

People and things

The 1995 exhibition of the French Physical Society was officially inaugurated on 3 October by Secretary of State for Research Elisabeth Dufourcq. Here Jacques Haissinski (right), Director of DAPNIA, Saclay (see page 15) explains to Madame Dufourcq the structure of a superconducting magnet for CERN's future LHC proton collider. Centre is IN2P3 Director Claude Detraz and left is Denis Linglin, Director of LAPP, Annecy. (Photo M. Jacob)

On people

José Mariano Gago, president of LIP, the national Laboratory for experimental high energy physics and related research and development projects, in Lisbon becomes Portuguese Minister of Science and Technology. As well as being a prominent Portuguese particle physicist, Professor Gago is well known at CERN and played a vital role in his country's becoming a CERN Member State from 1986. (For a report on CERN-Portugal affairs, see September, page 22.)

CERN Research Director from 1989-93, Walter Hoogland left CERN in October to return to the Dutch NIKHEF Laboratory. Director General Chris Llewellyn Smith recalled Walter Hoogland's valuable contributions in strengthening ties between CERN and non-Member States anxious to participate in CERN's experimental programme, and in the establishment of the Detector Research and Development Committee which blazed a trail for work towards LHC detectors.

Brian Foster of Bristol has been invited to serve for the period from 1 September to 31 December 1995 as a member and for the period 1 January to 31 August 1998 as Chairman of the UK Particle Physics and Astronomy Research Council's Particle Physics Committee, succeeding David Saxon.

At CERN on 23 October, Swiss Federal Councillor and head of the Department of Transport, Communications and Energy Adolf Ogi (left) contemplates the immensity of the L3 experiment at LEP with Hans Hofer of ETH Zurich. (Photo CERN H18.10.95)

Aldo Michelini retires

Following a successful and wide ranging career at the forefront of particle physics, Aldo Michelini formally retired from CERN at the end of October.

He joined CERN in 1960, following a series of experiments with tracking chambers, including some time with Jack Steinberger's group in Columbia. At CERN, he first worked on the CERN Wilson chamber, which now performs valuable service as an aquarium! Four years later, he led a CERN/ETH Zurich/IC London collaboration studying strong interactions using a then novel approach - spark chambers in a large magnet.

From 1969 - 73, he led the Omega spectrometer project, a general purpose spectrometer initially equipped with optical spark chambers and downstream Cerenkov counters. Its huge superconducting magnet, and indeed all the magnets



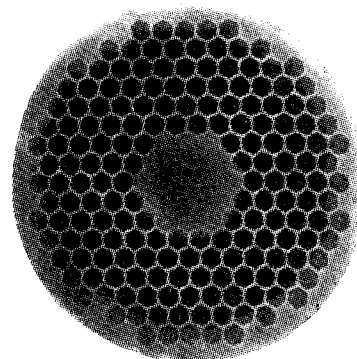
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RESEARCH ASSOCIATE THEORETICAL PARTICLE PHYSICS INDIANA UNIVERSITY

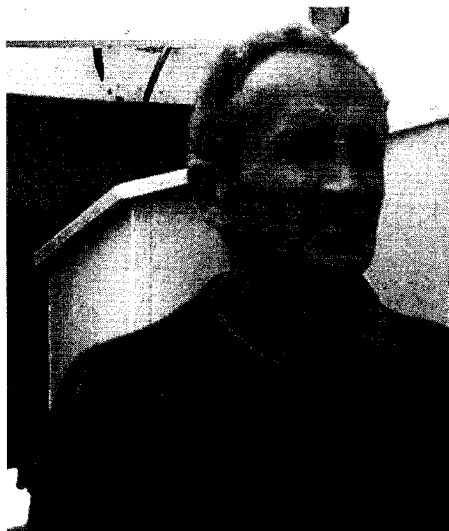
Applications are invited for the position of postdoctoral research associate in theoretical particle physics, available September 1, 1996. Initial appointment is for one year, with probable renewal for a second year. We seek outstanding candidates in theoretical particle physics who have overlapping interests with our group. Each application should include a curriculum vitae, a description of research interests and accomplishments, and a list of publications. Candidates should also have at least three letters of reference sent to: Particle Theory Group, Physics Department, Indiana University, Bloomington, IN 47405, USA. Applications received before January 15, 1996 may receive preference. Indiana University is an Equal Opportunity/Affirmative Action Employer.

Postdoctoral Research Positions in Experimental Particle Physics and Astrophysics Department of Physics University of California, Riverside

The Department of Physics invites applications for Postdoctoral Research positions in experimental particle physics and astrophysics. The appointed individuals are expected to participate in the ongoing research projects of the group, which include the LSND neutrino experiment at LANL-LAMPF, and the MILAGRO cosmic ray experiment at Fenton Hill, NM, near LANL. The individuals will be located full-time at Los Alamos National Laboratory in New Mexico. Candidates, who are recent recipients of the Ph.D. degree, should submit a resumé and at least three references to Professor Gordon J. VanDalen, Department of Physics, University of California, Riverside, CA 92521-0413, USA. The deadline date is January 31, 1996. Positions are subject to availability of funding.

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Aldo Michelini - formal retirement from CERN



of Aldo's later experiments, were built by his good friend Mario Morpurgo. The validity of the Omega concept, which first went into action at the PS and was later resited at the new SPS proton synchrotron, is underlined, more than 20 years later, by the continuing vigour of its experimental programme.

In 1973 Michelini became responsible for a group studying a general purpose spectrometer for the SPS North Area. This led to the NA3 experiment whose valuable measurements included production of (Drell-Yan) muon pairs and of direct photons. Following the success of NA3, in 1981 he became spokesman of the Opal experiment at the LEP electron-positron collider, a demanding post which he held until recently.

The success of Opal owes a great deal to the care with which he guided the formation of the collaboration, and the construction and exploitation programme. He has always appreciated the efforts of team members at all levels and his colleagues admire and enjoy the agreeable working atmosphere which he has created.

Dario Squeri, President of the Italian province of Piacenza, addresses this year's international Amaldi Conference. On his right are Giacomo Vaciago, Mayor of Piacenza, President of the Amaldi Foundation Nicola Cabibbo, and Italian Minister of Scientific and University Research Giorgio Salvini. Under the title 'Overcoming the obstacles to peace in the post-cold war era', the conference was the 8th in the series, founded in a world academy context by Edoardo Amaldi and Wolfgang K.H. Panofsky in 1988. (Photo Ballardo)



1995 Amaldi Conference

The Fondazione Edoardo Amaldi, founded in 1992 to honour the memory of the distinguished Italian scientist and CERN founding father, hosted in October the 8th international Amaldi Conference, held this year in the Amaldi home town of Piacenza. Under the title 'Overcoming the obstacles to peace in the post-cold war era', prominent international personalities discussed pressing problems in conventional, nuclear, biological and chemical warfare. President of the Foundation is Nicola Cabibbo, who is also President of the Italian Atomic Energy Authority. The annual Amaldi Conference, founded by Edoardo Amaldi and Wolfgang K.H. Panofsky in 1988, alternates between venues in Italy and other countries.

Pep progress

October saw the successful commissioning of the portion of electron injection line for the the PEP-II electron-positron collider being built at the Stanford Linear Accelerator Center (SLAC - October, page 9) This line extracts electrons from the main linac and carries them along the length of the linac tunnel. The celebration was the first PEP-II commissioning event en route to project commencement of operations in September 1998. For a PEP-II progress report, see October, page 9.

New ISIS instrument

Under a £2.5 million grant, a general materials diffractometer, GEM, will be installed at the ISIS pulsed neutron source at the UK Rutherford

The Holland at CERN industrial exhibition from 17-20 October attracted 22 high technology companies.



Appleton Laboratory in the beamline currently occupied by the LAD Liquids and Amorphous Diffractometer.

To be operational early in 1999, GEM will combine high resolution with high count rate, and be able to monitor the behaviour of a wide range of materials in varying conditions of temperature and pressure and while undergoing chemical reaction.

RHIC Summer Study at Brookhaven

Brookhaven National Laboratory has announced plans to hold a workshop devoted to physics at the relativistic heavy ion collider, RHIC, now under construction. To be held from July 8-19 1996, it will be the first in a series of Summer Studies on RHIC physics. Future programs will juxtapose both school and workshop formats. The principal emphasis will be on topical theoretical concerns, but will also include experimental directions. The

intent is to define and sharpen the scientific focus of the physics at RHIC. It is hoped that a workshop environment will encourage examination of the theoretical foundations of existing models of ion-ion collisions, and will further point these models towards observables measurable in the proposed detectors. The topics to be considered include: Thermodynamics; Hard processes; Phenomenology, Simulations and signals; and Chiral symmetry and coherent effects.

The Workshop is part of a broader programme of summer and winter meetings sponsored jointly by Brookhaven and the National Institute for Nuclear Theory at the University of Washington, Seattle.

Further information from S. Kahana (kahana@bnl.gov) or T. Ludlam (ludlam@bnl.gov). A home page updating the evolution of the Workshop is at "<http://penguin.phy.bnl.gov/www/workshop.html>".

Applying the accelerator

Judged by feedback, the special July/August issue of the CERN Courier - 'Applying the Accelerator', covering the uses to which particle accelerators have been harnessed - was appreciated by many readers. However as usual, when trying to cover a major topic once and for all in a single issue, some fish slipped through the net. In particular, the dynamic growth area of spallation neutron sources was overlooked and will be covered in a forthcoming issue.

Publication of that issue also drew our attention to a document 'Impact and Applications of Nuclear Science in Europe: Opportunities and Perspectives', published by NuPECC, the Nuclear Physics European Collaboration Committee, which covers similar ground, but with 184 pages compared to the 24 editorial pages of the July/August issue of the CERN Courier, could do so more lavishly.

Copies are available from the NuPECC Scientific Secretary, Gabriele-Elisabeth Körner, Physikdepartment E12 der Technischen Universität München, D-85748 Garching. Fax +49 89 3209 2297, e-mail sissy.koerner@physik.tu-muenchen.de

Meetings

The 1996 Lake Louise Winter Institute "Topics in Electroweak Physics" will be held at Lake Louise, Alberta, Canada from 18-24 February 1996. For information, contact Conference Secretary, Lake Louise Winter Institute, Department of Physics, University of Alberta Edmonton, AB

Guest of this year's European School of High Energy Physics, held in Dubna, Russia, was Z. Yakobashvili, Russian Federation Vice-Minister of Science and Technical Policy, who spoke on 'the Status and Perspectives of Russian Science'. On his right in this photograph are (left to right) JINR Vice-Director A. Sissakian and School manager Egil Lillestøl of CERN, and on his left are an interpreter, head of JINR's International Office A. Romanov, and JINR Director General V. Kadyshovsky.

Canada T6G 2J1 or by electronic mail from llwi@phys.ualberta.ca or audrey@phys.ualberta.ca

The next traditional mini-conference at NIKHEF-K (on February 1 and 2) will concentrate on the deuteron, following the exciting new results with NIKHEF's extracted beam and with the stored beam on polarized deuterium in the internal target hall. Also new developments are taking place world-wide, both on the theoretical and the experimental side. Further information from the secretary of the conference: Joppie Kohler, phone +31 20 5922142, or e-mail mini96@nikhef.nl

The organization will be similar to that of the preceding years: participants (with the exception of invited speakers) have to organize their own travel and accommodation. There will be no conference fee, the lunches will be free and the Proceedings will be made available to the participants free of charge.

Additional information at <http://www.nikhef.nl/www/pub/default/meetings.html>

The XIIth Workshop HADRON-96, organized by the Bogoliubov Institute for Theoretical Physics, National Academy of Sciences of Ukraine, will be held in Novy Svet, Crimea (Ukraine) from June 9-16. It will cover: Elastic and diffractive scattering, small-x structure functions, spin and polarization phenomena, dual and string models, confinement in QCD, collective properties of the nuclear matter, and advances in quantum field theories. Information from: Mrs. Galina Bugrij, Institute for Theoretical Physics, Kiev-143, Ukraine; E-mails: abugrij@gluk.apc.org or jenk@gluk.apc.org; fax: +380-44-



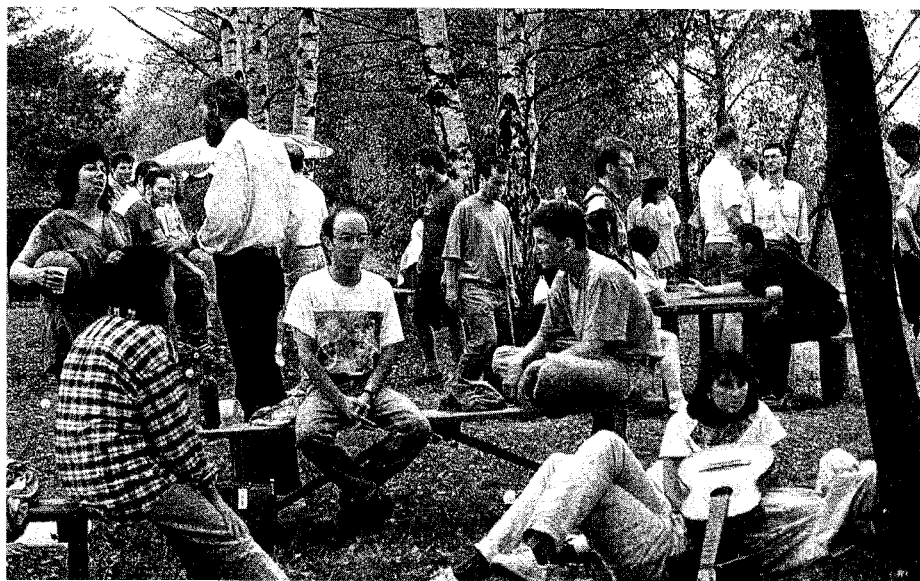
2665998; phones: +380-44-2669123 /2669161 /2660988.

1995 European School of High Energy Physics

This summer, Dubna, a pleasant Russian town on the Volga river and the home of the Joint Institute for Nuclear Research (JINR) hosted the European School of High Energy Physics. Under a CERN-JINR agreement, these two-week schools,

aimed at young experimentalists, have been organized every year since 1993, when the school was held in Zakopane (Poland). Last year it was held in S. Agnello (Sorrento, Italy) and next year's venue is Marseille.

Time out during this year's European School of High Energy Physics.
(Photos Yu. Tumanov)



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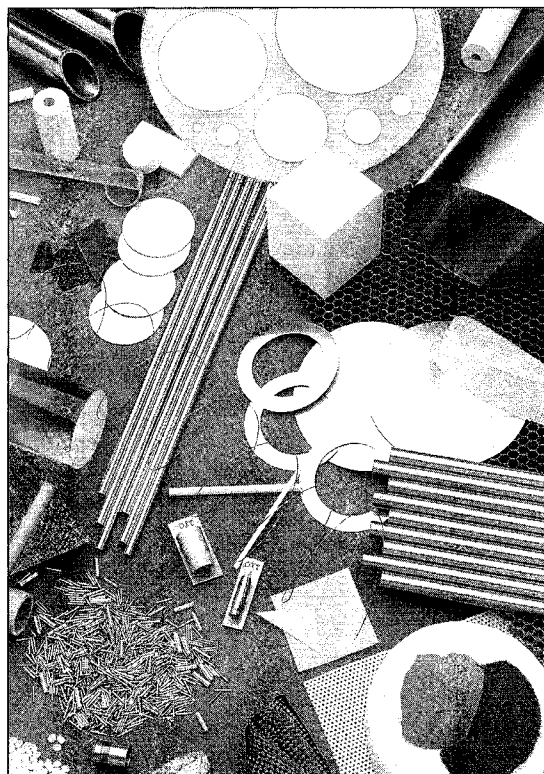
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Assistant Research Astrophysicist

Center for Particle Astrophysics

UNIVERSITY OF CALIFORNIA AT BERKELEY

The Center for Particle Astrophysics, an NSF Science and Technology Center, invites applications for the position of Center Fellow.

The Center is investigating the dark matter problem through four lines of experimental attack: using conventional and cryogenic detectors to detect the interaction of dark matter particles in the laboratory; studying the diffuse radiation from the early universe (particularly the 3K microwave background); using distant supernovae to determine how much dark matter exists; and studying the role of dark matter in the evolution of large-scale structure. The Center Fellowship is intended to provide a young experimentalist with the opportunity to bring fresh insight (particularly from other fields of physics) to bear on the dark matter problem and take a leading role in developing new initiatives. This two-year position will start in October, 1996, with a possible extension for a third year.

Candidates should have a Ph.D. in Physics or Astronomy. Research experience at the post-doctoral level is preferred. Salary will be commensurate with experience. Interested applicants should submit a statement of their research interests, a curriculum vitae, and arrange for letters of support from three referees who are familiar with their work. These items and a letter of application should be sent to:

Professor Bernard Sadoulet
Center for Particle Astrophysics
301 LeConte Hall
University of California
Berkeley, CA 94720, USA

The closing date for applications will be January 1, 1996. The University of California is an Affirmative Action/Equal Opportunity Employer. We especially encourage applications from female and minority candidates.



DESY

Deutsches Elektronen-Synchrotron
Zeuthen

At the DESY-Institute for High Energy Physics
in Zeuthen (Berlin) there is an opening for a

Post Doc Position in Theoretical Particle Physics

The activities of the theory group include high energy phenomenology (electroweak and strong interaction physics), lattice gauge theory and non-perturbative quantum field theory.

Applications are invited until 31 December 1995 (later applications may also be considered). The position is for two years and starting in fall 1996. The salary is corresponding to BAT-O IIa.

Applications should be addressed to

Prof. Dr. F. Jegerlehner,
DESY-IfH Zeuthen,
Platanenallee 6,
D-15738 Zeuthen, Germany.

On 13 October, at a colloquium to celebrate the its tenth birthday of the CDF experiment at Fermilab's Tevatron proton-antiproton collider, CDF spokesman emeritus Alvin Tollestrup (left) and Fermilab Director John Peoples admire a bound volume of CDF's first hundred scientific papers.
(Photo Reidar Hahn, Fermilab)

CEBAF reaches design energy

Operation of CEBAF, the Continuous Electron Beam Accelerator Facility in Newport News, Virginia, recently began shifting from commissioning towards physics research. The accelerator has begun reliably producing stable continuous beam at the design energy of 4 GeV in a design-maximum five full acceleration passes. The beam power is about 100 kW, with still higher powers planned in the new year. Experimenters can now be supplied with beam from any number of passes up to the design maximum, and experimental nuclear physics is starting in Hall C. There will be a major article on CEBAF commissioning in a forthcoming issue.

Gold for RHIC

At Brookhaven, commissioning of the beam transfer line from the AGS Alternating Gradient Synchrotron to the new RHIC heavy ion collider began at the end of October, as scheduled. (A photograph of this line featured on the front cover of the October issue.)

Initial work involved commissioning the AGS 'context switching system'. Forseeing the time when the AGS menu will have to include a wider variety of beams, this new operating mode allows different AGS cycles to be interleaved, and a RHIC injection cycle was introduced among many fixed target cycles for parasitic commissioning. Debugging this new mode in a short period of time was in itself a great accomplishment for the AGS Controls Group.

Two shifts of machine time were then dedicated to the extraction of



beam into the upstream portion of the injection line. Early in the morning of 9 November, the gold beam was successfully transported to a downstream dump. The 400 m from the AGS to the dump includes one 8° bend, one 20° bend, and a 1.73-m drop in beam elevation.

The gold bunch intensity was estimated to be about 1.5×10^7 ions. There were no pronounced beam losses, but since the intensity was at the lower limit of the instrumentation sensitivity, a quantitative statement is difficult. A systematic study of the injection line optics and parameters, as well as radiation fault studies, is continuing.

A decade of CDF

On 13 October, the CDF experiment at Fermilab's Tevatron proton-antiproton collider celebrated its tenth birthday. According to CDF's special commemorative t-shirt, this decade has seen 100 physics papers, 1,148 stores of colliding beams, 8.4×10^{12} collisions, 165 inverse picobarns of integrated luminosity, and 92 million collision events stored on tape, as well as one new quark - top.

CERN Research Director from 1989-93, Walter Hoogland (left) of the LHC-B experiment has returned to the Dutch NIKHEF Laboratory. He is seen here with Gerrit Bossen of CERN, who was until recently in charge of CERN's Fellows and Associates Service.





STATE UNIVERSITY OF NEW YORK

POSTDOCTORAL RESEARCH ASSOCIATE EXPERIMENTAL PARTICLE PHYSICS

Applications are invited for postdoctoral research associate positions to participate in the D0 experiment at the Tevatron at Fermilab. The positions offer opportunities for hardware, software and physics analysis activities and could start immediately. The Stony Brook High Energy Group has been involved with the D0 experiment since its conception. The experiment studies proton-antiproton collisions at a center-of-mass energy of 1.8 TeV, and is currently collecting large data samples. The group is actively involved in several analyses: top-quark search, W and Z physics, searches for new phenomena, QCD and B physics. We are also working on the design and construction of detector elements and electronics for the D0 upgrade. We are seeking candidates holding a Ph.D. or an equivalent degree in physics, with diverse experience in experimental particle physics. We strongly encourage applications from women and minorities. Interested applicants should send a curriculum vitae, a brief summary of research interests, and arrange to have at least three letters of recommendation sent to:

Professor M. Mohammadi
Dept. of Physics, SUNY at Stony Brook
Stony Brook, NY 11794-3800, USA

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TENURE-TRACK FACULTY POSITION EXPERIMENTAL NUCLEAR PHYSICS THE OHIO STATE UNIVERSITY

The Department of Physics invites applications for a tenure-track Assistant Professor position in experimental nuclear physics. The successful candidate, who should be capable of establishing a strong, independent research program, would join an existing nuclear group, composed of three faculty members working typically with three postdoctoral fellows and about fifteen graduate students. Topics of current study include nuclear astrophysics, relativistic heavy ions, and hadron spin physics. We are particularly interested in identifying strong candidates who would be able to augment our recent move into relativistic heavy-ion physics at such facilities as CERN and RHIC, but would encourage candidates in other subfields as well. A commitment to teaching is also required. For fullest consideration, applicants should send their curriculum vitae and arrange for at least three letters of recommendation to be sent no later than February 1, 1996 to: Professor Thomas Humanic, Department of Physics, The Ohio State University, 174 West 18th Avenue, Columbus, OH 43210-1106, USA. The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Qualified women, minorities, Vietnam-era Veterans, disabled veterans and individuals with disabilities are encouraged to apply.



The Deutsche Elektronen-Synchrotron DESY in Hamburg performs basic research in the field of elementary particle physics by means of a High Energy Storage Ring. It is a research institute of international repute which collaborates with similar research centres throughout the world.

We are looking for a

Realtime Software Developer

in the ZEUS collaboration at DESY

Job description:

The successful candidate will be a physicist or a computer scientist with experience of working in large high energy physics collaborations and will be responsible for designing and implementing new software within the ZEUS experiment's data acquisition system. The candidate must have an intimate knowledge of realtime applications programming (distributed control of networked tasks, multithreading, X user interfaces etc.) on Open VMS, UNIX (OSF1, IRIX) and OS9, i.e. those operating systems currently used in the ZEUS data acquisition system. Expertise is required in the C and C++ programming languages, whereby additional experience of FORTRAN and OCCAM would be advantageous. The candidate must also have knowledge of and be interested in the use of commercial tools. In this respect the use of SUN RPC/XDR and of TCL is a prerequisite.

Qualification:

PhD in physics or computer science; experience with online data acquisition systems in large high energy physics experiments; several years of experience in designing and operating a large realtime data acquisition system; capability to work together in a team of physicists and computer scientists within an international collaboration. Good knowledge of the English language is essential. The contract will be limited until 31.08.2000. The salary will be according to the "MTV Angestellte".

Handicapped applicants with equal qualifications will be preferred.

DESY is interested in advancing the professional development of women and would encourage women to apply for this position.

Written applications (curriculum vitae, certificates and references) should be sent to our Personnel-Department before 31.12.1995.

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