

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

INFORMATION BULLETIN No 79

January 1997

CONTENTS	i
Editorial	iii
In Memoriam: V.A. Ambartsumian	iv
1. GENERAL ASSEMBLIES	1
1.1. The XXIIIrd General Assembly, Kyoto, Japan	1
	[1] to [25]
1.1.1. Invitation from the President	[1]
1.1.2. IMPORTANT Deadlines for the XXIIIrd General Assembly	[2]
1.1.3. Additional Deadlines for Adhering Organizations, Commissions and Divisions	[2]
1.1.4. Scientific Programme	[3]
1.1.5. Call for poster papers	[3]
1.1.6. New Contact Address (JD 15)	[3]
1.1.7. IAU Local Organizing Committee Grants	[10]
1.2. XXIVth General Assembly	3
2. EXECUTIVE COMMITTEE	4
2.1. 68th Meeting of the IAU Executive Committee	4
2.2. Working Rules of the IAU (Issue of June 26, 1996)	4
2.3. The 69th and 70th Meetings of the IAU EC	11
3. DIVISIONS: World Wide Web	12
4. COMMISSIONS & WORKING GROUPS	13
4.1. Commission 24	13
4.2. Intercommission Working Group on Astronomical Standards	13
5. SCIENTIFIC & EDUCATIONAL ACTIVITIES	18
5.1. Commission 38: Exchange of Astronomers IAU Travel Grants: Guidelines	18
5.2. Commission 46: Teaching of Astronomy	21
5.2.1. 23rd International School for Young Astronomers (ISYA)	21
5.2.2. Teaching for Astronomy Development (TAD)	22
5.2.2. Messages from Commission 46 (Teaching of Astronomy)	22
5.3. Future IAU Scientific Meetings	23
5.3.1. Deadline	23
5.3.2. Future IAU Symposia	23
5.3.3. Future IAU Colloquia	25

5.3.4.	Past Regional Astronomy Meetings Report of the VIIth Asian Pacific Regional Meeting	27
6.	OTHER SCIENTIFIC MEETINGS OF INTEREST TO IAU MEMBERS	28
7.	IAU PUBLICATIONS	31
7.1.	Symposia	31
7.2.	Colloquia	32
8.	INTERNATIONAL ORGANISATIONS: Report of the International Earth Rotation Service (IERS)	33
9.	MEMBERSHIP: WWW	35
10.	OTHER MATTERS	35
10.1.	Information on UTC - TAI	35
10.2.	International Geophysical Calendar 1997	36

EDITORIAL

In addition to the usual news from the events and activities of our Union this issue of the Information Bulletin contains some further information on the XXIIIrd IAU General Assembly in August 1997 in Kyoto (see central leaflet). This information supplements the (special) issue No. 78 which contained the preliminary Programme and important practical information for this General Assembly. Colleagues who are interested in attending the XXIIIrd General Assembly and who have not received IB 78, can find IB 78 in this World Wide Web server under "Previous issues of the Information Bulletin". Additional paper copies of IB 78 can be obtained from our Paris office or from the Kyoto Local Organising Committee.

This issue of the Information Bulletin also contains a short report on the discussions at the last (68th) meeting of the IAU Executive Committee, which took place in June 1996 in Baltimore. Among the decisions taken at this Executive Committee meeting was the approval of a new issue of the Working Rules of the Union. The new text of the Working Rules is given in Section 2.2 of this Information Bulletin. This text contains for the first time explicit rules for the proposal of Resolutions at General Assemblies. As the new working rules took effect with their approval by the Executive Committee, the Rules for Resolutions should be followed, as far as possible, already for all Resolutions to be submitted to the Kyoto General Assembly. However, a regular standing Resolutions Committee, as required by the new rules, can be elected only during the Kyoto General Assembly. Therefore, until the second session of the Kyoto General Assembly, the Executive Committee has asked the Resolutions Committee elected in The Hague to continue to function until August 1997 and the Executive Committee will allow adequate flexibility in the application of the rules during this transition period.

As the publication of this issue of the Information Bulletin marks the beginning of a new year, I would like to close this editorial with my very best wishes for 1997 to all members of our Union and to all readers of this Bulletin.

November, 1996

Immo Appenzeller

General Secretary

IN MEMORIAM

V.A. AMBARTSUMIAN

On August 12, 1996 V.A. Ambartsumian, IAU's oldest past President, passed away at the age of 87. He had been a Vice-President of the IAU from 1948 to 1955 and President from 1961 to 1964. He became President of the International Council of Scientific Unions in 1968.

Viktor Amazaspovich Ambartsumian was born on September 18, 1908 in Tbilisi, the capital of Georgia. He graduated in 1928 at Leningrad University, continued as a post-graduate at Pulkovo Observatory (near Leningrad) in the years 1928-1931 and next was associated with the University of Leningrad (now St-Petersburg), from 1934 as a professor. In subsequent years he devoted much of his time to the foundation and construction of the Byurakan Observatory in Armenia of which he became the Director, and from 1947 he also was professor of astrophysics at the State University in Yerevan, the capital of Armenia. The observational programme of Byurakan Observatory has been strongly inspired by Ambartsumian's imaginative thinking.

Ambartsumian's scientific achievements are manifold. Whereas his early work was primarily in theoretical astrophysics, in particular on radiative transfer including the theory of light scattering by planetary atmospheres, his interest broadened to include stellar evolution, the problem of star formation, and the origin and evolution of stellar systems. It was particularly in these latter two domains that his unorthodox approach drew much attention. As early as in the years 1941-43, he postulated that certain groups containing stars with similar properties, drifting among the general stellar population like, for instance, the groups of O and B stars called by him stellar associations, are dynamically instable systems and must be of much more recent origin than the stellar population in general. This work has greatly contributed to the now generally accepted view that star formation has been a continuous - and still ongoing - process up to the present. As to the formation process itself, Ambartsumian went even as far as postulating that stellar associations originate from superdense primordial matter, a postulate he then also extended to the formation of galaxies in general.

Ambartsumian received many honours, both from inside the USSR and internationally. Among the first were the Order of Lenin and the Stalin Prize, both awarded soon after the end of World War II. In 1950 he became a Deputy to the Supreme Soviet and in 1961 a member of the Presidium of the Academy of Sciences of the USSR. In 1960 he was awarded the gold medal of the Royal Astronomical Society, and in the same year the Bruce medal of the Astronomical Society of the Pacific. He was a foreign member of many Academies of Science.

Ambartsumian's term as a Vice-President of the IAU coincided with the years of the cold war between western powers and the Soviet Union. It was at that time that the IAU went through a

critical stage in its existence as a consequence of the IAU Executive Committee's decision to postpone the General Assembly planned for 1951 in Leningrad. During the subsequent years, although vigorously contesting the EC's decision, Ambartsumian did not fail to continue his support of the Union as the world-wide organisation embracing astronomers from all countries. His election as President of the IAU in 1961 reflected both the appreciation for his efforts in this respect and his outstanding scientific achievements.

Adriaan Blaauw

November 15, 1996

1. GENERAL ASSEMBLIES

1.1. THE XXIIIIRD GENERAL ASSEMBLY, KYOTO, JAPAN, AUGUST 18-30, 1997

Additions to the Special Issue of Information Bulletin (IB 78) are given on Pages [1] to [25] at the end of this Bulletin

1.2. XXIVTH GENERAL ASSEMBLY

We are pleased to inform the members of the Union that the IAU received an official invitation from the Royal Society to hold its XXIVth General Assembly in the year 2000 in Manchester, United Kingdom. The IAU Executive Committee will propose to the XXIIIrd General Assembly to accept this invitation.

2. EXECUTIVE COMMITTEE

2.1. 68TH MEETING OF THE IAU EXECUTIVE COMMITTEE

The 68th Meeting of the IAU Executive Committee took place on June 23 to 25, 1996 at the Space Telescope Science Institute, Baltimore, USA, on the kind invitation of its Director, Professor Robert Williams.

Among the main topics discussed at this Executive Committee meeting were the proposed budget for the years 1998 to 2000, proposed modifications in the IAU Statutes, By-laws and Working Rules, the selection of the Symposia, Joint Discussions and Special Sessions of the XXIIIrd General Assembly, the selection of the other scientific meetings in 1997, the selection of an ISYA and of TAD programs, and the discussion of bids for the IAU publishing contract 1998-2003.

The modifications of the Statutes and By-laws and the draft budget 1998-2000 adopted by the Executive Committee will be submitted the XXIIIrd General Assembly. The modified Working Rules (which are drawn up and published by the Executive Committee under its own responsibility) are already in force. The English version of the new Working Rules is printed below.

2.2. WORKING RULES OF THE IAU
(as amended during the 68th EC, June 23-25, 1996)

I. Non-Discrimination

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

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

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

In the last resort, the Chairperson or the Secretary of the ICSU Standing Committee on the Freedom in the Conduct of Science (SCFCS) should be approached. The SCFCS has been created by ICSU in 1963 in order to safeguard the principle of the universality of science and to assist in the solution of specific problems. The SCFCS has, ever since, worked vigorously to ensure that this principle is upheld by providing advice and taking appropriate measures. The Chairperson or the Secretary of the SCFCS can be reached at the Royal Swedish Academy of Sciences in Stockholm (Telefax: 46 8 155670).

II. Membership

A. Adhering Countries

2. Applications of countries for adherence to the Union are examined by the Executive Committee for:

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

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

B. Members

4. Individuals proposed for Union Membership should, as a rule, be chosen

from among astronomers and scientists, whose activity is closely linked with astronomy taking into account:

- (a) the standard of their scientific achievement;
- (b) the extent to which their scientific activity involves research in astronomy;
- (c) their desire to assist in the fulfilment of the aims of the Union.

5. Young astronomers should be considered eligible for membership after they have shown their capability (as a rule Ph.D. or equivalent) of and experience (some years of successful activity) in conducting original research.

6. For full time professional astronomers the achievement in astronomy may consist either of original research or of substantial contributions to major observational programs.

7. Others are eligible for membership only if they are making original contributions closely linked with astronomical research.

8. Eight months before an ordinary General Assembly, adhering bodies will be asked to propose new Members. The proposals should reach the General Secretary not later than five months before the first session of the General Assembly. Proposals received after the closing date will only be taken into consideration if the delay is justified by exceptional circumstances.

9. Each proposal shall be prepared separately and signed by the proposer. It should include the name, first names, postal and electronic address of the candidates, Institute or Observatory, place and date of birth, the University and the year of Ph.D. or equivalent title, present occupation, titles and bibliographic data for two or three of the more important papers or publications, and details, if any, worthy to be considered by the Nominating Committee.

10. (a) Pursuant article 13 of the Statutes Presidents of Union Divisions wishing to nominate candidates for Membership should address their suggestions to the General Secretary at least nine months before the first session of an ordinary General Assembly. The nominations should contain particulars as in article 9.

(b) The General Secretary notifies the adhering bodies about such suggestions.

11. The General Secretary shall prepare two lists for the Nominating Committee:

- (a) one containing the candidates proposed by the adhering bodies.
- (b) the other containing those suggested by Presidents of Divisions, but not included among the proposals of the adhering bodies

12. The Nominating Committee prepares the final proposals for Union membership from the two lists as mentioned in article 11.

13. Adhering Bodies should propose the deletion of Members who have left the field of astronomy for other interests, unless they continue to contribute to astronomy. Such proposals should be announced to the Member concerned and to the General Secretary.

14. The alphabetical list of Union Members will be published by the General Secretary following each ordinary General Assembly.

III. Commission Membership

15. Members of Union Commissions are co-opted by Commissions. The rules governing the procedure of such co-option are drawn up by the Commissions

themselves.

16. Commissions should choose, or approve of, Commission members taking into account their special interests, in particular their scientific activity in the appropriate fields of research and their contribution to the work of the Commission. They may:

- (a) invite Union Members to become members of their Commission;
- (b) remove Union members who have not contributed to the work of the Commission;
- (c) accept or reject applications for membership from existing or proposed Union Members;

17. Members may not, as a rule, be members of more than three Commissions.

18. Members may apply for Commission membership by writing to the President of the Commission concerned. Such applications should only be made if the Member is actively engaged in the appropriate field of research and is prepared to contribute to the work of the Commission.

19. Members of Commissions may resign from a Commission by writing to its President.

20. Adhering Bodies, in sending in their proposals for new Members, may also suggest one Commission for each candidate.

21. The General Secretary will record and analyse the lists of members of Commissions. If necessary, the General Secretary will try to resolve any outstanding anomalies.

22. The list of Commission members will be published by the General Secretary in the Transactions of each ordinary General Assembly.

IV. Consultants

23. Eligible as Consultants are non-astronomers in a position to further the interest in astronomy.

24. Proposals of Commissions for the approval of consultants should, as a rule, reach the General Secretary not later than five months before the first session of an ordinary General Assembly.

25. The General Secretary shall prepare a list of those proposed for admission as consultants and submit it to the Executive Committee for approval.

26. The Administrative Office will maintain an alphabetical list of consultants.

27. Consultants may participate in the meetings of the Union. They may have voting right in the respective Commission. They receive, free of charge, the Information Bulletin of the Union.

V. Scientific Meetings

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

VI. Publications

29. The publications of the International Astronomical Union, approved in the budget by the General Assembly, are prepared by the Administrative Office of the Union

30. Commissions of the Union may, with the approval of the Executive Committee, issue their publications independently.
31. The distribution of publications of the Union is decided, on the proposal of the General Secretary, by the Executive Committee.
32. Members may purchase the publications of the Union at reduced prices.

VII. External Contacts

33. No dealings with third parties, attributable to the Union, shall be undertaken by any Member of the Union except on the authority of the General Secretary.
34. Representatives of the Union in other bodies, especially ICSU Committees and ICSU Inter-Union Committees, shall be appointed by the Executive Committee. Nominations are sought from Presidents of appropriate Commissions.
35. Expenses incurred by Representatives of the Union in other bodies will be reimbursed at the discretion of the General Secretary, within the provisions of the Budget Estimate adopted by the General Assembly. Representatives are required to obtain prior approval of the General Secretary before incurring such expenses.

VIII. General Assemblies

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

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

(a) Resolutions fall in three categories:

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

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

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

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

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

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

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

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

office until the end of the following General Assembly.

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

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

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

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

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

IX. Working Groups

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

2.3. THE 69TH AND 70TH MEETINGS OF THE IAU EXECUTIVE COMMITTEE

The 69th and 70th Meetings of the IAU Executive Committee will take place in connection with the XXIIIrd IAU General Assembly in August 1997 in Kyoto, Japan.

Any matter to be submitted to these meetings should reach the Office of the General Secretary by May 15th, 1997

3. DIVISIONS: WORLD WIDE WEB

Up to now, Divisions V, VIII, X and XI have their own home page within our IAUWWW server. The Division home pages provide news and announcements from the Divisions as well as basic information on their scope and activities.

4. COMMISSIONS & WORKING GROUPS

4.1. COMMISSION 24

Commission 24 (Photographic astrometry/Astrométrie Photographique) informed us that, Dr. Elena Schilbach (Potsdam) has been elected Vice-President of Commission 24, following the resignation of Dr. Philip Iannam.

4.2. INTERCOMMISSION WORKING GROUP ON ASTRONOMICAL STANDARDS (COMMISSIONS 4, 5, 8, 19, 24 & 31)

STANDARDS OF FUNDAMENTAL ASTRONOMY INITIATIVE

ANNOUNCEMENT OF OPPORTUNITY:

INVITATION TO BID FOR THE SOFA CENTER

BACKGROUND

The IAU, at the 1994 General Assembly, accepted a recommendation from the Working Group on Astronomical Standards (WGAS) that a collection of authenticated fundamental-astronomy algorithms and astronomical constants be made freely available, together with arrangements to maintain and develop the service as new standards emerge.

The initiative was called "Standards of Fundamental Astronomy " (SOFA). The SOFA Collection - constants, algorithms, software, test data and documentation - would, in general, be provided by the community, appropriately adapted, enhanced and standardized by the SOFA Review Board, and made available through a facility called the "SOFA Center".

The WGAS is responsible for defining SOFA's terms of reference and appointing the SOFA Review Board. The latter has been appointed, and the WGAS has asked the Board to draw up the present invitation to bid for the SOFA Center.

The remainder of this statement gives the background to SOFA, and sets out the functions, terms and conditions of the SOFA Center.

STANDARDS OF FUNDAMENTAL ASTRONOMY (SOFA)

The intention is for SOFA to serve the whole astronomical community.

The principal purpose of SOFA is to define a set of standard (canonical) positional-astronomy procedures in the form of computer code and reliable test data, together with an appropriate level of documentation. SOFA also maintains the official IAU constants, both canonical and "best estimates".

The aim is to provide procedures which are both rigorous (including consistency with General Relativity) and of direct practical use.

It must be stressed that SOFA encourages experts and groups working at the leading edge to continue to develop and use their own state-of-the-art software. This private software is a vital resource, as it provides independent checks on the SOFA routines and guides the development of, and can form the basis of, future SOFA products. The existence of SOFA should not inhibit the independent development and refinement of fundamental-astronomy algorithms in the community at large, and indeed should stimulate such work.

THE FUNCTIONS OF THE SOFA CENTER

The Center shall make available, through anonymous FTP and the WWW the following:

- a) The SOFA collection,
- b) The non-confidential part of the review reports,
- c) Other useful files, as agreed with the Review Board.

The principal interface between the Center and the outside world shall, for the present, be the World Wide Web (WWW). There will be a dedicated SOFA home page, which will provide access to official SOFA software and documents only (i.e. no links to material which is not part of the SOFA Collection).

The Center shall provide material on machine-readable media on request. For the present, a 3.5-inch MS-DOS diskette is the minimum service envisaged. A reasonable fee (agreed by the Management Board) can be charged for this copy service. This service may be introduced at a later stage.

The Center, at its discretion, may provide SOFA products in paper form. A reasonable fee (agreed by the Management Board) can be charged for this service.

On behalf of the Review Board, the Center shall inform the community, through IAU Bulletins, IAG publications (e.g. Journal of Geodesy) and the WWW, about:

- a) the SOFA collection,
- b) how new SOFA procedures may be submitted,
- c) news on the activities of the Center and the Review Board,
- d) new algorithms and constants.

The Center will be involved in the work of the Review Board, by:

- a) receiving new software and associated material,
- b) providing access to new software to Review Board members and designated reviewers,
- c) installing new software in the SOFA collection.

The details of these processes have yet to be decided.

The Center shall be able to build the SOFA procedures and execute the suite of test programs on at least two different platforms, including at least two different operating systems, one of which must be Unix-based. An appropriate set of compilers must be available, currently supporting at least ANSI C and ANSI Fortran 77 with the DoD extensions. Additional computers, operating systems and compilers may be required in the future.

The Center shall maintain an archive of the whole SOFA Collection, past and present.

The Center shall monitor the use of the SOFA Collection and provide statistics on request to the SOFA Management Board.

The Center may authorize mirror sites, to provide fast access to SOFA products to users in different geographical regions.

TERMS OF REFERENCE OF THE SOFA CENTER

The Center, located at a suitable institution, is responsible for operating the SOFA service for the astronomical community worldwide.

The Center will, for the time being, be ranked as one of the formal functions of the IAU WGAS, as is the SOFA Review Board.

The Director of the Center shall be a member of the IAU WGAS and also a member of the SOFA Review Board.

The service provided by the SOFA Center will be monitored by a Management Board. Reports and assessments will be made at each triennial General

Assembly of the IAU.

The Management Board will initially be the WGAS. Because IAU Working Groups exist only for a limited period, it will be necessary in due course to establish a permanent SOFA Management Board, perhaps in the form of a new IAU Commission. Steps to bring about this change will be taken prior to the IAU General Assembly in 2000.

Electronic access to the SOFA Collection will be free of charge.

All items of the SOFA Collection shall be covered by the GNU general public license. The SOFA Management Board will rule on matters of copyright.

The selection of items for the SOFA Collection and their specifications are the responsibility of the Review Board.

The Center may elect to work in collaboration with other institutions and individuals, with the Review Board's approval, each providing different parts of the SOFA service. However, any distributed mode of operation must be transparent to the user, who will be able to access all SOFA services through a single point of contact.

Due notification of significant changes in the Center's service must be notified and discussed with the Review Board. Similarly the Review Board must discuss and give the Center due warning of changes in its requirements.

Notification of termination of the SOFA service, by either the Center or the Management Board, must be given at least 18 months prior to an IAU General Assembly.

The Management Board must notify the Center if it finds that the Center is not providing a suitable service. The Center will then have 6 months in which to meet the Management Board's requirements before any steps are taken to terminate the agreement.

No financial support by the IAU is available. Bidding institutions must be prepared to operate the SOFA Center within their existing programs and budgets.

The Center must maintain an effective and efficient service, and must not bring the IAU into disrepute.

RESOURCES NEEDED BY THE SOFA CENTER

Human resources - The SOFA Center will be expected to provide about 0.5 staff years per year.

Computer resources - adequate processing power and online information storage capacity must be provided, as well as continuous WWW and anonymous FTP accessibility at acceptable bandwidths, and the capability to build and test the SOFA Collection on a variety of platforms.

BIDS

Bids must be submitted, in writing, to the SOFA Review Board Chair by 1997 April 1. Electronic transmission is acceptable (and indeed encouraged). Bidding institutions must describe in detail how they propose to set up and operate the SOFA Service and what level of resources will be committed.

The SOFA Review Board intends to announce the successful bidder to host the Center at the IAU General Assembly in Kyoto, Japan in 1997 August. (At that time it is hoped that development of the first tranche of SOFA algorithms will be nearing completion).

Patrick Wallace, Chair

SOFA Review Board
Rutherford Appleton Laboratory
Chilton, Didcot, Oxon OX11 0QX, UK
ptw@star.rl.ac.uk

1996 December 10

5. SCIENTIFIC & EDUCATIONAL ACTIVITIES

5.1. COMMISSION 38: EXCHANGE OF ASTRONOMERS

IAU TRAVEL GRANTS: GUIDELINES

Within the limitations imposed by the budget of the Commission as approved by the Executive Committee of the International Astronomical Union, funds are available to Commission 38 toward grants to qualified individuals to enable them to visit institutions abroad. It is intended, in particular, that the visitors should have ample time and opportunity to interact with the intellectual life of the host institution so that maximum benefit is derived by both sides. It is a specific objective of the programme that astronomy in the home country be enriched after the applicant returns.

1. Candidates may be faculty/staff members, post-doctoral fellows, or graduate students at any recognised educational/research institution or observatory. All candidates must have an excellent record of research and must have made permanent and professional commitments to astronomy. The programme is designed to support both the work of young astronomers and established astronomers whose visits may benefit the country or institution visited. It is emphasised that all recipients should return to their home institutions or home countries upon the completion of their visits.
2. All visits must normally consist of a stay of at least 3 months at a single host institution. In special cases, shorter visits can be considered; stopover at other institutions en route may be permitted.
3. All visits must be formally agreed to by the Directors of the home and host institutions involved. Such endorsements must confirm that the proposed plan of study is a reasonable one and will be of benefit to astronomy.
4. All applicants must give details of funds currently available to her/him to finance her/his proposed visit including supporting documents. In particular, s/he must state what other applications s/he has submitted in efforts to obtain support from other sources and the status of such applications. In the event that an applicant receives funds, which may be used, in whole or in part, for the same proposed purpose from another source, s/he is required to revise her/his application or make a refund to the IAU. If dependants are to accompany the applicant, details must be given.
5. The amount of the grant will be governed by the cost of one return economy air fare and limited to the least expensive fare (such as PEX, APEX, etc.) between home and host institutions and normally is to be used by the applicant for such travel. With prior approval, the funds can instead be used wholly or in part for subsistence costs during the visit.

Some grants may be awarded on the basis of a one-way fare. An example is the case where highly qualified graduate students apply for funds to go abroad to begin graduate studies at an institution where they have been formally accepted.

6. Grants to attend symposia, summer schools, conferences, society meetings,

etc. are outside the scope of the programme.

Grants will not normally be made for the sole purpose of obtaining observational data.

An individual should normally not expect to receive an IAU award for a second visit.

7. Each recipient is required to submit a brief report to the President of Commission 38 after her/his return from the visit. Acknowledgement of support from the Exchange of Astronomers Programme of the IAU should be made in any published paper resulting from the visit.

Application Procedure

1. An individual who wishes to apply for a grant under the IAU Exchange of Astronomers Programme should read the rules carefully to ensure that the circumstances of her/his case conform to the conditions under which IAU grants can be made. S/he should then proceed by formally submitting her/his request for a grant in the form of a letter to the President of Commission 38 (see § 4, below).

Each candidate must submit a curriculum vitae showing that s/he is professionally qualified, and must submit a viable plan of scholarly activity to be carried out during the visit.

The information supplied in those documents should be complete and detailed as it will be used to judge whether the proposal is in conformity with the aims of the programme, whether the minimum initial requirements are being met, and whether the guidelines will permit a favourable decision. Any special circumstances must be carefully set forth.

2. It is the applicant's responsibility to arrange for the two confidential letters of endorsement from senior officials of the home and host institutions. These are to be sent without delay directly to the President of Commission 38. The letters from both institutions should confirm that the applicant's proposed visit has the knowledge and support of the directors or senior academic/research officers of the institutions involved. Further they should state whether the applicant will be returning to a position at the home institution at the conclusion of the visit. Finally, they should confirm to the President of Commission 38 that the senior officials themselves have made every effort to obtain the necessary travel funds from their own institutions and from other resources within the respective countries.

The applicant must state who is responsible for her/his subsistence during the prolonged visit at the host institute, i.e. subsistence paid by the home or by the host institute, by a grant or fellowship or by any other means. Copies of the relevant documents should be submitted with application. In addition the applicant should provide information on the lowest available travel fare required.

3. As noted above, care should be taken to make the application as complete as possible and to include detailed statements rather than generalities. Material should be typed and single spaced. The application will be considered as quickly as possible, but it should be recognised that information and opinions must be exchanged among the President, Vice-Presidents, and/or other Members of the Organising Committee of Commission 38.

4. In summary, the application should include:

- i. plan of scientific activity,
- ii. curriculum vitae,
- iii. letters of support from home and host institutions,
- iv. information on responsibility for subsistence at the host institution,

v. information on lowest available travel fare.

and should be submitted in time for the Officers of the Commission to consult by post.

5. All correspondence, including the endorsements referred to above, should be directed to the President of Commission 38, International Astronomical Union, with copy to the Vice-President. For the period August 1994-July 1997, the addresses are:

President	Vice-President
Prof. H.E. Jorgensen NBifAFG NRAO Juliane Maries Vej 30 DK 2100 Copenhagen O Denmark USA	Dr. Morton S. Roberts Edgemont Road Charlottesville VA 22903

Fax: 45 35 32 3989 1 804 296 0278

5.2. COMMISSION 46: TEACHING OF ASTRONOMY

5.2.1. 23rd IAU International School for Young Astronomers (ISYA)

The 23rd IAU International School for Young Astronomers will be held at the Institute for Advanced Studies in Basic Sciences at Zanjan, Iran, Director Y. Sobouti, during July 4-24, 1997. Language: English. Topics to be emphasized: Stars and stellar atmospheres, radio astronomy, cosmology, MHD with emphasis on the Sun, planetary system, practical observational training. Applications should include your achieved level of studies in physics and astronomy, any topic of special interest, plus e-mail and/or fax address if available. Local costs will be born by the host. To apply for cost of travel, a letter of reference is needed which evaluates your academic standing and your proficiency in English. Applications and letters of reference should arrive by April 21, 1997 and should be sent to both Donat G. Wentzel, secretary for ISYA, by air-mail at Department of Astronomy, University of Maryland, College Park MD 20742, USA, or by fax to (International 1) 301 314 9067, or preferably by Internet e-mail to wentzel@astro.umd.edu and also to Mrs. Z. Zahedi, Executive Secretary, Institute for Advanced Studies in Basic Sciences, by air-mail at PO Box 14155-3834, Tehran, Iran, or by fax to (International 98) 21 641 4650.

5.2.2. Teaching for Astronomy Development (TAD)

After evaluating the TAD proposals received in response to the announcement published in 1995 the Executive Committee selected at its June 1996 meeting programmes for Vietnam and Central America as the first actions in the TAD framework.

1. Vietnam: The Vietnamese astronomers and astronomy teachers have been scientifically out of touch for 30 years. At a conference September 1 - 14, 1997 we plan to up-date at least one professor from each astronomy-teaching university and pedagogical college and several of the best current physics students. A computer, slide projector, many books and journals have already been provided. Saunders Publ. Co. donated 45 textbooks. Project coordinator is Prof. N. Q. Rieu, Paris.

2. Central America: The IAU will support students from five Central American countries and a faculty member from Spain for an observing course at the Observatory of the National University of Honduras, Tegucigalpa, during January 1997. A photometer has been bought for use on the European-donated telescope. Project coordinator is Prof. Armando Arellano F., Guanajuato, Mexico.

Discussions are proceeding how to help establish academic astronomy programmes in Sri Lanka and Morocco.

D. Wentzel, Secretary for TAD

5.2.3. Messages from Commission 46 (Teaching of Astronomy)

Thanks to the help of Dr. Andrew J. Norton, The Open University, UK, Commission 46 (Teaching of Astronomy) now has a Web site:

<http://physics.open.ac.uk/IAU46/>

Please visit!

John R. Percy
President, Commission 46

IAU MEETINGS

5.3. FUTURE IAU SCIENTIFIC MEETINGS

5.3.1. Deadline

```
*****
*
*   Proposals for IAU Symposia, Colloquia, Regional Meetings, and
*   co-sponsored meetings planned for 1998 (and beyond) should reach
*   the Assistant General Secretary
*
*           no later than May 15, 1997
*****
```

in order to be considered at the 1997 Executive Committee meeting. Proposals should be complete, with all supporting documents, at that time (cf. the Rules for IAU Scientific Meetings).

5.3.2. Future IAU Symposia

Symposium 189 FUNDAMENTAL STELLAR PROPERTIES: THE INTERACTION BETWEEN OBSERVATION AND THEORY
January 13 - 17, 1997, Sydney, Australia

Scientific Organising Committee: J. Andersen (Denmark), Y. Balega (Russia), B. Barbuy (Brazil), M. Bessell (Australia), C. Chiosi (Italy), J. Christensen-Dalsgaard (Denmark), J. Davis (Australia; Chair), R. P. Kudritzki (Germany), D.L. Lambert (U.S.A.), M. Spite (France), D.A. VandenBerg (Canada)

Principal Topics:

Stellar Distances
Stellar Masses, Angular Diameters and Radii
Flux Distributions, Effective Temperature Scales
Stellar Atmospheres, Chemical Abundances
Stellar Oscillations
Stellar Models versus Observed Stars
Stellar Interiors and Advanced Evolutionary Stages

Stellar Chemical Evolution

Stars as Indicators of Ages in the Universe

Chairperson, Local Organising Committee: A. Booth

Contact address: Dr. A.J. Booth, Astronomy Department, School of Physics,
A28, University of Sydney, Sydney, NSW 2006, Australia

Phone: 61-2 9351 7726

Fax: 61-2 9351 3849

E-mail: fsp97@physics.usyd.edu.au

WWW: <http://www.physics.usyd.edu.au/astron/>Symposium 182 HERBIG-HARO FLOWS AND THE BIRTH OF LOW-MASS STARS
January 20 - 26, 1997, Chamonix, France.

See IB 76, p. 16.

Symposium 183 COSMOLOGICAL PARAMETERS AND THE EVOLUTION OF THE UNIVERSE
August 18 - 22, 1997, Kyoto, Japan

See IB 78, p. 9.

Symposium 184 THE CENTRAL REGIONS OF THE GALAXY AND GALAXIES
August 18 - 22, 1997, Kyoto, Japan

See IB 78, p. 11.

Symposium 185 NEW EYES TO SEE INSIDE THE SUN AND STARS: PUSHING THE LIMITS
OF HELIO- AND ASTEROSEISMOLOGY WITH NEW OBSERVATIONS FROM THE GROUND AND
FROM SPACE
August 18 - 22, 1997, Kyoto, Japan

See IB 78, p. 13.

Symposium 186 GALAXY INTERACTIONS AT HIGH AND LOW REDSHIFT
August 26 - 30, 1997, Kyoto, Japan

See IB 78, p. 15.

Symposium 187 COSMIC CHEMICAL EVOLUTION
August 26 - 30, 1997, Kyoto, Japan

See IB 78, p. 18.

Symposium 188 THE HOT UNIVERSE
August 26 - 30, 1997, Kyoto, Japan

See IB 78, p. 20.

5.3.3. Future IAU Colloquia

Colloquium 164 RADIO EMISSION FROM GALACTIC AND EXTRAGALACTIC COMPACT SOURCES
April 21 - 26, 1997, Socorro, NM, USA.

See IB 76, p. 19, and IB 77, p. 33.

Colloquium 166 THE LOCAL BUBBLE AND BEYOND
April 21 - 25, 1997, Garching, GermanyScientific Organising Committee: F. Boulanger (France), D. Breitschwerdt
(Germany), P. Frisch (USA), U. Mebold (Germany), J. Lequeux (France), C.
McKee (USA), Y. Tanaka (Japan), J. Trümper (Germany; Chair), J. Vallergera (USA)

Principal Topics:

Observations of the Local Bubble
Soft X-rays and EUV

UV and optical line measurements
 IR, mm and radio
 Origin and Evolution of the Local Bubble
 Distribution of hot and cold matter
 Magnetic field structure
 Shock waves and energetic particles
 Plasma emission models
 Dynamical evolution
 The Local Bubble Environment
 Boundary of the Local Bubble
 Evolution of superbubbles
 Local vs. general ISM
 Galactic halo(s)

Chairperson, Local Organising Committee: D. Breitschwerdt

Contact address: Dr. D. Breitschwerdt, Max-Planck-Institut für
 Extraterrestrische Physik, Giessenbachstrasse 1, D - 85740 Garching, Germany
 Phone: 49 89 3299 3321
 Fax: 49 89 3299 3569
 E-mail: breitsch@rosat.mpe-garching.mpg.de
 WWW: <http://ftp.rosat.mpe-garching.mpg.de/local-bubble/>

Colloquium 167 NEW PERSPECTIVES ON SOLAR PROMINENCES
 April 28 - May 4, 1997, Aussois, France

Scientific Organising Committee: E. Cliver (USA), O. Engvold (Norway), V.
 Gaizauskas (Canada), I. Kim (Russia), Z. Mouradian (France), G. Peres
 (Italy), D.M. Rust (USA; Co-chair), T. Sakurai (Japan), B. Schmieder
 (France; Co-chair), R. Schwenn (Germany), Wang J.-X. (China)

Principal Topics:

Filaments and their Environment
 Thermal and magnetic aspects
 Theory and observations from X-ray to radio and optical wavelengths
 Birth and Death of Filaments
 Origin of filament mass and magnetic field
 Eruption of filaments
 Global Patterns of Filaments
 Magnetic helicity and filaments

Chairperson, Local Organising Committee: B. Schmieder

Contact address: Dr. D.M. Rust, The Johns Hopkins University, Applied
 Physics Laboratory, Johns Hopkins Road, Laurel, MD 20723, USA
 Phone: 1 301 953 5414
 Fax: 1 301 953 6670
 E-mail: david.rust@jhuapl.edu
 WWW: <http://www.in2pr3.fr/~drevon/CPL.html>

5.3.4. Past IAU Regional Astronomy Meeting

Report on the VIIth Asian-Pacific Regional Meeting of the IAU

The 7th Asian-Pacific IAU Regional Meeting of the IAU was held at the
 Conference Halls of Pusan National University, Korea, during August 19-23,
 1996. This meeting was one of the most important events commemorating the
 50th anniversary of the Pusan National University. About 300 people (160
 from 26 foreign countries and 140 from Korea) participated in the meeting.
 The Korean Astronomical Society contributed greatly to the organization of
 the meeting, in collaboration with the SOC and LOC.

There were 24 regular sessions of 1/2 hour duration and a 1 hour summary
 session. There were 44 invited talks and over 180 contributed papers (47
 were oral papers). The scientific program covered entire area of astronomy

and astrophysics, ranging from Solar System to Cosmology. There were also two sessions on Astronomical History and Education.

Several satellite meetings were held concurrently with main sessions. These included a Radio Frequency Allocation Committee Meeting for the Asian-Pacific Region, a Space Schmidt Telescope Project Discussion Meeting, a meeting on Large-Scale Facilities in the Future, a Workshop for School Teachers, and a Star Party for the General Public. The Space Schmidt Telescope Discussion Group proposed a resolution for the promotion of an all-sky survey in the UV frequency range with a Space Schmidt telescope. This resolution was discussed at the final session of the meeting and adopted unanimously by the participants.

The papers presented at the meeting will be published in a supplementary issue of the Journal of the Korean Astronomical Society.

Hyung Mok Lee
Chairperson of the SOC

6. OTHER SCIENTIFIC MEETINGS OF INTEREST TO
IAU MEMBERS

THE THREE GALILEOS: THE MAN, THE SPACECRAFT, THE TELESCOPE

January 7 - 10, 1997, Padova, Italy.

Contact address: C. Barbieri, Dept. of Astronomy, Univ. of Padova, Vicolo dell'Osservatorio 5, I 35122 Padova, Italy.

Tel: 39 49 875 4343

Fax: 39 49 875 4345

E-mail: barbieri@astrpd.pd.astro.it

FUNDAMENTAL STELLAR PROPERTIES: THE INTERACTION BETWEEN OBSERVATION AND THEORY

January 13 - 17, 1997, Sydney, Australia.

Contact address: Andrew Booth, Chatterton Astronomy Dpt, School of Physics, University of Sydney, NSW 2006, Australia.

Tel: 61 2 351 3849

Fax: 61 2 660 2903

E-mail: booth@physics.usyd.edu.au

The Fifth CTIO/ESO Workshop SN 1987A: TEN YEARS AFTER

February 22 - 28, 1997, La Serena, Chile.

Contact address: M.M Phillips or N.B. Suntzeff, CTIO, Casilla 603, La Serena, Chile.

Tel: 56 51 225 415

Fax: 56 51 205 212

E-mail: mphillips@noao.edu or nsuntzeff@noao.edu

WWW: [HTTP://www.ctio.noao.edu/SN1987A_conf.html](http://www.ctio.noao.edu/SN1987A_conf.html)

THE LOCAL BUBBLE AND BEYOND

April 21 - 25, 1997, Garching, Germany.

Contact address: D. Breitschwerdt, Max-Planck-Institut für

Extraterrestrische Physik, Postfach 1603, D 85740 Garching bei München, Germany.

Tel: 49 89 3299 3317

Fax: 49 89 3299 3569

E-mail: breitsch@rosat.mpe-garching.mpg.de

4th Compton Symposium on GAMMA RAY ASTRONOMY AND ASTROPHYSICS

April 27 - 30, 1997, Williamsburg, VA, USA.

Contact address: James Kurfess, Naval Research Lab., Code 4150, 4555

Overlook Ave SW, Washington, DC 20375-5320, USA.

Tel: 1 202 767 3182

Fax: 1 202 767 6473

E-mail: kurfess@osse.nrl.navy.mil

NEW PERSPECTIVES ON SOLAR PROMINENCES, A MEMORIAL COLLOQUIUM TO LUCIEN
D'AZAMBUJA

April 28 - May 4, 1997, Aussois, France.

Contact address: D.M. Rust, The Johns Hopkins University, Applied Physics Laboratory, Johns Hopkins Road, Laurel, MD 20723, USA.

Tel: 1 301 953 5414

Fax: 1 301 953 6670

E-mail: david.rust@jhuapl.edu

A HALF CENTURY OF STELLAR PULSATIONS INTERPRETATIONS

June 16 - 20, 1997, Los Alamos, NM, USA.

Contact address: Joyce A. Guzik, Los Alamos National Laboratory, X 2 MS B220, Los Alamos, NM 87545-2345, USA.

Tel: 1 505 667 8927

Fax: 1 505 665 4080

E-mail: joy@lanl.gov

ASTROPHYSICS FROM ANTARCTICA

June 30 - July 2, 1997, Chicago, USA.

Contact address: Annual Meeting ASP, 390 Ashton Ave, San Francisco, CA 94112, USA.

Tel: 1 415 337 1100

Fax: 1 415 337 5205

E-mail: bally@nebula.Colorado.edu

10th Cambridge Workshop on COOL STARS, STELLAR SYSTEMS, AND THE SUN

July 15 - 19, 1997, Cambridge, MA, USA.

Contact address: A.K. Dupree, Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, USA.

Tel: 1 617 495 7489

Fax: 1 617 495 7049

E-mail: adupree@cfa.harvard.edu

GLOBAL CHANGE AND HISTORY OF GEOPHYSICS AND RELATED DISCIPLINES

August 4 - 14, 1997, Uppsala, Sweden.

Contact address: Wilfried Schröder, Geophysical Station, Hechelstrasse 8, D 28777 Bremen Rönnebeck, Germany

International Conference on VARIABLE STARS, dedicated to the 90th anniversary of V.P. Tsessevich (1907 - 1983)

September 1 - 5, 1997, Odessa, Ukraine.

Contact address: Prof. V.G. Karetnikov, Astronomical Observatory, Odessa State University, T.G. Shevchenko Park, Odessa 270014, Ukraine.

Tel: 7 0482 228 442

E-mail: root@astro.odessa.ua

ASTRONOMY FROM LARGE DATABASES III

September 7 - 10, 1997, Sonneberg, Germany.

Contact address: Constanze la Dous, Sonneberg Observatory, Sternwartestrasse 32, D 96515 Sonneberg, Germany.

Tel: 49 3675 81210

Fax: 49 3675 81219

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

ASYMPTOTIC GIANT STARS

August 26 - 31, 1998, Montpellier, France.

Contact address: C. Waelkens, Instituut voor Sterrenkunde, Celestijnenlaan 200B, B 3001 Leuven, Belgium.

Tel: 32 16 20 0656

Fax: 32 16 20 1241

E-mail: christoffel@ster.kuleuven.ac.be

7. IAU PUBLICATIONS

Special offer from Kluwer Academic Publishers to IAU Members on IAU publications: Members

of the IAU receive a discount of 33 1/3% off the price of the hardbound Symposia and Highlights volumes. They may purchase paperback copies of Symposium proceedings at NLG 70.00 per copy and paperback copies of the Highlights at NLG 105.00 per copy. The Transactions may be purchased at NLG 115.00 per copy.

7.1. SYMPOSIA (KLUWER ACADEMIC PUBLISHERS)

- 169 UNSOLVED PROBLEMS OF THE MILKY WAY
Eds. L. Blitz & P. Teuben
Hardback USD 208.00 GBP 140.00 0-7923-4039-6
Paperback USD 104.00 GBP 70.00 0-7923-4040-X
- 172 DYNAMICS, EPHEMERIDES & ASTROMETRY OF THE SOLAR SYSTEM
Eds. S. Ferraz-Mello, B. Morando & J.-E. Arlot
Hardback USD 180.00 GBP 120.00 0-7923-4084-1
Paperback USD 90.00 GBP 60.00 0-7923-4085-X
- 174 DYNAMICAL EVOLUTION OF STAR CLUSTERS - CONFRONTATION OF
THEORY AND OBSERVATIONS
Eds. P. Hut & J. Makino
Hardback USD 160.00 GBP 108.00 0-7923-4069-8
Paperback USD 80.00 GBP 54.00 0-7923-4070-1
- 175 EXTRAGALACTIC RADIO SOURCES
Eds. R. Ekers, C. Fanti & L. Padrielli
Hardback USD 195.00 GBP 132.00 0-7923-4121-X
Paperback USD 98.00 GBP 61.00 0-7923-4122-8
- 176 STELLAR SURFACE STRUCTURE
Eds. K.G. Straussmeier & J. L. Linsky
Hardback USD 199.00 GBP 135.00 0-7923-4026-4
Paperback USD 99.00 GBP 69.00 0-7923-4027-2

7.2. COLLOQUIA

ASTRONOMICAL SOCIETY OF THE PACIFIC CONFERENCE SERIES

Vol. 84

- 148 THE FUTURE UTILISATION OF SCHMIDT TELESCOPE
Eds. J. Chapman, R. Cannon, S. Harrison & B. Hidayat
Hardback 1-886733-05-8, 1995

ASTRONOMICAL SOCIETY OF THE PACIFIC CONFERENCE SERIES

Vol. 104

- 150 PHYSICS, CHEMISTRY AND DYNAMICS OF INTERPLANETARY DUST
Eds. B.O.S. Gustafson & M.S. Hanner
Hardback 1-8886733-24-4

SPRINGER VERLAG

- 151 FLARES AND FLASHES
Eds. J. Greiner, H.W. Duerbeck & R.E. Gershberg
Hardback 3-540-60057-4

KLUWER ACADEMIC PUBLISHERS

- 152 ASTROPHYSICS IN THE EXTREME ULTRAVIOLET
Eds. S. Bowyer & R.F. Malina
Hardback 0-7923-3908-8
- 153 MAGNETODYNAMIC PHENOMENA IN THE SOLAR ATMOSPHERE: PROTOTYPES OF STELLAR
MAGNETIC ACTIVITY

Eds. Y. Uchida, T. Kosugi & H.S. Hudson
 Hardback USD 195.00 GBP 132.00 0-7923-4121-X

158 CATAclysmic VARIABLES AND RELATED OBJECTS
 Eds. A. Evans & J.H. Wood
 Hardback USD 220.00 GBP 150.00 0-7923-4195-3

8. INTERNATIONAL ORGANISATIONS: IERS

REPORT OF THE 1996 IERS WORKSHOP

BRIDGING ASTRONOMY, GEODESY AND GEOPHYSICS:

THE TRENDS WITHIN IERS

During its ninth year of existence, the International Earth Rotation Service (IERS) organized a review of its activities and missions. External experts were invited to report on current activities and possible future extensions of tasks, under the following six topics.

1. IERS Missions
2. Astronomical reference frames
3. Vertical terrestrial references
4. Monitoring crustal deformations
5. Unification of national geodetic datums
6. Monitoring global geophysical fluids

The reports were discussed at the 1996 IERS Workshop, held at Paris Observatory, 14-16 October 1996, and attended by about 80 invited scientists. The Workshop adopted a number of recommendations. The IERS Directing Board started to work on their implementation. The major aspects of the foreseen evolution are as follows.

- Taking over the maintenance of the International Celestial Reference Frame (ICRF) based on VLBI-derived directions of extragalactic radio sources, and of the tie of the Hipparcos galactic reference frame, as will be recommended by the IAU Working Group on Reference Frames to the 1997 IAU General Assembly.
- Coordinating the use of astronomical observations for tying the Solar System reference frames to the ICRF.
- Fostering the provision of global vertical terrestrial references and of global horizontal references for the monitoring crustal deformations, in close cooperation with the International Association of Geodesy.
- Monitoring the global geophysical fluids that influence the Earth's rotation, an extension of the current activity on atmospheric data.
- Monitoring the motion of the Earth's centre of gravity.

While some extensions of activities in the fields of astronomy, geodesy and geophysics were recommended, the Workshop also recognised the great success of IERS in providing timely and accurate data on Earth rotation, and in the establishment and maintenance of accurate terrestrial and celestial reference frames.

A detailed report of the Workshop will be published as an IERS Technical Note in January 1997. Extra copies of the report are available from

Christoph Reigber
 Chairman, Directing Board of IERS
 Central Bureau of IERS, Observatoire de Paris
 61 Avenue de l'Observatoire, 75014 Paris, France
 Fax: 33 1 4051 2291. Internet: iers@obspm.fr

9. MEMBERSHIP: WWW

Science Council of Japan & Astronomical Society of Japan

ADVISORY BOARD

Yoshio Fujita, Chairperson (President of the Japan Academy)

Kenji Akabane (Prof. Emeritus, NAO) Chushiro Hayashi (Prof. Emeritus, Kyoto= Univ)
 Yoshihide Kozai (Prof. Emeritus, NAO) Shinya Obi (President, University of the Air)
 Minoru Oda (Prof. Emeritus, ISAS) Yasuo Tanaka (Prof. Emeritus, ISAS)

NATIONAL ORGANIZING COMMITTEE (NOC)

Daiichiro Sugimoto, Chairperson (University of Tokyo)

Satoru Ikeuchi (Osaka University) Toshio Matsumoto (ISAS)
 Masato Ishiguro (NAO-NRO) Yoji Osaki (University of Tokyo)
 Norio Kaifu (NAO) Humitaka Sato (Kyoto University)
 Keiichi Kodaira (NAO) Katsuhiko Sato (University of Tokyo)
 Yoshihide Kozai (NAO) Mine Takeuti (Tohoku University)
 Fumiyoshi Makino (ISAS) Yutaka Uchida (Science University of Tokyo)
 =09

+ LOCAL ORGANIZING COMMITTEE (LOC)

Toshio Fukushima, Chairperson (NAO)

Nobuo Arimoto (University of Tokyo) Kouji Ohta (Kyoto University)
 Izumi Hachisu (University of Tokyo) Sadanori Okamura (University of Tokyo)
 Toshihiro Handa (University of Tokyo) Kozo Sadakane (Osaka Kyoiku= University)
 Tetsuo Hasegawa (University of Tokyo) Toshikazu Shigeyama (University of= Tokyo)
 Shogo Inagaki (Kyoto University) Yoshinori Suematsu (NAO)
 Junji Inatani (NAO-NRO) Naoshi Sugiyama (Kyoto University)
 Hajime Inoue (ISAS) Shunsaku Suzuki (NAO)
 Jun Jugaku (Tokai University) Tomoharu Suzuki (University of Tokyo)
 Takeo Kosugi (NAO-NRO) Yoshiaki Taniguchi (Tohoku University)
 Hideyo Kunieda (Nagoya University) Hiroshi Tsunemi (Osaka University)
 Shin Mineshige (Kyoto University) Takeshi Tsuru (Kyoto University)
 Ken'ichi Nomoto (University of Tokyo) Munetaka Ueno (University of Tokyo)
 Ryusuke Ogasawara (NAO) Jun-ichi Watanabe (NAO)

NAO: National Astronomical Observatory

NAO-NRO: Nobeyama Radio Observatory of National Astronomical Observat

ISAS: Institute of Space and Astronautical Science

TABLE OF CONTENTS

+ INVITATION FROM THE PRESIDENT

+ IMPORTANT DATES AND ADDRESSES

+ SCIENTIFIC PROGRAMME

UPDATES

NEW CONTACT ADDRESS (JD 15)

WGDDA
CALL FOR POSTER PAPERS

PRACTICAL INFORMATION

GENERAL REMARK
INFORMATION ON THE GENERAL ASSEMBLY
WWW
E-mail information service

TRAVEL
Importance advice
+ Visas
+ Getting to Kyoto
Transportation in Japan
+ Transportation in Kyoto city
Weather and clothing
Electricity
+ Consumer's Tax

REGISTRATION
Participation
Financial support to attend the General Assembly
IAU Grants
+ LOC Grants
How to register

RESERVATIONS FOR HOTEL ACCOMMODATION, SOCIAL
& CULTURAL EVENTS & TOURS
+ Japan Travel Bureau
List of Hotels & Hotel Accommodation
Social & Cultural Events
Programme for accompanying persons & optional tours

+ HOW TO REDUCE YOUR TRAVEL EXPENSES
Low price accommodations
Sharing hotel rooms in Kyoto
Daily life - Low price food

GENERAL INFORMATION ON FACILITIES
Venue of the General Assembly
Registration desk & general information
Travel desk
+ Banking & currency exchange facilities
Mail boxes
+ Mail, phone, facsimile & electronic mail
Photocopy
Daily newspaper
Coffee & tea breaks
Lunch facilities
Medical Aid
Child care
+ Exhibitions

SCIENTIFIC PRESENTATIONS

FACILITIES FOR ORAL PRESENTATIONS
VIDEO PRESENTATIONS
POSTERS
Selection of posters & publication of poster abstracts
Preparation of abstracts

+ SMALL LEXICON ON JAPANESE WORDS USED

FIGURES

FIGURE 1: Connection Map to/from Airports see IB 78
 FIGURE 1: Connection Map to/from Seaports see IB 78
 FIGURE 3: Guide Map of Kyoto City and Hotel Locations see IB 78

FORMS

REGISTRATION FORM see IB 78
 APPLICATION FORM FOR HOTELS AND TOURS see IB 78
 APPLICATION FORM FOR AN IAU GRANT see IB 78
 + APPLICATION FORM FOR A LOC GRANT please contact LOC
 (address see below)

INVITATION FROM THE PRESIDENT

The twenty-third General Assembly of the IAU will take place in Kyoto, Japan from August 18 to 30, 1997. An extensive and attractive programme of six Symposia, twenty-six Joint Discussions and Special Sessions, as well as three Invited Discourses, on essentially all topics of contemporary Astronomy should have a widespread scientific appeal. The total programme contains some seventy days worth of programmed activities, so attendees will have many difficult choices to make. As a result, whether your interest is the sun or the planets, stellar or interstellar, galactic or extra, there is something for everyone

Perhaps even more important the General Assembly will give Astronomers from around the world an opportunity to meet to discuss common interests, to organise co-operative ventures or just to renew old friendships. All of this will be much facilitated by an excellent social programme organised by our Japanese hosts.

Astronomers who are not IAU Members will be very welcome to attend by invitation. An invitation may be extended by the relevant National Committee for the IAU or in special circumstances by the President through the IAU Secretariat in Paris. Participants of the General Assembly Symposia and Joint Discussions may be invited by the corresponding Scientific Organising Committee Chairperson.

It is sometimes thought that the General Assembly is primarily an organisational or even bureaucratic meeting. Nothing is further from reality. It is true that some Commissions will have to deal with organisational questions. It is after all important that we all agree on the definition of Universal Time or on the names of geographical features on the planets. Also the General Assembly provides a much needed opportunity to set up collaborations in science or instrumentation. But the overwhelming part of the time is devoted to the presentation and discussion of new scientific results.

I am looking forward to meeting many of you in Kyoto.

Lo Woltjer
 President

IMPORTANT DATES AND ADDRESSES

DEADLINES TO REMEMBER

Submission of poster abstracts February 15, 1997
 IAU Grant applications February 15, 1997
 LOC Grant applications February 15, 1997
 Early registration April 30, 1997
 Hotel/Tour reservation June 30, 1997
 Registration by Mail/Facsimile/E-mail/WWW July 15, 1997

ADDRESSES

For inquiries concerning the XXIIIrd General Assembly in general and the Scientific Programme, please contact:

Prof. Immo Appenzeller, General Secretary Telephone: 33 1 43 25 8358
 International Astronomical Union (IAU) Facsimile: 33 1 43 25 2616
 98 bis, bd Arago, F 75014 Paris, France E-mail: iau@iap.fr

For all inquiries concerning registration and local arrangements in Kyoto except hotel/tour reservations, please contact:

Prof. T. Fukushima, Chair Telephone: 81 422 34 3027
 Local Organizing Committee, Facsimile: 81 422 34 3027
 the XXIIIrd General Assembly of the IAU E-mail: iau97@tenmon.or.jp
 National Astronomical Observatory
 2-21-1, Ohsawa, Mitaka, Tokyo 181, Japan

+ For all inquiries concerning hotel/tour reservations in Kyoto, please contact:

Japan Travel Bureau, Inc. Telephone: 81 3 5620 9429
 International Travel Division Facsimile: 81 3 5620 9499
 Convention Center (CD100993-543) + E-mail: jtbiau@mx.meshnet.or.jp
 5-5-2, Kiba, Koto-ku, Tokyo135, Japan

+ SCIENTIFIC PROGRAMME

UPDATES

The Preliminary Programme of the XXIIIrd General Assembly has been published in the Information Bulletin No. 78 (Special Issue). The final programme will be available at the Registration Desk in Kyoto. Since the publication of IB 78 our Secretariate has received updates concerning the programmes of Symposium No. 187 and of Joint Discussion No. 24. These updates have been implemented in the WWW version of IB 78 (which will remain available through the WWW homepage under "Previous issues of the Information Bulletin" and which will be updated at regular intervals, if needed. Members who have not

access to the WWW can get information on the changes concerning Symposium 187 and Joint Discussion 24 directly from the contact addresses listed in IB=78.

NEW CONTACT ADDRESS (JD 15)

Please note that the contact address for Joint Discussion No. 15 has changed=to:

Dr. R. Spurzem Phone: 49 6221 405 230 (Office)
Astronomisches Rechen-Institut 49 6221 405 0 (Switchboard)
Moenchhofstrasse 12-14 Email: spurzem@relay.ari.uni-heidelberg.de
D-69120 Heidelberg
Germany
WWW: <http://www.astrophysik.uni-kiel.de/pershome/supas028/iau.html>

WGDA

Please note that the meeting of the Working Group: Encouraging the International Development of Antarctic Astronomy, initially scheduled Wednesday August 27th, has been put forward to Friday August 22nd, 14:00 to 17:30, room J.

CALL FOR POSTER PAPERS

Various Symposium and Joint Discussion No. 3 and 19 SOCs have informed us that they will accept poster papers or other contributions. Anybody interested in presenting a poster at one of the General Assembly scientific events should submit an abstract to the corresponding contact address (see IB 78) before February 15, 1997.

PRACTICAL INFORMATION

GENERAL REMARK

In order to ease the comprehension of the following, the signification of the acronyms quoted and the Japanese words (transcribed in Roman characters) which are printed in italics, are given at the end of this leaflet. This list also gives the phonetics of these transcribed words.

The next issue of the Information Bulletin will comprise Chinese characters (Kanji).

INFORMATION ON THE GENERAL ASSEMBLY

WWW

We provide the latest information by way of the World-Wide Web (WWW) through the Astronomical Society of Japan.
The URL of the [LOC WWW page](#) is:

<http://www.tenmon.or.jp/iau97/>

From this page, you can also visit other servers providing useful information about Kyoto and Japan. Note that tenmon means astronomy in Japanese. Registration and reservation for accommodation and tours are also possible through the WWW which is frequently up-dated.

E-MAIL INFORMATION SERVICE

We provide the latest information also by e-mail. Information is itemized

as General Information, Registration, Accommodation, Forms, LaTeX Template, etc. Each request is automatically sent back a reply to anyone who sent an e-mail with a specific digit code in its Subject field to the following address (no mail body is necessary):

iau97-info@tenmon.or.jp

The detailed usage of this service is obtained by sending any (blank) e-mail with "help" in its Subject field. The released information is frequently up-dated.

TRAVEL

IMPORTANT ADVICE

The week around August 15 is one of the busiest tourist periods in Japan. A lot of Japanese are travelling in Japan and abroad. On the weekend of August 16 and 17 most people will be travelling back home. Therefore, it is strongly advised to reserve seats on international flights well in advance.

+ VISAS

As of November 1996, no visa is required for short-stay visitors to Japan from the following countries: Argentine, Austria, Bahamas, Barbados, Belgium, Brunei (within 14 days), Canada, Chile, Colombia, Costa Rica, Croatia, Cyprus, Denmark, Dominican Republic, El Salvador, Finland, France, Germany, Greece, Guatemala, Honduras, Iceland, Ireland, Israel, Italy, Lesotho, Liechtenstein, Luxembourg, Malta, Mauritius, Mexico, Netherlands, New Zealand, Norway, Portugal, San Marino, Singapore, Slovenia, Spain, Suriname, Sweden, Switzerland, Tunisia, Turkey, United Kingdom, United States of America, Uruguay. The length of stay allowed without a visa is limited to three or six months for these countries, with the exception of Brunei (14 days). As visa regulations may change, we recommend prospective participants from these countries to check at the nearest Consular Office or Embassy of Japan that no visa is required.

Those from other countries and regions are requested to contact the nearest Consular Office or Embassy of Japan at least **THREE MONTHS IN ADVANCE** of their trip. The Local Organizing Committee will make any possible efforts to assist participants in obtaining visas when necessary. In some cases, documents prepared by the LOC will be required by the Consular Offices in visa applications. Note that the documents from the LOC only prove the purpose of your visit to Japan and do not guarantee any financial support.

If you need assistance, please contact the LOC by providing the following information:

- | | |
|-----------------------------------|---|
| 1. full name and home address | 5. date of issue and passport number |
| of the visa applicant | 6. date and place (and preferably number |
| 2. date and place of birth | of visa application) |
| 3. citizenship | 7. trip schedule |
| 4. affiliation and office address | 8. facsimile number and/or E-mail address |

GETTING TO KYOTO

+ BY AIR

There are two major international airports in Japan: Kansai International Airport (KIX), close to Kyoto and New Tokyo International Airport (Narita: NRT), close to Tokyo.

Kansai International Airport (KIX)

How to get from KIX airport to Kyoto? Train is highly recommended. There

are three possibilities to get to Kyoto.

- Although there are several train services from Kansai International Airport to Kyoto, we strongly recommend to use the limited express Haruka because it is the only direct service to Kyoto. Its fare, including the supplemental charge, is 3,500 Yen. It takes 75 minutes from Kansai International Airport station (JR) in Kansai International Airport to Kyoto station. As of November 1996, the service hours of Haruka from/to the airports are as follows:

From	To	Service Hours	Typical Interval
KIX	Kyoto	6:29 - 22:18	30 min
Kyoto	KIX	5:31 - 20:16	30 min

- A more economical way to get to Kyoto station is to use one of the two JR rapid trains (these trains show the pictogram of an airplane) from the Kansai International Airport station (JR) in Kansai International Airport, although there is a change at the Osaka station, i.e.

either the rapid train Kanku-Kaisoku to Osaka or Kyobashi

or the special rapid train Kanku-Tokkai Wing, in the direction of Kyobashi. In both cases, check that you get on the right wagon (for Kyobashi) as some of the wagons of this train go to JR Namba. Do NOT take a train for Tennoji.

At Osaka station you should change to the new rapid trains Shin-Kaisoku of JR Kyoto line in the direction of Kusatsu, Maibara, Nagahama, Omi-shiozu, or Yasu. The blue Shin-Kaisoku logo with black background appears at a small window on the wagon side but only in Chinese characters (Kanji). The trains stop at track number 8 or 9 at Osaka Station.

The fare of this route is 1,800 Yen and it is a 2 hour ride in total. The tickets for the Kyoto train station can be bought at the Kansai International Airport station (JR).

- The least expensive way to travel from Kansai International Airport to Kyoto is by combination of 3 railways, namely Nankai, Osaka-subway, and Hankyu to Karasuma station in Kyoto. Although we do not recommend this last solution, as it is a rather complicated one, should you decide to reach Kyoto following this particular way, please ask the information service desk at Kansai International Airport for details. The fare of this route is 1,490 Yen and it takes 2 hours in total. Tickets for Karasuma (Hankyu Kyoto line) can be bought at the Kansai International Airport station (Nankai).

New Tokyo International Airport (Narita:NRT), close to Tokyo.

How to get from NRT airport to Tokyo? Here again, train is highly recommended. There are two possibilities to get to Tokyo train station:

- The Narita express trains for Shinjuku, Yokohama, Ikebukuro, and Ofuna which all stop in Tokyo train station are the most convenient. Its fare, including the supplemental charge is 2,900 Yen. It takes 60 minutes from Narita International Airport station (JR) in NRT to Tokyo Station. As of November 1996, the service hours of Narita express from/to the airport are as follows:

From	To	Service Hours	Typical Interval
NRT	Tokyo	7:43 - 21:43	30 or 60 min
Tokyo	NRT	6:30 - 20:03	30 or 60 min

- A more economical way to get to Tokyo is to use JR rapid trains with the sign Airport Narita. The fare of this route is 1,260 Yen and it takes about 90 minutes.

Fare and travelling time are shown in Figure 1: Connection Map to/from Airports. The latest schedules are available through the WWW.

All trains are through Tokyo station and you can take Shinkansen trains there to reach Kyoto (see Transportation in Japan below).

BY SEA

Some regular ship services are available to Japan from Russia, China, and Korea.

Port (Country) Port in Japan

Vladivostok (Russia)	Niigata, Fushiki
Shanghai (China)	Osaka, Kobe, Nagasaki
Tsingtao (China)	Shimonoseki
Tientsin (China)	Kobe
Pusan (Korea)	Hakata, Shimonoseki

Nota: From Taiwan no direct access is available to Japan main islands.

From the ports to Kyoto, trains are highly recommended (See also Transportation in Japan below). Fare and travelling time are given in Figure 2 (Connection Map to/from Seaports) in IB 78.

TRANSPORTATION IN JAPAN

BY AIR

Regular domestic flights are available to all major cities in Japan. As regards transportation from Narita Airport (NRT, Tokyo) to Kansai International Airport (KIX, Osaka), and as only four flights are available per day, we recommend the train (See following).

Flights from Tokyo Airport (Haneda) to Osaka Airport (Itami) take 60 min and cost 15,600 Yen. Air travel on this route is recommended only when its fare is included in the fare of your international flight, since there are more frequent Shinkansen trains than planes and since access to these airports is rather complicated.

BY TRAIN

Train is the most convenient public form of transport in Japan. Most trains are monoclasse ones although some of them have higher class cars named green cars, for which a supplement is charged.

Major cities in Japan are connected by a railway network operated by Japan Railway (JR) companies, which includes Shinkansen (Bullet trains), connecting big cities like Tokyo, Kyoto and Osaka. There are more than 5 services per hour between Tokyo and Kyoto, Osaka (Shin-osaka station) from 6:00 to 21:18. A non-limited mileage pass called JR pass can be purchased in advance outside of Japan. Please contact your nearest travel agent for detail.

Some smaller railway companies operate lines connecting major sightseeing spots and cities. Hankyu and Keihan operate between Kyoto and Osaka, Kintetsu between Kyoto, Osaka and Nara, Nankai between Kansai International Airport (KIX) and Osaka. More information will appear on the WWW home page of the LOC.

BY CAR

Driving is on the left-hand side. We discourage driving a car, because of heavy traffic jams and parking problems. However, should you decide to drive a car, an international driving license is required. We also strongly

recommend to take out an unlimited liability insurance.

+ TRANSPORTATION IN KYOTO CITY

In order to reduce your expenses the usage the bus of and subway services is recommended. The bus network covers the whole city. Several independent companies/authorities operate buses, subways and railways in a single city area. Their fares are usually paid separately.

BUS

Single ride

The bus fare in the central zone of Kyoto costs 220 Yen per ride. Kyoto International Conference Hall (KICH) is located at the north edge of this central zone. No single fare tickets exist, the fare being paid with coins.

One day tickets

One day tickets for Shi bus in the central zone cost 700 Yen and can be bought at any subway station and at a Shi bus ticket office in Kyoto station of JR line.

Multifare tickets (Kaisuken) are useful for bus usage.

The 5 fare tickets, 15.5 fare tickets and 26 fare tickets cost 1,000 Yen, 3,000 Yen, and 5,000 Yen, respectively (0.5 fare means that you can get one ride if you add 110 Yen in coins). The multi-ride tickets are acceptable for all buses covering Kyoto city operated by the following 6 companies/authority, those are Shi bus, Keihan bus, Kyoto bus, Kyoto Kotsu, Hankyu bus and JR bus. The multi-ride tickets can be shared with several people.

All the buses are operated by a driver only and you are requested to get on from the rear door and get off from the front door at a bus stop. Your request to stop at the next bus stop is noticed by a push button buzzer at the window pillar. When getting off, you should pay the fare by dropping coins or a single fare part of multi-fare tickets into a fare box beside the bus driver, or by showing a one-day or two-day ticket. Note that some bus routes extend up to the suburbs beyond the central 220 Yen zone. For such buses you should take a code tag called Se-i-riken from a small box close to the entrance of the bus. The fare depends on your mileage and the automatically scrolling fare table near the exit shows your fare to the next stop in terms of the tag code. Your code tag must be dropped in the box together with your fare. The multi-fare tickets are accepted for this case but need additional coins.

Major bus routes to Kyoto International Conference Hall are presented in Figure 3 of IB 78 but they may change between now and the date of the General Assembly. The latest bus routes connecting to Kyoto International Conference Hall will be shown in the LOC WWW page.

SUBWAY

A subway line across the city in the north-south direction is available. Its service hours are 5:30 to 23:00 and the frequency is four to seven minutes. The subway is scheduled to be extended up to Kyoto International Conference Hall (KICH) by June 1997 and the closest station will then be Kokusai-Kaikan, which means international conference hall in Japanese, just in front of Kyoto International Conference Hall. The fare is between 200 Yen and 290 Yen depending on the distance. One-day and two-day tickets are also available.

Combined bus/subway tickets

Discount tickets are available for a connected ride of Subway and Shi bus (the city bus, operated by Kyoto Municipal Transportation Bureau)

One day and two day tickets for Shi bus, Kyoto bus & subway in the central zone & suburb are 1,200 Yen and 2,000 Yen per person, respectively, and can be bought at subway stations and any Shi bus ticket office in the Kyoto train station.

SUBWAY & RAILWAYS

The network of the subway and other railways in Kyoto city are shown in Figure 3 of IB 78 (Guide Map of Kyoto City and Hotel Location).

Note that not all stations are presented in the map.

TAXIS

Taxis are also available, but they are much more expensive than other means of transportation, approximately ten times of the corresponding subway and/or bus fare. It costs roughly 630 Yen for the first 2 km and 320 Yen/km for additional distance, for example 3,000 Yen from Kyoto station to Kyoto International Conference Hall.

WEATHER & CLOTHING

Kyoto is usually hot and humid in August. The average temperatures in August are 24 C (75 F) and 33 C (91 F). The average humidity is= 69%. Rain

showers are frequent in the evening. Light and casual clothing is appropriate. Kyoto International Conference Hall and all major hotels, buildings, trains, and buses are air-conditioned. A light sweater or cardigan can be useful there.

ELECTRICITY

The voltage in Japan is 100 V AC. The frequency is 60 Hz in the western half of Japan including Kyoto and Osaka. In the eastern half including Tokyo, it is 50 Hz. The plugs are of the flat pin type and are similar, but not identical, to those used in the US, the difference being that both blades are the size of the narrower one of US type blades.

+ CONSUMER'S TAX

At some stores the displayed price does not include the consumer's tax (Shohizei), which is 3 % at present but is expected to be raised to 5 % by the time of the General Assembly. Be aware of this when paying.

REGISTRATION

PARTICIPATION

Attendance at the XXIIIrd General Assembly is open to all members of the IAU and to non members invited by the IAU. Invitations can be provided by the Adhering Organizations/National Committees for the IAU, the Scientific Organization Committees of the Symposia and Joint Discussions or, if necessary, by the President of the Union through the IAU Secretariat. Please note that an invitation to attend the General Assembly does not imply any financial commitment towards the participant by the IAU or the Local Organizing Committee.

Each participant (IAU member or invited participant) may register one adult and/or child(ren) as guest(s). Registered guests cannot attend the scientific meetings (except for the Invited Discourses), but otherwise enjoys the same privileges as participants.

FINANCIAL SUPPORT TO ATTEND THE GENERAL ASSEMBLY

IAU GRANTS

A limited number of IAU travel grants to attend the XXIIIrd General Assembly will be available for participants who cannot obtain necessary travel funds from national sources. Those who plan to contribute actively to one of the Symposia should send their grant application to the corresponding Symposium Scientific Organizing Committee. Colleagues who plan to participate actively in Joint Discussions, Special Sessions, Divisions, Commissions, and Working Groups are requested to send their grant application to the General Secretary. The deadline for grant applications is in both cases February 15, 1997. For grant applications the white form attached at the center of this issue has to be used.

+ LOC GRANTS

Thanks to donations from companies in Japan and individuals, including astronomers, the LOC is pleased to be in a position to offer a limited amount of travel grants called LOC Grant.

The LOC Grants will support the expenses covering one week stay in cheap lodgings (youth hostel class) and the registration fee of the General Assembly. A few of them will cover the fare to/from Japan. The deadline for applying is February 15, 1997, the same as that of the IAU Grants. The LOC Grants support young participants and those encountering difficulties with hard currencies. You may apply to both the IAU and the LOC Grants, although any applicant who obtains an IAU Grant cannot receive a LOC Grant. The green application form for the LOC Grant is attached as central page of this issue or is available through our WWW/E-mail (see the section on WWW and E-mail Information Service above). Please complete this green form and send it to the following address:

The LOC Grant Committee Facsimile: 81 422 34 3027
c/o LOC of IAU 23rd General Assembly
National Astronomical Observatory
2-21-1, Osawa, Mitaka, Tokyo 181, Japan

HOW TO REGISTER

Participants should complete the (blue) Registration Form attached in this issue and return it to the LOC no later than July 15, 1997. Note that the return addresses are different between blue and yellow forms. We accept forms sent by regular mail, facsimile, and e-mail and registration through our WWW registration page:

[LOC WWW page](#). After that date, advance registrations by mail/facsimile/e-mail/WWW are no longer accepted. However late registration will still be possible upon arrival in Kyoto at the Registration Desk in the conference hall until August 29.

Each person attending any portion of the XXIIIrd General Assembly or the associated symposia must register and pay the appropriate fee, as shown= below:

	Registration & payment received before April 30, 1997	May 1 or later
IAU Member	Yen 30,000	Yen 35,000
Invited Participant *	Yen 30,000	Yen 35,000
Registered Guest**	Yen 10,000	Yen 15,000
Child(ren) less than 12 y	Free	Free

* invited by the IAU, Adhering Organizations or National Committee or

SOCs

** must be registered on the same form as the IAU member or the invited participant

*** must be registered on the same form as the IAU member or the invited participant; For most of the tours, children aged 6 and under do not pay and children aged 6 to 11 get about 20-50 % discount.

Applications should be accompanied by a remittance covering the registration fee. No registration will be confirmed in the absence of this payment. Personal checks are NOT accepted. All payments must be in Japanese Yen. Payment should be in one of the following forms (in the case of E-mail/WWW registration, only credit cards may be used):

- A bank draft payable at a Japanese bank (Bank of Tokyo Mitsubishi, preferably) to the order of "Dai 23 Kai Kokusai-Tenmongaku-Rengo Soukai Soshiki-Iinkai Kaikei Arimoto Nobuo"
- A bank transfer to "Dai 23 Kai Kokusai-Tenmongaku-Rengo Soukai Soshiki-Iinkai Kaikei Arimoto Nobuo", account at the Bank of Tokyo Mitsubishi, Musashi-Sakai Branch (Branch 221) 2-2-3, Kyohnan, Musashino, Tokyo 180, Japan, (Account 0837975).
- Credit cards: VISA, MasterCard, and AMEX

Confirmations

Registrations will be confirmed via e-mail/facsimile/mail by the LOC within two weeks after receipt of the registration form and payment. If any confirmation does not arrive six weeks after you sent it, please contact the LOC by e-mail/facsimile.

Cancellation & Refunds

For notices sent before June 15, 1997 (postmark date), a charge of transfer of 2,000 Yen or so will be deducted before refunding. For late notices sent before August 1, 1997 (postmark date), the half of payment will be refund. Regrettably, no refund requests will be accepted after that date.

RESERVATIONS FOR HOTEL ACCOMMODATION, SOCIAL & CULTURAL EVENTS & TOURS (see also: How to reduce your travel expenses?)

+ JAPAN TRAVEL BUREAU

Reservations for accommodation and most tours are under the responsibility of the Japan Travel Bureau (JTB), which has been appointed as the official travel agent for the General Assembly:

Japan Travel Bureau, Inc. Telephone: 81 3 5620 9429
 International Travel Division Facsimile: 81 3 5620 9499
 Convention Center (CD100993-543) + E-mail: jtbiau@mx.d.meshnet.or.jp
 5-5-2, Kiba, Koto-ku, Tokyo135, Japan

JTB will accept reservation requests during the period November 1, 1996 to June 30, 1997. Forms for accommodation and tours, whose E-mail version are available through the WWW and automatic E-mail service, may be sent to this address. Please contact JTB for any query on these two subjects. Unfortunately, the LOC cannot answer any requests concerning these matters, which are exclusively handled by JTB.

LIST OF HOTELS & HOTEL ACCOMMODATION see IB 78

If you want to enjoy a traditional Japanese style hotels, please see Low Price Accommodations below, although NEITHER LOC NOR JTB will arrange them for you.

SOCIAL & CULTURAL EVENTS

All participants and their registered guests are welcome to attend the social and cultural events. No formal dress is required at any events of the General Assembly. We request participants to wear their badge at all events. Further to the badge, a ticket is required for the Japanese Music Concert. Some of these events are handled by the LOC, the others by the

Japanese Travel Bureau. Please use the appropriate form as indicated.

Reception, Monday August 18, evening Free of charge

All participants and registered guests are welcome to the reception to be held on the evening of August 18 (Monday). Please tick the corresponding box of the (blue) Registration Form.

Welcome Brass Concert, Wednesday August 20, evening Free of charge

Following the first General Assembly meeting, a brass concert will be held in the evening of August 20 (Wednesday) at Kyoto International Conference Hall. Please tick the corresponding box of the (blue) Registration Form.

Japanese Music Concert, Monday August 25, evening Adults: 1,500 Yen
Children (Age 11 and under) 800 Yen

An evening Japanese music concert will be performed at a hall kindly offered by the Kyoto School of Computer Sciences near Kyoto Station. The programme will contain two parts. A team of "Taiko" (Japanese traditional drums) players will show their skills. Exhibitions of "Kyogen" (Japanese classical comic plays) are also planned. Please tick the corresponding box of the (blue) Registration Form in this issue. Seats will be reserved on a first received first served basis. Please note that only 500 seats can be accommodated.

Banquet, Wednesday August 27, evening Free of charge

All participants and registered guests are welcome to the banquet to be held on the evening of August 27 (Wednesday). Please tick the corresponding box of the (blue) Registration Form.

Recreational Tour to Nara, Sunday August 24, all day Free Transportation

The LOC arranges a Sunday tour in Nara on August 24. Some Japanese astronomers will accompany this tour. Nara was the imperial capital of Japan in the 8-th century. There are many famous old temples and shrines in Nara. Free transportation by train between Kyoto and Nara (a round trip) is provided by the LOC. After arriving at Nara, you are free to visit the places you are interested in. Admissions, lunch and bus or taxi fees are to be paid individually. A detailed guide map will be provided. Please tick the corresponding box of the (blue) Registration Form.

ST-1 Science Tour to the Nobeyama Radio Observatory
Saturday August 23 & Sunday August 24 Adults: 12,000 Yen
Children (Age 6-11): 6,000 Yen
Accommodation (4 up to 7 persons in a room) is included in this price

A visit to the Nobeyama Radio Observatory is planned from August 23 (Saturday) to August 24 (Sunday). The observatory belongs to the National Astronomical Observatory and is located in Nagano Prefecture. The Nobeyama 45 meter radio telescope, the Nobeyama Millimeter Array (interferometer with six 10 meter dishes), and the Radio Heliograph are in operation. The tour

is planned to leave Kyoto in the morning by bus. We go through expressways and arrive at the observatory after lunch. After a few hours of science visits, participants can enjoy an outdoor walking in cool atmosphere of highland and an evening beer party. Accommodations are booked near the observatory. They are of the type of youth hostels, a room being shared by 4-7 persons. The tour leaves Nobeyama next morning and comes back to Kyoto in the evening of August 24.

You can get more information on the observatory itself through the WWW. Its URL is:

<http://www.nro.nao.ac.jp/index-e.html>

The fare of tour includes two lunches, one breakfast as well as accommodation. Participants to the Nobeyama tour do not need to keep their hotel room(s) in Kyoto on August 23 (but please wait for confirmation of the trip before canceling your reservation for that night). Minimum: 30 persons, maximum: 90 persons. Please register using the (yellow) Application Form.

PROGRAMME FOR ACCOMPANYING PERSONS & OPTIONAL TOURS

Walking Tours in Kyoto, August 21, 22, 25 & 26, half day Individual payment

Half day walking visits in various spots (temples, shrines, gardens, museums and shopping centers) in Kyoto are planned for accompanying persons on August 21, 22, 25, and 26. Japanese volunteers will post relevant information on these walking tours in the entrance hall of Kyoto

International Conference Hall. Admissions and transportation (bus, subway, and taxi) fees are to be paid individually. No pre-registration for these tours is required.

Optional Tours

The following tours are handled by the Japanese Travel Bureau. Please use the (yellow) Application Form to register.

OP-1 Kyoto morning, Daily 8:55 - around 12:40 Adults: 5,000 Yen
Children (Age 6-11): 4,000 Yen

Tour visits Nijo Castle, once used as the Tokugawa Shogun's accommodations; Golden Pavilion, a gilded structure, originally an Ashikaga Shogun's villa; Kyoto Imperial Palace, a former residence of Emperors (on Sat. and Sun.: visit Higashi Honganji Temple instead); and Kyoto Handicraft Center to watch demonstrations by skilled craftspersons. Tour disbands on arrival at Kyoto Handicraft Center. Sending services to major hotels in Kyoto are offered by the Handicraft Center.

OP-2 Kyoto 1 Day, Daily 8:55 - around 17:30 Adults: 10,800 Yen
Children (Age 6-11): 8,700 Yen

The same as OP-1 for the morning. Lunch at Kyoto Handicraft Center. Tour visits Vermilion Heian Shrine, a magnificent structure strongly influenced by Chinese architecture; Sanjusangendo Hall and its 1,001 impressive statues of Buddha; and Kiyomizu Temple to enjoy a sweeping view of the city from its lofty terrace.

OP-3 Nara afternoon, Daily 13:40 - around 18:40 Adults: 5,900 Yen
Children (Age 6-11): 4,900 Yen

Tour visits Todaiji Temple, the world's largest wooden building that houses the 50-foot-high Great Buddha; Peaceful Deer Park, where many tame deer roam the grounds; Vermilion-hued Kasuga Shrine, with its thousands of lanterns. Countryside drive, an informative junket to Nara and return.

OP-4 Kyoto & Nara 1 Day, Daily 8:55 - around 18:40 Adults: 11,700 Yen
 Children (Age 6-11): 9,400 Yen

The same as OP-1 for the morning. Lunch at Kyoto Handicraft Center. The same as OP-3 for the afternoon.

OP-5 Rapid Shooting, Daily 13:40 - around 18:00 Adults: 9,800 Yen
 Children (Age 6-11): 8,500 Yen

Transfer to JR Kyoto Station and boarding a local train for Kameoka. Then, an exciting eight-mile, ninety-minute trip downstream, shooting the Hozu Rapids aboard a flat-bottomed boat from Kameoka to scenic Arashiyama. Return by local train to Kyoto. Non-reserved seats on local trains. This tour will not operate if the total number of participants does not reach 2.

OP-6 Special Night
 Tuesday, Thursday & Saturday, 18:40 - around 22:00 10,000 Yen

Being a guest at Tea Ceremony in the Japanese inn "Yoshiima". Supper at the Japanese inn "Yoshiima". Enjoy various kinds of Japanese traditional arts at Gion Corner.

This tour will not operate if the total number of participants does not reach 2.

Tour Conditions

Tour fare include (1) Sightseeing and transfers as shown in the itineraries, by motorcoach and/or sightseeing boats on a seat-sharing basis, plus admission fees to temples, shrines, etc.; (2) Railways: tourist-class reserved seats; (3) Meals as specified in each itinerary; (4) English-speaking guide.

Payment, confirmation, cancellation & refunds

Payment

Participants wishing to reserve hotel accommodations and tours should complete the (yellow) Application Form and return it to reach JTB no later than June 30, 1997. Note that the return addresses are different between blue and yellow forms. Application should be accompanied by a remittance covering the hotel deposit of 20,000 Yen and/or total tour fare and a handling charge of 500 Yen due JTB. No reservation will be confirmed in the absence of this payment. Personal checks are NOT accepted. All payment must be in Japanese Yen. The hotel deposit will be credited to your bill when checking out. Payment should be in the form of:

- A bank transfer to the Japan Travel Bureau, Inc. (Ref: CD100993-543) account at the Bank of Tokyo Mitsubishi, Shin-Marunouchi Branch 1-4-2, Marunouchi, Chiyoda-ku, Tokyo 100, Japan (Account number: 1025740):
- A bank check payable to the order of the Japan Travel Bureau, Inc.:
- The following credit cards are acceptable:

MasterCard	VISA
Diners Club	AMEX

Confirmations

JTB will confirm your reservations within 2 weeks after receipt of your accommodation form and payment for requests received at the latest by July 15, 1997. If confirmation is not received six weeks after mailing the form and payment, please contact JTB by e-mail: <jtbiau@mx.meshnet.or.jp> or facsimile: 81 3 5620 9499.

Cancellation & Refunds

In the event of cancellation, written notification should be sent to JTB. The following cancellation fees will be deducted before refunding.

Hotels

Up to 9 days before the first night of stay 2,000 Yen
 2 to 8 days before 20% of daily room charge (minimum 2,000 Yen)
 Less than 2 days before, or no notice 100% of daily room charge

Tours

Up to 21 prior to departure day 2,000 Yen
 20 - 8 days 10% of tour fare (minimum 2,000 Yen)
 7 - 1 days 20% of tour fare (minimum 2,000 Yen)
 Prior to starting time, or no notice 100% of tour fare

+ HOW TO REDUCE YOUR TRAVEL EXPENSES

A common thought is that the cost of living in Japan is very high. The following suggestions may reduce this cost to a reasonable level.

LOW PRICE ACCOMMODATIONS

WESTERN STYLE HOTEL

If you stick to a western style hotel, we recommend you to choose one from the list of hotels in this issue. Among them youth hostels are the least expensive. We remind you that reservation of accommodation among this list is handled by JTB.

JAPANESE STYLE

Japanese style hotels: Ryo-kan (or Min-shuku)

These hotels are less expensive than Western style hotels. There are at least 7 suitable Ryo-kans in Kyoto, their prices ranging from 3,300 to 4,500 Yen/night (meals not included). Most of them have only Japanese style public bath. men and women being separate.

Dormitory style lodgings

There are at least 5 of such suitable lodgings in Kyoto, their prices ranging from 1,500 to 3,000 Yen/night.

Buddhist temple lodging: Shukubo

There are at least 3 of such suitable lodgings in Kyoto. Your religion is of no concern if you accept the Buddhist atmosphere. Their prices range from 3,000 to 3,500 Yen/night (meals not included).

If you want to know the contact addresses of these three types of low cost accommodations, please access our

[LOC WWW page](#).

or e-mail request to:

iau97-info@tenmon.or.jp (with the word "help" in subject field).

If you cannot access electronically, contact one of the following addresses for information. In some cases, you are expected to return a small contribution covering the postal fee.

For Ryo-kans and Dormitory style lodgings, please send a request for the Directory of Welcome Inns - Kyoto Area to the following office:

Welcome Inn Reservation Center Phone: 81 3 3211 4201
 c/o International Tourism Center of Japan Facsimile: 81 3 3211 9009
 9th floor Tokyo Kotsu Kaikan Building
 2-10-1 Yurakucho, Chiyoda-ku, Tokyo 100, Japan

For Shukubo accommodation, please send a request for the List of Buddhist temple lodgings in Kyoto city to the following office:

Tourist Information Center Phone: 81 75 371 0480
 Kyoto Tower Building 1st floor Facsimile: 81 75 343 6847
 Karasuma-Shichijo sagaru
 Shimogyo-ku, Kyoto 600, Japan

Please note that whereas the LOC provides the contact addresses, it will NOT take care of any reservation for these accommodations. NEITHER will JTB.

+ SHARING HOTEL ROOMS IN KYOTO

While historic Kyoto will provide a very pleasant environment for the XXIIIrd General Assembly, accommodation is not inexpensive in this city. A way to reduce costs is sharing hotel rooms, since twin rooms are significantly less expensive in Japan than two single rooms. We expect that in the great majority of cases participants who wish to share a room will make such arrangements directly with colleagues from the same institutions or the same country. However, if individual members, who wish to share a hotel room in Kyoto have problems finding a colleague with the same intention, they are welcome to contact the IAU Secretariat (Attn. Ms. Julie Saucedo) providing their address and all relevant information. The Secretariat will then provide a list of other colleagues interested in sharing a room.

DAILY LIFE - LOW PRICE FOOD

The easiest way is to make Japanese friends, particularly students living in Kyoto, during your stay. The reception organized Monday August 18, evening is one of the best chances to meet them. They know well about inexpensive daily life in Kyoto.

STUDENT LIFE STYLE

One of the inexpensive ways to eat in Japan consists in buying a lunch box sold at a Kombini (mini-markets such as Seven-Eleven or Lawson). A pack of sandwiches costs about 150 250 Yen, a rice ball (Onigiri) about 100-120 Yen, a pre-cooked noodle in a plastic cup (Cup Ra-a-men) about 200 Yen, and Japanese style lunch box (Bento) about 500 Yen.

TRADITIONAL JAPANESE LIFE STYLE

Another way is to go and eat out downtown, in a low-price restaurant (Shokudo-o), mainly located near universities. Most of such restaurants display imitation dishes with their prices in the showcase. Some of them offer only noodles (Udon, Soba), some offer only rice bowl with meat (Katsudon, Gyudon), some offer only Japanized-western meals such as curry & rice (Kare-i Ra-isu), hamburger steak with rice (Hamba-a-gu Te-i-shoku), and fried pork with rice (Tonkatsu Te-i-shoku), etc. Most of the dishes are a complete set. The average price is 700 1,000 Yen.

WESTERN LIFE STYLE

Cheap western style restaurants, called family-restaurants, are located in the suburbs. They offer western meals in the Japanese style. The average price is 900-1,500 Yen.

FAST FOOD RESTAURANTS

American style fast food restaurants, such as McDonald's and Lotteria, may also be found in the city. Take out food and drink can be bought from these restaurants. The average price is about 300-600 Yen.

The LOC will hand you a list and a map of low-priced restaurants and mini-markets around Kyoto International Conference Hall at the time of the meeting.

GENERAL INFORMATION ON FACILITIES

VENUE OF THE GENERAL ASSEMBLY

The XXIIIrd General Assembly of the IAU is to be held in "Kyoto Kokusai Kaikan (Kyo-o-t- Kokusa-i Ka-i-kan)", which means Kyoto International Conference Hall (KICH) in Japanese, Takaraga-ike, Sakyo-ku, Kyoto. Full details of the facilities and services available to participants of the XXIIIrd IAU General Assembly will be given in the final programme.

REGISTRATION DESK & GENERAL INFORMATION

The registration desk will be open from Sunday afternoon, August 17 through Friday afternoon, 29 August. It will be closed on Saturday afternoon August 23 and on Sunday August 24. All participants, including those who already registered by mail, e-mail or WWW, must first report to the registration desk and collect their registration package containing the final program, badges, the Abstract Book, etc. Badges will be required for entering the Conference Hall and for all General Assembly meetings and events.

TRAVEL DESK

A desk for general tourist information and travel assistance will be organized by the official travel agent, the Japan Travel Bureau, Inc. (JTB).

+ BANKING & CURRENCY EXCHANGE FACILITIES

Major shops accept VISA, Mastercard, Amex & JCB credit cards. Some banks have automatic teller machines (ATM) for most international credit cards. Please refer carefully in detail to your credit card instructions before travelling.

Immediate exchange of most of the major currencies and traveller's checks (including Japanese Yen travellers checks) to Japanese Yen can be made in some banks and post offices. Limited amounts of foreign currencies and traveller's checks can also be exchanged at the financial office (Ke-i-rika) of Kyoto International Conference Hall. The exchange rates are the same in banks and post offices.

The following currencies and corresponding traveller's checks can be exchanged to Japanese Yen in some banks and post offices in Kyoto:

Australian Dollar, Austrian Schilling, Belgian Franc, Canadian Dollar, Danish Krone, Finnish Markka, French Franc, German Mark, Hong Kong Dollar, Italian Lira, Dutch Guilder, New Zealand Dollar, Norwegian Krone, Portuguese Escudo, Singapore Dollar, Spanish Peseta, Swedish Krone, Swiss Franc, Thai Baht, Pound Sterling, US Dollar.

Downtown banks are open from Monday through Friday from 9:00 to 15:00. They are closed on Saturday and Sunday. At Kansai International Airport (KIX), the Bank of Tokyo Mitsubishi and other major banks are open from 6:00-22:30, 7 days a week whereas they are open from 6:00-23:00, 7 days a week at New Tokyo International Airport (Narita airport, NRT).

Banking services of post offices are open from Monday through Friday from 9:00 to 16:00, whereas the Kyoto-chuo post office is open from Monday through Friday from 9:00 to 18:00. All the banking services of post offices are closed on Saturday and Sunday.

MAIL BOXES

Each participant will have his/her own mailbox in the Kyoto International Conference Hall.

+ MAIL, PHONE, FACSIMILE & ELECTRONIC MAIL

The postal address of participants during the XXIIIrd General Assembly will be

IAU XXIIIrd General Assembly
Kyoto International Conference Hall
Takaragaike, Sakyo-ku, Kyoto 606 Japan

Note that this address is only valid during the General Assembly.

There are some public phone boxes at the Kyoto International Conference Hall.

Facsimile service is available at Kyoto International Conference Hall with a charge. Participants to the General Assembly may receive urgent messages, using the (LOC) facsimile number at the Kyoto International Conference Hall:

Facsimile (LOC): 81 75 705 1250

Note that this number is valid only during the General Assembly.

A limited number of terminals will be available to participants to send/receive e-mail messages.

PHOTOCOPY

Photocopying machines will be available at the Kyoto International Conference Hall. Participants will be charged for using this service.

DAILY NEWSPAPER

The General Assembly Newspaper will appear daily at the time of the Assembly. It will carry articles of general interest to the astronomical community, reports on scientific and social programme of the days to come. The editors of the daily Newspaper are Drs Jun Jugaku and G. Seth Shostak.

COFFEE & TEA BREAKS

Cold green tea, cold water, and coffee will be served at the Kyoto International Conference Hall.

LUNCH FACILITIES

The Kyoto International Conference Hall hosts a restaurant, named "Grill", and a cafe. Prices are about 700-1,000 Yen per dish. There are also some small restaurants and coffee shops within 1 km of the Conference Hall. If you want to reduce your expenses, please see also the section of "Daily Life - Low Price Food" above.

MEDICAL AID

First Aid is available in the Kyoto International Conference Hall.

CHILD CARE

Please inquire at your hotel. Child care is available at Miyako Hotel and Kyoto ANA Hotel. There is no child care service available at the Kyoto International Conference Hall.

+ EXHIBITIONS

Scientific and technical materials of interest to the participants will be exhibited during the General Assembly. Many institutions, such as observatories and space agencies, will present mock-ups, observational results and related publications. Many companies, such as optical firms, computer companies and publishers, will exhibit their products as well.

The exhibition fee is 200,000 Yen per unit booth (1.8 m x 1.8 m) or 40,000 Yen per square meter. For the non-profit exhibitors such as observatories and agencies, the fee is 50 % off. Deadline for registration is February 28, 1997.

If you plan to register to exhibit during the General Assembly, please contact the following address:

IAU LOC Exhibitions Phone: 81 52 789 2918
c/o Dr. Hideyo Kunieda Facsimile: 81 52 789 2919
Department of Physics, Nagoya University E-mail:
kunieda@satio.phys.nagoya-u.ac.jp
Furo-cho, Chikusa, Nagoya 464 Japan

SCIENTIFIC PRESENTATIONS

FACILITIES FOR ORAL PRESENTATIONS

Overhead and slide projectors will be available in all the rooms for oral presentation. Microphones will be available in large rooms. Video equipment will not be available in the lecture halls. However, a video corner will be set up in the poster room (see below).

VIDEO PRESENTATIONS

A limited number of video monitors will be available for poster presentations. They will be set up at a corner of the poster room. Those who want to use them are requested to add a line "(Video presentation planned)" at the end of the abstract as well as to attach a memo in submitting poster abstracts. Please be sure to include your e-mail address in the abstract for further contacts. Only videos recorded on normal-sized VHS (not S-VHS) cassettes in NTSC mode can be displayed. The presentation time will be assigned to one of the breaks. Detailed instructions will be given later.

POSTERS

Only posters prepared by actual participants of the General Assembly and related to one of the scientific events or related to business sessions of Commissions will be accepted. A room for 600 poster presentations is reserved. The present plan is to share one poster space by 4 papers in turn. Hence a total number of 2,400 poster papers can be accommodated. Simple arithmetics results, on average, in 200 papers for a Symposium and 50 for a Joint Discussion of one-day length. If this is not enough, then we can offer more space by changing posters more frequently. Each poster will be assigned a number referring to the poster board in the Congress building. The poster board for a paper will be 90 cm x 90 cm.

SELECTION OF POSTERS & PUBLICATION OF POSTER ABSTRACTS

Selection of poster papers will be made by the Scientific Organizing Committees (SOCs) of Symposia and Joint Discussions, on the basis of Poster

Abstracts received before February 15, 1997 at the SOC contact address given in the Information Bulletin 78. Poster papers accepted by an SOC and communicated to the Local Organizing Committee will be accepted for display and registered by the LOC when at least one of the authors has registered and paid his/her registration fee before June 15, 1997. Only the registered poster papers will be included in the Abstracts Book and the WWW page and will be allocated a poster board. Hence, authors of poster papers have to register no later than by June 15, 1997.

Copies of the Abstract Book containing the Abstracts of all posters accepted by Symposium and Joint Discussion SOCs, and a floor plan of the poster area, will be distributed at the Assembly. For publication in the Abstract Book, poster abstracts must be prepared following the instructions given below.

PREPARATION OF ABSTRACTS

Each page of the Abstract Book will contain four abstracts. The page size is A4: 21.0 cm x 29.7 cm. The actual size for each abstract in print is 7.8 cm wide and 10.6 cm high. Please send the abstract to the SOCs by E-mail in the following two forms:

(1) a LaTeX file following a template available on the WWW page or by E-mail from LOC,

and

(2) a plain ASCII text for inclusion in the WWW page.

You are requested to send BOTH the above files by e-mail. If e-mail is not available, however, please send the SOC a camera-ready copy being 11 cm wide and 15 cm high, which will be reduced by 70.7 % before printing. Any typeface, font sizes, and line spacings will be accepted, but oversized manuscripts will be shortened for printing.

The manuscript must include a title, author name(s), institute(s), e-mail address(es), and main text. Each abstract must be shorter than 200 words.

+ SMALL LEXICON ON JAPANESE WORDS USED

The next issue of the Information Bulletin will contain the same list, along with corresponding Chinese characters:

ACRONYMS

JR Japan Railways, the largest railway companies covering the whole of Japan (successors of the Japan National Railway). They are JR Hokkaido, JR East, JR Tokai, JR West, JR Shikoku, JR Kyushu, and JR Freight. JR East operates lines around Tokyo. JR West operates lines around Kyoto and Osaka. JR Tokai operates Shinkansen between Tokyo, Kyoto and Osaka.

KICH Kyoto International Conference Hall, the venue of the XXIIIrd Kokusai-Kaikan IAU General Assembly.

Kokusa-i-Ka-i-kan Address: Takaraga-ike, Sakyo-ku, Kyoto 606

KIX The international airport abbreviation code for Kansai International Kansai Airport, the new international airport close to Kyoto.

Kansa-i-ku-u-ko-o Built on a man-made island.

NRT The international airport abbreviation code for New Tokyo International Airport, called also "Narita Airport". The largest international airport near Tokyo.

TRANSPORTATION

Awaji A railway station crossing Hankyu Kyoto line and Osaka city subway.

Haneda Tokyo Airport. For domestic flights and China Air.

Hankyu One of railway companies operating lines connecting
Hankyu-u between Kyoto, Osaka and Kobe.
Also operating a bus network around its railways.

Haruka Limited express trains connecting KIX and Kyoto, which require a
supplement charge. Operated by JR.

Itami Osaka Airport. Only for domestic flights.

JR Namba A railway terminal of JR line in Osaka. One of the destinations of
trains from KIX to Osaka.

Kaisatsu A gateway to/from platforms at railway stations where
Ka-i-satsu your ticket is checked or collected.

Kaisuken A multi-fare ticket which costs roughly 10 % less.
Ka-i-su-u-ken

Kansaikuko The same as KIX but in Japanese.
Kansa-i-ku-u-ko-o

Kanku-Kaisoku Rapid trains connecting KIX and Osaka, which do not require
any supplement charge.
Kanku-u-ka-i-soku Operated by JR.

Kanku-Tokkai Wing Special rapid trains connecting KIX and Osaka,
Kanku-u-tokka-i which require no supplement charge.
Operated by JR.

Karasuma Street in Kyoto.
Also the name of a station on the Hankyu Kyoto line which is close to the
Shijo station of Kyoto Subway.

Kawaramachi Street in Kyoto. Also the name of railway terminal of the Hankyu
Kyoto line.

Keihan One of the railway companies operating lines connecting
Ke-i-han Kyoto and Osaka.
Also operating a bus network around its railways.

Kintetsu One of the railway companies operating lines connecting Kyoto,
Nara, Osaka and Nagoya.
Also operating a bus network around its railways.

Kokusai-Kaikan The same as KICH but in Japanese.
Kokusa-i-Ka-i-kan

Kusatsu A city near Kyoto.
One of the destinations of the trains from Osaka to Kyoto.

Kyobashi A railway station of JR Osaka Loop line.
One of the destinations of trains from KIX to Osaka.

Kyoto Kotsu One of the transporter companies operating a bus network
Ko-o-tsu-u covering Kyoto.

Maibara A town near Kyoto. One of the destinations of trains from
Ma-i-bara Osaka to Kyoto.

Nagahama A city near Kyoto. One of the destinations of trains from

Osaka to Kyoto.

- Namba A railway terminal of Nankai line in Osaka.
One of the destinations of trains from KIX to Osaka.
- Nankai One of the railway companies operating lines connecting
Nanka-i KIX and Osaka.
Also operating a bus network around its railways.
- Omi-shiozu A railway station near Kyoto.
O-omi-shiozu One of the destinations of trains from Osaka to Kyoto.
- Seiriken A code tag to account your mileage on bus in the case
Se-i-riken of a bus line beyond the central zone.
- Shi bus The largest bus network in Kyoto.
Operated by the Kyoto Municipal Transportation Bureau.
- Shijo Street in Kyoto.
Also the name of station of Kyoto Subway which is close to Karasuma station
of Hankyu Kyoto line.
- Shin-Kaisoku Special rapid trains connecting Osaka and Kyoto,
Shin-Ka-i-soku which require no supplement charge.
Operated by JR.
- Shinkansen The name of lines and trains with high speed around 300 km/h
connecting Tokyo, Nagoya, Kyoto and Osaka. Operated by JR.
- Tengachaya A railway stations crossing Nankai line and Osaka city Subway.
- Tennoji A railway station of a JR line in Osaka.
Ten-no-o-ji One of the destinations of trains from KIX to Osaka.
- Yasu A town near Kyoto.
One of the destinations of trains from Osaka to Kyoto.

ACCOMMODATION

- Min-shuku Japanese style lodgings operated by individuals.
- Ryo-kan Japanese style hotels.
- Shukubo Buddhist temple lodgings.
Shukubo-o

DAILY LIFE - LOW PRICE FOOD

- Bento A box lunch.
Bento-o Usually contains rice, vegetables and meat and/or fish.
- Gyudon A rice bowl with beef.
Gyu-u-don
- Hamba-a-gu Te-i-shoku A set menu of Hamburg steak with rice.
- Kare-i Ra-isu curry and rice.
- Katsudon A rice bowl with fried pork.
- Kombini A small sized supermarket like Seven-Eleven,
the origin of this word being Convenience Store.
- Onigiri A ball of steamed rice with small pieces of fish,
salty plum, etc...

