

# People and things

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## DESY people

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DESY Director Bjorn Wiik becomes a Foreign Honorary Member of the American Academy of Arts and Sciences. Meanwhile Julius Wess of MPI Munich becomes Chairman of DESY's Scientific Council.

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## CERN heavy ion preinjector in operation

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The first part of the new injector linac (Linac3) of CERN's heavy ion facility is being commissioned and is well on the way to meeting its specifications. The electron cyclotron resonance ion source, built by the French heavy ion laboratory GANIL, and the Low Energy Beam Transport (LEBT), supplied by INFN, Legnaro, were initially tested with oxygen, argon, krypton and xenon ions.

At the end of August, soon after the heated lead sample (isotopically pure lead 208) was inserted into the source, the first beam of highly charged lead ions was produced at 20 kV (2.5 keV per nucleon).

Using the LEBT to analyse the charge states, a current of 65 microamps of lead  $27+$  (lead atoms stripped of 27 of their electrons) was obtained and this was later increased to 75 microamps.

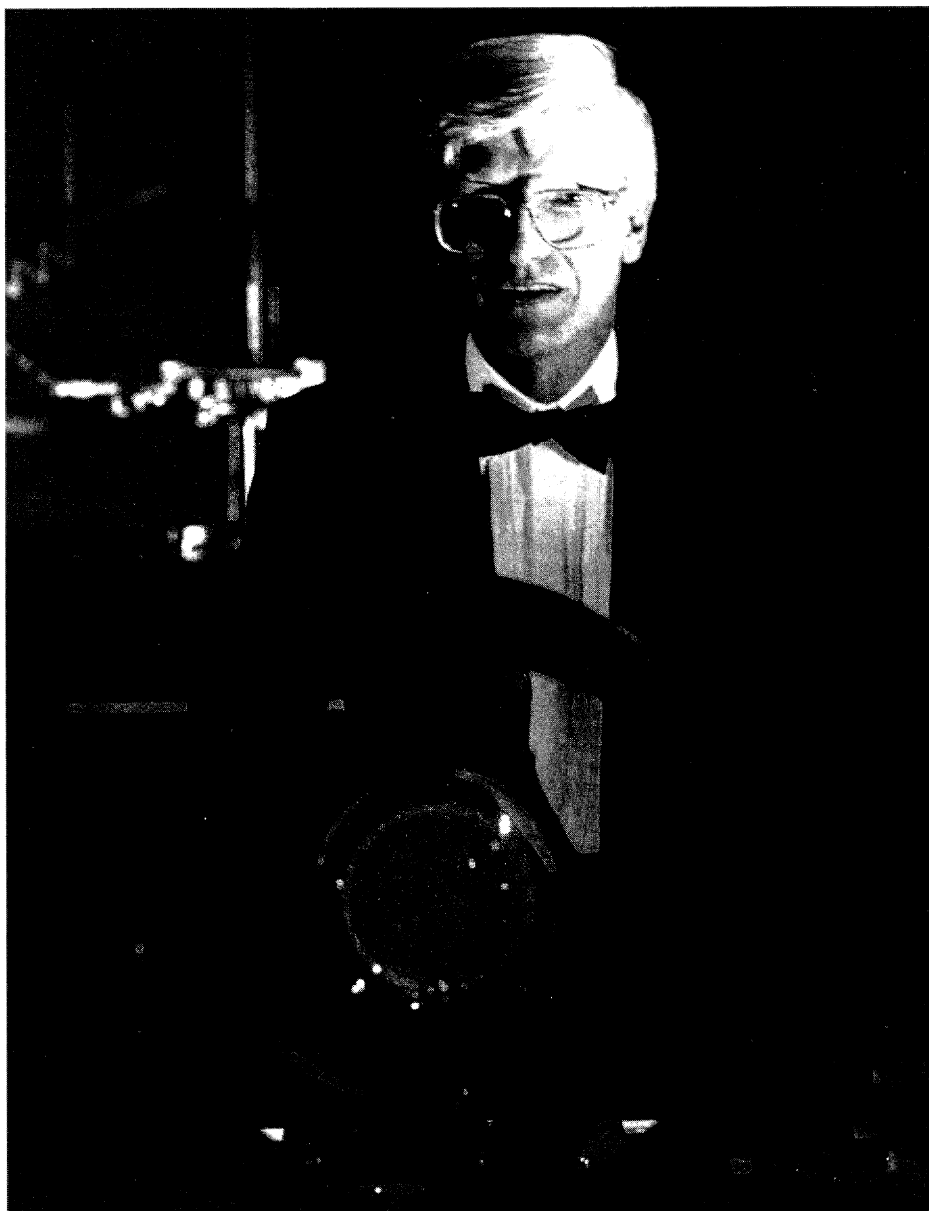
The current, limited by ion recombination in the residual gas of the LEBT, should increase after the vacuum is improved.

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## Faraday's footsteps

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Following in the footsteps of Michael Faraday, on 15 October CERN Director General Designate Christopher Llewellyn Smith gave one of the celebrated Friday evening discourses at the Royal Institution, London. These events were largely



Faraday's creation, aimed at bringing scientific discoveries to a wider audience.

In his talk "Particle Physics Today - Quarks, Ws and Higgs bosons", Llewellyn Smith took his audience on a tour of particle physics, beginning with some of the basic principles of how we study particles and leading on to the present Standard Model, the questions it raises and how we might hope to answer them with the LHC proton collider to be built in CERN's 27-kilometre LEP tunnel.

The underlying theme of a unified description of particles and forces may well have appealed to Faraday, much of whose work led to the unification of electricity, magnetism and light. And no doubt he would have appreciated the demonstration of how an accelerator works, with the lecturer varying the energy and the

CERN Director General Designate Christopher Llewellyn Smith 'discourses' at the Royal Institution, London.

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controlling magnetic field of a glowing circular electron beam.

In an accompanying exhibition, set up by Oxford University and the Rutherford Appleton Laboratory, an identical apparatus allowed people to try this for themselves. The exhibition also included a modern wire chamber and demonstrations of state-of-the-art silicon detectors.

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## Historic Tevatron

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The American Society of Mechanical Engineers has designated the Cryogenic Cooling System of the Fermilab Tevatron an International Historic Mechanical Engineering Landmark.

On 8 September CERN Director General Carlo Rubbia formally opened the Microcosm exhibition centre at CERN.



#### Experiments at Low Energy Machines

An international workshop on Large Experiments with Low Energy Hadron Machines will be held from 12-15 April at the Paul Scherrer

Institute, Villigen, Switzerland, to coincide with 20 years of PSI/SIN beams. Such experiments need suitable beams, and adequate funding and manpower. The workshop will aim to outline the available facilities, identify priority goals and coordinate collaborations, where

involvement with Eastern countries offers interesting possibilities.

Contact the Conference Secretary, Mrs. Sabine Jährling, PSI-West, 5232 Villigen, Switzerland. Phone +41 56 99 32 54, fax +41 56 99 32 94, e-mail [paris@cvax.psi.ch](mailto:paris@cvax.psi.ch) before Christmas please.

#### Meetings

The 5th Conference on the Intersections of Particle and Nuclear Physics will be held in St. Petersburg, Florida, from 31 May - 6 June 1994. Further information: Elly Driessen, Conference Secretary, TRIUMF, 4004 Wesbrook Mall, Vancouver, BC V6T 2A3 Canada. Fax +1 604 222 1074, bitnet [driessen@triumfcl](mailto:driessen@triumfcl)

An International Workshop on Superconductivity and Particle Detection will take place from April 20-24 1994 in Toledo, Spain. Contact Ms. M. Fatas, Instituto de Fisica Nuclear y Altas Energias, Universidad de Zaragoza, 50009 Zaragoza, Spain. Phone: ++ 34.76.35.83.21; Fax: ++ 34.76.56.80.60; E-mail: [fatas@gae.unizar.es](mailto:fatas@gae.unizar.es)

The Second International Winter School "QCD: Perturbative and Non-Perturbative Topics" will be held at St. Petersburg Nuclear Physics Institute, Russia, from 20 February - 5 March. Lectures will be at the postgraduate and young postdoc level and include such topics as high



Admiring LHC technology at the opening of the Netherlands trade show at CERN on 12 October, left to right, H.L. Beckers, Chairman of the Dutch Government's Advisory Board for Research and Development; HOLEC Director H. Smit; J. Beenakku, Chairman of the Foundation for the Fundamental Research of Matter (FOM); CERN Research Director Walter Hoogland; and NIKHEF Managing Director J. Langelaar.



UK Public Service and Science Minister William Waldegrave signs CERN's VIP Visitors' Book on 13 September. With him, left to right, were CERN Council Chairman Sir William Mitchell, CERN Director General Carlo Rubbia, CERN Director General Designate Chris Llewellyn Smith and UK Public Service and Science Permanent Secretary Richard Mottram.

energy processes, heavy flavour decays, instantons, anomalies, chiral lagrangians. Lecturers include Profs. Anselm, Diakonov, Dokshitzer, Eides, Lipatov, and Uraltsev. For further information and applications contact [eides@lnpi.spb.su](mailto:eides@lnpi.spb.su)

The 3rd Biennial conference on low-energy antiproton physics - LEAP '94 - will take place in Bled, Slovenia, from 12-17 September. Contact : Marko Mikuz, J. Stefan Institute; Jamova 39; SI-61111 Ljubljana, Slovenia, Tel : +386 (61) 12 59 199 Fax : +386 (61) 12 57 074, E-mail : [marko.mikuz@ijs.si](mailto:marko.mikuz@ijs.si) or [marko@cernvm.cern.ch](mailto:marko@cernvm.cern.ch)



Middle - On 16 September, a reunion at Birmingham marked the 40th anniversary of the university's 1 GeV proton synchrotron. First proposed by Oliphant as a 1.3 GeV machine in 1943, post-war frugality meant the machine only began operation in 1953, with space limitations dictating a 1 GeV energy limit. For five years (until the commissioning of the Saclay machine) it was the only European machine in the GeV range, making valuable contributions. Speakers at the event included (left to right) Bob van der Raay, George Morrison, Owen Lock, John Kinson, Bill Burcham, John Walker and John Lawson.



Below - Kampai! At the General Assembly of the International Union of Pure and Applied Physics (IUPAP), Nara, Japan, in September, left to right, past president Yuri Ossipian, 1993-96 President Yoshio Yamaguchi and president designate Ian Nilsson.

## UNIVERSITY OF CALIFORNIA, RIVERSIDE

### Postdoctoral Position in Theoretical High Energy Physics

The physics department at the University of California, Riverside, invites applications for a

Postdoctoral Researcher position in the field of Theoretical High Energy Physics

to begin in September, 1994. Please submit a resume and three letters of recommendation to Professor Jöse Wudka, Physics Department, University of California, Riverside, CA 92521-0413, USA.

*The University of California is an Equal Opportunity, Affirmative Action Employer.*

## POSTDOCTORAL POSITIONS UNIVERSITY OF CAMBRIDGE DEPARTMENT OF APPLIED MATHEMATICS AND THEORETICAL PHYSICS

### RESEARCH ASSISTANTSHIP IN THEORETICAL ELEMENTARY PARTICLE PHYSICS

A 2-year post from 1 October 1994 in the Department of Applied Mathematics and Theoretical Physics, Cambridge. The post is associated with the High Energy Physics group which has diverse interests that include the following topics.

Phenomenology of elementary particles; cosmological models, lattice QCD and other properties of quantum field theory, string theory and its connections with conformal field theory; two-dimensional statistical mechanics and quantum groups.

Applications and supporting letters from at least two referees, should arrive not later than 13 December 1993 and be sent to

**Ms. D. Stretch**  
Department of Applied Mathematics and  
Theoretical Physics  
University of Cambridge,  
Silver Street, Cambridge CB3 9EW  
(email : danielle@damtp.cambridge.ac.uk  
fax : + 44 223-337918)

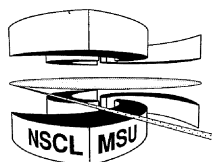
## UNIVERSITY OF BRISTOL Department of Physics

### EC Human Capital and Mobility Fellowship (Fixed Term)

The University of Bristol particle physics group wishes to appoint as soon as possible to a fixed term (23 months) Fellowship which is part of the EC Human Capital and Mobility programme. Eligibility is limited to citizens of EC and associated countries excluding the U.K. Applicants must not have been practising physicists in the U.K. for at least 2 years prior to the date at which the fellowship is taken up. The Bristol particle physics group consists of 8 permanent academic staff and postdoctoral, support and technical staff. The group is currently involved in the ZEUS experiment at the electron-proton collider HERA, hyperon beam experiments at Fermilab and CERN, preparation for the proposal for the CMS experiment at LHC and work on novel particle detection techniques.

The successful candidate will be expected to play a leading role in the work of the group both in the ZEUS experiment and in preparation for the CMS experiment. The division of time spent between these two activities will be a matter for discussion with the successful candidate. The position will be based in Bristol, but will involve extended visits to DESY and/or CERN.

The salary will be 3,801 ECU per month. Applicants should send a full curriculum vitae and the names and addresses of three referees to Dr B. Foster, H.H. Wills Physics Laboratory, Tyndal Avenue, Bristol, BS8 1TL, from whom further details can be obtained (email: 19711:bf (Decnet) or bf@siva.bris.ac.uk (Internet)). Applications should reach Bristol by 1st February 1994.



## JOHN A. HANNAH DISTINGUISHED PROFESSORSHIP MICHIGAN STATE UNIVERSITY

The National Superconducting Cyclotron Laboratory and the Departments of Physics & Astronomy and of Chemistry invite applications for the award of this special chair. Among its privileges the chair carries a generous annual research award and the option, but not the requirement, to teach. We are looking for a person who can provide intellectual leadership in experimental or theoretical nuclear science and/or accelerator physics. The applicant should have a demonstrated ability to conduct innovative research and to lead others, including graduate students, in that research. Send vita to **Aaron Galonsky, Cyclotron Laboratory, Michigan State University, East Lansing, MI 48824-1321, USA.**

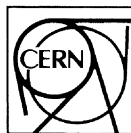
UNIVERSITY OF DURHAM  
DEPARTMENT OF PHYSICS  
LECTURESHIP (ELEMENTARY PARTICLE  
THEORY)

Available from 1 October 1994, to join the strong, active Centre for Particle Theory in Durham.

Applicants with research experience in the general area of Elementary Particle Phenomenology will be preferred. As well as teaching, the successful candidate will be expected to conduct an independent research programme.

Salary will be within either the Lecturer Grade A or Lecturer Grade B Scale.

Further details and an application form may be obtained from the Director of Personnel, Old Shire Hall, Durham DH1 3HP, United Kingdom (tel. : 0044 91 374 3158, fax : 0044 91 374 4747), to whom applications should be returned no later than 19 January 1994. Please quote reference A245.



**Forum on  
Boundary Scan for digital  
and mixed-signal boards**

**January 20 & 21, 1994  
CERN - Main Auditorium**

A two-day forum on test bus standards  
organized in collaboration with

**Ecole Polytechnique Fédérale de Lausanne (LEG/C3i)  
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**Morning** Tutorial sessions given by international specialists  
- JTAG Boundary Scan standard  
- mixed-signal extension bus under development

**Afternoon** Panels and demonstrations on hardware and software  
products available on the market.

Information and application forms may be obtained from

CERN Technical Training Secretariat  
1211 Geneva 23 - Switzerland  
Tel.: (+41.22) 767.44.60 - Fax : (+41.22) 785.08.38  
e-mail: eductech@cernvm.cern.ch

**GSI Darmstadt**

The Gesellschaft für Schwerionenforschung mbH, Darmstadt (GSI), the German National Laboratory for Heavy Ion Research and the

**Johannes Gutenberg-Universität Mainz**

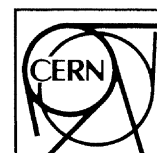
invite applications for a joint position

**Leading Senior Scientist  
and Full Professor (C4)**

in the field of experimental heavy ion physics. GSI runs a broad research program, ranging from basic studies in nuclear and atomic physics to various applications. The successful candidate will head an existing group in one of these fields. He is expected to advance the scientific program at GSI in close collaboration with German and international groups from universities and research institutes. The candidate will simultaneously be appointed full professor at the Fachbereich Physik of the Johannes Gutenberg-Universität Mainz, where he is expected to participate in the teaching program. GSI and the Universität Mainz explicitly ask for applications of female candidates.

Applications, including the usual comprehensive personal documents should be submitted no later than January 15, 1994, to the

**Geschäftsführung der  
Gesellschaft für Schwerionenforschung mbH  
Postfach 11 05 52  
D - 64 220 Darmstadt Tel. (06151) 359 648/9**



GENEVE, SUISSE  
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**ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE  
EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH**

Laboratoire Européen pour la Physique des Particules  
European Laboratory for Particle Physics

**COURRIER CERN**

Le Courrier CERN offre à un jeune physicien de langue maternelle française, capable de traduire de l'anglais en français, la possibilité de collaborer occasionnellement à des travaux de traduction d'articles du Courrier CERN.

Des offres écrites avec des traductions de textes déjà effectuées sont à présenter au rédacteur du Courrier CERN,

Gordon Fraser  
Rédacteur  
Courrier CERN  
CH -1211 Genève 23 (Suisse)

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## CERN New Cooperation Agreement with Russian Federation

At the biannual meeting of the CERN-Russia Committee, under the co-chairmanship of Minister Boris Saltykov and CERN Director General Carlo Rubbia, a new Scientific and Technological Cooperation Agreement was formally signed on 30 October at the Institute for High Energy Physics (IHEP), Protvino, near Moscow. The three years of this agreement constitutes a reasonable transition period in further developing the long-standing relations between CERN and the Russian Federation with the ultimate goal of the Russian Federation becoming a full Member State of CERN.

At IHEP, the construction site of the UNK-600 machine, the two signatories expressed their satisfaction on excellent collaboration and called for

increased participation in experiments both at CERN and in Russia.

Maintaining a vigorous experimental programme both at home and on CERN's machines requires a major commitment in the context of Russian resources for pure and applied scientific research, but Minister Saltykov expressed his firm intention to maintain the present level in both human and material resources for what he called the most fundamental of basic research: an endeavour of a highly cultural character, in which an active Russian presence is essential.

Strong scientific and technological collaboration between CERN and the former Soviet Union goes back almost thirty years, with a considerable part of these activities being carried out in the Russian Federation. Russian research institutes and physicists play an important role in many experiments at CERN, exemplifying the Geneva Laboratory's role as a truly international research centre.

Russian participation in CERN research involves a heavy investment of intellectual, and in many

cases technological and industrial efforts, and CERN has benefited from this expertise.

Russian research institutes, with assistance from highly competent sectors of Russian industry, have the firm intention to make a major contribution to the construction and utilisation of the Large Hadron Collider (LHC), CERN's new superconducting accelerator project.

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### SSC Director

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*Fermilab Director John Peoples takes over from Roy Schwitters following the latter's request to be relieved of responsibilities as Director of the condemned SSC Laboratory (see page 1). Peoples remains Fermilab supremo, but expects to spend several days each week in Dallas to supervise the SSC wind-down. Both the SSC and Fermilab are managed by The Universities Research Association (URA) as contractor to the US Department of Energy.*



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*Hans Hofer (centre) of ETH Zurich and a leading light of the L3 experiment at CERN's LEP electron-positron collider has recently received double honours from China, with a Doctor Honoris Causa from Shanghai University of Science and Technology, and an Honorary Professorship from the Chinese University of Science and Technology, Hefei. Hofer is seen here between (left) Shanghai University of Science and Technology Honorary President D.S. Dan and President Guo Ben-yu.*

*(Photo S. Ting)*

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