

UNION ASTRONOMIQUE INTERNATIONALE  
INTERNATIONAL ASTRONOMICAL UNION

40th Meeting of the Executive Committee

Lagonissi, Greece

Tuesday, 9 September - Thursday, 11 September 1975

P R O C E E D I N G S

The 40th meeting of the Executive Committee of the International Astronomical Union was held in Hotel Lagonissi, Greece, on 9, 10 and 11 September 1975, with sessions from 09,00 to 12,30 and 16,00 to 19,00. The meeting was preceded, on Monday, 8 September, by an Officers Meeting and followed, on Friday, 12 September, by an excursion to the Kryonerion Observatory near Korinth.

Present at the meeting of the Executive Committee were:

President: L. Goldberg

Vice-Presidents: J.G. Bolton  
Ch. Fehrenbach  
W. Iwanowska  
P.O. Lindblad  
B. Lovell  
E.R. Mustel

Adviser: C. de Jager

General Secretary: G. Contopoulos

Assistant General Secretary: E.A. Müller

Executive Secretary: A. Jappel

Administrative Secretary: J. Dankova

Prof. B. Strömgren, former President, Adviser to the Executive Committee, was excused.

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

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A G E N D A

I. OPENING BY THE PRESIDENT

II. ADMINISTRATIVE MATTERS

1. Report of the 39th meeting of the Executive Committee
2. Approval of the Agenda
3. Report by the General Secretary on the Administrative Office
4. Report by the President on the progress made in the Special Nominating Committee
5. Problem of IAU publisher
6. Statutes and By-laws: The General Assembly will be asked to approve the insertion of the following clause in By-law 12a (Special Nominating Committee): "Members of the Executive Committee, both present and past, cannot be elected into the Special Nominating Committee."
7. New Adhering Organizations - with report on the People's Republic of China
8. IAU Commissions
  - (a) Approval of new members and consultants
  - (b) Any other matter - Lunar Nomenclature
9. General Assemblies:
  - (a) The XVIIth General Assembly - report of the General Secretary on the state of preparation
  - (b) The XVIIth General Assembly - Canadian invitation
  - (c) Future General Assemblies - appeal for invitations - interval between them
10. IAU Finances
  - (a) The General Secretary reports on the financial situation of the IAU
  - (b) Discussion of budget for 1976
  - (c) Discussion of budget for 1977-1979
  - (d) Grants to young astronomers
  - (e) Proposed increase of contribution, Individual Membership Fees
11. Publications
  - (a) The Assistant General Secretary reports on IAU publications
  - (b) State of preparation of Reports on Astronomy 1976. Report by the General Secretary
12. SCIENTIFIC ACTIVITY
  - (a) Invited Discourses
    - (i) Infrared Astronomy and Galactic Dust - J.-C. Pecker (in French)
    - (ii) Astronomy and the Laws of Physics - P. Morrison
    - (iii) X-ray Sources - I.S. Shklovsky
  - (b) Joint Discussions  
Accepted so far:
    - (i) The Abundance of the Elements
    - (ii) Cosmic Rays
    - (iii) Space Missions to the Moon and PlanetsNew proposals
  - (c) Commission Meetings

13. IAU Symposia and Colloquia - report by the Assistant General Secretary
14. Regional Meetings
15. Other Scientific Meetings - report by the Assistant General Secretary
16. Young Astronomers' Schools

IV. RELATIONS TO OTHER ORGANIZATIONS

17. ICSU and IAB (ICSU Abstracting Board)
18. COSPAR
19. IUCM - IUCMP
20. FAGS with special emphasis on IPMS
21. General relations to other organizations

V. OTHER BUSINESS

22. Invitation of members of other organizations to participate in the XVIIth General Assembly
23. Symbol of the IAU
24. International Solar System Decade (ISSD)
25. Purpose, organization, structure and importance of IAU General Assemblies
26. Future of the IAU
27. Any other matter
28. Next meeting of the Executive Committee

VI. CLOSING BY THE PRESIDENT

I. OPENING BY THE PRESIDENT

The President opened the meeting on Tuesday, 9 September at 9,00 with a word of welcome to the members of the Executive Committee.

II. ADMINISTRATIVE MATTERS

1. Report of the 39th meeting of the Executive Committee

The Proceedings had been distributed. A few corrections were respected. In this final form the report was approved.

2. Approval of the Agenda

The agenda, as prepared by the General Secretary and circulated before the meeting, was approved.

3. Report on the Administrative Office

The President announced that the Administrative Office would be moved to Athens for the rest of the present term.

The General Secretary informed the meeting of the invitation received from R. Michard to establish the permanent seat of the Union in the Observatoire de Paris any time after the completion of a new building of the Observatoire, which is expected around February 1976. The Observatoire de Paris is prepared to place at the Union's disposal 2 - 3 rooms and a storing space for its archives. It was resolved to accept this offer and establish the permanent seat in Paris in 1979, after the term of the next General Secretary, who had already secured the rooms for the Secretariat at the Lausanne University in Switzerland.

The establishment of a permanent seat would require the employment of an Astronomer as Executive Secretary, and this again a change in the Statutes specifying his responsibilities. The General Secretary in collaboration with the Executive Secretary will prepare draft Statutes to this effect. The future Assistant General Secretary has to be informed immediately of the establishment of the permanent seat.

4. Report on the progress in the Special Nominating Committee

The President informed the meeting that the proposed future President, one Vice-President, and the Assistant General Secretary had accepted the candidature. Two more Vice-Presidents will have to be nominated.

5. IAU Publisher

The General Secretary reported that twelve publishers in Europe (German Democratic Republic included) and U.S.A. had been asked for bids to produce and sell IAU Publications. This action was to result in lower publication costs. Only 3 positive responses were received. The North-Holland Publication Company had to be excluded for unacceptably high prices. The considerations narrowed down to the offers of Springer Verlag, Berlin, and Reidel Publishing Company, Dordrecht, whose terms were as follows:

		All prices in DM	
		<u>Values per page (camera-ready copies)</u>	
	<u>REIDEL</u>		<u>SPRINGER</u>
Cloth	0.222	Average	0.189
			<u>per page</u>
		250-290 pages	51 DM
		290-350	" "
		350-410	" "
Paper	0.145	Average	0.180

Members of the IAU 1/3 discount

REIDEL

TRANSACTIONS A and B

SPRINGER

Same as above

0.106 DM

(128 DM for 1200 pages)

INFORMATION BULLETIN

About 0.90 DM per copy (printed)                    1.30 DM per copy (camera-ready)  
(plus 0.64 postage per copy)                            (4000 copies for 5.200 DM)

After a careful examination the Executive Committee found the offer of the Reidel Publishing Company somewhat more favourable than that of the Springer Verlag, and resolved to continue the contract with the former.

The General Secretary will write the necessary letters. Reidel will be asked to draft a new contract.

In this connection it was agreed that, starting with 1976, all IAU Symposium volumes would be produced from camera-ready copies. Great attention will have to be paid to the selection of editors. The Assistant General Secretary will have to inform the editors of their new responsibilities and duties, and will have to re-write the rules concerning IAU Publications in which the possibility of accepting contributed papers will have to be ruled out completely. Such papers will only be listed by title and author with reference to the journal, where they appeared or will appear.

By using camera-ready copies and excluding contributed papers it is expected that the cost of IAU Proceedings Volumes will be of the order of \$ 15 (Members \$ 10) instead of the \$ 30-60 of today.

Transactions XVI A will be produced in the old form, that is, in hot metal. The camera-ready copies for Transactions XVI B will be prepared by the Commissions. Presidents of Commissions will be informed by the General Secretary.

#### 6. Statutes and By-laws

It was agreed to recommend to the General Assembly to change the second sentence of the art. 12.(a) of the By-laws (S.M.C.) as follows: "This consists of the President and past President of the Union, a member proposed by the retiring Executive Committee, and four members selected by the Nominating Committee from among twelve Members proposed by Presidents of Commissions. Other than the President and the immediate past President, present and former members of the Executive Committee shall not serve on the Special Nominating Committee."

#### 7. Adhering Organizations. People's Republic of China

It was noted that no applications for admission of new Adhering Countries had been received.

The reports of the President and of the General Secretary, and the ensuing discussion showed that, in spite of several efforts, no progress had been made in persuading the People's Republic of China to re-join the Union. It was noted that IUGS resolved that the admission of Taiwan was made in breach of their Statutes. The IAU should not follow the action taken by UMO. In fact, the IAU had accepted the membership of the People's Republic of China long before this country was accepted in the UMO. The IAU will go as far as possible to meet the objections of China, but without changing its principle that astronomers from all parts of the world should be allowed to participate in it.

#### 8. IAU Commissions

(a) The Executive Committee appointed G.A. Newkirk as Acting President, and

V. Bumba as Acting Vice-President of Commission 10.

The following co-options of new members and consultants were approved:

- Commission 5: R.S. Dixon, Mme Rémy-Bettin - members
- Commission 8: W. Brouw, C.C. Counsellman III, F. Noël, C.M. Wade - members
- Commission 12: G. Godoli, H. Holwegger, R.W. Noyer, J.H. Thomas - members
- Commission 14: E.C. Beatty - consultant
- Commission 16: H. Masursky - consultant
- Commission 20: M. de Pascual Martinez - member
- Commission 21: L. Banderman, A. Frey, D.J. Kessler, A. Levasseur, H. Link, R.D. Mercer, E. Pitz, J.R. Roach, J.G. Sparrow, H.J. Staudt, H.A. Zook - consultants
- Commission 31: G.A. Wilkins - member; H.F. Fliegel - consultant
- Commission 41: I.P. Verdet - consultant
- Commission 42: Kan-Ching Leung, Virginia Triabler - members

The composition of Commission 50 was approved as follows:

President: M.F. Walker

Vice-President: R. Cayrel

Organizing Committee: G.A. Anguita, F. Bertola, A. Blaauw, H.A. Brück, D.L. Crawford, H. Elsässer, S.C.B. Gascoigne, W. Matzig, S. van den Bergh

Members: Ardeberg A.L., Barreto L.M., Bhattacharyya J.C., Boyarchuk A.A., Dommangeat J., Gylldenkerne K., Haupt H., Kubiela A., Leibowitz B., Navridis L.N., Mendoza E.E., Osawa K., Oommen J.J.S.P., Sanchez-Martinez F., Treanor P.J., S.J., Tschandl J. Wayman P.A., Woolley, Sir R., Woszczyk A.

Consultants: Lewis B.M., Molnes B., Markkanen T.

- (b) On the proposal of the General Secretary and the Assistant General Secretary it was agreed that Keenan's Atlas of Stellar Spectra later than G-type will be subsidized by \$ 1000 U.S. from item "Executive Committee Projects" of the budget.

It was regretted that Presidents of Commissions do not always provide sufficient details on the candidates they propose as new IAU Members. In his letter to Commission Presidents, the General Secretary will emphasize that such supporting information is indispensable.

#### Lunar Nomenclature

The General Secretary reported that following the resignation of D.H. Menzies P.M. Millman had been appointed as Acting Chairman of the Task Group on Lunar Nomenclature. This was approved. From the discussion of the problems in Lunar and Planetary Nomenclature, the following should be emphasized:

- The Executive Committee expressed its concern because no resolution was made for naming the craters of Mercury. E.R. Mustel reported that in Levin's view, opposed by Dollfus, but supported by the American delegation to the Moscow meeting, large craters on Mercury should be given names of great men of culture. The Executive Committee was in favour of this view since resolutions of the Working Group need not be unanimous. Millman and Morrison will be contacted by the President.
- The results of the meeting on Lunar and Planetary Nomenclature, held in Moscow, are satisfactory. Resolutions 1, through 5, passed by the Working Group, were accepted by the Executive Committee with the following remarks:  
Resolution I, par. 2, the name II is J. Herschel. Normally no initials are used.  
As regards Resolution II, doubt was expressed whether the names of presently active observatories are desirable.

As to Resolution III, par. 2, instead of "radio techniques" it should be "radio and other techniques" and instead of "radio and radar scientists, electrical engineers and information theoreticians" it should be "radio, radar and space scientists".

On the recommendation of the Working Group for Planetary System Nomenclature the Executive Committee also approved the names for the following satellites of Jupiter: V - Amalthea, VI - Himalia, VII - Elara, VIII - Pasiphae, IX - Sinope, X - Lysithea, XI - Carne, XII - Ananke, XIII - Leda.

In general it was felt that the Executive Committee should only raise objections to the action of the Working Group if something seriously wrong is found.

#### 9. General Assemblies

(a) The General Secretary read passages from J. Kovalevsky's report on the state of preparation for the General Assembly in Grenoble. It was noted that the Local Organizing Committee needs the following information from the Secretariat: dates and topics of Colloquia and Symposia, preliminary scientific programme (Joint Discussions, etc.), speakers and topics of Invited Discourses, amount of participation fee, and any other information to appear in the preliminary programme.

The Executive Committee was satisfied that the preparations are under way. Ch. Fehrenbach stressed that the participation fee must not be lower than 200 FF. The General Secretary asked Ch. Fehrenbach to suggest to the Local Organizing Committee a participation fee ranging from 150-200 FF. W. Iwanowska was strongly in favour of keeping the participation fee as low as possible and of cutting out all expenses for entertainment. On the proposal of the President it was resolved to request from the Local Organizing Committee a budget on how the participation fee would be spent.

Ch. Fehrenbach reported that the French authorities have placed at the disposal of the Local Organizing Committee

10 return tickets in the total amount of 65.000 FF,  
60 grants for young astronomers, each up to 1.700 FF.

The Executive Committee acknowledged these generous arrangements with thanks and agreed that the grants would be distributed by the Officers. The General Secretary is to inform National Committees accordingly and ask them to send in applications with supporting evidence.

For all other details regarding the XVIIth General Assembly, the Chairman of the Local Organizing Committee, J. Kovalevsky, should be contacted.

(b) The Canadian National Committee confirmed that participation in the XVIIth General Assembly in Montreal, 1979, would be open to all accredited participants without discrimination.

(c) The General Secretary received an inquiry from the Bulgarian National Committee of Astronomy regarding the possibility of holding the XVIIth General Assembly in Bulgaria. It was recommended not to ask other countries for further invitations and wait 1 more year for details from Bulgaria.

The investigation of the General Secretary among Adhering Countries showed a clear preference for maintaining the 3 years interval between General Assemblies.

#### 10. Finances

(a) and (b) The survey of IAU income and expenditure from 1.1. to 30.6.1975, and the estimate of the budgets for 1975 and 1976 were acknowledged without discussion

(c) The Executive Committee then drew up the following budget for the years 1977 - 1979, to be presented to the Finance Committee during the XVIIth General Assembly.

#### Draft Budget of the IAU for 1977-1979

Unit of Contribution 1.125 gold francs

(equal 1.329,93 Sw. frs or \$ 438,92 U.S. as on 28 June 1973,  
and \$ 517,48 U.S. as on 10 June 1975)



RECEIPTS

	Budget 1977/79	Budget 1974/76	Increase/ Decrease in %	
	Sw. frs	U.S. dollars	Sw. frs	
1. Contribution from Adhering Countries	857,804,85	333,776,20	881,730,00	-2,71
2. Revenue from publication	61,260,03	23,836,59	49,995,00	22,53
3. Interest on accounts	33,924,00	13,200,00	31,209,00	8,70
4. UNESCO subvention through ICSU	92,520,00	36,000,00	109,080,00	-15,08
<u>Total receipts</u>	<u>1,045,508,88</u>	<u>406,812,79</u>	<u>1,072,014,00</u>	<u>-2,47</u>
Total payments	1,129,144,85	439,355,45	1,065,832,80	
Excess of payments over receipts	83,635,98	32,542,76	-	-
Excess of receipts over payments	-	-	6,181,20	-

PAYMENTS

	Sw. frs	U.S. dollars	Budget 1974/76	Increase/ Decrease in %
	Sw. frs	U.S. dollars	Sw. frs	Sw. frs
1. Administrative Office	436,900,00	170,000,00	376,629,00	16,00
2. Subvention to ICSU	21,445,12*	8,344,40	17,634,60	21,60
3. Commission expenses	10,280,00	4,000,00	3,333,00	208,43
4. Projects of Commissions				
1. Exchange of Astronomers	60,000,00	23,346,30	87,870,00	-17,17
2. Other projects	31,611,00	12,300,00	41,662,50	-24,12
5. General Assembly	136,210,00	53,000,00	99,990,00	36,22
6. Publication	38,550,00	15,000,00	36,663,00	5,14
7. Publications for developing countries	50,000,00	19,455,25	46,510,50	7,50
8. Executive Committee	46,260,00	18,000,00	46,662,00	-0,86
9. Officers' Meetings	25,700,00	10,000,00	29,997,00	-14,32
10. Symposia, Colloquia	117,540,74	45,735,19	119,988,00	-1,71
...-Union Commissions	51,400,00	20,000,00	43,329,00	15,70
12. Executive Committee Projects	12,850,00	5,000,00	10,605,00	21,08
13. Representation	30,000,00	11,673,15	4,599,50	552,20
14. Bank charges	3,558,00	1,384,43	2,559,70	3,
15. Astronomers' Schools	26,000,00	10,116,73	49,995,00	-47,99
16. Regional Meetings	30,840,00	12,000,00	16,665,00	85,14
17. Debt to ICSU	-	-	-	-
18. Refund to reserves	-	-	30,300,00	-
Total payments	1,129,144,86	439,355,45	1,065,832,80	5,97

\* 23,589,63 if unit of contribution increased  
Total payments are then:  
Sw. frs = 51,289,37  
or 6,14 % increase

Projects under Payments 4.2.

<u>Commission</u>	<u>Sw. frs</u>	<u>U.S. dollars</u>	<u>1974/76</u> <u>Sw. frs</u>
4. Ephemerides	3,855,-	1,500,-	2,056,00
6. Telegram Bureau	7,196,-	2,800,-	5,088,60
16. Documentation, Mendon	6,425,-	2,500,-	4,805,90
17. Special Working Groups	6,425,-	2,500,-	4,805,90
20. Minor Planets	7,710,-	3,000,-	5,654,00
21. Variables Catalogue	-	-	8,481,00
Inf. Bull. South. Hem.	-	-	4,240,50
<b>Total</b>	<b>31,611,00</b>	<b>12,300,00</b>	<b>35,131,20</b>

IAU BUDGET 1977-1979

as adjusted for 10 % increase of unit of contributions from Adhering Countries

R E C E I P T S

	<u>Sw. frs</u>	<u>U.S. dollars</u>	<u>Budget 1974/76</u> <u>Sw. frs</u>	<u>Increase/</u> <u>Decrease in %</u> <u>Sw. frs</u>
1. Contributions from Adhering Countries	943,585,34	367,153,82	881,730,00	7,02
2. Revenue from publications	61,260,03	23,836,59	49,995,00	22,53
3. Interest on accounts	33,924,00	13,200,00	31,209,00	8,70
4. UNESCO subvention through ICSU	92,520,00	36,000,00	109,080,00	-15,18
<b>Total receipts</b>	<b>1,131,289,37</b>	<b>440,190,41</b>	<b>1,072,014,00</b>	<b>5,52</b>
<b>Total payments</b>	<b>1,131,289,37</b>	<b>440,190,41</b>		
<b>Excess of receipts over payments</b>	<b>-</b>	<b>-</b>		
<b>Excess of payments over receipts</b>	<b>-</b>	<b>-</b>		

The comments of the General Secretary on the budget were read and discussed.

(d) The General Secretary suggested that the 20 grants of \$ 150 each to young astronomers might perhaps be changed into 40 grants each of \$ 75. This matter will be discussed again by the Officers.

(d) Increase of contribution, Individual membership fees

In order to balance the approved budget for 1977-1979; an increase of contributions from Adhering Countries is necessary. It was agreed to propose to the General Assembly an increase of 10%. Minor adjustments within the draft budget were left to the discretion of the General Secretary.

In the general discussion that preceded the approval of the budget, the following items were reduced: 4.1 Exchange of Astronomers from 100,230 to 60,000 Swiss frs.; 4.2 Other Projects from 48,830 to 31,611 Sw. frs.; 7. Publications for Developing Countries from 102,800 to 50,000 Sw. frs.; 13. Representation from 41,120 to 30,000 Sw. frs.; 15. Astronomers' Schools from 51,400 to 26,000 Sw. frs. On the other hand, it was recommended to raise the allocation for Symposia and Colloquia over the proposed amount of 107,940 Sw. frs. (respected in budget as above).

The activity of Commission 38, Exchange of Astronomers, was criticized. The President asked that a letter should be written to the President of Commission 38 expressing the dissatisfaction of the Executive Committee with the way the program

had been administered and the way the money had been spent. On the proposal of P.O. Lindblad it was agreed that new rules should be set up for the distribution of the funds available to Commission 38. The General Secretary and W. Iwanowska recommended that these rules should include a change of procedure so that grants would not be limited to travel expenses only, and that the number of persons would be increased by avoiding grants for travels to remote countries. Countries providing ample exchange possibilities through their own exchange agreements should be excluded from the program. The President of Commission 38 will have to prepare for each meeting of the Executive Committee a special report.

As to other projects of Commissions it was decided to discontinue the grants for the Information Bulletin for the Southern Hemisphere and the Variable Stars Catalogue. However, a veritytype machine necessary for the production of the Variable Stars Catalogue will be paid for from budget item 12. "Executive Committee Projects". The General Secretary was authorized to contact the other recipients of grants in order to find out whether the subventions to the projects are still justified. This applies in particular to the IAU Telegram Bureau at the Smithsonian Institution.

As regards the IAU publications distributed at reduced prices to institutions in developing countries, the General Secretary will re-assess the number of copies to be sent to each country.

The costs of representation might be reduced by asking the prospective representatives whether their institutions would be prepared to pay for their expenses. Moreover, representatives should be changed if they move to a more distant country.

It was recommended that the money for astronomers' schools should be spent more efficiently, by using local professors as far as possible.

The budget for 1977-79, as approved by the Executive Committee, will be circulated to Adhering Organizations for comments. They will be informed of the proposed increase of contribution which will permit them to make the necessary budgetary arrangements.

The possibility of improving the finances of the Union by introducing individual membership fees was re-discussed. The majority of Adhering Countries that responded to the General Secretary's inquiry did not favour such fees. The Executive Committee therefore decided to abandon the idea for the present.

#### II. IAU Publications

(a) The Assistant General Secretary reported on the state of publication of the Symposium volumes, which appeared up to No. 69. Moreover, there appeared the proceedings of the COSPAR/IAU/IUTAM Symposium on Satellite Dynamics and those of the Second European Astronomical Meeting in Trieste. The proceedings of the First European Solar meeting held in Florence, Italy, will be out by end of October.

The proceedings of the Third European Astronomical meeting in Tbilisi will be edited by Kharadze and published by the Academy of the Georgian SSR, hopefully before the XVIIth General Assembly.

(b) On the proposal of the General Secretary it was decided that the Reports on Astronomy 1976 will be divided in 3 separate volumes. The grouping of Commissions will be decided by the General Secretary.

#### III. SCIENTIFIC ACTIVITY

##### 12. Scientific content of the XVIIth General Assembly

###### (a) Invited Discourses

J.-C. Pecker and P. Morrison accepted to give Invited Discourses on respectively "Infrared Astronomy and Galactic Dust" and "Astronomy and the Laws of Physics". It is not yet clear if I.S. Shklovsky will come to Grenoble to give an Invited Discourse on "X-ray Sources". It was decided not to withdraw the invitation to Shklovsky, and to ask C. Sagan to present a discourse on the "Exploration of the Planets". Thus, if both Shklovsky and Sagan accept, there will be 4 Invited Discourses in Grenoble.

(b) Joint Discussions

The Joint Discussions greatly add to the scientific value of the General Assembly and hence it was agreed to increase their number to seven. Accepted were:

1. "Galactic Structure in the Direction of the Galactic Polar Caps" proposed by Commissions 25, 33, and 45, of interest also to Commission 40.
2. "X-ray Binaries and compact Objects", to combine proposals by Commissions 42, 44, and 48; of interest also to Commissions 35 and 40.
3. "Space Missions to the Moon and Planets", proposed by Commissions 16 and 17.
4. "Clusters of Galaxies, Cosmology and Intergalactic Matter" (title not final) to combine proposals by Commissions 28, 34, 40, 47 and 48.
5. "Stellar Atmospheres as Indicator and Factor of Stellar Evolution, Physical Processes and Observational Evidence", proposed by Commission 36, of interest also to Commissions 29, 35 and 44.
6. "Small Scale Structure of Solar Magnetic Fields", proposed by Commissions 10 and 44, of interest also to Commissions 12 and 36.
7. "The Impact of Ultraviolet Observations on Spectral Classification", proposed by Commissions 29 and 44, of interest also to Commission 45.

It was recommended to reserve the following topics for Joint Meetings:

- a. Astronomical Constants and Ephemerides (Commissions 4, 8, 31, etc.)
- b. Advances in Techniques for the Determination of the Rotation of the Earth (Commissions 4, 8, 9, 19, 31 and 40)
- c. Early Books in Astronomical Observatories (Commissions 5, 41)
- d. Physics of Dense Matter (Commissions 35, 48)
- e. Reports on Skylab and OSO-8 (Commissions 10, 12, 44)
- f. Effects of Solar Activity on Weather (Commissions 10, 12)
- g. Results on Interplanetary Dust and Zodiacal Light obtained from Pioneer 10 and 11 Deep Space Probes and the Helios close-in Solar Probes (Commissions 21, 22)
- h. The Observational Evidence of the Heterogeneity of Stellar Surfaces (Commissions 26, 27, 29, 34 and 35)

13. IAU Symposia and Colloquia

The Assistant General Secretary reported on past Symposia and Colloquia and on already accepted or proposed future IAU meetings.

The previously accepted Symposia and Colloquia for 1975-1976 are as follows:

SYMPOSIUM:

- No. 72: "Abundance Effects in Classification", Lausanne, Switzerland, 8-11 July 1975
- No. 73: "Structure and Evolution of Close Binary Systems", Cambridge, U.K., 29 July - 1 August 1975
- No. 74: "Radio Astronomy and Cosmology", Cambridge, U.K., 16 - 20 August 1976
- No. 75: "Star Formation", Geneva, Switzerland, 6 - 10 September 1976

COLLOQUIA:

- No. 30: "Jupiter", Tucson, Arizona, USA, 18 - 23 May 1975
- No. 31: "Interplanetary Dust and Zodiacal Light", Heidelberg, F.R.G., 10 - 13 June 1975
- No. 32: "Physics of Ap Stars", Vienna, Austria, 8 - 10 September 1975
- No. 33: "Observational Parameters and Dynamical Evolution of Multiple Stars", Oaxtepec, Mexico, 13 - 16 October 1975
- No. 35: "Compilation, Critical Evaluation and Distribution of Stellar Data", Strasbourg, France, 19 - 21 August 1976  
(Note: Editor - Jaschek instead of de Jong)

No. 36: "Energy Balance and Hydrodynamics of the Chromosphere and Corona",  
Nice, France, 6 - 10 September 1976

The IAU sponsorship of Colloquium 34 (Mercury) had been withdrawn. However, no other Colloquium will take the number 34.

Future IAU Symposia:

It was recommended to join the topic "Planetary Theory and Related Application on the Construction of Ephemerides" and the topic "Dynamical Astronomy" into one Symposium under the title "Planetary and Satellite Dynamics", to be held in Cambridge, U.K., from 17-19 August 1976. The name of G.A. Chebotarev, who died, is to be deleted from the Scientific Organizing Committee. S. Hamid should be added to it. J. Chapront is to contact P.J. Message for a final proposal. Suggested Editor: G.E.O. Giacaglia. The Executive Committee will decide by correspondence.

It was found that the proposed Symposium on "Planetary Nebulae", June 1977, is an important topic; however, more information is needed.

The proposal for a Symposium on "Structure of the Universe and the Formation of Galaxies", to be held in Talin, U.S.S.R., from 30 August to 2 September 1977, received during the meeting, was considered favourably. This proposal requires formal endorsement of the Presidents of Commissions 28, 40 and 47, and more information.

Newly accepted IAU Colloquia:

No. 37: "Redshifts and Expansion of the Universe", Institut d'Astrophysique, Paris, France, 6-9 September 1976. Sponsored by Commission No. 28 (E.B. Holmberg). Scientific Organizing Committee: S. van den Bergh (Chairman). Editor of Proceedings: B.E. Westerlund. IAU support: \$ 500.

No. 38: "Problems of Stellar Convection", Nice, France, August 1976 (5 days), before the IAU General Assembly in Grenoble. Suggested by Commission 35 (L. Mestel). Scientific Organizing Committee: E.A. Spiegel (Chairman). Editor(s): to be appointed. IAU support: \$ 500.

No. 39: "Relationship between Comets, Minor Planets and Meteorites", Lyon, France, 17-20 August 1976. Suggested by Commission 15 (A.H. Delsemme) and co-sponsored by Commissions Nos. 20 (L. Kresak) and 22 (B.A. Lindblad). Scientific Organizing Committee: A.H. Delsemme (Chairman). Editors: F. Gehrels, E. Anders, A.H. Delsemme. IAU support: \$ 500.

No. 40: "Astronomical Applications of Image Detectors with Linear Response", Menden, France, 13-15 September 1976. Suggested by Commission No. 9 (A.B. Meinel). Scientific Organizing Committee: M.F. Walker (Chairman). Editors: M. Duchesne and G. Lelievre. IAU support: \$ 500.

Mentioned were the proposals for Colloquia on

- a) "Non-pulsating Variable Stars", and
- b) "Photometry of Emission Line Objects".

The latter proposal was received during the meeting.

Presidents of Commissions will be contacted for endorsement of both proposals. More information is needed.

It was decided to co-sponsor:

- a) the COSPAR/IAU Symposium on "Galactic and Extragalactic Infrared and Sub-millimeter Astronomy" (IAU representative: H. Friedman)
- b) The COSPAR/ITCG/IAU Symposium on "Scientific Applications of Lunar Laser Ranging" (IAU representative: B. Guinot).  
The General Secretary will take the necessary steps.

14. Regional Meetings

The reports of W. Iwanowska and E.K. Kharadze on the Third European Astronomical Meeting in Tbilisi, U.S.S.R., 1 - 5 July 1975, were presented.

P.O. Lindblad reported on the possibilities of holding a Regional Meeting in one of the Scandinavian countries, in 1977 (Stockholm or, more probably,

Oslo). Up to 500 participants could be accommodated. As regards the topics and other details it was resolved to await a formal proposal.

The General Secretary reported on a proposal to hold a Regional Meeting on "Variable Sources of Radiation and Galaxies" in New Zealand in 1978. Bolton said that this meeting has a good chance of a large attendance from Australia and from South Asia. It was felt that the topic needs clarification. The proposal was considered favourably also with regard to the fact that it may stimulate Regional meetings in other than European areas.

Z.R. Mustel reported that the Astronomical Council of the USSR considers the organization of an Asian astronomical conference in Tashkent for 1977 or 1978, to which astronomers from India, Japan, Burma, China, etc. would be invited. This idea was found very interesting.

In the general discussion on Regional meetings the following problems came to the fore:

- the clash between the Leicester and Philisi Meeting is regrettable;
- greater efforts to coordinate European meetings should be made;
- B. Lovell emphasized that overlaps with Symposia and Colloquia must also be avoided;
- young astronomers must be given an opportunity to present their papers;
- the proceedings need not be published, however abstracts of the papers should be presented before the meeting;
- the greatest value of the meetings consists in personal discussions.

#### 15. Other Scientific Meetings

The Assistant General Secretary presented a list of international conferences outside the IAU of interest to astronomers. This survey was appreciated.

#### 16. Young Astronomers Schools

It is regrettable that the programme, list of lecturers, and other details on the Young Astronomers School in Athens were not available to the President of Commission 46 and to the Executive Committee. The General Secretary said that about \$ 20,000 were contributed to the organizers of the School by the Greek Government.

#### IV. RELATIONS TO OTHER ORGANIZATIONS

17. (a) ICSU. The General Secretary introduced the letter of the President of ICNU dated 9 July 1975 in which it is suggested that the resolutions accepted by ICNU should be ratified by the Unions. The Unions would either ratify the appropriate ICNU resolutions, both past and future, or write their own resolutions on the subject or, in case of disagreement, would make their position known. The matter will be discussed at the meeting of the ICNU General Committee in Vienna, this September. The General Secretary presenting the Union at this meeting will ask for a list of resolutions which come into consideration, with particular emphasis on those with political consequences. B. Lovell remarked that the resolutions should come to the Executive Committee before the ICNU meetings, so that the General Secretary may be briefed how to present the Union's opinion and how to vote. It was remarked, however, that in many cases the ICNU resolutions are not known before the ICNU Meetings.

The General Secretary felt unhappy about the present Statutes of ICNU, especially with the fact that not all the Unions are represented on the Executive Board. There should be a moment to suggest a reformulation of the ICNU Statutes.

(b) IAB. The General Secretary presented the report of J.-C. Pecker on the meeting of the ICNU Abstracting Board held in Brussels, June 1975, and his suggestions regarding the reduction of representation costs. In compliance with one of these suggestions it was decided to appoint V. Weidemann as IAU representative at the next meeting of the ICNU Abstracting Board. Weidemann will attend the meeting also for other reasons.

#### 18. COSPAR

De Jager stated that it is difficult to combine in one person the function

of President of COSPAR and that of the IAU representative on this Committee. He will investigate the possibility of appointing another representative of a Union if the first representative becomes President.

De Jager also reported on the work of the COSPAR ad hoc Group for ISSD which was unsatisfactory. The COSPAR Executive Committee contemplated the dissolution of the Group; however, it was eventually felt more advisable to await one more year.

Ch. Fehrenbach accepted to represent the IAU at the meetings of the COSPAR ad hoc Group for ISSD.

19. IUCM - IUCMP

It was noted that the IOSU General Assembly recommended the dissolution of IUCM in September 1975. In the ensuing discussion it was agreed to propose the replacement of IUCM not by a formal Inter-Union Commission, but by an informal co-ordinating committee on the Moon and Planets (COMIP), to consist of representatives of the interested Unions and of COSPAR. The General Secretary and C. de Jager prepared a Draft Constitution of the Committee. M. Millman was proposed as IAU representative on COMIP and J.W. Hovenier as its Secretary.

20. FAGS

The General Secretary informed the meeting of the discussion whether the permanent FAGS service, International Polar Motion Service (IPMS) should continue its work unrestricted or whether it should be limited. It was recommended not to take any action before the meetings of the interested Commissions in Grenoble. The Presidents in question will be asked to put this point on the programmes of their meetings.

21. IOSU Committee on Science Teaching

On the proposal of E.A. Müller it was approved to raise the IAU contribution to this Committee from \$ 200 to \$ 300 for 1976.

V. OTHER BUSINESS

22. The General Secretary and National Committees of Astronomy were authorized by the Executive Committee to make the necessary arrangements for invitations of members of other organizations and non-Members to participate in the XVIIth General Assembly.

23. The Assistant General Secretary stated that during her term of office she will need no symbol or stamp of the IAU. It was therefore recommended to thank J.-C. Pecker for his efforts in designing such a symbol.

24. The problem of the International Solar System Decade was discussed under item 18.

25. The President said that he would include an outline of the purpose, organization, structure and importance of IAU General Assemblies in his address to the XVIIth General Assembly.

26. Future of the IAU

In the general discussion the Executive Committee members exchanged their views on problems such as the increase of membership, the number of astronomers over the world, their employment or unemployment, the statistics on them, the possible development of Regional Astronomical Societies with their own officers and administration, the danger of splitting the IAU up if the scientific contact at the General Assemblies should weaken or disappear, etc.

E.R. Mustel presented his impression of the IUGG General Assembly in Grenoble (August - September 1975). It must be realized that IUGG has a different structure than the IAU, with its several independent associations. The arrangements and organization were generally considered good, the rooms in student

hostels were convenient, the meals not expensive. In his view more attention should be paid to details regarding projection facilities. He did not attend the reception in the ice-ring and therefore could not answer E.A. Miller's question regarding the acoustics in it. This problem had been pointed out by the Assistant General Secretary to Pecker and Boischot.

27. Any Other Matter

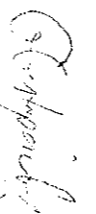
O. Keefe proposed an ICSU project of collecting tektites. More information will be asked from him, and a letter will be sent to ICSU accordingly.

E.R. Mustel inquired whether it would be possible to organize an unofficial meeting on Novae during the Grenoble General Assembly. The President said that this would be no problem and advised E.R. Mustel to contact J. Kovalovsky.

28. The next meeting of the Executive Committee will be held in Grenoble, starting on 22 August 1976.

VI. CLOSING BY THE PRESIDENT

The President closed the meeting on Thursday, 11 September at 18,30. He expressed his thanks to the members of the Executive Committee for their attendance, to the Greek National Committee of Astronomy for local arrangements, and to the General Secretary, Assistant General Secretary and the Staff for their work.



G. Contopoulos  
General Secretary

Athens, 22 September 1975