

CHAPTER IV
REPORT OF THE EXECUTIVE COMMITTEE
1985-1988

EXECUTIVE COMMITTEE

1985-1988

President:

Prof. J. Sahade C.C. No. 677, Observatorio Astronomico, Universidad Nacional de La Plata, 1900 La Plata (Bs. As.), Argentina

Vice-Presidents:

Dr. A.H. Batten Herzberg Institute of Astrophysics, Dominion Astrophysical Observatory, 5071 West Saanich Road, Victoria BC, V8X 4M6, Canada

Prof. R. Kippenhahn MPI für Physik & Astrophysik, Karl-Schwarzschild-Strasse 1, D-8046 Garching bei München, Germany, FR

Prof. R.P. Kraft Lick Observatory, University of California, Santa Cruz, CA 95064, USA

Prof. P.O. Lindblad Stockholm Observatory, S6133 00 Saltsjöbaden, Sweden

Prof. M. Peimbert Instituto de Astronomía, Apartado Postal 70264, Mexico 04510 DF, Mexico

Prof. Ya. S. Yatskiv Main Astronomical Observatory, Ukrainian Academy of Sciences, SU-252127 Kiev, USSR

General Secretary:

Dr. J.-P. Swings Institut d'Astrophysique, 5, avenue de Cointe, B-4200 Cointe-Ougrée, Belgium

Assistant General Secretary:

Dr. D. McNally University of London Observatory, Mill Hill Park, London NW7 2GS, UK

Advisers:

Emeritus Prof.
R. Hanbury Brown 37 Beatty Street, Balgowlah, NSW 2093, Australia

Dr. R.W. West European South Observatory, Karl-Schwarzschild Strasse 2, D-8046, Garching bei München, Germany, FR

1. Introduction

The present report covers the period from the end of the XIXth General Assembly up to mid 1988.

The report by the General Secretary at the XXth General Assembly for the period 1st January-31 July, 1988 is to be found pp. 26-28.

A summarized financial report of the Union audited accounts for the calendar years 1985, 1986 & 1987 and a brief resume of the Union's accounts for 1988 are also included.

2. Administration

Executive Committee Meetings

The Executive Committee held the following meetings:

53rd Meeting:	Delhi, India, November 17,18 & 26, 1985
54th Meeting:	Delhi, India, November 28, 1986
55th Meeting:	Liège, Belgium, September 19-22, 1986
56th Meeting:	Santa Cruz, USA, September 9-12, 1987

The 53rd Meeting was chaired by Professor R. Hanbury Brown while the 54th was chaired by the newly elected President, Professor J. Sahade; the new Members of the Executive Committee were all present, as well as the two advisers. The 55th and 56th Meetings were also chaired by Professor J. Sahade.

Officers' Meetings

The President, the General Secretary and the Assistant General Secretary met as follows:

November 16, 1985	Delhi, India
May 14, 1986	Paris, France
September 18, 1986	Liège, Belgium
March 11-12, 1987	Paris, France
September 8, 1987	Santa Cruz, USA
November 6, 1987	Paris, France
March 10-11, 1988	Baltimore, USA

IAU Secretariat

The secretariat is in the process of moving to the following address:

98bis, boulevard Arago
F-75014 - PARIS, France

The phone and telex numbers remain unchanged.

IAU Staff

Miss D. Lours and Mrs. B. Manning left the secretariat on April 27, and June 25, 1987, respectively. They have been replaced by Mrs. Monique Orine, administrative assistant, and Mrs. Huguette Gigan, part-time bilingual secretary, as of September 1, and October 15, 1987, respectively.

Adhering Countries

Nigerian membership of IAU was ratified by the XIXth General Assembly (motion adopted unanimously, see Transactions XIXB, p. 54).

Members of the IAU

The XIXth General Assembly welcomed 935 new members: the total number of IAU members thus became 6027, on 28 November 1985. The number, as of June 1988, is 5940.

Consultants to IAU Commissions

The 40 IAU Commissions had a total of approximately 200 consultants.

3. Commissions of the IAU

The name of **Commission 51** has become "Bioastronomy: Search for Extraterrestrial Life", as of the end of the XIXth General Assembly.

Commission Reports, covering the period July 1, 1984, to June 30, 1987 have been published (Reports on Astronomy; IAU Transactions XXA, 708 pp.).

An updated list of the IAU Working Groups, belonging to one or more Commissions, has been published (cf. IB 59, pp. 11-13).

A few specific points about some Commission activities, especially those providing services to the astronomical community, are listed below:

Commission 5

Work has continued on the new IAU Style Manual, largely due to the active role of G. Wilkins (cf. IB 60, p. 26): the Manual is expected to be presented at the XXth General Assembly. Contacts have also been made with editors of the main astronomical journals to attempt to coordinate the rules of publication.

Commission 6

The IAU Central Bureau for Astronomical Telegrams (Director: B.G. Marsden) issued the following number of circulars and "telegram books" respectively in 1985, 1986, and 1987: 132, 35; 135, 41; 230, 55; i.e. a total of 497 circulars and of 131 "telegram books".

Commissions 19 and 31

The new International Earth Rotation Service (IERS) established in 1987 by the IAU and the IUGG, has become operational on January 1, 1988 (cf. IB 59, p. 15).

Commission 20

Together with Commission 6 and the IAU Working Group on Planetary System Nomenclature (WGPSN), procedures were established for assigning names and designations to various classes of newly discovered bodies in the solar system. The IAU Minor Planet Center (Director: B.G. Marsden) issued 3330 MPCs and numbered no less than 554 new minor planets during 1985-1987.

Commission 22

The IAU Meteor Data Center, created in Lund, Sweden (director: B.A. Lindblad) has computed and archived an impressive number of orbits. A report by B.A. Lindblad has been published for the period 1985-1987 (cf. IB 59, p. 17 & IB 60, p. 27).

Commission 38

Under the guidance of its President, E.A. Müller, this Commission continued to give assistance to (young) astronomers under the rules published in IB 55, pp. 25-27. The names of the 23 grant recipients for the period February 1985-November 1987 have been published in IB 59, pp. 18-19.

Commission 46: Visiting Lecturers' Programmes (VLP)

- a. VLP in Lima (Peru): see IB 56, p. 14; 57, p. 16 & 58, p. 16. A limited extension of this VLP will start shortly.
- b. VLP in Asuncion (Paraguay): a description appeared in IB 58, pp. 16-17 & 60, p. 27. The present contract is only for one year, starting in 1988. The possibility of the extension of the contract will be examined by the next Executive Committee.

Commission 46

New rules concerning the membership and activities of Commission 46 are under preparation. Two IAU-UNESCO International Schools for Young Astronomers were successfully held in Beijing (10-30 August 1986) and Porto (15-27 September 1986).

4. Scientific meetings**Symposia (22)**

- 114 Relativity in Celestial Mechanics and Astrometry - High Precision Dynamical Theories and Observational Verifications
Leningrad, USSR, May 28-31, 1985
- 115 Star Forming Regions
Tokyo, Japan, November 11-15, 1985
- 116 Luminous Stars and Associations in Galaxies
Porto Heli, Greece, May 26-31, 1985
- 117 Dark Matter in the Universe
Princeton, USA, June 24-28, 1985
- 118 Instrumentation and Research Programs for Small Telescopes
Christchurch, New Zealand, December 2-6, 1985
- 119 Quasars
Bangalore, India, December 2-6, 1985
- 120 Astrochemistry
Goa, India, December 3-7, 1985
- 121 Observational Evidence of Activity in Galaxies
Byurakan, Armenia, USSR, June 3-7, 1986
- 122 Circumstellar Matter
Heidelberg, Germany, FR, June 23-27, 1986
- 123 Advances in Helio- and Asteroseismology
Aarhus, Denmark, July 7-11, 1986
- 124 Observational Cosmology
Shanghai, China, PR, August 25-29, 1986

- 125 The Origin and Evolution of Neutron Stars
Nanjing, China, PR, May 26-29, 1986
- 126 Globular Cluster Systems in Galaxies
Cambridge, MA, USA, August 25-29, 1986
- 127 Structure and Dynamics of Elliptical Galaxies
Princeton, USA, May 28-31, 1986
- 128 Earth's Rotation and Reference Frames for Geodesy and Geodynamics
Washington, USA, October 20-24, 1986
- 129 The Impact of VLBI on Astrophysics, Astrometry and Geophysics
Cambridge, MA, USA, May 31 - June 3, 1987
- 130 Evolution of Large Scale Structures in the Universe
Balatonfured, Hungary, June 15-20, 1987
- 131 Planetary Nebulae
Mexico City, Mexico, October 5-9, 1987
- 132 The Impact of Very High S/N Spectroscopy on Stellar Physics
Paris, France, June 29-July 3, 1987
- 133 Mapping the Sky - Past Heritage and Future Directions
Paris, France, June 1-5, 1987
- 135 Interstellar Dust
Mountain View, CA, USA, July 26-30, 1988
- 136 The Galactic Center
Los Angeles, CA, USA, July 25-29, 1988

Colloquia (21)

- 87 Hydrogen Deficient Stars and Related Objects
Mysore, India, November 10-15, 1985
- 88 Stellar Radial Velocities
Schenectady, NY, USA, October 24-27, 1984
- 89 Radiation Hydrodynamics in Stars and Compact Objects
Copenhagen, Denmark, June 11-20, 1985
- 90 Upper Main Sequence Stars with Anomalous Abundances
Nauchny, Crimea, May 14-17, 1985
- 91 History of Oriental Astronomy
New Delhi, India, November 14-17, 1985
- 92 Physics of Be Stars
Boulder, CO, USA, August 18-22, 1986
- 93 Cataclysmic Variables
Bamberg, Germany, FR, June 16-20, 1986

- 94 Physics of Formation of FeII Lines Outside LTE
Capri, Italy, July 4-8, 1986
- 95 Second Conference on Faint Blue Stars
Tucson, AZ, USA, May 31 - June 3, 1987
- 96 The Few Body Problem
Turku, Finland, June 14-19, 1987
- 97 Wide Components in Double and Multiple Stars: Problems of Observation and Interpretation
Brussels, Belgium, June 8-13, 1987
- 98 The Contribution of Amateur Astronomers to Astronomy
Paris, France, June 20-24, 1987
- 99 Bioastronomy - The Next Steps
Lake Balaton, Hungary, June 22-27, 1987
- 100 Fundamentals of Astrometry
Belgrade, Yugoslavia, September 8-11, 1987
- 101 Interaction of Supernova Remnants with the Interstellar Medium
Penticton, BC, Canada, June 9-12, 1987
- 102 UV and X-Ray Spectroscopy of Astrophysical and Laboratory Plasmas
Beaulieu-sur-Mer, France, September 9-11, 1987
- 103 The Symbiotic Phenomenon
Torun, Poland, 18-21 August, 1987
- 105 The Teaching of Astronomy
Williamstown, NY, USA, July 27-30, 1988
- 106 Evolution of Peculiar Red Giant Stars
Bloomington, IN, USA, July 27-29, 1988
- 109 Applications of Computer Technology to Dynamical Astronomy
Gaithersburg, MD, USA, July 27-29, 1988
- 110 Library and Information Services in Astronomy
Washington, DC, USA, July 28-30, August 1, 1988

Co-sponsored Meetings

CNES/IAU Meeting on "Comparative Study of Magnetospheric Systems"
La Londe des Maures, France September 9-14, 1985

IAG/IAU/COSPAR Symposium on "Figure and Dynamics of the Earth, Moon, and Planets"
Praha, Czechoslovakia, September 15-20, 1986

IAU/ESLAB Symposium on "Exploration of Halley's Comet"
Heidelberg, Germany, FR, October 27-31, 1986

COSPAR/IAU Symposium on "UV Space Astronomy: Physical Processes in the Local Interstellar Medium"
Toulouse, France, June 30 - July 12, 1986

COSPAR/IAU Symposium on "Latest Results on Venus and Uranus Missions"
Toulouse, France, June 30-July 12, 1986

COSPAR/IAU Symposium on "Solar and Stellar Activity"
Toulouse, France, June 30-July 12, 1986

COSPAR/IAU Symposium on "Comets Halley and Giacobini-Zinner"
Toulouse, France, June 30-July 12, 1986

SCOSTEP/IAU 6th International Symposium on "Solar-Terrestrial Physics"
Toulouse, France, June 30-July 5, 1986

SCOSTEP/IAU Symposium "Synopsis of the Solar Maximum Analysis"
Toulouse, France, July 2-5, 1986

Symposium on "Image Detection and Quality", with Commission Internationale
d'Optique,
Paris, July 16-18, 1986

COSPAR/IAU Symposium on "Physics of Compact Objects: Theory versus
Observations"
Sofia, Bulgaria, July 13-19, 1987

COSPAR/IAU/IUGG/IUPAP/SCOSTEP/URSI/WMO Symposium on "The Middle
Atmosphere after MAP"
Espoo, Finland, 19-23 July, 1988

COSPAR/IAU/SCOSTEP Symposium on "International Heliospheric Study"
Espoo, Finland, 20-23 July, 1988

COSPAR/IAU/IUPAP Symposium on "Cosmic Ray Studies in Space"
Espoo, Finland, 25-26 July, 1988

COSPAR/IAGA/IAU Symposium on "Studies of Cometary Environments: Modelling
and Space Missions"
Espoo, Finland, 25-26 July, 1988

COSPAR/IAU/IUPAP Symposium on "Relativistic Gravitation"
Espoo, Finland, 18-19 July, 1988

COSPAR/IAA/IAU/IUGG/IUGS Symposium on "The Outer Planets: Current
Knowledge, Future Prospects"
Espoo, Finland, 19-20 July, 1988

COSPAR/IAA/IAU Symposium on "Advances and Perspectives in X-Ray and
Gamma-Ray Astronomy"
Espoo, Finland, 19-20 July, 1988

COSPAR/IAA/IAU/IUGG/IUGS Symposium on "Reappraisal of Moon and
Mars/Phobos/Deimos: Preparation for Renewed Exploration"
Espoo, Finland, 21-22 July, 1988

COSPAR/IAA/IAU Symposium on "Magnetic Energy Conversion in Astrophysical
and Laboratory Plasmas"
Espoo, Finland, 21-23 July, 1988

COSPAR/IAU Symposium on "Space Observations of Solar Variability"
Espoo, Finland, 27-28 July, 1988

COSPAR/IAU Workshop on "Future Planetary Missions"
Toulouse, France, June 30 -July 12, 1986

COSPAR/IAU Workshop on "Contamination of Environment of Space Shuttle for
Astronomical Observations,
Toulouse, France, June 30 -July 12, 1986

COSPAR/IAU Workshop on "Chemical Evolution of Outer Planets, Satellites, and
Small Bodies"
Toulouse, France, June 30 - July 12, 1986

COSPAR/IAA/IAU/IUGG/IUGS Workshop on "Future Planetary Missions"
Espoo, Finland, 20 July 1988

COSPAR/IAGA/IAU Workshop on "The Middle and Upper Atmosphere of Venus"
Espoo, Finland, 25-27 July, 1988

COSPAR/IAU/SCOSTEP Workshop on "Scientific Planning for the Solar Maximum
and Beyond"
Espoo, Finland, 25-27 July, 1988

COSPAR/IAU/IUGG Workshop on "Origin and Evolution of Planetary and Satellite
Systems"
Espoo, Finland, 29-30 July, 1988

Regional Meetings (4)

Ninth European Regional Astronomy Meeting on "Activity in Stars and Galaxies"
(with EPS)
Leicester, UK, September 2-5, 1986

Fifth Latin-American Regional Astronomy Meeting,
Merida, Yucatan, Mexico,
October 6-10, 1986

Tenth European Regional Astronomy Meeting (with EPS),
Praha, Czechoslovakia, August 24-29, 1987

Fourth Asian-Pacific Regional Astronomy Meeting (with EPS),
Beijing, China, PR, October 5-9, 1987

IAU/UNESCO Young Astronomers' Schools (2)

XIVth IAU-UNESCO International School for Young Astronomers
Beijing, China, PR, 10-30 August, 1986

XVth IAU-UNESCO International School for Young Astronomers
Porto, Portugal, 8-20 September 1986

XIXth General Assembly, New Delhi, India, 19-28 November, 1985

IAU Transactions, Volume XIXB (1986), contain a report of the Proceedings of the General Assembly of the Union, including the resolutions passed at the Assembly. It also contains the reports of Commission meetings during the period of the General Assembly.

5. Publications**Publisher**

In November 1984, the contract with D. Reidel Publishing Co. was renewed for a six-year period, from 1985-1991. The contract was continued when Reidel became a part of Kluwer Academic Publishers.

Sales

Number of copies sold (**hard**, **soft**) by D. Reidel Publishing Company in the period 1985-1987:

Transactions:

XIIIA (2), XIIIB (2), XIVA (2), XIVB (2), XVA (1), XVB (5), XVIA (3), XVIB (5), XVIIIA part 1 (7), XVIIIA part 2 (6), XVIIIA part 3 (7), XVIIIB (13), XVIIIA (30), XVIIIIB (40), XIXA (431), XIXB (404).

Highlights:

I (10), II (13), III (17), IV 1 (8, 9), IV 2 (8, 9), V (21, 8), VI (20, 36), VII (198, 208).

Symposia Proceedings:

32 (20), 33 (1), 34 (4), 35 (4), 37 (4), 38 (20), 39 (8), 40 (9), 43 (18), 44 (14), 45 (32), 46 (5), 47 (8), 48 (25), 49 (4, 22), 50 (15, 16), 51 (5, 20), 52 (3, 15), 53 (2,9), 54 (14, 1), 55 (6, 16), 56 (3, 11), 57 (4, 11), 58 (6, 9), 59 (12, 23), 60 (8, 8), 61 (9, 17), 62 (5, 25), 63 (22, 0), 64 (6, 22), 65 (6, 3), 66 (12, 29), 67 (52, 22), 68 (5, 2), 69 (4, 24), 70 (5, 14), 71 (13, 14), 72 (9, 12), 73 (12, 20), 74 (6, 32), 75 (15, 54), 76 (15, 7), 77 (10, 34), 78 (12, 9), 79 (15, 30), 80 (28, 8), 81 (7, 40), 82 (12, 24), 83 (14, 33), 84 (22, 4), 85 (8, 19), 86 (14, 13), 87 (21, 11), 88 (9, 17), 89 (9, 14), 90 (19, 7), 91 (18, 9), 92 (22, 10), 93 (14, 14), 94 (11, 25), 95 (18, 7), 96 (25, 16), 97 (21, 13), 98 (5, 8), 99 (12, 18), 100 (28, 37), 101 (38,26), 102 (33, 41), 103 (28, 34), 104 (49, 50), 105 (58, 107), 106 (405, 352), 107 (276, 197), 108 (69, 60), 109 (322, 208), 110 (34, 93), 111 (373, 253), 112 (446, 438), 113 (373, 287), 114 (364, 195), 115 (302, 213), 116 (306, 112), 117 (290, 273), 118 (309, 217), 119 (331, 311), 120 (306, 115).

Information Bulletin

Six issues of the Information Bulletin (n° 55 through 60) have been sent, free of charge, to IAU Members, consultants, scientific institutions, and selected international organizations. Each print-run was 7500 copies.

6. Relations to other organisations

IAU was represented by the General Secretary at the following meetings of the International Council of Scientific Unions (ICSU): 20th meeting of the General Committee (München, Germany, FR, 1985), 21st General Assembly and 21st/22nd meetings of the General Committee (Bern, Switzerland, 1986) and 23rd meeting of the General Committee (Rome, Italy, 1987). The highlights concern future programmes such as the International Space Year (1992), and the large International Geosphere-Biosphere Programme (IGBP).

IAU was also represented at meetings of the ICSU Committee for Space Research (COSPAR): XXVIth Plenary meeting of COSPAR (Toulouse, France, 1986): J.-P. Swings and R. Wilson; XXVIIth Plenary meeting of COSPAR (Espoo, Finland, 1988): J.-P. Swings.

The following IAU Representatives to other ICSU and international bodies were active during the period 1985-1988: it is to be noted that one minor change occurred: the present IAU representative to IAF (International Astronautical Federation) is Dr. Y. Kondo, President, IAU Commission 44:

	<u>Organisation</u>	<u>Representative 1985-1988</u>
ICSU	International Council of Scientific Unions General Committee	R.M. West (until Sept. 86) J.-P. Swings (after)
BIH (*)	Bureau International de l'Heure	P. Pâquet G. Winkler
CCDS	Consultative Committee for the Definition of the Second Working Group on the Temps Atomique International	J. Benavente G. Winkler
CCIR	International Radio Consultative Committee Study Group 2 Study Group 7	J. Whiteoak A.R. Thompson J. Pilkington
CODATA	Committee for Data for Science & Technology	G. Westerhout
COSPAR	Committee on Space Research	J.-P. Swings
COSTED	Committee on Science & Technology in Developing Countries	J.-P. Swings
CTS	Committee on the Teaching of Science	L. Gouguenheim
EPS	European Physical Society Conference Committee	D. McNally
FAGS	Federation of Astronomical & Geophysical Services	J. Kovalevsky E. Tandberg-Hanssen
IAF	International Astronautical Federation	M. Papagiannis/ Y. Kondo

ICSTI (**)	International Council for Scientific & Technical Information	G. Wilkins
IPMS (*)	International Polar Motion Service	Ye Shu-Hua
IUCAF	Inter-Union Commission on Frequency Allocation for Radio Astronomy & Space Science	R. Schilizzi G. Swarup
IUPAP	International Union of Pure & Applied Physics	V. Trimble
IUWDS	International Ursigram & World Day Service	H. Coffey
QBSA	Quarterly Bulletin on Solar Activity	E. Hiei
SCOPE	Scientific Committee on Problems of Environment	R. Cayrel
SCOSTEP	Scientific Committee on Solar-Terrestrial Physics	S.T. Wu
URSI	Union Radio Scientifique Internationale	J. Baldwin
CIE	Compagnie Internationale de l'Eclairage	D. Crawford
IERS (*)	International Earth Rotation Service	G. Wilkins

(*) IERS subsumed BIH & IPMS with effect from 1988 January 01, 1988.
 (**) IAU Membership in ICSTI was discontinued in 1987.

7. Financial matters

Summarized accounts

The 3 year (1985-1987) summarized accounts are given in the following table together with the budgetary estimates. The data is extracted from the "Vérification des Comptes" for 1985, 1986 & 1987 as certified by the IAU Auditors, R. Bâcle, HEC (1985, 1986) and P. Meyssonier EC (1987), Paris. The unit is Swiss Francs throughout.

The ICSU mean conversion rates for Swiss Francs for 1985-1987 are:

	1 US \$	1 Dfl.	1 FF	1 DM	1 Rupee
1985	2.4600	0.7423	0.2730	0.8378	0.2018
1986	1.8175	0.7323	0.2602		0.1466
1987	1.5050	0.7386	0.2492		

TABLE I
Summary 1985-1987

Income	BUDGET	1985	1986	1987	TOTAL
1. Contributions	1244580,00	356459,32	475002,10	399178,41	1230639,83
2. Publications	127000,00	12247,79	73235,08	59100,25	144583,12
3. Interest	102000,00	47698,59	22688,98	24782,38	95169,95
4. UNESCO/ICSU	120000,00	68852,94	47358,60	30981,93	147193,47
5. Miscellaneous	0,00	861,00	4571,98	1150,72	6583,70
	1593580,00	486119,64	622856,74	515193,69	1624170,07
Expenditure					
1. Administration	492000,00	175854,45	196049,48	161138,53	533042,46
2. ICSU Contribution	327000,00	11586,60	6582,99	9833,25	28002,84
3. Commission expenses	23600,00		5717,95	327,45	6045,40
4. Commission projects	128000,00				
. Exchange of Astronomers		31151,54	18500,53	8327,97	57980,04
. Teaching		23747,00			23747,00
. Other projects		19819,50	8202,56	1000,00	29022,06
5. General Assembly	213000,00	199633,06	22332,30	3980,00	225945,36
6. IAU Publications	50000,00	23722,40	16592,45	32814,48	73129,33
7. Publication for Executive Committee & Developing Countries	34000,00	2623,47	7619,91	4526,45	14769,83
8. Executive Committee Meeting	80000,00	1360,92	19564,00	23146,38	44071,30
9. Officers meeting	23000,00	3670,30	5274,69	24396,85	33341,84
10. Symposia & Colloquia	335000,00	96616,28	116160,03	151104,83	363881,14
11. Inter Union Commission	33000,00	13899,00	4816,38	4484,42	23199,80
12. Projects of Executive Committee	11000,00				
13. Representation	23000,00	8948,70	7904,27		16852,97
14. Bank charges	3500,00	1983,53	1144,71	3341,63	6469,87
15. International School for Young Astronomers	50000,00		31543,75		31543,75
16. Visiting Lecturer's Programmes	48000,00		12784,96	8833,46	21618,42
17. Regional Meetings	65000,00		32000,00	16556,58	48556,58
18. Special Nominating Committee	5000,00				
19. Miscellaneous	0,00	119,90	159,75		367,84
			88,19		
Loss on transfers	0,00	2110,68	512,41	652,02	3275,11
	1649800,00	616847,33	513551,31	454464,30	1584862,94

Comments on summarized accounts

Income:

Total income was in excess of budget.

1. Shortfall in contribution with respect to budget is largely due to late or non-payment.
4. The ICSU contribution shows a steady decline which is continuing.

Expenditure:

1. Administrative costs were seriously underestimated in the budget. The savings in 1987 were a consequence of a change of staff and the savings of 1987 will not carry forward.
4. Commission Projects were over budget.
9. The Officers Meeting expenses were over budget in 1987 -this was a direct consequence of the staff changes.
15. There was a considerable underspend on the VLP programme.
18. 1986 includes an unsupported miscellaneous expenditure of 88.19 not detected until 1987.

Balance 1985-1987

The balance for the years 1985-1987 is set out below:

TABLE 2

	1985	1986	1987
Income	486119,64	622856,74	515193,69
Expenditure	- 616847,33	- 513551,29	- 454464,50
Re/devaluation	23672,68	- 93529,04	- 36317,23
Balance of the preceding year	826143,03	719088,03	735134,44
Balance	719088,03	735134,44	759546,40 (*)

(*) The accounts for Symposium 130 have affected this balance as follows:

Income	55950,01
Expenditure	33533,39
Balance	22416,62

Total balance as of 31.12.87

781963,02

The balance for 1987 must be increased by 22416,62 as a result of IAU Symposium 130 (income +55950.01; expenditure -33533.39) giving a reserve of 781963.02 as of 1987 December 31. The losses on valuation result from changes in major currencies -in particular the US dollar which suffered heavy devaluation during the period of accounts. The present balance is about 20 % in excess of one year's working. It should be noted that ICSU is currently reviewing the balances held by member Unions.

Residual budget 1988

The residual budget for 1988 is set out in Table 3. The figures are provisional, have not been audited and do not include loss on exchange.

TABLE 3

	EC Budget	Residual Inc/Exp	Difference (B-R)
	-----	-----	-----
1. Contributions	453130	461105	- 7975
2. Publications	55000	55551	- 551
3. Interest	35000	22060	12940
4. UNESCO/ICSU Contribution	35000	25122	9878
5. Miscellaneous	-	19370	- 19370
Total income	578130	583208	- 5078
<u>Expenditure</u>			
1. Administration	183500	177719	5781
2. ICSU Subvention	11300	6521	4779
3. Commission expenses	4000	2702	1283
4. Commission projects			
4.1. Exchange of astronomers	24000	15077	8923
4.2. Other projects	14500	2595	11905
5. General Assembly	240000	337500	- 97500
6. IAU Publications	15000	15662	- 662
7. Publications for EC and developing countries	12000	2702	9298
8. EC Meetings	-	623	- 623
9. Officers Meetings	8000	2549	- 5451
10. Symposia & Colloquia	125000	105228	19772
11. Inter-Union Commissions	9000	6159	2841
12. Projects of EC	5000	-	5000
13. Representation	8000	4028	3972
14. Bank charges	1000	2438	- 1438
15.1. Young Astr. Schools	-	-	-
15.2. VLP	24000	2894	21106
16. Regional Meetings	-	-	-
17. SNC	-	-	-
18. Miscellaneous	-	-	-
Total expenditure:	684300	684397	- 97
Excess of expenditure over income:	- 106170	- 101189	- 4981

Adopted Budget for 1989-1991

The budget for 1989-1991 was approved at the XXth General Assembly and is given below:

TABLE 4

BUDGET (1989-1991)

All amounts in Swiss Francs

<u>INCOME</u>	Triennial (1989-91)	1989	Annual 1990	1991
1. CONTRIBUTIONS				
1.1 Adhering Organisations (238 units)	1 532 720	493 850	510 510	528 360
1.2. ICSU/UNESCO	78 000	26 000	26 000	26 000
1.2.1. ICSU Allocations				
1.2.2. ICSU Grants				
1.2.3. UNESCO Contracts				
2. PUBLICATIONS	165 000	55 000	55 000	55 000
3. INTERESTS, etc.	75 000	25 000	25 000	25 000
4. OTHER RECEIPTS	-	-	-	-
TOTAL INCOME	1 850 720	599 850	616 510	634 360

Notes:

- 1.1. a. Changes of category:
 . Argentina: II to III: now 4 units
 . China: III to V: now 10 units
 b. Possibility of around 4 new Members in category I. Total:
 1986-1988: 226 units 1988-1991: 238 units
 c. Same inflation considered for 1989-1991 as for previous triennium;
 very difficult to estimate in present crisis period.
 Proposed unit of contribution:
 2075 SF for 1989
 2145 SF for 1990
 2220 SF for 1991
- 1.2. The income from ICSU/UNESCO has decreased in the last years. It is 17 335 US \$ for 1988 (in November 87 dollars !). Therefore the sum indicated in the draft can only be realistically introduced as 26 000 SF.
2. 6 year contract with Reidel Publ.: same royalties as for 1986-1988 triennium.

<u>EXPENSES</u>	Triennial (1989-91)	1989	Annual 1990	1991
1. EXECUTIVE COMMITTEE, etc.				
1.1. EC Meetings	80 000	40 000	40 000	-
1.2. Officers' Meetings	24 000	8 000	8 000	8 000
1.3. SNC Expenses	5 000	-	5 000	-
1.4. Other	-	-	-	-
TOTAL 1.	109 000	48 000	53 000	8 000
2. PUBLICATIONS				
2.1. Information Bulletin	63 000	20 000	21 000	22 000
2.2. Other Publications	-	-	-	-
2.3. Distribution to Developing Countries	30 000	10 000	10 000	10 000
TOTAL 2.	93 000	30 000	31 000	32 000
3. SCIENTIFIC AND RELATED ACTIVITIES				
3.1. Meetings				
3.1.1. General Assemblies	240 000	-	-	240 000
3.1.2. Symposia and Colloquia	365 000	120 000	120 000	125 000
3.1.3. Regional Astronomy Meetings	65 000	32 000	33 000	-
3.1.4. Young Astronomers' Schools	50 000	25 000	25 000	-
3.1.5. Visiting Lecturers' Programmes and follow-ups	72 000	24 000	24 000	24 000
3.1.6. Other	-	-	-	-
Total 3.1.	792 000	201 000	202 000	389 000
3.2. Commissions Activities				
3.2.1. Commission Expenses	15 000	5 000	5 000	5 000
3.2.2. Commission Projects				
3.2.2.1. Exchange of Astronomers	70 000	23 000	23 000	24 000
3.2.2.2. IAU Telegram Bureau	10 500	3 500	3 500	3 500
3.2.2.3. IAU Minor Planet Center	10 500	3 500	3 500	3 500
3.2.2.4. Variable Star Catalogue	10 500	3 500	3 500	3 500
3.2.2.5. IAU Meteor Data Center	3 000	1 000	1 000	1 000
3.2.2.6. Other (incl. IERS)	6 000	2 000	2 000	2 000
Total 3.2.	125 500	41 500	41 500	42 500
3.3. Relations With Other Organisations				
3.3.1. Dues to ICSU	38 500	12 500	12 800	13 200
3.3.2. Support of Inter-Union Commissions	18 000	6 000	6 000	6 000
3.3.3. Representation to Other Organisations (including liaison members)	24 000	8 000	8 000	8 000
Total 3.3.	80 500	26 500	26 800	27 200
3.4. Other Activities				
3.4.1. Executive Committee Projects	15 000	5 000	5 000	5 000
3.4.2. Other Projects	-	-	-	-
Total 3.4.	15 000	5 000	5 000	5 000
TOTAL 3.	1 013 000	274 000	275 300	461 700

4.	ADMINISTRATION				
4.1.	Secretariat				
4.1.1.	Salaries and Social Charges, etc.	375 000	120 000	125 000	130 000
4.1.2.	Office Expenses	165 000	50 000	55 000	60 000
4.1.2.1.	Rent, Heating, Light, Cleaning, etc.				
4.1.2.2.	Communication (PTT)				
4.1.2.3.	Equipment (Major)				
4.1.2.4.	Office Supplies				
4.1.3.	General Secretary's Expenses	57 000	18 000	19 000	20 000
4.1.3.1.	Travel, Subsistence				
4.1.3.2.	Representation				
4.1.4.	President's Expenses	18 000	6 000	6 000	6 000
4.1.5.	Ass. General Secretary's Expenses + Local help (AGS)	12 000 3 000	4 000 1 000	4 000 1 000	4 000 1 000
	Total 4.1.	630 000	199 000	210 000	221 000
4.2.	Other				
4.2.1.	Bank Charges	3 000	1 000	1 000	1 000
4.2.2.	Audit Fees, Legal Advice	4 500	1 500	1 500	1 500
4.2.3.	Loss on Exchange	-	-	-	-
4.2.4.	Miscellaneous	-	-	-	-
	Total 4.2.	7 500	2 500	2 500	2 500
	TOTAL 4.	637 500	201 500	212 500	223 500
	TOTAL EXPENDITURE	1 852 500	553 500	571 800	727 200
	<u>INCOME - EXPENDITURE</u>	- 1 780	+ 46 350	+ 44 710	- 92 840

Notes:

- 1.1. EC meetings: less expensive than expected during 1986-1988, because of locations and absences at EC 56.
For future: include President-Elect.
- 2.1. Mailing of Information Bulletin had been underestimated for previous triennium; one has also to take into account hundreds of new members after the XXth General Assembly.
3. No major change foreseen for next triennium.
- 4.1. Secretariat
- 4.1.1. Salaries: had been strongly underestimated for 1986-88 triennium; however, because of new personnel (i.e. one full-time administrative assistant, and one part-time (2/3) bilingual secretary), costs will not increase much during 1989-1991.
- 4.1.2. The location of the Paris secretariat may change in 1988, so that an estimate of the expenses is hard to make. A very slight increase over the figure of the previous triennium was made.
- 4.1.3. G.S. expenses: here also, underestimated for 1986-88.
- 4.1.4. President's expenses: one has to include trips for useful contacts in several countries: increase this item.

8. **List of Adhering Organizations**

(Not reproduced here, see Chapter VII).

9. **List of deceased Members**

(See updated list on pp. 25-26).

10. **List of IAU publications****Transactions and Highlights**

Transactions XIXA: (Delhi, 1985) pp. viii + 736, D. Reidel Publ. Co., 1985

Transactions XIXB: (Delhi, 1985) pp. xii + 656, D. Reidel Publ. Co., 1986

Transactions XXA: (Baltimore, 1988) pp. viii + 708, Kluwer Academic Publ., 1988

Highlights of Astronomy, **7**, as presented at the XIXth General Assembly of the IAU, 1985, pp. xvi + 900, D. Reidel Publ. Co., 1986

IAU Symposia Volumes (edited by Reidel Publ. Co. & by Kluwer Academic Publ.)

- 106 The Milky Way Galaxy
H. van Woerden, R.D.J. Allen & W.B. Burton, pp. xxiv + 660, 1985
- 109 Astrometric Techniques
H.K. Eichhorn & R.J. Leacock, pp. xxi + 838, 1986
- 111 Calibration of Fundamental Stellar Quantities
D.S. Hayes et al., pp. xxiv + 646, 1985
- 112 The Search for Extraterrestrial Life: Recent Developments
M. Papagiannis, pp. xxvi + 580, 1985
- 113 Dynamics of Star Clusters
J. Goodman & P. Hut, 644 p., 1985
- 114 Relativity in Celestial Mechanics and Astrometry, High Precision Dynamical Theories and Observational Verifications
J. Kovalevsky & V.A. Brumberg, pp. xvii + 426, 1986
- 115 Star Forming Regions
M. Peimbert & J. Jugaku, pp. xxxiv + 734, 1985
- 116 Luminous Stars and Associations in Galaxies
C.W.H. de Loore, A.J. Willis & P. Laskarides, pp. xx + 530, 1986
- 117 Dark Matter in the Universe
J. Kormendy & G.R. Knapp, pp. xxix + 596, 1986
- 118 Instrumentation and Research Programs for Small Telescopes
P.L. Cottrell & J.B. Hearnshaw, pp. xxii + 482, 1986
- 119 Quasars
G. Swarup & V.K. Kapahi, pp. xxii + 606, 1986

- 120 Astrochemistry
M.S. Vardya & S.P. Tarafdar, pp. xxviii + 640, 1986
- 121 Observational Evidence of Activity in Galaxies
E. Ye Khachikian, K.J. Fricke & J. Melnick, pp. xxii + 601, 1987
- 122 Circumstellar Matter
I. Appenzeller & C. Jordan, pp. xxiv + 607, 1987
- 123 Advances in Helio- and Astroseismology
J. Christensen-Dalsgaard & S. Frandsen, pp. xxi + 604, 1988
- 124 Observational Cosmology
A. Hewitt, G. Burbidge & Li Zhi-Fang, pp. xxiii + 854, 1987
- 125 The Origin and Evolution of Neutron Stars
D.J. Helfand & J.-H. Huang, pp. xx + 572, 1987
- 126 Globular Cluster Systems in Galaxies
J.E. Grindlay & A.G. Davis Philip, pp. xxvii + 750, 1987
- 127 Structure and Dynamics of Elliptical Galaxies
T. de Zeeuw, pp. xxv + 579, 1987
- 128 The Earth's Rotation and Reference Frames for Geodesy
A.K. Babcock & G.A. Wilkins, pp. xviii + 470, 1988
- 129 The Impact of VLBI on Astrophysics and Geophysics
M.J. Reid & J.M. Moran, pp. xxiv + 599, 1988
- 132 The Impact of Very High S/N Spectroscopy on Stellar Physics
G. Cayrel de Strobel & M. Spite, pp. xxxiii + 626, 1988

IAU Colloquia Volumes

- 81 Local Interstellar Medium
Y. Kondo, F.C. Bruhweiler & B.D. Savage, NASA Conference Publication 2345, 356 p., 1984
- 82 Cepheids, Theory and Observations
B.F. Madore, Cambridge University Press, pp. ix + 300, 1985
- 83 Dynamics of Comets: Their Origin and Evolution
A. Carusi & G.B. Valsecchi, D. Reidel Publ. Co., pp. xii + 400, 1985
- 84 Longitude Zero Symposium 1884-1984
S.R. Malin, A.E. Roy & P. Beer, Pergamon Press, in the series *Vistas in Astronomy*, **28**, parts 1/2, 407 p., 1985
- 85 Properties and Interactions of Interplanetary Dust
R.H. Giese & P. Lamy, D. Reidel Publ. Co., pp. xxxvi + 444, 1985
- 86 Eighth International Colloquium on Ultraviolet and X-ray Spectroscopy of Astrophysical Laboratory Plasmas
G.A. Doschek, published by the Naval Research Laboratory, 1986

- 87 Hydrogen Deficient Stars and Related Objects
H. Hunger, D. Schönberner & N. Kameswara Rao, D. Reidel Publ. Co., in the series *Astrophysics and Space Science Library* **128**, pp. xx + 506, 1986
- 88 Stellar Radial Velocities
A.G. Davis Philip & D.W. Latham, L. Davis Press, pp. xi + 455, 1985
- 89 Radiation Hydrodynamics in Stars and Compact Objects
D. Mihalas & K.-H.A. Winkler, Springer-Verlag in the series *Lecture Notes in Physics*, **255**, pp. ix + 454, 1986
- 90 Upper Main Sequence Stars with Anomalous Abundances
C.R. Cowley, M.M. Dworetzky & C. Mégessier, D. Reidel Publ. Co., in the series *Astrophysics and Space Science Library*, **125**, pp. xiv + 489, 1986
- 91 History of Oriental Astronomy
G. Swarup, Cambridge University Press, pp. xiv + 289, 1987
- 92 Physics of Be Stars
A. Slettebak & T.P. Snow, Cambridge University Press, pp. xvii + 557, 1987
- 93 Cataclysmic Variables
H. Drechsel, J. Rahe & Y. Kondo, D. Reidel Publ. Co., reprinted from *Astrophysics and Space Science*, **130** n° 1 & 2, **131**, n° 1 & 2, 1987
- 94 Physics of Formation of FeII Lines Outside LTE
R. Viotti, A. Vittone & M. Friedjung, D. Reidel Publ. Co., in the series *Astrophysics and Space Science Library*, **138**, 1988
- 95 The Second Conference on Faint Blue Stars
A.G. Davis Philip, D.S. Hayes & J.W. Liebert, L. Davis Press, Inc., pp. xxix + 778, 1987
- 96 The Few Body Problem
M.J. Valtonen, D. Reidel Publ. Co., 1988
- 97 Wide Components in Double and Multiple Stars
J. Dommangeat, E.L. van Dessel & Z. Kopal, D. Reidel Publ. Co., reprinted from *Astrophysics and Space Science*, **142**, 1988
- 98 Stargazers, The Contribution of Amateurs to Astronomy
S. Dunlop & M. Gerbaldi, Springer-Verlag, pp. xvii + 237, 1988
&
La contribution des Astronomes Amateurs à l'astronomie
Observations & Travaux, Hors série N° 1, 2, 3 & 4
Société Astronomique de France
- 99 Bioastronomy, Next Steps
G. Marx, D. Reidel Publ. Co., 1988
- 101 Supernova Remnants and the Interstellar Medium
R.S. Roger & T.L. Landecker, Cambridge University Press, pp. xi + 540, 1988
- 102 UV and X-ray Spectroscopy of Astrophysical and Laboratory Plasmas
F. Bely-Dubau & P. Faucher, *Journal de Physique*, **49**, pp. xvii + 400, 1988
- 103 The Symbiotic Phenomenon
J. Mikolajewska, M. Friedjung, S.J. Kenyon & R. Viotti, eds., Kluwer Academic Publishers, in the Series *Astrophysics and Space Science Library*, **145**, pp. xvi + 365, 1988

Proceedings of Regional Astronomy Meetings

Seventh European
 Florence, Italy, December 12-16, 1983
Frontiers of Astronomy & Astrophysics
 R. Pallavicini, Italian Astronomical Society, Florence, Italy

Eighth European
 Toulouse, France, September 17-21, 1984
 New Aspects of Galaxy Photometry
 J.-L. Nieto, Springer-Verlag in the series Lecture Notes in Physics, **232**, 350 p., 1985
 High Resolution in Solar Physics
 R. Muller, Springer-Verlag in the series Lecture Notes in Physics, **233**, 320 p., 1985
 Nearby Molecular Clouds
 G. Serra, Springer-Verlag in the series Lecture Notes in Physics, **237**, 242 p., 1985

Third Asian-Pacific
 Kyoto, Japan, September 30-October 5, 1984
 Ed. M. Kitamura & E. Budding, D. Reidel Publ. Co, part I: 552 p.; part II: 264 p., 1986

Fourth Latin-American
 Rio de Janeiro, Brazil, November 18-23, 1984
 Ed. P. Pismis & S. Torres-Peimbert, special issue of *Revista Mexicana de Astronomia y Astrofisica*, **12**, 452 p., February 1986

Fourth Asian-Pacific
 Beijing, China, PR, October 5-9, 1987
Vistas in Astronomy, **31**, 1988, Science Press (Pergamon Press), Beijing

Miscellaneous Publications

Image Detection and Quality
 SFO & ANRT meeting, co-sponsored by the IAU, SPIE, eds., 1987

Commission Publications

- Commission 10:** Quarterly Bulletin on Solar Activity.
 Published at the Tokyo Astronomical Observatory, F. Moriyama, Mitaka, Tokyo 181, Japan.
- Commission 10:** Sunspot Bulletin.
 Published by the Sunspot Index Data Center (SIDC), Dr. A. Koeckelenbergh, 3 Avenue Circulaire, B-1180 Bruxelles, Belgium.
- Commission 19:** *Circulaires du Bureau International de l'Heure*.
 A monthly publication of Bureau International de l'Heure, 61, Avenue de l'Observatoire, 75014 Paris, France (now terminated).
- Commission 19:** Monthly Notes of the International Polar Motion Service.
 Prepared and distributed by the Central Bureau of the International Polar Motion Service, International Latitude Observatory of Mizusawashi, Iwate-ken, Japan.

- Commission 20:** Minor Planet Circulars.
Issued by the Minor Planet Center, B.G. Marsden, Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, USA
- Commission 27:** Information Bulletin on Variable Stars.
Prepared and distributed by the Konkoly Observatory of the Hungarian Academy of Sciences, 1525 Budapest XII, Box 67, Hungary.
- Commission 27:** Catalogue of Variable Stars
Catalogue of Suspected Variable Stars.
Name-lists of Variable Stars.
Distributed by Publishing House Nauka, Moscow, USSR
- Commission 29:** Nucleosynthesis in the Galaxy from the Study of Low-Mass Stars
Proceedings of the IAU Commission 29 Meeting, held in New-Delhi, India, 1985
G. Cayrel de Strobel & M. Parthasarathy, Eds., *Journal of Astrophysics & Astronomy*, **8**, No. 2, 1987
- Commission 46:** Newsletter on the Teaching of Astronomy.
- Commission 46:** Astronomy Education Materials.