

New Scientist Features BNL's 'Plasma Power'

A "plasma window" technology invented by Ady Herscovitch of the Collider-Accelerator Department and described in "Hot Mettle," a feature article in the *New Scientist* of April 12, is now being developed by the Acceleron welding company in Connecticut.

This novel technology, for which Herscovitch won an *R&D Magazine* R&D 100 award as one of the top 100 technological achievements of 1996, has been used in a prototype device at the National Synchrotron Light Source (NSLS). But it also has major potential to revolutionize the construction of anything that requires metal to be welded as seamlessly as possible — from airplanes to ships to cars.

A plasma window is a thin foil of plasma, a fluidic material made of ionized gas, that can be used to separate atmospheric pressure from a vacuum while allowing high-energy electrons or other beams to pass through it unimpeded without unsealing the vacuum. Electrical current that drives the plasma window provides another benefit by generating an effective mag-

netic lens which focuses charged particle beams.

At NSLS experiments, the plasma window, because it is made of gas, is useful in cases where a beam passing through a conventional, solid window would be absorbed or distorted too much, or where the tool marks on the conventional window might be seen, perhaps impairing the quality of the results.

In addition, properties of the plasma window that allow electrons to flow through it unimpeded and focused can be used to solve a long-term welding problem.

Herscovitch explained that the highest quality welding is done using a beam of high-energy electrons.

"The difficulty has been that electrons disperse and lose energy unless they are in a vacuum, making the electron beam less effective at welding. Yet placing the metal to be welded in a vacuum with the source of the electron beam is usually inconvenient and often impossible," he said.

Herscovitch's invention
(continued on page 2)



Science Project by 3rd-Grader Austin Stack Wins at BNL's 2003 Science Fair, Helps Confirm Diagnosis of Disease



Austin Stack

The front page of *Newsday* on Tuesday, June 10, reports that third-grader Austin Stack's science project — which came first at the third-grade level in BNL's 2003 Elementary School Science Fair — had helped show that Austin and his mother had a serious digestive disorder, previously misdiagnosed.

Early this year at Dickinson Avenue Elementary School, East Northport, one of the more than 100 Suffolk County schools entered in the BNL science fair, eight-year-old Austin had chosen to research "Diabetes and Carbohydrates" for his entry.

Austin's interest was personal: according to *Newsday*, after being treated for diabetes for two years, he still suffered digestive pain. Then, his pediatrician suggested that he might have celiac disease, a hereditary condition that causes a reaction to gluten, a protein found in wheat and certain other grains.

So, for his project, Austin monitored how he felt on nights when he ate wheat or gluten-heavy products, reporting on his resulting discomfort.

BNL's Office of Educational Programs' (OEP) Melvin Morris, who coordinated the fair,

(continued on page 2)

384th Brookhaven Lecture, 6/18

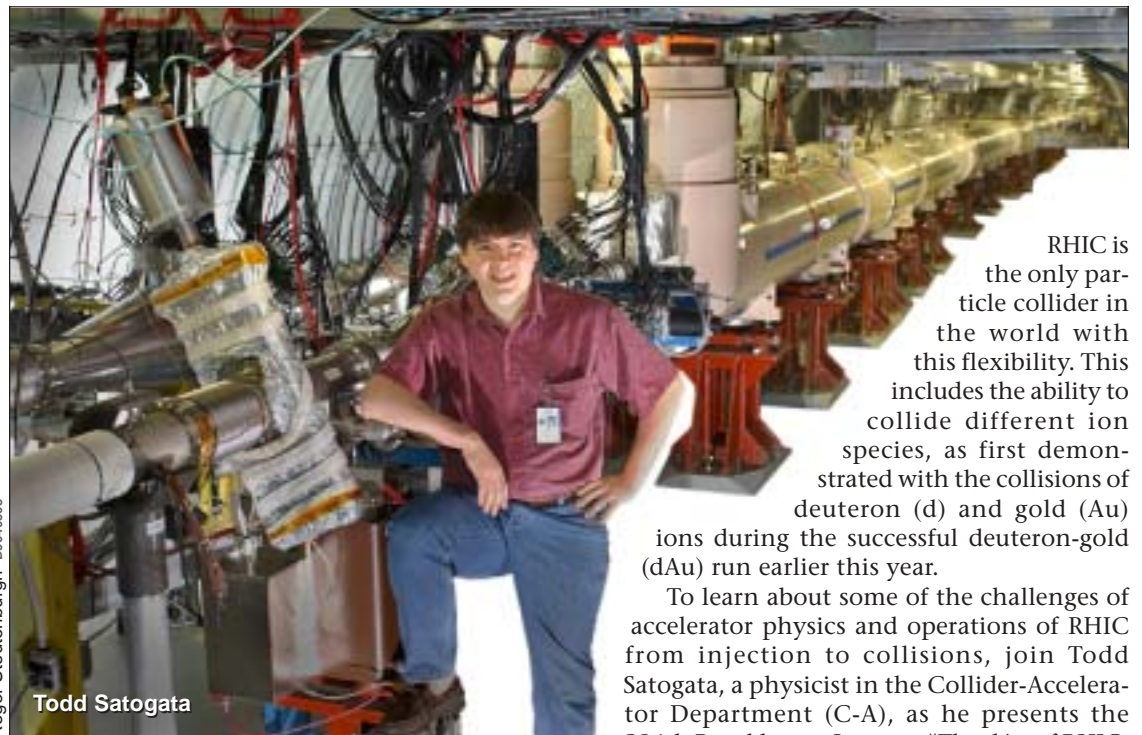
'The dAu of RHIC: The Challenges Of Flexible RHIC Operations'

BNL, ANL Scientists Invent Plasma Valve

BNL and Argonne National Laboratory have received U.S. patent number 6,528,948 for a device that shuts off airflow into a vacuum about one million times faster than mechanical valves or shutters that are currently in use. The new device, which was featured in *Physics News Update* on June 5, is called a plasma valve. The valve was developed through research funded by DOE's Office of Basic Energy Sciences in the Office of Science.

The need for a fast valve at Argonne's Advanced Photon Source led Argonne engineers to explore the potential use of plasma window arcs previously developed for electron welding guns. At BNL, Ady Herscovitch, Collider-Accelerator Department, had been working on the plasma window for about ten years (see story above). The Argonne team — Sushil Sharma, John Noonan, Elbio Rotela, and Ali Khounsary — joined Herscovitch to develop the plasma valve.

In synchrotron light sources, other particle accelerators, and various other scientific instruments, where plasma valves
(continued on page 2)



Todd Satogata

RHIC is the only particle collider in the world with this flexibility. This includes the ability to collide different ion species, as first demonstrated with the collisions of deuteron (d) and gold (Au) ions during the successful deuteron-gold (dAu) run earlier this year.

To learn about some of the challenges of accelerator physics and operations of RHIC from injection to collisions, join Todd Satogata, a physicist in the Collider-Accelerator Department (C-A), as he presents the 384th Brookhaven Lecture, "The dAu of RHIC: The Challenges of Flexible RHIC Operations" on Wednesday, June 18, at 4 p.m., in Berkner Hall. Satogata will be introduced by C-A Department Chair Derek Lowenstein.

After receiving a B.S. in physics and a B.A. in mathematics from the University of Cincinnati in 1997, and a Ph.D. in physics and astronomy from Northwestern University in 1993, Satogata came to BNL's RHIC Project to work on accelerator modeling and software development. He was run coordinator for the 2002-03 RHIC dAu run, overseeing all tactical aspects of program operations.

Satogata is also an enthusiastic lecturer and tour guide for BNL educational and outreach programs.

Refreshments will be offered before and after the lecture. To dine with the speaker at a restaurant after the lecture, call Mary Campbell, Ext. 4776.



Ady Herscovitch

Calendar of Laboratory Events

- The BERA Sales Office is located in Berkner Hall and is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347; or Chris Carter, Ext. 2873.
- Additional information for Hospitality Committee events can be found at the Lollipop House and the laundry in the apartment area.
- The Recreation Building (Rec. Hall) is located in the apartment area.
- Contact names are provided for most events for more information.
- Calendar 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, and 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 Gospel Choir

5:15-7 p.m. Berkner Hall. All faiths are welcome. www.bnl.gov/bera/activities/choir/.

Mon., Tues., & Thurs.: Kickboxing

\$5 per class. Mon. & Thurs. noon-1 p.m. in the gym; Tues., 5:15-6:15 p.m. in the gym; Thurs., 5:15-6:15 p.m. in Brookhaven Ctr. Registration is required. Christine Carter, Ext. 2873.

Mon., Thurs., & Fri.: Tai Chi

Noon-12:45 p.m., Brookhaven Center North Room. Adam Rusek, Ext. 5830 or rusek@bnl.gov.

Mondays: BNL Dance Club Ballroom, Latin & Swing Practice

5:30-7 p.m. North Ballroom, Brookhaven Center, except Lab holidays. Jean Logan, jlogan@bnl.gov or Ext. 4391.

Tuesdays: Welcome Coffee

10-11:30 a.m. Rec. Hall. Hospitality event. Come and meet friends. The first Tuesday of every month is special for Lab newcomers and leaving guests. Hospitality Chair Monique de la Beij, 399-7656.

Tuesdays: BNL Music Club

Noon, North Room, Brookhaven Center. Come hear live music. Joe Vignola, Ext. 3846.

Tuesdays: Singles Club

5:15 p.m., Brookhaven Center. Contact: Jean, Ext. 4391.

Tuesdays: BNL Dance Club Individual & Couples Instruction

5-11 p.m. North Ballroom, Brookhaven Center. Ron Ondrovic, ondrovic@bnl.gov or Ext. 4553.

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/toastmasters/default.htm.

Tuesdays & Thursdays: Aerobics

5:15-6:30 p.m., \$4 per class. Rec. Hall. Pat Flood, Ext. 7886.

Tuesdays & Thursdays: Aqua Aerobics

5:15-6:15 p.m. Christine Carter, Ext. 2873.

Wednesdays: On-Site Play Group

10 a.m.-noon. Rec. Hall. An infant/toddler drop-in event. Parents meet while children play. Svetlana Agafonova, 205-5065.

Wednesdays: Farmer's Market

11:30 a.m.-1:30 p.m., Berkner Hall parking lot

Wednesdays: Weight Watchers

Noon-1 p.m. Michael Thorn, Ext. 8612.

Wednesdays: Yoga Practice

Noon-1 p.m., Brookhaven Center. Free. Ila Campbell, Ext. 2206.

Wednesdays: Open Chess Night

5-8 p.m., Rec. Hall. Christine Carter, Ext. 5090.

Wednesdays: Exercise 101

5:15-6 p.m., Rec. Hall. \$4 per class or \$35 for 10 classes. Stretching, low-impact aerobics, and other exercises. Pat Flood, Ext. 7886.

Fridays: Family Swim Night

5-8 p.m. at the BNL Pool. \$5 per family.

Fridays: BNL Social & Cultural Club

6-9 p.m. North Ballroom, Brookhaven Ctr., dance lessons, 9-11:30 p.m. general dancing. Rudy Allforque, Ext. 4733, rudy@bnl.gov.

Fridays: Jiu Jitsu Club

6-7 p.m. in the gym. All levels, ages 6 and above. \$10 per class. Tom, Ext. 4556.

June is Gay Pride Month

A display commemorating gay pride is set up in the Berkner Hall lobby. For more information, see www.bnl.gov/bera/activities/globe.

— THIS WEEKEND —

Friday, 6/13

*BNL Blood Drive

9:30 a.m.-3 p.m., Brookhaven Center. BNLers from 17 to 75 years of age, in good health, and weighing over 110 lbs. are welcome. All donors should have photo identification and know their social security number. Susan Foster,

Two Stony Brook University Students Awarded 2003 Scharff-Goldhaber Prize



Joseph Rubino 02060503

At a ceremony held at BNL on April 30, Maurice Goldhaber (back, right), BNL Scientist Emeritus and widower of Gertrude-Scharff Goldhaber, presented Lilia Anguelova (back, middle) and Carola Berger (front, right), doctoral students at Stony Brook University's (SBU) C.N. Yang Institute for Theoretical Physics, with the 2003 Scharff-Goldhaber Prize. Each winner will receive a \$1,000 award. The Scharff-Goldhaber Prize was established to recognize substantial promise and accomplishment by women graduate students in physics who are enrolled at SBU or who are performing their thesis research at BNL. Administered by Brookhaven Women in Science (BWIS), the award honors the late nuclear physicist Gertrude Scharff-Goldhaber (image in background). In 1950, Scharff-Goldhaber became the first woman Ph.D. physicist appointed to the BNL staff, and, later, she became a founding member of BWIS. Also in the photo are Sally Dawson (front, left), a BNL physicist who was one of the scientists on the Scharff-Goldhaber Prize selection committee; Vinita Ghosh (front, middle), a physicist who is a member of the BWIS scholarship committee; and Martin Rocek (left, back), a physics professor at SBU and Anguelova's thesis advisor.

New Scientist Features 'Plasma Power' (cont'd.)

allows an electron beam generator to be placed in a small vacuum chamber fitted with a plasma window. The beam fires out directly at full power onto the metal to be welded. Also, the vacuum chamber can be small enough to be set on wheels, so an electron gun welder could be used in hitherto inaccessible places.

Hershcovitch's early research for this discovery was supported by DOE's Office of Science, and later work by DOE's Office of Industrial Technology (OIT) within the Office of Energy Efficiency & Renewable Energy. OIT, Acceleron, and the Con-

necticut Light & Power Company of Northeast Utilities are funding the development of this technology.

"There are still some problems that need to be addressed," cautioned Hershcovitch. "For example, when the beam strikes metal, it emits x-rays, so shielding of lead glass or solid lead must be developed and added to the device."

But, according to Acceleron, the potential savings promised by this technology could cut high-quality welding costs almost in half — well worth the work of development.

— Liz Seubert

BNL, ANL Scientists Invent Plasma Valve (cont'd.)



can be put to use, a vacuum allows very high-energy electron beams to circulate in rings for hours. These electron beams interact with magnetic fields to generate x-rays, ultraviolet light, and other forms of radiation that travel unimpeded through beam lines used for experiments. When the vacuum is breached, air moves in with great force, the electron beam loses confinement, and its energy is deposited on vacuum walls. The faster the breach can be contained, the less damage there will be to the ring, beam lines, and the experiments that use those beam lines.

Hershcovitch explained the advantages of the plasma valve: "Unlike traditional valves, a plasma valve has no moving parts, does not require much maintenance, and establishes a vacuum-air separation much faster. Also, it is completely nondestructive. In contrast, existing ultra-fast valves and shutters can cause damage to machinery when triggered."

When activated, the plasma valve is composed of an ionized gas, or a gas with charged particles confined by electric and magnetic fields, that fills an airtight aperture. When the plasma reaches certain temperature and density parameters, it separates atmospheric pressure from a vacuum, which must be devoid of pressure.

— Diane Greenberg

3rd-Grader's Science Fair Project (cont'd.)

commented, "Deciding on the winners entered at this year's fair really tested the judges. Decisions are based on scientific thought, creativity, thoroughness, and clarity, but having so many excellent projects makes choosing one a hard task."

To judge the contest, BNL scientists and staff members pair with local school teachers. The first to select the winning third-grade project were Gail Donoghue, who heads BNL's Museum Programs in OEP, and Pamela Urso, a Longwood Middle School science teacher who has often volunteered as a judge at this yearly contest.

"Not only did this project fulfill all the requirements that we look for, but also, because it was based on Austin's real life, it was particularly meaningful," said Donoghue.

"It was truly an outstanding effort," agreed Urso in a phone conversation with the Bulletin. "Austin did the work over time, his journal was very well documented — it had everything that you would want to see in a science project."

Some time after the science fair, Austin and his family were



told that a biopsy requested by his pediatrician had confirmed what his project had also strongly suggested: that he had celiac, and that other members of the family should be tested. As *Newsday* reports, Jeanine Tayler Stack, Austin's mother, and another family member also have the disease, which can be sent into remission by an appropriate diet.

BNL's annual Elementary School Science Fair started in 1985, the brainchild of a joint committee of local educators and BNL staff, chaired by the late Don Metz, then OEP Head. That first year, children from more than 50 Suffolk schools, from kindergarten through sixth grade, entered 167 projects in competition.

The fair has flourished ever since, bringing in projects ranging from designing and constructing innovative paper airplanes to analyzing which vegetables have the most bacteria to studying diabetes and carbohydrates. The fair is now sponsored by Brookhaven Science Associates in support of DOE's community, educational, and workforce development mission. — Liz Seubert

Remember, Give Blood Drive Today, 6/13

Today's blood drive, 9:30 a.m.-3 p.m., is in the Brookhaven Center. Donors must be in good health, between ages 17 and 75, weigh over 110 lbs, have photo identification, and know their social security number. To make an appointment, contact Susan Foster, Ext. 2888 or donateblood@bnl.gov.



Noon Recital, 6/18

Jacques Thibaud String Trio

Award-winners in the prestigious 1999 Bonn Chamber Music Competition, the Jacques Thibaud String Trio was founded at the Berlin School of Art in 1994, and first toured together that same year. Since then, the ensemble has performed throughout Europe, Japan and the U.S., receiving tremendous acclaim from audiences and critics alike.

After an extremely successful month-long tour of North America in winter 1999, the Trio returned to the U.S. that spring for a reengagement at the Frick Collection and many other concerts.

Appearances at Lincoln Center's Alice Tully Hall, a Washington D.C. recital at the National Gallery and a residency at Stanford University were among the highlights of the Trio's 1999-2000 season.

Last season featured a return engagement at Lincoln Center, a debut at London's Wigmore Hall, over 40 US cities, and a residency at the Florida International Festival. With their charm, youthful exuberance, and astounding virtuosity, the trio has delighted all audiences. Their program for BNL will feature works by Mozart, Bach, Beethoven, and Francaix.

Noon recitals are free and open to the public. All visitors to the Lab age 16 and over must have photo identification. Bring your lunch and come and go as you please.



Precertify Hospital Stays

All participants in the CIGNA PPO medical plan are reminded to obtain hospital precertification from CIGNA. Precertification is mandatory for a one-or-more-night's stay in the hospital, but not for ambulatory surgery procedures for which patients are admitted to and released from the hospital the same day. If you are retired and covered by Medicare, you *do not* have to precertify.

If an employee, retiree, or family member fails to notify CIGNA regarding precertification or emergency hospital admission, medical insurance benefits will be reduced to cover 50 percent of the amounts otherwise payable with a maximum of \$500.

Expectant mothers *must* call CIGNA before the end of their first trimester to precertify their maternity-hospital admission. They or a family member *must* also call within 24 hours following admission into the hospital for the delivery.

For hospital pre-admission certification, call CIGNA at (800) 281-1122 before admission to the hospital or within 48 hours of an emergency admission. This phone number is on the back of the CIGNA identification card. Employees and retirees should advise their families of the precertification requirement, so, in case of an emergency, they can make the required telephone call to CIGNA.

Money Talks Seminar, 6/25

Join representatives from TIAA-CREF at noon on Wednesday, June 25, in Berkner Hall, where the next Money Talks Seminar, "Investment Solutions: New Funds From TIAA-CREF," will be presented. BNLeers will learn about the new TIAA-CREF funds available in BSA retirement plans as of July 1, 2003; learn how to evaluate risk tolerance, investment style, and preferences; and how to use TIAA-CREF's range of asset classes to create a diversified portfolio. Check your mailbox for registration forms. For more information, contact Joyce Wund, Ext. 7516.

The tick population is very high this year Learn how to reduce your risk

Lyme disease is caused by a spirochete that lives in deer ticks. When a deer tick bites a human, the spirochete can be transferred to the person, resulting in Lyme disease. Long Island is a prime location for the ticks that carry the spirochete (about 30-50 percent of the deer ticks are infected).



Deer ticks are active in March to early June and late August to November. The male tick is pictured on left, female on right. The marks on ruler are millimeters.

You can protect yourself by doing the following:

1. Stay on paved surfaces, bare soil and sand, and large expanses of well mown grass.
2. Avoid the edge of fields at the shrub line, entering wooded areas, and walking in high grass near wooded areas.
3. Stay out of tick areas when ticks are most active. Deer ticks are most active in predawn to mid morning and again in late afternoon to dusk. Dog ticks (also found on Long Island) are active all day. Dog ticks do not carry the Lyme disease spirochete).
4. Wear long pants and socks when going into tick areas. Tuck the pant legs into the socks. This makes a barrier that keeps ticks off the skin of the legs.
5. Carefully check your entire body and small children after exposure to tick areas. Ticks can easily walk from ankle to shoulders in a few hours.

What to do if you find a tick on you:

1. If the tick is still walking on you, then carefully remove it and place it into a plastic bag or jar. You can contact Safety and Health Services (SHSD), Ext. 3066, for microscopic examination of the tick.
2. If the tick is attached:
 - If during Occupational Medical Clinic (OMC) hours: Go immediately to OMC for removal.
 - If it is during off-hours: Remove the tick yourself by using tweezers (grasping the tick as close to the skin as possible or use a credit card and scrap the tick off the skin. Do not squeeze the body of the tick. Prompt, immediate removal lessens the chance of Lyme disease spirochete transfer. Place the tick into a plastic bag or jar. Contact SHSD for microscopic examination of the tick. If necessary, the tick can be sent off-site to be tested for the presence of the spirochete.

For more information, contact:

- Medical symptoms and treatment information: OMC, Ext. 3670
- Tick identification, habitat control, and risk prevention: SHSD, Ext. 3066
- BNL Lyme Disease Web Based Training: <http://training.bnl.gov/>

Get to Know Your Lab! Visit the PHENIX Detector, 6/20



Roger Stouenburgh 03-21-01

All Lab employees, facility users, guests, and retirees are welcome to join the next Employee Lunchtime tour, which will be on Friday, June 20, to see the Relativistic Heavy Ion Collider's PHENIX experiment. The group will meet at noon in Berkner Hall upper lobby to be transported by Lab bus to PHENIX, to learn about how this giant detector was built, and how it works. The group will return to Berkner by 1 p.m. For more information, call BNL Community Involvement's Elaine Lowenstein, Ext. 2400.

Federal Women's Dollars & Sense Workshop, 6/25

All BNL employees are invited to attend the BNL-sponsored Federal Women's Dollars and Sense Workshop on Wednesday, June 25, from 9 a.m. to noon in Berkner Hall. Local women-owned businesses will display their products and services.

See how these businesses can help BNLeers increase job safety and productivity. Everything from batteries and chemicals to light bulbs and hazardous-chemical disposal systems will be on display. For more information, contact Barbara Simpson, Ext. 7643.

Computer Training Course Date Change

The Access-Level 1 two-day class, which was scheduled for July 2 & 3, has been rescheduled for July 10 & 11.

Skin-Cancer Seminar, 6/17

Join Marcia Tonnesen, Assistant Professor of Dermatology at Stony Brook University, at noon on Tuesday, June 17, in Berkner Hall where she will discuss how excessive exposure to the sun and its ultraviolet (UV) rays can cause skin cancer.

Tonnesen will also talk about how to protect your skin from UV radiation and other ways to reduce your risk of developing skin cancer. Check your mailbox for registration forms. For more information, contact Denise DiMeglio, Ext. 2881.

Arrivals & Departures

Arrivals

Edward Shea Staff Services

Departures

Blair Bromley ES&T

Jennifer Bromley Info. Svcs.

Grant Thomson Env. Sci.

ANS Meeting, 6/18

Carl Czajkowski, Energy Sciences & Technology Department, will speak at a meeting of the Long Island Section of the American Nuclear Society (LIANS) on Wednesday, June 18, at the Brick House Brewery and Restaurant, 67 West Main Street, Patchogue.

Czajkowski's talk, "Boric Acid Corrosion and David Besse: What's Old is New Again," will deal with the recent publicity over the reactor-vessel-head corrosion event at the Davis Besse Nuclear Power Plant, the phenomenon of boric acid corrosion of carbon steel, and corrosion experiments done at BNL in the 1980s for the U.S. Nuclear Regulatory Commission.

After a social hour from 6 p.m. and dinner at 7 p.m., the talk will be at 8 p.m. Call Arnie Aronson, Ext. 2606, by Monday, June 16, for information and reservations.

BERA Store Offers

Want to go places, meet people? At BERA Sales office in Berkner Hall, open 9 a.m.-3 p.m., you can buy discount tickets to Splish Splash and Great Adventure, or pay to reserve a seat on bus trip to Ellis Island, 8/16; the Yankees, July 21; or the U.S. Open, September 2. Also, items such as baseball hats, T-shirts, sweatshirts, film, and more are ready to buy.

Save That Date! Blues Concert, 7/25

At 8 p.m. on July 25, the BNL Music Club with the Long Island Blues Society will present "Soaring with the Bluz," live at Berkner Hall, with Sam Taylor and Todd Wolfe. The concert will be open to the public and held in Berkner Hall.

Buy tickets in advance at \$15 each from the BERA Sales Office or through the Music Club. No tickets will be sold at the door. For more information, call the BNL Music Club, Ext. 3846 or e-mail jjv@bnl.gov.

Calendar

(continued)

Ext 2888, donateblood@bnl.gov.

— WEEK OF 6/16 —

Tuesday, 6/17

Equipment Demo

10 a.m.-2p.m., Berkner Hall. Representatives from Equipto and LNR Tool will present information on the latest Equipto storage and space-utilization products to maximize your storage space. Ernie Rushia, 491-1825.

*Skin Cancer Prevention Seminar

Noon, Berkner Hall. Marcia Tonnesen, Assistant Professor of Dermatology at Stony Brook University, on causes and prevention of skin cancer. See notice below, left. Denise DiMeglio, Ext. 2881.

Wednesday, 6/18

Apple Computer Technology Show

10 a.m.-3 p.m., Berkner Hall. Presentations will be given in Conference Rooms A & B on such topics as SCITECH, xserve, xserve raid, and a basic introduction to OSX. There will also be PowerBook G4s, PowerMacs, Apple Cinema Displays, and other Apple hardware available for BNLeers to test drive. For more information, contact Sebastian White, Ext. 5488.

*Noon Recital — String Trio

Noon, Berkner Hall. Jacques Thibaud String Trio. See notice on page 3.

*Brookhaven Lecture

4 p.m., Berkner Hall. Todd Satogata, Collider-Accelerator Department, will present "The dAu of RHIC: The Challenges of Flexible RHIC Operations." See story, page 1.

Free Movie Night — The Matrix

7 p.m., Berkner Hall. The English for Speakers of other Languages Program will present the 1999 blockbuster hit *The Matrix* starring Keanu Reeves, Laurence Fishburne, and Carrie-Anne Moss. Rated R. Deepali Mitra, Ext. 5360.

Thursday, 6/19

BERA Bridge Club

7 p.m., Brookhaven Center, South Room. Morris Strongson, Ext. 4192, mms@bnl.gov.

Friday, 6/20

Lunchtime Tour of PHENIX Detector

Noon, Berkner Hall. Meet in the lobby to be taken by Lab bus to PHENIX at the Relativistic Heavy Ion Collider. See notice and photo above, left. The group will return to Berkner by 1 p.m. Elaine Lowenstein, Ext. 2400.

— WEEK OF 6/23 —

Tuesday, 6/24

Garden Enthusiasts Tailgate Swap

Noon, gazebo. Thin out your gardens and bring excess plants and ideas to swap. There should be enough to share without an exchange if you are just starting out. Beth Blevins, Ext. 5630.

Tues., 6/24, & Wed. 6/25

Vacuum Gauging and Cryogenic Pump Seminars

9 a.m.-1:30 p.m., Berkner Hall, Room B. Representatives from Helix Technology will present this two-day course in vacuum measurement. Lunch, coffee, and refreshments will be provided by Helix. For more information and to register, contact Mel Johns, (508) 337-5150, or mjohns@helixtechnology.com.

Wednesday, 6/25

*Federal Women's Workshop

9 a.m.-noon, Berkner Hall. Displays and exhibits by local women-owned businesses. See notice at left. Barbara Simpson, Ext. 7643.

*Money Talks Seminar

Noon, Berkner Hall. All are welcome at the seminar entitled "Investment Solutions: New Funds From TIAA-CREF." See notice at left. Check your mailbox for registration forms. Joyce Wund, Ext. 7516.

— WEEK OF 7/7 —

Thursday, 7/10

Community Advisory Council Meeting

6:30 p.m., Bldg. 490, Large Conference Room. Open to the public. For more information, see <http://www.bnl.gov/>

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

OPEN RECRUITMENT – Opportunities for Laboratory employees and outside candidates.

MK2830. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. in physics with experience in ultra-short laser pulse technology and coherent short (UV/ XUV) wavelength generation highly desirable. Research will involve the development and study of a high harmonic source of attosecond radiation. The aim of this research is to understand the physics which could result in the formation of an attosecond pulse and, ultimately, engineer such a pulse. This is a joint research project with the University of Rochester. Under the direction of L. DiMauro, Chemistry Department.

NS4034. MANAGER, SAFEGUARDS AND SECURITY DIVISION (M-3) – Requires a bachelor's degree (advanced degree preferred), broad background in safeguards and security, to include extensive experience in nuclear security, nuclear materials control and accountability, and emergency management of security forces. Minimum of five years' experience in managing a major safeguards and security organization, such as a military unit or a Federal or private security organization. Considerable skill required in supervising large numbers of people and effectively dealing with upper management and other division managers. Excellent skills in oral and written communication, decision-making, budgeting, and interviewing are a must, as are U.S. citizenship and ability to obtain and maintain a DOE "Q" security clearance. Responsible for planning, organizing, managing, and directing the activities of the Division and directing all safeguards and security activities at the Laboratory. Develops policies and procedures; manages programs for the protection of nuclear materials, classified information, and other Laboratory assets; directs the nuclear materials control and accountability program; and liaisons with Federal, state, and local law enforcement agencies. Ensures compliance with DOE and Laboratory policies and procedures pertaining to the safeguarding and securing of nuclear resources and other Laboratory facilities, equipment, and personnel. Identifies problems, weaknesses, and deficiencies in safeguards and security programs; develops solutions; and takes corrective actions. Prepares and manages the Division budget. Serves as Laboratory Classification Officer. In security emergencies, acts as the Laboratory Emergency Supervisor. Reports to the Assistant Laboratory Director for Facilities & Operations.

TB2479. PRINCIPAL TECHNICIAN (TW-4) – Requires an AAS degree, general knowledge of and more than 2 years' experience with lasers, high-vacuum and high-pressure gas technology, and accelerator diagnostics. In addition, skills in machining and assembling of mechanical components and equipment specific for the aforementioned technical fields are required. Experience in operating an electron-accelerator facility would be an advantage. Responsibilities will include working as a laser technician, providing technical support to the scientific and engineering staff at the Accelerator Test Facility in the maintenance and upgrade of the ATF lasers and accelerator. Physics Department.

Motor Vehicles & Supplies

01 FORD TAURUS - silver, 3L., 50K mi., a/t, a/c, all power, am/fm/cass., well maint., \$9,000. Henri, Ext. 8294 or 776-2779.

00 MAZDA MILLENNIA - all power, 59K mi., every option, CD player, heated seats, 100K warr., \$13,200. Gregg, Ext. 4548 or 874-8631.

00 MITSUBISHI GALANT - 89K mi., excel. cond., \$6,500. Louie, Ext. 4897.

00 SUZUKI ESTEEM - a/c, a/t, 1.8, 4-cyl., 55K mi., new tires, new stereo, \$5,000. Samantha, Ext. 3471.

Caution: Protective Parents Perambulating



Roger Stoutenburgh, Lab photographer, stayed out of the picture while he watched and recorded scenes of this BNL family of geese. After noticing a goose on a Lab roof before the final great 2003 whiteout, he returned to see the goose nesting in the snow. As the nestlings hatched, he captured "Dad" and the early days of these new BNLers in this photo essay.

At this time of year, it is wise to give extra space to Canada geese, even if their young seem not to be with them, says Tim Green, BNL's natural resource manager. "The goslings may be just out of sight, and parent geese — like humans — can act in an aggressive manner if you get too close." Other young animals, especially fawns,

are also appearing, Green says. "You can expect to see fawns on site from now through the end of the summer, and they are more unpredictable than the older deer, who are more alert to the dangers of cars on the road. So watch out for young creatures and their protective parents as you walk or drive around the site."

98 PONTIAC GRAND AM - green, 113K mi., all power, runs very well, 4-dr., Karen, 384-5442.

97 DODGE STRATUS - excel. cond., in/out, \$2,500. Cheryl, Ext. 3571.

97 JEEP GRAND CHEROKEE LIMITED - V8, leather int., 107K mi., moonroof, am/fm/cass., all power, \$6,500. John, 929-4450.

96 VOLKSWAGON GOLF - green, 92K mi., alarm, \$4,000. Rich, Ext. 7013 or 698-5294.

95 FORD T-BIRD - all power, 121K hwy. mi., sunroof, good cond., \$3,800. Jamal, Ext. 5805 or 804-2959.

93 FORD TAURUS - V6, 3.8L, 4-dr., 75K mi., a/t, airbags, excel. eng., new waterpump & sparks, runs well, \$2,200. Edward, Ext. 4331 or 516-297-3904.

93 JEEP CHEROKEE - all power, 117K mi., clean, good cond., 2/4WD, new front brakes, alloy wheels, CD player, \$4,400. Bob, 928-1806.

89 FORD ESCORT - 2-dr. hatchback, 118K mi., \$700 obo. Ian, Ext. 5616 or 217-337-6021.

89 HARLEY ULTRA CLASSIC - lots of chrome, S&S carb., excel. cond., \$12,000. Dennis, Ext. 2825 or 698-4823.

87 FORD TAURUS WAGON - 5-sp., all power, 140K mi., runs well, \$500. Yuri, Ext. 8419 or Ext. 1268.

87 MERCURY TOPAZ - a/t, a/c, 61K mi., runs well, \$950. Mitch, Ext. 2302.

84 LINCOLN TOWN CAR - silver, 117K mi., all power, 4-dr. sedan, leather int., good cond., digital dashboard, \$1,399. Ext. 3479 or 645-6110.

79 TRAILER - Terry travel trailer, 24', some new parts, \$1,850. Russ, Ext. 7759.

LADDER RACK - Kargomaster, fits Chevy ext. cab w/cap, new cond., cost \$550, ask. \$250. John, Ext. 7268 or 732-7568.

RADAR DETECTOR - Uniden RD9XL, X&K bands, small, w/meter, volume & sensitivity adjustments, cord, new in box, \$10. Peter, Ext. 2913.

SCOOTER - gas & electric, Top-of-The-line quality, brand new. Gordon, 433-7136.

TRAILER TIRES - 205/75/R15, 2 new \$45/ea., 2 like new, \$30/ea., all \$125, 1 new tire & lug, \$65. Rich, Ext. 7160.

Boat & Marine Supplies

21' CC SUZUKI OB - 140 HP, 350 hrs., FF, GPS, VHF, livewell canvas, great fishing boat, excel. cond., \$10,000. Frank, Ext. 3433.

13.5' BOSTON WHALER - 18 h.p. Evinrude eng., '64, comes w/extra motor & trailer, \$850. Charlie, Ext. 3260.

SUNFISH - \$800. Meyer, Ext. 2169 or 286-8350.

Furnishings & Appliances

AIR PURIFIER - Blue Air, heavy duty, very quiet, lg. capacity on coasters, almost new, cost \$500, ask. \$250. Ext. 5080 or 751-1884.

BABY FURNITURE - bassinette, Mason, wicker & toddler bed w/mattress, other assorted items also avail., cash & carry. Robert, 476-5772.

BEDS - solid maple bunk beds, \$175, custom oak twin platform bed & storage drawer, \$125. Lorraine, 689-7326.

BEDROOM SET - queen-size bed w/w/throw pillows, overhead lights, side cabinets & armoire, Thomasville, light oak, \$950 neg. Bob, 928-1806.

BOTANICAL PRINTS - P.J. Redoute, matted, gold wood framed, 14.5" x 18.5", \$69/set of 3. Karen, Ext. 4262.

BOY'S BEDROOM FURNITURE - solid oak desk w/hutch, dresser, night table, headboards (single & full), fishtank w/stand, \$650/all. Kathleen, Ext. 2113 or 298-5345.

CABINET - with or w/o draws. Ext. 3280.

CAPTAIN CHAIRS - 2 pedestal from Hatteras, \$50. Gary, Ext. 2214.

CHEST FREEZER - Frigidaire 13 cu. ft., '00, white, diamond cond., 43"W x 30"D x 35"H, energy star, cost \$299, ask. \$185. Ext. 3756 or 821-8827.

COUCH - sectional, off white w/pillows, \$500; brass and glass coffee & end tables, \$200/ea. Tom, Ext. 3085 or 744-4535.

CRIB - wood, turns into day bed, v.g. cond., cost \$340, \$150 obo; crib, \$75; couch, lg. sectional, queen sleeper, 2-end inclines, \$300 obo; car seats, 2, \$20/ea.; \$35/both; high chair, \$15; stroller, \$25. Tim, Ext. 4661 or 722-2125.

DESK - wood, 24 x 44.6 drawers w/chair, \$50. 567-9025.

DESK - wooden, honey pine finish, \$40 obo. Doreen, Ext. 2457 or 821-7879.

DINETTE SET - oak, 44" round table w/leaf, 6 wheatback chairs/green & white cushions, storage drawer under table, incl. glass table top, excel. cond., \$400. John, 208-0196.

DINING ROOM SET - black lacquer w/gold trim table, 40 x 72 w/4 chairs, 3-pc. wall unit, \$575. Diana, Ext. 3681 or 399-3910.

END TABLES - 2 hexagonal cabinets with glass tops, 22"W x 22"H, dark wood, v.g. cond., \$50. John, Ext. 7268 or 732-7568.

GLASS TABLE - with 2 glass shelves & brass trim, 51" x 1'w. \$100 obo. Cheryl, Ext. 2272 or 732-7634.

HOME FURNITURE SET - excel. cond., wooden king bed, matrix, small tables, 3-seat sofa bed, clothing cabinet & more, \$350, must sell. Alex, Ext. 3144 or 645-1883.

KITCHEN SET - oval table & 2 chairs, \$25. Walter, 744-9423.

LAMP - glass, 16" tall, candlestick style, old, \$15. Karen, Ext. 4262.

MICROWAVE - Panasonic, NE7860, 1.4 cu. ft., 700W. Ed, 928-4522.

NORDICTRAK - excel. cond., \$150. Tim, 722-2125.

OAK TABLE - 48x30, 6 mos. old, ideal for small space, \$75. Carol, 744-8632.

RESIN PATIO SET - 42" glass square table, 4 chairs w/cushions, m.s. gray umbrella with metal base, \$125. Gerry, 878-2872.

SOFA - double recliner, light grey, \$250, picture avail.; table w/swivel chairs, Formica finish, seats 6, \$200. Dave, Ext. 5460.

SOFA - & loveseat, brass glass oval table, oriental 9x12 rug. Evelyn, 864-8119.

SOFA - black Jennifer leather w/reclining ends, 78", excel. cond., very comfortable, \$350. Marita, Ext. 3060.

SOFA - queen size, white, leather-look, \$150; coffee table, oak & glass, \$55, both very good cond. Karen, Ext. 2922.

SOFA BED - brand-new w/throw pillows, \$300. Ext. 7150.

SOFA BED - floral print, \$130 neg. Steve, Ext. 2897.

WATERBEDS - 2 queen, tube type individual bladders, boxsprings, pillow top, new, \$300/ea. or \$500/both obo. Keith, 827-2275.

Tools, House & Garden

GAS GRILL - Sunbeam, w/side burner, \$65. Carol, 744-8632.

LAWNMOWERS - Snapper ride-on lawnmower, \$350; Honda self propelled, like new, \$200, both just serviced & in excel. running cond. Paul, Ext. 5829 or 289-9152.

PATIO FURNITURE - 84 in. table, 8 chairs, incl. swivel, cost \$2,100, ask. \$800. Karen, Ext. 2922.

RIDING LAWNMOWER - Craftsman, 1 yr. old, under warr., 24" cut, mulch, bag, side dish, elec. start, excel. cond., \$650. Hank, 744-9812.

TILE SAW - IMER Combi, 200 mm dia blade, cuts perpendicular & 45 degrees up to 17 in. long, \$385. Trevor, Ext. 4374.

Lost & Found

KEY - found in front of Berkner, Lg. key w/ black plastic top, located in lost & found office, bldg. 179B. C. Carter, Ext. 2873.

MP3 PLAYER - iriver, lost, last seen in the gym on yellow bench 6/2 at lunchtime. Kurt, Ext. 6324.

Sports, Hobbies & Pets

ARCHERY BOWS - 2, new, 1 Golden Eagle "Super Hawk" bow w/12 Easton custom made arrows, \$150; 1 Hoyt USA bow, \$100. John, 929-4450.

BICYCLE - Shimano, 21-sp., good cond., \$30; free lamp. Hua, Ext. 4367 or Ext. 1536.

BICYCLE - women's, 27", 10-sp., good cond., \$40; men's, 27", 10-sp., good cond., \$40. 567-9025.

BICYCLES - Trek 220, 24" wheel, one boy's, one girl's, excel. cond., \$100/ea. Cindy, Ext. 3641 or 874-3652.

BIKE RACK - SportRack, fits nearly every car, never used, \$40. Steve, Ext. 3822 or 929-6527.

CHINCHILLA PUPPY - hand raised, 10 wks. old, standard velvet, \$60. Maryann, 395-3890.

GO-PED - sport/ped gas operated, like new, must sell, blue, orig. own., owners manual incl. cost. \$445, ask. \$300 neg. Nick, 928-7042.

GOLF CLUBS - ladies, w/bag & cart, \$100. Kathryn, Ext. 3442.

GOLF CLUBS - tailor made, oversize, 3-AW R80 shafts, \$125. Hank, 744-9812.

MOPED - brand new, \$850; go-cart, Critter one year old, roll cage, \$600. Joann, Ext. 7009.

QUARTER PIPE - 3'H x 4'W x 7'L, wooden construction, excel. cond., \$350. Laura, Ext. 7861 or 698-4143.

ROLLERBLADES - in-line skates, Razor Soul 2K, size 7, 56mm/90a wheels, hard shell, \$75; Mission Proto SV, size 6D, 72 mm/80mm wheels, \$50. Don, Ext. 7237 or 929-6571.

VINTAGE BUMPER POOL TABLE - '60s era, 1" thick slate, good cond., no tears, w/ accessories, \$300. Norah, 758-2760.

WEIGHT BENCH - & 140 lbs. of vinyl-wrapped weights, Weider brand, \$70. Mike, Ext. 7941.

WEIGHT BENCH - st. bar, curl bar, some wts., \$60. 698-1184.

Audio, Video & Computers

TRANSCEIVER - YAesu VX5R50/144/430 mhz triband w/h drop in charger, Larsen NMO 2/70 mag mount, \$250. Lon, Ext. 2012 or 379-3954.

Miscellaneous

CONCERT TICKETS - 2, Westbury Music Fair, 7/25, Foghat, Grandfunk Railroad, Leslie West & Corky Laing of Mountain. Lisa, Ext. 7524.

ELECTRONIC PIANO - Korg Concert C-40, speakers, sustain, sostenuto, pedals, MIDI compatible, mint condition, 88 keys, cost \$2,500, ask. \$1,200. Chris, 744-6874.

HUMIDIFIERS - Kaz, ultrasonic type, quiet, steam vaporizer, both in excel. cond., in boxes, \$5. Peter, Ext. 2913.

UNIQUE PINATAS - all occasions, all characters, cartoon, Disney, Sesame Street. Donna, 821-0359.

Yard & Garage Sale

JAMESPORT - huge multi-family, children's clothes, couch, many items, Sat. 6/14, Fox Lane off Manor Lane. Tim, Ext. 4661.

MEDFORD - multi-family, something for all, proceeds to 4-H youth, Horseblock, Connecticut, Wave, 3107 Kane Ave. 6/13 & 6/14, 8 a.m. - 4 p.m. Maryann, 758-0790.

Wanted

BABY CRIB - needed to buy or borrow. Ken, 929-6744.

SINGERS - soprano, alto, tenor, base, to join Monday noon-1 p.m. group. Liz, Ext. 2346.

Free

BEDROOM SET - full-size headboard, mattress, boxspring, triple dresser, excel. cond., dark wood, you pick up. Deborah, Ext. 3888 or 744-7210.

CHILD'S BED - box bed w/drawers & headboard. Glenn, Ext. 4988 or 209-1263.

KITTENS - 2, adorable rescued, mostly white w/gray markings, 1 male, 1 female, vet checked, ready 6/20. Kathy, Ext. 4756.

PRINTER - Epson Action Laser II, broken. Nick, Ext. 3205.

WOOD - you cut the trees, you keep the wood. Walter, 698-0576.

In Appreciation

Our sincere thanks & appreciation to our friends at BNL for the kindness & support shown following the loss of my father Charles. — John Bohnenblusch & Family

Happenings

Join BORO - Brookhaven Off Road Club — for outer beach outings w/fellow BNL employees & their families. First outing is 6/22 at Smith Point Park. For more info., contact Nancy, Ext. 4303 or concadoro@bnl.gov.

Attention: On-Site Golfers No Golf on Softball Fields

On-site golfers are reminded that the practice of golf on the softball fields is prohibited.

The safety of softball players and soccer players who use the fields is being compromised by golf balls that are left on the field. Injuries can and have occurred as a result. Golfers are requested to adhere to the posted signs that read "No Golfing." Their cooperation will be much appreciated.

Cultural Note



Happy Friday 13th! Although this day is supposed by some to be unlucky, remember that if you should see a black cat, wearing a bowler hat and wellington boots, and carrying an umbrella which, in view of current weather trends, may well be unfurled — the odds are strong that it is a *British* black cat, possibly descended from a seafaring Limey ancestor, and, as such, believed by many stiff-upper-lipped UK dwellers to bring good fortune should it cross your path.

— Liz Seubert (*Brit*)