

People and things

internal target and can thus reach detectors. A whole new class of nuclear structure measurements therefore becomes possible, using heavy fragment 'tags' at low energy storage rings. Stan Kowalski outlined the 1 GeV electron stretcher ring and internal target facility under construction at the MIT-Bates accelerator, and Kees de Jager revealed similar plans for NIKHEF in Amsterdam.

Other potential internal-target dividends include polarized nuclear targets. The recent EMC surprises in muon scattering from polarized protons have whetted theorists' appetites for similar measurements on the neutron, requiring targets of polarized deuterium or helium-3.

Richard Milner of MIT discussed recent work on a novel polarized target of optically pumped helium-3 atoms and described a proposal to measure the quark spin structure of nucleons in the HERA electron-proton collider being built at the German DESY Laboratory in Hamburg.

Several other speakers, among them Louis Dick of CERN, described the wide range of plans to use internal targets in circulating proton or antiproton beams. Martin Perl of SLAC showed how PEGASYS might even be used to search for new particles.

Providing useful insights into the range of new experiments possible with internal targets, the Topical Conference on Electronuclear Physics with Internal Targets drew large contingents from CERN and MIT; Caltech, Fermilab, Frascati, Livermore and Novosibirsk were also well represented. The Conference was organized and chaired by Ray Arnold of American University, Coordinator of the NPAS (Nuclear Physics At SLAC) programme.

From Michael Riordan

On people

*The Alexandre Joannides Prize, a major award of the French Academy of Sciences, goes this year to **Raymond Stora**, research director at the French Centre National de la Recherche Scientifique working at LAPP (Annecy) and CERN, for his work in the renormalization of non-Abelian gauge theories, where with his students A. Rouet and C. Becchi, he developed the BRS formulation, a cornerstone of modern quantum field theory. In other areas, his contributions to particle theory have been both profound and wide-ranging.*

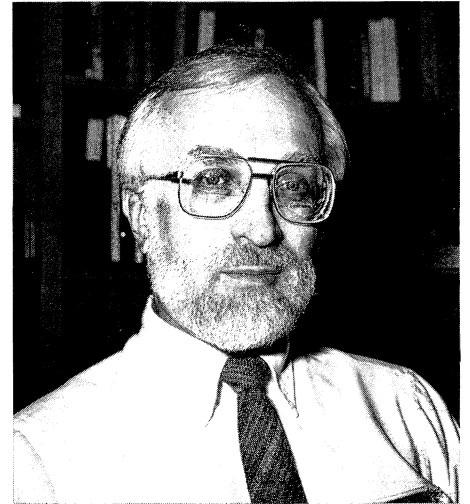
*The 1989 J.J. Sakurai Prize for Theoretical Particle Physics goes to Italian theoretician **Nicola Cabibbo** for his 'outstanding contribution to elucidating the structure of the hadronic weak neutral current'. In 1963, Cabibbo supplied a framework to describe the weak decays of particles carrying strange quarks, a vital step towards the current picture of three interrelated 'families' of leptons and quarks.*

Stan Schriber takes over from Bob Jameson as Head of Los Alamos National Laboratory's Accelerator Technology Division.

New Berkeley Director

Charles Vernon Shank, 45, currently Director of the Electronics Research Laboratory at AT and T Bell Laboratories in Holmdel, New Jersey, becomes Director of the Lawrence Berkeley Laboratory from 1 September, succeeding David A. Shirley, who will return to chemistry.

Stan Schriber is the new Head of Los Alamos National Laboratory's Accelerator Technology Division.



German Awards

Among the awards for this year by the Deutsche Physikalische Gesellschaft is its highest annual accolade, the Max Planck Medal, to Bruno Zumino of Berkeley, and the Robert Wichard Pohl Prize to Wolfgang Paul.

A member of CERN's Theory Division from 1969 to 1982 and for several years its Leader, Zumino is well known for his fundamental contributions to the field theory of elementary particles, characterized by deep insight and mathematical and logical rigour. In 1974 came his pioneer work with Julius Wess which led to the formulation of supersymmetry.

Wolfgang Paul, who celebrated his 75th birthday last year, has made numerous contributions to atomic and nuclear physics, including ingenious systems to handle electrically neutral particles, and was a driving force behind the Bonn electron synchrotron. At CERN from 1964-67, he was first joint Head of Nuclear Physics Division, then Director of Physics I Department. He was Chairman of CERN's Scientific Policy Committee from 1975-77.

Fermilab Director Leon Lederman (right) with V. Vranic of the Ruder Boskovic Institute, Zagreb, at the recent European Physical Society Seminar on International Research Facilities, held in Zagreb.

(Photo Maurice Jacob)

Nishikawa steps down

On 31 March, Tetsuji Nishikawa retired as Director-General of the Japanese National Laboratory for High Energy Physics (KEK). During his twelve-year term of office KEK has developed from modest beginnings into a prestige Laboratory reflecting Japan's status in the world.

Established in the new Tsukuba 'science city' in 1971, KEK's progress has been marked by the commissioning of the 12 GeV proton synchrotron in 1976, the Photon Factory with its dedicated 2.5 GeV Synchrotron Light Source and the Booster in 1982, and the site-wide TRISTAN electron-positron collider in 1986. First as Director of the Accelerator Department and then as Director-General, Nishikawa has led these ambitious projects as both an outstanding accelerator specialist and as a physicist with broad scientific interests.

His keen international awareness has opened KEK to research teams from abroad, and has furthered the US/Japan cooperation scheme in high energy physics, the UK/Japan cooperation in neutron scattering, and 'summit' working groups.

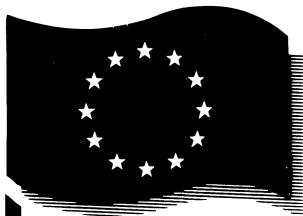
The new KEK Director General is Hirotaka Sugawara.

Centre, the CERN auditorium was packed on 31 March to hear Martin Fleischmann (Southampton) who with fellow electrochemist Stanley Pons of Utah has seen effects in modest experiments suggesting that nuclear reactions such as fusion are being induced.

(Photo CERN 489.3.89)

► Probir Roy of the Tata Institute of Fundamental Research, Bombay, India, receives the 1988 Shanti Swarup Bhatnagar Award from Indian Prime Minister Rajiv Gandhi.





THE COMMISSION OF THE EUROPEAN COMMUNITIES

is carrying out a selection procedure with a view to drawing up a reserve list from which to appoint staff in grade A3 for implementing the

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Contracts: only temporary contracts of fixed or indefinite duration are offered to research staff. **Nationality:** candidates must be a national of one of the Community Member States. **Place of employment:** Commission staff must be available to work in any of the Commission's places of activity and in many cases outside their country of origin. **Age:** candidates must have been born after 1 June 1933. **Knowledge of languages:** candidates must have a thorough knowledge of one Community language (Danish, Dutch, English, French, German, Greek, Italian, Portuguese or Spanish) and a satisfactory knowledge of a second Community language.

Closing date: requests for application forms must be made in writing not later than 15.5.89 (postmark) to the following address: C.E.C., Secretariat for Selection Committees Research, SDME R2 / 82, rue Montoyer 75, B-1040 Brussels (tel.: 02 / 235.56.60).

These application forms, duly completed and signed, must reach the above address not later than 6.6.1989.

Eligibility: candidates must ensure that: ☐ the above deadlines are met; ☐ their application form is legible, complete and signed; ☐ copies of certificates and other documents specified in the application form are attached; ☐ the other conditions set out above are satisfied, failing which they will be disqualified.

The Commission is an equal opportunities employer.

ACCELERATOR SCIENTISTS AND ENGINEERS

Argonne National Laboratory will be entering the construction phase of its 7-GeV Advanced Photon Source (APS) Project. The APS is a state-of-the-art synchrotron x-ray source optimized to produce insertion-device radiation. APS accelerator facilities comprise a 7-GeV low-emittance positron storage ring 1100 m in circumference, a 7-GeV synchrotron, a 450-MeV positron accumulator ring, a 450-MeV positron linac, and a 200-MeV electron linac. The challenges of building the facility offer great potential for professional growth for scientists and engineers in the following areas:

ACCELERATOR SCIENTISTS

Several positions at various appointment levels are available for candidate with experience and interest in accelerator design, including computer simulation of beam dynamics, calculation of coupling impedance and collective effects, particle tracking simulation, lattice design, vacuum and surface physics, beam diagnostics, and magnetics and magnet design. Appointment level will depend on the candidate's experience. Entry-level or postdoctoral positions will be available.

ELECTRICAL ENGINEERS

Two senior positions are available, requiring an advanced engineering degree and at least ten years' experience in design and construction of large particle accelerators. Work experience in accelerator-type magnets and/or power supplies is highly desirable. We also have several positions requiring BSEE and a minimum of five years' experience in the following areas:

• Design and power electronics • Multi-kilowatt power supplies • Low-level fast electronics • Beam diagnostics.

MECHANICAL ENGINEERS

A senior-level position is available, requiring an advanced ME degree at least ten years' experience in mechanical engineering aspects, such as ultra-high vacuum and structural design, of the design and construction of large particle accelerators. We also have several openings requiring a BSME and a minimum of five years' experience in the following areas:

• Survey and alignment techniques • Ultra-high vacuum systems • Mechanical design of magnets • Shop fabrication practices.

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CERN Accelerator School

CERN's Accelerator School and Uppsala University, Sweden, are jointly organizing a course on Advanced Accelerator Physics, to be held in Uppsala from 18-29 September. Students should have a basic knowledge of accelerators, and the course is designed to highlight the problems of small rings. Further information from Mrs. S. von Wartburg, CERN Accelerator School, LEP Division, CERN, 1211 Geneva 23, Switzerland. Next year, CERN's Accelerator School is organizing a course on Power Converters for Particle Accelerators, from 26-30 March in Montreux, Switzerland. Further information from the above address or by e-mail from caspower@cern.ch.

Ernst Michaelis

Ernst Michaelis died on 17 March. Although not one of CERN's real pioneers, he arrived at the new Laboratory in 1957 just in time for the first beam at the new 600 MeV Synchro-Cyclotron (SC). Going on to become SC Division Leader, his dynamic leadership resulted in the successful SC improvement programme of the mid-1970s. Until his retirement in the early 1980s, he spent his last few years at CERN in experimental physics, and continued an active physics career in Oxford after he left Geneva.

CERN's phone number

CERN's general telephone number has changed from Geneva 83 61 11 to Geneva 767 61 11. For direct dialling, use 767 followed by the four-digit internal number. Thus the CERN Courier's new number is Geneva 767 41 03. (The international dialling code for Geneva ends with 4122.)

World Laboratory

The new World Laboratory headquarters in Lausanne, Switzerland, were formally opened on 7 March. On 5-6 May its General Assembly and Scientific Committee reviewed major changing projects.

High Energy Physics Research Associates

There are vacancies for Research Associates to work with groups in high energy physics. Groups from the Rutherford Appleton Laboratory are working on experiments at CERN, DESY, ILL and SLAC. There is in addition a vacancy in the HEP Theory Group.

Candidates should normally be not more than 28 years old. Appointments are made for 3 years, with possible extensions of up to 2 years. RAs are based at the accelerator laboratory where their experiment is conducted, and at RAL, depending on the requirements of the work. Most experiments include UK university personnel with whom particularly close collaborations are maintained.

For an application form please contact Recruitment Office, Personnel and Training Division, Rutherford Appleton Laboratory, Science and Engineering Research Council, Chilton, Didcot, Oxon OX11 0QX, England. Tel: (0235) 445435, quoting reference VN758.



Rutherford Appleton Laboratory

RESEARCH ASSOCIATE POSITIONS at Yale University

Applications are invited for Research Associate positions in Particle Physics at Yale University.

Recently a major new experiment to measure precisely the anomalous g-value of the muon has been approved at Brookhaven National Laboratory, and one position will involve principally work at BNL (with a Guest Appointment at Brookhaven) to develop this experiment. Some part-time opportunity may be available for participation in other experiments in muon physics, if desired.

A strong background in experimental particle physics or accelerator physics experiments at the Los Alamos Meson Physics Facility.

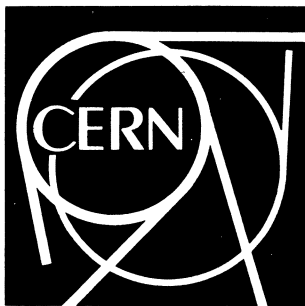
Salary dependent on experience of candidate.

Appointments are for two years, renewable. Appointments to be made at earliest possible date.

Interested candidates should send a curriculum vitae and publication list and arrange to have three recommendation letters sent to:

**Professor Vernon W. Hughes
Chairman of Search Committee
Department of Physics
Yale University
P.O. Box 6666
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