The President's Report

The report of the President, Professor R.A. Ricci, that was sent to the Group members, Associate Members and the delegates to Council of the IOMs, so that all delegates could consult with their colleagues before the Council Meeting in Uppsala on 29/30 March 1990.

The first remark to be made in opening this report relates to the large number of discussions, decisions and undertakings since the last Council Meeting held in Zagreb one year ago.

The most important results, as a consequence of various brainstorming meetings of the Review and Executive Committee and of the Presidents of National Societies held in Eindhoven in June 1989, as well as the meeting with the Chairmen of the Divisions in Geneva in November 1989, can be briefly summarized as follows:

— The Advisory Committees have been replaced by **"Action Committees"** with a simplified structure and a more active role in topics other than scientific ones related to physics, in order to have more impact and a better visibility of EPS. Subsequent actions taken by the Conference Committee, the ACAPPI and the Publications Committee concerning, for instance, the Europhysics Study Conferences, the relationships between EPS and industrial representatives as well as the visible improvement of *Europhysics News*, are very promising.

Particular attention has been devoted by the Executive Committee to activities concerning **Physics and Society**. The success of the East-West Workshops held in Torino, September 1989, on "Induced Critical Conditions in the Atmosphere" and in Bad Honnef, February 1990, on "Balances in the Atmosphere and the Energy Problem" stems from a clear identification of the scientific aspects of social problems — a concern which will be extended to other items such as the employment situation of physicists, scientific and technological progress, *etc.*

Another question was, and still is the action concerning fund-raising: the replacement of the **Finance Committee** with another body more active in promoting new ways to find financial support for EPS activities is still under discussion. The present situation has convinced the Executive Committee to assume all the responsibility itself, with R. Pike as an advisor.

Furthermore, a more extended field of action is being developed for **Physics Education**, which is a topic having a large European interest.

— The same is true for the revewed spirit of the **Divisions**. The meeting in Geneva last November has been an important achievement, as it represented at least a serious confrontation with a significant participation in order to discuss the way to extend activities beyond the organisation of topical or divisional Conferences, and to provide EPS with expertise and study-group activities on a European and international scale. The contribution of **Interdivisional Groups** such as the one on Experimental Physics Control Systems is of great importance in this respect. The recently formed Groups on Accelerators and History of Physics prove that there are many needs for European activities, and that there are many people prepared to do the work.

— The contacts started with **UNESCO** (Rostena) and the **CEC** and undergoing rapid evolution are another sign of possible, important impact of the EPS scientific inheritance on the future policies of European institutions. Concerning UNESCO, the establishment of the International Advisory Committee on "Energy Storage and Saving" is under way and new common activities with ROSTENA were discussed in Venice on 21-23 March just before the Council Meeting in Uppsala. We have discussed with the CEC the role to be played by EPS in organising Gordon-type conferences and in participating in SCIENCE PLAN for the management and exploitation of intellectual resources in science. While this represents a large amount of work which should be shared among the EPS divisions, it is also the occasion to play a very important role in the development of physics in Europe. On the other hand, CEC programmes are usually limited to EEC countries and there is only a partial extension to AELE countries. The fact that EPS is also representing countries in eastern Europe and the Mediterranean rim should be deemed an asset.

— The meeting of the Presidents of the National Societies, which will be repeated in Uppsala the day before the next Executive Committee and Council meetings, has provided a specific forum for discussing not only improvements in the relationships between EPS and **national bodies**, but also the role of the various Societies in making the European physics community stronger. EPS is the only really functioning Society covering East and West. This fact is mainly reflected in the activities exercised through the Divisions and Interdivisional Groups as well as some of the Action Committees.

The immediate goal is to increase the interest of National Societies in better coordinating their traditional roles with stronger help from EPS for more intensive activity at a European scale in fields such as education and training, professional standing, social impact and technological studies. There are many important items which would not exist without EPS in Europe and which could provide the basis for a more representative character to our Society. Further discussions are needed following the motion signed by some members of the AMPD. At the moment it is quite unrealistic to change the basic structures of EPS if we take into account not only the need to preserve the federative link of the national physics bodies, but also the evolution which is in progress in European countries.

"Adelante Pedro, com juicio!"

Meanwhile, we have to make all possible efforts to persuade people to join as Individual Ordinary Members because mergers will become a conceivable possibility when a high proportion of the National Societies' members are IOMs.

One of the important tools to achieve such long term goals is ***Europhysics News***. The acquisition of a full-time editor with the task of putting special emphasis on a larger collaboration through correspondents of the National Societies will be help significantly.

One of the best examples of European collaboration remains ***Europhysics Letters***, for which two National Societies, the French and the Italian, have taken the risk to give up their own journals and to run a new one, thus opening the way to a larger collaboration with quite a number of other societies. The great success of such an enterprise is a clear indication of the impact of EPS on professional aspects of the European physics community.

— A number of activities, summarized below on the basis of the reports of the Divisions and the Action Committees, have been performed last year; some of them represent a significant improvement in the EPS spirit of enterprise. A good example is the launching of the **Southern European School of Physics** which aims at providing advanced training for talented young physicists and promoting North-South and South-South collaboration in physics. Other examples are the promotion of a **Mediterranean Conference** (on quarks and nuclei) jointly organized by EPS, APS and ICTP, as well as the survey under way on the education of physicists at European universities.

The reports of the Divisions are available from the Secretariat: I have picked out the highlights and will give them in telegraphic style.

Astronomy and Astrophysics: Discussions towards creating a European Astronomical Society are continuing. It is the task of all of us to think over in which way we can maintain close contacts with this traditional domain of science.

Atomic and Molecular Physics: ECAMP III was held with great success in Bordeaux. The 1992 meeting will be held in Riga. The chairmanship has changed from F.A. Gianturco to M. Barat.

Condensed Matter: The 9th Annual General Conference was held in Nice and the 10th takes place in Lisbon. Unfortunately there were two sad events since Professor G. Harbeke and Professor E. Lüscher died. Both had made important contributions to the activities of the Division.

High Energy and Particle Physics: The biennial Conference was held in Madrid and on that occasion Georges Charpak was awarded the HEPP prize donated by several industrial companies.

Nuclear Physics: Close contacts with NuPECC have been established.

Optics: Discussions about the future of the ECO conferences were carefully prepared.

A series of topical conferences (ECOOSA) is planned.

Plasma Physics: The Division has successfully continued its annual conference which was held in Venice.

Quantum Electronics: The second EQEC was held in Dresden. The chairmanship has changed from H. Walther to P.L. Knight.

Computational Physics: The present Board is discussing new activities *e.g.* surveys of parallel computing and of computer-aided education in physics.

Experimental Physics Control Systems: This interdivisional group has extended its international activities and now has 29 participating group members.

Physics for Development: The EPS Southern European School of Physics has been firmly established with the help of UNESCO, CEC and the Council of Europe. Much effort has been put into the preparation of a satellite Conference to EPS-8 in Amsterdam.

The Action Committees have reported about their activities in *Europhysics News* and will continue to do so in the future. New guidelines and terms of reference have been drawn up and are available from the Secretariat.

Conclusions

In the 22 years of the EPS, many achievements have been obtained which go a long way to fulfilling the aims of the founders. At its creation such an enterprise, being a realization of the dreams of its promoters, appeared as the beginning of an "utopia" based on equal representation of physicists from both eastern and western Europe and their sameness of ideals in scientific collaboration.

Despite difficulties and political trouble over all the years, the fundamental philosophy never failed. The presence of a representative body of physicists from all European countries in scientific, educational and social events has allowed continuous cooperation. We offer this heritage, typical of science, to the goals of freedom, tolerance and human dignity everywhere in Europe.

Nowadays, following the extraordinary transformations occurring in the central and eastern European countries, important socio-political claims are sometimes called for, maybe without sufficient historical awareness. It is worth underlining the perhaps modest but nevertheless very real and concrete contribution given by European science to the breakdown of the ideological and political barriers which have so far hindered the construction of the "common house" that, for the European physicist, is already a concrete achievement.

R.A. Ricci, *EPS President*

Hewlett-Packard Europhysics Prize 1991

Call for Nominations

The Selection Committee for the Hewlett-Packard Europhysics Prize invites nominations for the 1991 award. The prize is given for an outstanding contribution to condensed matter physics within the previous five years, with the potential for leading to advances in the fields of electronic, electrical or materials engineering. Nominations may be submitted by EPS members as individuals or as representatives of a Division or Section.

The Hewlett-Packard Europhysics Prize has been awarded to the following:

1982 – K. von Klitzing
1983 – I. Silvera
1984 – G. Binnig and H. Rohrer
1985 – J. Als-Nielsen and M. Pepper
1986 – F. Mezei
1987 – I. Yanson
1988 – J.G. Bednorz and K.A. Müller
1989 – F. Steglich, H.-R. Ott and G. Lonzarich
1990 – R. Car and M. Parrinello

To maintain the extremely high standard, it is necessary that the Committee receive proposals which represent the breadth and strength of European condensed matter physics. It is also important that the submitted nominations be complete. They should comprise at least:

– a detailed motivation for the award, including a clear definition of the work and its significance;
– a brief curriculum vitae of the nominee;
– a list of relevant publications.

It is also extremely helpful it we receive letters of support from authorities in the field, in which the importance of the work is evaluated. These can with advantage also be sollicited from non-European physicists.

EPS members who know of a qualified candidate are urged to submit a complete nomination to the Selection Committee, **to arrive before 15 Sept.** All information will be treated as strictly confidential, and although proposals will be acknowledged, there will be no further correspondence.

Nominations should be addressed to:
Selection Committee,
H-P Europhysics Prize
EPS, POB 69, CH-1213 Petit-Lancy 2

A.R. Mackintosh

Who's Who in Condensed Matter

The first edition of the *European Who's Who in Condensed Matter Physics* is now available by transferring 15.– SFR for IOMs, 20.– SFR for other EPS members and non-commercial institutions, and 200.– SFR for non-members and commercial institutions to the Swiss Bank Corp., Account No. 164.899 (EPS), CH-1211 Geneva 11. It can also be ordered by writing to the Secretariat in Geneva. Any payments other than by bank transfer must be *via* cheques drawn on a Swiss bank account.

The 600 page hardback edition lists details of nearly 2600 individual physicists working in the field of condensed matter in Europe. These individuals are classified alphabetically and according to their affiliation in one of nearly 40 countries. It was edited by Professor G. Benedek and by Professor G. Harbeke who unfortunately died before he could see this very informative and useful compendium in its final form (see page 71).

Underground Heat Store Lives On

Among the activities of the EPS Physics and Society programme is the agreement with ROSTENA of UNESCO to develop specific initiatives relating to energy storage. For instance, it is planned to conduct a census of research and implementation projects. One particularly interesting project is the SPEOS underground thermal storage system developed in Switzerland. It is the only survivour of several projects launched in the early 1970's at the height of the oil crisis to use earth and rock, perhaps the ultimate low-technology media, to store waste heat.

It is pleasing to hear that the Ecole Polytechnique Fédérale de Lausanne, the senior partner in the seven year, 5.2 million SFR research phase has decided to proceed with SPEOS to the pilot phase. SPEOS is unique because it uses a horizontal distribution and recovery arrangement to provide hot water without heat pumps. The result of the research phase was a 1 MW prototype situated on the EPFL's Ecublens site that can heat 200 apartments for a cost equal to that for an oil-filled system.

The success of SPEOS should provide inspiration for other thermal storage projects that have been or are being launched in Switzerland. However, we shall have to wait until the end of the year to know if the Federal Government will support the construction of a larger SPEOS "thermos" at a site near Zurich.