

Yasuyuki Akiba Receives 2011 Nishina Prize

Yasuyuki Akiba, experimental group leader of the RIKEN BNL Research Center at Brookhaven Lab and vice chief scientist at the RIKEN Nishina Center in Japan, has been named the recipient of the 2011 Nishina Memorial Prize, given annually by the Nishina Memorial Foundation since 1955 to young physicists for their achievements in the fields of atomic and subatomic physics. Akiba received the award — a medal and approximately \$6,500 — at a ceremony in Tokyo on December 6.

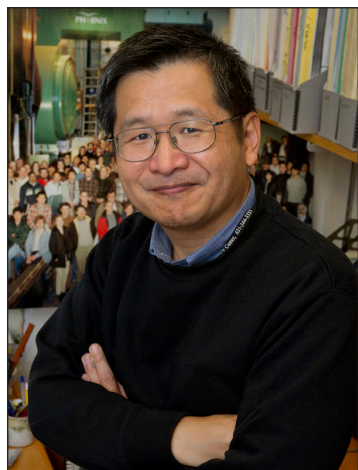
Akiba said, “I am honored to receive this prestigious award, and I would like to thank all my colleagues at PHENIX, RIKEN, and Brookhaven Lab who have helped with this research over several years. I am very pleased that our perseverance has resulted in some very significant results.”

Through studies of collisions of gold ions traveling at nearly the speed of light at Brookhaven’s world-class accelerator, the Relativistic Heavy Ion Collider (RHIC), physicists reported in 2005 that the early universe, just microseconds after the Big Bang, consisted of a freely flowing liquid of quarks and gluons called “quark-gluon plasma.” This substance has been dubbed a “perfect” liquid because it has almost no frictional resistance or viscosity. This was a surprising finding, since predictions made prior to RHIC’s initial operations in 2000 expected that the early universe would be composed of a gas.

In subsequent studies of quark-gluon plasma at PHENIX, one of RHIC’s two major detectors, Akiba and colleagues determined that the initial temperature of the quark-gluon plasma is about 4 trillion degrees Celsius — the hottest temperature ever reached in a laboratory, about 250,000 times hotter than the center of the Sun. These temperature measurements, combined with observations analyzed for over nine years from all four of RHIC’s detectors, confirm that RHIC’s gold ion collisions produce quark-gluon plasma.

Akiba and his collaborators at PHENIX measured the temperature of the hot matter by looking at the color, or energy distribution, of light (photons) emitted from it, similar to the way one can tell the temperature of iron from the color of light it emits. The PHENIX physicists used a new technique invented by Akiba to do so.

Akiba explained, “It is a very challenging measurement be-



Roger Stoulenburgh D0241211

cause there are many background, or noise, photons produced in the collisions of gold ions at RHIC. At high energies, photons and electron pairs are basically the same thing — just different forms of electromagnetic radiation. So instead of measuring photons, we measured electron pairs, which have much less noise, to determine the quark-gluon plasma temperature.”

Also, Akiba is being honored for measuring two heavy quarks called “charm” and “bottom” quarks, which are produced in RHIC collisions and are a very useful probe of quark-gluon plasma. Akiba and colleagues found that heavy quarks lose a significant amount of energy and flow with the medium within the quark-gluon plasma. Akiba explained, “In theory, it was expected that the heavier a quark, the less energy it loses, and the heavier it is, the less able it is to flow, so these findings were surprising.”

Akiba was also cited for discovering large enhancements of electron pairs in the low-energy region in RHIC collisions. The cause of this enhancement has not yet been determined. Akiba credits Alberica Toia, previously of Stony Brook University and currently at CERN, the European Organization for Nuclear Research, for conducting most of the analysis work for this research.

Akiba earned his undergraduate degrees in 1982 and 1984, and his doctorate in 1988, all from the University of Tokyo. He was a research associate at the University of Tokyo’s Institute for Nuclear Study from 1988 to 1997, and at the High Energy Accelerator Research Organization in Tsukuba, Japan, from 1997 to 2003. After briefly serving as a senior research scientist at RIKEN in Wako, Japan, in 2003, he became RIKEN’s vice chief scientist, a position he still holds. He has also been the experimental group leader of the RIKEN BNL Research Center at Brookhaven Lab since 2008. In addition, he is the project manager of the VTX detector of PHENIX, as well as a deputy spokesperson for the PHENIX collaboration.

— Diane Greenberg

Using NSLS X-rays and Detector To Uncover a Rembrandt

The quest to authenticate an unknown Rembrandt painting, titled “Old Man with a Beard,” hit a dramatic high at the National Synchrotron Light Source (NSLS) at Brookhaven Lab. Using an advanced x-ray detector developed at NSLS, scientists found compelling evidence that the famous Dutch master did indeed have his own hand on the painting.

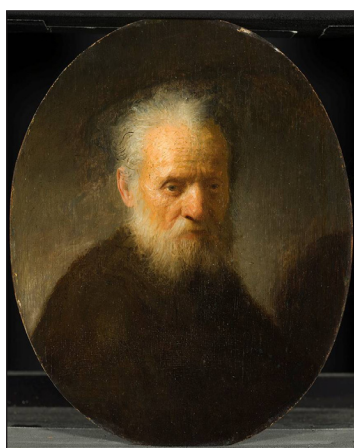
“After doing the experiments at NSLS, I felt that the painting I held in my hands was a genuine Rembrandt,” said D. Peter Siddons, a physicist in the Photon Sciences Directorate. “We had identified hidden paint layers, which the art historians considered critical to determining attribution.”

Siddons is funded by the DOE Office of Science’s Office of Basic Energy Sciences (BES). BES plays a critical role in supporting detector development for research in a range of scientific disciplines, including materials science, physics, chemistry, and medicine. New detectors are essential to sustaining innovative science in the United States.

Siddons explained that art historian Ernst van de Wetering and his colleagues — University of Delft materials scientist Joris Dik, art restorer Martin Bijl, and University of Antwerp chemist Koen Janssens — had all been working closely together to answer questions about the painting’s attribution and to probe beneath the surface for what they believed was a second image. The Europeans were eager to see what more they



The newly authenticated Rembrandt painting under analysis in the Maia detector at BNL’s NSLS beamline X7A. Image from *Out of the Shadows*.



Courtesy Rembrandt House

Rembrandt’s Old Man With a Beard

could learn using a specialized detector at the New York facility an ocean away.

The detector, named Maia, produced high-definition maps of the spatial distribution of different chemical elements in the painting, at speeds up to 100 times faster than previously achievable. Those results gave scientific support to the declaration

of authentication just announced by van de Wetering at the Rembrandt House Museum in Amsterdam. Van de Wetering is chair of the Rembrandt Research Project and considered a preeminent authority on Rembrandt.

Technology supported by DOE at Brookhaven is developed and optimized to study energy-relevant materials. New techniques and capabilities, however, can often shed light on other problems. According to Siddons, most of the light sources around the world now support an influential amount of “cultural heritage” research, both in art and archaeology. “This field poses interesting scientific questions, particularly since many objects are structurally and chemically very complex, challenging our most sophisticated instruments,” he said.

In the case of a painting, what lies underneath could be...

See *Rembrandt on p. 2*

473rd Brookhaven Lecture, 12/14

Multimodal Thinking — Medical Imaging With Antimatter and Nuclear Spins

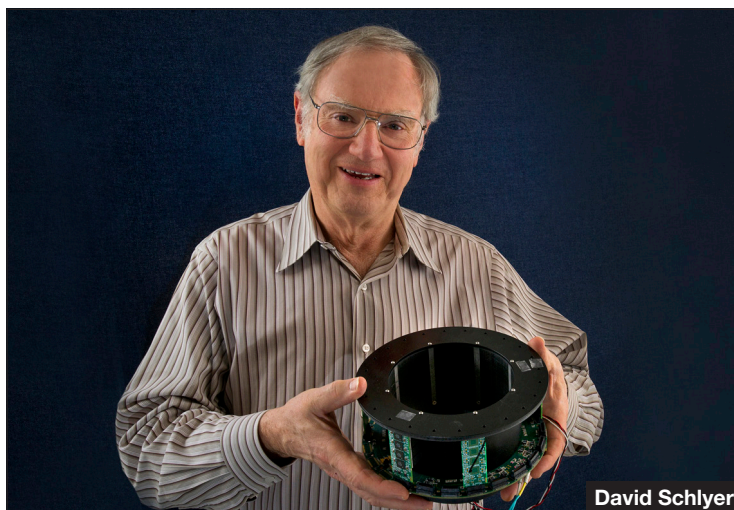
The goal of more accurate diagnoses, fewer unwanted biopsies, and better patient care is in sight. For years, researchers at Brookhaven Lab have been developing new scanners that combine PET and MRI imaging techniques. Now, this new multimodality imaging — which provides both anatomical and functional information from one single scan — is proving to be an invaluable tool for research in areas ranging from cancer in humans to water transport in plants.

On Wednesday, December 14, join David Schlyer of the Laboratory’s Medical Department for the 473rd Brookhaven Lecture, titled, “Multimodal Thinking — Medical Imaging with Antimatter and Nuclear Spins.”

All are invited to attend this free talk, which is open to the public and will be held in Berkner Hall at 4 p.m. Refreshments will be offered before and after the lecture. Visitors to the Lab of age 16 and older must carry a photo ID while on site.

To join Schlyer for lunch at a restaurant off-site on the day following the talk, contact Amalia Ruggiero, Ext. 2837, alr@bnl.gov.

Schlyer earned a Ph.D. in



David Schlyer

Roger Stoulenburgh D0241211

chemistry from the University of California at San Diego in 1976. He arrived at Brookhaven Lab as a postdoc in the Chemistry Department that year, and between 1978 and 1981, he became an assistant chemist and then an associate chemist there. He continued his research at the Cyclotron Corporation in Berkeley, and at King Faisal Specialist Hospital in Saudi Arabia, where he became a department chairman. He returned to Brookhaven’s Chemistry Department in 1985. In 2000, he became an adjunct professor in the Biomedical Engineering Department at Stony Brook

University, and he continues to teach there today. He earned tenure from Brookhaven’s Chemistry and Medical Departments in 2003, and was promoted to senior chemist with tenure in the Medical Department in 2007.

Schlyer holds eight patents, and is a member of both the Experts Section of the International Atomic Energy Agency and a committee for the International Union of Pure and Applied Chemistry. He is also a reviewer for the *Journal of the Korean Nuclear Society*, and editor of *Current Radiopharmaceuticals*.

— Joe Gettler

Voice Mail System Change Tonight, 12/9

The Information Technology Division will switch voice mail services to a new system tonight, December 9. There are a few simple steps that everyone who uses Lab voice mail must take to ensure uninterrupted access during the transition.

Get details online: <http://intranet.bnl.gov/memo/mm.asp?IssueId=206&StoryId=5>.

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 may be found at www.bnl.gov/hospitality/calendar.asp.
- The Recreation Building #317 (Rec. Hall) is located in the apartment area.
- Events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.

— REGULARLY —

Weekdays: Free English for Speakers Of Other Languages Classes

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

Mondays: Yogalates

Noon–1 p.m. at the Rec Hall (Bldg. 317). Registration required, Ext. 2873.

Mondays: Pilates

5:30–6:30 p.m. at the Rec Hall (Bldg. 317). Registration required, Ext. 2873.

Mon. & Thurs.: Kardio Kickboxing

\$5 per class. 12:15–1:15 p.m. in the gym (Bldg. 461). \$5 per class. Ext. 2873.

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

Noon–1 p.m., B'haven Cntr (Bldg. 30). N. Rm. Adam Rusek, Ext. 5830, rusek@bnl.gov.

Tuesdays: Hospitality Welcome Coffee

10:30 a.m.–noon at the Rec Hall (Bldg. 317). Meet over coffee. Children welcome. Ext. 2873.

Tuesdays: Knitting Class

2–4 p.m. at the Rec Hall (Bldg. 317). Learn to knit/crochet — all skill levels. Free. Ext. 2873.

Tuesdays & Wednesdays: Zumba

Tuesdays: Noon–1 p.m., in gym (Bldg. 461). Wednesdays: 5:15–6:15 p.m., at the Rec Hall (Bldg. 317). Registration required, Ext. 2873.

Tuesdays: Toastmasters

Two monthly meetings: 1st & 3rd Tuesdays, 5:30 p.m., Bldg. 463, Room 160. Guests and visitors welcome. www.bnl.gov/bera/activities/toastmasters/.

Tuesdays & Thursdays: Aerobic Fitness

5:15–6:30 p.m. in the Rec. Hall (Bldg. 317). \$5 per class, or 10 classes for \$40. Kathy Schoenig, Ext. 2818.

Tues., Wed., & Thurs.: Rec Hall Activities

5:30–9:30 p.m. in Bldg. 317. General activities, TV, ping pong, chess, games, socializing. Christine Carter, Ext. 5090.

Tuesday & Thursday: Aqua Aerobics

5:30–6:30 p.m., Pool (Bldg. 478). Registration required, Ext. 2873.

Wednesdays: Ballroom Dance

5:30, 6:30, 7:30 p.m., Brookhaven Center (Bldg. 30). Vinita Ghosh, Ext. 6226.

Wednesdays: Play Group

10 a.m.–noon at Rec Hall (Bldg. 317). Parents meet while infants/toddlers play. For events, see <http://www.meetup.com/BNL-Playgroup>, or call Ext. 2873.

Wednesdays: Yoga

Noon–1 p.m., B'haven Center (Bldg. 30). Free. Ila Campbell, Ext. 2206, ila@bnl.gov.

1st Wednesday of month: LabVIEW

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

Thursdays: BNL Cycletrons Club

5 p.m., Brookhaven Center. First Thurs. of month. Andy Mingino, Ext. 5786.

Thursdays: Reiki Healing Class

Noon–1 p.m., Call for location. Nicole Bernholz, Ext. 2027.w

Thursdays: Postdoc Social Night

6:30 p.m. ASAP Lounge (Bldg. 462). www.bnl.gov/asap.

Thursday: Judo Class

7:30 p.m. Gym (Bldg. 461). Tom Baldwin, Ext. 4556.

Fridays: Family Swim Night

5–8 p.m. Pool (Bldg. 478). \$5/family. Ext. 2873.

Safety Concern?
Dial **8800** for an environmental, safety, or health concern not considered an imminent danger.

Luxuriate

in December worries—

but remember

Necessities first:

Tuna Veg. Stew Mayo Soup

BNL FOOD DRIVE

pickup all next week!

Two Talented High School Seniors Win BNL’s 2011 ‘Discovery’ Art Prize

BNL awards the Discovery Art Prize annually to two local high school seniors for artwork best exhibiting the spirit of “Discovery.” The BNL Art Society chooses the winners from artworks

exhibited at a show for high school seniors held by the South Bay Art Association (SBAA) each November.

The winning artworks were displayed at the annual BNL

Employee Art & Crafts Show, also in November. Peter Siddons, a scientist at the National Synchrotron Light Source who is interested in art (see *Rembrandt story, p.1*), presented the \$300

prizes to Maya Cohen of Bellport High School for her photo, “Magnify,” and Makenzie Sullivan of Eastport South Manor High School for her drawing, “Charlie.”

— Liz Seubert

Peter Siddons and Maya Cohan

Makenzie Sullivan and Peter Siddons

Maya Cohen, who hopes to study at Pratt University and become a professional photographer, works now with art teacher Suzette Fandale at Bellport High School. Cohen’s extremely striking digital photograph, titled “Magnify,” was taken in the street, with Maya holding a water bead in one hand and taking the photo with the other — a feat in itself. She wanted to photograph the tree reflected in the bead, and she succeeded so well that the effect seems simple although original and technically excellent. In addition, the viewer approaches and sees that the tree appears upside down. This photo was chosen for the “Discovery” prize because the photographer employs the bead as a “tool” using the laws of refraction of light to look at something (the tree) and see it differently, similar to the way in which scientists use tools and the different wavelengths of synchrotron light in the National Synchrotron Light Source at BNL, to make discoveries by seeing things differently.

Rembrandt from p. 1

...just as interesting, if not more so, than what the eye sees on the surface. But how do you peel back the layers on a fragile — and valuable — canvas without destroying the original image? Art historians and scientists have found an extremely effective way using penetrating beams of x-rays and powerful detectors such as Maia at the NSLS.

Quite a few paintings have made appearances on the NSLS experimental floor — ranging from those created by 20th-century artists Bertha Lum and Edward Hopper to the portrait in the news now, declared to be painted nearly 400 years ago by a young Rembrandt Harmenszoon van Rijn.

“At the time, Rembrandt’s many students perfected their technique by copying their teacher’s works,” said Dik. “As a result, there’s a whole complex group of paintings that are exactly the same, slightly modified, or in some way related to each other,” he said. “The goal is to understand more about how they are related and where the hand of the master begins and ends.”

Initial work was done at the European Synchrotron Radiation Facility, where heavy elements such as lead and mercury could be visualized. Then Dik, in collaboration with the Rembrandt Research Project and the painting’s owner, a private collector, discovered some puzzling information: Studies with a portable x-ray fluorescence (XRF) scanner revealed high concentrations of copper, not evident on the painting’s surface.

To investigate this anomaly further, the group teamed with researchers from Cornell University, Australia’s Commonwealth Scientific & Industrial Research Organi-

sation (CSIRO), and NSLS to use XRF through the Maia detector.

In x-ray fluorescence, a tiny x-ray beam is focused onto a sample, causing some electrons to be ejected from their “orbits” around atomic nuclei, leaving an ionized atom behind. Other electrons in the atom “fall” into the newly created vacancy and, in doing so, emit x-rays at energies characteristic of specific elements. As the sample is scanned through a highly focused x-ray beam, a 2D map of elemental composition vs. position is obtained.

“This is an application that benefits greatly from a synchrotron,” said Arthur Woll, a researcher at the Cornell High Energy Synchrotron Source and an expert in a variant of scanning XRF, not used for this painting, that allows the XRF signal to be resolved in 3D. “Yet, like all fluorescence experiments, one of the limitations is detector speed.”

That roadblock is primarily why the Rembrandt group crossed an ocean to use NSLS, where Siddons and colleagues have an international reputation for developing advanced x-ray detectors like Maia that are much faster and more precise than the traditional variety.

“We developed Maia to address challenges experienced by all x-ray microprobes with poor detector performance, including the inability to examine statistically significant areas of highly inhomogeneous samples, like those found in environmental samples or complex materials used in energy conversion,” Siddons said. The application of the technique to the analysis of a potentially famous artwork gave the researchers a chance to demonstrate the detector’s prowess.

“I knew the kind of data they’d get from the NSLS fluorescence

detector would knock their socks off,” Woll said.

And it did.

The Maia detector — based on a massively parallel detector array composed of 384 individual detectors, an “on-the-fly” scanning system, and advanced analysis software — imaged the entire painting in about eight hours, a job that would normally take about 30 days.

The copper mapping by Maia revealed contour lines of a beardless, seemingly younger male figure wearing a collar and beret, characteristic of Rembrandt’s early self-portraits. It appears that Rembrandt started a self-portrait, left the painting unfinished, and later painted over the earlier work.

“The copper revealed by x-ray fluorescence corresponds to the underpainting, the first monochrome layer that Rembrandt traditionally put down when creating a new work,” Dik said. Cross-sectional analysis later confirmed the presence of copper in the lower layer of paint.

A third image, verified by infrared photography, revealed possibly a sketch made from carbon of a figure wearing a turban with a feather. “One thing was clear after the images Maia produced — this was no student copy,” said Dik. “You can’t always judge a painting by its surface!”

Given access to the underlying layers through the high-tech imaging techniques of science, the team’s art historians were able to draw enough similarities with other Rembrandt works and studio techniques to conclude that this painting was indeed by the master himself. According to Dik, someone who is copying a painting — such as a student in Rembrandt’s studio — would not change anything; they would sim-

ply replicate the work. Reworking an original painting into another work is an example of experimental techniques used by Rembrandt. The buried paint is proof of that, he said.

Dik added, “When I brought the painting to NSLS with my assistant, Matthias Alfeld, I knew the Maia detector was fast and sensitive. But the images far exceeded my expectations. We were very, very impressed.”

Siddons said that the Maia detector was originally inspired by a custom-made integrated circuit designed by BNL’s Instrumentation Division for a different x-ray technique, extended x-ray absorption fine structure. Maia was developed during an eight-year collaboration with CSIRO. With their expertise in high-speed custom computers, CSIRO added a real-time computer, which performs a sophisticated algorithm to extract the elemental contributions from the raw data as they are acquired. The algorithm allows reliable separation of weak fluorescence peaks that would otherwise be buried by nearby strong peaks from abundant elements. (See <http://nmp.csiro.au/dynamic.html>) Because of its speed and precision, the Maia detector and its associated analysis techniques will enhance studies that use x-ray fluorescence in the biological, environmental, geological, and materials sciences for measuring trace element concentrations in everything from soil deposits to the microstructure of exotic energy materials — and works of art. The Maia detector recently won an R&D100 Award, which recognizes the top high-tech innovations. — Mona S. Rowe

For more information and images, go to: http://webh01.ua.ac.be/mitac4/rembrandt/index_301111.html.

Brotherly Love for the Gift of Life
BNL siblings who always find time to donate blood

If you combine the number of years the Paquette brothers, Doug and Mike, have been rolling up their sleeves to donate blood, that number would be greater than 50! Both men give blood at least twice a year.

“On Long Island, we have access to the best healthcare in the world,” said Doug Paquette, who works in the Lab’s Environmental Protection Division. “But hospitals depend on ordinary people like us to ensure they have an adequate blood supply on hand.”

Mike Paquette of the Lab’s Facility and Operations Directorate agreed. “We are immensely grateful that our family has never needed an emergency blood transfusion,” he said. “Still, we want to make sure that blood is available for our family, friends, and neighbors.”

Both men agree that donating at the Lab is easy and convenient. “And it isn’t just about eating the jelly beans and donuts provided after donating,” Mike said, smiling.

“All kidding aside, Mike and I agree that it is definitely the best hour someone can spend that truly makes a difference in their community,” added Doug.

— Jane Koropsak



Doug (left) and Mike Paquette

Joe Rubino 06/24/11

Consider rolling up your sleeve for the next BNL blood drive on December 15. Make an appointment: <http://www.bnl.gov/hr/blooddrive/>.

For more information, contact Liz Gilbert, Ext. 2315, gilbert@bnl.gov.

IRS Allows Additional 401(k) Contributions for 2012

Denise DiMeglio, Benefits Office Manager

The IRS limits annual contributions an employee can make to the 401(k) Plan. This limit is increasing effective January 1, 2012, from \$16,500 to \$17,000. In addition, those who are turning age 50 in 2012 or are older may elect up to an additional \$5,500 in “catch-up” contributions, which brings the annual maximum contribution to \$22,500 for these individuals.

The IRS also limits annual compensation that can be used for the purpose of calculating contributions to both the Lab’s Retirement Plan — which is provided as a benefit at no cost to eligible employees — and the optional 401(k) Plan. This annual limit for the purposes of calculating the contributions has been increased from \$245,000 to \$250,000 effective January 1, 2012.

If you would like to change the current percentage allocation you are contributing to the 401(k) Plan and/or elect the catch-up provision for January 1, 2012, please go into PeopleSoft under Employee Self-Service/Benefits/Change My 401(k) and insert the new percentage. For your online change to be in effect for January 1, 2012:

- Employees paid weekly: make the change between December 27 and 28, 2011.
- Employees paid monthly: make the change between January 1 and 15, 2012.

If you do not have access to a computer or are unable to make the change online, you can request an election form by visiting the Benefits Office in Human Resources at Bldg. 400 or calling Ext. 7516. Please note that you can increase, decrease, start, stop, or restart your 401(k) contributions at any time during the calendar year.

As a reminder, TIAA-CREF and Fidelity representatives are available on site on various days of the month to provide one-on-one financial counseling. To schedule an appointment with a representative, call: TIAA-CREF, (800) 732-8353; Fidelity, (800) 642-7131.

Talk by Essayist David Bouchier, 12/14

After working as a journalist, a bookseller, and later a lecturer at the University of Essex, U.K., Stony Brook University and Suffolk County Community College in the U.S., David Bouchier for many years produced a humor column “Out of Order” in the Sunday edition of *The New York Times*. Since 1992, he has established an ironic voice on public radio and hosts a program of classical music and commentary, *Sunday Matinée*.

Bouchier has published six books of thoughtful and amusing essays, and at noon on Wednesday, December 14, in Berkner Hall, he will read from and talk about pieces from



his latest volume, *Peripheral Vision: Irregular Essays from Public Radio*.

Sponsored by Brookhaven Science Associates, this free event is open to the public. Visitors to the Lab of 16 and older must carry a photo I.D.

Holiday Party With Santa, 12/19

Santa Claus will visit the Recreation Hall (Bldg. 317) and bring small gifts for good little boys and girls on Monday, December 19, at 5 p.m. To attend, RSVP to Jen Pieniazek (jpieniazek@bnl.gov) and include your name, the number of children you will bring, and their ages.

Dunk a BNLER Today, 12/9

Today, December 9, go to the Firehouse (Bldg. 599) and make a donation of \$5 to the United Way for three chances to dunk one of the BNLERs listed below. Times are also listed.

Scott Bradley	11-11:14	Mike Schaeffer	12:38-12:52
Ken White	11:14-11:28	Suzanne Davidson	12:52-1:06
Robert Lincoln	11:28-11:42	Mike Loftus	1:06-1:20
Patricia Bender	11:42-11:56	Mark Davis	1:20-1:34
George Goode	11:56-12:10	James Donohue	1:34-1:48
Chris Johnson	12:10-12:24	Tom Roza	1:48-2
Roy Lebel	12:24-12:38		

SBU-BNL Research Initiatives
Seed Grants 2012

The SBU-BNL Seed Grant program serves to foster and build collaborative efforts between Stony Brook University (SBU) and Brookhaven Lab. It is a key element for developing synergistic activities that will grow joint research programs aligned with the strategic plans of both institutions.

For this 14th year, a pool of approximately \$150,000 will be distributed to proposals submitted jointly by SBU and BNL scientists. BNL matching funds may be available for proposals of special interest to the Laboratory. Typical awarded budgets range between \$10,000 and \$50,000 per project.

Current strategic initiatives are in Energy (Smart Grid, Energy Storage), High-Performance Computing, the Joint Photon Science Institute, and Bio-Imaging. Proposals that enhance other BNL-SBU collaborations are also welcome.

Selection of winning proposals will be announced by April 27, 2012. Funds will be available in June, 2012.

More information is available at: <http://www.stonybrook.edu/commcms/bnl/seedgrants.html>.

**Deadline for proposal submissions:
5 p.m. (EST), on Friday, March 2, 2012**

BERA News

Holiday Party at the Crowne Plaza in Holtsville, Friday, 12/16, 7-midnight. \$60pp includes: open bar 7-11 p.m., hors d’oeuvres, dinner buffet, dessert, DJ, raffle prizes! Bonus! Want to stay at the Plaza? Special \$79 + tax rate with breakfast.

Toy Drive in Progress! See bins in 400 & 488. Bring new unwrapped toys for tots, kids, who won’t have any without you.

Stocking Stuffers. The BERA store carries discount movie tickets to a variety of local theatres, discounted Atlantis Marine World, greeting cards, and lots of fun toys & souvenirs. Stop in! (NOTE: The store will close Friday, 12/23, and reopen Tuesday, 1/3.

Trips: Tickets at BERA Store, buses depart from the Brookhaven Center

International Motorcycle Show at the Javits Center, NYC, Sunday, January 22. \$24pp includes ticket, luxury bus, & driver tip. 50 tickets only. Depart BNL 8 a.m., depart show at 4 p.m.

Philadelphia Flower Show, Saturday, March 10. \$40 pp includes event ticket, luxury bus, driver tip. 50 tickets only.

Rangers vs. Islanders at Madison Square Garden, Sunday, March 11, 7 p.m. game. \$90 pp includes luxury bus, ticket in the 325 section, driver tip. 40 tickets only. Depart BNL 3:30 p.m., depart after the game.

Rangers vs. Boston at Madison Square Garden, Sunday, April 1, 3 p.m. game. \$90 pp includes luxury bus, ticket in the 325 section, driver tip. 40 tickets only. Depart BNL at noon, depart after the game at about 6 p.m.

**All tickets are non-refundable, all ticket arrangements must be handled through the BERA Store.*

**All tickets and arrangements are for the benefit of BNL/BSA employees, users, guests & their families.*

**Under 21 must be accompanied by an adult.*

**Tickets are limited to 4 per person for the first week of sales, but BERA reserves the right to limit ticket sales.*

**Keep up to date at <http://www.bnl.gov/bera>.*

Upcoming Events for the United Way

12/9: Dunk Tank. 11 a.m.-2 p.m. Firehouse (Bldg. 599). See right.

12/12: Dessert Sample Sale. 11 a.m.-1:30 p.m. (Bldg. 725)

12/12: Chili Cook-off. Noon-1:30 p.m. Bldg. 459, training room

12/14-16: Gift Wrapping. 11 a.m.-2 p.m. Berkner

12/15: Physics Pizza-Piazza-Palooza (rescheduled from 12/8). Noon-1 p.m. Physics (Bldg. 510), second floor

12/15: Pie-in-the-Face Contest. 11:30 a.m.-12:30 p.m. Berkner

12/15: Hot Dog Lunch. 11:30 a.m.-1 p.m. (Bldg. 326)

For more information and to keep up with new fundraising efforts in the departments and divisions, see <http://intranet.bnl.gov/unitedway/>.

CALENDAR

Today, Friday, 12/9

***Dunk A BNLER for the United Way**
11 a.m.–2 p.m. Firehouse (Bldg. 599). See below.

***Science Learning Center Gift Sale**
Noon to 2 p.m. See below.

***Employee Tour: RHIC & PHENIX**
Noon–1 p.m.. Meet in lobby of Berkner Hall. See below.

WEEK OF 12/12

Wednesday, 12/14

***Talk: Essayist David Bouchier**
Noon. Berkner Hall. See below.

***473rd Brookhaven Lecture**
4 p.m. Berkner Hall. David Schlyer, Medical Department, will talk on “Multimodal Thinking — Medical Imaging With Antimatter and Nuclear Spins.” All are welcome to this free public lecture. Visitors to the Lab of 16 and over must carry a photo ID. Refreshments will be served before and after the event. See p.1.

Thursday, 12/15

***Talk: Copernicus and the Cosmos**
7 p.m. Berkner Hall, Award winning author Dava Sobel talks on “A More Perfect Heaven: How Copernicus Revolutionized the Cosmos.” All are welcome to this free public lecture sponsored by Brookhaven Women in Science. Visitors to the Lab of 16 and over must carry a photo ID.

Friday, 12/16

***Science Learning Center Gift Sale**
Noon-2 p.m. See below.

— WEEK OF 12/19 —

Monday, 12/19

***Holiday Party With Santa**
5 p.m. Rec. Hall. See below.

Friday, 12/23

Christmas Eve Observed.
Lab Half Holiday.

— WEEK OF 12/26 —

Monday, 12/26

Christmas Day Observed.
Lab Holiday.

NOTE: No IBEW Meeting in December 2011. Date for January 2012 meeting to be announced

Lunchtime Tour, 12/9
RHIC and the
PHENIX Detector

All are invited to tour the Relativistic Heavy Ion Collider (RHIC) tunnel and the PHENIX Detector on Friday, December 9. This is the last chance to see both of these stunning facilities before access is restricted for the upcoming twelfth RHIC run. Meet in the upper lobby of Berkner Hall at noon for this two-in-one tour. No reservations required. Call Elaine Lowenstein, Ext. 2400, for more information.

Science Learning Center
Gift Sale, 12/9 & 16

On two more consecutive Fridays, today, December 9, and next week, on December 16, from noon to 2 p.m., do your holiday shopping at the Science Learning Center, which is managed by the Lab’s Office of Educational Programs, in Bldg. 935. You’ll find unique gifts and fun toys for all ages.

Arrivals & Departures

— Arrivals —

Jueri Tagger Photon Sciences
Athi Varuttamaseni NS&T
Lawrence Walker Rad Control

— Departures —

None

Classified Advertisements

Placement Notices

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

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

OPEN RECRUITMENT – Opportunities for Lab employees and outside candidates.

CUSTODIAN POSITIONS (Temporary) (LG-1) – Requires one year of custodial experience, including stripping and waxing floors, commercial carpet cleaning, and ability to operate commercial cleaning machines. Must be flexible and customer oriented. Must be able to read and comprehend OSHA Material Safety Data Sheets and other job related documents. Must have a valid driver's license and the ability to pass computer based training. Under general supervision, performs general cleaning and housekeeping duties in all Laboratory buildings. Site Resources Division Please apply to Job ID # 15957.

Motor Vehicles

08 NISSAN VERSA HBACK – 44K mi. gd cond, 27 city 31 mpg, optional 100k mile bumper to bumper <http://tinyurl.com/bsc69pl>. \$9,000 neg. Ext. 7328.

03 FORD SE FOCUS WAGON – 75K mi. a/t, a/c ABS, am/fm stereo, cd/mp3 player, roof rack, dual front air bags, gd cond. \$6,000. Nick, Ext. 2490.

97 BMW Z3 – 100K mi. 2.8 convertible w/ hard top, a/t, many upgrades incld, mint cond. \$9,000 neg. Charlie, 331-6651.

97 FORD TAURUS G – 170K mi. 6 cyl, 2nd owner, h/way mi. gd running cond, , moving, need to sell. \$1,400 neg. Rubi, 344-2309 or rubi786@yahoo.com.

95 BUICK LESABRE – 91K mi. runs well, new: struts/eng mounts/brake lines/batt/water pump, new usb/mp3 am/fm cd, on-site. \$3,250 neg. Ext. 3932 or wilke@bnl.gov.

94 HONDA ACCORD – 159K mi. 2dr, a/t, red, runs v/well, rec. done tmg belt, crank shaft, water pump, fr & rear brakes, ignition, more. \$2,500 neg. Trisha, 804-5394.

91 RV JAMBOREE – 63K mi. org mi, Class C 350cid Ford chassis, slps 6, eng turns over, roof needs rep., 4KW on board generator, pics. \$2,500 neg. 928-5684.

Boats

23' ODAY CONVERTABLE – Shoal Keel/ C/B 2'5'Draft, VHF, OB, Roller Furling, Sails, PortiPotti, Stove, cushions, cradle. \$2,300 neg. Ext. 5055 or sals@bnl.gov.

MONTERAY LSC – '02, 24.5', 350 HP Mer-cruiser/Bravo3 I/O, mint, deluxe cuddy cbn, stereo, stove, sink, sep head/shwr, \$16,599, needs exh. manifold. 516-449-8924.

OUTBOARD MOTOR – Johnson Seahorse 6 hp, v/gd cond, lightly use and stored/maintained, ask/\$650. Ext. 4691.

Furnishings & Appliances

2 TVs – 26" esa/\$25; 15" Sharp/\$15. Lynda, Ext. 7235 or fitz@bnl.gov.

AIR CONDITIONERS – 4 Frigidaire, excel, used 2 ys, 2/8000, 2/6000/btu, \$60/\$50/ea; Thermostats: 3/Honeywell, hot/cold; 2 programmable, \$35,\$30,\$20. 929-6442.

BEDROOM SET – bought 6 mos ago, q/bed w/new mattress, 2/side tbles, dressing tbl w/6 cabinets, 5/big cabinet almirah, 2/lamps, \$800. 344-2309 or gul@bnl.gov.

BEDROOM SET – Broyhill Fontana, q/bed, 2 nightstands, dresser w/mirror/armoire/\$500, pic avail. Kevin, 258-8164.

CABINET – w/2 drawers, solid wood, brown, pics, <http://tinyurl.com/22ptcj4>, \$15, ext 4360. Wei-Fu, wfchen@bnl.gov.

CAPTAIN BED – all wood, oak color, for twin mattress, has 4 drawers below, sm storage closet/bkcase as headbrd, ask/\$100. Andrew, Ext. 3024 or seelin@bnl.gov.

COMPUTER DESK/HUTCH COMBO – cherry finish, 54" w x 24" d, orig/\$250, ask/\$75/ea, 8-10pcs avail, excel cond. 804-6262.

DINING ROOM SET – extra lg, 2/leaves, cust. tble pads, opens/109", 2 arm chrs, 6 side chrs, china cabinet w/glass upper/lighting, bottom storage, \$1,750, 767-5205.

DINING ROOM SET – table w/leaf/83", 6 chairs and China Cabinet/\$500, pics avail. ccullen@bnl.gov.

FREEZER – Imperial Heavy Duty Commercial, 20.8 cu ft, excel cond/\$1,000. 678-3299 or dgbdoug@gmail.com.

MICROWAVE – GE® 1.6 Cu Ft, over-the-range M/wave Oven Model #JVM1750D, white, ask/\$100 v/gd cond. Ext. 3024.

MICROWAVE – purchased 6/mos ago, moving must sell, sale prize is less than half, \$30. Rubi, 344-2309 or gul@bnl.gov.

OAK ENTERTAINMENT CENTER – 55w, 50½t, 17d, TV opening = 27w x 24t, 4 shelves for audio equip, pic avail. Ext. 2826.

PAPASAN CHAIR – lg wicker chair w/off-white cushion, see Pier 1 website for photo, u-pic-up, excel cond/\$25. Ext. 2277.

PAPASON CHAIR – approx 4' round/\$30/obo; blue/wht cushion, free w/chair frame, pics lauren.nash@noaa.gov. 816-739-1012.

RANGE – elect, 30" Whirlpool Accubake, Self Clean, flat top glass top, Mdl 396LXEQ, white, v/gd cond, ask/\$200. seelin@bnl.gov.

REFRIGERATOR – fireplace, range hood, all work, all b/o. Karl, Ext. 3116.

WALNUT BEDROOM – Danish Mod.Amer. of Martinsville, all wood, excel cond: 2/ dressers, mirror, 2/night tables pics avail, \$500. Ext. 7365 or stelmach@bnl.gov.

Audio, Video & Computers

2 ACER 17" LCD MONITORS – 2 Acer 17" LCD monitors model AL1716. Excel cond. \$120 for both. Rob - rkrebs@bnl.gov.

BARNES & NOBLE NOOK COLOR – brand new w/1 yr accidental insurance/\$195. 736-7367 or smokey20@optonline.net.

GUITAR AMPLIFIER - TUBE – Crate V-18 all tube, , 18 watts, 12" spker, line out, excel cond/\$100. Mark, Ext. 2599.

HP TOUCHPAD – brand new, 32GB. \$300/obo. Muralidhar, Ext. 3546.

MUSCIANS SALE – Mesa Boogie Nomad45 2x12 45watt all tube amp excel cond/\$400, Fender Power Chorus, 2X12, 150 watt, solid state/\$100, Ibanez RG570 gd cond/\$150. Tom Flanagan, Ext. 5010.

NINTENDO DSI XL – Red Nintendo w/ Brain Age games in orig box w/cables/\$140. Renee, Ext. 8278.

PHONE – Panasonic KX-TG4024, cordless, 4 sets, Dect 6.0 plus, intelligent eco mode, digital answering system, brand new, still in box, \$85, Ext. 4290. 344-4290.

SPEAKERS – for computer/\$5; w/sub-woofer/\$10, cart/\$15. 344-4290.

TAPE RECORDER – in gd cond, little used, \$10. Rubi Gul, 344-2309.

TV – Samsung TXM2796HF 27 inch hi def CRT set w/NTSC tuner. 1080i component input. Works fine. Very heavy. You help pick up. \$50. Rich, Ext. 7239.

TVS – 26" esa/\$25; 15" Sharp/\$15. Lynda, Ext. 7235 or fitz@bnl.gov.

Sports, Hobbies & Pets

BOWFLEX MOTIVATOR – w/lat pulldown & leg extension/\$400. Ext. 5873.

DECORATIVE PAINTING WOOD – lg no. of wood bowls, boxes, sleds, benches, etc for dec. painting, pic. Rich, Ext. 7013.

ELLIPTICAL MACHINE – Yowza, Sanibel model, excel cond, still selling see www.yowzafitness.com, ask/\$1,000. 928-7893.

JET TICKETS – Kansas City Chiefs vs Jets Dec 11 at 1pm 2 Tickets and parking pass Price/\$240. Patrick, Ext. 8217.

MOTORCYCLE HELMET – Bell Revolver Modular, med, Matte Black, Brand new, doesn't fit me, Anti-fog shield, internal retractable sunshade, \$80. shrey@bnl.gov.

STAMPS – 124 glassine envelopes w/asorted stamps to collect, mostly fr. overseas & Canada, some postmarked, + 30 empty glassine envcls, \$40. 949-4046.

YOUTH COMPOUND BOW – Make: PSE Model:Nova Gamespot, 26" draw, Color: Camouflage Mossy Oak, Easton arrows, \$100. Richard, Ext. 3932 or wilke@bnl.gov.

Tools, House & Garden

LEAF VACUUM – w/twig chipper, made by Patriot, needs new air filter/100. 375-2680.

SNOW BLOWER – Toro single, 3 yrs old, excel cond, \$110. Henry, 744-9812.

SNOW BLOWER – elect, Craftsman 120 V.A.C., 12 amp 60 Hz 20" clearing width, like new/\$100. 506-9242 or reed@bnl.gov.

SNOWBLOWER – '05 Ariens 1332 Pro, 32", 2/stage, w/13 hp, elect start, halogen light, hand warmer, looks new, just serviced, ask/\$950. Tony, 973-609-3083.

Miscellaneous

AUDI AND VW REPAIR – Certified VW tech w/7 yrs dealer experience, all repairs, maintenance to eng diag, 484-9888.

BABY'S ITEMS – Stroller w/swivel wheels & hood, grey \$25; Graco portable baby crib-cum-playpen, almost new/\$35. 766-7701.

BABY GIRL CROSS – 6" wall cross, pink w/ praying little girl/\$8; pink/white photo frame w/"Godchild" for 4x6 photo/\$12. Kathleen, Ext. 7114.

CHRISTMAS TREE – 8' w/colored lights, used 2 yrs, incl cloth carrying case, brought/\$200, ask/\$45. Ext. 2277.

CHRISTMAS TREE DECORATOR – will decorate your real/fake tree. Price varies by size, aver. cost is \$75. 384-2467.

EXERCISE CHAIR – for the belly, branded, gd quality pd/\$180, ask/\$40; 24" TV, gd cond/\$40. Rubi, 344-2309 or gul@bnl.gov.

GYM – Gold's Gym Platinum System, pic on Sports Auth. website, set up so we can disassemble together, ask/\$250. Ext. 3024.

KINDLE LIGHTED LEATHER COVER – new, black, fits Kindle Leyboard/\$50. Diana, Ext. 3681 or teich@bnl.gov.

THERAPEUTIC MASSAGE – relax, relieve muscular tension, \$20/off 1st treatment, 508-360-8633.

Winter Is Coming

Guidelines for Reopening After Severe Weather

By Lanny Bates, Assistant Laboratory Director for Facilities & Operations

Last winter and during Hurricane Irene and its aftermath, Lab leadership and Facilities & Operations (F&O) staff learned valuable lessons about how the Lab should respond to inclement weather events. As winter approaches, this is a good time to refresh your understanding of our closing and delayed-opening policy, first announced last February.

Delayed Openings

The next time we have a delayed opening following bad weather, such as snow or ice, there will be only two time scenarios:

- If the Lab work start time for non-essential employees is 11 a.m., the gate will reopen at 10 a.m.
- If the Lab work start time is 1 p.m., the gate will reopen at noon.

The one-hour difference between gate opening and official work start times gives non-essential personnel the opportunity to arrive at the Lab and get to their work areas before the official start time. Non-essential personnel will not be permitted on site before the gate reopening time.

This policy makes delayed openings more manageable and safer for all employees. It's a response to problems

we encountered last winter, including long lines of cars backing up onto the William Floyd Parkway as non-essential personnel all returned to work at the same time. Then, once employees were through the Lab gates, there was a sense of urgency to get to parking lots, walk quickly to buildings, and be at our desks as close as possible to the official start of the delayed work day. Traffic jams on icy roads and a rush to get back to work only expose us to a greater risk of accidents and injuries.

Full-day Closures

When we have a closure, everyone except essential personnel and guests and visitors living on site must stay off site so snow removal teams can work safely and efficiently. Those on the essential personnel list know who they are and we know where they will be during the event. We hold weather briefings with operations and scientific personnel (including user representatives) to help identify priority needs for building entry and parking lot cleanup.

Lab Status Updates

The next time we have a snow or ice storm, there are several ways to learn if we have a full-day closure or delayed opening.

- How the Lab reaches out to you: The Internal Communications Office sends

broadcast emails to all "@bnl.gov" addresses. In addition, the Office of Emergency Management sends recorded phone calls to staff through the Everbridge mass notification system. (For Everbridge to work for you, your contact information in PeopleSoft must be current. Log in to PeopleSoft now and click through to "Personal Information" to review your details and make any changes necessary.)

- How you can check with the Lab: Visit www.bnl.gov or call (631) 344-INFO (344-4636).

Note both the official work start time and the gate reopening time. Then, please, take your time as you drive to the Lab.

Always Think Safety

The Lab sits on 5,300 acres with approximately 350 buildings that are connected by more than 29 miles of paved roads, 12 miles of paved walkways, and many paved parking lots. Cleaning up that large an area is a huge undertaking.

As always, there may be icy patches on roads and sidewalks at the Lab. Watch for slippery conditions as you drive and walk around. The few hours lost in a delayed opening are insignificant compared to recovery and healing time after an injury.

2012 Holiday Schedule

New Year's Day	Monday, January 2
Martin Luther King Jr. Day (Floating Holiday)...	Monday, January 16
President's Day	Monday, February 20
Memorial Day	Monday, May 28
Independence Day	Wednesday, July 4
Labor Day	Monday, September 3
Veterans Day	Monday, November 12
Thanksgiving Day	Thursday, November 22
Day After Thanksgiving	Friday, November 23
Christmas Eve Observed (1/2 day).....	Friday, December 21
Floating Holiday	Monday, December 24
Christmas Day.....	Tuesday, December 25

Car Pool

PLAINVIEW – 3 man carpool, looking for 4th driver, work 8am-4:30pm, meet at Plainview Library, if interested call Pat x6195 or Elliott, Ext. 2495.

For Rent

CTR. MORICHES – House, 3BR/2Bath, unfurn, beach/boating rights, no smkg/pets, avail Jan 1. \$1,950/mo neg. Ext. 3116.

MIDDLE ISLAND – lg 1/bdrm apt, l/r, full kitch w/all new applis, full bath, lg closets, utilis incl, priv ent, off st prkg. \$1,000/mo. 786-3620.

MIDDLE ISLAND – lg 1/bdrm bsmt apt, pvt ent, phone/ cable/int, strictly no smkg/pet, quiet, all incl, nr Lab, SBU, employee only, 1 mo sec. \$850/mo. 672-2451.

NORTH SHIRLEY – need a roommie to sign a 2bd/1br apt, onsite w/d, prefer male, quiet, and clean, immed avail. \$550/mo neg. CB, Ext. 3511 or geniusni@gmail.com.

RIDGE – 1 bdrm, kitchenette, full bath, l/r, sep ent/prkg, quiet neighborhd, no smkg/pets, in apt, mins to Lab, bikable. \$975/mo. Lynne, 924-0002.

ROCKY POINT – Legal 2nd flr 1 br apt, nw full bth, huge eik, l/r, priv ent, no smkg, access priv beach, incl water, heat, cable TV & w/less int, 1st mo & 1 mo sec @ signing. \$975/mo. 494-5474.

ROCKY POINT – 1 bdrm apt, d/r, full kitch, l/r, bath, priv entry/deck&ynd, off-st prkg, 15 min to BNL, w/d, d/r, no smkg/pets, heat/elec not incl. \$1,150/mo. 849-3061 or mcappasso@yahoo.com.

SHOREHAM, – Cozy 1/bdrm apt on tree-lined st, 8 min to Lab, cathedral ceilings, pvt ent, w/w cpt, kitch/lr combo, bath, b/r, incl utilis, sec + 1st mo + refs. \$850/mo. Susan, slattuca@bnl.gov.

WADING RIVER – Roommate wanted, priv bdrm and b/r, share hse w/owner, amenities incl laundry, cable, wifi, short walk to beach, shopping nearby. \$700/mo. 929-0704.

For Sale

SHOREHAM – 3 bdrm, 1.5/ba Col, cul de sac, updated kit, st/less appl, new w/d, updated bath, f/p, deck, gar, new wood shed, SWR school dist., 10 min to Lab. \$359,000. Andrea, Ext. 334, 744-8793 or dreashouse@aol.com.