MC 0572
BOX 608 FOLDER 10

IUPAP 1972 [1 of 2]

MC 572 9K

97-72 b3

AMERICAN INSTITUTE OF PHYSICS
335 East 45th St., New York, N. Y. 10017

From: Lewis Slack

Viki -

These copies of ICSU
+ NAS material pertaining to
Free circulation were
supplied some time ago
by E. J. Rowan & the
NAS staff.

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS

AMENDMENT TO THE STATUTES

The Extraordinary General Assembly of the International Council of Scientific Unions, immediately preceding the XIV General Assembly at Helsinki, Finland, September 1972, amended the Statutes of the Council. The following new provision concerning the non-discriminatory philosophy of ICSU was incorporated into the Statutes:

> "5. In pursuing these objectives the Council shall observe the basic policy of non-discrimination and affirm the rights of scientists throughout the world to adhere to or to associate with international scientific activity without regard to race, religion, political philosophy, ethnic origin, citizenship, language or sex. The Council shall recognize and respect the independence of the internal scientific planning of its National Members."

September 1972

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS

RESOLUTION ON THE FREE CIRCULATION OF SCIENTISTS

The XIVth General Assembly

A. Recapitulates that the terms of reference of the Standing Committee on the Free Circulation of Scientists, as defined by the 10 General Assembly, are:

to assist the Executive Board to find solutions to various problems associated with the implementation of the resolution, according to which the declaration of "political nondiscrimination", adopted by the 8 General Assembly, is reaffirmed, and moreover, as resolved by the 10 General Assembly,

- in holding ICSU meetings and meetings of ICSU scientific and special committees, the Council shall take all measures within its power to ensure the fundamental right of participation, without any political discrimination, of the representatives of every member of ICSU concerned and of invited observers;

- this policy be adopted also by the Unions adhering to ICSU for all their activities;

- the ICSU National Members be invited to follow this policy.

Noting with satisfaction that ICSU, in executing its declared policy of supporting free international collaboration among scientists, has been successful in most cases;

Observes, however, with regret, that scientists are still today sometimes not allowed freely to attend the appropriate scientific meetings organized by the ICSU family either abroad or in their home countries;

Notes that the obstacles encountered in recent years have fallen into the following categories:

i) the refusal of a visa to enter a certain country, or fatal delays in granting visas;

ii) refusal of permission to participate in an appropriate scientific meeting organized by the ICSU family in the country of the scientist in question;

iii) refusal of permission to travel to scientific meetings organized by the ICSU family and held outside the country, and/or excessive payment required for the permission to travel out of the country to such meetings.

Fearing that the difficulties encountered by scientists from some countries, in gaining permission to travel freely to scientific meetings of the ICSU family in other countries or to participate in such appropriate meetings in their own country, might endanger the global character of ICSU and the Unions;

Decides to remind the affiliated Unions and other organs of ICSU of their obligation to bring all instances in which the free circulation of scientists has been restricted to the notice of the ICSU Standing Committee on the Free Circulation of Scientists;

Recommends that when consideration is being given to the selection of a place for an ICSU meeting the Standing Committee on the Free Circulation of Scientists shall, on request, provide summary information in its possession on previous cases of restriction relative to the proposed place of meeting.

B. Observes that recently considerable communication has been received by the Standing Committee on the difficulties encountered by some scientists wishing to migrate from their country;

Further observes that this form of "brain drain", that is, the migration of talent from developing countries to the industrialized ones, is of great concern to the developing as well as to developed countries, as illustrated among others by resolution 1.243 of the General Conference of UNESCO at its 16 session, in 1970;

Observing, moreover, that the prevention of migration of scientists from a country is an internal political question, outside the terms of reference of ICSU, but nevertheless a serious challenge to the world scientific community;

Notes that this problem does not fall within the mandate of the Standing Committee on the Free Circulation of Scientists;

Decides to ask the Executive Board to study how ICSU should approach this new problem, namely the factual impossibility of migrating from a country, and to report to the 15 General Assembly.

September 1972

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS

RESOLUTION ON THE NONPOLITICAL TRADITION OF ICSU

The International Council of Scientific Unions (ICSU) with its component Unions and committees, exists to promote active cooperation in scientific matters between scientists from all parts of the world, regardless of the political structure of their governments. To this end, there is a well-established agreement that scientific meetings shall not be disturbed by political statements or by any activities of a political nature. It is upon this understanding that ICSU has been able to exert considerable influence in order to ensure the free movement of bona fide scientists to attend scientific meetings anywhere in the world.

The Executive Committee of ICSU, unanimously, wishes to emphasize the importance of this agreement on the exclusion of politics and draws attention to the need of observing it at all times.

October 1966

NATIONAL ACADEMY OF SCIENCES
NATIONAL RESEARCH COUNCIL

RESOLUTION ON NONPOLITICAL NATURE OF SCIENTIFIC MEETINGS

Scientific meetings sponsored by the International Unions provide an unparalleled opportunity for scientists to exchange scientific information in their chosen fields. The intrusion of nonscientific issues into union-sponsored gatherings, either during the formal sessions or in a manner that identifies them with the meetings, can only serve to undermine the Unions as vehicles for advancing scientific knowledge.

The National Academy of Sciences is the organization which serves as the focus for participation by the United States in the work of the International Council of Scientific Unions and its constituent unions, committees and commissions. The Council of the Academy re-emphasizes the basic nonpolitical nature of those organizations. ICSU and the unions exist to facilitate free and constructive communication on scientific matters among scientists from all areas, irrespective of the social and political policies of their governments. To this end there is a long-established tradition that their deliberations remain unencumbered by the introduction of political statements and related activities.

The Council of the NAS urges all scientists to help maintain ICSU's nonpolitical traditions by avoiding controversial nonscientific activities while participating in union-sponsored meetings.

October 1966

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS

RESOLUTION ON FREE CIRCULATION OF SCIENTISTS

The Xth General Assembly

considering that ICSU has a declared policy of supporting free international collaboration among scientists, but

noting with regret, that there are still parts of the world where difficulties exist in the free passage of scientists, thus interfering seriously with the progress of modern science,

reaffirms the declaration on "political non-discrimination" adopted by the VIIIth General Assembly of ICSU in 1958,

resolves that, in holding ICSU meetings and meetings of ICSU Scientific and Special Committees and Inter-Union Commissions, the Council shall take all measures within its powers to ensure the fundamental right of participation, without any political discrimination, of the representatives of every member of ICSU concerned and of invited observers;

recommends that this policy be adopted also by the Unions adhering to ICSU for all their activities,

invites the ICSU National Members also to follow this policy, and

requests the Executive Committee to create a standing working group to assist the Officers Committee to find solutions to various specific problems associated with the implementation of this resolution.

November 1963

NATIONAL ACADEMY OF SCIENCES
NATIONAL RESEARCH COUNCIL

RESOLUTION ON POLITICAL NON-DISCRIMINATION IN INTERNATIONAL SCIENTIFIC ACTIVITIES

1. The Governing Board of the National Academy of Sciences - National Research Council desires that the United States maintain its intellectual and scientific leadership in international activities and emphasize and implement its role as a friendly host to international scientific meetings.

Meetings of international scientific bodies make a positive contribution to national security and welfare: they contribute to scientific progress in this country; they express the high value that the United States as a nation places on intellectual and scientific pursuits; they give scientists of other nations a first-hand opportunity to become acquainted with our scientific and cultural contributions to the welfare of all peoples.

2. The opportunity that an institution has to be a friendly host to an international scientific organization depends upon its ability to receive officers and members of that organization and scientific delegates duly selected by the responsible participating scientific body in any country.

3. We endorse the spirit of the attached statement approved in 1958 by the International Council of Scientific Unions, which (a) draws a distinction between the recognition of the activities of scientists and the political recognition of the government of the country or territory involved, and (b) affirms the right of the scientists of any country or territory to adhere to or to associate with international scientific activity without regard to race, religion, or political philosophy.

4. In view of the contribution of science to human welfare, we strongly believe that the foregoing considerations should be weighed in the formulation of governmental policy. We recognize that many other factors not primarily scientific must also enter into the formulation of this policy, but we urge that ingenuity and imagination be used to achieve the benefits of international cooperation in science.

April 1960

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS

RESOLUTION ON POLITICAL NON-DISCRIMINATION

To ensure the uniform observance of its basic policy of political non-discrimination, the ICSU affirms the right of the scientists of any country or territory to adhere to or to associate with international scientific activity without regard to race, religion or political philosophy.

Such adherence or association has no implications with respect to recognition of the government of the country or the territory concerned.

Subject only to payment of subscriptions and submission of required reports, the ICSU is prepared to recognize the academy, research council, national committee, or other bona fide scientific group representing scientific activity of any country or territory acting under a government de facto or de jure that controls it /i.e., the country or territory - Ed./

Meetings or assemblies of ICSU or of its dependent organisms such as its special committees and its joint commissions should be held in countries which permit participation of the representatives of every national member of ICSU or of the dependent organisms of ICSU concerned, and allow free and prompt dissemination of information related to such meetings.

ICSU and its dependent organisms will take all necessary steps to achieve adherence to these principles.

October 1958

111

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

Executive Committee
Washington meeting, September 19 and 24, 1972
National Academy of Sciences

FIRST SESSION, September 19, 1972
14h.00

Present: Messrs. R. BACHER, presiding
W. BOAS
W. DEKEYSER
A. KASTLER
H. MAIER-LEIBNITZ
L. PAL
S. ROZENTAL
V. WEISSKOPF
C. BUTLER, Secretary-General
L. KERWIN

Sent regrets: G. BERNARDINI

Sent good wishes: D. BLOKHINTSEV

-.-

A. President Bacher welcomed the Executive Committee to the United States and to the National Academy of Sciences.

B. It was decided to invite Dr. Tuchkevich of the Soviet Union to a consultation towards the end of the meeting.

C. Preliminary discussion took place concerning possible action of the Union with respect to Continental China and the well-known problem of designating and seating together the Republic of China and the People's Republic of China. It was agreed that steps should continue to be taken, within the spirit of the Union statutes, to encourage the participation of Continental China.

1. Minutes

The minutes of the Executive meeting at Brussels in June 1972 were reviewed. An error in the locale of the meeting was noted (!) and the minutes otherwise approved as circulated.

2. The Secretary-General reported

a) the refusal by Hungary to issue visas for any South African scientists wishing to attend the IUPAP conference at Keszthely. It was agreed that Commissions should be informed of this potential difficulty for future conferences and asked to require assurances on the visa problem before contemplating future meetings in Hungary. The ICSU Committee on the free circulation of scientists should be informed.

b) on routine matters handled by the Secretariat.

3. Slates

The Committee turned to the problem of completing slates of nominees for Commissions. Several suggestions had been received from National Committees and Commissions. The Committee consulted (later in the day) with Dr. Tuchkevich on the matter of Soviet members. A revised list was finally approved by the Executive for release to the Assembly.

The matter of a candidate for the position of Associate Secretary-General was raised. It was agreed that Messrs. Maier-Leibnitz, Weisskopf and Kerwin should meet with Dr. Jan NILSSON of Sweden to discuss the possibility of his accepting the position.

4. General Assembly Agenda

The agenda for the General Assembly was discussed, and that given in Appendix I was agreed upon. It followed closely the proposed agenda previously circulated to delegates. It was decided not to introduce the question of Statute modifications at this time.

D. In closing the first session, President Bacher read a letter of good wishes sent by Past-President Blokhintsev. Members expressed their regret that he would not be present for the General Assembly.

SECOND SESSION, September 24th, 1972
14h.00

Present: as at the first session

in addition: Dr. S. BHAGAVANTAM
Dr. L. SOSNOWSKI
Dr. J. NILSSON

E. President Bacher welcomed Messrs. Sosnowski and Nilsson, members of the new Executive Committee, who were sitting in.

5. Member countries

Associate Secretary-General Kerwin reported on the status of member countries. It was agreed that several should increase the number of shares held in the Union, viz: Switzerland, Soviet Union, Japan; while other countries might be approached for membership, viz: Nigeria, Turkey, Chile.

Prof. Maier-Leibnitz agreed to contact Swiss physicists in this respect.

6. News-Bulletin

Recent issues of the News-Bulletin were distributed.

7. Financial report for 1971
8. Suggested budget for 1973

The financial reports for 1971 and for the three-year period 1969-70-71 were reviewed and accepted.

The 1973 budget was discussed and some changes in the draft budget made. The budget as adopted is given in Appendix II.

11. Conferences proposed in 1973

The list of conferences requesting sponsorship for 1973 was reviewed. In the case of those requests not accompanied by check-lists, the Secretary-General was instructed to request them, with particular attention to be paid to the commitment for visas.

The list of approved conferences and grants (subject in several cases to appropriate check-lists being obtained) is given in Appendix III. Several conferences were rejected, particularly those of insufficiently "international" character.

It was also decided to award an exceptional grant for 1972 of $1,000. to the Tucson meeting on modulation spectroscopy.

12. Commissions' support

The broad lines of financial support which Commissions might expect for 1972-75 was examined, and amounts tentatively assigned as guide-lines. These are given in Appendix IV.

13. 1973 Executive Meeting

Professor Pal reiterated the invitation of Hungary that the 1973 Executive Committee meeting should be held in Budapest. This invitation was warmly accepted.

Noting that the dates of the ICSU General Committee meeting were September 18-22, the Executive fixed Friday and Saturday, September 28-29 for its Budapest meeting.

14. 1975 General Assembly

It was agreed to wait until next year before taking up the matter of the venue of the 1975 General Assembly.

15. Other business

a) Acting on a resolution approved by the XIVth General Assembly, the Executive named a study group to examine the advisability of creating an International Commission on Quantum Electronics. Scientists who will be invited to serve on the study committee are:

D. Bradley (Belfast)
S.C. Brown (USA)
P. Lallemand (Paris)
K.P. Meyer (Bern)
A.M. Prohorov (Moscow)
Ramsden (UK)
Haken (Stuttgart).

It was noted that liaison should be established with the Association of Electrical Engineers.

b) Dr. Bertaut's letter concerning the ICSU resolution on the free movement of scientists was discussed. IUPAP is in agreement with ICSU and Professor Bell's résumé of the situation as distributed to the General Assembly was to the point. The Executive emphasized the need for continuous pressure against offending parties, and for systematic reporting of difficulties to the ICSU Committee headed by Prof. Herlofson. The suggestion of inviting papers from speakers to be specified just before a conference was rejected as impractical. Such a procedure might have eased some visa problems superficially, but would not attack the basic wrong.

c) The People's Republic of China: Following the Assembly discussion, it was agreed to write Commissions about inviting Mainland Chinese scientists, and to await the report on Professor Aage Bohr's visit to China.

d) Gravitation Group: This group was considering some affiliation with IUPAP. Dr. Butler was reluctant to give it Affiliated Commission status.

e) IUCSTP: Dr. Bhagavantam reported that IUCSTP would like a corresponding member from IUPAP. He suggested Dr.Salan.

f) Check-list: Dr. Boas regretted the lack of information about projected conferences. He suggested that more publicity be given the check-list, and that a reprint of it could accompany an issue of the Bulletin.

g) Scientific programme: That of the Washington meeting was deemed highly successful. It was suggested that not more than two lectures be scheduled per session.

16. Adjournment

Professor Bacher thanked the Executive Committee warmly for their cooperation during his term of office. Various members of the Executive expressed their appreciation of his guidance during a successful period.

The meeting then adjourned.

Québec, November 1972.

APPENDIX I

Proposed Agenda for the General Assembly 1972

1. Welcome by the USA Academy of Sciences and the President.
2. Minutes of the 1969 General Assembly as recorded in Document IUPAP-16.
3. Adoption of the Agenda.
4. Obituaries.
5. Resolutions of the Executive Committee concerning the Election Procedure for Executive and Commission membership: Paper I.
6. Resolution of the Executive Committee concerning the sizes of Commissions: Paper II.
7. Preliminary discussion of names proposed by Commissions, National Committees and the Executive Committee (Decisions will be deferred until items 13 and 14) : Paper III.
8. Secretary-General's Report.
9. Commission reports: Paper IV.
10. Inter-union and other commissions - some brief reports.
11. ICSU matters.
12. Report of the Financial Commission.
13. Recommendations of Commissions - presentation and preliminary discussion.
14. General discussion of future union policy.
15. Conferences for 1973.
16. Election of the Executive Committee for 1972-1975.
17. Election of Commission Members for 1972-1975.
18. Resolutions from Commissions.
19. Resolutions from National Committees.
20. The venue of the 1975 General Assembly.
21. Other business.
22. Adjournment of the Assembly.

APPENDIX II

1973 BUDGET

INCOME

Member countries (170 x $300.)	$51,000.
UNESCO	13,000.
Interests	1,500.
	$65,500.

EXPENDITURES

Conferences	$40,000.
Commissions	8,000.
Executive Committee	8,000.
Secretariat	4,000.
Publications	2,000.
Subscriptions	1,500.
Banking and Accounting	500.
Contingencies	1,500.
	$65,500.

APPENDIX III

1973 CONFERENCES

3. Thermodynamics and Statistical Mechanics

3.1 International Conference on Statistical Mechanics
Amsterdam : September 1973

Organiser :	Professor N. Trappeniers Van der Waals Lab. University of Amsterdam
"A"	Valcknierstraat 67
$5,000.	Amsterdam

3.2 Theoretical Physics and Biology
Versailles : 1973

	Professor M. Marois Institute de la Vie
"C"	89 Bd. St. Michel
$0.	Parie 5e

4. Cosmic Rays

4.1 13th Conference on Cosmic Rays
Denver, Colorado : 17-30 August 1973

	Professor R. L. Chasson Department of Physics University of Denver
"A"	Denver
$4,000.	Colorado 80210, U.S.A.

8. Semi Conductors Commission

8.1 5th Conference on Amorphous and Liquid Semiconductors
Garmisch-Partenkirchen : Summer 1973
(BRD)

"B"
$0.

Professor M. H. Cohen
The James Franck Institute
University of Chicago
5640 Ellis Avenue
Chicago Ill. 60637, U.S.A.

9. Magnetism Commission

9.1 International Conference on Magnetism
Moscow : 22-28 August 1973

"A"
$6,000.

Dr. A.A. Goussev
Vavilova St. 44, Bldg. 2
Moscow 117333, U.S.S.R.

9.2 Sagamore IV : Electron charge, spin and momentum density
Minsk, U.S.S.R. : 12-17 August 1973

"C"
$0.

Professor N. Sirota
The Institute of Physics
Byelorussiam Academy of Sciences
Podlesnaya 17
Minsk, U.S.S.R.

9.3 6th International Colloquium on Magnetic Thin Films
U.S.S.R. Date?

"C"
$0.

Professor Telesnin
Department of General Physics
Faculty of Physics
Moscow State University
Moscow V-234

10. Solid State Commission

10.1 4th International Conference on Solid Compounds of Transition Elements
Geneva : 9-13 April 1973

"B"
$1,000.
subject to further study.

Professor E. Parthe
Laboratoire de Cristallographie aux Rayons X
University of Geneva
32 bd. d'Yvoy, 1211 Geneva 4.

10.2 Sagamore IV : Electronic Charge, Spin and Momentum Densities
(Satellite to the International Moscow Magnetism Conference)

Minsk, U.S.S.R. : 12-17 August, 1973

Professor N. N. Sirota
Institute of Physics of Solids and Semiconductors
Byelorussian Academy of Sciences
Minsk, Podlesnaya 17
U.S.S.R.

see 9.2

10.2 1st Specialised Coll. Ampere "Nuclear Magnetic Resonance in Solids: Pulse Methods, High Resolution, Spin Dynamics and Related Phenomena".

Cracow, Poland : 28 August - 1 September 1973

Dr. J.W. Hennel
Instytut Fizyki Jadrowej
W. Krakowie
Krakow 23
ul. Radzikowskiego 152
Poland.

"B"
$1,000.
subject to
further study

10.3 3rd International Meeting on Ferroelectricity
Edinburgh, U.K. : 10-14 September 1973

Professor W. Cochran
University of Edinburgh
Department of Physics
James Clerk Maxwell Building
The King's Buildings
Mayfield Road
Edinburgh EH9 3JZ, U.K.

"B"
$1,000.
subject to
further study

10.4 Lattice Defects in Ionic Crystals
Marseille or Nice, France : 2-7 July 1973

Professor M. Chemla
Laboratoire d'Electrochimie
Universite de Paris VI
9 quai Saint Bernard
75 - Paris Ve

"B"
$1,000.
subject to further study.

10.5 5th International Conference on Internal Friction and Ultrasonic Attenuation
Aachen, BRD : 27-30 August 1973

Prof. K. Lücke
Metallurgy and Metal Physics
Technische Hochschule
Aachen, BRD.

"C"
$500.
subject to f. study

11. Commission on Particles and Fields

11.1 International Conference on Instrumentation for High Energy Physics
Rome : 8-12 May 1973

"B"
$1,000.

Professor I. F. Quercia
Frascati National Laboratories
Casa Postale 70-00044
Frascati (Roma)
Italy

11.2 Vth International Conference on High Energy Physics and Nuclear Structure
Uppsala, Sweden : 18-22 June 1973

"B"
$1,000.

Dr. Helge Tyren
Gustaf Werner Institute
University of Uppsala
Uppsala, Sweden

11.3 VIth International Conference on Photon and Electron Interactions at High Energy
Bonn, BRD : 27-31 August 1973

"B"
$1,000.

Dr. K. H. Althoff
Physikalisches Institut der Universität Bonn
Nussallee 12
Bonn, Germany

12. Nuclear Physics Commission

12.1 International Conference on Nuclear Physics
Munich, Germany : 27 August - September 1973

"A"
$5,000.

Professor H. J. Mang
Physik Department
8046 Garching
Germany

12.2 International Conference on Photonuclear Reactions and Applications
Asilomar Conference Grounds, Pacific Grove, California :
26-30 March 1973

"B"
$1,000.

Barry L. Berman
Physics Department
Laurence Livermore Laboratory
University of California
Livermore, California 94550

12.3 Reactions between Complex Nuclei
Gatlinberg, Tennessee : October 1973

Paul H. Stelson
Physics Division
Oak Ridge National Laboratory
"B" Oak Ridge
$1,000. Tennessee 37830

15. Atomic and Molecular Physics

15.1 8th International Conference on the Physics of Electronic and Atomic Collisions
Belgrade, Yugoslavia : July 16-21, 1973

Dr Branka Cobic
Ion Physics Laboratory
Boris Kidric Institute
"A" P.O. Box 522
$4,000. Belgrade, Yugoslavia.

16. Plasma Physics

16.1 Conference on Plasma Theory
Kiev, USSR : October 1973

Prof. L.A. Artsimovich
I.V. Kurchatov Institute for Atomic Energy
"B" Moscow
$1,000. USSR.

16.2 XIth International Conference on Ionized Gases
Prague

Prof. Milos Chvojka
Post Schranka 24
"A-B"? Praha 8
$2,000. Czechoslovakia.
subject to further study.

International Astronomical Union

Gravitational Radiation and Gravitational Collapse
Warsaw, Poland : 5-8 September 1973

Prof. C. de Jager
The Astronomical Institute
21 Beneluxlaan
Utrecht
Netherlands.

"B"
$0.

Joint sponsorship with IAU.

Raman Scattering
Bangalore, India : January 1973

Dr. S. Ramaseshan
Deputy Director
National Aeronautical Laboratory
Bangalore 17, INDIA.

APPENDIX IV

COMMISSIONS' BUDGET : 1973-74-75

Commission	Budget 1970-71-72	Spent 1970-71-72	Conf.	Spent/ Conf.	Suggested
1. FINANCE	$ 0.	0.	0	0.	0
2. S.U.N.	3,000.	0.	0	-	0
3. THERMODYNAMICS, STAT. MECHANICS	5,000.	$ 9,000.	4	$2,250.	$ 7,000.
4. COSMIC RAYS	8,000.	8,000.	1	8,000.	8,000.
5. VERY LOW TEMPERATURES	5,000.	7,500.	4	1,750.	6,000.
6. PUBLICATIONS	3,000.	0.	0	-	0
7. ACOUSTICS	5,000.	5,000.	1	5,000.	5,000.
8. SEMICONDUCTORS	8,000.	12,000.	6	2,000.	10,000.
9. MAGNETISM	5,000.	5,000.	3	1,660.	6,000.
10. SOLID STATE	15,000.	17,000.	14	1,200.	12,000.
11. PARTICLES and FIELDS	12,000.	13,000.	9	1,450.	12,000.
12. NUCLEAR PHYSICS	12,000.	10,200.	8	1,250.	10,000.
13. ATOMIC MASSES	3,000.	3,000.	1	3,000.	3,000.
14. PHYSICS EDUCATION	6,000.	3,300.	2	1,600.	6,000.
15. ATOMIC PHYSICS & SPECTROSCOPY	15,000.	16,600.	9	1,850.	15,000.
16. PLASMA PHYSICS	5,000.	4,000.	3	1,300.	5,000.
17. OPTICS	5,000.	0.	3	0.	0
18. OTHERS	15,000.	3,500.	3	1,150.	15,000.
	$130,000.	$127,100.	71		$120,000.

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUÉE

IUPAP

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

Secretary-General :
Dr. C.C. BUTLER, F.R.S.,
Nuffield Lodge
Regents Park
London NW1 4RS, ENGLAND.
Tel.: 01 - 722-8871

Secrétaire général adjoint :
Prof. L. KERWIN, F.R.S.C.,
Université Laval
Québec 10, Canada.
Tél.: 418 - 656-2131

MEMO to Members of the 1969-72 IUPAP Executive Committee

from Larkin KERWIN

subject: Minutes of the Washington Executive Meeting.

-.-

You will find enclosed a draft of the Minutes of the meeting of the Executive Committee of the Union held in Washington last September.

I would ask you to please send me any comments or corrections by December 31st.

The Minutes of the General Assembly are in preparation.

Québec, November 13, 1972.

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

Executive Committee
Washington meeting, September 19 and 24, 1972
National Academy of Sciences

FIRST SESSION, September 19, 1972
14h.00

Present: Messrs. R. BACHER, presiding
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W. DEKEYSER
A. KASTLER
H. MAIER-LEIBNITZ
L. PAL
S. ROZENTAL
V. WEISSKOPF

C. BUTLER, Secretary-General
L. KERWIN

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4. General Assembly Agenda

The agenda for the General Assembly was discussed, and that given in Appendix I was agreed upon. It followed closely the proposed agenda previously circulated to delegates. It was decided not to introduce the question of Statute modifications at this time.

D. In closing the first session, President Bacher read a letter of good wishes sent by Past-President Blokhintsev. Members expressed their regret that he would not be present for the General Assembly.

SECOND SESSION, September 24th, 1972
14h.00

Present: as at the first session

in addition: Dr. S. BHAGAVANTAM
Dr. L. SOSNOWSKI
Dr. J. NILSSON

-.-

E. President Bacher welcomed Messrs. Sosnowski and Nilsson, members of the new Executive Committee, who were sitting in.

5. Member countries

Associate Secretary-General Kerwin reported on the status of member countries. It was agreed that several should increase the number of shares held in the Union, viz: Switzerland, Soviet Union, Japan; while other countries might be approached for membership, viz: Nigeria, Turkey, Chile.

Prof. Maier-Leibnitz agreed to contact Swiss physicists in this respect.

6. News-Bulletin

Recent issues of the News-Bulletin were distributed.

7. Financial report for 1971
8. Suggested budget for 1973

The financial reports for 1971 and for the three-year period 1969-70-71 were reviewed and accepted.

The 1973 budget was discussed and some changes in the draft budget made. The budget as adopted is given in Appendix II.

11. Conferences proposed in 1973

The list of conferences requesting sponsorship for 1973 was reviewed. In the case of those requests not accompanied by check-lists, the Secretary-General was instructed to request them, with particular attention to be paid to the commitment for visas.

The list of approved conferences and grants (subject in several cases to appropriate check-lists being obtained) is given in Appendix III. Several conferences were rejected, particularly those of insufficiently "international" character.

It was also decided to award an exceptional grant for 1972 of $1,000. to the Tucson meeting on modulation spectroscopy.

12. Commissions' support

The broad lines of financial support which Commissions might expect for 1972-75 was examined, and amounts tentatively assigned as guide-lines. These are given in Appendix IV.

13. 1973 Executive Meeting

Professor Pal reiterated the invitation of Hungary that the 1973 Executive Committee meeting should be held in Budapest. This invitation was warmly accepted.

Noting that the dates of the ICSU General Committee meeting were September 18-22, the Executive fixed Friday and Saturday, September 28-29 for its Budapest meeting.

14. 1975 General Assembly

It was agreed to wait until next year before taking up the matter of the venue of the 1975 General Assembly.

15. Other business

a) Acting on a resolution approved by the XIVth General Assembly, the Executive named a study group to examine the advisability of creating an International Commission on Quantum Electronics. Scientists who will be invited to serve on the study committee are:

D. Bradley (Belfast)
S.C. Brown (USA)
P. Lallemand (Paris)
K.P. Meyer (Bern)
A.M. Prohorov (Moscow)
Ramsden (UK)
Haken (Stuttgart).

It was noted that liaison should be established with the Association of Electrical Engineers.

b) Dr. Bertaut's letter concerning the ICSU resolution on the free movement of scientists was discussed. IUPAP is in agreement with ICSU and Professor Bell's résumé of the situation as distributed to the General Assembly was to the point. The Executive emphasized the need for continuous pressure against offending parties, and for systematic reporting of difficulties to the ICSU Committee headed by Prof. Herlofson. The suggestion of inviting papers from speakers to be specified just before a conference was rejected as impractical. Such a procedure might have eased some visa problems superficially, but would not attack the basic wrong.

c) The People's Republic of China: Following the Assembly discussion, it was agreed to write Commissions about inviting Mainland Chinese scientists, and to await the report on Professor Aage Bohr's visit to China.

d) Gravitation Group: This group was considering some affiliation with IUPAP. Dr. Butler was reluctant to give it Affiliated Commission status.

e) IUCSTP: Dr. Bhagavantam reported that IUCSTP would like a corresponding member from IUPAP. He suggested Dr.Salan.

f) Check-list: Dr. Boas regretted the lack of information about projected conferences. He suggested that more publicity be given the check-list, and that a reprint of it could accompany an issue of the Bulletin.

g) Scientific programme: That of the Washington meeting was deemed highly successful. It was suggested that not more than two lectures be scheduled per session.

16. Adjournment

Professor Bacher thanked the Executive Committee warmly for their cooperation during his term of office. Various members of the Executive expressed their appreciation of his guidance during a successful period.

The meeting then adjourned.

Québec, November 1972.

APPENDIX I

Proposed Agenda for the General Assembly 1972

1. Welcome by the USA Academy of Sciences and the President.
2. Minutes of the 1969 General Assembly as recorded in Document IUPAP-16.
3. Adoption of the Agenda.
4. Obituaries.
5. Resolutions of the Executive Committee concerning the Election Procedure for Executive and Commission membership: Paper I.
6. Resolution of the Executive Committee concerning the sizes of Commissions: Paper II.
7. Preliminary discussion of names proposed by Commissions, National Committees and the Executive Committee (Decisions will be deferred until items 13 and 14) : Paper III.
8. Secretary-General's Report.
9. Commission reports: Paper IV.
10. Inter-union and other commissions - some brief reports.
11. ICSU matters.
12. Report of the Financial Commission.
13. Recommendations of Commissions - presentation and preliminary discussion.
14. General discussion of future union policy.
15. Conferences for 1973.
16. Election of the Executive Committee for 1972-1975.
17. Election of Commission Members for 1972-1975.
18. Resolutions from Commissions.
19. Resolutions from National Committees.
20. The venue of the 1975 General Assembly.
21. Other business.
22. Adjournment of the Assembly.

APPENDIX II

1973 BUDGET

INCOME

Member countries (170 x $300.)	$51,000.
UNESCO	13,000.
Interests	1,500.
	$65,500.

EXPENDITURES

Conferences	$40,000.
Commissions	8,000.
Executive Committee	8,000.
Secretariat	4,000.
Publications	2,000.
Subscriptions	1,500.
Banking and Accounting	500.
Contingencies	1,500.
	$65,500.

APPENDIX III

1973 CONFERENCES

3. Thermodynamics and Statistical Mechanics

3.1 International Conference on Statistical Mechanics
Amsterdam : September 1973

Organiser : Professor N. Trappeniers
Van der Waals Lab.
University of Amsterdam
"A" Valcknierstraat 67
$5,000. Amsterdam

3.2 Theoretical Physics and Biology
Versailles : 1973

Professor M. Marois
Institute de la Vie
"C" 89 Bd. St. Michel
$0. Parie 5e

4. Cosmic Rays

4.1 13th Conference on Cosmic Rays
Denver, Colorado : 17-30 August 1973

Professor R. L. Chasson
Department of Physics
University of Denver
"A" Denver
$4,000. Colorado 80210, U.S.A.

8. Semi Conductors Commission

8.1 5th Conference on Amorphous and Liquid Semiconductors
Garmisch-Partenkirchen : Summer 1973
(BRD).

"B"
$0.

Professor M. H. Cohen
The James Franck Institute
University of Chicago
5640 Ellis Avenue
Chicago Ill. 60637, U.S.A.

9. Magnetism Commission

9.1 International Conference on Magnetism
Moscow : 22-28 August 1973

"A"
$6,000.

Dr. A.A. Goussev
Vavilova St. 44, Bldg. 2
Moscow 117333, U.S.S.R.

9.2 Sagamore IV : Electron charge, spin and momentum density
Minsk, U.S.S.R. : 12-17 August 1973

"C"
$0.

Professor N. Sirota
The Institute of Physics
Byelorussiam Academy of Sciences
Podlesnaya 17
Minsk, U.S.S.R.

9.3 6th International Colloquium on Magnetic Thin Films
U.S.S.R. Date?

"C"
$0.

Professor Telesnin
Department of General Physics
Faculty of Physics
Moscow State University
Moscow V-234

10. Solid State Commission

10.1 4th International Conference on Solid Compounds of Transition Elements
Geneva : 9-13 April 1973

"B"
$1,000.
subject to further study.

Professor E. Parthe
Laboratoire de Cristallographie aux Rayons X
University of Geneva
32 bd. d'Yvoy, 1211 Geneva 4.

10.2 Sagamore IV : Electronic Charge, Spin and Momentum Densities
(Satellite to the International Moscow Magnetism Conference)

Minsk, U.S.S.R. : 12-17 August, 1973

Professor N. N. Sirota
Institute of Physics of Solids and Semiconductors
Byelorussian Academy of Sciences
Minsk, Podlesnaya 17
U.S.S.R.

see 9.2

10.2 1st Specialised Coll. Ampere "Nuclear Magnetic Resonance in Solids: Pulse Methods, High Resolution, Spin Dynamics and Related Phenomena".

Cracow, Poland : 28 August - 1 September 1973

Dr. J.W. Hennel
Instytut Fizyki Jadrowej
W. Krakowie
Krakow 23
ul. Radzikowskiego 152
Poland.

"B"
$1,000.
subject to
further study

10.3 3rd International Meeting on Ferroelectricity
Edinburgh, U.K. : 10-14 September 1973

Professor W. Cochran
University of Edinburgh
Department of Physics
James Clerk Maxwell Building
The King's Buildings
Mayfield Road
Edinburgh EH9 3JZ, U.K.

"B"
$1,000.
subject to
further study

10.4 Lattice Defects in Ionic Crystals
Marseille or Nice, France : 2-7 July 1973

Professor M. Chemla
Laboratoire d'Electrochimie
Universite de Paris VI
9 quai Saint Bernard
75 - Paris Ve

"B"
$1,000.
subject to further study.

10.5 5th International Conference on Internal Friction and Ultrasonic Attenuation
Aachen, BRD : 27-30 August 1973

Prof. K. Lücke
Metallurgy and Metal Physics
Technische Hochschule
Aachen, BRD.

"C"
$500.
subject to f. study

11. Commission on Particles and Fields

11.1 International Conference on Instrumentation for High Energy Physics
Rome : 8-12 May 1973

"B"
$1,000.

Professor I. F. Quercia
Frascati National Laboratories
Casa Postale 70-00044
Frascati (Roma)
Italy

11.2 Vth International Conference on High Energy Physics and Nuclear Structure
Uppsala, Sweden : 18-22 June 1973

"B"
$1,000.

Dr. Helge Tyren
Gustaf Werner Institute
University of Uppsala
Uppsala, Sweden

11.3 VIth International Conference on Photon and Electron Interactions at High Energy
Bonn, BRD : 27-31 August 1973

"B"
$1,000.

Dr. K. H. Althoff
Physikalisches Institut der Universität Bonn
Nussallee 12
Bonn, Germany

12. Nuclear Physics Commission

12.1 International Conference on Nuclear Physics
Munich, Germany : 27 August - September 1973

"A"
$5,000.

Professor H. J. Mang
Physik Department
8046 Garching
Germany

12.2 International Conference on Photonuclear Reactions and Applications
Asilomar Conference Grounds, Pacific Grove, California :
26-30 March 1973

"B"
$1,000.

Barry L. Berman
Physics Department
Laurence Livermore Laboratory
University of California
Livermore, California 94550

12.3 Reactions between Complex Nuclei
Gatlinberg, Tennessee : October 1973

Paul H. Stelson
Physics Division
Oak Ridge National Laboratory
"B" Oak Ridge
$1,000. Tennessee 37830

15. Atomic and Molecular Physics

15.1 8th International Conference on the Physics
of Electronic and Atomic Collisions
Belgrade, Yugoslavia : July 16-21, 1973

Dr Branka Cobic
Ion Physics Laboratory
Boris Kidric Institute
"A" P.O. Box 522
$4,000. Belgrade, Yugoslavia.

16. Plasma Physics

16.1 Conference on Plasma Theory
Kiev, USSR : October 1973

Prof. L.A. Artsimovich
I.V. Kurchatov Institute for Atomic Energy
"B" Moscow
$1,000. USSR.

16.2 XIth International Conference on Ionized Gases
Prague

Prof. Milos Chvojka
Post Schranka 24
"A-B"? Praha 8
$2,000. Czechoslovakia.
subject to further study.

International Astronomical Union

Gravitational Radiation and Gravitational Collapse
Warsaw, Poland : 5-8 September 1973

Prof. C. de Jager
The Astronomical Institute
21 Beneluxlaan
Utrecht
Netherlands.

"B"
$0.
Joint sponsorship with IAU.

APPENDIX IV

COMMISSIONS' BUDGET : 1973-74-75

Commission	Budget 1970-71-72	Spent 1970-71-72	Conf.	Spent/ Conf.	Suggested
1. FINANCE	$ 0.	0.	0	0.	0
2. S.U.N.	3,000.	0.	0	-	0
3. THERMODYNAMICS, STAT. MECHANICS	5,000.	$ 9,000.	4	$2,250.	$ 7,000.
4. COSMIC RAYS	8,000.	8,000.	1	8,000.	8,000.
5. VERY LOW TEMPERATURES	5,000.	7,500.	4	1,750.	6,000.
6. PUBLICATIONS	3,000.	0.	0	-	0
7. ACOUSTICS	5,000.	5,000.	1	5,000.	5,000.
8. SEMICONDUCTORS	8,000.	12,000.	6	2,000.	10,000.
9. MAGNETISM	5,000.	5,000.	3	1,660.	6,000.
10. SOLID STATE	15,000.	17,000.	14	1,200.	12,000.
11. PARTICLES and FIELDS	12,000.	13,000.	9	1,450.	12,000.
12. NUCLEAR PHYSICS	12,000.	10,200.	8	1,250.	10,000.
13. ATOMIC MASSES	3,000.	3,000.	1	3,000.	3,000.
14. PHYSICS EDUCATION	6,000.	3,300.	2	1,600.	6,000.
15. ATOMIC PHYSICS & SPECTROSCOPY	15,000.	16,600.	9	1,850.	15,000.
16. PLASMA PHYSICS	5,000.	4,000.	3	1,300.	5,000.
17. OPTICS	5,000.	0.	3	0.	0
18. OTHERS	15,000.	3,500.	3	1,150.	15,000.
	$130,000.	$127,100.	71		$120,000.

IUPAP

THE WHITE HOUSE

WASHINGTON

September 21, 1972

On behalf of all my fellow citizens, I welcome the distinguished physicists who have come to the United States to participate in the Fourteenth General Assembly of the International Union of Pure and Applied Physics. We are especially honored that you have chosen to celebrate your fiftieth anniversary in our country, and that you have given us this opportunity to pay special tribute to the achievements you have realized for all humanity.

Never before has there been such an urgent need for global cooperation in scientific affairs. It is a need that is positively and effectively served by meetings such as this. Governments have often lagged behind organizations such as yours in promoting scientific and technological cooperation. Your leadership has been an inspiration toward this end and has given incentive to scientific progress that will serve all mankind and promote the cause of world peace and prosperity.

I hope that your sessions will be rewarding and productive for all who attend, and that your deliberations will benefit the millions of people who, on this milestone in your history, gratefully acknowledge your considerable accomplishments.

Richard Nixon

IUPAP



Reprinted from

physics today

SEPTEMBER 1972 VOL 25 NO 9

IUPAP –Past and future

Five physicists who have been closely linked with the International Union of Pure and Applied Physics discuss its role in promoting meetings, in publications, scientific exchange and research support.

Although "everyone" has heard of IUPAP, many of us are unaware of what it is (a membership organization? an organization of other organizations?), what it does, and how it is financed (does the money come out of our American Physical Society or Optical Society dues? out of our taxes?).

These questions are brought to mind by two coincident events: This year the International Union of Pure and Applied Physics celebrates its fiftieth anniversary, and later this month the first IUPAP General Assembly to be held in the US will take place at the US National Academy of Sciences. To answer some of the questions and to indicate the new roles that IUPAP is likely to play in the future, PHYSICS TODAY invited five people from the US who have been closely associated in some way with IUPAP to discuss the organization. (For a discussion of some of the more formal aspects of IUPAP, see L. Kerwin, PHYSICS TODAY, May 1969, page 53.) Participants were

▶ Robert F. Bacher of the California Institute of Technology, who is president of IUPAP

▶ William W. Havens of Columbia University, who is Executive Secretary of The American Physical Society, a delegate to the General Assembly and the secretary of the US National Committee of IUPAP.

▶ H. William Koch, Director of the American Institute of Physics, who is a member of the US National Committee of IUPAP and is chairman of the finance committee for the 1972 assembly

▶ Robert E. Marshak, president of the City College of the City University of New York, who is a former member of the US National Committee of IUPAP and a former secretary of the IUPAP High Energy Physics Commission

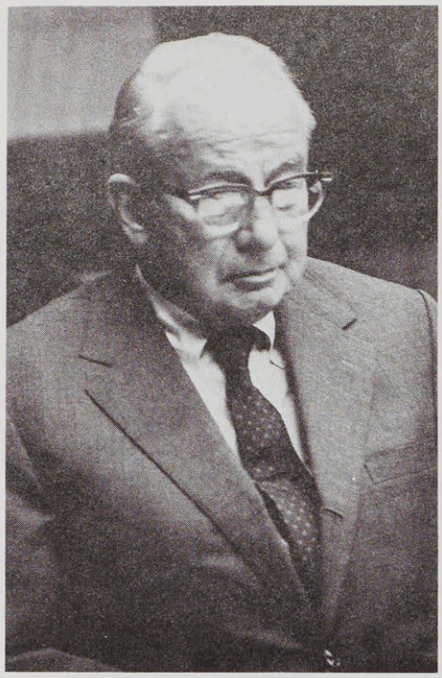
▶ Frederick Seitz, president of Rockefeller University, who is a member of the US National Committee of IUPAP and a delegate to the General Assembly; Seitz was a vice-president of IUPAP from 1960–1966.

IUPAP was established to encourage international physics. What has it really accomplished since 1922?

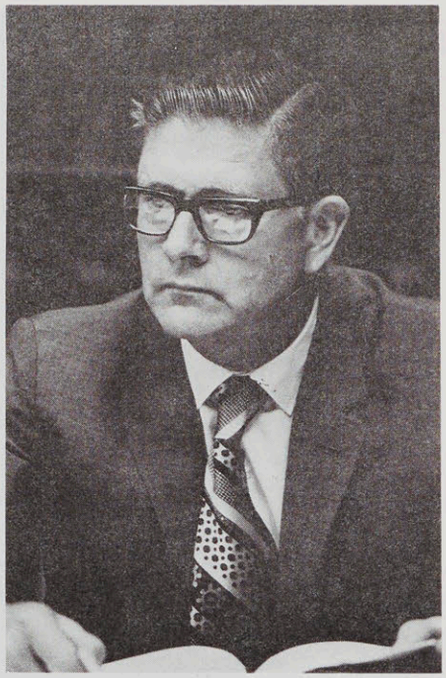
Bacher I think it would be useful to look at the history in terms of US participation. US participation in IUPAP has of course varied over the years since 1921. George Ellery Hale had a major part in starting ICSU [the International Council of Scientific Unions], so the US National Academy through him played a role in the establishment of this organization. Through the 1920's and 1930's, our role in IUPAP was one of not too active participation. The organization was almost extinct during World War II and, after the war, came back—with a certain amount of difficulty. The last twenty years have been a period of steady growth, for several reasons, but mostly because international meetings have become much more popular, and IUPAP has been very active in sponsoring these meetings.

Havens IUPAP is now primarily concerned with meetings, and the organization has several commissions on specialities in physics, which arrange meetings within the specialities. When I first became associated with IUPAP about eight years ago, meetings apparently took place more or less at random, with conflicting meetings on the same subject, at the same time, in two different countries. We began to coordinate the meetings, so that they could be spaced at reasonable times and would have good reasons for existing. Some goofs still do occur—the High Energy Physics Commission might hold a meeting on high-energy nuclear physics, and the Nuclear Physics Commission, not knowing about the plan, schedules a conflicting meeting. But the number of these goofs is decreasing.

The 1969 IUPAP General Assembly, in Dubrovnik, defined three types of meetings to help assure adequate arrangements for the sessions it helps sponsor. A large general meeting, in a particular subject, is a "Class A" meeting and must be held in a place large enough to accommodate 1000–2000 people. A "Class B" meeting is a genuinely international meeting on a speciality within a subject. A "Class C" meeting is one that, although international, is either on an extremely nar-



BACHER



HAVENS



KOCH

row topic or is likely to draw participants only from a local area.

Meetings are supported by IUPAP with varying sums of money. The organizing committee of a particular meeting may use the money with very few restrictions—for paying the travel expenses of particular participants, for aid in publishing the proceedings or for amenities at the meeting to make it more attractive, and so on. The amount of money is never large, because the entire annual IUPAP operating budget is only about $50 000. The publication of a printed *Proceedings* is encouraged so that the meeting may be valuable to more than only the few people who can attend.

Bacher Even IUPAP approval, without any money, helps conference organizers raise funds.

Where does IUPAP's money come from?

Havens It comes from the contributions of the member academies and from UNESCO. In the US the contributions are handled by the National Academy of Sciences, with funds from the National Science Foundation. Each member country has a certain number of shares in IUPAP, related to the extent of scientific activity in the country, and pays $300 per share. The US has 18 shares out of a total of 169.

People sometimes ask me what good IUPAP does, other than financial, in running international meetings. Its real value is the very fact that it *is* an international organization that has been accepted by the governments that are members, and once a meeting is sponsored by IUPAP, a whole group of regulations take over. These regulations, "The Free Exchange of Scientists Program," were formulated by ICSU. If a physicist wants to travel from one country to another to attend one of the conferences, regular procedures, recognized by both governments, are in effect to enable him to obtain a visa. In fact for the upcoming General Assembly in Washington, we are providing information about how one applies for a visa in the US, and what to do if the visa is not issued within a certain period of time. Some people, particularly from Eastern Europe, don't even realize that they *need* to apply for a visa if they have an official invitation.

Bacher Some of the things that Bob [Marshak] has done illustrate the role of IUPAP in international meetings very well.

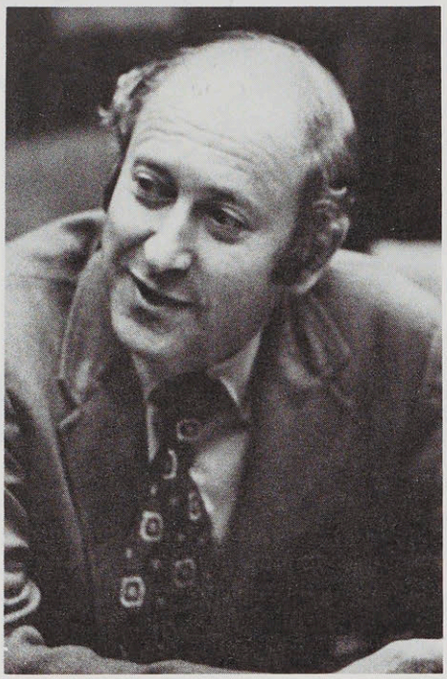
The International Council of Scientific Unions and its member unions—of which IUPAP is one—have provided the medium for scientific interaction between the Eastern European countries and the West. The particular series of meetings that Bob started in 1950, the "Rochester" conferences, became *the* conferences at which high-energy physics information was exchanged. Shortly after the Soviet Union was invited to attend, difficulties arose with visas, and the Soviet Union found it much easier to participate through some international organization. For this reason, the Commission on Particles and Fields was set up. It came into being solely to sponsor these conferences.

Marshak Yes, after the Rochester Conference had been going on for six years, in 1956, we were finally able to have the Soviet Union represented at the conference. They had declassified their high-energy work several years earlier, so we know that they were fairly active, and we were finally able to persuade the US Atomic Energy Commission to cooperate by allowing them to come to the US.

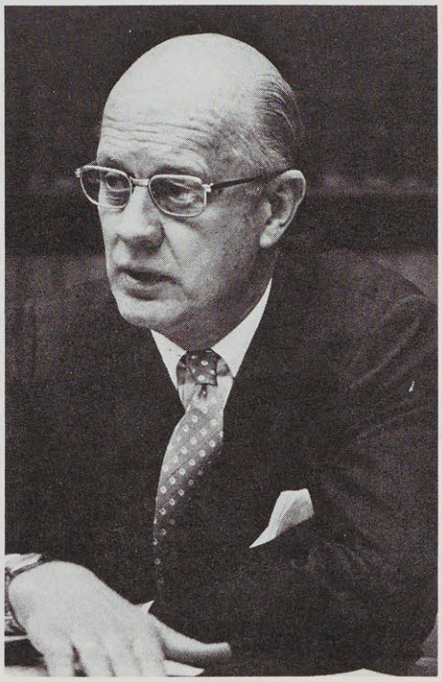
Now that year, 1956, we had an international high-energy conference in Rochester [New York] in April; in May, the Soviet Union organized its first international high-energy conference; in June, CERN arranged *its* international high-energy physics conference.

This kind of repetition was a little ridiculous, and wasteful of time and effort. I happened to be a member of the US delegation to the IUPAP General Assembly in Rome, in 1957, and we decided to try to internationalize the conference and put it on a more rational basis. I recall getting full cooperation from Ioffe, the head of the Soviet Union's delegation, to set up the IUPAP High Energy Commission.

You are right, of course, that a major purpose of the Commission was to regulate the conferences, and we built in a three-way symmetry among the Americans, the Russians and the Western



MARSHAK



SEITZ

Europeans—in terms of the relative number of Commission members.

But one of the interesting features of that 1957 IUPAP General Assembly, as I remember it, was that we gave the Commission two charges in addition to that of organizing the high-energy physics conferences. One further charge was to try to develop much more vigorous communication in high-energy physics; we even tried to develop an international newsletter at that time. The effort was abortive, although we did raise money from the National Science Foundation and CERN was ready to publish it. The Soviet Academy of Sciences did not at that time support the idea, but they did agree to the idea of preprints, and that was an important step in the right direction.

The final charge, which I thought very important and innovative, was giving the Commission responsibility to develop new modes of international cooperation in research. It was, in other words, a precursor of the National Academy of Sciences–Soviet Academy exchange program. Although the efforts were not completely successful at that time, they did produce results in later years and led to serious informal discussions between Soviet, US and CERN scientists. Each tried to learn more about the other's plans, so that foolish duplication of machines could be avoided. Formal action was difficult because of fluctuations in the political climate.

Those informal discussions, which went on continuously through the mechanism of the IUPAP Commission, were perhaps to some extent responsible for the more recent formal collaborations established by the AEC with the Soviet Commission for Peaceful Uses of Atomic Energy. We have an analogy here with the Pugwash Conference, which is a mechanism or forum for informal discussion of arms control that later leads to more formal agreements.

Bacher In fact IUPAP, through ICSU, has been the *principal* medium for scientific exchange between the Eastern European countries and the western countries. From the time of Fred Seitz's participation in IUPAP, an effort was made to get greater involvement for the American Institute of Physics and the various physicist's societies in IUPAP. And, for the last six years or so, we have had vigorous participation of these societies and AIP.

Seitz One historical point of interest here is that the US suffered originally because of its geographical isolation. Hale, as an astronomer, was concerned because US scientists were three thousand miles away from Europe and were cut off from the international movement centered there. The situation is a little reversed now. We are certainly not off the center any longer, but many of the countries that are now developing scientifically need the international unions for the same purposes that we once did.

Bob Marshak's comments have raised an even more general issue, the importance of unions, IUPAP among them, in helping to open doors by being very consciously apolitical. It has taken a long while for people to appreciate this. I think it was ten years after World War I before the Germans were allowed back into the international unions, but since World War II, we have taken the view that any duly constituted scientific group, regardless of what country or half country it is in, should be part of an international organization. Our own US delegation has consistently voted to admit to IUPAP and ICSU groups appropriately and professionally representatives of the field. I think it is very important that we maintain that front, in the period ahead. There will be pressures to push out groups, and I think it would be a great disaster if we let that happen.

Bacher Well, if this were done, it would open the door to pushing out groups for all sorts of other reasons. And while a particular case might be one that would get a lot of sympathetic support, the principle of keeping it completely out of politics is a very important one, and I think now finally after a good many years this is generally agreed to by the US government at most levels.

In what other ways does IUPAP contribute?

Koch We've been discussing past accomplishments and organizational aspects of IUPAP. There is one area of

NIELS BOHR LIBRARY



William H. Bragg was the first president of IUPAP. Presidents since Bragg have been Robert A. Millikan, Karl Manne Siegbahn, Hendrik A. Kramers, Nevill F. Mott, Edoardo Amaldi, Homi J. Bhabha, Louis Néel, D. I. Blokhintsev and, currently, Robert F. Bacher.

activity that I think will become more important in the future. I think IUPAP is going to play an increasing role in stimulating and fostering international cooperation in the publication and information area. For years IUPAP has had a publications commission that has been active and effective, but increasingly IUPAP is going to be involved in international cooperation for computerized information systems. At the moment, the particular part of ICSU that is involved is the ICSU Abstracting Board. I've been the IUPAP representative to that abstracting board for the last three years, and it has been exciting to behold how the various countries of the world and the various scientific societies are agreeing more and more to standardize the production of the journals that report research results. There is growing agreement, and growing recognition of the *need* for agreement, on trying to lead these journals toward computerized abstract-indexing services, toward repackaging of discipline-oriented articles in journals so that the results in the fundamental sciences will be usable and adaptable to the solution of problems that are more mission oriented.

Bacher It's very likely that the international cooperation in publication and abstracting is really just in its early stages.

Koch One of the things that the Publications Commission has already done is to agree on standards for writing abstracts and standards for preparation of articles. But as we get into a computerized system and try to handle the various research articles uniformly, we need a much greater level of standardization and agreement than ever before. In the past, agreements have been aimed at improving the quality of particular journals, one journal at a time, and at having uniform ways to summarize an article in an abstract. Now, in a computerized system, we are going to have to handle all of those abstracts together. They must all be tagged the same way, with the same indexing terms and the same symbols, so that people in a developing country and people in a country like the US or a European country will be able to understand the language of physics in whatever format—printed, microform or computer tape—they find suits their needs.

Bacher The emphasis on IUPAP in the past has been principally on sponsoring meetings, and I hope that whatever the organization does, it doesn't take emphasis off that absolutely necessary function. Bill Koch has pointed out that IUPAP is increasingly active in publications, and there is a good deal to be done in that field. Now there is a new area just coming into being, and I think IUPAP can play an important role in it. The laboratories in which physics is done are getting to be fewer in number and larger in scope, and many of them already transcend national boundaries. In high-energy physics, and more recently in other subfields, people want to go to major centers where there are facilities and contacts that they could not possibly have in their own laboratories. It seems quite possible to me that IUPAP can in the future play a much more important role in this kind of exchange.

The team from the Soviet Union doing high-energy physics experiments at the National Accelerator Laboratory is an example. The visit was set up through the AEC exchange program. But I think that, because this kind of exchange is going to happen increasingly, there are ways that IUPAP can use its good offices to promote it.

Seitz As you said earlier, the work that IUPAP did in the past helped open that door, so that it's now routine.

Bacher If the question of having visas easily available had not been set up for going to meetings, it would be

impossible to have exchanges for doing experiments. But there are other possibilities—the CERN laboratory, the theoretical laboratory [International Centre for Theoretical Physics] in Trieste, and international experiments have been carried out at Serpukhov and earlier at Dubna [in the USSR].

We would want to include the developed as well as the underdeveloped countries, but if we are going to have this sort of international collaboration it will have to be started with the developed countries. Getting the developing countries to participate in international physics has been very difficult, although I think the situation is improved now and that there are really very good opportunities. But my feeling is that the way to proceed is through initial participation of the developed countries and, once the laboratories are going, the developing countries can be brought in.

Marshak There's no question that the way to start is through the existing laboratories, which are essentially all in the developed countries. But I think that the International Foundation of Science, a new organization that I have been helping to set up through ICSU, might play a role in scientific exchanges. About 14 countries have already joined, through their academies, and the foundation is intended to provide funds for individuals or small groups in the developing countries, to build up their scientific capacities. Roger Revelle [Harvard], Sven Brohult [president of the Swedish Academy of Engineering Sciences] and Abdus Salam [director of the Trieste Centre for Theoretical Physics] are among the organizers. If the International Foundation of Science gets going as we expect it to, it will need international review committees to judge the merit of various proposals from the scientists of the developing countries. And I would hope that, through ICSU—which is intended to have a very close relation with the Foundation—IUPAP will take a very active interest.

Everyone is going international in different ways. We have mentioned the Trieste center. Abdus Salam is the moving spirit behind another international federation being formed now, the International Federation of International Institutes. About 20 international or quasi-international centers, such as the Salk Institute and Woods Hole, are joining together into this international federation. Although the idea was originally conceived of to provide more opportunities for scientists from the developing countries, it is starting out by providing more cooperation among different scientific disciplines among the more advanced countries, for more or less the reasons we have mentioned. Here is another area of international activity in which IUPAP might get involved.



George Ellery Hale and Robert Millikan at Norman Bridge lab, Caltech. Both played important roles in relation to IUPAP—Hale as an early advocate of the International Council of Scientific Unions, to which IUPAP belongs, and Millikan as IUPAP's second president.

This leads me to a different thought. The kind of general self-examination of the role of physics that is taking place in the US is also going on in other countries. I wonder whether IUPAP might profitably get more involved in this kind of physics policy discussion as a prognosis for the future.

Koch You mean similar to the Bromley report [the recently completed report of the NAS Physics Survey Committee]? I think this may be an area in which, after a while, there will be a more conscious exchange of viewpoints.

What about the more immediate future? What is the program for the 1972 General Assembly going to include?

Koch I think Bill [Havens] was one of the prodders in associating a science program with the Assembly.

Havens The IUPAP general conferences I've attended have been very nice and enjoyable affairs, but there were only one or two lectures on science.

NIELS BOHR LIBRARY



Participants at the 1956 Moscow conference on high-energy physics included (left to right) Murray Gell-Mann, Lev Landau and Robert Marshak. That year three separate international conferences on this subject were held; the IUPAP High Energy Physics Commission, with Marshak as secretary, was established largely to regulate these international meetings.

This September conference has three reasons for being associated with a good scientific program: It is the fiftieth anniversary of IUPAP; this is the first general conference to be held in the US, and I don't think the attendance would be very good if all we had at the conference was discussion of a few administrative details.

I thought that the IUPAP General Assembly would be a gathering of eminent scientists coming from all over the world, and we ought to take advantage of this assembly to put on a unique scientific program that would be impossible in any other place. The first scientific session is Thursday 21 September, and we have such people as Edoardo Amaldi, a former president of IUPAP, who is going to talk on the unity of physics. Looking at the program I see that Toraldo di Francia will speak on optics, Tuzo Wilson of Canada on the physics of the earth, Sir Fred Hoyle of Cambridge on astrophysics, Kip Thorne on gravitation, Gerhard Herzberg on spectroscopy and molecular structure, John Bardeen and J. Friedel on solid-state physics, H. B. G. Casimir on physics and society, Wolfgang Gentner on international cooperation, [L. A.] Artsimovitch on plasma physics, [Victor] Weisskopf on elementary particles, [Aage] Bohr on nuclear physics —so we'll have quite a full program.

Bacher This move to have the general assemblies, which have traditionally been business sessions, devote an increasing amount of time to scientific work has been worked on for a good many years, and I think it fair to say that part of the impetus has come from people in the US. Having a general assembly here gave us an opportunity to try something unusual in this direction, and I think a really outstanding program has been put together.

Koch I think it's significant that in talking about IUPAP we've touched on so many different topics—the national physical societies, the relationship of IUPAP to ICSU, the growing strength of ICSU, publications, relations to other international bodies. I find this variety a particularly significant aspect, demonstrating the growing strength of IUPAP.

Bacher One of IUPAP's difficulties is that it has a very meagre budget to operate on. Between $50 000 and $60 000 is the entire budget. The major funds for any meeting, whether of a commission or a general assembly, must be raised outside. Our general assembly this year will cost considerably more than the annual budget of IUPAP for a year, just to put on that one meeting, and this is customary.

Marshak I wonder whether the time might not be ripe for asking all physicists who belong to a national physical society that in turn belongs to IUPAP to tax themselves to the tune of, perhaps, one dollar a year.

Bacher When we talk about IUPAP finances, we should recognize that about one quarter of the IUPAP budget does come as a subvention from UNESCO to ICSU, which then allocates funds among the unions according to plans and formulas worked out quite a long time ago.

With such limited budgets as they have, both IUPAP and ICSU are very frail organizations, and their strength can only be the strength that comes of being the principal organization for international cooperation and collaboration in science and technology.

Seitz That's right, and they depend very much on the spirit and dedication of a rather small number of people, who feel it transcends them.

Bacher I think it rather interesting that, 50 years ago, when IUPAP was set up, it was designated the International Union of Pure and *Applied* Physics. This much emphasis on applied physics 50 years ago is rather surprising. Well, of course, applied physics has come to mean something completely different in these 50 years. Now physics has applications to many other sciences and also applications to technology and industry; the border between pure and applied science has become one that is completely indistinct and will continue to be indistinct. I suspect that IUPAP in the future will have much more to do—and does already in some of its commissions—with problems that are related to industry. We cannot tell what this will mean for the future. □



symbol of

3 H Faelledgade B101
Copenhagen
March 6th
1913.

Dear Prof. Rutherford,

I thank you very much for your letter, I was so glad to hear about all what is going on in the laboratory. I am exceedingly interested in it all, and especially in the results of your work on the γ-rays.

Enclosed I send the first chapter of my paper on the constitution of atoms. I

When I have finished my paper, I hope to be able to come on a short visit to Manchester, and look forward to this eventuality with the greatest pleasure.

With the best compliments to you and Mrs. Rutherford from my wife and myself, and once more thanking you for your kind letter

Yours very sincerely,

Niels Bohr.

March 20th., 1913.

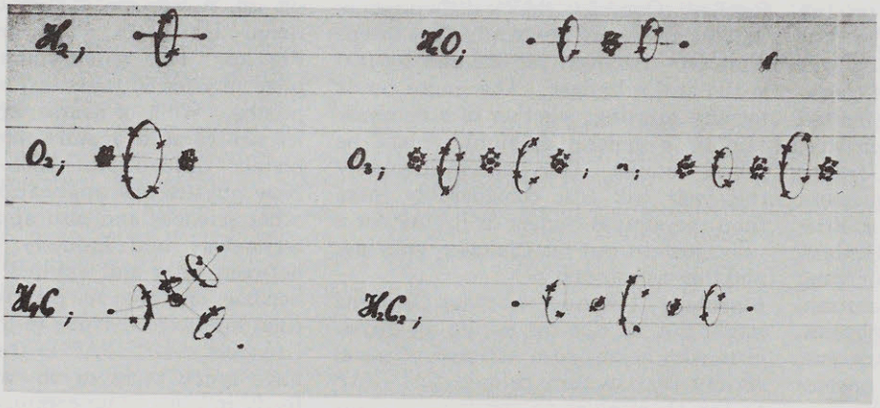
Dear Dr. Bohr.

I have received your paper safely and read it with great interest, but I want to look over it again carefully when I have more leisure. Your ideas as to the mode of origin of spectrum and hydrogen are very ingenious and seem to work out well; but the mixture of Planck's ideas with the old mechanics make it very difficult to form a physical idea of what is the basis of it. There appears to me one grave difficulty in your hypothesis, which I have no doubt you fully realise, namely, how does an electron decide what frequency it is going to vibrate at when it passes from one stationary state to the other? It seems to me that you would have to assume that the electron knows beforehand where it is going to stop.

Yours very sincerely,

E Rutherford

Ps I suppose you have no objection to my using my judgement & cut out any matter I may consider unnecessary in your paper?
Please reply.



The first draft of Bohr's ideas on atomic structure (see excerpt at left) served as a basis for discussions with Ernest Rutherford at Manchester in July 1912. After his return to Copenhagen, Bohr prepared his ideas for submission to the Philosophical Magazine; in the letter to Rutherford reproduced here (above left) he asked for comments on Part I of the three-part manuscript. Rutherford's reply (above) shows some of his reactions to the new theory. (The original draft and Rutherford's letter to Bohr are in the Bohr Papers at the Niels Bohr Institute, Copenhagen; Bohr's letter to Rutherford is in the Rutherford Papers at the Cambridge University Library. Both the Bohr and Rutherford collections are available on Microfilm at the AIP Niels Bohr Library.)

niels bohr international science

Niels Bohr's impact on physics was expressed over a fifty-year period through his fundamental scientific contributions, his creation and nurturing of a working center for physicists of all nations at his Copenhagen institute and his humanistic concern and vigorous efforts for international cooperation in science and other cultural fields. This month, ten years after his death, Bohr's major role in international physics will be commemorated in Washington, D.C., by the International Union of Pure and Applied Physics, as part of the celebration of the Union's 50th anniversary. A bust of Bohr (see photo at the top of the facing page) by the Danish sculptor Harald Isenstein will be unveiled at the fourteenth meeting of the IUPAP General Assembly at the National Academy of Sciences and thereafter will be accorded a place of honor in the offices of the IUPAP Secretary General. As part of the 50th anniversary celebration and tribute to Bohr, an exhibit will be presented at the National Academy by the American Institute of Physics Center for History of Physics. The exhibit will provide glimpses of the world of physics in 1922, when IUPAP was founded, and will show aspects of Bohr's life, work and international impact. The historical documents and photographs in the exhibit are from the collections of the AIP Center's Niels Bohr Library, which is now ten years old, and we offer a selection here.





Bohr's major contributions to physics continued during the decades following his pioneering work on the constitution of the atom, as did his warm relationships with scientists from all nations. In the photo at left, we see Bohr with the German physicist Arnold Sommerfeld (Margrethe Bohr Collection, AIP Niels Bohr Library). The photo above, taken at the 1931 Rome Conference on Nuclear Physics, shows (front row) Jean Perrin of France, Guglielmo Marconi of Italy, Bohr and Francis Aston of the UK (Segrè Collection, AIP Niels Bohr Library).

IUPAP

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

UNION INTERNATIONALE DE PHYSIQUE PURE ET APPLIQUÉE

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Université Laval
Québec 10, Canada
Téléphone: 418-656-2131

MEMORANDUM

To : Members of the Executive Committee

From : Secretary-General

Executive Meeting : September 19th

As arranged at Brussels the Executive will meet at 2.00 p.m. at the National Academy of Sciences, Washington.

The main business will be to reconsider some of our recommendations for appointments on Commissions and inter-union committees. A small number of comments on our proposals made at Brussels have been received - mainly from the existing Commissions.

Please bring your Brussels papers with you.

It will be necessary for the old Executive, plus any of the new members available in Washington, to meet briefly at the end of the Assembly - probably on September 25th. Conference grants for 1972/3 will be made then and arrangements made for the 1973 meeting. This will be the last occasion at which Professor Bacher will preside.

C. C. Butler
5th September 1972

IUPAP

ATTENDANCE AT XIV GENERAL ASSEMBLY OF IUPAP

I. Summary:

Delegation	Number in Delegation
Argentina	0
Australia	3
Austria	1
Belgium	1
Bolivia	3
Brazil	0
Bulgaria	0
Canada	5
Republic of China	5
Cuba	0
Czechoslovakia	1
Denmark	2
Finland	0
France	11
Federal Republic of Germany	7
German Democratic Republic	3
Hungary	1
India	5
Ireland	1
Israel	1
Italy	4
Japan	2
Republic of Korea	1
Mexico	0
Netherlands	1
New Zealand	1
Norway	0
Pakistan	0
Poland	2
Romania	0
South Africa	0
Spain	1
Sweden	3
Switzerland	3
United Arab Republic	0
United Kingdom	7
USA	24
USSR	3
Yugoslavia	2
Total	104

In addition, there were 6 IUPAP officials and 3 observers who were not part of a delegation who attended the General Assembly. This gave us a total of 113 who attended the IUPAP General Assembly sessions.

II. Names of Delegates and Observers

Australia

Dr. Walter Boas
Dr. John Stuart Dryden
Prof. H. Webster

Austria

Prof. Dr. Otto Hittmair

Belgium

Prof. W. Dekeyser

Bolivia

Lic. Carlos Aguirre
Ing. Ricardo Anda
+Ing. Gaston R. Mejia

Canada

Dr. R. E. Bell
Dr. Gerhard Herzberg
Prof. Paul Lorrain
Dr. G. Volkoff
Dr. J. Tuzo Wilson

Republic of China

Delegates

Dr. Ching-Tang Chen-Tsai
Prof. Chun-Shan Shen
Dr. Wei-Noon Wang
Dr. Ta-You Wu

Observer

Mr. Hsuen-Chang Pan

Czechoslovakia

Prof. Dr. Miroslav Trlifaj

Denmark

+Prof. Aage Bohr
Prof. S. Rozental

France

Prof. Jacques Badoz
Prof. Dr. E. F. Bertaut
Prof. Julien Bok
Dr. Bernard Briat
Prof. G. Delacote
Prof. B. Dreyfus
Prof. Pierre Lallemand
Madame H. Mathieu-Faraggi
Prof. Jean Charles Terrien
Prof. B. Vodar
Prof. M. Michel Voos

Federal Republic of Germany

Delegates

Prof. Dr. G. W. Becker
+Prof. Dr. Karl Ganzhorn
Prof. Dr. Hans Joos
Prof. Dr. W. Kroebel
Prof. Dr. H. Maier-Leibnitz
Dr. K.-H. Riewe

Observer

Prof. Wolfgang Gentner

German Democratic Republic

Prof. J. Auth
Dr. Herbert Friedrich
Prof. Dr. Karl Lanius

Hungary

Prof. L. Pal

India

Prof. F. C. Auluck
Prof. S. Bhagavantam
Prof. M. G. K. Menon
Prof. B. M. Udgaonkar
Dr. P. Venkateswarlu

Ireland

Prof. Declan M. Larkin

+Chairman of delegation

Israel

Prof. Yuval Ne'eman

Italy

Prof. Edoardo Amaldi
Prof. Bruno Brunelli
Prof. D. Sette
Prof. G. Toraldo Di Francia

Japan

Prof. Isao Imai
Prof. T. Sugawara

Republic of Korea

Dr. Chul C. Lee

Netherlands

Dr. H. F. P. Knaap

New Zealand

Dr. Ian G. Donaldson

Poland

Prof. Leonard Sosnowski
Prof. Joseph Werle

Spain

Prof. Luis Bru

Sweden

Dr. Eric Dyring
Prof. Jan S. Nilsson
Prof. E. Rudberg

Switzerland

Prof. Dr. Heini Granicher
Prof. Dr. Andre Mercier
Prof. Hans H. Staub

United Kingdom

Delegates

Prof. George R. Bishop
+Prof. Nicholas Kurti
Dr. R. S. Pease
Prof. W. C. Price
Prof. J. G. Wilson

Observers

Prof. L. F. Bates, F.R.S.
Sir Gordon Sutherland

USA

Delegates

Dr. D. Allan Bromley
+Prof. Sanborn C. Brown
Dr. Edwin L. Goldwasser
Dr. W. W. Havens, Jr.
Dr. Frederick Seitz

Alternate Delegates

Prof. Stanley S. Ballard
Dr. John Bardeen
Dr. Lewis M. Branscomb
Dr. Milan D. Fiske
Dr. Martin Greenspan
Dr. H. William Koch
Dr. Roman Smoluchowski

Observers

Dr. E. Richard Cohen
Dr. Hsu Y. Fan
Dr. Joseph L. Fowler
Dr. Conyers Herring
Dr. I. Hirsh
Dr. Walter H. Johnson, Jr.
Dr. William C. Kelly
Dr. Hugh Odishaw
Dr. Simon Pasternack
Dr. George T. Rado
Dr. F. Dow Smith
Dr. Hugh C. Wolfe

+Chairman of delegation

USSR

Dr. Eleveter Andronikashvili
Dr. Vasiliy D. Badakayev
+Dr. Vladimir M. Tuchkevich

Yugoslavia

+Prof. Aleksandar Milojevic
Dr. Milorad Mladjenovic

+Chairman of delegation

III. IUPAP Officials

President: Prof. Robert F. Bacher (USA)

First Vice-President: *Prof. H. Maier-Leibnitz (FRG)

Vice-Presidents: Prof. G. Bernardini (Italy)
*Dr. S. Bhagavantam (India)
*Dr. Walter Boas (Australia)
*Prof. Dr. W. Dekeyser (Belgium)
Prof. Alfred H. Kastler (France)
*Prof. L. Pal (Hungary)
*Prof. S. Rozental (Denmark)
Prof. Victor Weisskopf (USA)

Secretary-General: Dr. C. C. Butler (UK)

Assoc. Secretary-General: Prof. Larkin Kerwin (Canada)

*Also listed above as delegates

IV. Observers not included in National Delegations

Prof. Donald D. Betts (Canada) - member of Commission on Thermodynamics and Statistical Mechanics

Prof. H. B. G. Casimir (Netherlands) - member of Commission on Physics Education

Dr. Herbert Friedman (USA) - Representative from IUCSTP

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUÉE

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

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Secrétaire général adjoint :
Prof. L. KERWIN, F.R.S.C.,
Université Laval
Québec 10, Canada.
Tél.: 418 - 656-2131

Québec, October 13, 1972.

Prof. Victor Weisskopf,
Vice-President of IUPAP,
Department of Physics,
Massachusetts Institute of Technology,
Cambridge, Mass. 02139, USA.

Dear Prof. Weisskopf:

At the 14th General Assembly of IUPAP held in Washington, you were re-elected as Vice-President of the Union for the coming three years.

The delegates were very grateful that you should have allowed your name to stand and that the Union will continue to have the benefit of your counsel and experience for the next three years.

I look forward with great pleasure to working with you again.

Yours sincerely,

Larkin Kerwin

Larkin Kerwin,
Secretary-General

LK:cgb

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

APPENDIX "A"

Resolutions by the Executive Committee for consideration at the 1972 Washington General Assembly

The Secretary-General circulated a paper to National Committees and Executive and Commissions on the proposed arrangements for the appointment of Executive and Commission Members in January 1972. This paper was drawn up after considering some comments which arrived after the 1971 meeting of the Executive in Dublin.

The following resolutions are neither alterations nor additions to the existing IUPAP Statutes. Essentially they are Procedures for Elections of IUPAP officers.

Procedure for the Appointment of Executive Committee Members

The Executive Committee recommends :

1. The Executive shall consist of :

   President
   Past-President
   8 Vice-Presidents
   Secretary-General

   These officers are all provided for in the Statutes. In addition, the Executive proposes an Associate Secretary-General.

2. The President will serve for 3 years and will be succeeded by the First Vice-President.

3. The First Vice-President will serve for 3 years and will then become President.

4. The 8 Vice-Presidents will be appointed for 3 years and will be eligible for one further cycle of 3 years.

5. The Secretary-General and Associate Secretary-General will be appointed for 3 years and will be eligible for a maximum of 3 terms of 3 years. (The Executive recognise that it will not be possible to implement this rule in 1972).

6. Election Procedure :

   6.1 National Committees will be invited to send names of physicists willing to serve and whom they support to the Secretary-General 4 months before each General Assembly.

6.2 The Secretary-General will inform National Committees of all the suggested names approximately 3 months before the General Assembly.

6.3 The Executive Committee will consider all the suggested names (and may itself add names), and will prepare, as a basis for discussion at the next General Assembly, a list of names for the new Executive Committee. The Executive will publish its list of names for the new Executive as early as possible, but not later than the beginning of the General Assembly.

6.4 National Delegations will be able to add names, from the first list of suggested names, to the Executive proposals during the General Assembly. Each such addition must be seconded by another Delegation. If the candidate is not a national of the proposer's country, then the permission of the candidate's National Delegation must be obtained. The Executive will fix a deadline about mid-way through the Assembly for the receipt of final proposals, duly seconded.

6.5 If more names are proposed, either by the Executive or by National Committees, than the number of vacancies to be filled, then a secret ballot will be held. Voting will be by heads of Delegations completing the number of ballot forms corresponding to the number of votes allotted to their Delegation.

6.6 If one or more vacancies occur on the Executive between meetings of the General Assembly, the Executive is empowered to fill them. Members appointed to these vacancies will serve until the next General Assembly. In the event of their being reappointed by the Assembly, the initial period of service will not count towards the maximum permitted length of service.

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

APPENDIX "A"

Procedure for the Appointment of Commission Members

The Executive Committee recommends :

1. Each Commission (other than the Finance Commission) will consist of :

   Chairman
   Secretary
   5 to 10 members

2. Commissions will advise the Executive Committee on the appropriate size for their work. The Executive will make recommendations to the Assembly which will fix Commission sizes before elections take place.

3. Chairmen of Commissions

   Chairmen will be appointed for 3 years, normally after 3 (or exceptionally after 6) years as secretary or as an ordinary member of their Commission. In exceptional circumstances a Chairman may become an ordinary member of the Commission for 3 years after his period as Chairman.

4. Secretaries of Commissions

   Secretaries will be appointed for 3 years after 3 years' service on the Commission. Secretaries will be eligible for a second, and final, cycle of 3 years.

5. Commission members

   Commission members will be appointed for 3 years and will be eligible for one further term of 3 years.

   Exceptions to this rule will be permitted for members of the SUN Commission and the Atomic Masses Commission, both of which have very specialised tasks and undoubtedly have a need for some of their members to serve longer than 6 years.

6. National Distribution of Commission Membership

   The members of each Commission (excluding Chairman and Secretary) must all come from different countries adhering to IUPAP.

   The work of a few Commissions may be hindered by this rule,

for example Particles and Fields. They may present their case to the Executive and, if approval is given, the Executive will make a recommendation to the General Assembly for ratification before the elections take place.

7. Associate Members

Some Commissions have established valuable links with other Unions. They may wish to ask these Unions to nominate experts in their fields to become Associate Members of the IUPAP Commissions. These members would be additional to the fixed number of IUPAP members. Associate Members will not be eligible for IUPAP grants towards travelling and subsistence expenses when attending IUPAP Commission meetings. They will not have a vote at Commission meetings.

8. The Executive recognise that it may not be possible to implement all these rules concerning length of service straightaway in 1972.

When new Commissions are established ad hoc arrangements will need to be made until a normal rotation of membership can be established.

9. Election Procedure for Commission Members

9.1 National Committees and Commissions will be invited to suggest names for membership (including the offices of Chairman and Secretary) of Commissions to the Secretary-General up to four months before the General Assembly. Each name submitted must be accompanied by brief details of the physicist's career and post currently held, and, for names submitted by Commissions, it is desirable that the permission of the candidate's National Committee should be obtained. A special form will be provided for this purpose. The Secretary-General (or Associate Secretary-General) will circulate all the names received by the deadline to National Committees approximately 3 months before the General Assembly.

9.2 The Executive Committee will consider all the suggested names (and may itself suggest names) and will subsequently prepare, as a basis for discussion at the Assembly, a list of names for members of the Commissions.

In preparing the lists of names for Commissions the Executive will endeavour to ensure a satisfactory world-wide spread of Commission membership. The Executive will publish their proposed list of Commission members as early as possible but not later than the beginning of the General Assembly.

9.3 Individual National Delegations attending the Assembly will be able to add names, from the first list of suggested names, to the Executive list. Each proposal at this stage must be seconded by another Delegation. A convenient deadline (about mid-way through the Assembly) will be fixed for the receipt of formal proposals, duly seconded. If any candidate is not a member of the proposer's country, then the proposer must secure the permission of the candidate's National Delegation before making the proposal.

9.4 If more names are proposed and seconded than the number of vacancies to be filled on one or more Commissions, then secret ballots will be held. The voting procedure will be the same as the one adopted for choosing Executive Committee members.

9.5 The procedure for filling casual vacancies on Commissions which occur between meetings of the General Assembly will be the same as for casual vacancies on the Executive Committee.

June 1972

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

APPENDIX "B"

Symbols, Units and Nomenclature

(1) Present Members:

Chairman	E. Rudberg	Sweden	1954
Secretary	U. Stille	F. D. R.	1954

6 Members.

J. deBoer	Netherlands	1948
H. C. Wolfe	U.S.A.	1957
J. Rossel,	Switzerland	1959
J. Terrien	France	1966
E. Djakov	Bulgaria	1969
M. L. McGlashen	U.K.	1969

6 Corresponding Members

L. Rosenfeld	Denmark	1963
I.I. Novikov	U.S.S.R.	1966
D. Ilkovič	Czechoslovakia	1969
K. Shimoda	Japan	1969
L. Villena	Spain	1969
G. Volkoff	Canada	1969

(2) Commission Recommends:

Commission's preference is to remain unchanged until 1975 when a new version of the booklet I. U. P. A. P. 11 will be produced. However, a few members have not been active and could be replaced in 1972.

Long term the commission recommends Chairman, Secretary plus 12 members. However, two members could perhaps be associate members representing the views of B. I. P. M. and I. U. P. A. C. Possibly Terrien and McGlashen could take these places respectively. In this event the commission would be of standard size.

No names received for new members for Commission.

(3) National Committee recommends:

A. Bray	Italy	Age 47
D. Ilkovič	Czechoslovakia	65
U.S.E.E. Stille	F.D.R. (as Secretary)	62
H. C. Wolfe	U.S.A.	67
R. G. Chambers	U.K.	48
J. Terrien	France	65
E. Djacov	Bulgaria	

(4) The Executive Committee recommends that the S.U.N. Commission should be composed of Chairman, Secretary plus 10 members. In addition, associate members may be appointed representing the views of B.I.P.M. and I.U.P.A.C.

(5) Executive recommendations for membership of the Commission of 1972/75:

Chairman	E. Rudberg	Sweden	1954
Secretary	U. Stille	FDR	1954

10 Members:

J. de Boer	Netherlands	1948	E. Djakov	Bulgaria	1969
H. C. Wolfe	USA	1957	D. Ilkovič	Czechoslovakia	1969
J. Rossel	Switzerland	1959	L. Villena	Spain	1969
L. Rosenfeld	Denmark	1963	A. Bray	Italy	1972
I. I. Novikov	USSR	1966	R. G. Chambers	UK	1972

Associate members:

J. Terrien B.I.P.M.; M. L. McGlashen I.U.P.A.C.

THERMODYNAMICS AND STATISTICAL MECHANICS

1) Present Members:

Chairman:	H. Fröhlich	UK 1963
Secretary:	P. Mazur	Netherlands 1966

6 Members

R. Kubo	Japan	1963
L. Waldman	FDR	1966
E. Montroll	USA	1966
C. Block	France	1966
A. Abrikosov	USSR	1969
D. Betts	Canada	1969

3 Corresponding Members

N. Trappeniers	Netherlands	1966
A. Dacev	Bulgaria	1966
H. Wergeland	Norway	1966

2) Commission recommends: Chairman, Secretary and 10 members

Chairman: H. Frölich Secretary: P. Mazur

Abrikosov, Betts and Trappeniers to be members

New members:	E. G. D. Cohen	USA
	H. Haken	FDR
	P. Ch Hemmer	Norway
	Ch. G. Kuper	Israel
	H. Mori	Japan
	L. Verlet	France

Commission will meet in Amsterdam in 1973 and will propose a new Chairman and Secretary.

3) National Committees recommend:-

		Age
P. Szépfalusy	Hungary	41
B. Jancovici	France	42
P.T. Landsberg	UK	50
H. Mori	Japan	46
H. B. Callen	USA	53
H. Haken	FDR	46
G. Boato	Italy	48
R. S. Ingarden	Poland	52
A. Dacev	Bulgaria	

4) Executive Committee agrees with proposed membership of Chairman, Secretary and 10 members.

5) Executive Committee recommendations for membership of the Commission for 1972/75:

Chairman: P. Mazur	Netherlands	1966
Secretary: D. Betts	Canada	1969

10 Members:

A. Abrikosov	USSR	1969
G. Boato	Italy	1972
H. B. Callen	USA	1972
H. Haken	FDR	1972
C. Hemmer	Norway	1972
B. Jancovici	France	1972
C. G. Kuper	Israel	1972
P. T. Landsberg	UK	1972
H. Mori	Japan	1972
P. Szépfalusy	Hungary	1972

COSMIC RAY COMMISSION

1) Present Members:

Chairman: J. G. Wilson UK 1963

Secretary: M. G. K. Menon India 1963

5 Members

P. Meyer	USA	1966
S. N. Vernov	USSR	1969
B. Peters	Denmark	1969
A. J. Somogyi	Hungary	1969
J. Nishimura	Japan	1969

4 Corresponding Members

E. Bagge	FDR	1969
R. Gall	Mexico	1969
C. Castagnoli	Italy	1969
J. Gierula	Poland	1969

2) Commission recommends: Chairman, Secretary and 8 members.

Chairman: M. G. K. Menon

Secretary: B. Peters

J. G. Wilson and P. Meyer to retire.

Rest to be full members.

Plus C. J. Waddington USA

3) National Committees recommend:

		Age
E. Friedländer	Romania	47
A. W. Wolfendale	UK	45
A. J. Somogyi	Hungary	51
J. Nishimura	Japan	45
P. Meyer	USA	51
C. J. Waddington	USA	42
E. R. Bagge	FDR	60
J. Dubinsky	Czechoslovakia	58
C. Castagnoli	Italy	48
J. Gierula	Poland	55

4) Executive Committee agrees that membership should be Chairman, Secretary and 8 members.

5) Executive Committee proposes the following membership:

Chairman:	M. G. K. Menon	India	1963
Secretary:	B. Peters	Denmark	1969

8 Members:

E. Bagge	FDR	1969
C. Castagnoli	Italy	1969
R. Gall	Mexico	1969
J. Gierula	Poland	1969
J. Nishimura	Japan	1969
A. J. Somogyi	Hungary	1969
S. N. Vernov	USSR	1969
C. J. Waddington	USA	1972

VERY LOW TEMPERATURE PHYSICS

1) Present Members:

Chairman: J. Bardeen USA 1963

Secretary: T. Sugawara Japan 1966

6 Members

N. E. Alekseevskii	USSR	1966
W. Buckel	FDR	1966
J. L. Olsen	Switzerland	1966
S. Safrata	Czechoslovakia	1966
K. W. Takonis	Netherlands	1966
B. Dreyfus	France	1969

3 Corresponding Members

A. H. Cooke	UK	1969
O. V. Lounasmaa	Finland	1969
A. K. Sreedhar	India	1969

2) Commission recommends: Chairman, Secretary and 9 members

Chairman: O. V. Lounasmaa Finland

Secretary: T. Sugawara Japan

N. I. Brandt	USSR
A. H. Cooke	UK
B. Drefus	France
W. J. Huiskamp	Netherlands
W. Klose	FDR
A. K. Sreedhar	India
M. Tinkham	USA

Tentatively:

I. M. Templeton	Canada
J. Müller	Switzerland

Commission is content to leave choice of last two names to the Executive.

3) National Committees recommend:

		Age
E. L. Andronikashvili	USSR (as Chairman)	62
G. Careri	Italy	50
B. Dreyfus	France	44
R. P. Hudson	USA (by UK Committee)	48
J. Kaczér	Czechoslovakia	52
W. Klose	FDR	42
C. Kuper	Israel	46
J. Müller	Switzerland	43
T. Sugawara	Japan (as Secretary)	53
I. M. Templeton	Canada	43
M. Tinkham	USA	44
A. Zawadowski	Hungary	36
G. K. White	Australia	47
N. I. Brandt	USSR	49
W. J. Huiskamp	Netherlands	47

4) Executive Committee recommends: Chairman, Secretary and 9 members.

5) Executive Committee recommends the following membership for 1972/75:

Chairman:	E. L. Andronikashvili	USSR	1972
Secretary:	T. Sugawara	Japan	1966

9 Members:

A. H. Cooke	UK	1969
B. Dreyfus	France	1969
O. V. Lounasmaa	Finland	1969
A. K. Sreedhar	India	1969
N. I. Brandt	USSR	1972
W. J. Huiskamp	Netherlands	1972
W. Klose	FDR	1972
I. M. Templeton	Canada	1972
M. Tinkham	USA	1972

PUBLICATIONS

1) Present Members:

Chairman: H. C. Wolfe USA 1966

Secretary: J. van den Handel Netherlands 1966

6 Members			6 Corresponding Members		
S. Pasternak	USA	1966	K. Kinosita	Japan	1966
J. Weyssenhoff	Poland	1966	L. Villena	Spain	1966
B. R. Coles	UK	1969	E. Bretnütz	FDR	1969
J. Friedel	France	1969	M. Mladjenovic	Yugoslavia	1969
E. M. Lifshits	USSR	1969	P. Papali	Italy	1969
M. Matyas	Czechoslovakia	1969	C. I. Pedersen	UK	1969

2) Commission recommends: Chairman, Secretary and 10 members

Chairman: S. Pasternak USA Age 58

Secretary: J. Friedel France Age 51

J. Kvasnica	Czechoslovakia	
B. R. Coles	UK	45
E. Bretnütz	FDR	41
P. Papali	Italy	
A. W. K. Metzner	USA	38
K. Kinosita	Japan	54
E. M. Lifshits	USSR	
R. Nilsson	Sweden	

Editor of Canadian Journal of Physics

Editor of Physics Letters :

either J. Hamilton Denmark

or R. Gatto Italy

3) National Committees recommend:

		Age
J. Friedel	France	51
K. Kinosita	Japan	54
S. Pasternack	USA	58
A. W. K. Metzner	USA	38
E. Bretnütz	FDR	41
J. Kvasnica	Czechoslovakia	42
P. Papali	Italy	49

4) Executive Committee recommends: Chairman, Secretary and 10 members.

5) Executive Committee recommends the following membership for 1972/75:

Chairman:	S. Pasternak	USA	1966
Secretary:	J. Friedel	France	1969

10 Members:

E. Bretnütz	FDR	1969
B. R. Coles	UK	1969
K. Kinosita	Japan	1969
E. M. Lifshits	USSR	1969
P. Papali	Italy	1969
R. Haering	Canada	1972
J. Hamilton	Denmark	1972
J. Kvasnica	Czechoslovakia	1972
A. W. K. Metzner	USA	1972
R. Nilsson	Sweden	1972

ACOUSTICS

1) Present Members:

Chairman: I. Malecki Poland 1966

Secretary: D. Sette Italy 1966

6 Members			6 Corresponding Members		
Y. Saneyoshi	Japan	1966	F. Ingerslev	Denmark	1951
E. Zwicker	FDR	1966	J. Frenkiel	Belgium	1963
I. Hirsch	USA	1969	F. Kolmer	Czechoslovakia	1966
J. Mattei	France	1969	D. W. Robinson	UK	1966
A. Rimskii-Korsakov	USSR	1969	G. L. Fuchs	Argentina	1969
F. Tarnoczy	Hungary	1969	A. Lara	Spain	1969

2) Commission recommends: Chairman, Secretary and 10 members

Chairman: J. Mattei France

Secretary: D. Sette Italy

B. L. Clarkson	UK
H. G. Diestel	FDR
G. L. Fuchs	Argentina
I. J. Hirsch	USA
J. Igarashi	Japan
F. Kolmer	Czechoslovakia
A. Lara	Spain
I. Malecki	Poland
A. Rimskii-Korsakov	USSR
E, A. G. Shaw	Canada

Commission recommends retiring Chairman, I. Malecki, should continue as member for further 3 years.

3) National Committees recommend:

		Age
T. Tarnóczy	Hungary	57
B. L. Clarkson	UK	41
J. Mattei	France	51
I. Hirsch	USA	50
H. G. Diestel	FDR	51
I. Malecki	Czechoslovakia (as Chairman)	60
D. Sette	Italy (as Secretary)	54
F. Kolmer	Czechoslovakia	50

4) Executive Committee recommends: Chairman, Secretary and 10 Members.

5) Executive Committee recommends the following membership for 1972/75:

Chairman:	J. Mattei	France	1969
Secretary:	D. Sette	Italy	1966

10 Members:

F. Kolmer	Czechoslovakia	1966
G. L. Fuchs	Argentina	1969
I. Hirsch	USA	1969
A. Lara	Spain	1969
A. Rimskii-Korsakov	USSR	1969
F. Tarnóczy	Hungary	1969
B. L. Clarkson	UK	1972
H. G. Diestel	FDR	1972
J. Igarashi	Japan	1972
E. A. G. Shaw	Canada	1972

SEMICONDUCTORS

1) Present Members

Chairman: E. W. J. Mitchell UK 1963

Secretary: J. Bok France 1966

6 Members

V. S. Vavilov	USSR	1966
H. Welker	FDR	1966
J. Auth	DDR	1969
E. Kane	USA	1969
H. Kawamura	Japan	1969
J. Tauks	Czechoslovakia	1969

3 Corresponding Members

H. Y. Fan	USA	1969
R. Grigorovici	Romania	1969
G. C. Jain	India	1969

2) Commission Recommends: Chairman, Secretary and 8 members.

Chairman: H. Kawamura Japan
or
R. Grigorovici Romania

Secretary: J. Bok France

A. F. Gibson	UK
E. O. Kane	USA
O. Madelung	FDR
A. P. Shotov	USSR
J. Auth	DDR
F. Bassani	Italy
A. Many	Israel

3) National Committees recommend:

			Age
V. M. Tuchkevich	(as Chairman)	USSR	67
A. P. Shotov		USSR	45
I. C. Szép		Hungary	50
A. Glodeanu		Romania	40
A. Many		Israel	50
J. Auth		DDR	42
B. A. La Giullaume		France	
J. Bok	(as Secretary)	France	39
C. Hilsum		UK	46
E. O. Kane,		USA	47
O. Madelung		FDR	50
M. Matyáš		Czechoslovakia	49
F. Bassani		Italy	43
J. Kolodziejczak		Poland	37
H. Y. Fan		USA	60

4) Executive Committee recommends: Chairman, Secretary and 8 members.

5) Executive Committee recommends the following membership for 1972/75:

✓	Chairman: V. M. Tuchkevich	USSR	1972
✓	Secretary: J. Bok	France	1966

8 Members:

✓	J. Auth	DDR	1969
✓	R. Grigorovici	Romania	1969
✓	E. O. Kane	USA	1969
✓	H. Kawamura	Japan	1969
✓	F. Bassani	Italy	1972
✓	C. Hilsum	UK	1972
✓	O. Madelung	FDR	1972
✓	A. Many	Israel	1972

MAGNETISM

1) Present Members:

Chairman:	W. C. Marshall	UK	1966
Secretary:	G. T. Rado	USA	1966

5 Members

A. Blandin	France	1969
S. Chikazumi	Japan	1969
C. J. Gorter	Netherlands	1969
E. Kneller	FDR	1969
L. V. Kirenski	USSR	1969

5 Corresponding Members

L. Valenta	Czechoslovakia	1963
W. Andrä	DDR	1969
C. Herring	USA	1969
R. Kubo	Japan	1969
R. Pauthenet	France	1969

2) Commission recommends: Chairman, Secretary and 10 members.

Chairman:	G. T. Rado	USA
Secretary:	A. Blandin	France

E. P. Wohlfarth	UK
J. Kanamori	Japan
S. V. Vonsovsky	USSR
E. Kneller	FDR
C. J. Gorter	Netherlands
Z. Frait	Czechoslovakia
W. Andrä	DDR
W. Low	Israel

and 2 out of the following 3:

R. Street	Australia
H. B. Mueller	Denmark
B. Vankatarman	India

3) National Committees recommend:

		Age
L. Pál	Hungary	47
W. Low	Israel	50
W. Andrä	DDR	49
A. Blandin	France	39
E. P. Wohlfarth	UK	47
J. Kanamori	Japan	42
G. T. Rado (as Chairman)	USA	55
W. C. Herring	USA	59
W. Zinn	FDR	43
L. Valenta	Czechoslovakia	48
G. Montalenti	Italy	57
R. Street	Australia	51
S. Szczeniowski	Poland	73

4) Executive Committee recommends: Chairman, Secretary and 10 members.

5) Executive Committee recommends the following membership during 1972/75:

Chairman:	G. T. Rado	USA	1966
Secretary:	A. Blandin	France	1969

10 Members:

A. Andrä	DDR	1969
C. J. Gorter	Netherlands	1969
J. Kanamori	Japan	1972
W. Low	Israel	1972
H. B. Mueller	Denmark	1972
L. Pál	Hungary	1972
R. Street	Australia	1972
S. V. Vonsovsky	USSR	1972
E. P. Wohlfarth	UK	1972
W. Zinn	FDR	1972

SOLID STATE PHYSICS

1) Present Members:

Chairman: W. Boas Australia 1963

Secretary: E. F. Bertaut France 1966

6 Members (including I. U. Cr. representative)			6 Corresponding Members		
L. P. Gorkov	USSR	1966	G. Chiarotti	Italy	1966
W. J. Merz	Switzerland	1966	A. Guinier	France	1966
T. Nagamiya	Japan	1966	J. S. Koehler	USA	1966
A Seeger	DDR	1966	R. Blinc	Yugoslavia	1969
G. Szigeti	Hungary	1966	S. C. Jain	India	1969
J. M. Cowley	USA	1969	R. Kaishev	Bulgaria	1969

2) Commission recommends: Chairman, Secretary and 10 members

E. F. Bertaut	France	proposed as Chairman
G. Szigeti	Hungary	proposed as Secretary

3) National Committees recommend:

		Age
L. V. Keldysh	USSR	41
G. Szigeti	Hungary	67
D. D. Barb	Romania	37
W. Low	Israel	50
M. Balarin	DDR	37
P. G. de Gennes	France	39
E. F. Bertaut (as Chairman)	France	59
A. Keller	UK	46
F. C. Brown	USA	48
H. Ehrenreich	USA	44
J. A. E. Diehl	FDR	44
E. Fatuzzo	Italy	37
A. Piekara	Poland	68
C. Jaccard	Switzerland	43
R. Kaishev	Bulgaria	

4) Executive Committee recommends:

Chairman, Secretary and 10 members and 1 associate member

5) Executive Committee recommends for appointment for 1972/75

Chairman	E.F. Bertaut	France	1966
Secretary	G. Szigeti	Hungary	1966

10 Members:

R. Blinc	Yugoslavia	1969
S.C. Jain	India	1969
R. Kaishev	Bulgaria	1969
M. Balarin	DDR	1972
J.A.E. Diehl	FDR	1972
H. Ehrenreich	USA	1972
E. Fatuzzo	Italy	1972
L.V. Keldysh	USSR	1972
A. Keller	UK	1972
G.K. White	Australia	1972

An associate member to be agreed with IUCr, probably J.M. Cowley.

PARTICLES AND FIELDS

1) Present Members:

Chairman: A. A. Logunov USSR 1969

Secretary: R. L. Walker USA 1966

6 Members

T. G. Pickavance	UK	1963
V. P. Dzhelepov	USSR	1966
K. Lanius	DDR	1966
S. Suwa	Japan	1966
G. Salvini	Italy	1969
C. N. Yang	USA	1969

7 Corresponding Members

L. Van Hove	Belgium	1966
G. Ekspong	Sweden	1969
H. Joos	FDR	1969
A. Lagarrigue	France	1969
Y. Ne'eman	Israel	1969
J. Pniewski	Poland	1969
B. M. Udgaonkar	India	1969

2) Commission recommends: Chairman, Secretary and 10 members
One extra member for 1973-6

The Commission recommends that two members (including the Chairman and Secretary) should be permitted from the USSR and the USA.

Chairman: C. N. Yang USA

Secretary: G. Salvini Italy

A. A. Logunov	U.S.S.R.
G. Ekspong	Sweden
H. Joos	F.D.R.
Y. Ne'eman	Israel
J. Pniewski	Poland
B. M. Udgaonkar	India
B. Gregory	France
G. H. Stafford	U.K.
E. L. Goldwasser	U.S.A.

Name to be suggested by V. V. P. Dzelepov and A. A. Logunov from U.S.S.R.

Extra member for 1973 - 6: G. Takeda Japan

3) National Committees recommend:

		Age			Age
D. Kiss	Hungary	43	C. N. Yang	USA	50
S. Titeica	Romania	64	E. L. Goldwasser	USA	53
Y. Ne'eman	Israel	47	H. Joos	FDR	45
B. P. Gregory	France	53	M. Blažek	Czechoslovakia	40
G. H. Stafford	UK	52	G. Salvini	Italy	52
G. Takeda	Japan	47	J. Pniewski	Poland	59
V. L. Fitch	USA	49	H. Leutwyler	Switzerland	34

4) Executive Committee recommends:

Chairman, Secretary and 10 members maximum

5) Executive Committee recommends for appointment for 1972/75

Chairman	C.N. Yang	USA	1969
Secretary	G. Salvini	Italy	1969

10 Members:

G. Ekspong	Sweden	1969
H. Joos	FDR	1969
A.A. Logunov	USSR	1969
J. Pniewski	Poland	1969
B.M. Udgaonkar	India	1969
A.M. Baldin	USSR	1972
E.L. Goldwasser	USA	1972
B.P. Gregory	France	1972
G.H. Stafford	UK	1972
G. Takeda	Japan	1972

NUCLEAR PHYSICS

1) Present Members

Chairman:	R.E. Bell	Canada	1966
Secretary:	J. Teillac	France	1963

6 Members

G.R. Bishop	UK	1966
S.G. Cohen	Israel	1966
E.M. Frank	USSR	1967
T. Lauritsen	USA	1966
R. Remanna	India	1966
H. Schopper	FDR	1966

6 Corresponding Members

E. Baumgartner	Switzerland	1969
J. Fowler	USA	1966
R. Ricci	Italy	1969
M. Sakai	Japan	1969
I. Slaus	Yugoslavia	1969
S. Szaley	Hungary	1966

2) Commission recommends:

Chairman, Secretary and 10 members (perhaps 8)

Commission has not been consulted about future membership. Bell has consulted with Teillac.

R.E. Bell wishes to resign. He suggests J. Teillac (France) as Chairman. For Secretary he proposes either T. Lauritsen or J. Fowler, both of the USA. In general, Bell and Teillac feel that the existing membership should serve for a further three years.

3) National Committees recommend:

A. Szalay	Hungary	Age	62
M. Petrascu	Romania		45
S. Cohen	Israel		52
H. Faraggi-Mathieu	France		56
J. Teillac	as Chairman by UK Committee		52
J.C. Willmott	UK		50
M. Sakai	Japan		50
J.L. Fowler	USA		58
F. Ajzenberg-Selove	USA		46
D.A. Bromley	USA		45
T. Mayer-Kuckuk	FDR		42
I. Ulehla	Czechoslovakia		50
R.A. Ricci	Italy		44
A.Z. Hrynkiewicz	Poland		47
E. Baumgartner	Switzerland		46

4) Executive Committee recommends

Chairman, Secretary and 10 Members

5) Executive Committee recommends for membership for 1972/75

Chairman	J. Teillac	France	1963
Secretary	J.L. Fowler	USA	1966

10 Members:

E. Baumgartner	Switzerland	1969
R.A. Ricci	Italy	1969
M. Sakai	Japan	1969
F. Ajzenberg-Selove	USA	1972
H. Faraggi-Mathieu	France	1972
T. Mayer-Kuckuk	FDR	1972
B. Mottelson	Denmark	1972
Strutinski	USSR	1972
I. Úlehla	Czechoslovakia	1972
J.C. Willmott	UK	1972

ATOMIC MASSES AND RELATED CONSTANTS

1) Present Members:

Chairman: A. H. Wapstra Netherlands 1960
Secretary: E. R. Cohen USA 1966

6 Members

W. H. Johnson	USA	1966
I. P. Selinov	USSR	1966
H. H. Staub	Switzerland	1966
J. Terrien	France	1966
J. H. Bjerregaard	Denmark	1969
J. H. Sanders	UK	1969

5 Corresponding Members

W. W. Buechner	USA	1960
H. Duckworth	Canada	1960
U. Stille	FDR	1960
J. Mattauch	FDR	1966
K. Ogata	Japan	1966

2) Commission recommends: Chairman, Secretary and 8 members.

Chairman: E. R. Cohen USA
Secretary: W. H. Johnson USA

J. H. Sanders	UK	
I. P. Selinov	USSR	
H. H. Staub	Switzerland	
J. Terrien	France	
K. Ogata	Japan	
U. Stille	FDR	
H. E. Duckworth	Canada	or R. C. Barber of Canada
W. W. Buechner	USA	

A. H. Wapstra to be an Associate Member, representing the I.U.P.A.C. Commission on Atomic Weights.

3) National Committees recommend:

		Age
V. I. Goldansky	USSR	49
J. Terrien	France	65
W. H. Johnson	USA	43
E. R. Cohen (as Chairman)	USA	50
U. Stille	FDR	62

4) Executive Committee recommends

Chairman, Secretary and 8 members

5) Executive Committee recommends for appointment for 1972/75

✓ Chairman	E.R. Cohen	USA	1966
✓ Secretary	J.H. Sanders	UK	1969

8 Members:

✓ U. Stille	FDR	1960
* ✓ A.H. Wapstra	Netherlands	1960
✓ W.H. Johnson	USA	1966
✓ K. Ogata	Japan	1966
✓ H.H. Staub	Switzerland	1966
✓ J. Terrien	France	1966
✓ R.C. Barber	Canada	1972
✓ V.I. Goldansky	USSR	1972

* associated - representing IUPAC

EDUCATION

1) Present Members:

Chairman: H. H. Staub Switzerland 1966

Secretary: W. C. Kelly USA 1966

7 Members			6 Corresponding Members		
A. S. Akhamatov	USSR	1963	P. Fleury	France	1960
W. Schaffer	S. Africa	1966	D. Sette	Italy	1960
M.Y Bernard	France	1969	M. Valouch	Czechoslovakia	1960
L. S. Kothari	India	1969	H. B. G. Casimir	Netherlands	1966
W. Kroebel	FDR	1969	A. Harashima	Japan	1969
J. L. Lewis	UK	1969	E. Nagy	Hungary	1969
J. Werle	Poland	1969			

2) Commission recommends: Chairman, Secretary and 6 members.

Chairman: M.Y Bernard France

Secretary: J. L. Lewis UK

A. Harashima	Japan
L. S. Kothari	India
W. Kroebel	FDR
A. N. Matveyev	USSR
E. Nagy	Hungary
J. Werle	Poland

3) National Committees recommend:

		Age
E. Nagy	Hungary	52
S. Rapeanu	Romania	40
Delacote	France	33
J. L. Lewis	UK (as Secretary)	48
Vera Kistiakowsky	USA	44
A. P. French	USA	51
W. Kroebel	FDR	68
M. Trlifaj	Czechoslovakia	50
G. Cortini	Italy	53
H. Bebié	Switzerland	34

4) Executive Committee recommends

Chairman, Secretary and 9 members

5) Executive Committee recommends for membership for 1972/75

Chairman	W.C. Kelly	USA	1966
Secretary	J.L. Lewis	UK	1969

9 Members:

M.Y. Bernard	France	1969
A. Harashima	Japan	1969
L.S. Kothari	India	1969
W. Kroebel	FDR	1969
E. Nagy	Hungary	1969
J. Werle	Poland	
A.P. French	USA	1972
A.N. Matveyev	USSR	1972
W. Thirring	Austria	1972

ATOMIC AND MOLECULAR PHYSICS AND SPECTROSCOPY

1) Present Members:

Chairman: A. Kastler France 1966

Secretary: W. L. Fite USA 1966

6 Members

L. M. Branscomb	USA	1966
N. V. Fedorenko	USSR	1966
W. C. Price	UK	1966
M. J. Seaton	UK	1966
A. Walsh	Australia	1969
H. L. Welsh	Canada	1969

8 Corresponding Members

N. Cassini	Italy	1969
J. H. Hertz	DDR	1969
G. Herzberg	Canada	1969
I. Kovács	Hungary	1969
P. O. Noornan	Netherlands	1969
T. Skalinski	Poland	1969
K. Takayanagi	Japan	1969
H. Van Regemorter	France	1969

2) Commission recommends: Chairman, Secretary and 8 members.

Chairman: L. M. Branscomb USA (At. Spec.)

Secretary: Seaton, Walsh or Welsh (Collisions)

Members:

L. Bender	USA	(At. Spec.)
J. Brossel	Fránce	(At. Spec.)
H. Ehrhardt	FDR	(Collisions)
I. Kovacs	Hungary	(Mol. Spec.)
K. Takayanagi	Japan	(Collisions)
V. L. Tal'roze	USSR	(Collisions)
M. J. Seaton	UK	(Collisions)
A. Walsh	Australia	(Mol. Spec.)
H. L. Welsh	Canada	(Mol. Spec.)

3) National Committees recommend:

		Age
R. N. Il'iin	USSR	42
I. Kovács	Hungary	58
J. H. Hertz	DDR	48
J. Brossel	France	54
W. C. Price	UK	63
G. Herzberg	by UK (as Chairman)	68
K. Takayanagi	by UK	about 45
J. B. Hasted	UK	51
L. Branscomb	USA	46
V. W. Hughes	USA	50
G. zu Putlitz	FDR	41
F. J. Comes	FDR	43
A. Steudel	FDR	47
A. Gozzini	Italy	55
T. Skaliński	Poland	62
A. Walsh	Australia	55

4) Executive Committee recommends:

Chairman, Secretary and 10 members

5) Executive Committee recommends for appointment for 1972/75:

Chairman	L.M. Branscomb	USA	1966
Secretary	H.L. Welsh	Canada	1969

10 Members:

J.H. Hertz	DDR	1969
I. Kovács	Hungary	1969
T. Skalinski	Poland	1969
K. Takayanagi	Japan	1969
A. Walsh	Australia	1969
J. Brossel	France	1972
A. Gozzini	Italy	1972
J.B. Hasted	UK	1972
R.N. Iliin	USSR	1972
G. zu Putlitz	FDR	1972

PLASMA PHYSICS

1) Present Members:

Chairman: L. A. Artsimovich USSR 1966

Secretary: S. C. Brown USA 1966

6 Members

H. Alfven	Sweden	1966
H. Maecker	FDR	1966
K. Husimi	Japan	1969
R. S. Pease	UK	1969
I. Popescu	Romania	1969
R. F. Post	USA	1966

7 Corresponding Members

P. L. Bhatnagar	India	1969
B. Brunelli	Italy	1969
C. M. Braams	Netherlands	1969
J. L. Delacroix	France	1969
L. Pekárek	Czechoslovakia	1969
L. Rothhardt	DDR	1969
E. S. Weibel	Switzerland	1969

2) Commission recommends: Chairman, Secretary and 10 members.

R. F. Franklin	UK	Nominated by the International Scientific Committee on Phenomena in Ionized Gases
L. Pekárek	Czechoslovakia	
K. Takayana	Japan	
C. M. Braams	Netherlands	
L. Rothhardt	DDR	
M. Gottlieb	USA	
I. Popescu	Romania	
B. Brunelli	Italy	
R. S. Pease	UK	

No firm recommendation about Chairman or Secretary.

3) National Committees recommend:

		Age
L. V. Sagdeev	USSR	40
I. Popescu	Romania	40
L. W. Rothhardt	DDR	43
J. L. Delcroix	France	
M. B. Gottlieb	USA	55
S. C. Brown	USA	59
G. Ecker	FDR	47
J. Kracík	Czechoslovakia	44
B. Brunelli	Italy	49
E. S. Weibel	Switzerland	47
R.S. Pease	UK	
S.C. Brown	UK (as Secretary)	

4) Executive Committee recommends:

Chairman, Secretary and 10 members and 1 associate member

5) Executive Committee recommends for appointment for 1972/75

Chairman	S.C. Brown	USA	1966
Secretary	R.S. Pease	UK	1969

10 Members:

C.M. Braams	Netherlands	1969
B. Brunelli	Italy	1969
I. Popescu	Romania	1969
L. Rothhardt	DDR	1969
E.S. Weibel	Switzerland	1969
J.L. Delcroix	France	1972
G. Ecker	FDR	1972
M.B. Gottlieb	USA	1972
J. Kracik	Czechoslovakia	1972
L.V. Sagdeev	USSR	1972

R.F. Franklin to be an associate Member, nominated by the International Scientific Committee on Ionized Gases.

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

APPENDIX "B"

MEMBERSHIP of INTER-UNION COMMISSIONS

1. C.O.S.P.A.R.

   Present Representative: S. Bhagavantam

2. I.U.C.S.T.P.

   Prof. S. Bhagavantam — India

3. C.O.D.A.T.A.

   Prof. Boris Vodar — France — 1966

4. S.C.O.R.

   Sir Edward Bullard — U.K. — 1966

5. I.U.P.A.C. - POLYMERS

   Prof. K. Wolf — F.D.R. — wishes to retire

   G.W. Becker is proposed by the F.D.R.

6. I.C.S.U. Abstracting Board

   Prof. H.W. Koch — U.S.A. — 1969

   J. Ziman — U.K. has been suggested by the President of the ICSU Abstracting Board

7. I.U.Cr. - Crystal Growth

   Prof. H. Dekeyser — Belgium — 1969

8. Committee on the Teaching of Science

   Prof. H.H. Staub — Switzerland — 1969

9. European Physical Society

   Dr. C.C. Butler — U.K.

APPENDIX "C"

National Distribution of IUPAP Executive and Commissions' Membership proposed for 1973

Member Country	Total	Shares	Repres/Share
ARGENTINA	1	2	0.5
AUSTRALIA	3	6	0.5
AUSTRIA	1	1	1
BELGIUM	0	4	0
BOLIVIA	0	1	0
BRAZIL	0	2	0
BULGARIA	2	1	2
CANADA	6	8	0.75
CHINA	0	1	0
CUBA	0	1	0
CZECHOSLOVAKIA	5	3	1.6
DENMARK	5	3	1.6
FINLAND	1	1	1.0
FRANCE	14	12	1.2
EAST GERMANY	5	4	1.2
WEST GERMANY	15	12	1.2
GREAT BRITAIN	15	15	1.0
HOLLAND	5	4	1.2
HUNGARY	6	2	3.0
INDIA	5	4	1.2
IRELAND	0	1	0
ISRAEL	3	2	1.5
ITALY	11	12	1.0
JAPAN	12	8	1.5
MEXICO	1	2	0.5
NEW ZEALAND	0	1	0
NORWAY	1	3	0.3
PAKISTAN	0	1	0
POLAND	4	4	1.0
ROMANIA	2	3	0.6
SOUTH AFRICA	0	1	0
SOUTH KOREA	0	1	0
SPAIN	2	4	0.5
SWEDEN	3	8	0.37
SWITZERLAND	4	2	2.0
UNITED ARABEREPUBLIC	0	1	0
UNITED STATES of AMERICA	21	18	1.1
U.S.S.R.	16	12	1.3
YUGOSLAVIA	2	1	2.0
	171	171	1.0

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

APPENDIX "D"

Proposed Executive Committee

President: H. MAIER-LEIBNITZ

Past President: R.F. BACHER

Vice-Presidents: A. KASTLER
L. PAL
V. WEISSKOPF
L. SOSNOWSKI
W.M. VUL
H. WERGELAND

1st Vice-President: C.C. BUTLER

Secretary-General: L. KERWIN

Associate Secretary-General: (to come)

I.U.P.A.P.

APPENDIX "E"

State of the 1972 budget, as of June 1st, 1972

INCOME	to date	to come	estimated
Member countries	$ 24,300.	$26,700.	($51,000.)
UNESCO	14,125.	- - 0.	($16,000.)
Interests	- 0.	$ 1,500.	($ 1,500.)
Transfer from travel funds	- 0.	$ 4,000.	($ 5,500.)
	$ 38,425.	$32,200.	($74,000.)
	$70,625.		

EXPENDITURES				
Conferences:	regular	$ 30,500.	$ 5,200.	($32,500.)
	General Assembly	10,000.	- 0.	($10,000.)
Commissions		3,258.	$ 4,742.	($ 8,000.)
Secretariat		1,528.	$ 2,472.	($ 4,000.)
Banking and Accounting		356.	$ 144.	($ 500.)
Publications		- 0.	$ 2,000.	($ 2,000.)
Subscriptions		1,575.	$ - 0.	($ 1,500.)
Executive Committee		2,845.	$13,155.	($16,000.)
Contingencies		- 0.	$ 1,500.	($ 1,500.)
		$ 50,062.	$29,213.	($76,000.)
		$79,275.		

PROBABLE DEFICIT . . . . . $ 8,650.

APPENDIX "F"

Draft Agenda for the General Assembly in Washington - 1972

General Note

The programme provides for 5 business sessions September 20th am and pm, September 22nd pm, Sunday September 24th am, and Monday September 25th am. The 1969 Assembly required only 3 sessions. If business progresses well on September 20th, then the morning session of Sunday September 24th could perhaps be abandoned.

1. Welcome by the U.S.A. Academy of Sciences and the President
2. New Member (? New Zealand)
3. Adoption of the Agenda
4. Obituaries
5. Resolutions by the Executive Committee for modifications in the membership of commissions and the selection procedure to be adopted by the 1972 assembly
6. Preliminary discussions of names proposed by Commissions, National Committees and the Executive Committee (decisions will be deferred until items 13 and 14)
7. A possible revision of the statutes of IUPAP in 1975
8. Secretary-General's Report
9. Commission reports
10. Inter-union and other commissions - some brief reports
11. I.C.S.U. matters
12. Report of the Financial Commission
13. Recommendations of Commissions - presentation and preliminary discussion
14. Conferences for 1973
15. Election of the Executive Committee for 1972-1975
16. Election of Commission Members for 1972-1975
17. Resolutions from Commissions
18. Resolutions from National Committees
19. The venue of the 1975 General Assembly
20. Other business
21. Adjournment of the Assembly - including remarks by the President.

IUPAP

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Reports by Commissions for 1969-1972

Each report is prefaced by the number of the Committee given in document IUPAP 16, pp. 109 - 120.

2. Commission for Symbols, Units and Nomenclature (SUN)

The SUN Commission has the task to promote unification in the use of symbols for quantities and units and in the nomenclature and terminology used in physics publications and teaching.

The SUN Commission collaborates with various international organisations active in the same field, in particular with the IUPAC (especially IUPAC/STU), the Comite International des Poids et Mesures and its Comite Consultatif des Unites, the International Organisation for Standardisation (especially IEC/TC 24 and 25).

One of the main activities were advice to and cooperation with the above-mentioned international organisations, with the aim to giving a clear understanding and a widespread application of the International System of Units (SI), as established by the relevant bodies of Metre Convention, and to selecting units not belonging to the SI units and their decimal multiples or submultiples for usage together with the SI for an unlimited time or during a transitory period.

From special problems, as discussed and solved together with the above-mentioned international organisations, should be mentioned here the following.

In the field of computers and information processing the representation for SI and other units to be used in systems with limited character sets, especially recommendations regarding two different sets of representation and the principle conditions for their application - in this field a rather satisfactory compromise could be found.

The presentation of logarithmic quantities (e.g. loss, gain, level, frequency interval, decision content, information content) in the frame work of normal quantity calculus together with the belonging units for those dimensionless quantities - with this subject still remain not yet overcome discrepancies of point of view between IEC and the other organisations.

Acknowledging and establishing the distinction between the dimensional independence and the metrological independence of base units - dimensional independence being a property of the base units as the base of an algebraic structure in the sense of the theory of sets in connection with quantity calculus, whereas metrological independence means the degree of independence in experimentally realising base units in a National Standardising Laboratory.

Adaptation of nomenclature and symbolism in the special field of thermodynamic energetic functions between IUPAC and IUPAP.

In collaboration with interestee above-mentioned international organisations drafting a new chapter Plasma Physics, widely enlarging and rearranging the chapter Solid State Physics completely revising the Appendix Systems of Quantities and Units in Electricity and Magnetism of the IUPAP/SUN document, which is leading at the same time to a simplification as well as adaptation to the practical needs of today. Details are contained in documents submitted by the Commission to the XIVth General Assembly for approval.

The future work of the SUN Commission for the next two or three years is, in further close cooperation with other international organisations engaged in this field, accomplishing the adaptation of the concepts, nomenclature, and symbolism needed in pure and applied physics to the present situation with the aim to submit to the XVth General Assembly a completely revised new edition of the IUPAP/SUN document, if the XIVth General Assembly agrees to this intention.

SUN Commission has been represented at the meetings of corresponding commissions or committees of other international organisations active in an analogous field.

During the three year cycle 1969-1972 the SUN Commission answered many written questions from individuals in science and technology and met three times : 9 and 10 September 1970 at Dubrovnik, 19 and 20 August 1971 in Paris, and 29, 30 and 31 August 1972 in Paris.

3. Commission on Thermodynamics and Statistical Mechanics

During the period 1969-1972 the Thermodynamics and Statistical Mechanics Commission sponsored altogether four conferences. In chronological order these were :

1. The international conference on Thermodynamics held in Cardiff, 1-4 April 1970. This conference was sponsored in addition by IUPAC. It was attended by about 180 scientists and covered topics ranging from statistical thermodynamics to pedagogical aspects of thermodynamics.

2. International Conference on Statistical Mechanics held in Chicago, 29 March - 2 April 1971. This meeting, one in the series of international conferences on Statistical Mechanics, held every two years, was attended by about 300 physicists active in the field. It provided a rather complete survey of the current activities and developments in Statistical Mechanics.

3. The third international conference "de la Physique Theorique a la Biologie" organised by the Institut de la Vie at Versailles, 21-26 June 1971. The admission to this conference was by invitation only. It was attended by approximately 80 theoretical physicists, chemists, biologists, physiologists and mathematicians,

and was once more most successful in confronting the points of view of various disciplines relevant for biological problems.

4. The "100 years Boltzmann equation symposium" held in Vienna 4-8 September 1972. The program of the conference is set up in such a way as to give a survey of the historical developments, the recent progress and the unsolved problems in kinetic theory. The admission is by invitation.

The Commission met in Paris on April 19, 1971, to discuss changes in its membership, as well as sponsorship of future conferences.

During 1973 the Commission wishes to sponsor two meetings :

1. Fourth conference on Theoretical Physics and Biology at Versailles, 27 May - 2 June, 1973. The admission to this conference will be by invitation only. No funds are required from IUPAP.

2. An international conference on Statistical Mechanics at Amsterdam in September 1973 on the occasion of the centenary of the Van der Waals equation. The organiser is Professor N. Trappeniers, Van der Waals Laboratorium, University of Amsterdam, Valckenierstraat 67, Amsterdam.

The Commission intends to meet during this conference.

List of conferences sponsored by the Thermodynamics and Statistical Mechanics Commission during the period 1969-1972.

1. International conference on Thermodynamics, Cardiff, 1-4 April 1970, cosponsored by IUPAC.
Organiser : Professor P. T. Landsberg, Cardiff.
Proceedings published : Thermodynamics, Cardiff, Butterworth's 1970.
Not subsidised by IUPAP.

2. International conference on Statistical Mechanics, Chicago, 29 March - 2 April, 1971.
Organiser : Professor Stuart A. Rice, The James Franck Institute, University of Chicago.
Proceedings to appear : Chicago University Press.
IUPAP grant : $ 5000.

3. Third Conference from Theoretical Physics to Biology, Versailles, 21-26 June 1971.
Organiser : Professor M. Marois, Institut de la Vie, 89 Bd. St. Michel, Paris 5e, France.
Proceedings : not yet published.
Proceedings of 2nd conference Versailles (30. 6 - 5. 7. 69) published : Institut de la Vie, "From Theoretical Physics to Biology" Ed. du Centre National de Recherche Scientifique, 15 Quai Analole, France - Paris 7e.
Not subsidised by IUPAP.

4. Hundred Years Boltzmann-Equation Symposium, Vienna, 4-8 September 1972.
Organising Committee : Professor E. G. D. Cohen (New York)
Professor W. Thirring (Vienna)
Professor H. Wergeland (Trondheim)
IUPAP grant : $ 1000.

4. Commission on Cosmic Rays

The main activities of the Cosmic Ray Commission during the cycle 1969-1972 concerned the organisation and evaluation of the 12th International Conference on cosmic rays held at Hobart. This meeting was arranged with some trepidation on the grounds that sooner rather than later the conference ought to go to Australia. In the event it was highly successful. The attendance was fully representative of cosmic ray physics throughout the world, the only area rather more poorly represented than usual being Europe; even from Europe, however, there was a quite adequate attendance.

The Conference developed further the scheme of pre-presentation of papers first attempted two years earlier at Budapest. As a result the publication of short versions of contributed papers was completed in six volumes at the outset of the conference and lecturers were able to direct their attention to stressing important features and making points of clarification. The conference took place in August 1971 and the remainder of the publications, which will be based upon invited papers and rapporteur papers, is not yet in my hands.

The Commission met during the conference and had before it its own resolution that the 13th conference should take place at Denver in 1973, and proceeded to allocate the 14th conference to Germany who expect to mount it in or near Munich.

The Commission does not expect to submit any resolutions for consideration at the Washington Assembly.

5. Commission on Very Low Temperature

A. Conferences sponsored and Proceedings : The main purpose of the Commission is to help plan and sponsor a series of international conferences on low temperature physics (LT Conferences).

1. LT 12 (Kyoto), Conference on Transport on Solids.
The twelfth of the LT series, LT 12, was held in Kyoto, Japan, 4-10 September 1970. The number of participants was about 1000. The Fritz London Award was presented to Dr. B. Josephson, Cambridge University, for his distinguished work in low temperature physics. Proceedings

of this conference were published in one volume (895 pages) in 1971 by Keigaku Publishing Co., Tokyo (Japan), edited by E. Kanda. A satellite conference on Transport in Solids was held in connection with LT 12 and sponsored also by IUPAP. It was held in Sydney, Australia, 26-29 August 1970.

2. LT 13. This conference is to be held at the University of Colorado, Boulder, USA, 21-25 August 1972. The Chairman of the Organising Committee is Dr. R. H. Kropschot, National Bureau of Standards, Boulder, Colorado.

3. Conference on Sciences of Superconductivity.
This international conference was held at the Stanford University, Stanford, USA, 26-29 August 1969. Proceedings were published in 1972 in one volume (808 pages) by North-Holland Publishing Co., edited by F. Chilton.

4. Conference on Quantum Crystals.
This conference was held in Banff, Canada, 6-10 September 1971. It was sponsored by IUPAP with no financial support.

B. Future Conferences : The Commission favour going to a three-year cycle of LT Conferences after 1972. The next LT Conference, LT 14, will be held in 1975, probably in Europe. The site and the nature of this conference will be discussed at the Commission Meeting to be held in Boulder, August 1972.

C. Meetings of the Commission : A meeting of the Commission was held in Kyoto, 8 September 1970, in connection with LT 12. At this meeting the site for LT 13 and LT 14 and other problems were discussed. The University of California at La-Jolla was chosen for the site of LT 13 (1972)*. As to the site for LT 14 (1975), invitations were received from Helsinki and Haifa, but the final decision has been postponed to the 1972 meeting. Discussions were also made on the prospect and financial problems of the helium conservation program in USA. The Commission decided to send to Secretary-General a statement suggesting international support for helium conservation.

The next meeting is to be held in Boulder, 24 August 1972.

* Later, this was changed to the University of Colorado, USA, because of delays in construction of buildings at La Jolla and other factors.

D. Cooperation with other organisations : The Commission has been keeping close relation with international bodies in related areas. At the 1970 Meeting in Kyoto, O. V. Lounasmaa was appointed as the liaison member with the Commission 1 of the International Institute for Refrigeration, IIR. The former liaison member was N. Kürti.

6. Commission on Publications

The Commission held one meeting during the 3 year period at the CNRS in Paris on 12 May 1972.

1. The Commission made recommendations for membership during 1972-1975.

2. Journal Program of the European Physical Society :
Dr. Coles reported that EPS has approved a list of journals for designation as Europhysics Journals, on the basis of criteria for international editorial boards, regular refereeing procedures, etc. They must accept papers in any of three languages and must provide an abstract in English for each paper. The only commercially published journals included so far are PHYSICA and THE PHILOSOPHICAL MAGAZINE. No "letters" journals are included as yet. It is planned to use the specialist divisions of EPS in monitoring the commercial "international" journals in specialised fields. No "review" journals have been included as yet. The CZECHOSLOVAK JOURNAL OF PHYSICS has dropped the Europhysics label. Although the Soviet Union participates in EPS, no Russian journals are in the Europhysics list.

A new Style Manual has been prepared and will soon be printed in EUROPHYSICS NEWS.

3. The Current Physics Information system of the American Institute of Physics :
Supplementing brochures which had been mailed to the members earlier, Dr. Wolfe distributed copies of an article by Dr. H. W. Koch from SCIENCE, Nov. 1971 and an article by Dr. A. Herschman from PHYSICS TODAY, Nov. 1971. AIP is now producing and marketing a set of four secondary services to supplement its primary journal publication program.

a) CURRENT PHYSICS ADVANCE ABSTRACTS (CPAA) : a monthly publication in 3 sections, providing abstracts arranged by subject classification of articles accepted for publication in AIP journals.

b) SEARCHABLE PHYSICS INFORMATION NOTICES (SPIN) : a magnetic tape with title, author, abstract, cited references indexing and bibliographic data, covering about 70 journals.

c) CURRENT PHYSICS TITLES (CPT) : a monthly publication in three sections, photocomposed from the SPIN tape and and arranged by subject classification, giving title, author and bibliographic data.

d) CURRENT PHYSICS MICROFORM (CPM) : a monthly microfilm containing the complete text of all journal issues published by AIP during the preceding month. The reel and frame number for each article is included as part of the data in SPIN and CPT.

The list of selected journals in SPIN and CPT was discussed and it was moved, seconded and carried : that the Commission on Publications recommends to AIP that all journals selected as Europhysics journals by EPS be included in SPIN and CPT.

Note added by H. C. W. Unless the list grows in such a way as to complicate unduly the cooperative arrangements between AIP and the Institution of Electrical Engineers, the publishers of PHYSICS ABSTRACTS, AIP sees no difficulty in complying with this request.

AIP does not include journals other than those it publishes in CPM but encourages their publishers to arrange for similar microform output and to provide reel and frame numbers for SPIN and CPT.

Questions were raised about duplication of effort between AIP and IEE. Dr. Wolfe pointed out that much attention has been given to cooperation, with each marketing the products of the other, and with each supplying to the other the inputs it generates. CURRENT PAPERS IN PHYSICS is not sectionalised and does not seem to AIP to fill the role of CPT, so there is some competition between them at present but it is hoped that they may be combined before too long.

4. Classification and Indexing of Physics Literature :
AIP and IEE (INSPEC) have been working for some years on bringing their classification schemes into accord and a working group of the ICSU Abstracting Board is coordinating the effort to obtain a common classification scheme for all physics secondary journals. The combined AIP/INSPEC scheme was submitted to ICSU/AB in March 1972. Mr. Bretnütz reported that Physikalische Berichte tries to follow the classification scheme used by INSPEC but that this seems to be more difficult for the multi-disciplinary abstracting journals, Bulletin Signalitique and Referationyi Zhurnal.

The EPS Style Manual recommends that authors classify their papers in accordance with the scheme used by INSPEC and referees are asked to specify their areas of competence according to the same shceme. Most of the journals published by AIP use the AIP classification and indexing scheme. Dr. Pasternack was asked whether PHYSICAL REVIEW, which does not now use it, will follow this scheme for indexing in 1973. He reported that studies are underway to compare 1971 indexes prepared both ways as a basis for decision. Mr. Pedersen reported that the journals of the Institute of Physics are indexed by the INSPEC staff under a contract.

5. Composition and Printing Techniques : Mr. Pedersen reported that the IOP journals use Monophoto composition, which they find cheaper and more flexible than Monotype although corrections are more expensive, and offset printing. Mr. Bretnütz reported that Physikalische Berichte is printed by offset, using typewriter composition for abstracts and computerised photocomposition for indexes. Dr. Wolfe reported that essentially all AIP journals are printed by offset. An increasing number use typewriter composition with some set by monotype or computerised photocomposition. Since the "head" of each article (title, author, abstract) and the "tail" (cited references) have to be keyboarded for the SPIN tape, plans are underway to print these parts by computerised photocomposition and combine them with the typewriter-composed (or monotype) text, avoiding duplication of keyboarding.

6. Bibliographic References : It was reported that ICSU/AB and UNISIST have a combined group working on a standard format for bibliographic references to facilitate information interchange.

Subcommittee 4 of Committee Z-39 of the American National Standards Institute is also developing such a standard.

7. Journal Title Abbreviations : The ICSU/AB has agreed to follow the title abbreviation list developed and maintained by Z-39.

8. Coden : The matter of using 5-letter codens (developed by ASTM) or the serial number coding scheme developed by Z-39/SC-20 to designate journals has not been resolved in the US, so AIP does not print either on its journals, although codens are used internally in physics information activities. The IOP journals have agreed to carry the coden designations if they are requested to do so by INSPEC.

9. SI Units : Dr. Wolfe reported that the SUN Commission of IUPAP has cooperated with ISO/TC 12 in producing Draft International Standard 1000 "SI Units and Recommendations for the Use of their Multiples and of Certain Other Units". The use of SI units and their standard symbols for all data in physics journals is recommended.

10. Preprint Distribution : Many authors distribute preprints of their papers and this practice is accepted by the Commission. The only current organised preprint system is PREPRINTS IN PARTICLES AND FIELDS operated by SLAC (Standford) and CERN. A weekly sheet lists preprints received by SLAC and CERN and, in many cases, by preprint libraries operated at high energy physics centers. An "anti-preprint" list is published about once a month, giving bibliographic references for published papers originally listed as preprints. An individual

may obtain a Xerox copy of a preprint from his preprint library or may request one from the author.

Dr. Pasternack reported that SLAC proposes the distribution of preprints to subscribers at $100 per year with a $2 per page publication charge to authors. After discussion, it was moved, seconded and carried unanimously that :

The Commission feels that the printing and distribution of preprints on a subscription basis would constitute their unedited and unrefereed publication and, as such, would be a serious departure from normally accepted practices in physics publication.

Dr. Pasternack also reported a request that journal articles, which have been made available as preprints carrying report numbers, should carry footnotes saying something like "supersedes UCRL 2794". The Commission had no objection to this and felt that it might be helpful.

11. Financial Problems of Journals : Mr. Pedersen reported a 50% increase in two years in the number of pages published in IOP journals, bringing financial strains associated with increased staff, etc. The concensus was that few other journals had grown at this rate recently. Dr. Wolfe reported that there has been a drop off in acceptance of page charges in AIP journals, due to cutbacks in government support of research, etc. Quotas of pages that can be published without payment of page charges have been established and some papers are being delayed by as much as 14 months. AIP is not happy about this but finds it essential for economic stability.

7. Acoustics Commission

During the term 1969-72 the activity of ICA has been closely followed by the three Scientific Unions : IUTAM, IUPS, IUBS and the Biophysics Union. The first three of them have named an official observer.

Meetings of the Commission. Four meetings of the Commission were held : 5-6 May 1970 in Budapest (Hungary); 18-20 August and 25 August 1971 in Budapest; 3-4 May 1972 in Paris. A joint meeting of ICA with representatives of Acoustical Societies was held on August 20, 1971 in Budapest. Moreover the Chairman and the Secretary of ICA have been present to the first (constitutional) meeting of the Federation of European Acoustical Societies (Paris, 5 May 1972).

The Seventh International Congress. The Seventh Congress held in Budapest (18-26 August 1971) has been the major activity of the Commission in the present term. It was the first congress organised by the Commission in which a large participation of Acousticians of Socialist Countries was possible : 435 out of a total attendance of 1, 530. The Countries represented were 34. The scientific sessions included the presentation of 14 invited papers and 627 contributed papers. Round table discussions were organised on 10 important issues. The papers were delivered in English (64%), German (23%) and French (13%). The proceedings of the Conference have been published in 4 volumes of about 3000 pages total. During the Congress an exhibition of acoustical and electroacoustical apparatus and of books was held : Hungarian enterprises presented their products. Visits to factories and special demonstrations were organised.

In connection with the main congress two specialised symposia were held : the first was devoted to Speech, the other to Noise Prevention.

The major burden of the organisation of the congress was undertaken by the Hungarian Organising Committee led by Professor T. Tarnoczy, a member of ICA. The Commission has however dedicated to this organisation a great attention During the last two years before the meeting by assisting the Hungarian Committee.

The cost of the congress has been evaluated to 82, 000 USA dollars. They were covered in a small part by the entire IUPAP contribution for ICA activities in the three years, by the registration fees (38, 000$), and by the help of the Hungarian Government and enterprises. All participants received the proceedings. The excellent organisation of the large congress was due to the continuous and effective help of Hungarian Authorities and the enthusiastic effort of Hungarian Acousticians. The Hungarian Academy has also helped by taking care of the publication of the proceedings. A certain number of copies of these are in deposit at the Academy and can be purchased from the Academy distributor : Kulture, Budapest 62.

During the Congress two meetings of representatives of Acoustical Societies and Commissions were held : to the first all Acoustical Societies and Commissions were invited to exchange information and try to coordinate action. Only European Acoustical Societies were present at the second meeting; a group of Societies have proposed a draft statute of a Federation for organising cooperation among Societies and the Commission; it has been discussed in detail and a Steering Group has been charged with preparation for the constitution of the Federation of Acoustical Societies of Europe (FASE).

Organisation of the 8th and 9th ICA Congresses. The Commission is at present taking care of the organisation of the 8th ICA Congress. It will be held in London in July 1974. Although open to all sectors of Acoustics it will try to underline in particular the problems of "Environmental Acoustics". It will have satellite symposia on Microwave Acoustics, Underwater Acoustics and Transportation Noise. The Commission has also started the organisation of the 9th Congress which will be held in Madrid (Spain) in the summer of 1977 and will be the first one organised by the Commission in a Spanish speaking country.

Meetings connected with the IUPAP Assembly. ICA has stimulated the organisation of meetings connected with the IUPAP Assembly in Washington. Through the collaboration of the Acoustical Society of America two of such meetings have been organised : a symposium on the "Atmospheric sound propagation" at NBS (September 27-29) and the Inter-noise 72 Conference in Washington (4-6 October).

Information and Coordination Service. The Commission decided in 1969 to organise a service for collecting information on acoustic meetings in different countries and for diffusing this information by sending periodic lists of events to Acoustical Societies, Acoustic Journals and other organisations interested in Acoustics. This service has been undertaken by Dr. Kolmer, a Commission corresponding member, with the help of the Czechoslovakian Academy. The same service is also collecting and distributing information on European Laboratories where research in Acoustics is carried on. A further action of this center refers to the diffusion of information on the organisation, status, activities of each national Acoustical Commission or Society. The request of this activity came out during the meeting with the representatives of Acoustical Societies organised by ICA during its 7th Congress in Budapest.

Cooperation with Acoustical Societies and help with the organisation of a European Federation. ICA has usually called a meeting of representatives of National Societies and Commissions during its Congresses. In Budapest the meeting discussed the activities of ICA, how to improve the exchange of information and the coordination of activities of various Societies, the problems which are at present of particular importance for the development of Acoustics. We have already quoted same action which resulted from this meeting in the field of exchange of information. The meeting pointed out also the great importance that the problems of noise pollution has at present and gave support to ICA action in this direction.

Man and his environment. ICA has been considering for a long time the importance of the problems connected with the environment : it has had some of its members collaborating with ISO subcommittees on noise and architectural acoustics. In the last two years it has increased its activity in this field and it is collaborating in the effort that the UN are conducting on the "Human Environment" : as it is known the UN have been organising for a long time the Conference on the subject in Stockholm (June 1972).

ICA has asked to participate and one of its members (Dr. Mattei) has participated to a meeting organised by the European Economic Commission in Prague in May 1971 as a preparation of European Countries to the Stockholm Conference. In this meeting the problems of noise, considered as a part of air pollution, have been presented.

ICSU has organised a special group, SCOPE, to study the problem of environment, and IUPAP has appointed as its representative in this group Dr. Lara of ICA. Dr. Lara has been charged by SCOPE to prepare a report on the noise problem and ICA has appointed a small group of experts to assist Lara prepare a draft of this report. Due to the SCOPE procedures the final report will be ready in January 1973.

ICA, however, in order not to lose the unique opportunity of the Stockholm Conference (a Governmental Conference) for addressing to the Governments and calling their attention to the importance of considering noise aspects in their decisions on planning and of issuing adequate regulations concerning noise as well as to the need of supporting research on noise problems, has sent directly to the Stockholm Conference a document calling for resolutions to be adopted.

Financial Matters. The activity of the Commission has increased in the last term as shown above. The financial problems have become more acute. The operation at the level described has been possible only because the members have agreed to participate in meetings with a very low contribution to their expenses, or, more frequently, with no contribution at all, and they have found elsewhere funds for the activities that ICA has asked to them to perform. The low budget of the Commission, although ICA has given larger contributions to members moving from other continents that the place of the meeting, discriminates against some members. From the other side the great interdisciplinary nature of Acoustics requires direct discussion of problems in meetings and the participation in them of a large part of Commission Members.

Appendix to ICA report (1969-72)

The Commission has organised the 7th ICA Congress in Budapest (Hungary) 18-26 August 1971.

The Proceedings of the Congress have been published by "Akademiei Kiado" Budapest in four main volumes and one abstract volume.

The total number of pages is of 3006.

The proceedings were distributed to all participants.

Extra copies can be purchased from "Kulture", Budapest 62, an agency of the Hungarian Academy.

ICA has also sponsored the following two meetings:

1) Symposium on Atomspheric sound propagation at NBS (Gaithersburg) 27-29 September 1972.

2) Internoise - 72 Conference (Washington 4-6 October 1972)

8. Semiconductor Commission

1. International Conferences on the Physics of Semiconductors (type A)

a) The 10th Conference was held at the Massachusetts Institute of Technology, Cambridge, Massachusetts, USA, 17-21 August 1970. Attendance 700. The Commission members were very satisfied with the scientific program which achieved a very good balance of high quality papers over the whole semiconductor field. The proceedings were published in December 1970. Editors S. P. Keller, J. C. Hensel and St. Stern, Atomic Energy Commission, Washington D. C. 1970.

b) The 11th Conference will be held in Warsaw, Poland, 25-29 July 1972. An International Committee was set up to decide the scientific program and to select the papers. A full report of the conference will be given later.

2. Topical Conferences (type B)

- International Conference on Photoconductivity, Stanford, USA, 12-15 August 1969. Proceedings of the 3rd International Conference on Photoconductivity. Editors E. M. Pell, Pergamon Press 1971.

- Conference on Heterojunctions and Layer Structure, Budapest, Hungary. 11-17 October 1970. Editor G. Szigeti, Akademiai Kiado, Budapest 1971.

- International Symposium on Radiation Effects in Semiconductors, Albany, USA, July 1970. Editors James Corbett and George Watkins, Gordon and Breach Science Publishers, New York, NY (USA)

- International Conference on Radiation Damage and Defects in Semiconductors, Reading, UK, 19-21 July 1972.

International conferences on Amorphous and Liquid Semiconductors.

This field was rapidly developing these last years and an International Committee was set up which recommended conferences on that subject on a two-year periodicity. The conferences held during the 1969-1972 period were :

- 3rd Conference on Amorphous and Liquid Semiconductors, Cambridge, UK, 24-27 September 1969. Proceedings of the International Conference of Amorphous and Liquid Semiconductors, Editor N. Mott, North Holland 1970.

- 4th Conference on Amorphous and Liquid Semiconductors, Ann Arbor, Michigan, USA, 8-13 August 1971. No proceedings have been published.

- The 5th Conference is planned for the summer of 1973 in Garmisch-Partenkirchen, (German Federal Republic).

3. Meetings of the Commission

The Commission met in Cambridge, USA on August 17th 1970. The minutes of this meeting were sent to the Secretary-General in October 1970.

The next meeting will be held in Warsaw in July 1972.

4. Budget

The allocation for the 1969-1972 period was originally $8000 ; after a request from the Secretary of the Commission this allocation was raised to $12000, of which $1000 are part of the allocation for the 1973-1975 period. The allocations to the meetings were the following :

Cambridge (USA) Conference	(1970)	- $5000
Albany meeting	(1970)	- $ 500
Budapest meeting	(1970)	- $1500
Warsaw meeting	(1972)	- $5000

9. Magnetism Commission

1. Summary

During the period 1969-1972, as in the preceding three years, the activities of the Magnetism Commission centered around the triennial Commission Meeting and the triennial International Conference on Magnetism (ICM). Both of these events took place in 1970 in Grenoble, France, and are briefly described below. The Commission sponsored, in addition, two "satellite" conferences of the 1970 ICM and two other conferences. All of these conferences are listed in Appendix A, which includes information on publications and financial support. During this three-year period, as in earlier ones, the entirety of the IUPAP funds at the Commission's disposal has been used to support the ICM.

2. The 1970 Meeting of the Magnetism Commission

The major part of the meeting was devoted to the then current 1970 Grenoble ICM (see Sec. III), to a report on preparations for the 1973 Moscow ICM, and to a lengthy discussion of the visa problem. Among the Commission's other actions, the most important ones were its decision to hold the 1976 ICM in Amsterdam, Holland, and its recommendation that an international program committee should be organised formally in conjunction with all ICMs to be held in 1976 and thereafter.

3. The 1970 International Conference on Magnetism

The 1970 Grenoble ICM is generally considered to have been a great success, its 84 scientific sessions reflecting the continued vitality of the field of magnetism. Of the almost 1200 participants, about two-thirds came from 30 countries other than France. In addition

to 48 invited papers, a total of 705 were submitted. The Program Committee accepted 476 (i. e. only about 68%) for presentation, and then included, with the authors' concurrence, 425 of these in the Conference Proceedings which were subsequently published in two volumes of the Journal de Physique.

4. Additional Information

Additional information on Secs. II and III is given in the Secretary's 15 June 1970 and 7 July 1971 reports to Dr. Butler, and further details may be found in the Minutes of the 1970 Meeting of the Magnetism Commission (distributed on 27 April 1971) and in the references of Appendix A of the present report.

APPENDIX A

Recommendations of the Magnetism Commission During 1969-1972 for IUPAP Sponsorship or Co-Sponsorship of Conferences

(List prepared on June 7, 1972)

Note: Conferences marked with an asterisk (*) have already been granted IUPAP Sponsorship or Co-Sponsorship by the Executive.

Category	Title of Conference	Place and Date	IUPAP Support	Published Proceedings	Remarks
A	International Conference on Magnetism*	Grenoble, France Sept 14-19/70	$5000.	See Reference 1	
C	Density of Electronic Charge and Spin*	Aussois, France Sept 7-12/70	None	None	"Satellite" of '70 Grenoble Conference
C	Fourth International Colloquium on Magnetic Thin Films *	Prague, Czechoslovakia Sept 21-23/70	None	See Reference 2	"Satellite" of '70 Grenoble Conference
B (Not C)	Fourth International Symposium on Magnetic Resonance *	Rehovot, Israel Aug 24-31/71	None	See Reference 3	Also sponsored by IUPAC
C	Symposium on the Physics of Dense Matter*	Copenhagen, Denmark After Aug 1972	None		Co-sponsored by IAU
A	International Conference on Magnetism	Moscow, USSR Aug 22-28/73	More than $5000. requested		
C	Sagamore IV: Electronic Charge, Spin and Momentum Density	Minsk, USSR Aug 12-17/73	None		"Satellite" of '73 Moscow Conference

APPENDIX A (Contd.)

Category	Title of Conference	Place and Date	IUPAP Support	Published Proceedings	Remarks
C	Sixth International Colloquium on Magnetic Thin Films	? USSR ?	None		"Satellite" of '73 Moscow Conference
B	Fifth International Symposium on Magnetic Resonance	Bombay, India Jan or Feb, 1974	None		

Reference 1: Journal de Physique, Colloque C 1, Supplement to Nos. 2-3, Volume 32, February - March 1972, pages C 1 - 1 to C 1 - 1210.

Reference 2: Czechoslovak Journal of Physics, Vol. B21, No. 4-5, pages 329 - 590, 1971.

Reference 3: Invited papers: Pure and Applied Chemistry (to be published). Contributed papers: Journal of Magnetic Resonance (to be published).

10. Solid State Commission

1. The Commission consists of 8 members (including the Chairman and the Secretary) and 6 corresponding members, specifically representative of ferroelectricity lattice defects, luminescence and crystal growths.

2. Except for two meetings of the Chairman and Secretary, no meeting of the Commission took place. All matters were dealt with by correspondence.

3. The following conferences sponsored by the Commission took place:

- Third Sagamore Conference on Charge, Spin and Momentum Densities, Aussois, France, 9-12 September 1970; co-sponsored by I. U. Cr. 0

- *Metastable Alloys, Brela, Yugoslavia, 28-30 September 1970 0

- *Third International Conference on Crystal Growth, Marseille, France, 5-9 July 1971; co-sponsored by I. U. Cr. and I. O. C. G. (International Organization for Crystal Growth, formerly called Comite International de Croissance Cristalline - C. I. C. C.) 0

- *Second International Conference on Light Scattering in Solids, Paris, France, 19-23 July 1971 0

- Fourth International Symposium on Magnetic Resonance, Jerusalem, Israel, 24-31 August 1971 0

- *Colour Centres in Ionic Crystals, Reading, U.K., 13-17 September 1971 0

- International Conference for Solid Surfaces, Boston, U.S.A., 11-15 October 1971 0

- International Conference on Thin Films, Venice, Italy, 15-19 May 1972 ●

- *Second International Conference on Vapour Growth and Epitaxy, Jerusalem, Israel, 22-25 May 1972; co-sponsored by I. U. Cr. and I. O. C. G. ○

- *Second Symposium on Surface Physics, Enschede, The Netherlands, 22-23 June 1972 ●

- *International Conference on Band Structure in Solids, Exeter, U. K., 3-5 July 1972 ○

- Seventh International Symposium on the Reactivity of Solids, Bristol, U. K., 17-21 July 1972; co-sponsored by I. U. P. A. C. ●

4. The following conferences are to be held with I. U. P. A. P. sponsorship before the fall of this year:

- *Second International Conference on Luminescence, Leningrad, U. S. S. R., 17-22 August 1972 ●

- *International Conference on the Applications of the Mössbauer effect, Ayeleth Hashahar, Israel, 28-31 August 1972 ○

- *Second International Conference on the Properties of Liquid Metals, Tokyo, Japan, 3-8 September 1972 ●

- First International Conference on Modulation Spectroscopy, Tucson, U. S. A., 23-26 November 1972; recommended by the I. U. P. A. P. Solid State Commission and Spectroscopy Commission. ●

5. General Remarks

The number of conferences sponsored by I. U. P. A. P. in the field of Solid State Physics has increased from 13 (1966-1969) to 16 (1969-1972) and there is no indication for a slowing down. The total number of participants has exceeded 5000.

Some of the conferences have repetitive character and are organized on a nearly self supporting basis (about 1/3). For the major part (2/3) financial support from I. U. P. A. P. was required (indicated by an asterisk). Conferences giving rise to published proceedings are marked by full circles, Gordon type conferences by empty circles.

6. The problem of the optimum size of conferences has still produced a considerable correspondence. Although the idea of a big Solid State Conference is not systematically rejected, the Commission members favour the middle-sized conferences of 200 to 300 participants as particularly suitable in specialized Solid State topics. The idea of conferences and summer schools of the Gordon type has encountered nearly unanimous favour.

11. Commission on Particles and Fields

A. Commission Operations and Procedures : The Commission has one regular meeting per year, held in conjunction with one of the principal conferences which it sponsors. At these meetings, proposals for future conferences are discussed and decisions are made regarding recommendations for IUPAP sponsorship of these conferences. Also general questions concerning the formal and overall scheduling of conferences on different topics in particle physics and technology are discussed.

Although we prefer to make decisions after discussion at these annual meetings, problems of timing have sometimes made it necessary to reach agreement on certain proposed conferences by mail during the interval between our meetings.

Meetings of the Commission during the period 1969-1972 were held or will be held as follows :

1969 - September 16, in Liverpool, Great Britain, on the occasion of the IV International Symposium on Electron and Photon Interactions at High Energy.

1970 - August 27 and September 1, in Kiev, USSR, on the occasion of the XV International Conference on High Energy Physics.

1971 - August 25, in Ithaca, New York, on the occasion of the V International Symposium on Electron and Photon Interactions at High Energy.

1972 - September 8 (tentative date), in Chicago, Illinois, on the occasion of the XVI International Conference on High Energy Physics.

B. Conferences Sponsored by the Commission during the Period 1969-1972 :

Conferences in 1969

1. Topical Conference on Weak Interactions, CERN, Geneva, Switzerland, January 1969. Category B. Financial Support: $1000.

   Proceedings : published by CERN-Scientific Information Service, Geneva, Switzerland 1969.

2. VII International Conference on High Energy Accelerators. Yerevan, USSR, August 1969. Category B. Financial Support: $2000.

   Proceedings : published by the Publishing House of the Academy of Sciences of Armenian SSR, Yerevan 1970; General Editor, A.I. Alikhanian.

3. Third International Conference on High Energy Collisions, Stony Brook, New York, USA, September 1969. Category B. Financial Support : $1000.

   Proceedings : "High Energy Collisions", Yang, Cole, Good, Hwa, and Lee-Franzini. Publisher - Gordon and Breach, New York 1969.

4. IV International Symposium on Electron and Photon Interactions at High Energies. Liverpool, UK, September 1969. Category B. Financial Support : None.

   Proceedings : published by the Daresbury Nuclear Physics Laboratory, Daresbury, UK, 1969. Editor - D.W. Braben.

5. III International Conference on High Energy Physics and Nuclear Structure. Columbia University, New York, USA, September 1969. Category B. Financial Support : None.

   Proceedings : High Energy Physics and Nuclear Structure ; Proceedings. Edited by Samuel Devons, Plenum Press, New York 1970.

Conferences in 1970

1. XV International Conference on High Energy Physics, Kiev, USSR, 26 August - 4 September 1970. Category A.
   Financial Support : US $4000.

   Chairman of Organising Committee : N.N. Bogolubov, Joint Institute for Nuclear Research, Head Post Office, P.O. Box 70, Moscow, USSR.

   Proceedings : Not published.

2. International Conference on Instrumentation for High Energy Physics, Dubna, USSR, 8-12 September 1970. Category B.
   Financial Support : US $1000.

   Chairman of Organising Committee : V.P. Dzhelepov, Joint Institute for Nuclear Research, Head Post Office, P.O. Box 70, Moscow, USSR.

   Proceedings : published by the Joint Institute for Nuclear Research, Dubna, USSR, 1971. Editor : V.P. Dzhelepov.

Conferences in 1971

1. VIII International Conference on High Energy Accelerators, CERN, Geneva, Switzerland, 20-24 September 1971. Category B.
   Financial Support : US $2000.

   Organiser : K. Johnson, CERN, 1211 Geneva 23, Switzerland.

   Proceedings : published by CERN-Scientific Information Service, Geneva, 1971. Editor : M. Hildred Blewett.

2. V International Conference on Electron and Photon Interactions at High Energies, Ithaca, New York, 23-27 August 1971. Category B.
   Financial Support : US $1000.

   Organiser : Professor Boyce D. McDaniel, Laboratory of Nuclear Studies, Cornell University, Ithaca, New York.

Proceedings : 1971 International Symposium on Electron and Photon Interactions at High Energies. Published by the Laboratory of Nuclear Studies, Cornell University, Ithaca, New York 1972. Editor : N. B. Mistry.

3. International Conference on Duality and Symmetry in Hadron Physics, Tel-Aviv, Israel, 5-7 April 1971. Category B. Financial Support : US $1000.

   Organiser : Professor Y. Ne'eman, Department of Physics and Astronomy, Tel-Aviv University, Ramat-Aviv, Tel-Aviv, Israel.

   Proceedings : published by The Weizmann Science Press of Israel, 1971. Edited by E. Gotsman.

4. International Conference on High Energy Physics and Nuclear Structure, Dubna, USSR, 7-12 September 1971. Category B. Financial Support : US $1000.

   Organiser : Professor V. P. Dzhelepov, Laboratory of Nuclear Problems, Joint Institute for Nuclear Research, Head Post Office, P. O. Box 79, Moscow, USSR.

Conferences in 1972

1. XVI International Conference on High Energy Physics, Chicago, Illinois, 6-13 September 1972. Location : University of Chicago and National Accelerator Laboratory, Batavia, Illinois. Category A. Financial Support : US $3000.

   Organisers : Professor Edwin L. Goldwasser, National Accelerator Laboratory, P. O. Box 500, Batavia, Illinois 60510;
   Professor Robert G. Sachs, The Enrico Fermi Institute, 5630 Ellis Avenue, Chicago, Illinois 60637.

2. IV International Conference on High Energy Collisions, Oxford, UK., 5-7 April 1972. Category B. Financial Support : None.

   Organiser: G. Manning, Rutherford High Energy Laboratory, Oxford, Chilton, Didcot, Berkshire, UK.

3. 4th International Conference on Magnet Technology, Brookhaven, New York, 19-22 September 1972. Category B. Financial Financial Support : None.

   Organiser : Dr. J. P. Blewett, Brookhaven National Laboratory, Upton, New York 11973.
   (This conference was not reviewed by the Commission on Particles and Fields.)

13. Commission on Atomic Masses and Fundamental Constants

1. Change of Commission Name

In view of the changing scope of the Commission's activities, it has become clear that the fundamental constants are an increasingly important part of the Commission's activities. Accordingly, at its meeting in September 1971 the IUPAP Executive Committee authorised the change of the Commission name to its present form.

2. Activities

A. The Commission was one of the sponsors of the International Conference on Precision Measurements and Fundamental Constants held at the United States National Bureau of Standards in Gaithersburg, Maryland, during the week of 3-7 August 1970. The proceedings of this Conference has been published by the United States National Bureau of Standards (Special Publication 343 (543 pp) August 1971).

B. The 4th International Conference on Atomic Masses and Fundamental Constants sponsored by the Commission was held at the British National Physical Laboratory, Teddington, England, during the week of 6-10 September 1971. The Proceedings will be published by Plenum Press (London).

C. It has become increasingly evident that progress in precision (n,) and (p,) reaction energy determinations is hampered by a lack of uniformity and standards in the use of gamma ray calibration lines. This Commission, in conjunction with the Commission on Nuclear Physics, has therefore established a Task Group on gamma ray calibration energies. This Task Group, consisting of Dr. O. van der Leun (Netherlands), Dr. R. G. Helmer (US), and Dr. P. van Assche (Belgium), will consider the problems associated with the measurement of gamma ray energies and will attempt to establish appropriate standards in this area.

D. Professor A. H. Wapstra (Chairman of the Commission) and Dr. N. B. Gove (Oak Ridge National Laboratory) have completed the 1971 Atomic Mass Evaluation which has been published in four parts in Nuclear Data Tables, July 1971. This evaluation consisted of :

Part I. Atomic Mass Table
Part II. Nuclear-Reaction and Separation Energies
Part III. Evaluation of Input Values; Adjustment Procedures
Part IV. Systematics of Separation and Decay Energies

Part V, Nuclear Reaction Q Values will appear separately in the near future.

E. Dr. E. R. Cohen (Secretary of the Commission) and Dr. B. N. Taylor (US National Bureau of Standards) are in the process of a new evaluation of the fundamental constants. This evaluation, which will take into account the considerable amount of new material which

has become available in the last three years, should be completed by September and will be published in an appropriate journal.

3. Meetings

The Commission has held two meetings since those reported in the previous report.

1. August 3, 1970, Washington, D.C.
2. September 5, 1971, Twickenham, England.

4. Conferences

Preliminary discussions have been held concerning the time and place of the 5th International Conference on Atomic Masses and Fundamental Constants. Possible locations suggested have been : Sidney, Australia; Paris; Leningrad; the Conference will be scheduled for either 1974 or 1975.

14. Commission on Physics Education

1. Meetings of the Commission

The Commission met in Rome 11-12 July 1969; in Eger, Hungary, 14-15 September 1970; and in Kiel, West Germany 25-26 June 1971. In addition to members and corresponding members of the Commission, representatives from UNESCO and other interested organisations attended. The minutes of those meetings have been circulated.

2. International Seminar on the Role of History of Physics in Physics Education (1970)

The Seminar was held 13-17 July 1970 at the Massachusetts Institute of Technology. The purpose of the Seminar was to stimulate and extend cooperation among physicists, historians of science, and others interested in the humanistic teaching of physics. Twenty-two persons, representing twelve countries, took part. The proceedings of the Seminar and a special report entitled Resources for the History of Physics have been published (University Press of New England, 1972). The Commission considered the recommendation of the Seminar that a book or books on the history of physics be written for teachers and advanced students, but was unable to implement it within available resources.

3. International Congress on the Education of Teachers of Physics in Secondary Schools (1970)

The Congress was held in Eger, Hungary, 11-17 September 1970, under the joint sponsorship of IUPAP and the Hungarian National Committee on Physics Teaching. The purpose of the Congress was to review problems connected with the education of secondary-school physics teachers in many countries and to develop recommendations to

governmental groups and universities for improved pre-service education, motivation, and continuing education of teachers. Total attendance at the Congress was 144, including representatives of 25 countries. The proceedings of the Congress have been published (MIT Press, 1971).

4. International Congress on Teaching Physics to Students in Physics-Related Sciences and Professions

At its meeting on 25-26 June 1971 the Commission made plans for this Congress to be held in Kiel, West Germany, 20-26 July 1972, under the sponsorship of the Commission and the West German National Committee. Between 150 and 200 participants were expected, representing the physical and biological sciences, engineering, agricultural sciences, and the health professions. The Congress was intended to provide answers to several major questions : (1) What do the "consumers" of physics education want that they are not now getting? (2) What do physicists think they have to offer that is not presently being taken advantage of? and (3) How should physics courses for non-physicist scientists and professionals be organised? Professor M. Y. Bernard of France was named the chairman of the Program Committee, and Professor W. Kroebel of West Germany the chairman of the Organising Committee. A program was developed, speakers were invited, and two circulars were distributed. The early response indicated considerable world-wide interest in the Congress.

Regrettably the Organising Committee was unable to obtain sufficient financial support to make the Congress a success and was forced to cancel it. Notification of cancellation was sent to prospective participants early in June 1972.

5. Other Meetings

Plans for other international congresses or seminars are not under consideration at this time. Since the membership of the Commission will be reconstituted at the General Assembly in 1972, it does not seem advisable to carry forward planning of meetings that will be the responsibility of new members.

6. Cooperation with UNESCO

Two writing projects - "A Source Book for the Teaching of Physics in Secondary Schools" and "New Trends in the Teaching of Physics" - were completed. Manuscripts were given to UNESCO by the editors and publication is imminent.

7. Request to IUPAP

The reconstituted Commission will undoubtedly want to meet early in the triennium 1972-1975 to plan new activities. The requirement for travel funds will depend upon the number of Commission members and their distribution. It is suggested that at least $2000 be budgeted by IUPAP for Commission travel in 1972-73.

Conferences Sponsored 1969-1972

International Seminar on the Role of History of Physics in Physics Education, Cambridge, Massachusetts, USA, 13-17 July 1970.

History in the Teaching of Physics, University Press of New England, Hanover, New Hampshire, 1972

Resources for the History of Physics, University Press of New England, Hanover, New Hampshire, 1972

Planck's Original Papers in Quantum Theory, Taylor and Francis, Ltd, London, 1972.

International Congress on the Education of Teachers of Physics in Secondary Schools, Eger, Hungary, 11-17 September 1970.

Teaching Physics - An Insoluble Task?, MIT Press, 1971.

16. Plasma Physics Commission

This Commission was formed by the XIII General Assembly of IUPAP in September 1969. Unfortunately, because of the large number of verbal nominations given to the General Assembly for membership on this Commission, it was not until late March that the officers of the Commission had a validated list of members and corresponding members. This seven-month delay in determining who the members of the Commission were prevented the Commission from doing any work before June 1970.

Most of the Commission business has been carried out by mail, but the Commission had one formal meeting in connection with the Fourth Conference on Plasma Physics and Controlled Nuclear Fusion Research, which was held in Madison, Wisconsin, USA, on 22 June 1971. Present or represented were the following members and corresponding members : Professor H. Alfven, represented by Dr. B. Lehnert, Sweden; Professor Sanborn C. Brown, Secretary, USA; Dr. K. Husimi, Japan; Professor Ioan-Iovitz Popescu, Romania; Dr. Richard F. Post, USA; Dr. C. M. Braams, The Netherlands; Dr. Bruno Brunelli, Italy; Dr. J. L. Delcroix, represented by Dr. C. J. Jablon, France; and Professor E. S. Weibel, Switzerland.

The area of plasma physics and ionized gases is a very comprehensive one, and as a result there are several other international organisations which have committees of various sorts in this area of physics. One of the very useful functions performed by the IUPAP Commission is to serve as a liaison between these various other organisations. This is accomplished to a large extent by overlapping membership. For example, the International Atomic Energy Agency has set up an International Fusion Research Council. Dr. C. M. Braams, a corresponding member of the Commission on Plasma Physics of IUPAP, is Chairman of the IAEA Council. The European Physical Society has set up a Plasma Physics Division and Dr. B. Lehnert, who has been acting for Professor Alfven on the IUPAP Commission, is the President of this Division. There is a self-perpetuating International Scientific Committee that runs the International Conferences on Phenomena in Ionized Gases. It has been the recommendation of this Commission that a member of this Committee be nominated to membership on the Plasma Physics Commission to provide close liaison with this International Scientific Committee.

Also in connection with the wide range of physical phenomena covered by the field of plasma physics, this Commission has recommended to the General Assembly that the Plasma Physics Commission be made up of not less than two members expert in plasma physics, two members expert in gas discharge physics, and two members expert in astrophysical plasma phenomena.

Conferences sponsored by the Commission during 1971 were the following :

a) International Symposium on Plasma Physics in St. John's Newfoundland, 5-9 July 1971; Conference Organiser : Dr. M.P. Bachynski, RCA Laboratories, 1001 Lenoir, Montreal, P.Q., Canada.

b) Seminars in Fundamental and Applied Laser Physics, Isfahan, Iran, 1-7 September 1971; Conference Organiser : Professor Ali Javan, Rm. 6-210, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA.

c) Xth International Conference on Phenomena in Ionized Gases, Oxford, England, 13-18 September 1971; Conference Organiser : Dr. R.N. Franklin, Keble College, Oxford, England.

No conferences were sponsored by the Commission during the year 1972. This can be explained principally by the fact that there are two major international conferences of interest to this Commission which meet on a regular basis : one, the Conference on Phenomena in Ionized Gases, and the other, the Controlled Thermonuclear Fusion Conference. The first meets every two years and the second meets every three years and both met in 1971.

Conferences scheduled for 1973 are the following :

a) XI th International Conference on Ionization Phenomena in Gases, Prague, Czechoslovakia, September 1973; Conference Organiser : Dr. L. Pekarek, Czechoslovak Academy of Science, Vinicna Ul. 7, Praha 2, Czechoslovakia.

b) Conference on Plasma Theory, Kiev, USSR, October 1973; Conference Organiser : Professor L.A. Artsimovich, I.V. Kurchatov Institute of Atomic Energy, Moscow, USSR.

17. International Commission for Optics

1. Bureau

Le Bureau actuel a ete elu lors de C.I.O. 8 (Reading 1969). Il est constitue par : Prof. H.H. Hopkins (President), J.Ch. Vienot (Secr. Tres.), Prof. B. Havelka, Prof. Koreo Kinosita, Dr. R.M. Scott, Dr. W.H. Steel (Vice-Presidents).

2. Statuts - reglementation

Le Bureau de la C.I.O. a mis au point un projet de renovation des Statuts de la C.I.O., celui-ci a ete propose au Secretaire General de l'IUPAP et devrait etre normalement discute lors de la reunion C.I.O. 9 en octobre 1972 a Santa Monica.

La necessite de reglementer l'organisation des Ecoles d'Ete a egalement amene a proposer une procedure qui leur est applicable. Enfin, le Bureau de la C.I.O. a examine les relations a mettre en place d'une part avec les differentes org organisations s'occupant des Couches Minces, d'autre part avec les groupes d'optique europeens et la Societe Europeene de Physique.

3. Reunions

Plusieurs conferences et symposia ont ete organises sous les auspices de la C.I.O. :

- Symposium International sur les Applications de l'Holographie, Besancon (France) : 6-11 Juillet 1970.
- Symposium sur les Performances visuelles dan l'observation a travers un instrument d'optique, Munich (Allemagne) : 21-23 Juillet 1971.
- 3eme Conference Int. sur la Physique du Rayonnement Ultra-Violet dans le Vide, Tokyo-Kyoto (Japon) : 30 Aout - 2 Septembre 1971.
- Optique integree, Ondes Guidees, Materiaux et Systemes, Las Vegas, Nevada (USA) : 7-9 Fevrier 1972.
- Reunion Internationale sur les Couches Minces, Venise (Italie) : 15-19 Mai 1972.

4. Communications - bulletin de liaison

La C.I.O. ne comportant pas de membres individuels, mais regroupant les Comites Nationaux d'Optique de differents pays, les liaisons se font lors des Assemblees Generales (tri-annuelles), lors des Congres et Symposiums de la C.I.O. L'amorce d'un bulletin de liaison regulier a demarre (a) sous forme de circulaires : octobre 1969, puis janvier 1970 ; (b) ensuite, un bulletin de liaison ("News-Letter") a ete diffuse : fevrier 1971 puis avril 1972. Ce bulletin a pour but de renseigner les differents pays membres sur les activites de l'annee (cf. copies jointes).

5. Glossaire multilingue

La mise au point d'un glossaire multilingue d'optique se poursuit. Une documentation etendue a ete reunie, tant du point de vue lexicologique que du point de vue correspondance des termes dans des disciplines voisines.

6. Accroissement du nombre des pays membres de la C.I.O.

Plusieurs adhesions nouvelles doivent etre prochainement ratifiees ou sont actuellement en cours. Il s'agit d'Israel, du Mexique et de la

de la Republique Democratique d'Allemagne. Il semble que la Commission pourra egalement bientot compter l'U. R. S. S. parmi ses membres.

7. Budget

Le budget de la C. I. O. reste a peu pres stationaire, les cotisations n'ayant pas ete reajustees et les ressources exterieures etant inexistantes.

19. Scientific Committee on Oceanic Research

The increasing scientific and public interest in the oceans has been reflected in increased activity of the numerous international scientific organisations concerned and, in particular, by SCOR. The work of SCOR is carried out at meetings of its executive committee, at general meetings which are usually combined with oceanographic conferences, at meetings of working groups and by publications. A part of the work is biological, geological or chemical and of no direct interest to IUPAP; a substantial part, however, is concerned with the physical properties of sea water and sediments and with hydrodynamics, thermodynamics and instrumentation. All of this has a basis in physics.

During the period four volumes of SCOR Proceedings have been published, these give a detailed account of the meetings and of the work done and resolutions adopted. One general meeting was held. This took place in Tokyo and was a joint enterprise with IAPSO, IABO, and CMG. The proceedings have been published as a book, The Ocean World edited by M. Uda (Tokyo 1971). A number of smaller conferences have been held.

Much attention was given at the Tokyo meeting to considering the formation of a Marine Sciences Union. It was the almost unanimous view of those present that this was unnecessary and would be very difficult to achieve in view of the multiplicity of organisations whose agreement would be needed. Most people felt that it would be more satisfactory to strengthen SCOR. With this in view a revised constitution for SCOR was drafted; this is being considered by ICSU. A feature of this constitution is the introduction of a new class of Invited Members. This is to enable SCOR to coopt eminent oceanographers even if they are nationals of countries that have not joined SCOR. Some such members have already been appointed.

The main technical work of SCOR is done through working groups which hold meetings and organise cooperative projects. The working groups of main interest to IUPAP are :

WG 10 Oceanographic tables and standards. This committee prepared tables giving the physical properties of sea water and is responsible for advising on the certification of standard sea water. Particular attention has been given to the equation of state and to the relation between electrical conductivity and salinity. The theory of motions in the ocean requires very accurate determinations of denisty as a function of temperature, pressure and salinity. The investigations promoted by the working group have produced a great improvement in the quality of the data available. The program is continuing.

WG 15 Photosynthetic radient energy. This group is concerned with the methods of measurement of solar radiation in the sea that are relevant to biology.

WG 21 Continuous current velocity measurement. This group is engaged in a comparison at sea of the performance of the principal types of current meters. Its work has revealed a number of discrepancies which are being investigated.

WG 27 Tides of the open sea. This group is concerned with instrumentation for measuring tides in the deep sea and with the analysis of the results.

WG 28 Air-sea interaction. This group is concerned with the transfer of energy, momentum and water between ocean and atmosphere. It is involved in the oceanographic aspects of the Atlantic Tropical Experiment of GARP and in the Mid-Ocean Dynamics Experiment.

WG 34 Oceanographic basis of ocean monitoring and prediction systems. This group is concerned with the design of equipment for systematic monitoring of oceanic conditions, the planning of cooperative programs and the dynamical interpretation of the results.

Most of these groups are joint enterprises with other international bodies. Their terms of reference will be found in volume 7 of the SCOR Proceedings and accounts of the work of each are usually to be found in each issue.

Concern has been expressed lest the development of international law to cover activities in the deep sea might seriously restrict many kinds of oceanographic research. Much time has been spent on the discussion of this matter. Whilst the discussions have not led to any real consensus on the best method of minimising interference, they have led to a wider appreciation of the difficulties and have probably had some effect on the positions adipted by governments.

The eleventh general meeting of SCOR will take place in Oban, Scotland, in September 1972.

21. Upper Mantle Project

The Upper Mantle Project officially ended in December 1970. A final symposium on the results of this international corporation was held in August 1971 in Moscow at the general assembly of the International Union of Geodesy and Geophysics; the proceedings have been published as a special issue of Tectonophysics. During the period of the Upper Mantle Project it is not an exaggeration to say that a revolution has taken place in the earth sciences, especially with the discovery of many quantitative determinations of the large horizontal displacements of the earth's crust which have occurred over the last 100 m.y. The verification of the once speculative theory of continental drift and its more recent complement, the theory of sea floor spreading and the formulation of the theory of plate tectonics, has given us a dynamic in place of a static model of the earth's interior. The study of the physics of the processes in the earth's interior which has caused these movements, creep, convection and heat transfer, is still in a rudimentary state and most interesting problems in solid state physics and hydrodynamics invite investigation.

26. ICSU Abstracting Board - Report by H. W. Koch

The Abstracting Board of ICSU has made considerable progress of direct interest to IUPAP during the 1969-1972 period. A so-called Input Plan has been developed and approved by the Board in 1970. According to this plan, the major abstracting and indexing services of the world, including Physics Abstracts and Chemical Abstracts Service, will share the responsibilities and substantial costs involved in inputting a World Abstracting and Indexing System. An important prerequisite to the operational feasibility of this plan is the standardisation of the classification and indexing schemes for the organisation of physics literature in this computerised system. The ICSU/AB Working Group in Physics has just completed the details and agreements for a Physics Classification Scheme that will soon be adopted by Physics Abstracts, Bulletin Signalatique, and Physikalische Berichte, as well as many of the primary journals of the American Institute of Physics and the European Physical Society. Such agreements are not only the results of ICSU/AB efforts, but also of the effective coordination supplied by such commissions of ICSU as the Publications Commission of IUPAP. Both the Board and this Commission can be justly proud of their past contributions to the developments of science information systems of the near future.

The importance of continued IUPAP contributions should be emphasised. IUPAP is the principal mechanism for ensuring that appropriate consideration be given to the needs, capabilities, and interests of individual physicists, who, after all, are to be the main contributors to, and users of, the information systems in physics now being designed and developed. Because of the importance of IUPAP's role, I am delighted that a physicist active in the publications committee of the European Physical Society will be encouraged to participate in ICSU/AB after my term of involvement as IUPAP representative is completed. My own personal involvement with ICSU/AB will continue as a representative of the American Institute of Physics that became a member service of the Board in 1972.

The Executive Committee and the General Assembly may want to consider expanding formally the role of the Publications Commission so as to include in its terms of reference abstracting and indexing, together with primary publications. This expansion would be facilitated by making the IUPAP representative to ICSU/AB a member of the Publications Commission and by charging the Commission with the responsibility for nominating the IUPAP representative to the Board. Consideration may also want to be given to changing the name of the Publications Commission to the Science Information Commission.

IUPAP

CALIFORNIA INSTITUTE OF TECHNOLOGY

CHARLES C. LAURITSEN LABORATORY OF HIGH ENERGY PHYSICS
PASADENA, CALIFORNIA 91109

September 20, 1972

Members and Corresponding Members
of the IUPAP Commission on Particles and Fields
and Guests at the Committee Meeting in Chicago

Dear Colleagues:

Enclosed is a draft of the minutes of our meeting in Chicago on September 8, 1972. Please inform me of any corrections to these draft minutes as soon as possible.

Also enclosed is a copy of a letter which was sent to Dr. C. C. Butler, Secretary-General of IUPAP, immediately following our meeting on September 8.

I assume that the Executive Committee will act on our recommendations for IUPAP sponsorship of future conferences at its meeting on September 19, 1972, and I will let you know the outcome as soon as I hear from the Committee.

With best regards,

Sincerely yours,

Robert L. Walker

Robert L. Walker
Secretary

RLW:nc
Enclosures
CC: C. C. Butler
Larkin Kerwin
R. F. Bacher
R. E. Bell
J. Teillac
A. Wattenberg
W. W. Havens, Jr.
Helge Tyrén
Karl Althoff
I. Quercia

CALIFORNIA INSTITUTE OF TECHNOLOGY

CHARLES C. LAURITSEN LABORATORY OF HIGH ENERGY PHYSICS
PASADENA, CALIFORNIA 91109

September 8, 1972

Dr. C. C. Butler, F.R.S.
Nuffield Lodge
Regent's Park
London NW1 4RS, England

Dear Dr. Butler:

On July 7, 1972, I sent you a letter enclosing, among other things, a list of Conferences in 1973 and 1974 recommended for IUPAP sponsorship by the Commission on Particles and Fields. A copy of this list is enclosed for easy reference.

As you may remember, two of the three conferences in 1973 had not yet been approved by the Commission. This letter is to inform you that at its meeting in Chicago on September 8, 1972, the Commission decided to recommend that both these Conferences be sponsored by IUPAP. Thus, all five conferences on the enclosed list (three in 1973 and two in 1974) have the Commission approval. The checklists for these conferences have been completed and updated; copies of these checklists are enclosed. Note some changes in the amounts of recommended support.

We hope that all five of these Conferences will be considered by the Executive Committee at its meeting on September 19.

Sincerely yours,

Robert L. Walker

Robert L. Walker
Secretary, Commission
on Particles and Fields

CC: Dr. Larkin Kerwin
Dr. R. F. Bacher

Enclosures

Additional note: At the General Assembly, the National Committee of the USSR will probably nominate A. N. Tavkhelidze instead of Baldin as a new member of our Commission. If so, the Commission will support this nomination of Tavkhelidze.

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS
COMMISSION ON PARTICLES AND FIELDS

Minutes of Meeting in Chicago, September 8, 1972 - DRAFT

The Commission on Particles and Fields of IUPAP met on August 8, 1972, at The University of Chicago, on the occasion of the XVI International Conference on High Energy Physics. The following people were present at the meeting:

Members of the Commission	Guests
V. P. Dzhelepov	E. L. Goldwasser
K. Lanius	R. G. Sachs
G. Salvini	B. P. Gregory
S. Suwa	W. K. H. Panofsky
R. L. Walker	G. H. Stafford
C. N. Yang	W. Paul
G. Ekspong	T. Kitagaki
H. Joos	Yu. A. Shcherbakov
A. Lagarrique	W. Jentschke
Y. Ne'eman	V. Weisskopf
B. M. Udgaonkar	

The secretary, R. L. Walker, acted as Chairman and G. Salvini took notes during the discussion to help in preparing these minutes.

The minutes of the meeting in Ithaca, August 25, 1971, were approved. (Several Commission Members, including Drs. Dzhelepov and Logunov, were not present at that meeting.)

I. Report on Actions Taken since the Last Meeting

The secretary reviewed the following actions or decisions made since

the Ithaca meeting:

(a) The Commission approved the proposal to hold the IX International Conference on High Energy Accelerators at SLAC, Stanford University, in the Spring, 1974, and recommended that this Conference be sponsored by IUPAP.

(b) The Commission approved the proposal to hold the XVII International Conference on High Energy Physics at Imperial College, London, in July, 1974, and recommended that this Conference be sponsored by IUPAP.

(c) Recommendations for new members of the Commission for the term beginning in 1973 were agreed upon by the Commission and transmitted to the Secretary-General. The IUPAP Executive Committee made changes as indicated below and is recommending the following composition of the Commission for the term 1973-75:

Chairman:	C. N. Yang, USA
Secretary:	G. Salvini, Italy
10 Members:	G. Ekspong, Sweden
	H. Joos, FDR
	A. A. Logunov, USSR
	J. Pniewski, Poland
	B. M. Udgaonkar, India
	A. M. Baldin, USSR
	E. L. Goldwasser, USA
	B. P. Gregory, France
	G. H. Stafford, UK
	G. Takeda, Japan

This membership list differs from the Commission recommendations in the following respects: (1) The Commission recommended that Y. Ne'eman

continue as a member and that G. Takeda be added as an eleventh member. The Executive Committee would not agree to more than ten members on any commission and it removed Ne'eman from our list. (2) Baldin was named by the Executive Committee because by the time of its meeting no nomination for this position had been received from Dzhelepov and Logunov. Subsequently, they have suggested A. N. Tavkhelidze. It was pointed out in our discussion by Weisskopf, Walker, and others that in order to make the change from Baldin to Tavkhelidze, the National Delegation of the USSR will have to propose this change at the IUPAP General Assembly in Washington. The Commission agreed to support this official USSR proposal, presented by Prof. Dzhelepov, for the nomination of Tavkhelidze. (The following note was sent on September 8 to C. C. Butler, the Secretary-General: "At the General Assembly, the National Committee of the USSR will probably nominate A. N. Tavkhelidze instead of Baldin as a new member of our Commission. If so, the Commission will support this nomination of Tavkhelidze.")

II. Future Conferences Approved by the Commission

A review and discussion of future conferences either already approved or seeking the approval of the Commission took place. A summary of this discussion and of the recommendations agreed to by the Commission follows:

(a) 1974 Conference on High Energy Physics

Dr. Stafford reviewed briefly the status of plans for the 1974 High Energy Physics Conference to be held at Imperial College, London. This Conference had previously been recommended for IUPAP sponsorship by the

Commission. The dates are now fixed to be July 1-10, 1974. The total number of participants will be limited to approximately 800 by the size of the auditorium available. Goldwasser pointed out that the NAL auditorium is this same size and the number of participants at the present Chicago Conference is approximately 900.

The Commission agreed to recommend IUPAP support of $3,000 for the London Conference.

Among other details, a discussion of the registration fee for this and other conferences took place. Many people felt that $25 is a minimum fee from the point of view of covering the costs involved. At the same time, many felt that a fee higher than $25 or $30 should be avoided. Thus, the consensus seems to be that $25 is the "right" amount. All agreed that no additional charge should be made of participants for the Conference Proceedings - one reason being to insure a wide circulation of the Proceedings.

(b) 1974 Accelerator Conference

Dr. Panofsky gave a brief review of the status of the 1974 Accelerator Conference, which was also previously recommended by the Commission for IUPAP sponsorship. The dates are May 2-7, 1974, and the number of participants will be approximately 300. This number can be accommodated in the SLAC auditorium.

The Commission agreed to recommend IUPAP support of $1,000 for the SLAC Accelerator Conference.

(c) 1973 Instrumentation Conference

Dr. Salvini reviewed the status of the Frascati Instrumentation Conference which was approved by the Commission at its last meeting a year ago. The dates are May 8-12, 1973, and the Conference will be at Frascati rather than Rome. The number of participants will be approximately 250 to 300.

The Commission agreed to recommend IUPAP support of $1,000 for the Frascati Conference.

(d) 1973 Conference on High Energy Physics and Nuclear Structure

Walker reviewed the history of the proposal to hold a Conference in Uppsala on the above subject. Unusual efforts have been made by the Conference organizers to coordinate the choice of time and place with many people working in the field. Also, efforts extending over several months have been made to establish good communications with the Commission on Nuclear Physics, and to consider the possibility of joint sponsorship. The proposed time of the Conference, in the Summer of 1973, poses some problem to the nuclear physicists because of competition with the large conference on Nuclear Physics which will take place in Munich in August, 1973. However, a suggestion to postpone the Uppsala Conference until 1974 was not viewed favorably by the organizers.

The Commission on Nuclear Physics was informed by the secretary (R. L. Walker) that we would have to make a decision at our meeting on September 8, and that whereas joint sponsorship was not necessary, we would not approve the conference if they specifically objected. No objection had been received prior to September 8, but also no agreement for

joint sponsorship. Perhaps a joint sponsorship can be achieved the next time there is a conference in this series.

The Commission agreed to recommend IUPAP sponsorship for the Uppsala Conference, and IUPAP support of $1,000. The dates of the Conference will probably be June 18-22, 1973, although this is not yet firmly fixed. The Commission agreed that an earlier date in the first half of June should be avoided because of conflict with the schedule at many universities. The number of participants will be approximately 300.

(e) 1973 Conference on Photon and Electron Interactions

Dr. Paul reviewed the proposal to hold the next photon-electron conference in Bonn, August 27-31, 1973. It was pointed out that these dates would overlap those of the Nuclear Physics Conference in Munich mentioned before. The Conference organizers were asked to give some thought to whether this overlap is any problem, and, if so, to reconsider the date.

It was felt that the number of participants should be approximately the same as at the last conference in Ithaca, namely about 300.

Panofsky recalled the question discussed at one of our previous meetings as to whether the unity of the physics studied at proton and electron machines had developed to the point where separate electron-photon conferences were no longer appropriate. It was felt that, although the unity argument has validity, the electron-photon conferences have been very successful in the past and they are still much desired by people working in the fields discussed. It was agreed that this conference should include the subject of neutrino-induced reactions but the name of

the conference should not be changed because a broadening to include weak interactions in general would not be appropriate.

The Commission agreed to recommend that the Bonn electron-photon conference be sponsored by IUPAP and that IUPAP support of $1,000 be granted.

III. Other Conferences

(a) European Conference in 1973

Dr. Gregory reported on present plans for the "off-year" European Conference on High Energy Physics in 1973. This report was for information only because IUPAP sponsorship is not sought. This series of conferences has gradually assumed the nature of topical conferences, and in 1973, it is planned to concentrate on physics in the very high energy region. The probable location will be Aix-en-Provence, and the probable date will be early September, 1973. It was suggested that the precise date should be coordinated with the Bonn Conference described above.

(b) The 1976 High Energy Physics Conference

The Japanese physicists have proposed, in a letter previously sent to members of the Commission, that the large High Energy Physics Conference in 1976 be held in Japan, probably in Tokyo. This proposal was discussed. A number of members of the Commission expressed support for the idea of changing the traditional rotation between the USSR, Western Europe, and the USA so as to permit holding the conference in one of the "other countries". Most of these people viewed the Japanese proposal favorably. An argument expressed by Yang in this connection was that the holding of

such a conference does much to increase the prestige and recognition of the institution and country where the conference takes place and that these benefits can be especially important to a smaller country trying seriously to develop its high energy physics program.

Since the 1976 conference would be traditionally held in the USSR, the view of the Soviet physicists toward the Japanese proposal is especially relevant. This view was expressed by Dr. Dzhelepov, who reported that discussions have taken place in the USSR with the expectation that the Conference would be held there, and that for a number of reasons the Soviet physicists wish to have the Conference in 1976 rather than delaying it until 1978. Among these reasons are the expected importance of new data from Serpuhkov, Novosibirsk, other Soviet groups, and Dubna. He emphasized that they do not object to holding a high energy conference in Japan but only to displacing the 1976 conference from the USSR. Thus, they would have no objection to having the 1978 conference in Japan. As an alternative, Dr. Dzhelepov suggested that the Japanese consider holding a medium-sized topical conference and he suggested that an appropriate topic would be the theory of elementary particles because of the long tradition of excellence in this area in Japan. This conference would include review reports of experimental data.

No decision was made by the Commission on the Japanese proposal, as the time is still four years away and more thought should be devoted to the various questions raised by this proposal. It was agreed that a definite decision will have to be made at the Commission meeting next

year. In the meantime, opinions on the proposal will be exchanged by mail.

IV. Next Meeting

It was agreed that the 1973 meeting of the Commission will be held in Bonn at the time of the 1973 Conference on Photon and Electron Interactions.

Chicago, September 10, 1972

R. L. Walker, Secretary

September 5, 1972

Mr. Richard Y. Dow
(JH-421)
U.S. National Committee for IUPAP
Div. of Physical Sciences
National Academy of Science
2101 Constitution Avenue, N.W.
Washington, D. C. 20418

Dear Mr. Dow:

Professor Victor F. Weisskopf has just returned from a summer abroad, and upon showing him a copy of the attached registration form he did not recall having filled this form out and returning it to you. Therefore I am returning this Xerox copy of the form, filled out by him. This may be a duplicate, but if not would you please consider this as Professor Weisskopf's registration form.

Thank you.

Sincerely,

Diane Eulian
Secretary to Professor Weisskopf

encl.

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

XIV GENERAL ASSEMBLY

NATIONAL ACADEMY OF SCIENCES, WASHINGTON, D. C.

20 - 25 September 1972

Please Airmail Original and one copy to:

Mr. Richard Y. Dow (JH-421)
U.S. National Committee for IUPAP
Div. of Physical Sciences
National Academy of Sciences
2101 Constitution Avenue, N.W.
Washington, D. C. 20418 U.S.A.

Retain one copy for your files.

REGISTRATION FORM

for

XIV GENERAL ASSEMBLY

NAME _____

(Please indicate how correspondence should be addressed, i.e., Professor, Dr., Mrs., Miss, etc.)

COMPLETE ADDRESS _____

_____

_____

_____

INSTITUTIONAL AFFILIATION _____

_____

NAMES OF ACCOMPANYING PERSONS:

Name Address

_____

_____

_____

_____

_____

HOTEL ACCOMMODATIONS:

A block of rooms has been reserved at the Shoreham Hotel for delegates, officials of IUPAP, IUPAP Commission members and participants in the scientific sessions. Please indicate your room requirements below:

_____ Room(s) with single bed for 1 person at $22.00

_____ Room(s) with twin beds for 2 persons at $26.00

_____ No reservations required (making own arrangements for accommodations)

Arrival and departure dates are essential:

Arriving Washington Sept. _____ 1972 Hour _____ a.m. p.m.

Departing Washington Sept. _____ 1972 Hour _____ a.m. p.m.

Confirmation of reservations will be sent to the mailing address indicated on the form, unless the registrant specifically requests otherwise.

NATIONAL RESEARCH COUNCIL

NATIONAL ACADEMY OF SCIENCES NATIONAL ACADEMY OF ENGINEERING

2101 CONSTITUTION AVENUE WASHINGTON, D.C. 20418

DIVISION OF PHYSICAL SCIENCES

June 5, 1972

Dear Colleague:

Enclosed is the second announcement of the XIV General Assembly of the International Union of Pure and Applied Physics (IUPAP), General Information and Program. This announcement provides information on transportation, accommodations, luncheons and dinners, laboratory tours, visas, and other general information. It also provides a schedule of the business and scientific sessions and evening functions.

Three copies of a registration form for the General Assembly are also enclosed. Please complete these forms, as soon as possible, and send two copies to me (addressed envelope enclosed); retain one copy for your files. Confirmation of your reservations for rooms at the Shoreham Hotel will be sent to the mailing address on the registration form, unless you request otherwise.

Please let me know if I can be of assistance in any other matters regarding your participation as a delegate to the General Assembly.

Sincerely yours,

Richard Y. Dow

Richard Y. Dow
Secretary, USNC-IUPAP
Arrangements Committee
for XIV General Assembly
of IUPAP

Encls.

NA

JENO M. BARNOTHY
833 LINCOLN STREET
EVANSTON, ILLINOIS 60201

Dr.V.F.Weisskopf
MIT
Physics Department
Cambridge, Mass. 02138

Sept.7,1972

Dear Dr.Weisskopf:

I understand that the XIV General Assembly of IUPAP plans a commemorative meeting of Bohr's Nobel Prize on Sept.20-25 in Washington. I am sure you are among the invited speakers of this occasion.

I believe that this would be an appropriate occasion to show that Bohr's quantization of the atomic system seems to be applicable also to the planetary system, as shown in the enclosure, a paper I presented at the 138th meeting of the Am.Astr.Soc.

I would greatly appreciate to hear your comments.

Sincerely yours

Jeno Barnothy

Jeno M.Barnothy
professor of physics

JMB:eg
Encl.

Quantization of Macroscopic Rotators (09.06.02) J.M.Barnothy

Sixty years have elapsed since Bohr discovered his atomic model.

Have you ever posed the question what would have happened to quantum theory if the electron spin and its numerical value would have been known at the advent of the 2oth century? Let me take you on a ride in a time machine, which not only starts with the knowledge of the electron spin, (s_e) but which can also rearrange the sequence of events.

First we see Millikan and Einstein showing that in the photoelectric effect light is absorbed in quanta, each quantum carrying an energy $2\pi s_e \nu$.

Now comes Planck and says, this is exactly what I need to explain the spectrum of the black body radiation. The emission of light is not continuous, but occurs in quanta with energies as given by Einstein's equation. Obviously a light quantum sometimes behaves as a wave, and other times as a corpuscule.

Then de Broglie, who was a rather romantic type of scientist, recognizes that since nature seems to have a preference for symmetries, should light behave in a dualistic manner, then corpuscules should also behave at times undulatorily, whereby, in analogy to light quanta, there should exist corpuscular waves with wavelength equal to the ratio of 4π times the spin of the particle to its momentum.

Next Bohr explains the discrete set of Balmer lines, by postulating that electrons revolving around the nucleus do not emit radiation as long as they move in orbits along which the de Broglie waves are standing waves. This means, of course, that the orbital angular momentum of the electron must always be an integer multiple of the electron spin.

Unfortunately Heisenberg shows that such an atomic model is a nonsense, because the simultaneous observation of conjugate quantities always involves an error equal to the electron spin. Thus, it is impossible to observe Bohr's orbits. Schrödinger saves the situation by setting up a partial differential equation, leading for negative energies to a discrete set of Eigenvalues. He achieves this by substituting in the Hamiltonian a new variable $S=K \ln\psi$, whereby to remain in agreement with observations he sets the numerical value of K equal to twice the spin of the electron.

We have now covered the events leading up to Schrödinger without the need to mention h, that is Planck's constant. This curious circumstance raised in the '40s the heretical thought in me that h is probably not a fundamental general constant of nature, but a constant, the value of which changes in accordance with the "prima donna" of the show. I found that the general formula for Planck's constant is $h = 4\pi s_x \alpha^{-k}$, where s_x is the spin of the oscillating or revolving body, k is a small integer, inclu-

ding zero, and α is the fine structure constant.

In the special case of the atom k=0, and since $s_x=s_e$, h will be numerically equal to Planck's constant: nothing has changed. But, in the case of the Earth k=3, and s_x is the spin of the Earth, consequently Planck's constant according to which the orbit of the Earth should be quantized is 1.58×10^{48}cgs. Since the Earth is in its lowest quantum state, the de Broglie wavelength corresponds to the circumference of the ecliptic. The radiant energy which would be emitted if the Earth could "jump" from its second quantum orbit to the first, would be a gravitational wave of nearly three light-years wavelength.

Slide 1 shows the quantization of the planetary system. Three different k values were needed. When two planets occupy the same n and k quantum numbers, as in Mercury and Venus, and again Earth and Uranus, one of them happens to have retrograde rotation, suggestive that Pauli's exclusion principle would be applicable. From the nine planets only Neptune does not fit into the scheme. The trans-Plutonian planet has according to computations a mass about equal to that of Jupiter, I assumed that its diameter and rotational period would also be similar to those of Jupiter.

Slide 2 shows the twelve satellites with known diameters. For all I assumed bound orbits and homogeneous mass distribution. All have k=4.

I expect that you will say that with two adjustable parameters it is not surprising that for each object closely integer n values can be found. The chance to find within ±0.35 an integer n value of 1, 2, 3, 4 or 5 is 3.6%. But the probability to find such an integer value for 16 objects is 10^{-23}! I think this undoubtedly proves three points:

1) It is indeed possible to quantize macroscopic rotators;

2) Planck's constant is not a general fundamental physical constant. Dirac in 1968 has already reached the inference that in the physics of the future h cannot be a fundamental quantity.

3) That the uncertainty relation depends on what kind of signal carriers we use. Photons will give very blurred picture from Bohr's orbits, but very sharp pictures from the orbits of the planets. Gravitational waves, on the other hand, would give very hazy pictures from the planetary system, and what one could say, would merely be that the probability to find the Earth somewhere around the Sun is proportional to ψ^2. This means, that model-like description should not be dismissed as worthless: they are complementary to the statistical mathematical descriptions. Nature appears dualistic even in its recognition patterns.

138th meeting of Am.Astr.Soc., Aug.16,1972

*J.Barnothy, Nature, June 15, 1946; ibid Aug.31,1946

PLANETS

Assumptions: all have mass distributions similar to that of Earth (inertia factor=0.28); component of spin vector perpendicular to orbital plane taken into account.

Rotational perion	k	Name	n	<n>	Δ<n> %	
more than 6 days	4	Mercury	1.92	2	- 4	
		Venus	1.78	2	-11	retrograde
		Pluto	1.20	1	+20	(D=4000 mi)
less than 1 day	3	Earth	1.14	1	+14	
		Mars	5.12	5	+ 2.4	
		Uranus	1.09	1	+ 9	retrograde
		Neptune	0.27	?		
large planets	2	Jupiter	1.06	1	+ 6	
		Saturn	2.35	2	+17.5	(ring?)
		Trans-Pluto	(4.05)	(4)		(~Jupiter)

SATELLITES

Assumptions: have homogeneous mass distribution; have bound orbits and move on curtate cycloids, hence considered as planets.

k-value always = 4

		n	<n>	Δ<n> %	
Earth	Moon	1.93	2	- 3.5	
Jupiter	Jo	0.46	1/2	- 8.0	integer spin?
	Europa	0.84	1	-16.0	
	Ganymede	0.56	1/2	+12.0	integer spin?
	Callisto	1.65	2	-17.5	
Saturn	Mimas	1.08	1	+ 8.0	
	Enceladus	0.89	1	-11.0	
	Tethys	0.49	1/2	- 2.0	integer spin?
	Dione	0.94	1	- 6.0	
	Rhea	0.52	1/2	- 4.0	integer spin?
	Titan	1.87	2	- 6.5	
Neptune	Triton	1.87	2	- 6.5	retrograde

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

News-Bulletin No. 31 August 1972

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XVI GENERAL ASSEMBLY - PROGRAMME

Tues. Sept. 19	:	pm	Executive Committee
Wed. Sept. 20	:	am	General Assembly I
		pm	General Assembly II
		ev	Reception, NAS
Thur. Sept. 21	:	am	Symposium I (Amaldi, diFrancia)
		pm	Symposium II (Hoyle, Thorne)
		ev	Banquet
Fri. Sept. 22	:	am	General Assembly III
		pm	Symposium III (Herzberg, Bardeen)
Sat. Sept. 23	:	am	Symposium IV (Casimir, Gentner)
		pm	Symposium V (Artsimovich, Weisskopf, Bohr)
		ev	Dinner
Sun. Sept. 24	:	am	General Assembly IV*
		pm	Tours
Mon. Sept. 25	:	am	General Assembly V*
		pm	Tours
Tues. Sept. 26	:	am	Executive Committee

-.-.-.-.-.-.-

* one of these sessions may not be needed

AUTUMN CONFERENCES

Readers should consult the list published in News-Bulletin No. 25 and the addendum in No.27. They are reminded of the coming meetings:

23. MODULATION SPECTROSCOPY	Nov. 23-26 Tucson, USA
24. ICO - SPACE OPTICS	Oct. 9-13 Sta Monica, USA

XIV GENERAL ASSEMBLY - NOMINATIONS

Hundreds of nominations for the 184 positions on the Executive Committee and International Commissions have been received from National Committees as well as from the Commissions. A proposed slate has been prepared for distribution to Assembly delegates. Further nominations will be considered by the Assembly.

XIV GENERAL ASSEMBLY - 50th ANNIVERSARY

Preparations are now complete for the 14th General Assembly of IUPAP, being held in Washington Sept. 20-25th. The Assembly is being hosted by the U.S. National Academy of Sciences, the National Science Foundation, The American Institute of Physics, and is being coordinated by the U.S. National Committee for IUPAP.
An impressive scientific programme has been prepared for the occasion.
Many veteran members of IUPAP will attend this special meeting, including former Secretary-General P. Fleury (who attended the founding session in 1922) and Professor P.P. Ewald, who, as Secretary-General in 1947, animated the post-war reorganisation.

XIV GENERAL ASSEMBLY - AGENDA (draft)

1. Welcome by USA Academy of Sciences
2. Adoption of Agenda
3. Obituaries
4. Election procedures
5. Nominations
6. Secretary-General's report
7. Commission Reports
8. Inter-union affairs
9. ICSU matters
10. Report of the Financial Commission
11. Commission recommendations: preliminary
12. Elections: Executive Committee
13. Elections: International Commissions
14. Commission recommendations: action
15. Resolutions from National Committees
16. Venue of 1975 General Assembly
17. Other Business
18. Adjournment

XIV GENERAL ASSEMBLY - Unveiling

1972 is the 50th anniversary of the awarding of the Nobel Prize to Niels Bohr. To mark this event, and as a high point of its own 50th anniversary meeting, IUPAP will unveil a bust of Professor Bohr on the evening of Wednesday, Sept. 20th. The bust will be unveiled by Prof. Aage Bohr, and a short address will be made by Prof. S. Rozental, Director of the Niels Bohr Institute at Copenhagen. The bust is the work of Harald Isenstein, noted Danish sculptor, who has rendered many noted scientists.

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUÉE

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

Secretary-General :
Dr. C.C. BUTLER, F.R.S.,
Nuffield Lodge
Regents Park
London NW1 4RS, ENGLAND.
Tel.: 01 - 722-8871

Secrétaire général adjoint :
Prof. L. KERWIN, F.R.S.C.,
Université Laval
Québec 10, Canada.
Tél.: 418 - 656-2131

Québec, August 1st, 1972.

Prof. Victor Weisskopf,
Vice-President of IUPAP,
Department of Physics,
Massachusetts Institute of Technology,
Cambridge, Mass. 02139, U.S.A.

Dear Dr. Weisskopf:

We have instructed our bankers to forward you the sum of $223.00 representing your travel expenses to assist to the last Executive meeting.

It was very pleasant seeing you in Brussels, and I look forward to chatting with you again in Washington.

Cordially yours,

Larkin Kerwin,
Associate Secretary-General

c.c.: Dr. Butler

LK:cgb

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUÉE

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Tél.: 418 - 656-2131

Québec, le 1er août 1972.

Monsieur le Gérant,
Banque de Montréal,
Succursale St-Sacrement,
1405 chemin Ste-Foy,
Québec 6.

Monsieur,

Veuillez transmettre la somme de
----deux cent vingt-trois dollars U.S. ($223.00)----
au compte de:

Prof. Victor WEISSKOPF
Department of Physics
Massachusetts Institute of Technology
Cambridge,
Mass. 02139, U.S.A.

représentant ses frais d'assistance à la réunion de l'Exécutif à Bruxelles en juin.

Je vous prie d'indiquer au destinataire que ce montant d'argent est fourni par l'Union internationale de Physique pure et appliquée. Puis-je vous demander également de me faire parvenir une copie de la lettre accompagnant cet envoi?

Recevez, monsieur le Gérant, l'assurance de mes sentiments les meilleurs.

Larkin Kerwin,
Secrétaire-général adjoint

c.c.: Dr Butler

LK:cgb

AIR MAIL

Bank of Montreal
Canada's First Bank
St. Sacrement Branch
1405 Ste. Foy Road
Quebec 6, P.Q.

August 9th, 1972.

Prof. Victor Weisskopf,
Department of Physics,
Massachusetts Institute of Technology,
Cambridge,
Mass. 02139, U.S.A.

Dear Sir,

Enclosed please find draft #630557 in the amount of $223.00 U.S., representing the cost of assistance to the executive reunion at Bruxelles in june, sent by the International Union of Pure & Applied Physics,

Kindly acknowledge receipt.

Hoping all is to your entire satisfaction, we remain,

Yours Truly,

Mr. Albéric Grimard,
For Adm. Manager.

Amount received Sept 1 1972

Victor F Weisskopf

returned 8/7

MC 0572

BOX 6-09 FOLDER 1

IUPAP 1972 [2 of 2]

MC 572 JK

97-72 b3

NATIONAL RESEARCH COUNCIL

NATIONAL ACADEMY OF SCIENCES NATIONAL ACADEMY OF ENGINEERING

2101 CONSTITUTION AVENUE WASHINGTON, D.C. 20418

DIVISION OF PHYSICAL SCIENCES

June 16, 1972

Dr. Victor F. Weisskopf
Department of Physics
Massachusetts Institute of Technology
Cambridge, Massachusetts 02139

Dear Viki:

I enclose a note from Bacher to USNC-IUPAP regarding our delegation. As you and Bacher decided, he has left you and himself off the delegation in virtue of the international posts the two of you occupy. Needless to say, this does not mean your counsel should be withheld from the delegation!

We do want you to fill in the registration form, for obvious reasons, sending it to Mr. Dow here.

With warmest regards,

Sincerely,

Hugh Odishaw

Enclosures

NATIONAL RESEARCH COUNCIL

NATIONAL ACADEMY OF SCIENCES NATIONAL ACADEMY OF ENGINEERING

2101 CONSTITUTION AVENUE WASHINGTON, D.C. 20418

DIVISION OF PHYSICAL SCIENCES

June 15, 1972

MEMORANDUM

TO: U.S. National Committee for IUPAP

FROM: R. F. Bacher

SUBJECT: Our Delegation to the XIV General Assembly of IUPAP, September 20-25, 1972

The nominating committee appointed at the meeting in Washington has corresponded and held several conference telephone calls on the subject of the U.S. delegation to the forthcoming General Assembly in Washington. IUPAP Statutes specify that the U.S. delegation be composed of 5 Official Delegates but it has been customary to invite other nationals who are members of Commissions as Observers where this is practical. After discussion with the chairman of the nominating committee it has been proposed to supplement the Official Delegation by a small group of Alternate Delegates which includes the regular members of USNC who are not Official Delegates and two or three ex officio members who have been very much involved with the work of the National Committee.

The proposed Official Delegates are:

D. A. Bromley
S. C. Brown
E. L. Goldwasser
W. W. Havens, Jr.
F. Seitz

with the Vice Chairman of the U.S. National Committee, S. C. Brown as Chairman of the Delegation.

Alternate delegates proposed are:

S. S. Ballard
John Bardeen
L. M. Branscomb
M. D. Fiske
M. Greenspan
H. W. Koch
R. Smoluchowski

It is proposed that the following be included in the U.S. Delegation as Observers.

W. W. Buechner
E. R. Cohen
J. M. Cowley
H. Y. Fan

W. L. Fite
J. L. Fowler
C. Herring
I. Hirsh
W. W. Johnson, Jr.
E. O. Kane
W. C. Kelly
J. S. Koehler
T. Lauritsen
Peter Meyer
E. W. Montroll
Hugh Odishaw
S. Pasternack
R. F. Post
G. T. Rado
F. Dow Smith
R. L. Walker
H. C. Wolfe
C. N. Yang

You may recall that the USNC does not pick our delegation but makes recomendations to the President of the National Academy. If you do not agree with the proposed recommendations of Official Delegates, Alternates and Observers as listed above, please let me hear from you before July 10, 1972. Hearing no serious objections by that time, I shall send these recommendations to President Handler.

With this memorandum I send many thanks to Joseph Fowler, Conyers Herring and Roman Smoluchowski for serving on the nominating committee.

Robert F. Bacher

P.S. Please note Mr. Dow's enclosed memo and registration forms and respond appropriately to him as soon as you conveniently can.

Encls

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

News-Bulletin No. 29 April 1972

NATIONAL DELEGATIONS

National Committees for IUPAP are reminded that their country's delegation to the coming XIVth General Assembly should be fixed as soon as possible.

a) The number of delegates should be sent to the local Committee with copy to the Secretary-General Butler immediately.

b) The names and addresses of the delegates should be forwarded as soon as possible (not later than April 1st).

National Committees should consult articles 14 and 16 of the Statutes which fix the maximum number of official delegates (related to the number of shares held) and voting procedure.

They are reminded of a tradition whereby National Delegations include as members or observers nationals belonging to Commissions where this is practical.

Information should be sent to:

Chairman,
Arrangements Committee,
US National Committee for IUPAP,
National Academy of Sciences,
2101 Constitution Avenue N.W.,
Washington, D.C. 20418, U.S.A.

INTERNATIONAL CONFERENCES: EARLY SUMMER

Readers should consult the list published in News-Bulletin No. 25 and the addendum in No. 27. They are reminded of the coming meetings:

3.	11th SEMICONDUCTORS	July 25-29 Warsaw
4.	RADIATION PHYSICS	July 19-21 Reading
8.	2nd SURFACE PHYSICS	June 22-23 Netherlands
9.	BAND STRUCTURE	July 3-5 Exeter
10.	7th REACTIVITY SOLIDS	July 17-21 Bristol
18.	6th CYCLOTRON	July 18-21 Vancouver
19.	TEACHING PHYSICS	July 20-26 Kiel
26.	NUCLEAR STRUCTURE	July 31-Aug.5 Keszthely

50th ANNIVERSARY GENERAL ASSEMBLY : DATES

The XIV General Assembly of the Union will take place in Washington in 1972 and the dates have now been fixed as September 20th through 25th inclusive. The Assembly will open and close with business sessions.

To mark the 50th Anniversary which coincides with that of the award of the Nobel Prize to Niels BOHR in 1927, the USA National Committee has arranged for an impressive scientific program which will attract many physicists in addition to the official delegates. Thirteen of the world's most prominent physicists have accepted invitations to present papers.

The business sessions and scientific program will be rounded off by tours and several social gatherings. The XIV Assembly promises to be the most memorable of the Union's history.

DEATH of ACADEMICIAN FEDORENKO

Union members were saddened to learn of the death of Academician N.V. Fedorenko early in February. Professor Fedorenko had been prominent in organizing the series of International Conferences on Atomic and Electronic Collisions sponsored by IUPAP and was one of the charter members of the Commission on Atomic and Molecular Physics and Spectroscopy founded in 1966. He hosted the Vth CAEC Conference at his Laboratory in Leningrad in 1967.

TEACHING PHYSICS to NON-PHYSICISTS

While most of the Union's Commissions are highly specialized, some hold interest for all physicists, and that in the Teaching of Physics is an example. Particular attention is called to its forthcoming Conference at Kiel, July 20-26, 1972. It will be concerned with the teaching of Physics to Students in Physics-related sciences and Professions.

XIV : Wednesday, September 20th
to
Monday, September 25h, 1972

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

News-Bulletin No. 30 June 1972

LATE SUMMER CONFERENCES

Readers should consult the list published in News-Bulletin No. 25 and the addendum in No. 27. They are reminded of the coming meetings:

1.	BOLTZMANN EQUATION CENTENARY	? Vienna
2.	XIII LOW TEMPERATURE	Aug. 20-26 Boulder
11.	2nd LIQUID METALS	Sept. 3-8 Tokyo
12.	LUMINESCENCE	Aug. 17-22 Leningrad
13.	XVI HIGH ENERGY	Sept. 6-13 Chicago
15.	4th MAGNET TECHNOLOGY	Sept. 19-22 Brookhaven
16.	NUCLEAR INTERACTIONS	Aug.28-Sept.1 Los Angeles
17.	NUCLEAR MOMENTS	Sept. 4-8 Osaka
21.	3rd ATOMIC PHYSICS	Aug. 7-11 Boulder
22.	XVII COLLOQUE AMPERE	Aug. 21-26 Turku
26.	NUCLEAR STRUCTURE	July31-Aug.5 Keszthely

XIV Wednesday, Sept. 20 to Monday, Sept. 25

EXECUTIVE MEETING

Problems arising in connection with the XIVth General Assembly in September will be taken up by a special meeting of the Executive Committee in Brussels in June. Commissions and National Committees wishing to bring matters to its attention should communicate immediately with Dr. C.C. BUTLER, Secretary-General.

SCOPE

SCOPE's programme (see Ness-Bulletin No. 22) has been expanded by two projects:

: Working Party on Methods of Analysis of a Selected List of Pollutants;

: Working Group on Future Post-Stockholm Institutional Arrangements.

IUPAP's delegate (Dr Lara Saenz) is concerned with noise pollution (see Bulletin No. 27).

SCIENTIFIC SESSIONS : XIV GENERAL ASSEMBLY

Details of the scientific sessions which will be held in conjunction with the 50th anniversary General Assembly of IUPAP in Washington next September have been given by the USA National Committee. The following distinguished speakers will give lectures:

Thursday, September 21	Edoardo AMALDI Toraldi deFRANCIA J. Tuzo WILSON Sir Fred HOYLE Kip THORNE
Friday, September 22	Gerhard HERZBERG John BARDEEN V.L. GINZBERG
Saturday, September 23	H.B.G. CASIMIR Wolfgang GENTNER L.A. ARTSIMOVICH Victor WEISSKOPF Arne BOHR

ATTENDANCE at XIV

National Committees should by now have communicated the names of their official delegates to Washington. See News-Bulletin No. 29 for details.

National delegations may be accompanied by observers. The Arrangements Committee needs to know the numbers of these participants.

It is expected that there will also be general admission to the scientific sessions.

Contact: Chairman
Arrangements Committee
US National Ctee for IUPAP
National Academy of Sciences
2101 Constitution Avenue
Washington, D.C. 20418, U.S.A.

ICSU at HELSINKI

Meeting of the ICSU will take place this year at Helsinki, September 15-18. IUPAP is active in 10 ICSU Special Committees as well as being a Charter Member.

May 23, 1972

Professor W. Dekeyser
Laboratorium voor Kristallografie
Krijgslaan 271
B-9000 GHENT, Belgium

Dear Professor Dekeyser:

I am looking forward to seeing you at the IUPAP meeting in Brussels on Friday, June 23rd. Unfortunately, I have to attend a meeting in Vienna on the evening of the 22nd and the only plane that can bring me to Brussels arrives as late as 2:30 p.m. on the 23rd. Please let me know where the meeting will be held so that I can go directly from the airport to this place. I suppose that a taxi would be the best solution.

I expect to spend the night from Friday to Saturday in Brussels and I would appreciate if you could put me up in the Fondation Universitaire or anywhere else.

Please direct the answer to this letter to my European address -- % CERN, 1211 Geneve 23, Suisse, Switzerland.

Sincerely yours,

V. F. Weisskopf

VFW:dle

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Memorandum from Secretary-General

To Members of the Executive Committee

Meeting in Brussels, June 23rd and 24th, 1972

1. The meetings will be held in the Flemish Academy of Sciences, Brussels on June 23rd and June 24th.

2. Please assemble by 12 noon at the Academy on Friday, 23rd. The formal business will begin after lunch and will continue on the morning of Saturday, June 24th. We should be able to finish by lunch time of June 24th.

3. Please let me know if you expect to attend the meetings.

4. Please let Professor Dekeyser know when you will arrive in Brussels and ask him for any help you will need with accommodation. I believe some rooms will be available in the "Fondation Universitaire" (University Professors Club).

Professor W. Dekeyser
Laboratorium voor Kristallografie
Krijgslaan 271
B-9000 GHENT, Belgium

5. Agenda : The main points for the agenda will be -

5.1 Arrangements for the General Assembly

5.2 Agenda for the General Assembly

5.3 Election arrangements

5.4 Consideration of nominations and preparation of the Executive Committee's list of candidates.

This will be the main item of business. Unfortunately it will not be possible to circulate papers ahead of the meeting.

C. C. Butler
12th May, 1972

May 23, 1972

Dr. C. C. Butler, F.R.S.
Nuffield Lodge
Regent's Park
London, NW1, 4RS, ENGLAND

Dear Butler:

This is to tell you that I plan to attend the IUPAP meeting in Brussels. Unfortunately, I have to be in Vienna on the evening of Thursday, June 22nd. The only plane that can bring me to Brussels the next morning arrives at 2:30 p.m. I will take a taxi directly to the meeting place. I am looking forward to seeing you again.

With best regards,

Sincerely yours,

V. F. Weisskopf

VFW:dle

19 April 1972

DRAFT AGENDA

U. S. NATIONAL COMMITTEE OF IUPAP

MEETING

Sheraton Park Hotel
Franklin Room
27 April 1972
12:00 noon - 5:00 p.m.

	Attachments
1. Approval of Minutes of 29 April 1971 Meeting.	A
2. Review of Plans for XIV General Assembly of IUPAP.	B C D
a. Chairmen of Scientific Sessions.	
3. Proposed Arrangements for the Appointment of IUPAP Executive and Commission Members.	E
4. U. S. Nominations for IUPAP Executive Committee and Commissions.	F
5. Communications Among Commissions and International Committees.	
6. Future IUPAP Conferences.	G
7. Other Business.	
8. Next Meeting.	

ATTACHMENTS

A. Minutes of 29 April 1971 Meeting.

B. Report on Planning for the XIV General Assembly of IUPAP.

C. Summary Notes on Meeting of Arrangements Committee.

D. List of Delegates to XIV General Assembly of IUPAP.

E. IUPAP Proposed Arrangements for the Appointment of Executive and Commission Members.

F. Proposed U. S. Nominations for IUPAP Executive Committee and Commissions.

G. List of IUPAP Conferences Approved for 1972.

A

MINUTES OF THE MEETING
U. S. NATIONAL COMMITTEE
FOR THE
UNION OF PURE AND APPLIED PHYSICS

April 29, 1971
Sheraton Park Hotel
Washington, D. C.

Attendance

Members: Robert F. Bacher, Stanley S. Ballard, D. Allan Bromley, Sanborn C. Brown, Milan D. Fiske, Martin Greenspan, W. W. Havens, Jr., H. William Koch, Thomas Lauritsen, Victor F. Weisskopf, Hugh C. Wolfe

Agency representatives, guests and staff: Richard Y. Dow, NAS; Thomas Gikas, NAS; Larkin Kerwin, IUPAP; George A. Kolstad, AEC; Paul W. McDaniel, AEC; Edmund C. Rowan, NAS; George W. Wood, NAS

The meeting of the U. S. National Committee of the International Union of Pure and Applied Physics (IUPAP) was called to order by Robert F. Bacher, Chairman, at 12:15 p.m., April 29, 1971, in the Franklin Room of the Sheraton Park Hotel, Washington, D. C.

Minutes

The draft minutes of the meeting of February 3, 1971, were approved with the following additions and corrections: Paul Donovan noted that a "back-of-an-envelope" calculation shows that nuclear fusion will not provide sufficient helium to meet requirements. George Kolstad drew attention to the need for multiple-Commission approval of interdisciplinary conferences. The attendance list should be corrected to show Paul W. McDaniel as not being present.

Discussion of IUPAP General Assembly Plans

Havens drew attention to a report of a meeting of the Organizing Committee for the 1972 General Assembly of IUPAP which was held at the American Institute of Physics, April 2, 1971. A copy of that memorandum report is appended as Attachment A. Havens corrected several errors in the dates of the General Assembly meetings as given in the memorandum. They will begin on September 20 and end on September 26.

Bacher pointed out that not only would this be the first General Assembly of the Union to be held in the United States since its founding, but that in terms of the increased scientific content planned for the meeting, it represented a significant departure from precedent. Approval of the agenda for the business session is to be sought from the secretariat of IUPAP and other plans for the Assembly are to be presented at the Dublin meeting for information.

Rowan encouraged the Committee also to seek approval from the Executive Committee of IUPAP for the scientific sessions. He felt this might help establish a precedent that would be useful in controlling the quality of subsequent meetings held in other countries.

Other comments included the following:

- Papers or sessions dealing with the relationship of physics to society are a touchy subject, particularly in Eastern European countries. The matter should be discussed at the Dublin meeting.

- S. C. Brown, who has agreed to edit the proceedings, will consider taping the papers as well.

- Kerwin reminded the Committee of the need for an extra session or extra time at the opening session of the General Assembly to deal with a change of statutes, which is the first item of business. He also pointed out that, since this will be the 50th anniversary meeting, all sessions and speeches will tend to take on special significance. In consequence, sessions on relevance to society may appear defensive.

- Kolstad suggested the possibility of merging papers B and C on Thursday, September 21. He also inquired if consideration had been given to papers on space physics, physics in medicine and physics in industry.

- Weisskopf will suggest another speaker besides Casimir to talk about the relationship of physics to medicine.

- There was general agreement that three papers on solid state physics were too many.

In concluding the discussion of the scientific program, members of the Committee were asked to send suggestions for additional speakers and subjects to Havens, following which a new draft of the program will be circulated.

Suggestions for chairmen of sessions were solicited. Kerwin thought they might be drawn from the ranks of past Vice Presidents. Members of the Committee were asked to consider the matter further and send Havens their suggestions.

Simultaneous Translation

The possible need for simultaneous translation was discussed. It was generally agreed that all scientific sessions should be conducted in English and that this policy should be explicitly stated in the program. However, it was felt that the business sessions

would be multilingual and, provided the additional costs were not too great, the availability of simultaneous translation would represent a concession that would be welcomed by many foreign delegates. Indeed, it was noted that French was the official language of IUPAP. Wood was asked to investigate the costs of providing a translation service.

Visits to Local Laboratories

Greenspan pointed out that blanket clearances for visits of delegates to local laboratories should not be taken for granted and requests should be made early.

Accommodations

It was noted that a block of 150 rooms had been reserved at the Shoreham Hotel for participants in the meetings.

Admission of Cuban Scientists

The admission of Cuban scientists to the U. S. to attend the meeting was noted as a possible problem. Bacher expressed the view that, if they are excluded as a class, the Congress and the General Assembly in the U. S. will have to be cancelled. After some discussion, it was agreed that both the Office of the President's Science Adviser and the State Department should be consulted and efforts be made to obtain reasonable assurances by a specified date that there would be no blanket exclusion. Bacher agreed to get in touch with David Beckler before the end of the day.

Budget

The draft budget circulated to members in advance of the meeting was discussed briefly and was approved with the recognition that adjustments might yet have to be made.

Change in Constitution

The three amendments (Attachment B) to the constitution circulated to members in advance of the meeting were approved unanimously.

Actions Noted

It was noted that the U. S. National Committee had approved by mail two topical conferences: (a) Few Particle Problems in the Nuclear Interaction; (b) Ion Sources and Formation of Ion Beams.

Following the Committee's last meeting, its views on helium conservation were formally transmitted by Bacher to the President of the Academy and by the President of the Academy to the Director of the Office of Science and Technology, Dr. E. E. David, Jr. Copies of the correspondence will be found in Attachment C.

Possible Changes in IUPAP Organization Procedures

Bacher and Kerwin reviewed the background of the proposed changes (Attachment D). They are aimed at making the nomination and election process more orderly. The procedures will insure that at least a minimum amount of information concerning a nominee is available; that the source of the nomination is stated and that the nominee has agreed to serve if elected. It was reported that comments from National Committees in other countries had been favorable thus far. A short discussion produced the suggestion that, in addition to identification of the source of the nomination, it would be useful to indicate whether a specific nominee has the support of the national delegation of his country.

Other Business

In response to questions about sources of funds to support the 1972 General Assembly, Wood indicated that such meetings are usually supported in several different ways. Registration fees and fees for special events provide reimbursement for a substantial part of the costs. Private donations and industrial contributions are also important sources of support. In addition, the professional society or societies whose activities are most closely associated with the Union usually make a contribution. Finally, the remaining support required is usually sought from appropriate government agencies.

Wood indicated that the next step in the financing of the General Assembly was to seek the approval of the Governing Board of the Academy-Research Council for the receipt of the necessary funds, following which proposals to Government agencies could be made and contributions from industry and private organizations solicited.

Next Meeting

It was decided to hold in abeyance a decision on the date of the next meeting of the U. S. National Committee. Normally, it would be one year hence but it was agreed that, because of Congress plans, there might be a need for an earlier meeting.

Havens announced that a meeting of the Organizing Committee would be held early in June.

The Committee stood in adjournment.

29 February 1972

B

Report on Planning for the XIV General Assembly of the International Union of Pure and Applied Physics

The XIV General Assembly of the International Union of Pure and Applied Physics (IUPAP) will be held at the National Academy of Sciences in Washington, D. C., September 20-25, 1972. The Assembly also marks the Fiftieth Anniversary of the Union. The Assembly will be conducted under the aegis of the NAS-NRC U. S. National Committee for IUPAP (USNC-IUPAP). The 1972 Assembly represents the first occasion in the history of the Union when the United States will be the host country.

General Assemblies of IUPAP are held triennially. The number of official delegates approximates 250. The 1972 sessions are expected to see a much larger attendance because scientific symposia sessions are, for the first time, a major part of the Assembly. The activities of the 1972 sessions may be grouped in three categories: (1) the General Assembly concerned with customary Union business, (2) meetings of the Executive Committee of IUPAP and of up to 15 Commissions, and (3) five half-day symposia sessions during which invited papers by scientists from various nations will assess the status, near-term future, and implications of the major areas of basic and applied physics.

Planning for the above sessions is the responsibility of USNC-IUPAP. The tasks before it have three aspects: (1) the planning, already begun, and operations (announcements, invitations, etc.), (2) conduct of the three types of sessions and related events including appropriate evening functions and tours, and (3) follow-up activity to the Assembly, including (a) editing and publication of the symposia volume and (b) the preparation of U. S. responses to positions adopted in the business sessions of the Union and the Commissions.

The USNC-IUPAP has established three committees to assist in preparations for and conduct of the above sessions. The membership of these committees and of USNC-IUPAP is attached as Attachment A.

The Program Committee

This Committee is responsible for assisting the Executive Committee of IUPAP and the USNC-IUPAP in planning the program for the General Assembly. Their tasks are to: (1) determine the schedule of events, (2) recommend speakers for the scientific sessions and evening events, and (3) arrange for publication of the proceedings of the scientific sessions.

A schedule of events for the General Assembly, tentatively approved by Professor Larkin Kerwin, Associate Secretary General of IUPAP, has been prepared (Attachment B).

An announcement of the IUPAP General Assembly, with dates from Thursday, 21 through Tuesday, 26 September 1972, was published in the IUPAP Newsletter. In view of the approved change in schedule, another announcement giving the dates of the Assembly from Wednesday, 20 September through Monday, 25 September, will be published in the next IUPAP Newsletter.

The U. S. National Committee of IUPAP has proposed a scientific program for the General Assembly comprising a set of invited lectures surveying the present state of various principal fields of physics. Each lecture will be addressed to scientists at large (not to specialists). The following tentative program for the scientific sessions has been proposed by the Program Committee:

Thursday, 21 September 1972, 10 AM

The Unity of Physics

Edoardo Amaldi, University of Rome

***

Optics

G. Toraldo di Francia, Institute of Optics, Florence

Thursday, 21 September 1972, 2 PM

The Physical Study of the Earth and the Scientific Revolution It has Caused

J. Tuzo Wilson, University of Toronto

***

Astrophysics

Sir Fred Hoyle, Cambridge University

***

Relativity

Kip Thorne, California Institute Of Technology

Friday, 22 September 1972, 2 PM

Atomic and Molecular Spectroscopy

Gerhard Herzberg, National Research Council, Canada

***

Solid State Physics: Accomplishments and Future Prospects

John Bardeen, University of Illinois

***

Solid State Physics

V.L. Ginzberg, P.N. Lebedev Institute, Moscow

Saturday, 23 September 1972, 9 AM

Physics and Society

H.B.G. Casimir, Philips Industries, Eindhoven, The Netherlands

***

International Cooperation in Physics

Wolfgang Gentner, Max Planck Institute, Heidelberg

Saturday, 23 September 1972, 2 PM

Plasma Physics: The Latest Infant of the Classics

L.A. Artsimovitch, Kurchatov Institute, Moscow

***

What Is an Elementary Particle?

V. Weisskopf, Massachusetts Institute of Technology

***

The Many Facets of Nuclear Physics

A. Bohr, Bohr Institute

The Program Committee is arranging for the publication of a 50th Anniversary Volume of the IUPAP General Assembly Proceedings to present the collection of papers and discussions in a dignified and scholarly fashion. Professor Sanborn C. Brown of the Massachusetts Institute of Technology will be editor of the proceedings.

The Finance Committee

This Committee is responsible for guidance in financial matters in connection with the General Assembly. Their tasks are to (1) approve budgets and (2) arrange for non-governmental contributions.

Total costs for the Assembly is estimated at $120,000, of which $40,000 is expected from registration and activity fees and a subvention from IUPAP and from scientific societies; $40,000 from industry; and $40,000 from government agencies. Pledges of $20,850 from four scientific societies and of about $21,000 from industrial companies have been received as of January 20, 1972.

Proposals have been submitted to NSF, AEC, DOD and NASA for federal support in the amount of $40,000 (NSF, $19,000; the other three agencies, $7,000 each).

The Arrangements Committee

This Committee is responsible for Academy arrangements, logistics and related matters, and guidance to the NAS-NRC staff engaged in these matters. The NAS staff, with such guidance, will make local arrangements for: (1) preparation and distribution of notices, programs and registration forms, (2) registration and secretarial help, (3) meeting rooms and office space, (4) luncheons, dinners and receptions, (5) tours, and (6) transportation.

It has been suggested that (a) a preliminary announcement be issued in March 1972 and (b) letters be sent out in May to all secretaries of IUPAP National Committees with registration forms and information on the programs, hotels, visas, etc. Thus the preparation of announcements, programs, etc., must be pursued promptly. Arrangements for luncheons and dinners also require action in the near future. Visits in the Washington area and plans for laboratory tours are also on our agenda.

Attachment A
29 February 1972

U. S. NATIONAL COMMITTEE OF THE INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS (USNC-IUPAP)

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Dr. W. W. Havens, Jr., Secretary
Division of Nuclear Science
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Dr. John Bardeen
Department of Physics
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Urbana, Illinois 61801

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Dr. Martin Greenspan
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National Bureau of Standards
Washington, D. C. 20234

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Director
American Institute of Physics
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Dr. Roman Smoluchowski
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Mechanical Sciences
Solid State & Materials Laboratory
The Engineering Quadrangle
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Dr. D. Allan Bromley
Chairman, Department of Physics
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29 February 1972

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29 February 1972

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29 February 1972

ARRANGEMENTS COMMITTEE

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301-921-2411

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Washington, D. C. 20546
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*Government Dial Code - Washington Area

IUPAP EXTRAORDINARY ASSEMBLY AND XIV GENERAL ASSEMBLY
SEPTEMBER 1972

Attachment B
(2/29/72)

	20 WEDNESDAY	21 THURSDAY	22 FRIDAY	23 SATURDAY	24 SUNDAY	25 MONDAY
Morning	General Assembly of IUPAP	Scientific Session E. Amaldi G. Toraldo di Francia	General Assembly of IUPAP	Scientific Session H. B. G. Casimir W. Gentner	General Assembly of IUPAP	General Assembly of IUPAP
Afternoon	General Assembly of IUPAP	Scientific Session J. T. Wilson F. Hoyle K. Thorne	Scientific Session G. Herzberg J. Bardeen V. L. Ginzberg	Scientific Session L. A. Artsimovitch V. Weisskopf A. Bohr	Sight-seeing Tours	(Reserved for IUPAP Business)
Evening	Welcoming Reception at National Academy of Sciences Presentation of Bust of Niels Bohr (Speakers-Kerwin, Rozental, Bohr)	Dinner at State Department (Host-AIP-APS) (Speaker-Stever)	Dinner and Theater at J. F. Kennedy Center (Host-Research Corp.)	IUPAP Banquet		

April 12, 1972
For Academy Use Only

ARRANGEMENTS COMMITTEE

for

IUPAP XIV GENERAL ASSEMBLY

Summary Notes on First Meeting
Washington, D. C. - 4 April 1972

C

Attendance

Members Present: Lewis M. Branscomb (Chairman); Howard Laster, Paul W. McDaniel. Members Absent: Edward D. Creutz, Herbert S. Friedman, Stephen J. Lukasik, Homer E. Newell, Invited Participants: William W. Havens, Jr. (Secretary USNC-IUPAP): William H. Taft III, (Department of State). NAS Staff: Richard Y. Dow, Hugh Odishaw, Susan Perry, Edward C. Rowan.

1. Review of Plans for General Assembly - In addition to the plans given in the 29 February, "Report on Planning for the XIV General Assembly", announcements of the General Assembly and of the Scientific Session were printed and distributed to Secretaries of National Committees. Havens reported that the Scientific Program is firm, except for the two Soviet speakers, Ginsberg and Artsimovitch. There is the possibility that they would not be able to attend the meeting. However, Havens has an alternate for Artsimovitch, and as there are two papers on Solid Physics, Ginsberg's paper could be withdrawn without disrupting the program. To encourage the Soviets to send their speakers it was suggested that scientific institutions invite them to visit their laboratories while in the U.S. for the General Assembly. A report on Finances for the Assembly was given by Odishaw in which he indicated we should receive about $100,000 as a minimum and may reach our goal of $120,000. A current summary of amounts received is in Appendix 1.

2. Announcements, Programs and Registration: It was agreed that a second announcement should be issued in May giving more detailed information, including registration forms. It was recommended that separate announcements and registration forms be sent to two groups, (a) official delegates and members of IUPAP, and (b) invited participants.

It was also recommended that no fee be charged to the delegates and members of IUPAP for the dinners being hosted by the AIP-APS and Research Corp., but that invited participants be charged a nominal fee, to be determined later, for these dinners. The dinner and theatre at the J. F. Kennedy Center would be optional, but delegates, members and invited participants would pay some fee for this event. An optional activity fee, which would include these dinners and a copy of the proceedings of the General Assembly

would be made available at a reduced rate. In keeping with the past practice of IUPAP, official delegates would not be charged a registration fee.

As the NAS auditorium can only hold about 600, it was suggested that about 200 seats be reserved for delegates, members and foreign participants and that U.S. invited participants be limited to about 400; with an initial limit of 133 within 40 miles of Washington; another 133, within 40-400 miles, and the third 133, outside of 400 miles. These limits could be changed later if responses indicate that quotas further away from Washington will not be filled. It was recommended that all U.S. and Canadian Nobel Laureates in physics; past and present members of USNC-IUPAP: past and present U.S. officers of IUPAP: NAS members in Astronomy, Physics and Applied Physical and Mathematical Sciences sections; selected members of NAS/NRS Committees, senior scientists and administrators in Federal Agencies and Industries, and Scientific attaches in Washington be invited to attend the scientific sessions. It was also recommended that the Chairmen of Physics and Biophysics Departments in doctorate granting institutions in the U.S. and Directors of U.S. laboratories and institutions be asked to nominate a few physicists from their activity who would be interested in attending the scientific sessions. It was also suggested that science writers be invited to the scientific sessions. The NAS staff was asked to prepare draft letters and address lists for the groups listed above. These would be sent to all committee members for comments, additions and corrections.

3. Visas - William Taft from the Department of State is making arrangements to have an Airogram sent to all American Consulates announcing the Assembly, and asking them to render all possible assistance to foreigners requesting visas. It was recommended that a statement on visas be included in the next announcements. It was decided not to include a list of where foreigners should apply for visas. A sample statement prepared by the NAS Office of the Foreign Secretary is in Appendix 2. Local arrangements will be made between the Academy and the Department of State to deal with any problems with visas, such as changes in itinerary, that may arise during the Assembly.

4. Luncheons - It was recommended that arrangements be made for a light luncheon (sit-down meal served by waiters) at the NAS refectory for the delegates and members of IUPAP on Wednesday, 20 September; Friday, 22 September, and perhaps Monday, 25 September. For lunch on Thursday, 21 September and Saturday, 23 September, it was suggested that delegates, members and invited participants be provided with a list of restaurants and cafeterias in the area and that they be asked to make their own arrangements for lunch. It was decided not to have a luncheon for delegates at the NAS on Sunday, but to let them make their own arrangements for lunch.

5. Receptions and Dinners - It was recommended that:

(a) The reception for delegates and members of IUPAP be held at the Academy on 20 September, followed by the presentation of the bust of Niels Bohr in the Auditorium,

(b) The IUPAP banquet be hosted by the AIP-APS and be held at the

Museum of Science and Technology on 25 September; second choice was the Watergate Terrace (suggested having music, such as a string quartet, and no main speaker).

(c) The dinner on 21 September be hosted by the Research Corp. and be held at the State Department if they can seat about 400, (information we have indicates they are limited to 250); second choice was Watergate Terrace.

6. Speakers at General Assembly and Dinners - The following were suggested as possible speakers:

(a) General Assembly - Opening Ceremony - Dr. Handler, Mayor Washington, Dr. David

(b) After dinner speaker, Thursday, September 21:

H. Guyford Stever - Director NSF
Philip M. Morse - President APS
H. Richmond Crane - Chairman AIP
D. Alan Bromley - Yale University
Robert Wilson - NAL
Edward M. Purcell - Harvard University
G. J. Holton - Harvard University

(N.B. - - Dr. Bacher has invited Dr. Stever).

7. Travel Grants to attend Scientific Sessions - Concern was expressed by the Committee over the absence of funds for travel of young scientists and scientists from developing countries. However, it was noted that there are several programs such as the Foreign Leaders Program, AAPT Committee dealing with Physics in Developing Countries that might be able to provide travel funds for these scientists to attend the scientific sessions. William Taft would have the State Department look into this matter to see if they could provide support through some of their programs. In the letter to the Universities we would ask the chairmen of the Physics Departments to identify senior foreign students in Physics programs that might be interested in attending the scientific sessions.

8. Miscellaneous Recommendations

(a) Arrange for tours to local laboratories on Friday morning (22 September) and Monday afternoon (25 September).

(b) Make arrangements for ladies program during meetings of General Assembly.

(c) Decision was made not to ask delegates to name U.S. colleagues in the Washington area.

(d) It was suggested that Bell Laboratories, in lieu of contributions to the General Assembly, be asked to buy several volumes of the Proceedings for complimentary distribution.

(e) It was recommended that the Commission Chairmen be asked if they plan to hold any meetings during the Assembly and if they or any of their members plan to attend and/or present a report at the General Assembly (Havens - Kerwin).

(f) It was suggested that some type of exhibit on Bohr (minimum 10-12 photographs) and that exhibits on American Physics, (6" Lawrence exhibit at Smithsonian) be considered for display at the Academy during the General Assembly if appropriate material can readily be obtained.

(g) It was recommended that a copy of Professor Fleury's article on the history of IUPAP be included in the packet of information to be provided to delegates, members of IUPAP and invited participants.

APPENDIX 1

April 12, 1972

I. GOVERNMENT	AMOUNT	
National Science Foundation	$19,000	
National Aeronautics & Space Administration	7,000	
U. S. Atomic Energy Commission	7,000	
Department of Defense	7,000	$40,000

II. INDUSTRY AND FOUNDATIONS		
Eastman Kodak Company	$2,000	
U. S. Steel Corporation	500	
International Telephone & Telegraph Corp.	1,000	
E. I. Du Pont de Nemours & Company	2,000	
General Telephone & Electronics Foundation	1,000	
International Business Machines Corp.	5,000	
Xerox Corporation	2,000	
General Motors Corporation	1,000	
Union Carbide Corporation	1,000	
Radio Corporation of America	2,000	
Research Corporation	10,000	$27,500

III. SOCIETIES AND REGISTRATION		
Acoustical Society of America	$850	
American Physical Society	5,000	$5,850

TOTAL:		$73,350

DRAFT

APPENDIX 2
1970

NATIONAL ACADEMY OF SCIENCES
2101 CONSTITUTION AVENUE
WASHINGTON, D.C. 20418

1969
NOTE: Last November, Dr. Brown submitted a slightly different version of the following draft to the Chairman of the ICSU Committee on the Free Circulation of Scientists, after the Chairman had asked each member of his Committee to draft a form letter that could be used by organizers of meetings of ICSU Unions to explain visa procedures to prospective participants. The Chairman plans to amalgamate the various drafts into a form letter that will be submitted to the membership of his Committee and to the Secretaries General of Unions for approval or modification. He hopes a final version of the letter can be distributed to Unions and their subdivisions before the 1970 conference season gets under way.

* * * * *

MEMORANDUM FOR: Propsective Participants in the_____General Assembly of the International Union of_____at Washington, August ___, 197_.

FROM: The Organizing Committee of the General Assembly

SUBJECT: Obtaining a Visa to Enter the United States for the General Assembly

Obtaining a visa to enter the United States is usually a routine matter, a visa often being issued on the day of application or very shortly thereafter. Sometimes, however, delays do occur. Therefore, we offer the following advice to those of you who wish to make sure that you have your visa in hand when you need it.

We recommend that you apply for your visa six weeks before the date on which you plan to leave your country for the United States. If you do not apply directly to an American Consulate but, rather, through authorities in your own country, you should act earlier to assure that your application will be in the hands of an American Consular Officer six weeks before the date of your departure.

If three weeks after applying to an American Consular Officer you have still not received your visa, you should cable information about the date and place of your application to Dr._____of our Organizing

Committee, whose address is _____. Dr. _____ will make appropriate inquiries and will endeavor to resolve any problems that exist. Within a week of receiving your message, he will cable you information about the status of your application and, whenever possible, the approximate date on which you can expect to obtain your visa.

You will find American Consular Officers throughout the world ready to help you with your visa applications since they have received notification of our General Assembly from the Department of State.

We are confident that no scientist who is qualified to take part in our General Assembly will be refused a U.S. visa because of his nationality. On the other hand, our Government, like those of other countries, reserves the right to refuse a visa to a person for other reasons. Prospective participants who reside in countries where there is no U.S. diplomatic representation can obtain visas in other countries where such diplomatic representation exists. If, because of the absence of an American Embassy in your country, you expect to apply for a visa elsewhere, please let our Committee know in what country and city you intend to apply so that we can notify the Department of State and be of assistance to you in making whatever advance arrangements may be possible.

END OF DRAFT

12 April 1972

DELEGATES TO XIV GENERAL ASSEMBLY OF IUPAP

(From Information Received as of 12 April 1972)

D

BOLIVIA (Five probable delegates)

Ing. Gaston R. Mejfa, Director
Laboratoria de Fisica Cosmica
Universidad Mayor de San Andres
La Paz, Bolivia

Lic. Carlos Aguirre, Jefe
Departamento de Astroffsica
Laboratorio de Fisica Cosmica
Universidad Mayor de San Andres
La Paz, Bolivia

Dr. Ramon Cabre, S.J., Director
Observatoria San Calixto
La Paz, Bolivia

Ing. Ricardo Anda, Jefe
Departamento de Fisica Espacial
Laboratorio de Fisica Cosmica
Universidad Mayor de San Andres

Lic. Manuel Arellano, Jefe
Departamento de Fisica del Estado Solido
Laboratoria de Fisica Cosmica
Universidad Mayor de San Andres
La Paz, Bolivia

CANADA (Four proposed delegates - subject to approval by NRC)

Dr. R. E. Bell, Principal
McGill University
Montreal, P. Q., Canada

Dr. P. Lorrain
Physics Department
University of Montreal
Montreal, P.Q., Canada

Dr. J. M. Robson
Physics Department
McGill University
Montreal, P.Q., Canada

or

Dr. G. Volkoff
Dean of Science
University of British Columbia
Vancouver, B.C., Canada

Dr. A. T. Stewart
Physics Department
Queen's University
Kingston, Ontario, Canada

FEDERAL REPUBLIC OF GERMANY (Four definite delegates plus five probable delegates)

Prof. Dr. K. Ganzhorn
D-7000 Stuttgart 80, POB 800880 (IBM)
(as head of the Delegation)

Dr. K.-H. Riewe
D-6450 Hanau, Heraeusstraße 9
(as Secretary)

Prof. Dr. W. Kroebel
D-2300 Kiel, University, Olshausenstraße 40-60, Building 34

Prof. Dr. G. W. Becker
D-1000 Berlin 45, Unter den Eichen 87 (BAM)

The participation of the following gentlemen is not certain:

Prof. Dr. E. Bagge
D-2300 Kiel, University, Olshausenstraße 40-60, Building 32

Prof. Dr. H. Joos
D-2000 Hamburg 52, Notkestieg 1 (DESY)

Prof. Dr. U. Stille
D-3300 Braunschweig, Bundesallee 100 (PTB)

Prof. Dr. H. Haken
D-7000 Stuttgart, Azenbergstraße 12(University)

Prof. Dr. O. Madelung
D-3550 Marburg, Mainzer Gasse 33 (University)

HUNGARY (one delegate)

Prof. L. Pal, Director
Central Research Institute of Physics
Hungary, Budapest, XII.
Konkoly Thege utja 12

ISRAEL (one delegate)

Professor Yuval Ne'eman
President Tel-Aviv University
Ramat-Aviv,
Tel-Aviv, Israel

ITALY (Five delegates - subject to approval by Consiglio Nazionale delle Ricerche)

Prof. E. Amaldi
Istituto di Fisica
Universita di Roma

Prof B. Brunelli
Lab. Gas Ionizzati (CNEN)
C.P. 65
00044 Frascati

Prof. G. Salvini
Istituto di Fisica
Universita di Roma

Prof. D. Sette
Istituto di Fisica
Facolta di Ingegneria
Universita di Roma

Prof. G. Toraldo Di Francia
Istituto Ricerca Onde E.M.
del C.N.R.
Firenze

POLAND (Two delegates)

Professor Dr. Leonard Sosnowski
Institute for Experimental Physics
the University of Warsaw, Warszawa, Hoza 69

Professor Dr. Jozef Werle
Institute for Theoretical Physics
the University of Warsaw, Warszawa, Hoza 69
Poland

SPAIN (President of Spanish Committee of IUPAP plans to attend General Assembly)

Professor L. Bru
University of Madrid
Faculty of Sciences
Madrid, Spain

UNITED KINGDOM (Seven delegates)

Professor N. Kurti (leader)
Clarendon Laboratory
Parks Road, Oxford, OX1 3PU

Professor G. R. Bishop,
Department of Natural Philosophy
The University, Glasgow, W2

Dr. W. C. Marshall,
Atomic Energy Research Establishment
Harwell, Didcot, Berkshire

Professor W. W. J. Mitchell
Department of Physics
The University, Whiteknights
Reading, RG6 2AH

Dr. R. S. Pease
Culham Laboratory,
Culham, Abingdon, Berkshire

Professor W. C. Price,
38 Cross Way
Petts Wood, Kent

Professor J. G. Wilson,
Department of Physics
The University, Leeds
LS2 9JT

Additional Delegate-information received after 12 April 1972.

NETHERLANDS (Nineteen delegates)

Professor dr. C. M. Braams (Chairman)
FOM-instituut voor plasma-fysica
Rijnhuizen-Jutphaas

Dr. P. J. Brussaard (Secretary)
Fysisch laboratorium
Sorbonnelaan 4
Utrecht

Dr. A. Dönszelmann
Zeeman aboratorium
Pl. Muidergracht 4
Amsterdam

Professor dr. H. Verheul
Natuurkundig Laboratorium
der Vrije Universiteit
De Boelelaan 1081
Amsterdam

Dr. ir. M. T. Vlaardingerbroek
Natuurkundige Laboratorium N. V. Philips
Waalre

Dr. J. A. Schouten
Van der Waals-laboratorium
Valckenierstraat 67
Amsterdam

Ir. G. J. Beernink
Technische-fysische dienst TNO-TH
Stieltjesweg 1
Delft

Ir. H. S. Bongartz
T. H. Twente
Postbus 217
Enschede

Dr. M. Bustraan
RCN, afd. fysica
Petten (N-H)

Dr. H. A. Ferwerda
Technische-fysische laboratoria
Universiteitscomplex "De Paddepoel"
Groningen

Dr. J. Fahrenfort
Kon./Shell-laboratoria
Badhuisweg 3
Amsterdam

Professor dr. ir. J. J. Kokkedee
Lab. voor technische natuurkunde
Lorentzweg 1
Delft

Dr. H. F. P. Knaap
Kamerlingh Onneslaboratorium
Nieuwsteeg 18
Leiden

Dr. ir. F. W. Sluijter
T. H. Eindhoven
gebouw N-laag NA 0242
Eindhoven

Dr. H. J. Stammer
Hanenburrghlaan 38
Den Haag

Professor dr. ir. H. L. Hagedoorn
T. H. Eindhoven
Cyclotrongebouw
Eindhoven

Dr. D. J. Kroon
Jan Sluytersweg 36
Eindhoven

Professor dr. H. P. J. Wijn
Dirk van Hornelaan 23
Waalre

Dr. ir. H. Zijlstra
Larochetteweg 4
Eindhoven

REPRESENTATIVES FROM COMMISSIONS

TO ATTEND

XIV GENERAL ASSEMBLY OF IUPAP

(From Information Received as of 12 April 1972)

ACOUSTICS COMMISSION

Professor Dr. I. Malecki
UNESCO, Place de Fontenoy,
Paris 75 - 7e
France

COMMISSION ON PHYSICS EDUCATION

Professor Hans H. Staub
President, Physik-Institut Der Universitat Zurich
Schonberggasse 9
Zurich, Switzerland

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Proposed arrangements for the appointment of Executive and Commission Members

An introductory note

(1) At their 1970 meeting in Copenhagen the Executive Committee decided to propose changes in the election procedure for Executive and Commission members for consideration by National Committees and Commissions. They reached this view because many physicists present at the 1969 General Assembly in Dubrovnik were unhappy with the election arrangements. A paper, dated February 1971, describing the proposals was circulated to National Committees and Commissions, and during the summer of 1971 the Secretary-General received very many useful and constructive comments. The Executive met in Dublin in September 1971, and re-considered their proposals in the light of all the comments received. After a very thorough discussion the Executive decided to make a number of changes to their February 1971 proposals. They now submit the attached proposals for consideration at the beginning of the 1972 General Assembly to be held at Washington.

E

(2) The three most important impressions formed by the Executive from the comments they received are :

(i) All commentators agree that the Executive and Commissions should be fixed in size to simplify the holding of formal elections.

(ii) The majority of correspondents accept the abolition of the "Corresponding Member" grade for Commissions.

(iii) The final decisions on appointments must continue to be made by National Committees of Physics, through their Delegations at General Assemblies.

(3) The Executive members present at Dublin (all except Professors Blokhintsev, Bernardini and Pal) were unanimous that the procedure leading up to the appointments by the Assembly must provide an opportunity for the Commissions to express their views, and to suggest names to fill their vacancies. The Executive considers it essential that the Commissions should feel involved in IUPAP, otherwise a number might elect to become independent bodies such as the existing International Committee on Relativity. This Committee is not formally affiliated to IUPAP but often receives IUPAP grants for its conferences. The Executive feels that the wish of the Commissions can best be taken into account by continuing the procedures adopted in recent

years. Namely, the Executive notes and circulates all the names suggested by National Committees and Commissions and prepares its recommendations as required by IUPAP Statute 8. The General Assembly has full powers to alter the Executive recommendations by formal vote.

(4) The new proposals attached to this note are not in contradiction with the Statutes of IUPAP which can be found in document IUPAP-16, published in 1970.

(5) At their Dublin meeting the Executive recognised that the Statutes are somewhat out-of-date and are imprecise on many important points. They decided to embark on a preliminary re-drafting of the Statutes, following the general format of the ICSU Statutes and Rules of Procedure. Most of the new proposals for conducting elections would probably be incorporated in Rules of Procedure, which we do not have at present. It should be possible to circulate drafts of the Statutes and Rules of Procedure well before the 1975 General Assembly.

(6) As an exceptional measure the Executive has decided to hold a Special Meeting in Brussels in June 1972.

(7) The deadline for the receipt of names for consideration by the Executive will be May 15th, 1972 in London. This will be a final deadline and late suggestions will be disregarded. The Executive's recommendations will be circulated to National Committees in July 1972.

(8) Commissions are asked to make recommendations about the numbers of members they need for their work to the Secretary-General by May 15th, 1972.

(9) It will not be possible to define the number of vacancies on Commissions until the sizes are fixed. There will be four vacancies on the Executive Committee (instead of Bernardini, Bhagavantam, Boas and Dekeyser) and additionally a First Vice-President will be needed (instead of Maier-Leibnitz who, following precedent, will become President for 1972-1975).

(10) Special Forms for making suggestions for membership of the Executive and Commissions are attached. Further copies can be obtained on application.

January 1972

C. C. Butler
Secretary-General

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Arrangements for the Appointment of Executive and Commission Members at General Assemblies

Proposals by the Executive Committee for consideration and adoption (if approved) at the 1972 General Assembly.

1. The Executive Committee

1.1 The Executive Committee will consist of the following members:

President
Past-President
First Vice-President
8 Vice-Presidents
Secretary-General
Associate Secretary-General

1.2 The eight Vice-Presidents will be appointed for 3 years and will be eligible for one further period of 3 years.

1.3 The First Vice-President will be appointed for 3 years and will be the President-Elect.

1.4 The President will serve for 3 years and will be succeeded by the First Vice-President.

1.5 The Secretary-General and the Associate Secretary-General will be appointed for 3 years and will be eligible for a maximum of 3 terms, i.e. 9 years in all. (It is expected that in practice service will be for longer than 3 years and that arrangements must be made to avoid the possibility of two Secretaries taking office at the same time, i.e. appointment of new Secretaries will be either 3 or 6 years apart.)

The precise division of administrative duties between the two Secretaries will be decided from time to time by the Executive Committee.

Note: The Statutes do not provide explicitly for the office of an Associate Secretary-General. The 1963 Assembly appointed Professor Kerwin to this office and the present Executive wish the post to continue. At the next revision of the Statutes the Assembly will be advised to provide for an Associate Secretary-General.

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DIVISION OF ... SCIENCES

2. The Commissions

2.1 Each Commission will consist of:

Chairman
Secretary
5 to 10 members as needed for the work of the Commission

Commissions will be asked to recommend their appropriate size to the Executive Committee who will, in turn, make recommendations to the General Assembly. The General Assembly will fix Commission sizes before elections take place (circumstances may require that the sizes be changed from time to time).

2.2 Terms of office for members (excluding Chairman and Secretary)

Commission members will be appointed for 3 years and will be eligible for one further term of 3 years. Exceptions to this rule will be permitted for members of the S. U. N. Commission and the Atomic Masses Commission, both of which have very specialised tasks and undoubtedly have a need for some of their members to serve longer than 6 years.

The members of each Commission (excluding Chairman and Secretary) must all come from different countries adhering to IUPAP. The work of a few Commissions may be hindered by this rule, for example Particles and Fields. They may present their case to the Executive and, if approval is given, the Executive will make a recommendation to the General Assembly for ratification before the elections take place.

2.3 Terms of office for Chairmen of Commissions

Chairmen will be appointed for 3 years, normally after 3 (or exceptionally 6) years as a member of their Commission. If the appointment is made from outside the Commission the Chairman will become an ordinary member for 3 years after his 3 years as Chairman.

2.4 Terms of office for Secretaries of Commissions

Secretaries will be appointed for 3 years after 3 years service on the Commission. Secretaries will be eligible for a reappointment for a second, and final, cycle of 3 years, i. e. 6 years will be the maximum service as Secretary.

2.5 When new Commissions are established ad hoc arrangements will need to be made until a proper rotation of membership can be obtained.

2.6 Some Commissions have established valuable links with other Unions. They may wish to ask these Unions to nominate experts in their fields to become Associate Members of the IUPAP Commissions. These members would be additional to the fixed number of IUPAP members. Associate Members will not be

eligible for IUPAP grants towards travelling and subsistence expenses when attending IUPAP Commission meetings. They will not have a vote at Commission meetings.

3. Election Procedure for Executive Committee

3.1 National Committees will be invited to submit names of physicists willing to serve to the Secretary-General 4 months before each General Assembly. Each suggested name must be accompanied by brief details of the physicist's career and post currently held. A special form will be provided for this purpose. The Secretary-General (or Associate Secretary-General) will circulate all the names received by the dead line to National Committees approximately 3 months before the General Assembly.

3.2 The Executive Committee will carefully consider all the suggested names (and may itself suggest names), and will prepare, as a basis for discussion at the Assembly, a list of names to fill vacancies. Besides considering all the suggested names, the Executive will consider the needs of the Union, the spread of physics expertise within the Executive and the necessary world-wide distribution of the Executive membership. The Executive will publish its prepared list of physicists to fill the vacancies as early as possible but not later than the beginning of the General Assembly.

3.3 National Delegations attending the Assembly will be able to add names, from the first list of suggested names, to the Executive list. At this stage each proposal must be seconded by another Delegation. If the candidate is not a member of the proposer's country, then the permission of the candidate's National Delegation must be obtained before the proposition can be made. A convenient deadline (about mid-way through the Assembly) will be fixed for the receipt of formal proposals, duly seconded.

3.4 If more names are proposed, either by the Executive or by National Committees, than the number of vacancies to be filled, then a secret ballot will be held. Voting will be by heads of Delegations completing the number of ballot forms corresponding to the number of votes allotted to their Delegation.

3.5 If one or more vacancies occur on the Executive between meetings of the General Assembly, the Executive is empowered to fill them. Members appointed to these vacancies will serve until the next General Assembly. In the event of their being reappointed by the Assembly, the initial period of service will not count towards the maximum permitted length of service.

4. Election Procedure for Commission Members

4.1 National Committees and Commissions will be invited to suggest names for membership (including the offices of Chairman and Secretary) of Commissions to the Secretary-General up to four months before the General Assembly. Each name submitted must be accompanied by brief details of the physicist's career and post currently held, and, for names submitted by Commissions, it is desirable that the permission of the candidate's National Committee should be obtained. A special form will be provided for this purpose. The Secretary-General (or Associate Secretary-General) will circulate all the names received by the deadline to National Committees approximately 3 months before the General Assembly.

4.2 The Executive Committee will consider all the suggested names (and may itself suggest names) and will subsequently prepare, as a basis for discussion at the Assembly, a list of names to fill the vacancies on the Commissions. In preparing the lists of names for Commissions the Executive will endeavour to ensure a satisfactory world-wide apread of Commission membership. The Executive will publish their proposed list of Commission members as early as possible but not later than the beginning of the General Assembly.

4.3 National Delegations attending the Assembly will be able to add names, from the first list of suggested names, to the Executive list. Each proposal at this stage must be seconded by another Delegation. A convenient deadline (about mid-way through the Assembly) will be fixed for the receipt of formal proposals, duly seconded. If any candidate is not a member of the proposer's country, then the proposer must secure the permission of the candidate's National Delegation before making the proposal.

4.4 If more names are proposed and seconded than the number of vacancies to be filled on one or more Commissions, then secret ballots will be held. The voting procedure will be the same as the one adopted for choosing Executive Committee members.

4.5 The procedure for filling casual vacancies on Commissions which occur between meetings of the General Assembly will be the same as for casual vacancies on the Executive Committee.

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Form for suggesting the name of a physicist for consideration for filling a vacancy either on the IUPAP Executive or on one of the Commissions

1. Name of National Committee or Commission making suggestion

2. Suggested Office (for example position on Executive or position on a particular Commission)

3. Name of candidate (and title, e.g. Dr. or Professor) 4. Age

5. Present appointment

6. Full address

7. Brief biographical details of candidate, indicating expertise in physics (not more than 50 words)

8. Signed :

9. On behalf of :

10. If the recommendation is made on behalf of a Commission has the candidate's National Committee approved?

Yes/No

Notes: Forms must reach the Secretary-General by May 15th 1972.
Please complete a separate form for each name suggested.
Please complete form in Typescript.
Please indicate clearly in (9) whether the form is signed on behalf of a National Committee or a Commission.
Please indicate clearly in (2) whether suggested name is for a particular office on Executive or on a Commission (e.g. for the latter Chairman, Secretary or member).

PRESENT U. S. MEMBERSHIP ON EXECUTIVE COMMITTEE AND COMMISSIONS

AND

NOMINATIONS RECEIVED FOR REPLACEMENT OF U.S. MEMBERS WHOSE TERM EXPIRES THIS YEAR

(Data after name is year of appointment)

COMMITTEE/COMMISSION	PRESENT MEMBER	NOMINEE	PROPOSED BY
Executive Committee	R. F. Bacher (1966)	J. Bardeen	H. Y. Fan
	V. Weisskopf (1969)	V. Weisskopf (2d term)	H. Y. Fan & P. Meyer
Financial Commission	R. F. Bacher (1966)	(none received)	
Commission for S.U.N.	H. C. Wolfe (1957)	H. C. Wolfe (to continue)	H. C. Wolfe
Commission on Thermodynamics and Statistical Mechanics	E. Montroll (1966)	H. B. Callam	H. Y. Fan
Commission on Cosmic Rays	P. Meyer (1966)	C. J. Waddington	P. Meyer
Commission on Very Low Temperature	J. Bardeen (1963)	M. Tinkham	J. Bardeen
		W. M. Fairbank	H. Y. Fan
Commission on Publications	H. C. Wolff (1966)	A. W. K. Metzner	H. C. Wolfe
	S. Pasternack (1966)	S. Pasternack (continue)	H. C. Wolfe
Acoustics Commission	I. Hirsch (1969)	I. Hirsch (2d term)	H. Y. Fan
Semiconductors Commission	E. Kane (1969)	E. Kane (2d term)	H. Y. Fan
		J. Tauc	E. Kane
*Corresponding Member	H. Y. Fan (1969)		
Magnetism Commission	G. T. Rado (1966)	G. T. Rado (continue)	H. Y. Fan & W. D. Doyle
*Corresponding Member	C. Herring (1969)	C. Herring (Member)	H. C. Wolfe
Solid State Commission	J. M. Cowley (1969)	J. M. Cowley (2d term)	H. Y. Fan
*Corresponding Member	J. S. Koehler (1966)	F. C. Brown	H. Y. Fan
Commission on Particles and Fields	R. L. Walker (1966)	E. L. Goldwasser	R. L. Walker, C. N. Yang
	C. N. Yang (1969)	C. N. Yang	R. L. Walker, H. Y. Fan
			A. Wattenberg
		R. L. Cool	A. Wattenberg
		V. L. Fitch	A. Wattenberg
Nuclear Physics Commission	T. Lauritsen (1966)	(None received)	
*Corresponding Member	J. Fowler (1966)		
Atomic Masses and Related Constants Commission	E. R. Cohen (1966)	E. R. Cohen (continue)	W. W. Haven, Jr.
	W. H. Johnson, Jr. (1966)		
*Corresponding Member	W. W. Buechner (1966		
Commission on Physics Education	W. C. Kelly (1966)	(None received)	
Atomic and Molecular Physics and Spectroscopy Commission	W. L. Fite (1966)	V. W. Hughes	H. M. Foley
	L. M. Branscomb (1966)	P. L. Bender	H. M. Foley
Plasma Physics Commission (Established in 1969)	S. C. Brown (1966?)	(Nominations pending)	
	R. F. Post (1966?)	R. F. Post (2d term)	S. C. Brown

* The grade "Corresponding Member" is being abolished.

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUÉE

Liste des congrès approuvés en 1972

Conferences approved for 1972

Commission on Thermodynamics and Statistical Mechanics

1.	Centenary of the Boltzmann Equation	"C"	Vienna AUSTRIA	Summer/ Autumn

inf.: Prof. Dr. P. MAZUR
Secretary of the Commission
Instituut-Lorentz voor
Theoretische Natuurkunde
Nieuwsteeg 18
Leiden, NETHERLANDS.

G

Commission on Very Low Temperatures

2.	XIII Int. Conf. on Low Temperature Physics	"A"	Boulder Col., USA	Aug. 20-26

inf.: Dr. R.H. KROPSCHOT
Cryogenics Division
National Bureau of Standards
Boulder, Colorado 80302, USA.

Commission on Semiconductors

3.	11th Int. Conf. on the Physics of Semiconductors	"A"	Warsaw POLAND	July 25-29

inf.: Prof. SOSNOWSKI
Institute of Physics
The Polish Academy of Science
Warsaw, POLAND.

4.	Radiation Induced Defects in Semiconductors	"B"	Reading UK	July 19-21

inf.: Prof. E.W.J. MITCHELL
J.J. Thomson Physical Laboratory
Whiteknights
Reading, RG6 2AF, UNITED KINGDOM.

Commission on Magnetism

5.	Symposium on the Physics of Dense Matter inf.: Dr. C. DeJAGER The Astronomical Institute 21 Beneluxlaan Utrecht, NETHERLANDS. (Co-sponsored by IAU)	"C"	Copenhagen DENMARK	?

Commission on Solid State Physics

6.	Int. Conf. on Thin Films inf.: Dr. K.H. BEHRNDT Granville-Phillips Corporation 5675 East Avapahre Avenue Boulder, Colorado 80303, USA. (also sponsored by the ICO)	"B"	Venice ITALY	May 15-19
7.	2nd Int. Conf. on Vapour Growth and Epitaxy inf.: Prof. M. SCHIEBER Department of Physics The Hebrew University Jerusalem, ISRAEL.	"B"	Jerusalem ISRAEL	May 22-25
8.	2nd Int. Symposium on Surface Physics inf.: Dr. A. vanSILFHOVT Technische Hogeschool Twente Afd. Technische Natuurkunde Postbus 217 Enschede, NETHERLANDS.	"B"	Enschede NETHERLANDS	June 22-23
9.	Int. Conf. on Band Structure in Solids inf.: Prof. E.P. WOHLFARTH Department of Mathematics Imperial College Exhibition Road London S.W. 7, UNITED KINGDOM.	"B"	Exeter UK	July 3-5

10.	7th Int. Symp. on the Reactivity of Solids inf.: Prof. J.S. ANDERSON Morganic Chemistry Laboratory University of Oxford South Parks Road Oxford OX1 3OR, UNITED KINGDOM. (co-sponsored by IUPAC)	"B"	Bristol UK	July 17-21
11.	2nd Int. Conf. on the Properties of Liquid Metals inf.: Prof. M. TANAKA Department of Applied Science Faculty of Engineering Tohoku University Sendai 980, JAPAN.	"B"	Tokyo JAPAN	Sept. 3-8
12.	Luminescence inf.: Prof. E.F. BERTAUT Secretary of the Commission Lab. d'Électrostatique Cedex 166 38 Grenoble-Gare, FRANCE.	"A"	Leningrad USSR	August

Commission on Particles and Fields

13.	XVI Int. Conf. on High Energy Physics inf.: Prof. R.R. WILSON N.A.L. Box 500 Batavia, Illinois 60510, USA.	"A"	Chicago Ill., USA	Sept. 6-13
14.	Int. Conf. on Hadronic Collisions inf.: Dr. G. MANNING R.H.E.L. Chilton, Didcot Berkshire, UNITED KINGDOM.	"B"	Oxford UK	April 5-7

15. 4th Int. Conf. on Magnet Technology — "B" — Brookhaven, New York, USA — Sept. 19-22

inf.: Dr. J.P. BLEWETT
Brookhaven National Laboratory
Upton, L.I.
New York 11973, USA.

Commission on Nuclear Physics

16. Few Particle Problems on the Nuclear Interaction — "B" — Los Angeles, Calif., USA — Aug.28-Sept. 1st

inf.: Dr. Ivo SLAUS
Physics Department
University of California
Los Angeles, Calif. 90024, USA.

17. Nuclear Moments and Nuclear Structure — "B" — Osaka, JAPAN — ~~Aug. 28-~~ Sept. ~~1st~~ 4-8

inf.: Dr. Kenzo SUGIMOTO
Department of Physics
Osaka University
Toyonaka
Osaka 560, JAPAN.

18. 6th Int. Cyclotron Conference — "B" — Vancouver, CANADA — July 18-21

inf.: Dr. M.K. CRADDOCK
TRIUMF
University of British Columbia
Vancouver 8, B.C., CANADA.

Commission on Physics Education

19. Int. Congress on Teaching Physics to Students in Physics, Related Sciences and Engineering — "B" — Kiel, F.R.GERMANY — July 20-26

inf.: Prof. W. KROEBEL
Institute for Applied Physics
University of Kiel
New University House 34
23 Kiel, FEDERAL REPUBLIC of GERMANY.

Commission on Atomic & Molecular Physics and Spectroscopy

20.	Conf. on Inner Shell Ionization inf.: Dr. R.W. FINK Chemistry Department Georgia Institute of Technology Atlanta, Georgia, USA.	"B"	Atlanta USA	April 17-21
21.	3rd Int. Conf. on Atomic Physics inf.: Dr. S.J. SMITH J.I.L.A. University of Colorado Boulder, Colorado 80302, USA.	"A"	Boulder USA	Aug. 7-11
22.	XVII Congress Ampère inf.: Prof. V. HOVI Wihuri Physical Laboratory University of Tirku Tirku, FINLAND.	"C"	Tirku FINLAND	Aug. 21-26
23.	1st Int. Conf. on Modulation Spectroscopy inf.: Prof. B.O. SERAPHIN Optical Sciences Center University of Arizona Tucson, Arizona 85721, USA.	"B"	Tucson USA	Nov. 23-26

International Commission for Optics

24.	9th Congress of ICO : Space Optics inf.: Dr. D.S. NICHOLSON P.O. Box 95213 Los Angeles, California 90045, USA.	"A"	Santa Monica Calif., USA	Oct. 9-13
25.	Integrated Optics - Guided Waves, Materials and Devices inf.: Dr. R.V. POLE OSA 2100 Pennsylvania Avenue NW Washington, D.C. 20037, USA.	"B"	Las Vegas Nevada, USA	Feb. 7-9

26 April 1972

U. S. NATIONAL COMMITTEE OF IUPAP

MEETING

27 April 1972

ADDENDUM TO ATTACHMENTS TO AGENDA

Attachment D. Addition to List of Delegates to XIV General Assembly:

CZECHOSLOVAKIA (one delegate)

Professor M. Trlifaj
Institute of Physics, CSAV
Na Slovance 2
Prague 8, Czechoslovakia

GERMAN DEMOCRATIC REPUBLIC (three delegates)

Professor Dr. J. Auth
Humboldt-Universitat Berlin
Sektion Physik
104 Berlin 4
Hessische Str. 1/2
German Democratic Republic

Dr. H. Friedrich
Nationalkomittee fur Physik der DDR
108 Berlin 8
Am Kupfergraben 7
German Democratic Republic

Professor Dr. K. Lanius
Direktor des Instituts fur Hochenergiephysik der DAW
1615 Zeuthen
Platanenallee 6
German Democratic Republic

IRELAND (one delegate)

Dr. Declan M. Larkin
Department of Physics
University College
Galway, Ireland

NORWAY (one delegate)

To be designated

Summary of Number of Delegates as of 26 April 1972:

Country	Number
Bolivia	5
Canada	4
Czechoslovakia	1
Federal Republic of Germany	4 - 9
German Democratic Republic	3
Hungary	1
Ireland	1
Netherlands	19
Norway	1
Poland	2
Spain	1
United Kingdom	7
12 of 38 countries	49 - 54 delegates

Additional Representatives from Commissions:

COMMISSION ON COSMIC RAYS

Professor J. G. Wilson (also on U.K. delegation)
Department of Physics
The University, Leeds
LS 2 9JT United Kingdom

Attachment F. Addition to List of Proposed U.S. Nominations for IUPAP Executive Committee and Commissions:

Commission	Nominee	Proposed by
Plasma Physics Commission	Mel Gottlieb	S. C. Brown
" (alternate) "	Jim Phillips	S. C. Brown

New material attached for Agenda Item 2.

(1) Draft letter inviting physicists to attend the Scientific Sessions.

(2) Draft memorandum asking for nominations of physicists from universities and laboratories.

(3) Draft Second Announcements of IUPAP General Assembly and Scientific Sessions.

D R A F T

19 April 1972

Draft of Letter to be sent to:

(1) Nobel Laureates in Physics
(2) Past and present members of USNC-IUPAP
(3) Past and present U.S. Officers of IUPAP
(4) NAS Members in Astronomy, Physics, and Applied Physical and Mathematical Sciences
(5) Members of NAS/NRC Committees
(6) Senior Scientists and Administrators in relevant Federal Agencies and Industries

Dear Colleague:

I wish to invite you to attend the Scientific Sessions of the XIV General Assembly of the International Union of Pure and Applied Physics (IUPAP), which will be held at the National Academy of Sciences, in Washington, D. C. this September. A copy of the first announcement of the Scientific Sessions is enclosed.

As the attendance at these sessions is limited to about 400 scientists in addition to the official IUPAP delegates, I would appreciate it if you would let us know on the attached form whether or not you plan to attend the sessions. Additional information on the program and registration will be sent to you about the first of June if we receive information that you plan to attend.

Sincerely yours,

Lewis M. Branscomb
Chairman, Arrangements Committee
USNC for IUPAP

TO:

Chairman, Arrangements Committee
U. S. National Committee for IUPAP
Div. of Physical Sciences (JH 421)
National Academy of Sciences
2101 Constitution Avenue, N. W.
Washington, D. C. 20418 U.S.A.

FROM:

_____
(Name)

_____
(Complete Address)

_____

_____

Please check one:

/_/ I do not plan to attend the scientific sessions.

/_/ I plan to attend the scientific sessions; please send me additional information about the program and registration.

D R A F T

19 April 1972

MEMORANDUM

TO: Chairmen of Physics Departments in U. S. Universities
Directors of U. S. Laboratories Doing Research in Physics

FROM: Chairman of Arrangements Committee, U. S. National Committee of IUPAP

SUBJECT: Scientific Sessions of XIV General Assembly of the International Union of Pure and Applied Physics

In celebration of the 50th Anniversary of the International Union of Pure and Applied Physics(IUPAP), a scientific program of invited lectures surveying the present state of various principal fields of physics, by noted international scientists, will be presented in five half-day scientific sessions during the XIV General Assembly of IUPAP to be held at the National Academy of Sciences in Washington, D. C., from September 20 through 25, 1972. Several copies of the first announcement of the scientific sessions are enclosed.

As indicated in the announcement, the Academy can accommodate only 400 scientists in addition to the official IUPAP delegates at these sessions. We would appreciate it if you would nominate a few physicists from your institution who would be interested in attending the scientific sessions. We would also appreciate receiving the names of senior foreign students in physics at your university who may desire to attend these scientific sessions.

For your convenience a form for indicating the nominee and a pre-addressed envelope are enclosed.

TO: Chairman, Arrangements Committee
U. S. National Committee for IUPAP
Div. of Physical Sciences (JH-421)
National Academy of Sciences
2101 Constitution Avenue, N. W.
Washington, D. C. 20418 U.S.A.

FROM: _____
(University/Laboratory)

The following physicists have indicated an interest in attending the scientific sessions of the XIV General Assembly of IUPAP and are hereby nominated to attend these sessions:

_____ _____
_____ _____
_____ _____
_____ _____

_____ _____
_____ _____
_____ _____
_____ _____

(From Universities) The following senior foreign students in physics have indicated an interest in attending these scientific sessions:

_____ _____
_____ _____
_____ _____
_____ _____

FIFTIETH ANNIVERSARY

SECOND

ANNOUNCEMENT

XIV General Assembly

of the

International Union of Pure and Applied Physics

September 20-25, 1972

at the

National Academy of Sciences

Washington, D. C.

D R A F T

25 April 1972

The XIV General Assembly of the International Union of Pure and Applied Physics (IUPAP) is to be held at the National Academy of Sciences in Washington, D. C., from September 20 through 25, 1972. Arrangements for the Assembly are under the aegis of the U. S. National Committee of IUPAP, a committee of the National Academy of Sciences.

In celebration of the 50th Anniversary of IUPAP, a scientific program of invited lectures surveying the present state of various principal fields of physics, by noted international scientists, will be presented in five half-day scientific sessions at the National Academy of Sciences.

ASSEMBLY SCHEDULE

WEDNESDAY, SEPTEMBER 20

MORNING:	General Assembly
AFTERNOON:	General Assembly
EVENING:	Reception at National Academy of Sciences
	Presentation of Bust of Niels Bohr

THURSDAY, SEPTEMBER 21

MORNING:	Symposium--Scientific Session I
AFTERNOON:	Symposium--Scientific Session II
EVENING:	Dinner at Watergate Terrace

FRIDAY, SEPTEMBER 22

MORNING:	General Assembly
AFTERNOON:	Symposium--Scientific Session III
EVENING:	Dinner and Theater at J.F. Kennedy Center for the Performing Arts

SATURDAY, SEPTEMBER 23

MORNING:	Symposium--Scientific Session IV
AFTERNOON:	Symposium--Scientific Session V
EVENING:	IUPAP Banquet at Smithsonian Institution, Museum of History and Technology

SUNDAY, SEPTEMBER 24

MORNING: General Assembly

AFTERNOON: Sightseeing Tours

MONDAY, SEPTEMBER 25

MORNING: General Assembly

AFTERNOON: Technical Tours

SCIENTIFIC SESSIONS

THURSDAY, SEPTEMBER 21

MORNING SESSION, 10:00-12:00

EDOARDO AMALDI, University of Rome

The Unity of Physics

* * *

G. TORALDO DI FRANCIA, Institute of Optics, Florence

Optics

THURSDAY, SEPTEMBER 21

AFTERNOON SESSION, 2:00

J. TUZO WILSON, Erindale College, University of Toronto

The Physical Study of the Earth and the Scientific Revolution It Has Caused

* * *

SIR FRED HOYLE, University of Cambridge

Astrophysics

* * *

KIP S. THORNE, California Institute of Technology

Gravitation Theory

FRIDAY, SEPTEMBER 22

AFTERNOON SESSION, 2:00

GERHARD HERZBERG, National Research Council, Canada

Spectroscopy and Molecular Structure

* * *

JOHN BARDEEN, University of Illinois

Solid State Physics: Accomplishments and Future Prospects

SATURDAY, SEPTEMBER 23

MORNING SESSION, 9:00-12:00

H. B. G. CASIMIR, Philips Industries, Eindhoven, The Netherlands

Physics and Society

* * *

WOLFGANG GENTNER, Max Planck Institute, Heidelberg

International Cooperation in Physics

SATURDAY, SEPTEMBER 23

AFTERNOON SESSION, 2:00

L. A. ARTSIMOVITCH, Kurchatov Institute, Moscow

Plasma Physics: The Latest Infant of the Classics

* * *

V. F. WEISSKOPF, Massachusetts Institute of Technology

What Is An Elementary Particle?

* * *

A. BOHR, Bohr Institute, Denmark

The Many Facets of the Nuclear Structure

SOCIAL PROGRAM

WEDNESDAY, SEPTEMBER 20

EVENING 8:00 p.m.

RECEPTION FOR DELEGATES AND MEMBERS OF IUPAP

AT

NATIONAL ACADEMY OF SCIENCES

PRESENTATION OF BUST OF NIELS BOHR

IN THE

NAS AUDITORIUM

SPEAKERS: AAGE BOHR, LARKIN KERWIN, _____ ROZENTAL

THURSDAY, SEPTEMBER 21

EVENING 7:00 p.m.

Dinner at Watergate Terrace

Hosted by Research Corporation

Speaker: Dr. H. Guyford Stever,

Director of National Science Foundation

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EVENING 7:00 p.m.

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SATURDAY, SEPTEMBER 23

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IUPAP Banquet

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~~XXXX

VISAS

It is recommended that delegates apply for a visa six weeks before the date on which they plan to depart for the United States. If application is not made directly to an American Consulate but, rather, through national authorities, delegates should act earlier to assure that their application will be in the hands of an American Consular Officer six weeks before the date of their departure to the United States.

Consular Officers at all American Embassies have received notification of the XIV IUPAP General Assembly from the Department of State.

If three weeks after applying to an American Consular Officer, delegates have still not received a visa, please cable information about the date and place of application to the Chairman of the Arrangements Committee, whose cable address is NARECO - Washington, D. C., USA. He will make appropriate inquiries and will endeavor to resolve any problems that exist. Within a week, he will cable information about the status of the visa application and, whenever possible, the approximate date on which the delegate can expect to obtain a visa.

No scientist who is qualified to take part in the General Assembly will be refused a U.S. visa because of his nationality. On the other hand, the U.S. Government, like those of other countries, reserves the right to refuse a visa to a person for other reasons. Prospective participants who reside in countries where there is no U.S. diplomatic representation can obtain visas in other counries where such diplomatic representation exists. If, because of the absence of an American Embassy in your country, you expect to apply for a visa elsewhere, please let the Chirman of the Arrangements Committee know in what country and city you intend to apply

so that he can notify the Department of State and be of assistance to you in making whatever advance arrangements may be possible.

CLIMATE AND DRESS

Late September in Washington is very pleasant with mostly sunny skies and mild temperatures. Anticipated daytime temperature is approximately _____. Scattered showers are possible and delegates are advised to bring light raincoats. Evening dress will not be required at any of the social functions.

POSTAL INFORMATION

You may use the address of the Shoreham Hotel where the delegates will be staying:

c/o The Shoreham Hotel
Washington, D. C. 20008, U.S.A.

or you may have your mail sent to:

c/o U.S. National Committee for IUPAP
Div. of Physical Sciences (JH-421)
National Academy of Sciences
2101 Constitution Avenue, N. W.
Washington, D. C. 20418 U.S.A.

(Second Draft)

25 April 1972

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

XIV GENERAL ASSEMBLY

NATIONAL ACADEMY OF SCIENCES, WASHINGTON, D. C.

20 - 25 September 1972

REGISTRATION FORM

NAME _____

(Please indicate how correspondence should be addressed, i.e., Professor, Dr., Mrs., Miss, etc.)

COMPLETE ADDRESS _____

_____

_____

_____

INSTITUTIONAL AFFILIATION _____

_____

NAMES OF ACCOMPANYING PERSONS:

Name Address

_____

_____

_____

_____

_____

HOTEL ACCOMMODATIONS:

A block of rooms has been reserved at the Shoreham Hotel for delegates, members of IUPAP and foreign participants. Please indicate your room requirements below:

_____ Room(s) with single bed for 1 person @ $22.00

_____ Room(s) with twin beds for 2 persons @ $26.00

Arrival and departure dates are essential:

Arriving Washington _____ Hour _____ a.m. p.m.

Departing Washington _____ Hour _____ a.m. p.m.

Confirmation of reservations will be sent to the mailing address indicated on the form, unless the registrant specifically requests otherwise.

ACTIVITIES AND PRODEEDINGS OF GENERAL ASSEMBLY

Please indicate activities you and members of your group plan to attend.

		Number
1.	Reception at National Academy of Sciences - September 20	_____
2.	Dinner at Watergate Terrace - September 21	_____
*3.	Dinner and Theater at J. F. Kennedy Center - September 22	_____
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5.	Sightseeing Tour of Washington - September 24	_____
6.	Tour of National Bureau of Standards - September 22	_____
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*8.	Luncheon for IUPAP Delegates and Members at National Academy of Sciences - September 20	_____
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	- September 25	_____
9.	Ladies program - Tours during General Assembly Sessions	_____
*10.	Copy of Proceedings of the XIV General Assembly	_____

*There will be a nominal fee charged for these activities and a copy of the Proceedings. For your convenience we have established an advanced Activity Fee of $_____ for these items for all delegates and members. However, if you prefer you may pay separately for these activities and a copy of the Proceedings at the following rates:

Dinner and Theater at J. F. Kennedy Center - $_____ per person

Luncheons at NAS ($_____ each day) - $_____ per person

Proceedings of the XIV General Assembly - $_____ per copy

Please send completed registration form to:

Chairman, Arrangements Committee
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(Scientific Sessions)

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Physics and Society

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or they ~~you~~ may have their ~~your~~ mail sent to:

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National Academy of Sciences
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(Invitied Participants)
(Second Draft)

25 April 1972

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

XIV GENERAL ASSEMBLY

NATIONAL ACADEMY OF SCIENCES, WASHINGTON, D. C. ← SCIENTIFIC SESSIONS

20 - 25 September 1972

REGISTRATION FORM

NAME _____
(Please indicate how correspondence should be addressed, i.e., Professor, Dr., Mrs., Miss, etc.)

COMPLETE ADDRESS _____

_____

_____

_____

INSTITUTIONAL AFFILIATION _____

_____

NAMES OF ACCOMPANYING PERSONS:

Name	Address

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____Rooms(s) with single bed for 1 person @ $22.00
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Arrival and departure dates are essential:

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(Invited Participants)

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(Scientific Sessions)

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*3. 4.	IUPAP Banquet at Smithsonian - September 23	
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5. 6.	Tour of National Bureau of Standards - September 22	
	" " " " " " - September 25	
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	" " " " " " - September 25	
~~*8.~~	~~Luncheon for IUPAP Delegates and Members at National Academy of Sciences - September 20~~	
	~~- September 22~~	
	~~- September 25~~	
7. 9.	Ladies program - Tours during General Assembly Sessions	
*8. *10.	Copy of Proceedings of the XIV General Assembly	

*There will be a nominal fee charged for these activities and a copy of the Proceedings. For your convenience, we have established an advanced Activity Fee of $30.00 for these items for ~~all delegates and members~~ invited participants. However, if you prefer you may pay separately for these activities and a copy of the Proceedings at the following rates:

Dinner at Watergate Terrace	$____ per person
Dinner and Theater at J. F. Kennedy Center	- $____ per person
Luncheons at NAS ($2.00 each day)	- $____ per person
IUPAP Banquet at Smithsonian	$____ per person
Proceedings of the XIV General Assembly	- $____ per copy

Please send completed registration form to:

Chairman, Arrangements Committee
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Washington, D. C. 20418 U.S.A.

Make check for the Activity Fee payable in U.S. dollars to National Academy of Sciences

IUPAP

Columbia University in the City of New York | *New York, N.Y. 10027*

DIVISION OF NUCLEAR SCIENCE AND ENGINEERING

287A Engineering Terrace
520 West 120th Street

April 15, 1972

To: U.S. National Committee of IUPAP, U.S. Members of IUPAP Commission, 1972 General Assembly Advisors, and Professor Larkin Kerwin.

From: W. W. Havens, Jr.

Subject: IUPAP General Assembly in Washington, September 22-26, 1972.

Gentlemen:

The Organizing Committee for the 1972 General Assembly of IUPAP met in the office of Dr. H. W. Koch at the American Institute of Physics at 10:00 A.M. on Friday, April 2, 1971. The Committee chose the dates of the General Assembly to be from Thursday, September 23rd through Tuesday, September 28th. The Committee allotted three sessions for conducting the business of IUPAP as follows:

Thursday, September 23rd, 9:00 A.M. - 12:00 noon, The Plenary Session.

Saturday, September 25th, 3:00 P.M. - 5:00 P.M., A Business Session.

Tuesday, September 28th, 2:00 P.M. - 4:00 P.M., Final Session.

Sight seeing tours will be arranged for Sunday afternoon, September 26th. There will be 7 1/2 sessions devoted to presentation of technical topics, allowing a total of approximately 15 invited papers for one hour each. Social events suggested are:

Wednesday evening, September 22nd, a welcoming reception at the National Academy of Sciences.

Thursday evening, September 23rd, a State Department reception at the New State Department Building.

Friday evening, September 24th, a foreign delegates reception at the National Academy Building with the unveiling of the bust of Niels Bohr which has been presented to IUPAP.

Saturday evening, September 25th, a program at the JFK Center for the performing arts.

Sunday afternoon, September 26th, sight seeing tours with suggestions as follows:

1. Lee Mansion, National Cemetry and Mount Vernon.

2. Goddard Space Center at Greenbelt, Maryland.

3. Naval Research Laboratory.

Suggestions for additional tours are solicited.

Monday evening, September 27th, a banquet at the National Academy of Sciences.

Sanborn Brown was appointed editor for the proceedings, and will investigate the possibility of publishing two volumes: the first being the scientific papers and the second, a popular version of the scientific papers. A more detailed suggested very tentative program for the meeting is attached herewith.

The names of the individuals listed on the program are only suggestions. Except for Bacher, Weisskopf, and Butler, no one whose name appears on the program has been informed that he has been suggested as an invited speaker for the IUPAP General Assembly. I would appreciate it if you would not distribute this information any more widely than is absolutely necessary.

Hugh Odishaw agreed to prepare a budget for the operation of the 1972 General Assembly and submit it for approval to the U. S. National Committee at its meeting on Thursday, April 29th.

You will note that many of the individuals who have been suggested as invited speakers reside outside of the United States. We realize that several of the individuals who are invited to speak will not be able to accept the invitation and an alternate will have to be chosen. The alternate is very likely to be a resident of the United States and for this reason, we have attempted to keep the number of United States scientists at a minimum.

I would appreciate it if you could send me any suggestions you may have for this meeting before September 23rd, so they can be discussed at the next meeting of the U. S. National Committee of IUPAP.

Sincerely yours,

W. W. Havens, Jr.

WWH:ss

Encl.

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

UNION INTERNATIONALE DE PHYSIQUE PURE ET APPLIQUÉE

Secretary-General:
Dr. C. C. BUTLER, F.R.S.
Nuffield Lodge
Regent's Park
London, NW1 4RS
England
Telephone: 01-722 8871

Associate Secretary-General:
Prof. L. KERWIN, F.R.S.C.
Département de Physique
Faculté des Sciences
Université Laval
Québec 10, Canada
Téléphone: 418-656-2131

MEMORANDUM

To : Members of the Executive Committee

From : Secretary-General

Role and Structure of ICSU

Professor Bacher has asked me to send you a copy of the enclosed ICSU paper. IUPAP is asked to comment by early May. Will you please send your comments to Professor Bacher not later than April 20th, 1972.

C. C. Butler
March 1972

Enc.

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS

CONSEIL INTERNATIONAL DES UNIONS SCIENTIFIQUES

SECRETARIAT:
7, VIA CORNELIO CELSO
00161 ROME, ITALY
TEL.: 86 25 55
CABLES: ICSUROMA

PRESIDENT : PROF. V. A. AMBARTSUMIAN (USSR)
SECRETARY GENERAL : PROF. F. A. STAFLEU (NETHERLANDS)
TREASURER : PROF. N. B. CACCIAPUOTI (ITALY)

Rome, 1972-02-29

From: The President

To: Members of ICSU

Rôle and Structure of ICSU

The 13 General Assembly of ICSU agreed unanimously to establish an ad hoc committee of not more than nine members to examine the rôle and structure of ICSU and report to the President before 31 December 1971, so that proposals could be circulated to Members early in 1972, and any revision of Statutes required could be prepared for submission to an Extra-Ordinary Assembly prior to the General Assembly 1972.

The General Assembly approved the following composition of the ad hoc committee: Messrs. Bhagavantam, Brankov, Coulomb, Kotani, Martin, Rees, Solomon, with the President and the Secretary General ex officio.

This committee held two meetings in 1971, in January in Rome and in June in Budapest. I acted as Convenor for the first meeting, at which Sir David Martin was elected Chairman. The report prepared by the Committee was submitted to me by Sir David Martin in September 1971 just prior to the XIII Meeting of the Executive Committee. After consideration of the report with my fellow Officers we decided to distribute it to the members of the Executive Committee without comment. The report of the discussions at the XIII Meeting of the Executive Committee is given on pages 5-7 of the Minutes of the Meeting.

As a result of these discussions I wrote to Sir David Martin requesting his comments on these discussions and inviting him to meet with the Officers in Amsterdam on 7 January to discuss the proposed changes in the rôle and structure and a preliminary revised version of the Statutes and Rules of

Procedure. The Officers established an Editorial Advisory Group, to consider further the preliminary draft, which met on 18 January and has provided me with its proposals.

In accordance with the Resolution of the 13 General Assembly of ICSU I am forwarding to you the new version of the Statutes and Rules of Procedure which take into account the proposed modifications in the rôle and structure of ICSU.

Briefly, the principal modifications are in the objects of the Council, Statutes 3 and 4, and in the administration of the Council. It is proposed that there be a General Assembly, a General Committee and an Executive Committee. The General Assembly remains unchanged; the General Committee has the same composition as the present Executive Committee; the Executive Committee will consist of four Officers, a President, Secretary General, Treasurer and President Elect, and four ordinary members, two from the Unions and two from the National Members elected by the General Committee from its own membership.

I should appreciate it if you would let me have your comments on the proposed modifications in the rôle and structure of ICSU and also on the revised Statutes and Rules of Procedure. It would be helpful to me if you would send these c/o the ICSU Secretariat, 7 Via Cornelio Celso, 00161 Rome, Italy, at your convenience but so as to arrive before 8 May, when the next meeting of the Officers will be held. The texts of the Statutes and Rules of Procedure, to be submitted to the Extra-Ordinary General Assembly on 15 September, will be distributed with the Agenda three months before the Extra-Ordinary General Assembly is due to commence.

(sgd.) V.A. Ambartsumian

STATUTES

I. DENOMINATION AND DOMICILE

1. 'The International Council of Scientific Unions' hereinafter called 'the Council' is an international non-governmental scientific organization.

2. The legal domicile of the Council is in Brussels.

II. OBJECTIVES OF THE COUNCIL

3. The four principal objectives of the Council are:

   i) to encourage international scientific activity for the benefit of mankind,

   ii) to facilitate and co-ordinate the activities of the International Scientific Unions in the field of the exact and natural sciences and related disciplines,

   iii) to stimulate, design and co-ordinate international interdisciplinary scientific research projects, and

   iv) to act as a co-ordinating centre for the international activities of the National Members.

4. In order to further the attainment of these objectives the Council may:

   i) enter, through the intermediary of the national adadhering organizations, into relations with their governments so as to co-operate in the promotion of scientific research,

   ii) maintain relations with the United Nations and its special and related agencies, and

   iii) make such contacts and mutual arrangements as are deemed necessary with other International Councils, other Unions or other organizations where common interests exist.

5. In pursuing these objectives the Council shall observe the basic policy of non-discrimination and affirm the rights of scientists throughout the world to adhere to or to associate with international scientific activity without regard to race, religion, political philosophy, ethnic origin, language or sex. Recognizing and respecting the independence of the scientific policy of its national adhering bodies the Council shall not interfere with their internal affairs.

III. MEMBERSHIP OF THE COUNCIL

6. The Council is composed of two categories of members:

i) Scientific Unions, and

ii) National Members.

7. The Scientific Unions of the Council are the International Scientific Unions whose admission has been granted by the General Assembly.

8. a) A National Member adheres to the Council either through its principal scientific academy, or its national research council, or any other institution or association of institutions.

b) Any territory having recognized independent scientific activity may be accepted as a National Member.

c) A National Member should not normally be considered as ready for full membership, unless it can fulfil the obligations imposed by full membership and has a national body representing the country's scientific activities which in some form has been in existence for six years.

IV. ADMISSION TO THE COUNCIL

9. The General Assembly, on the proposal of the Executive Committee, shall examine each application for membership of the Council, and may accept or reject it.

10. In order to be admitted to membership, a Scientific Union must be international in character and interested in one or

STATUTES

I. DENOMINATION AND DOMICILE

1. 'The International Council of Scientific Unions' hereinafter called 'the Council' is an international non-governmental scientific organization.

2. The legal domicile of the Council is in Brussels.

II. OBJECTIVES OF THE COUNCIL

3. The four principal objectives of the Council are:

i) to encourage international scientific activity for the benefit of mankind,

ii) to facilitate and co-ordinate the activities of the International Scientific Unions in the field of the exact and natural sciences and related disciplines,

iii) to stimulate, design and co-ordinate international interdisciplinary scientific research projects, and

iv) to act as a co-ordinating centre for the international activities of the National Members.

4. In order to further the attainment of these objectives the Council may:

i) enter, through the intermediary of the national adadhering organizations, into relations with their governments so as to co-operate in the promotion of scientific research,

ii) maintain relations with the United Nations and its special and related agencies, and

iii) make such contacts and mutual arrangements as are deemed necessary with other International Councils, other Unions or other organizations where common interests exist.

more branches of the exact or the natural sciences not already represented in the Council.

11. Application by a Scientific Union for membership must be supported by at least twelve National Members and must furnish proof that the Union or the organization it has succeeded, or of which it is an offshoot, has been in existence for at least six years and has held or sponsored at least two international meetings. A new Union shall be admitted to membership only when there are strong scientific reasons for its admission, and where there is no possibility for its accommodation by modification of the structure of a Scientific Union which is already a member of ICSU.

V. ASSOCIATES AND AFFILIATES OF THE COUNCIL

12. The Executive Committee may accept as National Associates those who are not yet ready for full membership of the Council. It may accept as Scientific Affiliates appropriate international scientific organizations.

VI. RESIGNATION AND EXPULSION OF MEMBERS

13. A member desirous of resigning from the Council must give three months' notice of resignation in writing, addressed to the Secretary General.

14. The General Assembly may, by a qualified majority of two-thirds of those present and taking part in the vote, cancel the membership of any Member which has failed to fulfil its obligations.

VII. ADMINISTRATION OF THE COUNCIL

15. a) There shall be:

i) The General Assembly

ii) The General Committee

iii) The Executive Committee.

b) The composition and functions of these bodies are defined in Sections VIII and IX below; their application is governed by the Statutes and Rules of Procedure.

16. a) In the absence of any provision to the contrary in the Statutes and Rules of Procedure, decisions of these bodies shall be by a majority of the affirmative and negative votes of those present and taking part in the vote. In the event of an equality of votes, or if the issue is undetermined, the Chairman shall decide.

b) Qualified majorities shall also be reckoned solely on the number of votes cast, by the Members present and taking part in the vote.

17. a) At the General Assembly, Members' votes shall be regulated as follows:

i) each National Member has one vote, and

ii) each Scientific Union has three votes.

b) The vote of each Member must be cast by a representative (or alternate) nominated by that Member.

VIII. THE GENERAL ASSEMBLY

18. The General Assembly, to which the General Committee and the Executive Committee are both responsible, consists of the representatives of the National Members and of the Scientific Unions. The President, Secretary General, Treasurer and President Elect should attend sessions of the General Assembly but as such have no right to vote. Nevertheless in the event of an equality of votes the Chairman of the session shall decide.

19. An ordinary session of the General Assembly is normally held every two years, at a place and date determined by the

General Assembly at its previous ordinary session, or failing that, by the Executive Committee.

20. The President may, with the consent of the Executive Committee, summon an extraordinary session of the General Assembly. He is obliged to do so at the request in writing of at least one-third of the Members of the Council.

21. The Secretary General shall communicate the place and date of a session of the General Assembly to all Members of the Council and to all Members of the General Committee at least six months in advance.

22. Items proposed for inclusion in the agenda and applications for admission to the Council must be received by the Secretary General at least four months before the date fixed for an ordinary session of the General Assembly.

23. The Agenda of the General Assembly shall be communicated by the Secretary General to all Members of the Council and to all members of the General Committee at least three months before the first day of the session. No item that has not been placed on the Agenda can be discussed unless a proposal to that effect is approved by the General Assembly by a majority of not less than two-thirds of the votes of the Members present and taking part in the vote.

24. a) The General Assembly is the highest authority of the Council and shall determine its general policy.

b) It shall have, in particular, the following powers and obligations:

i) to review the administration of the Council by the Executive Committee since the previous ordinary session of the General Assembly;

ii) to appoint a Finance Committee and any other Committees it may deem necessary for the administrative and scientific work of the Council;

iii) to examine, on the proposal of the Executive Committee, each application for membership of the Council, and accept or reject it;

iv) to cancel, if it so decides, the membership of any Member of the Council which has failed to fulfil its obligations;

v) to consider and ratify, if it thinks fit, the Rules of Procedure proposed by the Executive Committee;

vi) on the proposal of the Finance Committee, to examine and approve the Treasurer's accounts for the period since the previous ordinary session of the General Assembly, and to discharge the Treasurer of liability;

vii) on the proposal of the Executive Committee, to decide the range of annual dues to be paid by Members of the Council;

viii) to elect a President, a Secretary General, a President Elect and a Treasurer;

ix) to elect the representatives of the Scientific Unions to the General Committee;

x) to elect the representatives of the National Members to the General Committee;

xi) to approve the creation of the Special or Scientific Committees and the Inter-Union Commissions recommended by the General Committee, and to dissolve these Committees and Commissions when appropriate;

xii) to examine, at each of its ordinary sessions, on both scientific and financial grounds, the work of Special or Scientific Committees and other organizations within

the Council, in the presence of appropriate representatives of these bodies, to arrange for the possible transfer of their work to a more appropriate and adequately equipped intergovernmental or other body and to take administrative steps for any such transfer; and

xiii) to deal with any other item that may be referred to it.

IX. THE GENERAL COMMITTEE

25. a) The General Committee consists of:

i) The Officers, namely the President, the Secretary General, the Treasurer and the President Elect;

ii) Representatives of the Scientific Unions;

iii) Representatives of the National Members.

b) Each Scientific Union has a representative on the General Committee; National Members are represented by elected delegates. For every two Union representatives above fourteen, one additional National Representative above ten shall be elected.

c) Each Officer and each representative has one vote; in the case of equality of votes the President shall decide.

d) The terms of reference of the General Committee are:

i) to review the international scientific scene, to study scientific problems, to encourage and co-ordinate co-operative activities between the Unions and other component parts of the Council, including the Council's Special and Scientific Committees, whose representatives shall be invited by the President to be present as a non-voting observer when appropriate;

ii) to recommend to the General Assembly the creation or dissolution of Special or Scientific Committees, Inter-

Union Commissions, or other bodies having as their purpose the attainment of objectives of the Council. When urgent action is needed the General Committee may set up such bodies, subject to ratification by the next following session of the General Assembly;

iii) to elect ordinary members of the Executive Committee.

e) No person in whatever capacity may serve on the General Committee for more than a total of twelve consecutive years.

26. The Scientific Unions shall themselves nominate their individual representatives on the General Committee.

X. THE EXECUTIVE COMMITTEE

27. a) The Executive Committee consists of:

i) the Officers of the Council, namely the President, the Secretary General, the Treasurer and the President Elect;

ii) four ordinary members, two from the International Scientific Unions and two from National Members elected by the General Committee from its own membership.

b) Each Officer and each ordinary member has one vote; the President, in addition, a casting vote.

28. a) The ordinary members shall hold office until the end of the ordinary session of the General Assembly next following their election except that a member elected to fill a vacancy shall hold office for the unexpired term only. The ordinary members are eligible for one additional term of office. Elections should, if possible, be so arranged that at each ordinary session of the General Assembly, one member from the Scientific Unions and one member from the National Members are in their first term.

b) The representatives of the National Members are elected in their individual capacity.

29. No person, in whatever capacity, may serve on the Executive Committee for more than a total of eight consecutive years.

30. The Executive Committee directs the affairs of the Council between sessions of the General Assembly. It shall meet as often as is necessary and at least twice a year. It can be convened by a decision of the President in case of particular urgency, provided at least thirty days' notice is given. Among its duties it shall include these specific actions:

i) present, through the President, to each General Assembly, a report on the work of the Council since the previous ordinary General Assembly;

ii) propose to the General Assembly the acceptance or rejection of each application for membership of the Council;

iii) propose to the General Assembly rules of procedure for the Council;

iv) propose a budget of the Council for consideration by the General Assembly;

v) propose the range of annual dues to be paid by Members of the Council;

vi) propose disbursements of subventions and grants for scientific purposes from the Council's funds.

XI. THE OFFICERS

31. The President, Secretary General, Treasurer and President Elect shall hold office until the end of the ordinary session of the General Assembly next following their election, except when elected to fill a vacancy in which event they shall hold office for the unexpired term only. The President is not

eligible for re-election for a second term of office unless he has filled a vacancy and served for the unexpired term of his predecessor. The Secretary General and the Treasurer are eligible for re-election but for not more than two successive terms of office.

32. The President, Secretary General, Treasurer and President Elect of the Council shall exercise the same functions in the General Committee and the General Assembly. The Executive Committee shall decide who shall undertake the duties of the Secretary General or Treasurer if either is unable to discharge his duties between meetings of the General Assembly.

33. The President Elect shall normally fulfil the duties of the President should the President become unable to discharge them.

34. The Executive Committee shall submit to all Members of the Council four months in advance of an ordinary session of the General Assembly a list of names of those whom they propose for the offices of President, President Elect, Secretary General and Treasurer.

XII. THE NOMINATING COMMITTEE

35. The Nominating Committee is appointed at the meeting of the General Committee immediately preceding an ordinary General Assembly. It consists of the President and six other members drawn from the General Committee and representatives of the Members of ICSU to be present at the General Assembly. The President shall prepare a list of members of the Nominating Committee after consultation with the Executive Committee, for decision by the General Committee. In making his nominations the President shall endeavour to ensure a fair regional representation. No member of the Nominating Committee shall be

a candidate for election to the Executive Committee at the particular General Assembly concerned.

36. The Nominating Committee shall present to the General Assembly a list of candidates for election to the offices of President, President Elect, Secretary General and Treasurer and as members of the General Committee. The Nominating Committee shall, excluding the President, President Elect, the Secretary General and Treasurer, endeavour to present a list of candidates for submission to the General Assembly as representatives of National Members on the General Committee, so that a) there shall, normally, be not more than one elected member from a National Member, and b) there shall be a reasonable balance of scientific and regional interests.

XIII. DECISIONS OF THE GENERAL AND EXECUTIVE COMMITTEES

37. The Secretary General shall at all times keep Members of the Council informed of the important proposals, decisions, and actions of the General Committee and of the Executive Committee.

38. A record of the proceedings of the General Committee, and an audited statement of accounts, shall be communicated annually to each Member of the Council.

XIV. ALTERNATES AND OBSERVERS

39. Alternates to representatives on the General Committee are permitted in case of illness or other compelling circumstances, and subject to the approval of the President. Alternates shall be scientists familiar with the business involved, and preferably of the standing of an Officer of a Scientific Union.

40. Observers are permitted to attend meetings of the General Committee only on the invitation of the President. This restriction shall not apply where a separate formal agreement permits the attendance of observers of an external organization.

XV. SPECIAL AND SCIENTIFIC COMMITTEES, AND INTER-UNION COMMISSIONS OF THE COUNCIL

41. a) The General Committee may recommend to the General Assembly the creation of Special or Scientific Committees to facilitate and co-ordinate scientific activities on an international basis. It may also set up Inter-Union Commissions. Such Committees and Commissions shall function in accordance with rules adopted by the General Committee.

b) The Assembly shall approve the setting up of these bodies only if it is satisfied that no other means exist for achieving the specific objectives of the proposed Committee or Commission.

42. The Executive Committee has the right to send an observer to any meeting of the governing body of a Committee or Commission appointed by the Council.

43. The President shall request an observer of each Special and Scientific Committee, acting as a consultant, to attend meetings of the Executive Committee and General Committee at which matters of importance affecting these Committees are to be discussed.

XVI. LEGAL REPRESENTATION

44. The President, or, if he is not available, the President Elect, is the legal representative of the Council in its dealings with other organizations. In case of necessity, the President may entrust the Secretary General or another member of the Executive Committee to represent him in such dealings.

XVII. FINANCE

45. a) The funds of the Council are obtained from:

i) the dues of its Members,

ii) subventions, donations and legacies accepted by the Executive Committee on behalf of the Council, and

iii) revenue from capital investment.

b) Funds derived from donations accepted by the Council shall be used in accordance with the agreements made with the donors. A donation shall not be accepted if its acceptance could interfere with the true international spirit of ICSU's activities and the complete independence of its scientific policies.

46. a) Each Member of the Council shall pay annual dues within a range determined by the General Assembly.

b) National Associates and Scientific Affiliates pay no dues and have no voting rights.

47. In the event of resignation or cancellation of membership the Member concerned is liable to pay any dues owed including those for the current year.

Any Member that ceases to belong to the Council shall forfeit all rights to the assets of the Council from the moment of ceasing to be a Member.

48. In the event of the dissolution of the Council, its assets may not be distributed amongst the Members.

XVIII. LIABILITY

49. The liability of each Member of the Council is limited to the amount of that Member's dues.

50. The organisms of the Council may not incur expenditure in excess of the funds at their disposal.

XIX. MODIFICATION OF THE STATUTES

51. No change may be made in these Statutes except with the approval of the General Assembly by a two-thirds majority of the votes cast by the Members present and taking part in the vote.

Enabling Clause. The validity of these Statutes shall not be vitiated by any error of a formal or accidental nature.

RULES OF PROCEDURE

I. APPLICATION FOR MEMBERSHIP

1.1 a) Applications for membership and for Affiliate and Associate status must be addressed to the Secretary General.

b) A standing committee for the consideration of admissions shall be set up, consisting of the President and eight other members not necessarily members of the Executive Committee.

1.2 Application for membership as a National Member shall name the organization through which it is desired to adhere to the Council.

1.3 a) Application from a Scientific Union for membership must be accompanied by a copy of the Statutes of that Union and evidence of support from at least twelve National Members (see Statute 11).

b) The statutes of Scientific Unions seeking admission to the Council should:

i) indicate the objects of the Union,

ii) provide for the direction of the Union by a General Assembly of its members,

iii) indicate the scale of dues payable by national adhering organizations, and

iv) set forth the rules of voting.

1.4 Any application from a Union or a National Scientific Body for membership shall be communicated by the Secretary General to all Members of the Council and to the members of the Executive Committee.

II. OFFICERS OF THE COUNCIL

2.1 The President shall act as Chairman at all meetings of the General Assembly, of the General Committee and of the Executive

Committee. He shall be in charge of the implementation of the general policy of the Council.

2.2 On the advice of the Executive Committee he may invite any scientific person to an ordinary meeting of the General Assembly, the General Committee, or of the Executive Committee.

2.3 He may, with the consent of the Executive Committee, delegate some of his power to one or more Officers of the Council.

2.4 The President Elect shall deputize for the President when necessary.

2.5 a) The Secretary General shall be responsible for all matters concerning the administration of the Council, of the General Committee, and, in particular, for the conduct of correspondence, the preparation and distribution of publications authorized by the General Assembly or the Executive Committee, and the safe keeping of the archives of the Council.

b) He shall prepare an annual report on the Council's work, which shall be distributed to all Members of the Council.

2.6 a) The Treasurer shall be responsible for the finances of the Council, in accordance with the directives issued to him by the Executive Committee.

b) He shall submit annually to the Executive Committee and to the Members of the Council an audited statement of accounts.

c) He may in one financial year, without prior authorization, expend sums not budgeted for up to a total of $1000. Such expenditure shall be submitted to the Executive Committee for approval.

2.7 The Secretary General and the Treasurer shall be assisted by a full-time Executive Secretary and such other staff as may be approved by the Executive Committee. The salaries and terms of appointment of all members of the administrative staff shall be determined by the Executive Committee.

2.8 With the approval of the Executive Committee, responsibility for a particular duty normally discharged by the President, the Secretary General, or the Treasurer, may be delegated to other persons.

2.9 In the event of a vacancy arising on the General Committee through the death or incapacity of a representative of a National Member, the Executive Committee shall have the power to fill the vacancy for the unexpired term, after consultation with the National Member concerned. A Scientific Union has the power to fill any vacancy in its representation on the General Committee.

2.10 In the event of a vacancy arising among the ordinary members of the Executive Committee, through death or incapacity, the General Committee shall have the power to fill the vacancy for the unexpired term.

III. NOMINATION OF PRESIDENT, SECRETARY GENERAL, TREASURER, AND PRESIDENT ELECT

3.1 The Secretary General, on behalf of the Executive Committee, shall, at least six months in advance of an ordinary session of the General Assembly, invite Members to put forward names of candidates for the offices of President, Secretary General, Treasurer and President Elect. Each suggestion should be accompanied by biographical details and by an assurance that the candidate has agreed to serve if elected.

3.2 The Executive Committee shall propose at least one person for each of the four offices, and shall send its proposals, together with biographical details, to all Members of the Council four months in advance of an ordinary session of the General Assembly*.

3.3 Members may submit additional names up to two months in advance of an ordinary session of the General Assembly. Such proposals can be accepted only if accompanied by biographical details and by an assurance that the candidate has agreed to serve if elected.

3.4 The list of proposed names shall be distributed to all Members at least one month in advance of the date of the ordinary session of the General Assembly. At the time of the General Assembly the Nominating Committee shall review all proposals for the offices of President, Secretary General, Treasurer, and President Elect, taking into account the proposals made by the Executive Committee, and shall prepare a selected list of nominees for consideration by the Assembly. Additional nominations may be made from the floor from the list of names previously proposed, provided that each such nomination has the support of at least five Members.

3.5 Election of the President, Secretary General, Treasurer and President Elect by the General Assembly shall take place according to established voting procedures.

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* If a name is put before the Executive Committee for consideration before the Committee submits a list of candidates (as required by the Statutes) for the positions of President, Secretary General, Treasurer or President Elect, and it is not on the list, it may be formally proposed again, as required by Rule of Procedure 3.3.

3.6 Nominations for ordinary members of the Executive Committee should be formally proposed and seconded by members of the General Committee.

IV. ELECTION OF REPRESENTATIVES OF NATIONAL MEMBERS TO THE GENERAL COMMITTEE

4.1 The procedure for these elections shall be as follows:

i) in order to facilitate the choice of representatives of the National Members, the Scientific Unions shall notify the Secretary General, before the start of an ordinary session of the General Assembly, of the names of their representatives to serve on the General Committee for the following term;

ii) the Secretary General shall request all National Members to submit four months before an ordinary session of the General Assembly, the names of those scientists in their own country whom they wish to put forward as candidates for election to the General Committee. Each submission should be accompanied by biographical details and by an assurance that the candidate has agreed to serve if elected;

iii) the names of the members of the General Committee due to retire, the names of the representatives of the Scientific Unions, already nominated by the Unions, and the full list of names put forward by the National Members, shall be sent by the Secretary General to the members of the Nominating Committee at the beginning of an ordinary session of the General Assembly;

iv) the Nominating Committee shall select, from the names put forward by the National Members, a list of names for submission to the General Assembly equal in number to the number of vacancies;

v) other names, from among those already put forward by the National Members, may be added to the list in iv), on the proposal of any five Members represented at the General Assembly; and

vi) election shall be by secret ballot according to the established voting procedure.

V. VOTING PROCEDURES FOR ELECTIONS AND DECISIONS BY THE GENERAL ASSEMBLY

5.1 The election of the President, Secretary General, Treasurer and President Elect shall be by secret ballot, separately for each position to be filled.

5.2 The election of the representatives of the National Members on the General Committee shall be by secret ballot. Each voting Member shall vote for the same number of names as there are vacancies to be filled.

5.3 At each ballot the list of candidates shall be ordered according to the number of votes each receives and they shall be elected in that order, provided that no candidate shall be elected who has received less than half the total number of votes actually cast. If at any stage it becomes necessary to decide between candidates who have obtained the same number of votes, a separate ballot shall be taken. At any ballot in which no candidate has obtained the required majority, the candidate with the least number of votes shall be eliminated, and the voting continued.

5.4 All majorities are calculated on the basis of the total number of affirmative and negative votes actually cast; absences, failure to vote, and abstentions are not taken into account.

VI. QUORUM

6.1 In meetings of the Executive Committee or of the General Committee, half the membership shall constitute a quorum.

VII. REPORTS

7.1 The Scientific Unions, the Scientific and Special Committees and the Inter-Union Commissions set up under the terms of Statute 41 shall submit annual reports to the General Committee, as well as reports to the General Assembly. They shall submit in writing to the Secretary General, at least four months before a session of the General Assembly, reports on their activities since the last session of the General Assembly. The Secretary General shall send such reports to all Members of the Council when sending the Agenda for the General Assembly.

VIII. FINANCE

8.1 The Finance Committee appointed by the General Assembly shall consist of two representatives of the National Members, two representatives of the Scientific Unions, and the Treasurer, ex officio. The Committee shall examine the budget estimates for the ensuing period, together with the accounts for that preceding. This Committee shall submit separate reports on these two items to the General Assembly, which, after considering the reports, shall fix the range of dues of Members for the succeeding two years.

8.2 Any Member of the Council which is in arrears with its dues for two years shall have no voting power. It may be excluded from the Council by a decision of the General Assembly.

IX. NATIONAL ASSOCIATES AND SCIENTIFIC AFFILIATES

9.1 National Associates and Scientific Affiliates admitted under Statute 12, shall enjoy the privilege of participation in discussions of the General Assembly without the right to vote.

X. GENERAL PROVISIONS

10.1 These Rules of Procedure may not be amended except by the General Assembly, by a majority of two thirds of the Members present and taking part in the vote.

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUÉE

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

Secretary-General :

Dr. C.C. BUTLER, F.R.S.,
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Secrétaire général adjoint :

Prof. L. KERWIN, F.R.S.C.,
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Tél.: 418 - 656-2131

MEMO to Members of the Executive Committee of IUPAP
from Associate Secretary-General

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Enclosed please find the audited accounts of the Union for 1971 as well as a résumé of our operations for 1969-1971 which will be submitted to the General Assembly in Washington.

I propose to discuss the report briefly at the Brussels meeting in June.

Québec, March 22nd, 1972.

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUÉE

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

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NOTES on 1971 FINANCIAL STATEMENTS

A - BALANCE SHEET

1. Dues receivable
   Since January 1st, 1972, $1,200. of the $7,550. outstanding at that date has been paid.

2. Accounts payable
   This includes as in 1970 mostly unclaimed Commissions expenses. This surplus will be allotted to the unusual expenses for the 1972 General Assembly.

3. Differed income
   Dues prepaid by member countries for 1972.

B - INCOME and EXPENSES

1. Miscellaneous income
   Return of our 1970 subscription to ICSU.

2. Commission travelling
   This is the standard allotment to Commission, not all of which has been claimed. See above (2).

3. Commission travelling - special
   This consists of travelling expenses of individuals to inter-union activities (COSPAR, SCOPE, etc.).
   These activities are relatively expensive.

4. Subscriptions
   ICSU: $845. - CIES: $200. - ICSU-AB: $300.

5. Bank charge
   This is a net figure. It includes the various bank charges and exchange losses diminished by the amount of appreciation of our Canadian dollar received during the year.

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUEE
INTERNATIONAL UNION of PURE and APPLIED PHYSICS

ETAT DES REVENUS ET DEPENSES
STATEMENT OF INCOME AND EXPENSES

	1971	1970	1969	Total
REVENUS **INCOME**				
Subventions de l'I.C.S.U. Grants from U.N.E.S.C.O.	$ 13,125	16,000	16,125	45,250
Cotisations des pays membres Dues from member countries	50,250	42,250	42,000	134,500
Intérêt gagné Interest earned	1,605	1,040	1,000	3,645
Revenu divers Miscellaneous income	840	840	887	2,567
	65,820	60,130	60,012	185,962
DEPENSES **EXPENSES**				
Conférences subventionnées par l'I.C.S.U. Conferences subsidized by U.N.E.S.C.O.	13,125	16,000	16,125	45,250
Conférences subventionnées par l'U.I.P.P.A. Conferences subsidized by I.U.P.A.P.	30,575	18,600	15,875	65,050
Frais de déplacement - commissions - réguliers Travelling expenses - commissions - regular	7,500	7,500	6,700	21,700
Frais de déplacement - commissions - spéciaux Travelling expenses - commissions - special	3,696	1,778	-	5,474
Frais de déplacement - comité exécutif Travelling expenses - executive committee	5,128	7,376	7,637	20,141
Secrétariat et comptabilité Secretariat and accounting	3,074	2,898	1,400	7,372
Cotisations Subscriptions	1,145	1,140	1,040	3,325

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUEE
INTERNATIONAL UNION of PURE and APPLIED PHYSICS

ETAT DES REVENUS ET DEPENSES
STATEMENT OF INCOME AND EXPENSES

(suite...)

	1971	1970	1969	Total
Impression Printing	-	2,018	-	2,018
Buste - Professeur Bohr Bust - Professor Bohr	132	420	-	552
Vérification Auditing	223	214	207	644
Télécommunications Telephone, telegrams	95	50	32	177
Fournitures de bureau, papeterie Stationery	136	49	453	638
Frais bancaires et échange Bank charges and exchange	7	14	279	300
	64,836	58,057	49,748	172,641
REVENU NET DE L'ANNEE NET INCOME FOR THE YEAR	$ 984	2,073	10,264	13,321

FORTIER, LANGEVIN & ASSOCIÉS

COMPTABLES AGRÉÉS / CHARTERED ACCOUNTANTS

TROIS-RIVIÈRES
1350, RUE ROYALE - TÉL. 376-4477

CAP-DE-LA-MADELEINE
399-A, BOUL. STE-MADELEINE - TÉL. 375-8996

PIERRE FORTIER, C.A.
GABRIEL PELLERIN, C.A.
RENE MONTREUIL, C.A.

JACQUES R. LANGEVIN, C.A.
GILLES MORIN, C.A.
LÉON CADIEUX, C.A.

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUEE

ETATS FINANCIERS

AU 31 DECEMBRE 1971

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

FINANCIAL STATEMENTS

AS AT DECEMBER 31, 1971

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUEE
INTERNATIONAL UNION of PURE and APPLIED PHYSICS

Bilan au 31 décembre 1971
Balance sheet as at December 31, 1971

ACTIF
ASSETS

	U.S. Dollars	
ENCAISSE ET CERTIFICAT DE DEPOT **CASH AND DEPOSIT CERTIFICATE**		
3,796.04 dollars canadiens	$ 3,758.08	
52,431.39 dollars américains	52,431.39	
		$ 56,189.47
ÇOTISATIONS A RECEVOIR **DUES RECEIVABLE**		7,550.00
		$ 63,739.47

PASSIF
LIABILITIES

COMPTES A PAYER ET DEPENSES ENGAGEES **ACCOUNTS PAYABLE AND ENCUMBRANCES**		$ 6,996.10
REVENU DIFFERE **DIFFERED INCOME**		800.00
AVOIRS **SURPLUS**		
Solde au 31 décembre 1970 Balance as at December 31, 1970	$ 54,959.57	
Ajouter: Revenu net de l'année Add: Net income for the year	983.80	
Solde au 31 décembre 1971 Balance as at December 31, 1971		55,943.37
		$ 63,739.47

ETAT DES REVENUS ET DEPENSES
STATEMENT OF INCOME AND EXPENSES

pour l'année terminée le 31 décembre 1971
for the year ended December 31, 1971

REVENUS
INCOME

Subventions de l'I.C.S.U. Grants from U.N.E.S.C.O.	$ 13,125.00	
Cotisations des pays membres Dues from member countries	50,250.00	
Intérêt gagné Interest earned	1,605.25	
Revenu divers Miscellaneous income	840.00	
		$ 65,820.25

DEPENSES
EXPENSES

Conférences subventionnées par l'I.C.S.U. Conferences subsidized by U.N.E.S.C.O.	13,125.00	
Conférences subventionnées par l'U.I.P.P.A. Conferences subsidized by I.U.P.A.P.	30,575.00	
Frais de déplacement - commissions - réguliers Travelling expenses - commissions - regular	7,500.00	
Frais de déplacement - commissions - spéciaux Travelling expenses - commissions - special	3,695.60	
Frais de déplacement - comité exécutif Travelling expenses - executive committee	5,128.00	
Secrétariat et comptabilité Secretariat and accounting	3,074.16	
Cotisations Subscriptions	1,145.00	
Buste - Professeur Bohr - transport Bust - Professor Bohr - freight	132.41	
Vérification Auditing	222.75	
Télécommunications Telephone, telegrams	94.84	
Fournitures de bureau Stationery	136.35	
Frais bancaires et échange Bank charges and exchange	7.34	
		64,836.45

REVENU NET DE L'ANNEE NET INCOME FOR THE YEAR	$ 983.80

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUÉE

COTISATIONS DES PAYS MEMBRES

	Unités 1971	Solde à recevoir 31-12-70	Cotisations 1971	Montants reçus	Solde à recevoir 31-12-71
Afrique du Sud	1	$	$ 300	$ 300	$
Allemagne Est	4		1,200	1,200	
Allemagne Ouest	12		3,600	3,600	
Argentine	2		600	600	
Australie	6		1,800	1,800	
Autriche	1		300	300	
Belgique	4	1,000	1,200	2,200	
Bolivie	1		300		300
Brésil	2		600	600	
Bulgarie	1	250	300	550	
Canada	8		2,400	2,400	
Chine de Formose	1		300	300	
Corée	1		300		300
Cuba	1		300	300	
Danemark	3		900	750 (1)	150
Espagne	4		1,200	1,200	
Etats-Unis	18	1,200	5,400	6,600	
Finlande	1		300	300	
France	12		3,600	3,000 (1)	600
Grande Bretagne	15		4,500	4,500	
Hollande	4		1,200	1,200	
Hongrie	2		600	600	
Indes	4		1,200	1,200	
Irlande	1		300	300	
Israël	2	500	600	1,100	
Italie	12	3,000	3,600	3,000	3,600
Japon	8		2,400	2,400	
Mexique	2		600		600
Norvège	3		900	900	
Pakistan	1	500	300		800
Pologne	4		1,200	1,200	
République Arabe Unie	1	250	300	250	300
Roumanie	3		900		900
Suède	8		2,400	2,400	
Suisse	2		600	600	
Tchécoslovaquie	3		900	(1970) 900	
U.R.S.S.	12		3,600	3,600	
Yougoslavie	1	750	300		1,050
	171	7,450	51,300	50,150	8,600
Moins: Pakistan	1		300		300
	170	7,450	51,000	50,150	8,300
Moins: Cotisations remises (1)			750		750
	170	$ 7,450	$ 50,250	$ 50,150	$ 7,550

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUEE

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

Nous avons examiné le bilan de l'Union Internationale de Physique Pure et Appliquée au 31 décembre 1971, et l'état des revenus et dépenses pour l'année terminée à cette date. Notre examen a comporté une revue générale des procédés comptables et tels sondages des livres, pièces et autres documents à l'appui que nous avons considérés nécessaires dans les circonstances.

A notre avis, le bilan et l'état des revenus et dépenses ci-annexés présentent équitablement la situation financière de l'Union Internationale de Physique Pure et Appliquée au 31 décembre 1971 ainsi que les résultats de ses opérations pour l'année terminée à cette date, conformément aux principes comptables généralement reconnus, appliqués de la même manière qu'au cours de l'année précédente.

Fortier, Langevin & Associés
Comptables agréés

Trois-Rivières, Qué.
le 13 mars 1972.

We have examined the balance sheet of International Union of Pure and Applied Physics as at December 31st 1971, and the statement of income and expenses for the year ended on that date. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion the accompanying balance sheet and statement of income and expenses present fairly the financial position of the International Union of Pure and Applied Physics as at December 31st 1971, and the results of its operations for the year ended on that date, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Fortier, Langevin & Associés
Chartered accountants

Trois-Rivières, Qué.
March 13th, 1972.

PHYSIQUE INTERNATIONALE

February 1972 No. 28 Special Bulletin Spécial No 28 Février 1972

INTERNATIONAL PHYSICS

UNION OF PURE AND APPLIED

Le printemps dernier, nous avons publié une liste d'adresses à corriger dans la brochure UIPPA-16. Voici de nouvelles corrections à y apporter:

page 101: Prof. Robert F. BACHER
Downs Laboratory of Physics
California Institute of Technology
Pasadena, California 91109, USA.

Prof. W. DEKEYSER
Laboratorium voor Kristallografie
Krijgslaan 271
B-9000 Gent, BELGIUM.

page 103: Argentina:
Dr. Alberto F. BONFIGLIOLI
Secrétaire général
Asociacion Fisica Argentina
Avenida Santa Fé 1145
Buenos Aires, ARGENTINA.

Austria:
Dr. Norbert PUCKER
Executive Secretary
Austrian Society of Physics
c/o Institut für Theoretische Physik
Universitätsplatz 5/I
A-8010 Graz, AUSTRIA.

page 104: France:
Monsieur J. BADOZ
Laboratoire d'Optique physique
Ecole supérieure de Physique et
Chimie industrielles
10, rue Vauquelin
75 Paris 5e, FRANCE.

East Germany:
change for - changer pour:
GERMAN DEMOCRATIC REPUBLIC.

West Germany:
change for - changer pour:
FEDERAL REPUBLIC of GERMANY.

Last March, we issued a list of corrected addresses to be noted in IUPAP-16. Here are a few other ones.

page 105: Dr. N. KAPLAN
Secretary - Nat. Committee for IUPAP
The Hebrew University of Jerusalem
Jerusalem, ISRAEL

page 106: România:
Prof. A. CORCIOVEI
Institute for Atomic Physics
P.O. Box 35
Bucuresti, ROMÂNIA.

Switzerland:
Prof. H.H. STAUB
Physik-Institut der Universität
Schönberggasse 9
Zürich 8001, SWITZERLAND.

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page 113: Solid State Commission:
Dr. Walter BOAS
Department of Metallurgy
University of Melbourne
Parkville, Victoria 3052, AUSTRALIA.

page 115: Nuclear Physics Commission:
Prof. R.E. BELL
Principal and Vice-Chancellor
McGill University
P.O. Box 6070
Montréal 101, P.Q., CANADA.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

2/23 1972

Memo to Viki Room Ext.

I have sent a copy of this letter to Sandy Brown, since he seems to be the relevant person.

from Teny Room Ext.

MURAN BOSTON

UNION INTERNACIONALE
DE PHYSIQUE PURE ET APPLIQUÉE
COMITE ESPAÑOL

February 15, 1972.

Prof. V. Weiskope
Department of Physics
Massachusetts Institute of Technology
Cambridge, Mass 02139
U. S. A.

Dear Prof. Weiskope,

I have pleasure in informing you that I have been choosen President of the Spanish Committee of the I.U.P.A.P.. My teaching and research activities range in the field of Solid States Physics, in particular, crystal defects and thin films utilizing techniques of electron diffraction and electron microscopy.

It is my greates wish that there exist a strong colaboration between the Spanish Committee, and the I.U.P.A.P. Executive Committee.

I have the intention to attend the conference held in Kiel on July 20-26 of this year, and also the general assembly to be held on the 21st of September (Washington?).

Thank you and best regards, I am,

Yours very sincerely,

Prof. L. Bru.

PHYSICS DEPT.
M. I. T.
FEB 22 1972
COPY TO Dean Brown
FWD. TO
FILE

LB/mta.

RECEIVED
FEB 10 1972
DIVISION OF PHYSICAL SCIENCES

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

News-Bulletin No. 27 February 1972

INTERNATIONAL CONFERENCES

Readers should consult the list published in News-Bulletin No. 25 (October 1971) and containing pertinent addresses. They are reminded of the coming Spring meetings:

No. 6 :	THIN FILMS	May 15-19 Venice
No. 7 :	VAPOUR GROWTH & EPITAXY	May 22-25 Jerusalem
No.14 :	HADRONIC COLLISIONS	April 5-7 Oxford
No.20 :	INNER SHELL IONIZATION	April 17-21 Atlanta
No.25 :	OPTICS, GUIDED WAVES	February 7-9 Nevada

ADDENDUM

A 26th International Conference has received IUPAP sponsorship for 1972. Recommended by the Commission for Nuclear Physics, it is:

No.26 : NUCLEAR STRUCTURE STUDY with NEUTRONS — July 31-Aug.5 Keszthely, HUNGARY

inf.: Prof. D. KISS,
Central Research Inst. of Physics,
P.O. Box 49,
Budapest 114, HUNGARY.

COSPAR and PHYSICS

Vice-President Bhagavantam, IUPAP's delegate to COSPAR, advises that the XVth meeting of this group will take place in Madrid, May 15-24, 1972. The working groups and symposia will cover a wide range of topics, many of particular interest to physicists, such as:

- lunar laser ranging;
- magnetosphere physics;
- solar electron events;
- neutral properties of the upper atmosphere.

National Committees for IUPAP are reminded of the need to work closely with the National Committees for COSPAR and to publicize the XVth meeting. They should contact the COSPAR committees or write write to:

Dr. L. deAZCARRAGA
COSPAR
Apartado de Correos 8454
Madrid 8, SPAIN.

MUCH ACTIVITY at ICSU/AB

ICSU's Abstracting Board project for establishing a world-wide system for abstracting and indexing (see News-Bulletin No. 18, September 1970) had made considerable progress.
Union representative H.W. KOCH attended the meeting at Orléans in July 1971 where 12 abstracting services (up one from 1970), 7 Union representatives and 3 national representatives (a new feature: more will be added) spent a week detailing plans for the project.
This calls for one major service per official language per discipline. Thus for Physics, the services will be:

English: Physics Abstracts
German: Physikalische Berichte
French: Bulletin signalétique
Russian: Referativny Zhurnal

The meeting took other actions including a decision to continue emphasis on science. However it is hoped to add technology if the World Fed. of Engineers joins the group. Working out means of effecting input cooperation among the services was examined in detail.

CODATA and PHYSICS RESULTS

ICSU's Committee on Data for Science and Technology has been getting down to cases and an example is its consideration of the problem of compilation of High Energy Physics results. The status of compilation of such data from the Particle Data Group at Berkeley and the European HERA Group based at CERN was analyzed for CODATA by Dr. D.R.O. Morrison of CERN. A résumé may be found in the June 1971 CODATA Newsletter which also contains many references to data compilations in other fields of Physics.

NOISE POLLUTION

The ICSU Special Committee on Problems of the Environment has now tackled the noise problem. IUPAP delegate to SCOPE, Dr. A. Lara Saenz, reports that the Canberra meeting accepted the draft proposals on the problem framed by the International Congress of Acoustics last August. The January meeting of SCOPE is considering the details of the program.

RECEIVED
FEB 10 1972
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PHYSIQUE INTERNATIONALE

February 1972 No. 28 Special Bulletin Spécial No 28 Février 1972

INTERNATIONAL PHYSICS

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Prof. R.E. BELL
Principal and Vice-Chancellor
McGill University
P.O. Box 6070
Montréal 101, P.Q., CANADA.

FEDERATION OF AMERICAN SCIENTISTS
203 C Street, N. E.
Washington, D. C. 20002
Code (202) 546-3300

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MEMORANDUM

January 26, 1972

TO: Council Members and Executive Committee Members

FROM: Jeremy J. Stone

We are sending you these things for your consideration and/or approval, and for keeping in your files.

1. Some comments of Michael Goldhaber which were made at the Council meeting and which it was agreed at that time would be circulated.

2. Copies of the Constitution of FAS and its bylaws--the latter have some minor changes in them, e.g. substitution of Director for "newsletter editor", a final clause permitting me to act in emergencies that is parallel to the delegation clause in the constitution permitting the Council to delegate to the Executive Committee. As our membership grows, demand for our Constitution and bylaws grows. I want to consider the bylaws as amended approved by the Council. Therefore please communicate any objections to me. If they are O.K., as I anticipate, or if they can be ironed out, I would like to consider them approved by a mail ballot.

JJS:nth
Enclosures

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Form for suggesting the name of a physicist for consideration for filling a vacancy either on the IUPAP Executive or on one of the Commissions

1. Name of National Committee or Commission making suggestion

2. Suggested Office (for example position on Executive or position on a particular Commission)

3. Name of candidate (and title, e.g. Dr. or Professor) 4. Age

5. Present appointment

6. Full address

7. Brief biographical details of candidate, indicating expertise in physics (not more than 50 words)

8. Signed :

9. On behalf of :

10. If the recommendation is made on behalf of a Commission has the candidate's National Committee approved?

Yes/No

Notes: Forms must reach the Secretary-General by May 15th 1972.
Please complete a separate form for each name suggested.
Please complete form in Typescript.
Please indicate clearly in (9) whether the form is signed on behalf of a National Committee or a Commission.
Please indicate clearly in (2) whether suggested name is for a particular office on Executive or on a Commission (e.g. for the latter Chairman, Secretary or member).

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

To National Committees for Physics and to Commissions from the Secretary-General

Possible changes in election procedures for use at the 1972 and subsequent General Assemblies

1. At their 1970 meeting in Copenhagen the Executive Committee of IUPAP reviewed the arrangements adopted at recent General Assemblies for the appointment of Executive Committee and Commission Members. They felt that the time had come when some changes in the procedures should be considered.

2. The attached paper sets out the views of the Executive and suggests a possible new procedure for elections.

3. I should be most grateful to receive the comments of your National Committee or Commission by the end of May 1971.

The Executive plans to meet in Dublin in September 1971 when they will revise their proposals taking into account the comments of National Committees and Commissions.

4. If the Executive receive sufficient encouragement, they will formally propose new election procedures for use at the 1972 Assembly. In the event, a formal Extraordinary General Assembly will be held the day before the normal 1972 Assembly to consider the new scheme and, if it is adopted, to modify the Statutes. The new scheme could then be used at the 1972 Assembly. The Executive will inform you of the final proposals towards the end of 1971 or early in 1972.

C. C. Butler,
Secretary-General,
Nuffield Lodge,
Regent's Park,
London N. W. 1.

February 15th, 1971. Tel: 01 722 8871

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Possible new arrangements for the appointment of Executive Committee and Commission Members at General Assemblies

1. Introduction

At its 1970 meeting in Copenhagen the IUPAP Executive Committee reviewed the arrangements adopted at recent General Assemblies for the appointment of Executive Committee and Commission Members. They noted that some physicists at the 1969 General Assembly in Dubrovnik were somewhat concerned when a number of additions to commissions were proposed from the floor but no formal elections were held. The Executive considered a new election scheme suggested by the Secretary-General and, after agreeing a number of modifications, they decided to seek opinions from National Committees and Commissions.

The Executive hope that IUPAP Members and Commissions will consider (probably by correspondence) the proposed scheme during the first half of 1971 and submit written comments and amendments to the Secretary-General by the end of May. The Executive plan to meet in Dublin in September, 1971, when they will reconsider their proposals in the light of the comments available. If they receive sufficient encouragement, the Executive will formally propose new election procedures for use at the 1972 Assembly. In this event, an Extraordinary General Assembly will be held immediately before the normal 1972 Assembly in order to consider the new scheme and, if it is adopted, to amend the Statutes accordingly. It should then be possible to use the new scheme at the 1972 Assembly.

In order to set the scene, the procedures used recently are described briefly in paragraphs 2 and 3, and a possible new scheme is outlined in paragraphs 4 and 5.

2. The present procedure - Executive Committee

The Statutes provide for a President, the Immediate Past-President, a First Vice-President (who acts for the President in his absence), an unspecified number of Vice-Presidents and a Secretary-General. The Executive is appointed by the General Assembly and serves for 3 years. The President serves for a maximum of 3 years and Vice-Presidents for a maximum of 6 years. By custom the First Vice-President succeeds the President; he may be chosen from among the Vice-Presidents or appointed directly to the office of First Vice-President.

In 1963 the Executive appointed Professor Kerwin as Associate Secretary-General.

Approximately 9 months before a General Assembly, National Committees are asked for nominations for the office of First Vice-President and for Vice-Presidents. Proposals must be sent to the Secretary-General 3 months before the Assembly. A list of all proposals is published at the beginning of the Assembly.

The outgoing Executive meets just before the Assembly and prepares its list of candidates for vacancies on the Executive, taking account of all the proposals received, the needs of the Union and the necessary world-wide distribution of the Executive membership. The Executive list is also published at the beginning of the Assembly and, in practice, is usually confirmed at the last session of the Assembly. In recent years formal elections have not been necessary as no additional or alternative names have been proposed from the floor of the Assembly. Perhaps the major difficulty is that the number of Vice-Presidents is not fixed, which would make formal voting on any proposals somewhat awkward.

3. The present procedure - Commissions

Commissions consist of a Chairman, a Secretary, a number of members and provision is made for corresponding members. The Statutes do not fix the sizes of commissions. The 1960 General Assembly, however, decided that the membership should be limited to 6 or 7, together with a small number of corresponding members. The corresponding members were envisaged as advisers to the commission to which they were attached. They were not entitled to attend commission meetings except as alternates for full members.

Commissions are appointed for 3 years but there are no strict rules about the total length of service of commission members - 6 years is regarded as the normal period but some members serve for very much longer.

The method of appointment at General Assemblies is as follows:-

(a) Nine months before the General Assembly the Secretary-General calls for nominations from National Committees and from the retiring Commissions.

(b) The full list of nominations is published at the beginning of the Assembly.

(c) The retiring Executive draws up its recommended list of commission members which is also published at the beginning of the Assembly. The appointment of commission members takes place during the last session of the Assembly. In practice, the Assembly accepts the Executive list but often adds names, particularly as corresponding members. Thus the number of corresponding members has grown considerably since 1960, i. e. from 1 or 2 to 6 or 7 per commission.

Nominations from the floor of the Assembly are valuable but cause considerable problems. Firstly, the names proposed may not be generally known to the Assembly and consequently it is difficult for members to make significant judgments. Secondly, considering that in

practice there is no real difference between ordinary and corresponding members, the size of some commissions has become unwieldy. Furthermore, the secretariat often have considerable difficulty in obtaining the addresses of the physicists added to the Executive List by the Assembly.

The main difficulty with the present procedure is that the number of commission members is not fixed in the Union Statutes; thus it is difficult to hold formal ballots for a specified number of vacancies.

4. A suggested procedure for the future - Executive Committee

At its 1970 meeting in Copenhagen the Executive decided to recommend for discussion the following proposals:-

(a) The composition of the Executive should be President, Immediate Past-President, First Vice-President, 8 Vice-Presidents, Secretary-General and Associate Secretary-General. (This is the present size of the Executive.)

(b) The length of service of the President, Immediate Past-President and First Vice-President to be 3 years - as at present. Vice-Presidents to serve for 3 years with the possibility of one further term of 3 years - i.e. a maximum of 6 years. The Executive did not decide on fixed terms of service for the Secretary-General and the Associate Secretary-General.

Nominations would be called for from National Committees as at present and the full list of names published at the beginning of the Assembly. Names and full addresses, together with a brief statement on the candidates' professional experience and position, would be required on a special form.

The retiring Executive would publish its list at the beginning of the Assembly, bearing in mind all the nominations received and the need to have an Executive composed of distinguished physicists expert in a wide variety of specialities within physics and also reasonably representative of physicists throughout the world.

Additional names could be added to the Executive List after being proposed and seconded by National Delegations. Both proposer and seconder must come from different countries and neither may belong to the candidate's own country. If additional names are duly proposed and seconded, a secret ballot would be held, following the voting procedures established in the existing Union Statutes, i.e. voting by National Delegations according to the numbers of votes prescribed for each delegation.

5. A suggested procedure for the future - Commission Members

The Executive recommends the following arrangements:-

(a) Each Commission should consist of a Chairman and Secretary together with 7 to 10 ordinary members. It would avoid complications,

however, if all commissions could be fixed at the same size, say, 10 members.

(b) The appointment of corresponding members should be discontinued.

(c) Normally, not more than one ordinary member of a Commission to come from any one country.

(d) The actual number of ordinary members to be fixed for each commission by the General Assembly, after receiving the advice of the Commission and the Executive Committee and before voting for members. (This complication would be avoided if the size of all Commissions could be the same.)

(e) Ordinary members would serve for 3 years and may be appointed for one further period of 3 years. Exceptionally, and for certain commissions only, e.g. SUN and Atomic Masses and Related Constants, a longer period of service may be permitted.

(f) The Chairman and Secretary would normally serve for 3 years (usually after 3 years as an ordinary member or exceptionally after 6 years).

The Election procedure would follow broadly the one proposed for the appointment of the Executive Committee. The essential steps would be the following :-

(i) First-round nominations would be requested by the Secretary-General from both Commissions and National Committees, with a deadline of 3 months before the General Assembly. All nominations would be published at the beginning of the Assembly. Names and full addresses, together with a brief statement on the candidate's professional experience and position, would be required on a special form.

(ii) The Executive Committee would publish its list of commission members early in the Assembly.

(iii) Additions to the Executive List can then be proposed - both proposer and seconder must come from two different countries, other than that of the nominee.

(iv) If additions to the Executive list for a commission are proposed and seconded, a secret ballot for the agreed number of places on that particular commission will be held and the results announced at the last session of the Assembly.

6. Summary of Proposals

The recommendations made in this paper can be summarized as follows:-

(i) The size of the Executive is fixed and terms of office are fixed for all

the members, other than the Secretary-General and Associate Secretary-General.

(ii) The size of each Commission would be fixed and terms of office of the members are fixed (allowing for a few exceptional cases).

(iii) The grade of corresponding member of commissions is abolished.

(iv) Nomination procedures are clearly established.

(v) Formal elections will be held, if required, according to the rules laid down in the Union Statutes.

Nuffield Lodge,
Regent's Park,
London, N.W.1.

Dr. C.C. Butler, FRS
Secretary-General, IUPAP

February 1971

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Proposed arrangements for the appointment of Executive and Commission Members

An introductory note

(1) At their 1970 meeting in Copenhagen the Executive Committee decided to propose changes in the election procedure for Executive and Commission members for consideration by National Committees and Commissions. They reached this view because many physicists present at the 1969 General Assembly in Dubrovnik were unhappy with the election arrangements. A paper, dated February 1971, describing the proposals was circulated to National Committees and Commissions, and during the summer of 1971 the Secretary-General received very many useful and constructive comments. The Executive met in Dublin in September 1971, and re-considered their proposals in the light of all the comments received. After a very thorough discussion the Executive decided to make a number of changes to their February 1971 proposals. They now submit the attached proposals for consideration at the beginning of the 1972 General Assembly to be held at Washington.

(2) The three most important impressions formed by the Executive from the comments they received are :

(i) All commentators agree that the Executive and Commissions should be fixed in size to simplify the holding of formal elections.

(ii) The majority of correspondents accept the abolition of the "Corresponding Member" grade for Commissions.

(iii) The final decisions on appointments must continue to be made by National Committees of Physics, through their Delegations at General Assemblies.

(3) The Executive members present at Dublin (all except Professors Blokhintsev, Bernardini and Pal) were unanimous that the procedure leading up to the appointments by the Assembly must provide an opportunity for the Commissions to express their views, and to suggest names to fill their vacancies. The Executive considers it essential that the Commissions should feel involved in IUPAP, otherwise a number might elect to become independent bodies such as the existing International Committee on Relativity. This Committee is not formally affiliated to IUPAP but often receives IUPAP grants for its conferences. The Executive feels that the wish of the Commissions can best be taken into account by continuing the procedures adopted in recent

years. Namely, the Executive notes and circulates all the names suggested by National Committees and Commissions and prepares its recommendations as required by IUPAP Statute 8. The General Assembly has full powers to alter the Executive recommendations by formal vote.

(4) The new proposals attached to this note are not in contradiction with the Statutes of IUPAP which can be found in document IUPAP-16, published in 1970.

(5) At their Dublin meeting the Executive recognised that the Statutes are somewhat out-of-date and are imprecise on many important points. They decided to embark on a preliminary re-drafting of the Statutes, following the general format of the ICSU Statutes and Rules of Procedure. Most of the new proposals for conducting elections would probably be incorporated in Rules of Procedure, which we do not have at present. It should be possible to circulate drafts of the Statutes and Rules of Procedure well before the 1975 General Assembly.

(6) As an exceptional measure the Executive has decided to hold a Special Meeting in Brussels in June 1972.

(7) The deadline for the receipt of names for consideration by the Executive will be May 15th, 1972 in London. This will be a final deal line and late suggestions will be disregarded. The Executive's recommendations will be circulated to National Committees in July 1972.

(8) Commissions are asked to make recommendations about the numbers of members they need for their work to the Secretary-General by May 15th, 1972.

(9) It will not be possible to define the number of vacancies on Commissions until the sizes are fixed. There will be four vacancies on the Executive Committee (instead of Bernardini, Bhagavantam, Boas and Dekeyser) and additionally a First Vice-President will be needed (instead of Maier-Leibnitz who, following precedent, will become President for 1972-1975).

(10) Special Forms for making suggestions for membership of the Executive and Commissions are attached. Further copies can be obtained on application.

January 1972

C. C. Butler
Secretary-General

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

MEMORANDUM

To : Members of the Executive Committee

From : Secretary-General

Proposed changes in the Election Procedures

1. I have now prepared a new version of proposed arrangements for the election procedures to be used at Washington. The new version incorporates many valuable suggestions I received from members of the Executive. Copies are attached.

2. Because of the importance of the May 15th dead line I have sent out the papers to National Committees and Commissions.

3. The President has agreed that we should hope to operate the new scheme under the present Statutes in 1972 and plan for new Statutes and Rules of Procedure to be formulated in good time for the 1975 Assembly. Professor Bacher was anxious that we should not blatantly contravene the existing statutes. For this reason the present titles of members of the Executive have been retained, as has the office of Past President. These offices are provided for in Statute 5. The Associate Secretary-General is not mentioned in the Statutes but we have had one since 1960 so I feel we can ignore this minor procedural point.

C. C. Butler

20th January, 1972

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Proposed arrangements for the appointment of Executive and Commission Members

An introductory note

(1) At their 1970 meeting in Copenhagen the Executive Committee decided to propose changes in the election procedure for Executive and Commission members for consideration by National Committees and Commissions. They reached this view because many physicists present at the 1969 General Assembly in Dubrovnik were unhappy with the election arrangements. A paper, dated February 1971, describing the proposals was circulated to National Committees and Commissions, and during the summer of 1971 the Secretary-General received very many useful and constructive comments. The Executive met in Dublin in September 1971, and re-considered their proposals in the light of all the comments received. After a very thorough discussion the Executive decided to make a number of changes to their February 1971 proposals. They now submit the attached proposals for consideration at the beginning of the 1972 General Assembly to be held at Washington.

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(8) Commissions are asked to make recommendations about the numbers of members they need for their work to the Secretary-General by May 15th, 1972.

(9) It will not be possible to define the number of vacancies on Commissions until the sizes are fixed. There will be four vacancies on the Executive Committee (instead of Bernardini, Bhagavantam, Boas and Dekeyser) and additionally a First Vice-President will be needed (instead of Maier-Leibnitz who, following precedent, will become President for 1972-1975).

(10) Special Forms for making suggestions for membership of the Executive and Commissions are attached. Further copies can be obtained on application.

January 1972

C. C. Butler
Secretary-General

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Arrangements for the Appointment of Executive and Commission Members at General Assemblies

Proposals by the Executive Committee for consideration and adoption (if approved) at the 1972 General Assembly.

1. The Executive Committee

1.1 The Executive Committee will consist of the following members:

President
Past-President
First Vice-President
8 Vice-Presidents
Secretary-General
Associate Secretary-General

1.2 The eight Vice-Presidents will be appointed for 3 years and will be eligible for one further period of 3 years.

1.3 The First Vice-President will be appointed for 3 years and will be the President-Elect.

1.4 The President will serve for 3 years and will be succeeded by the First Vice-President.

1.5 The Secretary-General and the Associate Secretary-General will be appointed for 3 years and will be eligible for a maximum of 3 terms, i.e. 9 years in all. (It is expected that in practice service will be for longer than 3 years and that arrangements must be made to avoid the possibility of two Secretaries taking office at the same time, i.e. appointment of new Secretaries will be either 3 or 6 years apart.)

The precise division of administrative duties between the two Secretaries will be decided from time to time by the Executive Committee.

Note: The Statutes do not provide explicitly for the office of an Associate Secretary-General. The 1963 Assembly appointed Professor Kerwin to this office and the present Executive wish the post to continue. At the next revision of the Statutes the Assembly will be advised to provide for an Associate Secretary-General.

2. The Commissions

2.1 Each Commission will consist of:

Chairman
Secretary
5 to 10 members as needed for the work of the Commission

Commissions will be asked to recommend their appropriate size to the Executive Committee who will, in turn, make recommendations to the General Assembly. The General Assembly will fix Commission sizes before elections take place (circumstances may require that the sizes be changed from time to time).

2.2 Terms of office for members (excluding Chairman and Secretary)

Commission members will be appointed for 3 years and will be eligible for one further term of 3 years. Exceptions to this rule will be permitted for members of the S. U. N. Commission and the Atomic Masses Commission, both of which have very specialised tasks and undoubtedly have a need for some of their members to serve longer than 6 years.

The members of each Commission (excluding Chairman and Secretary) must all come from different countries adhering to IUPAP. The work of a few Commissions may be hindered by this rule, for example Particles and Fields. They may present their case to the Executive and, if approval is given, the Executive will make a recommendation to the General Assembly for ratification before the elections take place.

2.3 Terms of office for Chairmen of Commissions

Chairmen will be appointed for 3 years, normally after 3 (or exceptionally 6) years as a member of their Commission. If the appointment is made from outside the Commission the Chairman will become an ordinary member for 3 years after his 3 years as Chairman.

2.4 Terms of office for Secretaries of Commissions

Secretaries will be appointed for 3 years after 3 years service on the Commission. Secretaries will be eligible for a reappointment for a second, and final, cycle of 3 years, i.e. 6 years will be the maximum service as Secretary.

2.5 When new Commissions are established ad hoc arrangements will need to be made until a proper rotation of membership can be obtained.

2.6 Some Commissions have established valuable links with other Unions. They may wish to ask these Unions to nominate experts in their fields to become Associate Members of the IUPAP Commissions. These members would be additional to the fixed number of IUPAP members. Associate Members will not be

eligible for IUPAP grants towards travelling and subsistence expenses when attending IUPAP Commission meetings. They will not have a vote at Commission meetings.

3. Election Procedure for Executive Committee

3.1 National Committees will be invited to submit names of physicists willing to serve to the Secretary-General 4 months before each General Assembly. Each suggested name must be accompanied by brief details of the physicist's career and post currently held. A special form will be provided for this purpose. The Secretary-General (or Associate Secretary-General) will circulate all the names received by the dead line to National Committees approximately 3 months before the General Assembly.

3.2 The Executive Committee will carefully consider all the suggested names (and may itself suggest names), and will prepare, as a basis for discussion at the Assembly, a list of names to fill vacancies. Besides considering all the suggested names, the Executive will consider the needs of the Union, the spread of physics expertise within the Executive and the necessary world-wide distribution of the Executive membership. The Executive will publish its prepared list of physicists to fill the vacancies as early as possible but not later than the beginning of the General Assembly.

3.3 National Delegations attending the Assembly will be able to add names, from the first list of suggested names, to the Executive list. At this stage each proposal must be seconded by another Delegation. If the candidate is not a member of the proposer's country, then the permission of the candidate's National Delegation must be obtained before the proposition can be made. A convenient deadline (about mid-way through the Assembly) will be fixed for the receipt of formal proposals, duly seconded.

3.4 If more names are proposed, either by the Executive or by National Committees, than the number of vacancies to be filled, then a secret ballot will be held. Voting will be by heads of Delegations completing the number of ballot forms corresponding to the number of votes allotted to their Delegation.

3.5 If one or more vacancies occur on the Executive between meetings of the General Assembly, the Executive is empowered to fill them. Members appointed to these vacancies will serve until the next General Assembly. In the event of their being reappointed by the Assembly, the initial period of service will not count towards the maximum permitted length of service.

4. Election Procedure for Commission Members

4.1 National Committees and Commissions will be invited to suggest names for membership (including the offices of Chairman and Secretary) of Commissions to the Secretary-General up to four months before the General Assembly. Each name submitted must be accompanied by brief details of the physicist's career and post currently held, and, for names submitted by Commissions, it is desirable that the permission of the candidate's National Committee should be obtained. A special form will be provided for this purpose. The Secretary-General (or Associate Secretary-General) will circulate all the names received by the deadline to National Committees approximately 3 months before the General Assembly.

4.2 The Executive Committee will consider all the suggested names (and may itself suggest names) and will subsequently prepare, as a basis for discussion at the Assembly, a list of names to fill the vacancies on the Commissions. In preparing the lists of names for Commissions the Executive will endeavour to ensure a satisfactory world-wide apread of Commission membership. The Executive will publish their proposed list of Commission members as early as possible but not later than the beginning of the General Assembly.

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4.4 If more names are proposed and seconded than the number of vacancies to be filled on one or more Commissions, then secret ballots will be held. The voting procedure will be the same as the one adopted for choosing Executive Committee members.

4.5 The procedure for filling casual vacancies on Commissions which occur between meetings of the General Assembly will be the same as for casual vacancies on the Executive Committee.

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Form for suggesting the name of a physicist for consideration for filling a vacancy either on the IUPAP Executive or on one of the Commissions

1. Name of National Committee or Commission making suggestion

2. Suggested Office (for example position on Executive or position on a particular Commission)

3. Name of candidate (and title, e.g. Dr. or Professor) 4. Age

5. Present appointment

6. Full address

7. Brief biographical details of candidate, indicating expertise in physics (not more than 50 words)

8. Signed :

9. On behalf of :

10. If the recommendation is made on behalf of a Commission has the candidate's National Committee approved?

Yes/No

Notes: Forms must reach the Secretary-General by May 15th 1972.
Please complete a separate form for each name suggested.
Please complete form in Typescript.
Please indicate clearly in (9) whether the form is signed on behalf of a National Committee or a Commission.
Please indicate clearly in (2) whether suggested name is for a particular office on Executive or on a Commission (e.g. for the latter Chairman, Secretary or member).

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

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Secretaries will be appointed for 3 years after 3 years service on the Commission. Secretaries will be eligible for a reappointment for a second, and final, cycle of 3 years, i.e. 6 years will be the maximum service as Secretary.

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4.5 The procedure for filling casual vacancies on Commissions which occur between meetings of the General Assembly will be the same as for casual vacancies on the Executive Committee.

APPENDIX VIII

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUÉE

Liste des congrès approuvés en 1972

Conferences approved for 1972

Commission on Thermodynamics and Statistical Mechanics

1.	Centenary of the Boltzmann Equation	"C"	Vienna AUSTRIA	Summer/ Autumn
	inf.: Prof. Dr. P. MAZUR Secretary of the Commission Instituut-Lorentz voor Theoretische Natuurkunde Nieuwsteeg 18 Leiden, NETHERLANDS.		$1,000.	

Commission on Very Low Temperatures

2.	XIII Int. Conf. on Low Temperature Physics	"A"	Boulder Col., USA	Aug. 20-26
	inf.: Dr. R.H. KROPSCHOT Cryogenics Division National Bureau of Standards Boulder, Colorado 80302, USA.		$2,000.	

Commission on Semiconductors

3.	11th Int. Conf. on the Physics of Semiconductors	"A"	Warsaw POLAND	July 25-29
	inf.: Prof. SOSNOWSKI Institute of Physics The Polish Academy of Science Warsaw, POLAND.		$3,000.	
4.	Radiation Induced Defects in Semiconductors	"B"	Reading UK	July 19-21
	inf.: Prof. E.W.J. MITCHELL J.J. Thomson Physical Laboratory Whiteknights Reading, RG6 2AF, UNITED KINGDOM.		$0.	

Commission on Magnetism

5.	Symposium on the Physics of Dense Matter	"C"	Copenhagen DENMARK	?
	inf.: Dr. C. DeJAGER The Astronomical Institute 21 Beneluxlaan Utrecht, NETHERLANDS.		$0.	
	(Co-sponsored by IAU)			

Commission on Solid State Physics

6.	Int. Conf. on Thin Films	"B"	Venice ITALY	May 15-19
	inf.: Dr. K.H. BEHRNDT Granville-Phillips Corporation 5675 East Avapahre Avenue Boulder, Colorado 80303, USA.		$0.	
	(also sponsored by the ICO)			
7.	2nd Int. Conf. on Vapour Growth and Epitaxy	"B"	Jerusalem ISRAEL	May 22-25
	inf.: Prof. M. SCHIEBER Department of Physics The Hebrew University Jerusalem, ISRAEL.		$1,000.	
8.	2nd Int. Symposium on Surface Physics	"B"	Enschede NETHERLANDS	June 22-23
	inf.: Dr. A. vanSILFHOVT Technische Hogeschool Twente Afd. Technische Natuurkunde Postbus 217 Enschede, NETHERLANDS.		$1,000.	
9.	Int. Conf. on Band Structure in Solids	"B"	Exeter UK	July 3-5
	inf.: Prof. E.P. WOHEFARTH Department of Mathematics Imperial College Exhibition Road London S.W. 7, UNITED KINGDOM.		$2,000.	

10.	7th Int. Symp. on the Reactivity of Solids	"B"	Bristol UK	July 17-21
	inf.: Prof. J.S. ANDERSON Morganic Chemistry Laboratory University of Oxford South Parks Road Oxford OX1 3OR, UNITED KINGDOM.		$0.	
	(co-sponsored by IUPAC)			
11.	2nd Int. Conf. on the Properties of Liquid Metals	"B"	Tokyo JAPAN	Sept. 3-8
	inf.: Prof. M. TANAKA Department of Applied Science Faculty of Engineering Tohoku University Sendai 980, JAPAN.		$2,000.	
12.	Luminescence	"A"	Leningrad USSR	August
	inf.: Prof. E.F. BERTAUT Secretary of the Commission Lab. d'Électrostatique Cedex 166 38 Grenoble-Gare, FRANCE.		$3,000.	

Commission on Particles and Fields

13.	XVI Int. Conf. on High Energy Physics	"A"	Chicago Ill., USA	Sept. 6-13
	inf.: Prof. R.R. WILSON N.A.L. Box 500 Batavia, Illinois 60510, USA.		$3,000.	
14.	Int. Conf. on Hadronic Collisions	"B"	Oxford UK	April 5-7
	inf.: Dr. G. MANNING R.H.E.L. Chilton, Didcot Berkshire, UNITED KINGDOM.		$0.	

15. 4th Int. Conf. on Magnet Technology — "B" — Brookhaven, New York, USA — Sept. 19-22

inf.: Dr. J.P. BLEWETT
Brookhaven National Laboratory
Upton, L.I.
New York 11973, USA.

$0.

Commission on Nuclear Physics

16. Few Particle Problems on the Nuclear Interaction — "B" — Los Angeles Calif., USA — Aug.28-Sept. 1st

inf.: Dr. Ivo SLAUS
Physics Department
University of California
Los Angeles, Calif. 90024, USA.

$2,000.

17. Nuclear Moments and Nuclear Structure — "B" — Osaka JAPAN — Sept.4-8

inf.: Dr. Kenzo SUGIMOTO
Department of Physics
Osaka University
Toyonaka
Osaka 560, JAPAN.

$1,200.

18. 6th Int. Cyclotron Conference — "B" — Vancouver CANADA — July 18-21

inf.: Dr. M.K. CRADDOCK
TRIUMF
University of British Columbia
Vancouver 8, B.C., CANADA.

$1,800.

Commission on Physics Education

19. Int. Congress on Teaching Physics to Students in Physics, Related Sciences and Engineering — "B" — Kiel F.R.GERMANY — July 20-26

inf.: Prof. W. KROEBEL
Institute for Applied Physics
University of Kiel
New University House 34
23 Kiel, FEDERAL REPUBLIC of GERMANY.

$3,000.

Commission on Atomic & Molecular Physics and Spectroscopy

20.	Conf. on Inner Shell Ionization inf.: Dr. R.W. FINK Chemistry Department Georgia Institute of Technology Atlanta, Georgia, USA.	"B"	Atlanta USA $2,000.	April 17-21
21.	3rd Int. Conf. on Atomic Physics inf.: Dr. S.J. SMITH J.I.L.A. University of Colorado Boulder, Colorado 80302, USA.	"A"	Boulder USA $3,000.	Aug. 7-11
22.	XVII Congress Ampère inf.: Prof. V. HOVI Wihuri Physical Laboratory University of Tirku Tirku, FINLAND.	"C"	Tirku FINLAND $1,500.	Aug. 21-26
23.	1st Int. Conf. on Modulation Spectroscopy inf.: Prof. B.O. SERAPHIN Optical Sciences Center University of Arizona Tucson, Arizona 85721, USA.	"B"	Tucson USA $0.	Nov. 23-26

International Commission for Optics

24.	9th Congress of ICO : Space Optics inf.: Dr. D.S. NICHOLSON P.O. Box 95213 Los Angeles, California 90045, USA.	"A"	Santa Monica Calif., USA $0.	Oct. 9-13
25.	Integrated Optics - Guided Waves, Materials and Devices inf.: Dr. R.V. POLE OSA 2100 Pennsylvania Avenue NW Washington, D.C. 20037, USA.	"B"	Las Vegas Nevada, USA $0.	Feb. 7-9

CONSTITUTION OF THE
U.S. NATIONAL COMMITTEE FOR THE
INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

(REVISED JUNE 1, 1972)

In the text of the Constitution and By-Laws "USNC" stands for "United States National Committee," "IUPAP" stands for "International Union of Pure and Applied Physics," and "NRC" stands for "National Research Council."

Article I. Objects:

The objects of the USNC for the IUPAP shall be (1) to promote the advancement and dissemination of physics, (2) to represent the United States in the IUPAP, and (3) to carry out such duties as are required of a national committee under the Statutes of the IUPAP, including the nomination to NRC of delegates to Assemblies of the IUPAP.

Article II. Membership:

The USNC shall consist of voting members appointed by the NRC, and these shall include:

1. Ex officio:

   (a) Any or all of the following officials of IUPAP who are citizens of the United States: The President, any Vice President, and the Secretary of IUPAP whose term of membership shall continue after retirement from IUPAP office until the end of the calendar year following that in which retirement occurred. U.S. members of any Commission of IUPAP, whose terms shall continue until the end of the calendar year in which they retire from such Commissions.

   (b) The Chairman of the U.S. National Committee of any Commission of the IUPAP designated by the IUPAP as an Affiliated Commission.

   (c) The Chairman of the Division of Physical Sciences of the NRC.

2. Nominees as follows:

	Nominator	Number
(a)	American Physical Society	Two
(b)	American Association of Physics Teachers	One
(c)	The Acoustical Society of America	One
(d)	American Institute of Physics	One
(e)	A committee composed of the Chairman of the Division of Physical Sciences of the NRC (as Chairman) and the officers of the USNC.	Three to Five

If anyone appointed on nomination in accordance with provisions of this Article vacates his appointment for any reasons, the organization which originally nominated him shall be invited to nominate a successor to be appointed the next January 1 to serve the remainder of the original term of appointment.

No one shall be eligible to be nominated by the same nominating organization for more than two consecutive three-year terms.

3. The Foreign Secretary of the National Academy of Sciences shall serve as an ex-officio, non-voting member.

Article III. Officers:

The officers of the USNC shall be the Chairman, the Vice-Chairman, and the Secretary. The term of office in each case shall be three calendar years. If the office of Chairman is vacated for any reason, the Vice-Chairman shall become Chairman. If the office of Vice-Chairman is vacated for any reason, a successor for the remainder of the term shall be elected at the next meeting of the USNC. If the office of Secretary is vacated for any reason, a successor shall be appointed for the remainder of the term by a Committee composed of the Chairman and Vice-Chairman of the USNC and the Chairman of the Division of Physical Sciences of the NRC.

Article IV. Election of Officers:

Officers for each three-year term shall be elected before the end of the calendar year following the year of the preceding IUPAP General Assembly. The ballot shall be mailed by the Secretary not later than December 1, and shall contain the names of nominees for each office. All ballots returned by the date printed on the ballot shall be counted. The nominee receiving the most votes for a given office shall be declared elected to that office.

A slate of nominees for each office shall be prepared by a Nominating Committee, appointed and functioning in such manner as shall be specified in the By-Laws. No individual shall be nominated unless his membership in the USNC the following year is assured by continuation of term or new appointment.

No one shall be eligible for more than two consecutive full terms in the same office.

Article V. Meetings:

Meetings of the USNC shall be called by the Chairman at times and places designated by him. It shall be his duty to call at least one such meeting during each calendar year. A meeting may also be called by the Chairman of the Division of Physical Sciences of the NRC. One half of the full membership of the USNC shall constitute a quorum. A regularly-called meeting attended by fewer may, however, act tentatively, subject to veto of any action by mail ballot by a majority of the full membership. A ballot for this purpose must be mailed within ten days of the meeting, and all votes received within ten days of such mailing shall be counted.

Article VI. Amendments:

Subject to approval by the NRC, this Constitution may be amended by an affirmative vote of at least two-thirds of the full membership of the USNC.

REVISED BY-LAWS OF THE

U. S. NATIONAL COMMITTEE FOR THE

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

1. Nominations for Membership:

It shall be the duty of the Secretary prior to October 1st of each year to write the appropriate organizations requesting them to make their nominations for the next year by January 1st. He shall present the resulting nomination to the NRC for appointment as soon as practicable after January 1st.

2. Nomination of Officers:

The Chairman shall appoint a nominating committee to prepare a slate for the ballot referred to in Article IV of the Constitution.

3. Information:

The Secretary-Treasurer of the USNC, or an alternate designated by him, shall act as the agent of the Secretariat of the IUPAP for the distribution of information to the members of the USNC.

4. Amendment:

These By-Laws may be amended by an affirmative vote of at least half of the full membership of the USNC.