

RECRUITMENT

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DESY announces a

Post-Doc Position

The DESY laboratory invites applications for a postdoctoral position for work in the area of data acquisition and higher level triggering for the HERA-B experiment.

HERA-B will measure CP-Violation parameters in the B meson system. The experiment is presently being installed in the HERA storage ring at DESY, Hamburg. HERA-B uses collisions of 920 GeV protons with a wire positioned close to the proton ring to produce B mesons. The decay products are analyzed in a forward spectrometer.

The high interaction rates (40 Mhz) and large particle densities force HERA-B to push the state of the art in several areas of detector technology, triggering and data acquisition.

The higher level triggering and data acquisition system is the first large switch-based system, which relies on high-speed data paths connecting the primary event data to a farm of commodity PCs. Similar architectures are being planned for the LHC experiments. Data taking has begun but many challenges remain. The successful candidate will play a major role in evolving the architectural design, programming, commissioning and operating the system.

Familiarity with the C programming language is required. Experience with the Linux operating system and client-server computing would be an asset.

Interested candidates, who have recently completed their Ph.D. and are under 32 year of age, should submit an application consisting of a curriculum vitae, copies of university degrees and a publication list; and should arrange to have three letters of recommendation send directly to: **DESY, Personalabteilung, Notkestraße 85, D- 22607 Hamburg. Code-number: 90/98**

Handicapped applicants will be given preference to others with the same qualifications. Women are especially encouraged to apply.



Darmstadt

the National Laboratory for Heavy-Ion Research, a member institute of the Helmholtz-Society of German Research Centers, invites applications for the position of

Head of the Information Technology Department (reference 81100-98.43)

Major tasks of this department are data processing and operation of computer networks throughout the laboratory. It consists of over 50 scientists and technicians who support the research division in the data acquisition and -analysis and by the development of specialized electronics. In addition to routine services, the development of new activities in the area of information technology are of particular importance.

The successful candidate should demonstrate the ability to develop new computing strategies jointly with the research and accelerator divisions as well as to introduce new hardware and software concepts for the experiments.

Applicants should have a PhD in physics and several years of experience in running or coordinating a large group of scientists and technicians.

The salary is according to the Bundesangestelltentarifvertrag. GSI is committed to employment equity. Women are especially encouraged to apply. Handicapped applicants will be given preference to other applicants with the same qualification.

Applications should be submitted not later than January 8, 1999 to

**GESELLSCHAFT FÜR SCHWERIONENFORSCHUNG MBH
PERSONALABTEILUNG
PLANCKSTR. 1
64291 DARMSTADT**

RESEARCH ASSOCIATE POSITION EXPERIMENTAL HIGH ENERGY PHYSICS INDIANA UNIVERSITY

The Department of Physics at Indiana University invites applicants for a research associate position to work with the high energy physics group on the OPAL experiment at CERN. The position will be available beginning in February 1999.

In OPAL the Indiana University Group has been playing a leading role in the development of the silicon microvertex detectors and their radiation monitoring. In physics analysis our interests are in searches for new particles at LEP2 and in heavy flavor physics. We also have developed and maintain the offline analysis facility, SHIFT.

Applicants should have experience in physics analysis and an interest in silicon microvertex detectors. Candidates must have a Ph.D degree. Applications, including vitae, list of publications, and three reference letters, should be sent to:

**High Energy Physics Secretary
Department of Physics
Indiana University
Bloomington, IN 47405**

by **January 31 1999**. Indiana University is an Equal Opportunity/Affirmative Action Employer

Colorado State University Postdoctoral Research Associate in High Energy Physics

Applications are invited for a postdoctoral research position in the **experimental High Energy Physics Group at Colorado State University**. The successful applicant will join an active program in the BaBar experiment and possibly the BES experiment. The CSU group has a large involvement with the BaBar drift chamber, DIRC detector and Physics Analysis.

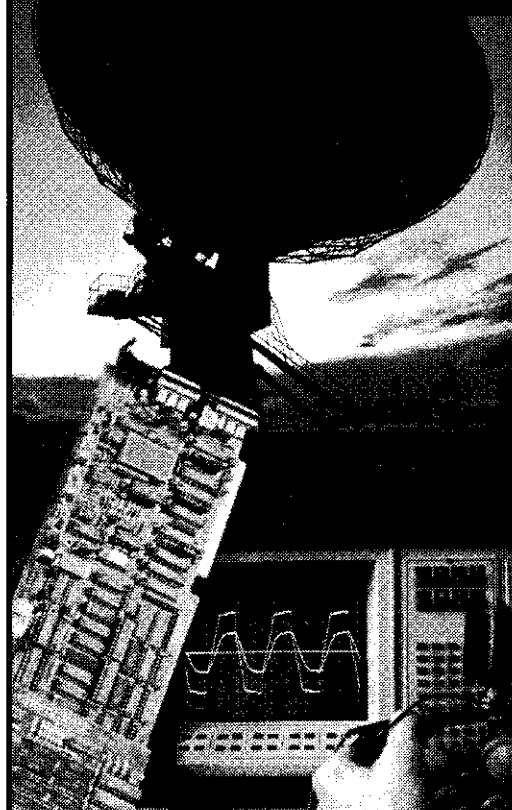
Candidates with a strong interest in detector simulation and data analysis in CP violation and the weak decays of B mesons are particularly encouraged to apply. The candidate would be based at CSU and expected to travel to the laboratory sites for research.

Please send a resume and have three letters sent to **Professor Walter Toki**, Department of Physics, Colorado State University, Fort Collins, CO 80523, by January 1st, 1999. The position will open January 15th 1999.

Visit <http://omega.physics.colostate.edu/~toki/post-doc/job-desc-v2.html> for further information and our **HEP group Webpage** at <http://omega.physics.colostate.edu/~hep/>.

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- Strategies and implementation for ASIC and system testing
- Advanced manufacturing including precision assembly and wire bonding
- Support and development of leading design tools and flows for ASIC, MCM and microsystem design

CLRC's Rutherford Appleton Laboratory provides world class facilities and engineering support for the UK scientific and engineering research programmes. Applications include data acquisition and high performance processors for particle physics, instrumentation for neutron and synchrotron radiation studies, spacecraft systems and medical imaging systems.

The salary range will be between £12,040 & £21,210, £15,180 & £24,820, £18,120 & £31,400 (in all these ranges there is a 1998 pay award pending). Progression within the salary range is dependent upon performance. A non-contributory pension scheme, flexible working hours and a generous leave allowance are also offered.

Application forms can be obtained from: Recruitment Office, Personnel Division, Rutherford Appleton Laboratory, Chilton, Didcot, Oxfordshire, OX11 0QX. Telephone (01235) 445435 (answerphone) quoting reference VN1713/98. More information about CLRC is available from CLRC's World Wide Web pages at <http://www.clrc.ac.uk>

All applications must be returned by 27 November 1998.

The CLRC is committed to Equal Opportunities and to achieving the Investors In People standard. A no smoking policy is in operation.



COUNCIL FOR THE CENTRAL LABORATORY
OF THE RESEARCH COUNCILS



UNIVERSITY COLLEGE LONDON
OPAL, ATLAS, MINOS, CDF, ZEUS,
Linear Collider.

Research Fellow(s) in Experimental Particle Physics

The HEP group at University College London is analysing data from OPAL at LEP, CERN, and from ZEUS at DESY. We are members of ATLAS at the CERN Large Hadron Collider and of the MINOS long-baseline neutrino experiment at Fermilab. Very recently we have been admitted to CDF at the Fermilab Tevatron. Members of the group are leading European and World-wide studies of physics and detectors for an e-e- Linear Collider.

There will be a vacancy for at least one PPARC supported three-year postdoctoral Research Associate starting early in 1999. Applications are invited from candidates with an interest in any part of our programme. The immediate need is for someone to spend approximately 60% of their time for two years completing the OPAL studies of the photon structure function, a field pioneered at LEP by UCL, with a prospect of achieving definitive results by the time LEP2 closes in Autumn 2000. The balance of their time would be spent on simulation and second level trigger studies for ATLAS. In the third year the ATLAS work would become the major activity. Bids are being made for further positions to work on MINOS and CDF.

The post(s) will be on the 1A scale, with salary between £15,735 and £23,651 per annum, according to experience, plus £2,134 London allowance. Please send a letter of application with a full cv, publications list and the names and addresses of two referees to **Professor David J. Miller, Department of Physics and Astronomy, University College London, Gower Street, London WC1E 6BT, UK. (Informal enquiries by email to DJM@HEP.UCL.AC.UK).**

Working towards equal opportunity



Mississippi State
UNIVERSITY

POST-DOCTORAL ASSISTANT EXPERIMENTAL NUCLEAR PHYSICS

The Department of Physics and Astronomy at Mississippi State University has an opening for a Post-Doctoral Assistant in Experimental Nuclear Physics starting January 1, 1999. The experimental group at MSU consists of five faculty members, one post doc. and five graduate students. The group is active in several research areas including the study of nuclear and nucleon structure, and meson production. This position is available through a partnership between MSU and Thomas Jefferson National Accelerator Facility (Jefferson Lab), and the candidate's research will be focused on Jefferson Lab's nuclear physics program. In particular, the candidate will be encouraged to be actively involved in two upcoming Hall C experiments: the measurement of the nuclear dependence and momentum transfer dependence of quasielastic (e,e'p) scattering, and the measurement of the σ/σ_{tot} ratio in the nucleon resonance region. Additional responsibilities will include working on an MSU proposal for J/ψ meson production. Initially, the candidate will be required to reside near Jefferson Lab.

This position offers an exciting opportunity to be part of a growing program. A Ph.D. in experimental nuclear or particle physics is required, and experience with electromagnetic probes is preferred. The initial appointment is for one year with the expectation of renewal for an additional year upon mutual agreement and satisfactory performance. Please send curriculum vitae, list of publications, and three letters of recommendation to:

Professor James A. Dunne, Mississippi State University, P.O. Box 5167, Mississippi State, MS 39762-5167. e-mail: dunne@ja.msstate.edu

Department information: <http://www.msstate.edu/Dept/Physics>. MSU is an affirmative action/equal opportunity employer.



UNIVERSITE
DE
LAUSANNE

The Institute of Theoretical Physics of the University of Lausanne has an opening for a junior faculty member. The starting date is July 1999, or later. The level of the position is

“Maître assistant”

It is a nonpermanent position with a total period of employment of up to 6 years. Research areas include high-energy phenomenology, cosmological aspects of particle physics, field theory. There is some teaching at an undergraduate level. As the teaching is in French, basic knowledge of French or the will to acquire it rapidly is required.

Please submit a curriculum vitae, list of publications and research plan, and arrange to have three letters of recommendation sent to Professor Mikhail Shaposhnikov, Institute of Theoretical Physics, University of Lausanne, BSP-Dorigny, CH-1015 Lausanne, Switzerland (Tel.: +41 (21) 692 3753 or 3750, Fax +41(21)692 3765, e-mail: Mikhail.Shaposhnikov@ipt.unil.ch).

For full consideration, the application should be completed by **January 31 1999**.

POSITIONS AT THE NSCL MICHIGAN STATE UNIVERSITY

The National Superconducting Cyclotron Laboratory at Michigan State University has openings for top quality candidates to be post-doctoral fellows and assistant research professors. The appointments are typically renewable up to three years and are for research in nuclear or accelerator physics, both experimental and theoretical. The experimental nuclear physics program includes studies approaching the driplines with radioactive beams, nuclear astrophysics, and nucleus-nucleus reaction dynamics using the K1200 cyclotron system that can produce heavy ion beams in the 10 - 200 MeV/nucleon range.

Further descriptions of the research opportunities can be found on our web-site <http://www.nsl.msu.edu/> Please send a CV with a list of publications and arrange for three letters of reference to be sent directly by post to Prof. D.J. Morrissey, NSCL, Michigan State University, East Lansing, MI, 48824, or e-mail to morrissey@nsl.msu.edu

Postdoctoral Position In Particle Theory

The Physics Department of the University of Cincinnati anticipates a postdoctoral position in particle theory beginning October 1, 1999. The appointment will be for one year, with an extension for an additional year depending on the availability of continuing support and the mutual consent of all the parties involved. Candidates should send a CV, a list of publications, and three letters of recommendation to:

Particle Theory Search Committee, Department of Physics, University of Cincinnati, Cincinnati, Ohio 45221-0011.

For full consideration, the application should be completed by February 15, 1999. For detailed description of the position please read our web announcement at <http://www.physics.uc.edu/job1.htm>.

The University of Cincinnati is an affirmative action, equal opportunity employer. Applications from women and minorities are encouraged.

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BEAMS DIVISION

Scientific Opening

The Fermilab Beams Division is seeking a physicist or engineer to lead the efforts to improve the antiproton yield from the Antiproton Source production target. Duties will include leading the effort to fabricate and commission a novel beam sweeping system to limit the peak energy deposition in the target. Other duties include the theoretical and experimental examination of the limitations to the antiproton acceptance and the proposal of practical means to remove those limitations.

A Ph.D. in physics or electrical engineering and extensive post-doctoral experience in the design and operation of charged particle beam lines is required. Some experience in leading a small group of scientists and engineers or in the design of high voltage, high current pulsed magnets is highly desirable.

Associate Scientist

The Associate Scientist will be focused on accelerator physics studies of the muon collider concept with some opportunity for self-directed research. The physics studies will concentrate on the proton driver, muon collection, cooling, acceleration and collider components. This position is a three-year initial appointment with possible extension.

To be considered, applicants must have a Ph.D. in physics or its equivalent and three or more years experience in accelerator physics or a related field.

Located 40 miles west of downtown Chicago on a campus-like setting, Fermilab provides its employees with opportunities for personal and professional growth, competitive salaries, and an attractive benefits package.

Applicants for either position are requested to forward their curriculum vitae, publication list, and the names of three references to:

**Dr. Stephen Holmes, Head, Beams Division,
Fermi National Accelerator Laboratory,
P.O. Box 500, MS 306, Batavia, IL 60510-
0500 USA.**



Fermilab



Postdoctoral Research Position Experimental Particle Physics Harvard University

Applications are invited for a postdoctoral research position with the Harvard University MINOS group.

The MINOS experiment will conduct a high sensitivity study of neutrino oscillations in the region suggested by experiments studying atmosphere neutrinos. The experiment will send a neutrino beam from the Fermilab Main Injector to the MINOS far detector, which will be placed in the Soudan mine in northern Minnesota.

The Harvard contributions to the MINOS experiment have not yet been fully specified, and can be negotiated, in part, depending on the interests and abilities of the successful candidate for this position.

Applicants should submit a curriculum vita and arrange for three of recommendation to be sent to: **Professor Gary Feldman, Lyman Laboratory, Harvard University, Cambridge, MA 02138.**

Applications will be reviewed starting December 1 and continued until the position is filled.

Harvard University is an equal opportunity/affirmative action employer. We encourage applications from qualified women and/or minority group members.

COLUMBIA UNIVERSITY NEVIS LABORATORIES

Senior Staff Associate: Electrical Engineer

Columbia University Nevis Laboratories has an immediate opening for an experienced electrical engineer. At Nevis Labs, we develop instrumentation for experimental high energy physics experiments. Current and future experiments involve advanced detectors requiring high precision, high speed readout and processing electronics for tens or hundreds of thousands of readout channels. Job responsibilities include analog circuit design, digital circuit design, FPGA and Gate Array development, printed circuit board design, and electronics measurement and testing.

Interested parties should send a resume and three letters of recommendation to: **F. William Sippach, Nevis Labs, POB 137, Irvington, NY 10533.** Columbia University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply. Salary commensurate with experience.

Postdoctoral Position in Experimental HEP University of Cincinnati

The experimental HEP group at Cincinnati has an immediate opening for a postdoctoral research associate to work on the HERA-B experiment. The successful candidate will be stationed partially at the experiment and will play a significant role in commissioning the detector and analyzing the data. The Cincinnati effort focuses on construction and installation of the high-pt trigger chambers and associated electronics. This position represents an excellent opportunity for a motivated individual to work on many aspects of a forefront physics experiment.

Interested candidates should send a curriculum vitae, a list of publications, and three letters of recommendation to: **Prof. Alan Schwartz Dept. of Physics, University of Cincinnati, P.O. Box 210011, Cincinnati, Ohio 45221. Email: schwartz@physics.uc.edu.** We will begin reviewing applications immediately and will accept applications until the position is filled.

The University of Cincinnati is an Affirmative Action/Equal Opportunity Employer.

STAFF POSITIONS IN PARTICLE PHYSICS

Rutherford Appleton Laboratory, Oxfordshire

The Particle Physics Department at Rutherford Appleton Laboratory invites applications from suitably qualified candidates for two established posts to work on the ATLAS experiment at the CERN Large Hadron Collider.

The first post is in the ATLAS Tracking group. RAL has major responsibilities for the ATLAS Semiconductor Tracker, and the successful candidate will be expected to take initiative and responsibility among the areas of silicon modules, front-end ASICs and hybrids, optical datalinks, cooling, assembly and final commissioning.

The second post is in the ATLAS Trigger group. The level-1 trigger requires a fast, purpose-built processor making use of ASICs, custom backplanes and high-speed modules. The successful candidate is expected to contribute to the specification, design and testing of prototypes, and will play a major role in developing on-line control, monitoring and analysis software.

Applicants should have a Ph.D. in Particle Physics or in a related discipline, or have equivalent experience. They should also have experience in experimental hardware, electronics or on-line computing, although applications from qualified and enthusiastic scientists with other relevant experience are also encouraged.

For further information, contact Dr. P.Norton (e-mail P.Norton@rl.ac.uk, telephone (+44)1235 445486), or Dr. M.Tyndel (e-mail M.Tyndel@rl.ac.uk, (+44)1235 445246) for the post in tracking, and Dr. N.Gee (e-mail N.Gee@rl.ac.uk, (+44)1235 446244) for the post in triggering. Information about RAL Particle Physics Department and ATLAS can be obtained from: <http://hepwww.rl.ac.uk>.

The salary range is between £15,180 and £31,400 (1998 pay award pending) and the starting salary is dependent on experience. Progression within the salary band is dependent on performance. A non-contributory pension scheme and a generous leave allowance are also offered.

Application forms can be obtained from: Recruitment Office, Personnel Division, Rutherford Appleton Laboratory, Chilton, Didcot, Oxfordshire, OX11 0QX. Telephone (01235) 445435 (answerphone) quoting reference VN1717/98. More information about CLRC is available from CCLRC's World Wide Web pages at <http://www.cclrc.ac.uk>

All applications must be returned by 15 January 1999

The CCLRC is committed to Equal Opportunities and to achieving the Investors In People standard. A no smoking policy is in operation.



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THE UNIVERSITY
OF BIRMINGHAM

POSTGRADUATE STUDENTSHIPS IN THE SCHOOL OF PHYSICS AND ASTRONOMY

The School of Physics and Astronomy is one of the largest physics departments in the country and its areas of international excellence in research were acknowledged by the award of a grade 5 in the HEFC 1996 Research Assessment Exercise. We offer excellent postgraduate training both by research and by course work, often collaborating with major institutions or industry at home and abroad.

Studentships funded by **EPSRC**, **PPARC** and industry exist for research training leading to MPhil/PhD and for taught/research courses leading to MSc or MRes.

MPhil and PhD:

Our opportunities are organised within the following areas:

- Applied Physics (including Medical Physics)
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- Chemical Physics
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**Director of Graduate Studies, School of Physics and Astronomy,
The University of Birmingham, Edgbaston, Birmingham B15 2TT**
or email Mrs Norma Simpson, Graduate Admissions
email: n.a.simpson@bham.ac.uk

Tel: +44 (0) 121-414-4568 Fax: +44 (0) 121-414-4577

Faculty Position in Atmospheric Physics

New Mexico Institute of Mining and Technology

The Department of Physics and the Geophysical Research Center invite applications for a tenure-track position in atmospheric physics. The appointment is likely to be at the level of Assistant Professor, but appointments at a higher level may be considered for exceptional candidates.

Applicants must have a strong background in physics and a Ph.D. in physics or a closely related field.

We seek a candidate who can demonstrate the ability to be an excellent physics teacher at the university level, has an outstanding record of research accomplishments, and shows excellent promise for leading a significant and independent research program in experimental, observational and/or theoretical atmospheric physics.

Current atmospheric research interests at New Mexico Tech include cloud and precipitation physics, thunderstorm electrification, lightning studies, radar meteorology, instrumentation, geophysical fluid dynamics, clouds and climate, physics of the middle and upper atmosphere, and environmental radioactivity and aerosols. Major facilities include the Langmuir Laboratory for Atmospheric Research.

Informal enquiries may be made to the Chair of the Physics Department, Alan Blyth (blyth@kestrel.nmt.edu). Information about the department is also available at <http://www.physics.nmt.edu>

Interested individuals should send a resume, significant reprints, a letter describing both proposed research directions and teaching interests, and the names, e-mail addresses, and phone numbers of three references to:

Physics Search,
Human Resources,
New Mexico Institute of Mining and Technology,
Wells Hall Box C-121
Socorro,
NM 87801.

The preferred starting date is the fall semester 1999.

Applications received before January 29, 1999 will be given full consideration; however, applications will continue to be accepted until the position is filled.

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