

CHAPTER IV

REPORT OF THE EXECUTIVE COMMITTEE 2000-2003

1. Executive Committee 2000-2003

1.1. Composition of the Executive Committee

During the triennium 2000-2003, the Executive Committee was composed as follows:

President	F. Pacini
President-Elect	R.D. Ekers
General Secretary	H. Rickman
Assistant General Secretary	O. Engvold
Vice-President	C. Cesarsky
Vice-President	N. Kaifu
Vice-President	N. Kardashev
Vice-President	K.A. Pounds
Vice-President	S. Torres-Peimbert
Vice-President	R.E. Williams
Advisor (Past President)	R. Kraft
Advisor (Past General Secretary)	J. Andersen

1.2. Meetings of the Executive Committee

The Executive Committee met as follows during the reporting period:

- 74th Meeting, August 17-18, 2000 at the 24th General Assembly in Manchester, UK
- 75th Meeting, June 14-15, 2001 at the Astronomical Observatory of Copenhagen, Denmark
- 76th Meeting, May 6-8, 2002 at the Saint-Petersburg Scientific Centre and Institute of Applied Astronomy, St Petersburg, Russia

The business conducted by the Executive Committee is recorded in the Minutes of these meetings. Summaries of these Minutes have appeared in the IAU Information Bulletin (EC73 & 74: IB88, pp. 25-26; EC75: IB90, pp. 24-25; EC76: IB91, pp. 49-50). Any urgent business between meetings, conducted by correspondence, is recorded in the Minutes of the following EC meetings.

1.3. Officers' Meetings

Between the meetings of the EC, the Officers (President, President-Elect, General Secretary, and Assistant General Secretary) met at the IAU Secretariat in Paris on February 8-9, 2001, January 28-29, 2002, and February 6-7, 2003.

2. Membership of the Union

2.1. National Membership

During the 24th General Assembly, up on the recommendation of the Executive Committee, Cuba, Jordan, Morocco and the Philippines were welcomed as new Associate Members of the IAU. Following nine years as Associate Members, Romania and Tadjikistan decided to step up to Full Membership of the IAU. The EC approved of these changes of Membership and put the issues on the agenda of the 25th General Assembly for decision.

Due to five years of non-payment of dues, the membership of CAAA (the Central American Assembly of Astronomers, comprising Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua and Panama) terminated December 31, 2002 (IAU Statutes, §7).

The EC approved a change in the Category of Argentina from III to II, effective January 1, 2003. A request by India to change from Category III to IV was received and placed on the agenda of the 77th EC Meeting at the 25th General Assembly in Sydney.

Number of Adhering Organizations as of June 10, 2003	65
Full Members	55
Associate Members	10

In addition, applications for Full Membership were received during the triennium from Serbia & Montenegro, and Nigeria. These were forwarded to the 25th General Assembly for decision.

2.2. Individual Membership

Number of individual Members admitted at the 24th General Assembly

Number of individual Members admitted at the 24th General Assembly	703
Number of individual Members as of June 10, 2003	8211
Number of Consultants	198

The Executive Committee is saddened to report the death of the following 152 members of the Union, which have been reported to the Secretariat since the 24th General Assembly:

Abbasov Alik R.	Adams David J.	Adolfsson Tord
Anantharamaiah Kuduvalli R.	Argue A Noel	Babin Valerij G.
Barrow Richard F.	Bendinelli Orazio	Billings Donald E.
Blinov Nikolai S.	Bohrmann Alfred	Bratijchuk Matriona V.
Bretagnon Pierre	Cabrita Ezequiel	Chavira Enrique
Chistyakov Vladimir E.	Ciatti Franco	Cousins A.W.J.
Coutrez Raymond A.J.	Covington Arthur E.	Cuffey James
Davidson Arthur Falnes	Davies Merton E.	Debrunner Hermann
Delhaye Jean	Denizman Levent	Dermendjiev Vladirnir
deWitt Jr. John	Dizer Muammer	Dobronravin Peter
Doughty Noel A	Dunkelman Lawrence	Efremov Yuri I.
Friedemann Christian	Friedman Herbert	Galperin Yuri I.
Gardner Francis F.	Gebler Karl-Heinz	Giuricin Giuliano
Goldsworthy Frederick A.	Gradsztajn Eli	Greenberg J. Mayo
Greenstein Jesse L.	Gregorieva Virginia	Groushinsky Nikolai P.
Grubissich C.	Guerin Pierre	Hagen John P.
Hameen Anttila Kaarle A.	Hanbury Brown Robert	Herold Heinz
Herrera Miguel Angel	Hoyle Fred	Hughes Victor A.
Hunger Kurt	Jenkins Louise F.	Jensch A.

Jensen Eberhart	Kerr Frank J.	Kharadze E.K.
Konopleva Varvara P.	Kosin Gennadij S.	Kresakova Margita
Kristenson Henrik	Kuklin Georgly V.	Laffineur Marius
Large Michael I.	Lucchin Francesco	Marino Brian F.
Merman Natalia V.	Mihalov John D.	Moiseev Ivan G.
Molchanov Andrea P.	Molotaj Olexandr	Moreno Hugo
Mullaly Richard F.	Nesterov Nikolai S.	Nezlin Mikhail
Nilson Peter	Occhionero Franca	Oda Minoru
O'Keefe John A.	O'Mara Bernard J.	Oterma Liisi
Overbeek Michiel Daniel	Ozernoy Leonid M.	Papagiannis Michael D.
Pekeris Haim Leib	Peniche Rosario	Petri Winfried
Peyturaux Roger H.	Phillips John G.	Piddington Jack H.
Pinto Girolamo	Polymilis Chronis	Protich Milorad B.
Radoski Henry R.	Ramaty Reuven	Randic Leo
Reber Grote	Reynolds John H.	Richter Johannes
Rucinski Daniel	Russell John A.	Sadeh Dror
Scheuer Peter A.G.	Schroeter Egon H.	Seiden Philip E.
Servan Bernard	Sevarlic Branislav M.	Shcheglov P.V.
Shcherbina-Samojlovalna S.	Silberg Rein	Sims Kenneth P.
Siry Joseph W.	Smith Alex G.	Souffrin Pierre R.
Stephenson C. Bruce	Stobie Robert S.	Strand Kaj Aa
Svensson Roland	Swensson John W.	Szafraniec Rozalia
Tanzi Enrico G.	Troche-Boggino A.E.	Tseytlin Naum M.
Tsioumis Alexandros	Uchida Yutaka	van Blerkom David J.
van Houten Cornelis Johannes	van Regemorter Henri	Vardanian Rafik A.
Vergnano A.	Visvanathan Natarajan	von Hoerner Sebastian
Waldmeier Max	Walker Jr Arthur B.C.	Weber Joseph
Weimer Theophile P.F.	Wellmann Peter	Weniger Schame
Westfold Kevin C.	Whitford Albert E.	Wilkinson David T.
Wilson Robert	Wiyanto Paulus	Wright K.O.
Wroblewski Herbert	Wyller Arne A.	Yu Kyung-Loh
Zhevakin S.A.	Zook Herb	

3. Divisions, Commissions and Working Groups

3.1. Commissions not belonging to a Division

IAU Commission 41 for the History of Astronomy, founded in 1948, has for decades seen close cooperation between its members and historians of astronomy associated with the Division for History of Science of the International Union for History and Philosophy of Science (IUHPS/DHS). Realizing the need for an international body representing the interests of all professional historians of astronomy, whether they are members of the IAU or not, the IAU agreed with the IUHPS/DHS to form the Inter-Union Commission for History of Astronomy (ICHA). Commission 41 continues as before, and its activities are now part of those of the ICHA.

3.2. Working Groups of the Executive Committee

During the 75th Meeting of the Executive Committee it was decided to form a Working Group directly under the Executive, charged with advising the EC on matters concerning the publication of astronomical results. Matters of concern included addressing the continuing need to determine how such publication should evolve in the world of the Internet, preprint servers and electronic publishing. Another matter of concern has been the preparations for a new contract with an IAU Publisher to become effective

January 1, 2004. The new EC Working Group on Publishing is chaired by Michelle Storey of CSIRO ATNF, Epping, Australia, and Assistant General Secretary Oddbjørn Engvold has served as EC representative on this WG.

3.3. Working Groups of Divisions and Commissions

After the 24th General Assembly, an effort was made to establish more clearly the inventory of such Working Groups, and as a result an authoritative list was published in 1998, pp. 22-26, as well as posted on the IAU web page. This list contains two Inter-Division Working Groups, namely, the WG on Near Earth Objects under Divisions I and III, and the WG on Active B Stars under Divisions IV and V. At the 75th Meeting of the Executive Committee, it was decided to endorse the formation of a new Division.

IV Working Group on Abundances in Red Giants, as described in IB90, p. 23, along with a few corrections and additions to the previously published list. As a work item conducted by correspondence, the EC also endorsed the formation of a Divisions . VIII Working Group on Supernovae, which will start its business during the 25th General Assembly.

3.4. The Minor Planet Center

During the 24th General Assembly, upon recommendation by Commission 20, the Executive Committee approved Terms of Reference for the IAU Minor Planet Center (MPC). Based on these Terms of Reference, a contract on the running of the MPC was negotiated and signed by the IAU and the Smithsonian Astrophysical Observatory, which is the host institute of the MPC. A Minor Planet Center Advisory Committee was formed under the auspices of Commission 20 and played an important role during the triennium covered by this report.

4. Scientific Activities

4.1. Research on Near-Earth Objects

The IAU activities have focused on (1) implementing the recommendations of the Policy Statement that the Executive Committee issued in 1999; (2) contributing to raising the awareness of the Near Earth Object (NEO) impact hazard among governments and policy makers, while emphasizing the importance of factual information as opposed to media hype as far as the general public is concerned; and (3) seeking sponsorship for interdisciplinary studies that may provide a scientific basis for political judgments as well as information to citizens at large.

1. The IAU expert review of calculations leading to the estimate of a non-zero risk of impact by a particular NEO at a particular time has been in place and tested out on several occasions. Needless to say, while the initial calculations were generally found to be correct, the availability of further observations always led to new estimates, whereby the impact risk was found to be essentially zero. Resulting from the peculiarities of the different circumstances encountered, the guidelines for the expert review have been revised and will likely continue to evolve.

2. The IAU participated in meetings arranged by several international organizations, where the NEO hazard and relevant actions were discussed, e.g., by the European Space Agency, the European Science Foundation, the United Nations Committee for Peaceful Uses of Outer Space, and the Global Science Forum of the Organization for Economic Cooperation and Development (OECD). The fact that the NEO potential threat is global and requires an international strategy, collaboration and coordination

was stressed, and the knowledge acquired as well as questions posed by modern astronomical research were highlighted.

3. Together with several other ICSU members, the IAU approached ICSU with a research initiative, proposing an international, multidisciplinary study of the likely consequences for human society of NEO impacts in a near future.

4.2. Follow-up Actions After UNISPACE III

The IAU is participating in five Action Teams, set up by the United Nations Office of Outer Space Affairs in order to follow up on the recommendations made at the UNISPACE III congress held in Vienna, July 1998. The topics of these are: Mitigation of space debris, International coordination on NEOs, Minimize radio interference, Enhance capacity building, and Education opportunities in space science and technology.

4.3. Environmental Challenges to Astronomy

The Commission 50 Working Group on Controlling Light Pollution has been very active and made essential contributions to the organization of an international Conference on Light Pollution in La Serena, Chile, March 5-7, 2002. The Technical Workshop on Astronomical Site Evaluation in Marrakesh, Morocco, November 2000, was another noteworthy event. The IAU has participated in the Scientific/Technical Subcommittee Meetings of the UN Committee for the Peaceful Uses of Outer Space with several presentations about the problems of frequency interference mitigation in radio astronomy. Preparations for dealing with a future spreading of this problem to higher frequencies in cooperation with ITU and other agencies have been started.

5. IAU Scientific Meetings

The IAU program of scientific meetings is the highest profile scientific activity of the IAU. The procedures for application for IAU sponsorship of planned meetings have been reviewed and developed, and the computer based facilities for this application and selection process have undergone an essential upgrade. The 76th EC Meeting marked the beginning of a new initiative to involve the Division Presidents more closely into the selection of the scientific program during the year of a General Assembly, and in particular the program of the 25th General Assembly itself. All the Divisions were invited to attend this EC meeting, and the results were received as very satisfactory and promising for a future continuation. .

5.1. XXIVth IAU General Assembly

Manchester, UK, August 7-18, 2000

5.2. IAU Scientific Meetings held between the XXIVth and XXVth General Assemblies

IAU Symposia

206 **Cosmic Masers: From Proto-Stars to Black Holes**
Rio de Janeiro, Brazil, March 10, 2001

207 **Extragalactic Star Clusters**
Pucon, Chile, March 12-16, 2001

- 208 **Astrophysical Supercomputing using Particle Simulations**
Tokyo, Japan, July 10-B, 2001
- 209 **Planetary Nebulae: Their Evolution and Role in the Universe**
Canberra, Australia, November 19-23, 2001
- 210 **Modeling of Stellar Atmospheres**
Uppsala, Sweden, June 17-21, 2002
- 211 **Brown Dwarfs**
Hawaii, USA, May 20-24, 2002
- 212 **A Massive Star Odyssey, from Main Sequence to Supernova**
Lanzarote, Spain, June 24-28, 2002
- 213 **Bioastronomy 2002: Life among the Stars**
Hamilton Island, Australia, July 8-12, 2002
- 214 **High Energy Processes and Phenomena in Astrophysics**
Suzhou, China PR, August 5-10, 2002
- 215 **Stellar Rotation**
Cancun, Mexico, November 11-15, 2002.

IAU Colloquia

- 183 **Small-Telescope Astronomy on Global Scales.**
Kenting National Park, Taiwan, China, January 4-8, 2001.
- 184 **AGN Surveys**
Byurakan, Armenia, June 18-22, 2001
- 185 **Radial and Non Radial Pulsations as Probes of Stellar Physics**
Leuven, Belgium, July 26-31, 2001
- 186 **Cometary Science after Hale-Bopp**
Puerto de la Cruz, Spain, January 21-25, 2002
- 187 **Exotic Stars as Challenges to Evolution**
Miami Beach, Florida, USA, March 4-8, 2002
- 188 **Magnetic Coupling of the Solar Atmosphere**
Santorin, Greece, June 11-15 2002
- 189 **Astrophysical Tides: The Effects in the Solar & Exoplanetary Systems**
Nanjing, China PR, September 16-20, 2002
- 190 **Magnetic Cataclysmic Variables, MCV3**
Cape Town, South Africa, December 8-13, 2002
- 191 **The Environment and Evolution of Binary Stars**
Yucatan, Mexico, February 3-7, 2003
- 192 **Supernovae (10 Years of SN1993)**
April 22-26, 2003, Valencia, Spain

Regional Meetings

10th Latin-American Regional Meeting
Cordoba, Argentina, September 17-21, 2001

8th Asia-Pacific Regional Meeting
Tokyo, Japan, July 2-5 2002

Technical Workshop

Astronomical Site Evaluation in the Visible and Radio Range
Marrakesh, Morocco, November 13-17, 2000.

Co-Sponsored Meetings

First COSPAR/IAU Capacity Building Workshop:
Data Processing from the Chandra and XMM-Newton Space Missions:
An Advanced School for Astronomers Working at all Wavelengths
Sao Jose dos Campos, SP - Brazil, 4-13 December 2001

COSPAR/IAU Workshop on Planetary Protection
Williamsburg, VA, USA, April 1-4, 2002

34th COSP AR Scientific Assembly
Houston, TX, USA, October 10-19, 2002

SCOSTEP / IAU C0-sponsored Symposium: Solar Variability as an Input
to the Earth Environment
Tatranska Lomnica, Slovakia, June 23-28, 2003

Second COSPAR/IAU Capacity Building Workshop in X-ray Astronomy
Udaipur, India, January 13-24, 2003

5.3. Publications

The Astronomical Society of the Pacific was the IAU Publisher during the whole triennium reported here, and managed the publication of all Transactions and Highlights volumes as well as IAU Symposium Proceedings and the IAU Information Bulletins.

The individual IAU publications that have appeared during the triennium are listed in the following (continually updated listings with all particulars are maintained at the IAU web site).

IAU Transactions

Transactions of the IAU Vol. XXIVB
Ed. Hans Rickman
Astronomical Society of the Pacific, ISBN: 1-58381-087-0, 2001

Transactions of the IAU Vol. XXV A
Ed. Hans Rickman
Astronomical Society of the Pacific, ISBN: 1-58381-137-0, 2003

Reports on Astronomy 1999 - 2002 (Highlights 12)
Ed. Hans Rickman
Astronomical Society of the Pacific, ISBN: 1-58381-137-0, 2003

Symposia

- 177 **The Carbon Star Phenomenon**
Ed. R.F. Wing
Kluwer Academic Publishers, Dordrecht, ISBN 0-7923-6346-9, 2000
- 195 **Highly Energetic Physical Processes and Mechanisms for Emission from Astrophysical Plasmas**
Bozeman, Montana, USA, July 6-10, 1999
Eds. P.C.H. Martens, S. Tsuruta & M.A. Weber
Astronomical Society of the Pacific, ISBN 1-58381-038-2, 2000
- 197 **Astrochemistry: From Molecular Clouds to Planetary Systems**
Sogwipo, Korea R, August 23-27, 1999
Eds. Y.C. Minh & E.F. van Dishoeck
Astronomical Society of the Pacific, ISBN 1-58381-034-X, 2000
- 198 **The Light Elements and their Evolution**
Eds. L. da Silva, M. Spite & J.R. de Medeiros
Astronomical Society of the Pacific, ISBN 1-58381-048-X, 2000
- 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
- 200 **The Birth and Evolution of Binary Stars: Poster Proceedings**
Eds. B. Reiputh & H. Zinnecker
- 203 **Recent Insight Into The Physics of the Sun and Heliosphere: Highlights from SoHO and other Space Missions**
Manchester, UK, August 7-11, 2000
Eds. P. Brekke, B. Fleck & J. Gurman
Astronomical Society of the Pacific, ISBN 1-58381-069-2, 2001
- 204 **The Extragalactic Infrared Background and Its Cosmological Implications**
Manchester, UK, August 15-18, 2000
Ed. M. Harwit.
Astronomical Society of the Pacific, ISBN 1-58381-062-5, 2001
- 205 **Galaxies and Their Constituents at the Highest Angular Resolutions**
Manchester, UK, August 15-18, 2000
Eds. R.T. Schilizzi, S. Vogel, F. Paresce & M. Elvis
Astronomical Society of the Pacific, ISBN 1-58381-066-8, 2001

- 206 **Cosmic Masers: from Protostars to Black Boles**
Rio de Janeiro, Brazil, March 5-10, 2001
Eds. V. Migeses & M.J. Reid
Astronomical Society of the Pacific, ISBN: 1-58381-112-5, 2002
- 208 **Astrophysical Supercomputing Using Particle Simulations**
Tokyo, Japan, July 10-13, 2001
Eds. K. Machino & P. Hut
Astronomical Society of the Pacific, ISBN: 1-58381-112-5, 2002
- 211 **Brown Dwarfs**
Hawaii, USA, May 20-24, 2002
Ed. E. L. Martin
Astronomical Society of the Pacific, ISBN: 1-58381-132-X, 2003
- 212 **A Massive Star Odyssey: From Main Sequence to Supernova**
Costa Teguis, Lanzarote, Canary Islands, June 24-28, 2002
Eds. K.A. van der Hucht, A. Herrero & C. Esteban
Astronomical Society of the Pacific, ISBN: 1-58381-133-8, 2003

Colloquia

- 172 **Impact of Modern Dynamics in Astronomy.**
Namur, Belgium, July 6-11, 1998
Eds. J. Henrard & S. Ferraz-Mello
Kluwer Acad. Publ., ISBN 0-7923-5842-2, 1999
- 174 **All Galaxy Groups.**
Eds. M.J. Valtonen & C. Flynn
ASP Conference Series Vol. 209, ISBN 1-58381-040-4, 2000
- 175 **The Be Phenomenon in Early-Type Stars.**
Eds. M.A. Smith, H.F. Henrichs & J. Fabregat
Astronomical Society of the Pacific, ISBN 1-58381-045-5, 2000
- 176 **The Impact of Large-Scale Surveys on Pulsating Star Research.**
Eds. L. Szabados & D.W.Kurtz
ASP Conference Series Vol. 203, ISBN 1-58381-030-7, 2000
- 178 **Polar Motion: Historical and Scientific Problems.**
Eds. S. Dick, D. McCarthy & B. Luzum
ASP Conference Series, Vol. 208, ISBN 1-58381-039-0, 2000
- 183 **Small-Telescope Astronomy on Global-Scales.**
Kenting, Taiwan, January 4-8, 2001
Eds. W.-P. Chen, C. Lemme & B. Paczynski
Astronomical Society of the Pacific, ISBN 1-58381-084-6, 2001
- 186 **Cometary Science after Hale-Bopp.**
Eds. H. Boelnhardt, M.R. Kidger & R. Schulz
Kluwer Academic Publishers, Vol. 1, ISBN 1-420-1288-8, 2003
- 184 **AGN Surveys.**
Eds. R.P. 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

5.4. IAU Regional Meeting

8th Asian-Pacific Regional Meeting, Vol. II
Eds. S. Ikeuchi, J. Hearnshaw & T. Hanawa
Astronomical Society of Japan, 2002

6. Educational Activities

6.1. International Schools for Young Astronomers (ISYA)

The following ISYA's took place during the triennium:

- 25th ISYA: Chiang Mai, Thailand, January 3-22, 2001
- 26th ISYA: San Juan, Argentina, August 12-30, 2002

Reports have been published, for the 25th ISYA in IB89, pp. 27-28, and for the 26th ISYA in IB92, pp. 40-41

6.2. The Teaching for Astronomy Development (TAD) Programme

This program aims to build up astronomy education in countries, where astronomy did not exist or was dormant, and which requested such help from the IAU. The activities during the previous triennium were initially focused on Vietnam, Central America, and Morocco.

Preparations were made for yet another project in the Philippines, and the General Secretary visited Manila in October, 2002, to sign an agreement for this undertaking - reproduced as Appendix 3 to this report.

6.3. Exchange of Astronomers

The IAU co-sponsored two Capacity-Building Workshops in X-Ray Astronomy, in collaboration with COSPAR. The first was held at INPE in Brazil in December 2001, and the second was held at Udaipur, India in January 2003. These workshops were attended by advanced students and scientists in the beginning of their careers from the regions around the host countries and involved both lectures and practical exercises in the form of project works.

6.4. COSPAR

The IAU co-sponsored two Capacity-Building Workshops in X-Ray Astronomy, in collaboration with COSPAR. The first was held at INPE in Brazil in December 2001, and the second was held at Udaipur, India in January 2003. These workshops were attended by advanced students and scientists in the beginning of their careers from the regions around the host countries and involved both lectures and practical exercises in the form of project works.

7. Relation to Other Organizations

7.1. ICSU

The IAU was represented by Assistant General Secretary O. Engvold at the Meeting of ICSUs International Scientific Unions in Paris, February 18-20, 2001. A report is contained in IB89, pp. 30-31.

Furthermore, the IAU was represented by M. Storey (later chairperson of the EC WG on Publishing) at the UNESCO/ICSU Conference on Electronic Publishing in Paris, February 2001, and by S. Isobe (President Commission 46) and J. Fierro at the ICSU International Conference on Primary School Science and Mathematics Education in Beijing, November 2000.

7.2. COSPAR

The IAU was represented by the General Secretary at the 34th Council meeting in Houston TX, USA, in October 2002.

7.3. UN-COPUOS

The IAU was represented by Past General Secretary J. Andersen at the meetings of the Scientific & Technical Subcommittee of the UN Committee on the Peaceful Uses of Outer Space (COPUOS) in Vienna, February 2001 and February 2002. Other persons attending the 2001 meeting and giving presentations on behalf of the IAU included J. Cohen (President Commission 50) and the General Secretary. The meeting in February 2003 was attended by J. Cohen, S. Isobe and A. Carusi (former President Commission 20), as the issues of frequency interference mitigation, capacity building, and Near-Earth Objects, respectively, were tackled by the respective Action Teams.

The IAU officially applied for Consultative Status at the United Nations Economic and Social Council (ECOSOC) in order to formally fulfill the requirements for consultative status at UN-COPUOS.

7.4. Representatives to Other Organizations

A list of representatives 2000-2003 has been published in IB88, pp. 51-52, and maintained on the IAU web page <http://www.iau.org/IAU/Organization/reporg.html>. The full list for 2003-2006 will be published after the 25th General Assembly.

8. Administrative Matters

8.1. Revisions of the Statutes and Bye-Laws

During the triennium a major revision was made of the IAU Statutes and Bye-Laws with the aim of setting down documents that are more straightforward and clear, have a better logical structure, and are better adapted to the operational circumstances of the IAU now and in the future. The following paragraphs summarize some of the most important news. The new documents were sent out to the Adhering Organizations in due time to prepare for the vote during the 25th General Assembly.

The definition of National Membership has been revised into consistency with the ICSU definition, such that the Adhering Organizations are now the National Members of the IAU. The distinction between full payment of dues for five years is replaced by one that gives the Executive Committee better chances to negotiate a constructive solution before loss of membership occurs. The rules for creating, terminating and governing Divisions have been made more explicit. Uniformly formulated Terms of Reference for the Divisions are included into the Bye-Laws, since the Divisions will form the future backbone of the Union. All Commissions will belong to a Division, and the creation, continuation or termination of Commissions is decided by the EC upon advice by the hosting Divisions, triennially. New Commissions are given an initial lifetime of six years, after which they cease to exist at the following General Assembly.

The Working Rules will be subject to revisions in accordance with these changes of the Statutes and Bye-Laws during the next triennium. The complete texts of all documents as approved at the 25th General Assembly are reproduced elsewhere in this volume.

8.2. Secretariat

The Secretariat in Paris was headed throughout the triennium by the Executive Assistant, Ms. Monique Leger-Orine, as always with admirable dedication and efficiency combined with hard and self-sacrificing work. Her primary responsibilities are traditionally focused on the relations to Member States, accounts and financial matters as well as a great deal of the preparatory work for the General Assembly. Due to the changes in secretariat staff since one year and a half, she has, moreover, been extensively busy with many other tasks.

In the beginning of 2002, the Administrative Assistant, Ms. Jodi Greenberg, decided to leave Paris and the IAU partly for health reasons. She was replaced, after an interregnum of four months, by Ms. Estelle Denos, who worked until March 2003, when she was succeeded by Ms. Claire Vidonne. The tasks have been somewhat variable though always including the maintenance of the Membership Directory as a prime responsibility.

In February 2001 the IAU Secretariat moved into new office space at the Institut d'Astrophysique, kindly put at our disposal thanks to INSU, the CNRS, and the IAP Director, Dr. Bernard Fort. Also the archives of the IAU found a new and more convenient place in connection with this move.

The IAU web site was maintained with the much appreciated assistance of our webmasters, first Dr. Johan Lagerros and then for most of the time, Dr. Marcus Gunnarsson. The structure of the site was reorganized, and some new features have been introduced, including a page with announcements for young astronomers. Much more work is still needed in order to keep all the information properly updated and to include pieces of relevant information that are missing. Above all, the web site should be visited more frequently by IAU members and astronomers at large, and for this purpose an effort has been started to reach better email contact with the members. One expected result of this exercise will be to make the future Information Bulletins primarily available through downloading via Internet from the IAU web page.

9. Financial Matters - Income and Expenditure (CHF) 2004-2006**TRIENNium 1999-2002****STATEMENT OF INCOME (CHF)**

INCOME BUDGET	1999	2000	2001	2002	2000-02
Unit of contribution	2950	3040	3100	3175	
Number of units of contribution	254	254	260	260	
ADHERING ORGANIZATIONS	875528	674947	751722	660194	2086863
	<i>749300</i>	<i>772160</i>	<i>80600</i>	<i>825500</i>	<i>2403660</i>
ICSU/UNESCO	17490	19360	16500		35860
	<i>40000</i>	<i>40000</i>	<i>15000</i>	<i>15000</i>	<i>70000</i>
ICSU/UNESCO				13107	13107
PUBLICATIONS: ROYALTIES	66173	63336	13556	29875	106767
	<i>30000</i>	<i>30000</i>	<i>25000</i>	<i>25000</i>	<i>80000</i>
BANK INTEREST	10623	9990	11654	20061	41705
	<i>15000</i>	<i>15000</i>	<i>25000</i>	<i>25000</i>	<i>65000</i>
TOTAL INCOME	972909	879258	938362	724331	2541951
	<i>834300</i>	<i>857160</i>	<i>871000</i>	<i>890500</i>	<i>2618660</i>

TRIENNIUM 1999-2002

STATEMENT OF EXPENDITURE (CHF)

EXPENDITURE <i>BUDGET</i>	1999	2000	2001	2002	2000-02
SCIENTIFIC ACTIVITIES					
General Assemblies					
Grants, incl. Div./Comm.		549748	4329		554077
		<i>220000</i>			<i>220000</i>
Operation	6360	13583	3399	2132	19114
	<i>5000</i>	<i>45000</i>	<i>5000</i>	<i>5000</i>	<i>55000</i>
Sub-total General Assembly	6360	563331	7728	2132	573191
	<i>5000</i>	<i>265000</i>	<i>5000</i>	<i>5000</i>	<i>275000</i>
Meetings					
Symposia/Colloquia	278012	82947	148062	225308	456317
	<i>256000</i>	<i>264000</i>	<i>24000</i>	<i>24000</i>	<i>744000</i>
Co-sponsored Meetings	10000	5000	35000	11367	51367
				<i>25000</i>	<i>25000</i>
Regional Meetings	25000			25000	25000
	<i>25000</i>		<i>25000</i>		<i>25000</i>
Sub-total Meetings	288012	87947	183062	261675	532684
	<i>281000</i>	<i>264000</i>	<i>265000</i>	<i>265000</i>	<i>794000</i>
Working Groups					
Telegram Bureau (06)	4000		8000	4000	12000
	<i>4000</i>		<i>4000</i>	<i>4000</i>	<i>8000</i>
Minor Planet Center (20)	6000		6000	12000	18000
		<i>4000</i>	<i>6000</i>	<i>6000</i>	<i>16000</i>
Meteor Data Center (22)	2200	2200	1100	1100	4400
	<i>1100</i>	<i>1100</i>	<i>1100</i>	<i>1100</i>	<i>3300</i>
EC WGs	1631	831		3570	4401
	<i>18000</i>	<i>18000</i>	<i>5000</i>	<i>5000</i>	<i>28000</i>
Commission WGs	3176	3271	5807	3253	12331
	<i>15000</i>	<i>15000</i>	<i>5000</i>	<i>5000</i>	<i>25000</i>
Sub-total Commissions & Working Groups	17007	6302	20907	23923	51132
	<i>38100</i>	<i>38100</i>	<i>21100</i>	<i>21100</i>	<i>80300</i>
Total SCIENTIFIC ACTIVITIES	311379	657580	211697	287730	1157007
	<i>324100</i>	<i>567100</i>	<i>291100</i>	<i>291100</i>	<i>1149300</i>

TRIENNIUM 1999-2002

STATEMENT OF EXPENDITURE (CHF)

EXPENDITURE	1999	2000	2001	2002	2000-02
<i>BUDGET</i>					
DELEGATES TO OTHER UNIONS	16159	11245	6626	16296	34167
	<i>10000</i>	<i>10000</i>	<i>10000</i>	<i>10000</i>	<i>30000</i>
DUES TO OTHER UNIONS					
ICSU	16500	1073	36658	1680	54531
	<i>16500</i>	<i>17000</i>	<i>17000</i>	<i>17000</i>	<i>51000</i>
IERS/FAGS	7500	7500	22500	7500	37500
	<i>7500</i>	<i>7500</i>	<i>7500</i>	<i>7500</i>	<i>22500</i>
IUCAF	7500		15149	7608	22757
	<i>7500</i>	<i>7500</i>	<i>7500</i>	<i>7500</i>	<i>22500</i>
Total DUES TO UNIONS/ ORGANIZATIONS	31500	8573	74307	31908	114788
	<i>31500</i>	<i>32000</i>	<i>32000</i>	<i>32000</i>	<i>96000</i>
EXECUTIVE CTTEE					
Executive Cttee meetings	50476	66322	32785	69115	168222
	<i>36000</i>	<i>65000</i>	<i>36000</i>	<i>37000</i>	<i>138000</i>
Officers meetings	2498	10457	15332	14700	40489
	<i>5100</i>	<i>5200</i>	<i>6000</i>	<i>6000</i>	<i>17200</i>
General Secretary expenditure	27919	18735	29960	22592	71287
	<i>26500</i>	<i>27500</i>	<i>30000</i>	<i>30000</i>	<i>87500</i>
President expenditure	4245				
	<i>3500</i>	<i>3500</i>	<i>1000</i>	<i>1000</i>	<i>5500</i>
Assist. Gen. Secr. expenditure			610		610
	<i>3000</i>	<i>3000</i>	<i>2000</i>	<i>2000</i>	<i>7000</i>
Archives	7519				
Total EXECUTIVE CTTEE	92657	95514	78687	106407	280608
	<i>74100</i>	<i>104200</i>	<i>75000</i>	<i>76000</i>	<i>255200</i>
Total PUBLICATIONS	76181	33297	22911	40936	97144
	<i>52000</i>	<i>53000</i>	<i>40000</i>	<i>52000</i>	<i>145000</i>

TRIENNIUM 1999-2002**STATEMENT OF EXPENDITURE (CHF)**

EXPENDITURE (Cntd)	1999	2000	2001	2002	2000-02
<i>BUDGET</i>					
ADMINISTRATION/ SECRETARIAT					
Salaries & Charges	184496	169183	156190	161848	487221
	<i>159000</i>	<i>164000</i>	<i>175000</i>	<i>175000</i>	<i>514000</i>
Training courses	2946		2699	2834	5533
	<i>4500</i>	<i>4500</i>	<i>5000</i>	<i>5000</i>	<i>14500</i>
General office expenses	50579	87059	77318	81193	245570
	<i>70000</i>	<i>72000</i>	<i>70000</i>	<i>72000</i>	<i>214000</i>
Audit fee	2503	2360	2276	2296	6932
	<i>2000</i>	<i>2000</i>	<i>2500</i>	<i>2500</i>	<i>7000</i>
Bank charges	3989	14042	23890	15446	53378
	<i>7000</i>	<i>8500</i>	<i>4000</i>	<i>4000</i>	<i>16500</i>
Total ADMIN./ SECRETARIAT	244513	272644	262373	263617	798634
	<i>242500</i>	<i>251000</i>	<i>256000</i>	<i>258000</i>	<i>766000</i>
TOTAL EXPENDITURE	873180	1142377	796466	898972	2837816
	<i>824200</i>	<i>1077300</i>	<i>804600</i>	<i>819600</i>	<i>2701500</i>

Appendix I

TERMS OF REFERENCE FOR THE IAU MINOR PLANET CENTER

Preamble: Rationale for the IAU Minor Planet Center

Studies of the spatial distribution, orbits, and physical properties of the small bodies of the Solar System require observations from locations all over the Earth and from space. In order to establish a coherent dataset as a basis for the further coordination and progress of such studies, an international clearing-house collecting, identifying, and archiving positional data and maintaining and disseminating updated information on the orbital properties of these bodies is essential. Moreover, a definitive system of internationally recognized nomenclature for the small bodies of the Solar System is also needed.

Selected examples of this type of research are the rapidly accelerating studies of the properties of near Earth objects, partly motivated by the concern for identifying potentially hazardous objects. Recent observational and theoretical discoveries have also established the existence of important relationships among Trans-Neptunian objects, Centaurs, comets, and at least some of the near-Earth asteroids.

Indications are that activities in this field will continue to increase and diversify considerably in the foreseeable future.

The international coordinating functions which are central to these studies are provided on behalf of the International Astronomical Union (IAU) by the IAU Minor Planet Center (MPC). The present Terms of Reference define the high-level requirements and scientific policies for the MPC, as a basis for the contractual relationship between the IAU and the host organization for the MPC. The practical implementation of these policies through this contract will be periodically reviewed and adapted to changing scientific needs and available human and financial resources, based on the recommendations of the MPC and the MPC Advisory Committee (MPCAC, see below).

Scientific Tasks of the IAU Minor Planet Center

The basic observational data provided to the MPC consist of astrometric and other observations of the small bodies of the Solar System. In the following, the term 'minor planets' will be taken to include asteroids, comets, near-Earth objects, Centaurs, and Trans-Neptunian objects, optionally including Pluto, Charon and the outer satellites of the giant planets.

The data processing tasks of the MPC include quality checking of the observations, their assignment to previously identified or newly discovered objects, the computation of updated orbital elements for individual objects, the computation of ephemerides for the execution of new observations or identification of archival data on individual objects, and the archiving of all these data.

The results of this process will be provided by the MPC to the international astronomical community, including observers, orbit computers, and scientists studying the physical properties of small Solar System bodies. The data products provided will include the original (mostly astrometric) data, the computed orbital elements and their uncertainties, and the ephemerides.

Operational Principles of the Minor Planet Center

The MPC will receive and promptly process astrometric and other observations on minor planets from professional and amateur astronomers all over the world. To the extent necessary and permitted by available human and technical resources, the validity

of these observations will be verified and their association with previously designated objects established by the MPC. Faulty data are corrected if possible, otherwise rejected.

After a finite period of time for the above tasks, all original data will promptly be made available to the international community, unless individual observers specifically request that remaining unlinked observations be returned to them by the MPC. The updated database of orbital parameters and ephemerides will be provided simultaneously. The period of time assigned to this phase will depend on scientific requirements (in particular the need for follow-up observations of rapidly moving objects) and available resources, and will be periodically reviewed and updated by agreement between the MPC and the MPCAC.

Priority in the discovery of new objects is assigned according to the time of submission of the corresponding data to the MPC, directly or through a publication. The precise procedures governing this process will be agreed to and periodically updated by the MPC and the MPCAC, subject to the approval of the IAU Executive Committee.

Finally, the MPC is charged with coordinating both the official catalog designations and the names of small Solar System bodies, in the case of comets through collaboration with the Central Bureau for Astronomical Telegrams according to the rules established by IAU Commissions 6 and 20. The actual assignment of names is undertaken with the Committee on Small Body Nomenclature of IAU Division III in accordance with the Terms of Reference for this Committee.

Updated documentation of the computational and other procedures of the MPC will be made publicly available to an extent allowing other workers to reproduce the results obtained by the MPC. The MPC may make its actual computational codes available to other groups as part of collaborative arrangements (see below).

It is recognized that the rapidly growing volume of activities in this scientific field will likely soon exceed the capabilities of any single institution, including the MPC. Accordingly, the MPC may delegate specific responsibilities or services to collaborating institutions. The terms of such collaborations will be defined in individual agreements between the IAU and the collaborating institution, based on the recommendations of the MPC and the MPCAC. One such example is the agreement between the MPC and the Institute of Theoretical Astronomy (now Institute of Applied Astronomy) concerning the ephemerides and definitive orbits for the numbered asteroids.

Policies Concerning Near-Earth Objects

The subject of possibly hazardous Near-Earth Objects (NEOs) has special observational, operational, and political implications. The MPC, the MPCAC, and the IAU Working Group on Near-Earth Objects (WGNEO) will cooperate to establish and maintain IAU policies and procedures covering the discovery, follow-up, and further studies of NEOs as well as quantification and characterization of any potential of hazard posed by an individual object. They will also define procedures for any official communications that might be appropriate for particular NEOs; such procedures require the approval of the IAU General Secretary.

Establishment and Organization of the MPC

The MPC is established through a contract or other agreement between the host institution and the IAU, formulated upon the recommendations of IAU Commission 20 and with the approval of the Executive Committee. The contract will be concluded for an initial period and will specify the procedures for its renewal as well as the financial and other support provided by the host institution and the IAU. Further national and international funding for the MPC is desirable and appropriate, and the IAU and the host institution will collaborate to secure such external funding. The Director of the MPC is

appointed by the host institution in consultation with the IAU General Secretary, who will in turn consult the IAU MPCAC, Commission 20, and Division III.

Notification by one or both of the parties of the termination or substantial revision of the contract must be given at least one year in advance and will take effect no sooner than the following IAU General Assembly. Any such action from the IAU side will be based upon a recommendation of the IAU MPCAC, Commission 20, and Division III.

The MPC host institution is selected based on its ability to provide the following services:

- qualified staff with scientific and practical expertise in astrometry and celestial mechanics
- full-time availability of sufficient personnel for day-to-day operations sufficient computational capability
- internet connections of adequate bandwidth
- ability to remain operational 24 hours a day.

It is a desirable goal that the fundamental databases of the MPC should be available at no cost to astronomers around the world. The MPC may, however, charge suitable fees for printed and other publications and services that supplement the fundamental, electronic databases. Conditions for the definition and revision of such charges will be included in the contract establishing the MPC.

The MPC Advisory Committee

In order to monitor the services and performance of the MPC on a running basis and advise the MPC and the IAU on its future development, IAU Commission 20 appoints an IAU MPC Advisory Committee (MPCAC), following the IAU rules for the appointment of Working Groups. The MPCAC will consist of four to eight members with expertise covering all observational and computational aspects of the operations of the MPC. It reports directly to the MPC Director, and to the IAU Executive Committee through IAU Commission 20 and Division III. The MPCAC also advises the MPC and the IAU on the need for and suitable terms of any agreements delegating some of the services of the MPC to collaborating individuals or institutions. Finally, the MPCAC will consider any proposals or appeals from observers or orbit computers regarding the procedures and services of the MPC. Any outstanding issues between the MPC and the MPCAC will be resolved by Division III or, in the last, instance, by the IAU Executive Committee.