

BNL Scientist Helps Determine Age of New-World Map

'Vinland Map' parchment predates Columbus's arrival in North America

Scientists from BNL, the University of Arizona, and the Smithsonian Institution have used carbon-dating technology to determine the age of a controversial parchment that might be the first-ever map of North America.

In a paper to be published in the August 2002 issue of the journal *Radiocarbon*, the scientists conclude that the parchment of what is called the "Vinland Map" dates to approximately 1434 A.D., or nearly 60 years before Christopher Columbus set foot in the West Indies.

"Many scholars have agreed that if the Vinland Map is authentic, then it is the first known cartographic representation of North America, and its date would be key in establishing the history of European knowledge of the lands bordering the western Atlantic Ocean," said Garman Harbottle of the Chemistry Department, the lead BNL researcher on the project. "If it is, in fact, a forgery, then the forger was surely one of the most skillful criminals ever to pursue that line of work."

Housed in Yale University's Beinecke Rare Book and Manuscript Library, the map shows Europe — including Scandinavia — Northern Africa, Asia, and the Far East, all of which were known by 15th-century travelers.

In the northwest Atlantic Ocean, however, it also shows the "Island of Vinland," which has been taken to represent an unknown part of present-day Labrador, Newfoundland, or Baffin Island. Text on the map reads, in part: "By God's will, after a long voyage from the island of Greenland to the south toward the most distant remaining parts of the western ocean sea, sailing southward amidst the ice, the companions Bjarni and Leif Eiriksson discovered a new land, extremely fertile and even having vines, . . . which island they named Vinland."

The map, drawn in ink and measuring 27.8 x 41.0 centimeters, surfaced in Europe in the mid-1950s, but had no distinct record of prior ownership or provenance in any famous library.

The map and the accompanying "Tartar Relation," a manuscript of undoubted authenticity that was at some point bound with the Vinland Map in book form, were purchased in 1958 for \$1 million by Paul A. Mellon, known for his many important gifts to Yale, and, at Mellon's request, subjected to an exhaustive six-year investigation.

In 1965, the Yale University Press published "The Vinland Map and the Tartar Relation," a detailed study by R.A. Skelton, T.E. Marston and G.D. Painter that firmly argued for the map's authenticity, connecting it with the Catholic Church's Council of Basel (A.D. 1431-49), which was convened a half-century before Columbus's voyage.

Two scientific conferences, in 1966 and 1996, featured strong debates over the map's authenticity, but no final determination could be made based on the available facts.

Beginning in 1995, Harbottle, with Douglas J. Donahue, University of Arizona, and Jacqueline S. Olin, Smithsonian Center for Materials Research and



Education, undertook a detailed scientific study of the parchment. The scientists traveled to Yale, where they were allowed to trim a 3-inch-long sliver off the bottom edge of the parchment for analysis. Using the National Science Foundation-University of Arizona's Accelerator Mass Spectrometer, they determined the precision date of 1434 A.D. plus or minus 11 years. The unusually high precision of the date was possible because the parchment's date fell in a very favorable region of the carbon-14 dating calibration curve.

This new analysis of the map parchment reaffirms the association with the Council of Basel since it dates (continued on page 2)

Garman Harbottle (above), who holds a replica of a Viking chess piece found in Scotland, shows the "Vinland Map," possibly the first map of the New World. The map is currently housed in Yale University's Beinecke Rare Book and Manuscript Library.

The removed slice (inset) was approximately three inches long. Based on the Vinland Map's estimated value of \$20 million, this slice would be worth approximately \$40,000.

Laura Sbarra Named OMC Manager

Laura Sbarra has been named Manager of the Occupational Medicine Clinic (OMC), effective June 13. She had been interim manager since Bryce Breitenstein retired in September 2001.

OMC provides a range of occupational health programs to promote the health of BNL's approximately 3,000 employees. The Clinic provides guidance in health and safety, protects workers against health hazards, and facilitates medical care and rehabilitation of injured or ill employees.

With 22 employees, the Clinic is responsible for regular physical exams and medical surveillance, which includes screening for work-related health effects and providing medical clearance for certain work-related activities.

Also provided are clinical services, health promotion programs, an employee assistance program to help with personal and mental health problems related to job performance, and back-to-work and restricted-duty determinations. The Clinic also provides medical case management for illness and injury.

The Clinic was honored with a Model Program Award from the American College of Occupational & Environmental Medicine (ACOEM) in May 2000, and it earned accreditation from the Accreditation Association for Ambulatory Care, Inc., in January 1999.

"The Clinic benefited immensely during Dr. Breitenstein's tenure," Sbarra said. "Great advances were made in the computerization of medical databases and the development of medical surveillance, and we plan to build upon these important programs."

Sbarra, who had managed the Clinic from 1979 to 1987, added, "I appreciate the opportunity to serve again. I enjoy working with Lab personnel, and I feel very fortunate to have a wonderful staff. In my work, I follow the principles and ethics of occupational medicine, and I try to balance the needs of managers and employees."

After earning her B.S. in genetics from Cornell University in 1965 and her M.D. from the Medical College of Pennsylvania in 1969. She is board-certified in occupational medicine, and she is certified as a medical review officer by the Medical Review Officer Certification Council. Before joining BNL in 1972 as a contract physician with the clinic, she had practiced with the Suffolk County Department of Health and at several local hospitals, as well as privately.

Sbarra has served in several roles at the Clinic since 1976, including staff physician, clinic manager, and deputy manager. She is a member of several professional organizations, including ACOEM and the Nuclear Industry Physicians Association. — Diane Greenberg



Roger Stoutenburgh D1410702

Calendar of Laboratory Events

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

— EACH WEEK —

Weekdays: Free English for Speakers of Other Languages Classes

Beginner, Intermediate, and Advanced classes. Various times. All are welcome. Learn English, make friends. See www.bnl.gov/esol/schedule.html for schedule. Jen Lynch, Ext. 4894.

Mon., Tues., & Thurs.: Kickboxing

\$5 per class. Mon. & Thurs. noon-1 p.m. in the gym; Tues., 5:15-6:15 p.m. in the gym; Thurs., 5:15-6:15 p.m. in Brookhaven Ctr. Registration is required. Mary Wood, Ext. 5923, or wood2@bnl.gov.

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

Noon-12:45 p.m., Rec. Bldg. Scott Bradley, Ext. 5745, bradley@bnl.gov.

Tuesdays: Aqua Aerobics

5:15-6:15 p.m. \$2 pool fee per class or use pool pass. Mary Wood, Ext. 5923.

Tuesdays: BNL Music Club

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

Tuesdays: Welcome Coffee

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

Tuesdays: Toastmasters

Meetings are 1st and 3rd Tuesday of each month at 5:30 p.m. in Bldg. 463, Room 160. Guests, visitors always welcome. www.bnl.gov/bera/activities/toastmasters/default.htm.

Tuesdays & Thursdays: Aerobics

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

Wednesdays: On-Site Play Group

9:30-11:30 a.m., Meet at the playground in the apartment area. Parents meet while children play. Monique de la Beij, 399-7656.

Wednesdays: Farmer's Market

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

Wednesdays: Hispanic Heritage Club

11:30 a.m., Berkner Hall, Room D. All are welcome. Carmen Narvaez, Ext. 3254, or www.bnl.gov/bera/activities/hispanic.

Wednesdays: Weight Watchers

Noon-1 p.m., Brookhaven Center South Room. Mary Wood, Ext. 5923, wood2@bnl.gov.

Wednesdays: Yoga Practice

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

Wednesdays: Stretch

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

Wednesdays: BNL Ballroom, Latin & Swing Dance Club Lessons

5-9 p.m. North Ballroom, Brookhaven Center. Marsha Belford, belford@bnl.gov or Ext. 5053, or www.bnl.gov/bera/activities/dance.

Thursdays: Science Discussion Group

12:30-1:30 p.m., Berkner Hall, Room A or D. Patrice Pages, Ext. 3270, pages@bnl.gov.

Thursdays: Falun Dafa Class

Noon-1 p.m., Free. Rec. Bldg. Falun Dafa refines the body and mind through exercises, meditation. www.falundafa.org.

Fridays: BNL Social & Cultural Club

7-11:30 p.m., Brookhaven Ctr., social. Rudy Alforque, Ext. 4733, rudy@bnl.gov.

Fridays: Science Museum Tours

11 a.m.-2 p.m. BNLers are invited to a free tour of the BNL Science Museum. No reservations are needed. Gail Donoghue, Ext. 2838.

— THIS WEEKEND —

Friday, 8/9

SOLD OUT
N.Y. Yankees Baseball Game
\$5 per person (includes return bus transfer to Yankee Stadium to watch Yankees take on the Oakland Athletics). Andrea Dehler, Ext. 3347.

Saturday, 8/10

Defensive Driving Course

9 a.m.-3:30 p.m., Berkner Hall, Room B.

GLOBE Meeting

The Gay, Lesbian, and Bisexual Employee Club at BNL will hold its monthly meeting. For the meeting's time and location, contact Debbie Bauer, Ext. 5664, or Mike Loftus, Ext. 2960. For more information about the GLOBE club, see www.bnl.gov/bera/activities/globe.

*Boston Russian Chorus Concert

5 p.m. in the BNL Apartment Area Recreation Hall. The Hospitality Committee and the Quality of Life Committee sponsor a concert of Russian liturgical, romance, and folk music by the Boston Russian Chorus. A donation of \$5 per person or \$7 per family would be appreciated. For more information, contact Joe O'Connor, Ext. 2212.

In Memoriam: Victor Emery, Physics Department

Senior Physicist Victor Emery, a world-renowned solid-state theorist for the past 38 years in BNL's Physics Department, died on July 17, after a long illness. He was 68.

Peter Paul, BNL Interim Director, notes, "The Laboratory, and science as a whole, has lost a great mind, one of the leaders in solid-state theory. I think we all lost a long-time and cherished friend when Vic Emery died after a courageous fight with a terrible illness. Vic worked on science until the end. Science, and all of us, will remember him."

Born in England, Emery earned a B.S. in mathematics from the University of London in 1954, and a Ph.D. in theoretical physics from the University of Manchester in 1957. He served as a research associate in the Cavendish Laboratory in Cambridge, England, 1957-59.

Emery then joined the University of California, Berkeley (UCB), where, in 1960, he and Andrew Sessler made the dramatic prediction that liquid helium-3 would experience superfluidity, or flow without friction, at temperatures very close to absolute zero. This prediction was later confirmed experimentally by future Nobel Laureates.

Emery remained at UCB until 1964, and he also served as a lecturer at the University of Birmingham, England, 1960-63.

In 1964, Emery joined BNL's Physics Department as an associate physicist. He received tenure in 1967 and was named senior physicist in 1972. Within the department, he led the Cryogenics Group, 1972-77, and the Solid State Theory Group, 1975-84 and 1994-96. Emery also served as Associate Physics Chair and Head of Condensed Matter Physics, 1981-85.

In 1995, Emery received a BNL Distinguished Research & Development (R&D) Award, which is given for "notable contributions to BNL's R&D made over one or more years." Re-

cently, cited for "their fundamental contribution to the theory of interacting electrons in one-dimension," Emery and Alan Luther of NOR-DITA, Denmark, were awarded the American Physical Society's prestigious 2001 Oliver E. Buckley Prize in condensed-matter physics. Emery was also elected Fellow of the American Academy of Arts & Sciences.

At the Lab, Emery first worked on fundamental theories to explain the behavior of helium-3/helium-4 mixtures, and later turned to the theory of organic conductors and superconductors. He provided deep insights into general many-body aspects of boson and fermion systems. Through this work, Emery became one of the world's leading theorists in the study of phase transitions and superconductivity in low-dimensional fermion systems.

After the discovery of high-temperature superconductors in 1986, Emery became one of the world's leading theorists of this new phenomenon. He presented one of the first believable theories of high-temperature superconductivity, and his model for the electronic structure of the copper-oxide planes in these materials became known as the "Emery model."

Condensed-matter experimentalist Myron Strongin of Physics comments: "Besides his work as one of the best condensed-matter theorists in the world, Vic had a great interest in shaping the experimental work in the condensed-matter program. With the advent of high-temperature superconductors, he had an even more profound effect on the experi-



Victor Emery

Roger Stoutenburgh CN2-100-95

was recognized with the 2001 Buckley Prize. He has always been greatly admired and respected by the best physicists, and his work has come to be one of the pillars of the modern, field theoretic approach to condensed-matter physics.

"In addition to his deep love for his family, his joy was in doing physics, in the thrill of discovery, the give and take of ideas," Kivelson recalled.

Martin Blume, American Physical Society Editor-in-Chief and former Deputy Director of BNL, adds, "Vic Emery was a brilliant scientist, a generous collaborator, and a dear friend. Even in the face of a relentless illness these qualities shone through, and his accomplishments continued until the end.

His presence at Brookhaven added greatly to the luster of our institution. I was fortunate to have worked with him and to have our names linked on publications of which I am very proud. I, and everyone who knew him, will miss him greatly."

In addition, John Tranquada, Physics' Neutron-Scattering Group Leader, says, "Vic was a generous leader and mentor who deeply loved physics. He would carefully explain new ideas to his colleagues, and then patiently repeat the explanations numerous times as we slowly absorbed the various steps of his elegant reasoning. He was also a good friend, and I will miss the old give and take."

Doon Gibbs, Physics Department Associate Director, summarizes, "Vic was one of our scientific giants, but he was also a nice guy, whom we sorely miss."

As Kivelson concluded: "Surely, his memory will burn brightly for all of us who knew and loved him."

A resident of Shoreham, Victor Emery is survived by his wife Vivienne; children Damian, Laurence, and Sharon; and seven grandchildren.

— Liz Seubert

Service Awards

The following employees celebrated BNL service anniversaries during June 2002.

40 Years

Russell Dietz Env. Sciences

30 Years

Nancy Harris P&PM

25 Years

John Boccio EE&NS Dir.

William Guthrie Plant Eng.

Edward Lessard C-A

James McBreen Mat. Sciences

10 Years

Teresa Baker Reactor Op. Dir.

Michael Hauptmann ... Env. Restor.

Chong-Jer Liaw C-A

Denise Rodgers Occ. Med.

Richard Savage Qual. Mgmt.

Salvatore Sciafani Biology

Dejan Trbojevic C-A

Karen Wagner N&NS

Spanish, Flamenco Music, Dance, 9/21

The BERA Hispanic Heritage Club will present a concert of classical Spanish and Flamenco music and dance, open to the public, on Saturday, September 21, at 7 p.m. in Berkner Hall. Buy tickets at the BERA Sales Office: adults, \$10; children under 12, \$5; at the door: adults, \$12.

Age of New-World Map

(cont'd.)

exactly to that time period and, thus, makes a strong case for the map's authenticity.

Several previous studies challenging the map's authenticity have focused on the chemical composition of the ink used to draw it. Some initial work found anatase, a particular form of titanium dioxide, in the ink. Since anatase only went into commercial production in the 20th century, some have concluded that the ink was also a 20th-century product, making the map a forgery.

Recent testing, however, only revealed trace quantities of titanium, the presence of which may be a result of contamination or the chemical deteriora-

tion of the ink over the centuries, or may even have been present naturally in the ink used in medieval times. Another recent study detected carbon, which has also been presented as evidence of a forgery. However, carbon can also be found in medieval ink. Current carbon-dating technology does not permit the dating of samples as small as the actual ink lines on the map.

"While the date result itself cannot prove that the map is authentic, it is an important piece of new evidence that must be considered by those who argue that the map is a forgery and without cartographic merit," said Harbottle. — Peter Gen-

On page 1, the portrait of Garman Harbottle (D1560702), the group photo (CN2-166-95) and the sample (CN2-100-95) were taken by Roger Stoutenburgh.

Walk to Fund Cancer Research, 9/22

The Women's Program Advisory Committee is organizing BNL's participation in the ninth annual "Walk for Beauty," to be held on September 22 to benefit breast and prostate cancer research at Stony Brook University Hospital. All are invited to join the BNL group for the walk, which will start at 9:30 a.m. at the Stony Brook Village Green. For more information or to be added to the mailing list, contact Kerry Mirabella, Ext. 2632 or mirabella@bnl.gov.

Boston Russian Chorus Will Perform at BNL Tomorrow, 8/10

The Boston Russian Chorus, directed by Irina Shachneva, will present Russian liturgical, romance, and folk music in a concert sponsored by the Hospitality Committee and Quality of Life Office. The concert will be held tomorrow, August 10, at 5 p.m. in the Recreation Hall in the BNL apartment area.

In the spirit of original Russian village singing, the chorus, with soloists Alexander Prochorov and Larisa Fillipenko, will perform music of Rachmaninoff, Tchaikovsky, Chesnokov, and others.

After the concert, the audience is invited to meet the artists at a coffee reception. Donations of \$5 per person or \$7 per family will be appreciated.

For information, call Joe O'Connor, Ext. 2212.

When Is a '48 Ford Pickup Not Just a Truck? When It's a Vehicle to Scientific Research

A 20-year old undergraduate student who had spent the past six years fixing a 1948 pickup truck has worked wonders over two summers on a research project at BNL, as part of an educational program that is funded by DOE and managed by BNL's Office of Educational Programs (OEP).

Today, Friday, August 8, Ryan Muller, a senior chemistry major at the College of William and Mary in Williamsburg, Virginia, finishes his second summer at BNL, having worked under the Energy Research Undergraduate Laboratory Fellowship (ERULF), which gives students an opportunity to work side by side with scientists.

The Chemistry Department scientists who have worked with Muller are so satisfied with his research that they listed him as first author of a scientific publication, co-author of three other upcoming publications, and co-inventor on a record of invention. In addition, Muller's summers at BNL have transformed his career plans.

"Initially, my interest was just in medicine as a whole," Muller says, "but, by joining this group, I absolutely fell in love with nuclear medicine and medical imaging, so I now consider pursuing radiology, and going from that into nuclear medicine and imaging."

What made Ryan's contribution to the team's efforts unique is his insatiable curiosity and the fact that he "never takes things for granted," according to Madina Gerasimov, the principal investigator of the National Institutes of Health-sponsored project on which Muller worked.

"He challenges us and questions everything that he encounters," Gerasimov says. "He is always full of ideas and never takes no for an answer."

According to Ryan's supervisor, Stephen Dewey, it is typical of Ryan to work independently and go "beyond what is expected from him."

For example, "Initially, we asked him to help us make a

solvent for medical imaging," Dewey says. "He did it, but then he went beyond and helped us set up a new drug-administration facility — in which the drug is inhaled instead of being provided intravenously or orally. Not only that, but he also made this device better than the



Roger Stoulenburgh dot-10892



Roger Stoulenburgh dot-10892

Ryan Muller (above) with a radiotracer synthesis module that he helped set up for his ERULF project.

Ryan Muller (left) with the 1948 Ford pickup truck that he has been restoring for the past six years, with help from his father, Tom Muller, Physics Department.

one we had originally planned." Things did not go without difficulties, however. Before finding the right solvent, Muller spent hours testing different solvents. He first considered the ones suggested to him by the team scientists, then he looked in the scientific literature, finding other solvents and testing them before finding the most satisfactory one.

"Ryan has learned that, in scientific research, there is always failure," says Richard Ferrieri, one of the scientists who worked most closely with Muller. "But he is not turned away by that. Rather, he evaluates the problems he faces and solves them step by step."

Muller acknowledges that, although many of his college classmates would not take pleasure in spending their summer doing research, he has learned to enjoy it and thinks that his six-year experience working on a pickup truck had a lot to do with it.

"When I decided to restore this old truck six years ago," Muller says, "my father [Tom Muller, Physics Department] tried to talk me out of it because he saw the size of the project that I was facing. But we worked together on this project from the start."

"What I particularly enjoyed," Muller adds, "was solv-

ing constant problems and issues related to the truck, and I think that this problem-solving process is now part of my personality."

Unknown to Muller at the time, his perseverance in rebuilding his truck was the very reason he was chosen by Ferrieri when Muller applied for the program last year.

"When I choose an ERULF student, I don't look so much at the grades, but at the personal essay that is part of the application file," Ferrieri says. "Ryan caught my eye because he wrote about how, during the last several years, he had restored the Ford pickup truck, and how, because of the lack of engine parts, he had to improvise."

Last summer's collaboration between Muller and Ferrieri was very successful. Their efforts led to a device now being used by Ferrieri to study toluene abuse and resulted in Muller's being the lead author of a scientific publication in *Nuclear Medicine and Biology*.

Muller has already applied to medical school, which he hopes to attend after being graduated from William and Mary in 2003. He plans to perform both medical practice and research in radiology and nuclear medicine after his medical studies.

"The ERULF program has changed my perception of scientific research," Muller says. "Before working at BNL in the ERULF program, I did not want to do research at all. I just wanted to do medicine. I never opened my mind up to scientific research until coming here, and it has been extremely exciting."

DOE's ERULF program evolved from a BNL summer student program which started in 1949, with the goal of training students to do research. Many of them went on to pursue successful scientific careers.

"This program is one of the most successful initiatives at the Lab," says Brian Murfin, OEP Manager. "ERULF students get to experience the fun and satisfaction of being part of a scientific team, and their mentors get satisfaction from working with motivated students."

To summarize their projects, Muller and the other ERULF students wrote reports and presented posters on their work, which was displayed in Berkner Hall. Today, they leave BNL for vacation and the start of school.

Many of their mentors will miss them, including Dewey. "I wish Ryan a lot of luck in medical school, and I would love to see him come back and work with us," he says.

— Patrice Pages

Calendar

(continued)

— WEEK OF 8/12 —

Monday, 8/12

Afro-American Culture Club Meeting
11:45 a.m., Berkner Hall, Room C. Nicole Trent, Ext. 4956.

Thursday, 8/15

VoiceStream Wireless Demo
10 a.m. - 2:30 p.m., Berkner Hall. Special rates for BNLers on VoiceStream's wireless network. Richard Goll, (516) 343-5900.

BAC Meeting
12:30-1 p.m., Berkner Hall, Room C. Brookhaven Advocacy Council Meeting, Open Session. www.bnl.gov/bac.

— WEEK OF 8/19 —

Thursday, 8/22

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

Saturday, 8/24

Bronx Zoo Trip
\$32 per person, \$18 per child. Includes bus transfer, lunch, and Zooventure tickets. Andrea Dehler, Ext. 3347.

— WEEK OF 8/26 —

Monday, 8/26

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

Wednesday, 8/28

***Port Jeff Sunset Ferry Banjo Cruise**
6-9 p.m. Port Jefferson Ferry. Hospitality Committee excursion. See notice below. Michelle Herman, Ext. 8481.

Thursday, 8/29

VoiceStream Wireless Demo
10 a.m. - 2:30 p.m., Berkner Hall. Special rates for BNLers. Richard Goll, (516) 343-5900.

— WEEK OF 9/2 —

Tuesday, 9/3

U.S. Open Tennis Trip
\$61 per person; includes ticket, bus to U.S. Open Tennis Championships. Bus departs Lab at 8:30 a.m.; departs the National Tennis Center at 7:30 p.m. Pay at BERA Sales Office.

— WEEK OF 9/9 —

Thursday, 9/12

BNL Blood Drive
9:30 a.m.-3 p.m., Brookhaven Center. BNLers from 17 to 75 years of age, in good health, and weighing over 110 lbs. are welcome. All donors should have photo identification and know their social security number. Susan Foster, Ext. 2888, donateblood@bnl.gov.

Friday, 9/13

Yankee Baseball Game
\$55 per person, includes ticket and bus. Bus leaves the Brookhaven Center at 4 p.m. for the 7 p.m. Yankees vs. White Sox game. Pay at the BERA Sales Office.

— WEEK OF 9/16 —

Wednesday, 9/18

Ballroom, Latin & Swing Dance Club: 2002-03 Wednesday lessons start
First 8-week series of lessons begins:
• 5-6 p.m. Quick-Start lindy & swing, \$40/person
• 6-7 p.m. Intro A:cha cha, fox trot, mambo, merengue, \$30/person
• 7-8 p.m. Syllabus peabody & quick-step review I & II, \$30/person
• 8-9 p.m. Syllabus American tango & bolero IV, \$35/person
Registration: Marsha Belford, Ext. 5053 or belford@bnl.gov; Sue Perino, Ext. 2483 or perino@bnl.gov.

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

Arrivals & Departures

Arrivals

Carol Sarlett Physics
Dmitri Zamiatkine Biology

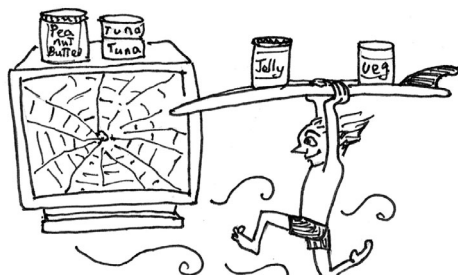
Departures

Robert Bennett C-A
Jan Chaloupka Chemistry
Jack Feldman C-A
Karen Fiorvante Waste Mgmt.
Robert Kinkead CEGPA
Richard Reeve Staff Services

Call for Translators

If you are fluent in English and another language or languages, you may like to volunteer to help translate documents for various BNL departments on an ad-hoc basis. If interested, contact Jennifer Lynch, English for Speakers of Other Languages (ESOL) Program Coordinator, Ext. 4894 or lynch@bnl.gov.

BNL Food Drive



Whether you surf the Web or the beach — first, surf your pantry for canned food to give to the BNL Food Drive! Please be generous — hungry neighbors need your help.

Cruise on Port Jeff Ferry, 8/28

Save Wednesday, August 28, to "Cruise to Nowhere" on the Port Jeff Ferry, 6-9 p.m. The ferryboat will cruise to Bridgeport, Connecticut, and return in the sunset. Pack a picnic dinner or buy snacks and drinks on board to enjoy with the scenery and lively music of Banjo Bob and Crazy Henry.

The Hospitality Committee has arranged special rates for BNL community members and families: adults, \$10; children 6-12, \$6; age 5 and under, free. Buy tickets on the boat. Committee members will meet participants on the pier to give out BNL-group nametags. Parking is free in the lot west of the ferry with proof of Brookhaven township residency on driver's license or car sticker. Questions? Call Michelle Herman, 344-8481.

What's in Store at the BERA Sales Office?

Stop by the BERA Sales Office in Berkner Hall, open weekdays from 9 a.m. to 3 p.m., to purchase BNL logo merchandise, obtain discount admission tickets to local and far-flung attractions, including Busch Gardens and Hershey Park — and learn about upcoming trips, such as the next Atlantic City bus trip, September 21, at \$21 per person. On sale are balloons, film, disposable cameras, cards, tee shirts, tote bags, and much, much more. Get more information from Andrea Dehler, Ext. 3347.

Free Summer Sundays

BROOKHAVEN
NATIONAL LABORATORY

This Sunday, August 11, Tour The National Synchrotron Light Source

This Sunday, August 11, Summer Sunday visitors to BNL can take a tour of the National Synchrotron Light Source, where more than 2,200 visiting scientists from 350 institutions worldwide come annually to perform experiments. Visitors will see how infrared, ultraviolet, and x-ray synchrotron light produced in the NSLS is used for scientific research by guest scientists and BNL staff in biology, chemistry, medicine, physics, and many other fields, including criminal investigations.

In addition, visitors may take guided bus tours of the Lab site that will run continuously throughout the day.

A new hands-on exhibit called "Brain Teasers," a collection of 20 puzzles ranging from giant jigsaws to rope tricks that will challenge both children and adults, is available in Berkner Hall. Also, local high school students will demonstrate the robots they built. In addition, the "Whiz Bang Science Show" — popular with both adults and children — will be shown at 10:30 a.m., noon, 1:30 p.m., and 3 p.m. every Sunday during the summer program.

Tour hours are between 10 a.m. and 3 p.m. Admission is free and no reservations are needed, but, to be admitted on site, all visitors age 16 and over must bring a photo ID.



Tours Continue Through August 25

Classified Advertisements

Placement Notices

The Lab's placement policy is to select the best-qualified candidate for an available position. Candidates are considered in the following order: (1) present employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action Plan, selections are made without regard to age, race, color, religion, national origin, sex, disability or veteran status. Each week, the Human Resources Division lists new placement notices, first, so employees may request consideration for themselves, and, second, for open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people. Except when operational needs require otherwise, positions will be open for one week after publication. For more information, contact the Employment Manager, Ext. 2882; call the JOBLINE, Ext. 7744 (344-7744), for a list of all job openings; use a TDD system to access job information by calling (631) 344-6018; or access current job openings on the World Wide Web at www.bnl.gov/HR/jobs/default.htm.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

MK2926. POSTDOCTORAL RESEARCH ASSOCIATE - (two positions) - Requires a Ph.D. in either optical physics/spectroscopy or closely related field with special emphasis on the acquisition of Raman spectroscopy in the UV/VIS spectral region, and associated data acquisition hardware, and data reduction. Expertise should also include the use of various pulsed-laser sources, low-level signal detection using ICCD devices, and LIDAR data reduction and analysis techniques. A good understanding of optical turbulence effects on horizontal laser beam/return signal propagation would be a plus. Research project in support of further development on the Mini-Raman Lidar System. This effort will involve both laboratory-based spectroscopic measurements and field measurements. Under the direction of A. Sedlacek, Environmental Sciences Department.

MK3050. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in physics, chemistry, or materials science; experience with x-ray scattering, atomic force microscopy, and wetting desirable. Research will involve fundamental understanding of wetting phenomena on nanostructural and nonchemical patterned surfaces and the development of appropriate substrates for these studies. Under the direction of B. Ocko, Physics Department.

MK3051. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in quantum electronics and hands-on experience with high power, high pressure CO₂ lasers and IR optics. Design and construction of the CO₂ lasers and experience with high voltage devices desirable. Will participate in the design of the CO₂ optical amplifier suitable for optical stochastic cooling of the RHIC gold ions. Under the direction of V. Yakimenko, Physics Department.

MK3052. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in experimental high-energy physics. Will work with one of the ongoing experiments including the ATLAS experiment at the LHC, the D0 experiment at Fermilab, the g-2 experiment at BNL or the rare K decay program. Under the direction of H. Gordon, Physics Department.

MK2785. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in physics with preference given to candidates with a strong background in MR (magnetic resonance) physics. This position will involve responsibilities for the high-field small animal MR instrument, pulse programming, image reconstruction, imaging processing and data analysis. Requires willingness and ability to work with a multidisciplinary team of scientists. The successful applicant is expected to work with an independent team that is focused on research and development within the area of MR microscopy. This research is a new Brookhaven National Laboratory/SUNY-Stony Brook initiative on creating a high resolution magnetic resonance imaging (microMRI) small animal facility in the Medical Department at BNL. This Center will enable scientists to phenotype transgenic mice models of human diseases and will focus especially on neurodegenerative diseases, substances of abuse/addiction, neuroinflammatory diseases, neurotoxicology, and environmental predictors of disease. Under the direction of H. Benveniste, Medical Department.

MK2721. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in organic

Softball Party

All softball players — adults only — are invited to the Annual BERA Softball League party. The party will be held at the East Wind Caterers, Wading River, on Thursday, September 26, from 6 to 10 p.m.

Tickets are \$25 per person for the first 100 paid softball players — you must be on a roster — and \$40 for all guests and for any player after the first 100 tickets are sold. The price includes full open bar, cocktail reception, salad, two pasta specialties, four hot entrees, cake and coffee, and music by DJ John.

Everyone must have a ticket! Bring cash or a check made payable to BERA Softball to the BERA Sales Office by 3 p.m., Friday, September 13. No tickets will be sold after this time. If the minimum number of tickets has not been sold, all tickets will be refunded. So, buy your ticket early. For more information, e-mail softball@bnl.gov.

BNL Science Museum Open Lunchtime Today

Today, Friday, August 9, 11 a.m.-2 p.m., all are invited to visit the BNL Science Museum, Bldg. 935, Railroad St. and East Fifth Ave. Children under 14 years must be with an adult.

Get to Know Your Lab — Take a Walk on the Wild Site!



Roger Stoutenburgh DSC00602

On Friday, August 16, the Lab community is invited to join the third employee lunchtime tour, this time to take a walk around the wildlife preserve on the BNL site. Lions, tigers, and bears usually go unseen, but you could glimpse a BNL chipmunk such as this one spotted recently by Photographer Roger Stoutenburgh.

Meet at noon in the upper lobby of Berkner Hall. The group will go by bus to the Upton Ecological Reserve, where Peter Kelly of the U.S. Fish & Wildlife Service will lead the walk and describe environmental features and ongoing research in the reserve. Participants should wear appropriate shoes and choose clothing such as thick socks and trousers to be as tick-proof as possible.

The group will return to Berkner Hall by 1 p.m. No reservations are needed. For information, call Elaine Lowenstein, Ext. 2400.

chemistry/medicinal chemistry or radiochemistry and experience in organic synthesis. Experience in the development of new radiotracers labeled with short-lived positron emitters is desirable. Research involves synthesis and characterization of new PET ligands for studies in neurosciences and oncology. Under the direction of Y. Ding, Chemistry Department.

MK2724. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in chemistry or related field and experience in one or more of the following areas: ionic liquids (preparation, purification, physical studies), pulse radiolysis or flash photolysis kinetic techniques, reaction mechanisms, electron transfer reactions, preparative organic chemistry, electrochemistry. Position involves investigation of the fundamental radiation chemistry of ionic liquids using ultrafast pulse radiolysis techniques to identify primary radical species and study their reactivity. This knowledge will then be used to apply pulse radiolytic methods to study general problems of chemical reactivity, such as electron transfer and small molecule activation reactions. Under the direction of J. Wishart, Chemistry Department.