

[Home](#) | [News](#) | [FAQ](#) | [Organization](#) | [Activities](#) | [Contact](#)

INFORMATION BULLETIN No. 84

June 1999

[Preface](#)

[1.Faits Divers](#)

[2.Main Deadlines in 1999-2000](#)

[3.The XXIVth General Assembly](#)

[4.News from Divisions and Commissions](#)

[5.Executive Committee](#)

[6.Scientific Meetings in 1999](#)

[7.The IAU Archives 1919-1970](#)

[8.Educational activities](#)

[9.Relations to other Organizations](#)

[10.Membership](#)

[11.Publications](#)

[12.Other meetings on Astronomical topics](#)

PREFACE

As this issue of the Information Bulletin is being mailed out, the IAU Executive Committee is meeting in Santiago, Chile. Its main tasks are to decide on the scientific programme for the XXIVth General Assembly in Manchester next year, and on the formal matters that need to be submitted to the Adhering Organizations in preparation for the business of the GA. At the same time, our UK hosts will be finalising all major arrangements for GA XXIV and preparing the information package that will accompany the Preliminary Announcement. A special issue of the Information Bulletin (No. 85, October 1999), will contain this Announcement as well as full details on the scientific and social programmes of GA XXIV, registration and hotel reservation forms, and much practical information for participants. Look out for IB 85 and keep an eye on our Web site, where all news will be posted promptly!

The format of the General Assembly will follow the pattern from The Hague and Kyoto, with parallel Symposia at the beginning and end, and Invited Discourses, Joint Discussions, and Division and Commission meetings during the period of the GA itself. We have received many exciting proposals for all major types of events, and the EC faces a difficult, but rewarding task in selecting among them. That the final programme will be of a high calibre is already clear.

Another part of the preparations for the General Assembly is the compilation of the triennial *Reports on Astronomy* (Transactions of the IAU, Vol. XXIVA), covering the period July 1, 1996 through June 30, 1999. As agreed in Kyoto, this volume will allow Divisions, Commissions, and Working Groups more latitude in the format of their reports than previously. Instructions have been mailed out to the Presidents and Chairpersons, and new LaTeX macros are being prepared and will be distributed shortly. In preparing for this volume, I am relieved to report that both the *Highlights of Astronomy, Vol. 11A+B* and the *Transactions of the IAU, Vol. XXIIIB*, recording the

scientific and administrative business of the Kyoto GA, have now appeared in print as some of the last IAU volumes to be produced by Kluwer under our previous publishing contract. The first Symposium volumes printed by ASP, the new IAU Publisher, have already appeared.

On other matters, I am pleased to extend a warm welcome to the astronomers of our new Associate Member state, Uzbekistan, which joined the IAU at the beginning of 1999 by the established procedure for Republics of the former Soviet Union. We also say "Welcome back!" to our Moroccan friends who are on their way back to the IAU after some years of financial hardship. Following visits earlier this year to Morocco and Jordan (see later), I have some hope that more applications for membership might arrive before the Manchester GA.

Finally, the Secretariat has continued to work quietly and efficiently to improve our services and procedures and eliminate the backlog of work from the past, preparing for the onslaught usually associated with General Assemblies. The dedicated and pleasant cooperation of Monique Léger-Orine and Jodi Greenberg is what keeps the IAU running.

Johannes Andersen
General Secretary

IN MEMORIAM

PATRICK ARTHUR WAYMAN
1927 - 1998

PATRICK A. WAYMAN, The 12th general secretary of the IAU (1979- 1982), died on 21 december 1998 after a short battle with cancer. He was born in Bromley, Kent, educated at the City of London School and Emmanuel College, Cambridge, and took his Ph.D. degree in optics after spending two years at the Warner and Swasey and Yerkes Observatories, USA. He joined the Royal Greenwich Observatory in 1952, first in the Solar Department which he headed from 1955, and from 1960 in the Meridian Department whose head he became in 1963. In 1964 he moved to Ireland as director of Dunsink Observatory until his retirement in 1992. He held the ancient, honorary Andrews professorship in Astronomy at Trinity College Dublin from 1985, and a D.Sc.H.C. degree from the National University of Ireland (1994).

His scientific interests ranged widely and included substantial work on instrumentation for both solar and meridian astronomy as well as advanced imaging cameras and the Armagh-Dunsink-Harvard telescope in South Africa. That telescope was used in major photometric work on the Magellanic Clouds, including a study of period changes in the Cepheids. But his interests also extended to theoretical studies of Galactic and solar-system dynamics. He was a most effective organiser of research, both nationally and internationally, with the negotiation of the Irish participation in the British observatory on La Palma as the most notable example. A strong interest also in the history of astronomy resulted in the restoration of several ancient instruments and a bicentennial history of Dunsink Observatory published in 1987, and was carried on in his retirement.

The vision and energy with which Patrick Wayman served the IAU in several capacities led to some notable achievements. In an historical perspective, the most important is probably the full

return in 1982 of the mainland Chinese astronomers to the IAU, the first scientific Union to negotiate the formula of dual adherence that is now a model for the scientific world. The process was begun in 1979 in close cooperation between IAU President Adriaan Blaauw, General Secretary Edith Müller, and then Assistant General Secretary Patrick Wayman, who initiated informal discussions during a visit to the People's Republic. His charm and persistence helped to pave the way for the following long and difficult direct negotiations, the happy end of which was only reached during Wayman's term as General Secretary. It was finally ratified at the XVIIIth IAU General Assembly in Patras, Greece, which was marked by a number of exceptional circumstances - a very short lead time to find a venue and make preparations, a major strike during the GA, and the sad loss of the President, Vainu Bappu, at the start of the GA - which placed extreme demands on his judgment and organizational skills. Under less dramatic circumstances, Patrick Wayman oversaw the start of operations of the permanent Secretariat of the IAU at Observatoire de Paris and the transfer of its archives from Bruxelles and Prague, setting a style of operation that has eased the task of all subsequent General Secretaries.

Patrick Wayman is remembered by friends and associates as a fine and dedicated scientist with a clear and stringent intellect, great personal energy and charm, and considerable tenacity and persistence once he had decided how a problem should be solved. Our warm sympathies go to his wife Mavis and their three children in their loss.

1. FAITS DIVERS

As a non-planetary astronomer, it is perhaps a bit ironic that I shall probably remember the Asteroid, Near-Asteroid, and "Small-or-Minor-Planet" community as having provided most of the drama and entertainment during my term as GS. Hardly was the manuscript of IB 83 off to press when a seemingly arcane technical debate on cataloguing and designating Trans Neptunian Objects (TNOs) erupted into an emotional media debate accusing the IAU of conspiring to rob poor Pluto of its status as a planet. To the innocent bystander (your GS), the fact of the matter seemed about as controversial as giving a social security number to a person, but the facts quickly drowned in emotions, and the relevant IAU committees finally decided to not include Pluto in any TNO catalogues. An official IAU press release to this effect was issued on February 4 and put the matter to rest. In retrospect, a useful lesson from this story is that consensus on the scientific issues after a broad debate in the whole IAU community is the basis - and in fact the *only* basis - for the acceptance of IAU recommendations or decisions by the General Public.

The potential for more drama reappeared with the discovery in late March of another asteroid that, based on a few first observations, was predicted to pass close to Earth in about 30 years and even closer a decade later. On the way, some very interesting insights into near-Earth asteroid dynamics were highlighted. By the time you read this, more observations of the object have likely been obtained and the detailed predictions may have changed. But unlike 1997 FX11, of 1998 notoriety, you are unlikely to have heard of it: A draft paper on these results was circulated and thoroughly discussed in the NEO community without anyone trying to create a sensation (although the potential victims of such a sensation were kept informed), a quite gratifying experience from a GS viewpoint. From the debate, three useful general lessons emerged: *(i)*: With the recent great increase in the intensity of NEO searches, similar objects will likely be found every few months; *(ii)*: When decades are available for follow-up observations and refinement of the orbital elements, eliminating the great majority of initially ominous objects, sensational early alerts are pointless,

and (iii): near-Earth asteroids may show very interesting dynamical effects which must be carefully considered in planning any future mitigation measures in case a *really* dangerous object were to be found.

On other matters, Don Wentzel and I visited Morocco for several days in early march, formalising an agreement to start up a series of educational activities under the TAD programme in that country, with Universit, Hassan II in Casablanca as the focus. During that time, we met most of the astronomy groups and many very helpful people, and we are hopeful that, through this programme, the IAU shall be able to help stimulating the growth of professional astronomy in Morocco. The following week, J. Mattei (AAVSO), S. Larsen (Copenhagen Univ.) and I attended the 8th *UN/ESA Workshop on Basic Space Science* in Mafraq, Jordan, which focused on Astronomical Research and Education with Small Telescopes. The workshop was an inspiring experience, far in style from the standard IAU meeting. It demonstrated the presence in the region of a number of brilliant, but isolated scientists whom the IAU could help with contacts and communications, and I hope that some of these will join the IAU as members next year. It also left us with a strong impression of the warm hospitality and chilling circumstances of our colleagues and hosts, struggling to survive, scientifically and literally, in this troubled region of the world.

2. MAIN DEADLINES IN 1999-2000

Date	Action Item	By
1999:		
18 Jun	72nd Meeting of the Executive Committee	EC
26 Jun	World 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 SOC's	Participants
15 Feb	Submit Symposium Travel Grant applications to SOC's	Participants
15 Feb	Submit GA Travel Grant applications to General Secr.	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.

15 Mar Proposals due for Meetings in 2001 (Symp & Coll)	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

Preparations for the XXIVth General Assembly in Manchester are proceeding apace. Activities will be centred on the University of Manchester, an extensive campus located one mile south of the city centre. Accommodation covering a wide range of tastes has been booked. A choice of hotel accommodation near the University and in the city centre is available. Budget standard accommodation is available in student halls of residence and in addition there is superior accommodation with rooms with ensuite facilities (private bath/shower and toilet). All residence hall accommodation is in single rooms; delegates bringing partners and families may wish to use the hotels.

An extensive social programme is being organized. We are planning a Welcome reception, sponsored by the Royal Astronomical Society. Visits will be available to historic houses such as Haworth, the home of the Brontës, and Chatsworth, the Cavendish family seat. Weekend tours include the Lake District (Wordsworth) and Stonehenge. Tours to the Jodrell Bank 250 ft telescope will also be a feature of the programme.

E-mail facilities will be available for delegates. 60 terminals have been booked in the Physics Department of the University. These are intended as a medium for communication rather than for the use of large work packages.

The LOC provides the facilities for the GA. The scientific programme is the responsibility of the IAU Executive Committee. The LOC assists with local arrangements to ensure that the scientific programme runs smoothly.

The arrangements for registration and booking of accommodation will be by a Conference Organizer appointed for the GA. More information on these topics will be given in the Preliminary Announcement (IB 85) on 1 October 1999, and on the Web.

R.D. Davies

D. Walsh

4. NEWS FROM DIVISIONS AND COMMISSIONS

Division II Sun and Heliosphere (Peter Foukal)

The Division II OC has been occupied in the last few months with preparing a solid program for the General Assembly and its connected meetings in the year 2000. Two proposals were received for 1-day Joint Discussions, and one for a 3-day Symposium, all to be held in Manchester, in August 2000. A proposal for a Colloquium to be held in December, 2000 has also been proposed. Besides these events for which we are acting as the coordinating Division, we are also acting in a supporting capacity for two other proposals, one for a JD, and another for a Symposium, coordinated by other Divisions and Commissions. All these proposals have now been processed by the Div II OC, and final choices will be made by the Executive Committee in the near future. Thanks to all the participants in the various proposals for your efforts - you will be notified in June of the EC decisions.

Division XI Space and High Energy Astrophysics (Willem Wamsteker)

Following the short report on Space activities of interest to the IAU membership in general in IB 83, Division XI will try to keep this information service up. As before, any inaccuracies in the listing below are the full responsibility of the Division President. To avoid exponential growth we supply only changes in the situation with respect to the previous report. Thus, for a complete overview of current space astrophysics, please combine the information here with that in IB 83. The Divisional Web Page will maintain a more complete listing in the future.

Space Astrophysics news

SOHO recovered

After the various mishaps with the Spacecraft since 24 June 1998, SOHO is now back again in full operations since 18 Feb 1999, with the completion of the Zero Gyro operations mode. Further information can be found at: <http://virgo.so.estec.esa.nl>

HST servicing mission scheduled

The next servicing mission for the Hubble Space Telescope (HST) has been advanced to 14 October, 1999 to prevent problems in the Gyro package for HST stabilization. With only three Gyroscopes operational (No.3 failed on 20 April 1999) further loss could create major problems for the telescope. Further information can be found at: <http://sci.esa.int/hubble/>

ROSAT turned off

After the various mishaps reported in the last IB 83, no recovery could be established and ROSAT

Orbital Operations were terminated on 12 Feb. 1999. Further information can be found at: <http://heasarc.gsfc.nasa.gov/docs/rosat/roskof.html>

FUSE launch date: 27 May 1999 from Cape Canaveral

Further information can be found at: <http://fuse.pha.jhu.edu/>

CLUSTER launch dates set

For ESA's Cluster mission, the modules FM6 and FM7 are scheduled for Launch with a Soyuz Launcher from the Baikonor cosmodrome for June 2000. FM5 and FM8 will be launched in July 2000. Further information can be found at: <http://sci.esa.int/cluster/>

DEEP SPACE 1 launched

On 24 November 1998 the Ion Propulsion Engine on NASA's Deep Space 1 (DS1) mission was successfully started and it is performing well. Further information can be found at: <http://nmp.jpl.nasa.gov/ds1/>

XMM

The first AO for ESA's X-ray Multi-Mirror Mission (XMM) has been issued with a deadline for proposals of 17 April 1999 00:00 Hr UT. The Ariane-5 launch remains scheduled for 21 January, 2000. Further information can be found at: <http://sci.esa.int/xmm/>

ABRIXAS launched

The DLR Broad-band Imaging X-Ray All-Sky Survey (ABRIXAS) has been successfully launched on 28 April, 1999 with a COSMOS launcher from the Kaputsin Yar launch site. Further information can be found at: <http://wave.xray.mpe.mpg.de/abrixas>

CHANDRA (AXAF) launch rescheduled again

The launch of NASA's Advanced X-Ray Astrophysics Facility (CHANDRA), scheduled for launch with the Shuttle Columbia (STS- 93) from KSC on 9 July, 1999, has been delayed. The new delay is associated with the failure in the Upper Stage motor on 9 April, 1999 of an Air Force mission. This same IUS is used to transfer CHANDRA to its final orbit. Further information can be found at: <http://xrtpub.harvard.edu/index.html>

HETE II launch scheduled

The High Energy Transient Explorer II (HETE II) mission is scheduled for Launch with a Pegasus XL launch vehicle from Kwajalein Missile Range for 27 October, 1999. This NASA/CNES /RIKEN/CESR mission replaces the original HETE mission which suffered a launch failure in 1996. Further information can be found at: <http://space.mit.edu/HETE/>

INTEGRAL launch scheduled

ESA's International Gamma-Ray Astrophysics Laboratory (INTEGRAL) is now scheduled for launch with a PROTON Launcher in September 2001. Further information can be found at: http://astro.estec.esa.nl/astrogen/integral/mission_top.html

SWAS launched

NASA's Submillimeter Wave Astronomy Satellite (SWAS), a Small Explorer Mission of two year duration, to investigate the composition of dense interstellar clouds, has been successfully launched on December 5, 1998 with PEGASUS from VDBAFB. Further information can be found at: <http://sunland.gsfc.nasa.gov/smex/swas/>

Mars Climate Orbiter launched

NASA's Mars Climate Orbiter (MCO) is part of Mars Surveyor 98 program and has been launched on December 11, 1998. (DELTA II Launch; Cape Canaveral). Further information can be found at: <http://mpfwww.jpl.nasa.gov/msp98/msp2.html>

Mars Polar Lander launched

NASA's Mars Polar Lander is part of Mars Surveyor 98 program and has been launched on January 3, 1999. (DELTA II Launch; Cape Canaveral). This Mission carries the DEEP SPACE 2 Mars Microprobes. Further information can be found at: <http://mpfwww.jpl.nasa.gov/msp98/msp2.html>

WIRE failed after launch

NASA's Wide Field Infrared Explorer (WIRE) has been launched on March 4, 1999, with Pegasus from Vandenberg AFB. A too early opening of the cover of the telescope caused the loss of the Hydrogen needed to cool the telescope and instruments as announced on March 8, 1999. WIRE had been expected to make a survey of the IR sky to detect starburst activity for the duration of its Hydrogen coolant (at least 4 months).

Commission 6**Annual Report of the Central Bureau for Astronomical Telegrams, 1998**

The rate of publication of the IAU Circulars continues to increase, the 278 issued in 1998 - five more than in 1997 - representing another record. As in other recent years, the main reason for the increase has been the great number of discoveries of supernovae and comets. Some 56 percent of the Circulars issued contained items on supernovae, while 47 percent contained items on comets.

In addition to the 158 supernovae reported in 1998 data during the year, there were also reports of 29 supernovae from images obtained in 1997 and earlier. Fully one-quarter of the supernovae were fainter than mag 22.5 at discovery, with two of them recorded at mag 26.8. Three supernovae - 1998S in NGC 3877, 1998aq in NGC 3982 and 1998bu in NGC 3368 - attained mag 12 visually, and the first of these was the single most popular topic during the year, with observations of it reported on 19 different Circulars.

As for comets, even excluding the five predicted recoveries of periodic comets and the five belated discoveries from images obtained in 1997, the remaining 46 handsomely broke the previous annual record. The five belated discoveries were obtained with the LASCO white-light coronagraphs aboard the Solar and Heliospheric Observatory (SOHO) spacecraft, and SOHO was responsible for 16 additional comets found before the temporary failure of the mission in

June. All but two of these SOHO comets appear to have been members of the Kreutz sungrazing group that did not survive perihelion passage. One of the exceptions, C/1998 J1, is the only SOHO comet to be observed subsequently from the ground, and this was the second most popular topic of the year, with mention on 12 Circulars. The ground-based data revealed a fundamental flaw in the positions obtained from SOHO - and thus with the orbital solutions. Toward the end of 1998 a start was made on rectifying this problem and revising the earlier results. As noted in the report of the Minor Planet Center, 16 comets were also credited to the "LINEAR" program: in addition, an apparently asteroidal object found by LINEAR could be identified with an "asteroid" observed at Turku in 1939 having an apparently cometary orbit, and the eventual recognition of a coma and tail has now allowed the object to be classified as comet 139P/Väisälä-Oterma.

Four galactic novae and ten gamma-ray bursters were reported during the year. Although one of the gamma-ray bursters was discussed on as many as ten Circulars, coverage was down considerably from the previous year, thanks to the "GCN" alerts on these objects that are being issued by the NASA Goddard Space Flight Center.

The two new, faint, distant, satellites of Uranus, the discovery and initial follow-up of which were recorded on IAU Circulars last year, were recovered in 1998, and the determinacies of their orbits were improved by the recognition of observations on a pair of nights in 1984. The brighter satellite was found to have an eccentric orbit with a period of 3.5 years, the longest for any known satellite in the solar system.

Although it was the subject of only three Circulars, the most "notorious" event of the year was the announcement, on March 11, that the asteroid 1997 XF11 would pass close - perhaps extremely close - to the earth in 2028. As has been noted many times, the possibility of an approach to only tens of thousands of kilometers was a valid deduction from orbital elements published five days earlier by the Minor Planet Center from a three-month arc of observations. The purpose of the announcement was to draw attention to the need for further observations of the object, which was largely being ignored. Unfortunately, the announcement was misunderstood by some as indicating that there was a significant probability (perhaps 0.1 percent or more) that the object would strike the earth in 2028; and a simultaneous message in the World Wide Web, improperly described as some kind of "official press release" by the IAU, did nothing to dispel this belief. The main point of the WWW message was to provide ephemerides to allow a search for past observations of the object, and indeed, such observations from 1990 were rapidly forthcoming as a result. These observations showed that 1997 XF11 would clearly pass at more than twice the distance of the moon, the initial suggestion that passage within the moon's distance was "virtually certain" having arisen from the hasty use of a 1- sigma error estimate, rather than an appropriately larger value.

The "free" distribution of the Circulars in the WWW has meant that the number of subscribers to the printed edition has continued to fall, from 365 in January to 336 in December. As noted in the report of the Minor Planet Center, the decrease in the number of subscribers to the Computer Service, while understandable, is also cause for concern, given the Bureau's strong dependence on subscriptions for supporting a staff (about 1.5 people) that is at least available for action 14 or more hours a day and seven days a week. As in recent years, most of the Circulars in 1998 were prepared by Bureau Associate Director Daniel Green, with backup from the undersigned. Responsibility for the administrative work of the Bureau has rested mainly with Muazzez Lohmiller, together with Donna Thompson through July. Gareth Williams continued very effectively to maintain the Bureau's presence on the WWW (URL <http://cfa-www.harvard.edu/iau/cbat.html>).

Brian G. Marsden
Director of the Bureau

Commission 20

Note: The web address of Comm. 20 is: <http://www.astro.uu.se/IAU/c20> (error in IB 83, p. 6)

Annual Report of the Minor Planet Center, 1998

The number of pages of Minor Planet Circulars (**MPCs**) issued, 2368, was again very slightly less than in the preceding year, but this needs to be augmented by the 3028 pages of the Minor Planet Circulars Supplement (**MPSs**), a new series introduced in October 1997 to include the actual observations, which are now only summarized in the MPCs themselves. More than 70 percent of the MPCs therefore now refer to orbital computations, including the documentation of new numberings of minor planets. The 1701 new assignments of permanent numberings in 1998 is well over twice the previous record of 758 attained in 1997. Furthermore, the number of objects given provisional designations in a single halfmonth exceeded the previous record on no fewer than five occasions during 1998, sending the subscripted numerals beyond 100 for the first time. The record subscript reached, in the second half of September, 164, which translates into the multiple-night detection of more than 4100 objects that were not immediately identifiable. The total of Minor Planet Electronic Circulars (**MPECs**) issued, 743, was also more than twice as many as ever before. The main reason for this increase is the "Daily Orbit Update" (**DOU**) MPEC that lists all the orbits computed and identifications found since the previous issue. Nevertheless, even if these 340 DOU issues are excluded - they do normally appear seven days a week, but there is an interruption for a few days each month while the MPCs are being prepared - there is a 34-percent increase over the previous record year of 1997. Subtraction of the DOU issues during the second halves of September and November still leaves more "traditional" MPECs, 33 and 31, respectively, than in any halfmonth in a previous year.

The principal reason for the tremendously increased activity in 1998 has been the enormous success of the M.I.T. Lincoln Laboratory Near-Earth Asteroid Research (**LINEAR**) program, which "almost overnight" in March resulted in a fivefold increase in the production rate of observations. Although this increase meant the addition of 55 new "potentially hazardous asteroids" to the 104 known at the end of 1997 (accumulated since 1932), it obviously applied also to the data on main-belt objects. The **LINEAR** program also yielded at least 16 new comets in 1998. This number is undoubtedly an underestimate, because the short exposures used by **LINEAR** mean that comets are generally not recognized as such. Cometary nature therefore needs to be established by other observers. In this connection, "The NEO Confirmation Page" (**NEOCP**), maintained by the Minor Planet Center on the World Wide Web, has proven very valuable, because it is a place where objects whose motion (even on a single night) suggests NEO status are immediately placed, in the hope that observations obtained by others as a result will confirm this status. Since such observations are likely to show whether or not an object is cometary, the Minor Planet Center also sometimes uses the **NEOCP** for objects it suspects (either from an orbit determination or from a tentative report by an observer) to be comets.

One area where activity was down during 1998 involved the transneptunian objects (**TNOs** or **KBOs** or **EKOs**), with only 15 new such objects actually reported during the year (four of them on images obtained during 1997). However, many additional TNOs from 1998 images were reported

during the first part of 1999, making 1998 therefore a record year for actual designations of TNO discoveries - a record undoubtedly to be broken in 1999. Of much more concern is the slow rate of second-opposition recoveries, which are essential for anything remotely resembling an orbit "determination". There were only five of these during 1998, yielding a total of 45 multiple-opposition TNOs (including Pluto). The most significant TNO development during the year was the recognition (in one case only when observations extended to a third opposition) of what appear to be the first two cases of TNOs in 1:2 resonance with Neptune.

The number of subscriptions to the printed MPCs fluctuated between 204 and 220 during the year. Although the printed MPSs were also distributed to about a dozen subscribers for most of the year, the expense of this mailing is not inconsiderable, and those who want these printed pages are now asked to obtain the MPSs by file-transfer-protocol as subscribers to the Extended Computer Service (ECS). Although there was a general increase, from 47 to 60, in the number of ECS subscribers during the year, the continuing general decrease in the number of subscribers to the MPCs, and even an indication now that the number of subscribers to the regular Computer Service (shared with the Central Bureau for Astronomical Telegrams) is showing a decline from the peak of 602 in mid-1997, is taking its toll on the Minor Planet Center's financial resources. A grant from the U.S. National Aeronautics and Space Administration during 1998 was therefore very much appreciated, as was the reinstatement of the annual subvention from the IAU. There is clearly a problem, however, in that a sudden fivefold increase in workload has occurred for a small staff (about 1.5 people) that is already grossly overworked and needs to be augmented. Despite this, some users have been urging a more rapid dissemination of observations, an act that would be ill-advised before the data have been fully checked. Nevertheless, starting in April, it was agreed to incorporate the observations of new NEOs on the DOU MPECs, a procedure that seems to be working reasonably satisfactorily. Anticipating that the fivefold increase would be permanent, the Minor Planet Center acquired three new computers, and a person associated with the LINEAR program provided essential help in getting them on line. It has still not been possible to make these new computers fully operational, however, and a situation has developed in that the urgency of attending to current data has increased the time spent struggling with the old computers, thereby preventing the upgrade.

The fivefold increase in activity has been handled almost single-handedly by Associate Director Gareth Williams, who also carries out most of the computer programming for the Minor Planet Center and maintenance of the WWW pages. Syuichi Nakano has again been the "Liaison in Japan", carefully organizing the data obtained by several dozen Japanese amateur astronomers. Susan Russell, of the Russell Mark Group, of Albany, California, has provided valuable pro bono service editing the citations for new namings of minor planets; this is another task that becomes progressively more time-consuming, as the members of the Division III Small Bodies Names Committee will attest. Timothy B. Spahr assisted operations for a while during the summer. Donna Thompson and Muazzez Lohmiller attended to the accounts and mailings, the latter having sole responsibility for these following the resignation of the former in July. As in the past, Billy Duggan oversaw the printing, collating and stapling of the MPCs (and, for much of the year, the MPSs) in the SAO's print shop.

*Brian G. Marsden
Director, Minor Planet Center*

5. EXECUTIVE COMMITTEE

The 72nd meeting of the Executive Committee

The 72nd EC meeting will take place at Universidad de Chile, Santiago, Chile, June 18-20, 1999. Arrangements for the 24th General Assembly will be the main item on the agenda. The 73rd and 74th EC meetings will be held in conjunction with the 24th General Assembly.

6. SCIENTIFIC MEETINGS IN 1999

6.1 Future IAU Symposia

(No changes since the announcements in IB 83 pp. 9-11)

*IAU Symposium 195 Highly Energetic Physical Processes and Mechanisms for Emission from Astrophysical Plasmas
6-10 July, Bozeman MT, USA
See IB 83 p. 9*

*IAU Symposium 196 Preserving the Astronomical Sky
12-16 July, Vienna, Austria; connected to the UNISPACE III Conference.
See IB 83 p. 10*

*IAU Symposium 197 Astrochemistry: From Molecular Clouds to Planetary Systems
23-27 August, Sogwipo, South Korea
See IB 83 p. 10*

*IAU Symposium 198 The Light Elements and their Evolution
22-26 November, Natal, Brasil
See IB 83 p. 11*

*IAU Symposium 199 The Universe at Low Radio Frequencies
30 November - 4 December, Pune, India
Contact Person: Govind Swarup (
gswarup@ncra.tifr.res.in)*

NB: The IAU notes with deep regret the passing of Prof. Vijay Kapahi, designated Chairman of the SOC of IAU Symposium 1999, on March 16, 1999.

His duties have been taken over by Prof. G. Swarup as noted above.

6.2 Future IAU Colloquia

(No changes since the announcements in IB 83 pp. 12-14)

*IAU Colloquium 174 Small Galaxy Groups
13-18 June in Turku, Finland
See IB 83 p. 12*

*IAU Colloquium 175 The Be Phenomenon in Early-Type Stars
28 June - 2 July, Alicante, Spain
See IB 83 p. 12*

*IAU Colloquium 176 The Impact of Large-Scale Surveys on Pulsating Star Research
8-12 August, Budapest, Hungary
See IB 83 p. 12-13*

*IAU Colloquium 177 Pulsar Astronomy - 2000 and Beyond
30 August - 3 September, Bonn, Germany
See IB 83 p. 13*

*IAU Colloquium 178 Polar Motion: Historical and Scientific Problems
27-30 September, Cagliari, Italy
See IB 83 p. 13*

*IAU Colloquium 179 Cyclical Evolution of Solar Magnetic Fields: Advances in Theory and Observations
13-16 December, Kodaikanal, India
See IB 83 p. 14*

6.3 Special Education Workshop

*IAU-COSPAR-UN Special Workshop on Education at UNISPACE III
July 20 - 22, 1999, Vienna, Austria
See IB 83 p. 14 and website <http://www.iau.org/capbuild.html>*

7. THE IAU ARCHIVES 1919-1970

The status of the IAU Archives was described in IB83. We are still missing the following volumes of the IAU Transactions: Nos. I (1922), V (1935), and XIII A (1967). Any donations from readers will be much appreciated.

8. EDUCATIONAL ACTIVITIES

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

8.1. 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:

Dr Morton S. Roberts
NRAO
Edgemont Road
Charlottesville VA 22903
USA
Phone: 1 804 296 0233
Fax: 1 804 296 0278
Email: mroberts@nrao.edu

Vice-President:

Dr Richard M West
ESO
Karl Schwarzschildstr 2
D 85748 Garching München
Germany
Phone: 49 89 320 06 276
Fax: 49 89 320 2362
Email: rwest@eso.org

8.2. Teaching for Astronomy Development (TAD): Progress Report

1. **Central America:** *After the destruction by Hurricane Mitch, the entire 1998 TAD (ICSU) support for Central America was sent to Honduras in order to repair the observatory of the National University of Honduras in Tegucigalpa, and to contribute to upgrading the observatory's capability to retrieve and analyzing data from Earth satellites. The observatory and its access to satellite data has become an essential part of the national reconstruction. Since Honduras' capability to access the web and satellite data was first installed by a visiting astronomer from Spain (with support by ESA), we see here a very practical benefit of astronomy.*

2. **Morocco:** *The IAU General Secretary has signed a contract with Université Hassan II in*

Casablanca for TAD support of astronomy in Morocco (March 1999). He and D. Wentzel visited astronomers and relevant national and international offices in Casablanca, Marrakech and Rabat to identify TAD and other IAU activities that may support the growth of Moroccan astronomy.

*Donat G. Wentzel, Secretary for TAD,
Professor Emeritus, University of Maryland*

9. RELATIONS TO OTHER ORGANIZATIONS

The IAU is continuing to strengthen relations to COSPAR and the UN Office for Outer Space Affairs in Vienna, the continued protection of good observing conditions and joint initiatives in education being on the top of the list (cf. the jointly organised Symposium and Educational Workshop at the UNISPACE III conference in Vienna in July). As part of these initiatives, D. Wentzel and the GS visited in early March the UN Regional Educational Centre for Space Science and Technology in Rabat, Morocco, which showed a most positive and cooperative spirit. Moreover, three participants supported by the IAU, including the GS, participated in the 8th UN/ESA Workshop on Basic Space Science in Mafraq, Jordan, also in March (see the brief note under "Faits Divers").

The IAU is pleased to announce the appointment of Dr. Suzanne Débarbat as the IAU representative to the Comité Consultatif des Unités (CCU) of the Bureau International des Poids et Mesures (BIPM).

We are also pleased to inform IAU members that Dr. Nicole Capitaine has accepted to represent the IAU to the Directing Board of the International VLBI Service for Geodesy and Astrometry (IVS).

10. MEMBERSHIP

10.1 National Membership

Following a formal application by the Uzbek Academy of Sciences, the IAU has been pleased to

welcome Uzbekistan as an Associate Member, according to the previously established policy of automatic eligibility of the Republics of the Former Soviet Union. An application has also been received to restore the Associate Membership of Morocco (see IB 81, p. 45), and also Jordan has now applied to become an Associate Member.

10.2 Deceased 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, three members whose death was reported in IB 83 (p. 28) or in IAU Transactions XXXIIIB kindly inform us that this information is in fact incorrect: Drs. G.C. Joshi, Sadaemon Kikuchi and Mayank Vahia. We are most pleased to learn that all three 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 following names of Members whose death has been reported to, and verified by, the Secretariat since IB 83.:

Beard, David, B	Langer, George, Edward
Blitzstein, William	Lasker, Barry, M
Bouvier, Pierre	Mikhail, Fahmy, I
Edwards, Terry, W	McCrea, William,
Geake, John, E	O'Leary, Brian, T
Green, Louis, C	Oliver, Bernard, M
Herzberg, Gerhard	Öhman, Yngve
Hitotsuyanagi, Juichi	Pedersen, Olaf
Howse, H, Derek	Rydbeck, Olof
Jaschek, Carlos, O R	Segal, Irving, E
Kahn, Franz, D	Sobolev, V, V
Kapahi, Vijay, K	Waldhausen, Silvia
Lagerqvist, Albin	Wayman, Patrick, A

10.3 Address Updates Needed for IAU Members or Consultants!

A major effort is being made by the Secretariat to keep the membership data base up-to-date. We thank all who sent information regarding Members or Consultants with erroneous addresses in response to the list given in IB 83. 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 continue to appreciate all possible help from readers.

In some cases, we receive information that a person listed has left astronomy and should be deleted from the membership file. We ask correspondents to note that removal of members from the membership list is only possible either through a written resignation to the General Secretary, or on the explicit proposal of the appropriate Adhering Organization, or at the confirmation of the death of a member. Accordingly, we ask correspondents to either contact such members and suggest that they resign from the Union, or the Adhering Organization.

Baier, Frank	Greenhouse,	Sleath, John
Zntrlnst	Matthew	6 The Quadrant
Astrophysik	Ntl Air/Space	Little Earling

<i>Sternwarte Babelsberg Rosa Luxemburg Str 17a D 14482 Potsdam Germany</i>	<i>Museum Smithsonian Institution MRC 321 Washington DC 20560 USA</i>	<i>Lane London W5 4EE UK Sweet, Peter Dept of Physics & Astron The University Glasgow G12 8QQ UK Taffara, Salvatore Via Calza 5bis I 35128 Padova Italy</i>
<i>Bolcal, Cetin Physics Dpt Univ of Istanbul University 34452 34459 Vezneciler Turkey</i>	<i>Gussmann, E Zntrlnst Astrophysik Sternwarte Babelsberg Rosa Luxemburg Str 17a D 14473 Potsdam Germany</i>	<i>Tiersch, Heinz Zntrlnst Astrophysik Sternwarte Babelsberg Rosa Luxemburg Str 17a D 14482 Potsdam Germany</i>
<i>Colombi, Stephane Cita Mclennan Labs Univ of Toronto 60 St Georges St. Toronto ON M5S 1A1 Canada</i>	<i>Haser, Leo MPE Postfach 1603 D 85740 Garching Germany</i>	<i>van der Borght, Rene 31 The Promenade Isle of Capri Surfers Paradise 4217 Australia</i>
<i>Cruise, Adrian Rutherford Appleton Lab Chilbolton Observ Ditton Park Slough SL3 9JX UK</i>	<i>Holloway, Nigel Safety/Reliabilit y dir Wigshaw Lane Culcheth Warrington WA3 4NE USA</i>	<i>Walraven, Th Box 989850 Orange Freestate South Africa</i>
<i>Domke, Helmut Zntrlnst Astrophysik Sternwarte Babelsberg Rosa Luxemburg Str 17a D 14473 Potsdam Germany</i>	<i>Malaise, Daniel DMO Consulting SA r Varin 141 A B 4000 Liege Belgium</i>	
	<i>Mitic, Ljubisa Astronomical Observ Volgina 7 11050 Beograd Yugoslavia FR</i>	

11. 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. Since IB 83, the following Proceedings of IAU sponsored meetings have appeared: (Kluwer Academic Publishers, Dordrecht NL)

*Highlights of Astronomy Volume XXIIIA
Ed. J. Andersen
ISBN 0 7923 5342 0 (PB) US\$ 100.00, 1998*

*Highlights of Astronomy Volume XXIIIB
Ed. J. Andersen
ISBN 0 7923 5556-3 (PB) US\$ 100.00, 1998*

*Transactions of the International Astronomical Union
Volume XXIIIB
Ed. J. Andersen
ISBN 0 7923 5588 1 (HB) US\$ 192.00, 1999*

*Alphabetical list of members
ISBN 0-7923-5589X (PB) US \$ 72.00, 1999*

11.1. IAU Symposia

183 Cosmological Parameters and the Evolution of the Universe

*Kyoto, Japan , August 18-22, 1997
Ed. Katsuhiko Sato
Kluwer Academic Publishers, Dordrecht 1999.
ISBN 0 7923-5959-1 (HB) \$173.00, 0 -7923-5460-5 (PB)
\$89.00.*

192 The Stellar Content of Local Group Galaxies

*Capetown, South Africa, September 7-11, 1998
Eds. P. Whitelock & R. Cannon
Astronomical Society of the Pacific, Provo UT, 1999.*

ISBN 1 886733-82-1 (HB).

11.2. Other books received

Astronomical Society of the Pacific, San Francisco, USA

ASP Conference Series

Vol 152 Fiber Optics in Astronomy III
Eds S. Arribas, E. Mediavilla & F. Watson
ISBN 1-886733-72-4, 1998.

Vol 153 Library and Information Services in Astronomy (LISA III)

Eds. U. Grothkopf, H. Andernach, S. Stevens-Rayburn & M. Gomez
ISBN 1-886733-73-2, 1998.

Vol 154 Cool Stars, Stellar Systems and the Sun

Eds. R. A. Donahue & J. A. Bookbinder
Tenth Cambridge Workshop, San Francisco 1998.
ISBN 1-886733-74-0.

Vol 155 Three Dimensional Structure of Solar Active Regions

Eds. C. E. Alissandrakis & B. Schmieder
Second Advances in Solar Physics Euroconference, San Francisco 1998.
ISBN 1-886733-75-9.

Cambridge University Press, Cambridge UK and Cambridge MA, USA

Cambridge Space Telescope Science Institute Symposium Series

The Hubble Deep Field
Eds. M. Livio, S.M. Fall & P. Madau
ISBN 0 521 63097 5 (HB) US\$ 69.95, 1998.

Other Cambridge University Press Books

The Cambridge Concise History of Astronomy
Ed. M. Hoskin
ISBN 0-521-57291 6 (HB) US\$ 69.95, ISBN 521 57600 80
(PB) US\$ 26.95, 1999.

Cosmological Physics

J. Peacock

*ISBN 0 521 4270 1 (PB) US\$ 39.95, ISBN 0 521 41072X (HB)
US\$ 85.00, 1999.*

Hubble Vision: Further Adventures with the Hubble Space Telescope.

*Eds. C. C. Petersen & J. C. Brandt
ISBN 0 521 59291 7 (HB) US\$ 39.95, 1998.*

The New Solar System

*Eds. J. K. Beatty, C.C. Petersen & A. Chaikin
ISBN (PB) 0-521-64587-5, 1999.*

The Physics of Fluids and Plasmas

*A. R. Choudhuri
ISBN 0 521 55543 4 (PB) US\$ 29.95, ISBN 0 521 55487X
US\$ 74.95, 1998.*

Quasars and Active Galactic Nuclei: An Introduction

*A. K Kembhavi & J.V. Narlikar,
ISBN 0 521 47989 4 (PB) US \$34.95, ISBN 0 521 47477 9 (HB)
US\$80.00, 1999.*

Seven Wonders of the Cosmos

*J. V. Narlikar
ISBN 0 521 63898 4 (PB) US\$19.95, ISBN 521 63087 8
(HB) US\$ 59.95, 1999.*

Theory of Black Hole Accretion Discs

*Eds. MA Abramowicz, G. Björnsson & JE Pringle,
ISBN 0 521 62362 6 (HB) US\$ 69.95, 1999.*

12. OTHER MEETINGS ON ASTRONOMICAL TOPICS

- [Fourth Biennial History of Astronomy Workshop](#)
July 1 - 4, 1999, Notre Dame IN, USA
Contact address: Michael J. Crowe, Program of Liberal Studies, Univ. of Notre Dame,
Notre Dame IN 46556, USA

Tel: 1 219 631 6212

E-mail: Michael.J.Crowe.1@nd.edu

- [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 or 1 415 337 1109
 Fax: 1 415 337 5205
 E-mail: lkeechler@aspsky.org
- [The Future of the Universe and the Future of our Civilization](#)
 July 2 - 7, 1999, Budapest, Hungary
 Contact address: Future-99, Astro Space Center, Lebedev Physical Institute,
 Profsoyuznaya 84/32, Moscow 117810, Russia
 Tel: 7 095 333 3366
 Fax: 7 095 333 2378
 E-mail: future@asc.rssi.ru
- [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
- [35th Liège International Astrophysics Colloquium, The Galactic Halo : from Globular Clusters to Field Stars](#)
 July 5-8, 1999, Liège, Belgium
 Contact address: Institut d'Astrophysique et de Géophysique, 5, avenue de Coïnte
 B-4000 Liège, Belgique
 E-mail: astrocol@astro.ulg.be
- [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
- [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

- [*Helioseismic Diagnostics of Solar Convection and Activity*](#)
July 12 - 15, 1999, Stanford CA, USA
Contact address: Alexander Kosovichev, Stanford Univ.,
455 via Palou, Stanford, CA 94305-4085
Tel: 1 650 723 7667
Fax: 1 650 725 2333
E-mail: Akosovichev@solar.stanford.edu
- [*SOFIA/Star Formation Workshop*](#)
July 12 - 17, 1999, Santa Cruz CA, USA
Contact address: Juleen Moon, Univ. California at Los Angeles, 405 Hilgard Ave.,
Los Angeles CA 90095-1562, USA
Tel: 1 310 206 2457
Fax: 1 310 267 0272
E-mail: moon@astro.ucla.edu
- [*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
- [*Life Cycles of Radio Galaxies*](#)
July 15 - 17, 1999, Baltimore MD, USA
Contact address: Lorraine Garcia, STScI, 3700 San Martin Drive, Baltimore
MD 21218, USA
Tel: 1 410 338 4402
Fax: 1 410 338 4767
E-mail: garcia@stsci.edu
- [*The Fifth International Conference on Mars*](#)
July 18 - 23, 1999, Pasadena CA, USA
Contact address: Arden Albee, Graduate Office, MS 02-31,
California Institute of Technology, Pasadena CA 91125, USA
Tel: 1 626 395 6367
Fax: 1 626 577 9246
E-mail: 5thMars99@caltech.edu
- [*14th UCL Astronomy Colloquium: Extragalactic Astrophysics at Millimetre and Infrared Wavelengths*](#)
July 19 - 22, 1999, Great Windsor Park, UK
Contact address: Carol Broad, Dept of Physics & Astronomy, Univ. College London,
Gower Street, London WC1E 6BT, UK
Fax: 44 171 380 7145
E-mail: c.broad@ucl.ac.uk
- [*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

- [Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space \(UNISPACE III\), satellite meetings on planetary exploration and astronomy](#)

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: ooosa@unov.un.or.at

- [Capacity Building in Astronomy and Basic Space Science, Special Educational Workshop of IAU-COSPAR-UN in connection with UNISPACE III](#)

July 20 - 22, 1999, Vienna, Austria

Contact address: Johannes Andersen, IAU, Inst. d'Astrophysique, 98bis Bd Arago, F-75014 Paris, France

Tel: 33 1 4325 8358

Fax: 33 1 4325 2616

E-mail: iau@iap.fr

- [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

- [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

- [Structure Formation in the Universe](#)

July 26 - August 6, 1999, Cambridge, UK

Contact address: Heather Hughes, Conference and Programme Secretary, Newton Institute, 20 Clarkson Rd, Cambridge CB3 0EH, UK

Tel: 44 1223 330119

Fax: 44 1223 330508

E-mail: h.hughes@newton.cam.ac.uk

- 1999 Pacific Rim Conference on Stellar Astrophysics

August 3 - 6, 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: astrophy@hkucc.hku.hk

- [Bioastronomy 99: 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: 1 808 956 6828

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

- [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

- [ESO/MPA Meeting on The First Stars](#)

August 4 - 6, 1999, Garching, Germany

Contact address: A. Weiss, MPI für Astrophysik, Karl-Schwarzschild-Str. 1, D-85748 Garching, Germany

Fax: 49 89 3299 3235

E-mail: stars@mpa-garching.mpg.de

- [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 Göttingen, Geismarlandstr. 11, D-37083 Göttingen, Germany

Tel: 49 551 394 037

Fax: 49 551 395 043

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

- [The Statistics of Cosmological Data Sets](#)

8 - 13 August 1999, Cambridge, UK

Contact address: Heather Hughes, Conference and Programme Secretary, Newton Institute, 20 Clarkson Road

Cambridge, CB3 0EH, UK

Tel: 44 1223 330508

Fax: 44 1223 330119

E-mail: h.hughes@newton.cam.ac.uk

- [Dagstuhl Seminar on Computer Science in Astronomy](#)

August 8 - 13, 1999, Wadern, Germany

Contact address: Reinhard Wilhelm, IBFI Schloss Dagstuhl, Postfach 15 11 50,

D-66041 Saarbrücken, Germany
Tel: 49 681 302 4396
Fax: 49 681 302 4397
E-mail: office@dagstuhl.de

- [Magnetospheres of the Outer Planets \(MOP'99\)](#)
August 9 - 14, 1999, Paris, France
Contact address: MOP Registration, DESPA, Observatoire de Paris,
5 Place Jules Janssen, F-92195 Meudon Cedex, France
Fax: 33 1 4507 2806
E-mail: MOP@megasx.obspm.fr
- [NATO Advanced Study Institute: Advances in Solar Research at Eclipses, from Ground and from Space](#)
August 9 - 20, 1999, Bucharest, Romania
Contact address: Astronomical Institute of the Romanian Academy, Str. Cutitul de Argint 5,
RO-75212 Bucharest, Romania
Tel: +401 335 68 92
Tel/Fax: +401 337 33 90
E-mail: magda@roastro.astro.ro
- [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
- [One Hundred Years of Observational Astronomy and Astrophysics](#)
August 13 - 15, 1999, Tihany, Hungary
Contact address: C. Sterken, University of Brussels (VUB), Pleinlaan 2,
B-1050 Brussels, Belgium
Tel: 32 2 629 3469
Fax: 32 9 362 3976
E-mail: csterken@vub.ac.be
- [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
- [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

- [Connecting Fundamental Physics and Cosmology](#)
August 16 - 20, 1999, Cambridge, UK
Contact address: Heather Hughes, Conference and Programme Secretary,
Newton Institute, 20 Clarkson Rd, Cambridge CB3 0EH, UK
Tel: 44 1223 330119
Fax: 44 1223 330508
E-mail: h.hughes@newton.cam.ac.uk
- [GMIC :99 The Universe of Gamov: Original Ideas in Astrophysics and Cosmolgy](#)
August 16-21, 1999, Odessa, Ukraine
Contact address: M. Ryabov, Odessa Astronomical Obsevatory, 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
- [XXVIth International Cosmic Ray Conference](#)
17 - 25 August, 1999, Salt Lake City UT, USA
Contact address: LOC University of Salt Lake, Dept. of Physics, Salt Lake City, UT
84112-0830, USA
Tel: 1-801-581-6628
Fax: 1-801-581-6256
E-mail: icrc1999@www.icrc.utah.edu
- [Tutorial Talks on the Origin of the Universe](#)
21 August, 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
- [GMIC 99 Early Universe: Cosmological Problems and Instrumental Technologies](#)
August 22-26, 1999, St. Petersburg, Russia
Contact address: V. Khaikin, Polytechnicheskaya 21 rm III,
195220 St. Petersburg, Russia
Tel: 7-812-247-22-23
Fax: 7-812-2475062
E-mail: ykh@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 or 1 573 341 4344

Fax: 1 573 341 6033

E-mail: oes@umr.edu

- [*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

- [*Physics of the Solar Corona and Transition Region*](#)
August 24 - 27, 1999, Monterey CA, USA
Contact address: Karel Schryver & Neal Hurlburt, Stanford-Lockheed Institute for Space Res,
Org. L9-41, Bldg 252, 3251 Hanover St, Palo Alto CA 94304, USA
Tel: 1 650 424 2907
Fax: 1 650 424 3994
E-mail: corona@lmsal.com

- [*ESO Workshop on Black Holes in Binaries and Galactic Nuclei*](#)
September 6 - 8, 1999, Garching, Germany
Contact address: Patrick Woudt, ESO, Karl-Schwarzschild-Str.2,
D-85748 Garching, Germany
Tel: 49 89 3200 60
Fax: 49 89 3200 6480
E-mail: bh99@eso.org

- [*Plasma Turbulence and Energetic Particles in Astrophysics*](#)
September 6 - 10, 1999, Krakow, Poland
Contact address: M. Ostrowski, Astronomical Observatory, Jagiellonian Univ.,
ul. Orla 171, PL-30-244 Krakow, Poland
Tel: 48 12 425 1457
Fax: 48 12 425 1318
E-mail: cracow99@oa.ju.edu.pl

- [*X-ray Astronomy 1999: Stellar Endpoints, AGN and the X-ray Background*](#)
September 6 - 10, 1999, Bologna, Italy
Contact address: Nicholas E. White, NASA/GSFC, Code 662,
Greenbelt MD 20771, USA
Tel: 1 301 286 8443
Fax: 1 301 286 0677
E-mail: nwhite@lheapop.gsfc.nasa.gov

- [*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

- [9th European Meeting on Solar Physics, Magnetic Fields and Solar Processes](#)
September 12 - 18, 1999, Florence, Italy
Contact address: Giannina Poletto, Osservatorio di Arcetri, Largo Fermi 5,
I-50125 Firenze, Italy
Tel: 39 55 275 2252
Fax: 39 55 220 039
E-mail: spm@arcetri.astro.it
- [Motion of celestial bodies, astrometry and astronomical reference frames, Les Journees 1999 \(systeme de reference spatio temporels\) and Lohrmann colloquium.](#)
September 13-15, 1999, Dresden, Germany
Contact address: Michael Soffel, Lohrmann observatory, TU Dresden, Mommsenstr. 13,
01062 DRESDEN
Tel.: (49) 351 463 4200
Fax.: (49) 351 463 7019
E-mail: soffel@rcs.urz.tu-dresden.de
- [NGST Science and Technology Exposition](#)
September 13 - 16, 1999, Woods Hole MA, USA
Contact address: Debora Miller, NASA/GSFC, Code 440,
Greenbelt MD 20771, USA
Tel: 1 301 286 5265
Fax: 1 301 286 1670
E-mail: Debora.A.Miller@gssc.nasa.gov
- [Progress in Cosmic Gas Dynamics](#)
September 13 - 17, 1999, Moscow, Russia
Contact address: Vladislav Izmodenov, Inst for Problems in Mechanics, RAS,
Pr. Vernadskogo 101-1, Moscow 117526, Russia
Tel: 7 095 434 4151
Fax: 7 095 938 2048
E-mail: izmod@ipmnet.ru
- [International Conference on Modern Theories of Structure Formation](#)
September 13 - 18, 1999, Porto, Portugal
Contact address: MSTF99 - LOC, Centro de Astrofisica da Universidade do Porto,
Rua das Estrelas, P-4150 Porto, Portugal
Tel: 351 2 608 9830
Fax: 351 2 608 9831
E-mail: mtsf99@astro.up.pt
- [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

- [*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

- [*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

- *New Views of the Moon II: Understanding the Moon Through the Integration of Diverse Datasets*
September 22-24 1999, Flagstaff AZ, USA
Contact address: New Views of the Moon II, Publ. and Program Serv. Dept, LPI, 3600 Bay Area Blvd, Houston TX 77058-1113, USA
Tel: 1-281-486-2158
Fax: 1-281-486-2125
E-mail: simmons@lpi.jsc.nasa.gov

- [*International Meteor Conference*](#)
September 23 - 26, 1999, Frasso Sabino, Italy
Contact address: Ina Rendtel, International Meteor Organisation, Mehlbeerenweg 5, D-14469 Potsdam, Germany
Tel: 49 331 520 707
E-mail: irendtel@t-online.de

- *International Conference: "Comets, Asteroids, Meteors, Meteorites, Astroblems, Craters", "CAMMAC-99"*
September 26 - October 1, 1999
Contact address: Klim I. Churyumov, Astron Observatory, Kyiv National University, Ul. Observatornaya 3, Kyiv 254053, Ukraine
E-mail: cammac99@aoku.freenet.kiev.ua

- *International Symposium on Planetary Impact Events and Their Consequences to the Planet Earth*
September 27 - 30, Yamaguchi, Japan
Contact address: Yasunori Miura, Yamaguchi Univ., Yoshida 1677-1, Yamaguchi 753-8512, Japan
Tel: 81 839 33 5746
Fax: 81 839 33 5786
E-mail: yasmiura@po.cc.yamaguchi-u.ac.jp

- [*Cosmo'99 - 3rd International Conference on Particle Physics and the Early Universe*](#)

September 27 - October 3, 1999, Trieste, Italy
 Contact address: ICTP, COSMO'99, P.O. Box 586,
 I-34100, Trieste, Italy
 Fax: 39 040 224 163
 E-mail: smr1149@ictp.trieste.it

- [H2 in Space](#)

September 28 - October 1, 1999, Paris, France
 Contact address: F. Combes, Observatoire de Paris, 61 av. de l'Observatoire,
 F-75014 Paris, France
 Tel: 33 1 4051 2077
 Fax: 33 1 4051 2002
 E-mail: bottaro@obspm.fr

- [Ecole Thematique du C.N.R.S "L'ENVIRONNEMENT DE LA TERRE PRIMITIVE ET L'ORIGINE DE LA VIE"](#)

October 3-10 1999, Propriano (Corse)
 Contact address: Muriel Gargaud, Observatoire de Bordeaux, BP 89, 33270 FLOIRAC
 Tel: 05 57 77 61 58 Fax: 05 57 77 61 55
 E-mail: muriel@observ.u-bordeaux.fr

- [Astronomical Data Analysis Software and Systems \(ADASS\) IX](#)

3 - 6 October, 1999, Waikoloa HI, USA
 Contact address: Mercedes M. Stevens, CFHT, ADASS Office, PO Box 1597,
 Kamuela HI 96743, USA
 Tel: 1 808-885-7944
 Fax: 1 808-885-7288
 E-mail: adass@cfht.hawaii.edu

- [Galactic Disks 99](#)

October 4 - 6, 1999, Heidelberg, Germany
 Contact address: Galactic Disks 99, Koenigstuhl 17,
 D-69117, Heidelberg, Germany
 Tel: 49 6221 528 211
 Fax: 49 6221 528 246
 E-mail: disk99@mpia-hd.mpg.de

- [The Eleventh Cambridge Workshop on Cool Stars, Stellar Systems and the Sun](#)

October 4-8, 1999, Puerto de la Cruz, Tenerife (Spain)
 Contact address: Cool Stars 11 Workshop, Instituto de Astrofisica de Canarias,
 E-38200 La Laguna, Tenerife, Spain
 Tel: 34-922-605200
 Fax: 34-922-605373
 E-mail: cs11@iac.es

- [Science with the Atacama Large Millimeter Telescope Array](#)

October 6 - 8, 1999, Washington DC, USA
 Contact address: C. White, NRAO, 520 Edgemont Road,
 Charlottesville VA 22903, USA
 Tel: 1 804 296 0211

Fax: 1 804 296 0278

E-mail: cwhite@nrao.edu

- [*AAS Division for Planetary Sciences*](#)
October 10 - 15, 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

- [*Cosmic Explosions!*](#)
October 11 - 13, 1999, College Park MD, USA
Contact address: Susan Lehr, Dept of Astronomy, Univ. of Maryland, College Park MD 20742, USA
Tel: 1 301 405 1507
Fax: 1 301 314 9067
E-mail: october@astro.umd.edu

- *4th International Conference on Cosmology, Relativistic Astrophysics, Cosmoparticle Physics*
October 17 - 24, 1999, Moscow, Russia
Contact address: Maxim Yu. Khlopov, Centre for Cosmoparticle Physics - Cosmion 99, Miusskaya Pl. 4, Moscow 125047, Russia
Tel: 7 095 251 0750
Fax: 7 095 973 0360
E-mail: mkhlopov@orc.ru

- [*High Energy Solar Physics Workshop, Anticipating HESSI*](#)
October 18 - 20, 1999, College Park MD, USA
Contact address: Reuven Ramaty, NASA GSFC, Code 665, Greenbelt MD 20771, USA
Tel: 1 301 286 8715
E-mail: ramaty@gsfc.nasa.gov

- [*5th Huntsville Gamma-Ray Burst Symposium*](#)
October 18 - 22, 1999, Huntsville AL, USA
Contact address: R. Marc Kippen, ES84, NASA/Marshall Space Flight Center, Huntsville AL 35812, USA
Tel: 1 256 544 7357
Fax: 1 256 544 5800
E-mail: huntsville5@iss.msfc.nasa.gov

- [*Astrophysical Plasmas: Codes, Models and Observations*](#)
October 25 - 29, 1999, Mexico City, Mexico
Contact address: Jane Arthur, UNAM, Apartado Postal 70-264, 04510 Mexico D.F., Mexico
Tel: 52 43 236 162
Fax: 52 43 236 165

E-mail: plasma99@astroscu.unam.mx

- [Star Formation from the Small to the Large Scale](#)
November 1 - 5, 1999, Noordwijk, The Netherlands
Contact address: Fabio Favata, Astrophysics Division, ESA, P.O. Box 299/SA,
2200 AG Noordwijk, The Netherlands
Tel: 31 71 565 4665
Fax: 31 71 565 4690
E-mail: eslab33@astro.estec.esa.nl
- [ISO Surveys of a Dusty Universe](#)
Workshop at Ringberg Castle, November 8 - 12, 1999
Contact address: Max-Planck-Institut fuer Astronomie, ISOPHOT Data Centre, Koenigstuhl
17,
D-69117 Heidelberg, Germany
Tel: (+49) 6221 528 352
Fax: (+49) 6221 528 246
E-mail: ISO.SURVEYS@mpia-hd.mpg.de
- [Cosmic Evolution and Galaxy Formation: Structure, Interactions, and Feedback](#)
November 15 - 19, 1999, Tonantzintla, Mexico
Contact address: Astrofisica, INAOE, Luis Enrique Erro 1, Tonantzintla,
Puebla 72840, Mexico
Tel: 52 22 2 472 011
Fax: 52 22 2 472 231
E-mail: cosmo99@inaoep.mx
- [Darwin and Astronomy: the Infrared Space Interferometer \(IRSI\)](#)
November 17 - 19, 1999, Stockholm, Sweden
Contact address: R. Liseau, Stockholm Observatory,
S-13336, Saltsjöbaden, Sweden
Tel: 46 8 16 4485
Fax: 46 8 717 4719
E-mail: darwin@astro.su.se
- [Colloquium on Quantitative Socio-Dynamics of Astronomy](#)
November 21 - 24, 1999, Bischenberg, France
Contact address: Andr 002 Heck, Observatoire Astronomique, 11 rue de l'Universit 002,
F-67000 Strasbourg, France
Fax: 33 388 150 760
E-mail: heck@astro.u-strasbg.fr
- [ICTP/ICGEB Ibero-American School of Astrobiology: Origins from the Big Bang to Civilization](#)
November 29 - December 8, 1999, Caracas, Venezuela
Contact address: The Abdus Salam International Centre for Theoretical Physics,
ICTP/ICGEB Ibero-American School of Astrobiology, P.O., Box 586,
I-34100, Trieste, Italy
Tel: 39 040 224 0111
Fax: 39 040 224 163

E-mail: smr1162@ictp.trieste.it

- [International School of Astrophysics "Daniel Chalonge", 7th Course: Current Topics in Astrofundamental Physics](#)
December 5 - 16, 1999, Erice, Sicily, Italy
Contact address: N. Sanchez, Observatoire de Paris, DEMIRM, 61 av. de l'Observatoire, F-75014 Paris, France
Tel: 33 1 4051 2221
Fax: 33 1 4051 2002
E-mail: chalonge@mesioh.obspm.fr
- [Joint MPE, AIP, ESO Workshop on Observational and Theoretical Progress in the Study of Narrow-line Seyfert 1 Galaxies](#)
December 8 - 11, 1999, Bad Honnef, Germany
Contact address: Thomas Boller, MPI für extraterrestrische Physik, Giessenbachstr., D-85740 Garching, Germany
Tel: 49 89 3299 3883
Fax: 49 89 3299 3569
E-mail: nls1-workshop@xray.mpe.mpg.de
- [PASCOS'99 - The 7th International Symposium on Particles, Strings and Cosmology](#)
December 11 - 16, 1999, Lake Tahoe CA, USA
Contact address: John F. Gunion, UC at Davis, Dept of Physics, Davis CA 95616, USA
Tel: 1 530 752 1134
Fax: 1 530 752 4717
jfgucd@pc90.ucdavis.edu
- [PHYSICS OF SPACE : GROWTH POINTS AND PROBLEMS](#)
January 10-14 2000, Observatoire de Paris-Meudon, France
Contact address: Les Rencontres de l'Observatoire, Nicole Meyer, DESPA, Observatoire de Paris-Meudon, F--92195 Meudon Cedex, France
Fax: 33-1 45 07 28 06
E-mail: OBS2000@ulyse.obspm.fr
- 195th AAS Meeting
January 11 - 15, 2000, Atlanta GA, USA
Contact address: Hal McAlister, Georgia State Univ., Atlanta GA 30303-3083, USA
Tel: 1 404 651 2932
Fax: 1 404 651 1389
E-mail: hal@chara.gsu.edu
- [Disks, Planetesimals & Planets](#)
January 24-28 2000, Puerto de la Cruz, Tenerife
Contact address: Monica Murphy (Disks, Planetesimals & Planets Meeting), Instituto de Astrofisica de Canarias, c/ Via Lactea s/n, 38200 La Laguna, Tenerife, Spain

Tel: 34 922 605 373
Fax: 34 922 605 220
E-mail: planet@ll.iac.es

- [Microlensing 2000: A New Era of Microlensing Astrophysics](#)
March 6 - 10, 2000, Cape Town, South Africa
Contact address: John Menzies, SAAO, P.O. Box 9, 7935 Observatory, South Africa
Tel: 27 21 447 0025
Fax: 27 21 447 3639
E-mail: jwm@sao.ac.za
- [Millennium Conference on Earth, Planetary and Solar System Sciences, European Geophysical Society XXV General Assembly](#)
April 3 - 7, 2000, Florence, Italy
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
- [Chronology of Mars in Comparison with Inner Solar Bodies](#)
April 10 - 14, 2000, Bern, Switzerland
Contact address: J. Geiss, ISSI, Hallerstr. 6, CH-3012, Bern, Switzerland
Fax: 41 31 631 4897
E-mail: geiss@issi.unibe.ch
- [4th IAA International Conference on Low-Cost Planetary Missions](#)
May 2 - 5, 2000, Laurel MD, USA
Contact address: R.W. Farquhar, JHU/APL, Johns Hopkins Rd, Laurel MD 20723-6099, USA
Fax: 33 147 238 216
E-mail: diana.whitman@jhuapl.edu
- [The Astrophysics of Galactic Cosmic Rays](#)
May 15 - 19, 2000, Bern, Switzerland
Contact address: R. Kallenbach, ISSI, Hallerstr. 6, CH-3012, Bern, Switzerland
Fax: 41 31 631 4897
E-mail: reinald.kallenbach@issi.unibe.ch
- [Workshop on Waves in Dusty, Solar and Space Plasmas](#)
May 29 - June 2, 2000, Leuven, Belgium
Contact address: F. Verheest, Sterrenkundig Observatorium, Univ. Gent, Krijgslaan 281, B-9000 Gent, Belgium
Tel: 32 9 264 4799
Fax: 32 9 264 4989
E-mail: Frank.Verheest@rug.ac.be
- 196th AAS Meeting

June 4 - 8, 2000, Rochester NY, USA

Contact address: Judy Pipher, Univ. of Rochester, Dept of Physics, Rochester, NY 14627, USA

Tel: 1 716 275 4402

Fax: 1 716 275 8527

E-mail: jlipher@sherman.pas.rochester.edu

- [*Galaxy Disks and Disk Galaxies*](#)

June 12-16, 2000, Rome, Italy

Contact address: Dr. George Coyne, S.J., Vatican Observatory (Specola Vaticana), V-00120 Citta' del Vaticano, Rome, Italy

Tel: +39 06 69885266

Fax: +39 06 69884671

E-mail: gcoyne@specola.va

- *Nuclei in the Cosmos 2000*

June 27 - July 1, 2000, Aarhus, Denmark

Contact address: J. Christensen-Dalsgaard & K. Langanke, Univ. of Aarhus, Ny Munkegade Bld 520, DK-8000 Aarhus, Denmark

Tel: 45 8 942 3614

Fax: 45 8 612 0740

E-mail: jcd@obs.aau.dk, langanke@ifa.au.dk

- [*Catastrophic Events and Mass Extinctions: Impacts and Beyond*](#)

July 9-12, 2000, Vienna

Contact address: Impact 2000 Conference, Lunar & Planetary Institute, 3600 Bay Area Blvd, Houston TX 77058-1113

Tel: 1-281-486-2142

Fax: 1-281-486-2125

Email: tanner@lpi.jsc.nasa.gov

- [*33rd COSPAR Scientific Assembly*](#)

July 16 - 23, 2000, Warsaw, Poland

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

Tel: 33 1 45 25 06 79

Fax: 33 1 40 50 98 27

E-mail: cospar@paris7.jussieu.fr

- [*4th INTEGRAL Workshop*](#)

September 4-8 2000, Alicante, Spain

Contact address: Prof. Dr. V. Reglero

Department of Astronomy and Astrophysics, Dr. Moliner, 50 E-46100 Burjassot, Spain

Tel: 34- 96 398 32 29

Fax: 34- 96 398 32 61

E-mail: loc@castor.daa.uv.es

- *X-Ray Astronomy 2000*

September 4 - 8, 2000, Palermo, Italy

Contact address: Donata Randazzo, Osservatorio Astronomico di Palermo, Piazza del Parlamento 1,

I-90134 Palermo, Italy

Tel: 39 091 233 243

Fax: 39 091 233 444

E-mail: xray2000@astropa.unipa.it

Page last modified by the [IAU Secretariat](#) on 2001-01-26.