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## CONTENTS

Preface .....	2
1. Faits divers .....	3
2. Main Deadlines & Events 2003 .....	4
3. Scientific Meetings .....	5
3.1. Future IAU Symposia .....	5
3.2. Future IAU Colloquia .....	5
3.3. IAU General Assemblies .....	5
4. News from Divisions .....	6
4.1. Division VIII .....	6
4.2. Division X .....	6
5. Commission Matters .....	7
5.1. Commission 6: Annual Report of the CBAT, 2002 .....	7
5.2. Commission 20: Annual Report of the MPC, 2002 .....	8
6. 77th & 78th Meetings of the Executive Committee .....	10
7. The XXVth General Assembly .....	10
8. Educational Activities .....	13
8.1. Overview .....	13
8.2. PG on Public Education at the Time of Solar Eclipses .....	13
9. Relations to other Organizations .....	13
9.1. ICSU .....	13
9.2. UN/COPUOS .....	13
9.3. COSPAR .....	14
9.4. NEO-related Activities .....	14
10. Membership .....	14
10.1. National membership .....	14
10.2. Individual members .....	14
11. Financial Information .....	15
12. Announcements .....	17
12.1. PGF Cosmology Prize 2002 .....	17
12.2. PGF Cosmology Prize 2003 .....	17
12.3. PGF Cosmology Prize 2004 .....	17
12.4. Astrobiology Journal .....	17
13. IAU Publications .....	18
13.1. IAU Transactions .....	18
13.2. IAU Symposia .....	18
13.3. IAU Colloquia .....	18
13.4. IAU Regional Meeting .....	18
14. Other Publications received .....	19
15. Other Meetings on Astronomical Topics .....	21

## PREFACE

On 18 January 2003, a bush fire swept across Mt Stromlo and devastated one of the Southern Hemisphere's most famous observatories. We were all deeply saddened by this disaster, and we felt sympathy with our Australian colleagues, who were in the midst of their great effort to prepare for the Sydney General Assembly.

Nonetheless, the work of organizing the scientific events of GA XXV has been proceeding admirably, and as the programs are shaping up, one gets more and more thrilled and excited. I really wish I could enjoy the GA without the administrative burdens of the Executive business! I am also grateful for the hard work of the LOC, and for the financial contributions from NASA, ESO and various national funding agencies that bring vital help to get a large number of us together.

This is the last issue of the Information Bulletin that is produced under my responsibility, and it is also the last issue that will be distributed by regular mail as a printed booklet to all IAU Members. Starting from the next issue, IB 94 in January 2004, the default option will be to download the Bulletin as a pdf file via the IAU web page. Mailings will be done only to those who are without Internet access, and the status of our membership in different countries in this respect will be investigated. A prerequisite for this new scheme is an efficient system of email communication with the individual IAU Members. As I have written before, we are working on establishing a database of email addresses, which covers as large a percentage of the membership as possible and can be used as input to a mass emailing program. The work is not finished yet. Our efforts have so far concentrated on email lists of Commissions and a few major Member countries via their national astronomical societies, and we will continue with other countries and additional search tools. An attempt was made on 16 April to send a mail with information on the XXVth General Assembly to some 5200 Members, and this exercise was also useful as a test and a check on the quality of the current database.

Keeping the database of addresses and contact information of the individual Members up to date is an essential but everlasting task that bears resemblance to the work of Sisyphus, especially as the number of Members as well as their mobility keep increasing but not the staffing of the IAU Secretariat. If this is the time to count my failures as General Secretary, I think an outstanding one is the fact that the Paris Office today has neither more persons employed nor significantly better work equipment than it had three years ago. I know that it is frustrating to send us address changes and find out that it takes time before they become visible, but I ask for your understanding and hope for more input, especially if we seem to have got your email address wrong.

As my time as GS is winding up, I want to thank my fellow Officers and EC members as well as the Division Presidents for having provided me with both efficient support and a friendly atmosphere that I shall certainly miss. The unfailing, hard and devoted work of my colleagues at the Secretariat, first of all Monique Léger-Orine, who for an extended time carried the heavy burden of coping with all the work on her own, and by her side Jodi Greenberg, Estelle Denos and during recent months Estelle's successor Claire Vidonne, has proved to be the heart of the matter for the running of the Union, and is something for which I am immensely grateful. Last but not least, our webmasters - first Johan Lagerros and then Marcus Gunnarsson - have provided kind and very competent service for improving our important Internet facilities.

Hans Rickman, General Secretary

## 1. FAITS DIVERS

Some aspects of life as IAU General Secretary and at the Secretariat are quite predictable. One of these is that, as the General Assembly draws nearer, the amount of work increases sharply. This year is no exception. We have finished the work on the IAU Transactions vol. XXV A, which contains the reports of Divisions, Commissions and Working Groups for the previous triennium, and the book will be available from the ASP in time before GA XXV. Grant notification letters for attending the GA have been sent to 362 people in 54 countries.

We are now dealing with the preparation of the Program Booklet for the GA - quite an exciting task! - and keeping track of all the demands concerning Working Groups and Officers of Commissions and Divisions. With our local hosts we hope for numerous attendance, and we also hope that the stage will be properly set for all the administrative business at Sydney, so that the running of the Union continues smoothly into the next triennium.

Other events in astronomy are less predictable. This is almost self-evidently the case for most of the scientific discoveries. But no one could have foreseen the tragic loss of much of the ancient heritage of cuneiform tablets that bears witness of Mesopotamian astronomy, as the Baghdad archeological museum was plundered at the fall of the Iraqi regime. This may prove to be a hard blow to historians of ancient astronomy, unless the sources of knowledge can be recovered.

One often hears about the Tunguska explosion in 1908 - a Mt class airburst - and what might have happened, had the impact occurred just a little earlier when densely populated areas of Europe could have been struck. Fortunately, history does not tell of any such disaster, but of course, smaller-scale impacts do occur everywhere. Last January, your General Secretary visited a very recent impact crater near Rome. This roundish lake - only 150 m across - is situated on a plain near the Sirente Massif in the Apennine Mountains and is a famous tourist landmark. But it has now been shown that the depression hosting the lake was formed as a huge meteorite (certainly an iron meteorite) fell some time in the 5th Century A.D. The fireball should have been plainly visible from Rome, and the impact cannot have passed unnoticed. One cannot help wondering how the citizens of Rome perceived this extraordinary event, and if it gave any echo around the whole Empire. However, nothing is known about this yet. Legends and ancient rumors, yes, but solid evidence, no!

Asking such a question is not just for simple curiosity. Similar impacts, or even harsher ones, may well occur during the 21st Century, and it is open to question, if our society is prepared for this eventuality in any serious way. The IAU is preparing to contribute to a study of this problem with all the expertise that we can muster, the aim being to put the matter on the agendas of politicians and policy makers.

## 2. MAIN DEADLINES AND EVENTS 2003

	2003	
July	06-11	IAU Colloquium 193, Christchurch, New Zealand
	11	End of pre-registration GA XXV
	13	Start of on-site registration GA XXV
	13-26	XXVth IAU General Assembly, Sydney, Australia
	13-24	77th EC Meeting, Sydney, Australia
	14-17	IAU Symposium 216, Sydney, Australia
	14-17	IAU Symposium 217, Sydney, Australia
	14-17	IAU Symposium 218, Sydney, Australia
	21-25	IAU Symposium 219, Sydney, Australia
	21-25	IAU Symposium 220, Sydney, Australia
	22-25	IAU Symposium 221, Sydney, Australia
	25-26	78th EC Meeting, Sydney, Australia
Aug.	31	Nominations due for Gruber Cosmology Prize 2004
Oct.	01	Manuscripts for Transactions XXVB due at Secretariat
	01	Contributions due for IB 94 (January 2004)
	15	Contributions to Highlights 13 due at Secretariat
Nov.	17-21	IAU Colloquium 194, La Paz, Mexico

Proposals for IAU Symposia, Colloquia, and co-sponsored meetings  
planned for 2005 must reach the Assistant General Secretary  
*See <http://www.iau.org/IAU/Organization/officers.html>*

**no later than February 15, 2004!**

in order to be considered at the 79th Executive Committee meeting.  
*See <http://www.iau.org/IAU/Activities/meetings/>*

### 3. SCIENTIFIC MEETINGS

#### 3.1. FUTURE IAU SYMPOSIA

**Symposium 216: Maps of the Cosmos**

July 14-17, 2003, Sydney, Australia

See IB 91, p. 30, tinted pages

**Symposium 217: Recycling Intergalactic & Interstellar Matter**

July 14-17 2003, Sydney, Australia

See IB 91, p. 30, tinted pages & IB 92, p. 30

**Symposium 218: Young Neutron & their Environment**

July 14-17, 2003, Sydney, Australia

See IB 91, p. 31, tinted pages

**Symposium 219: Stars as Suns: Activity, Evolution & Planets**

July 21-25, 2003, Sydney, Australia

See IB 91, p. 31, tinted pages

**Symposium 220: Dark Matter in Galaxies**

July 21-25, 2003, Sydney, Australia

See IB 91, p. 32, tinted pages & IB 92, p. 31

**Symposium 221: Star Formation at High Angular Resolution**

July 22-25, 2003, Sydney, Australia

See IB 91, p. 32, tinted pages

#### 3.2. FUTURE IAU COLLOQUIA

**Colloquium 193: Variable Stars in the Local Group**

July 6-11, 2003, Christchurch, New Zealand

See IB 91, pp. 8-9

**Colloquium 194: Compact Binaries in the Galaxy & Beyond**

November 17-21, 2003, La Paz, Mexico

See IB 91, p. 9 & IB 92, p. 6

#### 3.3. IAU GENERAL ASSEMBLIES

**XXVth IAU General Assembly & associated Symposia**

13-26 July, 2003, Sydney, Australia

*Contact address:* IAU Secretariat, 98bis, bd Arago FR 75014 Paris, France

*Tel:* 33 1 43 25 8358 - *Fax:* 33 1 43 25 2616

*Email:* iau@iap.fr - <http://www.astronomy2003.com/>

**XXVIth IAU General Assembly & associated Symposia**

13-26 August, 2006, Prague, Czech R

*Contact address:* IAU Secretariat, 98bis, bd Arago FR 75014 Paris, France

*Tel:* 33 1 43 25 8358 - *Fax:* 33 1 43 25 2616 - *Email:* iau@iap.fr

## 4. NEWS FROM DIVISIONS

### 4.1. DIVISION VIII: GALAXIES & THE UNIVERSE (Virginia L. Trimble)

Division VIII intends to recommend at Sydney the re-establishment of a Supernova Working Group (SNWG) and the establishment of a Working Group on Computational Astrophysics (WGCA). Organizational meetings will be held as part of the business meeting of the Division and of Commissions 28 and 47 on Monday, 21 July. If you are interested in participating in one of these, especially if you do not plan to be in Sydney, please contact the relevant chair pro tempore, Wolfgang Hillebrandt (wfh@mpa-garching.mpg.de) for the SNWG and Vincenzo Antonuccio-Delogu (van@sunct.ct.astro.it) for the WGCA.

If you are thinking of organizing a conference, see the need for a Working Group on some topic, or have other astronomical plans with which the Division might be able to help, please get in touch (vtrimble@astro.umd.edu).

### 4.2. DIVISION X: RADIO ASTRONOMY (Lucia Padrielli)

Commission 40 members were saddened by the death of Grote Reber on December 20, 2002, just a few days before his 91st birthday. Following Karl Jansky's 1932 detection of cosmic radio waves, Reber, working alone, and with his own resources, built and operated the world's first radio telescope in his backyard in Wheaton, Illinois. After several years of laborious design and construction of novel instrumentation followed by lengthy observations, he made the first radio map of the Milky Way and detected the first discrete radio sources as well as the intense radio emission from the Sun. Reber's pioneering work opened a new window on the Universe which later would lead to the detection of powerful radio galaxies, quasars, pulsars, cosmic masers, giant molecular clouds, gravitational lensing and gravitational radiation, the first extra-solar planetary system, and the cosmic microwave background.

Throughout his career, Reber worked alone designing and building his own antennas and receivers as well as the test equipment needed to work at previously unexplored wavelengths. He was driven by an intense curiosity which, combined with his experimental skills and uncanny insight, first demonstrated the power and importance of radio astronomy.

Text kindly supplied by Ken Kellerman



## 5. COMMISSION MATTERS

### 5.1. COMMISSION 6

#### Annual Report of the Central Bureau for Astronomical Telegrams, 2002

A total of 259 IAU *Circulars* were issued in 2002, up from the 229 published in 2001. The most common topics covered were supernovae (whose discoveries appeared on 54 percent of the *Circulars* while at least one separately titled follow-up item on a supernova appeared on 46 percent of the year's *IAUCs*). Follow-up items involving novae and other unusual Galactic variable stars appeared on about a quarter of the year's *Circulars*. Comets continued in 2002 to have a standard presence in the CBAT publications (with non-spacecraft discoveries and recoveries appearing on 18 percent, SOHO discoveries on 17 percent, and follow-up information on comets appearing on a fifth of the 2002 *Circulars*). Eleven percent of the year's *Circulars* contained items on high-energy (TeV,  $\gamma$ -ray, and X-ray) transients, and four percent contained reports on radio transients. Over a dozen *IAUCs* during the year covered the discoveries and follow-up information for numerous satellites of both major and minor planets. Twelve new satellites of Jupiter and one of Uranus were announced in 2002.

There were 292 new extragalactic supernova discoveries made in 2002 that were reported on *IAUCs* that year (nearly fifty more than the record number that were announced the previous year). Also, 47 supernovae discovered prior to 2002 were designated and announced on *Circulars* in 2002. Some 158 supernovae announced during the year were fainter than mag 20 at discovery (roughly double the number for 2001), meaning that there were notably *fewer* discoveries of brighter supernovae. Spectroscopic observations (usually with a supernova type given) were reported on the year's *IAUCs* for more than 90 percent of supernova discoveries brighter than mag 20 - though for objects fainter than mag 20, spectroscopic typing dropped to around 40 percent (and 86 percent of apparent supernovae of mag 23 or fainter had no available spectroscopic information). There is thus some continuing question about the value of designating most objects fainter than mag 23 that cannot be confirmed as supernovae. The brightest supernova of the year was the peculiar type-Ic SN 2002ap in M74, peaking at visual mag  $\sim 12$  in early February, and numerous items reporting X-ray, optical, infrared, and radio observations appeared on the *Circulars*. SN 2002fk in NGC 1309 reached visual mag  $\sim 13$  in September; a half dozen other supernovae peaked around mag 14-14.5 in 2002.

Some fifteen *IAUCs* carried discoveries of novae and outbursts of recurrent novae or novalike variables during 2002. A peculiar binary variable discovered at visual mag 10 by N.J. Brown in January, designated V838 Mon, was announced on the *Circulars* where its spectroscopic development and expanding light echo and shell were documented in some detail. In addition to V838 Mon, five novae were assigned permanent variable-star designations on *IAUCs* in 2002, in the continuing collaboration between the CBAT and IAU Commission 27 (via N.N. Samus). The brightest of these novae, V4743 Sgr, peaked near fifth magnitude in mid-September. An outburst (to mag 8) of the nova IM Nor was announced in January, its first since 1920.

In addition to the scores of new SOHO comets announced and designated during the year, some four dozen non-SOHO comets received new 2002 designations, including three recoveries and one rediscovery (C/2002 C1 = 153P/Ikeya-Zhang, which reached third magnitude in late March, being the first return of a comet observed by Hevelius in 1661). Comet 54P was found again after having been missed since 1965. Besides the visual discovery by Ikeya and Zhang, four other comets were discovered visually by amateur

astronomers in 2002 and announced by the Bureau. In June, a *Circular* announced seven winners of the 2002 Edgar Wilson Award for amateur comet discoveries. Comet C/2000 WM<sub>1</sub> reached  $m_1 \sim 2.5$  in late January 2002. Some *Circulars* during the year were devoted to the discovery of some 19 companions to comet 57P.

The number of paid subscribers to the printed edition of the IAU *Circulars* continued to fall, from 216 at the end of 2001 to 193 at the end of 2002. In addition, there were 38 free (complimentary or exchange) subscriptions to the printed *IAUCs* at the end of 2002. The printed *IAUCs* go to 77 addresses within North America and 154 outside of North America. There were 470 paid subscribers to the CBAT/MPC electronic service at the end of 2002, compared with 501 at the end of 2001.

A new feature implemented in December was the introduction of the *Central Bureau Electronic Telegrams*, or *CBETs*. The *CBETs* are e-mailed items intended for later publication on *IAUCs*, set up mainly to aid in the quick dissemination of urgent information when the Director is unavailable, so that others assisting in the running of the CBAT are freed from the additional effort needed to produce the TeX version of the *Circulars*. As in recent years, most of the *Circulars* in 2002 were prepared by the undersigned, with very helpful editorial backup by Director Emeritus B.G. Marsden (who prepared numerous *Circulars* during the year and helped to proofread and critique most of the rest prior to issuance). Minor Planet Center Associate Director Gareth Williams also helps to maintain the Bureau's presence on the World Wide Web. At SAO, Muazzez Lohmiller has continued to handle the accounts, addressing of envelopes, and other administrative matters; Judy Terry has also handled numerous CBAT administrative matters. Dan Wooldridge continues, as he has for years, with the fine printing of the *IAUC* cards.

Daniel W. E. Green, Director of the Bureau

## 5.2. COMMISSION 20

### Annual Report of the Minor Planet Center, 2002

The publication rate of the Minor Planet Center continued to rise in 2002, on the average by some 33 percent since 2001, with totals of 2992 printed *Minor Planet Circulars* (MPCs), 26 712 observation supplements (MPSs), 17 368 orbit supplements (MPOs) and 1603 *Minor Planet Electronic Circulars* (MPECs). A record 5 657 397 observations were published during the year (or in some cases entered from earlier published literature into the MPC files); this was only slightly less than the *total* number of observations in the files as recently as Oct. 2000, and it brings the current total to more than 16 million. As was the case during the two preceding years orbits for some 50 000 new minor planets were published, bringing the total in the MPC files at the end of 2002 to 208 572. By that time 52 224 had received permanent numbers, a record 19 495 having been added during the year. The month of November saw both the numberings surpass 50 000 and the number of those that have been named surpass 10 000. Following the assignment of the number (20000) in Jan. 2001 to Varuna, then the largest known transneptunian object - apart from Pluto and its satellite - the number (50000) was assigned in Nov. 2002 to the latest such object, Quaoar, which clearly takes the record size for a numbered object from (1) Ceres and appears to be somewhat larger than Pluto's satellite.

Although the *MPCs* were issued in 11 monthly batches (with none in December), three of these were "mini-batches" that did not contain observations or orbits of minor planets. On these occasions the *MPCs* were instead followed up with a batch of *MPSs* within a few days anyway, and two other extra batches of *MPSs* also appeared, the point about these "midmonth" batches being that they do provide verified observations, but the extensive filing effort that is required, particularly when minor planets receive permanent numbers, is eliminated.

About half of the *MPECs* consist of the first announcements of new near-earth asteroids (NEAs), with their first observations, orbits and ephemerides. By volume, most of the *MPECs* are the "Daily Orbit Updates", which were automatically issued on almost 350 days during the year (during the early-morning hours at the MPC); these include the orbit computations made at the MPC since the previous issue, as well as the additional observations received of NEAs. Although it was always the intention that some of the *MPECs* would provide information about comets, the number of cometary *MPECs* issued during 2002 increased to more than 400. The reason for this was the decision in February that verified observations of comets should routinely be published, essentially on a weekly basis (although the logistics sometimes mean a lapse of perhaps two weeks between these publications). In some cases, principally for the more recent discoveries, the cometary *MPECs* also include new orbital elements, and when perturbed (but entirely gravitational) orbital solutions are used for long-period comets, the opportunity has also been taken to provide the "original" and "future" (barycentric) values of the reciprocal of the semimajor axis.

The number of NEAs discovered during the year continued to rise, although the count of 485 did not represent as much of an increase over the 437 of 2001 as that had been an increase over the 2000 count. The 89 potentially hazardous asteroids discovered was a number fractionally larger than the 2001 count by the same 11 percent. The 176 centaurs and transneptunian objects discovered during the year brought the combined total to 775. *MPECs* announced twelve new outer satellites of Jupiter and one new outer satellite of Uranus (all but one having their discovery images in 2001), as well as second-opposition recoveries of six jovian satellites.

The number of subscribers to MPC publications and services continues to fall. The number of subscribers to the Computer Service the Minor Planet Center shares with the Central Bureau for Astronomical Telegrams was down to 470 at the end of 2002, while only 139 were receiving the printed *MPCs*. These were down from 501 and 154, respectively, at the end of 2001. Even the number of subscribers to the Extended Computer Service was down, from 73 to 70, whereas there had been a significant increase during 2001. A number of donations were received during the year, and the MPC would particularly like to thank A.C. Beresford (South Australia), R. Covington (North Carolina), R. Crawford (Arizona), M. Dawson (Luxembourg), D. Dixon (New Mexico), F.K. Edmondson (Indiana; the senior living former President of Commission 20), M. Griesser (Switzerland), P.A. Shugart (Texas), L.K. Sloan (California), B.L. Stevens (New Mexico), J. E. Sturm (New Jersey), S. Tashiro (New Mexico) and M. Trueblood (Arizona), as well as an anonymous donor, for their generosity. Some support from the U.S. National Aeronautics and Space Administration is also very much appreciated, as is the subvention from the IAU.

Most of the Center's work on processing observations of minor planets and computing orbits during the year has been carried out by Associate Director Gareth Williams and by Tim Spahr, NEO Technical Specialist, the former also writing most of the MPC's computer programs and serving as system manager. Most of the processing of data on comets, transneptunian objects and comets is by the undersigned, who also often works with the NEOs. From the beginning of December Spahr was on leave of absence, at which point Kyle Smalley became a contractor at the MPC. Although the MPC tries to maintain a 16/7 operation, this is simply not comfortably possible with only three people, but to employ a larger staff requires substantially more financial support than is available, some of which is also needed for the part-time employment of Muazzez Lohmiller, who continues to be responsible for mailing the *MPCs* and maintaining the subscriber accounts and address lists. Billy Duggan again oversaw the printing, collating and stapling of the *MPCs* in the SAO's print shop. The volunteer efforts of many amateur astronomers, particularly with regard to follow-up observations of NEAs and comets, is also very much appreciated. In addition, Syuichi Nakano continues to liaise with many Japanese observers, and he and Andreas Doppler serve as Associates of the Minor Planet Center. Susan Russell has also again helped with much of the editing of the citations for new namings of minor planets.

Brian G. Marsden, Director of the Minor Planet Center

## 6. 77th & 78th MEETINGS OF THE EXECUTIVE COMMITTEE

These EC meetings will be held at Darling Harbour Convention Centre in Sydney in connection with GA XXV. The 77th meeting will start July 13 and continue until noon, July 15, with a final session in the morning of July 24. The 78th EC meeting will take place July 25 and July 26. As usual, the Division Presidents are invited to attend these meetings (outgoing DPs for EC77, incoming DPs for EC78).

In view of the need for a new IAU Publishing contract to become effective from the start of 2004, and the need for a thorough discussion of possible new initiatives in this regard, a special session of EC77 including also new members of EC78, but excluding the Division Presidents, will be held between the July 15 and July 24 sessions, in order to discuss this very issue.

## 7. THE XXVth GENERAL ASSEMBLY

Latest News - April 8, 2003

The National Organising Committee has begun the final stages of planning of the General Assembly, with an aim to make this meeting and its associated events a most memorable and scientifically rewarding experience for participants and guests. Some final comments about the organization are provided below. For further details, see the GA website at [www.astronomy2003.com](http://www.astronomy2003.com) and the links from it to other important sites. The Committee hopes that the range of information included in the GA website has assisted astronomers in planning their trips to Sydney.

Because of increased security precautions, it will not be possible to have a Welcome Desk at Sydney's international airport. However, we will provide a welcoming committee,

attired distinctively, to assist attendees on arrival. The GA will not provide transfers between the airport and hotels and university colleges. However, the welcoming committee will assist new arrivals in selecting transport best suited for their destinations. Approximate costs of transport to Sydney's central business district are: taxis (AUD 20-30), train link to Central Station (AUD 8-12), and airport shuttle bus (AUD 10-15). The bus runs from both the international and domestic terminals to various locations in the city, including Darling Harbour. Some of the recommended hotels provide airport shuttle services.

In general, posters will be displayed together in Exhibition Hall 5 of the Convention Centre. However, access of GA attendees to the Hall will not be possible until Tuesday July 15, and posters for the meetings on Monday July 14 will be displayed in the Convention Centre on that day, and moved to the Hall when it becomes available that evening. Further details will be available on the GA website. Some posters for small meetings may be displayed near the meeting rooms, although display in the Hall is recommended to enable maximum exposure. Space available for each poster will be 1.0 metres in width and 1.2 metres in height (i.e. large enough to accommodate A0-size posters in portrait orientation).

For oral presentations at the major meetings (Symposia, JDs and Special Sessions), projection facilities for both Powerpoint presentations and overhead transparencies will be provided. For the meetings in smaller rooms, overhead transparencies will be standard, but additional presentation facilities may be available if they have been requested in advance by the meeting Convenors.

The GA 'Dinner' will be held in the Banquet Hall of the Sydney Convention Centre on Thursday July 24. This will be more of a cultural experience than merely a formal meal. Participants will be able to wander around the Hall, sampling both Australian and Asian-Pacific cuisine ranging from barbeque style to stir-fried noodles, whilst being entertained by local performers and musicians.

As is traditional, a special daily newspaper will be published during the GA. This will be edited by Seth Shostak of the SETI Institute; Seth has had considerable experience with such publications. Helen Sim of the ATNF will be responsible for media liaison.

The GA website contains the most up-to-date information about the scientific meetings, times and room allocations. Meeting schedules are shown for the 6 Symposia, 21 Joint Discussions, 4 Special Sessions, various Working Groups, Commissions and IAU administration, Opening / Closing ceremonies, and other events.

An exhibition ('Astro Expo') will be held during the GA, and will include a four-day Public Exhibition on July 18-21. Many groups have signed up to provide what we expect to be an exceptional display of scientific expertise and products. The Expo will share Exhibition Hall 5 adjacent to the Convention Centre with a communal area for the GA attendees, containing areas for posters, café, coffee and seating area, Internet Café, 150-seat theatrette, and individual mail boxes and information notice boards.

A wide program of astronomical public events and other outreach activities across Australia is being finalized and will take place before, during and after the GA. These include Public Lectures by astronomers at the Convention Centre and elsewhere, a late-afternoon concert (with astronomy theme) at Darling Harbour, opportunity for spirited debate at a 'Science in the Pub' event, a Schools Day of astronomy talks to Australian school children, and a public viewing night at North Sydney. Consult the GA website for up-to-date information.

It has been assumed that many overseas astronomers will combine attendance at the GA with an Australian holiday, and will bring their families with them. To assist parents wanting to attend GA meetings, a Childcare program has been planned on the basis of requirements supplied on the registration forms.

Sydney's public transport system enables easy travel around the city and its environs. The GA website offers a large range of activities ranging from self-guided walks, guided tours and sight-seeing trips around Sydney and further afield. Extended pre-and post-GA tours include locations such as Tasmania, inland Australia, NSW observatories, Great Barrier Reef, Kakadu and Arnhemland. A tour desk at the Convention Centre will be staffed in the period July 13-25 and here additional tour information can be obtained and tours organised.

Regarding banking facilities, Australian banks are open during the periods 09:30-16:00 Monday-Thursday and 09:30-17:00 on Friday. They are not open during weekends and public holidays. Currency exchange facilities are also available at the airport and most major hotels. ATMs (Automatic Teller Machines) are widely available. Money can also be obtained from EFTPOS facilities used in some shops - in particular food supermarkets.

#### Associated Public Events (as of April 11):

- May 1        onwards: "Astronomy on the Go" tours to NSW regional areas
- July 11      Inaugural Allison-Levick public lecture by Dr David Malin ("From Darkroom to Digital: 25 years of Colour Photography at the AAO") at the Powerhouse Museum
- July 12      Public lecture by Dr Bryan Gaensler at the Powerhouse Museum
- July 13      Public lecture at Sydney Observatory (speaker to be confirmed); Conference ("Pushing the Limits") for amateur astronomers at Macquarie University
- July 14      Harley Wood lecture by Professor Paul Davies ("The State of the Universe") at the Conference Centre
- July 16      Science in the Pub ("Life, the Universe & Everything") at Harlequin Inn, Pyrmont
- July 17      Public forum on the risks to Earth from space rocks at the Conference Centre (speakers: A.W. Harris, A. Milani, D. Morrison)
- July 18-21   Public Astro Expo at Exhibition Hall 5 Darling Harbour (includes several talks by astronomers)
- July 19      Astronomy theme concert, Darling Harbour
- July 20      Public viewing night ("Festival of Astronomy") at North Sydney Oval; Public lecture by Dr Jill Tarter ("SETI: Science Fact, not Fiction") at the Riverside Theatre Parramatta
- July 21      Public lecture by Dr Robert Kirshner ("The Extravagant Universe - Exploding Stars, Dark Energy, & the Accelerating Cosmos") at the Conference Centre
- July 24      UNSW Schools Day at Darling Harbour
- July 26      Teachers Professional Day at the Powerhouse Museum

## 8. EDUCATIONAL ACTIVITIES

### 8.1. OVERVIEW

During this half year most of our activities went into preparing for GA 25. Commission 46 organizes Special Session 4, "Effective Teaching & Learning of Astronomy", under the chairmanship of John Percy, decided on its invited speakers and recommended recipients of travel support. The PG on Teaching for Astronomy Development tried to support an activity in Vietnam. The PG on Collaborative Programmes worked mainly with UN/COPUOS to support the activity of UNISPACE III Action Team 17 (Capacity Building), which is now considering how well we organize our Commission 46 to build astronomy education from lower to higher level. Commission 46 Newsletter No. 58 has been published and can be seen at <http://physics.open.ac.uk/IAU46>.

Syuzo Isobe, President of Commission 46

### 8.2. PG ON PUBLIC EDUCATION AT THE TIME OF SOLAR ECLIPSES

The Program Group was very active this semi-year because of activities relating to the total solar eclipse of 4 December 2002. Totality was visible across southern Africa and south-central Australia, and partial phases were visible to the sides of the totality track. Our Program Group's Web site at <http://www.eclipses.info> carried information about observing eclipses safely and had links to maps and other information. I was in Australia and gave numerous radio, television, and newspaper interviews about what the eclipse was, why it was interesting, and how to observe it safely. Many ignorant articles appeared that exaggerated eclipse hazards, and several of us - notably Fraser Farrell of the Astronomical Society of South Australia - did our best to provide accurate information.

Jay M. Pasachoff, Chairman of the Program Group

## 9. RELATIONS TO OTHER ORGANIZATIONS

### 9.1. ICSU

The IAU did not lead any application for an ICSU Grant in 2003 but acted as supporting applicant for several projects headed by other Organizations: an African Institute for Mathematical Sciences (IUTAM), a Women in Physics and Physical Science Network in Africa (IUPAP), Capacity-Building Workshops in Space Science (COSPAR), and an Online Dictionary of Natural History of Sciences Bibliographies and Archival Sources (IUHPS/DHS). See further § 9.4.

### 9.2. UN/COPUOS

The 40th session of the Scientific and Technical Subcommittee was held at the Vienna International Centre, 17-28 February 2003. The IAU was represented by the Presidents of Commissions 46 and 50, Syuzo Isobe and Jim Cohen, and the latter gave a presentation on IAU activities for radio frequency interference mitigation, reporting in particular on moves to establish international radio-quiet zones for ALMA and the SKA. A presentation on IAU involvement in Near Earth Object research was also given by former Commission 20 President Andrea Carusi.

### 9.3. COSPAR

A capacity-building workshop, co-sponsored by the IAU, was held at Udaipur, India, in January 2003, and the topic was X-ray astronomy like it had been for the preceding workshop at INPE in Brazil. The main organizer was Professor Peter Willmore, and the "staff" of the workshop (teachers and supervisors) were well known scientists from five countries. There were 28 "student" participants, mainly from South-East Asia. The workshop was perceived as highly successful.

### 9.4. NEO-RELATED ACTIVITIES

The study of Near Earth Objects (NEOs) is supported by the IAU since more than ten years through the WGNEO, which is run jointly by Divisions I and III. In recent years it has become a matter for the EC though still for the same reason, i.e., the impact hazard. This may be seen as an environmental problem in a broad sense, thus ranking among the most important intersections between astronomy and human society at large.

During the last 7-8 months the IAU has participated in two efforts aiming to bring the NEO impact hazard to the agendas of policy makers on national and international levels, not as a purely astronomical affair but from a multidisciplinary point of view. The OECD Global Science Forum (OECD GSF) took up a UK initiative and organized a workshop, held at Frascati, Italy, 20-22 January 2003, which led to a range of findings and conclusions about how the world should go ahead tackling the various aspects of the impact problem. The IAU participated in this, and among other things, it was encouraging to see the need for a proper international funding of the activities of the Minor Planet Center once more reiterated.

The second effort was invited by ICSU as a consequence of last year's IAU proposal for a multidisciplinary study of the impact hazard, and as a response to the need to develop the scientific basis of an assessment that politicians could use as a trigger of action. A planning meeting was thus held in Paris 22-23 April 2003 with participation by several ICSU bodies (IAU, IUGG, IUGS, COSPAR, SCOR, SCOPE, and the USA) as well as the OECD GSF. The aim was to jointly prepare the scientific case for a study of the consequences of NEO impacts on human society and how best to mitigate these damaging effects, in order to seek ICSU funding.

## 10. MEMBERSHIP

### 10.1. NATIONAL MEMBERSHIP

Nigeria and Serbia & Montenegro have applied for full membership in the IAU. These applications will be voted upon by the XXVth General Assembly. In addition, Romania and Tajikistan have decided to step up to full membership after nine years of associate membership.

### 10.2. INDIVIDUAL MEMBERS

On the background of unfortunate mistakes in the past, the Secretariat is applying rigorous procedures to confirm any reports received on the decease of IAU members, if at all possible through their Adhering Organizations. Nevertheless, two members whose deaths were reported in this IB 93 (paper version) kindly announced us that this information was in fact incorrect: Drs Petrov G.M. and Sakurai Takashi. We are most pleased to learn that all two are alive and healthy and look forward to a long and fruitful



continued cooperation with them, but do apologise most sincerely to them all for this mistake and for any inconvenience it may have caused them.

The General Secretary regrets to report the names of former and current IAU members whose death has been communicated to the Secretariat since the previous list published in IB 92:

Adolfsson Tord	Anantharamaiah Kuduvalli R.	Bendinelli Orazio
Blinov Nikolai S.	Bratijchuk Matrona V.	Bretagnon Pierre
Chavira Enrique	Ciatti Franco	Clemedson Carl Johan
Coutrez Raymond A.J.	Debrunner Hermann	Doughty Noel A.
Galperin Yuri I.	Giuricin Giuliano	Gradsztajn Eli
Grubissich C.	Hagen John P.	Hämeen Anttila Kaarle A.
Herrera Miguel Angel	Jensen Eberhart	Konopleva Varvara P.
Kosin Gennadij S.	Kristenson Henrik	Large Michael I.
Marino Brian F.	Moiseev Ivan G.	Molchanov Andrea P.
Moreno Hugo	Mullaly Richard F.	Nesterov Nikolai S.
O'Mara Bernard J.	Oterma Liisi	Papagiannis Michael D.
Pekeris Haim Leib	Peniche Rosario	Polymilis Chronis
Radoski Henry R.	Randic Leo	Reber Grote *
Rucinski Daniel	Sadeh Dror	Servan Bernard
Shcherbina-Samojlova Inna S.	Sims Kenneth P.	Subotowicz Mieczyslaw P.R.
Svensson Roland	Szafraniec Rozalia	Tanzi Enrico G.
Troche-Boggino A E.	Tsioumis Alexandros	van Houten C.J.
van Regemorter Henri	Vardanian Rafik A.	Vergnano A.
von Hoerner Sebastian	Weimer Theophile P.F.	Wiyanto Paulus
Wroblewski Herbert	Yu Kyung-Loh	

\* See § 4.2.

## 11. FINANCIAL INFORMATION

TRIENNium 2000-2002

STATEMENT OF INCOME (CHF)

	1997-1999	2000	2001	2002	2000-2002
ADHERING ORGANIZATIONS	2 315 733	674 947	751 722	660 194	2 086 863
SPECIAL CONTRIBUTIONS	131 743	87 221	123 750		210 971
ICSU/UNESCO	67 040	19 360	16 500		35 860
UNESCO/ISYA				13 107	13 107
PUBLICATIONS: ROYALTIES	157 829	63 336	13 556	29 875	106 767
BANK INTERESTS	63 257	9 990	11 654	20 061	41 705
OTHER INCOME	23 898	24 404	21 180	1 094	46 678
TOTAL INCOME	2 759 500	879 258	938 362	724 331	2 541 951

TRIENNium 2000-2002

## STATEMENT OF EXPENDITURE (CHF)

	1997-1999	2000	2001	2002	2000-2002
<b>SCIENTIFIC ACTIVITIES</b>					
General Assembly					
Grants	508 978	549 748	4 329		554 077
Operation	39 128	13 583	3 399	2 132	19 114
Sub-total General Assembly	548 106	563 331	7 728	2 132	573 191
Meetings					
Symposia/Colloquia	539 807	82 947	148 062	225 308	456 317
Co-sponsored Meetings	15 000	5 000	35 000	11 367	51 367
Regional Meetings	25 000			25 000	25 000
Other meetings					
Sub-total Meetings	579 807	87 947	183 062	261 675	532 684
Commissions/ Working Groups					
Telegram Bureau (06)	8 000		8 000	4 000	12 000
Minor Planet Center (20)	12 000		6 000	12 000	18 000
Meteor Data Center (22)	3 300	2 200	1 100	1 100	4 400
EC WGs	11 209	831		3 570	4 401
Commission WGs	8 290	3 271	5 807	3 253	12 331
Sub-total Commissions/WGs	42 799	6 302	20 907	23 923	51 132
Total SCIENTIFIC ACTIVITIES	1 170 712	657 580	211 697	287 730	1 157 007
<b>EDUCATIONAL ACTIVITIES (46)</b>					
ISYA	63 399		43 809	75 864	119 673
VLP/TAD	92 580	39 241	8 032	35 433	82 706
Astronomy Teaching		11 836		7 906	19 742
Exchange of Astronomers	68 678	12 447			12 447
PGF			88 024	32 875	120 899
Other Activities	2 293				
Total EDUCAT. ACTIVITIES	226 950	63 524	139 865	152 078	355 467
DELEGATES TO O. UNIONS	39 514	11 245	6 626	16 296	34 167
<b>DUES TO OTHER UNIONS</b>					
ICSU	45 451	1 073	36 658	16 800	54 531
IERS/FAGS	22 500	7 500	22 500	7 500	37 500
IUCAF	22 500		15 149	7 608	22 757
Total DUES OTHER UNIONS	90 451	8 573	74 307	31 908	114 788
<b>EXECUTIVE COMMITTEE</b>					
Executive cttee meetings	172 746	66 322	32 785	69 115	168 222
Officers meetings	20 889	10 457	15 332	14 700	40 489
General Secretary expenditure	84 553	18 735	29 960	22 592	71 287
President expenditure	10 196				
Asst General Secretary expenditure	333		610		610
Archives	33 222				
Total EXECUTIVE COMMITTEE	321 939	95 514	78 687	106 407	280 608
PUBLICATIONS	165 788	33 297	22 911	40 936	97 144
<b>ADMIN/SECRETARIAT</b>					
Salaries & Charges	539 515	169 183	156 190	161 848	487 221
Training courses	2 946		2 699	2 834	5 533
General office expenses	171 801	87 059	77 318	81 193	245 570
Audit fee	6 916	2 360	2 276	2 296	6 932
Bank	28 177	3 808	3 239	5 560	12 607
Total ADMIN/SECRETARIAT	749 355	262 410	241 722	253 731	757 863
<b>TOTAL EXPENDITURE</b>	<b>2 764 709</b>	<b>1 132 143</b>	<b>775 815</b>	<b>889 086</b>	<b>2 797 044</b>
<i>Excess of Income over Expenditure</i>	<i>-5 209</i>	<i>-252 885</i>	<i>162 547</i>	<i>-164 755</i>	<i>-255 093</i>

## 12. ANNOUNCEMENTS

### 12.1. PGF COSMOLOGY PRIZE 2002

The 2002 Cosmology Prize of the Peter Gruber Foundation was awarded to Vera C. Rubin, the famous observational astronomer who has devoted her career to the study of motions of gas and stars in galaxies and the motions of galaxies in the Universe. Dr Rubin is a Senior Fellow at the Department of Terrestrial Magnetism of the Carnegie Institution of Washington, where she has been a staff member since the mid-60's. The Prize, including a cash sum of USD 150,000, was awarded at a ceremony in the gardens of the Carnegie Observatories in Pasadena, California, on November 18, 2002.

### 12.2. PGF COSMOLOGY PRIZE 2003

The 2003 Cosmology Prize of the Peter Gruber Foundation will be awarded to Rashid Sunyaev during the opening ceremony of the 25th IAU General Assembly, in the famous Sydney Opera House in the evening of Tuesday 15 July 2003. Prof. Sunyaev's great achievements in the study of the Universe need no introduction, and the events to take place in Sydney related to his Prize award will certainly be both fascinating and memorable.

### 12.3. PGF COSMOLOGY PRIZE 2004

Nominations for the 2004 PGF Cosmology Prize are hereby invited. These may be submitted by individuals, organizations and institutions, comprising individual IAU Members and astronomical institutions. For this purpose a nomination form, available via <http://www.iau.org/Activities/cosprize.html>, should be used. The deadline for receipt at the PGF Office is August 31, 2003.

Nominators should also include a concise letter of motivation and brief description of the nominee's achievements in addition to the required data in the form.

### 12.4. ASTROBIOLOGY JOURNAL

Cambridge University Press is pleased to inform IB readers about their recent, major journal "International Journal of Astrobiology". Astrobiology combines the sciences of biology, chemistry, palaeontology, geology, atmospheric physics, planetary science, astrophysics and cosmology in the study of the origin, evolution and distribution of life in the Universe. The *International Journal of Astrobiology* is a new journal which acts as an important forum for practitioners in this rapidly expanding field. Coverage includes cosmic prebiotic chemistry, planetary evolution, the search for planetary systems and habitable zones, extremophile biology and experimental simulation of extraterrestrial environments, life detection in our solar system and beyond, intelligent life and societal aspects of astrobiology.

### 13. IAU PUBLICATIONS

- 13.1. IAU TRANSACTIONS (Astrophysical Society of Pacific)  
Transactions of the IAU Vol. XXVA  
Reports on Astronomy 1999 - 2002  
Ed. Hans Rickman  
ISBN: 1-58381-137-0, 2003
- 13.2. IAU SYMPOSIA (Astrophysical Society of Pacific)
- 199 The Universe at Low Radio Frequencies  
Pune, India, Nov. 30-Dec. 4, 1999  
Eds. A. Pramesh Rao, G. Swarup & Gopal-Krishna  
ISBN: 1-58381-121-4, 2002
- 206 Cosmic Masers: From Protostars to Blackholes  
Rio de Janeiro, Brazil, March 5-10, 2001  
Eds. V. Migeses & MJ. Reid  
ISBN: 1-58381-112-5, 2002
- 212 A Massive Star Odyssey: From Main Sequence to Supernova  
Costa Teguse, Lanzarote, Canary Islands, June 24-28, 2002  
Eds. K.A. van der Hucht, A. Herrero & C. Esteban  
ISBN: 1-58381-133-8, 2003 (HB, USD 22.11)
- 13.3. IAU COLLOQUIA
- 184 AGN Surveys  
Eds. R.F. Green, E.Ye. Khachikian & D.B. Sanders, ASP Conference Series,  
Vol. 284, ISBN: 1-58381-127-3, 2002
- 187 Exotic Stars as Challenges to Evolution  
Miami, USA, March 4-8, 2002  
Eds. C.A. Tout & W. Hamme, Astr. Soc. Pacific, ISBN: 1-58381-122-2, 2002
- 13.4. IAU REGIONAL MEETING
- 8th Asian-Pacific Regional Meeting, Vol. II  
Eds. S. Ikeuchi, J. Hearnshaw & T. Hanawa  
Astronomical Society of Japan, 2002

## 14. OTHER PUBLICATIONS RECEIVED

*ASP Conference Series, San Francisco, CA, USA*

<http://www.astrosociety.org/pubs/cs/confseries.html>

- 274 Observed HR Diagrams & Stellar Evolution: The Interplay Between  
Observational Constraints & Theory  
Eds. T. Lejeune & J. Fernandes, ISBN: 1-58381-116-8, 2002
- 276 Seeing Through The Dust: The Detection of H<sub>2</sub> & The Exploration of The ISM  
in Galaxies  
Eds. A.R. Taylor, T.L. Landecker & A.G. Willis, ISBN: 1-58381-118-4, 2002
- 277 Stellar Coronae in The Chandra & XMM-Newton Era  
Eds. F. Favata & J.J. Drake, ISBN: 1-58381-119-2, 2002
- 278 NAIC-NRAO School on Single-Dish Astronomy: Techniques & Applications  
Eds. S. Stanimirovic, D. Altschuler, P. & C. Salter, ISBN: 1-58381-120-6, 2002
- 280 Next Generation Wide-Field Multi-Object Spectroscopy  
Eds. M.J.I. Brown & A. Dey, ISBN: 1-58381-123-0, 2002
- 281 Astronomical Data Analysis Software & System XI  
Eds. D.A. Bohlender, D. Durand & T.H. Handley, ISBN: 1-58381-124-9, 2002
- 282 Galaxies: The Third Dimension  
Eds. M. Rosado, L. Binette & L. Arias, ISBN: 1-58381-125-7, 2002
- 283 A New Era in Cosmology  
Eds. N. Metcalfe & T. Shanks, ISBN: 1-58381-126-5, 2002
- 285 Modes of Star Formation & The Origin of Field Populations  
Eds. E.K. Grebel & W.Brandner, ISBN: 1-58381-128-1, 2002
- 286 Current Theoretical Models & High Resolution Solar Observations: Preparing  
for ATST  
Eds. A.A. Pevtsov & H.Uitenbroek, ISBN: 1-58381-129-X, 2003
- 288 Stellar Atmosphere Modeling  
Eds. I. Hubeny, D. Mihalas & K. Werner, ISBN: 1-58381-131-1, 2003

*World Scientific*

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

- Cosmological Special Relativity: The Large-Scale Structure of Space, Time &  
Velocity (Second Edition),  
Ed. M. Carmeli, ISBN 981 02 4936 5
- Discovery of Cosmic Fractals  
Eds. Y. Baryshev & P. Teerikorpi,  
ISBN 981-02-4871-7 (HB), ISBN 981-02-4872-5 (PBK)
- TITAN: The Earth-Like Moon  
Eds. A. Coustenis & F. Taylor, ISBN 981-02-3921-1
- A Quest for Perspectives-Selected Works of S. Chandrasekhar,  
With Commentary (2 Volumes)  
Ed. K.C. Wali, ISBN 1-86094-201-6(set) (HB), ISBN 1-86094-208-3(set) (PBK)
- Astronomical Data Analysis Software & System XI  
Eds. D.A. Bohlender, D. Durand, & T.H. Handley, ISBN: 1-58381-124-9

Cambridge University Press, Cambridge, UK  
<http://www.cambridge.org>

**Accretion Power in Astrophysics**

Eds. J. Frank, A. King & D. Raine, ISBN: 0-521-957-8  
 (PBK, GBP 27.95) (HB, GBP 75.00)  
 (3rd Edition), 2002

**Active Learning Astronomy for Astronomy: The Evolving Universe**

Ed. M.L. Zeilik, ISBN: 0-521-52901-8 (PBK, GBP 29.95)  
 (9th Edition)

**Astrophysical Spectropolarimetry**

Eds. J. Trujillo-Bueno, F. Moreno-Insertis & F. Sanchez, ISBN: 0-521-80998-3  
 (HB, GBP 65.00), 2002

**Calendrical Tabulations 1900-2200**

Eds. E.M. Reingold & N. Dershowitz, ISBN: 0-521-78253-8 (HB, GBP 85.00),  
 2002

**Deep-Sky Companions: The Caldwell Objects**

Ed. S.J. O'Meara, ISBN: 0-521-82796-5 (HB, GBP 25.00), 2002

**Detection of Light**

**From the Ultraviolet to the Submillimeter**

Ed. G. Rieke, ISBN: 0-521-01710-6 (PBK, GBP 29.95)  
 (2nd Edition), 2003

**Dynamic Sun**

Ed. B.N. Dwivedi, ISBN: 0-521-81057-4 (HB, GBP 65.00), 2003

**Exploration of the Solar System by Infrared Remote Sensing**

Eds. R.A. Hanel, B.J. Conrath, D.E. Jennings & R.E. Samuelson,  
 ISBN: 0-521-81897-4 (HB), (2nd Edition), 2003

**Extreme Ultraviolet Astronomy**

Eds. M.A. Barstow & J.B. Holberg, ISBN: 0-521-58058-7 (HB, GBP 60.00), 2003

**Galaxies at High Redshift**

Eds. I. Perez-Fournon, M. Balcells, F. Moreno-Insertis & F. Sanchez,  
 ISBN: 0-521-82591-1 (HB, GBP 65.00), 2003

**Introduction to Radiative Transfer**

**Methods & Applications in Astrophysics**

Ed. A. Pariaiah, ISBN: 0-521-77989-8 (PBK), 2002

**Introduction to Spectropolarimetry**

Ed. J.C. del Toro Iniesta, ISBN: 0-521-81827-3 (HB, GBP 55.00), 2003

**Meteors in the Earth's Atmosphere**

Eds. E. Murad & I.P. Williams, ISBN: 0-528-0431-0 (HB, GBP 60.00), 2002

**Sky and Ocean Joined**

Ed. S.J. Dick, ISBN: 0-521-81599-1

**Stellar Astrophysical Fluid Dynamics**

Eds. M.J. Thompson & J. Christensen-Dalsgaard, ISBN: 0-521-81809-5 (HB),  
 2003

**Theoretical Astrophysics, Volume 3, Galaxies & Cosmology Galaxies &**

**Coesmology**

Ed. T. Padmanabhan, ISBN: 0-521-56242-2 (HB, GBP 75.00)

The Gravitational Million-Body Problem  
Ed. D. Heggie & P. Hut, ISBN: 0-521-77486-1

*Kluwer Academic Publishers, Dordrecht, The Netherlands*

Radio Recombination Lines: Their Physics and Astronomical Applications  
Eds. M.A. Gordon & R.L. Sorochenko, ISBN 1-4020-1016-8 (GBP 91.00)  
An Atlas of Local Group Galaxies  
Eds. P.W. Hodge, B.P. Skelton & H. Ashizawa, ISBN 1-4020-0673-X (GBP 106.00,  
EUR 169.00), 2002

## 15. OTHER MEETINGS ON ASTRONOMICAL TOPICS

TUG 2003, 25th Anniversary of TeX  
July 20-24, 2003, Outrigger, Waikaloa, Hawaii, USA  
Contact: Robin Laakso, TeX Users Group, 1466 NW Naito Parkway, Suite 3141,  
US Portland, OR, 97209 2820, USA  
Tel: 1 503 223 9994, Fax: 1 503 223 3960, E-Mail: tug2003@tug.org  
<http://www.tug.org/tug2003>

AGN Physics with the Sloan Digital Sky Survey  
July 27-30, 2003, Princeton, NJ, USA  
Contact: Pat Hall or Gordon Richards, Princeton Univ., Peyton Hall, Ivy Lane,  
US Princeton, NJ, 08544 1001, USA  
Tel: 1 609 258 8073/7529, Fax: 1 609 258 1020, E-Mail: patgordon@astro.princeton.edu  
<http://www.astro.princeton.edu/~gtr/sdssagn2003/>

Asymmetric Planetary Nebulae III: Winds, Structure, & the Thunderbird  
July 27- August 1, 2003, Mount Rainier, WA, USA  
Contact: Bruce Balick, Univ of Washington, Box 351580,  
Astronomy Dept., Univ. of Washington,  
US Seattle, WA, 98195-1580, USA  
Tel: 1 206 543 7683, Fax: 1 206 685 0403, E-mail: balick@astro.washington.edu

International SKA Conference 2003  
July 27-August 2, 2003, Geraldton, Australia  
Contact: Michelle Storey, CSIRO ATNF, PO Box 76,  
AU Geraldton, NSW 1710, Australia  
Tel: 61 2 9372 4590, Fax: 61 2 9372 4310, E-mail: Michelle.Storey@csiro.au  
<http://www.atnf.csiro.au/projects/ska/events/geraldton/>

Physics & Astrophysics of Neutron Stars  
July 28-August 1, 2003, Inn at Loretto, Santa Fe, NM, USA  
Contact: Chris Fryer, Los Alamos National Laboratory, T-6, MS B227,  
US Los Alamos, NM, 87545, USA  
Tel: 1 505 665 3394, Fax: 1 505 664 0007, E-Mail: fryer@lanl.gov  
<http://neutron-stars.lanl.gov/>

Fifth J.J. Giambiagi Winter School: Precision Cosmology  
July 28-August 1, 2003, Physics Department, Univ. of Buenos Aires, Argentina  
Contact: F.C. Lombardo, Physics Dpt, Univ Buenos Aires, Pab.I Ciudad Universitaria,  
AR Buenos Aires, 1428, Argentina  
Tel: 541145763390 ext.823, Fax: 541145763357  
E-Mail: giambiagi2003@df.uba.ar, <http://www.giambiagi2003.df.uba.ar>

28 th International Cosmic Ray Conference  
 July 31-August 7, 2003, Tsukuba, Japan  
 Contact: Takaaki Kajita, Institute for Cosmic Ray Research, 5-1-5, Kashiwanoha, Kashiwa,  
 JP Chiba, 277 8582, Japan  
 Tel: 81 471 36 5104, Fax: 81 471 36-3126, E-Mail: icrc2003@icrr.u-tokyo.ac.jp  
<http://www.icrr.u-tokyo.ac.jp/icrc2003/>

The International Symposium on Optical Science & Technology - SPIE's  
 48th Annual Meeting  
 August 3-8, 2003, San Diego, CA, USA  
 Contact: SPIE Customer Service, SPIE, P.O. Box 10,  
 US Bellingham, WA, 98225 0010, USA  
 Tel: 1 360/676 3290, Fax: 1 360/647 1445, E-Mail: spie@spie.org  
<http://www.spie.org>

The Fourth Conference on the Inspiration of Astronomical Phenomena (INSAP)  
 August 3-9, 2003, Magdalen College, Oxford Univ., Oxford, UK  
 Contact: Professor Ray White, Steward Observatory, 933 N. Cherry Ave., Univ of Arizona,  
 US Tucson, AZ, 85721 0065, USA  
 Tel: 1 520 326-3005, Fax: 1 520 621N 1532, E-Mail: rwhite@as.arizona.edu,  
<http://ethel.as.arizona.edu/~white/insap/insap4x.htm>

Cometary Dust in Astrophysics  
 August 10-14, 2003, Mount Rainier, WA, USA  
 Contact: Donald Brownlee, Univ. of Washington,  
 US Seattle, WA, 98195 1580, USA  
 E-mail: brownlee@bluemoon.astro.washington.edu

AGAVA 2003 - Order & Chaos in Stellar & Planetary Systems  
 August 17-24, 2003, St. Petersburg, Russia  
 Contact: Victor Orlov, Sobolev Astronomical Institute of St. Petersburg,  
 State Univ., Universitetskij pr. 28, St. Petersburg,  
 RU Sary Peterhof, 198504, Russian Federation  
 Tel: 7 812 428 42 16, Fax: 7 812 428 71 29, E-Mail: agava@astro.spbu.ru  
<http://www.astro.spbu.ru/AGAVA>

Star and Structure Formation: From First Light to the Milky Way  
 August 18-22, 2003, ETH Zurich, Switzerland  
 Contact: Marianna Berger  
 Tel: 41 1 633 22 86  
 Fax: 41 1 633 12 38  
 E-mail: eth\_astro2003@phys.ethz.ch

Joint European & National Astronomy Meeting for 2003 (JENAM-2003)  
 August 25-30, 2003, Eötvös Univ., Budapest, Hungary  
 Contact: Andras Holl, Konkoly Observatory, P.O. Box 67,  
 HU Budapest, 1525, Hungary  
 Tel: 36 1 3754122, Fax: 36 1 2754668, E-Mail: holl@konkoly.hu  
<http://www.konkoly.hu/jenam03>

Radio Astronomy at 70: from Karl Jansky to microjansky  
 August 27-29, 2003, Budapest, Hungary  
 Contact: Leonid Gurvits, Joint Institute for VLBI in Europe, P.O. Box 2,  
 NL Dwingeloo, 7990 AA, Netherlands  
 Tel: 31 521 596500, Fax: 31 521 597332, E-Mail: lgurvits@jive.nl  
<http://www.konkoly.hu/jenam03/>



Third Ulyanovsk International School-Seminar: Problems of Theoretical & Observational  
Cosmology UISS-2003  
September 1-10, 2003, Ulyanovsk, Russian Federation  
Contact: Prof. Sergei V. Chervon, Ulyanovsk State Univ., 42 Leo Tolstoy Str.,  
RU Ulyanovsk, 432970, Russian Federation  
Tel: 7-8422-344338, Fax: 7-8422-344338, E-Mail: chervon@sv.uven.ru

Chicago Workshop on Adaptive Mesh Refinement Methods  
September 3-5, 2003, Chicago, IL, USA  
Contact: Carrie Eder, The ASCI Flash Center The Univ of Chicago, 5640, S. Ellis, RI 468,  
US Chicago, IL, 60637, USA  
Tel: 1 773 834 2057, Fax: 1 773 834 3230, E-Mail: amr2003@flash.uchicago.edu  
<http://flash.uchicago.edu/amr2003/>

Conference on Statistical Problems in Particle Physics, Astrophysics, & Cosmology  
September 8-11, 2003, Stanford Linear Accelerator Center, Menlo Park, CA, USA  
Contact: Arla Lecount, Stanford Linear Accelerator Center, 2575 Sand Hill Rd, MS97,  
US Menlo Park, CA, 94025, USA  
Tel: 1 650-926-2574, E-Mail: phystat2003@slac.stanford.edu  
<http://www-conf.slac.stanford.edu/phystat2003/>

Gamma-ray Bursts: 30 Years of Discovery  
September 8-12, 2003, Santa Fe, NM, USA  
Contact: Ed Fenimore, Los Alamos National Laboratory, NIS-2, MS D436,  
US Los Alamos, NM, 87545, USA  
Tel: 1 505 667 7371, Fax: 1 505 665 4414, E-Mail: grb2003@nis.lanl.gov  
<http://grb2003.lanl.gov/>

The Magnetized Interstellar Medium  
September 8-12, 2003, Antalya, Turkey  
Contact: Dr. Bulent Uyaniker, MPIfR, Auf dem Huegel 69,  
DE Bonn, 53121, Germany  
Tel: 49 228 525 122, Fax: 49 228 525 436, E-Mail: uyaniker@mpifr-bonn.mpg.de  
<http://www.mpifr-bonn.mpg.de/div/konti/antalya/>

12 th UN/ESA Workshop on Basic Space Science  
September 8-12, 2003, Beijing, China PR  
Contact: Hans J. Haubold, United Nations, Wagramerstr. 5, P.O. Box 500,  
AT Vienna, 1400, Austria  
Tel: 43 1 26060 4949, Fax: 43 1 26060-5830, E-Mail: hans@neutrino.aquaphoenix.com  
<http://www.seas.columbia.edu/~ah297/un-esa/>

Coronal & Stellar Mass Ejections  
September 13-17, 2003, Beijing, China PR  
Contact: Kenneth Dere, Naval Research Laboratory, Code 7663, 4555 Overlook Ave.,  
US Washington, DC, 20375, USA  
Tel: 1 202 767 2161, Fax: 1 202 767 5636, E-Mail: cme2004@bao.ac.cn  
[http://lasco-www.nrl.navy.mil/~avourlid/cme\\_mtg](http://lasco-www.nrl.navy.mil/~avourlid/cme_mtg)

The Sun & Planetary Systems - Paradigms for the Universe  
September 15-20, 2003, Kiepenheuer Institute for Solar Physics  
Contact: Reinhard E. Schielicke, Univ. Observatory Jena, Schillergaesschen 2,  
DE Jena, 07745, Germany  
Tel: 49-3641-947526, Fax: 49-3641-947502, E-Mail: schie@astro.uni-jena.de  
[http://www.astro.uni-jena.de/Astron\\_Ges/agtagfbg.html](http://www.astro.uni-jena.de/Astron_Ges/agtagfbg.html)

Four Years of Chandra Observations: A Tribute to Riccardo Giacconi  
 September 16-18, 2003, Huntsville, AL, USA  
 Contact: Martin C. Weisskopf, NASA MSFC, SD50,  
 US Huntsville, AL, 35812, USA  
 E-Mail: [Martin.Weisskopf@msfc.nasa.gov](mailto:Martin.Weisskopf@msfc.nasa.gov), <http://cxc.harvard.edu/giacconi/>

Science with Adaptive Optics  
 September 16-19, 2003, ESO Headquarters, Garching, Germany  
 Contact: Wolfgang Brandner, Max-Planck-Institut fuer Astronomie, Koenigstuhl 17,  
 DE Heidelberg, 69117, Germany  
 Tel: 49 6221 528 289, Fax: 49 6221 528 246, E-Mail: [aoscience03@eso.org](mailto:aoscience03@eso.org)  
<http://www.eso.org/aoscience03>

Plasmas in the Laboratory & in the Universe: New Insights & new Challenges  
 September 16-19, 2003, Villa Olmo, Como, Italy  
 Contact: Giuseppe Bertin, Dipartimento di Fisica, Università degli Studi, via Celoria 16,  
 IT Milano, 20133, Italy,  
 Tel: 39 02 50317619, Fax: 39 02 5031 7272, E-Mail: [como03@ifp.cnr.it](mailto:como03@ifp.cnr.it)  
<http://www.ifp.cnr.it/conference/como03>

International Meteor Conference  
 September 18-21, 2003, Bollmannsruh, Germany  
 Contact: Ina Rendtel, International Meteor Organization, Mehlbeerenweg 5,  
 DE Potsdam, 14469, Germany  
 Tel: 49 331 520707, E-Mail: [IRendtel@t-online.de](mailto:IRendtel@t-online.de)  
<http://aipsoe.aip.de/~rend/2003imc.html>

Interacting Binaries Probing Accretion & Stellar Evolution  
 September 21-27, 2003, Cefalù, Sicily, Italy  
 Contact: Luciano Burderi & GianLuca Israel, OAR, Via di Frascati,  
 IT Monte Porzio Catone, 3300040, Italy  
 Tel: 39 06 9428 6434 or 9428 6437, Fax: 39 06 9447 243  
 E-mail: [ib2003@ulysses.mporzio.astro.it](mailto:ib2003@ulysses.mporzio.astro.it)

4th Cologne-Bonn-Zermatt-Symposium on The Dense Interstellar Medium  
 September 22-26, 2003, Zermatt, Switzerland  
 Contact: J. Stutzki, I. Physikalisches Institut, Univerität Köln, Zuelpicher Str 77,  
 DE Köln, 50937, Germany  
 E-mail: [zermatt2003@ph1.uni-koeln.de](mailto:zermatt2003@ph1.uni-koeln.de)

Numerical Methods for Multidimensional Radiative Transfer Problems  
 September 24-26, 2003, Heidelberg, Germany  
 Contact: Rainer Wehrse, Institut fuer Theoretische Astrophysik, Tiergartenstr. 15,  
 DE Heidelberg, 69221, Germany  
 Tel: 9 6221 54 8973, Fax: 49 6221 54 4221, E-Mail: [radconf@ita.uni-heidelberg.de](mailto:radconf@ita.uni-heidelberg.de)  
<http://www.ita.uni-heidelberg.de/~radconf/>

Modelling the Intergalactic & Intracluster Media  
 October 1-4, 2003, Vulcano (Messina - Eolian Islands), Italy  
 Contact: Vincenzo Antonuccio-Delogo, INAF - Catania Astrophysical Observatory, Città  
 Universitaria - Via Santa Sofia 78,  
 IT Catania, 95125, Italy  
 Tel: 39-095-7332318, Fax: 39-095-330592, E-mail: [van@ct.astro.it](mailto:van@ct.astro.it)

**Stellar Populations**

October 6-10, 2003, Garching, Germany  
 Contact: Stephane Charlot, Max-Planck Institut fuer Astrophysik,  
 Karl-Schwarzschild-Str.1  
 DE Garching, 85748, Germany  
 Tel: 49 89 30000 2015, Fax: 49 89 30000 2235  
 E-Mail: stel pops@mpa-garching.mpg.de  
<http://www.mpa-garching.mpg.de/~stel pops/>

**Astronomical Data Analysis Software & Systems XIII**

October 12-15, 2003, Strasbourg, France  
 Contact: Marc Wenger, Observatoire de Strasbourg, 11 Rue de l'Universite,  
 FR Strasbourg, 67000, France  
 Tel: 33 3 90 24 24 33, Fax: 33 3 90 24 24 32  
 E-Mail: adass2003@astro.u-strasbg.fr  
<http://astro.u-strasbg.fr/adass2003/>

**Multi-wavelength Mapping of Galaxy Evolution**

October 13-16, 2003, Venice, Italy  
 Contact: Alvio Renzini, ESO, Karl-Schwarzschild-Str. 2,  
 DE Garching, 85748, Germany  
 Tel: 49 89 320 060, Fax: 49 89 320 2362, E-mail: venice03@eso.org

**The Fifth Microquasar Workshop - Microquasars & Related Astrophysics**

October 13-19, 2003, Tsinghua Univ., Beijing, 100084, China  
 Contact: Jianfeng Zhou, Physics Department & Center for Astrophysics, Tsinghua Univ.,  
 CN Beijing, 100084 China  
 Tel: 86-10 6279-2127, Fax: 86-10 6279-2125, E-mail: microquasar@jet.uah.edu  
<http://jet.uah.edu/microquasar/>

**APHYS-2003 First International Meeting on Applied Physics**

October 15-18, 2003, Badajoz, Spain  
 Contact: Antonio Mendez-Vilas  
 E-Mail: secretariat@formatex.org,  
<http://www.formatex.org/aphys2003/aphys2003.htm>

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

October 20-24, 2003, Dubrovnik, Croatia  
 Contact: K. Pavlovski, Univ. of Zagreb, Department of Physics, Bijenicka cesta 32,  
 HR Zagreb, 10000, Croatia  
 Tel: 385-1-4605536, 385-1-4680336, Fax: E-mail: pavlovski@sirius.phy.hr  
<http://act.phy.hr/workshop>

**Second CHANDRA Calibration Workshop**

October 27-28, 2003, Cambridge, MA, USA  
 Contact: CHANDRA Calibration Workshop Organizing Committee, SAO,  
 60 Garden Str, MS 3,  
 US Cambridge, MA ,02138, USA  
 Tel: 1 617 495 7356, E-Mail: ccw@cfa.harvard.edu  
<http://cxc.harvard.edu/ccw/>

**Payload & Mission Definition in Space Sciences**

November 17-28, 2003, Instituto de Astrofisica de Canarias,  
 Contact: Ms Nieves Villoslada, Ms Lourdes Gonzalez,  
 ES Tenerife, Canary Island, Spain  
 Fax: 34 922 605210, E-mail: xvwinter@II.iac.es

**The Formation & Evolution of Massive Young Star Clusters**

November 17-21, 2003, Cancun, Mexico

Contact: Henny J.G.L.M. Lamers, Utrecht Univ, or Linda J. Smith, London Univ. College

Tel: 31 30 253 5222

Fax: 31 30 253 5201

E-mail: lamers@astro.uu.nl,ljs@star.ucl.ac.uk

**High Resolution Infrared Spectroscopy in Astronomy**

November 18-21, 2003

ESO Headquarters, Garching, Germany

Contact: Hans Ulrich Kaufl, ESO, Karl Schwarzschild Str. 2,

DE Garching, 85748, Germany

Tel: 49 89 3200 6414, Fax: 49 89 320 2362, E-Mail: ekstasy2003@eso.org

<http://www.eso.org/gen-fac/meetings/ekstasy2003/>**The Impact of Active Galaxies on the Universe at Large**

February 16-17, 2004, Royal Society, London, UK

Contact: Katherine Blundell, Oxford Univ. Astrophysics, Keble Rd,

GB Oxford, OX1 3RH, UK

Tel: 44 1865 273308, Fax: 44 1865 273390, E-mail: kmb@astro.ox.ac.uk

**The INTEGRAL Universe - 5th INTEGRAL Workshop**

February 16-20, 2004, Bavarian Academy of Sciences, Munich, Germany

Contact: Christoph Winkler, RSSD, ESA, ESTEC, Keplerlaan 1,

NL Noordwijk, 2200 AG, The Netherlands

Tel: 31 71 565 3591, Fax: 31 71 565 5434, E-mail: Christoph.Winkler@rssd.esa.int

**Planetary Defense Conference: Protecting Earth from Asteroids**

February 23-26, 2004, Garden Grove, CA, USA

Contact: Dr. William H. Ailor, The Aerospace Corporation, P.O. Box 92957,

US Los Angeles, CA, 90009, USA

Tel: 1 310 336 1135, Fax: 1 310 563 3004,

E-Mail: william.h.ailor@aero.org

<http://www.aero.org/conferences/planetdef/>**The Interplay among Black Holes, Stars & ISM in Galactic Nuclei**

March 1-5, 2004, Hotel Serrano Gramado, Rio Grande do Sul

Contact: Thaisa Storchi Bergmann, Instituto de Fisica - UFRGS - Brazil,

Campus do Vale - CP 15051,

BR Porto Alegre, RS, Brazil, 91 501-970

Tel: 55 51 3316 6443, Fax: 55 51 3316 7286, E-mail: bhsign@if.ufrgs.br

**TITAN from Discovery to Encounter**

April 13-17, 2004, ESTEC, Noordwijk, The Netherlands

Contact: Henk Olthof, ESA/ESTEC, Keplerlaan 1,

NL Noordwijk, 2200 AG, The Netherlands

E-Mail: Henk.Olthof@esa.int, <http://sci2.esa.int/huygens/conference/>**Interacting Binaries: Probing Accretion, Evolution & Outcome**

July 4-10, 2004, Cefalu', Sicily, Italy

Contacts: Luciano Burderi &amp; GianLuca Israel, Astronomical Observatory of Rome,

Via di Frascati 33, Monteporzio Catone,

IT Rome, 00040, Italy

Tel: 39-06/942-864-27, Fax: 39-06/944-7243, E-mail: ib2003@coma.mporzio.astro.it

**Massive Stars in Interacting Binaries**

August 16-20, 2004, La maison du lac Sacacomie, Quebec province, Canada  
Contact: A. Moffat, Dept. de physique, Université de Montreal, 6128, Succ. Centre-ville,  
CA Montreal, QC, H3C 3J7, Canada  
Tel: 1 514 343-6682/6932, Fax: 1 514 343-2071,  
E-Mail: moffat@astro.umontreal.ca/stlouis@astro.umontreal.ca

**Coronal & Stellar Mass Ejections**

September 13-17, 2004, Beijing, China  
Contact: Kenneth Dere, Naval Research Laboratory, Code 7663, 4555 Overlook Ave.,  
US Washington, DC, 20375, USA  
Tel: 1 202-767-2161, Fax: 1 202-767-5636  
[http://lasco-www.nrl.navy.mil/~avourlid/cme\\_mtg](http://lasco-www.nrl.navy.mil/~avourlid/cme_mtg)

**Modest 7 - Modeling Dense Stellar Systems**

August 29-31, 2005, Northwestern Univ., Evanston, USA  
Contact: Fred Rasio, Northwestern Univ, Dept of Physics & Astronomy, 2145 Sheridan Rd,  
US Evanston, IL, 60208, USA  
Tel: 1-847-467-3419, Fax: 1-847-467-6857, E-mail: rasio@northwestern.edu  
<http://www.manybody.org/modest-7.html>



## The IAU Divisions

### **Division I Fundamental Astronomy**

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### **Division II Sun & Heliosphere**

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### **Division III Planetary Systems Sciences**

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### **Division V Variable Stars**

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### **Division VI Interstellar Matter**

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### **Division VII Galactic System**

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Fax: 1 410 338 4767  
gmeylan@stsci.edu

### **Division VIII Galaxies and the Universe**

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*From July to December*  
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Astronomy Dpt  
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Fax: 1 301 314 9067  
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### **Division IX Optical & Infrared Techniques**

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### **Division X Radio Astronomy**

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### **Division XI Space and High Energy Astrophysics**

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