

Lyme Disease Protein Structure Determined at BNL

A research team working at BNL has determined the three-dimensional structure of a key protein on the bacterium that causes Lyme disease.

Called OspC, the protein is derived from two strains of the Lyme disease bacterium. This

research may lead to a second-generation vaccine that would be more effective than the vaccine currently used.

The current vaccine is based on another Lyme disease protein, known as OspA, which was previously deciphered at

Brookhaven. Both OspA and OspC are outer surface proteins of *Borrelia burgdoferi*, the bacterium that causes Lyme disease. Researchers from BNL, Stony Brook University's School of Medicine, the University of Rochester Medical Center and

Rutgers University reported their findings on the structure of OspC in the March 1, 2001, edition of *The EMBO Journal*.

Spread by the bite of an infected deer tick, Lyme disease is the most common vector-borne disease in the U.S. Between 1982 and 1996, over 99,000 cases were reported in the nation. Early symptoms of the disease may include a bull's-eye rash and flu-like symptoms. If the disease is not promptly

treated with antibiotics, more serious symptoms, including joint and neurological complications, may develop.

To determine the structure of OspC, the researchers used a technique at the National Synchrotron Light Source (NSLS) known as multiple wavelength anomalous diffraction. First, researchers grew crystals of the protein that could withstand the intense x-rays at the NSLS. To make large quantities of OspC, the team used the T7 gene-expression system, which was developed at Brookhaven.

Then OspC crystal was illuminated with beams of x-rays at different energies and diffraction patterns were recorded on a detector. With the aid of powerful computers, the researchers then analyzed the diffraction patterns to gain the vital information needed to create an image of the protein structure.

John Dunn, a member of the research collaboration from BNL's Biology Department, explains that the structure of OspC is predominantly helical, and very different from OspA, which is flat. Also, a region on the surface of OspC has a strong negative charge. Dunn says the negatively charged region may be attracted to a positively charged site on the surface of human cells, helping the bacterium to cause infection. This feature is only found in the OspC protein derived from bacterial strains

that cause human disease.

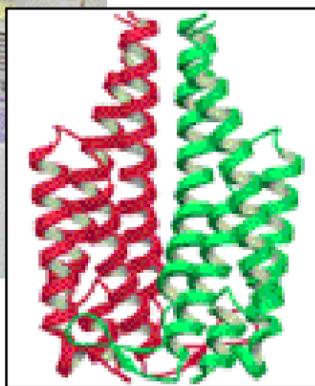
The scientists believe that a vaccine based on OspC will be more effective than the current OspA-based vaccine because the OspA protein is only present in the bacteria while they are in the cold-blooded deer tick's stomach, but not in the host. After the tick bites the warm-blooded mammalian host, the injected bacteria produce OspC in the host's bloodstream.

When the host is vaccinated solely with OspA, antibodies to this protein can only kill the bacterium inside the tick if it ingests these antibodies with its blood-meal. If the bacterium finds its way into the host, it changes into several other forms for which the vaccine offers no protection.

In contrast, an OspC-based vaccine would enable the host to make antibodies to kill the Lyme disease bacteria within the host's body.

Another member of the Brookhaven team, Subramanyam Swaminathan, Biology Department, adds, "To develop an effective OspC-based vaccine, we'll have to know the three-dimensional structures of at least a few variants of OspC, especially those from invasive strains. Since we've solved the structure of OspC based on two infectious strains of the Lyme disease bacterium, we now have a prototype for determining the structure of OspC from other strains."

— Diane Greenberg



The BNL collaborators on the research team that determined the structure of OspC are the Biology Department's (clockwise from left) John Dunn, Subramanyam Swaminathan, Helen Kycia, Barbara Lade, Subramaniam Eswaramoorthy, and (seated) Desigan Kumaran.

Five Lab Employees Honored With Brookhaven Awards

Each year, BNL recognizes key contributors in support functions, whose performance and achievements represent outstanding service to the Laboratory, especially in areas such as environment, safety, affirmative action, training, community involvement, and quality. Laboratory Director John Marburger presented this year's Brookhaven Awards in the form of a commemorative plaque and a pre-tax award of \$2,000 to each recipient, at the Employee Recognition Award Ceremony on January 24. The honorees are:

Stephen Dewey

Stephen Dewey, Senior Chemist, joined the Lab's positron emission tomography (PET) program in 1987, and has been developing a novel approach to treating addiction. His passion for research is nearly matched by his commitment to sharing his research with the public. Dewey presents dozens of lectures each year, particularly to school children and parents, which help the public understand addiction as an illness rooted in chemical changes in the brain. He personifies the concept that Brookhaven does outstanding science that is of enormous benefit to the public, and that Brookhaven scientists care about their community.

Robert Ernst

Bob Ernst, Physics Department, has made critical financial planning and management contributions to the construction of the PHENIX detector for RHIC, and is now providing similar support to the U.S. ATLAS Project Office and other major physics projects. Ernst was responsible for financial tracking and reporting for the whole PHENIX project, an extremely large, costly, and complex project, with funding from many U.S. and foreign sources and an international collaboration of 20 institutions. He helped PHENIX management make tactical funding decisions to produce a working detector in time for the start-up of RHIC experiments.



George Goode

Since coming to BNL in 1991, George Goode, Project Engineer I in the Environmental Services Division, has tirelessly promoted pollution prevention and waste minimization. Under Goode's leadership, this program has resulted in 80 and 79 percent reductions, respectively in routine hazardous and routine mixed

wastes. Goode also managed an evaluation of some 2,000 processes that generate waste at the Lab, which formed the technical basis for implementing an ISO 14001 Environmental Management System at BNL. Goode's accomplishments have reduced operational costs and have helped regain the trust of the Lab's external stakeholders.

Brookhaven Award winners (from left) George Goode, Environmental Services Division; Patricia Williams, Plant Engineering Division; Stephen Dewey, Chemistry Department; Darcy Mallon, Director's Office; and Robert Ernst, Physics Department, were honored at an awards ceremony on Wednesday, January 24, in Berkner Hall.

(continued on page 2)

Calendar of Laboratory Events

- The BERA Sales Office is located in Berkner Hall and is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347; or M. Kay Dellimore, Ext. 2873.
- Additional information for Hospitality Committee events can be found at the Lollipop House and the laundry in the apartment area.
- The Recreation Building is located in the apartment area.
- Calendar events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.

— EACH WEEK —

Tuesdays: Welcome Coffee

10-11:30 a.m. Recreation Bldg. Newcomers meet friends. Mimi Luccio, 821-1435
— Hospitality event

Wednesdays: On-Site Play Group

9:30 a.m.-11:30 a.m. Recreation Bldg. Parents meet while children play. Free, drop in any time. Monique de la Bey, 399-7656. — Hospitality event.

Wednesdays: Dance Lessons

6-9 p.m., Brookhaven Ctr. North Ballroom
Marsha Belford, Ext. 5053.

Wednesdays: Yoga Practice Sessions

12:10-12:50 p.m., Recreation Bldg., free. For more information, contact Ext. 3924.

Tues. & Thurs: Aerobic Dance

5:15 p.m., Recreation Bldg. \$4 per class or \$35 for any ten classes. Pat Flood, Ext. 7886; or Susan Monteleone, Ext. 7235.

Mon., Tues., & Thurs:

Cardio Kickboxing

noon-1 p.m., Mon. & Thurs. and 5:15-6:15 p.m., Tues. & Thurs. Mary Wood, Ext. 5923, or wood2@bnl.gov.

— NEXT WEEK —

Tuesday, 3/6

*Income Tax Presentation

noon-1:30 p.m., Recreation Bldg. Presentation will be given by BNL's Director of Internal Audit Frank Federmann, CPA. For more information, contact Karen Adelwerth, Ext. 4262, or Mimi Luccio, 821-1435.

Wednesday, 3/7

*Ombudsman Meeting at BNL

noon-1 p.m., Berkner Hall. The DOE National Ombudsman, Jeremy Wu, will meet with non-management staff for an open discussion on concerns, recommendations, and complaints perceived to interfere with productivity and/or morale. Wu will be at the Lab until Friday, 3/9.

Thursday, 3/8

Sam's Club Info

11 a.m. - 2 p.m., Berkner Hall A representative will be at the Lab to provide enrollment information to BNLers who would like to become members of Sam's Club.

Friday, 3/9

GLOBE Meeting

For more information and for the time and location of the gay and lesbian club's meeting, contact Mike Loftus, Ext. 2960, or Chris Gardner, Ext. 4537.

RHIC Construction Team Receives Special Award

At the Employee Recognition Award Ceremony on January 24, Peter Paul, the Lab's Deputy Director for Science & Technology, presented a special award to the entire RHIC construction team.

"RHIC is a complete success, as has been driven home by the successful Quark Matter 2001 Conference," said Peter Paul at the ceremony. "RHIC was constructed on schedule and soon provided the excellent beams that made possible the rapid successful start of the RHIC science program."

The award was presented to team leaders Steve Peggs and Michael Harrison, who accepted the award, on behalf of the entire team.

Michael Harrison

Coming to BNL from Fermi National Accelerator Laboratory (Fermilab) in September 1991, where he had been Deputy Head of the Accelerator Physics Group, Mike Harrison assumed the position of Associate Project Director for the RHIC Collider. In this capacity, he oversaw the construction of RHIC, meeting all schedules and staying within costs. Under his leadership, the RHIC team was able to complete construction in 1999 as scheduled. As one of his many successful steps, he enticed Steve Peggs to join the RHIC effort.

Steve Peggs

Steve Peggs moved to BNL from Fermilab in 1992, assuming the responsibilities of Section Head of the Accelerator Physics Group. In this capacity, he laid out the RHIC design and then oversaw the first sextant test, which proved the soundness of RHIC. As the final step of the RHIC construction schedule, he directed the principal commissioning run in 1999, which provided the basis for completing the RHIC Project.

DOE Ombudsman to Visit Next Week

Next Wednesday through Friday, March 7-9, the DOE National Ombudsman, Jeremy Wu, will visit Brookhaven. Wu was appointed last year by Secretary Richardson as a result of a recommendation from the task force on racial profiling. The Office of the Ombudsman is under the Office of Economic Impact and Diversity, which provides an opportunity for employees to confer with a designee to discuss concerns, recommendations, and complaints perceived to interfere with productivity or morale.

The mission of the Office of the National Ombudsman is to be a catalyst in building trust and producing positive change to advance a diverse, hospitable, and productive work environment. The general goals of the Ombudsman are to promote understanding, resolve concerns, identify systemic issues, and produce positive change. He provides Ombudsman's services to DOE employees and contractor employees.

In an effort to carry out his mission, Wu requested to meet with non-management staff to allow for more open and frank exchange. This meeting is scheduled on March 7 in Berkner Hall Auditorium from noon to 1 p.m.

Employees who would like to speak with Wu confidentially while he is here, can make an appointment by calling his secretary, Regina Neal, (202)586-2234, or regina.neal@hq.doe.gov.

For additional information on the Office of the Ombudsman, go to www.hr.doe.gov/ombuds/.

Summer Camp Expo

On Wednesday, March 14, from 11 a.m. to 2 p.m., in Berkner Hall several Long Island summer camps will be providing facility and registration information to BNLers. For more information, contact Sue Foster, Ext. 2888, or foster2@bnl.gov.

Dosimetry badges will be exchanged today, Friday, March 2. Therefore, place your badge in its assigned rack space before leaving work today.



Michael Harrison, Associate Project Director for the RHIC Collider, and Steve Peggs, Section Head of the Accelerator Physics Group, accepted a special award on behalf of the entire RHIC Construction team at an Employee Recognition Ceremony on Wednesday, January 24.

Brookhaven Awards

(cont'd.)

Darcy Mallon

In 1998, Darcy Mallon, Staff Specialist in the Director's Office, formalized the Office of Research Administration, which has administrative and training responsibilities for the Laboratory's Institutional Review Board, the Institutional Animal Care and Use Committee, and the Radioactive Drug Research Committee. Mallon helped create policies and procedures for human and animal research. She also created and maintains the office's Web site and other efforts to support and train researchers. A tireless member of the working group that developed the Corrective Action Plan for BNL's Human Subjects Research Program, she is also a Certified Institutional Review Board Professional.

Patricia Williams

Pat Williams, Manager of Safety, Training, and Quality in the Plant Engineering (PE) Division, has been a major contributor to the development of balanced, effective, and efficient environment, safety, and health programs. Williams led the Lab-wide team that developed BNL's work planning and control systems, implementing them before the DOE Integrated Safety Management verification last May. As acting Manager for the Building Manager Program, she upgraded BNL policies and procedures, training, and program implementation. Pat also led PE's effort to reduce occupational injuries, resulting in a 70 percent drop in the division's lost workday case rate.

Computer Training

The following PC training classes have been scheduled for March:

March 7	Excel	beginner
March 8	PowerPoint	beginner
March 23	PowerPoint	intermediate
March 28	Word	beginner
March 30	Excel	intermediate

To register for these classes, submit a training request form and an ILR or Web requisition for the appropriate amount to Pam Mansfield, Bldg. 515. When the form is received, your name will be put on a waiting list. All classes are based on the number of requests received. For more information, registration information, forms, and class schedules, visit the ITD training page at www.bnl.gov/itd/.

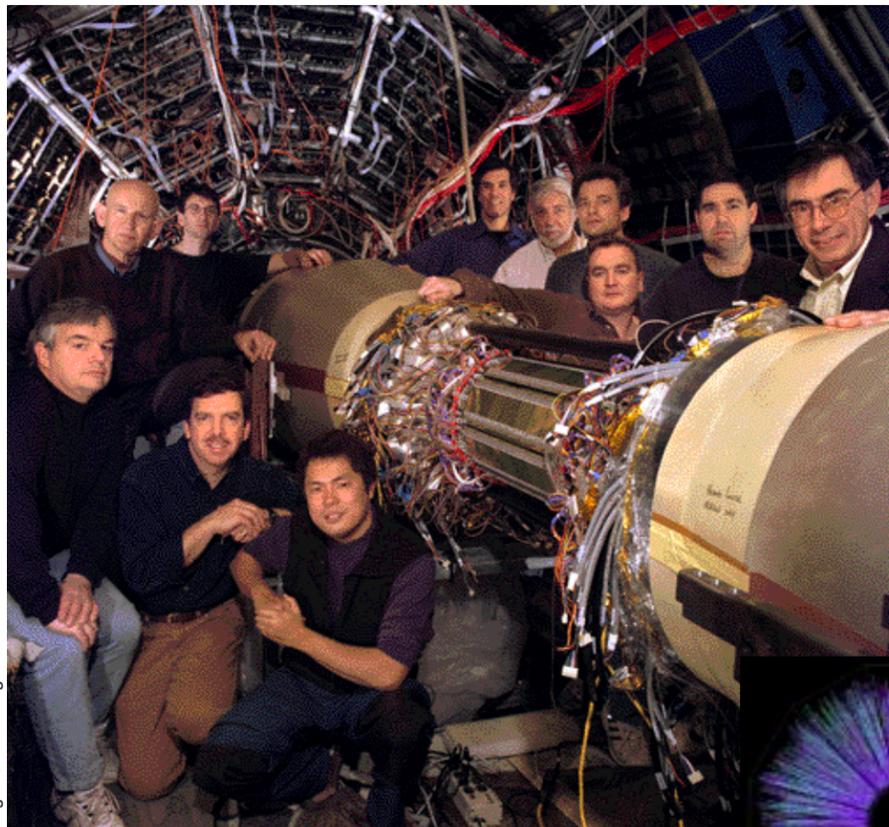
For more information about the following three classes, contact Mansfield, Ext. 7286.

March 26-30	LabView
March 5-9	Perl programming
March 5-9	Introduction to UNIX



Does this truck look familiar? If so, then there's good reason. Over the past four months it has been parked in various locations around the site, as part of a comprehensive sanitary system upgrade managed by the Plant Engineering Division (PE). The truck and attendant equipment belong to Insituform Technologies, Inc., headquartered in Missouri. Insituform's technology is being applied to reline roughly four miles of sewer lines. Here's how it works: Water pressure propels a resin-saturated, felt tube into the sewer. Hot water is then circulated into the line to cure the resin, creating a new fiberglass pipe inside the existing sewer. The advantage of the technology, according to PE's Greg Flett, is that it can be used in place, or *in situ*, eliminating the cost and inconvenience of digging up old lines.

STAR Detector Upgrade Allows Scientists to Look Closer at RHIC Collisions



Roger Stroutenburgh c92-110-01

Pictured (clockwise from front, center) are members of STAR's silicon vertex tracker (SVT) team: Jun Takahashi, University of Sao Paulo, Brazil; Phil Kuczewski, Physics Department; Rolf Beuttenmuller, Instrumentation Division; Veljko Radeka, Instrumentation; Robert Wilson, Ohio State University; Robert Soja, Physics; Lead Project Engineer Bill Leonhardt, Physics; Project Leader Rene Bellwied, Wayne State University, MI; David Lynn, Physics; Don Pinelli, Instrumentation; and Deputy Associate Laboratory Director for High-Energy and Nuclear Physics Thomas Ludlam.

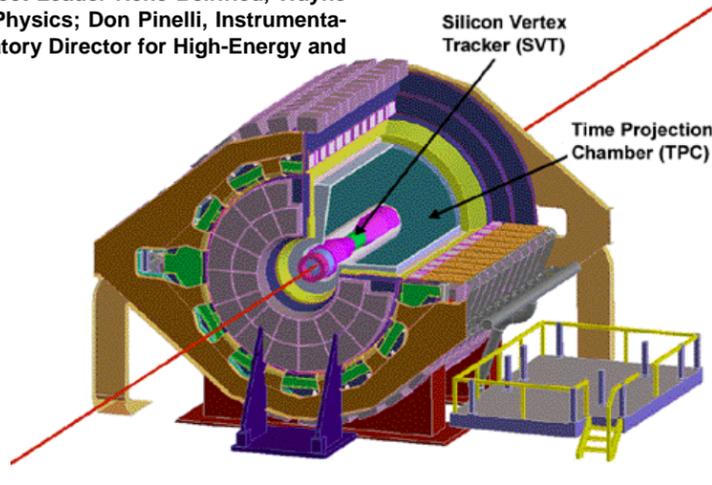
On Saturday, February 17, a silicon vertex tracker (SVT) was installed into the STAR detector at RHIC. This upgrade — which was the culmination of eight years of research, development, and design by a team of more than 50 people — will allow physicists to collect data at a much closer proximity to the point of collision than was possible before the upgrade.

Compared to the time projection chamber (TPC) portion of the detector, which is located approximately 50 centimeters from the interaction region, the three silicon layers of the SVT reside, respectively at 5, 10, and 15 centimeters from where the gold-gold collisions are occurring. This close proximity allows for the detection of charged particles that usually decay before reaching the TPC.

According to SVT project leader Rene Bellwied, Wayne State University, "The installation of the SVT will allow for the detection of particles with short lifetimes, such as cascade and omega particles."

Silicon drift detection — a new semiconductor technology that was developed in the mid-1980s by BNL physicist Pavel Rehak — was employed in the design of the SVT, allowing for a thirty-fold increase in resolution compared to the TPC.

Bellwied also adds, "a portion of the 'dark hole' in the center of previous STAR images will be filled with some wonderful tracks in future STAR images."



BERA Elections 3/26-30

The BERA nominating committee has selected the following slate of candidates to run for the 2001 BERA Executive Board:

- Susan Cataldo Medical
- Charles Gardner C-A
- Jo Ann Reed Cont. & Proc.
- Peter Pohlot ES

March 26-30, all eligible employees of BNL, DOE, and other permanent, on-site employees may cast ballots to elect two of the four candidates to serve on the BERA Board.

More information on the candidates and the election process will be published in subsequent editions of the Bulletin.

BERA Spring Fling

The annual BERA Spring Fling will be held on Friday, March 30, at the Rock Hill Country Club in Manorville at 6 p.m. There will be a D.J., a cash bar, and a buffet dinner served from 7 to 8:30 p.m. Tickets cost \$15 each and can be purchased by contacting: Andrea Dehler, Ext. 3347; John McCaffrey, Ext. 2075; Louie Nieves, Ext. 4897; or Laurie Pearl, Ext. 5520.

T-100 Consolidated Warehouse Grand Opening

The Lab community joined the Procurement & Property Management Division (PPM) at a ribbon-cutting ceremony on Wednesday, February 14, to celebrate the consolidation of three warehouses into the new T-100 warehouse, which provides a more functional space. According to Mary-Faith Healey, PPM Manager,

the consolidation reduced the total number of line items from 13,000 to 5,200 and will save the Laboratory over one million dollars per year. PPM maintains a stock of items, which include everything from paper towels to electronic components — all of which can be ordered on-line at <http://130.199.76.90/picktick/>.



Roger Stroutenburgh c92-100-01

Pictured at the dedication ceremony (from left) are: David Dale, PPM; Shelby Williams, PPM; Barbara Langhorne, PPM; George Dioguardo, PPM Stockroom Supervisor; Mary-Faith Healey, PPM Division Manager; Laboratory Director John Marburger; Brian Sack, Assistant Laboratory Director for Finance & Administration; and Peter Cancel, PPM.

Calendar

(continued)

*Hospitality Potluck Party

5:30 p.m., Recreation Bldg. All are welcome, especially newcomers to the Lab. Bring your family, friends, and your favorite dish to share. For more information, contact Mimi Luccio, 821-1435, or Luise Woltering, 744-7964.

— WEEK OF 3/12 —

Tuesday, 3/13

*Income Tax Workshop

noon-1:30 p.m., Recreation Bldg.

Wednesday, 3/14

*Summer Camp Expo

11 a.m. - 2 p.m., Berkner Hall Long Island summer camps will be providing facility and registration information to BNLers. For more information, contact Sue Foster, Ext. 2888, or foster2@bnl.gov.

Thursday, 3/15

*Income Tax Workshop

noon-1:30 p.m., Recreation Bldg.

Science, Politics, & Budgets Talk

Noon, Berkner Hall, Room B. The talk will be presented by Peter Bond, Director's Office, and will focus on how the Washington D.C. budget process works and how scientists' role in the political process can be either constructive or destructive.

BERA Bridge Club

7 p.m., Berkner Hall cafeteria For more information, contact Morris Strongson, Ext. 4192, mms@bnl.gov.

— WEEK OF 3/19 —

Wednesday, 3/21

BERA Ski Trip

Brodie Mt., Massachusetts \$45, includes bus transportation and lift ticket. Bus leaves Brookhaven Center at 5 a.m.

Brookhaven Lecture

4 p.m., Berkner Hall. Jose Rodriguez will speak on "Environmental Catalysis: SO₂ Surface Chemistry on Oxides and Metals."

Thursday, 3/22

Apheresis Blood Drive

Brookhaven Center. BNL volunteers from the previous apheresis drive are scheduled to donate platelets. For more information, contact Sue Foster, Ext. 2888, or foster2@bnl.gov.

Friday, 3/23

Women Engineer's Lunch Networking Meeting

Noon, Berkner Hall, Room A. Contact Arlene Zhang, Ext. 5369.

Note: This calendar is updated continuously and will appear in the Bulletin whenever space permits. Submissions must be received by the preceding Friday at noon to appear in the following week's Bulletin. Please enter the information for each event in the order listed above (date, event name, description, and cost) and send it to bulletin@bnl.gov. Write "Bulletin Calendar" in the subject line.

Spirit Dinner Cruise

Join BERA on Tuesday, July 3, for an Independence Day sail around Manhattan on a luxury yacht that will cruise past the Statue of Liberty, Ellis Island, and other fabulous Manhattan landmarks. Tickets include round-trip bus transportation, live music and entertainment, and a buffet dinner. The bus will depart from the Brookhaven center at 4 p.m.

Tickets are being sold first-come, first-served for \$75 per person at the BERA Sales Office. For more information, contact Andrea Dehler, Ext. 3347; Rosalie Piccione, Ext. 3160; or M. Kay Dellimore, Ext. 2873.

L.I. Ducks Tickets

Four tickets are available for each game of the Long Island Ducks 2001 baseball season. These tickets will be sold on Tuesday, April 3, at 8 a.m. in the BERA Sales Office. Tickets cost \$10 each, are non refundable, and will only be sold in pairs. The seats are located in the second level, row J, seats 7-10.

Arrivals & Departures

Arrivals

Alexandros G. Georgakilas
Biology

Michael A. O'Donnell
Superconducting Magnet

Marc D. Pfeffer
NLS

Departures

Betsy A. Dowd
NLS

Joseph Dvorak
Chemistry

Norman Holden
Reactor

Caroline F. Kramer
Reactor

Michael J. O'Brien
Independent Oversight Office

Patricia A. Riche
Environmental Restoration Division

Smita Sathe
Collider Accelerator

Classified Advertisements

Placement Notices

The Lab's placement policy is to select the best-qualified candidate for an available position. Candidates are considered in the following order: (1) present employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action Plan, selections are made without regard to age, race, color, religion, national origin, sex, disability or veteran status. Each week, the Human Resources Division lists new placement notices, first, so employees may request consideration for themselves, and, second, for open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people. Except when operational needs require otherwise, positions will be open for one week after publication. For more information, contact the Employment Manager, Ext. 2882; call the JOBLINE, Ext. 7744 (344-7744), for a list of all job openings; use a TDD system to access job information by calling (631) 344-6018; or access current job openings on the World Wide Web at www.bnl.gov/JOBS/jobs.html.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

DD7229. SECRETARIAL POSITION - (part time) Requires an AAS degree in secretarial science or equivalent experience, good communication skills, and a knowledge of Laboratory policies and procedures. Proficiency in Microsoft Word, Access, and Outlook is required. Experience with Web requisitions and the IPAP travel system is desired. Position involves extensive interaction with Lab employees and the public. Will provide support to the CIGPA Directorate including answering telephones, ordering supplies, maintaining databases, distributing lists, and files, meeting coordination, and clerical support as needed. Community Involvement, Government & Public Affairs.

DD7230. SECRETARIAL POSITION - (part time) Requires an AAS degree in secretarial science or equivalent experience, good communication skills, and a knowledge of Laboratory policies and procedures. Proficiency in Microsoft Word, Access and Outlook is required. Experience with Web requisitions and the IPAP travel system is desired. Position involves extensive interaction with Lab employees and the public. Will provide support to the Museum Program office, including answering telephones, ordering supplies, and processing Web requisitions, travel and petty cash vouchers. Will be responsible for Science Museum bookings and database entry and support activities associated with various programs, contest, fairs and festivals. Community Involvement, Government Public Affairs.

DD9086. OFFICE SERVICES POSITION - (term appointment) Under the direct supervision of the Collider-Accelerator Department Mechanical Design Documentation Control Coordinator, will assist with the following tasks: copying mechanical and electrical drawings, distributing prints to engineers and designers, plotting copies of archived drawings using a PC, making prints from aperture card using an Océ Reader/Printer, and performing general office duties. Collider-Accelerator Department.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

MK8915. PHYSICIST - The Neutron Scattering Group is looking for an expert in electronic transport measurements on correlated-electron systems, especially including intermetallics, with interests in materials synthesis. Experience with neutron scattering techniques is highly desirable. Requires a Ph.D. in Physics, plus demonstrated ability to run an independent research program. Under the direction of J. Tranquada, Physics Department.

MK8916. PHYSICIST - Requires a Ph.D. in physics, chemistry or materials science, expertise in x-ray/neutron scattering techniques, and demonstrated ability to initiate an independent scientific program in polymer physics, biophysics and/or nanoscience. Research involves soft-condensed matter physics. Under the direction of B. Ocko, Physics Department.

MK2039. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in physics, electrical engineering or chemistry,

experience in femto-second high power laser system; experience in electron diffraction, ultra-short laser-pulse characterization and laser pulse shaping highly desirable. Will involve laser system and optical transport for femto-second photocathode RF gun in the Accelerator Test Facility. Under the direction of X. Wang, National Synchrotron Light Source Department.

MK2201. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in chemistry, physics or biomedical engineering with experience in experimental *in vivo* MR science and its attendant pulse sequence and computer programming. Position is with the High-Field MRI Laboratory at BNL which is part of the Brookhaven Center for Imaging and Neuroscience which includes the PET laboratory. The focus of the laboratory includes the development of new *in vivo* NMR science and a broad array of efforts in neuroscientific MR imaging. The PET lab includes two human scanners, as well as a micro-PET. Under the direction of C. Springer, Chemistry Department.

MK7826. POSTDOCTORAL RESEARCH ASSOCIATE - (reposting) Requires a Ph.D. in structural or molecular biology and experience in protein crystallography. A strong background in molecular biology and protein purification and a desire to learn macromolecular crystallography highly desirable. Current projects include Clostridium toxins, toxins complexed with inhibitors and other related proteins. Will be expected to become involved in biochemical studies on inhibitors. Under the direction of S. Swaminathan, Biology Department.

MK2202. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in chemistry with experience in preparation and characterization of air-sensitive metal complexes and in one or more of the following fields: photochemistry, electrochemistry, time-resolved spectroscopy, and chemistry in supercritical CO₂. Research focuses on mechanistic and kinetic studies of photochemical CO₂ conversion into useful chemicals and fuels using transition metal complexes in solution. Under the direction of E. Fujita, Chemistry Department.

MK9139. RESEARCH FELLOW - (reposting) M.D. degree with clinical experience, to participate in NIH and DOE-sponsored research on the application of functional and perfusion MRI. Will contribute to the human subject studies by conducting subject screening, subject evaluation and examinations, and assisting with research procedures, data analyses and manuscript preparations. Medical Department.

MK2246. ADMINISTRATIVE POSITION - Requires a bachelor's degree or equivalent experience and excellent oral and written communication skills. In addition, must possess strong interpersonal skills to aid current and prospective staff members in obtaining and maintaining appropriate visa status and resolving a variety of immigration issues and problems. Must be detail oriented, and display interest and ability to become knowledgeable in immigration law. Will be responsible for performing administrative and support duties with regard to visa determinations, as well as preparing and processing of immigration petitions. Human Resources Division.

DD6489. REGISTERED HEALTH INFORMATION ADMINISTRATOR POSITION - Responsibilities will include encoding medical information, performing medical record review, planning and performing quality assurance reviews and reports, and providing professional guidance on medical records management and encoding issues. Prefer a minimum five years' work experience with computerized medical databases, knowledge of Microsoft Windows and Word environments, and database management systems. Familiarity with occupational health information systems highly desirable. Must be capable of independent work, including program design and modification. In-depth knowledge of encoding practices across wide variety of formats required, as is successful completion of RHIA certification process. Occupational Medicine Clinic.

TB2040. TECHNICAL POSITIONS - Requires a BSET or equivalent. Will work in a small group maintaining, operating and upgrading a state-of-the-art laser linear accelerator research facility, the BNL Accelerator Test Facility (www.atf.bnl.gov). Responsibilities range from design to implementation of various electronic circuits, including low- and high-power microwave, analog and digital electronics, DC and pulses power supplies, and more. National Synchrotron Light Source Department.

New Computer Ordering Procedure

Requisitioners will continue to use Dell's BNL Premier Store Front. Standard systems must be configured by generating an E-quote. (See www.bnl.gov/ppm for directions.) Users will then create a web requisition, referencing the Dell E-quote number, the E-quote name, and their e-mail address. The web requisition will follow the normal approval procedures and PPM will place the order electronically with Dell.

Web requisitions submitted without an E-quote cannot be processed. Orders can be tracked using the BNL PO number on Dell's on-line order status link. Systems will be delivered directly to the requisitioner's office by Shipping and Receiving.

ITD will still be available for technical recommendations and installations through the ITD Help Desk.

Income Tax Info

The Quality of Life Program and the Hospitality Committee are sponsoring an income-tax presentation on Tuesday, March 6, from noon to 1:30 p.m. in the Recreation Bldg. The presentation will be given by the Director of Internal Audit, Frank Federmann, CPA.

Income tax workshops will be held on Tuesday, March 13, and Thursday, March 15, from noon to 1:30 p.m. in the Recreation Bldg. For registration information, contact Karen Adelwerth, Ext. 4262, or Mimi Luccio, 821-1435.

Potluck Party

The Hospitality Committee welcomes Lab newcomers and BNLers at its potluck party on Friday, March 9, at 5:30 p.m. in the Recreation Bldg. Bring your family, friends, and your favorite dish to share. For more information, contact Mimi Luccio, 821-1435, or Luise Woltering, 744-7964.



Subjects Wanted

If you are between 18 and 50 years old, speak English, and do not use illicit drugs, you may be eligible to participate in a MRI research study.

All participants will be compensated for their time. For additional information, contact Megan, Ext 5953, or Trish, Ext. 2773.

Game Room Opens

Monopoly, cards, Yatzee, chess, checkers, Trouble, Scrabble, Candyland, and other games are available to all BNLers in the Brookhaven Center game room. Games can be played weekdays until 11 p.m., and on Sundays from 5 to 9 p.m.