the Bulletin

BROOKHAVEN NATIONAL LABORATORY

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BNL — A Super Superconducting Lab!

At APS Meeting, BNL Discusses Secrets Of High-Temperature Superconductors

Although it was discovered more than 20 years ago, a particular type of high-temperature (Tc) superconductor — material that conducts electricity with almost zero resistance — is regaining the attention of scientists at BNL in research funded by the Office of Basic Energy Sciences within DOE's Office of Science. Copper-oxide compounds, called cuprates, operate at temperatures warmer than traditional superconductors but still far below freezing. Understanding the mechanism for these superconductors may one day help scientists design superconductors able to function closer to room temperature for applications such as more efficient power transmission.

Discovered in 1986, the most perplexing of these cuprate superconductors is "LBCO," named for the elements it contains: lanthanum, barium, copper, and oxygen. After years of research on similar materials, BNL researchers have learned how to "grow" better samples of LBCO, which has allowed extensive studies to be made on its intriguing properties. Three BNL physicists in the Condensed Matter Physics & Materials Science Department discussed their most recent findings about LBCO at the March 2007 meeting of the American Physical Society (APS). The details of their research are highlighted below.

— Kendra Snyder

A Superconductor With Insulating Properties


Roger Stoutenburgh D0990207
Christopher Homes

One of the most perplexing findings involving LBCO is that the high-temperature superconductor actually has distinct insulating-like properties. Each barium atom has one fewer electron than lanthanum, so increasing barium adds electron "holes," or the absence of electrons, to the system. The more barium that is "doped" into the material, the more holes, and the greater the superconductivity — until the composition reaches a point where there is exactly one barium atom for every eight copper atoms, a state known as the 1/8 doping. Then, oddly, the superconductivity disappears. Above this point, as more holes (barium atoms) are added, the superconductivity reappears.

Christopher Homes discussed this odd phenomenon on March 5, 2007, during the APS meeting. At BNL's National Synchrotron Light Source and other facilities on site, Homes investigates LBCO's electronic properties by shining various types of light onto an LBCO crystal and measuring the intensity that is reflected back. This optical picture tells scientists about the behavior of the charge carriers — or holes — in LBCO.

Most materials have a set number of carriers that scientists can count using these methods. As a material becomes a superconductor, some of the holes lower their energy by falling into a superconducting state that allows them to

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Paving Way for Crystal Growth Helps Advance Superconductor Research


Roger Stoutenburgh D0970207
Genda Gu

In order to study the properties of LBCO superconductors, scientists need to produce large, single crystals of the material — a difficult task that was not possible until recently. At the state-of-the-art crystal growth facility in BNL's physics building, physicist Genda Gu and his colleagues have perfected the process. Gu discussed his crystal growth method during the APS meeting on March 7, 2007.

The crystals are grown in an infrared image furnace, a machine with two mirrors that focuses infrared light onto a feed rod, heating it to about 2,200 degrees Celsius (3,992 degrees Fahrenheit) and causing it to melt. Under just the right conditions, Gu and his colleagues can make the liquefied material recrystallize as a single uniform crystal.

At present, the most interesting form of LBCO has one barium atom for every eight copper atoms, or a 1/8 "doping," at which point the material loses its superconductivity. Achieving this high barium concentration is extremely difficult and is the reason many scientists previously opted to use different but related materials for their research on superconducting stripes and other properties, Gu said.

"LBCO was the first high-temperature superconductor discovered, but everyone switched over to studying other materials for a while because they weren't able to grow single crystals with a concentration of barium greater than 11 percent," Gu said. "Now,

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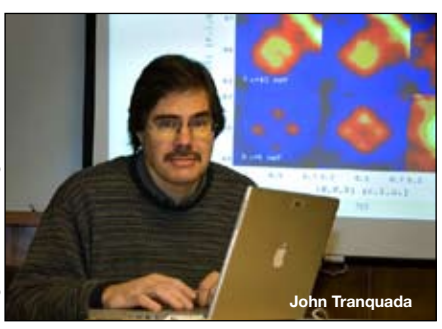
Looking for 'Stripes' in High-Tc Superconductors


Roger Stoutenburgh D0980207
John Tranquada

In LBCO, as in all materials, negatively charged electrons repel one another. But by trying to stay as far apart as possible, each individual electron is confined to a limited space, which costs energy. To achieve a lower-energy state, the electrons arrange themselves with their spins aligned in alternating directions on adjacent atoms, a configuration known as antiferromagnetic order. As mentioned above, scientists can dope the material with electron "holes," or the absence of electrons, to allow the electrons/holes to move more freely and carry current as a superconductor. The question is: How do these holes arrange themselves?

BNL's John Tranquada answered that question during his talk about superconducting "stripes" on March 5, 2007, during the APS meeting. Studies conducted by Tranquada and other BNL researchers support the controversial theory that the holes segregate themselves into stripes that alternate with antiferromagnetic regions in the material.

"There's a lot of excitement in trying to understand why these materials are superconducting, and there's plenty of controversy surrounding it," Tranquada said.

Most recently, Tranquada's research group examined the effect of the stripes on vibrations in the crystal lattice. Lattice vibrations play a role

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BNL Bakes Advanced Superconducting Material in R&D for LHC Magnets

BNL's Superconducting Magnet Division (SMD) staff are baking — but not cake. They are baking an advanced type of superconducting material in a large oven that will bake, or "react" the material at 1,200°F (700°C) for several days. The oven was installed last fall as part of the Large Hadron Collider Accelerator Research Program (LARP) at BNL. With Fermi National Accelerator Laboratory and Lawrence Berkeley National Laboratory (LBL) staff, SMD staff members, with contributions from BNL's Central Fabrication Services Division, are working to develop more powerful superconducting magnets for an Large Hadron Collider (LHC) upgrade. This giant collider is near completion at the CERN laboratory in Geneva, Switzerland. Although the LHC upgrade will not be started until 2009, becoming operational only in the next decade, research and development (R&D) must always be well ahead of the game.


Joseph Rubino D2540307

On the Bldg. 902 production floor, Tom van Winckel and Glenn Jochen, Superconducting Magnet Division, prepare to "bake" a magnet coil of niobium (Nb) and tin (Sn) in a huge oven to produce the superconducting compound Nb_3Sn being tested at BNL for use in a future upgrade to the Large Hadron Collider in Switzerland.

Like the Relativistic Heavy Ion Collider (RHIC) at BNL, the LHC will smash two beams of protons or heavy ions into each other, recreating conditions a fraction of a second after the dawn of the universe. The two colliders complement each other: though both can operate with either protons or heavy ions, RHIC is designed primarily for heavy ion experiments, which are best done at 100 billion electron volts (GeV) of energy per nucleon, the LHC primarily for protons, at about 3,500 GeV per proton. From the results of the experiments, the scientists expect to get new information on how the forces of nature acted at the time immediately following the Big Bang. The present LHC is scheduled to make its first test run at a low energy in November 2007. First collisions at high energies are expected in mid-2008.

As at RHIC, the accelerated beams at the LHC will be guided and focused around the collider ring by electromagnets, which are specially made with coils of material that become magnetic when electricity is passed through them. Superconducting materials, when cooled to very low temperatures near absolute zero, lose all their normal resistance to electricity and become "super"conductors. Magnets made of superconducting materials can be much more powerful than other magnets, because the lack of resistance to electricity allows more current to flow through them before they get too hot and "quench" or shut down the magnet.

Magnet R&D at BNL

Said Peter Wanderer, who heads the SMD, "The R&D we are working on makes use of a superconducting material, Nb_3Sn, which is a niobium-tin compound that performs better than the niobium titanium compound, NbTi, used for the existing superconducting magnets in RHIC and the LHC. The snag is that the niobium-tin is very brittle and tough to work with. However, a significant upgrade could result from using a small number of Nb_3Sn magnets just before the point in the ring where the beams collide. Hence our tests on prototype coils of the Nb_3Sn."

Wanderer explained that BNL is making long (4-meter) coils of wire of niobium and tin in order to study the effect of length on magnet operation. "You start with a rod of tin about the diameter of a pencil lead, and cover it with about the amount of niobium to form the 'wood' of the pencil," he said. "That part is done by industry. LBL gets the wire and makes it into a cable, which is sent to BNL to be wound into a coil. At this stage, the tin and niobium are still separate."

The coils must then be wound. To make them superconducting, they are loaded into the oven to be reacted,

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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.*

— EACH WEEK —

Weekdays: Free English for Speakers Of Other Languages Classes
Beginner, Intermediate, Advanced classes. Various times. All are welcome. Learn English, make friends. See 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: Pilates
12:15 & 5:15 p.m. Rec. Hall. Ext. 5090.

Mondays: Jiu Jitsu Club
6-7:30 p.m. B'haven Center. All levels, ages 6 & up. $10/class. Tom, Ext. 4556.

Mondays & Thursdays: Kickboxing
$5 per class. Noon-1 p.m. in the gym. Registration is required. Christine Carter, Ext. 5090.

Mon., Tue. & Thu: Ving Tsun Kung Fu
Noon-1 p.m., B'haven Center, North Room. Taught by Master William Moy. Scott Bradley, Ext. 5745, bradley@bnl.gov.

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

Tues. & Thurs: Jazzercise
Noon, Rec. Hall. 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
5:15 p.m., Pool. Ext. 5090.

Tuesdays: Welcome Coffee
10 a.m-noon, apartment area gazebo. First Tuesday of every month is special for Lab newcomers and leaving guests. Lisa Yang, 979-3937.

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

Tuesdays: Toastmasters
1st and 3rd Tuesday of each month, 5:30 p.m., Bldg. 463, Room 160. Guests, visitors always welcome. www.bnl.gov/bera/activities/toastmstrs/.

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

Wednesdays: On-Site Play Group
10 a.m.-noon, Recreation Bldg. An infant/toddler drop-in event. Parents meet while children play. Petra Adams, 821-9238.

Wednesdays: Ballroom Dance Class
B'haven Center, N. Ballroom. Instructor: Giny Rae. Arup Ghosh, Ext. 3974; Donna Grabowski, Ext. 2720; or Vinita Ghosh, Ext. 6226.

Wednesdays: Weight Watchers
Noon-1 p.m. Michael Thorn, Ext. 8612.

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

Wednesdays: Pilates
5:15 p.m., Rec Hall. Ext. 5090.

Thursdays: Reiki Healing Class
Noon-1 p.m., Bldg. 211 Conference Rm. Nicole Bernholc, Ext. 2027.

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

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

CIGNA: Tuesdays, Bldg. 400

A CIGNA Healthcare representative will be on site in Human Resources, Bldg 400, on Tuesdays, to assist you with any claims issues that you have been unable to resolve yourself. Janice Petgrave will be available for 30-minute meetings, by appointment only, 10 a.m.-1 p.m. Bring all pertinent documentation to your meeting. To schedule, call Linda Rundlett, Benefits Office, Ext. 5126.

Then & Now at the Research Library

By looking at the January 1947 photo of BNL's "entire Research Library" — a couple of not very large bookshelves — and comparing these resources with the wealth of printed and web-based information now available for Lab researchers through the library, (see www.library.bnl.gov/isd/reslib/), one can savor a real "Then & Now" time span. A good part of that span was experienced by Librarian Supervisor Madeline Windsor, who looks back over her time as a BNL research librarian for over 40 years.

When Windsor came to the Lab for a job interview in 1963, she wore a suit, with matching shoes and pocketbook and white gloves — the proper attire for interviews at that time. That interview embarked her on a career at BNL. She now plans to retire at the end of April.

"When I first arrived, most of the librarians were women who had worked in the U.S. Army Signal Corp," recalls Windsor. "Since those early days, I have seen many changes in the way we collect, organize, and disseminate information. Technology and the information explosion impacted the way we do business. The migration from print to online materials presented many challenges. Meeting those challenges over the years has made my job both interesting and rewarding."

Roger Stoutenburgh D0030407

Librarian Madeline Windsor looks back and forward.

Windsor remembers that in earlier days, researchers would come to the library to browse journals. In particular, in the late 1940s, well before her arrival and before the Chemistry Department labs were completed, Chemistry Chair Richard Dodson told new chemists to spend time in the library to find a scientific area that they would like to investigate. Among these "browsers," famously, was Raymond Davis, Jr., whose decision to study solar neutrinos eventually won him the 2002 Nobel Prize in Physics.

Since then, the library has greatly expanded its reference and research capabilities. Windsor was instrumental in setting up access to many online resources that have made it quicker and more convenient for researchers to retrieve information.

"Online research is efficient, but it means that camaraderie isn't quite the same as it used to be," says Windsor. "The interaction between library staff and researchers was different in the old days. We knew them, and they knew us. Now, most research is conducted right from desktop computers."

Adds Windsor, "I realize how far we've come when I think back to the days when we would remove bibliographic index cards from the catalog drawers by using knitting needles. We would place the knitting needles through holes in cards that were punched according to individual topics. Using the knitting needles we could remove only the cards on the topic we were interested in. It may seem antiquated now, but it was the precursor to database systems."


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Entire Research Library, January 1947

So, along the way, Windsor has watched the library evolve. "I've seen computers replace card catalogs and seminars become 'webinars,'" she says. When asked why she has decided to retire, she replies, "I woke up one morning and realized that it's time for me to move on to the next phase of life. I feel good about leaving, and also about what I'm leaving behind. My career here has been the best learning experience I could ever have hoped for." —- Jane Koropsak

Superconductor With Insulating Properties *(cont'd)*

flow without resistance. As these carriers condense, there is a characteristic change in the optical conductivity. However, even though LBCO is not a superconductor at the 1/8 doping, the number of holes still decreases at low temperature.

Homes and other researchers attribute this feature to the formation of the so-called "energy gap." In semiconductors, the charge gap blocks the flow of current because of its isotropic nature (the gap spreads evenly in all directions). Superconductors also have energy gaps, but in the cuprates these gaps have different energies in different directions with respect to the copper-oxygen chemical bonds.

"The more we look at this charge gap, the more it looks like a superconducting gap," Homes said. "It has the same magnitude, the same shape and symmetry. Yet, it doesn't have superconductivity."

Homes and other BNL researchers continue to tackle this mysterious problem in order to understand why a material that wants to be a superconductor is behaving like an insulator.

'Stripes' in High Tc Superconductors *(cont'd)*

in pairing up the electrons that carry current in conventional superconductors. At the Laboratoire Leon Brillouin, Saclay, in France, researchers bombarded samples of superconducting materials and the same stripe-ordered non-superconductor with beams of neutrons and measured how the beams scattered. Comparing the energy and momentum of the incoming beams with those scattered by the samples gives the scientists a measure of how much energy and momentum is transferred to the lattice vibrations. Each of these vibrations normally has a particular, well-defined frequency for a given wavelength. But in the superconductor experiment, at a particular wavelength, the scientists observed an anomaly: a wider range of frequencies in the lattice vibrations.

The scientists observed this anomalous signature most clearly in samples with observable stripe order, but they also saw it in samples of good superconductors without static stripes. This indicates the presence of dynamic stripes — meaning that the stripes can wiggle through the crystal lattice — and suggests that stripes might be important in the mechanism for high-Tc superconductivity, Tranquada said.

Superconducting Material for LHC *(cont'd)*

allowing the brittle superconducting Nb_3Sn material to be formed. At all stages of production, the 4-meter coils must be handled with rigid, precise tooling. The tooling was designed by the SMD and made by Central Fabrication Services personnel.

"Right now, we have reacted coils of Nb_3Sn coming out of the oven," said Wanderer. "To get the very accurate magnetic field we need, the coils must stay absolutely still even when electricity is passed through them. So we add supports to the coils, cool them to near zero, then start the electricity. The coils become superconducting magnets, and we go on to the next phase of LARP tests."

— Liz Seubert

Crystal Growth *(cont'd)*

we can study the whole class of high-Tc materials."

Each crystal takes about a month to make, with precise control over growth temperature, atmosphere, and other factors. BNL is currently capable of making crystals with barium concentrations up to 16.5 percent, a world record, Gu said.

— Kendra Snyder

Arrivals & Departures

— Arrivals —
Manojeet Bhattacharya ..... ES&T
Damayanti Naik ..... C-AD
Susan Pagano ..... HR/OMC
Michael Silberstein ..... Biology
Lori Stiegler ..... S&H Srvcs.
Huiming Xiong ..... CFN
Yi Zhang ..... C-AD

— Departures —
Toshifumi Sugama ..... ES&T

TIAA-CREF One-on-One Retirement Counseling

A TIAA-CREF consultant will visit BNL on Wednesday, April 25, to answer employees' questions about their financial matters. For an appointment, call Suzanne Leone, (866) 842-2053, Ext. 4601.

Vanguard One-on-One Retirement Planning, 4/25

On Wednesday, April 25, the Vanguard Group invites you to spend 45 minutes one-on-one with a licensed Vanguard representative to talk on site about financial issues. Schedule your 45-minute session online at www.meetvanguard.com or call 1-800-662-0106, Ext. 14500.

SBU Workshop on Metals, Environment, Health, 4/27
BNL's Lisa Miller Will Discuss Metals, Disease

Lisa Miller of the National Synchrotron Light Source Department will be among the speakers at a workshop on "Metals, Environment and Human Health: Bridging the Gaps," to be held Friday, April 27 at Stony Brook University. Miller will speak on "X-Ray Imaging of Trace Metal Concentration and Distribution in Diseased Cells and Tissues."

The workshop is open to all and will be held at the Charles B. Wang Center, Lecture Hall #2, 8:45 a.m.-5 p.m. The workshop will focus on the behavior of metals as they relate to environmental processes and human health. Leading researchers in environmental chemistry, toxicology, and epidemiology will highlight current topics and identify future directions for research and collaboration, followed by an open panel discussion.

Miller's talk, scheduled for about 2:55 p.m., will cover three topics: the role of zinc and copper in plaque formation in Alzheimer's disease, the role of copper in scrapie pathogenesis, and the use of strontium in the treatment of osteoporosis.

Join in the 'B-N-L 6-0' Photo Op, 5/1

All BNLers — employees, retirees, facility users, guests, contractors, and on-site residents — are invited to come to the field beside Police Headquarters, Bldg. 50, at noon on Tuesday, May 1. All participants will then take part in the giant human "B-N-L 6-0" living logo for a photo- and video-op from the water tower to celebrate the Lab's 60th anniversary, and get a free T-shirt while supplies last. Bad weather prevented the photo's being taken on the original date of March 21. The rain date for May 1 will be May 3. For more information, see www.bnl.gov/60th/events/photo.asp .

BNL Pledges to Help the Environment

Roger Stoutenburgh D1090407

Lab Director Sam Aronson (third from left) contributes to the Environmental Pledge Tree, one of the Earth Week activities sponsored by the Environmental Services & Waste Management Division (ES&WM), April 16-20. With him are: (from left) Ariana Breisch, Melanie Theisen, Tim Green, and Jason Remien, all of ES&WM. Today, the Pledge Tree is in the new Research Support Building, Bldg. 400, 11:30 a.m.-2:30 p.m. All are invited to pledge support: donations will benefit the Foundation for Ecological Research in the Northeast (FERN) to be used for research in the Long Island Pine Barrens.

Take Our Children to Work Day, 4/26

Lab community parents may still register their children of ages 10 to 15 to participate in Take Our Children to Work Day, on Thursday, April 26. Just download the form from Human Resources website and send it to Susan Foster, Bldg. 400B, or contact Liz Gilbert, Ext. 2315 or gilbert@bnl.gov.

On-Site SBU Master's Info Meeting, 4/25

Global Operations, Environmental Waste Management

Following the success of the first program over the past three years, Stony Brook University (SBU) and BNL plan to continue an on-site Master's Degree program in global operations management and environmental waste management. A new group is planned to begin in September 2007. Classes will meet weekly at 5:30 p.m. at the Lab.

All interested are invited to a short information meeting on Wednesday, April 25, at noon in Berkner Hall, Room B, to talk to faculty and hear from BNL colleagues who are now completing the program. Refreshments will be served. For more information, contact Marypat Taveras, 632-8762.

Fore! BERA Golf Association

The BERA Golf Association is now accepting applications for its 2007 golf league. For more information about the league visit the BERA Golf website at http://www.bnl.gov/bera/activities/golf/ or contact Jeff Williams (Ext. 5587) or jwilliams@bnl.gov.

Fresh Organic Veggie Delivery Available

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 in season that week will be delivered to BNL for you to pick up. The fee for a season of produce is $405, which may be paid immediately or in installments of $200 on sign-up, by May 31, with two post-dated checks: $105 for July 10, and $100 for September 4. 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.

BNL's VIP Celebrates National Volunteer Month

The Volunteers in Partnership program (VIP), sponsored by Brookhaven Science Associates, seeks to support and acknowledge employees who volunteer in organizations outside BNL. To celebrate National Volunteer Month, in an effort coordinated by VIP member April Gray, four BNLers are coming to Berkner Hall lobby to share information about their volunteer work in a local community organization. Each Friday, the Bulletin has featured the volunteer and service organization of the following week. This article (below) on the BNL Food Drive volunteers is the last in this series. For more information on the VIP program, contact Barbara Blenn, Ext. 4458, or go to www.bnl.gov/community/vip/body.htm.

Roger Stoutenburgh D1080407

Gathered with BNL Food Drive Coordinators Rita Kito (second from left) and Linda Rundlett (right) are other BNL volunteers for this service: (from left) Frank Kito, Jerry Quigley, Amber Aponte, Susan Monteleone, Michel Perrier, and Marion Blennau.

Learn More About BNL's Food Drive, How It Helps

Rita Kito of the Budget Office and Linda Rundlett of the Human Resources & Occupational Medicine Division work side-by-side collecting and distributing food for the Town of Brookhaven's Interface Program as Co-Chairs of the Food Drive. The program is successful because of the efforts of the many BNL and American Physical Society (APS) volunteers who assist in this worthwhile cause. The program is designed to assist local organizations and corporations distribute food to local needy families.

Since 1988 the Lab has partnered with the APS in collecting non-perishable food items for the community. According to Kito, in 2006 the two organizations donated 15,919 pounds of food for local charities.

Says Kito, "The Lab is a leader in donations. I urge everyone at BNL to continue to give whatever they can because it truly makes a difference to our neighbors."

Rundlett has just completed her first year as a Co-Chair with Kito. "I wasn't sure what to expect when I became the Co-Chair last year but I now know how generous BNLers are," she says. "I've enjoyed working with Rita and getting to know everyone on the Lab's Food Drive Committee."

Kito and Rundlett will be at Berkner Hall on Wednesday, April 25, 11:30 p.m. – 1:30 p.m., to collect non-perishable food items, cash, or checks (all donations are used to buy food), and answer any questions about the program. In addition, employees may place their donated items in bins located in Berkner Hall, the BERA store, or around the site in most buildings. — Jane Koropsak

If you have any questions, please contact Kito, Ext. 3320, kito@bnl.gov or Rundlett, Ext. 5126, lrundlett@bnl.gov.

Classified Ads, continued

94 FORD MUSTANG - black, 8cyl, cd, 4spd, a/c, power windows, am/fm. 100K mi. $1,800. Cynthia, 286-3545.

90 OLDSMOBILE DELTA 88 ROYAL - blue, excel. cond., orig. mi., 2nd owner 63K mi. $1,950/neg. Ext. 6392 or 433-0833.

87 CHEVY S10 - 2-whl-dr. a/t truck, runs well, gd body, tilt whl., sliding rr window, needs some work. $700/neg. 744-3569.

Boats & Marine Supplies

17' FOUR WINNS 170 FREEDOM - 17'6" OAL 92'bowridr, 86'90hp VROEvnrde, nds teleflx steerg cab $2,000/neg. 775-0724.

17' STARCRAFT 1975 - strong hull, twin 88HP Evinrude engs, Anchors etc. $2,100/neg. Dennis, Ext. 4028 or 6313758519.

DOCKSPACE - Center Moriches. Protected, private, to 26', elec, water avail, 7 min to Bay, 12 min to inlet. 487-5717.

OUTBOARD MOTOR - Johnson, 100 HP, 25 inch shaft, controls, PT&T, good cond., runs well. $950. Ext. 5436 or 369-7809.

Sports, Hobbies & Pets

GIRL'S BICYCLE - 20" wheels, purple, v.gd., cond., $30. Larry, Ext. 2194.

MET TICKETS - Tues & Fri games avail., 2 tickets per game; LOGE SEC 5, ROW G, seats 7 & 8; Face V. 751-7023.

TREADMILL - Weslo Cadence 935, excel. working cond. call for more info, $75, u pick up . Ext. 4538.

Furnishings & Appliances

BUNKBED LOFT SYSTEM - twin, white, attached dressers and toy box, drawers have a warranty. $550. 662-1220.

DAYBED - twin size, cherry finish w/pop-up trundle for bottom & 2 twin Seta mattresses, excel. cond. $325. Beth, Ext. 3689.

ENTERTAINMENT CENTER - 4 piece w/2 corner shelf pieces, excel. cond. $400. Darcy, Ext. 3362 or 286-8523.

TABLE, CHAIRS - Cherry dining room table, 6 chairs, good cond. $40; 3'x10' foldable table on wheels, $15. 588-1214.

Audio, Video & Computers

CAR STEREO - Kenwood, KDC-516S, am/fm, CD-R/CD-RW, removable faceplate, 47 watts x4, $70 neg. 580-2940.

GUITAR AMPLIFIER - Fender, Hot-Rod Deluxe w/cover & f/s. All tube, 40 watt, reverb, 12" spkr., excel. $400. Ext. 3689.

MONITOR - Dell, 17", flat screen, CRT, good cond. $15. Yugang, Ext. 3485.

SONY PSP W/4 UMD'S - just bought, full pack, 1 movie, 3 games,1 gig. Will, Ext. 7139 or 205-0501.

Miscellaneous

CONTENTS OF HOUSE - Sofa & Lvest $150, Refridg $100, Master B/R Set $400, more, all neg. Ext. 7007 or 473-9678.

OPEN HOUSE - 4/21/07 - A-frame Chalet house for sale nr BNL, move-in cond., heated pool/jacuzzi, big yard. 790-2292.

RAFFLE TICKETS - Win a guitar signed by Bon Jovi and help cancer research! $10 each. Ian, Ext. 3393.

TV SWIVEL STAND - hvy duty steel wall, 19", 75 lb. TV, $20; desk, blk/chrome, 20"x20" w/chairs, woodgrain, $35. Ext. 2897.

WEIGHT BENCH - ExerciserWeider Pro 220 w/leg curler, 110 lb. wgts, must pick up. $85. Mark, Ext. 2238 or 828-6459.

YANKEE TICKETS - Mon, May 7, vs Seattle, 2 tix $21 each, section 15, Visor night. Laurie, Ext. 5520.

Community Involvement

SPECIAL OLYMPICS - Volunteers needed for BNL table and for event activities on 5/6 at William Floyd HS. Jeff, Ext. 5587.

Happenings

BREAKFAST/CHINESE AUCTION - Sat., 5/12, 8-12 p.m. Best Western R/head, (Exit 71). Spons. Unity Baptist Church. Ext. 3571.

CHINESE AUCTION - Fri., 4/20, 6-10 p.m., Knghts of Columbus, 31 M/tauk Hwy., H/pton Bays (Old St Rosalies Church). Ext. 5191.

CHINESE AUCTION - theme baskets, St. Andrew's Episcopal Church, Main St., Yaphank, Sat., May 5, 12:30 start. Ext. 4538.

MAD HATTER TEA PARTY - at St. Andrews Episcopal Church, Mastic Beach, 4/22, 3-5 p.m., $20/ticket. 281-9133.

SCIENCE FORUM - William Floyd Middle School, 7-9:30 p.m., Mon., 4/23, Save the Forge River Research update. Ext. 3256.

Free

DOG - 1-1/2 yo female pitbull /lab /ridgeback mix, excel. health, spayed, trained, great w/adults, kids, dogs. 516-816-0939.

VACUUM SHREDDER BAGGER - Craftsman 4 HP., old but low mi. Ext. 3666.

Wanted

AFGHANS OR COMFORTERS - not used - crocheted, knitted or quilted afghans to give to children's hosp. Ext. 4705.

CAR SEAT - needed for 1 yr old. Must be less than 5 yrs old. 5 pt. harness. Ext. 2463.

HOUSE TO RENT - wanted, Longwood School Dist., or close, 2 bdrm pref., $1050 or less/mo., excel. tenant. Ext. 4538.

REFRIGERATOR - wanted, white, top frzer, 18-21 cu., gd. working cond. 395-9610.

SINGERS - wnted for BNL Vets Assn. Memorial Day/Camp Upton 90th Ann. Ceremony. Fran, Ext. 3709, Nancy, Ext. 5744.

TRAVEL SYSTEM - or only infant car seat, gd cond., 5 pt harness. Williamson, Ext. 4992.

TREADMILL - reasonable. 750-3244.

For Rent

CENTER MORICHES - W/front 50' blkhd 3/4bdrm 2 bth 2 car det. htd gar, new: kitch, sidg, roof, more, w/d, hrdwd flrs, dead end. $2,200/mo./neg. Ext. 5288 or 487-5717.

E. PATCHOGUE - 1-bdrm. apt., close to water, l/r, bdrm., kit., bath, priv. ent., heat & water incl., 1 mo. sec. $950/mo. 484-2990.

FARMINGVILLE - 1 bdrm in Lg house, share bath w/2, full kit., l/r, d/r. elec incl, avail 4/21. $450/mo. Ben, 513-8275.

MASTIC - 3 yr old house, 3 bdrm, large eik, den, 1.5 bath, w/d. 1/2 block to water. $1,700/mo. plus utils, heat. 774-7704.

MEDFORD - 1 min to LIE ex 63, 1BR gnd flr. furn apt w/ lg yd, for 1 pers, util incl. no smkg/pets, refs. req. $950/mo. 289-7828.

RIDGE - 1 bdrm. in lg. apt., share bath w/2, full kit., l/r. heating incl., l/net, avail 4/21. $620/mo. Ext. 3725 or 401-575-7042.

ROCKY POINT - 1-bdrm. apt., kit., l/r, bath, pvt. dr/way/ent., no smkg./pets, 1 mo. sec., utils not incl. $850/mo. 821-3287.

SHOREHAM - 4/bdrm, 2/bath hse, hrdwd flrs, 4 kit appli, full bsmt, w/d, gar, lg. backyd, patio, SWRSD, $2,300/mo. + util. 821-2577.

SOUND BEACH - immaculate Ranch, 5 rms, 2 bdrm, 1.5 Bths. patio, landscaped yd., amenities, yr. lease + 1.5 mo. Sec., + util. $1,400/mo. Maria, 374-1512.

CALENDAR

— THIS WEEKEND —

Friday, 4/20

***Employee Lunchtime Tour**

Noon. Berkner Hall lobby. Meet the group to be taken on a tour of the World War I training trenches on site. No reservation needed. The group will return to Berkner by 1 p.m. See page 4.

— WEEK OF 4/23 —

Monday, 4/23

Perfect Attendance Award Winners

3 p.m. Berkner Hall, Room B. Perfect Attendance Award winners — photo and ceremony.

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.

Tues. & Wed., 4/24 & 25

Varian Vaccuum Tech Seminar

9 a.m.-1 p.m. Berkner Hall, Room B (4/24); Room C (4/25), free course on high and ultra high vacuum given by Varian Vacuum Technologies, maker of vacuum pumps & components, presented by Johan de Rijke. Includes range of topics from system basics to pumping speed issues to gauge types to troubleshooting. Free lunch. Register with Jim Primm, jim.primm@varianinc.com.

Thursday, 4/26

***Take Our Children to Work Day**

Parents may still register their children of ages 10 to 15 to participate in this event. See notice at left.

Friday, 4/27

***Dance Social - Swingin' Into Spring**

7 p.m.-midnight. Brookhaven Center, North Ballroom. Live band, 20-piece Bill Wilkinson & Orchestra, will play 8-11 p.m. Free dance lesson 7-8 p.m., digital DJ, 11 p.m.-midnight. Open to the public. Visitors of age 16 and over must bring a photo ID. Tickets, $25 each in advance at the BERA Store. See page 4.

***Blues/Rock Concert**

8 p.m. Berkner Hall. "Pickin' at the Berkner," featuring Andy Aledort and the Groove Kings, the Todd Wolfe Band, and Mark Newman, sponsored by the BNL Music Club. Open to public. $15. See www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=07-34 and notice, page 4.

Sunday, 4/29

Sam's Club Open House

7-9 p.m. Sam's on Horseblock Rd, Medford, will open for Lab community employees only. Store normally closes at 6 p.m. Refreshments will be offered, and family & friends will be welcome. Not a member? You can join that day $40+ tax for 1 year; $43.45 for 2 cards. Call Mary Ann, 447-0253, for more information.

— WEEK OF 4/30 —

Tuesday, 5/1

***"Big-60' Photo-op Rescheduled**

Noon. Police HQ field. All employees, retirees, facility-users, guests, contractors, and on-site residents are invited to join in the giant human "BNL 60" living logo for a photo and video to be taken from the water tower to commemorate BNL's 60th anniversary. Free T-shirts for all participants, while supplies last. Rain date, May 3. See notice, page 2, and www.bnl.gov/60th/events/photo.asp .

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

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/.

The Deputy Director has exempted the following positions from the freeze:

LABORATORY RECRUITMENT - Opportunities for Lab Employees

RM3256. PROJECT ENGINEER/SAFETY ENGINEER II (P-7, reposting) – Requires a BS or MS degree in a science discipline and a minimum of seven years' relevant experience. Detailed knowledge, skills, and experience within the discipline of ES&H are required. Industrial hygiene experience is desirable. Professional certification within an ESH discipline is desirable (CIH, CSP, CHP, CHMM). Knowledge and experience with BNL and DOE safety standards are desirable. Excellent communication (oral and written) and interpersonal skills are required to work with a diverse internal and external workforce and to achieve compliance within all aspects of ES&H. Experience with accelerator-related hazards and associated controls is desirable. This position will support the department, Tier I inspection, experiment safety review, work planning review, electrical safety, radiation control, and waste management programs. Activities will include inspection of work places, documentation of findings, waste minimization, participation in ESH reviews, and routine contact with department staff and the visiting scientific community. Reports to the NSLS Safety Officer. National Synchrotron Light Source Department.

TB4434. GENERAL SUPERVISOR, MECHANICAL OPERATIONS (T-7) – Requires the equivalent of a bachelor's degree acquired through considerable experience in an applicable field, ten (10) years' supervisory experience, knowledge of management principles and practices, excellent organizational and record keeping skills, excellent verbal, written, and problem-solving skills, the ability to investigate and resolve Union Grievances, and working knowledge of computers and software applications including maintenance management systems. Interviewing techniques and employee hiring; project management experience; and experience performing job estimates are desired. Responsible for the control and efficient operation of the mechanical trades functions, including Refrigeration and Air Conditioning, Steamfitting, Plumbing, and Insulation. Through first line supervisors, coordinates the tasks of the various mechanical trades to ensure expeditious and effective completion of assigned projects. Provides guidance and assistance to supervisors and acts as a replacement in a supervisor's absence. Responsible for the control and efficient operation of the Central Chilled Water Facility (CCWF). Supervises and coordinates the tasks of the CCWF staff to ensure continuity of operation and service of plant and related buildings supplied with chilled water. Provides limited engineering support pertinent to the CCWF. May be required periodically to fill in for the Site Shift Supervisors during unexpected absences. Must be able to prepare specifications for various mechanical parts, equipment, and services. Will be designated as the Work Control Coordinator for all mechanical trades and Building Manager for various buildings. Plant Engineering Division.

NS3974. 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.

OPEN RECRUITMENT – Opportunities for Lab employees and outside candidates.

KH4570. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. in high energy or nuclear physics. Experience with Geant4, detector simulation and data analysis, and neutrino physics, as well as object-oriented programming is also desirable. Successful candidate will participate in the activities of the group including operation and analysis of the running MINOS experiment; and simulation, design, and analysis of the Daya Bay reactor antineutrino disappearance experiment. The Daya Bay experiment strives to reach a sensitivity to the neutrino mixing parameter sin22013 of an order of magnitude better than any previous experiment. Participation in simulations of future possible long baseline experiments with very large detectors in underground is also expected. Travel to China and/or Fermilab should be expected. Under the direction of S. Kettle and V. Diwan. Physics Department.

KH3599. POSTDOCTORAL RESEARCH ASSOCIATE – (reposting) Requires a Ph.D. in experimental high-energy physics. Research will be within the Omega Group on the ATLAS experiment at the LHC in Geneva, Switzerland. BNL Physics Department is involved in many aspects of the ATLAS experiment. It is an ATLAS Tier-1 computing facility. It is designated as one of the US ATLAS Analysis Support Centers. The Omega Group is currently working in a few ATLAS subsystems, liquid argon calorimeter, cathode strip Chambers for the muon spectrometer, high level trigger and technical coordination, as well as software development for the infrastructure, detector performance and analysis tools. The physics analysis efforts focus on understanding the ATLAS experiment's early physics potential at LHC, and the search for supersymmetric particles and Higgs. The candidates are expected to participate in some of these activities with emphasis on physics data analysis. Under the direction of D. Lissauer. Physics Department.

NS4267. DEPUTY SENIOR COUNTERINTELLIGENCE OFFICER (M-1) – Requires a bachelor's degree in a related field, master's degree desirable, and at least 20 years experience in intelligence, counterintelligence, or criminal investigations at the Federal, state, or local government level. Some management or program experience in counterintelligence or a related field is required, as is considerable skill in interview techniques and oral and written communications. Experience in developing and conducting training and briefing programs; modern computer skills and familiarity with word processing, secure data bases, presentation, and e-mail applications are necessary. Must successfully complete a rigid background check to include a limited-scope polygraph examination concerning National Security issues. US citizenship and the ability to obtain and maintain DOE "Q" and "SCI" Access Authorizations are required. Candidates successfully competing for this position may be requested, as a pre-condition to an offer of employment, to submit to the above polygraph examination. Responsibilities include developing, implementing, managing, enhancing, and maintaining all required elements of the Counterintelligence Program for BNL. Conducts briefings and debriefings of travelers to foreign countries, hosts of foreign national visitors and assignees, and employees with significant foreign national interactions. Conducts CI Awareness training for all categories of employees. Coordinates with and assists U.S. Intelligence Community members in queries and investigations. Provides assistance and support for activities of CI concern within the Unclassified Foreign Visits and Assignments, Official Foreign Travel, OPSEC, Information Security, Security Education and Awareness, and Personnel Security Programs. Counterintelligence Office.

NS4106. CRYOGENIC PROCESS/PROJECT ENGINEER I (P-9) Requires a bachelor's or master's degree in engineering and at least eight years of relevant cryogenic experience. Experience with cryogenic refrigeration equipment for superconducting application and related hardware is necessary, as well as knowledge of cryogenic safety standards, piping and pressure vessel design, vacuum systems, and instrumentation and control systems. Flexibility in working hours to assist in and trouble shoot unforeseen equipment failures during the 24/7 operations is also required. Requires excellent written and verbal communications skills, good interpersonal skills, engineering design and analysis software skills, and office computer skills. Responsibilities will include project management, overall system engineering, detailed engineering, and equipment specifications and procurement of new cryogenic equipment. Will direct the efforts of technicians and designers during all phases of construction of new equipment, during the repair and upgrade of existing equipment, and during refrigerator operations. The Cryogenics Group is responsible for operation and upgrade of the 12 kW Relativistic Heavy Ion Collider (RHIC) superconducting magnet helium refrigeration system, the Energy Recovery Linac cryogenic system, and other existing and planned cryogenic systems. Collider-Accelerator Department.

TB2677. STAFF ENGINEER (P-5, reposting) – Requires a BS in electrical engineering, MSEE preferred, three years of hands-on experience in designing with high density programmable gate arrays and embedded microcontroller hardware/firmware, excellent communications skills, familiarity with CAD tools used for schematic capture and simulation, and must be able to work with a team with diverse skills and talents to complete assignments. Familiarity with LabView a plus. Knowledge/experience with analog signal interfacing is highly desirable. Ancillary duties include board level fabrication, troubleshooting, and repair, as well as system level installation and maintenance. Collider-Accelerator Department.

RM4259. SENIOR APPLICATIONS ENGINEER (I-8, reposting) - Requires a bachelor's degree in computer science or a related field or equivalent experience, and eight-plus years of relevant experience. Must demonstrate a thorough understanding of requirement specification, design, coding and testing of information systems. Requires solid technical knowledge of design and building datacentric applications (client-server and web-based) using ASP, and Visual Basic. Experience with Oracle and SQL Server Databases, stored procedures, SQL, C/C++ and Linux and Windows environments is also required. Knowledge of .NET, Visual Studio 2005, UNIX, Crystal Reports, Java, Access, FrontPage, Information Internet Service, environmental chemistry and radiological data is a plus. Excellent written and oral communication skills are necessary. Responsibilities will include installing, administering, tuning, and maintaining Oracle and SQL Server databases and the development and maintenance of a suite of applications including forms and reports for data entry, querying, and reporting for an Oracle environmental database; design and development of a Web-based user interface; data processing; and production of technical and end-user documentation. Some additional system administrator tasks will be required. Environmental & Waste Management Services Division.

RM4105. MECHANICAL DESIGN ENGINEER (T-5) Requires a BS degree in mechanical technology and design or equivalent experience, and a minimum of 10 years' experience with 3D modeling software and 20 years' experience overall with CAD software designing mechanical components and systems for fabrication. Experience with Pro-E wildfire and/or AutoCad inventor is also required. Must have the ability to perform mechanical design functions independently with general direction and review by a mechanical engineer or scientist. This includes knowledge of material properties, component choice, manufacturing/machine shop processes, and dimensioning and tolerances. Must be able to create accurate and detailed 3D system designs as well as mechanical manufacturing drawings to ANSI Y14.5 standards. Must be able to review and check the work efforts of other design personnel. Work experience with vacuum system components, high voltage/high current systems, RF systems, and cryogenics is highly desirable. With engineering support, will design and provide fabrication drawings for components used in particle accelerators such as magnets, power supplies, RF systems, vacuum chambers, and electronic diagnostics. Collider-Accelerator Department.

TB3259. SR. TECHNICAL SPECIALIST (T-3)/RF AND POWER SYSTEMS - Requires a BSET degree and five years of experience or equivalent. A thorough understanding of analog and digital circuitry and the ability to use standard test equipment and work from schematics and verbal instructions are necessary. Experience with high power RF systems, pulsed or accelerator magnet power supply systems is a plus. Job duties will include the fabrication, testing, installation, troubleshooting, repair and maintenance of RF and power systems, including off-hour emergency call-in repairs. Assignments will be in the area of responsibility above, with specific application to RF and high power equipment. All work will be performed in a manner that is consistent with BNL and NSLS safety and quality assurance guidelines and regulations. Responsibilities will also include technical support for NSLS operations as a member of the RF and Power Systems Group. National Synchrotron Light Source Department.

NS 3349. STAFF SPECIALIST/REGISTERED HEALTH INFORMATION ADMINISTRATOR (A-6, part-time, 50 percent, reposting) - Requires a bachelor's degree or equivalent plus four (4) years of medical records experience and in-depth knowledge of computerized medical records/databases, DOE records systems/regulations, occupational health information systems and ICD-9-CM coding. Must be a credentialed health information management professional possessing RHIA and RHIT certifications. Strong background with computers and software systems including database management is essential. Must be detail oriented with high degree of accuracy in work output. Will provide professional guidance on OMC's medical records management and encoding issues. Responsibilities include but not limited to ICD-9-CM coding, record reviews, release of information, data entry, summary reports, planning/performing quality assurance reviews/reports and quality improvement projects. Will also be responsible for HIPAA compliance, Illness and Injury Surveillance Program (IISP), participate in AAAHC accreditation preparation and reviews, and develop and record relevant OMC procedures and processes as required. Position reports to the Head of the Occupational Medicine Clinic. Human Resources & Occupational Medicine Division.

Employee Lunchtime Tour, Today, 4/20
Visit BNL's Historic Trenches of WW I

The Trenches of World War I will be the focus of the next Employee Lunchtime Tour, today, Friday, April 20, at noon. BNL's Cultural Management Director Mark Davis will lead an expedition to the historic site. All interested employees are welcome to meet at the reception desk in Berkner Hall lobby for this event, which will be part of the Lab's year-long 60th anniversary celebration. For information, call Elaine Lowenstein, Ext. 2400.

'Pickin' at the Berkner:' Blues/Rock, 4/27

Blues/rock guitarist Andy Aledort and the Groove Kings, the Todd Wolfe Band, and singer/songwriter/guitarist Mark Newman will be the featured performers at "Pickin' at the Berkner," a concert to be held in Berkner Hall on Friday, April 27, at 8 p.m. Sponsored by the BNL Music Club, the concert is open to the public. Tickets cost $15 each and can be purchased in advance at the BERA Store, electronically at www.ticketweb.com or at the door on the evening of the show. All visitors to the Lab age 16 and over must bring a photo ID.

Andy Aledort has been a significant figure in the blues/rock music scene for 20 years. He is an editor of several guitar-oriented music magazines, such as *Guitar World, Guitar Extra*, and *Guitar Legends*, and he is a well-known music transcriber as well as an instructional columnist and journalist. As a blues/rock performer, Aledort often appears with high-profile artists, such as Buddy Guy, Dickey Betts, and the Allman Brothers Band. Recently, he has also participated in a series of Jimi Hendrix Tribute concerts. With his band, the Groove Kings, Aledort released a self-produced CD, "Put a Sock In It," which garnered rave reviews.

The Todd Wolfe Band, also known as Wolfe, plays experimental blues with a rock edge. Besides Todd Wolfe, who was former lead guitarist for Grammy-winner Sheryl Crow from 1992 to 1998, band members include Eric Massimino on bass, Dave Hollingworth on drums, and John Cree on percussion. Performing Wolfe originals and reworked blues pieces, the band hones the music into its own style. Wolfe has shared the bill with many well-known performers, including Buddy Guy, the Allman Brothers Band, Blues Traveler, the Neville Brothers and Jimmy Vaughn. Wolfe has several CDs to its credit, and Todd Wolfe will appear as a guest on the tribute album to Bob Dylan recorded by Mountain, which will be released soon.

Mark Newman, a strong slide guitarist who is known for his rock n' roll songs mixed with blues, folk and soul music, has traveled internationally as a performer but always returns to his roots as a singer-songwriter of the famous Bleecker Street in Greenwich Village. Well-known as the front man for the group Tao Jones, whose album "Rorschash Sunset" achieved worldwide distribution, Newman recently launched a self-produced, solo CD, called "Must Be A Pony." Newman also performs with legends Sam Moore and Sam the Sham.

Dance Social — 'Swingin' Into Spring,' 4/27

In a return engagement after a full-house attendance last year, the 20-piece "Bill Wilkinson & the Long Island Sound Orchestra" will perform during a dance social celebrating BNL's 60th anniversary, in the Brookhaven Center North Ballroom on Friday, April 27, 8-11 p.m. A one-hour beginner dance lesson in East Coast Swing will be given 7-8 p.m., and after the performance, an extra hour of ballroom, Latin, swing, and hustle dance music will be played by a Digital-DJ until midnight. The event is sponsored by the BERA Social & Cultural Club and is open to the public. All visitors of age 16 and over must bring a photo ID.

Tickets cost $25 each in advance, or $35 at the door; buy them at the BERA store, Berkner Hall. Cost includes a cold hero buffet, cookies, refreshments, etc. Members of BNL's Association for Students & Postdocs (ASAP) are offered a 50 percent discount. Contact Rudy Alforque, Ext. 4733 or rudy@bnl.gov, for more information.

BERA Events

Reservations are required and can be made at the BERA Store on weekdays, 9 a.m.-3 p.m. Tickets are non-refundable. Buses leave from the Brookhaven Center.

- Ducks tickets are now being sold at the BERA Store.
- Friday, May 4 - Yankees vs. Seattle - $44/pp. Tier Box 664. Dep. 4 p.m., return, around midnight.
- Wednesday, June 6 - Mets vs. Philly, section 25, Loge reserved, $44/pp. Leave BNL 4 p.m., return around midnight.
- Friday, June 29 - Yankees vs. Oakland - $44/pp. Tier Box 669. Dep. 4 p.m., returning around midnight.
- Sunday, May 6 - *Romeo & Juliet*, by the New York City Ballet at Lincoln Center. $69/pp for orchestra seats and coach bus transportation, leaving BNL at 10 a.m., land NYC at 5:30 p.m.
- Sunday, June 3 - NASCAR. Dover, Delaware. $110/pp includes round coach and snacks on the bus. Leave Lab at 5 a.m., return to BNL at about 11 p.m.
- Saturday, June 9 - Captain Bob's Charter, Mattituck. Be at the dock 7:45 a.m., boat returns at 3 p.m. $50/pp, no transportation provided. 631-298-5522. www.captbobfishingfleet.com/boats1.cfm .
- Sunday, June 10 - Bus trip to NYC. $10/pp, leave Lab at 9 a.m.

Motor Vehicles & Supplies

06 SUZUKI GSXR 600 - white/silver, w/3 year ext. warr. 775 mi. $6,750/neg. Ext. 7277.

03 HYUNDAI TIBURON - 6-spd manl trans., sports pkg., fully equipped, excel. cond. 30K mi. $11,000. Ext. 5149 or 929-0961.

03 30 CROSSROADS CRUISER 5TH WHL - single slide out, 2 bdrms., w/bunks, dinette, sofa bed, more. $17,500. 433-2673.

02 TOYOTA CELICA - GT, blue, 2dr., 5spd., a/c, AM/FM, cass., cd, c/c, FWD, avail. 08/17. 82K mi. $11,000/neg. Ext. 4924.

01 VW PASSAT - loaded, 1.8L, a/t, new tires, s/roof, CD, burgundy, 4dr, all pwr, primo cond. 61K mi. $10,000/neg. 475-3415.

00 HONDA CIVIC LX - 4 cyl., a/c, a/t, cd, grt cond. 159K mi. $4,500/neg. Howard, Ext. 3198.

97 NISSAN MAXIMA SE - s/roof, cd, a/t. Orig owner, gar, grt cond, 22/27 mpg. 132K mi. $3,900/neg. Ext. 4846 or 298-5507.

96 AUDI A4 - Quattro 2.8L, V6, 5spd., stk., blue w/gry. ltr. int., looks good, runs very well. 132K mi. Ext. 2576.

96 GEO PRIZM - white, a/t a/c, gd cond., airbags, am/fm/cass. 116K mi. $2,000/neg. 398-7601.

96 HONDA SHADOW VT1100 ACE - mint, well maint. cruiser, extras, top qual, 36K mi. $4,200/neg. Robert, Ext. 4798 or 235-3440.

95 HONDA MAGNA VF750 - perfect bike, runs well & looks good, custom w/extras. 49K mi. $3,700. Victor, Ext. 2271 or 484-1133.

More classified ads are on page 3.

the Bulletin

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Liz Seubert, editor
John Galvin, reporter
Roger Stoutenburgh, photographer

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.html.

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