

56 fl

MC 0572

IUPAP 1971

MC 572

ok

BOX 6-08 FOLDER 9

97-72 b3

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

2270

MEMO to Members of the IUPAP Executive Committee
from Associate Secretary-General
Object: Letter from Prof. Cohen

Recently some discussion has taken place concerning the use by
our Commission on Atomic Masses and Related Constants of the
expression "Fundamental Constants" in some of its literature.
Dr. Butler has received some protests to the effect that this
infringes on other Commissions' work. The Commission has taken
the bull by the horns and will request the Executive to change
its name to "Commission on Atomic Masses and Fundamental Constants".

Copy of Prof. Cohen's letter is enclosed as background material
for discussion at our meeting in Dublin.

Québec, June 22nd, 1971.

IUPAP

Executive Committee of IUPAP, DUBLIN, September 1971

Report on the Activities depending on Commission XV :
Atomic and Molecular Physics and Spectroscopy

The members of the commission had not the occasion to meet during the university year 1970-71. The important questions were treated by correspondance between chairman, secretary and the members.

Conferences held in 1971

Two conferences interesting the field of Commission XV were held this year :

- a) The seventh international conference on Physics of Electronic and Atomic Collisions, organized by Professor J. KISTEMAKER, held in Amsterdam July 26-30.

The conference covered the large field of collision physics which is rapidly developing.

More than 700 participants attended the conference (registration fee : \$ 40. -), in addition 80 students at a reduced fee were present.

26 countries were represented.

456 papers were presented.

The book of abstracts printed by North Holland C° was available at the conference.

A separated book containing the invited papers and the progress reports will be published at the end of this year.

The total conference budget amounted to Florins 150.000 (about \$ 40.000. -).

The IUPAP grant was \$ 4.000. -

- b) The third international conference on Vacuum Ultraviolet Radiation Physics held in Tokyo, Japan, August 30 - September 2.

Chairman of the Steering Committee : Dr. ISHIGURO

Chairman of the Organizing Committee : Prof. FUJIOKA

204 participants attended the conference, among them 54 from abroad from 8 different countries.

The conference covered essentially the entire range of vacuum ultraviolet from 2000 Å to a few Å.

More than 80 papers were presented. The booklet of abstracts was available in Offset form at the conference. It is not intended to publish the proceedings.

The total budget of the conference amounted to 8 Million Yen (\$ 22.000. -).

The contribution of IUPAP was \$ 2.500. -

The greatest part of this sum was used for financial help to participants from abroad.

19 participants received each 30.10³ Yen.

The registration fee was \$ 25. -

.../...

Proposals for the year 1972

Support from IUPAP has been requested for three international conferences to be held in 1972, in the field of Commission XV. The members of the commission are in favor of such a support :

- a) The International Conference on Inner Shell Ionization Phenomena, to be held at ATLANTA, Georgia, U.S.A., April 17-21
Organizer : Dr. R. W. FINK, Professor of Chemistry, Atlanta.

This will be the first international conference in this field of physics. Its interest will be to bring together workers in the separate fields of Auger electron spectroscopy, X-ray spectroscopy, radioactive decay, atomic collisions, theoretical atomic physics and nuclear physics.

A number of participants between 100 and 200 is expected. The proceedings will be published.

The total budget needs are evaluated to \$ 15.000. -

Dr. PRICE (London) proposes a IUPAP grant of \$ 1.500. -

- b) The Third International Conference on Atomic Physics, to be held in BOULDER, Colorado, U.S.A., August 7-12
Organizer : Dr. S. T. SMITH, from J.I.L.A.

This type of conference, which brings together physicists working in the different fields of atomic physics, is held with a periodicity of two years. The first conference was held in New York (1968) and the second in Oxford (1970). For each of these conferences, the success was guaranteed by selected distinguished invited papers which were published in the conference proceedings. This will be the case also for the Boulder conference. More than 300 people are expected to attend this conference, the fee will be fixed to \$ 40. -, and for young participants to \$ 10.

The total budget is expected to be \$ 20.000. -

A request is made for an IUPAP grant of \$ 5.000. The grant attributed to the Oxford conference in 1970 was \$ 3.000.

- c) The 17th International AMPERE Conference on Radiofrequency Spectroscopy, to be held
at Wihuri Physical Laboratory, University of TURKU, Finland,
August 21-26
Organizer : Professor V. HOVI, Turku.

This conference brings together physicists from East and West. At the last conference of this type in Bucarest, Rumania, in 1970, more than 700 people attended the meeting, 300 from Rumania, 200 from Eastern Europe, 200 from Western Europe, 40 from America and other continents.

The moral support of IUPAP is requested.

The organizing Committee applies for a IUPAP grant of \$ 1.000 to 1.500. -

In July 1971, the Chairman of Commission XV was informed of a proposal made by Professor S. BHAGAVANTAM to organize an international conference on Raman Scattering to be held in Bangalore, India, during December 1972 or January 1973, partly intended to commemorate the life and work of the late Sir C. V. RAMAN.

It was not possible to consult the members of the Commission before the meeting of the Executive Committee.

To be able to give a good financial support to this conference, the Chairman of Commission XV suggests to fix its date on January 1973 and to foresee it in the IUPAP budget of 1973.



THE INTERNATIONAL COMMISSION ON PHYSICS EDUCATION

PRESIDENT:

PROFESSOR HANS H. STAUB
PHYSIK-INSTITUT DER UNIVERSITÄT ZÜRICH
SCHÖNBERGGASSE 9
ZÜRICH, SWITZERLAND

SECRETARY:

DR. WILLIAM C. KELLY
NATIONAL RESEARCH COUNCIL
2101 CONSTITUTION AVENUE
WASHINGTON, D. C., 20418, U.S.A.

August 18, 1971

Dr. C. C. Butler
Secretary-General
International Union of Pure
and Applied Physics
Nuffield Lodge
Regent's Park
London NW1 4RS, England

Dear Dr. Butler:

At its meeting of June 25-26, 1971, in Kiel, the Commission on Physics Education discussed the proposed project for the writing of a book or series of booklets on the history of physics, under the joint sponsorship of the International Union for Pure and Applied Physics and the International Union of the History and Philosophy of Science. The Commission instructed me to say that they recommended acceptance of the project by the IUPAP Executive and, if IUPAP approval were given, to request that IUPAP take whatever steps are necessary to ensure IUHPS collaboration.

The origins and the various appraisals of this project have been described in my letter of June 1, 1971 to the Commission and in the early report of the International Working Seminar on the Role of History of Physics in Physics Education. The more recent discussion is reported in the minutes of the Kiel meeting. Copies of these documents were circulated earlier, but additional ones are attached for your convenience.

What is envisioned is a writing project conducted by a small number of competent historians of physics and physicists under the policy guidance of an international editorial board to be jointly appointed by IUPAP and IUHPS. The editor-in-chief would be asked to give substantial amounts of time to the project, perhaps full time for a year or so. It would be necessary to find an administrative home for the project---an organization with scholarly credentials to provide a suitable environment for the project and to receive and disburse funds. We suggest that the American Council of Learned Societies be asked to assume this role.

The content, format, timetable, personnel, and editorial policies are best left to the Editorial Board. The Commission had a number of suggestions to offer, however:

August 18, 1971

- The final product might well be published as a series of small booklets to keep the costs within the means of students. A several-volume Penguins set was proposed as a model.
- Emphasis could be placed on important episodes in the history of physics, but enough connective tissue should be provided among episodes to give a sense of historical development and a time frame.
- Biographical material, content to illustrate the social relationships of developments in physics, and content from the history of ideas (e.g., what steps led to the laser?) all had their advocates among the Commission members. It was also suggested that material from the history of astronomy be included.
- The published material should have a didactic purpose rather than a scholarly one. It should draw on the latest results of scholarship, but should be written to be interesting and informative to teachers and advanced students of physics. The publications should include extensive and well-organized bibliographies to lead the reader into more detailed treatments of the subject.

It is not possible at this time to present a detailed and accurate estimate of the costs of this project. A very rough estimate would be about \$50,000 for the first year, including a full-time salary for the editor-in-chief, travel, and secretarial assistance. This would probably decrease to \$25,000 for a second year when the editor-in-chief would give only part time to the project. Publication costs would be assumed by the publisher, it is to be hoped, as a commercial venture. It seems clear, however, that a substantial subsidy would be needed from one or more private foundations or governmental organizations for the preparation of the manuscript. It would be the task of the Editorial Board and the organization administering the project to seek such funds as well as to recruit the project personnel.

Should the IUPAP Executive decide to implement this proposal, the following steps would be necessary:

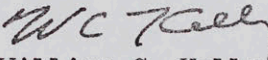
1. The IUPAP intent should be stated to IUHPS and the participation of IUHPS formally invited. As you know, the Commission has explored this possibility with the IUHPS through Professor I. Bernard Cohen and found them receptive to the notion.

August 18, 1971

2. A joint IUPAP-IUHPS Editorial Board should be named to oversee the project. Although the Commission did not suggest nominees, I would propose that three persons be invited to serve as IUPAP members: a member of the Commission (perhaps Professor Staub or Professor Matveyev); Professor Mogens Pihl of Copenhagen, who has served on our Commission and who has demonstrated a strong interest in the proposed project; and a third IUPAP member to be named by the IUPAP Executive. The IUHPS would appoint a like number.
3. IUPAP should provide partial financial support for its members to attend the first meeting of the Board---say \$500-\$1000---and IUHPS should pay for its members. Thereafter, I would hope that project funds would cover these travel costs.
4. IUPAP and IUHPS should decide on an administrative home for the project. If it is decided that the ACLS should be approached, the Commission could follow up on earlier discussions with Dr. Frederick Burkhardt. Thereafter, the Commission should maintain only an informal connection with the project.

I hope that consideration can be given to this proposal by the IUPAP Executive at its meeting next month. Please let me know whether further information is required.

Sincerely yours,


William C. Kelly
Secretary

Enclosures (3)

cc: Professor Cohen
Professor Kerwin
International Commission
Organizing Committee for
MIT Seminar

I U P A P

Comments on Proposed Election Procedures
Submitted by Commissions

The Commission numbers correspond to those found in IUPAP-16.

Those Commissions omitted from the following notes have not replied to several memoranda requesting their opinions.

3 - Thermodynamics and Statistical Mechanics Commission

- (1) Commission favours all proposals with one exception concerning Point 5(e) - a possible service of only three years is too short for an effective contribution to be made.
- (2) Nothing is said about mechanism for appointment of Chairman and Secretary. Commission recommends that these officers should be elected from the ordinary members.

4 - Cosmic-Ray Commission

- (1) Commission is in general agreement with proposals.
- (2) Accept that all Commissions should be of the same size.
- (3) Prefer size to be Chairman plus Secretary plus eight members.
- (4) Period of membership 3+3 years.
- (5) Secretary appointed for six years after three years as a member - subsequently to be Chairman for three years.

6 - Publications Commission

The Commission supports the proposals.

7 - Acoustics Commission

- (1) No objections to rules for election of Executive members.
- (2) Limitation of terms of service of Chairman and Secretary of Commissions too restrictive. Recommend two terms for Chairman and three terms for Secretary. Chairman to be ordinary member for one term after his service as Chairman.

- (3) Commission not very happy about proposals from the floor of the assembly.
- (4) Acoustics Commission needs observers from other Unions - not to be counted in the total of ten members.

9 - Magnetism Commission

Comments of the Chairman: Dr. W. Marshall.

- (1) Strongly approves of objectives for Executive elections.
- (2) Serious doubts about proposals for Commissions.
- (3) Magnetism Commission operates well with ordinary and corresponding members. Much money will be needed if distinction is to be abolished.
- (4) There is no argument for all Commissions being the same size.
- (5) Agrees that not more than one full member should come from any particular country.
- (6) Either Chairman or Secretary should serve longer than three years.
- (7) Election procedures admirable.

10 - Solid State Commission

- (1) Commission gives general approval.
- (2) Concerning 5(c): membership should be maximum of two per country or one per country disregarding nationality of Chairman and Secretary.
- (3) Concerning 5(f): the office of Secretary should be for a long period.
- (4) Doubt if restriction of 5 (iii) is necessary.

11 - Commission on Particles and Fields

- (1) Approve of discontinuing category of corresponding member.
- (2) Limitation of one member from any one country inappropriate for this Commission. Recommend there should be no more than two members of a Commission from one country, including the Chairman and Secretary.
- (3) Favour Chairman, Secretary and ten Members.

13 - Commission on Atomic Masses and Related Constants

- (1) Limiting the size of the Executive seems admirable.
- (2) The size of Commissions should depend on the work to be done - not the same for each Commission.
- (3) Commission likes corresponding members. Favours membership of six ordinary and a number of corresponding members.
- (4) Objects to arbitrary and restricted clause 5(c). Commissions must be composed of persons best qualified to carry out the goals of the commission.
- (5) Terms of office are too restrictive in 5(e) and 5(f).

16 - Plasma Physics Commission

- (1) Generally support proposals.
- (2) Secretary doesn't think any of Executive should have fixed terms of service.
- (3) 5(c): suggest eliminate "normally".

17 - International Commission for Optics (ICO)

Comments by the President.

- (1) Secretary of commission should serve longer than three years.
- (2) Three years adequate for Chairman.

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

SUMMARY OF COMMENTS ON SUGGESTED ELECTION PROCEDURE
RECEIVED FROM NATIONAL COMMITTEES

Countries omitted have not replied to the Secretary-General's request for opinions.

1. Australia

Fully accepts the proposed methods of election.

2. Austria

Accepts the proposals.

3. Bulgaria

- (1) Accepts proposal for Executive Committee.
- (2) Recommends Secretaries-General be elected each three years with a maximum length of service of nine years.
- (3) Nominations to be announced well in advance of the general assembly.
- (4) Commissions should be of seven to fifteen members, including Chairman and Secretary. Each Commission to decide its size.
- (5) Term of office of all Commission members (including Chairmen and Secretaries) should be three years, with a possible extension of three years, making a maximum of six years.
- (6) Only candidates proposed by National Committees should be considered.

4. Canada

Canada accepts the proposals but recommends that the term of office of secretaries of Commissions should not be limited to three years.

5. Czechoslovakia

Accepts the proposals.
Commission sizes should be five to fifteen.
Discussion needed on the dissemination of information - present arrangements not satisfactory.

6. Finland

No comments.

7. France

Accepts the proposals.

8. Federal German Republic

- (1) Agrees with general objectives of proposals.
- (2) All elections could be by secret ballot - presumably with no screening by Executive.
- (3) Advocates a six-year term for Secretaries-General.
- (4) All nominations should be circulated two or three months before the assembly.
- (5) Own country must be either proposer or seconder - own country might object to a candidate! Alternatively, own country must consent.
- (6) Ten members plus Chairman and Secretary should be upper limit - smaller number allowed.

9. German Democratic Republic

- (1) Endorses proposals in 4(a) and 4(b).
- (2) Term of office of Secretary-General should be a maximum of ten years.
- (3) Executive members should first serve on a Commission.
- (4) Agrees with 5(e) - maximum of six years for Commission members.
- (5) Commissions should have a maximum membership, including Chairman and Secretary, of fifteen.
- (6) An unclear paragraph about election procedures!

10. Hungary

- (1) No firm opinion.
- (2) Concern about date from which length of service on Commissions should be restricted.
- (3) Should not the office of Secretary-General be limited?
- (4) Service on Executive can be too long!
- (5) Not clear how voting would be carried out.
- (6) Scheme should be explained in the Bulletin.

11. Israel

No comment, appears to accept proposals.

12. Italy

Generally favourable. Desirable to have a rule fixing terms of office for the Secretaries-General. The rule should permit long term of office.

13. Norway

- (1) Agrees revision is desirable and proposals are a step in right direction.
- (2) Modernise titles of members of Executive, e.g. President, ordinary members, Secretary, etc.
- (3) Candidates own country should be allowed to make proposal.
- (4) Prefers Commissions all to be same size - nine, including Chairman and Secretary.
- (5) National delegations should be able to propose candidates from their own country.

14. Poland

- (1) Generally favourable.
- (2) Concerned that maximum length of service on Executive could be fifteen years, i.e. six years as V.P., three years as 1st V.P., three years as P. and three years as Past. P.
- (3) Doubts about a uniform number of Commission members.
- (4) Will present corresponding members who have served only three years' time have the right to be considered as ordinary members?

15. South Africa

- (1) Doubts about 5(e), i.e. exceptional cases for service longer than six years on a Commission.
- (2) Suggests that members required for longer than six years should be coopted individuals - not recognised as full members.

16. Sweden

Fully accepts proposals.

17. Taiwan

Generally approves proposals.

18. United Kingdom

- (1) Some members think that the Executive is rather large.
- (2) It is suggested that names, addresses and a brief statement on professional experience should be circulated six weeks before the assembly. This would give National Committees an opportunity of withdrawing a candidate or supporting candidates nominated by other National Committees.
- (3) Agrees to abolition of Corresponding Member category.
- (4) Commissions should have the power to invite non-members to attend meetings for particular purposes.
- (5) Lists of all nominations with details should be circulated six weeks before the assembly.

19. United States

- (1) Generally approves proposals.
- (2) In any listing of nominees, the source of the nominations should be identified and the National Committee should indicate whether or not it supports a specific nominee.

20. U.S.S.R.

- (1) Each Commission should be fixed at five to fifteen - decided by themselves.
- (2) Period of office of commission members, including the "President and his deputy", should be three to six years.
- (3) Nominations should only be accepted by National Committees.
- (4) Elections should be in three rounds:
 - (a) Complete list of proposed candidates would be voted upon.
 - (b) Second round would retain only those candidates who received a qualifying number of votes - say 10.
 - (c) Third round would retain only those with, say, 20 votes.
 - (d) Finally, election by simple majority vote.

IUPAP

Conferences Proposed for 1972

Solid State Commission

(1) International Conference on Thin Films

Venice, Italy. May 15-19, 1972 (attendance about 500)

Dr. K. H. Behrndt,
Granville-Phillips Corpn.
5675 East Avapahre Avenue,
Boulder, Colorado, 80 303 USA.

(no grant recommended)

(also sponsored by ICO)

(2) Second International Conference on Vapour Growth and Epitaxy

Jerusalem, Israel. May 22-25, 1972. (attendance about 250)

Prof. M. Schieber,
Department of Physics,
The Hebrew University,
Jerusalem, Israel.

(Grant proposed \$1000)

(3) Second International Symposium on Surface Physics

Enschede, The Netherlands. June 22-23, 1972. (attendance about 250)

Dr. A. van Silfhovt,
Technische Hogeschool Twente,
Afd. Technische Natuurkunde,
Postbus 217,
Enschede, Netherlands.

(Grant recommended \$1000)

(4) International Conference on Band Structure in Solids

Exeter, U. K. July 3-5, 1972. (attendance about 350)

Prof. E. P. Wohefarth,
Department of Mathematics,
Imperial College,
Exhibition Road,
London, S. W. 7. (U. K.)

(Grant recommended \$3000)

- (5) Seventh International Symposium on the Reactivity of Solids
Bristol, U.K. July 17-21, 1972. (attendance about 350)
(Co-sponsored by IUPAC)
Prof. J.S. Anderson, FRS,
Morganic Chemistry Laboratory,
University of Oxford,
South Parks Road,
Oxford OX1 3OR. (U.K.)
(No grant recommended)
- (6) The Second International Conference on the Properties of
Liquid Metals
Tokyo, Japan. September 3-8, 1972. (attendance about 300)
Prof. M. Tanaka,
Department of Applied Science,
Faculty of Engineering,
Tohoku University,
Sendai 980. (Japan)
(Grant recommended \$2000)
- (7) A Conference on Luminescence is planned for Leningrad in
August 1972 - Category A. The views of the Commission on the
Conference are being obtained.
(Financial grant requested)
- Semiconductors Commission
- (8) Eleventh International Conference on the Physics of Semiconductors
(Category A)
Warsaw, Poland. July 25-29, 1972.
Prof. Sosnowski,
Institute of Physics,
The Polish Academy of Science,
Warsaw, Poland.
(Recommended grant \$6000)
- (9) Radiation Induced Defects in Semiconductors
(Category B)
Reading, U.K. July 19-21, 1972.
Prof. E.W.J. Mitchell,
J.J. Thomson Physical Laboratory,
Whiteknights,
Reading, RG6 2AF. (U.K.)
(no grant recommended)

Commission on Very Low Temperatures(10) XIII International Conference on Low Temperature Physics

(Category A)

Boulder, Colorado, USA. August 20-26, 1972.

Dr. R.H. Kropschot,
Cryogenics Division,
National Bureau of Standards,
Boulder, Colorado 80302.

(Grant requested \$3000)

Magnetism Commission(11) Symposium on the Physics of Dense Matter(Sponsored by IAU)
(Category C)

Copenhagen

Date ?

Dr. C. De Jager,
The Astronomical Institute,
21 Beneluxlaan,
Utrecht,
Netherlands.

(No grant recommended)

Atomic and Molecular Physics and Spectroscopy(12) Conference on Inner Shell Ionization

Atalanta, Georgia.

April 17 - 21, 1972.

Dr. R.W. Fink,
Chemistry Department,
Georgia Institute of Technology,
Atalanta, U. S. A.

(13) Conference prepared by India

Raman Scattering

(Category B)

Bangalore

December 1972 and January 1973

Dr. S. Bhagavantam,
Deputy Director,
National Aeronautical Laboratory,
Bangalore 17,
India.

- (14) Third International Conference on Atomic Physics
(Category A)
Boulder, Colorado. August 7-11, 1972.
Dr. S.J. Smith,
J.I.L.A.
University of Colorado,
Boulder, Colorado 80302, U.S.A.
- (15) XVII Congress Ampère
(Category C)
Tirku, Finland. August 21-26, 1972.
Prof. V. Hovi,
Wihuri Physical Laboratory,
University of Tirku,
Finland.
- Education Commission
- (16) International Congress on Teaching Physics to Students in
Physics-Related Sciences and Engineering
Kiel, West Germany. July 20-26, 1972.
(Grant recommended \$4000, plus \$2000 for members of
commission to attend congress)
Commission on Particles and Fields
- (17) XVI International Conference on High Energy Physics.
(Category A)
Chicago, Illinois. September 6-13, 1972.
Prof. R.R. Wilson,
N. A. L.
Box 500,
Batavia,
Illinois 60510, U.S.A.
(Grant requested \$3000 - \$4000)
- (18) International Conference on Hadronic Collisions
(Category B)
Oxford, U.K. April 5-7, 1972.
Dr. G. Manning,
R. H. E. L.
Chilton, Didcot,
Berkshire, U.K.
(No grant recommended)

Nuclear Physics Commission(19) Few Particle Problems on the Nuclear Interaction

Los Angeles, California

August 28th -
September 1st, 1972.

(Category B)

Dr. Ivo Slaus,
Physics Department,
University of California,
Los Angeles,
California 90024

(Grant recommended \$2000)

(20) Nuclear Moments and Nuclear Structure

(Category B)

Osaka, Japan

Date ?

Dr. Kenzo Sugimoto,
Department of Physics,
Osaka University,
Toyonaka,
Osaka 560,
Japan.

(Grant recommended \$1200)

(21) Sixth International Cyclotron Conference

(Category B)

Vancouver, Canada

July 18th - 21st, 1972

Dr. M. K. Craddock,
TRIUMF,
University of British Columbia,
Vancouver 8,
British Columbia,
Canada.

(Grant recommended \$1800)

Thermodynamics and Statistical Mechanics Commission

(22) A small meeting (3-day) may be held in Vienna on the Doltzmann equation (Centenary of derivation of equation)

The Commission favours a \$1000 grant if conference is
organised in Summer or Autumn of 1972.

International Commission for Optics (ICO)

(No grants requested from IUPAP)

- (23)
- Nineth Congress of ICO: Space Optics

Santa Monica, California

October 9th - 13th, 1972

D. S. Nicholson,
P.O. 95213,
Los Angeles,
California 90045

- (24)
- Integrated Optics - Guided Waves, Materials and Devices

Las Vegas, USA

February 7th - 9th, 1972

Dr. R. V. Pole,
OSA
2100 Pennsylvania Avenue,
N.W. Washington DC 20037,
United States of America.

Late additions not so far recommended by Commissions

- (1)
- First International Conference on Modulation Spectroscopy

Tucson, Arizona

November 23rd - 26th, 1972

B. O. Seraphin,
Optical Sciences Center,
University of Arizona,
Tucson, Arizona 85721.

- (2)
- The Fourth International Conference on Magnet Technology

Brookhaven, New York

September 19th - 22nd, 1971

J. P. Blewett,
B. N. L.,
Upton, L.I,
New York 11973, U.S.A.

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Brief Reports from Commissions : 1970-1971 (numbered as in IUPAP-16)

1. Financial Commission

(no report)

2. SUN Commission

The SUN Commission has continued its regular programme of work by correspondence. A meeting of the Commission was held in Paris on August 19th and 20th. The next meeting will be directly before the 1972 General Assembly.

No conferences are proposed during the next three years but the Commission ask for a normal \$1,500 for travel plus \$3,000 for additional Commission travel (instead of holding a conference).

The Commission requests the Executive to endorse their view that the mole should be introduced as a base unit in the International System of Units and to transmit this opinion to the International Committee on Weights and Measures.

The Secretary-General has requested the Commission to consider promoting collaboration with IUPAC.

3. Thermodynamics and Statistical Mechanics Commission

The Commission met in Paris on April 19th, 1971. It was decided to arrange a conference on statistical mechanics for the autumn of 1973, probably at Amsterdam when the centenary of the van der Waals equation will be celebrated. A Boltzmann meeting may be held in Vienna in 1972.

4. Cosmic Ray Commission

The 1971 Conference was held in Hobart, Tasmania. The next conference will be in 1973, most probably in Denver, Colorado. The 1975 meeting may be held in Munich.

5. Very Low Temperature Commission

The Commission met on September 8th, 1970 during the Kyoto meeting (LT12). The next conference will be LT13 at Boulder, Colorado in 1972. Thereafter it is proposed to move to a 3 year cycle.

The Commission urges international support for helium conservation.

6. Publications Commission

The IUPAP Commission on Publications has been inactive since the 1969 General Assembly. Plans for a meeting in August 1971 did not work out, and it is now anticipated that the Commission will meet in the spring of 1972 to prepare for the 1972 General Assembly.

7. Acoustics Commission

The 7th ICA conference was held in August 1971 in Budapest and the 8th is being planned for 1974 in London.

A list of acoustical societies has been prepared to circulate to societies. Details of events in acoustics are also published.

Preliminary discussions are taking place which may lead to the formation of a European Acoustical Society.

ICA is paying special attention to environmental acoustics. A member of the commission has been nominated to serve on SCOPE.

ICA is in close touch with several scientific unions.

8. Semiconductor Commission

The last meeting of the Commission was on August 17th, 1970. Two conferences were held in 1970 and one in 1971. Two conferences are proposed for 1972 but unfortunately it will not be possible to hold a specialist meeting in association with the General Assembly in 1972.

9. Magnetism Commission

The Commission met during the 1970 Grenoble conference and made plans for the 1973 meeting in Moscow. The 1976 meeting will be held in Amsterdam.

2 Hick

10. Solid State Physics Commission

The Commission continues to favour medium sized conferences on relatively restricted topics rather than general conferences covering all aspects of solid state physics.

The Commission make suggestions for the scientific programme at the Washington General Assembly. They comment on the new proposal for Union election procedure.

The Commission recommends IUPAP to consider Gordon-type conferences and sponsorship for high-level summer schools.

11. Commission on Particles and Fields

The Commission met in August 1970 and again in August 1971. It continues to arrange an active programme of conferences. A report on the August 1971 meeting is expected.

12. Nuclear Physics Commission

The Commission recommends three conferences for 1972.

The Commission is concerned that the Commission on Particles and Fields has arranged a meeting in Dubna USSR, in September 1971, on "High Energy Physics and Nuclear Structure" without consultation. It appears that steps will have to be taken to improve collaboration between the two commissions.

13. Commission on Atomic Masses and Related Constants

The Commission met on August 3rd 1970, in Washington D. C. It decided to withdraw its endorsement of the 1963 list of fundamental physical constants and urged that IUPAP and CODATA should determine what new values should be recommended for general use.

The Fourth International Conference on Atomic Masses and Fundamental Constants was held at the N.P.L. Teddington between 6th and 10th September, 1971. The next meeting in this series will be in 1974 or 1975.

The Commission are considering changing their name to "Atomic Masses and Fundamental Constants". They consider that this change will not cause awkward clashes with the SUN, the Atomic and Molecular Physics Commission or the Commission on Particles and Fields.

14. Commission on Physics Education

The Commission met in Eger, Hungary in 1970 and again in Kiel on June 25th-26th, 1971, when plans were reviewed for a congress to be held in Kiel in 1972.

Their writing projects are essentially complete and the MSS have been sent to UNESCO by the editors.

The Commission seeks the advice of the Executive on its plans for producing a number of paper-back volumes to comprise a history of physics. It is suggested that an international editorial board should be established, the members being appointed by IUPAP and IUHPS. It is envisaged that the editorial board will have to raise the necessary funds for its work.

15. Atomic and Molecular Physics and Spectroscopy

The Commission will not meet during 1971; business has been conducted by correspondence.

16. Plasma Physics Commission

The Commission sponsored three conferences in 1971 but, so far, none are proposed for 1972. Plans are being made for a large conference on Phenomena in Ionized Gases for 1973.

The Commission held its first full meeting at Madison, Wisconsin on June 22nd, 1971. The IAEA has set up an International Fusion Research Council whose membership overlaps to a large degree the membership of the IUPAP Commission. The Council and the Commission plan to exchange working papers. The Commission is also in touch with the Plasma Physics Division of the E. P. S.

The Secretary of the Commission has received a proposed constitution for the International Scientific Committee that runs the series of International Conferences on Phenomena in Ionized Gases.

17. ICO

ICO continue to be active in organising conferences and seminars. The ninth congress will be held in 1972.

Consideration is being given to a revision of the ICO Statutes.

ICO is in close touch with the EPS.

Three countries have applied for membership - DDR, Israel and Mexico.

A multi lingual glossary of technical optics terms is in preparation.

The first ICO news letter was published in February 1971. About 1,000 copies were sent to National Committees.

18. Report of the IUPAP Representative to COSPAR

I attended the XIV Plenary meeting and the XVI meeting of the COSPAR Executive Council in Seattle, Wa., USA during June 1971 as a representative of the IUPAP. The programme was in many ways of special interest to physicists, topics discussed in several group meetings covering areas like the physics of the magnetosphere, atmospheric physics, investigations of the moon and planetary studies of mars, venus and so on. Each adhering union like the IUPAP has a right to nominate representatives on the various working groups but presumably we have not done so in the past as the expense involved will not be commensurate with the returns.

Executive Committee will recall my having raised the subject of our relationship with COSPAR at our meeting in Copenhagen. As a result of the discussions at that time, the Associate Secretary-General has issued a memo to the IUPAP National Committees in countries with COSPAR National Committees suggesting better liaison between the two bodies at the National level. This is bound to produce some effect. In addition, a note of announcement under the heading of SPACE RESEARCH has also been inserted in our News-Bulletin No. 23. In spite of these efforts, it is my feeling that the relationship between IUPAP and COSPAR remains somewhat passive and deserves to be improved. It is interesting to see that the feeling held by me on behalf of a well established scientific stream like physics is also held by another equally important union, namely IUPAC. The IUPAC representative at the Seattle meeting of COSPAR expressed himself in the following words. "There is a strong feeling within IUPAC that its relationships with several international bodies, including COSPAR, can be improved. In particular, if the studies of COSPAR working groups can benefit from talents to be found in IUPAC, then IUPAC should participate more actively than in the past. IUPAC is not interested in passive representation. Its cooperation must be active, otherwise it is not worthwhile".

While I report my reactions, I have no clear cut suggestions to make but the situation merits discussion in the IUPAP both formally and informally.

(signed)

S. Bhagavantam
(IUPAP representative to
COSPAR)

THE INTERNATIONAL COMMISSION ON PHYSICS EDUCATION

PRESIDENT:

PROFESSOR HANS H. STAUB
PHYSIK-INSTITUT DER UNIVERSITÄT ZÜRICH
SCHÖNBERGGASSE 9
ZÜRICH, SWITZERLAND

SECRETARY:

DR. WILLIAM C. KELLY
NATIONAL RESEARCH COUNCIL
2101 CONSTITUTION AVENUE
WASHINGTON, D. C., 20418, U.S.A.

August 18, 1971

Dr. C. C. Butler
Secretary-General
International Union of Pure
and Applied Physics
Nuffield Lodge
Regent's Park
London NW1 4RS, England

Dear Dr. Butler:

At its meeting of June 25-26, 1971, in Kiel, the Commission on Physics Education discussed the proposed project for the writing of a book or series of booklets on the history of physics, under the joint sponsorship of the International Union for Pure and Applied Physics and the International Union of the History and Philosophy of Science. The Commission instructed me to say that they recommended acceptance of the project by the IUPAP Executive and, if IUPAP approval were given, to request that IUPAP take whatever steps are necessary to ensure IUHPS collaboration.

The origins and the various appraisals of this project have been described in my letter of June 1, 1971 to the Commission and in the early report of the International Working Seminar on the Role of History of Physics in Physics Education. The more recent discussion is reported in the minutes of the Kiel meeting. Copies of these documents were circulated earlier, but additional ones are attached for your convenience.

What is envisioned is a writing project conducted by a small number of competent historians of physics and physicists under the policy guidance of an international editorial board to be jointly appointed by IUPAP and IUHPS. The editor-in-chief would be asked to give substantial amounts of time to the project, perhaps full time for a year or so. It would be necessary to find an administrative home for the project---an organization with scholarly credentials to provide a suitable environment for the project and to receive and disburse funds. We suggest that the American Council of Learned Societies be asked to assume this role.

The content, format, timetable, personnel, and editorial policies are best left to the Editorial Board. The Commission had a number of suggestions to offer, however:

August 18, 1971

- The final product might well be published as a series of small booklets to keep the costs within the means of students. A several-volume Penguins set was proposed as a model.
- Emphasis could be placed on important episodes in the history of physics, but enough connective tissue should be provided among episodes to give a sense of historical development and a time frame.
- Biographical material, content to illustrate the social relationships of developments in physics, and content from the history of ideas (e.g., what steps led to the laser?) all had their advocates among the Commission members. It was also suggested that material from the history of astronomy be included.
- The published material should have a didactic purpose rather than a scholarly one. It should draw on the latest results of scholarship, but should be written to be interesting and informative to teachers and advanced students of physics. The publications should include extensive and well-organized bibliographies to lead the reader into more detailed treatments of the subject.

It is not possible at this time to present a detailed and accurate estimate of the costs of this project. A very rough estimate would be about \$50,000 for the first year, including a full-time salary for the editor-in-chief, travel, and secretarial assistance. This would probably decrease to \$25,000 for a second year when the editor-in-chief would give only part time to the project. Publication costs would be assumed by the publisher, it is to be hoped, as a commercial venture. It seems clear, however, that a substantial subsidy would be needed from one or more private foundations or governmental organizations for the preparation of the manuscript. It would be the task of the Editorial Board and the organization administering the project to seek such funds as well as to recruit the project personnel.

Should the IUPAP Executive decide to implement this proposal, the following steps would be necessary:

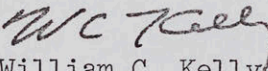
1. The IUPAP intent should be stated to IUHPS and the participation of IUHPS formally invited. As you know, the Commission has explored this possibility with the IUHPS through Professor I. Bernard Cohen and found them receptive to the notion.

August 18, 1971

2. A joint IUPAP-IUHPS Editorial Board should be named to oversee the project. Although the Commission did not suggest nominees, I would propose that three persons be invited to serve as IUPAP members: a member of the Commission (perhaps Professor Staub or Professor Matveyev); Professor Mogens Pihl of Copenhagen, who has served on our Commission and who has demonstrated a strong interest in the proposed project; and a third IUPAP member to be named by the IUPAP Executive. The IUHPS would appoint a like number.
3. IUPAP should provide partial financial support for its members to attend the first meeting of the Board---say \$500-\$1000---and IUHPS should pay for its members. Thereafter, I would hope that project funds would cover these travel costs.
4. IUPAP and IUHPS should decide on an administrative home for the project. If it is decided that the ACLS should be approached, the Commission could follow up on earlier discussions with Dr. Frederick Burkhardt. Thereafter, the Commission should maintain only an informal connection with the project.

I hope that consideration can be given to this proposal by the IUPAP Executive at its meeting next month. Please let me know whether further information is required.

Sincerely yours,


William C. Kelly
Secretary

Enclosures (3)

cc: Professor Cohen
Professor Kerwin
International Commission
Organizing Committee for
MIT Seminar

Please forward to IUPAP Juleif

ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE
CERN EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

Téléphone : (022) 41 98 11

Télex : GENÈVE - 2 36 98

Télégramme : CERNLAB-GENÈVE

1211 GENÈVE 23

Genève, 16 September 1971

COPY TO PROFESSOR V. WEISSKOPF

To the Executive Committee of IUPAP

The recent conference in Dubna on High Energy Physics and Nuclear Structure (September 7-11, 1971) has revealed a series of weaknesses in the IUPAP organization. The weaknesses were not directly due to the conference organizers, but were the consequence of a series of unfortunate coincidences and breakdown of liaison on the IUPAP level. Some weaknesses are of general nature and could potentially affect conferences in any field, others are specific to the field of intermediate energy physics.

Below are given the principle facts and my recommended action.

General weaknesses.

1) National quotas were applied to all participants, including rapporteurs, review speakers and invited speakers.

There is a fundamental conflict between the national and institutional opinion of best participants and that of the conference organizers. For example, it may be highly desirable for the conference to have an outstanding, although narrow, specialist, while a country or institute may prefer a representative who spans a wider field or even a person with administrative responsibility. In the present case several important rapporteur speakers were not included in the national selection.

Recommended action : that it be an absolute rule in all fields that invited speakers cannot be part of national quotas.

.../...

2) Information about the conference and even its existence became available very late, even to persons very active in the field. I know of numerous persons who first knew of the conference in June, while the majority seemed first to have heard about it in April, and practically nobody earlier than late March. The organizers seemingly expected IUPAP and its national representatives to distribute information rapidly; this certainly did not happen in many places. The only conference list that carried advance notice of the conference was that of CERN and this only because of personal intervention by myself.

Recommended action: that IUPAP as a rule transmits the name of a conference, date and responsible person to the editors of the principle conference lists at the moment the conference is sponsored in principle. If the organizers, for any reason, administrative or financial or other, at this stage cannot fully guarantee that the conference can be held (as seemingly happened in the present case) the word "preliminary" or something similar could be attached.

Further, IUPAP should strongly urge organizers to distribute in advance material to workers in the field and principle institutes simply to insure awareness of the conference (or even of the possibility of a conference) at an early stage.

Specific weaknesses in intermediate energy physics.

1) Principles for national quotas for the present conference as well as for the whole field of intermediate energy physics seem non-existent.

In Western Europe the original national quotas were established under strong time pressure. The high energy physics quotas of the Amsterdam Conference seemingly were scaled to the allotted total number of participants. Compounded with a lack of information on speakers the resulting quotas in some instances were spectacular with little relation to activities in the field.

An extreme example is that of CERN with ten invited speakers and six (!) allotted places, but other cases can easily be cited.

Recommended action: that IUPAP urgently takes steps to establish principles for national quotas both for the present conference and for intermediate energy physics.

2) Similar problems have also occurred on the national level, again caused by lack of experience and precedence. Breakdown of liaison and confusion seems to have occurred, particularly in bigger countries. The problem seems in general to be that the field has had no clearly designated spokesman who could be consulted.

Recommended action : that IUPAP draws the attention of the national high energy committees to the problem and that it recommends to them, as a minimum, to find a consultant and regular liaison man for intermediate energy physics who will be automatically consulted on any question concerning this field. The name of this person should obviously be made known to those in the field.

3) It has by now become clear that a sufficient number of participants in this field participate, some in high energy physics conferences, and some in nuclear structure conferences. Thus clashes of dates of major conferences in both of these topics with those of "High Energy Physics and Nuclear Structure" must be avoided.

Recommended action : in so far as this does not already exist, that a regular liaison be established on such questions between the high energy and low energy section in IUPAP.

Finally, I only want to say that the effects of all these breakdowns of communication on the actual conference were very much smaller than might be inferred from the account above. The Dubna organizing committee discovered the problem relatively late, but succeeded in removing the worst effects by improvisation.

Sincerely yours,

T. Ericson
Senior Physicist, CERN.
Scientific Advisor to the IVth
International Conference on
High Energy Physics and Nuclear
Structure.

P.S. A copy of a letter from H. Lipkin to IUPAP concerning his visa for the Dubna Conference has just arrived. It was my personal strong impression at the conference that numerous delegates had visa difficulties (including myself). It seemed that these difficulties were particularly severe in the U.S., where the Soviet Embassy seems to have forcefully insisted on Intourist arrangements before granting visas. As for myself, I only obtained a visa in the last minute after over two months waiting time and a number of telegrams, and then for wrong dates. My suspicion is that there is no systematic discrimination, but that there is poor execution of instructions in certain Soviet Embassies.

Executive Committee Meeting: Dublin, 24th - 25th September, 1971.

Royal Irish Academy Offices, 19 Dawson Street, Dublin 2.

REVISED AGENDA

1. Introduction.
2. Adoption of the agenda.
3. Minutes of the Copenhagen Meeting, held on October 2nd and 3rd, 1970 - already circulated.
Please bring your copy of the minutes and your copy of IUPAP-16 to Dublin.
4. Matters arising from the minutes.
5. New scheme for the Election of Executive and Commission Members.
6. Consequential and other changes to the IUPAP Statutes.
7. The 1972 General Assembly - arrangements and tentative programme.
8. Commission Reports.
9. Mandate of the Commission on Atomic Masses and Related Constants.
10. COSPAR report.
11. Report on ICSU business.
12. Financial Report for 1970 and budget for 1972.
13. Withdrawal of Pakistan.
14. Conferences for 1972 and later years.
15. Financial allocations for 1972.
16. Possible collaboration with IUPAC.
17. Other business.
18. Conclusion.

Nuffield Lodge,
Regent's Park,
London, NW1 4RS.

C. C. Butler
8th September, 1971.

Stud

(10 copies)

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, 1971

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 2¹3rd, 9:00 A.M. - 12:00 noon, The Plenary Session.
- Saturday, September 2³5th, 3:00 P.M. - 5:00 P.M., A Business Session.
- Tuesday, September 2⁶8th, 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 2⁰2nd, a welcoming reception at the National Academy of Sciences.

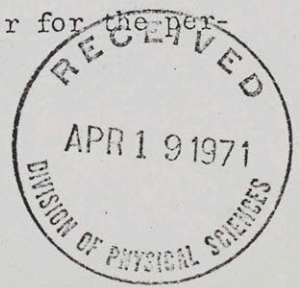
Thursday evening, September 2¹3rd, a State Department reception at the New State Department Building.

Friday evening, September 2²4th, 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 2³5th, a program at the JFK Center for the performing arts.

Honorary
Chairmen
Retiree
Speaker

Panel: "Significance of Physics"
~~Case~~



Sunday afternoon, September 2⁴th, sight seeing tours with suggestions as follows:

1. Lee Mansion, National Cemetery and Mount Vernon.
2. Goddard Space Center at Greenbelt, Maryland.
3. *National Bureau of Standards*
Naval Research Laboratory.

Suggestions for additional tours are solicited.

Monday evening, September 2⁵th, 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.
W. W. Havens, Jr.

April 14, 1971

IUPAP General Assembly
September 23-26, 1971
National Academy of Sciences, Washington, D.C.

(Very Tentative Program)

⁰
Wednesday, September 22, 1972

Executive Committee Meeting - 1:00-5:00 P.M.

Welcoming Reception

National Academy of Sciences - 5:30-7:30 P.M.

¹
Thursday, September 23, 1972

9:00 A.M - Noon - Plenary Session (Butler)

2:00 P.M.

A. The Unity of Physics (Suggested Speaker E. Purcell, Harvard Univ.)

B. Plasma Physics (Suggested Speaker Prof. L. A. Artsimovich)

C. Magneto Hydrodynamic (Suggested Speaker H. Alfven)

5:30-7:30 P.M.

U.S. Reception for Foreign Delegates - New State Dept. Reception Rm.

^V
Friday, September 24, 1972

10:00 A.M.- Noon

Physics and Its relation to Society (Suggested Speaker Sir Lawrence

Bragg; alternate Sir Harrie Massey)

Classical Physics (Suggested Speaker Richard Feynman, Cal. Tech;

alternate Luis Alvarez- Berkeley)



IUPAP General Assembly, September 23-26, 1972
(Tentative Program Cont'd)

²
Friday, September 24, 1972 (Cont'd)

2:00 P.M. - 4:00 P.M.

Nuclear Physics (Suggested Speaker Aage Bohr-Univ. of Copenhagen)
Particles and Fields (V. F. Weisskopf- MIT)

³
Saturday, September 25, 1972

10:00 A.M.

*Low-Temp
Statistical
Physics*

Solid State Physics I (Suggested Speaker John Bardeen)
Solid State II (Suggested Speaker A. Abragam)
Solid State III (Suggested Speaker Ginzberg, U.S.S.R.)
Alternates: Kastler, Josephson, Zimel, Coppi, Fisher,
Schawlow, Schreiffer, DeGennis

2:00 - 3:00 P.M.

Physics Research and Its Relation to Society (Suggested Speaker
Casimir; alternates Weinberg, Baker)

⁴
Sunday, September 26, 1972

1:00 P.M. - Sightseeing Tours

- 1) Lee Mansion, National Cemetry, and Mount Vernon
- 2) Goddard Space Center in Greenbelt, Md.
- 3) Naval Research Laboratory

(additional Suggestions Requested)

X

IUPAP General Assembly, September 23-26, 1972

(Tentative Program Cont'd)

5
Monday, September 21, 1972

10:00 A.M.

Astrophysics (Suggested Speaker F. Hoyle; alternate - Biondi)

Physics of the Earth (Suggested Speaker J. Tuzo Wilson; alternate-
Bullard)

2:00 P.M.

Relativity (Suggested Speaker K. Thorne; alternate - Singh)

Atomic and Molecular Physics (Suggested Speaker G. Hertzberg)

Optics (Suggested Speaker Di Francia; alternate - Schawlow)

5:30 - 7:00 P.M.

Cocktails at the National Academy of Sciences

7:00 P.M.

Banquet

6
Tuesday, September 22, 1972

10:00 A.M.

International Co-operation in Physics (Suggested Speaker Gentner
alternates - Kikuchi, Maier-Leibnitz)

2:00 P.M.

Final Session - R. F. Bacher

7
Wednesday, September 23, 1972

Final Meeting of the Executive Committee

SUGGESTED LIST OF INVITED SPEAKERS

Abragam
Alfven
Artisomovich
Bardeen
Bohr
Bragg
Casimir
DiFrancia
Feynman
Gentner
Ginzberg
Hertzberg
Hoyle
Purcell
Thorne
Weisskopf
Wilson

SUGGESTED LIST OF ALTERNATES


Alvarez
Baker
Biondi
Bullard
Coppi
DeGennis
Fisher
Josephson
Kastler
Kikuchi
Maier-Leibnitz
Massey
Schawlow
Schreiffer
Weinberg
Zimel

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Possible modifications to the proposals for election procedures


These notes have been prepared by the Secretary-General to aid discussion at the Dublin Meeting of the Executive. They take into account many of the comments received in London.

1. The Executive Committee

- 
- 1.1 There is general agreement on the proposed size for the Executive.
- 1.2 Possibly titles should be changed to President, Vice-President, Members, Joint-Secretaries.
- 1.3 Some commentators suggest that proposed arrangements allow very long service on Executive - conceivably as long as 15 years.

Possible modifications are:

- (a) Vice-Presidents 6 years
- (b) First Vice-President 3 years
- (c) President 3 years
- (d) abandon title of Past-President -
in recent years no Past-President has played an active role.
- (e) First Vice-President to be appointed from Vice-Presidents of three years' service or from outside the Executive.

- 
- 1.4 Consider having two Joint Secretaries-General.
- 1.5 The Secretaries-General should have limited office, perhaps formal election every three years, but nine years maximum. It would be necessary to stagger appointments, i. e. either three or six years apart.
- 1.6 To what extent should everyone be re-elected every three years?
- 1.7 Brief synopsis of election procedures

- (a) Call for suggestions from National Committees by end of May 1972 (possibly by end of April?). This date would have to be a firm dead-line.
- (b) Suggestions to be submitted on a prepared form, including name, address, brief details of professional expertise in physics, and post currently held.
- (c) All suggestions to be circulated to National Committees at end of June 1972 (possibly end of May?).
- (d) Executive to publish its proposals - not necessarily restricted to suggestions received - at the beginning of the assembly. (Some countries would want to deny this right to the Executive.)

Redon

- (e) Additional names could be added to the Executive list, by an announced dead-line early in the assembly, by a proposer and seconder. Candidate's own country permitted to propose and second.
- (f) If additional names are proposed a formal secret ballot would be held.

2. The Commissions

- 2.1 Commissions should consist of a Chairman and a Secretary and five to ten members.
- 2.2 Commissions to be asked to recommend (? decide) sizes appropriate for their work.
- 2.3 At the beginning of the 1972 assembly the Executive would announce its recommendations on commission sizes. Assembly to confirm or alter. Commissions may need coopted members or observers from other unions.
- 2.4 Terms of office:
 - (a) Members - six years maximum, normally all from different countries.
 - (b) Chairman - three years, after service of three, or exceptionally six, years on commission.
 - (c) Secretary - six years, usually after three years' service on commission.
(Note that several countries and commissions would be unhappy with these suggestions)
 - (d) Membership of SUN and Atomic Masses and Related Constants Commission could perhaps be longer.
 - (e) Two members could belong to one country, provided one was Chairman or Secretary.
- 2.5 Election procedure:
 - (a) Suggestions for members and officers from National Committees and Commissions to be required by the end of May 1972.
(Note: some countries will object to Commissions making suggestions.)
 - (b) Same information required as for Executive proposals.
 - (c) A list of all suggested names to be circulated at the end of June 1972.
(It will probably be impossible to circulate addresses and synopses of careers - paper would be too large!)
 - (d) The Commissions will make proposals on their desired sizes by the end of June 1972.

- (e) At the beginning of the assembly in Washington the Executive will recommend sizes for Commissions and publish its recommendations for members and officers. (Some Commissions would prefer to elect their own officers.)
- (f) Additions to the Executive list will need to be proposed and seconded. Candidate's country may propose or second.
- (g) If required, election will be held according to procedures in the statutes.

3. General Comments

- 3.1 It would probably help if the Executive could meet in June to decide on their list. Is this practicable because of cost and probable failure to adhere to the proposed dead-line of end of May (or April) for receiving names from National Committees and Commissions?

This extra meeting would undoubtedly improve the efficiency of the assembly.

It would be particularly valuable in 1972 because of the possible changes in the statutes.

- 3.2 We may have to explain in greater detail the philosophy of the new proposals, viz:

Stage 1 Suggestions received from National Committees and Commissions

Stage 2 Executive chooses its list - can itself introduce names

Stage 3 Alternative names to Executive's choice can be proposed and seconded at the assembly.

Stage 4 Formal elections

- 3.3 Several countries want to vote on all suggested names - totally impracticable and would not lead to reasonably balanced membership of Commissions.
- 3.4 We may need to discuss the roles of the Joint Secretaries-General.



ARGONNE NATIONAL LABORATORY

September 10, 1971

To:

G. Backenstoss	B. H. Flowers	A. Salam
D. I. Blokhintsev	M. L. Goldberger	V. P. Shelest
N. N. Bogoliubov	M. Goldhaber	S. Suwa
A. Bohr	E. L. Goldwasser	I. Talmi
G. E. Brown	E. P. Hincks	J. Teillac
S. Devons	R. E. Marshak	W. Thirring
S. Drell	Y. Ne'eman	L. Van Hove
V. P. Dzhelepov	J. Pniewski	V. F. Weisskopf
T. E. O. Ericson	R. Rozental	K. Wildermuth
H. Feshbach	R. G. Sachs	C. N. Yang

Enclosed is a copy of my letter to Dr. Robert L. Walker, Secretary of the IUPAP Commission on Particles and Fields, regarding my failure to obtain a Soviet visa to attend the International Conference on High Energy Physics and Nuclear Structure at Dubna, September 7-12, 1971.

Sincerely yours,

Harry J. Lipkin
Harry J. Lipkin

HJL:js
Enclosure

*U.S. Embassy (Secret)
insisted on interview*



ARGONNE NATIONAL LABORATORY

September 8, 1971

Dr. Robert L. Walker, Secretary
IUPAP Commission on Particles and Fields
Charles C. Lauritsen Laboratory of High Energy Physics
California Institute of Technology
Pasadena, California 91109

Dear Bob:

This is to inform you that I have been unable to attend the International Conference on High Energy Physics and Nuclear Structure at Dubna, 7-12 September, 1971. I did not receive a Soviet visa.

I applied for my visa in the same way as I did last year for the Kiev conference. Since I was in the United States for the summer, I applied through a local travel agent to the Soviet Embassy in Washington. Last year (Kiev) there were no problems, and everything went through at the same rate as a normal American application. This year everything took longer than last year, and longer than similar American applications this year. The Intourist request took longer and required extra telegrams from the travel agent to get the confirmation which came less than a week before the scheduled departure. When the visa had still not arrived a few days before departure, the travel agent called twice to the Soviet Embassy in Washington and was told that the visa had already been mailed and was on its way. However, it did not arrive.

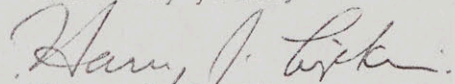
Today, when the conference is already in session and it is too late to make any further travel plans, the Soviet Embassy called my travel agent and apologized. They said that the application got attached to something else. Anyone who wishes to believe this story is welcome to do so.

Before the 1970 Kiev Conference, considerable attention was given to the question of visas for the Israeli delegation, and visas were granted with no apparent problems. As a result of this apparent absence of difficulties, I have heard the opinion expressed that the Israelis were making too big a fuss about the whole problem. We therefore decided not to make a fuss

about this conference. It now appears that such a fuss was necessary, and that the kind of activity which preceded the Kiev conference will probably be necessary before every conference held in countries which play these games with visas.

Perhaps it would be a good idea for IUPAP to require that participants at all conferences sponsored by IUPAP receive their visas by a certain deadline, which can be made uniform for all conferences or be fixed individually for each conference. If the visas are not received by this deadline, there will then be time to check whether or not they are "already in the mail" or "attached to something else."

Sincerely yours,



Harry J. Lipkin

HJL:js

IUPAP
Associate Secretariat

Working Documents
1971 Executive Meeting

1. Minutes of the Copenhagen Meeting
2. Résumé of activities at Québec
3. Recent issues of News-Bulletin
4. Financial report for 1970 (sent out)
5. State of 1971 Budget
6. State of Member countries' dues
7. Suggested budget for 1972
8. Partial list of proposed Conferences for 1972
9. Record of Conference support
10. Commission budgets

Québec, September 1st, 1971.

IUPAP

Associate Secretariat

RESUME of ACTIVITIES at QUEBEC

- a) The Quebec Secretariat has continued to operate satisfactorily, madame Balaux maintaining an approximately one-week turnover time.
- b) Minutes of the Executive Committee meeting at Copenhagen were distributed.
- c) The financial statements for 1970 were compiled, audited, and circulated.
- d) 7 issues of the News-Bulletin were published.
- e) The compiling of the index of physicists who have served on IUPAP Committees and Commissions has been continued. It is expected to be terminated in time for the 1972 meeting, when it will be useful for the composition of slates of candidates.

Québec, September 1971.

Working Document

IUPAP

State of the 1971 budget, as of September 1st

<u>INCOME</u>	<u>to date</u>	<u>expected</u>	<u>total</u>	1971 <u>(prediction)</u>
Member countries.	\$35,900.	\$15,100.	\$51,000.	(\$51,300.)
UNESCO.	13,125.	-	13,125.	(16,000.)
Interest.	-	1,200.	1,200.	(1,000.)
	<u>\$49,025.</u>	<u>\$16,300.</u>	<u>\$65,325.</u>	<u>(\$68,300.)</u>
 <u>EXPENDITURES</u>				
Conferences	\$44,500.	\$ 4,000.	\$48,500.	(\$47,500.)
Commissions	7,525	-	7,525.	(8,000.)
Secretariat	2,150.	1,500.	3,650.	(4,000.)
Banking & Accounting.	225.	175.	400.	(500.)
Publications.	-	-	-	(1,000.)
Subscriptions	1,150.	-	1,150.	(1,500.)
Executive Ctee.	1,800.	5,700.	7,500.	(5,000.)
Contingencies	150.	350.	500.	(1,000.)
	<u>\$57,500.</u>	<u>\$11,725.</u>	<u>\$69,225.</u>	<u>(\$68,500.)</u>
 DEFICIT.			 \$ 3,900.	 (\$ 800.)

Québec, September 1971.

Working Document

IUPAP

Member countries' dues as of September 1st, 1971

	<u>before 1971</u>	<u>1971</u>
FEDERAL REPUBLIC of GERMANY		\$ 3,600.
ARGENTINA		600.
BELGIUM		1,200.
BOLIVIA		300.
BULGARIA		300.
CHINA		300.
CUBA		300.
DENMARK		900.
FINLAND		300.
FRANCE		600.
HUNGARY		100.
ISRAEL		600.
ITALY		3,600.
KOREA		300.
MEXICO		600.
PAKISTAN	\$500.	-
ROMANIA		900.
UNITED ARAB REPUBLIC		300.
YUGOSLAVIA	750.	300.
	<u>\$1,250.</u>	<u>\$15,100.</u>

Working Document

IUPAP

Budget proposed to the Executive Committee for 1972

INCOME

(estimated)

Member countries (170 x #300.)	\$51,000.
UNESCO	13,000.
Interests	1,000.
Transfer from travel funds.	<u>5,000.</u>
	\$ 70,000.

EXPENDITURES

Conferences: regular: \$35,000.	
General Assembly: \$10,000.	\$45,000.
Commissions	8,000.
Secretariat	4,000.
Banking and Accounting.	500.
Publications.	2,000.
Subscriptions	1,500.
Executive Committee	8,000.
Contingencies	<u>1,000.</u>
	\$ 70,000.

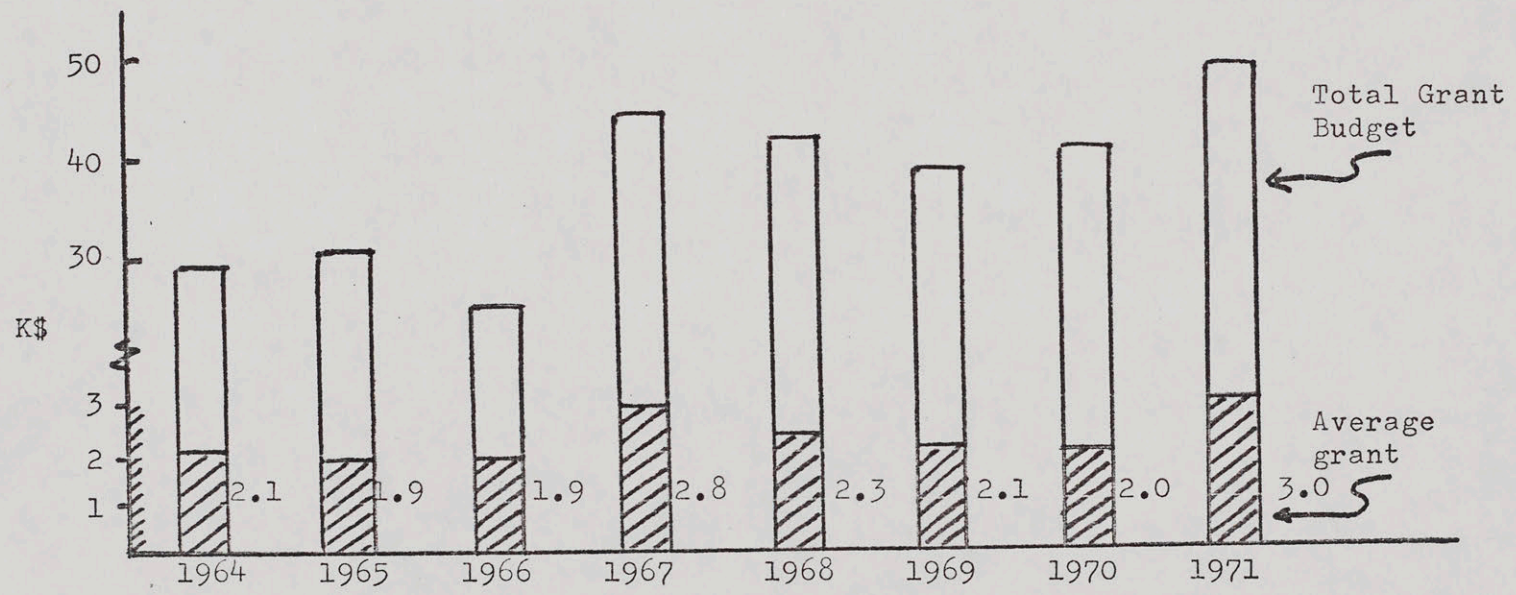
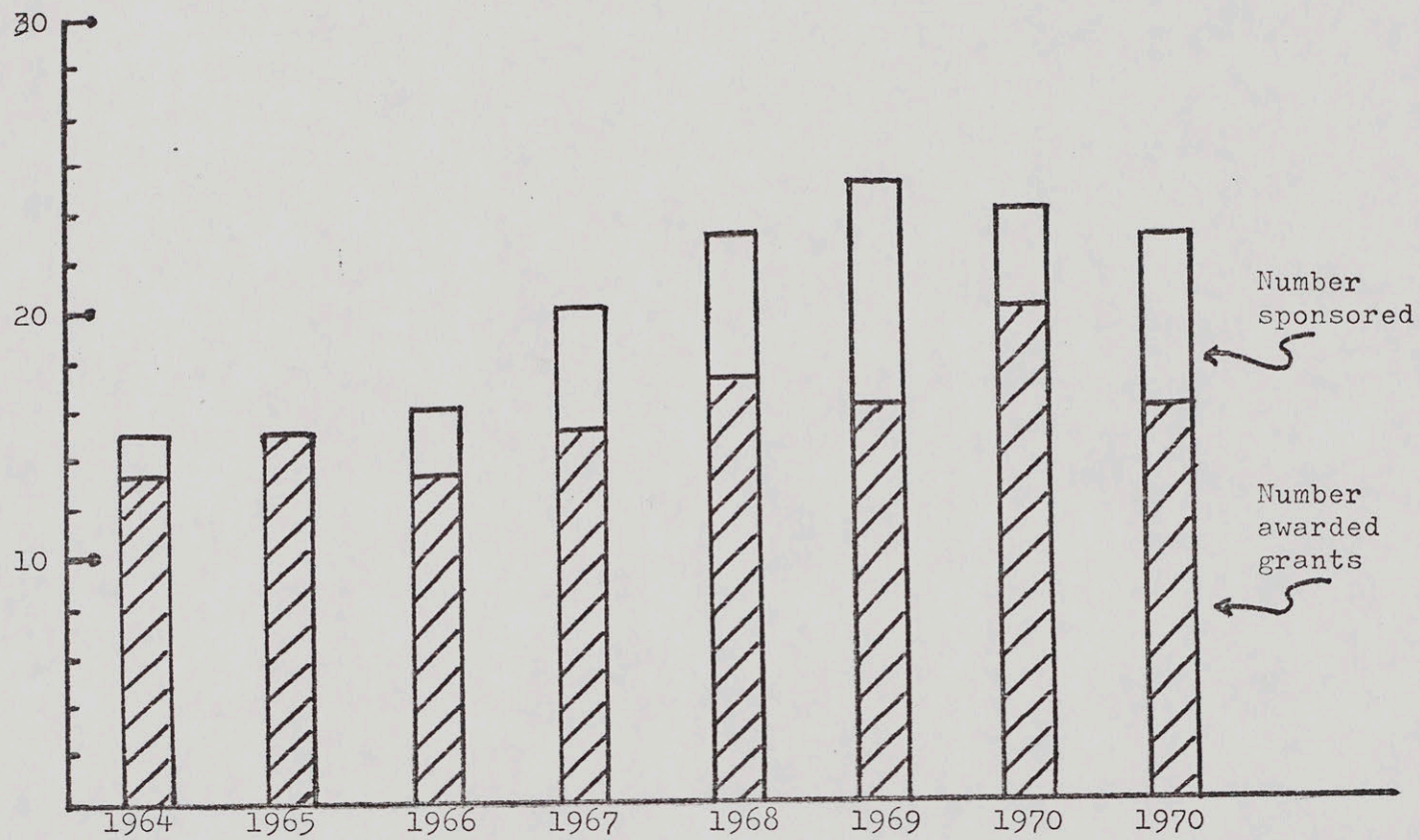
Québec, September 1971.

Partial List of Proposed Conferences for 1972

<u>Commission</u>	<u>Conference</u>
VERY LOW TEMPERATURE	13th Conf. on Low Temperature Physics Boulder, USA - August - \$3,000.
SEMICONDUCTORS	Radiation Induced Defects in Semiconductors Reading, UK - July 11th Conf. on the Physics of Semiconductors Warsaw, POLAND - July - \$6,000.
SOLID STATE	Int. Conf. on Thin Films Venice, ITALY - May Int. Conf. on Vapour Growth Jerusalem, ISRAEL - May Band Structure of Solids Exeter, UK - July 2nd Int. Symp. on Surface Physics Enschede, HOLLAND - June 7th Int. Symp. on the Reactivity of Solids Bristol, UK - July 2nd Int. Conf. on the Properties of Liquid Metals Tokyo, JAPAN - September - \$2,500.
PARTICLES & FIELDS	14th Int. Conf. on High Energy Physics Chicago, USA
NUCLEAR PHYSICS	Nuclear Moments and Nuclear Structure Osaka, JAPAN - August - \$2,000. 6th Int. Cyclotron Conference Vancouver, CANADA - July - \$2,500. Few Particle Problems in the Nuclear Interaction Los Angeles, USA - August - \$3,000.
PHYSICS EDUCATION	Teaching of Physics to Students in Physics..... Kiel, GERMANY - July - \$6,000.
ATOMIC PHYSICS & SPECTROSCOPY	3rd Int. Conf. on Atomic Physics Boulder, USA - August - \$5,000. Inner Shell Ionization Phenomena Atlanta, USA - April 17e Colloque Ampère Turku, FINLAND - August - \$1,500.

IUPAP Executive Committee Meeting 1971
Working Sheet

Record of
Conference Support



IUPAP

COMMISSIONS BUDGET re: 1970-71-72 CONFERENCES

	to date	proposed for 1972	total	proposed budget
S.U.N.	\$ -	\$ -	\$ -	\$ 3,000.
THERMO. & STAT. MECHANICS	8,000.	-	8,000.	5,000.
COSMIC RAYS	8,000.	-	8,000.	8,000.
VERY LOW TEMPERATURE	5,500.	3,000.	8,500.	5,000.
PUBLICATIONS	-	-	-	3,000.
ACOUSTICS	5,000.	-	5,000.	5,000.
SEMICONDUCTORS	7,000.	6,000.	13,000.	8,000.
MAGNETISM	5,000.	-	5,000.	5,000.
SOLID STATE	8,000.	2,500.	10,500.	15,000.
PARTICLES & FIELDS	10,000.	?	10,000.	12,000.
NUCLEAR PHYSICS	4,000.	7,500.	11,500.	12,000.
ATOMIC MASSES	3,000.	-	3,000.	3,000.
PHYSICS EDUCATION	3,000.	6,000.	9,000.	6,000.
ATOMIC PHYSICS & SPECTROS.	10,100.	6,500.	16,600.	15,000.
PLASMA PHYSICS	4,000.	-	4,000.	5,000.
OPTICS	-	-	-	5,000.
OTHERS	3,500.	14,400.	17,900.	15,000.
	\$84,100.	\$45,900.	\$130,000.	\$130,000.

INTERNATIONAL ^{IUPAP} PHYSICS

UNION OF
PURE AND
APPLIED

News-Bulletin No. 23

June 1971

INTERNATIONAL CONFERENCES

Readers should consult the list published in News-Bulletin No. 19 and the addendum in No. 22. They are reminded of the coming August meetings:

- | | |
|---|----------------------------|
| 3. 12th Int. Conf. on Cosmic Rays (A) | August 16-25
Hobart |
| 4. 7th Int. Conf. on Acoustics (A) | August 18-26
Budapest |
| 5. Int. Conf. on Amorphous and Liquid Semiconductors (B) | August 8-13
Ann Arbor |
| 11. Int. Conf. on Electron and Photon Interactions at High Energies (B) | August 23-28
Ithaca |
| 14. Conf. on Statistical Properties of Nuclei (B) | August 23-27
Albany |
| 16. 3rd Int. Conf. on Vacuum UV Radiation Physics (B) | August 30-Sept. 2
Tokyo |

SPACE RESEARCH

Vice-President Bhagavantam, IUPAP's representative on COSPAR, reports that elaborate plans have been made for the XIVth meeting, to take place in Seattle, USA, from June 21-July 2, 1971. Many working groups will hold meetings on various aspects of space research. Care has been taken to exclude topics covered by other International groups. The meeting will be preceded and followed by eight special Symposia, five in Seattle alone.

COSPAR's Executive Secretary, Mr. Z. Niemirowicz, notes that the programme should hold special interest for physicists who might care to attend the open working groups (samples of topics: Long baseline interferometry; Lunar laser; Galactic and extra-galactic astronomical measurements; the theoretical study of interplanetary dust; Upper atmosphere phenomena; chronic effects of ionizing radiation; latest investigations of Moon, Mars, Venus).

Local Committee is:

c/o Dr. Harold B. Liemohn,
COSPAR,
P.O. Box 24165,
Seattle, Washington 98124, U.S.A.

Tel.: (206)655-0695 Cable: COSPAR, Seattle.

PERIODICAL TITLE WORD ABBREVIATIONS

The Abstract Bureau of ICSU has gone to the trouble of compiling a list of 7000 words or word roots frequently used in titles of papers and has recommended abbreviations for them. This material will be useful for coding, memory storage, etc. It is based on the lists published since 1966 by the Standards Ctee Z39 of the American Nat. Standards Int. Copies (\$4.50) may be obtained from the AB Secretariat (Paris) or the Chemical Abstracts Service (Columbus).

LATIN AMERICAN BULLETIN

The attention of Spanish and Portuguese speaking members is drawn to the "NOTICIA; Centro Latino Americano de Fisica" published at Av. Wenceslau Braz, 71-ZC-82 Rio de Janeiro, Brasil.

THE HISTORY OF PHYSICS

Following the successful International Seminar on the Role of History of Physics in Physics Education (MIT, July, 1970), the International Commission on Physics Education is wrestling with the problem of how to go about having written a History of Physics. The need for such a document appears to be established, but numerous difficulties are obvious. Further discussions are planned, and the matter will be taken up again at the next meeting of the Commission. National Committees are invited to send comments to the Commission.

NOTICE from INDIA

The Secretariat has been requested to inform Union members that the adhering body in India for ICSU, IUPAP and other Unions has changed its name from "The National Institute of Sciences of India" to "THE INDIAN NATIONAL SCIENCE ACADEMY."

PLEASE NOTE

Since the publication of the list of International Conferences for 1971 and the addendum to this list, another Conference has been sponsored by the Union:

23. Int. Symposium on Magnetic Resonance - 'C'
August 24-31 - Rehovot, ISRAEL
inf.: Dr. D. Fiat,
Weizmann Institute of Sciences,
Rehovot, ISRAEL.

USNC - IUPAP
April 29, 1971

AGENDA

1. Approval of Minutes of February 3, 1971, Meeting
(Sent on March 30, 1971)
2. Discussion of Plans for the IUPAP 1972 General Assembly
 - 2.1 Program (see Havens' memo of April 15, 1971)
 - 2.2 Draft Budget (Attachment A)
3. Change in Constitution (Attachment B)
4. For Noting:
 - 4.1 Approval of two topical conferences
 - a) Few Particle Problems in the Nuclear Interaction
 - b) Ion Sources and Formation of Ion Beams

(These proposals were submitted on March 30, 1971,
and Committee approval was obtained by mail.)
 - 4.2 Action on Helium Conservation (Attachment C)
5. IUPAP Document: "Possible changes in election procedures"
(Sent on March 30, 1971)
6. Other Business
7. Next Meeting
 - 7.1 Of Committee
 - 7.2 Of Organizing Committee for the General Assembly

Draft Budget Estimates
IUPAP 1972 General Assembly

I. Estimates for Conduct of Assembly and Scientific Sessions		
1. Personal Services		
1.1 Secretariat		
1/4 man-year at \$20K/annum	\$5,000	
1/2 man-year at \$9K/annum	4,500	
Fringe Benefits	<u>1,000</u>	\$10,500
1.2 Registration and Information Desk		
100 hours at \$4/hr		400
2. Communications and Shipping		
		800
3. Materials and Services		
3.1 Announcements and Invitations	1,000	
3.2 Programs	500	
3.3 Transportation		
3 buses, 6 days @ \$100/day	<u>1,800</u>	3,300
4. Travel		
4.1 Grants, Foreign Speakers	5,000	
4.2 Committee	<u>2,000</u>	7,000
5. Indirect Costs		
		<u>6,500</u>
	Sub-total	\$28,500

II. Estimated Costs of Amenities

1. Coffee Service

500 people, 6 days, twice daily, @ .50/person \$3,000

2. Lunches

200 people, 5 days, @ \$3/person 3,000

3. Reception and Dinners

3.1 Sept. 20: NAS Reception, 200 people @ \$3/person \$ 600

3.2 Sept. 21: State Dept., 200 people @ \$20/person 4,000

3.3 Sept. 22: Smithsonian, 200 people @ \$20/person 4,000

3.4 Sept. 23: NAS (pre-Kennedy Center visit)
200 people @ \$13/person (including \$3 for Kennedy
Center ticket) 2,600

3.5 Sept. 25: Banquet at NAS, 200 people @ \$10/person 2,000 13,200

4. Ladies Program 1,000

5. Indirect Costs 4,800

Sub-total \$25,000

Total, I and II \$53,500

Sources of Support:

IUPAP
Societies
Industry
Registration
Government
Academy

Amendments to the Constitution
USNC-IUPAP

Revision, April 29, 1971

1. To include as ex-officio members any U.S. member of an IUPAP Commission.

Article II, Section 1(a), reads in its first sentence as follows:

"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 and the Chairman of any Commission of IUPAP."

Change to read:

"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 and U.S. members of any Commission of IUPAP."

(N.B.--There are 17 Commissions in IUPAP (including the ICO). There now are 3 U.S. chairmen. One might expect an average of 5 or 6 to be chairmen, and thus the change proposed above would add some 10 people to the Committee's membership, albeit in an ex-officio capacity.)

2. An increase in the "member-at-large" category from "3" to "from 3 to 5."

Article III, Section 2(d), provides for three "members-at-large" in the following language:

"A committee composed of the Chairman of the Division of Physical Sciences of the NRC (as Chairman) and the officers of the USNC (3)

One for 3 year term

Every Year"

Change to read:

"A committee composed of the Chairman of the Division of Physical Sciences of the NRC (as Chairman) and the officers of the USNC (3)

From three up to five, each for a three-year term."

3. Deletion of narrative paragraph in Article II, Section 3.

This reads as follows:

"A nominee as follows:

The Acoustical Society of America (1)

One for 3 year term 1952 and every third
successive year

However, this section 3 of Article II shall become inoperative and shall be automatically deleted from this Constitution if and when the USANC determines that an Affiliated Commission of the IUPAP on Acoustics has come into existence, and the Chairman of its USA National Committee has been designated."

In view of the fact that the proposal for an affiliated Acoustics Commission has not been advanced and is not being pressed, deletion of the above paragraph, "However,...designated", is proposed.

NATIONAL ACADEMY OF SCIENCES

OFFICE OF THE PRESIDENT
2101 CONSTITUTION AVENUE
WASHINGTON, D. C. 20418

April 23, 1971

Dr. Edward E. David, Jr.
Director
Office of Science and Technology
Executive Office of The President
Washington, D.C. 20506

Dear Dr. David:

I transmit herewith a letter from Professor Robert F. Bacher, Chairman of our U. S. National Committee for the International Union of Pure and Applied Physics, on helium conservation, with which he encloses a statement on this subject adopted by the international Very Low Temperature Commission. Our Committee has endorsed the latter position and has requested that I make the statements available to the government.

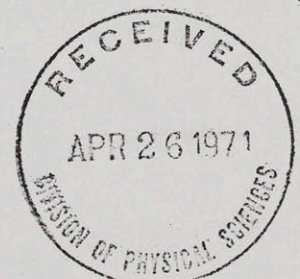
The Commission briefly notes the importance of helium conservation, commends the United States for its conservation program, and calls for the cooperation of other governments because "it seems unreasonable that the USA should continue to bear the sole cost of preserving helium for the future use of all the peoples of the world." We expect that the Commission's statement will reach various governments through their scientific institutions adhering to the International Union of Pure and Applied Physics and the International Council of Scientific Unions. Perhaps active collaboration on the part of other governments may be thus encouraged.

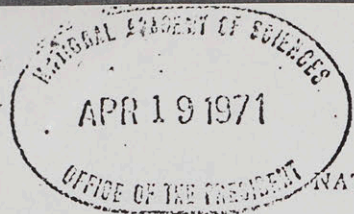
Sincerely yours,

Philip Handler
President

cc: Mr. U. Alexis Johnson
Dr. William T. Pecora

bcc: Dr. Robert F. Bacher
Dr. David Z. Beckler
Dr. Hugh Odishaw ✓





NATIONAL RESEARCH COUNCIL

NATIONAL ACADEMY OF SCIENCES NATIONAL ACADEMY OF ENGINEERING

2101 CONSTITUTION AVENUE WASHINGTON, D.C. 20418

DIVISION OF PHYSICAL SCIENCES

April 2, 1971

Dr. Philip Handler
President
National Academy of Sciences
2101 Constitution Avenue
Washington, D.C. 20418

Dear Phil:

At its February 3, 1971 meeting, the U. S. National Committee for the International Union of Pure and Applied Physics had before it the topic of helium conservation. This was discussed with the Committee by the chairman of the International Commission on Very Low Temperature, Professor John Bardeen. In particular, Professor Bardeen put before the Committee a statement (copy enclosed) adopted by the Commission on Very Low Temperature regarding helium conservation, September 3, 1970, at the Commission's international meeting in Kyoto, Japan.

Our Committee recognizes the value of helium conservation but also the economic considerations involved therein, noting that recent governmental actions in the U. S. will greatly reduce this country's program in this area. The International Commission itself was sensitive to these aspects of the problem, stating specifically that "It seems unreasonable that the USA should continue to bear the sole cost of preserving helium for the future use of all the peoples of the world." Thus it is that the Commission recommends that other nations share in the costs. (This recommendation is expected to go to the Union itself and from there to the International Council of Scientific Unions. It is hoped that the latter will concur in the recommendation and will address the adhering bodies of various nations to this effect.)

Our Committee, aside from endorsing the statement of the Commission on Very Low Temperature, felt that the statement ought to be in the hands of our government, in part because the statement appropriately recognizes the laudable role of the U. S. in helium conservation and in part because, if our government is negotiating or can negotiate with other governments with a view toward their purchasing and storing helium, the position of an international body might be of value.

Sincerely yours,

Bob

Robert F. Bacher
Chairman, USNC-IUPAP

Enclosure

International Union of Pure and Applied Physics

Very Low Temperature Commission

Helium Conservation

At its meeting held on 8 September 1970 during the Twelfth International Conference on Low Temperature Physics held in Kyoto, Japan, the question of helium conservation was considered as a matter of international urgency.

Helium is an element with unique properties for which there is no conceivable substitute. In a very few gas wells in the world, practically all the known ones being in the USA, the covering mantle is sufficiently impermeable to retain helium in concentrations high enough to make separation and restorage underground reasonably economic.

In 1958, the U.S. Congress initiated a far-sighted programme for the separation and underground storage of helium gas for the future use of humanity. The programme envisaged the ultimate storage of 10^{11} cubic feet of helium at ntp, at a cost of several hundred million dollars.

Now, after ten years of work and the successful storage of 2.42×10^{10} cubic feet, 30 year's supply at current rate of consumption, the US government have found the programme too costly and are considering abandoning it. Two of the principal reasons appear to be the curtailment of the NASA programme with consequent reduction of income from NASA for the sale of helium, and the undercutting of the government price for helium by commercial operators of helium separation plants.

It may be that at some time in the future, if fusion processes can be made economic, then helium may be an economic by-product. It may also be possible economically, but this is not the case for the foreseeable future, to separate helium from the atmosphere. Unless and until either of these processes can come into being, helium is the one irreplaceable and wasting element.

It is an accident of geography and geology that the only sources of abundant helium are in the USA. The American government has for ten years performed a world service in conserving helium for world wide use. It seems unreasonable that the USA should continue to bear the sole cost of preserving helium for the future use of all the peoples of the world.

The Commission therefore makes the urgent plea that IUPAP should consider the matter of helium conservation, and if favourable to our plea, should, through ICSU or by other means, bring the question of helium conservation to the notice of ICSU member governments.

It would be inappropriate for the Very Low Temperature Commission to make specific recommendations as to the method of financing internationally the conservation of helium. We do, however, suggest that the member governments find a method of sharing in the cost of conservation possibly by buying, and banking in the US storage system for future use, helium in appropriate quantities.

In this matter of helium conservation, the Very Low Temperature Commission has an absolutely vital interest since helium provides its essential sustenance. Nevertheless, helium has a vastly wider use in the scientific and technological world. We are concerned not only for the decades immediately ahead but for many future generations.

We are aware that governments have been unaccustomed to planning more than a few decades in advance. Problems of safeguarding the environment are, however, now forcing a much longer term view. The conservation of helium is one highly important factor in this context. The Very Low Temperature Commission is therefore stressing the extreme importance of this matter, and repeats its urgent request that IUPAP give it earnest and early attention.

April 14, 1971

IUPAP General Assembly
September 23-26, 1971
National Academy of Sciences, Washington, D.C.

(Very Tentative Program)

Wednesday, September 22, 1972

Executive Committee Meeting - 1:00-5:00 P.M.

Welcoming Reception

National Academy of Sciences - 5:30-7:30 P.M.

Thursday, September 23, 1972

9:00 A.M - Noon - Plenary Session (Butler)

2:00 P.M.

A. The Unity of Physics (Suggested Speaker E. Purcell, Harvard Univ.)

B. Plasma Physics (Suggested Speaker Prof. L. A. Artsimovich)

C. Magneto Hydrodynamic (Suggested Speaker H. Alfven)

5:30-7:30 P.M.

U.S. Reception for Foreign Delegates - New State Dept. Reception Rm.

Friday, September 24, 1972

10:00 A.M.- Noon

Physics and Its relation to Society (Suggested Speaker Sir Lawrence

Bragg; alternate Sir Harrie Massey)

Classical Physics (Suggested Speaker Richard Feynman, Cal. Tech;

alternate Luis Alvarez- Berkeley)

IUPAP General Assembly, September 23-26, 1972
(Tentative Program Cont'd)

Friday, September 24, 1972 (Cont'd)

2:00 P.M. - 4:00 P.M.

Nuclear Physics (Suggested Speaker Aage Bohr-Univ. of Copenhagen)
Particles and Fields (V. F. Weisskopf- MIT)

Saturday, September 25, 1972

10:00 A.M.

Solid State Physics I (Suggested Speaker John Bardeen)
Solid State II (Suggested Speaker A. Abragam)
Solid State III (Suggested Speaker Ginzberg, U.S.S.R.)
Alternates: Kastler, Josephson, Zimel, Coppi, Fisher,
Schawlow, Schreiffer, DeGennis

2:00 - 3:00 P.M.

Physics Research and Its Relation to Society (Suggested Speaker
Casimir; alternates Weinberg, Baker)

Sunday, September 26, 1972

1:00 P.M. - Sightseeing Tours

- 1) Lee Mansion, National Cemetery, and Mount Vernon
- 2) Goddard Space Center in Greenbelt, Md.
- 3) Naval Research Laboratory

(additional Suggestions Requested)

IUPAP General Assembly, September 23-26, 1972
(Tentative Program Cont'd)

Monday, September 21, 1972

10:00 A.M.

Astrophysics (Suggested Speaker F. Hoyle; alternate - Biondi)

Physics of the Earth (Suggested Speaker J. Tuzo Wilson; alternate-
Bullard)

2:00 P.M.

Relativity (Suggested Speaker K. Thorne; alternate - Singh)

Atomic and Molecular Physics (Suggested Speaker G. Hertzberg)

Optics (Suggested Speaker Di Francia; alternate - Schawlow)

5:30 - 7:00 P.M.

Cocktails at the National Academy of Sciences

7:00 P.M.

Banquet

Tuesday, September 22, 1972

10:00 A.M.

International Co-operation in Physics (Suggested Speaker Gentner
alternates - Kikuchi, Maier-Leibnitz)

2:00 P.M.

Final Session - R. F. Bacher

Wednesday, September 23, 1972

Final Meeting of the Executive Committee

SUGGESTED LIST OF INVITED SPEAKERS

Abragam
Alfven
Artisomovich
Bardeen
Bohr
Bragg
Casimir
DiFrancia
Feynman
Gentner
Ginzberg
Hertzberg
Hoyle
Purcell
Thorne
Weisskopf
Wilson

SUGGESTED LIST OF ALTERNATES

Alvarez
Baker
Biondi
Bullard
Coppi
DeGennis
Fisher
Josephson
Kastler
Kikuchi
Maier-Leibnitz
Massey
Schawlow
Schreiffer
Weinberg
Zimel

March 30, 1971

Draft Minutes

USNC-IUPAP Meeting, February 3, 1971, New York

Attendance

R. F. Bacher	J. Bardeen	G. Kolstad
W. W. Havens, Jr.	P. F. Donovan	F. Seitz
H. C. Wolfe	H. Odishaw	R. Smoluchowski
D. A. Bromley	S. Lukasik	T. Lauritsen
M. Greenspan	G. Wood	H. W. Koch
S. S. Ballard	A. W. Schardt	S. C. Brown
F. D. Smith	E. C. Rowan	P. W. McDaniel

a. IUPAP 1972 General Assembly

(1) Dates. In view of several restrictive factors--e.g., the ICSU General Assembly (September 12-18), the Elementary and the European Physical Society Meeting (October 2-7) Particle Commission Batavia Meeting (September 6-13)--the Committee authorized its officers, in consultation with Butler and Kerwin, to select an appropriate period between September 18 and September 30 for the 1972 General Assembly of IUPAP in Washington.

(2) Duration. It seemed that 4 to 5 days would suffice.

(3) General Schedule. (i) IUPAP Executive Committee to meet the day prior to the Assembly. (ii) The 4-5 day General Assembly to be structured so that one-half of each day is allocated to IUPAP's administrative sessions, one-half to scientific sessions; a banquet is to be arranged for the penultimate evening of the Assembly; other appropriate evening events are to be considered, and perhaps a "tour" if an open day is

available during the Assembly period. (iii) Following the Assembly, the IUPAP Executive Committee will hold its concluding meeting.

(4) Scientific Sessions. It was concluded that some 10 to 12 invited papers could be accommodated. Two of these were somewhat predetermined: (i) an historical paper on IUPAP, probably delivered by the Secretary General; (ii) address of the retiring president. (Question: Should this be presented at the banquet?). Other papers ought to be concerned with currently provocative areas of physics--e.g., Weisskopf on elementary particles; Artsimovich on plasma physics; Bondi, Massey, or Gold on space physics; Anatole Abragam on solid state; Kapitza on education; Casimir on physics in industry.

It was agreed that the nature of each paper must be not a critical field review but a presentation of what is important in and about a given subject, its prospective significances in coming years, and prospects for realizing objectives implied in the latter.

It was agreed that speakers not only would have to be most competent in their fields but effective speakers. It was hoped that all papers would be presented in English: perhaps IUPAP could declare English as the official language for the scientific sessions.

The sensitivity of ICSU and the Unions vis-a-vis social problems was noted. However, papers could properly deal with both pure and applied physics.

has this will be discussed in 2 July?

why explicitly?

*extra
tells*

(5) Publication. If suitable speakers and topics ensue the value of publishing papers was noted. Such a volume might well be attractive to a commercial publisher or it might be issued by IUPAP itself, or the AIP, or the NAS/NRC: this topic will be considered further as plans develop. It was also noted that perhaps Fleury might well prepare an historical pamphlet on IUPAP and its accomplishment.

(6) Audience. With the Academy's new auditorium, it becomes possible to consider audiences of up to about 800 in number. Assuming some 300 as directly involved in the IUPAP Assembly, some 500 guests could be invited to the scientific sessions. The composition of this prospective audience might consist of invited colleagues from local governmental and public institutions, members of the NAS and NRC, etc., and is to be considered further by the Committee at a later date.

(7) Program Arrangement. Two groups--whether constituting a single committee or two committees--were deemed necessary for arranging the scientific sessions: (i) a domestic group, which would have to do the actual work, (ii) an international group to reflect the character of the enterprise and to advise. In addition, Commission chairmen were to be consulted appropriately. These organizational problems represented an initial task of the first group, appointed by the Committee: Havens (Chairman), Bromley, Brown, Fiske, and Koch. (Havens plans to schedule a meeting of this group well before the Committee's next meeting (April 29, 1971, Washington, D.C.).

(8) Local Arrangements. An appropriate local arrangements group, supported by an NAS secretariat will be needed. Tasks such as hotel accommodations, transportation, announcements, invitations, meeting facilities, etc., will have to be accomplished by such a group.

(9) Budget. Such activities as some of those noted in (8) and other costs (e.g., expenses of some speakers) will require the preparation of a budget and an appeal to various sources for funds (e.g., IUPAP subvention and public and private assistance).

b. Helium Conservation

Bardeen summarized the situation as presented in more detail in the documents he had made available to the Committee and noted recent U. S. government action in curtailing the annual domestic program. He observed that recent production has been about 5B cu. ft. while demand has been about 1B. It was observed (i) that superconducting transmission lines would require considerable helium, if and when this development comes about, and here the Edison Electric Institute would have some interests in the problem and (ii) that fusion power plants, if and when realized, would provide added helium. Bardeen proposed that the Committee appropriately support the VLT Kyoto statement on international cooperation in helium conservation, and the Committee agreed to this, suggesting that the Chairman so advise

the Academy's President in the expectation that the latter would transmit the Committee's views to the government.

c. IUPAP-Associated U. S. Conferences

(i) 1973 Cosmic Ray Commission. An organizing committee is in process of formation. An NAS invitation will be requested in the near future. The University of Denver is expected to be the local host institution.

(ii) 1972 ICO Congress. Dow Smith summarized the status plans, now well along. The Congress will be held at Santa Monica, October 9-13, 1972. Approximately 1000 are expected to attend. Both arrangements and program committees are at work. A draft budget has been prepared and approved.

(iii) 1972 Very Low Temperature Conference. Bardeen requested that this meeting will be held at La Jolla toward the end of August, 1972. As in the past some 800 participants are expected, 500 domestic.

(iv) Topical Symposia. The Committee endorsed IUPAP sponsorship of the following topical conferences: (1) Inner Shell Ionization Phenomena and (2) Heavy Ion Sources, provided the appropriate Commissions occur.

d. USNC-IUPAP Constitution

The Committee approved in principle the following changes to the Constitution: (i) to include as ex-officio members any U. S. member of an IUPAP Commission and (ii) an increase

in the member-at-large category from "3" to "from 3 to 5", subject to submission of exact language to the Committee and mail concurrence therein. (A formal proposal is to be submitted at the Washington 1971 meeting.)

e. IUPAP Procedures

Bacher reported on recent actions by the IUPAP in this general area--e.g., voting procedures, number of Executive Committee members, terms of office, "corresponding members" vs. "regular members" of Commissions, and nominations. An IUPAP document is expected soon on this topic and will be submitted.

f. UNESCO Subventions to Non-governmental Bodies

Rowan reported a recent UNESCO resolution (a copy of a portion of which is attached) which could well cause UNESCO to sever all relationships, including contracts and financial subventions, with international non-governmental scientific organizations such as IUPAP and ICSU. As a result, IUPAP could lose approximately \$16,000 per annum. Bacher expressed the hope that the non-discriminatory traditions and policy of IUPAP and ICSU set forth in the reply of the ICSU Secretary-General, might satisfy the UNESCO resolution. If, however, this really proves to be a political limitation on ICSU, he expressed the view that ICSU (and IUPAP) should not acquiesce.

g. Next Meeting

Thursday, April 29, 1971, at Washington, D.C.

ATTACHMENT

Copy of Portion of UNESCO Resolution

28. (a) Requests the Director-General to undertake investigations of all international non-governmental organizations enjoying relations with Unesco, which have branches, sections, affiliates or constituent parts in South Africa or Rhodesia or Portuguese-dominated African territories, with respect to the practice of racial discrimination or racial segregation in their policies, activities, or membership or their cooperation in any way with the apartheid policy of the Government of South Africa; and to report thereon to the Executive Board;
- (b) Calls upon the Executive Board to take the necessary measures, in the light of the Director-General's report, to cut off, as from 31 December 1971, all relations with those international non-governmental organizations, in respect of which it has not been established, to the satisfaction of the Executive Board, that their branches, sections, affiliates or constituent parts in South Africa, Rhodesia or Portuguese-dominated African territories neither practise racial discrimination or segregation in their policies, their activities or in their membership, nor co-operate in any way with the Government of South Africa in the latter's apartheid policy.

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

IUPAP

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Memorandum from Secretary-General to Members of the IUPAP
Executive present at Dublin, September 1971.

Proposed changes in Election Procedure

1. Shortly after I returned to London from Dublin I received a memorandum for Professor Pal. I have discussed this paper with Professor Bacher and he has asked me to circulate it forthwith and seek your comments.
2. I enclose a copy of Professor Pal's memorandum and shall be grateful for your observations.
3. Pal explains in detail what seemed to be the Russian proposals. Essentially he accepts most of the recommendations we agreed in Dublin. The main issue is the right of the Executive and the Commissions to introduce names and the right of the Executive to prepare its slate. Pal recommends that only National Committees may suggest names and all should be voted on at the Assembly. His proposals are contrary to the unanimous view expressed at
Dublin.
4. If some Eastern Countries maintain their position as outlined in Pal's paper then it will probably be impossible to change the Statutes extensively at the 1972 meeting in Washington. I am considering the possibility of formulating a number of separate proposals some of which are likely to be accepted, e. g. fixed size for Executive, abolish distinction between ordinary and corresponding members of commissions etc.

C. C. Butler
28th October 1971

Professor H. Maier-Leibnitz
Dr. S. Bhagavantam
Dr. W. Boas
Professor W. Dekeyser
Professor A. Kastler
Professor S. Rozental
✓ Professor V. Weisskopf
Professor L. Kerwin
Professor R. Bacher

Some Remarks on IUPAP Election Procedures

The Executive Committee must be applauded for its suggestion that IUPAP election procedures should be developed further. From private conversations with physicists of the different member countries it has become clear that the majority readily accepts the fundamental principles of the preliminary recommendations, although there are, however, a number of questions over which divergent opinions have been voiced.

There is wide agreement - and for my own part I too favour the idea - that the IUPAP Executive Committee should not be expanded but should remain with its present composition of President, First Vice-President, Immediate Past-President, eight Vice-Presidents, Secretary-General and Associate Secretary-General. The original recommendation as to the term of office of the appointed members seems sensible.

With regard to the Commissions, the proposal that the distinction between ordinary and corresponding members should be discontinued in the future is very sound. The size of the representation on the Commissions should be determined on the basis of an analysis of the duties they have to carry out. There should be at least seven, but no more than 15, members. Although there would be many formal advantages to fixing all Commissions at the same size, I feel that such uniformity might bring with it the danger that at certain times a Commission

engaged in tasks of a complicated and diverse nature might not be able to raise the required number of expert members and thus might find its work impeded. I am inclined to think, therefore, that before the election of members to the Commissions a General Assembly vote should be taken on each Commission in turn as to what its size should be. This decision as to size should accept as a starting point the views of the individual National Committees. The working Commissions and the Executive Committee should be allowed to indicate their own standpoints, but only the proposals of the National Committees should come up for discussion in the General Assembly.

In this connection it would be in place to remark that more importance must be placed on the role of the National Committees in future IUPAP work, and more right conceded to them in the decision of IUPAP affairs. For the danger arises that in the future the appointed bodies will decide the course of things for themselves and that these decisions may reflect only partially the opinions of physicists of the individual countries. Of course, the appointed bodies might very well work so that their recommendations were in line with those of the National Committees, but if the General Assembly does not debate the National Committees' proposals and does not vote on them, then the danger can arise and potentially will always exist.

As I have noted, the abolition of the grade of corresponding member is a sound step. However, care must be exercised to ensure that the presently elected corresponding members - who according to the old procedure would in all likelihood have earned a further three-year term in this

position - should not all be lost from the various Commissions. I suggest that with perhaps a few exceptions these members should join the newly constituted Commissions as ordinary members with full voting rights. I feel that there is a need for such an arrangement in the transition period, although naturally in future elections it would be by no means proper to ensure such a continuity of office for appointed members.

In the election of members to both the Executive Committee and the Commissions it would be advisable to adopt some uniform procedure, in accordance with the initial proposal. The exact form of this procedure must be very carefully pondered, but among the various possibilities I think that serious consideration should be given to the following scheme. Nomination of candidates should be left entirely to the National Committees. The currently appointed bodies, both Commissions and the Executive Committee, should have the right to comment on these nominations but must submit the list of candidates from the National Committees in its entirety to the General Assembly. The list of candidates, together with for each candidate a statement on his career and scientific work, would then be discussed in the General Assembly.

The best election procedure would seem to be one adopting progressive elimination over several balloting rounds. This could be realized in the following manner. The first ballot would take place after discussion in the General Assembly as to the qualifications and suitability of the candidates, with due regard to the remarks of the Commissions and the Executive Committee. Those candidates who do not receive at

least, say, 10 votes would be eliminated. After further discussion on the remaining contenders a second ballot would be held to achieve further selection, this time at least 20 votes being the requirement. The final ballot would decide, on the basis of majority vote, which of the remaining pool of candidates is appointed to the Executive Committee, and what office they will hold, and which candidates are elected onto the various Commissions.

If this procedure is adopted we can presumably expect greater activity and also greater opportunities for screening. At all event, the situation must be avoided in which it appears that the retiring Commissions have already decided for themselves what the composition of their successors shall be.

To look a bit more closely at the process of nomination, it should be pointed out that spontaneous nomination carries with it many risks and for this reason serious reflection might perhaps be given as to whether we should adopt the procedure whereby nominations are made in the General Assembly by persons from two different countries other than that of the nominee - the one proposing the nominee, the other seconding - and the Assembly then votes on the list of so-called statutorially proposed candidates. For this method, too, can conceal the possibility of improvisation. The procedure might, however, be justified if progressive elimination balloting were introduced. In connection with the latter form of balloting, it might be objected that in some cases the necessary technical provisions for scrutiny of the votes or for

organization of the balloting might not exist, but I think that the availability of modern means of balloting can be taken for granted in all countries where it is possible to hold a General Assembly.

To summarize: In my opinion the questions of new election procedures should be debated before the 1972 General Assembly, so that if the General Assembly, and earlier the National Committees, agrees by a decisive majority to support the proposed procedure, the new statutes can be brought into force in the elections held at the 1972 Assembly.

A. Vai

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

News-Bulletin No. 25

October 1971

PHYSIQUE INTERNATIONALE

Bulletin de Nouvelles publié par l'U.I.P.P.A.

No 25 - octobre 1971

Lors de la réunion du Comité exécutif de l'Union internationale de Physique pure et appliquée tenue à Dublin en septembre dernier, on a accordé l'appui de l'Union aux congrès internationaux dont la liste est fournie ci-après.

VEUILLEZ CONSERVER ce NUMÉRO du
BULLETIN de NOUVELLES pour FINS
d'INFORMATION et de RÉFÉRENCE.

Ce Bulletin de Nouvelles est publié par le Secrétaire-général adjoint de l'Union, le professeur Larkin KERWIN, Université Laval, Québec 10, CANADA.

At the meeting of the Executive Committee of the International Union of Pure and Applied Physics held in Dublin last September, the patronage of the Union was extended to the following international conferences to be held in 1972.

PLEASE KEEP THIS ISSUE OF
THE NEWS-BULLETIN FOR REFERENCE.

This News-Bulletin is published by the Associate Secretary-General of IUPAP, Prof. Larkin KERWIN, Université Laval, Québec 10, CANADA.

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 Summer/
AUSTRIA Autumn
inf.: Prof. Dr. P. MAZUR
Secretary of the Commission
Instituut-Lorentz voor
Theoretische Natuurkunde
Nieuwsteeg 18
Leiden, NETHERLANDS.

Commission on Very Low Temperatures

2. XIII Int. Conf. on Low Temperature Physics "A" Boulder Aug. 20-26
Col., USA
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 "A" Warsaw July 25-29
of Semiconductors POLAND
inf.: Prof. SOSNOWSKI
Institute of Physics
The Polish Academy of Science
Warsaw, POLAND.
4. Radiation Induced Defects in Semiconductors "B" Reading July 19-21
UK
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

"C" Copenhagen ?
DENMARK

inf.: Dr. C. DeJAGER
The Astronomical Institute
21 Beneluxlaan
Utrecht, NETHERLANDS.

(Co-sponsored by IAU)

Commission on Solid State Physics

6. Int. Conf. on Thin Films

"B" Venice May 15-19
ITALY

inf.: Dr. K.H. BEHRNDT
Granville-Phillips Corporation
5675 East Avapahre Avenue
Boulder, Colorado 80303, USA.

(also sponsored by the ICO)

7. 2nd Int. Conf. on Vapour Growth
and Epitaxy

"B" Jerusalem May 22-25
ISRAEL

inf.: Prof. M. SCHIEBER
Department of Physics
The Hebrew University
Jerusalem, ISRAEL.

8. 2nd Int. Symposium on Surface Physics

"B" Enschede June 22-23
NETHERLANDS

inf.: Dr. A. vanSILFHOVT
Technische Hogeschool Twente
Afd. Technische Natuurkunde
Postbus 217
Enschede, NETHERLANDS.

9. Int. Conf. on Band Structure in Solids

"B" Exeter July 3-5
UK

inf.: Prof. E.P. WOHEFARTH
Department of Mathematics
Imperial College
Exhibition Road
London S.W. 7, UNITED KINGDOM.

10. 7th Int. Symp. on the Reactivity
of Solids "B" Bristol July 17-21
UK
- inf.: Prof. J.S. ANDERSON
Morganic Chemistry Laboratory
University of Oxford
South Parks Road
Oxford OX1 3OR, UNITED KINGDOM.
- (co-sponsored by IUPAC)
11. 2nd Int. Conf. on the Properties of
Liquid Metals "B" Tokyo Sept. 3-8
JAPAN
- inf.: Prof. M. TANAKA
Department of Applied Science
Faculty of Engineering
Tohoku University
Sendai 980, JAPAN.
12. Luminescence "A" Leningrad August
USSR
- inf.: Prof. E.F. BERTAUT
Secretary of the Commission
Lab. d'Électrostatique
Cedex 166
38 Grenoble-Gare, FRANCE.

Commission on Particles and Fields

13. XVI Int. Conf. on High Energy Physics "A" Chicago Sept. 6-13
Ill., USA
- inf.: Prof. R.R. WILSON
N.A.L.
Box 500
Batavia, Illinois 60510, USA.
14. Int. Conf. on Hadronic Collisions "B" Oxford April 5-7
UK
- inf.: Dr. G. MANNING
R.H.E.L.
Chilton, Didcot
Berkshire, UNITED KINGDOM.

15. 4th Int. Conf. on Magnet Technology "B" Brookhaven Sept. 19-22
New York, USA
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 "B" Los Angeles Aug.28-
Nuclear Interaction Calif., USA Sept. 1st
inf.: Dr. Ivo SLAUS
Physics Department
University of California
Los Angeles, Calif. 90024, USA.

17. Nuclear Moments and Nuclear Structure "B" Osaka ~~Aug. 28-~~
JAPAN Sept. 1st 48
inf.: Dr. Kenzo SUGIMOTO
Department of Physics
Osaka University
Toyonaka
Osaka 560, JAPAN.

18. 6th Int. Cyclotron Conference "B" Vancouver July 18-21
CANADA
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 "B" Kiel July 20-26
to Students in Physics, F.R.GERMANY
Related Sciences and
Engineering
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 "B" Atlanta April 17-21
USA
inf.: Dr. R.W. FINK
Chemistry Department
Georgia Institute of Technology
Atlanta, Georgia, USA.
21. 3rd Int. Conf. on Atomic Physics "A" Boulder Aug. 7-11
USA
inf.: Dr. S.J. SMITH
J.I.L.A.
University of Colorado
Boulder, Colorado 80302, USA.
22. XVII Congress Ampère "C" Tirku Aug. 21-26
FINLAND
inf.: Prof. V. HOVI
Wihuri Physical Laboratory
University of Tirku
Tirku, FINLAND.
23. 1st Int. Conf. on Modulation Spectroscopy "B" Tucson Nov. 23-26
USA
inf.: Prof. B.O. SERAPHIN
Optical Sciences Center
University of Arizona
Tucson, Arizona 85721, USA.

International Commission for Optics

24. 9th Congress of ICO : Space Optics "A" Santa Monica Oct. 9-13
Calif., USA
inf.: Dr. D.S. NICHOLSON
P.O. Box 95213
Los Angeles, California 90045, USA.
25. Integrated Optics - Guided Waves, "B" Las Vegas Feb. 7-9
Materials and Devices Nevada, USA
inf.: Dr. R.V. POLE
OSA
2100 Pennsylvania Avenue NW
Washington, D.C. 20037, USA.

INTERNATIONAL

UNION OF
PURE AND
APPLIED

PHYSICS

News-Bulletin No. 25

October 1971

PHYSIQUE INTERNATIONALE

Bulletin de Nouvelles publié par l'U.I.P.P.A.

No 25 - octobre 1971

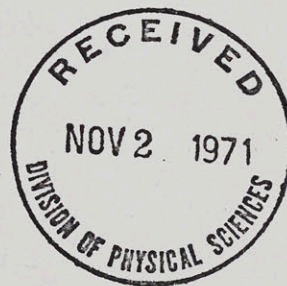
Lors de la réunion du Comité exécutif de l'Union internationale de Physique pure et appliquée tenue à Dublin en septembre dernier, on a accordé l'appui de l'Union aux congrès internationaux dont la liste est fournie ci-après.

VEUILLEZ CONSERVER ce NUMÉRO du
BULLETIN de NOUVELLES pour FINS
d'INFORMATION et de RÉFÉRENCE.

Ce Bulletin de Nouvelles est publié par le Secrétaire-général adjoint de l'Union, le professeur Larkin KERWIN, Université Laval, Québec 10, CANADA.

At the meeting of the Executive Committee of the International Union of Pure and Applied Physics held in Dublin last September, the patronage of the Union was extended to the following international conferences to be held in 1972.

PLEASE KEEP THIS ISSUE OF
THE NEWS-BULLETIN FOR REFERENCE.



This News-Bulletin is published by the Associate Secretary-General of IUPAP, Prof. Larkin KERWIN, Université Laval, Québec 10, CANADA.

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.

Commission on Very Low Temperatures

- | | | | |
|---|-----|----------------------|------------|
| 2. XIII Int. Conf. on Low Temperature Physics | "A" | Boulder
Col., USA | Aug. 20-26 |
|---|-----|----------------------|------------|
- inf.: Dr. R.H. KROPSCHDT
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 "C" Copenhagen ?
DENMARK
- inf.: Dr. C. DeJAGER
The Astronomical Institute
21 Beneluxlaan
Utrecht, NETHERLANDS.
- (Co-sponsored by IAU)

Commission on Solid State Physics

6. Int. Conf. on Thin Films "B" Venice May 15-19
ITALY
- inf.: Dr. K.H. BEHRNDT
Granville-Phillips Corporation
5675 East Avapahre Avenue
Boulder, Colorado 80303, USA.
- (also sponsored by the ICO)
7. 2nd Int. Conf. on Vapour Growth and Epitaxy "B" Jerusalem May 22-25
ISRAEL
- inf.: Prof. M. SCHIEBER
Department of Physics
The Hebrew University
Jerusalem, ISRAEL.
8. 2nd Int. Symposium on Surface Physics "B" Enschede June 22-23
NETHERLANDS
- inf.: Dr. A. vanSILFHOUT
Technische Hogeschool Twente
Afd. Technische Natuurkunde
Postbus 217
Enschede, NETHERLANDS.
9. Int. Conf. on Band Structure in Solids "B" Exeter July 3-5
UK
- inf.: Prof. E.P. WOHEFARTH
Department of Mathematics
Imperial College
Exhibition Road
London S.W. 7, UNITED KINGDOM.

10. 7th Int. Symp. on the Reactivity
of Solids "B" Bristol July 17-21
UK
inf.: Prof. J.S. ANDERSON
Morganic Chemistry Laboratory
University of Oxford
South Parks Road
Oxford OX1 3OR, UNITED KINGDOM.
(co-sponsored by IUPAC)
11. 2nd Int. Conf. on the Properties of
Liquid Metals "B" Tokyo Sept. 3-8
JAPAN
inf.: Prof. M. TANAKA
Department of Applied Science
Faculty of Engineering
Tohoku University
Sendai 980, JAPAN.
12. Luminescence "A" Leningrad August
USSR
inf.: Prof. E.F. BERTAUT
Secretary of the Commission
Lab. d'Electrostatique
Cedex 166
38 Grenoble-Gare, FRANCE.

Commission on Particles and Fields

13. XVI Int. Conf. on High Energy Physics "A" Chicago Sept. 6-13
Ill., USA
inf.: Prof. R.R. WILSON
N.A.L.
Box 500
Batavia, Illinois 60510, USA.
14. Int. Conf. on Hadronic Collisions "B" Oxford April 5-7
UK
inf.: Dr. G. MANNING
R.H.E.L.
Chilton, Didcot
Berkshire, UNITED KINGDOM.

- ✓ 15. 4th Int. Conf. on Magnet Technology "B" Brookhaven Sept. 19-22
New York, USA
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 "B" Los Angeles Aug.28-
Nuclear Interaction Calif., USA Sept. 1st
inf.: Dr. Ivo SLAUS
Physics Department
University of California
Los Angeles, Calif. 90024, USA.

17. Nuclear Moments and Nuclear Structure "B" Osaka ~~Aug. 28-~~ 4-8
JAPAN Sept. 1st
inf.: Dr. Kenzo SUGIMOTO
Department of Physics
Osaka University
Toyonaka
Osaka 560, JAPAN.

18. 6th Int. Cyclotron Conference "B" Vancouver July 18-21
CANADA
inf.: Dr. M.K. CRADDICK
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 "B" Kiel July 20-26
Engineering F.R.GERMANY
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 "B" Atlanta April 17-21
USA
inf.: Dr. R.W. FINK
Chemistry Department
Georgia Institute of Technology
Atlanta, Georgia, USA.
- ✓ 21. 3rd Int. Conf. on Atomic Physics "A" Boulder Aug. 7-11
USA
inf.: Dr. S.J. SMITH
J.I.L.A.
University of Colorado
Boulder, Colorado 80302, USA.
22. XVII Congress Ampère "C" Tirku Aug. 21-26
FINLAND
inf.: Prof. V. HOVI
Wihuri Physical Laboratory
University of Tirku
Tirku, FINLAND.
- ✓ 23. 1st Int. Conf. on Modulation Spectroscopy "B" Tucson Nov. 23-26
USA
inf.: Prof. B.O. SERAPHIN
Optical Sciences Center
University of Arizona
Tucson, Arizona 85721, USA.

International Commission for Optics

24. 9th Congress of ICO : Space Optics "A" Santa Monica Oct. 9-13
Calif., USA
inf.: Dr. D.S. NICHOLSON
P.O. Box 95213
Los Angeles, California 90045, USA.
25. Integrated Optics - Guided Waves, "B" Las Vegas Feb. 7-9
Materials and Devices Nevada, USA
inf.: Dr. R.V. POLE
OSA
2100 Pennsylvania Avenue NW
Washington, D.C. 20037, USA.

IUPAP

INTERNATIONAL UNION of PURE and APPLIED PHYSICS
Executive Committee

Annual Meeting, 1971
September 24-25th
in the Meeting Rooms
of the Royal Irish Academy, Dublin

.....

Present: Professor Robert BACHER, presiding
Professor H. MAIER-LEIBNITZ
Dr. S. BHAGAVANTAM
Dr. W. BOAS
Professor W. DEKEYSER
Professeur A. KASTLER
Professor S. ROZENTAL
Professor V. WEISSKOPF

Dr. C.C. BUTLER, Secretary-General
Professor L. KERWIN, Associate Secretary-General

Absent: Professor G. BERNARDINI
Professor L. PAL
Professor D.I. BLOKHINTSEV

.....

A - 12h.00 Reception

The Committee was welcomed to Ireland and to the Royal Irish Academy by Dr. Vincent C. BARRY, President of the Academy, and Dr. C. O'CEALLAIGH, President of the Irish National Committee for the Union. They expressed pleasure that a country old in the traditions of Physics but young in Union participation should have the honor of receiving the Executive Committee.
Following the welcome, a reception was tendered.

B - 14h.30 First Session1. Introduction

President Bacher opened the meeting, expressing his thanks to the members who had gone to considerable trouble to attend. He conveyed to the members present the regrets of Professors Bernardini and Pal (the latter ill) who were unable to attend. He noted with regret the absence of members from eastern countries.

2. Agenda

The agenda as prepared by the Secretary-General and circulated was adopted unanimously.

3. Minutes of the 1970 meeting

The minutes of the meeting of the Executive Committee held at Copenhagen in September 1970 had been circulated by the Associate Secretary-General. Two corrections were noted:

- a) the spelling of the name of the Danish artist Isenstein (pp. 1 and 5);
- b) the identification of the Langelinie Pavillon (page 8).

With these modifications, the minutes were adopted as circulated, unanimously.

4. Matters arising from the minutes

- a) The President noted (and Dr. Boas emphasized) that the fears of the Executive concerning the Hobart meeting had proven groundless - the meeting has been very successful (item 11);
- b) No further progress had taken place concerning the proposal that an International Commission on Thin Films be created (item 8).

5. Concerning election procedures

Secretary-General Butler reviewed developments since the decisions of the Executive in 1970 (Copenhagen Minutes, item 13).

- a) a first draft of new election procedures had been circulated to the Executive, to National Committees, and to Commissions (Appendix I);

b) various comments had been received:

- Commissions - in general, were in agreement with the abolishing of the class of corresponding members;
- tended to favor a variable size of Commission;
 - had made some specific comments (see Appendix II);
 - tended to favor a fixed (6-year) term for members, more lengthy terms for President and Secretary of Commissions.

- Nat. Cttees - were in general agreements in principal;
- had made some specific comments, a résumé of which was presented to the Executive (see Appendix III);

The Sec.-Gen.- had prepared modifications to the first draft, which were circulated to the Executive (see Appendix IV);

c) considerable discussion took place on these matters, and is reported in Appendix IV.

C - On the evening of September 24th, the Committee assisted at the Larmor lecture of the Royal Irish Academy, delivered by Professor Victor WEISSKOPF. It was entitled "New Insights into the Structure of Matter", and was very warmly received by the large audience. For the occasion, the Academy had prepared an exhibit of Larmor manuscripts and of other historical documents. A reception followed.

D - September 25th - 09h.00

Second Session6. Statutes

Discussion revealed the necessity of a fairly complete revision of the Statutes. It was agreed (numbers refer to present Statutes):

- : to adhere as closely as possible to the ICSU forms;
- : to spell out No. 4 and revise No. 5 in particular;
- : to re-work the Section on Commissions;
- : to revise No. 8;
- : to place Section V earlier;
- : to refer No. 13 to an appendix;
- : to combine 17 and 20, but leave essence as at present.

It was agreed that legal counsel would be consulted, that the new proposals would be drawn up officially in English and translated into French.

It was noted that the General Assembly could only vote on amendments as submitted, which might involve pre-circulation and require considerable time for the Special General Assembly.

7. 1972 General Assembly

President Bacher reported on preparations for the Washington meeting which would take place from September 20-26th inclusively.

- a) An extensive scientific programme had been prepared in view of the meeting corresponding with the Union's 50th anniversary. At least 15 very distinguished speakers would be presented.
- b) The social programme would include Dinners at the State Department, the Academy and the Smithsonian Institute.
- c) Problems included the entry of all delegates (practically solved) and the high cost of living in Washington which would necessitate a "registration fee" (to be optional).
- d) It was agreed that the Assembly would require more sessions than planned by the Local Committee. Six should be provided for:
 - 2 on the first day for the Special Session;
 - 4 ordinary sessions.

The Executive would meet on the 19th, and one half-day for paper production would be required between this and the first special session.

- e) The Local Committee would need to know very soon the numbers of the various delegations.

8. Commission Reports

Résumés of those which had been submitted were circulated to the Executive (see Appendix V). Several particular points raised were discussed.

- The Solid State Commission proposed to organize Gordon-type Conferences.
- The SUN Commission request re the definition of the Mole was agreed to.
- Possible conflict between the Particles and Fields and Nuclear Physics Commissions. Secretariat to encourage better liaison between them.
- The problem of visas being issued late by the USSR (forcing cancellations) was raised in connection with the Dubna meeting. Further, USA delegates, but not European, had been obliged to submit Intourist travel arrangements to obtain visas. The same restriction had been imposed on Vice-President Bhagavantam for a recent trip. The Associate Secretary-General was requested to report these matters to the ICSU Committee on Free Circulation of Scientists.
- Professor Weisskopf raised the question of the Union sponsoring other activities than Conferences, e.g. CERN-like agreements whereby the Union would enjoy multi-lateral privileges in sending scientists to work on major international projects (e.g. Batavia). This would help considerably with the free circulation of scientists.

In brief, just as the Union provides a frame-work for the organization of international conferences, might it provide a framework for the organization of international research projects?

Discussion on this point revealed problems which would be entailed. Possibly the Union could negotiate exchange agreements between countries. The suggestion appealed to the members who considered however than an ad hoc case would have to be awaited for practical consideration.

- The Executive discussed the project of a History of Physics proposed by the Physics Education Commission as a joint project with the International Union of the History and Philosophy of Science. This had come up in Copenhagen (item 6f), and the doubts expressed there were renewed. It was suggested that the project might best be handled by a commercial firm. General feeling was lukewarm, but it was agreed to leave the Commission initiative in the matter, but with only its regular funds.

9. Mandate of Commission on Atomic Masses

The Commission had requested that its name and mandate be modified to include "fundamental constants" rather than "related constants". It was agreed that this would not involve any real conflict with other commissions, and the change was agreed to.

10. COSPAR

Vice-President Bhagavantam had attended the recent meeting and reiterated his impressions that the project involved many physicists who were isolated from IUPAP in such a way that the physics contribution was not well identified. He stated that the IUPAC representative had the same impression. The Union request to National Committees to establish liaison with COSPAR national committees might help. It was agreed that the Secretariat should further request the Cosmic Ray Commission to consider its relationship with COSPAR.

11. ICSU

President Bacher reported on the Council, which seemed at the moment to be a rather frail organization. Among its problems were its reorganization (Dr. Bhagavantam was on the Committee) and its relationship with UNESCO and the current "racism" resolution. It was agreed that the Union support ICSU in its refusing political criteria for membership.

The reorganization faced the problems of too cumbersome a structure which was not functioning well (e.g. an executive of 40), the matter of control by Union or National elements, lack of unanimity on the basic apolitical attitude.

President Bacher would attend the 1971 Executive meeting in Ottawa and Dr. Bhagavantam the 1972 meeting in Helsinki. Thereafter, it was hoped that either the Secretary-General or his Associate might attend.

12. Budget

- a) Professor Kerwin had circulated the audited financial statement for 1970, which corresponded well with the September 1970 estimate. The 1970 statement was adopted.
- b) The state of the 1971 budget as of September 1st was circulated and discussed (Appendix VI). It showed a \$3000 deficit unauthorized at the previous meeting and due to a cut in the ICSU grant from \$16,000. to \$13,000. Otherwise the budget was moving as predicted. The cut in ICSU funds had been protested, and a specific request that it be restored for 1972 had been made. President Bacher would push for this in Ottawa. However, it was recognized that ICSU's financial position was presently difficult.

The deficit would reduce the Union's reserves to about \$52,000. - less than a year's operating budget.

- c) The Associate Secretary-General had circulated a draft budget for 1972. It included:
- : provision for only \$13,000 from ICSU;
 - : transfer of \$5,000. from pre-1969 travel accounts (not used) to current funds;
 - : a conference budget of \$45,000 including \$10,000 for the Washington meeting which would have a very high scientific content;
 - : balanced expenditures and revenues.

Following discussion, it was agreed:

- : to transfer all of the unused travel funds;
- : to assume a \$16,000 ICSU grant;
- : to increase the Executive fund from \$8K to \$16K so as to permit a June meeting;
- : to budget for a \$2,000 deficit for 1972 which was an unusual year. This deficit might be \$5K if ICSU support was reduced.

The amended draft (Appendix VII) was adopted.

13. Withdrawal

The Associate Secretary-General reported Pakistan's wish to withdraw from the Union in view of the country's exchange difficulties. Although Pakistan intended to pay its arrears, it had not done so, and it was agreed that the matter should stand in this way, with no action being taken, in the hope that Pakistan's position would improve. The Secretariat would continue to send it news of the Union.

17. Other Business

- The Executive discussed the areas of Commission responsibility and the desirability of reviewing them when changes in the Statutes were studied. It was suggested that a small committee might study the matter in a preliminary fashion. Examples were: the Cosmic Ray Commission which may need a new name and the Publications Commission which might be closed down. It was agreed to include the item on the 1972 agenda.

- A summary of the activities at the Quebec Secretariat was tabled.

- Also tabled, but not read, was a letter from Argentina expressing intentions of increased activity in the Union (Appendix IX).

- It was agreed that the Executive should meet in June to consider the question of Statutes, the submissions of nominations, and the preparation of a slate of candidates for early circulation to the National Committees. Preparatory work to be done by the Secretariat was discussed.

- Professor Dekeyser invited the Executive to meet in Belgium. This invitation was gratefully received. Decision would be made later on the tentative dates of June 23-24 or 16-17.

- Warm votes of thanks were expressed to the Royal Irish Academy and to the IUPAP National Committee for Ireland - in particular the Secretary, Mr. O'Toole - for their efforts on behalf of the Executive.

18. Adjournment

The meeting was adjourned at 18h.00.

Larkin Kerwin,
Associate Secretary-General

WPA

APPENDIX III

SUMMARY OF COMMENTS ON SUGGESTED ELECTION PROCEDURE
RECEIVED FROM NATIONAL COMMITTEES

Countries omitted have not replied to the Secretary-General's request for opinions.

1. Australia

Fully accepts the proposed methods of election.

2. Austria

Accepts the proposals.

3. Bulgaria

- (1) Accepts proposal for Executive Committee.
- (2) Recommends Secretaries-General be elected each three years with a maximum length of service of nine years.
- (3) Nominations to be announced well in advance of the general assembly.
- (4) Commissions should be of seven to fifteen members, including Chairman and Secretary. Each Commission to decide its size.
- (5) Term of office of all Commission members (including Chairmen and Secretaries) should be three years, with a possible extension of three years, making a maximum of six years.
- (6) Only candidates proposed by National Committees should be considered.

4. Canada

Canada accepts the proposals but recommends that the term of office of secretaries of Commissions should not be limited to three years.

5. Czechoslovakia

Accepts the proposals.
Commission sizes should be five to fifteen.
Discussion needed on the dissemination of information - present arrangements not satisfactory.

6. Finland

No comments.

7. France

Accepts the proposals.

8. Federal German Republic

- (1) Agrees with general objectives of proposals.
- (2) All elections could be by secret ballot - presumably with no screening by Executive.
- (3) Advocates a six-year term for Secretaries-General.
- (4) All nominations should be circulated two or three months before the assembly.
- (5) Own country must be either proposer or seconder - own country might object to a candidate! Alternatively, own country must consent.
- (6) Ten members plus Chairman and Secretary should be upper limit - smaller number allowed.

9. German Democratic Republic

- (1) Endorses proposals in 4(a) and 4(b).
- (2) Term of office of Secretary-General should be a maximum of ten years.
- (3) Executive members should first serve on a Commission.
- (4) Agrees with 5(e) - maximum of six years for Commission members.
- (5) Commissions should have a maximum membership, including Chairman and Secretary, of fifteen.
- (6) An unclear paragraph about election procedures!

10. Hungary

- (1) No firm opinion.
- (2) Concern about date from which length of service on Commissions should be restricted.
- (3) Should not the office of Secretary-General be limited?
- (4) Service on Executive can be too long!
- (5) Not clear how voting would be carried out.
- (6) Scheme should be explained in the Bulletin.

11. Israel

No comment, appears to accept proposals.

12. Italy

Generally favourable. Desirable to have a rule fixing terms of office for the Secretaries-General. The rule should permit long term of office.

13. Norway

- (1) Agrees revision is desirable and proposals are a step in right direction.
- (2) Modernise titles of members of Executive, e.g. President, ordinary members, Secretary, etc.
- (3) Candidates own country should be allowed to make proposal.
- (4) Prefers Commissions all to be same size - nine, including Chairman and Secretary.
- (5) National delegations should be able to propose candidates from their own country.

14. Poland

- (1) Generally favourable.
- (2) Concerned that maximum length of service on Executive could be fifteen years, i.e. six years as V.P., three years as 1st V.P., three years as P. and three years as Past. P.
- (3) Doubts about a uniform number of Commission members.
- (4) Will present corresponding members who have served only three years' time have the right to be considered as ordinary members?

15. South Africa

- (1) Doubts about 5(e), i.e. exceptional cases for service longer than six years on a Commission.
- (2) Suggests that members required for longer than six years should be coopted individuals - not recognised as full members.

16. Sweden

Fully accepts proposals.

17. Taiwan

Generally approves proposals.

18. United Kingdom

- (1) Some members think that the Executive is rather large.
- (2) It is suggested that names, addresses and a brief statement on professional experience should be circulated six weeks before the assembly. This would give National Committees an opportunity of withdrawing a candidate or supporting candidates nominated by other National Committees.
- (3) Agrees to abolition of Corresponding Member category.
- (4) Commissions should have the power to invite non-members to attend meetings for particular purposes.
- (5) Lists of all nominations with details should be circulated six weeks before the assembly.

19. United States

- (1) Generally approves proposals.
- (2) In any listing of nominees, the source of the nominations should be identified and the National Committee should indicate whether or not it supports a specific nominee.

20. U.S.S.R.

- (1) Each Commission should be fixed at five to fifteen - decided by themselves.
- (2) Period of office of commission members, including the "President and his deputy", should be three to six years.
- (3) Nominations should only be accepted by National Committees.
- (4) Elections should be in three rounds:
 - (a) Complete list of proposed candidates would be voted upon.
 - (b) Second round would retain only those candidates who received a qualifying number of votes - say 10.
 - (c) Third round would retain only those with, say, 20 votes.
 - (d) Finally, election by simple majority vote.

APPENDIX VI

IUPAP

State of the 1971 budget, as of September 1st

<u>INCOME</u>	<u>to date</u>	<u>expected</u>	<u>total</u>	<u>1971 (prediction)</u>
Member countries.	\$35,900.	\$15,100.	\$51,000.	(\$51,300.)
UNESCO.	13,125.	-	13,125.	(16,000.)
Interest.	-	1,200.	1,200.	(1,000.)
	<u>\$49,025.</u>	<u>\$16,300.</u>	<u>\$65,325.</u>	<u>(\$68,300.)</u>
 <u>EXPENDITURES</u>				
Conferences	\$44,500.	\$ 4,000.	\$48,500.	(\$47,500.)
Commissions	7,525	-	7,525.	(8,000.)
Secretariat	2,150.	1,500.	3,650.	(4,000.)
Banking & Accounting.	225.	175.	400.	(500.)
Publications.	-	-	-	(1,000.)
Subscriptions	1,150.	-	1,150.	(1,500.)
Executive Ctee.	1,800.	5,700.	7,500.	(5,000.)
Contingencies	150.	350.	500.	(1,000.)
	<u>\$57,500.</u>	<u>\$11,725.</u>	<u>\$69,225.</u>	<u>(\$68,500.)</u>
 DEFICIT.			 \$ 3,900.	 (\$ 800.)

Québec, September 1971.

APPENDIX VII

IUPAP

Budget proposed to the Executive Committee for 1972

<u>INCOME</u>	(estimated)
Member countries (170 x #300.)	\$51,000.
UNESCO.	16,000.
Interests	1,500.
Transfer from travel funds.	5,500.
	<hr/>
	\$ 74,000.

EXPENDITURES

Conferences: regular: \$32,500.	
General Assembly: \$10,000.	\$42,500.
Commissions	8,000.
Secretariat	4,000.
Banking and Accounting.	500.
Publications.	2,000.
Subscriptions	1,500.
Executive Committee	16,000.
Contingencies	1,500.
	<hr/>
	\$ 76,000.
DEFICIT	\$ 2,000.

Québec, September 1971.

APPENDIX IV

IUPAP

Possible modifications to the proposals for election procedures

These notes have been prepared by the Secretary-General to aid discussion at the Dublin Meeting of the Executive. They take into account many of the comments received in London.

1. The Executive Committee

- 1.1 There is general agreement on the proposed size for the Executive.
- 1.2 Possibly titles should be changed to President, Vice-President, Members, Joint-Secretaries.
- 1.3 Some commentators suggest that proposed arrangements allow very long service on Executive - conceivably as long as 15 years.
Possible modifications are:
 - a) Vice-Presidents 6 years
 - b) First Vice-President 3 years
 - c) President 3 years
 - d) abandon title of Past-President - in recent years no Past-President has played an active role.
 - e) First Vice-President to be appointed from Vice-Presidents of three years' service or from outside the Executive.
- 1.4 Consider having two Joint Secretaries-General.
- 1.5 The Secretaries-General should have limited office, perhaps formal election every three years, but nine years maximum. It would be necessary to stagger appointments, i.e. either three or six years apart.
- 1.6 To what extent should everyone be re-elected every three years?
- 1.7 Brief synopsis of election procedures
 - a) Call for suggestions from National Committees by end of May 1972 (possibly by end of April?). This date would have to be a firm dead-line.
 - b) Suggestions to be submitted on a prepared form, including name, address, brief details of professional expertise in physics, and post currently held.

- c) All suggestions to be circulated to National Committees at end of June 1972 (possibly end of May?).
- d) Executive to publish its proposals - not necessarily restricted to suggestions received - at the beginning of the assembly. (Some countries would want to deny this right to the Executive).
- e) Additional names could be added to the Executive list, by an announced dead-line early in the assembly, by a proposer and seconder. Candidate's own country permitted to propose or second.
- f) If additional names are proposed a formal secret ballot would be held.

2. The Commissions

- 2.1 Commissions should consist of a Chairman and a Secretary and five to ten members.
- 2.2 Commissions to be asked to recommend (? decide) sizes appropriate for their work.
- 2.3 At the beginning of the 1972 assembly, the Executive would announce its recommendations on commission sizes. Assembly to confirm or alter. Commissions may need coopted members or observers from other unions.
- 2.4 Terms of office:
 - a) Members - six years maximum, normally all from different countries.
 - b) Chairman - three years, after service of three, or exceptionally six, years on commission.
 - c) Secretary - six years, usually after three years' service on commission.
(Note that several countries and commissions would be unhappy with these suggestions).
 - d) Membership of SUN and Atomic Masses and Related Constants Commissions could perhaps be longer.
 - e) Two members could belong to one country, provided one was Chairman or Secretary.
- 2.5 Election procedure:
 - a) Suggestions for members and officers from National Committees and Commissions to be required by the end of May 1972.
(Note: some countries will object to Commissions making suggestions.)
 - b) Same information required as for Executive proposals.
 - c) A list of all suggested names to be circulated at the end of June 1972.
(It will probably be impossible to circulate addresses and synopses of careers - paper would be too large!)
 - d) The Commissions will make proposals on their desired sizes by the end of June 1972.

- e) At the beginning of the assembly in Washington, the Executive will recommend sizes for Commissions and publish its recommendations for members and officers.
(Some Commissions would prefer to elect their own officers.)
- f) Additions to the Executive list will need to be proposed and seconded. Candidate's country may propose or second.
- g) If required, election will be held according to procedures in the statutes.

3. General Comments

- 3.1 It would probably help if the Executive could meet in June to decide on their list. Is this practicable because of cost and probable failure to adhere to the proposed dead-line of end of May (or April) for receiving names from National Committees and Commissions?

This extra meeting would undoubtedly improve the efficiency of the assembly.

It would be particularly valuable in 1972 because of the possible changes in the statutes.

- 3.2 We may have to explain in greater detail the philosophy of the new proposals, viz:

- Stage 1 Suggestions received from National Committees and Commissions
- Stage 2 Executive chooses its list - can itself introduce names
- Stage 3 Alternative names to Executive's choice can be proposed and seconded at the assembly
- Stage 4 Formal elections.

- 3.3 Several countries want to vote on all suggested names - totally impracticable and would not lead to reasonably balanced membership of Commissions.
- 3.4 We may need to discuss the roles of the Joint Secretaries-General.

C.C. Butler,
Secretary-General

Comments and Action by Executive

re:

Possible modifications to the proposals for election procedure
prepared by Secretary-General

- 1.1 - There to be no corresponding members of Commissions. Agreed.
- 1.2 - Agreed, but 8 Members, Secretary-General and Associate Sec.-Gen.
- 1.3 - Items a,b,c and d were agreed to, except for changing the title of Vice-President to Member;
Item e would be incorporated in the Statutes.
- 1.4 - It was agreed to revert to the offices of Secretary-General and Associate Secretary-General, with an ad hoc division of responsibility.
- It was noted that there were problems involved in having an Eastern Secretary-General (there were none in any ICSU Union).
- 1.5 - President Bacher felt that any change in the Secretariat should be postponed until 1975, when one member might be replaced. Dr. Bhagavantam suggested a transition article in the Statutes.
- 1.6 - Agreed - at regular general assemblies.
- 1.7 - a) Agreed, but deadline to be May 15th.
b), c), d) Agreed - c) and d) to be simultaneous.
- e) This item provoked much discussion. It was agreed that the Executive should advise delegates of the practical (disciplinary and geographic distribution) reasons for its slate, but to permit further names to be submitted at the General Assembly on the following conditions:
- : they be made early
 - : they be made on forms providing for proposals and seconding by heads of delegations
 - : they be approved by the National Committee
 - : the nominee be completely identified.
- f) It was agreed that no secret ballot be used if there were only one nominee.

- 2.1 - Agreed.
- 2.2 - Agreed, but Commission to recommend size, which Executive would propose to General Assembly.
- 2.3 - Agreed, but members from other Unions to be associates, and not counted in number of members.
- 2.4 - a) Agreed, but specify exceptions for Particles and Fields.
b) c) Agreed.
d) Re-phrase, possibly include Education Commission.
e) Agreed.
- 2.5 - This item occasioned much discussion, particularly in view of the opinions expressed by some eastern countries.
In particular, the procedures requested appeared to require a meeting of the Executive Committee in the month of June preceeding each General Assembly.

All items agreed to, however:

- c) agreed, but also a preliminary slate should be circulated in June and this slate not modified at the General Assembly but further nominations permitted.

It was noted that withdrawal of a nominee did not necessarily permit replacement from the same country.

3. - The general comments of the Secretary-General had been taken into account during the discussion.

Larkin Kerwin,
Associate Secretary-General

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

15th August, 1971

Dear Professor Weisskopf,

Executive Committee Meeting
Dublin : 24th/25th September 1971

Meetings will be held in the office of the Royal Irish Academy at 19 Dawson Street, Dublin 2. Please assemble by noon on September 24th.

The agenda this year contains several important items and I expect we shall need three sessions - afternoon on the 24th and with morning and afternoon on the 25th.

I am afraid it will probably not be possible for me to send out many papers beforehand. Professor Kerwin and I will be at the academy offices throughout the morning of the 24th and will issue papers then.

Only fourteen countries have sent comments on the election procedures. I am writing again to the outstanding 23 members requesting their comments. I will prepare a general summary paper during September.

Attached is a provisional agenda.

Please confirm that you expect to attend the Dublin meeting.

Yours sincerely,

(Dictated by Dr. Butler and
signed in his absence)

117717

Executive Committee Meeting : Dublin, 24th - 25th September, 1971

Royal Irish Academy Offices, 19 Dawson Street, Dublin 2.

PROVISIONAL AGENDA

1. Introduction.
2. Adoption of the agenda.
3. Minutes of the Copenhagen Meeting, held on October 2nd and 3rd, 1970 - already circulated.

Please bring your copy of the minutes and your copy of IUPAP-16 to Dublin.

4. Matters arising from the minutes.
5. New scheme for the Election of Executive and Commission Members.
6. Consequential and other changes to the IUPAP Statutes.
7. The 1972 General Assembly - arrangements and tentative programme.
8. Commission Reports.
9. COSPAR report.
10. Report on ICSU business.
11. Financial Report for 1970 and budget for 1972.
12. Conferences for 1972 and later years.
13. Financial allocation for 1972.
14. Possible collaboration with IUPAC.
15. Other business.
16. Conclusion.

Nuffield Lodge
Regent's Park
London, NW1 4RS

C. C. Butler
5th August, 1971

NATIONAL RESEARCH COUNCIL

NATIONAL ACADEMY OF SCIENCES NATIONAL ACADEMY OF ENGINEERING

2101 CONSTITUTION AVENUE WASHINGTON, D.C. 20418

DIVISION OF PHYSICAL SCIENCES

August 25, 1971

MEMORANDUM

TO: Members of the USNC-IUPAP

FROM: Hugh Odishaw *HO*

Enclosed are proposals for two international conferences for which IUPAP sponsorship is being sought. In both instances appropriate commission approval will be necessary, but in accordance with IUPAP procedures, national committee endorsement is helpful. Unless we hear from you to the contrary within two weeks or so, we shall assume that you are favorably disposed.

Enclosures

P.S. Also enclosed is IUPAP News-Bulletin No. 24.

Odishaw - re. IUPAP

BROOKHAVEN NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES, INC.

UPTON, L. I., N. Y. 11973

TEL. AREA CODE 516 YAPHANK 4-6262

REFER:

ACCELERATOR DEPARTMENT

August 17, 1971

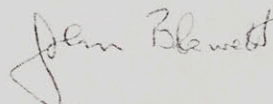
Dr. Hugh Odishaw
National Academy of Sciences
2101 Constitution Avenue
Washington, D.C. 20418

Dear Dr. Odishaw:

I enclose a copy of a letter that I have just written to Professor J. Teillac requesting IUPAP sponsorship for the fourth International Conference on Magnet Technology which is to be held at Brookhaven on September 19-22, 1972.

It is our hope that your Committee will approve of our proposal. If further information is required I shall be happy to supply it.

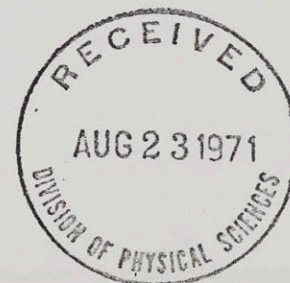
Sincerely,



John P. Blewett

JPB/yew

cc: W.W. Havens, Jr.
J.L. Fowler
J.J. Grisoli



BROOKHAVEN NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES, INC.

UPTON, L.I., N. Y. 11973

TEL. AREA CODE 516 YAPHANK 4-6262

REFER:

ACCELERATOR DEPARTMENT

August 17, 1971

Professor J. Teillac
Secretary, Nuclear Physics Commission
International Union of Pure and Applied Physics
Institut du Radium
11 rue Pierre et Marie Curie
Paris 75, France

Dear Professor Teillac:

I am writing to inform you of a conference which we believe merits consideration for sponsorship by the International Union of Pure and Applied Physics. This is the fourth of a series of International Conferences on Magnet Technology of which the latest was held at Hamburg last year. The second of these conferences, held at Oxford, was sponsored by IUPAP. We propose to hold the fourth Conference at the Brookhaven National Laboratory between September 19-22 in 1972.

On the enclosed page some information has been collected about the organization of the Conference and the proposed program. I shall be the Conference Chairman.

The Conference will adhere to the IUPAP rules as set forth in the 1970 General Report. Proceedings will be published as soon as possible after the Conference.

We hope that the Nuclear Physics Commission will act favorably on our request for sponsorship. If any further information is required I shall be happy to supply it.

Sincerely,

John P. Blewett

JPB/yew

cc: R.E. Bell
C.C. Butler
R.L. Walker
J.J. Grisoli

INTERNATIONAL MAGNET CONFERENCE

Brookhaven National Laboratory
September 19-22, 1972

This Conference is the fourth of the series begun at Stanford in 1965 and continued at Oxford in 1967 and Hamburg in 1970. Its aim will be the exchange of information on magnet technology between physicists and engineers engaged in the design, construction and measurement of magnets and magnet fields.

Participation will be by invitation and the attendance will be limited to about 300 people.

The Conference will be supervised by two committees, an International Organizing Committee and a Program Committee.

Proposed topics for contributed papers are:

1. General Design Principles

Advances in field computation and in basic magnet design.

2. Materials

New knowledge of the properties of materials used in magnets.

3. Techniques of Construction

New methods of building magnets for operation at ambient temperatures.

4. Superconducting and Cryogenic Magnets

Significant development in design and construction of magnets for operation at low temperatures.

5. Magnet Power Supplies

New methods for supplying and controlling the power flow to magnets.

6. Instrumentation

Advances in methods and apparatus for observing magnetic fields and other pertinent magnet properties.

FIRST INTERNATIONAL CONFERENCE ON MODULATION SPECTROSCOPY

The first international conference on modulation spectroscopy will be held on Thanksgiving weekend, November 23-26, 1972, at the Optical Sciences Center of the University of Arizona in Tucson, Arizona. The program will offer 20 to 25 review papers and approximately 75 to 100 contributed papers, all of which will be published as proceedings of the conference. A total attendance of 150 to 250 is expected. The meeting is planned to be a "working conference," with sufficient time for discussion and panel sessions.

History and State of the Field

Solid-state spectroscopy, the study of the optical properties (reflection, absorption, etc.) of a solid, has a long history. *Modulation spectroscopy*, the study of perturbation-induced changes in these optical properties, is a recent development based on a family of novel effects and techniques, which has greatly advanced our understanding of both optical and electronic properties of solids.

In his recent book, *Modulation Spectroscopy*, M. Cardona describes the considerable attention focused on a study of the electronic optical properties of solids during the 1950's, then continues:

Activity in the field began to taper off, probably as a result of having reached the limit of possibilities of the existing experimental methods, until the electroreflectance technique...appeared in 1965. Since then, the vast amount of activity in electroreflectance and other optical modulation techniques has brought new vigor to the field of electronic optical properties of solids. A number of very ingenious experimental techniques have been developed; their applicability extends beyond solid state spectroscopy.

—Solid State Physics, Suppl. 11, ed. by F. Seitz, D. Turnbull, and H. Ehrenreich, New York, Academic Press, 1969, p. VII

This new vigor is best documented in the number of publications that are based on one or another aspect of modulation spectroscopy. As a result of the efforts of various groups throughout the world, approximately 300 papers have been published in the past six years. The first reviews of the field have been published recently or are in press.

A first phase in the development of the field is completed, in which the basic effects and mechanisms have been explored. Since we tentatively understand some of the modulation mechanisms, we can now apply modulation techniques as sensitive tools in new areas of physics. In an early phase, modulation spectroscopy was used in the analysis of energy band structure. More recently, modulation techniques are spreading into an ever wider variety of physical measurements, some of which are listed below. Their results are being reported in a steadily increasing number of journals.

Justification of the Conference

Before embarking on firm plans for a conference, we contacted the leading scientists in the field. (Their names are listed in a subsequent paragraph.)

Without exception, their endorsement of the conference is enthusiastic. High on the list of reasons for their support is the timeliness and necessity of such a conference. There is general agreement that the development of the field has reached the boundary between first-generation and second-generation type work where applications are spreading beyond an exploration of the basic mechanisms. It is now necessary to assess existing results and concepts. However, with the field expanding faster than ever, it is even more necessary to discuss the relevant problems and areas of application in order to outline more efficiently and economically its future development. By bringing various groups of theorists and experimentalists into personal contact at this time, the proposed meeting offers a unique opportunity to do this. It can also be expected that new ideas and novel applications will result from the discussions.

List of Topics Included in the Program

Suggestions from the leading scientists in the field, and a survey of the literature, show that the methods of modulation spectroscopy have been used in the following fields. Work in these areas qualifies for inclusion in the conference program:

Experimental energy band studies, such as:

Energy band dependence on structural parameters.

Energy bands of new materials or materials of particular current interest, such as amorphous and chalcopyrite-ternary compounds, layer structures, and liquid crystals.

Symmetry assignment of optical structure to specific energy band regions.

Photoconductivity.

Surface and surface state studies, such as:

Optical studies of absorbed layers and very thin films.

Surface plasmons.

Spectroscopy of surface states.

Solid-liquid interfaces.

Photoemission and surface photovoltaic effects.

Catalytic and electrochemical reactions.

Dielectric theory of modulation processes, including effects such as:

Crystal symmetry.

Many-body interactions.

Electron correlation.

Degenerate semiconductors and metals.

And others.

Supporters of the Conference

The scientists listed below have endorsed the conference and have promised to participate. Most of them will contribute reviews of the various aspects of the field. A Board of International Advisors, as well as a Program and an Organizing Committee, will be selected from this list.

W. A. Albers (GE)	E. O. Kane (Bell)
D. E. Aspnes (Bell)	B. Lax (MIT)
M. Balkanski (France)	F. Lukes (Czechoslovakia)
F. Bassani (Italy)	J. D. E. McIntyre (Bell)
B. Batz (Belgium)	J. C. Phillips (Bell)
N. Bottka (NWC)	H. Piller (Louisiana)
E. Burstein (Pennsylvania)	F. Pollack (Brown)
M. Cardona (Germany)	V. Rehn (NWC)
J. L. Deiss (France)	J. E. Rowe (Bell)
J. D. Dow (Princeton)	D. Sell (Bell)
H. Ehrenreich (Harvard)	J. L. Shay (Bell)
R. Enderlein (Germany DDR)	Y. R. Shen (Berkeley)
A. Frova (Italy)	A. Shileika (U.S.S.R.)
R. Glosser (Maryland)	W. E. Spicer (Stanford)
Y. Hamakawa (Japan)	H. Stuke (Germany)
P. Handler (Illinois)	V. K. Subashiev (U.S.S.R.)
G. Harbeke (Switzerland)	J. C. Wooley (Canada)
G. Heiland (Germany)	W. Zawadski (Poland)
F. Herman (IBM)	

Tentative Budget of the Conference

Travel expenses for invited speakers @ \$400 per speaker	\$10,000
Printing of announcements	500
Clerical services	500
	\$11,000

The cost of publication of the proceedings is to be paid out of the registration fee of \$25.

B. O. Seraphin, Chairman
International Conference on
Modulation Spectroscopy

Optical Sciences Center
University of Arizona
Tucson, Arizona 85721
Tel. (602) 884-2263

NATIONAL RESEARCH COUNCIL

NATIONAL ACADEMY OF SCIENCES NATIONAL ACADEMY OF ENGINEERING

2101 CONSTITUTION AVENUE WASHINGTON, D.C. 20548

DIVISION OF PHYSICAL SCIENCES

August 9, 1971

MEMORANDUM

TO: Members of USNC-IUPAP


FROM: Hugh Odishaw *HO*

SUBJECT: Endorsement Request for the Third International
Conference on Atomic Physics

I enclose self-explanatory correspondence on the above from
Dr. Peter L. Bender. Unless we hear from you to the contrary
in two weeks, we shall assume that you are favorably disposed
to USNC-IUPAP endorsement.

Encl.

Odishaw



THIRD INTERNATIONAL CONFERENCE ON ATOMIC PHYSICS
AUGUST 7-11, 1972, UNIVERSITY OF COLORADO, BOULDER

August 5, 1971

Organizing Committee:

P. L. Bender
Joint Institute for Laboratory
Astrophysics

V. W. Cohen
Brookhaven National Laboratory

R. J. Damburg
Academy of Sciences, Riga

H. Ehrhardt
University of Trier

N. V. Fedorenko
A. F. Ioffe Physico-Technical
Institute, Leningrad

W. L. Fite
University of Pittsburgh

H. M. Foley
Columbia University

V. W. Hughes
Yale University

P. Jacquinet
Laboratoire Aimé Cotton, Orsay

A. Kastler
École Normale Supérieure, Paris

H. Kleinpoppen
University of Stirling

D. Kleppner
Massachusetts Institute of Technology

I. Lindgren
Chalmers University of Technology,
Gothenburg

W. Paul
Deutsches Elektronen-Synchrotron,
Hamburg

H. A. Shugart
University of California, Berkeley

K. Takayanagi
University of Tokyo

G. K. Walters
Rice University

G. K. Woodgate
Clarendon Laboratory, Oxford

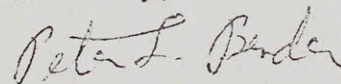
S. J. Smith, Chairman
Joint Institute for Laboratory
Astrophysics
University of Colorado
Boulder, Colorado 80302
Telephone: 303 447-1000, ext. 3631

Dr. Hugh Odishaw
Executive Secretary
National Research Council
National Academy of Sciences
2101 Constitution Avenue
Washington, D. C. 20418

Dear Dr. Odishaw,

A brief description of the Third International Conference on Atomic Physics is enclosed, along with a letter from Dr. Smith to the Organizing Committee suggesting tentative procedures for running the Conference. On Dr. Smith's behalf, I would like to request the approval of this conference by the U. S. National Committee for IUPAP. We are requesting a small amount of financial support from IUPAP, and hope to have a favorable recommendation from Commission XV - Atomic and Molecular Physics and Spectroscopy. Approval by the U. S. National Committee is needed so that the application can be presented to the IUPAP Executive Committee at its meeting in Dublin in September.

Sincerely,



Peter L. Bender

PLB:hg

Encs



Cornell University

PROGRAM ON SCIENCE, TECHNOLOGY AND SOCIETY

632 CLARK HALL
ITHACA, NEW YORK 14850
TELEPHONE 607/256-3810

18 June 1971

Dr. Robert F. Bacher
Provost
California Institute of Technology
Pasadena, California 91101

Dear Bob:

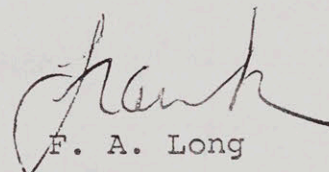
I am a member of a small group which must study and ultimately write something about "international relations in physics." A possible point of interest is IUPAP. It would be good to know what potential role this has in improving international relations in physics. Of particular interest is what ought to be done within the United States to make IUPAP better and how much funds or efforts it would cost. Is there a specific role here for the American Institute of Physics?

Would you be prepared to write me in somewhat extended fashion about what is good about IUPAP, how much U.S. money it now costs, how much ought to be spent on it, what ought to be the role of professional physics societies, etc?

The other two members of this committee are Victor Weisskopf and Arthur Kantrowitz. You might also want to send copies of whatever you write to them, also.

Thanks for your help.

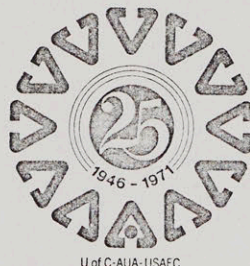
Sincerely yours,


F. A. Long

FAL:mkw

cc: Dr. Arthur Kantrowitz
Dr. Victor Weisskopf*

Long



U of C-AUA-USAEC

ARGONNE NATIONAL LABORATORY

September 10, 1971

To:

G. Backenstoss	B. H. Flowers	A. Salam
D. I. Blokhintsev	M. L. Goldberger	V. P. Shelest
N. N. Bogoliubov	M. Goldhaber	S. Suwa
A. Bohr	E. L. Goldwasser	I. Talmi
G. E. Brown	E. P. Hincks	J. Teillac
S. Devons	R. E. Marshak	W. Thirring
S. Drell	Y. Ne'eman	L. Van Hove
V. P. Dzhelepov	J. Pniewski	V. F. Weisskopf
T. E. O. Ericson	R. Rozental	K. Wildermuth
H. Feshbach	R. G. Sachs	C. N. Yang

Enclosed is a copy of my letter to Dr. Robert L. Walker, Secretary of the IUPAP Commission on Particles and Fields, regarding my failure to obtain a Soviet visa to attend the International Conference on High Energy Physics and Nuclear Structure at Dubna, September 7-12, 1971.

Sincerely yours,

Harry J. Lipkin
Harry J. Lipkin

HJL:js
Enclosure

IUPAP - H. Lipkin



ARGONNE NATIONAL LABORATORY

September 8, 1971

Dr. Robert L. Walker, Secretary
IUPAP Commission on Particles and Fields
Charles C. Lauritsen Laboratory of High Energy Physics
California Institute of Technology
Pasadena, California 91109

Dear Bob:

This is to inform you that I have been unable to attend the International Conference on High Energy Physics and Nuclear Structure at Dubna, 7-12 September, 1971. I did not receive a Soviet visa.

I applied for my visa in the same way as I did last year for the Kiev conference. Since I was in the United States for the summer, I applied through a local travel agent to the Soviet Embassy in Washington. Last year (Kiev) there were no problems, and everything went through at the same rate as a normal American application. This year everything took longer than last year, and longer than similar American applications this year. The Intourist request took longer and required extra telegrams from the travel agent to get the confirmation which came less than a week before the scheduled departure. When the visa had still not arrived a few days before departure, the travel agent called twice to the Soviet Embassy in Washington and was told that the visa had already been mailed and was on its way. However, it did not arrive.

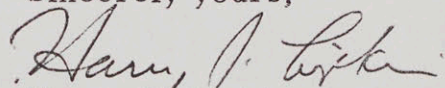
Today, when the conference is already in session and it is too late to make any further travel plans, the Soviet Embassy called my travel agent and apologized. They said that the application got attached to something else. Anyone who wishes to believe this story is welcome to do so.

Before the 1970 Kiev Conference, considerable attention was given to the question of visas for the Israeli delegation, and visas were granted with no apparent problems. As a result of this apparent absence of difficulties, I have heard the opinion expressed that the Israelis were making too big a fuss about the whole problem. We therefore decided not to make a fuss

about this conference. It now appears that such a fuss was necessary, and that the kind of activity which preceded the Kiev conference will probably be necessary before every conference held in countries which play these games with visas.

Perhaps it would be a good idea for IUPAP to require that participants at all conferences sponsored by IUPAP receive their visas by a certain deadline, which can be made uniform for all conferences or be fixed individually for each conference. If the visas are not received by this deadline, there will then be time to check whether or not they are "already in the mail" or "attached to something else."

Sincerely yours,



Harry J. Lipkin

HJL:js

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

MEMO to Members of the IUPAP Executive Committee
from Associate Secretary-General
Object: Letter from Prof. Cohen

Recently some discussion has taken place concerning the use by our Commission on Atomic Masses and Related Constants of the expression "Fundamental Constants" in some of its literature. Dr. Butler has received some protests to the effect that this infringes on other Commissions' work. The Commission has taken the bull by the horns and will request the Executive to change its name to "Commission on Atomic Masses and Fundamental Constants".

Copy of Prof. Cohen's letter is enclosed as background material for discussion at our meeting in Dublin.

Québec, June 22nd, 1971.

IUPAP: Cohen



Science Center
North American Rockwell

INTERNATIONAL UNION OF
PURE AND APPLIED PHYSICS

P.O. Box 1085
1049 Camino Dos Rios
Thousand Oaks, California 91360

COMMISSION ON ATOMIC MASSES AND RELATED CONSTANTS

May 12, 1971

Professor L. Kerwin, F.R.S.C.
Département de Physique
Faculté des Sciences
Université Laval
Québec 10, Canada

Dear Professor Kerwin:

In your letter to Professor Wapstra of February 26, 1971, you raise a question concerning the appropriate designation of the Conference on Atomic Masses and Fundamental Constants to be held at Teddington, England, September 6-10, 1971.

I have not replied sooner because I felt that the question raised in your letter should be submitted to the members of the Commission for their comments. The members and corresponding members of the Commission on Atomic Masses and Related Constants are in essential agreement with the position that the Commission's scope was broadened beyond that of atomic masses some time ago and have assumed that this was well understood by IUPAP. It should be recalled that the Commission was established as the "Commission on Atomic Masses" in 1960 and broadened to its present scope in 1963.

The present consistency of the values of atomic masses, the abandonment of the separate physical and chemical scales of atomic weights, and the adoption of the unified scale based on ^{12}C has meant that the interests of the Commission have shifted over the years in the direction of the fundamental physical constants because of their involvement in the problem of further refining the relationship between reaction energy data and mass doublet data. It has been suggested at previous Commission meetings that as a result of this shift of emphasis it may even be appropriate to specifically change the name of the Commission from "Atomic Masses and Related Constants" to "Atomic Masses and Fundamental Constants." In doing so we would recognize that this does not represent a change in scope of the work of the Commission which has already been accepted for several years now, but only a clarification and an evolving change in emphasis.

W.P.P.P. - Cohen

Professor L. Kerwin
May 12, 1971
Page Two

The distinction is perhaps only a semantic one since all fundamental physical constants are by their nature "related." Whereas the determination of a consistent set of atomic masses may in principal require only a value of the Faraday constant from the list of the so-called "fundamental" constants, the value of the Faraday cannot be determined independently of a total evaluation of the consistency of all of the significant data on perhaps a score of physical constants.

The actual range of the Commission's activities has been reported to the IUPAP Secretariat in our annual reports over the last several years. Furthermore, there is little overlap between the interests of our Commission and the other IUPAP Commissions. The commission which is superficially most directly concerned is the SUN Commission with which we have of course maintained close communication through Dr. Stille. Their activities however are in the field of nomenclature and definition rather than the numerical values of the physical entities. The other possible commission would be the Atomic and Molecular Physics Commission, but although they are concerned with the determination of the values of many fundamental constants, there is no overlap between that commission and ours in the area of evaluation and numerical consistency of the fundamental constants.

Outside of IUPAP the major international group is CODATA and its Task Group on Fundamental Constants. However, the overlap between that Task Group and the Atomic Masses Commission (Cohen, Terrien, Stille, and Duckworth) guarantees that there is no conflict between the activities of the two groups, and the CODATA Task Group is relying on our Commission to produce the consistent numerical data which they will propose to CODATA for international adoption.

This matter would be clarified for future conferences if a proposal to change the name of our commission to "Commission on Atomic Masses and Fundamental Constants" could be brought before the Executive Committee of IUPAP at the next appropriate opportunity.

Sincerely,

E. Richard Cohen
ER

E. Richard Cohen, Secretary
IUPAP Commission on Atomic Masses
and Related Constants

cc: A. H. Wapstra
Commission Members
and Corresponding Members

UNION INTERNATIONALE de PHYSIQUE PURE et APPLIQUÉE

INTERNATIONAL UNION of PURE and APPLIED PHYSICS

Secretary-General :

Prof. C. C. BUTLER, F.R.S.,
Physics Department
Imperial College
Prince Consort Road
London S.W. 7, England.
telephone: KEN. 5111

Secrétaire général adjoint :

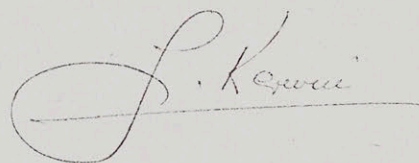
Prof. L. KERWIN, F.R.S.C.,
Département de Physique
Faculté des Sciences
Université Laval
Québec 10, Canada.
téléphone: 656-2131

NOTE to Members of the Executive Committee
Members of the Finance Commission (Profs. Bacher and Dekeyser)

from the Associate Secretary-General

.....

I enclose a copy of the audited
accounts of the Union for 1970 together with a sheet of explanatory
notes.



Larkin Kerwin,
Associate Secretary-General

Québec, March 17, 1971.

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

NOTES on 1970 FINANCIAL STATEMENTS

A - BALANCE SHEET

1. Dues receivable

Since January 1st, 1971, \$2,200. of the \$7,450. outstanding at that date has been paid.

2. Prepaid expenses

Advance to an International Conference to be held in 1971 : \$300.

3. Accounts payable

This includes mostly unclaimed Commission travelling expenses. At its 1971 meeting, the Executive should consider allotting some of this to the unusual expenses for the 1972 General Assembly.

4. Differed income

Dues prepaid by member countries for 1971.

5. Balance

The balance of about \$55,000. should now be adequate for some years.

B - INCOME and EXPENSES

1. Miscellaneous income

Return of our 1969 subscription to I.C.S.U.

2. Commission travelling

This includes the standard allotment to Commissions, not all of which has been claimed. See above.

3. Subscriptions

ICSU: \$840. - CIES: \$200. - ICSU-AB: \$100.

4. Printing

This large amount includes the publishing and mailing of IUPAP-16.

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.

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

News-Bulletin No. 22

April 1971

INTERNATIONAL CONFERENCES

Since the publication of the list for 1971 (see Bulletin No. 19, October 1970), two further Class 'C' Conferences have been sponsored by the Union:

21. Fundamental and Applied Laser Physics Sept. 1-7
Isfahan, IRAN
contact: Prof. S.C. Brown
Research Lab. of Electronics
Massachusetts Inst. of Technology
Cambridge, Mass. 02139, USA.
22. Quantum Solids Sept. 5-10
contact: Prof. J. Bardeen
Dept. of Physics
University of Illinois
Urbana, Ill. 61801, USA.

Readers are reminded of the coming July meetings (see Bulletin No. 19 for details):

6. Crystal Growth (B) July 5-9
Marseille
9. Light Scattering in Solids (B) July 19-23
Paris
17. Electronic and Atomic Collisions (A) July 26-31
Amsterdam
19. Plasma Physics (C) July 6-7
Newfoundland

The SECRETARY-GENERAL

Change of address to:
Dr. C.C. BUTLER, F.R.S.,
Nuffield Lodge,
Regents Park,
London NW1 4RS, ENGLAND.

ELECTORAL PROCEDURE

Following technical difficulties during elections to International Commissions at the IUPAP General Assembly at Dubrovnik (1969) and comments received from some national representatives, the Executive has recently circulated to all Commissions and National Committees proposals for revision of procedure. IT IS URGENT that replies to these proposals be returned to the Secretary-General by summer, for action by the Executive Committee in September.

NEW APPOINTMENTS

IUPAP National Committee for Israel:
: Prof. W. LOW, President
: Dr. N. KAPLAN, Secretary
(The Hebrew University of Jerusalem).

IUPAP National Committee for Italy:
: Prof. Edoardo AMALDI, Chairman
: Prof. Bruno BRUNELLI, Secretary
(Consiglio Nazionale delle Ricerche,
Piazzale delle Scienze, Roma 7).

Please amend Document IUPAP-16.

SCOPE FIRST MEETING

The Special Committee on the Problems of the Environment set up by ICSU in 1970 has held its first meeting. Three working parties reported on:

- : materials which significantly alter the biosphere; their determination and biological assessment;
- : case studies of toxicology of chlorinated aromatic compounds;
- : scientific basis for management of man-modified ecosystems.

Further details may be obtained from the ICSU Secretariat (Rome). The matter of noise pollution, for which IUPAP's representative, Dr. A. Lara, was appointed, has not yet been raised

TRAINING of SECONDARY SCHOOL PHYSICS TEACHERS

National Committees are alerted to the publishing of the Proceedings of the Conference on the training of teachers of Physics for Secondary Schools, held at Eger, Hungary, under the direction of Professor Nagy. The International Commission on Physics Education reports that editors Sanborn Brown, F.J. Kedves, and Edward Wenham expect the MIT Press to deliver the volume this Spring. This report is considered important, and National Committees should arrange for publicity to be given in Institutions for teacher training, as well as generally.

IUPAP

38 countries, 17 International Commissions, 12 Inter-union Commissions, 20-25 International Conferences per year, 250 physicists serving on Commissions, member of ICSU.

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 20, 1971

TO: U.S. National Committee of IUPAP, U.S. Members of IUPAP Commissions, 1972 General Assembly Advisors, and Professor Larkin Kerwin.

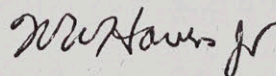
FROM: W. W. Havens, Jr.

SUBJECT: Dates for the IUPAP General Assembly, September 21-26, 1972.

Gentlemen:

I must have been using two different calendars for establishing the dates for the 1972 IUPAP General Assembly, neither of which was the calendar for 1972. The dates for the General Assembly are Thursday, September 21, 1972 through Tuesday, September 26, 1972. All the dates in the memo and on the program are incorrect.

Sincerely yours,



W. W. Havens, Jr.

WWH:ek

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

News-Bulletin No. 21

February 1971

INTERNATIONAL CONFERENCES

The complete list was published in News-Bulletin No. 19 (October). Readers are reminded of the coming Spring meetings:

- | | |
|---------------------------------------|-----------------------------------|
| 1. Statistical Mechanics | Mar.29-April 2
Chicago, U.S.A. |
| 2. Hadron Physics | April 5-7
Tel-Aviv, Israel |
| 2. Theoretical Physics
and Biology | June 21-26
Versailles, France. |

ADDITIONS to the SI SYSTEM

The SUN Commission reports additions to the first list of units to be used with SI units. They are: the atomic mass unit (u); the parsec (pc), and the astronomical unit (A.u.). The rad (10^{-12} J/kg) is given temporary status.

HELIUM CONSERVATION : Difficulties

The International Commission on Very Low Temperatures has made an urgent plea for action on helium conservation. The USA program, begun in 1958, to accumulate 10^{11} c.f. (ntp) has now achieved 25% of its objective, but the costly program may have to be abandoned. The Commission points out that unless fusion by-products or atmospheric separation become feasible (an unlikely short-term prospect) world helium supplies will run low. No other national efforts similar to that of the USA have been reported. The Commission therefore makes the urgent plea that helium conservation be considered a matter of grave importance by scientific organizations and national governments.

ACOUSTICS INFORMATION

The International Commission on Acoustics has set up an Information and Coordinating Center organized by Dr. Kolmar of Czechoslovakia. It has already distributed one bulletin concerning international meetings of possible interest to specialists in acoustics.

COMMISSION on LUNAR STUDIES

An inter-union Commission on Lunar Studies is being set up by ICSU. Interested IUPAP Commissions or National Committees should communicate with the Secretary-General of ICSU, 7, via Cornelio Celso, Rome 00161, ITALY.

NEW TABLE of ATOMIC MASSES

The Commission on Atomic Masses and Related Constants reports progress on its new tables of atomic masses and nuclear reaction energies. The new edition will contain, as well, graphs of nuclear mass systematics and reaction energies for stable nuclide targets.

TWO IUPAP BOOKS in MANUSCRIPT FORM

The International Commission on Physics Education reports that two of its books written in collaboration with UNESCO are now in manuscript form. They are:

"Source Book for Teaching of Physics in Secondary Schools"

J.L. Lewis of the U.K. is editor;

"New Trends in the Teaching of Physics"

E. Nagy of Hungary is editor.

OPTICS GLOSSARY

Interested physicists should note that the International Commission for Optics is preparing a multi-lingual glossary of optical terms.

EGYPTIAN PHYSICAL SOCIETY CONGRESS

IUPAP Secretariat has been informed that the Egyptian Physical Society is organizing its 2nd Congress on Physics to be held in Cairo from 17-21 April 1971.

The YEAR of COPERNICUS

General agreement was noted at the recent ICSU General Assembly to have 1973 marked by special events to commemorate the 500th anniversary of the birth of Nicolai Copernik. Suggestions have been made concerning the organization of an "ICSU day" and other special events. National Committees are invited to consider the manner in which this important scientific anniversary might be noted in their countries.

CODATA NEWSLETTER

ICSU's Committee on Data for Science and Technology (IUPAP's delegate is Prof. B. Vodar) issues a twice-yearly 16-page Newsletter. Copies may be obtained from the Codata Central Office: Westendstrasse 19, 6 Frankfurt/Main, Germany-BRD.

PHYSIQUE INTERNATIONALE

Bulletin de Nouvelles publié par l'U.I.P.P.A.

no 21 - février 1971

CONGRÈS INTERNATIONAUX

La liste complète des congrès internationaux auxquels l'Union a accordé son appui en 1971 a été publiée dans le Bulletin no 19 (octobre). On est prié de noter la date prochaine des congrès suivants:

- | | |
|--------------------------------------|--------------------------------------|
| 1. Mécanique statistique | 29 mars - 2 avril
Chicago, U.S.A. |
| 2. Physique théorique et
Biologie | 21-26 juin
Versaille, France |
| 12. Physique des Hadrons | 5-7 avril
Tel-Aviv, Israël |

ADDITIONS au SYSTÈME des UNITÉS "SI"

La Commission S.U.N. signale des additions à la première liste des unités à être employées avec les unités "SI". Ce sont: l'unité de masse atomique (u); le parsec (pc), et l'unité astronomique ($A.u.$). On attribue un statut analogue temporaire au rad (10^{-12} J/kg).

CONSERVATION de l'HÉLIUM : difficultés

La Commission internationale sur les très basses Températures vient de faire un plaidoyer urgent touchant la conservation de l'hélium. Le programme des États-Unis, débuté en 1958 et visant à accumuler 10^{11} pi.c (tpn), a maintenant atteint 25% de son objectif, mais étant donné le coût du programme, il est question de l'abandonner. La Commission fait remarquer qu'à moins que les sous-produits de la fusion ou de la séparation atmosphérique ne deviennent pratiques (ce qui semble improbable à court terme), les réserves mondiales d'hélium diminueront de façon alarmante. Aucun autre effort national analogue à celui des États-Unis n'a encore été rapporté. La Commission insiste donc afin que les organisations scientifiques et les gouvernements considèrent cette conservation de l'hélium comme une question de toute urgence.

RENSEIGNEMENTS sur l'ACOUSTIQUE

La Commission internationale sur l'Acoustique a établi un Centre d'information et de coordination sous la direction du docteur Kolmer de la Tchécoslovaquie. Ce Centre a déjà émis un bulletin concernant les assemblées internationales d'intérêt possible pour les spécialistes en acoustique.

NOUVELLES TABLES des MASSES ATOMIQUES

La Commission internationale des Masses atomiques et des Constantes associées signale des progrès dans la compilation des nouvelles tables de masses atomiques et des énergies des réactions nucléaires. La nouvelle édition contiendra aussi des graphiques de masses nucléaires ainsi que des énergies de réaction pour les cibles stables.

2 LIVRES de l'UNION sous forme de MANUSCRITS

La Commission internationale sur l'Éducation en Physique signale que deux volumes écrits en collaboration avec l'UNESCO sont maintenant sous forme de manuscrits. Ce sont:

- "Source Book for Teaching of Physics in Secondary Schools"
Éditeur: J.L. Lewis, du Royaume-Uni;
- "New Trends in the Teaching of Physics"
Éditeur: E. Nagy, de la Hongrie.

DICTIONNAIRE d'OPTIQUE

Les physiciens intéressés doivent noter que la Commission internationale d'Optique prépare actuellement un dictionnaire multilingue des termes utilisés en Optique.

CONGRÈS de la SOCIÉTÉ ÉGYPTIENNE de PHYSIQUE

La Société de Physique de l'Égypte nous informe que son deuxième congrès sur la Physique aura lieu au Caire du 17 au 21 avril prochains.

L'ANNÉE de COPERNIC

Il a été décidé lors de la récente assemblée générale du Conseil International des Unions Scientifiques d'organiser différentes manifestations pour marquer le 500ième anniversaire de la naissance de Nicolas Copernic en 1543. On prévoit, entre autres, une "journée du CIUS".

BULLETIN du CODATA

Le Comité du CIUS sur les données pour la Science et la Technologie (le délégué de l'Union est le professeur B. Vodar) distribue deux fois par an un Bulletin de 16 pages. On peut en obtenir des copies au Bureau central de CODATA:
Westendstrasse 19,
6 Frankfurt/Main,
GERMANY BRD.

PHYSIQUE INTERNATIONALE

I.U.P.A.P. Special Bulletin

Bulletin spécial de l'U.I.P.P.A.

On est prié de noter les changements d'adresses suivants et, au besoin, de les inscrire dans la brochure UIPPA-16 - Rapport général 1970.

Please note the following changes to be made in IUPAP-16 - 1970 General Report.

page 101: Prof. H. MAIER-LEIBNITZ,
Institut Max von Laue-Paul Langevin,
Cedex 156,
38 Grenoble-Gare, FRANCE.

Dr. S. BHAGAVANTAM,
525, Rajamahal Extensions,
Bangalore 6, INDIA.

Dr. Walter BOAS,
Department of Metallurgy,
University of Melbourne,
Parkville,
Victoria 3052, AUSTRALIA.

page 102: Dr. C.C. BUTLER, F.R.S.,
Secretary-General of I.U.P.A.P.,
Nuffield Lodge,
Regents Park,
London NW1 4RS, ENGLAND.
Tél.: (01) 722-8871

page 103: Argentina:
Dr. Santos MAYO, Presidente,
Asociacion Fisica Argentina,
Casilla de Correo No. 17,
Victoria B,
Buenos Aires, ARGENTINA.

Bolivia:
Ing. Gaston MEJIA, Director,
Laboratorio de Fisica Cosmica,
Universidad Mayor de San Andrés,
La Paz, BOLIVIA.

Bulgaria:
Dr. Emil NADJAKOV,
The Academy of Sciences of Bulgaria,
1, Street of 7 November,
Sofia 13, BULGARIA.

page 104: France:
Prof. R. LENNUIER,
Comité français de Physique,
33, rue Croulebarbe,
75 Paris 13e, FRANCE.

page 105: Holland:
Mrs. C.F. BRESSER,
Bureau Nederlandse Natuurkundige
Vereniging,
Van der Waalslaboratorium,
Valckenierstraat 67,
Amsterdam, THE NETHERLANDS.

Inde:
Dr. S. BHAGAVANTAM,
525, Rajamahal Extensions,
Bangalore 6, INDIA.

Italy:
Prof. Bruno BRUNELLI, Segretario,
Commissione Italiana di Fisica
pura ed applicata,
Consiglio Nazionale delle Ricerche,
Piazzale delle Scienze 7,
Rome 00100, ITALIA.

page 106: South Africa:
Dr. P. van der WESTHUIZEN,
South African Council for
Scientific and Industrial
Research,
Science Co-operation Division,
P.O. Box 395,
Pretoria, SOUTH AFRICA.

South Korea:
Dr. Tae-Soon YIM,
Public Relation Secretary,
Korean Physical Society,
c/o Department of Physics,
College of Liberal Arts & Sciences
Seoul National University,
Seoul, SOUTH KOREA.

Secrétariat de Québec de l'U.I.P.P.A.,
Bureau du Prof. L. Kerwin,
Université Laval,
Québec 10, P.Q., CANADA.

PHYSIQUE INTERNATIONALE

I.U.P.A.P. Special Bulletin

Bulletin spécial de l'U.I.P.P.A.

On est prié de noter les changements d'adresses suivants et, au besoin, de les inscrire dans la brochure UIPPA-16 - Rapport général 1970.

Please note the following changes to be made in IUPAP-16 - 1970 General Report.

page 101: Prof. H. MAIER-LEIBNITZ,
Institut Max von Laue-Paul Langevin,
Cedex 156,
38 Grenoble-Gare, FRANCE.

Dr. S. BHAGAVANTAM,
525, Rajamahal Extensions,
Bangalore 6, INDIA.

Dr. Walter BOAS,
Department of Metallurgy,
University of Melbourne,
Parkville,
Victoria 3052, AUSTRALIA.

page 102: Dr. C.C. BUTLER, F.R.S.,
Secretary-General of I.U.P.A.P.,
Nuffield Lodge,
Regents Park,
London NW1 4RS, ENGLAND.
Tél.: (01) 722-8871

page 103: Argentina:
Dr. Santos MAYO, Presidente,
Asociacion Fisica Argentina,
Casilla de Correo No. 17,
Victoria B,
Buenos Aires, ARGENTINA.

Bolivia:
Ing. Gaston MEJIA, Director,
Laboratorio de Fisica Cosmica,
Universidad Mayor de San Andrés,
La Paz, BOLIVIA.

Bulgaria:
Dr. Emil NADJAKOV,
The Academy of Sciences of Bulgaria,
1, Street of 7 November,
Sofia 13, BULGARIA.

page 104: France:
Prof. R. LENNUIER,
Comité français de Physique,
33, rue Croulebarbe,
75 Paris 13e, FRANCE.

page 105: Holland:
Mrs. C.F. BRESSER,
Bureau Nederlandse Natuurkundige
Vereniging,
Van der Waalslaboratorium,
Valckenierstraat 67,
Amsterdam, THE NETHERLANDS.

Inde:
Dr. S. BHAGAVANTAM,
525, Rajamahal Extensions,
Bangalore 6, INDIA.

Italy:
Prof. Bruno BRUNELLI, Segretario,
Commissione Italiana di Fisica
pura ed applicata,
Consiglio Nazionale delle Ricerche,
Piazzale delle Scienze 7,
Rome 00100, ITALIA.

page 106: South Africa:
Dr. P. van der WESTHUIZEN,
South African Council for
Scientific and Industrial
Research,
Science Co-operation Division,
P.O. Box 395,
Pretoria, SOUTH AFRICA.

South Korea:
Dr. Tae-Soon YIM,
Public Relation Secretary,
Korean Physical Society,
c/o Department of Physics,
College of Liberal Arts & Sciences
Seoul National University,
Seoul, SOUTH KOREA.

Secrétariat de Québec de l'U.I.P.P.A.,
Bureau du Prof. L. Kerwin,
Université Laval,
Québec 10, P.Q., CANADA.

IUPAP

NATIONAL RESEARCH COUNCIL
NATIONAL ACADEMY OF SCIENCES NATIONAL ACADEMY OF ENGINEERING
2101 CONSTITUTION AVENUE WASHINGTON, D.C. 20418

DIVISION OF PHYSICAL SCIENCES

January 19, 1971

TO: Members, USNC-IUPAP

FROM: Hugh Odishaw

1. Next Meeting. The memo of December 9, 1970, advised you of date and city; the following provides added details:

Date: February 3, 1971

Time: 12:00 noon - 4:00 p.m. (luncheon at noon)

Place: Room 548, The New York Hilton

2. Agenda. The following topics are at hand:

a. Planning for the 1972 IUPAP General Assembly, Washington, D.C.

b. Helium Conservation

c. IUPAP-associated U. S. Conferences

(i) 1973 Cosmic Ray Commission Conference

(ii) 1972 ICO Congress

(iii) Very Low Temperature International Conference, 1972

(iv) Topical Symposia

(1) Inner Shell Ionization Phenomena

(2) Multiply-Charged Heavy Ion Sources and
Accelerating Systems

d. USNC-IUPAP Constitution

3. USNC-IUPAP Officers. The members have elected Drs. Bacher, Brown, and Havens for three-year terms as, respectively, chairman, vice-chairman, and secretary-treasurer.

4. Enclosures. Several are included, some relevant to the agenda noted in item 2 above:

a. Agenda-related: Letters from Drs. Fiske and Bromley.

b. Agenda-related: Livingston-Main letter re proposed "heavy-ion sources and accelerating systems" conference, requesting IUPAP sponsorship.

c. Information: Last IUPAP Newsletter.

d. Information: List of current USNC-IUPAP members.

Yale University *New Haven, Connecticut 06520*

DEPARTMENT OF PHYSICS

Office of the Chairman

Sloane Laboratory

217 Prospect Street

(203-436-3348)

January 12, 1971

Professor W. W. Haven, Jr.
Department of Physics
Columbia University
538 West 120th Street
New York, New York 10027

Dear Bill:

This is in response to your memorandum concerning the forthcoming IUPAP general assembly in Washington in September, 1972.

I could not agree with you more concerning the desirability of making a real scientific impact during the U.S. assembly. I have not thought about this in any great detail but would like to suggest the following as at least an input to our discussions on February 3rd.

It would seem to me that a possible format for the scientific part of the assembly might involve a series of sessions, each of which might be devoted to a major subfield of physics and in each of which some three or four very high level invited papers might be scheduled. I would anticipate that reflecting the international character of the assembly, we might be able to obtain some of the world's most distinguished people in each of the fields in question and if we were successful in doing so these sessions could represent a rather impressive state of the art report on physics. To consider nuclear physics, for example, one might have Dennis Wilkinson representing the United Kingdom, Aage Bohr from Copenhagen, Igal Talmi from Israel, Hans Weidenmuller from Germany, G. N. Flerov from the Soviet Union, and some appropriately selected individual from the U.S. as a possible roster of speakers. If we made it very clear from the beginning that it was our intent to provide a very real overview of the status and accomplishment of the subfield and some feeling for its future, I think we could have a very real impact on physics as a whole.

In addition to these sessions devoted to specific subfields of physics, I feel that we could arrange, with considerable profit, additional sessions on more general topics. Two of which come to mind are "Physics and Society" and the "Support of Physics". It would be extremely interesting to hear these discussed by broadly knowledgeable individuals from a wide variety of countries; I only wish that this could be in time for inclusion in the Physics Survey Report.

Professor W. W. Haven, Jr.

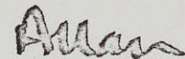
January 12, 1971

I do not know what the relevant ground rules might be, but I should think that a published record of these contributed talks would be very much worthwhile. I am sure that you would know whether this is possible or not within IUPAP regulations. I know that Hugh Odishaw has real expertise in these matters too.

Somehow the idea of having just another conference, in one or more subfields of physics, does not seem to be appropriate to the occasion and I believe that in view of the IUPAP stature and the special occasion of its fiftieth anniversary, we might hope to have a high rate of acceptance of our invitations to unusually distinguished speakers and an arrangement whereby the country in question would be fully prepared to take care of the expenses involved. In short, I have a feeling that this might be a unique opportunity to bring together international leaders in the entire field of physics.

I shall look forward to seeing you in New York. I have talked with Conyers Herring about the possibility of getting some of the people in our data panel, and our survey committee, who are worrying about questions of international physics together with some of the members of the IUPAP group, perhaps on February 4th, to discuss the most effective presentation which we might make in the survey concerning international aspects of physics. If it can be arranged it would seem to me particularly desirable to get you, Sanborn Brown, Bob Bacher, Vicki Weisskopf, Frank Long, Louis Schlichter, Conyers Herring and me at minimum. There may well be other people whom you think it might be important to add and I would certainly welcome any suggestions. Conyers will be calling you about this soon. I hope that we can arrange to get together, although it certainly will be difficult in view of the rather tight schedules which I am sure all of us have for the meeting period.

Sincerely yours,



D. Allan Bromley
Chairman

DAB/he

cc: Professor Robert F. Bacher
Dr. Hugh Odishaw

GENERAL  ELECTRIC
COMPANY



P. O. BOX 8, SCHENECTADY, NEW YORK 12301 . . . TELEPHONE (518) 346-8771

January 5, 1971

Dr. Hugh Odishaw
Division of Physical Sciences
National Research Council
2101 Constitution Avenue, N.W.
Washington, D. C. 20418

Dear Hugh:

This is in response to your letter of December 9 regarding the next meeting of USNC-IUPAP. Unfortunately I shall be out of the country at that time, and will have to convey my thoughts in writing, to wit:

1. Proposed International Conference on Inner Shell Ionization Phenomena. The Conference organization appears to be proceeding along lines suitable for IUPAP sponsorship, and the Advisory Board should have the requisite balance and distinction. I cannot personally assess the timeliness of such a conference, but if the Advisory Board as outlined can be formed, I would favor sponsorship.

2. Helium Conservation. I strongly favor the provisional statement of the VLT Commission and urge that the USNC use what influence it can to have the 1960 helium conservation program of the Bureau of Mines continued and expanded, employing such necessary international support for the program as can be developed.

3. 50th Anniversary Assembly of IUPAP. I urge consideration of a suggestion made by W. W. Havens and expanded a bit by myself at a previous meeting of USNC,

Rec'd
61

Dr. Hugh Odishaw

- 2 -

January 5, 1971

namely, that there be a scientific program at the Assembly comprising a set of invited lectures surveying the present states of the various principal fields of physics. Each lecture would sketch the main lines of development of the field, where it stands now, what the principal unsolved problems are, where it appears to be heading, etc. Each should be addressed to physicists at large and not to specialists in the field, and should have a broad appeal to the scientific public.

The lecturer should be among the leading figures in the field, selected primarily for his breadth of view and ability to present the survey desired.

The lectures should be of an hour's duration and number between 10 and 20, the former as a sort of irreducible minimum to divide physics into and the latter as a practical upper limit for the Assembly to sit through.

I would carefully avoid any one-to-one correspondence between field of physics and field of the existing IUPAP Commissions, or turning parts of the program over to the respective Commissions (though they should be consulted for suggestions). Rather this program must be centrally planned and administered, perhaps by a committee joint between the IUPAP Executive Committee and USNC-IUPAP as hosts. Selection of the speakers may be an administrative nightmare, but I should think it could be done on bases which would recognize the various equities.

It would be appropriate to have the lectures published as a special volume commemorating IUPAP's 50th year.

This is, it seems to me, a singularly appropriate time for a comprehensive summing-up and prospective view. With scientific work under attack in so much of the world today, it would be timely for physics to put its best voices forward reminding us all of the towering achievements of the past half-century, and how much poorer our lives would be but for them.

GENERAL  ELECTRIC

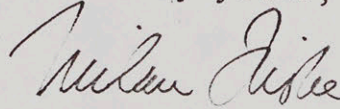
Dr. Hugh Odishaw

- 3 -

January 5, 1971

I regret very much that I shall be unable to attend the meeting, but hope that this suggestion will be considered.

Sincerely yours,



M. D. Fiske
Physical Science Branch

MDF:blm

cc: W. W. Havens

25

OAK RIDGE NATIONAL LABORATORY

OPERATED BY
UNION CARBIDE CORPORATION
NUCLEAR DIVISION



POST OFFICE BOX X
OAK RIDGE, TENNESSEE 37830

January 14, 1971

Dr. Hugh Odishaw
National Academy of Sciences
2101 Constitution Avenue
Washington, D. C. 20418

Dear Dr. Odishaw:

This note is to inform you of a conference being planned which we believe would be appropriate for sponsorship by the International Union of Pure and Applied Physics. The attached announcement lists the purpose of the conference and the organizing committee which has been formed. As you will note, many of the leaders in scientific investigation of heavy ion sources are members of this committee.

We believe the holding of such a conference is timely as there is now great interest and considerable activity in this field.

We would appreciate it if you could bring this matter to the attention of the appropriate officials in the IUPAP. We hope that the sponsorship by the International Union of Pure and Applied Physics can be authorized in the near future.

Yours sincerely,

Robert Livingston
Robert S. Livingston

Rmain
Robert M. Main

Co-Chairmen
International Conference on Multiply-
Charged Heavy Ion Sources and
Accelerating Systems

job

Enclosure

PHYSIQUE INTERNATIONALE

I.U.P.A.P. News-Bulletin No. 20

December 1970

INTERNATIONAL CONFERENCES in 1971

At its October meeting, the Executive Committee, acting on the recommendation of the various International Commission, extended the sponsorship of the Union to 20 international conferences, being organized in 12 member countries (Australia, Canada, Denmark, France, Hungary, Israel, Japan, Netherlands, U.S.A., U.S.S.R.). The complete list was published as issue No. 19 of this News-Bulletin (October 1970). The first of these conferences is scheduled for April 5-7th at Tel-Aviv Israel, when the conference on Duality and Symmetry in Hadron Physics will be organized by Prof. Y. NE'EMAN.

IUPAP MEMBERS HONORED

All IUPAP members rejoiced to learn of the awarding of the Nobel Prize in Physics for 1970 to Prof. Louis NÉEL of France and Prof. H.O.G. ALFVEN of Sweden. Prof. Néel was President of the Union from 1963 to 1969. Prof. Alfven is one of the founding members of the International Commission on Plasma Physics.

1972 GENERAL ASSEMBLY at WASHINGTON

Lieu of the 1972 IUPAP General Assembly, which will correspond with the 50th anniversary of the Union, has been fixed in Washington, U.S.A. The dates have not been fixed, pending liaison with the E.P.S. to avoid a conflict, but will probably be in the second half of September.

NEW SECRETARY-GENERAL at I.C.S.U.

Professor F.A. STAFLEU of the Netherlands was elected as Secretary-General of ICSU at its Madrid General Assembly. He succeeds Prof. K. Chandrasekharan of India.

UNISIST : "feasible"

The UNESCO-ICSU Committee on the establishment of a World Science Information System has reported that it is feasible. An inter-governmental conference will be held in 1971 to establish mechanisms.

PHYSICS ARCHIVES

Participants in the Seminar on the Role of the History of Physics in Physics Education (at M.I.T., July 1970) called the attention of the Education Commission to the importance of preserving archival material. It was urged to alert "physicists and physics organizations of all nations, including the National Committees of the Union to the need of preserving their own personal papers, and similar records of their scientific institutions, journals, and societies".

The Commission on Physics Education advises:

- : that Dr. Charles Weiner of the American Institute of Physics' Center for the History and Philosophy of Physics has offered the Center's services to aid societies or countries in setting up Physics archives;
- : Prof. Stephen Brush of the University of Maryland is organizing a committee on the translation of Historical Materials.

ICSU and POLLUTION : Noise

The General Assembly of ICSU, held at Madrid in September 1970, reviewed plans for its Special Committee on the Problems of the Environment (SCOPE). A possible duplication of effort with UNESCO's Man and the Biosphere (MAB) programme was noted, and liaison established between the two groups. IUPAP's contribution to the ICSU project will concern itself largely with pollution by noise. Dr. Andres LARA of Spain's Centro de Investigaciones Fisicas has been named by the Union to the SCOPE Committee, on the recommendation of the Commission on Acoustics.

CRITERIA for CONFERENCE PAPERS

At the October 1970 Union Executive meeting, it was agreed that, in addition to the other criteria (News-Bulletin No. 15, January 1970) IUPAP would only sponsor conferences where papers were accepted and refereed as to their scientific content and relevance to the conference. Political or institutional criteria may not be used.

NATIONAL RESEARCH COUNCIL

NATIONAL ACADEMY OF SCIENCES NATIONAL ACADEMY OF ENGINEERING

2101 CONSTITUTION AVENUE WASHINGTON, D.C. 20418

DIVISION OF PHYSICAL SCIENCES

January 19, 1971

U. S. National Committee
for the
INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

Current Membership

Dr. Robert F. Bacher - Chairman
Dr. Sanborn C. Brown - Vice Chairman
Dr. W. W. Havens, Jr. - Secretary

Dr. Stanley S. Ballard
Dr. John Bardeen
Dr. D. Allan Bromley
Dr. Milan D. Fiske
Dr. Martin Greenspan
Dr. H. William Koch
Dr. Thomas Lauritsen
Dr. Frederick Seitz
Dr. F. Dow Smith
Dr. Roman Smoluchowski
Dr. Victor F. Weisskopf
Dr. Hugh C. Wolfe

UNION INTERNATIONALE DE PHYSIQUE PURE ET APPLIQUÉE
COMMISSION DE SYMBOLES, UNITÉS ET NOMENCLATURE

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS
COMMISSION ON SYMBOLS, UNITS AND NOMENCLATURE

January 26, 1971

Secrétaire – Secretary:

Prof. Dr. U. STILLE

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT

D-33 BRAUNSCHWEIG

Bundesallee 100

Bundesrepublik Deutschland

téléphone: 592-2201

télex: 9-52822 (ptb bswg)

Memorandum

to the National Committees for Physics

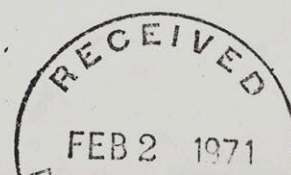
At the General Assembly of IUPAP at Dubrovnik the SUN Commission decided to prepare a new edition of document U.I.P. 11 (S.U.N. 65-3) *Symbols, Units and Nomenclature in Physics*, i.e., among others, enlarging and rearranging the chapter 7.10 *Symbols for Solid State Physics* and inserting a new chapter *Symbols for Plasma Physics*. Meanwhile, some additions for chapter 7.10 and the new chapter have been drafted. Please, find enclosed 5 copies of

document S.U.N. 70-5 *Symbols for Solid State Physics*

document S.U.N. 71-1 *Symbols for Plasma Physics.*

I would appreciate to receive your comments to these two documents before the end of June 1971, which will be dealt with at the next meeting of SUN Commission to prepare the relevant draft recommendations for the next General Assembly of IUPAP.

U. Stille



Symbols for Plasma Physics

dissociation energy	D
electron affinity	E_{ea}, A
ionization energy	E_i
ionization energy of ^1H	$E_i(^1\text{H})$
degree of ionization	x
degree of ionization for ionization state z ($x_z = \frac{n_z}{n_z + n_{z-1}}$)	x_z
gas temperature	T_g
ion temperature	\bar{T}_i
electron temperature	T_e
(electron) plasma circular frequency $\omega_p^2 = \frac{n_e e^2}{\epsilon_0 m_e}$	ω_p
(electron) plasma frequency $f_p = \frac{\omega_p}{2\pi}$	f_p, ν_p
Debye length $\lambda_D^2 = \epsilon_0 kT/n_e e^2$	λ_D
charge of particle	q
cyclotron circular frequency $\omega_c = (q/m)B$	ω_c
reduced mass $\mu = m_1 m_2 / (m_1 + m_2)$	μ, m_r
impact parameter	b
mean free path	l, λ
collision frequency ($\nu_c = 1/\tau_c$)	f_c, ν_c
(average) time interval between collisions	τ_c

cross section	$Q = 1/\ln$	Q, σ
rate coefficient		k
one-body rate coefficient ($-dn_A/dt = n_A/\tau$)		$k, 1/\tau$
two-body rate coefficient, binary rate coefficient		
e.g. $X + Y \rightarrow XY + h\nu$		
$dn_{XY}/dt = k n_X n_Y$		k, k_D
three-body rate coefficient, ternary rate coefficient		
e.g. $X + Y + M \rightarrow XY + M$		
$dn_{XY}/dt = k n_M n_X n_Y$		k, k_t
charge number of ion		z
positive or negative ion density		n_+, n_-
electron number density		n_e
Townsend (electron) ionization coefficient		α
Townsend (ion) ionization coefficient		β
secondary electron emission coefficient		γ
mobility	$\mu = e\lambda/m \bar{v}$	μ
drift velocity	$v_{dr} = \mu E$	
	($E =$ electric field strength)	v_{dr}
positive or negative ion diffusion coefficient		D_+, D_-
electron diffusion coefficient		D_e
ambi polar electron diffusion coefficient		
	$D_a = \frac{D_+\mu_+ + D_-\mu_-}{\mu_+ + \mu_-}$	D_a
characteristic diffusion length		L

ionization frequency	$\nu_i = D_i/L^2$	ν_i
recombination coefficient		α
ion-ion recombination coefficient	$dn_-/dt = -\alpha_i n_- n_+$	α_i
electron-ion recombination coefficient	$dn_e/dt = -\alpha_e n_e n_+$	α_e
bound-free Gaunt factor (for bound state n)		G_n
magnetic pressure	$p_m = B^2/2\mu$	p_m
magnetic pressure ratio	$\beta = p/p_m$, where $p =$ static pressure	β
magnetic diffusivity	$\nu_m = 1/\sigma\mu$	ν_m, η_m
Alfvén speed	$v_A = B/\sqrt{\rho\mu}$	v_A
Alfvén number	$Al = v/v_A$	Al
Hartmann number	$Ha = B l \sqrt{(\sigma/\rho\nu)}$	Ha
first Cowling number	$Co_1 = B^2 l \sigma/\rho\nu =$ $= Re_m Co_2$	Co_1
second Cowling number	$Co_2 = B^2/\mu\rho\nu^2$	Co_2
magnetic Reynolds number	$Re_m = \nu l/\nu_m$	Re_m
Reynolds number	$Re = \nu l/\nu$	Re

7.10. Symbols for Solid State Physics7.10.1 Crystallography: no new symbols7.10.2 Lattice vibrations:

(particle) position vector ^{*)}	\vec{r}
(particle) equilibrium position vector ^{*)}	\vec{r}_0
(particle) displacement vector	\vec{u}
total potential energy	Φ
phonon creation and - annihilation operators	b, b^\dagger
normal coordinates	Q_i
polarization vector	\vec{e}
Debye-Waller factor	f
Debye (circular) wave number	q_D
Debye (circular) frequency	ω_D
Grueneisen parameter $\gamma = -\frac{V}{\theta_D} \cdot \frac{d\theta_D}{dV}$ or	γ
$\gamma = 3\alpha V / \kappa C_v$	
(α : linear expansion coefficient; κ : compressibility)	
Madelung constant	α

*) When a distinction between ion and electron position vectors is needed, capital and small letters are used respectively.

7.10.6 Electrons in solids, phonons:

mean free path of electrons	l
drift velocity	v_{dr}
mobility	μ
phonon mean free path	l_{ph}, Λ
one electron wave function	$\psi(r)$
Bloch wave function $\Psi_k(r) = u_k(r) \exp ikr$	$u_k(r)$
density of states	N_E
exchange integral	I

7.10.7 Transport phenomena (especially in metals):

resistivity tensor	ζ_{ik}
electric conductivity tensor	σ_{ik}
thermal conductivity tensor	λ_{ik}
residual resistivity	ζ_R
relaxation time	τ
Lorenz coefficient ($L = \lambda/\sigma T$)	L
Hall coefficient	R_H, A_H
Ettinghausen coefficient	A_E
first Righi-Leduc coefficient	A_{RL}, A_R, A_L
first Ettinghausen-Nernst coefficient	A_N
differential thermoelectric power, Seebeck coefficient	S
total thermoelectric power	Σ
Thomson coefficient	μ, τ, σ_T

7.10.8 Emission:

work function *) ($\phi = e\varphi$)	ϕ
Richardson constant ($j = (A/T^2)\exp(-\phi/kT)$)	A

*) The symbol W is used for the quantity $W = \phi + \mu$, where μ is the electron chemical potential being equal to E_F at $T = 0$.

7.10.9 Semiconductors *):

electron concentration	n_-, n
hole concentration	n_+, p
donor concentration	n_d
acceptor concentration	n_a
intrinsic concentration $n_i = (n \cdot p)^{1/2}$	n_i
gap energy	E_g
donor ionization energy	E_d
acceptor ionization energy	E_a
Fermi energy	E_F

effective mass	(n = electrons, p = holes)	m_n, m_p
mobility		μ_n, μ_p
mobility ratio	($b = \mu_n / \mu_p$)	b
diffusion coefficient		D_n, D_p
diffusion length		L_n, L_p
life time		τ_n, τ_p

*) In general subscripts n and p can be replaced by - and + respectively.

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

News-Bulletin No. 21

February 1971

INTERNATIONAL CONFERENCES

The complete list was published in News-Bulletin No. 19 (October). Readers are reminded of the coming Spring meetings:

- | | |
|---------------------------------------|------------------------------------|
| 1. Statistical Mechanics | Mar. 29-April 2
Chicago, U.S.A. |
| 12. Hadron Physics | April 5-7
Tel-Aviv, Israel |
| 2. Theoretical Physics
and Biology | June 21-26
Versailles, France. |

ADDITIONS to the SI SYSTEM

The SUN Commission reports additions to the first list of units to be used with SI units. They are: the atomic mass unit (u); the parsec (pc), and the astronomical unit (A.u.). The rad (10^{-12} J/kg) is given temporary status.

HELIUM CONSERVATION : Difficulties

The International Commission on Very Low Temperatures has made an urgent plea for action on helium conservation. The USA program, begun in 1958, to accumulate 10^{11} c.f. (ntp) has now achieved 25% of its objective, but the costly program may have to be abandoned. The Commission points out that unless fusion by-products or atmospheric separation become feasible (an unlikely short-term prospect) world helium supplies will run low. No other national efforts similar to that of the USA have been reported. The Commission therefore makes the urgent plea that helium conservation be considered a matter of grave importance by scientific organizations and national governments.

ACOUSTICS INFORMATION

The International Commission on Acoustics has set up an Information and Coordinating Center organized by Dr. Kolmar of Czechoslovakia. It has already distributed one bulletin concerning international meetings of possible interest to specialists in acoustics.

COMMISSION on LUNAR STUDIES

An inter-union Commission on Lunar Studies is being set up by ICSU. Interested IUPAP Commissions or National Committees should communicate with the Secretary-General of ICSU, 7, via Cornelio Celso, Rome 00161, ITALY.

NEW TABLE of ATOMIC MASSES

The Commission on Atomic Masses and Related Constants reports progress on its new tables of atomic masses and nuclear reaction energies. The new edition will contain, as well, graphs of nuclear mass systematics and reaction energies for stable nuclide targets.

TWO IUPAP BOOKS in MANUSCRIPT FORM

The International Commission on Physics Education reports that two of its books written in collaboration with UNESCO are now in manuscript form. They are:

"Source Book for Teaching of Physics in Secondary Schools"

J.L. Lewis of the U.K. is editor;

"New Trends in the Teaching of Physics"

E. Nagy of Hungary is editor.

OPTICS GLOSSARY

Interested physicists should note that the International Commission for Optics is preparing a multi-lingual glossary of optical terms.

EGYPTIAN PHYSICAL SOCIETY CONGRESS

IUPAP Secretariat has been informed that the Egyptian Physical Society is organizing its 2nd Congress on Physics to be held in Cairo from 17-21 April 1971.

The YEAR of COPERNICUS

General agreement was noted at the recent ICSU General Assembly to have 1973 marked by special events to commemorate the 500th anniversary of the birth of Nicolai Copernik. Suggestions have been made concerning the organization of an "ICSU day" and other special events. National Committees are invited to consider the manner in which this important scientific anniversary might be noted in their countries.

CODATA NEWSLETTER

ICSU's Committee on Data for Science and Technology (IUPAP's delegate is Prof. B. Vodar) issues a twice-yearly 16-page Newsletter. Copies may be obtained from the Codata Central Office: Westendstrasse 19, 6 Frankfurt/Main, Germany-BRD.

IUTAP

January 14, 1970

A. H. Rosenfeld
Lawrence Radiation Laboratory
University of California
Berkeley, California 94720

Dear Art:

As you remember, the Division of Particles and Fields held a discussion evening on the problems of high energy physics at the last Washington meeting. I would be very much in favor of having a similar meeting held again this year. It is very important for HEPAP to be in close touch with the community, and I, for my part, found last year's meeting most rewarding and interesting, in spite of, or perhaps because of, the strong opposition which has been voiced to some of the HEPAP decisions. I hope it can be done again.

With best regards,

Yours sincerely,

Victor F. Weisskopf

VFW:gpm