

UNION ASTRONOMIQUE INTERNATIONALE

INTERNATIONAL ASTRONOMICAL UNION

37th Meeting of the Executive Committee

Sydney, N.S.W. Australia

Sunday, 19 August to Tuesday 28 August 1973

P R O C E E D I N G S

The 37th Meeting of the Executive Committee of the International Astronomical Union was held during the XVth General Assembly of the IAU in the rooms of the Carslaw Building of the Sydney University on 19, 20 and 28 August 1973. The session on Sunday started at 10,00 and ended at 16,30 with a break for lunch. The session on Monday 20 August started on 9,15 and ended at 17,30 with a break for lunch, and the session of 28 August started at 16,00 and was closed at 23,45 with a break from 19,30 to 21,30 to permit attendance at Invited Discourse.

Present were:

B. Strömberg, President

M.K.V. Bappu, Vice-President

B.J. Bok, Vice-President

L. Gratton, Vice-President

B. Lovell, Vice-President

E.R. Mustel, Vice-President

J. Sahade, Vice-President

L. Perek, former General Secretary

C. de Jager, General Secretary

G. Contopoulos, Assistant General Secretary

A. Jappel, Executive Secretary

Mrs. J. Dankova, Administrative Assistant

O. Heckmann, Former President, was prevented by illness from attending the meeting. E.R. Mustel, Vice-President, was excused for the session on 19 August.

L. Goldberg, President elect, attended the meeting on invitation of the President on 19, 20 and 28 August, and E.A. Müller, Assistant General Secretary, elect, on 28 August.

INTRODUCTORY NOTE: This report has been prepared in the order of the items overleaf in the Summary List of the Agenda. The documents related to the Agenda, and distributed before and during the meeting, have not been included in the present report. They will be kept in the archives of the Union for further reference.

A G E N D A

1. Opening by the President, Professor B. Strömgren
Internal Matters of Administrative Nature
2. Approval of the Report on the 36th meeting of the Executive Committee and of the Agenda
3. Future IAU Officers
Report of the President
4. Report by the General Secretary
 - a) Administration
 - b) Finances
 - c) Arrangements for the General Assembly
5. Consideration of the Agenda for the first session of the General Assembly, as printed and distributed
6. Consideration of the special meetings to be held during the General Assembly
 - Brief for the meeting of Presidents of Commissions
 - Brief for the meeting of representatives of Adhering Countries
7. Admission of new Adhering Countries
Consideration of the application of South Korea, report by the General Secretary of the correspondence with Burma
8. Appointment of new Members of the Union
A list of proposed new Members is given separately. The Executive Committee submits this list to the Nominating Committee for comment before giving final approval
9. Resolutions
 - a) Proposals by the Executive Committee
 - i) to suspend clause 2 of Statute 11(a) for 1973
 - ii) proposals with budgetary implications will be discussed under point 11 of the Agenda. They are as follows:
 - To increase the unit of contribution payable by Adhering Countries by 25% from 900 to 1.125 gold francs
 - To continue IAU grants to Commissions as follows:

Commission No. 4 - Ephemerides (Information Bureau)	\$880 for 1974/76
Commission No. 17 - For Special Working Groups	\$1.870 for 1974/76
Commission No. 27 - For Catalogue of Variable Stars	\$3.000 for 1974/76
Commission No. 38 - Exchange of Astronomers	\$29.000 for 1974/76
Information Bulletin for the Southern Hemisphere	\$1.650 for 1974/76
 - b) Proposals by National Committees
 - France:
 - i) To change Article 11 of the Statutes to the effect that Adhering Countries which, owing to irregularities in the rates of exchange, did not fully pay their annual contributions up to 31 December of the year preceding the General Assembly may participate in the voting on questions involving the budget of the Union with a number of votes by one greater than the number of category that corresponds to the payment actually made.

- ii) To extend the interval between two General Assemblies of the IAU from 3 to 4 years.
- iii) To organize regional astronomical meetings at intervals of 4 years or, with well defined topics, in years where there is no General Assembly of the IAU.
- iv) To reduce, in co-operation with international and national organizations, air pollution by jet propelled aircraft, and the risks of airborne persons of being exposed to laser rays.

Yugoslavia:

- v) Not to increase the unit of contribution payable by Adhering Countries to the IAU.
- vi) To organize young astronomers competitions under the auspices of the IAU.
- vii) To establish a centre for exchange and loan of temporarily unused astronomical instruments and accessories.

U.A.R. (late proposal):

- v) To organize regional astronomical colloquia of 50 to 100 participants for astronomers from developing countries; to make available astronomical literature to astronomers and astronomical institutions in developing countries.

c) Proposals by Commissions

- i) (Commission 6) To maintain the IAU subvention to the IAU Telegram Bureau at \$1.600 U.S. per triennium.
- ii) (Commission 7) Creation of new IAU Commission on "Astrodynamics".
- iii) (Commission 8) To endorse the proposals by IAU Colloquium No. 20 on "Meridian Astronomy" for resolutions on new instrumentation, improvement of the FK4, the meridian catalogue, the SRS catalogue, etc.
- iv) (Commission 16) To allocate \$1.500 U.S. to the Centre de documentation sur les planètes à Meudon for 1974 - 1976.
- v) (Commission 17)
 - To approve a list of fundamental lunar craters as basis for the co-ordinate system.

To include smaller topographic features in the Lunar Nomenclature.

- vi) (Commission 20) To continue the subvention of \$2.000 U.S. to the Minor Planet Centre, Cincinnati, for the period 1974 - 1976.
- vii) (Commission 30)
 - Sur l'adoption d'une formule unique pour l'expression de la Vitesse Radiale V_r en fonction du déplacement spectral relatif

$$z = \frac{\Delta\lambda}{\lambda_0}$$
 par tous les observateurs (Spectroscopie optique et Radio-Astronomie).

Sur la convention à adopter pour l'expression de λ_0 (valeur du vide ou de l'air) en vue du calcul de la vitesse radiale des Quasars.

Sur la nécessité de déterminer par priorité les orbites Binaires Spectroscopiques qui sont aussi Binaires à Eclipse en vue de l'obtention d'un plus grand nombre de Masses.

- viii) (Commission 31) To recommend the adoption of the UTC system as the basis for the dissemination of Standard Time (Heure Normale) in all countries, to recommend definitions for TAI, TAI' and UTC, to recommend a "Modified Julian Date", and to

recommend maximum limit of DUT1 and the introduction of leap seconds.

- ix) (Commission 35) To consider the problem of overlapping international and large national symposia and colloquia on same or similar topics, and their possible coordination.
- x) (Commission 42) To change the name of IAU Commission No. 42 from "Photometric Double Stars" to "Close Binary Stars".

10. Commissions

- a) Creation of new Commissions
 - i) on Astrodynamics
 - ii) on Astronomical (Planetary) Nomenclature
 - iii) creation of working group on Site Studies

- b) Dissolution and/or merger of Commissions
New structure of Commissions on the Planetary System (15, 16, 20, 21, 22)

- c) Nomination of Presidents and Vice-Presidents of Commissions

The Executive Committee will, at its first session, make preliminary nominations based on those on the list prepared by the General Secretary in consultation with Presidents of Commissions. The willingness of the nominees to serve will be ascertained. The full list will be drawn up at final session and submitted to the General Assembly for approval.

- d) Organizing Committees of Commissions

Preliminary proposals for membership in the Organizing Committees of Commissions are given separately; they have been derived from proposals made by the present Presidents of Commissions. The Executive Committee may make suggestions for the consideration of Commissions, before the Commissions present their final proposals.

11. IAU Finances

- a) Financial accounts and budget

The Executive Committee has to submit a preliminary comprehensive budget to the Finance Committee which reports direct to the General Assembly. Requests from Commissions for grants may still arrive, and hence some details will have to be discussed between meetings.

- i) Approval of budget in general terms: the "Report on IAU Finances", which also includes the preliminary supplementary budget for 1970, has been circulated. The preliminary budget for the years 1974, 1975 and 1976 is given separately.
- ii) Approval of individual projects as proposed by Commissions, and as included in the preliminary budget for the years 1974 - 1976 - given separately.
- iii) Recommendation to the new Executive Committee to approve the "Financial Authority to the General Secretary" and to authorize the transfer of responsibility for the bank accounts of the Union.

- b) Proposed unit of contribution

The Executive Committee resolved that the unit of contribution paid by Adhering Countries be increased by 25% from 900 to 1.125 gold francs for the ensuing period.

- c) Investment of IAU reserves

12. The Transfer of the Administrative Office to Thessaloniki.
Questions relative to removal, equipment, bank accounts, etc.
13. Publication policy
 - a) IAU publications, their production and distribution
 - b) New contract with the Reidel Publishing Company
14. XVIth General Assembly
Discussion of the invitation by France to hold the XVIth General Assembly in Grenoble, in 1976.
15. Consideration of the future Special Nominating Committee prior to its discussion by the Nominating Committee and by the Executive Committee, according to rules.

SCIENTIFIC ACTIVITY OF THE IAU

16. Scientific Meetings

a) Symposia

- i) The Symposia to be held in conjunction with the XVth General Assembly in 1973 were finally discussed and approved at the 36th meeting of the Executive Committee in Copenhagen, September 1972.
- ii) The Symposia proposed for 1974 are as follows:
Solar X- and Gamma Radiation, Buenos Aires, Argentina, June 1974. Cosponsored by COSPAR. Commissions: 10, 12, 44. Organizing Committee: Anderson (Chairman), Culhane, Elwert, Rossi, Mandel'stam, Newpert, Prokof'ev, Sahade (COSPAR: Friedman, Sahade).

Dynamics of Stellar Systems; Theories and Observations, Besançon, France, 3 - 7 September 1974. Commissions: 33, 37. Organizing Committee: King (Chairman), Contopoulos, Hayli, Henon, Hori, Lynden-Bell, Perek, Spitzer, Wielen, Zeldovich.

Study of Comets, Greenbelt, Maryland, U.S.A., late October 1974. Organizing Committee: Donn (Chairman), Biermann, Delsemme, Dobrovolskij, Levin, Marsden, Roemer, Swings, Vanýsek, Whipple.

iii) Symposia in 1975 and later:

Be Stars (The Merrill-McLaughlin Memorial), most likely in Michigan, U.S.A., 1975. Commissions: 29, 42. Organizing Committee: Slettebak (Chairman), Boyarchuk, Cowley, Hack, Herman, Hummer, Hutchings, Plavec, Sahade, Underhill.

Solar Activity, Prague, Czechoslovakia, August, 1975. Organizing Committee: Bumba (Chairman), Dodson-Prince, Kiepenheuer, Kopecký, Leighton, Matres, Nakagawa, Vitisky, Wilson.

Recent Advances in Infrared and Millimetre Astronomy; no further details. Proposed by K. Shivanandan.

b) Colloquia

The colloquia proposed for 1974 are as follows:

Reference Coordinate Systems for Earth Dynamics, Toruń, Poland, 2 - 7 September 1974. Commissions: 4, 8, 19. Organizing Committee: Dobaczewska, Gaposkin, Kolaczek, Kovalevsky, Lundquist, Moritz, Veis, Weiffenbach.

UV and X-Ray Spectroscopy and Astrophysical and Laboratory Plasmas, Harvard University, Cambridge, Massachusetts, U.S.A., 4 - 6 September 1974. Commissions 14 and 44. Organizing Committee: Blamont, Fraenkel, Garton, Griem, Jordan, Madden, Morton, Neupert, Severny, Walker Jr.

Magnetic Stars, Vienna, Austria, September 1974. No further details. Proposed by J. Meurers.

c) Meetings cosponsored by the IAU

Symposium on Solar Terrestrial Physics, Brazil, 1974. Organized by SCOSTEP, cosponsored by COSPAR, IAU, IAGA, URSI. Organizing Committee: 3 representatives of COSPAR, 2 of IAU, 3 of IAGA, 2 of URSI and de Mendonça.

Symposium on Satellite Dynamics, in 1974. Organized by COSPAR, cosponsored by IAU. IAU representative J. Kovalevsky.

d) Regional meetings

17. Specific projects.

The specific projects discussed under point 11(a) (ii) are a continuation of projects already in operation (see point 11).

Further proposals may still be submitted.

RELATIONS WITH OTHER ORGANIZATIONS

18. Relation with the International Council of Scientific Unions

- a) Report of the General Secretary of ICSU meetings and developments within the ICSU family (SCOSTEP, IAGA)
- b) Appointment of IAU representative on the ICSU General Committee - recommendation.

19. Representation

Report by the General Secretary.

Final meeting of the Executive Committee

20. Re-discussion of problems dealt with at previous meetings.

21. Resolutions adopted by Commissions, not, however, by the Resolutions Committee.

22. Any other business, including:

- a) Lunar Nomenclature
- b) Light Pollution
- c) Letter by Luyten concerning the question of IAU "Committee on Ethics"

23. Closing by the President.

SUPPLEMENTARY AGENDA FOR THE THIRD SESSION

- Election of one member of the Special Nominating Committee
- Relation with the International Council of Scientific Unions
 - a. Report of the General Secretary on ICSU meetings and developments within the ICSU family (IUCSTP-SCOSTEP; COSPAR; IAGA; URSI)
 - b. Recommendation regarding appointment of IAU representative on the ICSU General Committee
- Representation (Report by the General Secretary)
- Matters resulting from previous sessions and from the General Assembly
 - a. Colloquia and Symposia
 - b. Regional meetings
 - c. Report meeting nominating committee
 - d. Report meeting finance committee; budget 74-76; proposed increase of the unit of contribution
 - e. New commissions proposed; the abolishment of other commissions
 - f. Proposed Presidents, Vice-Presidents, Organizing Committees of Commissions
 - g. Constitution and membership Working Group Astronomical Nomenclature
 - h. The interval between the General Assemblies
 - i. Review of other proposed resolutions
 - j. Free copies of publications to developing countries
 - k. Report Lembang International School for Young Astronomers
 - l. Report on request from Iraq regarding membership IAU
 - m. Publication policy
- Any other matters
 - a. Committee on Ethics
 - b. Scientific priorities
 - c. Telegram Beckmann re Levich

1. Opening by the President.

The President opened the meeting on Sunday 19 August at 10,00, welcomed the participants and extended his special welcome to Prof. L. Goldberg. He regretted the absence of Prof. O. Heckmann, former President, and suggested to send him a telegram of good wishes from the General Assembly. This proposal was accepted. It was agreed that further telegrams of greetings should be sent to: Mrs D. Lindblad, Academician, V.A. Ambartsumian, former President, and Dr D.H. Sadler and Dr P. Oosterhoff, former General Secretaries.

The president then announced that the Agenda for the meeting had been circulated in advance and asked for its approval. The Agenda was unanimously approved.

2. Report of the 36th Meeting of the Executive Committee.

The Report had been distributed in September 1972. The comments received had been respected. With this in mind the meeting unanimously approved the report of the previous meeting of the Executive Committee.

3. Future IAU Officers.

The President reported that the Special Nominating Committee had put forward the names of the President, 3 Vice-Presidents, the General Secretary and the Assistant General Secretary for the ensuing period, and that these names would be submitted to the General Assembly for election. Dr Sahade regretted that Latin America would not be represented on the future Executive Committee.

4,5. Report by the General Secretary on Administration, Finances and Arrangements for the General Assembly.

a.

The General Secretary referred to the printed and distributed report of the Executive Committee and to his supplementary report distributed to the Members. These reports were approved. He said that the Office of the Union would be moved to Thessaloniki, Greece, by end October/beginning November, and the files for 1967-1970 to the archives of the Union at the Ondrejov Observatory, Czechoslovakia. The question of a permanent seat of the Union had not been closed and will be investigated by the future General Secretary. The General Secretary said that in the building that houses ICSU in Paris, there may be one vacant floor in the course of 1974. The International Union of Biology had already moved in and COSPAR had applied for premises. It would be good if the IAU could be in the same building.

b.

The General Secretary informed the meeting that the savings-accounts of the Union in the United States had been closed and the balance on them transferred to the Amsterdam-Rotterdam Bank Utrecht where they are kept on a special US dollar account. The current account of the IAU in both the United States and the Netherlands will be maintained and a working account will have to be opened in Thessaloniki.

The accounts of the IAU showed the following balances as on 30 June 1973:

Current account at the Chemical Bank, New York	\$	25.472,87
Current account at the AMRO Bank, Utrecht	Dfl	142.533,56
Dollars account at the AMRO Bank, Utrecht	\$	85.082,78
Savings account at the AMRO Bank, Utrecht	Dfl	81.695,88
Petty-cash Utrecht	Dfl	218,04

Since that date, however, considerable payments have been made from both current accounts towards the XVth General Assembly and the symposia in Australia and Poland.

C.

The arrangements for the General Assembly made by the Local Organizing Committee had been inspected and were found satisfactory.

The General Secretary proposed the following Members of the Executive Committee to introduce the individual Discourses:

M.K.V. Bappu for "A new look at the Sun" by J.P. Wild
 B.J. Bok for "Interstellar Molecules" by C.H. Townes
 L. Gratton for "Early Stages of the Universe" by D.W. Sciama

This proposal was approved.

The difficulties arisen with Australian visas for Soviet delegates were dealt with by the General Secretary, the Executive Secretary and the Chairman of the Local Organizing Committee. All Soviet delegates would eventually arrive, however, with delays of 2 to 4 days. It was pointed out by Perek that the Preliminary Programme should have warned participants from socialist countries that applications for visas had to be made at least 6 weeks beforehand.

The General Secretary suggested that the following Members should be appointed as official interpreters:

J.-C. Pecker and L.N. Houziaux for English to French
 J.B. Sykes and E.A. Müller for French to English

This proposal was accepted.

The Executive Committee resolved that its member J. Sahade should be allowed to act as representative of Argentina, since he was the only delegate of this country present in Sydney.

The General Secretary informed the meeting of the application of the Republic of Korea (South) for admission to the Union and emphasized that as it had come in after the deadline, a special procedure would be required to put the motion on the Agenda.

It was suggested that the Executive Committee should propose

P.O. Lindblad as Chairman of the Nominating Committee,
 D.W.N. Stibbs as Chairman of the Finance Committee, and
 J.C. Pecker and L. Perek as members of the Resolutions Committee.

This proposal was approved.

6. Consideration of Special Meetings.

At the meetings of Presidents of Commissions to be held immediately before the 1st session of the General Assembly and on 27 August, the following points would have to be dealt with:

- election of candidates for the Special Nominating Committee
- form of Commissions reports 1976
- reports of Commissions meetings
- Commissions rules of procedure
- proposals of new IAU Members for 1976

The Executive Committee appointed for those Commissions, whose Presidents and Vice-Presidents did not attend the whole of the General Assembly, acting Presidents as follows:

Comm. 7 - V. Szebehely
 Comm. 30 - A.H. Batten
 Comm. 41 - A. Hayli
 Comm. 47 and 48 - M.J. Rees

The meeting of official representatives of Adhering Countries would have

to discuss:

- the financial situation of the Union
- the budget for 1974 - 1976
- the place and date of the XVIth General Assembly
- the admission of South Korea
- the unit of contribution (increase by 25%)

All the other meetings would be held as on the printed Agenda.

7. Admission of new Adhering Countries.

The General Secretary informed the meeting that the Republic of Korea had applied for admission to the Union and that he had carefully studied the documents submitted in support of this application. He said that South Korea lived up to the standards of the Union and recommended to submit the application to the General Assembly for approval. This proposal was accepted. With regard to the fact that the application had reached the General Secretary after the statutory deadline and hence could not have been placed on the Agenda, it was resolved to ask the General Assembly, in the 1st session, to put the application of South Korea on the Agenda, and to vote on the admission in the 2nd session.

The General Secretary reported of his correspondence with Burma and of his conversations with a representative of Iraq regarding membership of these two countries in the Union. It will be the task of the future General Secretary to follow further development.

8. Appointment of new Members of the Union.

A list of new IAU Members (about 600) together with a list of deleted and deceased IAU Members and a list of new Members proposed by Presidents of Commissions were presented to the meeting with details of how they had been compiled. These lists would have to be discussed by the Nominating Committee prior to the decision of the Executive Committee.

In this connection it was noted that the number of Members leaving the Union is incomparably smaller than that of those admitted to the Union. Sir Bernard Lovell suggested that the introduction of a reasonably high annual membership fee might discourage inactive Members from staying in the Union; This problem would be brought to the attention of the meeting of National representatives.

It was agreed to admit to the Union the four astronomers from the Republic of Korea of which proposals had been received, provided this country becomes a Member.

On the proposal of the General Secretary it was agreed that each new Member should receive a letter signed by the President and welcoming him/her to the Union.

9. Resolutions.

a.

Proposals by the Executive Committee.

It was agreed to withdraw the motion of the Executive Committee to suspend the 2nd sentence of Statute 11(a) for 1973, as redundant. A count had shown that 45 out of the 46 Member Countries had brought their contributions up to 31 December 1972 before the General Assembly, and would thus have the right to vote at the General Assembly according to the Statutes.

The proposals of the Executive Committee with budgetary implications would be discussed by the Finance Committee.

b.
Proposals by the National Committees.
The proposals for resolutions made by France, Yugoslavia and the U.A.R. were first discussed by the Resolutions Committee. They were then re-discussed by the Executive Committee.

c.
Proposals by Commissions.
The proposals for Resolutions submitted by Commissions, those received during the General Assembly included, would be submitted to the appropriate Commissions and eventually to the Resolutions Committee.
All proposals for Resolutions discussed either by the Finance Committee or by the Resolutions Committee, and endorsed by them, were then re-discussed by the Executive Committee, and it was decided to recommend them to the consideration of the General Assembly as follows:

RESOLUTION No. 1

The General Assembly of the International Astronomical Union resolves to adopt the following change of the Statutes: At the end of articles 11(a) and 11(b), the following sentence is added: "Exceptions from this rule cannot be considered unless decided by the Executive Committee".

RESOLUTION No. 2

The General Assembly of the International Astronomical Union requests the Executive Committee to examine the desirability of a change in the Statutes, such as to allow the three years interval between two General Assemblies to be extended to a four-years interval, if such is, after study, the opinion of the Executive Committee.

RESOLUTION No. 3

The General Assembly of the International Astronomical Union recognizes the scientific interest of regional meetings and recommends to their organizers to take the appropriate steps so that the dates of these meetings and their programme be such as not to constitute for the member countries an excessive financial burden.

RESOLUTION No. 4

Considering:

- a. that there exist requirements for dating in a decimal sequence for various purposes in conjunction with the use of radio time signals and radio time codes,
- b. that it is desirable to refer such dating to 0^h UT as the beginning of a day instead of 12^h UT,
- c. that a decimal day count, the Julian Day count, has long been in established use for dating in astronomy, chronology, and related sciences,
- d. that it is necessary to avoid a proliferation of different dating systems,
- e. that a simple conversion from the above-mentioned conventional Julian Day count to a modern decimal day count will be advantageous,
- f. that the existing established Julian Day count which refers to a Greenwich Mean Noon as the beginning of the day needs to be maintained without discontinuity, and

- g. that a "Modified Julian Day" count satisfying the above requirements is already in use;

Recommends

that the term "Modified Julian Date" and the symbol MJD be used only for the quantity $JD - 2\,400\,000.5$, MJD being equal to 0 on 1858 November, 17, 0^h UT.

RESOLUTION No. 5

(Commission 28)

The General Assembly of the International Astronomical Union recommends, for determination of Z in large-redshift objects, the use of vacuum wave-lengths of lines, where the difference in λ_0 is significant.

RESOLUTION No. 6

(Commissions 4, 14, 31, 40)

L'Assemblée Générale de l'Union Astronomique Internationale,
reconnaisant que la seconde du système international peut être réalisée en pratique avec une précision meilleure que 2 sur 10^{13} ,
 que les distances sur Terre et dans l'espace sont mesurées par le temps de parcours du rayonnement électromagnétique,
 et que le système des constantes astronomiques de l'UAI sera révisé dans le cours des trois années à venir,
 considère qu'une valeur unique de la vitesse de propagation du rayonnement électromagnétique devrait être utilisée au moment d'exprimer en mètres les résultats des mesures de distance les plus précises,
 et recommande que, lorsque la valeur la plus précise de la vitesse de propagation du rayonnement électromagnétique dans le vide est nécessaire, la valeur proposée par le Comité Consultatif pour la définition du mètre à sa réunion de juin 1973, c'est-à-dire: $C = 299\,792\,458$ mètres par seconde, soit utilisée,
 que cette valeur de la vitesse de propagation du rayonnement électromagnétique soit incorporée dans la révision prochaine du système des constantes astronomiques de l'UAI,
 et que le Comité International des Poids et Mesures maintienne cette valeur dans toute éventuelle définition du Mètre.

RESOLUTION No. 7

Proposed by the Resolutions Committee

On the resolutions adopted by Commissions.
 Considering the impracticability of giving individual attention to every resolution adopted by each of its 39 Commissions, and having full confidence in its Commissions, this General Assembly wishes to give its endorsement to the resolutions adopted by its individual Commissions, and recommends that astronomers give effect to these Resolutions in so far as they are able.
 As to the remaining proposals it was recommended to refer them to the appropriate Commissions for adoption as resolutions of Commissions that would be covered by the "blanket resolution" (No. 7).

10. Commissions.

a-b.

After a lengthy and detailed discussion the Executive Committee resolved to make the following proposals to the General Assembly:

i) to re-name the Planetary Commissions as follows:

Comm. 15 "Physics of Comets, Minor Planets and Meteorites"
 Comm. 22 "Meteors and Interplanetary Dust"
 Comm. 25 "Stellar Photometry and Polarimetry"
 Comm. 42 "Close Binary Stars"

ii) to abolish
 Comm. 43 "Astrophysical Plasmas and Magnetohydrodynamics"

iii) to create the following new Commissions:

Comm. 49 "The interplanetary plasma and the heliosphere"
 with E.N. Parker as President and A. Hewish as Vice-President
 Comm. 50 "Protection of Existing and Potential Observatory Sites"
 with M.F. Walker as President and R. Cayrel as Vice-President.

Moreover it was resolved to create a Working Group for Planetary System Nomenclature, and Task Groups for each relevant celestial body. The Working Group should consist of the Chairman of the Task Groups, of the Presidents of Commissions 16 and 17 and a representative of the IUCM. The Working Group would be headed by a President, nominated by the Executive Committee. The Executive Committee appointed for the forthcoming period P.M. Millman as President. The Executive Committee appointed D. Menzel as Chairman of the Task Group Lunar Nomenclature, A. Dollfus as its Vice-Chairman, El-Baz, Florensky, Masursky and Runcorn as its members.

The President of Commission 16 should suggest names of the Chairman of the Planetary Task Groups.

c.

Nomination of Presidents and Vice-Presidents of Commissions.

The General Secretary presented a list of preliminary nominations of Presidents and Vice-Presidents of Commissions to be endorsed by the Executive Committee for submission to the General Assembly. The final list as approved by the General Assembly, will be published in Transactions XVB. It was noted and approved that P. Simon and O.J. Gingerich would continue exceptionally for another term as Presidents of Comm. 6 and 41 respectively.

d.

Organizing Committees of Commissions.

The list giving the composition of Organizing Committees of Commissions, as prepared in consultation with Presidents of Commissions was approved. It was resolved that the composition of the Organizing Committees should be made public in Transactions XVB.

It was emphasized that the Working Rules should restrict the number of members of the Organizing Committees to not more than about 10.

11. IAU Finances.

a.

Financial Accounts and budget.

The Executive Committee confirmed its approval of the financial report as printed and distributed to the Adhering Organizations. The General Secretary and Assistant General Secretary then jointly submitted to the Executive Committee the estimates of the supplementary budget for 1973 and of the comprehensive budget for the 1974-1976, as approved by the Finance Committee.

BUDGET 1973

RECEIPTS IN U.S. DOLLARS

1. Contributions from Adhering Countries	91.200
2. Revenue from IAU publications	11.600
3. Interest on accounts	3.300
4. UNESCO subvention through ICSU	14.000
TOTAL	<u>120.100</u>

PAYMENTS IN U.S. DOLLARS

1. Administrative Office	29.700
2. Contribution to ICSU	2.150
3. Commission expenses	300
4. Specific projects	15.400
5. General Assembly	49.500
6. IAU Publications	7.700
7. Free copies to developing countries	7.150
8. Executive Committee	0
9. Officer's meetings	3.850
10. Symposia and Colloquia	21.000
11. Inter-Union Commissions	4.500
12. Projects approved by the Executive Committee	800
13. Representation	500
14. Bank charges and losses	300
15. Young Astronomer's school	6.600

TOTAL	<u>149.450</u>
RECEIPTS	<u>120.100</u>

EXCESS OF PAYMENTS OVER RECEIPTS	29.350
AVAILABLE FROM 1972 (about)	20.720

TO BE TAKEN FROM RESERVES	<u>8.630</u>
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BUDGET FOR 1974 - 1976
(\$438,92 U.S. at 28 June 1973)

RECEIPTS IN U.S. DOLLARS

1. Contributions from Adhering Countries	291.000
2. Revenue from publications	16.500
3. Interest on accounts	10.300
4. UNESCO subvention through ICSU	36.000

TOTAL	353.800
PAYMENTS	351.760

EXCESS OF RECEIPTS OVER PAYMENTS	2.040
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List of projects under Payments: Item 4.2	\$ U.S.
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Comm. 4, Ephemerides	880
Comm. 6, IAU Telegram Bureau	1.980
Comm. 16, Documentation, Meudon	1.870
Comm. 17, Special Working Group	1.870
Comm. 20, Minor Planets	2.200
Comm. 27, Catalogue of Variables	3.300
Inf. Bull. Southern Hemisphere	1.650
TOTAL	13.750

PAYMENTS IN U.S. DOLLARS

1. Administrative Office	124.300
2. Subscription to ICSU	5.820
3. Commission expenses	1.100
4. Projects of Commissions	
4.1 Exchange of Astronomers	29.000
4.2 Other projects	13.750
5. General Assembly	33.000
6. IAU publications	12.100
7. Symposium volumes for developing countries	15.350
8. Executive Committee meetings	15.400
9. Officer's meetings	9.900
10. Symposia and Colloquia	39.600
11. Inter-Union Commissions	14.300
12. Projects authorized by the Executive Committee	3.500
13. Representation	1.650
14. Bank charges and exchange costs	990
15. Young Astronomer's schools	16.500
16. Regional meetings	5.500
17. Refund to reserves	10.000
TOTAL	351.760

It was noted that the comprehensive budget for the ensuing period had to be balanced by increasing the contributions due from Adhering Countries by 25%. In the discussion, which followed, B.J. Bok said that he had been criticized by the U.S. National Committee for advocating a large increase of the IAU contribution only after a lapse of six years and that it had been recommended to him to introduce an automatic annual increase that would correspond to the per cent of inflation. L. Perek remarked that some countries would be reluctant to pay for the inflation of others, and thus considered the recommendation of the U.S. National Committee impracticable. Another suggestion was made by B. Lovell, namely, to increase each country's contribution by the per cent of inflation in that country.

It was eventually resolved to recommend to the General Assembly an increase by 25% of the unit of contributions (from 900 to 1.125 gold francs).

The General Secretary welcomed this decision and pointed out that several other ICSU bodies were considering increases of the same order, and that ICSU had decided to increase its unit by 40%.

B.J. Bok questioned the usefulness of the Information Bulletin for the Southern Hemisphere. J. Sahade took upon himself to investigate this question, and reported in a later session that a meeting of Southern Hemisphere astronomers, convened during the General Assembly, had expressed its wish to continue the publication of the Bulletin.

In conclusion of the discussion it was agreed to recommend the budgets presented by the General Secretary and Assistant General Secretary to the General Assembly for approval.

Moreover the Executive Committee resolved unanimously that it should be recommended to the future Executive Committee formally to approve the Financial Authority to the new General Secretary as set forth in the document kept in the archives of the Union and, especially, to transfer on him the responsibility for the banking accounts of the Union.

As to the investment of the IAU reserves it was agreed to defer this problem to the new Executive Committee.

12. Transfer of the administrative office.

The Assistant General Secretary reported that the future address of the IAU Secretariat would be c/o Astronomical Department, University of Thessaloniki, Thessaloniki, Greece. The staff of the office would consist of the Executive Secretary, the administrative assistant and a typist. The future General Secretary will receive financial help from his University.

The question of the removal of the staff and part of the office from Utrecht was discussed. The following decisions were taken:

the files for 1967-1970 will be removed to the archives at Ondrejov Observatory;

the files for 1970-1973 will be removed to Thessaloniki

the Executive Secretary and the Administrative Assistant will not transfer their furnishings to Thessaloniki as this would be too expensive. Instead of paying the removal costs, the Union will grant them \$2.000 U.S. each.

B.J. Bok remarked that such complications would not arise if the Union had a permanent seat. L. Gratton was not in favour of "stabilizing the Secretariat", as this could give difficulties to officers from Eastern Countries. If, however, the permanent seat would become indispensable, smaller countries, such as Switzerland, Holland, Belgium should be taken into consideration. B.J. Bok was of the opinion that Geneva would be acceptable to both western and eastern countries.

13. Publication Policy.

The Executive Committee discussed Heeschen's proposal to discontinue the Reports on Astronomy. It endorsed the view of J.B. Sykes that the reports are of great importance to astronomers, and resolved to maintain them. B.J. Bok said that the price of 80,32 U.S. \$ for the reports shocked astronomers in the USA, especially the young ones, and supported the strong recommendation of the US National Committee that every possible effort should be made to obtain reprints of single reports at minimum costs. The President pointed out that such reprints had already been available for Reports 1973, and asked J.B. Bok to inform US astronomers accordingly.

L. Perek recommended to examine the possibility of printing the reports in offset on the basis of camera copies. His suggestion was seconded by B. Lovell.

As to the production of Transactions XVB the following possibilities were examined:

- a. to produce them in a mimeographed form in Thessaloniki
- b. to publish them as a special number of the Information Bulletin
- c. to publish them, as foreseen in the contract with Reidel.

It was eventually agreed to publish Transactions XVB in the same form as Transactions XIV B, that however ample reprints of the list of Commissions and of the Alphabetical List of IAU Members should be made available. The Symposium volumes will continue to be published at the cost of D. Reidel Publ. Co., and distributed through normal commercial channels. The distribution list of free copies to members of the Executive Committee, of Organizing Committees of Symposia, and to institutions of developing countries was discussed. The following suggestions were made:

- a. to abolish the list,
- b. to send one free copy to each developing country,
- c. to ask developing countries wishing to remain on the distribution list for payment of 30% of the price,
- d. to distribute to the members of the Executive Committee only those copies in which they are interested.

The President summed up the discussion by declaring that the problem should be studied during the next year and the decision deferred to the next meeting of the Executive Committee.

L. Perek reminded that if the Union wished to terminate its contract with Reidel in 1976, notice should be given before 1 September 1975.

14. The XVIth General Assembly.

The French invitation to hold the XVIth General Assembly in Grenoble, France, in 1976 was read. It was agreed to recommend this invitation to the General Assembly for acceptance.

Among the countries coming into consideration for future General Assemblies, Bulgaria, Canada and the U.S.A. were mentioned. B.J. Bok emphasized that future General Assemblies would have to be held earlier in August in order to facilitate participation to those on the staff of U.S. Universities whose terms begin about 20 August.

15. Future Special Nominating Committee.

The Executive Committee elected H. Elsässer into the future Nominating Committee so that this Committee would consist of: the future President, the outgoing President (B. Strömberg), 4 members elected by the Nominating Committee (Blaauw, Pecker, Perek, Severny), and H. Elsässer elected by the Executive Committee.

In this connection B.J. Bok expressed his dissatisfaction with the fact that there are no young people in the Special Nominating Committee, and said that he was greatly concerned that the IAU would be governed by a self-perpetuating board of directors.

L. Perek disagreed with this view and pointed out that the Special Nominating Committee had been elected in 3 steps: in the first step each President of Commission had been asked to nominate 12 candidates, and from those nominations 22 names with the largest number of votes had been put to the vote of the meeting of Presidents of Commissions. In the second step Presidents of Commissions had elected 12 candidates for the vote of the Nominating Committee, and in the third step 4 members of the future Special Nominating Committee had been elected by the Nominating Committee; this must be considered a democratic procedure.

It was unanimously resolved to propose the Special Nominating Committee, in the composition mentioned above, to the General Assembly for approval.

SCIENTIFIC ACTIVITY OF THE IAU

16. Scientific Meetings.

The Assistant General Secretary reported of the IAU Symposia and Colloquia and of the Regional Astronomical Meeting held in the past period. He pointed out that the name of Symposium 67 had been changed to Variables as a key for Stars and Stellar System Evolution, and would have to be re-discussed. Preparations for a regional meeting in Vienna, in 1974, are under way. This regional meeting, proposed by Dr Meurers, was approved provided that the Local Organizing Committee is in a position to reserve for its organization at least 10.000 \$. A formal invitation will be necessary. In Tbilisi, arrangements were being made for a regional meeting in June 1975. The main topic of this meeting would be Stars and Galaxies. Kharadze and Ambartsumian come into consideration as chairmen of the Local Organizing Committee. The new Executive Committee will appoint the Scientific Organizing Committee.

B.J. Bok reminded that radio astronomy should be remembered as a topic for regional meetings. L. Gratton will examine the possibilities of holding a regional meeting in Italy.

Decisions as regards symposia and colloquia to be held in 1974 and later were referred to the new Executive Committee.

17. Specific Projects.

This subject was dealt with under point 11. of this report.

18. Relations with other organizations.

a.

The General Secretary gave a brief review of the development in ICSU and said that the new Statutes of this organization had been voted in. It was agreed that permission would be asked from the ICSU President to admit G. Contopoulos as an observer at the next meeting of the ICSU General Committee in September 1973.

URSI had submitted some proposals for change of the statutes of SCOSTEP, under discussion, and IUGG proposed that it would have 2 representatives in the Bureau. It was agreed to advocate that IUGG should only have one vote. There had been tendencies in the past years to reorganize URSI and to create from it, a part of the Union of Geophysics and a part of the IAU, a Union on the Planetary System. This solution is unacceptable for the IAU, nor was it accepted by URSI. It would be more convenient to remedy the present overlap in planetary matters by forming an Inter-Union Commission for the Planetary System, which could be formed out of IUCM. The General

Secretary was authorized to look after the interest of IAU in the forthcoming discussion.

b.

The Executive Committee resolved unanimously to recommend the future General Secretary G. Contopoulos as representative of the IAU on the General Committee and General Assembly of ICSU.

19. Representation.

The General Secretary made the following proposal as to the representation of the IAU in the various international bodies:

1. ICSU organizations
 - a. COSPAR: C. de Jager
 - b. IAB: J.B. Sykes
 - c. FAGS: G.A. Wilkins and G. Contopoulos
 - d. IUCAF: two names to be put forward by the new Executive Committee
 - e. SCOSTEP: Z. Švestka
 - f. IUCST: D. MacNally
 - g. CODATA: G.A. Wilkins
 - h. IUCS: B. Edlén, J.G. Phillips and M.J. Seaton
 - i. IUCM: A. Dollfus and E. Anders
 - j. COSTED: D. MacNally
2. Other organizations
 - a. Pic-du-Midi: A. Lallemand
 - b. CCDS: Wm. Markowitz
 - c. CCDM: A.H. Cook
 - d. CCIR: F.G. Smith and H.M. Smith
 - e. EPS: E.A. Müller
 - f. FAGS services
 - BIH: H.M. Smith and H. Enslin (Guinot remains Director)
 - IPMS: E.P. Fedorov and B. Guinot
 - IUWDS: F.W. Jäger
 - SPARMO: P. Simon and L.D. de Feiter

This proposal was unanimously accepted.

As to the representation on the Quarterly Bulletin of Solar Activities it was resolved to defer the decision to the new Executive Committee.

20. Re-discussion of problems dealt with at previous meetings.

The results of this re-discussion have been incorporated under the appropriate points of this report.

21. Resolutions adopted by Commissions, not however, by the Resolutions Committee.

Reference is made to point 9 of this report.

22. Any other business.

a.

According to a letter received by the President, Prof. W.J. Luyten complained that plagiarism is also observable among astronomers and suggested that a Committee on Ethics be established within the IAU to deal with such cases. It was felt that such matters can only be effectively dealt with on a national basis. It was agreed to take no action and to ask the President to answer Luyten in this sense.

b.

ICSU has established a Committee on Scientific Priorities. As a consequence the General Secretary has asked the Presidents of Commissions to consider the matter of scientific priorities in the fields of their commissions, and to discuss them in their commission meetings. Some of them mentioned lists of priorities in the reports on astronomy. Others will publish them in the reports of their Commissions to appear in Transaction XVB. The matter was also discussed at the meeting of Commission Presidents where it was felt that setting up of priorities in science is a dangerous thing. The problem will be discussed at the meeting of the ICSU General Committee in Leningrad.

It was agreed that this problem should be carefully followed by the future Executive Committee.

c.

A cable sent in by J.E. Beckman informed the General Assembly of the forced detention of Y. Levich, a Jewish astrophysicist, in a military work-camp in the USSR, and asked for intercession of the Union. The problem was discussed at length and it was felt that the Union as such cannot act in this case that, however, individual members of the Executive Committee may react if they felt to do so. The General Secretary will write a letter to Beckman in this sense.

d.

The Executive Committee, approved the list of new Members as submitted by the Nominating Committee. The names of Dr J. Geiss, Switzerland and F. Macchetto, The Netherlands, were added by the Executive Committee.

e.

The problem whether to or not to introduce individual membership fees was deferred to the next meeting of the Executive Committee.

f.

It was agreed that a Working Group on astrodynamics (i.e. the motion of artificial celestial bodies) should be formed within Commission 7; the Working Group on Numerical Data would henceforward be within the jurisdiction of Commission 5. Dr Wilkins will be informed and had already agreed with this proposal.

g.

It was decided that Commission 50 on Protection of Existing and Potential Observatory Sites would be a Committee of the Executive Committee.

23. Closing by the President.

The President thanked L. Goldberg and E.A. Müller for having attended the meeting and expressed his gratitude to the members of the Executive Committee and the staff. He thanked especially the members leaving the Executive Committee, the 2 advisors, and the General Secretary and Assistant General Secretary. He then closed the meeting at 11.45 p.m.