

People and things

cated an alternative perturbation expansion approach, and A. Pich (CERN) covered duality and quark field theory sum rules. The isospin $1/2$ selection rule was a yardstick for reliability of the different results.

H. Harari (Weizmann Institute) investigated the hierarchy of quark and lepton masses, paying particular attention to the neutrinos and looking at relationships between masses and mixing angles.

The final day of the workshop was given over to speculations beyond the standard model and possible experimental tests. H.K. Walter (PSI) surveyed worldwide efforts to detect rare decays of muons, pions, kaons and heavy particles. A. Masiero (Padua) showed how rare decays of B mesons could be used as a litmus test for a fourth quark family, further Higgs bosons, left-right symmetry and supersymmetry.

Flavour dynamics in the standard model is intimately connected with spontaneous symmetry breaking and the concomitant Higgs bosons, which have so far eluded observation. However renormalization group and lattice studies can give limits for Higgs and other masses, as demonstrated by R. Petronzio (Rome). The results all say that the standard Higgs boson should be lighter than 1 TeV.

R. Peccei (DESY) speculated on an exotic zoo of spin zero particles, including leptoquarks, majorons and cosmons.

Superstrings are a long way from flavour physics, however these ambitious ideas could shine new light on many open questions. The concepts of string theories were introduced by H. Nicolai (Hamburg), while H. P. Nilles (Munich) looked at the possible links between strings and conventional

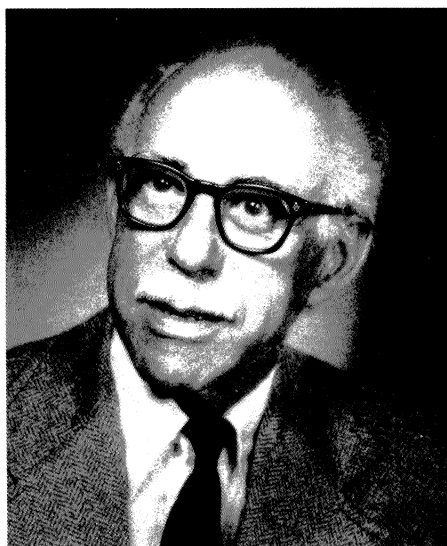
physics.

Summarizing, H. Fritzsch (Munich) singled out the question of particle masses in the standard model, claiming the potential for answering this problem to be a good measure of theoretical physics progress.

(The Workshop organizing committee consisted of J. Bartels of Hamburg, W. Buchmueller of Hannover, J. Koerner of Mainz, R. Rueckl of DESY, B. Stech of Heidelberg, and P. Zerwas of Aachen as chairman.)

From R. Rueckl

The 1988 Enrico Fermi Award of the US Department of Energy goes to Richard B. Setlow of Brookhaven (left) and Viktor Weisskopf (right).

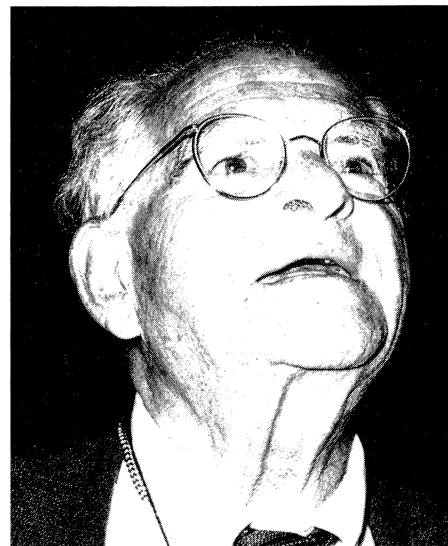


Fermi Award

The 1988 Enrico Fermi Award, the highest scientific award of the US Department of Energy, goes to Viktor Weisskopf, doyen of the particle physics community, and to Richard B. Setlow, a biophysicist at Brookhaven.

The career of Weisskopf, who celebrated his 80th birthday last year (December 1988, page 32), spans the entire history of particle physics, beginning in the golden age of quantum mechanics in Europe in the 1920s. He was Director General of CERN from 1961-5, has been very influential in the development of modern US particle physics policy, and has remained a steadfast proponent of international collaboration.

Richard Setlow is honoured 'for his pioneering and far-reaching contributions to the fields of radiation biophysics and molecular biology, beginning with the discovery and conceptualization of the processes of DNA repair that have had an impact on research in genetics, recombination, mutation and carcinogenesis'.



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.

You will receive a competitive salary and a superior benefits package which includes medical/dental insurance, 9% contribution to your retirement annuity, 24 days paid vacation, and 10 paid holidays each year. Please forward your resume in confidence to:

R.A. JOHNS, Appointment Officer
Box J-APS-88, Employment and Placement
ARGONNE NATIONAL LABORATORY
9700 South Cass Avenue
USA - ARGONNE IL 60 439

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In the

Max-Planck-Institut für Physik und Astrophysik Munich

a group is pursuing the development of cryogenic detectors for low energy neutrinos and dark matter and is searching for an

Experimental Physicist (Ph. D.)

to take a leading role in the group.

Experience in low temperature physics and/or particle and nuclear physics is requested. Depending on qualification, permanent appointment on a senior level is anticipated.

Applications (including curriculum vitae, list of publications, and names of two referees) should be sent as soon as possible to:

Prof. N. Schmitz
Max-Planck-Institut
für Physik und Astrophysik
Führinger Ring 6
D-8000 München 40,
Fed. Rep. of Germany

UNIVERSITY OF SOUTH CAROLINA

Faculty Positions in HIGH ENERGY PHYSICS

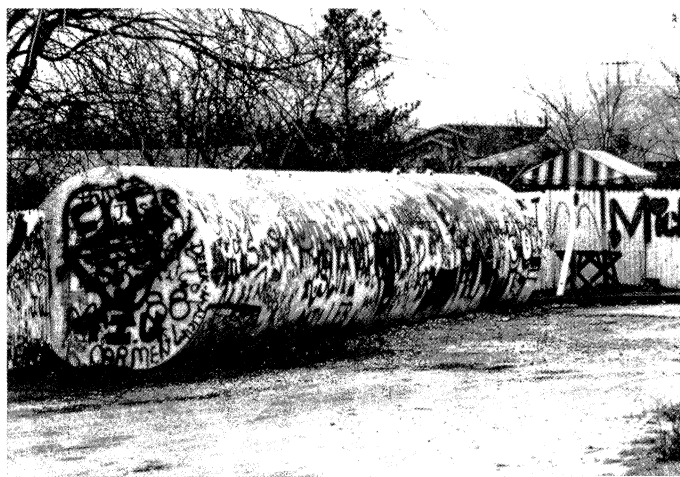
The Department of Physics at the University of South Carolina invites applications for two tenure-track positions in the area of experimental high energy physics. The positions are at the assistant professor level although appointment at a higher level may be considered for an exceptionally qualified candidate. The South Carolina high energy group currently pursues $e^+ e^-$ collider physics at KEK's TRISTAN ring using the AMY detector and an experiment on charmless two-body B^0 decays at Fermilab. The ongoing programs would welcome new members, but candidates with other research interests will also be considered. Applicants should submit a curriculum vitae and publications list, a statement of research interests, and the names of professional references to

Prof. Frank T. Avignone, III,
Chairman,
Department of Physics and
Astronomy
University of South Carolina
Columbia, SC 29208

The University of South Carolina is an Affirmative Action / Equal Opportunity employer and solicits applications especially from qualified women and minorities.

Waxahachie walkabout

On a recent North American trip, CERN's E.J.N. ('Ted') Wilson took his camera to Waxahachie, Texas, preferred site for the proposed 84-kilometre US Superconducting Supercollider ring to collide 20,000 GeV proton beams.



Directors old and new at the Joint Institute for Nuclear Research, Dubna, near Moscow. Left to right, new Vice-Director Alexei Sissakian (USSR), former Director and now Honorary Director N.N. Bogolubov, new Director Dezso Kiss (Hungary) and new Vice-Director Ditmar Ebert (East Germany).



Dubna Directorate changes

Following the recent senior staff reshuffle at the Joint Institute for Nuclear Research (JINR), Dubna, near Moscow (January/February, page 29), the Committee of Plenipotentiaries of the JINR Member States at its January meeting elected a new Directorate.

Academician Dezso Kiss (Hungary) was elected JINR Director for three years from 1 March, with Alexei Sissakian (USSR) and Ditmar Ebert (East Germany) as Vice-Directors for three years from 1 April.

Former Director N.N. Bogolubov was named Honorary Director in recognition of his outstanding role in the development of the Institute, which has eleven Member States.

On people

Francis Cole, well known in the accelerator field and who has played a major role in Fermilab documentation, has left Fermilab to work on the Loma Linda University Medical Center proton therapy accelerator.

W.P. Swanson 1931-1988

William P. Swanson of Berkeley's Occupational Health Division died in December. After twenty years as a particle physicist, he turned his attention to radiation physics and radiological protection. His work at Stanford and Berkeley created a wealth of expertise on the radiation environments of large accelerators, and he was the author of the definitive work 'Radiological Aspects of the Operation of Electron Linear Accelerators'.

Meetings

The new Summer Nuclear Institute at the Canadian TRIUMF Laboratory aims to provide short nuclear physics courses at the first or second year graduate level. This year's Institute will be held from 31 July – 11 August with core courses covering multiple scattering and the optical potential, hypernuclear physics, relativistic nuclear physics, and hadronic symmetries. Short seminars will cover other topics. Further information from Byron Jennings, TRIUMF, 4004 Westbrook Mall, Vancouver BC, Canada V6T 2A3.

Instrumentation technology

The European Committee for Future Accelerators (ECFA) is organizing a study week on the new instrumentation technology needed to exploit the high luminosity hadron colliders – such as the LHC hadron collider in the 27 kilometre LEP ring at CERN – now being proposed for the next generation of particle physics research. The meeting will be held from 14-21 September in Barcelona, Spain.

For the LHC machine itself, R and D partnerships between CERN and European industry are already underway, and the physics community is now eager to stimulate industrial interest in the technology for big new detectors, with possibilities for significant spin-off.

Key technical areas to be covered at the meeting include semiconductor technology, optical fibres, optoelectronics, fast electronics, and computing.

Further information from Oscar Barbalat, Industry and Technology Liaison Office, CERN, 1211 Geneva 23, Switzerland, or Markus Nordberg, University of Helsinki, Otaniemi Science Park, 02150 Espoo, Finland.

CERN's phone number

From 22 April, CERN's general telephone number will change from Geneva 836111 to Geneva 767 6111. For direct dialling, use 767 followed by the four-digit internal number. Thus the CERN Courier's new number will be Geneva 767 4103. (The international dialling code for Geneva ends with 4122.)

The 12th International IUPAP Conference on Few Body Problems in Physics will be held in Vancouver, Canada, from 2-8 July. Topics will cover nuclear, medium energy, particle and atomic physics. Further information from Terry Murphy (local arrangements, bitnet fewbody at triumfcl) or Harold W. Fearing (conference organizer, bitnet fearing at triumfcl), TRIUMF, 4004 Wesbrook Mall, Vancouver, British Columbia, Canada V6T 2A3.

20 years of the Triangle Seminar

Last year saw the 20th anniversary of the 'Triangle Seminar', founded by H. Pietschmann of Vienna to stimulate particle physics contact between the universities of Vienna, Budapest and Bratislava, building on a previous tradition of joint Vienna/Bratislava seminars. From its modest beginnings, it has become an important east-west bridge, attracting physicists also from Prague, Trieste, Crakow and Zagreb.

H. Pietschmann (left) and W. Thirring (right) of Vienna celebrate the 20th anniversary of the Vienna/Budapest/Bratislava 'Triangle Seminar' with organizer R.A. Bertlmann.

(Photo Renate Bertlmann)

ACCU-rate

Following the recommendations of the CERN Review Committee under Anatole Abragam, the role of the Advisory Committee of CERN Users (ACCU), established in 1978, has been redefined, making it more representative and improving its efficiency as a mutual consultation channel between CERN and its user communities.

ACCU's task is to advise CERN on the practical measures and administrative arrangements needed to complement the research facilities, in particular as regards working conditions and technical support for outside researchers working at CERN. Each Member State is represented by one or two users recognized by their appropriate scientific organizations. In addition, there are two representatives each for users from outside the Member States (a growing community at CERN) and for CERN research staff. While contacts between estab-

lished users and CERN are being strengthened in the respective countries, individual users (particularly those from outside the Member States) are encouraged to channel their requirements through their ACCU representative(s):

Austria – W. Bartl;
Belgium – C. Bricman;
Denmark – P. Hansen;
France – A. Roussarie, G. Sauvage;
Germany – M. Holder, H. Siebert;
Greece – G. Theodosiou;
Italy – G. Conforto, P. Laurelli;
Netherlands – D. Toet;
Norway – E. Lillestol (Chairman);
Portugal – P. Bordalo;
Spain – J. Hernandez;
Sweden – P.O. Hulth;
Switzerland – J. Schacher;
United Kingdom – P. Booth, P. Norton;
Non-Member States – I. Galaktionov, S.L. Wu;
CERN – C. Fabjan, P. Jenni.



Staff Scientists

The Advanced Light Source (ALS), a new facility based on a third-generation electron storage ring, is currently under construction at the Lawrence Berkeley Laboratory. The technical components of the source comprise a 50 MeV linac, a 1.5 GeV booster synchrotron and an electron storage ring optimized for operation at 1.5 GeV, but capable of operation between 1.0 and 1.9 GeV. Machine commissioning will start with the injection system (linac and booster) early in 1990.

The Exploratory Studies Group has two job openings for staff scientists to work on high-level applications programming for the commissioning and operational phases of the project beginning October, 1989. The incumbents will be responsible for the development of algorithms to control the behavior of the beam in the accelerators, to interpret the data gathered by the diagnostic system, and to develop fault-finding procedures in the event of abnormal conditions. It is planned that the incumbents move into positions within the accelerator operations group of the ALS.

The successful candidates will have demonstrated experience in computer control applications and a working knowledge of both FORTRAN and PASCAL. (Experience with Modula-2 and C would also be desirable). A basic knowledge of accelerator physics and some experience in an accelerator based laboratory are required. A Ph.D. in Physics or closely related field is preferred.

To apply, send two copies of resume to: Lawrence Berkeley Laboratory, Employment Office, 90-1042, #1 Cyclotron Road, Berkeley, CA 94710. Refer to JOB # A/5076. An equal opportunity employer M/F/H.



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Senior Mechanical Engineer

Brookhaven National Laboratory, one of the nation's leading R&D facilities, has a challenging opportunity within our Accelerator Development Department's Relativistic Heavy Ion Collider design team. We require a minimum of a MS degree and 10 years' experience, with a background in at least one of the following: ultrahigh vacuum systems, magnet design, fusion devices or cryogenic engineering. Experience with the mechanical construction of particle accelerators is desirable.

Brookhaven offers a superior working environment on a campus-like site on eastern Long Island, New York. We offer an excellent benefits package, including 24 days annual vacation, comprehensive medical, dental and retirement plans and relocation allowances. If you would like to explore this opportunity, please forward your resume, responding to ad #RHIC, including salary history and requirements, to: Nancy L. Sobrito, Brookhaven National Laboratory, Associated Universities, Inc., Personnel, Bldg. 185, Upton, NY 11973. An Equal Opportunity Employer.

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In this position, you will provide leadership for the Accelerator Theory and Simulation Group, as well as assist in the development and exercise of capabilities of Group to provide expertise in analytic and numerical solution of problems related to traditional linear and circular accelerator performance, including accelerator design and nonlinear instability analysis. Develop expertise in advanced acceleration techniques. Assist in preparation of proposals for advanced accelerator R&D. Assume duties of group leader in his absence. Assist in evaluation of performance of staff.

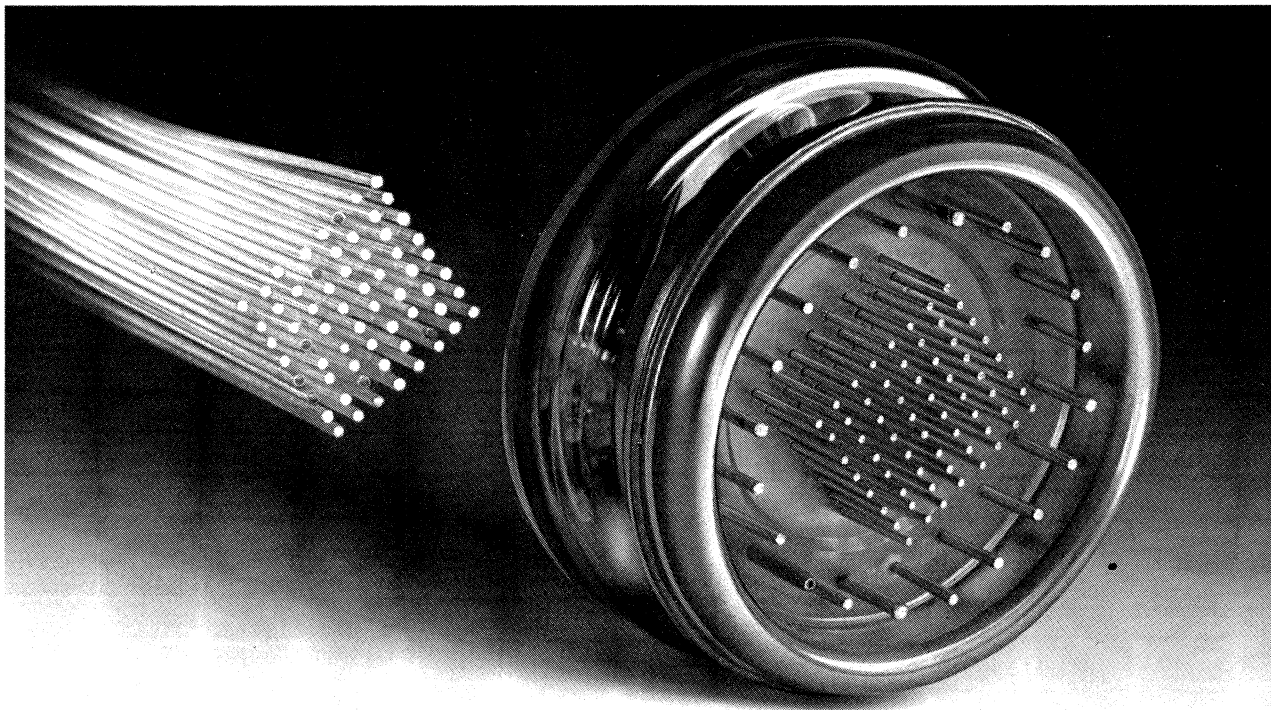
Demonstrated ability to lead technical staff in development, simulation and analysis of traditional linear and circular accelerator theory required. Extensive working knowledge of accelerator theory and practice essential as is effective oral/written communication skills as evidenced by technical presentations, substantial record of publication in technical journals and other accelerator literature. Permanent resident alien or U.S. citizenship required. A PhD in Physics or closely related discipline required.

Interested candidates should forward a resume and salary history to: Shelly Melton (MS P280), Personnel Services Division 80896-I, Los Alamos National Laboratory, Los Alamos, NM 87545.

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