Nuclear Theory Centre Targets Interfaces

A European Theoretical Centre for studies in nuclear physics and related areas (ECT* for short) was just a dream a year ago. Today it's a reality: programmes are being held and the secretariat is housed in new premises adjacent to the villa on the outskirts of Trento in northern Italy that will one day become part of the ECT*'s permanent home. An offical inaguration was clearly appropriate and this was held on 10-11 September in Trento at the Istituto Trentino di Cultura (ITC), the ECT*'s umbrella organization (the form of the relationship may change as the ECT develops). Without dwelling on how Trento came to be selected as the site for a European nuclear theory centre [*EN* **23** (1992) 180], one should acknowledge the support from the Trento-Alto Adige regional government through ITC (a 1000 MLIT annual grant for five years, plus services).

The region, with a population of 0.8 million and autonomous since World War II, practices an active policy in science, with the ITC as a special instrument. Among the ITC's affiliates are research centres for mathematics and for science — the latter employing 150 people. Meanwhile, the University of Trento (11000 students; 5 nuclear theorists in the physics department) enjoys financial advantages under a 1982 law reflecting the region's autonomy.

The ICT Director speaking at the opening ceremony described the ECT*'s challenges as applying to the whole of science, where effective research is international, contacts between theory and experiment must be reinforced, and development of the community must come from the base. The centre aims to stress the training of young theorists *via* focussed programmes and by hosting visitors, especially postdocs, for extended stays.

G.P. Picozza, the Vice-President of the Istituto Nazionale di Fisica Nucleare (INFN), indicated that the INFN recognizes the importance of a nuclear theory centre as a European focus, and will provide support "in the spirit of independence". It will be up to the INFN committee responsible for nuclear physics to recommend whether successful and stable operation justifies regular support in the form of say fellowships. The INFN will meanwhile cover the expenses of INFN staff visiting the centre for workshops of 1-2 weeks duration (seven in 1994) and a summer institute aimed at students.

It is natural to compare the ECT* with the Institute for Nuclear Theory (INT) set up at the University of Washington, Seattle, WA, USA, four years ago as they share similar objectives. The INT has a small permanent staff with a Director (W. Haxton, who took over last year from E. Henley, the interim Director) and two senior fellows. The programmes (usually 3 each year lasting 2-3 months with a graduate school linked to the summer programme) basically imply living expenses for participants, and only exceptionally salaries. They are covered by a 5-year 1.3 M$US Department of Energy grant; local support comprises mostly facilities in Washington University's new physics building. The main criticisms which the INT has met with from its Council are that programmes (which are proposed to the DoE by a national advisory committee) are too diffuse, while too many (≈ 65%) of the participants (mostly senior scientists with 30% postdocs and few graduate students) do not attend an entire programme.

G. Bertsch, an INT senior fellow, remarked that there was room for the two centres to complement each other, especially if the ECT* succeeds in attracting younger visitors. Nonetheless, coordination is important and cross-Atlantic "spillovers" are envisaged. He felt that the true test of the value of the ECT* will come when the level of European Community support is negotiated. Brussels, of course, does not operate like the DoE and is unwilling to provide long-term, basic funding but aims to promote multi-partner initiatives within existing programmes emphasizing needs in less-developed regions. The main option is support under the Human Capital and Mobility (HCM) Programme, and indeed the ECT* was selected in the last HCM round for institutional fellowships (page 186).

Villa Tambosi in Villazzano on the outskirts of Trento which, once renovated, will form the main part of the ECT complex.*

R. Leonardi, Dean of the science faculty and scientific secretary and a prime mover in creating the ECT*, points out that the centre may need to experiment to optimize activities and topic selection. The inaugural symposium stressed the importance of interfaces with other fields, without forgetting the mainstreams of nuclear physics such as heavy-ion reactions where facilities are generating a wealth of new data (P. Kienle), and nuclear structure theory where many systematic effects need assimilation (G. Bertsch).

The ECT* has a Board of Directors, endorsed by NuPECC, which meets three times each year to decide programmes. D. Brink, a nuclear theoretican from Oxford University, became the Vice-Director in July when B. Mottelson from NORDITA stood down as Chairman of the Board to become the Director, working half-time in Trento.

Celebrating the official inauguration of the ECT. From the left: B. Mottelson, D. Brink, P. Kienle, V. Staudacher (President, University of Trento), and R. Leonardi.*

Information on the ECT* programmes from: ECT* Secretariat (L. Attardi), Dip. di Fisica, Università degli Studi di Trento, I-38050 Povo (Tel.: +39-461 88 15 08; fax: +39-461-88 16 99; email: preside@itncisca.bitnet).

Societies Endorse Greater Engagement

The sound development of European-level activities, covering a wider spectrum, needs the engagement with EPS to be strengthened and balanced in a more realistic way between large and small national societies, and between the different types of members within a society. The Presidents of national societies, meeting with the Executive Committee in Florence just before the EPS-9 General Conference last month, endorsed proposals on ways this can be done by opening up Divisional and other EPS activities to national society members, and by keeping them informed *via Europhysics News* distributed in bulk through their societies.

A careful analysis of the financial implications is clearly needed before preparing a proposal for Council in Cracow next March. It had therefore been agreed at the last Council (in March in Nice) that the societies would be asked before the meeting with the Presidents if they wished to pay a proportional unit fee and receive *Europhysics News* mailed in bulk to a declared number of full members. A total of 19 said yes and one society replied that for financial reasons it was unable to decide.

Instead of today's sliding scale for the fee structure whereby large societies pay somewhat less per member than small ones, under the new arrangement all participate on an equal footing: they contribute for each member on a proportional basis determined by the fee an individual pays to his or her society. The contribution to EPS may, for instance, be less for a student than for a full member (*e.g.*, a research physicist working in industry or academia) if a national society levies different fees: it is up to each society to tell EPS how many members it has in each membership category. The only exceptional feature is that the two largest societies (The UK's Institute of Physics and the German Physical Society — the DPG) publish EPS and Division material in their national bulletins instead of distributing *Europhysics News*.

Most of the 16 societies represented in Florence, including the DPG and the IOP, indicated that they would recommend the proportional arrangement to members (the proposed starting date is January 1995, effectively the earliest). However, in order to develop precise financial estimates it is necessary to consider 1994 as a reference year. Following a membership survey this summer, national societies will be invoiced a total of 433 kSFR for 1994 under today's scaled scheme, and 570 kSFR for the proportional arrangement assuming the current unit fee of SFR 14.50, with 16 000 full members receiving *News*. Most societies who do not presently purchase *News* in bulk will therefore see their contributions increase. For some this will be difficult, especially during the economic transition in east and central Europe and in the aftermath of the recent round of currency devaluations elsewhere.

The Presidents felt, however, that their members would agree to redefining the relationship with EPS wherever possible, because the changes provide a sound basis for the Divisions and for future activities (not forgetting less visible aspects where the EPS acts, for instance, as a legal umbrella and a focal point for contacts with other organizations). Norbert Kroó, the President, indicated that the Society will also be able to focus on providing tangible benefits to all physicists throughout Europe. The challenge here is to develop and support activities across an even broader front than up to now, in addition to handling essentially professional needs. Current forecasts indicate that with the help of contributions from individual members it should be possible to continue to set aside some funds for specific new activities even in the early stages of the proportional arrangement. There are understandably many details to be worked out, and the switch-over will need to be handled carefully. It was therefore very encouraging to hear at the meeting that the IOP and DPG were prepared to donate a total of 45 kSFR in 1994 for specific activities, so that the momentum of recent years can be maintained. Meanwhile, the constitutional aspects are being worked out.

The Presidents of national societies meeting with the EPS Executive Committee in Florence on 13 September.

GENERAL MEETING

Emphasize New Opportunities

"EPS is in good shape. The Divisions are organizing successful meetings, *Europhysics News* is functioning correctly, *Europhysics Letters* is a good venture, the Action Committees are enthusiastic, the Society has successfully balanced its budget in recent years and has, in general, fulfilled its task to bridge east and west. But much effort is needed to find extra resources for new activities in today's difficult economic climate". In these few words, the President, Norbert Kroó, summed up the status of EPS at the General Meeting of the ordinary members during EPS-9 in Florence.

But where to go from here? The President feels the Society must be opened up to new fields such as education. Hence the importance of the new Interdivisional Group for Physics Education and the student mobility scheme launched this month. More "professional services" should be offered, notably to international bodies such as the European Community, the problem at present being that things are not "organized appropriately." While there may be too many conferences, they nevertheless need to be enhanced as they are an essential part of scientific activity. There was some disappointment that more young people could not attend the General Conference. One remedy is to find funds to support participation at conferences — especially Divisional events — and to encourage young physicists to take part in Division activities, the most important element of the Society's life. One possibility would be to promote job opportunities.

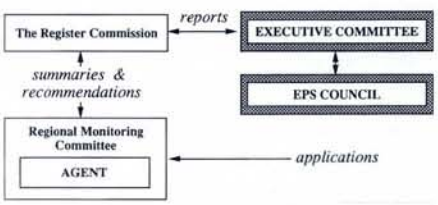
There should also be a drive to find new members among more senior colleagues as the number of individual members (IOM's) has stayed fairly constant for the last decade or so. One must clearly activate national society members to join EPS by enhancing the rôle of the IOM's who are essentially people who want to do something for Europe as a whole. The Society has up to now focussed on professional activities and defined its boundary conditions accordingly: this should change to stimulate renewed interest. This is not to say that the Society has little to offer for there is a long list of activities. EPS also supports physicists indirectly by representing the community at the European level.

Hans Beck, who took over this year from Phillipe Choquard as Treasurer, reported that a surplus was still planned for 1993, bringing the accumulated deficit to just under 10 kSFR. A balanced budget has been prepared for 1994 prior to the meeting with the Presidents that left little for starting new activities. This obviously does not mean that the Society has no specific activities. It is simply that they are mostly funded from the general budget to ensure flexibility .

New Activities Highlighted

Four major new activities were described, starting with André Landesman's review of the work of the East-West Coordination Committee. Most of the points he raised have been reported on elsewhere and foremost among the new elements was the disappointing news that the association set up in Luxembourg to support basic research in the former Soviet Union had got off to an unfortunate start. However, there have been developments and the situation is now much more promising. Hendrik Ferdinande gave an account of the status of the student mobility scheme which starts this month with 134 institutions and 107 students being involved in transfers in the first year — a remarkable achievement. It is clear that the scheme is in line with current European Community thinking on how mobility arrangements should be structured to benefit from EC support (see page 187). George Marx and Carlos Ferreira, in summarizing opportunities for the new education group, gave a comprehensive overview of the rôle of several organizations (GIREP, IUPAP, UNESCO, International Council of Associations for Science Education, Academica Europea) in promoting physics teaching in schools. Most collaborate in organizing conferences for physics teachers so the Society will have to work hard to develop its own activities.

Finally, Derek Jefferies, who chairs the Working Group on Professional Qualifications, reported on progress in defining how a Register of European Physicists could be set up under the Society's auspices (someone entered on the Register would be a European Physicist — *Eur Phys*). The Executive Com-



The proposed professional qualifications scheme. It is envisaged that there will be several Regional Monitoring Committees (RMC's) made up of delegates from national physical societies and of other bodies representing physicists. Individuals apply to the RMC's which make recommendations to the Register Commission responsible for standards and maintaining the Register of European Physicists. RMC's may appoint agents, e.g., *national societies, to do their work.*