

Looking Back AND Forward: Neutrino Helicity at 50

Joseph Rubino D7670408



On Friday, May 2, a very special symposium, "Neutrino Helicity at 50," filled the Physics Large Seminar Room with enthusiastic attendees who were celebrating the half-century-old Goldhaber-Grodzins-Sunyar experiment on neutrino helicity, renowned as an landmark among elegant table-top experiments. Chief among the many distinguished attendees were BNL Distinguished Scientist Emeritus

Maurice Goldhaber; Lee Grodzins, Massachusetts Institute of Technology Professor of Physics Emeritus, and ThermoFisher Scientific; and members of the Andrew Sunyar family.

The symposium was held first, to look back at the experiment, which proved that the neutrino particle, at that time little known, had "left-handed" spin, or helicity — and also, to discuss the impact this discovery had on particle physics.

In addition, the symposium examined some of the current worldwide activities in neutrino physics and the future prospects for the field.

The morning session, "Looking back," was chaired by Gene Sprouse, Editor-in-Chief of *Physical Review*, where the two historic papers on the experiment were published: Goldhaber, Grodzins, and Sunyar, *Phys. Rev.* 109 (1958) 1015; and Grodzins, *Phys. Rev.*

109 (1958) 1014. Sprouse announced that, in honor of the 50th anniversary of the experiment and to mark the special relationship between BNL and *Phys. Rev.*, including the Lab's having been the birthplace of *Physical Review Letters*, now also celebrating a fiftieth anniversary, the American Physical Society had made the two papers "Free to Read."

After welcoming remarks by BNL Director Sam Aronson,

the session continued with a talk on "Theory Perspective on the GGS Experiment," by Wick Haxton, University of Washington (UW), followed by "A Personal History of the Measurement of the Helicity of the Neutrino," by Grodzins. Chaired by Kenneth Lande, University of Pennsylvania, the session continued with IBM Fellow Emeritus Richard Garwin's "Recollections of the Muon" (continued on page 3)

Benefits, Challenges of Alternative Fuels Discussed at Biodiesel Workshop at BNL

More than 100 attendees at the second Biodiesel Workshop held at BNL heard speakers confirm that use of alternative fuels has increased sharply since the first workshop here in the spring of 2005. Users and suppliers of biofuels and public officials who have sponsored initiatives to encourage research and production detailed how interest in alternative energy has led to numerous successful demonstration projects and a burgeoning interest in the potential for biodiesel and other biofuels.

As Bob Gordon of the DOE Site Office pointed out, ever since Rudolph Diesel launched the first demonstration project in 1900 with peanut oil, it has been evident that engines should be capable of running on different types of fuel. Issues of production cost, storage and transportation are being studied by a broad range of groups and individuals seeking an alternative to fossil fuels. BNL's Interim Associate Laboratory Director of Energy, Environment & National Security, Creighton Wirick, predicted that the Lab's new Center for Functional Nanomaterials and the upcoming National Synchrotron Light Source II will be among the tools that will help identify the fuels of the 21st century.

Ray Albrecht, senior project manager for the New York State Energy Research & Development Authority (NYSERDA), remembered when the bioheat/biodiesel core group "could fit into a car together." This year, more than 25 speakers covered



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a wide range of industry and user perspectives and success stories.

Todd Stebbins, director of the Office of Energy within the Suffolk County Department of Environment & Energy, recounted how the county's Clean Energy Action Plan has led to use of alternative fuels for everything from the county's fleet of buses to building retrofits for conservation and use of renewable energy sources, and even use of biodiesel for dredging projects.

Said Lab Director Sam Aronson: "A lot has changed since the last biodiesel workshop three years ago. All the experience and information shared here have enabled a very mature conversation."

Keynote speakers at the workshop included U.S. Congressman Tim Bishop and Gunnar Walmet, NYSERDA's Industrial and Buildings Re-

search program director.

Said Bishop: "The future of our planet is intimately related to the decisions we make today. The Energy Independence and Security Act of 2007 begins the process of taking us in the right direction, but it is only the first step in a long and painful journey. We are trying to chart a new course, but there will also need to be a paradigm shift."

BNL's Tom Butcher and C.R. Krishna both gave presentations on their research using biofuels to displace heating oil and biodiesel's properties of concern. Other speakers represented companies including Advanced Fuel Solution, LLC, Sprague Energy Corporation, Changing World Technologies, the National Oilheat Research



Roger Stoutenburgh D0310508

Alliance and the Empire State Development Corporation.

The workshop was cosponsored by the Greater Long Island Clean Cities Coalition (GLICC), NYSERDA, and the

National Biodiesel Board, along with BNL. GLICC spokeswoman Rita Ebert advised participants to "network, learn, and when you walk away, take action!" — Kay Cordtz

2008 Joint NSLS/CFN Users' Meeting, 5/19-21



The Joint National Synchrotron Light Source and Center for Functional Nanomaterials Users' Meeting, to be held this year on May 19-21 at BNL, will provide a venue for scientists from diverse disciplines to share new research results and advances in experimental capabilities that utilize synchrotron radiation and focus on nanoscience. This year's theme, "Renewable Energy," will be highlighted during the main meeting by individuals currently involved in this area of research. All BNL employees are invited to attend the morning plenary session on Tuesday, May 20, free of charge. BNL employees and guests are also welcome to register for other sessions dedicated to scientific talks, workshops, and other events (registration and a nominal fee are required). For more information, go to www.nsls.bnl.gov/users/meeting/2008/.

2008 RHIC & AGS Annual Users' Meeting, 5/27-30

The theme for this year's Relativistic Heavy Ion Collider (RHIC) & Alternating Gradient Synchrotron (AGS) Annual Users' Meeting is "Opening the Window on QCD." On Tuesday, May 27, there will be five topical workshops. A special Symposium on "RHIC & Its Impact on Nuclear Science" will take place on Wednesday, May 28, followed by a banquet at Majestic Gardens (reservations required). Two days of plenary sessions will be held, on Thursday, May 29, and Friday, May 30. The

plenary program will reflect the achievements and results from RHIC, reports from Washington, Users' Executive Committee (UEC) election results, thesis awards, a poster session, and an Open Forum Meeting with guest speaker U.S. Representative Tim Bishop. The UEC is proud to sponsor a panel discussion on the evening of May 29 entitled, "Diversity in Physics: What Can We Do Better?" All are invited. For more information, visit http://www.bnl.gov/rhic_aggs/users_meeting.

2008 BSA Scholars



Brookhaven Science Associates (BSA) has announced the 15 winners of the annual BSA Directors' Scholarships, which go to children of BNL employees in continuation of a tradition instituted at BNL in 1965. Each BSA Scholar is a high-school senior who will receive \$2,500 per year for up to four years of study at the college or university of his or her choice.

1. Christine Anerella, daughter of Michael Anerella, Superconducting Magnet Division, attends the United Nations International School. She will major in biology and medicine at St. Bonaventure University and the George Washington University School of Medicine.

2. Matthew Burling, son of Conrad Smith, Jr., Plant Engineering Division, will graduate from Eastport South Manor High School. He has decided to major in psychology at Clemson University.

3. Jessica Cruz, daughter of Luis Cruz and niece of Gilbert Cruz, both of the Plant Engineering Division, is a senior at Longwood High School. She will major in special education at Marist College to become a tutor for children with autism.

4. Daniel Grove is the son of Edward Grove of the Internal Audit & Oversight Office. After graduating from Smithtown High School, West, he will major in biology at the University of Delaware.

5. Ariana Hackenburg, the daughter of Donna Chiossone of the Budget Office and Robert Hackenburg of the Physics Department, attends William Floyd High School. She will major in mathematics at Rutgers University.

6. Shreel Joshi, a senior at Shoreham-Wading River High School, is the son of Piyush Joshi of the Superconducting Magnet Division. To pursue a career in biotechnology, he will major in biomedical engineering at Rensselaer Polytechnic Institute.

7. Teresa Kao, who attends Ward Melville High School, is the daughter of Grace Tsai of the Physics Department and Chi-Chang Kao of the National Synchrotron Light Source Department. She will major in biomedical engineering at Columbia University.

8. Hefei Li, daughter of Weimin Zhou of the Environmental Sciences & Technology Department, is a senior at Ward Melville High School. She will major in business at Columbia College, Columbia University.

9. Elvira Miceli is the daughter of Lino Miceli of National Synchrotron Light Source-II. To prepare for a career in medieval and renaissance studies, after graduating from Shoreham-Wading River High School, she will major in history at Williams College.

10. Hillary Moss of Ward Melville High School is the daughter of Steven Moss, Safety & Health Services Division. As yet undecided on a major, she will attend the State University of New York at Stony Brook Honors College.

11. Bridget O'Brien, who attends Miller Place High School, is the daughter of Edward O'Brien, Physics Department. Her major is currently undecided, but she will pursue her studies at the University of Virginia.

12. Eva Raparia, daughter of Deepak Raparia of the Collider-Accelerator Department, attends Shoreham-Wading River High School. To achieve a career in medicine, she will study at the State University of New York Downstate Medical School.

13. Gregory Rodzevik, who will graduate from Hauppauge High School, is the son of Gregory P. Rodzevik of the Plant Engineering Division. He will major in pharmacy at the Albany College of Pharmacy.

14. Shreya Subramani, the daughter of Jaishree Subramani of the Human Resources & Occupational Medicine Division, is a senior at The Wheatley School. She will major in psychology and neuroscience at Barnard College, Columbia University.

15. Stephen Tuozzolo, who attends Sayville High School, is the son of Joseph Tuozzolo of the Collider-Accelerator Department. He will major in environmental engineering at Princeton University.

Neutrino Helicity at 50 Symposium

(cont'd)

Decay Parity Violation Experiment, January 4-8, 1957;" and Jack van der Velde, University of Michigan Professor Emeritus, on "IMB . . . The Early Years."

Milind Diwan, BNL, chaired the first part of the afternoon session, "Looking forward." John Wilkerson, UW, talked on "Neutrino-less Double Beta Decay," and Yoichiro Suzuki, Kamioka Observatory, ICRR, University of Tokyo, spoke on "Super-Kamiokande." Lawrence Sulak, Boston University, chaired the session's second half, in which Henry Sobel of University of California, Irvine, talked on "Prospects for the Direct Detection of Dark Matter," and William Marciano, BNL, gave an overview of "The Future of Neutrino Physics."

A standing ovation honored the final speaker, Goldhaber himself, whose closing remarks were hallmarked, as expected, with wit and wisdom.

At the festive dinner that followed at the Brookhaven Center,



Roger Stoulenburgh BNL/2008

Maurice Goldhaber

Physics Chair Thomas Ludlam, a member of the organizing committee, thanked the BNL organizers: Diwan and Werner Vogelsang, who co-chaired the effort; Peter Bond; Howard Gordon; Laurence Littenberg; Nicholas Samios; Steven Vigdor; and Lisa Whitehead, and included special thanks to administrator Deborah Kerr.

More details about the symposium, including the slides of the talks given, are available at www.bnl.gov/nh50. In addition, the symposium will soon be available on line at WBNL.

— Liz Seubert

Gertrude Scharff-Goldhaber Prize Ceremony, 5/23

The 2008 Gertrude Scharff-Goldhaber Prize will be awarded to Christine Nattrass, a graduate student at Yale University, in a ceremony on Friday, May 23rd, at 3 p.m., in the Large Seminar Room of the Physics Department, Bldg. 510. Nattrass will present a short seminar on her research titled "Jets as a probe of the Quark Gluon Plasma." Refreshments will follow the presentation.

Established in 1992, the annual Gertrude Scharff-Goldhaber Prize recognizes substantial promise and accomplishment by a woman graduate student in physics. The prize honors the outstanding contributions of the late nuclear physicist Gertrude Scharff-Goldhaber, who, in 1950, became the first woman Ph.D. appointed to the BNL staff, and, later, a founding member of Brookhaven Women in Science (BWIS). The award is administered by BWIS.

BWIS invites the Brookhaven community and the faculty members and graduate students of the Stony Brook University's Department of Physics to the award ceremony and reception.

For more information, contact Vinita Ghosh, Ext. 6226.

Defensive Driving Course in Two Parts, 5/19 & 22

The six-hour Defensive Driving (Point & Insurance Reduction) course will be held in two parts on Monday and Thursday evenings, May 19 and 22, 6-9:15 p.m. Monday's class will be in Bldg. 490, Large Conference Room; and Thursday's class in the Brookhaven Center South Room. The course is open to BNL, BSA, and DOE employees, facility-users, and their families. The cost is \$38 per person. Preregistration is required. To register, call Ed Sierra, 821-1013, and leave a message. Include your phone number. For more information, call Sarah Wiley, Ext. 4207.

Newspaper Ad Offering Medical Screening

A few weeks ago, local newspapers, including *Newsday*, carried an ad (see right) offering free medical screening for eligible individuals who had done construction work at Brookhaven Lab or at any other Department of Energy site. Many employees noticed the ad and reported it to the Lab.

The ad was placed by the national Building and Construction Trades Department of the AFL-CIO. The local Nassau Suffolk Building Trades Group, on behalf of the national organization, originally contacted Brookhaven Lab in 2006 about work they were doing related to the Energy Employees Occupational Illness Compensation Program.

The Bulletin first reported on this program in the issue of November 17, 2000 (DOE to Compensate Sick Workers), and then published an update on July 13, 2001 (DOE Update: Worker Compensation Legislation). In brief, Congress enacted the Energy Employees Occupational Illness Compensation Program (EEOICP) in 2000, a follow-up

Have you ever worked construction at the Brookhaven National Laboratory or any other Department of Energy (DOE) site? If so, you may be eligible for a FREE Medical Screening. Call 631-813-2725 or 1-800-866-9663 or visit www.btmed.org for more information.

to the Former Worker Medical Surveillance Program, authorized by Congress in 1993. EEOICP is administered by the Department of Labor.

"Through EEOICP," said Joe Falco, Occupational Medicine Clinic Manager, "compensation and payment of medical expenses is available to employees of DOE contractors and subcontractors who develop an illness due to exposure to ionizing radiation or toxic substances such as beryllium or silica."

Here on Long Island, the Nassau Suffolk Building Trades Group is working to identify any construction workers that may be eligible for medical examinations and clinical tests under the former worker program. These evaluations concentrate on the detection of occupational (work-related) illnesses. When an examination reveals a possible occupational illness, the examinee is referred to the EEOICP, which determines whether the former worker is eligible for any federal compensation benefits.

Said Mike Bebon, Assistant Director for Operations, "As part of BNL's commitment to our employees, visitors, guests, and contractors, we have a strong construction safety program that is built on the Department of Energy's Integrated Safety Management Program (ISM). ISM includes compliance with OSHA regulations as well as other standards that affect construction activities on the site. Working with our contractors, we identify hazards associated with the various aspects

of the work and develop and implement ways to protect workers against those hazards."

Bebon added that contractors are required to document how they will implement these controls in a health and safety plan that must be approved by the Lab before work begins. BNL also provides oversight of contractor activities during construction.

BERA Happenings: Baseball, Fish, Plants

Baseball: Yankees & Mets tickets for games on various dates, and Long Island Ducks tickets are on sale at the BERA Store store, Berkner Hall, weekdays, 9 a.m.-3 p.m.

Captain Bob's Fishing Fleet: May 17, Be at the dock by 7:45 a.m., returning at 3 p.m., \$60 per person - No bus transportation.

The Annual Plant Swap will be held at noon outside Berkner Hall on Friday, June 6. Bring your spare plants and swap for others.

Benefit Notes: Qualifying Events

Changes to medical and/or dental coverage may be made during the benefits annual open enrollment. Also, certain changes may be made within either 30 or 60 days of when a qualifying event occurs depending on the event. Qualifying events include: birth or adoption of a child, marriage, divorce or legal separation, loss of dependent status (for instance, graduation, attainment of age limit, or no longer a full-time student), death of a dependent, change in the place of residence or worksite or a spouse's gain or loss of employment. The Benefits Office will need documentation of the qualifying event. If the event results in a loss of coverage, and documentation is submitted within the allotted timeframe, coverage may be continued under COBRA.

For the change in benefits to be approved, the qualifying event must closely relate to the requested change in benefits. For example, if a child is born, a participant may add the child to his/her medical coverage. The participant cannot drop medical coverage at that time.

In addition, depending on the situation, below are some items you may want to update when you have a qualifying event: covered dependents for medical and/or dental coverage, life insurance beneficiaries, retirement plan beneficiaries, tax withholdings on Form W-4, address change, and emergency contact(s).

Employees covering dependent children over the age of 19 as full-time students should be aware that full-time students are only covered over the summer if the student attends classes on a full-time basis for both the Spring and Fall semesters. Otherwise coverage ends on the last day the child attended an accredited college or university on a full-time basis. If there is a possibility that the child may not be in full-time attendance in the Fall, please contact the Benefits Office immediately to discuss continuation of benefits through COBRA. For more information or to make a change to your benefits due to a qualifying event, contact the Benefits Office, Bldg. 400B, Ext. 2877, Ext. 5126 or call (800) 353-5321.

NYC Bus Trip, 6/1

The Hospitality Committee offers a "do-as-you-like" trip to Manhattan, Sunday, June 1. The coach will leave from the Recreation Bldg. in the apartment area at 9 a.m., drop attendees in the Bryant Park area, and leave Bryant Park at 6 p.m. The cost is \$10 for adults, \$5 for children up to 12. You must reserve in advance with Joanne Rula, jrula@bnl.gov or stop at Staff Services in Bldg. 400.

In Memoriam

Walter Palais, who joined the Photography & Graphic Arts Division as a draftsman IV on September 15, 1975, and retired as an illustrator on November 30, 1992, died on November 28, 2007. He was 85.

Louis Potter, who became a mechanic A with life number 924 in Architectural Planning & Plant Maintenance on June 9, 1947, died at 97 on December 19, 2007. He had retired from the Accelerator Department as a technician IV on March 30, 1973.

Olga Vario, who received BNL Life No. 34 in the Fiscal Division as an administrative assistant B on January 6, 1947, died at the age of 95 on January 10, 2008. She had retired as payroll supervisor on December 31, 1977.

Barry Galen, who, on October 31, 1955, became a technician C in the Department of Nuclear Energy, and retired from the Department of Applied Science as a technical associate II on December 28, 1990, died at 77 on January 26, 2008.

Arrivals & Departures

— Arrivals —

Maria Z. Cabail Medical
YongMan Choi Chemistry
Kevin Fox Plant Eng.
Joseph Gettler CEGPA
Aesook Bayon-WagnerNSLS-II
Gary Olsen Facil.&Ops.

— Departures —

Jingyi ChenCMPMS
Hyung Kim ES&T
Richa Rawat.....Biology
Alicia Reid Medical

CALENDAR

— THIS WEEKEND —

Friday, 5/9

Costco Shopping

11 a.m.-2 p.m. Berkner Hall lobby. A Costco representative will discuss discounts at Costco.

— WEEK OF 5/12 —

Wednesday 5/14

Techni-Tool Exhibit, Demo

11 a.m.-2 p.m. Berkner Hall. Representatives from Tektronix Oscilloscope & Function Generator Products, OKI/Metcal Solder/Desolder/Rework Stations, Luxo Magnifier Products, Mantis Stereo Viewing Systems by Vision Engineering, and Chemtronics Cleaners, Degreasers, Flux Remover & Conformal Coating products will discuss their products. For more information, see www.techni-tool.com or contact Carol Fitzgerald, cfitzgerald@techni-tool.com; or 1-800-295-8665 ext. 2469.

Thursday, 5/15

Sam's Club Shopping

11 a.m.-2 p.m. Berkner Hall lobby. A Sam's Club representative will talk on discount shopping at Sam's Club.

BSA Distinguished Lecture

4 p.m. Berkner Hall. Arthur Grollman of Stony Brook University's Department of Pharmacology will talk on "Unraveling the Mystery of an Environmental Disease." Sponsored by BSA, the company that manages BNL, this free lecture is open to the public. Visitors to the Lab of 16 and over must carry a photo ID.

— WEEK OF 5/19 —

Mon.-Wednes., 5/19-21

***2008 Joint NSLS/CFN Users' Mtg.**

Joint National Synchrotron Light Source and Center for Functional Nanomaterials Users' Meeting, theme: "Renewable Energy." All invited to morning plenary session, Tues. 5/22. See p. 1, and www.nsls.bnl.gov/users/meeting/2008/.

Mon.-Fri, 5/19-23

Sleep Screening Week

The Employee Assistance Program of the Occupational Medicine Clinic offers screening for anyone with sleeping problems. Call Ext. 4567 for an appointment.

Monday, 5/19

IBEW Meeting

6 p.m. Centereach Knights of Columbus Hall, 41 Horseblock Rd., Centereach. A meeting for shift workers will be held at 3 p.m. in the union office. The agenda includes nominations for union president and officers.

***Defensive Driving, Part I**

6-9:15 p.m. Bldg. 490, Large Conference Room. Part I of a two-part course. See notice, left.

Thursday, 5/22

Defensive Driving, Part II

6-9:15 p.m. Brookhaven Center South Room. Part II of a two-part course. See notice, left.

Friday, 5/23

***Scharff-Goldhaber Prize**

3 p.m. Physics Department, Bldg. 510, Large Seminar Room. The Gertrude Scharff-Goldhaber Prize will be awarded. All are welcome. Refreshments will follow a short presentation by the winner. See above, left.

— WEEK OF 5/26 —

Wednesday, 5/28

437th Brookhaven Lecture

4 p.m. Berkner Hall. Walter Mangel of the Biology Department will give the next Brookhaven Lecture, title to be announced. All are welcome to these free lectures, open to the public. Visitors to the Lab of 16 and older must carry a photo ID.

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 benefits-eligible employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present benefits-eligible 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. Access current job openings on the World Wide Web at www.bnl.gov/HR/jobs/.

To apply for a position, go to www.bnl.gov. Select "Careers at Brookhaven" then "Employment Opportunities."

LABORATORY RECRUITMENT - Opportunities for Laboratory Employees Only

MATERIAL HANDLER - Performs a variety of laboring and manual tasks in stores operations such as moving, loading, unloading, sorting and storing of materials. May operate motorized equipment pertinent to stores operations. Keeps stores facilities in neat condition. Please send transfer request to Diana Hubert, Bldg. 400B. Apply to Job ID # 14477.

OPEN RECRUITMENT - Opportunities for Lab employees and outside candidates.

POSTDOCTORAL RESEARCH ASSOCIATE - Requires a PhD in physics, electrochemistry, chemical engineering or chemistry. Experience in synthesis of lithium-ion battery cathode materials; metal oxide powder synthesis using solid-state method or sol-gel process is desired. Experience with X-ray diffraction spectroscopy and neutron diffraction spectroscopy to study battery materials, Transmission Electron Microscopy (TEM) studies for lithium battery materials and cyclic voltammetry (CV) on electrolyte studies for lithium batteries is also desired. The research programs that the candidate will be assigned use a combination of in situ x-ray diffraction (XRD) and x-ray absorption spectroscopy (XAS) at National Synchrotron Light Source (NSLS) to study the cathode and anode materials for energy storage devices such as lithium-ion batteries and super capacitors. Under the direction of X. Yang, Chemistry Department. Apply to Job ID # 14482.

SENIOR TECHNOLOGY ARCHITECT/CONTROL APPLICATIONS (I-10) - Requires a PhD in engineering, computer science, or physics, or equivalent experience; and a minimum of fifteen (15) years experience in control system design and applications, distributed control system architecture and distributed instrumentation. Experience must include the following areas: millisecond response times, timing/event systems that operate at the nanosecond accuracy and sub nanosecond jitter, high precision MHz signal digitization, global machine protection with response times under 100 msec, and ten years' experience in programming in some combination of VHDL, C, C++, and Java in a real time environment. The successful candidate will support the development of the NSLS II control system architecture and have primary responsibility over hardware development for timing, fast orbit feedback, machine protection, and the integration of embedded device controllers. Responsibilities include: collect system and subsystem requirements, develop interface control documents, develop preliminary and final design documents, develop control system architecture options for cost/performance evaluation, lead prototype and development stages of development, implement, deploy, integrate, and commission control system for given subsystems, work as a contributing and productive member of a team of application engineers, and perform other tasks as they are identified. In addition, the successful candidate will develop code under LINUX and will have a proven track record of working within a team and have demonstrated communication skills. Reports to the Controls Group Leader, National Synchrotron Light Source II Project. Apply to Job ID #14474.

RF TECHNICIAN - TECHNICAL ASSOCIATE I (T-5) - Requires an AAS degree in electrical engineering technology or equivalent experience, plus at least eight (8) years of relevant work experience performing complex and difficult assignments including programming FPGA-based timing and RF circuits. Primary role will be working on the low level RF control electronics which will be a direct digital I/Q FPGA-based system using the Xilinx Virtex 4. Must consistently show a high degree of initiative and judgment when solving technical problems and have experience with analog/digital board

design, working with electrical designers on board layouts, and troubleshooting board designs. Must be familiar with standard test and measurement equipment such as function generators, oscilloscopes, multi-meters, and network and spectrum analyzers. Candidate will have secondary responsibilities in the operation of superconducting and normal conducting RF cavity systems. The successful candidate will assist in the installation and commissioning of an S-band Linac, and 500MHz CW RF power systems. Experience with PFN modulators, HV power supplies and servo systems highly desirable. The selected candidate must be able to program system interlocks and house-keeping functions using Programmable Logic Controllers (PLC's), be able to follow written test procedures, troubleshoot, and perform routine electrical tests. Reports to the RF Systems Group Leader, National Synchrotron Light Source II. ERAP eligible - \$1,000. Apply to Job #14468.

VACUUM SYSTEMS TECHNICIAN - SR. TECHNICAL SPECIALIST (T-3) - Requires an AAS degree in electro/mechanical technology or equivalent experience, plus six (6) years' experience in a wide variety of highly skilled and complex technical assignments such as assembly, installation, operation, diagnosis, repair and maintenance of ultrahigh vacuum systems. The successful candidate will have considerable responsibility and will exercise a high degree of initiative and judgment for fabricating, assembling, using, troubleshooting, and repairing leak detectors, turbo molecular pumps, ion pumps, titanium sublimation pumps, residual gas analyzers, vacuum gauges and their associated controls. Extensive experience in the use of hand tools and electronic test instruments is required. Proficiency in PC and machine shop practices is a plus and the ability to work from drawings, schematics and verbal instructions is necessary. Must be self-motivated, able to work with a diverse group of scientists and technical staff, and have excellent communication skills. Prior experience with accelerator vacuum system is preferred. National Synchrotron Light Source II Vacuum Group. ERAP eligible - \$500. Apply to Job #14475.

FIREFIGHTER/EMT - Requires five years' progressive experience in a fire department, five years as a New York State EMT-D, and Suffolk or Nassau County or NY State Certification as a motor pump operator on a Class A pumper. In descending order of importance, the following criteria will be used for selection in the event two or more individuals meet the above criteria: certified OSHA Hazardous Materials Technician; Certified in Confined Space Rescue; current line officer in home department; and possession of an associate degree or higher in fire protection technology. Must be willing to work shifts at the completion of training period. Emergency Services Division. Apply to Job ID #14476.

Motor Vehicles & Supplies

05 ACURA TL - 4dr. sedan, GPS, perfect cond., seller moved to U.K. Must sell now! 40K mi. \$21,000/neg. AI, Ext. 7262.

02 HONDA S2000 - Spa yellow mint cond.. 2L 245hp, 6spd, a/c, p/w, c/c, p/l pwr. top cd. 19K mi. \$20,000/neg. 849-2520.

00 SUZUKI ESTEEM WAGON - 1.8L, a/t, p/s, a/c. 103K mi. \$3,100/neg. LEE, Ext. 5534 or 256-454-2941.

00 INFINITI G20T - 4-door, 5-speed, air cond., cruise control, power windows & door locks, s/roof. 140K mi. \$3,500. 255-0729.

98 CHEVY SUBURBAN - LT 4X4 a/c, a/t, cd, p/b, p/l, new whls/tires brakes, lthr, heatd fr seats 104K mi. \$7,500/neg. Fred, Ext. 3498.

96 HONDA CIVIC EX - a/t, p/s, p/l, p/w, 4 dr, abs, alarm, rem start, an/fm, a/c, gd. gas mi., 170K mi. \$3,200/neg. 751-1224.

95 CADILLAC SEDAN DE VILLE - v/gd. to excel. cond. 75K mi. \$4,200/neg. 581-7656.

TOW BAR - 3500 lbs. cap. w/2-in. ball hitch/safety chains, non-adjustbl, ask \$30. Ext. 5551.

Boats & Marine Supplies

22' MACGREGOR SLOOP - Retractable keel, new trailer/sails, Honda motor, pop-top, sleep berth, extras. \$5,000/neg. 267-7786.

ANCHOR - mushroom for sm. boat \$10. Peter, Ext. 5551 or 772-4751.

BOAT SLIP - Jamesport Peconic Bay, deep water, boat up to 25', floating dock, no util., \$50', \$900/min. Ext. 2906 or 929-6189.

Furnishings & Appliances

BED - brand new queen bx spring & frame \$100; free wooden headbrd. Babu, 344-1086.

COFFEE GRINDER - gd. cond.; coffee machine w/ timer, 4 cups, both Mr. coffee, \$20/both. Ariane, Ext. 5245.

DESK - w/hutch and matching headbrd. for girl, \$60/neg. Babu, Ext. 2568.

ENTERTAINMENT CENTER - coffee table; 1 end table w/glass top, all oak, pics avail., \$375/obo. John, 331-4792.

SOFA & BEDROOM SET - Sleeper couch/love seat, floral print; bdrm. set, dark oak; both queen, all excel. cond., b/o. 661-3368.

TABLE - w/matching 4 chairs, ask \$150/neg. Babu, Ext. 2568 or 344-1086.

TABLE SET - oak, 6 chairs, 2 leaves, single pedestal base, oval top w/carved details, \$375. 878-9020.

Audio, Video & Computers

35MM SLIDE SCANNING SERVICE - www.pictureperfectscans.com, delivered on DVD. Music avail. Dianne, 928-6469.

TIVO - TCD649080 Series2 80 hr. dual-tuner DVR., new-n-bx, \$60. Min, Ext. 2508.

TRANSMITTER - Belkin Tune Cast II mobile FM, turns FM stereo wirelessly into an MP3 broadcaster, \$15. Ext. 5245.

Sports, Hobbies & Pets

DOG CRATE - for dogs up to approx. 110 lbs. e.g. golden retrievers; excel cond., \$50. Kim, Ext. 7465 or 399-3098.

POP-UP TRAILER - '83, Colemans, sleeps 6, stove, sink, storage, needs tires, gd. cond., ask \$900. Ext. 2716 or 878-2425.

SURFBOARD - "Lost" brand, gd. cond., 6'2"L, \$100/neg. Lynda & Michael, Ext. 7235 or 286-1018.

TANK - drain water w/wheels for camper, gray water, 10 gals. \$10. Ext. 5551 or 772-4751.

TENT - Field & Stream Tahoe, 3 rm. 1 sleeps 8 people, UV Armor 17 x 8' x 6' ask \$100. Peter, Ext. 5551 or 772-4751.

WETSUIT - youth, size 12, excel. cond., barely worn, pd/\$100, ask/\$40. Lynda or Michael, Ext. 7235 or 286-1018.

Tools, House & Garden

ENGINE ANALYZER - \$20; car ramps, \$20. chris, Ext. 2094 or 831-3469.

INVISIBLE FENCE - Model ICT-150 w/ Model 3000 lightning protector and two R21 collar, \$100. Scott, Ext. 7313.

WORK BENCH - assembled wood, w/elect. outlets, 2 drawers, attach'd vice, You pick up, \$100. Cheryl, Ext. 2272 or 732-7634.

Miscellaneous

ATTN. TREE SERVICE Cos. - Do you need to dump wood? Please call. Michael, Ext. 7861 or 849-2329.

ORGANIZER - Sharp Wizard, new, small. \$25. 281-4459.

PICTURE - abstract, peach; frame 46 x 34, peach, pink, acqua, \$50. 281-4459.

SPEAKER PHONE - dishes, coffee maker, bred toaster, table lamps much more. Babu, Ext. 2568 or 344-1086.

SPRINKLER HEADS - gear drive & sprays, also valves and 1" poly pipe. Michael, Ext. 5262 or 284-2277.

TICKETS - Mets/Cinn. May 9th, 7:05 Lodge 37/ea contact. James, Ext. 2214.

WALL CLOCK - oval, oak, like new, \$25. 281-4459.

WEDDING DRESS - size 10, "White One" brand, cathedral train, bought at RBC but ended up not using, \$250. Ext. 3621.

WEDDING DRESS - gorgeous, size 10, perfect cond., beaded, half sleeve, veil, slip, shoes, ask \$200. Barbara, Ext. 3431.

WEDDING GOWN - white, straight, beaded w/train, size 4, \$200. 281-4459.

Yard & Garage Sales

NORTH BABYLON - estate/gar. sale, May 10, 10-5pm no previews/earlybirds, rain/shine, 124 Parkdale Dr., off rte 231. 661-3368.

Happenings

VEHICLE SALE NOTICE - Public Vehicle Sale, May 12-16. The Government Services Administration will offer 15 motor vehicles, located at Warehouse 100, for public Auction from Monday, May 12, through Friday May 16 during which time anyone may bid on the vehicles. Photos on the vehicles, w/pertinent information. See www.gsauctions.gov. Ext. 2325.

Free

ARTIFICIAL CHRISTMAS TREE - 12', used about 5 times, stand incl., perfectly fine cond. Ext. 5483.

AUDIO TAPES - 71 cass.; 80 8 tracks; mostly Country Music, some Christmas. Peter, Ext. 5551 or 772-4751.

PVC PIPES - 60 pieces, 2-1/4" diameter, you pick up. Dejan, Ext. 3078.

TRAMPOLINE - 14' long, u-pick-up. Richard, Ext. 3386.

Wanted

BIKE RACK - used, that fits over spare tire on back of a SUV. Melanie, Ext. 3906.

FIREWOOD LOGS ALREADY CUT - want hardwood 16" to 22", Oak, Locust, Maple, Cherry, Michael, Ext. 7861 or 849-2329.

GUITARS/AMPS - old, unwanted or in need of repair. chris, Ext. 2094 or 831-3469.

PING PONG TABLE - used, reasonable cond. & price. Daniel, Ext. 4798 or 878-1255.

PING PONG TABLE - fair shape. Ext. 4095.

SPECIALIST - for Autism Spectrum, work w/ 6 yr. old who does not speak, pls. call if you can help. Susan, Ext. 7414 or 645-7707.

For Rent

CHERRY GROVE - vac. rental, full season, mo/wkly, 1 bdrm. studio cottage, priv. ent., deck, a/c, satellite TV, few min walk to ocean. \$1,200/wk. 597-6874.

Employee Lunchtime Tour Today, 5/9 Come Birding!



Roger Stoutenburgh DOT79407

The Employee Lunchtime Tour to be held today, Friday, May 9, is a birding walk. Meet the group in Berkner Hall upper lobby at noon to be transported to the bird-walk site, which will be on the roads, not in the woods, down by the ball fields. It would still be sensible to wear appropriate shoes and anti-tick garments: long sleeves, trousers, and big socks that can go over pant legs. Bring binoculars also if you have them. The group will return to Berkner Hall by 1 p.m. For more information, call Elaine Lowenstein, Ext. 2400.

Join the BNL Veggie Club!

Fresh organic produce from a local farm on Long Island is available, delivered to BNL, for those who wish to join Community Supported Agriculture (CSA) at BNL. Members receive fresh organic produce from the Green Thumb Organic Farm in Water Mill, where the Halsey family has been farming their land since 1644. The Halseys grow over 350 varieties of fruits and vegetables, picked daily for delivery to provide the highest nutritional content.

As a CSA member, each week, for 26 weeks, a selection of freshly picked organic produce will be delivered to BNL for you to pick up. The selection is based upon whatever is in season that week. Often the produce will be accompanied by a recipe giving ideas for preparing that week's specials. The fee for a season of produce is \$410, which may be paid immediately or in installments of \$275 on sign-up, by May 31, with one post-dated check for: \$135 for July 14. The first delivery is in early June, continuing through November. For more information, including a list of the fruits, herbs, and veggies that the Halseys grow, or to join CSA, contact Ruth Comas, comas@bnl.gov or Ext. 3545.

Water Mains to Be Flushed Next Week, 5/12-16

To eliminate "rusty" water and thereby improve the quality of the water delivered to consumers' taps, the Water Treatment Engineers of the Plant Engineering Division will flush the Lab's water mains from Monday, May 12, through Friday, May 16, as follows:

- Monday, 5/12: Rutherford Drive, Lawrence Drive, and south of Bldg. 490
- Tuesday, 5/13: Upton Road through the apartment area
- Wednesday, 5/14: Cornell Avenue and its cross streets
- Thursday, 5/15: Brookhaven Avenue
- Friday, 5/16: Bell Avenue

During and after water-main flushing, run the water in your sink, fountain, or shower before using it. You may have to flush your tap for 5 to 10 minutes until the water runs clear. If a "rusty" water problem persists beyond the hydrant-flushing schedule, then please call the Maintenance Management Office, Ext. 2468.

So that discolored water is not used for washing clothes, the on-site laundries will close at 8 a.m. on Tuesday, May 13, and re-open at 10 a.m. on Wednesday, May 14.



Joseph Rubino D1422048

FARMINGVILLE - lg. house, share bath w/2; w/1 \$575; incl. cable, wifi, phone. benjil@bnl.gov. \$495/mo. Ben, 513-8275.

MIDDLE ISLAND - Hidden Meadow, 2 rms., can be 2 brs or 1 br 1 sitting rm, priv. kit. & bath, 2nd flr. 10 min to BNL. quiet neighborhood \$925/mo. 253-0454.

SHIRLEY - 1rm, microwave kitnet, full bath, sep ent, furn, tv, cac, cable, wireless int, 1-mo sec, 5min to stores/beach, no smkg/pets \$600/mo. Regis, Ext. 8321.

SHOREHAM - lg. 1 bdrm. w/off. area, lr/kit. combo, full stove/frig, new bath/carpet/paint/tile, pvt french dr. nnt/prkg., incl. util. \$1,250/mo. Ext. 2025 or 849-6121.

WADING RIVER - new 1 bdrm. apt., 10 min. to BNL, quiet neighborhood, incl. util./cable/int., no smkg/pets. \$1,000/mo. Toby, 929-6523.

MCGAHEYSVILLE, VA - Timeshare, 1 bdrm throuse, part. kit., sleeps 6, in/outdr., wtrprk, gd. for children, 2 hrs. s. of Wash, DC, 7/26-8/2. \$600/wk. Ext. 3750 or 672-4141.

SANIBEL ISLAND, FL - Timeshare, 2 bdrm, 2 baths, w/dr, full kit., sleeps 6, pool, ground flr., on beach, wk. Aug. 2-8. \$700/wk. Linda, Ext. 3750 or 672-4141.

For Sale

EAST MORICHES - 3 bdrm. ranch, new windows/ roof/siding/kit. w/granite counters, stainless appli., .25 acre, 15 mins. to lab. \$309,999 Steven, 445-2720.

FANTINEKILL, NY - Catskills 1890 Farmhouse w/guest cottage, barn, fenced paddcks, views, nr stream, 1.5 acres. <http://ti.nyurl.com/2nokdn>. \$259,000/neg. Ext. 2922.

HOLTSVILLE - 1 br co-op in well maint'd gated community, incl. igp, tennis/basketball courts, gym, playgrnd., community rm., laundry. \$170,000/neg. 475-2579.

MILLER PLACE - well maint'd, Old Field Ranch, 3 bdrm, 1 full bath, 1/2 w/tp, Andersen windows, .34/acre level prop., 1.5 car det. gar. w/elec. \$320/neg. 241-4166.