42 865 3263 Fax: 82 42 861 5610

E-mail: iau197@hanul.issa.re.kr WWW: <http://www.issa.re.kr/~iau197>

IAU Symposium 198 The Light Elements and Their Evolution

22 - 26 November, 1999, Natal, Brasil

Scientific Organizing Committee: G. Michaud (Canada), B.E.J. Pagel (UK), L. Pasquini (Italy), Y.U. Pavlenko (Ukraine), M. Peimbert (Mexico), M. Rugers (USA), S.G. Ryan (Australia), I.-J. Sackmann (USA), K. Sato (Japan), L. da Silva (Brasil, Chairperson), M. Spite (France, Chairperson), V.V. Smith (USA), G. Steigman (USA), E. Terlevich (Argentina-UK) T.L. Wilson (USA-Germany).

Chairperson, Local Organizing Committee: J.R. de Medeiros.

Principal Topics:

- Big Bang: nucleosynthesis
- Sources of light elements: Big Bang, spallation, stellar flares etc.
- Sinks of light elements: mass loss, convection, turbulent diffusion in stars; depletion in interstellar medium
- Abundance determination and observational status of the light elements in the intergalactic medium, the galaxies, the stars, the interstellar medium
- Evolution of the light elements abundances: in stellar evolution, in the Solar System and Global Galactic Evolution

Contact address: Monique Spite, Observatoire de Paris, Section de Meudon, F-92195 Meudon PPL Cedex, France

Tel: 33 1 45 07 78 39 Fax: 33 1 45 07 78 78

E-mail: Monique.Spite@obspm.fr WWW: <http://www.dfte.ufrn.br>

IAU Symposium 199 The Universe at Low Radio Frequencies

30 November - 4 December, 1999, Pune, India

Scientific Organizing Committee: G. de Bruyn (Netherlands), P. Dewdney (Canada), R.D. Ekers (Australia, Chairperson), W. Erickson (Australia), M. Goss (USA), V.K. Kapahi (India, Chairperson), N.S. Kardashev (Russia), A. Lyne (UK), L. Padrielli (Italy), N. Rendong (China), G. Swarup (India).

Chairperson, Local Organizing Committee: A. Pramesh Rao.

Principal Topics:

- HI at high redshifts
- Radio source surveys at low frequencies
- Extended extragalactic radio sources.
- Relic radio sources
- Low frequency variability of radio sources

- Galactic radio sources (SNRs, HII regions, pulsars, Sun and radio stars.
- Recombination lines and the interstellar medium
- Instruments and techniques for low frequency radio astronomy
- Interference rejection/cancellation

Contact address: Vijay Kapahi, Natl. Center for Radio Astrophysics Pune Univ. Campus,
Pune 411 007, India

Tel: 91 212 35 6105 Fax: 91 212 35 7257

E-mail: vijay@ncra.tifr.res.in WWW: <http://www.ncra.tifr.res.in/~iau199>

6.2 Future IAU Colloquia

IAU Colloquium 174 Small Galaxy Groups

13 - 18 June, 1999, Turku, Finland

Scientific Organizing Committee: J. Anosova (USA), L. Athanassoula (France), G. Byrd (USA), A. Chernin (Russia), F. Combes (France), P. Hickson (Canada), W. Huchtmeier (Germany), I. Karachentsev (Russia), G. Longo (Italy), J.C.Muzzio (Argentina), M. Noguchi (Japan), V. Trimble (USA), M. Valtonen (Finland, Chairperson).

Chairperson, Local Organizing Committee: S. Mikkola.

Principal Topics:

- Triple systems of galaxies; theory and observations
- Small groups of galaxies
- The Local Group of galaxies
- Interactions and mergers in triplets.
- Free-fall triplets and cosmological structure formation
- The Extended Local Group
- Evolution from triplets to binaries
- The role of triplets in cluster dynamics
- Triplets at high redshift
- Dark matter in small groups

Contact address: Mauri Valtonen or Chris Flynn, Tuorla Observatory, FIN-21500 Piikkiö,
Finland

Tel: 58 2 2744 245 Fax: 358 2 2433 767

E-mail: sgg@astro.utu.fi WWW: <http://oj287.astro.utu.fi/sgg>

IAU Colloquium 175 The Be Phenomenon in Early-Type Stars

28 June - 2 July, 1999, Alicante, Spain

Scientific Organizing Committee: L. Balona (S. Africa), J. Bjorkman (USA), J. Fabregat (Spain), A. Fullerton (Canada), W. Hummel (Germany), E. Kambe (Japan),

M. Marlborough (Canada), R. Mennickent (Chile), P. Roche (UK), M. Smith (USA, Chairperson), S. Stefl (Czech R.), Z. Wang (China)

Chairperson, Local Organizing Committee: J. Fabregat.

Principal Topics:

- Overview of the Be Phenomenon
- New Missions & Technologies
- Time Variability in Isolated Be Stars: Nature of the Periodic Phenomenon, International Observing Campaigns, Aperiodic Variations
- Circumstellar Environment of Be Stars: Observational Diagnostics, Theoretical Models
- The Be Phenomenon in Interacting Binary Systems
- Future Directions for Research

Contact address: Myron Smith, 3700 San Martin Dr., Baltimore MD 21218, USA

Tel: 1 410 338 5036 Fax: 1 410 338 5075

E-mail: msmith@nebula.gsfc.nasa.gov WWW: <http://www.bestars.ua.es/be99/>

IAU Colloquium 176 The Impact of Large-Scale Surveys on Pulsating Star Research

8 - 12 August, 1999, Budapest, Hungary

Scientific Organizing Committee: J.-P. Beaulieu (France), A. Bouquet (France), J. Christensen-Dalsgaard (Denmark), W. Dziembowski (Poland, Chairperson), W. Gieren (Chile), J. Guzik (USA), G. Kovacs (Hungary), D. Kurtz (S. Africa), A. Layden (USA), J. Nemec (Canada), B. Paczynski (USA), P. Sackett (Netherlands), H. Shibahashi (Japan).

Chairperson, Local Organizing Committee: G. Kovacs.

Principal Topics:

- Large-Scale Surveys - Techniques, Methods, Data Flow
- Cepheids - Physical Properties, Distance Indicators
- RR Lyrae and SX Phe Stars - Physical Properties, Distance Indicators
- Small-Amplitude Pulsators - B-type, Delta Scuti, Ap Stars, White Dwarfs, Subdwarfs
- High-Luminosity Pop. II Stars - Regular and Irregular Pulsations
- Non-stationary Pulsations - Blazhko-effect, Mode Switching, Irregularity
- Theoretical Works - Recent Results
- Pulsating Stars - Broader Astrophysical Aspects

Contact address: Geza Kovacs, Konkoly Observatory, 1525 Budapest XII. Box 67, Hungary

Tel: 36 1 175 4122 Fax: 36 1 275 4668

E-mail: kovacs@buda.konkoly.hu WWW: <http://www.konkoly.hu/iau176>

IAU Colloquium 177 Pulsar Astronomy- 2000 and Beyond

30 August - 3 September, 1999, Bonn, Germany

Scientific Organizing Committee: D.C. Backer (USA), D. Bhattacharya (India), A. Kuzmin (Russia), A.G. Lyne (UK), R.N. Manchester (Australia), D. Melrose (Australia), F. Nagase (Japan), J.H. Taylor (USA), J. Trümper (Germany, Chairperson), J. van Paradijs (Netherlands), R. Wielebinski (Germany, Chairperson), A. Wolszczan (USA).

Chairperson, Local Organizing Committee: M. Kramer.

Principal Topics:

- Pulsar Emission (Theory & Observations)
- Origin and Evolution
- Pulsar Timing
- Pulsars as Probes (ISM, Circumstellar Medium)

Contact address: R. Wielebinski, MPI für Radioastronomie, Auf Dem Hügel 69, D-53121 Bonn, Germany

Tel: 49 228 525 300 Fax: 49 228 525 436

E-mail: rwielebinski@mpifr-bonn.mpg.de

WWW: <http://www.mpifr-bonn.mpg.de/div/pulsar/IAU177/>

IAU Colloquium 178 Polar Motion Historical and Scientific Problems

27 - 30 September, 1999, Cagliari, Italy

Scientific Organizing Committee: G. Beutler (Switzerland), N. Capitaine (France), S. Dick (USA, Chairperson), T. Fukushima (Japan), D. Gambis (France), D. McCarthy (USA), E. Proverbio (Italy), J. Vondrak (Czech R.), Ya. Yatskiv (Ukraine).

Chairperson, Local Organizing Committee: F. Fusi-Pecchi.

Principal Topics:

- History of Early Polar Motion Research
- History of the International Latitude Service, Bureau International de l'Heure, International Earth Rotation Service
- Evolution of Observations, Excitation of Polar Motion
- Secular Polar Motion / Chandler Motion
- Daily and Subdaily Polar Motion
- Modern Definition of the Celestial Ephemeris Pole
- Future Problems in Polar Motion Research

Contact address: S. Dick, U.S. Naval Observatory, 3450 Massachusetts Ave., NW, Washington, D.C. 20392-5420, USA

Tel: 1 202 762 1438 Fax: 1 202 762 1516

E-mail: dick@ariel.usno.navy.mil WWW: <http://www.ca.astro.it/IAU178>

IAU Colloquium 179 Cyclical Evolution of Solar Magnetic Fields: Advances in Theory and Observations

13 - 16 December, 1999, Kodaikanal, India

Scientific Organizing Committee: G. Ai (China), R. Canfield (USA), S.M. Chitre (India), M. Dryer (USA), O. Engvold (Norway, Chairperson), C. Froehlich (Switzerland), J. Leibacher (USA), V.I. Makarov (Russia), T. Sakurai (Japan), J. Toomre (USA), P. Venkatakrishnan (India, Chairperson), A. Wolfendale (UK).

Chairperson, Local Organizing Committee: P. Venkatakrishnan.

Principal Topics:

- Sunspot groups, filaments and coronal structures as tracers of sub-surface processes
- Vector magnetic fields, sub-surface stresses and evolution of magnetic helicity
- Properties of flux tubes and relation with solar irradiance variability
- Helioseismology, interior dynamics and cyclical evolution of seismic parameters
- Magnetoconvection
- Dynamo mechanisms
- Cyclical variation in quiet corona and coronal holes
- Cyclical variability of prominences, CMEs and flares.
- Solar wind, interplanetary magnetic fields, cosmic rays and the solar cycle
- New initiatives for synoptic observations

Contact address: P. Venkatakrishnan, Indian Inst. of Astrophysics, Bangalore 560034, India

Tel: 91 80 553 0672 Fax: 91 80 553 4043

E-mail: pvk@iiap.ernet.in WWW: <http://www.iiap.ernet.in/~iauc179>

6.3 Special Education Workshop

IAU-COSPAR- UN Special Workshop on Education at UNISPACE III

July 20 - 22, 1999, Vienna, Austria

Contact address: Donat Wentzel, Dept. of Astronomy, University of Maryland, College Park MD 20742 2421

Tel: 301 405 1518 Fax: 301 314 9067

E-mail: wentzel@astro.umd.edu WWW: <http://www.iau.org/futmeet.html>

7. POLICY STATEMENT ON ENVIRONMENTAL CHALLENGES TO ASTRONOMY

Issued by the IAU Executive Committee on July 4, 1998

During the 20th century, astronomy has made great progress on the most fundamental questions concerning the origin and evolution of the Universe and our place in it. Within subjects ranging from the origin and evolution of the Solar system, the formation and evolution of stars and the origin of the chemical elements, the nature and evolution of galaxies, up to the structure, origin, and evolution of the Universe itself, sound physical theories have been developed and tested against a wealth of increasingly detailed observational facts.

Except in the Solar system, astronomers cannot conduct experiments on the subjects of their studies. Thus, our understanding of the Universe is primarily based on observations of the electromagnetic and other kinds of radiation emitted by stars and galaxies. The dramatic recent progress is due to a series of observational breakthroughs, made with ground and space based observatories and closely linked to the development of cutting-edge technologies. In order to probe the diverse range of astronomical objects, observations must cover all wavelengths from radio via infrared and optical to X- and gamma-rays, some of which are only accessible from space.

The phenomena thus discovered include the most violent events known in the Universe. Yet, these objects are so far away that the signals recorded by astronomical telescopes when capturing radiation from the early phases of the Universe are vastly fainter than those familiar from everyday life. This fact makes astronomy especially vulnerable to, but also a very sensitive indicator of, environmental degradation affecting the night sky at all wavelengths.

At the threshold of the third millennium, progress in the further exploration of the depths of the universe is threatened by human activities affecting the night sky. Briefly, these adverse effects are fourfold:

1: *Pollution by scattered light from ground based light sources.*

To millions of people living in or near great cities or industrial centres, the sight of the dark night sky is unknown. Plainly visible from space, this light not only obliterates the faint signals reaching us from the Universe, it also represents the useless waste of much fossil or nuclear fuel. Thus, economic incentive and scientific interest go hand in hand in this matter. Simple measures exist to direct light where it is needed, and thus both conserve energy and keep the night sky pristine; they need to be implemented more widely. The IAU values and supports the numerous national and local initiatives taken to promote understanding and action on this issue.

2: *Interference from man-made radio noise.*

Radio astronomy has contributed several of the most fundamental discoveries of the past century. Now, however, it is under relentless and increasing pressure, above all from the communications industry, to give up the protected wavebands containing the astrophysically most important frequencies. Considering that an ordinary portable telephone, if placed on the Moon, would be one of the very brightest sources in the radio sky at its wavelength, even sideband radiation from transmissions in a permitted waveband may be fatal to astronomy. Continued efforts by the IAU and URSI (Union de Radio Science Internationale), as represented by the Inter-Union Committee on the Allocation of Frequencies for Radio Astronomy and Space Science (IUCAF) within the International Telecommunications Union (ITU), are vital for radio astronomy to survive in the face of this competition.

3: Space debris.

Space debris from spacecraft and launchers has two kinds of deleterious effects on astronomy: First, it leaves luminous trails on the sky which ruin astronomical observations. Second, direct hits by spacecraft debris are a threat to the survival of scientific satellite observatories, including the International Space Station, somewhat analogous to the effects of swarms of small natural meteorites. The former effect is mainly felt by astronomers; the latter problem affects all satellites regardless of their purpose. For this reason, international efforts are under way to control the growth of space debris, which will hopefully also benefit astronomy.

4: Technology experiments and artistic or commercial displays in space.

Experiments continue to be proposed which would place strongly luminous objects in space, whether for technology assessment (generation and transmission of illumination or power), or for artistic or commercial purposes. Responsibly executed and carefully controlled experiments should, of course be allowed, but malfunctions may occur. Moreover, at the moment, no international regulations exist to prevent uncontrolled private and other enterprises from launching objects into space that would ruin the night sky for people of all nations, potentially for many generations: Unlike ground-based art or advertising displays, space displays respect no national sovereignty or environmental regulations. An international treaty is needed to prevent unbridled proliferation of such displays to the irreparable detriment of scientific progress in astronomy.

The IAU, therefore, urgently appeals to the nations of the world to negotiate and implement an international treaty regulating space activities that would unnecessarily endanger what is perhaps the last natural resource available to all mankind: The night sky. Clearly, nations should be free to develop potentially beneficial space technology in a controlled and responsible manner as defined by internationally recognised guidelines. The IAU urges, however, that such guidelines be defined with due regard to the protection of peaceful scientific investigation, following the models set by, e.g. the Antarctic Treaty or the international agreements on radio frequency allocations.

8. POLICY STATEMENT ON NEAR EARTH OBJECT RESEARCH

Issued by the IAU Executive Committee on July 4, 1998

The Solar system contains a large number of bodies ranging in size from the major planets to tiny meteorites. Research over the last several decades has revealed that all major bodies of the Solar system have suffered larger or smaller impacts of bodies ranging in size from millimetres to kilometres, the best-known example of which is the abundance of craters on the Moon. Geological features on Earth show that impacts of significant size have occurred also on our own planet. The realization that such impacts occur at long, but presently poorly-known intervals has recently caused growing concern in the public, and in the press.

Research on the minor constituents of the Solar system - the minor planets or asteroids - has formed part of astronomical research for the last two centuries. The International Astronomical Union (IAU) has acted as the international focal point for this research since the foundation of the Union in 1919, in particular through its Commission on the Positions and Motions of Minor Planets, Planets, and Satellites. As part of this function, the IAU has for over 50 years operated a Minor Planet Center (MPC), currently at the Smithsonian Astrophysical Observatory (SAO;

Cambridge, Mass., USA), for the collection of data and the dissemination of information concerning minor planets and, lately, comets. When continued research showed that the orbits of several minor planets crossed that of the Earth, the IAU in 1991 appointed a Working Group on Near Earth Objects (NEO) to coordinate international studies of NEOs and develop suitable strategies for detection, follow-up, and orbit prediction. As one result of this work, the international Spaceguard Foundation was formed, and a number of observational programs for the detection of NEO's have been started. The WGNEO is also active in the development of proven algorithms for long-term NEO orbit prediction and thus for assessing the distance to which NEOs may approach Earth within the next few centuries.

Currently, the number, size distribution, and orbits of individual NEOs are incompletely known from observation. Thus, the most urgent task is the detection and observation of NEO's to determine their orbits. This is an international responsibility that requires the efforts of and support for astronomers around the world. As the international organization of professional astronomers, the IAU coordinates this activity through the NEO Working Group and offers the services of the MPC for the collection and collation of new observations and computation of predictions from which follow-up observations can be made to improve our knowledge of the orbits and sizes of these objects.

It is possible that, sometime in the future, these studies may lead to the prediction of an actual impact on Earth. In such a case, this information must be promptly conveyed to the governments of the world, who may be in a position to organise countermeasures (a subject outside the mandate of the IAU). On the other hand, public announcements of potential impacts without proper verification are clearly undesirable. The IAU has therefore charged the WGNEO, in consultation with astronomers worldwide, to draft a set of recommended procedures to be followed in case minor planets and comets are discovered that lead to predictions by the MPC of potential impacts. These procedures will conform to the following general principles:

- 1:** All information will be openly shared with astronomers and the general public world-wide.
- 2:** The content of public statements that might alarm the public will be subject to prior scientific peer review by the IAU.
- 3:** The IAU Officers and appropriate authorities will be consulted before such information is released to the press.

The IAU reaffirms and increases its support of the Minor Planet Center, as the international clearing-house for this research, and acknowledges the support of SAO and NASA for its operation. The IAU encourages all countries of the world to contribute to the effort of charting the NEO population and will continue to ensure that this global issue is addressed in a properly international forum.

9. IAU WORKING RULES, AS REVISED AT THE 71ST EC MEETING

Working Rules

I NON-DISCRIMINATION

1. The International Astronomical Union follows the regulations of ICSU: The International Council for Science (and concurs with ICSU statute 5 which defines the basic tenets of non-discrimination and of the universality of science:

"In pursuing its objectives in respect of the rights and responsibilities of scientists, ICSU, as an international non-governmental body, shall observe and actively uphold the principle of the universality of science. This principle entails freedom of association, expression, information, communication and movement in connection with international scientific activities, without any discrimination on the basis of such factors as citizenship, religion, creed, political stance, ethnic origin, race, colour, language, age or sex. ICSU shall recognise and respect the independence of the internal science policies of its National Members. ICSU shall not permit any of its activities to be disturbed by statements or actions of a political nature."

Participants in IAU-sponsored activities who feel that they have been subjected to discrimination are urged in the first instance to seek immediate clarification of all aspects of the incident, which may have occurred simply because of misunderstandings due to cultural differences inherent in an international organization such as the IAU. If the attempt to seek clarification does not prove satisfactory, contact should then be made with the IAU General Secretary who will seek to resolve the issue.

In the last resort, the Chairperson or the Secretary of the ICSU Standing Committee on the Freedom in the Conduct of Science (SCFCS) should be approached. The SCFCS has been created by ICSU in 1963 in order to safeguard the principle of the universality of science and to assist in the solution of specific problems. The SCFCS has, ever since, worked vigorously to ensure that this principle is upheld by providing advice and taking appropriate measures. The Executive Secretary of the SCFCS, Dr. P. Schindler, can be reached at the Swiss Academy of Sciences, Bärenplatz 2, 3011 Bern, Switzerland (Telephone: 41 31 312 33 75, Telefax: 41 31 312 32 91, e-mail: schindler@sanw.unibe.ch).

II MEMBERSHIP

A ADHERING COUNTRIES

2. Applications of countries for Full or Associate Membership of the Union are examined by the Executive Committee for:

- (a) the adequacy of the category in which the country wishes to be classified;
- (b) the present state and expected development of astronomy in the applying country;
- (c) the degree to which the prospective adhering body is representative of its country's astronomical activity.

3. Applications proposing an adequate annual contribution to the Union shall, with the recommendation of the Executive Committee, be submitted to the General Assembly for

decision.

B INDIVIDUAL MEMBERS

- 4.** Individuals proposed for Union Membership should, as a rule, be chosen from among astronomers and scientists whose activity is closely linked with astronomy, taking into account:
 - (a) the standard of their scientific achievement;
 - (b) the extent to which their scientific activity involves research in astronomy;
 - (c) their desire to assist in the fulfilment of the aims of the Union.
- 5.** Young astronomers should be considered eligible for membership after they have shown their qualifications for (as a rule through a Ph.D. degree or equivalent) and some years of experience in conducting original research.
- 6.** For full time professional astronomers the achievement in astronomy may consist either of original research or of substantial contributions to major astronomical programs.
- 7.** Others are eligible for membership only if they are making original contributions closely linked with astronomical research.
- 8.** Eight months before an ordinary General Assembly, adhering bodies will be asked to propose new Members. The proposals should reach the General Secretary not later than five months before the first session of the General Assembly. Proposals received after the closing date will only be taken into consideration if the delay is justified by exceptional circumstances.
- 9.** Each proposal shall be prepared separately and signed by the proposer. It should include the name, first names, postal and electronic addresses of the candidates, Institute or Observatory, place and date of birth, the University and the year of Ph.D. or equivalent title, present occupation, titles and bibliographic data for two or three of the more important papers or publications, and details, if any, worthy to be considered by the Nominating Committee.
- 10.** (a) Pursuant to Article 13 of the Statutes, Presidents of Union Divisions wishing to nominate candidates for Membership should address their suggestions to the General Secretary at least nine months before the first session of an ordinary General Assembly. These nominations should contain particulars as in Article 9.
 - (b) The General Secretary notifies the adhering bodies about such suggestions.
- 11.** The General Secretary shall prepare two lists for the Nominating Committee:
 - (a) one containing the candidates proposed by the adhering bodies.
 - (b) the other containing those suggested by Presidents of Divisions

- 12.** The Nominating Committee prepares the final proposals for Union membership from the two lists as mentioned in article 11.
- 13.** Adhering Bodies should propose the deletion of Members who have left the field of astronomy for other interests, unless they continue to contribute to astronomy. Such proposals should be announced to the Member concerned and to the General Secretary. Individual Members may resign from the Union by written notification of their resignation to the General Secretary.
- 14.** The alphabetical list of Union Members will be published by the General Secretary following each ordinary General Assembly.

III COMMISSION MEMBERSHIP

- 15.** Members of Union Commissions are co-opted by Commissions. The rules governing the procedure of such co-option are drawn up by the Commissions themselves.
- 16.** Commissions should choose, or approve of, Commission members taking into account their special interests, in particular their scientific activity in the appropriate fields of research and their contribution to the work of the Commission. They may:
 - (a) invite Union Members to become members of their Commission;
 - (b) remove Union members who have not contributed to the work of the Commission;
 - (c) accept or reject applications for membership from existing or proposed Union Members;
- 17.** Members may not, as a rule, be members of more than three Commissions.
- 18.** Members may apply for Commission membership by writing to the President of the Commission concerned. Such applications should only be made if the Member is actively engaged in the appropriate field of research and is prepared to contribute to the work of the Commission.
- 19.** Members of Commissions may resign from a Commission by writing to its President.
- 20.** Adhering Bodies, in sending in their proposals for new Members, may also suggest one Commission for each candidate.
- 21.** The General Secretary will record and analyse the lists of members of Commissions. If necessary, the General Secretary will try to resolve any outstanding anomalies.
- 22.** The list of Commission members will be published by the General Secretary in the Transactions of each ordinary General Assembly.

IV CONSULTANTS

23. Eligible as Consultants are non-members in a position to further the progress of astronomy.
24. Proposals of Commissions for the approval of consultants should, as a rule, reach the General Secretary not later than five months before the first session of an ordinary General Assembly.
25. The General Secretary shall prepare a list of those proposed for admission as consultants and submit it to the Executive Committee for approval.
26. The Administrative Office will maintain an alphabetical list of consultants.
27. Consultants may participate in the meetings of the Union. They may have voting right in the respective Commission. They receive, free of charge, the Information Bulletin of the Union.

V SCIENTIFIC MEETINGS

28. The General Secretary shall publish rules for scientific meetings organized or sponsored by the Union.

VI PUBLICATIONS

29. The publications of the International Astronomical Union, approved in the budget by the General Assembly, are prepared by the Administrative Office of the Union.
30. Commissions of the Union may, with the approval of the Executive Committee, issue their publications independently.
31. The distribution of publications of the Union is decided, on the proposal of the General Secretary, by the Executive Committee.
32. Members may purchase the publications of the Union at reduced prices.

VII EXTERNAL CONTACTS

33. No dealings with third parties, attributable to the Union, shall be undertaken by any Member of the Union except on the authority of the General Secretary.
34. Representatives of the Union in other bodies, especially in the ICSU General Assembly and Scientific Committees and Programmes, shall be appointed by the Executive

Committee. Nominations are sought from Presidents of appropriate Commissions.

35. Expenses incurred by Representatives of the Union in other bodies will be reimbursed at the discretion of the General Secretary, within the provisions of the Budget Estimate adopted by the General Assembly. Representatives are required to obtain prior approval of the General Secretary before incurring such expenses.

VIII GENERAL ASSEMBLIES

36. The General Secretary distributes the budget prepared by the Executive Committee to National or other appropriate Committees of Astronomy and/or Adhering Organizations for comments eight months before the General Assembly.

37. The decisions and recommendations of the Union on scientific and organizational matters are expressed in its Resolutions. Resolutions are proposed, evaluated, and approved according to the following guidelines:

(a) Resolutions fall in three categories:

A: Resolutions, proposed by Adhering Bodies or by the Executive Committee,

B: Resolutions, proposed by Divisions or Commissions not attached to a Division and adopted by the General Assembly,

C: Resolutions, adopted by Divisions or Commissions, but not presented to the General Assembly.

Resolutions proposed by Working Groups of the Executive Committee, of Divisions, or of Commissions not attached to a Division, shall be submitted to the parent bodies of these Working Groups for evaluation and approval as for other Resolutions proposed by these bodies.

(b) Resolutions should be submitted on standard forms appropriate to Resolutions of type A, B, and C, respectively. These forms are available from the IAU Secretariat.

(c) Resolutions of type A must be placed on the Agenda of the General Assembly and must be submitted to the General Secretary at least six months prior to the beginning of the General Assembly. Resolutions of type A or B which have implications for the budget of the Union must be submitted to the General Secretary nine months in advance in order to be considered by the General Assembly.

All other Resolutions of type B must be submitted to the General Secretary three months before the beginning of the General Assembly.

(d) In truly exceptional cases the Executive Committee may consider accepting late proposals for resolutions of type B.

(e) At its second session, each General Assembly appoints a Resolutions Committee consisting of five members of the Union, one of whom should be a member of the Executive

Committee. The Resolutions Committee remains in office until the end of the following General Assembly.

(f) The Resolutions Committee will examine the content, wording, and implications of all resolutions of types A and B to be presented to the second session of the General Assembly. In particular, it will address the following points:

- i Suitability of the subject for an IAU Resolution,
- ii Correct and unambiguous wording,
- iii Consistency with previous IAU Resolutions.

The Resolutions Committee may refer a Resolution back to the proposers for reconsideration or withdrawal, but can neither withdraw nor modify the substance of a Resolution on its own initiative. The Resolutions Committee will notify the Executive Committee of any perceived problems with the substance of a proposed Resolution.

(g) The Executive Committee will examine the substance and implications of all Resolutions proposed for adoption by the General Assembly (types A and B). The Resolutions Committee presents the proposals with the recommendations of the Executive Committee to the second session of the General Assembly for approval.

(h) Resolutions of type C have force only within the Commission or Division of origin.

IX WORKING GROUPS

38. The Executive Committee and the Divisions and Commissions may set up Working Groups for special tasks. Working Groups established by Divisions and Commissions have to be approved by the Executive Committee. All Working Groups are established initially for a period of three years. Before each General Assembly the Divisions and Commissions shall inform the Executive Committee which Working Groups are to be retained for the next 3-year period and which Working Groups are to be dissolved.

10. THE IAU ARCHIVES 1919-1970

The preservation of the Archives of the Union is one of the responsibilities of the General Secretary. As previously mentioned, we are fortunate that former IAU President Prof. Adriaan Blaauw, has undertaken, and now completed, the sorting, selection, packing and inventory of our archives for the period 1919-1970.

By agreement with the French Académie des Sciences, the IAU archives have been deposited in the Archives of the Académie where they will be preserved and administrated to fully professional standards, a task that would be impossible for our Secretariat to undertake. All access to the IAU archives will require the prior written authorisation of the IAU General Secretary. Requests for access to the IAU archives, including a description of the scientific project for which they will be used, should be addressed to the General Secretary well in advance of the projected visit. The IAU expects to receive a copy of all publications or reports including material from its archives.

Prof. Blaauw has prepared a detailed Inventory of the IAU archives, indicating the existence and precise location of the archival material. The Inventory (approx. 60 pages) will be printed in a limited number of copies, available upon request to the IAU Secretariat. The Inventory will also be made available from the IAU Web page, under *Administrative Matters*.

An integral part of the Archives is a collection of the *IAU Transactions* for the period, which is, however, unfortunately not complete. The missing Volumes are Nos. **I (1922)**, **V (1935)**, and **XIII (1967)**. There is also a collection of all *General Assembly Newspapers* which have appeared since such newspapers were initiated in 1958, except that the whole set from the GA in **Buenos Aires (1991)** is missing. We should be very grateful to readers who might be able to provide these missing volumes and newspapers.

11. EDUCATIONAL ACTIVITIES

The primary educational activities of the IAU are the exchange programme operated by Commission 38 (see below), the International Schools for Young Astronomers (ISYA), and the Teaching for Astronomy Development (TAD) programmes organised by Commission 46. Partial support for these activities from ICSU and UNESCO is gratefully acknowledged.

With the approval of the COSPAR Bureau, consultations are held to define a collaboration on future joint IAU-COSPAR educational initiatives that would profit from the synergy between the capabilities of the two organisations. As a step in this process, a joint IAU-COSPAR-UN Special Educational Workshop will be held during the UNISPACE III conference in Vienna in July 1999 (see [Sect. 6](#) for details).

11.1. Commission 38: Exchange of Astronomers

Within the budget approved by the Executive Committee, Commission 38 allocates grants to qualified individuals to enable them to visit institutions abroad. It is intended, in particular, that the visitors should have ample opportunity to interact with the intellectual life of the host institution so that maximum benefit is derived by both sides. Another specific objective is that astronomy in the home country should be enriched after the applicant returns.

Detailed guidelines for these grants and the application procedures to be followed were published in IB 81 (pp. 37-39) and are available from the Commission 38 Web page (linked from the IAU home page). All correspondence related to the programme should be directed to the President of IAU Commission 38, with a copy to the Vice-President. For the current triennium, their addresses are:

President: Vice-President:

Dr Morton S. Roberts Dr Richard M West
NRAO ESO
Edgemont Road Karl Schwarzschildstr 2
Charlottesville VA 22903 D 85748 Garching München
USA Germany
Phone: 1 804 296 0233 Phone: 49 89 320 06 276

Fax: 1 804 296 0278 Fax: 49 89 320 2362

Email: mroberts@nrao.edu Email: rwest@eso.org

11.2 Commission 46: Teaching of Astronomy

11.2.1. 24th IAU/UNESCO International School for Young Astronomers (ISYA)

The 24th ISYA will be held July 26 - August 14, 1999, at the University of Bucharest, Romania. The language of the School will be English.

Among the topics to be covered will be stars and stellar atmospheres. Special emphasis will be put on solar physics, due to the total solar eclipse of August 11, 1999, which will reach its maximum visibility in Romania.

Applications should include your achieved level of studies in physics and astronomy, any topic of special interest, as well as an e-mail and/or fax address, if available. To apply for the cost of travel, a letter of reference is required which evaluates your academic standing and your proficiency in English. Local costs will be supported by the host institute.

Applications and letters of reference should arrive **by April 15, 1999** and should be sent, by air mail, fax, or e-mail, to both:

Dr. Michèle Gerbaldi and Dr. Magda Stavinschi

Secretary for ISYA Director, Astronomical Institute of the
Institut d'Astrophysique, 98 bis, Bd. Arago Romanian Academy of Sciences
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The 25th ISYA is planned for January 2001 in Chiang Mai, Thailand.

11.2.2 Teaching for Astronomy Development (TAD): Progress Report

Vietnam: Ten of the university astronomy teachers who attended last year's IAU-sponsored "Summer school on astrophysics" met at a workshop in Vinh City, Sep. 21-24, with Donat G. Wentzel and James C. White II (both USA) as foreign advisors and with senior Vietnamese astronomers observing. The teachers have enthusiastically changed the style and to some degree the content of their teaching, aided by the texts that were donated by Saunders College Publishing last year. This year's practical exercise for the teachers was based on the color photos and computer-based data on variable stars that are part of the AAVSO's educational package "Hands-On-Astrophysics". A new university text is in preparation, both in English and Vietnamese, with the IAU contributing the extra cost of quality photographs. Vietnam's first (Japanese-donated) public planetarium has opened in Vinh. The IAU will help establish a program for the city schools. A variety of educational materials has been sent to several universities. The recent arrival at several universities of slide projectors, modern PC's, and limited e-mail will help accelerate progress.

Central America:

The second observing course at the Central American Observatory in Honduras, 15 Jan. to 15 Feb. 1998, served eight students from the six participating countries, most continuing from the previous course. Maria Cristina Pineda de Carias (Director of the Observatory) supervised a program of acquisition and reduction of photometric data on variable stars (0.4m telescope with IAU-supplied CCD photometer). Michael Barylak (ESA, Spain, travel supported by ESA) emphasized stellar spectra and the capability to use computer/internet based catalogues of data from ground and space.

The fourth Central American Course on Astronomy took place in Panama 15 Feb. to 1 March 1998, in connection with the solar eclipse on 26 Feb. Forty participants included Julieta Fierro and Armando Arellano Ferro (both Mexico); delegates from the six countries of the Central American Assembly of Astronomers; and 25 local physics teachers and students. Three teams observed the eclipse successfully. The lecture program has led to discussions how to make future meetings more effective for astronomy in Central America.

Armando Arellano Ferro (Mexico) taught a special course on astronomy in El Salvador, 22 Sep. to 10 Oct., emphasizing both practical work with a small telescope (their 0.3 m telescope and the IAU Traveling Telescope photometer) and the corresponding radiation physics and astrophysics. Participants are both University of El Salvador science and engineering students and members of the Asociacion Salvadoreña de Astronomía.

Morocco: The National Committee on Accreditation has approved a program of research and teaching of astronomy within the physics department of University Hassan II in Casablanca. Work towards the initiation of a TAD programme in Morocco is in progress.

Donat G. Wentzel, Secretary for TAD,

Professor Emeritus, University of Maryland

12. RELATIONS TO OTHER ORGANIZATIONS

ICSU: A major concern of the General Secretary (GS) has been to strengthen liaisons with our main international partner organizations. Developments at ICSU were described in IB 82 (p. 13), and we are collaborating with ICSU on the plans for the UNESCO/ICSU *World Conference on Science* in Budapest in June 1999. A major concern of the General Secretary (GS) has been to strengthen liaisons with our main international partner organizations. Developments at ICSU were described in IB 82 (p. 13), and we are collaborating with ICSU on the plans for the UNESCO/ICSU *World Conference on Science* in Budapest in June 1999.

COSPAR: Our long-standing good relations to COSPAR are being strengthened in our collaboration on the organization of two meetings (on environmental and educational matters) at UNISPACE III in 1999, and constructive discussions on more long-term joint initiatives in the educational field are under way. The COSPAR Executive Director, Prof. S. Grzedzielski, has provided the following short report on the 32nd COSPAR Scientific Assembly:

The Assembly, in Nagoya (Japan), July 1998, broke all records with more than 2500 papers accepted for 80+ symposia and scientific meetings. The attendance was second largest ever with over 1700 scientists registered. The meeting was extremely well organized by the Japanese hosts.

COSPAR Assemblies strive at covering the full spectrum of space research disciplines (cf. the COSPAR publications.) Astronomy in the broad sense of the term was discussed at more than twenty symposia and other meetings. As usual, a prominent place was occupied by solar system exploration with emphasis on remote and *in situ* studies of small bodies and, in the case of planets, on the results of the current Galileo mission to the Jovian system, as well as present and future exploration of Mars. Other well covered topics were solar physics and solar activity, which were discussed at six different symposia devoted to subjects from helioseismology to heliospheric physics to solar-type activity observed in other stars. High-energy astrophysics was represented by symposia on broad band X-ray spectra, active galactic nuclei and cosmic rays. As COSPAR draws most of its input from novel techniques of observation from space, due attention was devoted to such developments as space infrared telescopes and space VLBI. Search for new experimental techniques was also most prominent at the symposium on fundamental physics where possibilities of testing general relativity, equivalence principle, etc. were discussed.

Three new members were elected to the COSPAR Bureau 1998-2002, including the current IAU General Secretary.

United Nations: The IAU has Observer status with the UN *Committee on the Peaceful Uses of Outer Space* in Vienna, which has been instrumental in preparing the major UN treaties and conventions regarding outer space. Former IAU GS Derek McNally has been very effective in raising awareness of the environmental dangers to astronomy there. Our efforts are now directed at collecting support for an agreement to regulate the launch of strongly luminous and radio-emitting satellites, so science may remain alive in parallel with technical and commercial developments. The UN Office of Outer Space Affairs also has a long record of educational initiatives in astronomy in developing countries. We are seeking ways to develop this synergy to make everybody's efforts more effective: Bright young scientists need not only brains and training (e.g. through an ISYA), but also a job and appropriate tools to use their capabilities effectively in the service of their country. Collaboration between pure and applied sciences, and with governments, should help to reach this goal.

13. MEMBERSHIP

13.1 National Membership

At its 71st meeting the Executive Committee considered an application by the Macedonian Academy of Sciences and Arts for full membership in the IAU and found it to be in order. Based upon the authorization of the XXIIIrd General Assembly, the EC decided to welcome the *Former Yugoslavian Republic Of Macedonia* as a Full Member of the IAU. The Union looks forward to collaborating with our Macedonian colleagues for the benefit of astronomy in the country.

Following five years of non-payment of dues, and after several attempts to arrive at a solution to this problem, the EC regretted to note that the membership of *Azerbaijan* had terminated at the end of 1997, pursuant to Article 7 of the IAU statutes.

13.2 Deceased Members

The General Secretary regrets to report the following names of Members whose death has been reported to the Secretariat since the XXIIIrd General Assembly

Ballario M C

Barnothy Jenő

Becker Wilhelm

Brückner Guenter E

Bruston Paul

Burger J J

Byrne Patrick B

Caughlan Georgeanne R

Cheng Chung-chieh

Dinescu A

Dossin F

Dramba C

Durgaprasad N

Edlén Bengt

Eelsalu Heino

Elgaroy Öystein

Emerson David

Engelbrecht Christian,

Gent Hubert

Hansson Nils

Hosokawa Yoshimasa H

Izvekov Vladimir

Kamper Karl W

Kikuchi Sadaemon

Kojoian Gabriel

Kustaanheimo Paul

Laurent Bertel E

Le Dourneuf Maryvonne
Lunel Madeleine
Machado Silva
Mandzhos Andrej V
Mariotti Jean-Marie
Markowitz William
Michalitsianos Andrew
Missana Natale
Moons Michele B M M
Oesterwinter Claus
Ponnamperuma Cyril
Prosser Jr Charles
Rodgers Alex W
Sato Yuzo
Schramm David N
Scott Elizabeth L
Strong John D
Sundelius Björn
Suzuki Yoshimasa
Swihart Thomas L
Szebehely Victor G
Tagliaferri, Giuseppe
Troitsky V S
Tsubokawa Ietsune
Vaghi Sergio
Vahia Mayank N
Venkatesan Doraswamy

Wallenquist Åke A E

Willey Robert L

Wood Frank Bradshaw

Worley Charles

Wright Frances

13.3 Address Updates Needed for IAU Members or Consultants!

A major effort has been made by the Secretariat to bring the membership data base up to date. We thank all who sent information regarding previously listed Members or Consultants with erroneous addresses. In many cases, this information allowed us to "recover" these Members. However, we still need accurate address information for the following Members (mail to the addresses below is returned), and would appreciate all possible help from readers:

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14. PUBLICATIONS

Proceedings of IAU General Assemblies and Symposia are published as a series by the IAU Publisher, *i.e.* by Kluwer for all meetings through 1997 and by the Astronomical Society of the Pacific for all meetings from 1998 onwards. Publishers for Proceedings of IAU Colloquia, Regional Meetings, and Co-Sponsored Meetings are chosen by the organisers.

Lists of previous IAU meetings and their proceedings are maintained at the IAU Web site under *Scientific Meetings* and *IAU Publications*. Please report any errors or omissions to the Secretariat. Especially, our information on some early Colloquia is still incomplete, and we would appreciate any additional information that may enable us to complete it. Moreover, while the Secretariat has a complete set of Symposium volumes, our collection of Colloquium proceedings is seriously incomplete. The missing volumes will be identified in the list posted on the Web, and we shall be most grateful to readers for any donations of missing books.

The *Highlights of Astronomy, Vol IIA+B* and *IAU Transactions Vol. XXIIIB* are now in print; the former should appear by the end of 1998.

Since IB 82, the following Proceedings of IAU sponsored meetings have appeared:

14.1. IAU Symposia (All Kluwer Academic Publishers)

181 Sounding Solar and Stellar Interiors

Nice, France, September 30 - October 3, 1996,
Eds: J. Provost & F.-X. Schmieder. ISBN 0-7923-4839-9, 1997

184 **The Central Regions of the Galaxy and Galaxies**

Kyoto, Japan, August 18-22, 1997

Eds: Y. Sofue. ISBN 0-7923-5060-X, 1998

185 **New Eyes to See Inside the Sun and the Stars : Pushing the Limits of Helio and Astero-Seismology with New Observations from the Ground and from Space**

Kyoto, Japan, August 18-22, 1997

Eds: F.-L. Deubner, J. Christensen-Dalsgaard & D. Kurtz. ISBN 0-7923-5075-8, 1998

188 **The Hot Universe**

Kyoto, Japan, August 26-30, 1997

K. Koyama, S. Kitamoto & M. Itoh. ISBN 0-7923-5058-8, 1998

14.2. IAU Colloquia

162 **New Trends in Astronomy Teaching**

London and Milton Keynes, UK, July 8-12, 1996

Eds: L. Gouguenheim, D. McNally & J.R. Percy
Cambridge Univ. Press. ISBN 0-521-62373-1, 1998

164 **Radio Emission from Galactic and Extragalactic Compact Sources**

Socorro, New Mexico, USA, April 28 - May 2, 1997

Eds: A. Zensus, G.M. Taylor & J.M. Wrobel
ASP Conf. Ser. Vol. 144. ISBN 1-886733-64-3, 1998

166 **The Local Bubble and Beyond**

Garching b. München, Germany, April 21-25, 1997

Eds: D. Breitschwerdt, M.J. Freyberg & J. Trümper
Springer-Verlag (Lecture Notes in Physics, Vol. 506). ISBN 3-540-64306-0, 1998

14.3. Other books received

Some publishers send complimentary review copies of new books to the IAU Secretariat. Although we cannot undertake to bring book reviews in the IB, the basic information on such books received in 1997-1998 is listed below.

Kluwer Academic Publishers, Dordrecht, The Netherlands:

Astrophysics and Space Science Library

212 **Wide-Field Spectroscopy**

Eds. E. Kontizas, M. Kontizas, D.H. Morgan & G.P. Vettolani
ISBN 0-7923-4518-5 (HB) ,1997 US\$ 182.00

216 Magnetohydrodynamics in Binary Stars

C.G. Cambell, ISBN 0-7923-4606-8 (HB), 1997 US\$ 148.00

217 Nonequilibrium Processes in the Planetary and Cometary Atmosphere: Theory and Applications

Eds. M.Y. Marov, V. Shematovich, D.V. Bisikalo & J.C. Gérard
ISBN 0-7923-4686-6 (HB), 1997 US\$ 140.00

218 Astronomical Time Series

Eds. D. Maoz, A. Sternberg, & E. Leibowitz.
ISBN 0-7923-4706-4 (HB), 1997 US\$ 140.00

219 The Interstellar Medium in Galaxies

Ed. J.M. Van der Hulst. ISBN 0-7923-4676-9 (HB), 1997 US\$ 98.00

220 The Three galileos: The man, the spacecraft. the telescope.

Eds. C. Barberi, J.H. Rahe, T. V. Johnson & A. M. Sohus
ISBN 0-7923-4861-3 (HB), 1997 US\$ 185.00

223 Visual Double Stars: Formation, Dynamics and Evolutionary Tracks

Eds. J.A. Docobo, A. Elipe & H. McAlister. ISBN 0-7923-4793-5 (HB) 1997

224 Electronic Publishing for Physics and Astronomy

Ed. A. Heck. ISBN 0-7923-4820-6 (HB), 1997 US\$ 129.00

225 SCORE '96 Solar Convection and Oscillations and Their Relationship

Eds. F.P. Pijpers, J. Christensen-Dalsgaard & C.S. Rosenthal
ISBN 0-7923-4852-4 (HB), 1998 US\$ 142.00

226 Observational Cosmology With the New Radio Surveys

Eds. M.N. Bremer, N. Jackson & I Pérez-Fournon.
ISBN 0-7923-4885-0 (HB), 1998 US\$ 142.00

227 Solar System Ices

Eds. B. Schmitt, C. de Bergh & M. Festou.
ISBN 0- 7923-4902-4 (HB), 1998 US\$ 340.00

229 Observational Plasma Astrophysics: Five Years of Yohkoh and Beyond

Eds. T. Watanabe, T. Kosgugi & A. C. Sterling

ISBN 0-7923-4985-7 (HB), 1998 US\$ 188.00

NATO ASI Series

C501 High Angular Resolution in Astrophysics

Eds. A. Lagrange, D. Mourard & P. Léna
ISBN 0-7923-4767-6 (HB), 1997 US\$ 169.00

C502 The Cosmic Microwave Background

Eds. C.H. Lineweaver, J.G. Bartlett, A. Blanchard, M. Signore & J. Silk
ISBN 0-7923-4815-X (HB), 1997 US\$ 199.00

C503 Generation of Cosmological Large-Scale Structure

Eds. D. Schramm & P. Galeotti. ISBN 0-7923-4816-8 (HB), 1997 US\$ 149.00

C509 Polar Cap Boundary Phenomena

Eds J. Moen, A. Egeland & M. Lockwood.
ISBN 0-7923- 4976-8 (HB),1998 US\$ 184.00

Other Books:

ISSI 2 Transport Across the Boundaries of the Magnetosphere

Eds. B. Hultqvist & Marit Oieroset. ISBN 0-7923-4788-9 (HB), 1997 US\$ 159.00

The First Results From Soho

Eds. B. Fleck & Z. Svestka. ISBN 0-7923-4882-6 (HB), 1998 US\$ 285.00

Solar Electromagnetic Radiation Study for Solar Cycle 22

Eds. J.M. Pap, C. Fröhlich & R.K. Ulrich.
ISBN 0-7923-4999-7 (HB), 1998 US\$ 189.00

Geometry, Fields and Cosmology: Techniques and Applications

Eds. B.R. Iyer and C.V. Vishveshwara
ISBN 0-7923-4725-0 (HB), 1997 US\$ 248.00

Cambridge University Press, Cambridge, UK, and Cambridge, MA, USA:

Cambridge Astrophysics Series

CAS 30 Globular Cluster Systems

K. Ashman & S. Zepf. ISBN 0-521-55057-2 (HB), 1998 US\$ 69.95

CAS 31 Pulsar Astronomy

A.G. Lyne & F. Graham-Smith. ISBN 0-521-59413-8 (HB), 1998

CAS 32 Accretion Processes in Star Formation

L. Hartmann. ISBN 0-521-43507-2 (HB), 1998

Cambridge Contemporary Astrophysics

Instrumentation for Large Telescopes

Eds. J.M. Rodriguez Espinosa , A. Herrero & F. Sanchez
ISBN 0-521-58291-1 (HB), 1997

Relativistic Astrophysics

Eds. B.J.T. Jones & D. Markovic. ISBN 0-521-62113-5 (HB), 1997 US\$ 69.95

Advances in Stellar Evolution

Eds. R.T Rood & A. Renzini. ISBN 0-521-59184-8 (HB), 1997 US\$ 69.95

Relativistic Gravitation and Gravitational Radiation

Eds. J.A. March & J.P. Lasota. ISBN 0-521-59065-5 (HB), 1997 US\$ 74.95

Stellar Astrophysics for the Local Group

Eds. A. Aparicio, A. Herrero & F. Sanchez. ISBN 0-521-632522-2 (HB), 1998

Nuclear and Particle Astrophysics

Eds. J.G. Hirsch & D. Page. ISBN 0-521-63010-X (HB), 1998

Other C.U.P. Books

The Search for Life on Other Planets

B. Jakosky. ISBN 0-521-59837-0 (PB), 1998 US\$ 19.95

The Solar Corona

L. Golub & J. Pasachoff. ISBN 0-521-0-48535 5 (PB), 1998 US\$ 39.95

The Heavens on Fire: The Great Leonid Meteor Storms

M. Littmann. ISBN 0-521-62405-3 (HB), 1998 US\$ 39.95

The Universe at Large

Eds. G. Münch, A. Mampaso & F. Sanchez. ISBN 0-521-58944-4 (PB), 1997

Nucleosynthesis and Chemical Evolution of Galaxies

B.E.J. Pagel. ISBN 0-521-55958-8 (PB), 1998

Image Processing and Data Analysis: The Multiscale Approach

J.L. Stark, F. Murtagh & A. Bijaoui. ISBN 0-521-59914-8 (PB), 1998

Galaxy Morphology and Classification

S. Van den Bergh. ISBN 0-521-62335 9 (HB), 1998 UK£ 19.95

Other publishers:

Variable Stars and the Astrophysical Returns of Microlensing Surveys

Eds. R. Ferlet, J. P. Maillard & B. Raban
Editions Frontieres, Gif-sur-Yvette, ISBN 2-86332-215-X (HB), 1996

Galaxies: Interactions and Induced Star Formation

R.C. Kennicutt Jr. F. Schweizer & J.E. Barnes
Springer Verlag, Berlin, ISBN 3-540-63569-6 (HB), 1998

Supernovae and cosmology

Eds. L. Labhardt, B. Binggeli & R. Buser
Astronomisches Institut der Universitat Basel, Binningen CH, 1997, US\$ 30.00

The Planet Venus

M. Y. Marov & D. Grinspoon
Yale University Press, New Haven CT, ISBN 0 4975-7 US\$ 65.

Galileo Galilei: Sidereus Nuncius

Digital Facsimile Edition on CD-ROM (further titles available at www.octavo.com) Octavo Corporation, 394 University Ave. Palo Alto, CA 94301, USA.

Systèmes de Référence Spatio-Temporels (Prague, Sep. 22-24, 1997)

Order form and cheque for 150 FRF to Observatoire de Paris to:
Dr. N. Capitaine, DANOF, Obs. de Paris, 61, Av. de l'Observatoire, F 75014 Paris.

15. OTHER MEETINGS ON ASTRONOMICAL TOPICS

Radar Observations of Meteors: Issues and Results, Session at 1999 URSI National Meeting

January 6, 1999, Boulder CO, USA

Contact address: Communications and Space Sciences Laboratory (CSSL), The Pennsylvania State Univ., 316 EE East, University Park PA 16802-2707, USA

Tel: 1 814 865 2354 E-mail: JDMathews@psu.edu

Fax: 1 814 863 8457 WWW: <http://cires.colorado.edu/ursi>

INSAP II: The Inspiration of Astronomical Phenomena

January 7 - 14, 1999, Island Republic of Malta

Contact address: Raymond E. White, Steward Observatory, 933 N. Cherry Ave., Tucson AZ 85721-0065, USA

Tel: 1 520 621 6528 E-mail: rwhite@as.arizona.edu

Fax: 1 520 621 1532

WWW: <http://ethel.as.arizona.edu/~white/insap2.htm>

The Cosmological Parameter Ω (First Princeton-PUC Joint Workshop on Astrophysics)

January 11 - 14, 1999, Pucón, Chile

Contact address: Alejandro Clocchiatti, Dept. of Astronomy and Astrophysics, Pontif. Universidad Catholica, Casilla 104, Santiago 22, Chile

Tel: 56 2 686 4940 Fax: 56 2 686 4948

E-mail: workshop@astro.puc WWW: <http://www.astro.puc.cl/~workshop/>

The Status of Inflationary Cosmology (Pritzker Symposium & Workshop)

January 29 - February 3, 1999, Chicago IL, USA

Contact address: Carrie Eder, Astronomy & Astrophysics, Univ. of Chicago, 5640 South Ellis Ave., Chicago IL 60637, USA

Tel: 1 773 702 8203 Fax: 1 773 702 8212

E-mail: eder@oddjob.uchicago.edu

WWW: <http://www-astro-theory.fnal.gov/Personal/psw/>

Southern African Relativistic Cosmology Conference

February 1 - 5, 1999, Cape Town, South Africa

Contact address: R. Maartens, Portsmouth Univ., School of Computer Science and Mathematics, Hampshire Terrace, Portsmouth PO1 2EG, UK

Tel: 44 1705 843 112/009 Fax: 44 1705 843 106

E-mail: maartens@sms.port.ac.uk WWW: <http://vishnu.mth.uct.ac.za/cosmos/>

2nd ICRA Network Workshop: The Chaotic Universe: Theory, Observations, Computer

Experiments

February 1 - 5, 1999, Rome, Italy

Contact address: Chaotic Universe Workshop, ICRA, Dipartimento di Fisica, Univ. degli Studi di Roma, La Sapienza, Piazzale Aldo Moro 5, I-00185 Roma, Italy

Tel: 39 6 4991 4397 Fax: 39 6 4454 992

E-mail: gurzadya@icra.it; chaos@icra.it

WWW: <http://www.icra.it/chaos/announce.htm>

Mars Exploration Programme & Sample Return Missions

February 1 - 5, 1999, Paris, France

Contact address: SOCFI/MARS, 14 rue Mandar, F-75002 Paris, France

Tel: 33 1 44 88 25 25 Fax: 33 1 44 33 54 70

E-mail: i.burger@socfi.fr WWW: <http://www.cnes.fr/actualites/MARS>

Treasure-Hunting in Astronomical Plate Archives

March 4 - 6, 1999, Sonneberg, Germany

Contact address: Angelika Wicklein, Sonneberg Observatory, Sternwartestr. 32, D-96515 Sonneberg, Germany

Tel: 9 3675 81210 Fax: 49 3675 81218

E-mail: office@stw.tu-ilmenau.de

WWW: <http://www.stw.tu-ilmenau.de/~web/workshop/thapa.html>

Eighth UN/ESA Workshop on Basic Space Science: Science Exploration

March 13 - 17, 1999, Mafraq, Jordan

Contact address: Hans J. Haubold, United Nations, P.O. Box 500, A-1400 Wien, Austria

Tel: 43 1 26060 4949 Fax: 43 1 26060 5830

E-mail: haubold@kph.tuwein.ac.at

WWW: <http://www.seas.columbia.edu/~ah297/un-esa/>

30th Lunar and Planetary Science Conference

March 15 - 19, 1999, Houston TX, USA

Contact address: 30th LPSC, Publ. and Program Services Dept, Lunar and Planetary Inst.,

3600 Bay Area Blvd, Houston TX 77058-1113, USA

Tel: 281 486 2158 Fax: 1 281 486 2125

E-mail: simmons@lpi.jsc.nasa.gov WWW: <http://cass.jsc.nasa.gov/meetings/LPSC99/>

29th Saas-Fee Advanced Course: Physics of Star Formation in Galaxies

March 22 - 27, 1999, Les Diablerets, Switzerland

Contact address: SSAA Advanced Course 1999, Geneva Observatory, CH-1200 Sauverny, Switzerland

Fax: 41 22 755 3983 E-mail: ssaa99@obs.unige.ch

WWW: <http://obswww.unige.ch/ssaa99/>

1999 AAS High Energy Astrophysics Division (HEAD) Meeting

April 12 - 15, 1999, Charleston SC, USA

Contact address: John Vallerger, Suite 100, 2452 Delmer St., Oakland CA 94602, USA

Tel: 1 510 530 1688 Fax: 1 510 530 2416

E-mail: eureka@netcom.com WWW: <http://www.eurekasci.com>

Cataclysmic Variables: A 60th birthday symposium in honour of Brian Warner

April 12 - 16, 1999, Oxford, UK

Contact address: Phil Charles, Dept of Astrophysics, Oxford Univ., Keble Road, Oxford OX1 3RH, UK

Tel: 44 1865 2733 302 Fax: 44 1865 2733 390

E-mail: warner@astro.ox.ac.uk WWW: <http://www-astro.physics.ox.ac.uk/~warner/>

European Geophysical Society XXIV General Assembly, Sessions on Solar-Terrestrial Sciences, Planetary and Solar System Sciences

April 19 - 23, 1999, The Hague, Netherlands

Contact address: EGS Office, Max-Planck-Str. 13, D-37191 Katlenburg-Lindau, Germany

Tel: 49 5556 1440 Fax: 49 5556 4709

E-mail: egs@copernicus.org

WWW: <http://www.copernicus.org/EGS/EGS.html>

Thermal Emission Spectroscopy and Analysis of Dust, Disks, and Regoliths

April 28 - 30, 1999, Houston TX, USA

Contact address: Thermal99 Workshop, Lunar and Planetary Inst., 3600 Bay Area Blvd, Houston TX 77058-1113, USA

Tel: 1 281 486 2158 Fax: 1 281 486 2125

E-mail: simmons@loi.jsc.nasa.gov

WWW: <http://cass.jsc.nasa.gov/meetings/thermal99/>

Magnetic Activity in Stars, Disks and Quasars

May 19 - 20, 1999, London, UK

Contact address: D. Lynden-Bell, Inst. of Astronomy, The Observatories, Madingley Road, Cambridge CB3 0HA, UK

Tel: 44 1223 33 7548 Fax: 44 1223 33 9910

E-mail: dlb@ast.cam.ac.uk

Working on the Fringe: An International Conference on Optical and IR Interferometry from Ground and Space

May 24 - 27, 1999, Dana Point CA, USA

Contact address: Steve Unwin, MS 301-486, JPL, 4800 Oak Grove Drive, Pasadena CA 91109, USA

Tel: 1 818 354 5066 Fax: 1 818 393 5239

E-mail: unwin@huey.jpl.nasa.gov WWW: <http://sim.jpl.nasa.gov/conference/>

International Monitoring Programs for Asteroid and Comet Threat (IMPACT Workshop)

June 1-4 1999, Torino, Italy

SCO Co-Chairs : H. Rickman and V.Zappala (Pres., IAU Commissions 20 and 15)

Contact Addresses : H Rickman (IAU see inside cover) or V. Zappala :

Oss Astronomico di Torino, St. Osservatorio 220, I 10025 Torino, Italy

Tel: 39 11 461 9035 Fax: 39 11 461 9030

E-mail: zappala@to.astro.it WWW: <http://www.iau.org/neo.html>

The Hy-Redshift Universe

June 21 - 24, 1999, Berkeley CA, USA

Contact address: Ivan King, Univ. of California Berkeley, 601 Campbell Hall, Berkeley CA

94720, USA

Tel: 1 510 642 2206 Fax: 1 510 642 3411

E-mail: hyfest@bigz.berkeley.edu

WWW: <http://astro.berkeley.edu/~dan/hyfest/hyfest.html>

8th SOHO Workshop: Plasma Dynamics and Diagnostics in the Transition Region and Corona

June 22 - 25, 1999, Orsay, France

Contact address: Jean-Claude Vial, Inst. d'Astrophysique Spatiale, Bat. 121, Univ. Paris XI, F-91405 Orsay Cedex, France

Tel: 33 1 69 85 86 31 Fax: 33 1 69 85 87 01

E-mail: vial@medoc-ias.u-psud.fr WWW : <http://soho8www.medoc-ias.u-psud.fr>

Instruments and Cosmology: A Meeting to Celebrate Jim Gunn's 60th Birthday

June 23 - 25, 1999, Princeton NJ, USA

Contact address: Jill Knapp, Dept of Astrophysical Sciences, Princeton Univ., Princeton NJ 08544-1001, USA

Tel: 1 609 258 3824/3803 Fax: 1 609 258 1020

E-mail: gk@astro.princeton.edu WWW: <http://www.astro.princeton.edu>

Clustering at High Redshift

June 29 - July 2, 1999, Marseille, France

Contact address: A. Mazure or O. Le Fevre, LAS, Traverse du Siphon, BP 8, F-13376 Marseille Cedex 12, France

Tel: 33 491 055 902 Fax: 33 491 661 855

E-mail: mazure@astrsp-mrs.fr

WWW: <http://www.astrsp-mrs.fr/www/igrap99.html>

111th Annual Meeting of the Astronomical Society of the Pacific

July 1 - 7, 1999, Toronto, Canada

Contact address: Laurie Keechler, Astronomical Society of the Pacific, 390 Ashton Av., San Francisco, CA 94112, USA

Tel: 1 415 337 1100/ 1109 Fax: 1 415 337 5205

E-mail: lkeechler@aspsky.org WWW: <http://asp.unm.edu>

Amateur-Professional Partnership in Astronomical Research and Education

July 5 - 7, 1999, Toronto, Canada

Contact address: J.R. Percy, Erindale Campus, Univ. of Toronto, Mississauga ON, L5L 1C6, Canada

Tel: 1 905 828 5351 Fax: 1 905 828 5425

E-mail: jpercy@erin.utoronto.ca WWW: <http://www.aspsky.org/u99/sched.html>

Galaxy Dynamics: From the Early Universe to the Present

July 8 - 13, 1999, Paris, France

Contact address: Françoise Combes, DEMIRM, Observatoire de Paris, 61 avenue de l'Observatoire, F-75014 Paris, France

Tel: 33 1 4051 2077 Fax: 33 1 4051 2002

E-mail: francoise.combes@obspm.fr WWW: <http://www.iap.fr/iapmtg99>

62nd Annual Meeting Meteoritical Society

July 11 - 16, 1999, Johannesburg, South Africa

Contact address: Wolf Uwe Reimold, Dept of Geology, Wits Univ., Private Bag 3, P.O. Wits 2050, Johannesburg, South Africa

Tel: 27 11 716 2946 Fax: 27 11 339 1697

E-mail: 065msoc@cosmos.wits.ac.za WWW: <http://www.wits.ac.za/metsoc99/>

HIA/UVic Workshop on Cosmic Flows

July 13 - 18, 1999, Victoria BC, Canada

Contact address: Stephane Courteau, HIA/DAO, 5071 W. Saanich Rd., Victoria BC, V8X 4M6, Canada

Tel: 1 250 363 8108 Fax: 1 250 363 0045

E-mail: cflows99@hia.nrc.ca

IAGA/IUGG 1999, Symposia on Solar Wind and Interplanetary Field, and Long and Short Term Variability in Sun's History and Global Change

July 19 - 30, 1999, Birmingham, UK

Contact address: IUGG99 Secretariat School of Earth Sciences, Univ. of Birmingham,

Edgbaston, Birmingham B15 2TT, UK

Tel: 44 121 414 6165 Fax: 44 121 414 4942

E-mail: IUGG99@bham.ac.uk

WWW: <http://www.ngdc.noaa.gov/IAGA/symposia/d4sym.html>

Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III) and Satellite Meetings

July 19 - 30, 1999, Vienna, Austria

Contact address: Office for Outer Space Affairs, Vienna International Centre, P.O. Box 500, A-1400 Vienna, Austria

Tel: 43 1 26060 4950 Fax: 43 1 26060 5830

E-mail: osa@unov.un.or.at WWW: <http://www.un.or.at/OOSA/>

Gravitational Lensing: Recent Progress and Future Goals

July 25 - 30, 1999, Boston MA, USA

Contact address: Tereasa Brainerd, Dept of Astronomy, Boston Univ., 715 Commonwealth Ave., Boston MA 02215, USA

Tel: 1 617 353 6646 Fax: 1 617 353 5704

E-mail: brainerd@bu.edu WWW: <http://bu-ast.bu.edu/~brainerd/lensconf/>

Asteroids, Comets, Meteors 1999

July 26 - 30, 1999, Ithaca NY, USA

Contact address: Beth Clark, ACM Conf., Space Sciences Bldg., Cornell Univ., Ithaca NY 14853-6801, USA

Tel: 1 607 254 8895 Fax: 1 607 255 9002

E-mail: acm@scorpio.tn.cornell.edu WWW: <http://scorpio.tn.cornell.edu/ACM/>

1999 Pacific Rim Conference on Stellar Astrophysics

August 1 - 4, 1999, Hong Kong, China

Contact address: Kwong-Sang Cheng, Dept of Physics, Hong Kong Univ., Pokfulam Road, Hong Kong, China

Tel: 852 2859 2368 Fax: 852 2559 9152

E-mail: astrophysics@hkucc.hku.hk

A New Era in the Search for Life in the Universe

August 2 - 6, 1999, Hapuna Beach HI, USA

Contact address: Karen Meech, Inst. for Astronomy, 2680 Woodlawn Drive, Honolulu HI 96822, USA

Tel: 1 808 956 6828 Fax: 1 808 988 2790

E-mail: bioast99@nihoa.ifa.hawaii.edu

WWW: <http://www.ifa.hawaii.edu/~meech/bioast/>

Asymmetrical Planetary Nebulae II: From Origins to Microstructures

August 3 - 6, 1999, Cambridge MA, USA

Contact address: Joel Kastner, MIT Center for Space Res., NE80-6007, 77 Mass. Ave., Cambridge MA 02139, USA

Tel: 1 617 253 3875 Fax: 1 808 988 2790

E-mail: jhk@juggler.mit.edu WWW: http://space.mit.edu/PN_conf

Solar Eclipse August 1999 Symposium: Research Amateur Astronomy in the VLT Era

August 7 - 13, 1999, Garching bei München, Germany

Contact address: Klaus Reinsch, Univ. Observatory Goettingen, Geismarlandstr. 11, D-37083 Goettingen, Germany

Tel: 49 551 394 037 Fax: 49 551 395 043

E-mail: reinsch@uni-sw.gwdg.de

WWW: http://neptun.uni-sw.gwdg.de/sonne/eclipse99_conference.html

Last Total Eclipse of the Millennium

August 13 - 15, 1999, Istanbul, Turkey

Contact address: Attila Özguc, Bogazici Univ., Kandilli Observatory, Cengelkoy, Istanbul 81220, Turkey

Tel: 90 216 308 0514 Fax: 90 216 332 1711

E-mail: ozguc@boun.edu.tr WWW: http://www.boun.edu.tr/~koeri/eclipse_99

XXVIth General Assembly of the International Union of Radio Science, Sessions on Radio Astronomy

August 13 - 21, 1999, Toronto, Canada

Contact address: Nicole A. Sarault, URSI GA' 99 Management Office, NRC Canada, Montreal Road Bldg M-19, Ottawa, Ontario K1A 0R6, Canada

Tel: 1 613 993 7271 Fax: 1 613 993 7250

E-mail: ursi99@nrc.ca

WWW: http://www.nrc.ca/confserv/ursi99/session_e.htm#commission_j

Second International Workshop on Cometary Astronomy (IWCA II)

August 14 - 16, 1999, Cambridge, UK

Contact address: Daniel W.G. Green, Smithsonian Astrophysical Observatory, 60 Garden Street, Cambridge, MA 02138, USA

Tel: 1 617 495 7440 Fax: 1 617 495 7001

E-mail: icq@cfa.harvard.edu

WWW: <http://cfa-www.harvard.edu/cfa/ps/icq/IWCA2.html>

GMIC :99 The Universe of Gamov: Original Ideas in Astrophysics and Cosmology

August 16-21, 1999, Odessa, Ukraine

Contact address: M. Ryabov, Odessa Astronomical Observatory, Park Shevchenko, Odessa-14, Ukraine, 270014

Tel: 7 0482 24 71 60/ 22 03 96 Fax: 7 0482 22 84 42

E-mail: root@astroc.odessa.ua

WWW: <http://www.rsssi.ru/gmic99/brown.nord.nw.ru/conf99.htm>

GMIC 99 Early Universe: Cosmological Problems and Instrumental Technologies

August 22-26, 1999, St. Petersburg, Russia

Contact address: V. Khaikin, Polytechnicheskaya 21 rm 111, 195220 St. Petersburg, Russia

Tel: 7-812-247-22-23 Fax: 7-812-2475062

E-Mail: vkh@ratan.sao.ru

ACS Symposium on Origin of Elements in the Solar System: Implications of Post-1957 Observations

August 22 - 26, 1999, New Orleans LA, USA

Contact address: Oliver Manuel, UMR Chemistry Dept, Univ. of Missouri, Rolla MO 65401, USA

Tel: 1 573 341 4420/4344 Fax: 1 573 341 6033

E-mail: oess@umr.edu WWW: <http://www.umr.edu/~oess>

Thermal and Ionization Aspects of Flows from Hot Stars: Observations and Theory

August 23 - 27, 1999, Tartu, Estonia

Contact address: Tiit Nugis, Tartu Observatory, Tõravere, EE-2244 Estonia

Tel: 372 7 410 443 Fax: 372 7 410 205

E-mail: nugis@aai.ee

WWW: http://www.aai.ee/workshop/Tartu_workshop.html

JENAM-99: Joint Meeting of the European Astronomical Society and of the French Astronomical Society (Société Française des Spécialistes d'Astronomie)

September 7 - 11, 1999, Toulouse, France

Contact address: JENAM-99, Observatoire Midi-Pyrénées, 14 avenue Edouard Belin,

F-31400 Toulouse, France

Tel: 33 5 61 33 29 47 Fax: 33 5 61 33 28 40

E-mail: JENAM99@obs-mip.fr WWW: <http://www.obs-mip.fr/omp/JENAM99>

A New Millennium for Galaxy Morphology

September 13 - 18, 1999, Johannesburg, South Africa

Contact address: D.L. Block, Univ. of Witwatersrand, P.O. Box 60, WITS, 2050 Gauteng, South Africa

Tel: 27 11 716 3250 Fax: 27 11 672 3791

E-mail: zwicky@gauss.cam.wits.ac.za

WWW: <http://www.cam.wits.ac.za/origins99/>

The 5th Compton Symposium

September 15 - 17, 1999, Portsmouth NH, USA

Contact address: Ms. Robbin Pendexter, Univ. of New Hampshire, Space Science Center, Morse Hall, Durham NH 03824, USA

Tel: 1 603 862 1061 Fax: 1 603 862 4685

E-mail: compton5@unh.edu WWW: <http://www.gro.unh.edu/compton5/>

Large Scale Structure in the X-ray Universe

September 20 - 22, 1999, Santorini, Greece

Contact address: I. Georgantopoulos, Natl. Observatory of Athens, I. Metaxa and B. Pavlou, Athens 15236, Greece

Tel: 30 1 804 0619 Fax: 30 1 404 0355

E-mail: santor99@sapfo.astro.noa.gr WWW: <http://www.astro.noa.gr/~ig/conf.html>

AAS Division for Planetary Sciences

October 18 - 22, 1999, Padova, Italy

Contact address: Giannandrea Bianchini, University of Padova-CISAS, Via Venezia 1, I-35131 Padova, Italy

Tel: 39 49 827 6808 Fax: 39 49 827 6785

E-mail: bianchini@dim.unipd.it

Millennium Conference on Earth, Planetary and Solar System Sciences, European

Geophysical Society XXV General Assembly

April 3 - 7, 2000, Florence, Italy

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Galaxy Disks

June 16 - 20, 2000, Rome Italy

Contact Address : George Coyne, Vatican Observatory, V- 00120 Citta' del Vaticano, Rome Italy

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33rd COSPAR Scientific Assembly

July 16 - 23, 2000, Warsaw, Poland

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

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16. ANNOUNCEMENTS

16.1 The Grave of Walter Baade to be Preserved by his Home City

Following an appeal from German and international astronomers, including IAU President R.P. Kraft, the President of the Astronomische Gesellschaft, Prof. W. Pfau, informs us that the city of Bad Salzuflen has agreed to take responsibility for the preservation of the grave of Walter Baade, who has left no living descendants. The IAU shares the appreciation of our German colleagues that the resting-place of this eminent astronomer will thus be preserved as a "Prominent Person's Grave" by his home city.

16.2 UTC Time Step

The International Earth Rotation Service (IERS) announces a time step at the end of 1998. At midnight, the second marker 23h 59m 59s of 1998 December 31 will be followed by 23h 59m 60s (same date), then by 0h 0m 0s of January 1, 1999. The difference TAI-UTC will then increase from +31s to +32s.

16.1. The International Geophysical Calendar 1999

The Secretariat has received the International Geophysical Calendar for 1999. 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 International Solar Cycle Studies 1998-2002 project are covered in this calendar.

The Calendar, with basic explanations, has in the past often been printed in the Information Bulletin. Given the large volume of the present issue, we give here instead the Web addresses where the complete Calendar and all explanatory files can be found and downloaded:

www.ngdc.noaa.gov (Solar and Upper Atmosphere icon under *Get Data*), and

www.sec.noaa.gov (ISES icon)

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