



Communication Medium for the EPS

E. N. Shaw

As readers of *Europ physics News* will be aware, the EPS has been studying the possibility of establishing a European periodical which would act not only as a medium for publishing information on the activities of the EPS itself, its member societies and international organizations, but also as a much broader means of communication between physicists in Europe. The possible contents of such a publication were summarized in the March issue (No. 8, p. 6). A number of interpretations of this general plan were considered: a fully professional magazine, containing at least 36 pages of text, a proposal from The Institute of Physics and The Physical Society of the UK and proposals from commercial publishing companies, in particular the North-Holland Publishing Company.

For a young society such as the EPS the question of operating costs is of prime importance. The Society has already embarked upon an extensive programme of activity which is stretching its present limited resources to the maximum. The Society is thus in no position to make up the deficit in any venture which operates at a loss: on the contrary, it would hope at some time in the future to obtain a net income from its information dissemination service.

There is also the problem of initial capital and a survey was conducted amongst physicists and member societies to sound out their interest in forming their own company on the assumption, of course, that this would be a profitable investment in the long term, the profits being shared with the EPS.

Comparative Study

The Bulletin Committee, under the chairmanship of N.R. Nilsson, together

with members of the Executive Committee of the EPS, considered the various possibilities at a meeting in Geneva on 20 May.

From the data assembled it became clear that if all members of the EPS and the members of member societies were to receive the publication automatically and without charge, there was little chance (under any system) of the total expenses involved being met by revenue from advertising. For a magazine containing say forty pages of editorial, at least twice this number of advertising pages would be necessary to balance the expenditure (in which paper and distribution costs figure prominently) and a market analysis indicated that such a number would not be obtained at least in the first few years of operation.

Making a separate charge for the magazine would be a possible solution but it was felt that, at this stage, a wide distribution of a more modest publication was of greater benefit to the members of the EPS than a publication that would not be automatically read by all the physicists connected to the Society, since they might not be willing to subscribe.

The finances of *Europ physics News* are greatly helped by member societies distributing copies with their own national publication at a small extra charge to themselves and paying the bare cost of printing and paper. An examination was made of what it would mean to member societies to take over the distribution of a magazine of significant weight which was delivered in bulk to their headquarters for redistribution.

Two difficulties arise — the first is time, the second is expense. If everyone is to receive the publication at even approximately the same time, the cheapest forms of bulk delivery

are excluded and the cost of mailing to the headquarters of member societies becomes not so very different from that of mailing to individuals. Then, at the headquarters of the societies, there is the cost of handling followed by a further postage charge which adds up to an overall cost greater than that involved in mailing to individuals from the central printing house.

These may seem trivial details at first sight but the extra costs could readily mount up to 20 000 Sw. frs or more per month.

The IPPS had made the generous proposal that its publishing office assume responsibility for the production of an EPS Bulletin. The IPPS would additionally put up the capital for launching the journal in the expectancy that advertisement revenue would eventually cover basic charges. The scale of operations would be somewhat more modest than the EPS study had assumed and a rather higher proportion of voluntary effort would be necessary in the editorial work. However, the problems of arriving at a suitable organization and covering the distribution costs completely could not be solved at present.

It would be improper to go into detail on the commercial offers, but no company could offer the EPS the expectancy of a profitable venture at this stage without equivalent risks or demands on capital. This is in effect stating that the estimates made by the companies did not differ in any significant way from those made by the EPS itself.

As far as initial capital is concerned there was an encouraging response from individual members and from national societies: over 300 replies were received in the first four weeks following the publication of the

CERN Future Programme

questionnaire concerning the establishment of a member-sponsored publishing company. It was nevertheless felt that members would not be willing to finance a scheme that did not have a strong probability of being profitable and giving a fair return on investment.

After this somewhat disheartening analysis it was gratifying to be able to record the number of positive comments received on Europhysics News which seems to have been favourably received throughout Europe.

Conclusion

It was, therefore, the unanimous decision of the Bulletin Committee to recommend to Council the continuation and improvement of Europhysics News whilst consideration is given to the whole question of communication between members of the EPS including a more detailed study of requirements, methods and means.

Two measures can greatly assist in the continuation and improvement of Europhysics News.

- (1) The appointment of a permanent member of the Secretariat to be responsible for the collation and assembly of information which has until now depended largely upon voluntary help.
- (2) The active participation of member societies in the editorial work of Europhysics News.

Other ways of lightening the load on those who have produced the journal so far will also be considered. Meanwhile Europhysics News goes on!

Society News

A donation has been received from Stichting Physica, Utrecht, The Netherlands amounting to 10 000 Sw. frs.

Personal gifts have been received from :

The Rev. Prof. James R. McConnell, Dublin, Ireland
Prof. Victor F. Weisskopf, Cambridge, Mass., USA

The following organisations have decided to join the European Physical Society as **Associate Members** :

Danfysik A.S., Jyllinge, Denmark
North-Holland Publishing Company, Amsterdam, The Netherlands
Taylor and Francis Limited, London, UK.

The European Organization for Nuclear Research, the joint high energy physics research organization of twelve western European States, has been studying for more than seven years a major extension to its present facilities.

The existing laboratory of CERN straddles the Franco-Swiss border near Geneva. Research undertaken principally by visiting teams from the Universities and research centres of the Member States is centred upon the use of two particle accelerators : a proton synchro-cyclotron of 600 MeV, which came into operation in 1957, and a 28 GeV proton synchrotron, which has been operating since 1959. Intersecting Storage Rings for colliding beam physics in association with the synchrotron are currently under construction and are due to come into service next year. The laboratory has built up an extensive array of particle detectors and these are being further extended.

An important committee of European physicists — the European Committee for Future Accelerators (ECFA) first recommended in 1963 to the CERN governing body (the Council) the construction of a proton accelerator of 300 GeV energy. In the following year designs were evolved for such a machine and its laboratory facilities.

The accelerator was conceived as a "combined-function" machine (with the main magnets combining the functions of bending the beam and focusing it, the peak magnetic field being 12 kG). Several long straight sections with ejection points were foreseen resulting in a ring diameter of 2.4 km and several tangential beam lines of up to 5 km length set out round the circumference. Member States were asked to propose sites for a new laboratory to house the accelerator.

In 1967 ECFA reaffirmed its opinion that such an accelerator was necessary for the progress of high energy physics in Europe. Its report was accepted by Council and Member

States were asked to express their intentions in regard to their participation in such a project.

By the end of 1968 one Member State (the UK) had given a negative decision and six (Austria, Belgium, France, Germany, Italy and Switzerland) had agreed to participate on the understanding that their financial commitment would not be higher than had originally been expected. The programme was accordingly revised, restricting the initial energy and/or intensity and limiting the number of initial experimental areas to one. The programme definition referring to a laboratory centred on an accelerator of not less than 200 GeV was agreed by Council in June 1969.

Difficulties then arose as to the choice of site and early this year the project seemed to have reached an impasse. As a result, the approval of government representatives was sought for alternative proposals to be submitted.

Meanwhile in the new design study of the accelerator (led by the newly appointed Director-designate of the project, J.B. Adams), which began in Spring 69 in collaboration with laboratories in the Member States, the emphasis was placed on flexibility in the approach to ultimate performance. The "missing magnet" concept was elaborated, whereby on a ring of fixed diameter, provision can be made, by omitting half the magnets at the beginning, for a doubling of the energy at a subsequent date. The functions of bending and focusing were separated and the main magnets were envisaged as operating at a peak field of 18 kG. Recent developments in superconducting materials also suggested the installation of higher field superconducting magnets at a later stage, should they prove technically feasible and economically viable.

The new proposal seeks to take advantage of these developments in design and technology, to attract all the Member States to join the project and, at the same time, to resolve the