

At BNL, DOE Plans to Establish Energy Frontier Research Center

BNL will be home to one of 46 new multi-million-dollar Energy Frontier Research Centers (EFRCs) announced on April 27 by the White House in conjunction with a speech delivered by President Barack Obama at the annual meeting of the National Academy of Sciences. The EFRCs, which will pursue advanced scientific research on energy, are being established by DOE's Office of Science at universities, national laboratories, nonprofit organizations, and private firms across the nation.

"As global energy demand grows over this century, there is an urgent need to reduce our dependence on fossil fuels and imported oil and curtail greenhouse gas emissions," said Secretary of Energy Steven Chu. "Meeting this challenge will require significant scientific advances. These Centers will mobilize the enormous talents and skills of our nation's scientific workforce in pursuit of the breakthroughs that are essential to make alternative and renewable energy truly viable as large-scale replacements for fossil fuels."

The 46 EFRCs, which DOE plans to fund at \$2-to-5 million per year each for an initial five-year period, were selected from a pool of some 260 applica-

tions received in response to a solicitation issued by the Office of Science in 2008. Selection was based on a rigorous merit review process utilizing outside panels composed of scientific experts.

Scientists at the BNL EFRC will seek to understand the underlying nature of superconductivity in complex materials. Ultimately the research is aimed at improving the capacity, efficiency, and reliability of the electric grid.

EFRC researchers will take advantage of new capabilities in nanotechnology, high-intensity light sources, neutron scattering sources, supercomputing, and other advanced instrumentation, much of it developed with DOE Office of Science support over the past decade, in an effort to lay the scientific groundwork for fundamental advances in solar energy, biofuels, transportation, energy efficiency, electricity storage and transmission, clean coal and carbon capture and sequestration, and nuclear energy.

"We at BNL are delighted to have been chosen to lead a DOE EFRC together with our partners at the University of Illinois and Argonne National Lab," said Deputy Lab Director for Science & Technology Doon Gibbs.

"We are also excited at the way this research will leverage many unique Brookhaven facility strengths including the National Synchrotron Light Source and the Center for Functional Nanomaterials."

Scientists at the BNL EFRC will seek to understand the underlying nature of superconductivity in complex materials. Ultimately the research is aimed at improving the capacity, efficiency, and reliability of the electric grid.

These are crucial issues for Long Island, New York State, and the nation especially as demand continues to rise and as substantial renewable energy sources like the sun and wind are integrated into the system.

Of the 46 EFRCs selected, 31 are led by universities, 12 by DOE national laboratories, two by nonprofit organizations, and one by a corporate research laboratory. The criterion for providing an EFRC with Recovery Act funding was job creation. The EFRCs chosen for funding under the Recovery Act provide the most employment for postdoctoral associates, graduate students, undergraduates, and technical staff, in keeping with the Recovery Act's objective to preserve and create jobs and promote economic recovery.

Annual Joint NSLS/CFN Users' Meeting, 5/18-20

The annual Joint National Synchrotron Light Source (NSLS)/Center for Functional Nanomaterials (CFN) Users' Meeting will be held May 18-20. Hear the latest about the NSLS, CFN, and NSLS-II through workshops, talks, the poster session, and exhibits. The Main Meeting and Plenary sessions on Tuesday, May 19, will be open to all, and free. For more information, go to: <http://www.nsls.bnl.gov/users/meeting/page.aspx?id=home>.



Talk on Archimedes' Oldest Writings, 5/20

Uwe Bergmann, a scientist at SLAC National Accelerator Laboratory, will give a talk titled "Archimedes' Oldest Writings Under X-ray Vision," on Wednesday, May 20, at 4 p.m. in Berkner Hall. Sponsored by Brookhaven Women in Science (BWIS) and QuarkNet, the talk is free and open to the public. Visitors to the Lab age 16 and older must carry a photo ID.

Archimedes of Syracuse (287 – 212 B.C.) is considered one of the most brilliant mathematicians and thinkers of all times. The tenth-century parchment document known as the *Archimedes' Palimpsest* is the oldest surviving copy of works by the Greek genius. Currently,

the privately owned *Palimpsest* is the subject of an integrated campaign of conservation, imaging, and scholarship being undertaken at the Walters Art Museum in Baltimore. Much of the text has been imaged by various optical techniques, but significant gaps in the legibility of the writing have remained on several pages.

Large parts of these writings were recently deciphered at the Stanford Synchrotron Radiation Lightsource at SLAC. A special x-ray technique showed maps of iron in faint traces of partially erased ink. The x-ray images revealed Archimedes' writings from some of his most

See *Archimedes* on pg. 2

2009 RHIC & AGS Annual Users' Meeting, 6/1-5



See details, pg. 3 or visit: http://www.bnl.gov/rhic_ag/users_meeting.



Recent NSLS/CFN Science Highlights

Researchers Discover "On Switch" For Cell Death Signaling Mechanism

Scientists from Burnham Institute for Medical Research have determined the structure of the interactions between proteins that form the heart of the death inducing signaling complex (DISC), which is responsible for triggering apoptosis (programmed cell death). The research, performed by Stefan Riedl and colleagues, published in the February 19, 2009 edition of *Nature*, highlights how protein-protein interactions between Fas receptor and Fas-associated death domain protein mechanistically control

DISC formation. Data collection took place at the National Synchrotron Light Source (NSLS) beamline X29A.

This research was funded by grants from the National Institutes of Health and the National Cancer Institute. The NSLS is funded by DOE's Office of Science.

For more information, go to <http://www.nsls.bnl.gov/newsroom/science/2009/05-391.htm> or "The Fas-FADD Death Domain Complex Structure Unravels Signaling by Receptor Clustering," *Nature*, **457**, 1019-1022 See "On Switch" on pg. 2

At the CFN, DNA-Based Assembly Line For Precision Nano-Cluster Construction

Building on the idea of using DNA to link up nanoparticles — particles measuring mere billionths of a meter — scientists at the Center for Functional Nanomaterials have designed a molecular assembly line for predictable, high-precision nano-construction. Such reliable, reproducible nanofabrication is essential for exploiting the unique properties of nanoparticles in applications such as biological sensors and devices for converting sunlight to electricity.

The work was published online March 29,

2009, by *Nature Materials*. Led by Oleg Gang, the team of researchers included materials scientist Dmytro Nykypanchuk, summer student Marine Cuisinier, and biologist Daniel (Niels) van der Lelie, all from BNL, and former BNL chemist Matthew Maye, now at Syracuse University. Their work was funded by DOE's Office of Science and through a Goldhaber Distinguished Fellowship sponsored by Brookhaven Science Associates (BSA).

BSA has applied for a patent on the method See *Construction* on pg. 2

Researchers Find New Protein Function

Researchers from Dartmouth College, with colleagues from Lawrence Berkeley National Laboratory (LBL), Stowers Institute for Medical Research (SIMR) in Kansas City, Missouri, and Kansas University Medical Center (KUMC) have found a new function for one of the proteins involved with chromosome segregation during cell division. Their finding adds to the growing knowledge about the fundamental workings of cells, and contributes to understanding how cell function can go wrong, as it does with cancerous cells.

The researchers studied a protein called NOD, distantly related to the motor proteins that power diverse cellular activities, including

intracellular transport, signaling, and cell division. They used x-ray crystallography at National Synchrotron Light Source (NSLS) beamline X6A to determine its structure, and then enzyme kinetics to find out how it performed. The results are published in the January 9, 2009, issue of the journal *Cell*.

"This study on NOD provided evidence for a new way a kinesin motor could function," said Jared Cochran, a postdoctoral fellow at Dartmouth and the lead author on the study. "Rather than moving on its own, it hitches a ride on the ends of microtubules which results in a dynamic cross-linking between the arms of chromosomes and the

See *Proteins* on pg. 2

CALENDAR
OF LABORATORY EVENTS

- The BERA Store in Berkner Hall is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347, or Christine Carter, Ext. 2873.
- Additional information for Hospitality Committee events may be found at the Lollipop House and the laundry in the apartment area.
- The Recreation Building #317 (Rec. Hall) is located in the apartment area.
- Contact names are provided for most events for more information.
- Events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.

— REGULARLY —

Weekdays: Free English for Speakers Of Other Languages Classes

Beginner, Intermed., Adv. classes, various times. All welcome. Learn English, make friends. See <http://www.bnl.gov/esol/schedule.html> for schedule. Jen Lynch, Ext. 4894

Mondays: BNL Social & Cultural Club
Noon–1 p.m., Brookhaven Center, South Room, free beginners dance lessons. Rudy Alforque, Ext. 4733, alforque@bnl.gov

Mondays & Wednesdays: Pilates
12:15–1:15 p.m. Mons.; 5:15–6:15 p.m. Mon. & Wed. Rec. Hall. \$75/onc/wk., Registration is required. Ext. 5090

Mondays & Thursdays: Kickboxing
\$5 per class. Noon–1 p.m. in the gym. Pay as you go. Ext. 8481

Mon., Thurs., & Fri.: Tai Chi
Noon–1 p.m., B'haven Cntr N. Rm. Adam Rusek, Ext. 5830, rusek@bnl.gov

Tuesdays: Hospitality Coffee
10:30 a.m.–noon, Rec. Hall lounge. All welcome. Ext. 5090

Tuesdays: BNL Music Club
Noon, B'haven Center, N. Room. Come hear live music. Joe Vignola, Ext. 3846

Tuesdays: Knitting Class
2–4 p.m. Rec. Hall. All levels of skill. Ext. 5090 for information.

Tuesdays: Jiu Jitsu
6:30–7:30 p.m. Gym. All ages, 6 yrs. to adult. \$10/class, pay as you go. Tom Baldwin, Bldg. 452, Ext. 4556

Tuesdays: Toastmasters
3 monthly meetings: 2nd Tuesday: Noon, Berkner, Rm. D. 1st & 3rd Tuesdays, 5:30 p.m., Bldg. 463, Rm 160. Guests, visitors welcome. <http://www.bnl.gov/bera/activities/toastrnists/>

Tue., Wed. & Thurs.: Rec Hall Activities
5:30–9:30 p.m. General activities, TV, ping pong, chess, games, socializing. Christine Carter, Ext. 5090

Tuesday & Thursday: Aerobic Fitness
5:15 p.m., Rec. Hall. 10 classes for \$40 or \$5 per class. Pat Flood, Ext. 7866, flood@bnl.gov

Tuesday & Thursday: Aqua Aerobics
5:30–6:30 p.m., Pool. Registration is required. Ext. 2873

Tuesday & Thursday: Jazzercise
Noon–1 p.m. Rec. Hall. 8-wk session, \$90 2x/wk. Holbrook & Wading River locations too. Registration is required. Ext. 2873

Wednesdays: On-Site Play Group
10 a.m.–noon. Rec. Hall. Infant/toddler drop-in event. Parents meet while children play. Restarts 9/10. Petra Adams, 821-9238

Wednesdays: Ballroom Dance Class
B'haven Center, N. Ballroom. Instructor: Giny Rae. Three 1-hr. classes, starting at 5:15 p.m. Ext. 3845

Wednesdays: Yoga
Noon–1 p.m., B'haven Center. Free. Ila Campbell, Ext. 2206, ila@bnl.gov

1st Wednesday of month: LabVIEW
1:30–3 p.m., Bldg. 515, 2nd fl. Seminar Rm. Free technical assistance from LabVIEW consultants. Ext. 5304, or Terry Stratoudakis, (347) 228-7379

Thursdays: BNL Cycletrons Club
Noon–1 p.m., First Thurs. of month. Berkner, Rm. D. Toni Hoffman, Ext. 5257

Thursdays: Reiki Healing Class
Noon–1 p.m., Call for location. Nicole Bernholz, Ext. 2027

Fridays: BNL Social & Cultural Club
Noon–1 p.m., B'haven Center, S. Room, free beginners dance lessons. 7–11:30 p.m. N. Ballroom, Dance Social, workshops. Rudy Alforque, Ext. 4733, alforque@bnl.gov

Fridays: Family Swim Night
5–8 p.m. BNL Pool. \$5 per family

Fridays: Family Gym Night
5–8 p.m. Family gym activities. Free

CIGNA Representative

A CIGNA Healthcare representative is available in Human Resources, Bldg. 400, or by phone to assist with claims issues you have been unable to resolve yourself through CIGNA's Customer Service number (1-800-CIGNA24) — by appointment only. You need to provide all pertinent documentation. To schedule, call Ext. 5126.

SBU Student Engineers Visit BNL's Facilities

Undergraduate students from Stony Brook University (SBU) who are members of the National Society of Black Engineers visited BNL on April 17 to learn about some of the Lab's exciting scientific facilities. Chief Human Resources Officer Tony Bowman of the Human Resources & Occupational Medicine Division (HROM), Diversity Manager Shirley Kendall, Diversity's Rosa Palmore, the Office of Educational Programs' Noel Blackburn, and HROM's Terrence Buck, who organized the visit, welcomed the students and talked with them about their career goals.

A tour of the Lab followed, coordinated by Elaine Lowenstein of the Community Relations Office. The first stop was the Main Control Room for the Relativistic Heavy Ion Collider, where Lee Hammons of the Collider-Accelerator Department explained the basic physics behind the operations of the complex, and how computer controls are used to determine the state of the beam of particles

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important works that were hidden by twelfth-century biblical texts, mold and forged gold paintings. Join Bergmann in a fascinating journey of a 1,000-year-old parchment from its origin in the Mediterranean city of Constantinople to an x-ray beam line at SLAC in California.

BWIS is a not-for-profit organization at BNL that promotes the advancement of women in scientific professions, and QuarkNet is an initiative funded by DOE and the National Science Foundation to involve high school teachers and their students in particle physics research about the structure of matter and the fundamental forces of nature.

Uwe Bergmann earned a Ph.D. in physics from Stony Brook University in 1994 and did his postdoctoral work at the European Synchrotron Radiation Facility in Grenoble, France, and DOE's Lawrence Berkeley National Laboratory (LBNL) in Berkeley, California, before he became a scientist at LBNL in 1999. He also became an assistant researcher in the Department of Applied Science at the University of California, Davis, in 2000. He then moved on from these positions to become a staff scientist at SLAC's Stanford Synchrotron Radiation Lightsource (SSRL) in 2003. He is currently a senior staff scientist at the facility as well as head of the Chemical & Materials Science & User Support Department at SSRL. — Diane Greenberg

In Memoriam

Lois Zeidler, who joined the Lab's Payroll Division on June 6, 1949, as an office services assistant, and retired from that position on March 26, 1976, died on March 27, 2009. She was 80.

*The Editor greatly regrets that the Bulletin of April 17, 2009, incorrectly reported that **William Eberspacher**, who was at the Lab from September 26, 1955, to December 31, 1976, died on August 25, 2008. He died on October 8, 1996.*



Roger Stoutenburgh D3900409

Stony Brook University student engineers from the National Society of Black Engineers are pictured with BNL staff members, including Chief Human Resources Officer Tony Bowman (back, third from left) and Terrence Buck (left), Human Resources & Occupational Medicine Division.

that is being accelerated to race around the collider ring.

Next, at the Center for Functional Nanomaterials (CFN), Yolanda Small of the CFN, led the group to see the innovative instruments being used by researchers in studying materials at the nanoscale, focusing especially on finding alternative ways to solve the nation's energy challenges.

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and several specific applications. For more information, see <http://www.bnl.gov/cfn/news/PRdisplay.asp?prID=921>.

"On Switch" on pg. 2

(2009), by F.L. Scott, B. Stec, C. Pop, M. Strokegorzata, K. Dobaczewska, J.J. Lee, E. Monosov, H. Robinson, G.S. Salvesen, R. Schwarzenbacher, and S.J. Riedl. For more highlights of research at the National Synchrotron Light source, go to <http://www.nsls.bnl.gov/newsroom/science/>.

Retirement Counseling

A TIAA-CREF consultant will visit BNL on Thursday and Friday, May 21 and 22, to answer employees' questions about the importance of protecting assets against inflation, finding the right allocation mix, learning about TIAA-CREF retirement income flexibility, and comparing lifetime income vs. cash withdrawal options.

For an appointment, call 1-800-732-8353.

Letter to the Editor: Another Way to Save Gasoline

After reading the article on BNLer Ron Schroeder who uses recycled cooking oil to power his car (The Bulletin, April 17, 2009) retiree David Alburger commented:

A few years ago the NBC TV commentator Asa Aaron listed 50 ways to save gasoline. But he failed to include a very important one, "Minimize the Use of the Brakes." From the point of view of an energy-conscious physicist, the engine converts the explosive energy of gasoline into the car's kinetic energy (acceleration) and/or potential energy if on an up-grade. Once on a level road at a constant speed, all the engine's energy goes into frictional losses in the engine, the drive train, wheel bearings, and tires on the road, as well as overcoming wind resistance. All of those losses are unavoidable and are pre-determined by the car's design (engine efficiency, quality of bearings, tire design, and stream-lining) and by main-

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cell's growing spindle of microtubules. If NOD doesn't function properly, then the two cells end up with either both or none of that particular chromosome, which is lethal [to the cell and the organism] in most cases."

"Before this study, it had been shown that kinesin motors either walked along their microtubule tracks or functioned to break microtubules apart," says Jon Kull, the senior author on the paper. "This work describes a novel mode for kinesin function, in which NOD does not walk, but rather alternates between grabbing on to and let-

Attention Retirees!

Get-Together Luncheon, 6/4

All retirees are warmly invited to come to the Annual Luncheon to be held at the Bellport Country Club on Thursday, June 4. You do not have to be a member of the Brookhaven Retired Employees Association (BREA) to join in the fun and meet old friends and new acquaintances. The cost is \$35 per person. Just send a note with the following information: your name, address, phone number, e-mail address if you have one, name or names of your spouse or guests who you will bring to the lunch, if any, and the amount of your check, and mail it with your check to BREA, BNL, Bldg. 421, P.O. Box 5000, Upton, NY 11973.



Roger Stoutenburgh D0450105

David Alburger

tenance (lubrication, tire pressure, engine tune-up, etc.).

Every time the brake pedal is depressed some of the car's kinetic energy, and potential energy if on a down-grade, is converted into lost heat in the brakes. Aside from uniform acceleration, a good way to save

and brightness for experiments, especially at the nanoscale. It will produce x-rays more than 10,000 times brighter than the current Light Source, where scientists from 400 universities, government laboratories, and companies use beams of x-rays, ultraviolet light, and infrared light for research.

At the close-out session, Ray Roberts of the Quality Management Office, a former member of the SBU National Society of Black Engineers, talked about some of the work he performs in quality assurance engineering. The students then viewed a video on scientific research at BNL, titled *Discovery*.

"I would like to express how pleased I am that this group of Stony Brook undergraduate engineers from the National Society of Black Engineers came to visit the Lab," said Buck. "BNL offers a diverse and dynamic work place, where collective efforts by all serve to fuel the passion for discovery, and we need young talented scientists and engineers to join us." — Liz Seubert

ting go of the end of the growing filament, thereby tracking the end as it grows. The diversity of function of these proteins is remarkable."

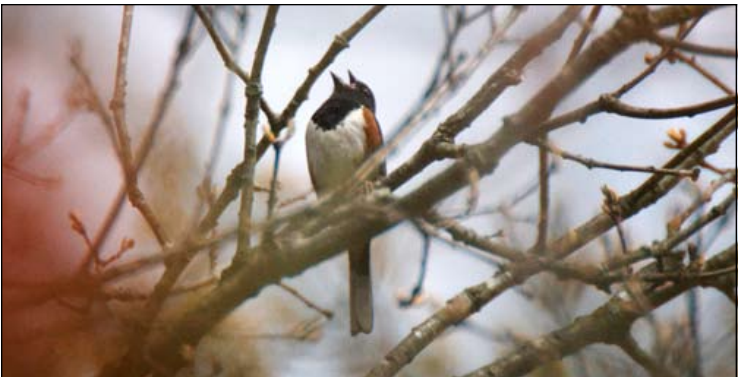
In addition to Cochran and Kull, authors on this study include Natasha Mulko, Dartmouth; Charles Sindelar, LBNL; and Kimberly Collins, Stephanie Kong, and R. Scott Hawley, SIMR. Hawley is also affiliated with KUMC. For more information on their work, see "ATPase Cycle of the Nonmotile Kinesin NOD Allows Microtubule End Tracking and Drives Chromosome Movement," *Cell*, **136**(1), 110-122.

on gasoline is to use the brakes as little as possible. All sorts of strategies can accomplish this. For example, if a traffic light a quarter-mile ahead is starting to turn red, or if a 'stop' sign or turn is coming up, put the gear-shift into neutral and allow the frictional losses and wind resistance to slow the car down rather than powering ahead and slamming on the brakes at the last moment. In slow-moving traffic, try to maintain as constant a speed as possible without rushing to fill in a gap and then braking to a complete stop.

If the general driving public were to adopt these energy-saving practices, there could be a substantial reduction in total gasoline consumption. It would be up to the media to explain some of these ideas, or perhaps the curriculum of defensive-driving courses should include a section on this topic.

— David Alburger

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Employee Lunchtime Walk Birding Tour, 5/22

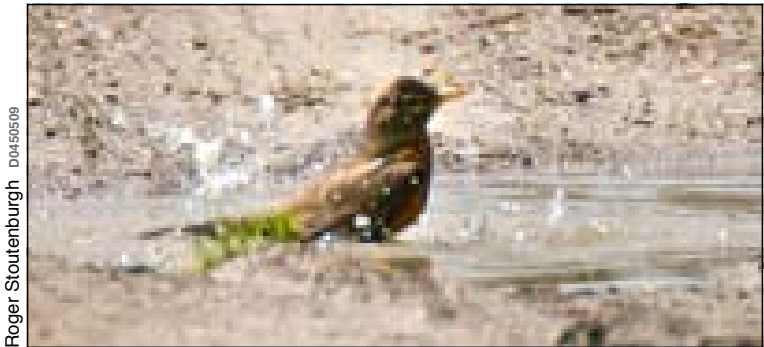
On Friday, May 22, noon to 1 p.m., all are invited to join the Employee Lunchtime Tour for a bird walk led by Ernie Lewis and Tim Green, who will identify birds and provide a checklist of some of the more common birds on site. Meet the group at noon in Berkner Hall lobby to be taken to the walking area. Wear suitable shoes and clothes that are as anti-tick as possible; bring your binoculars and a bird book if you like. For more information, call Elaine Lowenstein, Ext. 2400.

Lewis provides some background to the tour: "BNL, comprising more than 5,000 acres (approximately 8 square miles) in the Pine Barrens region of Long Island, contains a large diversity of bird species, ranging in size from the Ruby-throated Hummingbird (so small that eight could be mailed anywhere in the U.S. for 42 cents) to the Wild Turkey. Some of the species are found here all year, whereas others occur for only part of the year. In total, more than 180 species have been reported on site, and nearly half this number breed here. Some of these, such as the Canada Goose, are probably familiar to most people, whereas



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others are relatively rare, such as the Summer Tanager, a beautiful red bird usually found much further south, for which the first New York State nesting record was on BNL property. "Spring is a wonderful time to look for birds on site, as many colorful warblers, tanagers, and grosbeaks can be seen in the finest plumage. Most of these birds are neotropical migrants that spend the winter in Central America, flying thousands of kilometers in both spring and fall. Some of these are only passing through on migration to their breeding grounds further north, but many remain on site to build nests and raise their young, and these are often openly displaying to attract mates and establish territories, allowing easy observation. "To see some of these colorful wonders, join us next Friday."



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Skin Cancer Screening

Lawrence Lieblich, Board-certified dermatologist, will perform full-body examinations to screen BNLeers for skin cancer on Thursday, June 25, 9 a.m.-noon in the Occupational Medicine Clinic. To obtain an appointment, contact Michael Thorn, Health Promotion Coordinator, Ext. 8612, or mthorn@bnl.gov.

Arrivals & Departures

— Arrivals —

David Bergman.....NSLS-II
Joseph De LongNSLS-II
Vito De Monte..... C-AD
Michael Luizzi..... Maint. & Fab
James Stolfi.....NSLS-II

— Departures —

Jesus Graciani.....Chemistry
Chunyan Tang.....Biology

Correction

The Bulletin much regrets that among the 15 2009 BSA Scholars listed in the Bulletin of May 8, 2009, Angela Hackenburg was incorrectly reported as being a senior at Miller Place High School; she attends William Floyd High School.

2009 RHIC & AGS Annual Users' Meeting, 6/1-5



The 2009 Relativistic Heavy Ion Collider (RHIC) and Alternating Gradient Synchrotron (AGS) Users' Meeting will be held at BNL from June 1 through 5. The first two days, Monday and Tuesday, will have workshops on RHIC science, which will run in parallel and will highlight the recent results from RHIC experiments. On Wednesday, June 3, a special educational symposium will be held on Accelerator Physics, with the goal of enhancing the community's understanding of the field on which the researchers rely. Thursday and Friday will feature plenary sessions with highlight talks on the accomplishments of the RHIC experiments, their future, perspectives from BNL management and the funding agencies and the special guest speaker, George Sterman, Stony Brook University. The last day, Friday, will include an open forum session of the Users' Executive Committee to present election results, review the committee's activities and discuss user concerns. For more information, go to http://www.bnl.gov/rhic_ags/users_meeting/default.asp.

40th National Training Program BNL 2009 Seeks FEW Conference Participants

The national organization of Federally Employed Women (FEW) will sponsor the annual National Training Program (NTP) the week of July 20 – July 24 in Orlando, FL. The FEW NTP for women offers workshops covering subjects in areas such as: career management, technology and technical skills, personnel, equal opportunity and diversity issues, and work, family and health issues. These high-quality workshops are well run and relatively inexpensive when compared to other training courses. This training program is very popular with the women who have attended because of the quality of the classes.

Requests to attend the program should be directed to departmental managers/supervisors. All managers and supervisors are encouraged to rotate this professional development opportunity as widely as possible within their departments, division or work groups. This year's FEW coordinator is Susan Wong of the Information Technology Division, who is available to answer any questions pertaining to the FEW conference, Ext. 7988 or sge@bnl.gov.

Sign Up for Summer Swimming Lessons

Children's swimming lessons will begin on July 6 and run until August 21. Classes meet one day per week (according to skill level) from 2:15 to 3:15 p.m. Children should be at least 42 inches tall and between the ages of five and 13. Swimming lessons cost \$80 per child. To register, send a check to the Recreation Office (Bldg. 400) no later than June 5. For more information, call Ext. 2873.

Hispanic Heritage Club Scholarship Awards Reception, 5/21

The BERA Hispanic Heritage Club (HHC) invites all to attend their annual Scholarship Awards Ceremony at noon on Thursday, May 21, in Berkner Hall, Room B. Awards of \$500 will be presented to four local area high school students who have demonstrated academic excellence in science and/or mathematics studies. Part of the Brookhaven Employees Recreation Association, the HHC was founded at BNL in 2001 and is committed to supporting the educational achievements of Hispanic students. Refreshments will follow the presentation. For more information, contact Yvette Malavet-Blum, Ext. 5591.

Focus on SAFETY

When the Collider-Accelerator Department's Lawrence Vogt saw the large steel plates in the roadway at the intersection of West Princeton Avenue and Upton Road, he immediately recognized that they represented a significant hazard to motorcyclists and bicyclists. "These plates get very slippery when it rains," said Vogt. "The fact that they were in an intersection — where drivers are turning — made them that much more dangerous." Vogt called Assistant Lab Director for Environment, Safety & Health Carol Parnell to report the issue, but then went a step further — he asked Parnell for advice on whom to call to help find a solution. "I was really pleased to see Lawrence identify a safety issue, take ownership of it, and



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follow through to ensure it was promptly addressed," said Parnell. "I suggested that he speak with Tom Lambertson from Site Services, and, working with the Community, Education, Government & Public Affairs Directorate, the concern was brought to drivers' and bicyclists' attention." Parnell added that these kinds of actions are key to preventing a member of the Lab community from becoming its next accident victim. "This kind of critical thinking is

exactly what we're hoping to develop among all Lab workers and visitors," said Parnell. "Observe your surroundings, question possible unsafe acts or conditions, protect yourselves and your coworkers, take ownership of problems you come across, and follow through to ensure the hazard is addressed." Do you know someone who deserves to be profiled for a safety-related achievement? Contact Editor Liz Seubert at lseubert@bnl.gov or Ext. 2346.

CALENDAR

Friday, 5/15

*Blues Musician Roy Book Binder 8 p.m. Brookhaven Center. Sponsored by the BNL Music Club. All are welcome. Tickets \$15 at the BERA Store, \$20 at the door. See pg. 4.

— WEEK OF 5/18 —

Monday, 5/18-20

*Joint NSLS/CFN Users' Meeting See pg. 1 and <http://www.nsls.bnl.gov/users/meeting/page.aspx?id=home>.

Wednesday, 5/20

*Talk: Archimedes' Oldest Writings 4 p.m. Berkner Hall. Uwe Bergmann, SLAC National Accelerator Laboratory, will talk on "Archimedes' Oldest Writings Under X-ray Vision." Sponsored by Brookhaven Women in Science (BWIS) and QuarkNet, the talk is free and open to the public. See pg. 1.

Thursday, 5/21

*Hispanic Heritage Reception Noon. Berkner Hall, Room B. BERA Hispanic Heritage Club awards scholarships to four high schoolers. All are invited. See below, left.

Friday, 5/22

Poppy Day Held to Benefit Vets 11 a.m.-1 p.m. Berkner Hall lobby. Leisure Knoll residents representing the American Legion will give out poppies, made by veterans, and collect donations to benefit the veterans. Scarlet poppies, which bloomed in the battlefields of Flanders in World War I, are a symbol of the dedication of all veterans.

Memorial Day Ceremony Noon. Brookhaven Center. In observance of Memorial Day, the Brookhaven Veterans Association will hold a ceremony at the flagpole. All employees, users and guests are invited.

— WEEK OF 5/25 —

Monday, 5/26

Lab Closed to Honor Memorial Day No Bulletin will be issued on Friday, 5/29.

Tuesday, 5/26

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 regular business, committee reports, and the president's report.

Wednesday, 5/27

Science of 'Angels & Demons' 5:30 p.m. Berkner Hall. BNL physicists and local educators will separate science facts from fiction in *Angels & Demons*, a film starring Tom Hanks. This talk is part of a series of public lectures about the film. All are welcome. Visitors to the Lab 16 and older must bring a photo I.D.

Saturday, 5/30

Project Floyd Band 8 p.m. Berkner Hall. Project Floyd, a New York based Pink Floyd tribute band, will perform "Animals" and "Dark Side of the Moon" albums and other "Floyd" songs, sponsored by the BNL Music Club. The concert is open to the public. All visitors to the Lab 16 and older must bring a photo I.D. Tickets are \$15 in advance at the BERA Store.

— WEEK OF 6/1 —

Monday, 6/1-5

*2009 RHIC & AGS Users' Meeting See above, left, and http://www.bnl.gov/rhic_ags/users_meeting/default.asp.

Classified Advertisements

To apply for a position, go to www.bnl.gov. Select "Job Opportunities," then "Search Job List."

LABORATORY RECRUITMENT - Opportunities for Laboratory Employees

PROJECT INTEGRATION ENGINEER I (P-9) - Requires a master's degree in an engineering discipline or closely related field of study. A Professional Engineering license is preferred. Minimum of ten years' progressively responsible related work experience including outstanding abilities in environmental project engineering leadership required. Demonstrated application of advanced project management techniques or certification as a Project Management Professional (PMP) is required. Will report to the ERP D&D Manager and be responsible for planning and integration of work associated with ERP D&D projects with significant scope and complexity. Specifically, the Project Integration Engineer will support ERP personnel in preparing readiness assessment elements required for projects funded through the American Recovery and Reinvestment Act (ARRA). These include ERP Self-Assessment Program, the Management Self-Assessment process, and the subsequent DOE Readiness Assessment process. Requires the use of advanced approaches and techniques to resolve complex problems and will interface with ERP Project Managers, Project Engineers and Job Supervisors. Will be required to provide project leadership and develop work scope, schedule and budget. Will be responsible for recommending solutions to complex problems and ensuring that solutions are in compliance with all established procedures, programs and policies. Specific responsibilities will include project management, design engineering and construction management, contract management, health and safety training, scope and budget management, tracking costs and schedules utilizing the Earned Value Management System, and preparing cost estimates. Will also be responsible for review of operations procedures, preparing technical training modules and associated instruction to ERP employees and subcontractors. Will manage D&D remediation projects in compliance with CERCLA, RCRA, New York State, and local regulations. Environmental Restoration Projects. Apply to Job ID #14865.

OPEN RECRUITMENT - Opportunities for Lab employees and outside candidates.

POSTDOCTORAL RESEARCH ASSOCIATE (Crystal Growth, Exploratory Materials Synthesis, Superconductivity) - Requires a Ph.D. in experimental condensed matter physics or materials science with a strong physics background. Expertise in crystal growth, X-ray diffraction methods and low temperature cryogenic measurements is desirable. Expected to be engaged in exploratory materials synthesis and characterization of novel superconductors and other materials with strong electronic correlations. Under the direction of C. Petrovic, Condensed Matter Physics & Materials Science Department. Please attach a CV, a list of publications and three references to your application. When applying for a position, please add your references' contact and email address in the Reference box located on the application page. Please note that if you have applied for multiple positions under one application, the same reference information is attached to all those positions. If you elect to use different referees for different positions, please apply to each position separately. BNL policy states that Research Associate appointments may be made to those who have received their doctoral degrees within the past five years. Apply to Job ID #14870.

BEAMLINE DEVELOPMENT SCIENTIST (S-3, 50 percent) - The National Synchrotron Light Source II (NSLS-II) seeks an experienced physicist to lead the conceptual design and development effort for experimental facilities beamlines at NSLS-II. Will work closely with the scientific community, beamline scientists and engineers on the design and implementation of beam line optical layout and assist in the engineering analysis, specification, and selection of specific optics and required motions, as well as in alignment and commissioning. Responsibilities also include conducting research in instrumentation for synchrotron radiation. Requires a Ph.D. in physics or related fields, at least 20 years of experience in synchrotron beamline designs and applications, in-depth knowledge and practical experience on a wide range of x-ray optics including mirrors, gratings, crystals, as well as ultra-violet and infra-red optics, experience in the design, installation, and maintenance of beamlines and associated instrumentation at an existing synchrotron facility, excellent written and oral communications skills and the ability to interact effectively with a diverse group of scientists, engineers, and technical staff. Experience in planning and cost-estimating new beamlines at synchrotron facilities is preferred. This position will report to the NSLS-II Experimental Facilities Division Director. National Synchrotron Light Source II. Apply to Job ID #14871.

SR. RESEARCH ENGINEER/DIAGNOSTICS AND INSTRUMENTATION (P-10) - Requires an advanced degree or equivalent in electrical engineering or physics and 15 years' expert engineering experience in the design

and analysis of highly complex RF analog front end and FPGA digital processing. Expert knowledge in the use of test and measurement equipment, in particular network and spectrum analyzers; excellent communication skills and the ability to solve the most challenging engineering problems as well as the development of comprehensive technical designs and procedures are also required. Experience in design, development and operation with accelerator beam position monitors and other beam diagnostics instrumentation is highly desirable. Responsibilities include the comprehensive design and analysis of RF front-end system architecture and the evaluation of alternative approaches for next-generation beam position and tune monitors. Must apply leading-edge engineering principles and demonstrate expertise with system analysis tools such as Pspice, MatLAB and electromagnetic field solvers. Reports to Diagnostics & Instrumentation group leader, will assume the technical lead and will work closely with accelerator division groups in the integration of the diagnostics and instrumentation systems into the accelerator complex. National Synchrotron Light Source II. Apply to Job ID #14853.

CYBER SECURITY ANALYST (I-6, reposting) - Requires Bachelor's degree in computer science or related discipline and three-plus years of recent relevant experience. Experience in the administration of multiple platforms such as networking equipment, Windows/Unix systems, databases, etc. required. Prior experience with security tools/appliances, working knowledge of shell scripting and related certifications a plus. Will conduct security assessments in support of the Cyber Security self-assessment program. Will monitor security consoles and analyze alerts to achieve a measured response. As a member of the Cyber Security Incident Response Team you will be responding to and handling incidents as appropriate. Ability to work independently with a variety of operating systems, tools, security appliances and applications to assist the Cyber Security mission will ensure your success in this position. Information Technology Division. Apply to Job ID #14524.

CUSTOMER SUPPORT ENGINEER (I-6) - Requires bachelor's degree in computer science or closely related technical field or equivalent; and 3-plus years of related customer service IT work experience. Knowledge equivalent of an expert user of all standard and proprietary software and hardware configurations. Strong administrative and interpersonal skills and the ability to work well with all levels of staff and management. Ability to resolve complex problems within the work scope and to work independently with a varied work group. Proven written and oral communications skills. Proficiency in Microsoft Office (Word, Excel, PowerPoint, Outlook, and Access). Keep abreast of current technologies. Will provide support and act as an expert resource by addressing customer requests, carrying out hardware/software installations & upgrades and provide training support. Acts as an interface between the customer and other laboratory divisions to insure that all staff services needs are completely addressed. Troubleshoot complex IT problems involving multiple interrelated technologies. Will also function as the building manager, training coordinator and property management representative. As building manager will provide support for a multi-tenant building that will serve as the point of contact for operational issues that affect office and common space to insure the safe and efficient use of the building. Within a team environment, will possess strong administrative and organizational skills. Strong commitment to customer service, resolving customer problems directly and managing concurrent projects is essential. Familiarity with PeopleSoft is a plus. The position may require extended hours and/or after hours support and candidates must be able to lift 30 pounds. Staff Services Division. ERAP ELIGIBLE, \$1,000. Apply to Job ID #14864.

SR. OFFICE SERVICES ASSISTANT (CW-3) - Requires a high school diploma and a minimum of three years' relevant work experience. Some college or business trade school preferred. Must possess demonstrated organizational and clerical administrative skills and a thorough knowledge of Microsoft Word and be familiar with Outlook, Excel and PowerPoint. Must have demonstrated written and oral communication skills. Under minimum supervision, carries out skilled clerical duties requiring the selection of appropriate guidelines and procedures. Duties include scheduling meetings and room assignments; entering web requisitions; organizing and filing work documents and common spaces; ordering and inventory maintenance of office supplies; generating memos; data entry and report generation in Excel and PeopleSoft; maintenance of office service contracts; office errands; processing of GIS data; tracking and communicating timecard deadline requirements; and other requested office assignments as directed. Business Operations Group/Facilities and Operations Directorate. Apply to Job ID #14866.

Motor Vehicles & Supplies

05 CHRYSLER 300 TOURING - 82K mi. pearl, mint. 6 cyl., extras. \$9,500 neg. Jared, Ext. 4705, 929-4978 or mjulian@bnl.gov.
02 YAMAHA MIDNIGHT VENTURE - 30K mi. loaded tourer, 1300cc V4, shaft. big, fm/cass/CB, \$7,995. 433-9205, dusek@bnl.gov.

02 FORD WINDSTAR - 106K mi. p/w,p/l,a/c, dual sliding drs, excel. cond, runs well, clean int, seats 7. \$4,200 neg. 987-4281.
01 LEXUS 300GS - 71K mi. a/c, c/c, 8 cyl., 4dr, gd, cond, silver/black leather int. \$5,000. Cynthia, 803-0005.

92 TOYOTA KING CAB PICKUP - 98K mi. V6 a/t, 4wd am/fm/cd. new mflr, strtr, fr brks, shcks gd. cond. \$3,500. 516-351-9521.

BILLET GRILLE BY LUND - stainless, fits '02-'04 Altimas, gd cond, \$50; ChrWheel Locks, new in pkg, more, David, Ext. 4669.

Boats

28' RINKER 260 FIESTA V - 1992 slps 4, clean, low hrs, prof maintd, all recpts. In water approx 6/15. \$13,000 neg. Ext. 4320.

Furnishings & Appliances

CHANGING TABLE - High quality solid wood baby changing table, mat, drawer, on rollers, \$30. Ext. 3621.

DOUBLE BED - mattress/box springs/frame, excel. cond, \$125/obo. Ext. 4940, 849-5296 or rockypoint18@gmail.com.

LIVING ROOM SET - Couch, loveseat, chair and coffee table \$475, incl. all covers for set. 786-3620.

REFRIGERATOR - compact 4.6c ft. cap, 20 5/16wx22 1/4dx32 1/16h, \$100; 2 oak finish loft beds, \$600/ea. 298-4570.

ROLLING KITCHEN CART - White tile top over white/natural wood cabinet, 24Wx18D x33H. \$40. 878-9020 or sivertz@bnl.gov.

Audio, Video & Computers

LCD MONITOR - Dell 19", perfect shape, no dead pixels/scratches on housing. 1280x1024 max res, \$80. shrey@bnl.gov.
PRINTER/SCANNER/COPIER - all in one, PIXMA MP 480, \$60/obo. Zheneng, Ext. 2787 or zzhang@bnl.gov.

TV 27 - WEGA Trinitron, like new. Model KV-27FV300 heavy, will deliver to BNL. \$75/obo, x3766. pgo@bnl.gov.

Car Pool

MEETS IN PLAINVIEW - established 3-person car pool, looking for 4th driver/rider, BNL hours 8:00- 4:30. Ron, Ext. 6068.

Miscellaneous

1996 SUNLINE TRAILER - 24', 5 new tires, new mtrss, elect jack, extras, slps 4, \$5,500 /obo. 924-5187, mabe324@yahoo.com.

BABY FORMULA - Similac Alimentum, 1 case, 6-1qt bottles. 560-2959.

BAY WINDOW - Anderson casement, #45-C16-20, fits R.O. 5' 3"w x 6' 2"h, \$100. 325-0447.

GAMETABLE - 5 in 1, by Sportcraft, soccer/air hockey pool/ping pong/basketball; 298-4570.

NURSERY - 6pc. Kidline Koko Baby Crib w/mtchg lamp, \$75/obo; Disney Princess Magic Talking Kitchen, \$30/obo. Ext. 3924.

PORTABLE DOG PEN - Galvanized chain, 10x10x6'h, ask/\$225. Jeff, 806-6001.

SLIDE-IN TRUCK CAMPER - '05, Lance 1130, 11'6", solar panel, a/c, triple pwr fridge, more, like new \$12,000. ldavis@bnl.gov.

SPRINKLERS - sprinklers & poly pipe, start ups, repairs, complete sprinkler systems installed. Michael, Ext. 5262, 284-2277.

WEDDING DRESS - Size 10, "White One" brand (Pronovia), cathedral train, unused, \$200 (orig.\$1250). Ext. 3621.

Sports, Hobbies & Pets

2 TICKETS - May 31 Dover Nascar race. Fmt strait Sect 107 rw 42. Orig \$192, ask \$125. Grt seats. Carl, Ext. 4666, skrezec@bnl.gov.

GO-PED - Motorized scooter, 2-stroke. Runs v. well. Pd. \$350 ask/\$150. Ext. 7235, 286-1018 or fitz@bnl.gov.

HOCKEY ICE SKATES - size 5, \$15. John, Ext. 3222 or skinner@bnl.gov.

HOME GYM - Weider 8515; Integ Pulley for wt lifting, legs/arms/abs/torso, stepper, \$125 u disassmb/pic-up, pix avail. Ext. 5920.

MALIBU PILATES CHAIR - like new, pd/\$250, ask/\$150. 921-1413.

MOTORCYCLE HELMET - HJC CL-2, black, visor, still in box/\$50. 645-1349.

NORDIC TRACK 'SKI' MACHINE - \$120. Carol, 744-8632.

WETSUIT - Youth size 12. Exc. cond. new \$110, ask \$55. 286-1018 or fitz@bnl.gov.

Tools, House & Garden

CONCRETE SAW - 14" blade cuts, 4.5"d, for rent \$35/day. Ext. 5262, 284-2277.

POOL PUMP - Pump & sand filter for above-grnd pool. Like new. Hayward1 HP, excel cond \$250. Will deliver. 298-4121.

TABLE SAW - Sears 10" Craftsman, 220 ready hookup, w/stand, \$100; 325-0447.

Wanted

TEACUPS AND SAUCERS - looking for old matching teacups and saucers for baby shower tea party, flower motif, reasonable priced. Linda, Ext. 4303.

Lost & Found

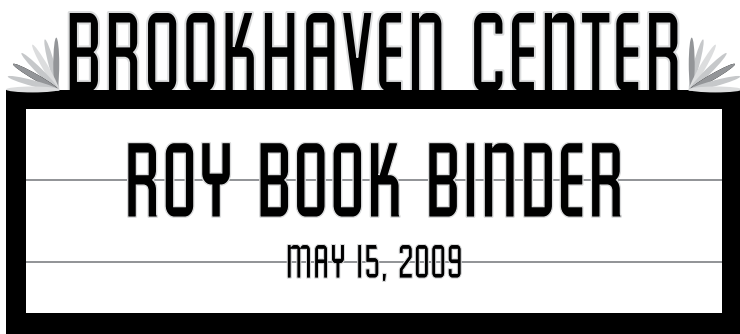
CHECK BOOK - Green covered checkbook (North Fork), w/ Upton POBox address. Ext. 4192, 924-3398, mms@bnl.gov.

Community Involvement

BOYSCOUT TROOP 161 GOLF OUTING - Friends of Boy Scout Troop 161 seek golfers & sponsors for golf outing, June 8 @ Great Rock Golf Club. Funds to support equipment for scouts. Mark, 744-9308.

TEMPLE BETH EMETH BARN SALE - Sunday, May 17, 10am-3 pm. Toys, kitchenware, clothing, books, records, electronics, much more. Carol, 744-8632.

Liz Seubert, editor
Joe Gettler, staff
Roger Stoutenburgh, photographer



Blues Musician, Storyteller Book Binder: Tonight!

Blues musician, storyteller and songwriter Roy Book Binder will perform tonight, Friday, May 15, at 8 p.m. at the Brookhaven Center. Sponsored by the BNL Music Club, the concert is open to the public. Visitors to the Lab of 16 and older must bring a photo ID.

In the 1960s, Book Binder learned his craft from the legendary blind street singer Reverend Gary Davis. Later, he toured across America performing at the New Orleans JazzFest, the Chicago Blues Festival, and MerleFest. A few years ago, the PBS Emmy Award-winning series "Arts Across America" documented his colorful career in a segment titled "Keeping Traditions Alive." Book Binder has been guitar picking, singing country blues, and telling stories behind the microphone



to appreciative audiences for more than 40 years. Tickets cost \$15 in advance at the BERA Store in Berkner Hall or through <http://www.ticketweb.com>, or \$20 at the door. — Jane Koropsak

BERA Sells Mets, Yankees Tickets

BERA has tickets to Mets games and Yankee games for the 2009 season on sale at the BERA Store — four tickets per person, per game, for the first two weeks of sale. For information on all the games, go to <http://www.bnl.gov/bera/recreation/events.asp>.

BERA Plant Swap, 5/19

All are invited to participate in BERA's plant swap on Tuesday, May 19 in the Berkner parking lot from noon until 1 p.m. Exchange your plants and seedlings for others and learn about new garden items. Those without plants are welcome to come too.

Happenings

ANYTHING GOES - John Drew Theater (Guild Hall) Main St, Rte 27, E.Hampton, 5/15,16 (8pm),17, 2pm, see theatermania.com, click on NEW YORK, then LI's "Anything Goes" Featuring Custodian Glen Glenn, abramowi@bnl.gov.

CONCERT - Sound Symphony plays Beethoven Symphony No. 9, June 6, 8 p.m., William Floyd HS. Mona, mrowe@bnl.gov.

DINNER/SHOW OUTING - Miracle of Christmas 11/14, Millennium Theatre, & dinner at Millers in Strasburg, PA. DE-POSITS: \$60pp due by Jun 1. Call for details and reservation forms. Kim, Ext. 7465, 399-3098 or khayes@bnl.gov.

QUILT SHOW, SUFFOLK COMM. COL. - Sat 6/6, 9-5, Sun 6/7 10-4, at Suffolk Coll, 121 Speonk R'head Rd, Riverhead. Talk at 1 pm daily by internat. quilter. Demos, vendors. Benefits marine research. \$7, under 12 free. Eastern LI. Quilters' Guild. **THE SOUND OF MUSIC** - "The hills are alive" at North Fork Community Theatre, Mattituck, Thurs-Sun, May 14-31. All seats \$20. Tickets at <http://www.nfct.com> or 298-6328 . Laura, Ext. 2520.

Yard & Garage Sales

MILLER PLACE - Multi-fam, Sat, 5/16, 17 Redwood La., 10a-4p, kit.ware, children's toys, sm. home furnishings. 928-4453.

N. SHIRLEY - Sat., 5/16/, weather permitting, 387 Wellwood Drive, Shirley. Lots of stuff. Open from 8 to 4. 921-1413.

For Rent

MASTIC - 3 bdrm, 2.5 ba. Victorian, eik, d/w, w/d, bsmt., 1 car gar, patio, a/g pool. 7mi to BNL. rmmates, some pets ok w/ refs. +util/sec. \$2,000/mo neg. 790-7179.

MILLER PLACE - 1 bdrm apt., pergo flrs, bdrm. carpet, dw, priv. ent, close to stores, no smkg/pets, incl all util/cable/int., 1yr old, 20 min/BNL. \$1,100/mo. 603-2343.

POCONOS, NY - T/Share, 7/11-18/09, Tanglewood Resort, 2 bdrm, full kit, sleeps 6, amenities, golf & lake onsite, www.tanglewoodresorts.com. \$700/wk. 672-4141.

RIDGE - 3 bdrm, 1.5 bath, l/r, d/r, kit, gar, fin. bsmt, +util/sec. \$1,750/mo. Ray, Ext. 3541, 924-4147.

ROCKY POINT - 1 bdrm apt, sm br/office/spare, l/r, kit/brfast nook, bath w/tub, fen. side yd w/patio, nr stores/bch, own t'stat/drway/prkg/more. \$1,300/mo. 987-3189.

SHIRLEY - 1 rm studio furn, full bath, sep ent, cable/elect/a/c/int. incl, 1mo sec, 5min to stores/beach/hwys, 8min to lab, no smkg/pets. \$650/mo. Ext. 2964, 804-8609.

On the Web, the Bulletin is located at www.bnl.gov/bnlweb/pubaf/bulletin.html. A calendar listing scientific and technical seminars and lectures is found at www.bnl.gov/bnlweb/pubaf/calendar.asp.

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