



## ● Czechoslovakia Joins CERN

CERN Council at its 93rd Session on 20 December 1991 agreed unanimously to admit the Czech and Slovak Federal Republic as the 17th CERN Member State, the second after Poland from eastern Europe, as from 1 January 1992 (negotiations on Hungary's accession are well advanced). A two-phase approach similar to Poland's will be adopted, with a 1.3 M SFR annual contribution for 1992-5 (at 1992 prices) followed by a linear increase to 100% of the full MS contribution based on net national income which will be assessed in 1994. Czechoslovakia carries out particle physics research at three centres and cooperation with CERN started as long ago as 1960. Contact after 1968 could only be maintained through JINR, Dubna, in the former Soviet Union, but normal, bilateral collaboration was re-established in the mid-1980's. Several groups, both experimental and theoretical, are presently working with CERN, heralding "a dynamic development of science and technology" and the implementation of "ambitious research programmes".

## ● Financing LHC

CERN Council endorsed the proposed LHC collider to be built in the existing LEP tunnel as "the right project for science and

CERN", coming close to the recommendation in principle (subject to technical feasibility in 1993) sought by the Director-General, Professor Carlo Rubbia as the first step of a two-step procedure designed to lend credibility to approaches to non-Member States. He was asked to provide to Council by the end of 1993 detailed information, ready to "move to a decision", on sources of funding (including possible equipment contributions by non-MS under the HERA model), direct costs to CERN and indirect costs for MS participating institutions.

Professor Rubbia indicated at a Special Session of Council on the LHC that construction of the machine over five years will cost about 2000 M SFR (1991 prices), 1400 M SFR of which could come from the CERN budget by 1998, 400 M SFR from non-MS participation in view of expanding user communities, and the remaining 200 M SFR from special contributions stimulating high technology. Sir William Mitchell, the Council Chairman, stressed the need to convince industry of the importance of participation, which may involve a flexible tendering scheme and optimizing collaborations in applied areas.

Regarding LHC's two proposed detectors, the baseline has been set at 700-800

M SFR compared to an equivalent 300-375 M SFR for the single detector approved so far for the higher energy, lower luminosity SSC, now in the preliminary construction phase in the USA. Professor Rubbia hoped financing would work out as for the CERN's four LEP detectors (510 MSFR total cost) involving roughly equal contributions from CERN, MS and non-MS.

## ● Polish Innovations

While Poland's markets were protected from foreign competition, the High Pressure Research Centre of the Polish Academy of Sciences, well known for its work on, and equipment for, high-pressure science and technology, was able to spin off activities into five, viable, limited liability companies with private investment, starting in 1984. With such possibilities, research scientists and engineers were encouraged to remain and not to emigrate to countries where suitably attractive structures are found.

Unfortunately, changed economic circumstances mean that sales in the first years can no longer be expected to cover expenditures so a new approach is needed. With limited resources, the Centre decided to collaborate with a Foundation to create a Centre for Emerging Technology Enterprises modelled on western "incubators"

### The Foundation for Fundamental Research on Matter

*The foundation FOM is an organisation for research in the area of physics with some 1100 employees. Research is executed by task-forces at university laboratories and institutes. The National Institute for Nuclear Physics and High Energy Physics (NIKHEF) in Amsterdam is one of these institutes, a cooperation of FOM, the Free University (VU) in Amsterdam, the University of Amsterdam (UvA) and Catholic University of Nijmegen (KUN). The NIKHEF staff counts about 350 people spread over two sections. Most experiments of the Nuclear Physics section (K) use their own electron accelerator MEA. For the experimental program of the High Energy Physics section (H) the facilities of CERN and Desy are used.*



## Experimental physicist (m/f)

Applications are invited for a tenure position in the Nuclear Physics Section of NIKHEF, the Dutch National Institute for Nuclear Physics and High-Energy Physics in Amsterdam. The Institute is involved in hadronic physics research using continuous wave electron beams of 1 GeV from the Amsterdam pulse stretcher and storage ring (AmPS). NIKHEF is partner in the Spin Muon Collaboration (SMC) at CERN and will expand in the near future its international programme in high-energy nuclear physics.

The academic staff consists of about 50 physicists of which more than half are Ph.D. students and postdoctoral fellows. The institute has strong connections with the nearby Amsterdam and Utrecht Universities.

### Requirements

We search for an outstanding physicist with a strong record of accomplishments and leadership in experimental research, preferably in intermediate energy nuclear physics. The successful

candidate is expected to contribute to the AmPS physics programme and to develop initiatives for new research lines in the international programme at higher energies.

### Information

Further information on the position can be obtained from the Scientific Director, prof.dr. P.K.A. de Witt Huberts, telephone +31-20-5922163.

### Application

Letters of application, including curriculum vitae, publication list and the names of three references are to be sent within four weeks after publication of this advertisement to the personnel officer Mr. T. van Egdom, NIKHEF, P.O. Box 41882, 1009 DB Amsterdam, The Netherlands.





Professor S. Prorowski (left) and Professor J. Niewodniczanski, Director, Institute for Physics and Nuclear Techniques, Cracow, Poland, which hosted the 1991 EPS Associate Members meeting.

for nurturing new, technology-based companies. Professor Sylwester Porowski, the Centre's Director and recently elected President of the Polish Physical Society, told the EPS Associate Members last September that the Polish incubator would need to offer a much broader range of services than is usual. Aside from selecting opportunities, renting space and sharing facilities, there must be a strong emphasis on business education, identifying commercial partners and acting as a venture capitalist.

Poland has created a **National Science Foundation** modelled on the USA's NSF that will finance with government funds a large fraction of research. Some 1400 research proposals in physics were submitted in 1991 under the present system to the Academy of Sciences, and 240 individual grants awarded, with strong competition between institutes and universities and the former better placed to obtain funds directly from ministries.

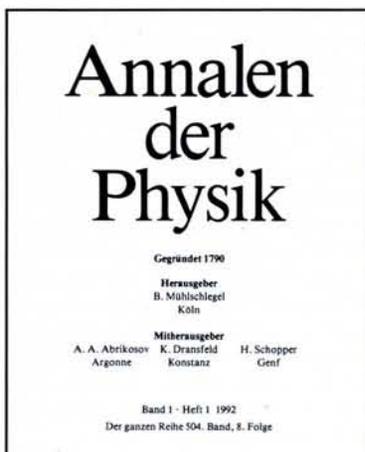
### ● Eötvös Society Centenary

Hungary's Eötvös Lorand Physical Society celebrated its 100th anniversary on 14-26 October 1991 with a series of meetings and special events attended by friends, well wishers and distinguished Hungarian physicists from the world over. A high point was at one-day EPS organized meeting entitled the "Past and Future of Physics in Europe". To stimulate students, Professor George Marx, the Eötvös President, asked the invited speakers comprising EPS Division Chairmen and eminent scientists from all branches of physics to describe their personal interests and activities, instead of deli-

*M. Jacob, EPS President, placing a wreath to mark the Centenary of the Eötvös Lorand Physical Society.*



vering the more usual "political" addresses implied by the title. There followed on the following day a round of tributes presented in the auditorium used by Eötvös for his torsion test of general relativity. Speakers included the Minister of Culture, the Vice-President of the Hungarian Academy, and representatives of UNESCO, IUPAP, EPS, Academia Europea, the Royal Society, national physical societies, and of teacher associations from Hungarian-speaking regions. Each had some facet of a remarkably well-rounded community in mind, ranging from the large number of renowned Hungarian physicists to the efforts to encourage students (Hungarians founded the Physics Olympiad).



### ● New Start for *Annalen der Physik*

*Annalen der Physik*, which celebrated its 200th anniversary last year, is one of the world's oldest physics journals. It played an important rôle around the turn of this century (articles by Planck and Einstein) and in the 1920's (e.g., articles by Schrödinger). After the 2nd World War, it remained the only all-German journal, with editors in both eastern and western Germany. Production by Johann Ambrosius Barth Verlag, Salomonstrasse 18b, O-7010 Leipzig, stayed, as since 1790, in Leipzig in the former GDR, but owing to political constraints became a tedious and difficult operation. Previous rankings could not be kept and recent years saw a rapid decline. But distribution levels remained important, due in part to a low price. The journal was published from about 1983 in cooperation with the physical society of the former GDR.

I. Peschel, the German Physical Society's Director of Information writes to say that Eastern colleagues indicated during unification talks the wish that the Society look after the journal and try to reshape it. This has been done together with Hüthig Verlagsgemeinschaft, Heidelberg, which took over Barth Verlag. The Society helped find new, experienced and well-known Editors, including H. Schopper, President-Elect of the GPS. Extensive discussions have led to the decision to run *Annalen*, contrary to the present trend, as a universal publication for articles from all fields of physics, experimental and theoretical, emphasizing the unity of physics. The reorganized *Ann. Physik* will appear in 1992 as a new series.

### ● APS News

The American Physical Society is to start distributing to APS members free of charge a monthly newsletter in 1992 entitled *APS News* consolidating news published in the *Bulletin of the APS* and the "News of APS" published in *Physics Today*. Members will be invited to subscribe to selected issues of the *Bulletin* which will continue to publish meetings-related material.

### ● New Publications

The 3rd Edition of the *International Classification Scheme for Physics* updating the 1978 Edition is now available from the ICSTI Secretariat, 15 boulevard de Montmorency, F-75016 Paris. Springer has also published the first sub-volume *Units* of a new Landolt-Börnstein volume on *Units and Fundamental Constants; Fundamental Constants* appears in 1992. The *L-B Comprehensive Index* is now available free of charge on floppy disk.

### ● EC Boosts Portuguese Spending

Portugal suffered historically from alarming discrepancies with other European Community partners in research expenditures. In 1986, both the country's research staff per head of population and its research spending of 19 834 M ECS were equivalent to 1/4 of the EC averages. Since 1986, it attracted EC funds for R. & D. so by 1989 R. & D. spending had risen 36% from the 1986 level with 50.7 M ECU received over the 4-year period. The country is presently witnessing a new spurt in research spending. First there is the effectively 1990-93 **CIENCIA** Programme, administered by a national commission with 162 M ECU from EC funds and 142 M ECU from national sources. The programme primarily aims to improve economic infrastructures having a direct impact on economic growth by reinforcing the country's scientific potential and educational system and by reducing regional differences in R. & D. activities. Initiatives cover resources (47%), advanced training (25%) and evaluation (25%). Although research workers in maths, physics and chemistry only represented about 2-5% of the total in 1986, with physics attracting just 5% of the 2574 MECS national science and technology budget for 1987/8, mirroring EC priorities, physics is not high on the list in a direct sense. But physics is well represented in government with the recent appointment of Professor M.F. Thomaz from the Physics Department of the University of Aveiro as Secretary of State for Science and Technology. Many sectors also involve physics. For instance, of the 47% for R. & D. infrastructures, some 35% is slated for information technology and communications, 23% for energy production, and 17% for new materials.

Second, there is the 1991-3 **STRIDE** Programme (71 M ECU with 49.9 M ECU from the EC) which aims to reinforce the country's scientific and technical capabilities by internationalizing the research system (21%), capitalizing research (43%) and diversifying production (36%).