

have attracted considerable attention because they are strongly focussed. Warwick University, on the other hand, emphasizes collaboration on an equal basis at its industrially-funded Advanced Technology Centre, where the staff work in more-or-less the same fashion, and with the same rewards, as their counterparts in industry.

From the many discussions at the meeting one concluded that physicists are at least as well placed as engineers to adopt the innovation culture the German report seeks. This is because they tend to have a broader perspective and training. However, physicists also need to learn about the new culture. So it is not surprising that some participants repeated the report's recommendations to reconsider physics curricula and to encourage further training at every stage of a physicist's career.

### 1996 EQEC/CLEO-Europe

Hamburg, 8-13 September 1996

Following the success of the first joint *European Quantum Electronics Conference/Conference on Lasers and Electro-Optics* — Europe held in Amsterdam last summer, the partners in the venture — the EPS Quantum Electronics and Optics Division, the Lasers and Electro-Optics Society (LEOS) of IEEE and the Optical Society of America (OSA) — have decided to hold the next event in Hamburg at the Congress Centre on 8-13 September 1996. As before, there will be parallel EQEC and CLEO technical sessions organized by the EPS Division and by LEOS/OSA, respectively. The industrial exhibition, which in Amsterdam attracted over 200 companies, will take place on the same site as the conference.

### SPECIAL OFFER

#### *Advanced Materials for Optics and Electronics*

Editor-in-Chief: David Cole-Hamilton,  
University of St. Andrews

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## Measures Needed to Promote University Participation in Large Experiments

Particle colliders are located in a few large laboratories, and physicists from all over the world make use of them by participating in large international collaborations that construct and run experiments. This procedure has worked very well up to now and has provided both laboratories and university groups with major scientific and technological challenges that have been tackled successfully. However, there is a danger that the situation will change since the size of the detector components which are now needed is such that construction by a university group could be inconvenient or uneconomic. The activities of university groups may then become limited and unattractive for graduate students. Furthermore, it would be very difficult to defend the importance of particle physics in front of colleagues from other fields who perform a large amount of experimental work at home institutions, and hence benefit from the possibility of technological spin-off. The attraction of the field, at the university level, to technically oriented scientists would be diminished, which could lead to an elitism in the large laboratories where major accelerators are located.

The following suggestions could help in keeping a healthy situation in universities:

— Members of university teams should be strongly represented in the leadership and management of large collaborations so that the views of outside institutions are taken account.

— Appropriate communication between all institutions involved in an experiment should

be facilitated via the widespread use of video-conferencing.

— Every effort should be made by the large collaborations, and by the management of the central laboratories where experiments take place, to facilitate a coherent contribution from the home institutions. Home institutions, or a group within an institution, should be encouraged to take on entire projects or well-defined parts of a project. These mini-collaborations should have the full scientific and financial responsibility for their execution, with the central laboratories retaining a co-ordinating role. Home institutions could then play a full scientific role, benefiting from a variety of tasks and a large degree of autonomy in managing projects.

— Future experiments require a large and expensive infrastructure that is not an active part of the measuring devices. However, the magnets, structural materials, computer networks, etc. that will amount to a large fraction of the cost of an experiment are usually considered under the heading of a "Common Fund". Every reasonable effort should be made to keep the contribution of home institutions to such a fund at a reasonable proportion of the construction budget (as was done for the four large LEP experiments at CERN). Contributions in kind should be considered as part of the contribution, subject to the agreement of funding agencies.

Göran Jarlskog, *Chairman, EPS High-Energy and Particle Physics Board*

### Physics Studies for Tomorrow's Europe

A conference entitled *Physics Studies for Tomorrow's Europe* sponsored by the EPS Mobility Committee of the European Mobility Scheme for Physics Students and by the University Teaching Section of the EPS Interdivisional Group on Physics Education will be held in the Aula complex of the University of Ghent, Volderstraat 9, Ghent, on 7-8 April 1995. The meeting is being organized on behalf of the European Commission's Task Force on Human Resources, Education, Training, and Youth in preparation for the SOCRATES Programme. It stems from an initiative by the University of Ghent and the Commission and is being supported by the ERASMUS and TEMPUS programmes.

The conference aims to outline how physics studies and training should be organized in tomorrow's Europe. National reports by members of a scientific committee will be the basis for discussing: national curricula in physics; new requirements for future physics curricula; and implementing changes using exchange, cooperation and mobility.

Overview presentations entitled *Present trends in university physics education in Europe* (P. Brussaard, Utrecht), *Suggestions for future directions* (R.A. Ricci, INFN Legnaro), and *The European Union policy on higher education* (I.V. Mitchell, EC) will be accompanied by a panel discussion on *New needs in physics training* chaired by J.C. Lehmann (Saint Gobain), with contributions by representatives from government (J.E. Reilly, ERASMUS Student Grants Council), industry (F. Schneider, Daimler-Benz Research), universities (C.M. Ferreira, Technical University of Lisbon), university administration (M. Goffart, Dienst Internationale Betrekkingen), and students (M. van de Poel, Copenhagen)

There is no conference fee and copies of the national reports and the proceedings will be provided free of charge. For information, please contact: Mrs. B. Desmedt, Ghent University, Proeftuinstraat 86, B-9000 Ghent. Tel.: +32-9-264 65 39; fax: +32-9-264 66 99; e-mail: physteu@rug.ac.be. A detailed announcement about the conference has been made available on the World-Wide Web at <http://ipne.pne.ulg.ac.be/>.