

BNL Awards \$34-Million Contract For NSLS-II Buildings

E.W. Howell to Construct Buildings Using American Recovery and Reinvestment Act Funds

BNL has announced the selection of the general contractor for construction of laboratory-office buildings (LOBs) for the National Synchrotron Light Source II (NSLS-II), which will be the world's most advanced storage ring light source when complete in 2015. E.W. Howell, based in Plainview, NY, has been chosen to construct the LOBs, which will provide 124,000 square feet of lab and office space for NSLS-II. Occupancy of the first LOB is anticipated in 2012, with the balance of construction lasting through 2013.

Funding for this new construction comes from the American Recovery & Reinvestment Act (ARRA). The NSLS-II project received \$150 million in ARRA funding, \$34 million of which is designated for the LOBs' contract.

NSLS-II, now under construction, will enable discovery-class



Artist's rendition of an NSLS-II Laboratory Office Building

science, including science that will drive abundant, safe, and clean energy technologies. Construction began in 2009, creating jobs and stimulating the economy. The facility is expected to start operating in 2015. NSLS-II is funded by the DOE Office of Science, which is also supporting construction of the LOBs.

Ultimately, the facility will include five LOBs. Under the

contract announced on August 13, E.W. Howell will construct three LOBs with various laboratories and offices.

Each LOB will feature a mix of wet labs, dry labs, fabrication/assembly shops, and tech spaces that have easy access to the NSLS-II experimental floor. The buildings will also have offices to accommodate up to 124 occupants. The buildings are being...

See *NSLS-II Contract* on p. 2

ARPA-E to Power Superconducting Magnet Energy Storage Project

Lab Director Sam Aronson joined elected officials and representatives from DOE and several collaborating institutions for the August 31 announcement of a \$4.25 million grant from the American Recovery and Reinvestment Act to fund superconducting magnet energy storage (SMES) research. The grant was awarded through DOE's Advanced Research Projects Agency-Energy (ARPA-E), and will be matched with \$1 million from the collaborating institutions for a total of \$5.25 million.

The Brookhaven team, headed by Principal Investigator Qiang Li and including Ramesh Gupta and Vyacheslav (Slowa) Solovyov, joined Aronson at the press event held August 31 at SuperPower, Inc. in Schenectady, NY. Also attending were ARPA-E Program Manager Mark Johnson, New York Congressman Paul Tonko, and Schenectady Mayor Brian Stratton.

The grant funds work on an advanced superconducting magnetic energy storage system, which can store energy in the magnetic field of a coil made of superconducting wire. BNL, with years of experience in producing superconducting magnets as well as studying the first and second generation of high-temperature superconducting (HTS) wire, will design, build and test the magnet system. BNL's multi-disciplinary team includes scientists the Superconducting Magnet Division and from the Advanced Energy Materials group in the Condensed Matter Physics & Materials Science Department. In addition, BNL, SuperPower, and the University of Houston, where SuperPower conducts its research and development, will develop a new-generation HTS



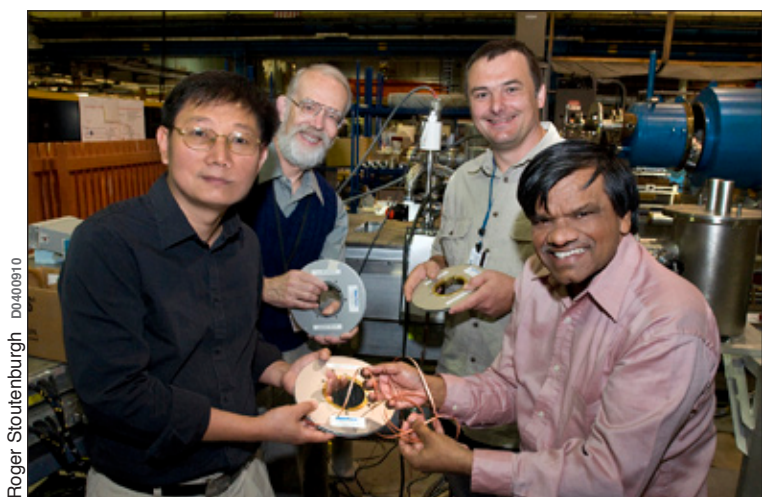
Celebrating the announcement of an important new energy storage collaboration are (from left) BNL Director Sam Aronson, Congressman Paul Tonko, SuperPower General Manager Art Kazanjian, ARPA-E Program Manager Mark Johnson, ABB Inc. Global Project Manager V.R. Ramanan, and Allan Jacobson, director of the Texas Center of Superconductivity at the University of Houston.

wire. The fourth partner in the collaboration, ABB, Inc. of Cary, NC, will create the electronics interface that will control the flow of energy from the coil to the grid.

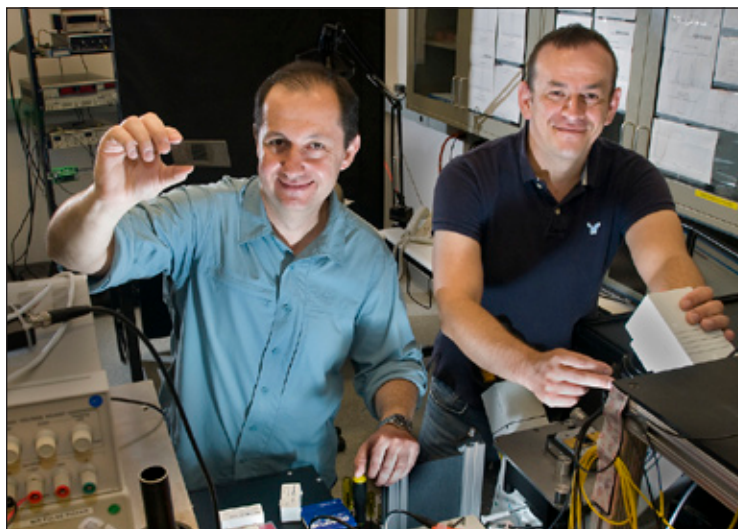
Speakers at the event and the press conference that followed stressed the urgency of the project, which could have a significant impact on how electricity is stored and delivered in the future. Developing affordable, large-scale energy storage systems would be a game-changing advance for the U.S. electrical grid. In particular, energy storage will be crucial in enabling the widespread use of two key renewable energy sources: wind and solar power. SMES systems use magnetic fields in superconducting coils to store energy with...

See *ARPA-E* on p. 2

Superconducting magnetic energy storage systems will be built using the second generation high-temperature superconducting wire used in the R&D magnet in the background. The team members are: (from left) Principal Investigator Qiang Li, Condensed Matter Physics & Materials Science Department (CMPMSD) Peter Wanderer, Superconducting Magnet Division (SMD), Vyacheslav (Slowa) Solovyov, CMPMSD, and Ramesh Gupta, Principal Investigator for SMD.



Roger Stoutenburgh 02320710



Oleg Gang, left, and Mircea Cotlet at the Center for Functional Nanomaterials

Nanoparticles Increase Intensity Of Quantum Dots' Glow

Demonstration of precision DNA-based nanoassembly method could lead to advances in solar cells, optoelectronics, and biosensors

By linking individual semiconductor quantum dots with gold nanoparticles, scientists at BNL have demonstrated the ability to enhance the intensity of light emitted by individual quantum dots by up to 20 times. The precision method for making the light-emitting particle clusters — published online July 26, 2010 in the journal *ChemComm* — will greatly advance scientists' ability to study and modify the optical properties of quantum dots, and could eventually lead to improved solar energy conversion devices, light-controlled electronics, and biosensors.

This research was performed at BNL's Center for Functional Nanomaterials (CFN) and was supported by the DOE Office of Science.

"Quantum dots — tiny crystals of semiconductor materials that fluoresce, or emit light, in response to photoexcitation —

have enormous potential for use in a wide range of fields from solar energy conversion to computing and medicine," said Mircea Cotlet, a physical chemist at the CFN and lead author on the current study. "But many factors can influence the light they emit, and it's hard to sort out the contributions of these factors in large samples due to the inherent ensemble averaging. Building single-molecule structures at the CFN seemed the ideal way to tease out these effects."

The BNL team recently developed a precision technique for building such nano-sized structures using short strands of DNA as a highly specific "glue" to link particles together.

"DNA consists of two strands with complementary pairings of bases that stick together in only one way," explained Oleg Gang, also of the CFN, and...

See *Quantum Dots* on p. 2



BNL's efforts to help small businesses succeed were seen in action at this Mentor-Protégé signing ceremony held in July 2009 between BNL and 3-Gals Industrial, LLC — a small/woman-owned business — with Jill Clough-Johnston (seated, left), BNL's Small Business Liaison Officer in the Procurement & Property Management Division (PPM), Lab Director Sam Aronson (fourth from right), and representatives from 3-Gals, DOE, Nassau County Minority Affairs Office, PPM, and MSC, the large business selling safety products through 3-Gals.

The BNL Small Business Program Receives LI 'Special Innovation' Award

BNL's Small Business Program has been chosen to receive the Hauppauge Industrial Association-Long Island (HIA-LI) Business Achievement Award in the "Special Innovation" category, which recognizes outstanding accomplishments and technical innovation, industry leadership, and commitment to the continued growth of the Long Island business community. HIA-LI is a 30-year-old business organization that focuses on the economic health of its approximately 1,000 member

companies and the entire Long Island business community.

BNL's Small Business Liaison Officer Jill Clough-Johnston accepted the award, an engraved plaque, at HIA-LI's 16th Annual Business Achievement Gala Luncheon held at the Crest Hollow Country Club in Woodbury on September 14.

"Brookhaven Lab's Small Business Program is honored to receive this award," Clough-Johnston said. "We have strong ties to the local business..."

See *Small Businesses* on p. 2

Roger Stoutenburgh 02320710

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CALENDAR
OF LABORATORY EVENTS

- The BERA Store (Bldg 488): Ext. 3347
- Recreation Office (Bldg. 400A): Ext. 2873
- The Rec Hall (Bldg. 317) 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 & Thursdays: Kickboxing

\$5 per class. Noon–1 p.m. in the gym. Pay as you go. 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.

Tues.: Hospitality Welcome Coffee

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

Tuesdays: Zumba

Noon–1 p.m., in the gym (Bldg. 461). Classes resume on September 14. Registration required, Ext. 2873.

Tuesdays: Knitting Class

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

Tuesdays: Toastmasters

Two monthly meetings: 1st & 3rd Tuesdays, 5:30 p.m., Bldg. 463, Room 160. Guests and visitors welcome. <http://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. Pat Flood, Ext. 7886 or flood@bnl.gov.

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

5:15 p.m., 6:15 p.m., and 7:15 p.m. N. Ballroom, Brookhaven Center (Bldg. 30). <http://www.bnl.gov/bera/activities/dance/default.asp>

Wednesdays: Pilates

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

Wednesdays: Play Group

10 a.m.–noon. Meet 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. Tim Devine, Ext. 2350.

Thursdays: Reiki Healing Class

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

Thursdays: Postdoc Social Night

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

Fridays: Family Swim Night

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

Fridays: Family Gym Night

5–8 p.m. Family gym activities. Free. Ext. 2873.

Walk to Fund Diabetes Research

In recognition of Disabilities Month, the BNL Americans with Disabilities Act Committee will sponsor the “Step Out Walk for Diabetes” led by the American Diabetes Association and scheduled for Sunday, October 24, at SUNY Old Westbury College. To participate, contact Margaret-Ann Douglas, Ext. 2078, mdouglas@bnl.gov; or Mike Paquette, Ext. 5891, mpaquette@bnl.gov.

Your BNL Food Drive donation all fall — don't leaf home without it!

NSLS-II Contract from p. 1

...designed with a number of environmentally conscious features to reduce energy consumption and qualify for Leadership in Energy and Environmental Design (LEED) certification.

E.W. Howell also served as general contractor for two other major construction projects at BNL: The 65,000-square-foot Research Support Building, completed in 2006, and the 94,500-square-foot Center for Functional Nanomaterials, completed in 2007. Both buildings were awarded a LEED silver rating by the U.S. Green Building Council, which evaluates buildings for sustainability, water efficiency, energy and atmosphere, materials and resources, and indoor environmental qualities. BNL recently awarded E.W. Howell the construction contract for the Interdisciplinary Science Building, which will be built with the aim of achieving a LEED gold rating.

— Mona S. Rowe

Quantum Dots from p. 1

...leader of the team that developed the technique. “By varying the length of the individual strands and attaching complementary pieces to the particles we want to join, and anchoring the whole process on an assembly surface, we can precisely control the construction of individual nanoclusters.”

In the current study, the team used this multi-step process to attach semiconductive quantum dots to gold nanoparticles. Metallic materials are known to affect the optical properties of quantum dots, either by enhancing or inhibiting photoluminescence, depending on a range of factors including the size and shape of the materials, the distance between them, and the wavelength of light used to induce photoexcitation.

The precision assembly technique allowed the scientists to control the size, shape, and distance factors to a high degree of precision and test the effect of wavelengths in isolation. They specifically chose two wavelengths to test: one close to the so-called “plasmon resonance” of the gold nanoparticles — that is, a wavelength that induces a collective oscillation of the material’s conductive electrons, leading to strong absorption of light at that wavelength — and one outside this range.

The wavelength within the plasmon resonance range enhanced photoluminescence approximately fourfold when compared with the luminescence achieved by the wavelength outside the plasmon resonance range. When compared with the photoluminescence of individual quantum dots not linked to gold nanoparticles, the resonant wavelength enhanced photoluminescence of the gold-linked quantum dots by an order of magnitude.

“This ability to control the excitonic properties in plasmonic fluorescent quantum dots is essential to the development of devices such as solar cells, light-emitting diodes, or optical circuits and might improve the sensitivity of quantum-dot based biosensing assays,” Cotlet said.

In addition to Mircea Cotlet and Oleg Gang from BNL, Mathew Maye (now at Syracuse University) contributed to this work. — Karen McNulty Walsh

Roger Stoutenburgh 05360810

HFBR Decommissioned

In August, the doors to the High Flux Beam Reactor (HFBR) were closed and locked. They will remain that way for up to 65 years, until radiation levels in the large components (reactor vessel and internals, thermal and biological shields) naturally decay to a point when the reactor may be removed safely. With support from DOE and federal, state, and local regulatory agencies, and input from the Lab’s Community Advisory Council, the Lab has made significant progress in cleanup of the HFBR, removing contaminated ancillary structures, underground pipes and ducts, control rod blades, and beam plugs, and putting the facility in a stable state for its hibernation. The DOE Office of Environmental Management provided American Recovery and Reinvestment Act (ARRA) funding to complete these near-term cleanup actions by September 2011, well ahead of the 2020 plan.

Lab Director Sam Aronson said, “I’d like to recognize Chuck Armitage and his team for their hard work and commitment to safety within a strict timeframe. This is a major environmental remediation

Roger Stoutenburgh 05940710

The interior of the High Flux Beam Reactor taken in July 2010, just before the doors were closed and locked.

milestone for the Laboratory.”

According to Armitage, the project team leader, “The door is locked, the lights inside the HFBR are off, and the facility is permanently shut down. It was a good deal of work preparing the facility for closure and I appreciate the hard work and commitment of the team. The Lab will monitor the HFBR regularly to be certain it stays in a safe state and the environment is protected.”

The HFBR operated from 1965 to 1996 and was used solely for scientific research. During this 30-year period, the HFBR was one of the world’s premier research reactors, providing neutrons for materials

science, chemistry, biology, and physics experiments.

Lou Evers, a reactor operator who worked at the HFBR for 20 years and was part of the decommissioning team, said, “While this is a huge environmental remediation accomplishment, I am still saddened to see the HFBR close. I am proud to be part of the team that operated the reactor and now part of the team that put it in its final state of hibernation. For me, it’s an era of science that will never be forgotten.”

More information about the decommissioning can be found at the Environmental Restoration Projects website, <http://www.bnl.gov/hfbr/>. — Jane Koropsak

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Small Businesses from p. 1

...community, and we have recently established innovative business practices that make it easier for suppliers to do business with the Lab. During the last three fiscal years, the Lab awarded \$278 million in contracts — more than 50 percent of our total procurement budget — to small businesses.”

Terri Alessi-Miceli, President of HIA-LI, said, “HIA-LI is pleased to recognize Brookhaven National Lab’s Small Business Program in the Special Innovation category. We believe that the winners of these awards are among the best run companies, not only on Long Island, but in the entire world.”

Last year, BNL bolstered the Long Island economy by awarding \$53.5 million in contracts to local businesses. With the injection of American Recovery and Reinvestment Act funds into its budget, the Laboratory spent \$105 million on contracts with small businesses during the first three-quarters

of fiscal year 2010, which began on October 1, 2009. About \$80 million of that amount was spent between April and June 2010.

The Lab’s Small Business Program offers numerous free small business conferences, seminars, and showcases, which are used as a vehicle for local small businesses to market their products or services to the Laboratory. Also, the program assists local small businesses with business and technical problems or refers them to various partner associations for assistance.

HIA-LI’s award and event sponsors include: ClearVision Optical, Inc.; Communication Strategy Group; Crest Hollow Country Club; Event Kings; Girl Scouts of Suffolk County; Holzmacher, McLendon & Murrell, P.C.; Irwin Contracting Inc.; Newsday; People’s Alliance Federal Credit Union; Stalco Construction; Stony Brook University; Suffolk County National Bank; Vormittag, Inc. and Verizon.

— Diane Greenberg

ARPA-E from p. 1

...near-zero energy loss, and have instantaneous dynamic response and nearly infinite cycle life. Aronson noted that Brookhaven will soon be home to the largest solar power array in the northeastern United States, and that the facility could be an ideal venue to test the effectiveness of the new technology.

For more information, see: http://www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=1174.

— Kay Cordtz

Arrivals & Departures

— Arrivals —

Erik Dalen.....	Site Services
Alan Dion.....	Physics
John Giarratano.....	C-AD
Yiping Lin.....	CFN
Christopher McRaven ...	Chemistry
Hyuk Park	Chemistry
Young Park.....	CFN
Paramita Sarkar	Biology
Harold Segura.....	C-AD

— Departures —

Andrew Burrill.....	C-AD
Gong Zhou.....	Chemistry



Don Farnam with President Clinton

Brookhaven Veterans Association Commander Meets a Commander-in-Chief

One recent Saturday afternoon, while enjoying some free time at a golf course on the east end of Long Island, Don Farnam, an employee in the Facilities & Operations Directorate, was pleasantly surprised when he found himself standing across from former President Bill Clinton.

During a brief conversation with the former Commander-in-Chief, Farnam mentioned to him that he noticed there was an impressive collection of military challenge coins on display in the background of his formal White House portrait. President Clinton smiled as he acknowledged the observation, and Farnam seized the opportunity to present him with a distinctive challenge coin that represents the Brookhaven National Laboratory Veterans Association (BVA).

“Most BVA members carry

our coin in their pocket,” said Farnam. “I was happy to have one with me the day I met the President.”

According to Farnam, offering challenge coins is a time-honored tradition within the military dating back to at least World War I. The presentation of the coin is meant to recognize an event, campaign, or achievement and to build *esprit de corps* among military units.

The coin collection displayed in President Clinton’s formal portrait now resides at the William J. Clinton Presidential Library and Museum in Little Rock, AR. Farnam, who is the current commander and a founding member of the BVA said, “It would be interesting to know if our BVA challenge coin found its way to that collection.”

—Jane Koropsak

Suffolk County Voting Machine Demo, 10/5

The Suffolk County Board of Elections will visit BNL on Tuesday, October 5, to demonstrate the county’s new voting machines. All who will vote in Suffolk County on Election Day this year are invited to attend the demonstration, which will be held in the lobby of Berkner (Bldg. 488) from noon until 2 p.m. More information about the new voting machines is available online: <http://www.suffolkvotes.com>.

TIAA-CREF One-on-One Retirement Counseling

A TIAA-CREF consultant will visit BNL in October on Thursday, 10/7, Wednesday, 10/13, Friday, 10/15, Thursday, 10/21 and Wednesday, 10/27 to answer employees’ questions about their financial matters. For an appointment, call 1-800-732-8353 or go online at <http://www.tiaa-cref.org/bnl> and select “set up a meeting.”

AdoptaPlatoon Bake and Book Sale, 9/30

AdoptaPlatoon will host its annual Book and Bake Sale on Thursday, September 30, in the lobby of Bldg. 400, 11 a.m.–3 p.m. To donate books, CDs, or DVDs, bring them to Denise Rodgers or Janet Sikora at the Clinic (Bldg. 490). Cookies, cupcakes, and sliced breads, individually wrapped in cellophane, are also needed, but please call Ext. 3670 before donating.

Defensive Driving Course in Two Parts, 9/27 & 9/30

The next six-hour Defensive Driving (Point & Insurance Reduction) course will be held in two parts on Monday and Thursday, September 27 and 30, in the Brookhaven Center South Room, from 6 to 9:15 p.m. The course is open to BNL, BSA, and DOE employees, facility-users, and their families. The cost is \$33 per person. Preregistration is required. To register, call Ed Sierra, Ext. 4080 or 821-1013, and leave a message. Or take a New York DMV approved course (Use code: “SAVE10” for \$10 discount) online: <http://www.lidrivesafe.com>.

BREA Tours of New BNL Facilities, 10/13

On Wednesday, October 13, the Brookhaven Retired Employees Association (BREA) is sponsoring morning and afternoon tours of the Research Support Building and the Center for Functional Nanomaterials (CFN), and a look at the plans for the National Synchrotron Light Source II now under construction. The program also includes a luncheon with a talk by Lanny Bates, the Assistant Laboratory Director for Facilities and Operations. Retirees and their guests can make reservations by e-mailing Ken Mohring at kenwadingriver@gmail.com or Eena-Mai Franz at SROOSILD@aol.com or by sending a note to BREA at Bldg. 421. The cost of the luncheon is \$7. The schedule for the day is at the BREA website, <http://www.bnl.gov/bera/activities/bera/Tours.asp>.

Former BNL Scientist Michael Reynolds Back From Sail Around the Americas

When the 64-foot sailboat *Ocean Watch* left Seattle harbor around Memorial Day 2009 to sail around the Americas and bring awareness to the public about the conditions of our oceans, former BNL scientist Michael Reynolds was aboard. As onboard scientist, Reynolds was also there more than a year later, when the single mast, steel-hulled yacht sailed back into the Port of Seattle on June 17, 2010. Though he reluctantly skipped the Northwest Passage from Alaska, and also left the ship in Uruguay before the expedition sailed around Cape Horn (due to personal and business demands), Reynolds had countless adventures during his months at sea.

A Bulletin reporter last interviewed Reynolds while the ship was anchored in New York Harbor last October. Upon leaving New York, the yacht and its crew sailed down the east coast of the Americas, around Cape Horn, up the west coast of the Americas, and back to Seattle. Reynolds rejoined the expedition in April in Costa Rica and stayed onboard for the duration of the cruise back to Seattle.

“Some of the worst weather was coming up the coast of California from Baja,” he said. “There’s a big high pressure system that sits in the ocean and generates northerly winds. That Pacific high had really tightened up and we had the ‘Baja Bash’ all the way to San Francisco — incredibly strong northerly winds and heavy seas.”

But the “Baja Bash” was just one of the trip’s challenges. “In terms of my experience, I’d say we had rough weather going across the Gulf of Alaska, and a difficult sail from Puerto Rico to Rio,” Reynolds said. “In that area along the north coast of Brazil, we had blazing sun, negative currents, and headwinds. All ports and hatches were sealed and we had sacrificed our air conditioner for scientific equipment so the temperature down below exceeded 99 degrees for days on end. I had moments of claustrophobia when I would think I couldn’t do another day.”

Yet, despite the weather, Reynolds and the crew did get a good firsthand look at the state of the seas. Much of it was alarming. The crew will spend the next year writing a report to describe their overall findings.

“We saw what we expected to see, but worse,” he said. “In the Arctic we saw very little ice compared to what used to be. We saw garbage everywhere, and measured fairly low pH levels, which are indicative of acidification.

“Throughout the expedition, we were interested in coral, which are strongly affected by temperature change. There is an algae called *zooxanthellae* living symbiotically inside coral and



when it dies because of cold or warm temperatures, the color goes away.” The team saw a good deal of “bleached” coral during the voyage.

Reminiscent of his days at BNL, Reynolds was also able to collect good aerosol optical depth data using a handheld photometer. He is now analyzing those with a student from the University of Washington.

“I think I have good air-sea flux data at high latitudes, which is kind of a big deal these days,” he said. “There are very few off-shore measurements of energy flux from high latitudes. Fluxes in high latitude regions help us understand processes that control polar climate. Trying to estimate energy flux in high latitudes is difficult because the instruments have a lot of variability. These data will be very useful to NOAA [the National Oceanic and Atmospheric Administration] and the National Weather Service as well as other researchers. My big job over the next months will be to get these data into a useful format for the global databases.”

The public education component of the voyage was a great success. Reynolds and his crew stopped at over 50 ports and gave more than 30 presentations from Barrow to the Falklands and at venues including Scripps Institution of Oceanography, the California Academy of Sciences, the Oregon Museum of Science and Industry, and the Pacific Science Center.

“The public was and is very interested,” Reynolds said. “I’m beginning to realize how important what we were doing was, and I am committed to continuing this work that focuses on educating the public, especially children, about marine science and the health of the ocean. For me, it has been life changing.”

While Reynolds will devote a large portion of his time to this continuing public outreach, he is also busy with other tasks. With plenty of video from the trip, the team is trying to raise enough money to finance a NOVA or National Geographic documentary. Reynolds is also currently working with NOAA to support cleanup and research related to the Gulf oil spill.

You can read more about his great adventure on the Around the Americas website <http://www.aroundtheamericas.org> and blog with pictures.

— Kay Cordtz

Film: The Dhamma Brothers, Today, 9/24

All are invited to attend a free screening of the film *The Dhamma Brothers* today, Friday, September 24, at 5:30 p.m. in Berkner Hall. The film closely follows and documents the stories of prison inmates who begin the ancient Vipassana meditation program. This event is sponsored by the Asian Pacific American Association, Brookhaven Women in Science, BERA, Chinese Students & Scholars Association, and the Indo American Association. The screening is open to the public and all visitors to the Lab ages 16 and older must carry a photo ID while on site.

CALENDAR

Friday, 9/24

***The Dhamma Brothers**
Film showing at 5:30 p.m. in Berkner Hall. See below, left.

— WEEK OF 9/27 —

Monday, 9/27

IBEW Meeting
6 p.m. Centereach Knights of Columbus Hall, 41 Horseblock Rd., Centereach. A meeting for shift workers will be held at 3 p.m. in the union office. The agenda includes regular business, committee reports, and the president’s report.

***Defensive Driving, Part I**
6-9:15 p.m. Brookhaven Center South Room. Part I of two-part course. Cost \$33/person. To register, see notice, below, left.

Thursday, 9/30

15th Pine Barrens Research Forum
8:30 a.m. Berkner Hall. All are welcome to 15th Annual Pine Barrens Research Forum, talks focusing on “The Pine Barrens Maritime Reserve: Beyond the Trees.” See Bulletin of 9/3, p. 4 and http://www.pb.state.ny.us/research/pbrf_2010_Brochure.pdf

***AdoptaPlatoon Book & Bake Sale**
11 a.m.–3 p.m. Bldg. 400 lobby. See notice, below, left.

***Defensive Driving, Part II**
6-9:15 p.m. Brookhaven Center South Room. To register, see notice below, left.

Friday, 10/1

***Talk on Heart Health**
Noon. Medical, Bldg. 490, Large Conference Room. To kick off October’s “Heart & Soul” fitness program, talk on “It Starts with your Heart. All welcome. See p.4.

— WEEK OF 10/4 —

Monday, 10/4

***Two-Mile Fitness Walk**
Noon-1 p.m. Part of “Heart & Soul” fitness program. See p.4.

Tuesday, 10/5

***Suffolk County Voting Machine Demonstration**
2 p.m. Berkner Hall lobby. Demo of new voting machines to be used on Election Day.

Friday, 10/8

***Biathlon Part One: 5K-Run**
Noon-1 p.m. Outside Biology, Bldg. 463. See p.4.

— WEEK OF 10/11 —

Wednesday, 10/13

***BREA Tours of New BNL Facilities**
Morning and afternoon. Bldg. 400 and CFN. Lunch, \$7, with key speaker. See notice below.

BSA Noon Recital
Noon. Berkner Hall. April Verch, world-class fiddler, champion step dancer, composer and singer, will perform with her band. All are welcome to this free public event.

BERA Trips

Buy tickets at the BERA Store in Berkner, weekdays, 9 a.m.-3 p.m.

Atlantic City: Sat. 10/9. Leave BNL at 9 a.m., leave casino at 8 p.m. Casino TBD. \$30 per person, must be 21 or older.

Blue Man Group Show: Sun. 10/24. Leave BNL at 10 a.m. and leave NYC after show at about 4 p.m. \$80 per person.

Rocking Horse Ranch: 11/5–7. Leave BNL on Friday at noon and leave Poughkeepsie area on Sunday at noon. \$375 per adult, \$145 per child (ages 4–15). Children age three and younger are free. Includes transportation, lodging, all meals, horseback riding, pool, splash park, nursery, hayrides, bonfire, and more.

Classified Advertisements

Motor Vehicles & Supplies

06 KAWASAKI NINJA ZX-10R – 16K mi. Arapovic exhaust. Power commander. Two new sprockets. \$5,000 neg. 942-4336.
06 HONDA CIVIC EX - COUPE – 71K mi. silver, excel cond, pw, ps, disc brakes, s/roof, new tires, extras. \$9,500 neg. 833-0886.
05 MAZDA 3 – 25K mi. hb, all pwr option, lo mi, blue, ABS, fr/rear side airbag, alloy wheel, \$9,300 neg. Tao, 344-2559.
02 AUDI TT – 75K mi. ALMS ed, well maintd, new trng belt, brakes, rotors, tires, wipers. \$13,000. Dmitri, Ext. 4772, 630-670-3993.
01 TOYOTA CAMRY LE – 142K mi. a/t, a/c, c/c, cd/fm/am, 30mpg, v/reliable, dk grey, rem start. \$3,600 neg. 413-4029.
00 NISSAN ALTIMA – 88.5K mi. black, a/t, c/c, alarm, am/fm/cd, cass. a/c new fr tires, v/gd cond. \$3,500 neg. Stefano, Ext. 4343.
00 HONDA ACCORD EX-L – 145K mi. 2dr Coupe, V6, lthr, s/roof, a/c, c/c, p/b, p/w, p/s, stereo, alarm, rem strt, \$5,100. Ext. 5263.
99 HONDA ODYSSEY – 134K mi. 7 pass van, gold, orig owner, well maint, trailer hitch. \$3,900. Ext. 4299, 793-1223.
99 FORD CONTOUR LX – 143K mi. 4dr at/ps/pb/pw/ac/cc/tilt-whl/reading lights, ~28mpg, all records \$1,950 neg. 751-5579.
98 GMC SONOMA/S10 – 93K mi. blk 5 spd, 4wd, 6cyl single cab, new clutch, brakes, bed cover, liner. \$4,600 neg. 891-9421.
97 AUDI CABRIOLET – 54K mi. all pwr, htd seats, windscrn, less than KBB value. \$7,000 neg. Steve, Ext. 3822, 929-6527.
97 SUZUKI GSXR 750 – Cust mtrcycle, show cond. New tires, brakes, clutch cable, oil filters, more. Pic avail. 355-2454.
93 ACURA LEGEND LEGEND – 16.5K mi. luxurious; orig owner everything works, perfectly maintd \$2,200 neg. Vasilis, Ext. 2830.
16" BMW RIMS – Set of 4 aluminum rims, good shape. Email for pic. \$450. Paul, 344-8189 or pmenga@bnl.gov.
18 INCH 5X100 RIMS – 3 used rims w/ or w/out tires, gd for Audi or any tire size of 225/40R18, \$100/ea. Dmitri, Ext. 4772.
19–5x120, 19x8.5/10" et30/37-F235/35, R275/30 Hankk Ventus V12 Evo, 3k bmw cntr caps, fit 2006+ bmw3, e9x, \$1300. Ext. 3970.
BMW WHEELS – 2, in gd cond, P225/60 R15 tires on stock BMW rims, orig from a BMW 525i, ask/\$75/pair. Steve, Ext. 2897.

Marine Supplies

BOAT TRAILER - TANDEM 4800 LB – '96 Star Board, Tandem Axle Roller Trailer; 23'/4800lb capacity, \$1,100. Ext. 2599.

Furnishings & Appliances

CHAIR/ – INFANT TO TODDLER ROCKER – reclining with a fold-out kickstand. \$30. Nina, Ext. 5894, 475-1297.
COMPRESSOR – for home a/c, runs well, almost never used, \$150/obo. 878-9020.
COMPUTER DESK – sm, w/keybrd rack, wheels, gd for lcd monitors, laptops, pic avail, \$25. 344-4290.
CRIB & CHANGING TABLE – gd cond, pics avail, \$100/pair. blackler@bnl.gov.
CRIB&CHANGINGTABLE/DRESSER – combo, white, excel cond, photos, \$150. Oshri, Ext. 4073 or pelleg@bnl.gov.
DINING ROOM – table, 5 chairs, server, hutch, \$250; 1.5 microwave \$25; 2 single beds \$15/ea. fred, Ext. 4312.
HOME GYM – Tuff Stuff Odessey 5, full body workout, 240lb stack, like new, new/\$2500, ask/\$1200. 516-315-6001.
KITCHEN – folding table/\$10; m/wave oven/\$15; toaster/\$5; plates/mugs/glasses/\$15; rice cooker/\$5; blender/\$5. 413-4029.
PEG PEREGO STROLLER – v/clean incl bassinet, rain cover, diaper bag, photos, \$110. Oshri, Ext. 4073 or pelleg@bnl.gov.
TABLE – melltorp ikea square 29.5" x 29.5" white, as new, ask/\$30. Stefano, Ext. 4343 or sagnoli@bnl.gov.
TEEN/CHILD BEDROOM – 7/pc gray laminate corner desk, bed, chest w/bookshelf, 2/chests, cabinet, \$350. 689-8092.

Audio, Video & Computers

35 – Toshiba, excel cond, surround sound, pip, w/Bello glass TV stand, \$350/ neg. David, 516-695-9625.
DESKTOP COMPUTER – Dell 17" mon, Dimnsn E310, XP op sys, MS Office 03, spkrs, keybrd/mse incl, \$450/obo. 445-4027.
DELL INSPIRON LAPTOP – Inspiron e1505 120gb HD, 2gb mem, clean cc Windows XP, Office 2007 Pro, \$350. Ext. 2122.
PHOTO & NEGATIVE SCANNING – www.pictureperfectscans.com scans converts to DVD, music slideshows avail, 928-6469.
POWERED SAMSON MONITORS – 2 slightly used, 15", in/outdr, DBA500 powered, built in amp, ask/\$700. 347-581-3731.
SAMSONITE ROLLING LAPTOP BAG – like new, space for files, fits up to a 15" laptop, pics avail. \$25/obo. Ext. 4147.
YAMAHA KEYBOARD /KARAOKE STA. – Yamaha PSR-K1 61 Keys, SmartMedia™, MIC, Notation, Lyrics Scrn \$250, 379-0742.

Sports, Hobbies & Pets

BOWFLEX – ULTIMATE II – Exercise equipment – in good condition – asking \$150. Maureen, Ext. 5026.
ELECTRONIC DART BOARD – in a wood case, could use a new set of darts, \$20. Angela, Ext. 7397 or awefer@bnl.gov.

LEARN KEMPO KARATE – w/L.I. Kempokan, 140 Belle Meade Rd, E. Setauket, Adult classes Mon, Thurs 7:30-8:30p, 684-6839.
MAN'S LEATHER DRESS JACKET – black, soft, extra lg, like new, b/o. Yvette, Ext. 5591 or malavet@bnl.gov.

MOTORCYLCE JACKET – Joe Rocket, Ballistic Series, Meteor 4 jacket w/removable liner, sm, \$200/new, ask/\$40. Ext. 3750.
MOUNTAIN BIKE – Balance, lots new parts incl crank, twist shifters, rear cassette, chain, brakes, \$250. Ext. 8116.
PIT BULL PUPPY FOR SALE – 2 mo. old light brown fem w/light brown eyes; needs loving home. Ask \$200 obo. Ext. 8593.
POOL TABLE – Gandy full size gray marble table w/all access \$500. Cynthia, Ext. 7433.
QUARTER HORSE – 7yr chestnut gelding, 14.2 hands, WTC UTD on shots also cog-gins neg pics avail, \$1200. Judi, Ext. 7430.
TOY HOUSES – Little Pony Play House for Ponies, Strawberry Shortcake for Dolls, Dora the Explorer & Diego. Ext. 7504.
TRAINS – Hawthorne Village-Th.Kinkade Xmas "Village Observation Car", gr/red, unused, in box, w/certif, \$50/ea. Ext. 2852.

Tools, House & Garden

LAWN VACUUM – Billy Goat lawn vacuum gd cond, \$100. Pat, 727-0547.
TORCH SET – oxygen/acetylene, gauges, hoses, cutting torch, tanks, cart \$150. Two 6x3"x2" maple workbenches \$35 ea. 872-8963.

Miscellaneous

CLOTHES RACK – Chrome w/beige cloth protective cover/\$20, proceeds to charity. Nina, Ext. 5894, 475-1297.
EASEL – kid's, magnetic whitebrd 1/side, chalk brd back, excel cond, magnetic letters/numbers incl, \$15. Ext. 7397.
FIREWOOD – Cured, \$150/cord, U-pic-up 512-6780. Jamie, Ext. 2238.
LENOX SPICE VILLAGE – complete w/rack, in perfect cond, \$250. Ext. 2492.
POOL COVER – for winter, agp, round, 24' fits 21' & 18' pools, new, unused, 15yr warr style, incl cable/winch, \$25. jcitro@bnl.gov.
OUTDOOR HOT TUB – Seats 4, 73" diam. round, 38" hi. Uses 110 or 220V, runs well. Moving, must sell. \$500 OBO. Ext. 2719.
PHONE RAZR V3M FOR VERIZON – silver, nice cond, box manuals, software & micro sd card, \$40 all. brookhaven@optonline.net.
SOUTHWEST TICKET VOUCHERS – four, worth \$140/ea, will sell for \$125/ea, must complete travel by 12/4/10. Ext. 4901.

Community Involvement

COUNTRY FAIR @MILLER PL – Mt. Sinai Historical Society Sat/Sun 9/18 & 19, 10am-4pm @ 75 No Country Rd Miller Pl, Attic Shoppe Sale, Pottery, Music, Cooking Demo, Civil War encampment \$3, under 12 free. Christine, Ext. 5090.
END OF SUMMER BBQ BASH – @ Tommy's Place, Rocky Pt. Sat 9/25 6-9p. \$30/ pers incl open bar & bbq - all proceeds to benefit A Mother's Kiss and families affected by childhood cancer. 924-2770.
SPAGHETTI DINNER BUFFET – \$10 pp. to benefit a critically injured firefighter. Sat. 11/6, 4-9 p.m. at Wading River Fire Dept., 1503 North Country Rd. http://tinyurl.com/2f4hlh2 for more info. 929-4340.
TICKETS: COMEDY SHOW – Sat., Nov 6, 8pm, at Flaming Hearth, Horseblock Rd, Farmingville, \$20, w/NO min, drink/food purch. req, 3 headliners, to support Sachem Marching Band. Denise, Ext. 7860.

Free

KITTENS – 5, born 9/21/10, mother extremely affectionate and loving, call if interested. Christine, Ext. 7224, 286-1195.

Wanted

BAKERS NEEDED – for BVA-AaP Book & Bake Sale on Sept 30th. Please call if you can bake & let us know what you are baking. Janet or Denise, 344-3670.
BOOK – *Tuesdays with Morrie* by Mitch Albom. Rosa, Ext. 2703.
CHILD CARE PROVIDER – for 2 children to catch bus 7am-8:30am in Smithtown some school weeks, will pay competitive wage. Enju, Ext. 4918, 316-1256.
CLARINET – For new student. Reasonably priced. Al, Ext. 5128.
DESK/BOOKSHELF – gd cond, light wood color/white, with drawers; & sm bookshelf in same colors. mvescovi@bnl.gov.
DONATIONS OF DOG/CAT FOOD – collection bins in Bldgs. 134, 400, 510 (x5864), 725, 901, 902, donations to be given to local pantries and also Kent Animal Shelter. Kathleen, Ext. 3161 or kratto@bnl.gov.
FIREWOOD – will cut and pick. Edward, Ext. 7502.
FIREWOOD – hardwd logs cut 14" to 18", split or non split pcs, will remove freef wood not rotted nr Rocky point vicinity. Michael, Ext. 7861, 849-2329.
KNITTING SUPPLIES – Hospitality hosts free knitting classes for guest/spouses/employees on Tuesdays, 2pm, 317 Rec Hall, Classes are free, taught by exp, volunteers who need materials! Christine, Ext. 5090.
MASTER B/R & DEN FURNITURE – prefer wood, country style, & den furn couches, chairs, storage benches, etc, if you have photos, please email. slattucca@bnl.gov.
NEW/GENTLY USED CLOTHES – all sizes, children's books, toys to be donated to 76 families living in a shelter. Laura X4027, lbuscemi@bnl.gov and. Kathleen, Ext. 3161 or kratto@bnl.gov.

This October: Celebrate *Heart & Soul* at BNL

This October, all are invited to celebrate *Heart & Soul* and participate in opportunities to de-stress, keep you moving, get the blood flowing, and raise your heart rate. *Heart & Soul* includes some annual favorites such as the two-mile walk, 5K run, and mountain bike ride, but this year, there is an emphasis on activities that promote your heart's health.

Heart & Soul is sponsored by Brookhaven Science Associates and chaired by Michael Thorn through Human Resources and the Occupational Medicine Division.

October 1 "It Starts With Your Heart," Talk

Noon–1 p.m.
Bldg. 490 Large Conf. Room

October 4 Fitness Walk

Two-mile walk
Noon–1 p.m.
Location TBD
Rain date: October 6

October 4–8 Free Trial BERA Classes

See class schedules available at <http://www.bnl.gov/bera/recreation/fitness.asp>.
October 7
Labyrinth Walking Meditation
11 a.m. – 1:30 p.m.
Brookhaven Center (Bldg. 30)
Ballroom
Adults and children are welcome.

October 8 Experience Yoga with Ila Campbell

Noon–1:00 p.m.
Brookhaven Center (Bldg. 30)
Biathlon Part One: 5K Run
Noon–1 p.m.
Meet outside Bldg. 363.
Organized by the BERA Running & Cycling Club (<http://www.roadrunners.bnl.gov>)



Joseph Rubino CN10-88-01

TRAILER FOR CANOE – 14'-16'. Michelle, holbrook@bnl.gov.
WIRELESS MODEM/ROUTER – looking for a used (cheap/free) wireless router. Lokesh, 344-7603.

Lost & Found

HONDA KEYS – found 9/20 in CFN parking lot, pick up in Bldg. 515, Rm 1-34. Ext. 4120.

Farewell Gathering

JIM DURNAN – Retirement Party - 10/14 at BNL Center - 5:30 (\$15) Come wish Jim much happiness in his retirement and all his future endeavors. Linda, Ext. 3750 or graves@bnl.gov.

For Rent

SPRING HILL, FL – 2 Bdrm/2 Bth Condo w/ garage in Timber Pines (Golf community.) 2 dates avail. Jan- Mar 2011, Sept -Dec. Refs, pics avail. \$1,400/mo. 294-5215.
FARMINGVILLE – lg 2nd flr furn, bdrm in hse, share bath w/1, full access to d/r, l/r, kit price incl, elec/cable/wifi/phone, avail end Sept. \$645/mo. Ben, 513-8275.
FLANDERS, NY – Waterfrt, deepwtr dock, beach, renov, cath ceiling, 3 bdrm, 2 ba, Jacuzzi, a/c, nat gas, lg deck, sail boat incl; for sale also, \$2,000/mo. neg. Ext. 3078.
MANOR PARK/MASTIC – cozy 1 bdrm apt, nice n'hood, priv ent/drwy, nr all, 5mi to BNL, util incl/no pets, 1 mo rent/sec, can be furn, avail 9/15. \$900/mo. 774-8397.
PATCHOGUE N. – 1 rm apt; grd fl; prv ent, thermostat; inc i'net/cble/util; full kit; nr St Joe's Coll, Brkhn Hosp; 1 mature pers; no smkg/pets; 1 mo sec; refs. \$825/mo. 730-5860.
SHOREHAM – 1 bdrm, new, furn. garden apt, grnd flr, indep. entr/drwy, full bath, kit, l/r area, cac, no smkg/pets, nr BNL, 1 mo sec., all util. incl. \$1,150/mo. 566-8261.

For Sale

BAYPORT – D.Perry-dsgnd 2300 sq. ft. ranch, aprx. 1acre, priv, wooded, nr G. S. Bay. 3 bdrm, 2+half ba, den, lr/dr, kit, util rm, screend prch, carprt. excel.schools. \$585,000. 617-332-6264.
EAST SHOREHAM – 7 rm Colonial hse w/3 bdrms, lg den, 2.5 baths 1/3 acre property, sm comm w/priv beach. \$329,000 neg. George, 744-2549.

October 13 "Mending Relationships" Talk

Noon–1 p.m.
Berkner Hall, Room B
October 14
Ping Pong Tournament
5 p.m.
Rec Hall (Bldg. 317)
E-mail ppingpong-L@lists.bnl.gov to register. All are invited.

October 20 Heart and Soul Month Fair!

11 a.m. – 1:30 p.m.
Berkner Hall
October 21
Reiki with Nicole Bernholc
Noon–1 p.m.
Bldg. 490, Large Conf. Room
Advanced Table Tennis Tournament
5 p.m.
Rec Hall (Bldg. 317)
Pre-registration required. E-mail your name, dept., and phone number to Neymotin@bnl.gov.

October 22 Mountain Bike Ride

Five- or eight-mile routes for novice and experienced riders. Helmets and mountain bike required.
Noon–1 p.m.
Meet at Gazebo by ball fields.

Buddy Merriam & Back Roads Band 30th Anniversary Extravaganza, 10/16

Buddy Merriam and Back Roads will perform in Berkner Hall on Saturday, October 16, at 8 p.m. Sponsored by the BNL Music Club, the concert is open to the public. All visitors to the Lab 16 and older must bring a photo I.D.

This year, Buddy Merriam and Back Roads celebrate 30 years of playing traditional bluegrass music. Merriam credits his love of bluegrass music to "the father of bluegrass," Bill Monroe, his early mentor. With Back Roads, Merriam has entertained a wide spectrum of audiences at bluegrass festivals throughout the United States. In 2004, the band toured Ireland. They have also been featured on CMT online radio's "Bluegrass Sound," WKET TV, and Merriam regularly hosts the weekly *Bluegrass Time* show on WUSB radio.

In 2009, the band released the CD "*Buddy Merriam-Back Roads Mandolin*," featuring 14 of

October 26 Laughter Yoga Class

Noon–1 p.m.
Bldg. 490, Large Conf. Room

October 27 400-yard Swim

11 a.m. – 1:30 p.m.
Bldg. 478
Organized by the BERA Swim Club (<http://www.bnl.gov/bera/activities/swimming/>)

October 27 and 28 Open House at the Gym, Pool and Weight Room

11:30 a.m. – 1:30 p.m.
Bldgs. 461 and 478

October 28 Biathlon Part Two: 800-Yard Swim

Swim as part of the split biathlon or just for the workout.
11 a.m. – 1:30 p.m.
Bldg. 478
Organized by the BERA Swim Club (<http://www.bnl.gov/bera/activities/swimming/>)

Pre-register for these events online:

<http://intranet.bnl.gov/heart soul>



Merriam's original mandolin tunes, bluegrass, waltz, gypsy jazz, and some contemporary interpretation of Merriam's original style. The CD featured Ernie Sykes on vocals and bass, Jerry Oland on banjo, Kathy DeVine on guitar, lead and harmony vocals, and Bob Harris on flatpicking guitar.

Tickets for the concert are \$20 in advance and \$25 the day of the show. Tickets may be purchased at the BERA Store, through www.ticketweb.com, or at the door. Advance ticket purchase is recommended. For more information on Buddy Merriam and Back Roads go to: <http://www.buddymerriam.com/>. — Jane Koropsak

MASTIC BEACH – 3-bdrm ranch, recently renovated, full basement, nr Lab & schools. Open house Sunday 9/26/10 1-3 pm. \$184,900 neg. Mike, Ext. 7472.
MIDDLE ISLAND – Well maint Victorian, '03 constr, 4bdr/2.5bath, hardwd flrs, all cust paint, lighting, tile, f/p, cabinets, cac, fin rm in bsmt, gar, nr Lab. \$349,000. Ext. 3621.

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

Bldg. 134, P.O. Box 5000
Upton, NY 11973-5000
phone: (631) 344-2345
fax: (631) 344-3368
e-mail: bulletin@bnl.gov