

INTERNATIONAL ASTRONOMICAL UNION

UNION ASTRONOMIQUE INTERNATIONALE

FORTY-EIGHTH MEETING OF THE EXECUTIVE COMMITTEE

GEORGIAN ACADEMY OF SCIENCES, TBILISI

and

ABASTUMANI ASTROPHYSICAL OBSERVATORY

GEORGIA, USSR

Tuesday, 21 July - Saturday, 25 July 1981

P R O C E E D I N G S

The 48th Meeting of the Executive Committee of the International Astronomical Union took place in the Abastumani Astrophysical Observatory of the Georgian Academy of Sciences, Mt Canobili, Georgia, USSR, 22-25 July 1981, with an opening session in the Georgian Academy of Sciences, Tbilisi, on 21 July 1981.

Present were:

|                           |                                   |
|---------------------------|-----------------------------------|
| Professor M.K.V. Bappu    | President                         |
| Dr M.W. Feast             | Vice-President                    |
| Dr D.S. Heeschen          | Vice-President                    |
| Academician E.K. Kharadze | Vice-President                    |
| Professor R. Wilson       | Vice-President                    |
| Professor P.A. Wayman     | General Secretary                 |
| Dr R.M. West              | Assistant General Secretary       |
| Professor E.A. Müller     | Adviser, Former General Secretary |
| Professor A. Blaauw       | Adviser, Former President         |

in attendance:

|                |           |
|----------------|-----------|
| Mrs B. Manning | Secretary |
| Ms P. Smiley   | Typist    |

Vice-President L. Kresak was unable to attend on medical advice. Apologies for absence were received from Vice-President S. van den Bergh.

N.B. The report below has been prepared in the order of the Agenda items. Documents of the meeting, including those circulated prior to the meeting, will be available in the Union files for further reference. Numbered documents were circulated to EC members at the beginning of the meeting; other numbered documents were not fully distributed.

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#### VI CLOSING BY THE PRESIDENT

I OPENING BY THE PRESIDENT

The President, Professor M.K.V. Bappu, opened the 48th Meeting of the Executive Committee at 10.00 on 21 July 1981 at the Georgian Academy of Sciences in Tbilisi, welcoming those present and expressing thanks to Professor Kharadze for the invitation to hold the Meeting in Georgia and for the hospitable arrangements made in respect of accomodation, travel and entertainment of the visitors.

The President noted the absence of two Vice-Presidents, that of S. van den Bergh, who had an observing schedule, and L. Kresak, who was prevented from attending by medical advice. The General Secretary was requested to send a letter to L. Kresak expressing sympathy and hope for satisfactory recovery.

Professor Kharadze, in the first session of 22 July, at Mt Canobili, welcomed the Executive Committee to the Abastumani Astrophysical Observatory with the hope that the time spent there would be profitable and interesting. The President acknowledged the very fine impression of generous hospitality that Members had experienced from the moment of arrival in Georgia.

II INTERNAL MATTERS

1. Report of the 47th Meeting of the Executive Committee

The Proceedings of the 47th Meeting of the Executive Committee, held in Amsterdam in August 1980, as circulated in December 1980 to Members and Advisers, were adopted.

2. Approval of the Agenda

The Agenda list, as prepared in detail for the Meeting, was adopted with additional items.

- II Item 7 Add (jj) Commission 22 - Meteor Centre Proposal
- IV Item 21 Add (c) Report of M.R. Kundu
- Item 23 Add (c) UNISPACE, Vienna 9-21 August 1982
- V Item 24 Add Invitation to Executive Committee 1983

3. Special Nominating Committee

The President reported that the Special Nominating Committee had prepared the following nominations for presentation to the 18th General Assembly at its First Meeting in Patras.

- As President: R. Hanbury Brown (Australia)
- As General Secretary: R.M. West (Denmark)
- As Assistant General Secretary: J.-P. Swings (Belgium)
- As Vice-Presidents: M.W Feast (South Africa)
  - L. Kresak (Czechoslovakia)
  - R. Wilson (UK)
  - M. Peimbert (Mexico)
  - R.P. Kraft (USA)
  - V.L. Ginzburg (USSR)
- As Advisers: M.K.V. Bappu (India)
  - P.A. Wayman (Ireland)

In each case except two, firm acceptance of nomination had been received. However, in the cases of R.P. Kraft and V.L. Ginzburg, insufficient time had elapsed for receipt of acceptances and the SNC proposed to nominate D.E. Osterbrock (USA) and Y.S. Yatskiv (USSR) respectively if the acceptances of Kraft or of Ginzburg were not obtained.

4. IAU Secretariat in Paris

The General Secretary reported that the work of the Secretariat had proceeded smoothly during the past year. As well as the work of correspondence and publication, progress had been made in arranging in archive form some 70% of the archival material of the Union.

The premises were proving generally satisfactory, except that the size was minimal and there were some heating problems in cold weather.

There had been a delay in the election of a new Président du Conseil de l'Observatoire de Paris, making it difficult to achieve progress in respect of a written agreement concerning the occupation of the premises. Two problems that would have to be addressed eventually were

- (a) what steps could be taken if the requirement for additional space were to become acute?

- (b) what provisions would be required for eventual termination of the occupancy of premises?

The General Secretary (document 4/1) indicated that since September 1979 basic salaries of the IAU staff had risen at an annual rate near to 15.5% in French Francs. No supplementary payments had been incurred for secretarial assistance during the past twelve months; the work of Miss Callanan in Dublin and Mrs Völk in München had contributed materially to the activities of the General Secretary and the Assistant General Secretary respectively.

The General Secretary expressed appreciation of the services of B. Manning and P. Smiley in Paris and he wished it to be known that their work was exemplary both as regards efficiency and in personal relationships.

#### 5. IAU Statutes and By-laws

The General Secretary made no specific proposal for changes at Patras in the Statutes and By-laws of the Union but three matters were discussed under this item:

- (a) Introduction of post as Treasurer of the IAU

The General Secretary indicated that EC members might wish to consider separating the duties of Treasurer and General Secretary, so that one person could specially provide advice to the Executive Committee on management of IAU financial investments, on approaching international bodies such as UNESCO for financial support, and on the question of possible further sources of income for the Union. The GS considered that there could be justification for separation of these responsibilities from the many other responsibilities of the General Secretary, in order to provide the best possible use of IAU monies.

After discussion, it was decided that, with a continuation of conservative policy on IAU investments, and without embarking on the many questions that would arise in regard to additional sources of income, transfer of some further tasks to the



Assistant General Secretary could enable the General Secretary, with the establishing of the Paris Secretariat now completed, to make continuous contact with international agencies, he being the best person for this work. Therefore no steps towards introducing the separation would be taken at present.

(b) Procedure on IAU Resolutions at General Assemblies

It was decided, on the recommendation of the General Secretary, not to encourage the Resolutions Committee to make use of the procedure of "noting" resolutions of Commissions in its Report to the General Assembly. The General Secretary undertook to instruct Presidents concerning procedure on Resolutions so that unsatisfactory resolutions might be eliminated. Use of the term "endorsement" could be considered as a less strong alternative to General Assembly "approval" of Commission Resolutions.

(c) COSPAR Rules for Scientific Meetings

The Assistant General Secretary undertook to consider any implications for the IAU of new COSPAR Rules for Scientific Meetings (Document 5/2) in ensuring co-ordination of meetings held by COSPAR and IAU.

6. Membership of the IAU

(a) Adhering Bodies

The General Secretary reported that 49 countries with 50 Adhering Bodies remained as IAU Members and no country other than Iran was further in arrears than 1980 (see 6/1), a subscription up to 1979 having been received recently from Uruguay. Countries that remained unpaid for 1981 would not be accorded a vote at the 1982 General Assembly.

Cuba and Colombia remained without individual members and the General Secretary was authorised to enquire about such deficiencies as could be readily corrected.

The General Secretary reported that there had been no definite proposals for adherence of new countries, following correspondence with Sri Lanka, Thailand and Kenya, and a change in the adhering body for Turkey was not yet confirmed.

A motion of the Executive Committee, to be taken at the First General Assembly in Patras, would ratify the steps taken by the Executive Committee to implement Chinese membership. With this resolution adopted, Chinese membership would be fully in force.

(b) Names of Adhering Bodies

A list (6/2) had been prepared of the names of member countries in the French and English languages so as to avoid incorrect usage.

(c) Individual Members

The General Secretary reported that 4536 individual names were included in the current IAU Memberlist, as compiled by D. Reidel. This included members from China (Nanjing) and excluded members known to be deceased since the 17th General Assembly.

It was agreed, in response to an enquiry by the Assistant General Secretary, that no special significance need be attached to country names used in describing members of Scientific Organising Committees. International designations (ESC, ESA, CIO, etc) could be used in these cases at the discretion of the AGS. At General Assemblies, participating members were free to indicate under which country they wished to be classified.

(d) Consultants to Commissions

It was agreed that this category of Commission membership is intended to be used for persons who are not IAU members. Commissions are free to consult any IAU member without formality and hence they need not be designated as Consultants.

The customary "3-Commissions" rule is to be maintained, but it is not intended to be a rigorous bar to additional Commission membership.

## 7. Commissions of the IAU

### (a) Proposal for Commission on Biology and Astronomy

The General Secretary gave an outline of correspondence (7/1 to 7/5) on the question of formation of a Commission on Exobiology, or a similar subject.

While it was agreed that IAU would in due course be specially interested in scientific aspects of this subject, rather than interpretation of signals, it was decided that for the present the proposals of Papagiannis to form an IAU Commission under the title "Search for Extra-Terrestrial Life" should be developed during 1981/82. This would not, in the opinion of EC Members, prevent later development of an Inter-Union Commission with IUBS or other ICSU bodies, nor would it conflict with COSPAR interests.

### (b) Commission 5

It was reported (7/6) that the Multilingual Dictionary of J. Kleczek was waiting for preparation of camera-ready manuscript. This project is being supported financially by the IAU.

The Nomenclature Dictionary of F. Spite and others at Observatoire de Paris is being prepared for publication (7/7) by Astronomy and Astrophysics as a special publication. It was queried as to whether a Supplement, without charge to European organisations, is not preferable to a special publication. This project has been adopted as an Executive Committee Project during 1980-82.

### (c) Commission 6 - Report of the Telegram Bureau

The Report of the Central Bureau for Astronomical Telegrams (7/8) as published in Information Bulletin No. 46 was considered. The work of the Bureau is at a high level and IAU support of the Bureau budget is small. It was considered necessary to review the method of registering membership and of levying membership subscriptions.

## (d) Commission 7 - Nutation Working Group

The General Secretary reported that difficulties that had arisen in the adoption of Nutation Theory for ephemerides had been resolved following the IAU Colloquium on Reference Systems in Poland in September 1980. An amending Commission resolution would be prepared for the 1982 General Assembly.

## (e) Commission 10 - Sunspot Index Data Center

The report of A. Kocklenbergh (7/11) indicated that the SIDC was in satisfactory operation at Brussels, Belgium. It was suggested that the address should include "Observatoire Royal" or "Observatoire Royal de Belgique".

## (f) Commission 12 - Solar Eclipse 1983

At the recommendation of J.-L. Leroy, Chairman of the Commission 12 Working Group on solar eclipses, it was agreed that Dr B. Hidayat of Bosscha Observatory be nominated as a National Coordinator of the Solar Eclipse of 11 June 1983, passing across Indonesia.

## (g) Commission 15 - International Halley Watch

56 It was agreed to indicate support of the proposal of B.D. Donn concerning the formation of a co-ordinating group of astronomers, International Halley Watch, concerned with the 1982 return of Comet Halley, observations of Comet Halley at this time, and space science projects in preparation for this return (Document 7/13).

## (h) Commission 16 - Centre de Photographies des Planètes

It was noted that R. Boyer has succeeded A. Dollfus as officer in charge of the Meudon Planet Centre, but A. Dollfus remains as IAU correspondent until 1982. R. Boyer has been specially notified that the financial support by IAU would not be renewed during 1983-85.

## (i) Commission 19/31

A report on the current status of Project MERIT had been published in Information Bulletin No. 46 and several other documents were available. Briefly, the objectives of the Short Campaign had been achieved and preparation of the Main Campaign, now fixed for 1983 September - 1984 October, was beginning. The General Secretary drew attention to late receipt of a letter from the Chairman of Project MERIT, Dr G.A. Wilkins (7/15a), asking for financial support for the 2nd and 3rd MERIT Workshops and for the costs to be incurred by BIH during the Main Campaign.

It was agreed to make no specific allocation to these costs but to recognise that Commission 19 participation in Project MERIT might incur Commission Expenses; also to suggest that MERIT Workshops as a Commission activity would not obtain IAU finance; they might be formulated as IAU Colloquia or be proposed as alternatives to IAU Colloquia.

## (j) Commission 20

Dr B.G. Marsden's Report of the Minor Planet Center for 1980, as published in IB No. 46, was approved (7/16).

The relationship between the Telegram Announcements and the Minor Planet Circulars had been examined, and the names of Minor Planet workers are now adequately indicated in the MPC's in recognition of their work.

## (jj) Commission 22

A proposal from W.G. Elford (7/16a), President of Commission 22, requests financial support for

1. Meteor Data Center, Lund, Sweden  
\$1000 p.a. for 3 years
2. Interchange of Astronomers' fund (Meteor Programme)  
\$1500 p.a. for 5 years 1981-85

Item 1 was accepted for the Budget proposals 1983-85 but Item 2 was rejected on the basis (a) that scientific interchanges are part of normal employment and (b) that Commission 38 travel grants can be applied for with these interchanges in mind.

(k) Commission 27

It was agreed to support the request of Commission 27 for financial assistance to the General Catalogue of Variable Stars (Moscow).

The General Secretary reported that discussions on the mode of transfer of these funds had been held in Moscow prior to travelling to Tbilisi (see Item 9(c) below).

(l) Commission 30

At the request of M. Duflot, President of Commission 30, it was agreed that activities of the Working Group on average radial velocities should continue even though formal continuation had not been arranged at the 17th General Assembly.

(m) Commission 38

The Report of J. Delhaye (7/19) on the expenditure for Commission 38 Travel Grants was approved.

The request for revised funding during 1980-82 budget was received sympathetically but it was felt that the procedures for allocating grants did not sufficiently take advantage of low-cost air fares and applications seemed to be granted in each case where the IAU rules were met (i.e. there seemed little element of competitiveness). The General Secretary was authorised to make a lesser increase than that requested (see item 9(d) below).

(n) Commissions 38 and 46

Future work in education programmes had been examined by a

special meeting in April 1981 with J. Delhaye as Chairman, attended by the General Secretary and by F.B. Wood, S. Ferraz-Mello. D.G. Wentzel had been informed and at the same time his request to the IAU to support the Nairobi School for Young Astronomers in 1982 had been received.

It was the opinion of the special meeting that the IAU should inaugurate a Contract Scheme for Visiting Lecturers with specific sponsoring institutions in "new" countries (7/21). A "unit cost" over 3 years for the IAU was estimated at 18000 - 20000 US\$. The recommendation was that, while international agencies such as UNESCO would be requested to support the project, the IAU should include such a possibility in its 1983-85 draft budget proposals.

After discussion, it was decided to put forward a limited proposal of this nature as part of the budget proposals even though it was agreed that IAU funds might be denied by adhering organisations for these purposes on the basis that educational programmes are otherwise provided for.

(o) Commission 46

The proposal to produce new versions of "Astronomy Education Materials" in 1982, supported by application for ICSU-UNESCO funding, was approved.

(p) Commission 50

The General Secretary indicated that the distribution of "IAU/CIE publication No. 1, 1980", on the diminution of sky illumination, would proceed during 1981 to adhering bodies and important observatories. The original funds provided for Commission 50 are now largely expended (see 9(c) below).

The problem of the Solar Power Satellites, also noted under SCOPE (item 23(a) below), was discussed (7/21a). It was agreed that F.G. Smith, M. Walker and R. Cayrel should

prepare a meeting to provide information on this topic at Patras with the aim of adopting a major resolution at the General Assembly.

(q) WGPSN

The progress and activity of the Working Group (7/22) was approved, including consideration of designation of planetary rings. It was decided to recommend that the example on p.3 of P.M. Millman's Minutes of the Eighth Meeting, para. 16, should be in the form "1981 UIR" rather than "UR1-81" or "1981 UR1" (temporary notation).

The co-option of J.M. Boyce (NASA) to the Working Group as replacement of S.E. Dwornik was approved.

8. General Assemblies

(a) XVIIIth General Assembly, Patras, 17-26 August 1982

The General Secretary reported various aspects of the Patras proposals (8/2). Generally speaking, preparations were well in hand, and a fairly detailed plan of sub-committees and terms of reference for these sub-committees had been recently drawn up. Advantage had been taken of a visit by Miss Madeleine Bergevin (Vice Chairman LOC Montreal 1979) to examine progress in many matters. However, it was disappointing to find that many plans still required to be made more definite and more detailed, especially allocation of space in buildings and closer specification of transport arrangements and other services.

It was agreed that the basis for timing of sessions should be 08:30 - 12:30 and 15:00 - 18:00, with less emphasis on p.m. periods, reserving these as far as possible for material of high scientific interest.

The total Greek Government support of the LOC finances is expected to be around Dr. 9m, or Sfr 360,000. The total income is expected to be near to the level required at Montreal, but allocations are different. Transportation will be a very heavy item, largely to be covered from registration fees, and



it was suggested that reservation of 50 buses each day might be more than is required. The total accommodation situation, though fully stretched, seemed to be adequate for up to 4000 persons in toto. The Cards of Intent total 2100 to date, including all accompanying persons.

The IAU financial assistance to the LOC, confirmed at Sfr 78000, was paid to the extent of Sfr 50520 during 1980. A request by Professor Goudas that the remainder be paid early in 1982 was discussed in the context of allocations being made to Symposia. As only two are to be held in Greece, it was decided that the allocation of Sfr 30000 for these purposes was adequate and that no release of funds from hotel deposits should be requested for this purpose. Part of the sum so released should be used for subsidy of "Reports on Astronomy 1982".

After discussion on the proposal to produce a low-cost edition of Reports on Astronomy 1982, made available to IAU members at Patras, item 10(b) below, it was decided to offer the volume at \$5 on the registration forms as an optional item, in order that the Registration Fee prior to 31 May 1982 be kept at \$100, and to subsidise the remainder of the cost from the IAU funds for the General Assembly.

The Registration Fee would therefore remain at \$100 for Participants and Registered Guests up to 31 May 1982 and increase to \$120 from 1 June 1982. In certain cases of hardship in regard to transfer of currency in advance, the LOC is to be requested to accept advance registration without advance payment.

A joint scheme for nomination of young astronomer grants was agreed with modification. The offer of free accommodation, with meals, plus waiver of registration fee to 250 nominees of Adhering Bodies was gratefully accepted. However, instead of the proposed offer of 250 small travel grants (\$60) from IAU General Assembly funds, it was agreed that Adhering Bodies in

distant countries (S. America, Central America, Africa, India, Australia, Japan, New Zealand, China, etc) could propose young astronomers for the receipt of \$500 travel grants (30 available).

The General Assembly budget thus provided for was adopted as follows:

|   | <u>Sfr</u>          |
|---|---------------------|
| Direct aid to LOC                         | 78000               |
| Travel Grants for Young Astronomers       | 30000               |
| EC and Office expenses                    | 47000               |
| Presidents travel grants                  | 30000               |
| Miscellaneous                             | 10000               |
| Reserve including subsidy of<br>"Reports" | <u>25000</u>        |
|   | <u>TOTAL 220000</u> |

The Contract with Reidel for 1400 copies of paper-back "Reports on Astronomy" at Dfl 31 is expected to total Sfr 39200. The account is to be covered approximately as follows:

|   | <u>Sfr</u>         |
|---|--------------------|
| 1000 copies ordered on registration forms | 10500              |
| 200 copies sold at \$12                   | 5040               |
| Transfer of Hotel Deposit                 | 13000              |
| Drawn on General Assembly Budget          | <u>10660</u>       |
|   | <u>TOTAL 39200</u> |

Further to General Assembly arrangements, it was to be proposed to send to EC members, at the same time as they receive the Preliminary Programme and the Registration Form, a slip explaining the preferred option for their booking arrangements. Also the Patras Travel Agent should be informed that various bodies, including the AAS and LOC's of the Italian colloquia, are proposing to arrange Charter flights to Greece.

) It is proposed to open an account on behalf of the IAU at the Ionian and Popular Bank of Greece, 63 Aghion Andreion, Patras.

(b) XIXth General Assembly

A letter of invitation (8/9) from Dr S.K. Trehan, Chairman of the Indian National Committee for Astronomy, to the IAU to hold the XIXth General Assembly of the IAU in India in 1985 had been received.

While the Executive Committee was pleased to be able to accept this invitation in principle and to anticipate that a formal invitation would be made at the Patras General Assembly, the General Secretary was asked to inform Dr Trehan that financial assurances should now be obtained from the Indian authorities and that a specific proposal for location and premises should be prepared. It was anticipated that the total number attending would be 1000-1200, including Registered Guests. The Chairmen of the National and Local Organising Committees should be agreed so that the problems of handling the General Assembly can be considered.

(c) XXth General Assembly

An enquiry (8/10) of Professor O. Gingerich, Chairman of the US National Committee for the IAU, was received in respect of the intention to invite the IAU to hold the 1988 General Assembly in the United States.

The Executive Committee welcomed this intention and instructed the General Secretary to reply to the effect that such an invitation could indeed be accepted in due course.

9. IAU Finances

(a) Correction to Vérification des Comptes 1979

The General Secretary reported that three corrections had been necessary to the 1979 Accounts produced by R. Bacle in 1980 and that corrected versions had been filed in the records. One error had produced the need for a

"Regularisation 1979" on p.10 of the 1980 Accounts. Following his examination of the level of audit fees, the General Secretary intends to make enquiries as to employment of new auditors.

(b) Vérification des Comptes 1980

The Accounts for 1980, circulated prior to the 48th EC meeting, were approved without alteration. The General Secretary pointed out that the accumulated balance to the credit of the IAU on 31 December 1980 stood at 591 957.90 Swfr, as compared with a figure of 593 658.43 Swfr on 31 December 1977.

The General Secretary's document (9/2) making a comparison of Budget provision with actual expenditure showed that in 1980, even though a substantial sum was provided in advance for the Patras General Assembly, the balance of income and expenditure was, overall, similar to what had been provided for.

The performance of savings accounts was reasonably satisfactory during 1980 because dollar values against Swiss Francs had improved, and this trend was continuing into 1981.

(c) IAU Special Accounts

The figures for special accounts held at the IAU Secretariat were as follows:

(9/3) Total balance available to the Variable Star (Comm 27) Account stands at Sfr 8173.37

Discussion in Moscow suggested that the GS should send in February of each year a statement to the Astronomical Council of the USSR in Moscow who would then indicate purposes for which expenditure could be made, including support of USSR scientists in visits to other countries for IAU meetings, etc.

(9/4) The Commission 50 Account (Site protection) showed a sum remaining of Sfr 1815.58, just under 20% of the original allocation in 1977.

(9/5) Payments under Commission 38 travel grants had considerably exceeded the budget provision and Professor J. Delhaye

requested a supplementary provision of Sfr 15000 during 1980-82.

It was pointed out that there was little evidence of economy in making Commission 38 awards. Every application that met the requirements seemed to be granted and full fares were paid rather than seeking low-cost alternatives.

(d) 1980-82 Budget Provisions

The General Secretary presented (9/2, Table 3) figures indicating estimated expenditure 1981 and hence the residual sums available under each budget head for 1982. Two alterations to Expenditure had already been agreed (item 5 (General Assembly) to be Sfr 220000 and item 4.2 (Comm 46) to be Sfr 4000, aided by an ICSU allocation in 1980).

Any revisions agreed would be taken into account by the GS early in 1982 when preparing the 1982 budget proposal to be approved at the Patras General Assembly but would not otherwise be published. It was agreed to make the following alterations

|             |     |                   |                 |         |
|-------------|-----|-------------------|-----------------|---------|
| Income      | 2   | Publications      | 51000 becomes   | 62000   |
|             | 4   | UNESCO/ICSU       | 47040 becomes   | 66000   |
|             |     | Total Income      | 1146940 becomes | 1176900 |
| Expenditure | 1.1 | Total (Admin)     | 380000 becomes  | 400000  |
|             | 1.2 | Secretarial help  | 30000 becomes   | 5000    |
|             | 1.3 | Furniture         | 20000 becomes   | 6000    |
|             | 4.1 | Comm 38 Grants    | 58000 becomes   | 68000   |
|             | 4.2 | Comm 46           | 3000 becomes    | 4000    |
|             | 4.3 | Total             | 32850 becomes   | 27540   |
|             | 5   | General Assembly  | 140000 becomes  | 220000  |
|             | 6   | Publ (Bulletin)   | 55000 becomes   | 67000   |
|             | 7   | Distribution      | 49000 becomes   | 34000   |
|             | 9   | Officers' Meeting | 21000 becomes   | 15000   |
|             | 15  | Young Ast Schools | 37000 becomes   | 63000   |
|             | 17  | Special Nom Comm  | 5000 becomes    | 0       |
|             |     | TOTAL EXPENDITURE | 1146040 becomes | 1224740 |

It was noted that although Expenditure for Administration in 1980 at Sfr 127254 was lower than any figure between 1976 and 1979 and was similar to expenditure in 1973, salaries at the Secretariat had risen considerably in the past two years and some increase was inevitable during 1981-82.

The budgetted Expenditure would exceed Income in 1980-82 by Sfr 47840, due to the extra payment of Sfr 78000 to the LOC Patras General Assembly. It was hoped that this could be reduced either through various economies or by ICSU-UNESCO support of the Kenya Young Astronomers' School, which was urgently requested by the President of Commission 46 (9/6).

(e) 1983-85 Budget Estimates

IAU procedures require that a Draft Budget proposal be prepared four months in advance of each General Assembly for consideration by Adhering Bodies.

After discussion of each item in detail, the following Draft Budget Estimate 1983-85 was approved by the Executive Committee

IAU DRAFT BUDGET ESTIMATE 1983-85

Unit of Contribution: Swfr 1760

Unit: Swiss francs

INCOME 1983 - 85

|                  |                      |
|------------------|----------------------|
| 1. Contributions | 1188000 <sup>1</sup> |
| 2. Publications  | 51000 <sup>2</sup>   |
| 3. Interest      | 125000 <sup>3</sup>  |
| 4. UNESCO/ICSU   | 68000 <sup>4</sup>   |
| Total Income     | 1432000              |

EXPENDITURE

|                               |                    |
|-------------------------------|--------------------|
| 1.1 Administration            | 500000             |
| 1.2 Secretarial Help          | 10000 <sup>5</sup> |
| 2 ICSU Contribution           | 29700 <sup>6</sup> |
| 3 Commission expenses         | 15000              |
| 4.1 Comm 38 Grants            | 58000 <sup>7</sup> |
| 4.2 Comm 46                   | 40000 <sup>8</sup> |
| 4.3.1 Telegram Bureau         | 10000              |
| 4.3.2 Minor Planet Centre     | 10000              |
| 4.3.4 Variable Star Catalogue | 10000              |

|     |                                   |                      |
|-----|-----------------------------------|----------------------|
| 4.3 | Total                             | 30000 <sup>9</sup>   |
| 5   | General Assembly                  | 200000               |
| 6   | Publications<br>(Bulletin)        | 60000                |
| 7   | Distribution of<br>Publications   | 20000 <sup>10</sup>  |
| 8   | EC Meetings                       | 70000                |
| 9   | Officers' Meetings                | 20000                |
| 10  | Symposia & Colloquia              | 225000 <sup>11</sup> |
| 11  | Inter-Union Commissions           | 40000 <sup>12</sup>  |
| 12  | Projects of the EC                | 14000                |
| 13  | Representation                    | 30000                |
| 14  | Bank Charges                      | 1000                 |
| 15  | Young Ast Schools                 | 36000 <sup>13</sup>  |
| 16  | Regional Astronomy Meetings       | 30000 <sup>14</sup>  |
| 17  | Special Nominating Committee      | 5000                 |
|     | Total Expenditure                 | 1433700              |
|     | Excess of Expenditure over Income | 1700 <sup>15</sup>   |

Notes for explanation:

1. Unit of contribution Sfr 1760 represents 20% increase on the current figure, unchanged since 1976, or just over 3% p.a. It is hoped that it may be possible to keep this proposed unit unchanged for a further period. Total number of units = 225 p.a.
2. The revised Contract for IAU Publications will diminish slightly the royalty income to the IAU.
3. Increased interest received should exceed Sfr 40000 p.a. and in this proposed Budget such interest is regarded as Income, as in former Budgets. In practice, interest on savings has always remained in the Reserves of the IAU but during the 1983-85 period it may be necessary to draw on this sum by transfer to current accounts.
4. An amount similar to that expected in 1980-82 is allocated as UNESCO-ICSU income.
5. Secretarial help may be required outside Paris. Such payments have not been required up to the present time.

6. The ICSU Contribution is strictly 2.5% of the received National Contributions.
7. It is proposed that the Commission 38 Travel Grants be kept to the original level planned for 1980-82 by making applications competitive.
8. It is proposed that the amount allowed shall be sufficient for 1 unit of expenditure under the proposed travelling lecturer scheme for "new" countries as a pilot scheme. It is possible that this item may be covered by UNESCO funds as a pilot scheme to the 1984-89 Medium Term Plan.
9. Item 4.3 increases the amounts provided for three services each of which is regarded as an essential component of IAU activities. The Planetary and Lunar Centres at Neudon are no longer supported, according to Executive Committee decision in 1978 (EC 44).
10. The cost of distribution of IAU publications to EC members and to institutions in developing countries is to be lessened by using the paper-bound editions where these are available.
11. The scientific activity of Symposia and Colloquia, including co-sponsored symposia, is to be strengthened since this activity represents benefit to many IAU members.
12. An increase for Inter-Union Commissions includes an undetermined subvention to the FAGS Council (see Agenda item 22 below).
13. This item is to be kept to a minimum allocation for two Schools. It may be augmented by UNESCO-ICSU applications in excess of the sums anticipated.
14. Five Regional Astronomy Meetings at the current level of support (Sfr 6000) are provided for.
15. A small excess of expenditure over income, plus use of interest on savings, represents drawing on reserves of the Union to a small extent. This may be offset by additional grants or by non-expenditure on some items.



The Committee was aware that some countries may have difficulty in agreeing to an increased unit of contribution. The General Secretary had been informed at the Astronomical Council in Moscow by Professor Mustel that USSR contributions to international bodies such as IAU could not be increased; this was confirmed by Professor Kharadze. Even so, the Executive Committee was of the opinion that the above levels of expenditure do not represent excessive increases. Administration, at about 34.5% of total expenditure, has been kept from increasing inordinately; it now has to include charges that were previously among those borne by the host institution, and it has to cover travel costs for the General Secretary on a regular basis.

Increases in countries' categories of contribution were not considered, but it was noted and agreed that USSR, in category IV, lying below Japan and Canada, ought properly to compare with France, the German Federal Republic or the United Kingdom, all of which adhere in Category VI.

Some expenditures, notably 4.2 and 11, remain to be finalised in accord with decisions to be made at the Patras General Assembly.

The possibility of purchasing Word Processing equipment for the IAU Secretariat was briefly discussed. It was decided not to include this item in the 1983-85 Budget but to assess the situation during 1982 when the impact of the increase in the unit of contribution was known. The amount required would be around Sfr 40000 and it could be justified in terms of potential future savings in Administrative Costs; nevertheless the respective benefits from the alternatives available were not sufficiently clear at this time.

(f) IAU Savings Investment Changes

The General Secretary reported that some changes (9/9, 9/10, 9/10a) had been made in June 1981 to the IAU Investment accounts. Advantage was to be taken of higher interest rates available in guilders and Swiss francs on 6-month or 12-month term deposits and the Paris office of Merrill Lynch was approached concerning dollar funds.

These changes were approved, being regarded as conservative and wholly in accord with normal IAU policy on investments.

## (g) IAU Future Financial Resources

The General Secretary drew attention to his estimate to ICSU (9/11) of Trends in Income and Expenditure 1967-1988.

It was anticipated that if expansion of IAU activities towards developing countries were to be undertaken, substantial alternative sources of income would be required. However the implications of attracting such sources would have to be carefully examined.

The view of adhering bodies towards IAU finances and their use could be that money is provided each year for specific activities and the IAU should neither build up financial reserves nor extend its activities into non-member countries.

## 10. IAU Publications

## (a) ICSU Publishing House Proposal

The ICSU document setting out proposals for an ICSU Publishing House (10/i) was examined. It was not regarded as an immediate possibility for the IAU to transfer its publications in this way but if well-handled it could be important for the future.

## (b) IAU Transactions

It was reported that IAU Transactions XVIIIB was published in 1980.

In regard to Reports on Astronomy 1982, it was agreed that, at their best, these Reports could be useful review material, although in some cases the Reports fell short of the ideal. "Annual Reviews" were much more in demand than the IAU Reports. It was decided that Presidents should continue producing such Reports and that the provision of a cheap edition "in the hand" at Patras could act as a stimulus to future use and improvement.

The purpose of producing a cheap edition at Patras was

(i) to give Commission Reports greater circulation among participants

(ii) to provide a readily-available volume representing the

scientific activity of the IAU prior to the General Assembly (iii) to encourage a raising of the standard of Presidents' reports in future volumes of Transactions A.

The General Secretary explained the offer of March 4 1981 (10/2) by D. Reidel Publishing Company to produce 1400 copies at Dfl 31 each delivered in Patras. One consequence is that the page size, at 17.5 x 24.5 cm, will be very slightly smaller than the present page size and this would be so for the full bound ("library") edition as well. The title of the volume would be

"Reports on Astronomy 1982  
18th General Assembly of the IAU  
Patras, Greece"

and the introductory matter of Transactions Vol XVIII A, to be produced as a single volume, would not be used.

The General Secretary was authorized to proceed with the order with Reidel, the estimated revenue being as given under 9(a) above.

(c) Highlights of Astronomy

The contents of Volume 6 of Highlights of Astronomy would be the responsibility of the incoming General Secretary and would include Invited Discourses, Joint Discussion Proceedings, and selected Joint Commission scientific meetings.

A request by G. Herzberg to have his 1979 Invited Discourse reproduced in the Journal of the Spectroscopical Society of Japan was accepted, presuming that due acknowledgement to the IAU publication would be made.

(d) IAU Symposia Volumes

The Assistant General Secretary reported that satisfactory progress had been made with publication of IAU Symposia. (document 10/5), four volumes (Symposia 93-96 inclusive) having appeared during the year.

## (e) IAU Information Bulletin

Preparation and distribution of the IAU Information Bulletin in January and June 1981 had been satisfactory. Issues have included some typed material at a greater reduction factor than usual giving 20% increase in content. The appearance was perfectly satisfactory. Possibility of using the larger size of c.r. sheets could be investigated.

## (f) IAU Colloquium Volumes

IAU Colloquia up to No 59 have been published and a set of IAU Colloquium volumes has been collected, with very few omissions, in the IAU Secretariat. The Secretary reported a good response to her requests and the librarian at Meudon had expressed satisfaction that a reference set would be available in order to respond to queries.

## (g) Index of IAU Publications

The Secretary reported that the old index, going back to the beginning of IAU publications, is now thoroughly out of date and a revised index, including only those volumes that are still available or still of active interest, was in preparation and would be ready for distribution during 1982.

## 11. IAU Contract for Publications 1982-85

The Assistant General Secretary reported on the Call for Tenders and the response (documents 11/0 to 11/3 plus Draft Memorandum of Agreement, 11/4). All the tenders were carefully examined and at least three (Reidel, CUP, Sky Publishing Corporation) were of interest to the IAU. CUP proposed, as an alternative to the specified Contract, reforming IAU publications as a Journal. Specific enquiries had gone back to these three firms and some further comparisons were made as follows:

(i) (see Appendix 3, page 2 - 11/3) A detailed comparison of Sfr costs of Reidel against Sky Publishing Corporation showed Reidel to be of lower cost in five out of the six categories.

The Reidel quote for the Information Bulletin was also substantially lower.

(ii) A draft Contract was prepared by Reidel and discussed in detail in Paris with GS and AGS. Several modifications were made at this stage which lower the cost of IAU publications to the IAU members and which diminish slightly the IAU royalties.

On the proposal of D. Heeschen, seconded by M.W. Feast, it was unanimously adopted that the General Secretary be authorized to proceed with the Memorandum of Agreement with D. Reidel Publishing Company for the period September 1982 to August 1985 as in the 6-page Draft of 4 June 1981 (11/4), with the proviso that many aspects of the Agreement could be in force during the final year of the present Agreement (from 1 September 1981).

### III SCIENTIFIC ACTIVITY

#### 12. Scientific Programme, 18th General Assembly

##### (a) Invited Discourses

M.A. Hoskin (Cambridge UK), President of Commission 41, had accepted the invitation to give a Discourse and had chosen the topic "Astronomy in Ancient Greece".

By telegram to Abastumani, Y.B. Zel'dovich (Moscow) accepted the invitation to give a Discourse and chose the topic "Contemporary Cosmology".

After discussion of the proposals listed at EC 47 in 1980, the following invitations were adopted:

To C. de Jager (Utrecht) to speak on the New Aspects of Solar Physics or a similar topic. This Discourse might be associated with the proposed Commemoration of the International Polar Year Anniversaries and of the 25th anniversary of the International Geophysical Year, according to the preferences of Professor de Jager.

To G.H. Herbig (Santa Cruz) to speak on Early Stages of Stellar Evolution.

This list, four rather than three topics, would recognize that one Discourse was primarily historical, and also would provide for possible non-fulfilment by one person.

(b) Joint Discussions

It was emphasized that Joint Discussions were, for many participants, a principal component of General Assemblies, so that those with business to carry out (cf. 12/2) would have to expect that they could not attend the whole of a Joint Discussion.

Discussion of twelve proposals, including "Stars in Ultraviolet" by G.A. Gurzadayan, a late proposal additional to those listed in 12/3, resulted in the adoption of the following list (with nominated Chairman of Scientific Organising Committee indicated):

|   | <u>Commissions</u>                               | <u>Chairman SOC</u> |
|---|--|---------------------|
| I Solar Luminosity Variations                           | <u>10</u> , 35, 27                               | J. Eddy             |
| II Evolution in Old Stellar<br>Populations in Galaxies  | <u>37</u> , 25, 28,<br>29, 33, 34,<br>35, 45, 47 | G. Lyngå            |
| III Extragalactic Distance Scale<br>and Hubble Constant | <u>28</u> , 25, 40,<br>45, 47, 48                | P. Hodge            |
| IV Exploration of the Solar<br>System                   | <u>16</u> , 44                                   | G. Hunt             |
| V Origin and Evolution of<br>Interplanetary Objects     | <u>15</u> , 20, 21,<br>22                        | B.A. Lindblad       |
| VI Active Galactic Nuclei                               | <u>48</u> , 40, 28                               | F. Pacini           |
| VII Mass Loss Phenomena                                 | <u>29</u> , 35, 36,<br>45                        | A.G. Hearn          |

Other proposed topics, including the Hyades, Atomic and Molecular Data, and Selection of Objects for Hipparcos and Space Telescope, would be suitable for Joint Commission meetings as part of the proposed programmes of Commissions.

The subject of "Stars in the Ultraviolet" could be incorporated in VII to some extent. "Planetary Rings", as well as being

covered in a proposed IAU Colloquium in Toulouse, could be included in the form of a special joint meeting in Patras, as a presentation.

The following nominations to SOC's were made:

- II R. Kraft, R. Cannon, J. Hesser, H. Spinrad, U. Steinlin
- III E.A. Dibay
- IV B.A. Smith, J. Blamont, T. Owen
- VI E.Y. Khachikian
- VII E.B. Churchwell, A. Willis, G.A. Gurzadyan

### 13. IAU Symposia and Colloquia

The Assistant General Secretary reported on past meetings and on meetings accepted or proposed for 1982 and 1983 (13/1 and 13/2). IAU Colloquium No. 65 (Budapest, August 1983) was cancelled. The following proposals were accepted:

- Symposium No. 102 Solar and Stellar Magnetic Fields: Origin and Coronal Effects, Zurich, Switzerland, 2-6 August 1982
- Symposium No. 103 Planetary Nebulae, London, UK, 10-14 August 1982
- Symposium No. 104 Evolution of the Early Universe and its Present Structure, Crete, Greece, 30 August - 2 Sept 1982
- Symposium No. 105 Observational Tests of the Stellar Evolution Theory, Geneva, Switzerland, September 1983
- Colloquium No. 72 Cataclysmic Variables and Related Objects, Tel Aviv or Haifa, Israel, August 1982
- Colloquium No. 73 Seventh Conference on UV and X-ray Spectroscopy of Astrophysical and Laboratory Plasmas, Dublin, Ireland, 30 August - 1 September 1982 (subject to conditions).
- Colloquium No. 74 Dynamical Trapping and Evolution in the Solar System, Thessaloniki, Greece, 20 August - 2 September 1982

Colloquium No. 75 Planetary Rings, Toulouse, France,  
30 August - 4 September 1982

The proposed Colloquium "Saturn" (Tucson, May 1982) was found to co-incide with a COSPAR Symposium on a similar topic already co-sponsored by the IAU. The proposal "Solar Radio Noise Storms" (Trieste, August 1982) was accepted for co-sponsorship by IAU if sponsored by the European Physical Society.

Some changes in the proposed Scientific Organising Committees would be carried out in correspondence by the Assistant General Secretary.

#### 14. Regional Astronomy Meetings

The Assistant General Secretary reported on the successful Regional Astronomy meetings in Liège, Belgium, July 1980, and Merida, Venezuela, January 1981 and the status of the proposals for Bandung, Indonesia, August 1981 and Dubrovnik, Yugoslavia, October 1981.

Further proposals were accepted in outline form as follows:

Florence, Italy, Autumn 1983

La Plata or Buenos Aires, Argentina, November 1983

Heidelberg, GFR, 1984

Rio de Janeiro, Brazil, November 1984

The Florence and Heidelberg proposals would be arranged in a form similar to the regular AAS meetings in the USA. The Astronomy and Astrophysics Division of EPS will be co-sponsor of these meetings. A further Regional Astronomy meeting in Japan or China in 1984 may be proposed.

#### 15. Young Astronomers' Schools

(a) Report of XIth ISYA, Hvar, Yugoslavia, October 1980

The narrative and financial report of V. Ruzdjak for the Yugoslav School was adopted (15/1). The School had been a successful and valuable occasion.

(b) Proposals for XIIth ISYA, Helwan, Egypt, August 1981

The General Secretary reported that although a detailed



programme was not yet available, arrangements approved by J. Kleczek were being followed and students from Equatorial Africa as well as from Egypt and Mediterranean and European countries were expected (15/2).

(c) Proposals for 1982 and subsequent years

The proposal for Nairobi, Kenya, in 1982 (15/3) was not fully substantiated and efforts to reduce the estimated cost were being made. The General Secretary had provisionally allocated \$11000. D.G. Wentzel had urged maximum financial support. UNESCO support through ICSU had been requested but was by no means assured. Provisional approval, subject to reports by D.G. Wentzel and J. Kleczek, was granted.

The General Secretary was authorized to adopt the Merida, Venezuela, proposal (early 1983) but the financial allocation would depend on the Budget 1983-85, to be approved at the Patras General Assembly and it ought to be possible in this case to manage with a minimum subvention from IAU funds.

It was decided that the proposal to hold a School in London, bringing young astronomers from other countries, was not appropriate.

16. Co-sponsored Scientific Meetings

The Assistant General Secretary listed (16/1) the meetings in 1981 and 1982 that were being co-sponsored by IAU. No further requests had been received.

17. Scientific Projects

(a) Commission Proposals

(b) Executive Committee Projects

These items were dealt with under Commission business, item 7 above.

## IV INTERNATIONAL ORGANISATIONS

## 18. ICSU (International Council of Scientific Unions)

## (a) General Committee and General Assembly, 1980

The Report of the General Secretary to the 18th ICSU General Assembly (18/1) and the Report on the ICSU General Assembly and associated meetings to EC members (18/2) had been circulated. These Reports were approved.

The General Secretary had been asked to be a Correspondent to the Committee on Financial Resources to undertake a review of the ICSU financial system.

It was reported that ISSP (Solar System Panel) had been dissolved by ICSU but that CCMP (Co-ordinating Committee for the Moon and Planets) would continue at any rate until September 1982.

The questions of adherence of new Unions, particularly new Biology Unions, such as Microbiological Societies, to ICSU posed a difficult problem for the old small Unions such as IAU (document 18/6). IUMS represents about 60,000 microbiologists in 52 countries.

## (b) IAU Report to ICSU, 1980

This Report (18/7) had been circulated to EC Members and was adopted.

## (c) ICSU General Committee, September 1981

It was agreed that the General Secretary would represent the IAU at the ICSU General Committee meeting scheduled for Dubrovnik, Yugoslavia, 24-25 September 1981, and the associated committee meetings.

## (d) ICSU General Committee and General Assembly, September 1982

It was agreed that the General Secretary in post after the 18th General Assembly would represent the Union at the 1982 ICSU meetings and he might be accompanied by the former

General Secretary as Adviser during the first part of the Assembly.

(e) Ad Hoc Committee for Commemoration of the Polar and Geophysical Years during 1982-83

The General Secretary reported that he had assisted with the work of this Committee and that there had been a request that the Commemoration be adequately marked in the 18th General Assembly of the IAU. It was remarked that most meetings in respect of Solar-Terrestrial Physics would occur in the COSPAR and SCOSTEP meetings of May 1982 in Ottawa, Canada. The suggestion that the Invited Discourse requested from C. de Jager be regarded in this light was not enthusiastically received and the question was left unresolved as to whether the Commemoration be recognized by more than a mention from the platform of the General Assembly.

19. UNESCO-ICSU Financial Provisions

(a) 1981-83 Programme

The General Secretary indicated that the Grant to the IAU from the UNESCO subvention through ICSU available in 1981 (19/1) totalled \$10800, as compared with \$16000 in 1980, \$18494 in 1979 and \$12000 in 1978. The 1981 School for Young Astronomers had not been specifically supported from this fund and a special enquiry had gone to UNESCO in this respect.

In response to a request of 1 June 1981 (19/2) an application was prepared (19/3) for ICSU-UNESCO funding of IAU Projects in 1982 on 22 June 1981 and submitted by due date. It was agreed that this application should stand in respect of items I and II only and that operation of III should be postponed to 1983.

It is expected (19/5) that the IAU Basic Allocation for 1982 will be higher than the 1980 figure of \$9600.

## (b) Medium-Term Plan 1984-89

The General Secretary had confirmed to ICSU and UNESCO the 1980 Executive Committee support for an educational programme to be executed which would complement the work of the GERT and INISSE projects in selected developing countries.

## (c) GERT-INISSE Programme

During the past year this Programme was adopted as a Study Project by UNESCO and a draft of a report had been received at the IAU Secretariat by a visiting team to Kenya, Nigeria and other countries.

It had been strongly stressed that an educational programme would be needed and it is hoped that the IAU proposals would therefore gain ground appreciably during 1982.

## 20. COSPAR (Committee for Space Research)

## (a) Membership of Scientific Commissions

By agreement with the President and Executive Secretary of COSPAR, the General Secretary had written a note to all IAU members named as Commission members, etc. in the March 1981 COSPAR Directory, approximately 180 in number, requesting them to study IAU interests when they have an opportunity of participating in any discussions preparatory to the 1982 Ottawa Plenary Meeting of COSPAR.

## (b) Plenary Meeting, Ottawa, May 1982

It was agreed that the General Secretary should represent the IAU at this meeting of COSPAR.

## 21. SCOSTEP (Scientific Committee for Solar-Terrestrial Physics)

## (a) Constitution of SCOSTEP

It was noted that the Steering Committee for the Atmospheric Physics Program was dissolved.

The constitution of SCOSTEP (21/3) was to be revised.

The revision was accepted by the IAU Executive Committee.

(b) Fifth International SCOSTEP Symposium,  
Ottawa, May 1982

Application of M.R. Kundu to represent IAU at the SCOSTEP 1982 General Meeting was granted but, since the fund for Representation is nearly exhausted for 1980-82, other support should be obtained if possible. (V. Bumba had also expressed interest in attending.)

(c) Report of M.R. Kundu

This report (21/5) of 30 April 1981 was duly noted.

A request by P.C. Simon on a MAP proposal (21/7) concerning meteoroids would be referred to President of Commission 22 and to L. Kresak.

22. FAGS (Federation of Astronomical and Geophysical Data  
Analysis Services)

(a) Reports of Services

A report by IAU Representative to FAGS, H. Enslin, indicated the budgetary difficulties (22/1 and 22/7).

Other reports were received in respect of Project MERIT (G.A. Wilkins, 25 May 1981, 22/2) - BIH (A. Orte, 22/3, and H.M. Smith, 18 May 1981, 22/4) and QBSA (Mitaka, 22/5).

(b) Statutes of FAGS

The changes in Statutes of FAGS (22/6) were approved without material comment.

(c) Financial Proposals

The contents of letters by E. Kejlso (22/8) and P. Melchior (22/9) concerning FAGS financial allocations were noted.

The General Secretary outlined the problem, now well-known, arising from diminished ICSU financial support of

FAGS. He had asked Adhering Organisations of the IAU whether they would support increased direct Union financing of FAGS. Replies were mainly, but not entirely, in the affirmative, but there was no consensus on how such support might be provided.

In the General Secretary's opinion, the duty for finding support, no longer provided by ICSU, falls upon the participating Unions, IAU, IUGG and URSI, who initiated many of the Services originally. However, the point was made that IAU Executive Committee members almost without exception, were unaware of the existence of FAGS as such until they found it on EC meeting Agenda. This indicated that the Services were perhaps not necessary or not effective. Some services, such as BIH, however, were clearly vital from the national point of view, rather than from the point of view of the science of astronomy, and therefore might be supported nationally. Others, such as QBSA (Quarterly Bulletin of Solar Activity), were probably over-generous in their provision of bulletins at no cost and could be made more efficient if they recovered more of their operating costs.

The new FAGS Statutes, and the requirement that one FAGS Council member should take the responsibility of being informed on each FAGS Service, could produce improvements. It seemed to be a past mistake to have financed FAGS from ICSU but to have controlled the Services by the participating Unions.

There was no agreement on whether the "nominal" IAU contribution of Sfr 2000 p.a. should be substantially increased or whether it should be even omitted from the 1983-85 proposed Budget. Eventually it was proposed to collect further direct opinions during 1982 on the necessity and efficacy of the FAGS services, including the opinions of current IAU Commission Presidents, and to propose increased Inter-Union Commission support that would permit an increased FAGS contribution to be determined by the Patras General Assembly.

## 23. Other International Organisations

### (a) Reports

No objection was raised to the appointment of R.N. Jones as the next Chairman of IUCS (Inter-Union Commission on Spectroscopy).

The high cost of IAU representation to ICSU-AB (Abstracting Board) by W.D. Heintz, which he regretted, was noted, particularly in view of the paucity of IAU business in ICSU-AB.

Contributions to CTS (Commission for Teaching of Science) from IAU members, reported by L. Houziaux, continued to be important.

L. Houziaux reported that no activities of COSTED had come to his notice.

The General Secretary was authorized to endorse for CCIR the list of astrophysically important radio spectral lines compiled by Commission 40.

H.M. Smith reported that Study Group 7 of CCIR (Consultative Committee for International Radio) had actively followed up the WARC 79 recommendations for use of UTC to replace GMT.

The report of PEDAS (Potentially Environmentally Detrimental Activities in Space) was finished by K. Rawer and presented to the UN.

The Assistant General Secretary reported that co-operation with the Conference Committee of the European Physical Society, although sparse, was in a satisfactory state.

H.M. Smith's substantial report on the Steering Committee for International Atomic Time in the CCDS (Consultative Committee for Definition of the Second) was received.

Discussions between A.H. Cook and CCDM (Consultative Committee for Definition of the Metre) had been actively followed during the year.

It was noted that the Chairman of CCMP (Coordinating Committee for the Moon and Planets), S.K. Runcorn, had responded to the General Secretary's suggestions and that more regularity was hoped for in 1982.

Null reports were received in respect of IUCAF (Inter-Union Commission for Allocation of Frequencies) and CODATA (Committee on Data for Science and Technology) but B. Hauck's report of the October 1980 CODATA General Assembly had been received earlier.

The relevance of Solar Power Satellites to the work of SCOPE (Scientific Committee on Problems of the Environment) had been discussed under Commission 50 (7(p) above).

(b) Representation 1982-85

The list of current IAU Representatives in other bodies was made available for consideration during 1982 when new proposals would be prepared.

It was noted that a personal message from the Executive Committee would be sent to L. Perek, President of the International Astronautical Federation, which holds its 32nd Congress in Rome in September 1981.

(c) UNISPACE, Vienna 9-21 August 1982

At the invitation of A. Massevich, a Vice-President of the UN Conference Committee for UNISPACE 1982, to be held immediately prior to the 18th General Assembly of the IAU, it was agreed that IAU should offer to organise a 1-day Symposium at the UNISPACE Conference, in order to present the science of astronomy in the context of Space Technology and International Co-operation. Two suggested contributors were R. Hanbury-Brown and M.K.V. Bappu. A short list should be agreed by EC members by December and invitations go out in January 1982.



## V OTHER BUSINESS

## 24. Invitation to Executive Committee, 1983

An invitation to the Executive Committee to hold its 1983 meeting on the ESO premises in Garching bei München, GFR, could be responded to positively but a final decision would rest with the new Executive Committee after the 18th General Assembly.

## 25. Other business

Correspondence from M.J. Seaton and R.J. Tayler, acting on behalf of the Council of the Royal Astronomical Society, to the President and General Secretary of the IAU, concerning falling off of overseas subscriptions for RAS journals was mentioned. It was agreed that the IAU could take no definite step at this time except to recommend to the RAS that low-cost individual subscriptions might be available independent of Society membership.

## VI CLOSING BY THE PRESIDENT

The meeting was closed at 21:00 on 25 July 1981 by the President.