

When it Rains, It Pours

New theory on drizzle formation says a few big drops get all the water

In research that could lead to more accurate weather forecasts and climate models, BNL scientists Robert McGraw and Yangang Liu, both of the Environmental Sciences Department, say that a physical limit on the number of cloud droplets that grow big enough to form drizzle paradoxically makes drizzle form faster. Those few droplets that cross the drizzle "barrier" readily collect enough surrounding droplets to fall — instead of staying stuck in the clouds competing for a limited water supply and never getting quite big enough.

McGraw, lead author of the study, presented this research on Thursday, August 26, at the 228th national meeting of the American Chemical Society in Philadelphia, Pennsylvania. The research, which will also be published in an upcoming edition of *Physical Review E*, was funded by the Office of Biological & Environmental Research within DOE's Office of Science.

"Drizzle is an important cloud process that plays a crucial role in regulating Earth's energy balance and water cycle, because drizzle affects how long clouds persist," says McGraw. "So, understanding drizzle formation will help scientists predict both local



Robert McGraw (left) and Yangang Liu

weather and the effects of clouds on global climate."

Older theories of drizzle formation left scientists with a puzzle: None explained how drizzle could form within the typical cloud lifetime. In these earlier models, droplets simply coagulated with each other to reach larger size. In this process, many droplets are free to begin growing, but they all end up competing for the available cloud water at the same time. This competition prevents any of them from quickly reaching

a size large enough to begin falling as drizzle.

The new theory resolves the puzzle through the discovery of a statistical barrier to the number of drops that achieve drizzle size, a barrier that paradoxically speeds up drizzle formation.

Under the new theory, the rate of drizzle drop formation depends on the cloud liquid water content, the droplet concentration, and turbulence. Atmospheric turbulence causes fluctuations in the rates of droplet growth and evaporation in

clouds. Once a drop grows large enough to fall under gravity, it begins to collect the smaller cloud droplets that surround it.

This process is called collection and it refers to the volumetric gain of a specified drop large enough to have a significant gravitational fall velocity so as to accrete the smaller, slower falling droplets that typify the main population of the cloud. Collection is thus an additional growth mechanism that, following the axioms 'the rich get richer,' or, 'when it rains, it pours,' becomes available to those relatively few droplets that, through chance fluctuations, reach fall velocity size.

"Those few droplets that do cross the barrier experience less competition for available cloud water and, thus, rapidly reach collection

size," McGraw says.

"Of course, if the barrier is too high — as it often is in polluted clouds with high droplet concentrations — then no droplets can cross and drizzle can't form," he adds. "Other things being equal, such drizzle suppression tends to increase the lifetimes of clouds formed in polluted areas, as compared to those formed in unpolluted areas, such as over the ocean." This could have important implications for understanding the climate effects of aerosol pollutants via their influence on cloud lifetime and cloud cover.

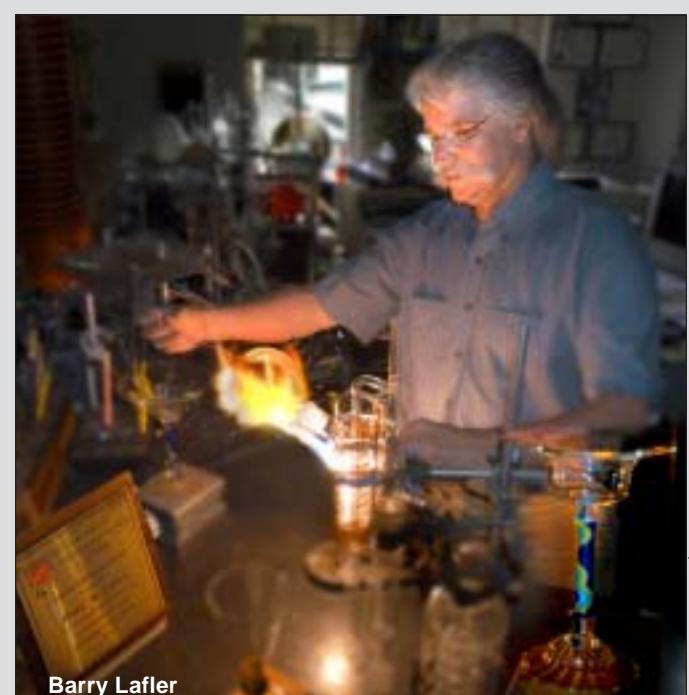
In the future, the scientists plan to test the drizzle theory by comparing it with aircraft and remote-sensing data on drizzle formation. They expect that this research will allow weather forecasters and climate modelers to improve their predictions.

— Karen McNulty Walsh

BNL's Scientific Glassblower Honored Lafler wins American Scientific Glassblowers award

"It takes about ten to twelve years to become proficient in glassblowing," says Barry Lafler, Chemistry Department. He speaks from experience, as he has been working with glass for 35 years — the last 12-plus of them as BNL's scientific glassblower.

Lafler's peers have recently recognized his efforts to share his specialized knowledge of the craft. The American Glassblowers Society, a professional, nonprofit organization of approximately 425 members, has honored Lafler with the 2004 J. Allen Alexander Award. The award consists of a plaque with a citation: "For outstanding contributions in furthering the aims and ideals of our Soci-



Barry Lafler

ety." The society's objectives are to share and promote the knowledge of scientific glassblowing.

Lafler creates custom-made glassware that cannot be purchased from a catalog, and he modifies and repairs existing scientific glassware for any department or division at BNL that requires his services. For example, he has made plasma tubes for lasers, furnace tubes for physics experiments, and numerous glass devices and containers for the Biology and Chemistry Departments. Recently, he designed an oil pump made of glass to replace toxic mercury diffusion pumps, thereby helping to make BNL a safer workplace.

By designing a special container for mixing gases, Lafler also recently helped Jack Preses of Chemistry to perform his research more efficiently. In many experiments, Preses needs to combine gases that do not mix easily or quickly, so he asked Lafler if he could design a glass apparatus to fix the problem.

(continued on page 2)

BSA Awards Tenure to Six BNL Scientists

Physicist William Kilgore of the Physics Department has been granted tenure based on his major, internationally recognized scientific accomplishments in high energy theory.

Said Sam Aronson, Physics Chair, "Bill has chosen research problems that are extremely challenging and important. He has produced results that are significant and critical to current experiments and that will be long lasting. His expertise is in perturbative quantum chromodynamics (QCD) – especially

Brookhaven Science Associates (BSA) granted tenure on June 1 to six Brookhaven scientists. They are: Larry Kleinman, Environmental Sciences Department; Vladimir Litvinenko, Collider-Accelerator Department; William Kilgore, Physics Department; Sergei Maslov, Physics; David Morrison, Physics; and Thomas Ullrich, Physics. The Bulletin will feature a description of the accomplishments of each of the recent tenured scientists over the next few weeks.

William Kilgore Physics Department

higher order calculations of the interactions of quarks and gluons. We expect Bill to continue to produce landmark results relevant to the leading problems in high energy physics and take a leadership role at BNL and internationally."

Kilgore's significant contributions include his work in calculating Higgs production at higher order in perturbation theory; he initially led a team to obtain results with numerical methods, but then went on to develop a creative new calculational technique which allowed an analytic

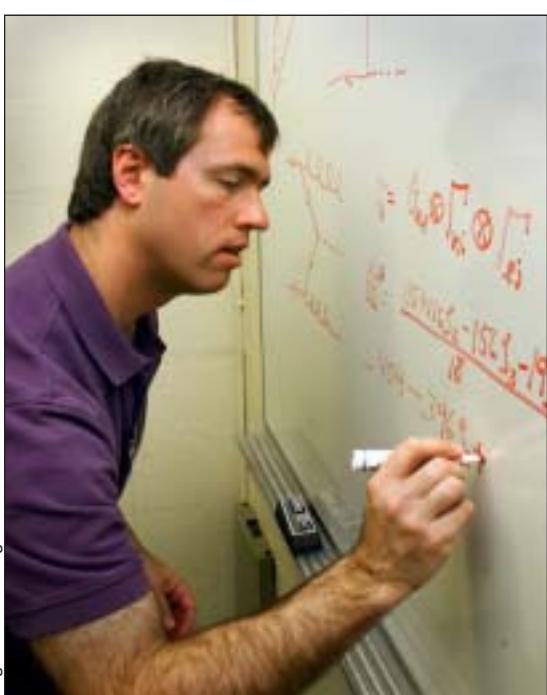
result to be made. The Higgs is a postulated particle that explains how matter acquires mass. Kilgore also used his technique to compute the rate for Higgs production from what is called "b-quark fusion." This last calculation is especially significant if Supersymmetry — an innovative theory of matter — exists.

A second major contribution was in multi-jet calculations. In collisions of two proton particles or a proton and an anti-proton particle, the scattering of the quarks and gluons making up protons leads to jets of particles observed in the detector. Measuring the rates of jet production can better verify QCD. Kilgore's work helped change the way jet data are analyzed.

In the course of this work, Kilgore also has made important contributions to the methodology of doing perturbative QCD calculations. These developments have enabled other physicists to do additional calculations of importance to experiments.

William Kilgore earned his Ph.D. in physics at the University of California, Berkeley, in 1994. He joined BNL in 1998 as an assistant physicist and rose to associate physicist in 1999 and physicist in 2003.

— Liz Seubert



Roger Stoutenburgh D2970403

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 Andra Dehler, Ext. 3347; or Chris Carter, Ext. 2873.
- Additional information for Hospitality Committee events can be found at the Recreation Bldg. and at the laundry, both located in the apartment area.
- Contact names are provided for most events for more information.
- Calendar events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.

— EACH WEEK —

Weekdays: Free English for Speakers of Other Languages Classes

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

Mondays: BNL Gospel Choir

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

Mon., Tues., & Thurs.: Kickboxing

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

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

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

Tuesdays: Welcome Coffee

10-11:30 a.m., Apartment area gazebo/playground. First Tuesday of every month is special for Lab newcomers and leaving guests. Cindy Ottemann, 849-2646.

Tuesdays: BNL Music Club

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

Tuesdays: Jiu Jitsu Club

6:30-7:30 p.m. in the gym. All levels, ages 6 and above. \$10 per class. Tom, Ext. 4556.

Tuesdays: Toastmasters

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

Tues. & Thurs.: Upton Nursery School

The school is on summer break. Contact Alison Tilp, Ext. 4465, or tilp@bnl.gov, for information on Sept. enrollment.

Wednesdays: On-Site Play Group

10 a.m.-noon. Apartment area gazebo/playground. An infant/toddler drop-in event. Parents meet while children play. Kati Petreczy, 821-4131.

Wednesdays: Farmer's Market

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

Wednesdays: Weight Watchers

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

Wednesdays: Yoga Practice

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

Wednesdays: Open Chess Night

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

Thursdays: Reiki Healing Class

Noon-1 p.m., Bldg. 211. Nicole Bernholc, Ext. 2027.

Thursdays: FreshDirect Delivery

3:30-5:30 p.m., Berkner Hall parking lot.

Fridays: Family Swim Night

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

Fridays: BNL Social & Cultural Club

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

— NEXT WEEK —

Tuesday, 8/31

*Upton Nursery School Info. Meeting

Noon at the playground in the apartment area. Rain location is Apt. 5A. Interested parents are welcome to attend this brown-bag lunchtime organizational meeting. Bring lunch, meet other parents and their children, and learn more about the school, a not-for-profit, cooperative nursery school that meets at the Recreation Building in the apartment area and provides a warm, caring, and stimulating environment for 3- and 4-year-old children. Classes meet two mornings a week, a third is being considered. For more information or to register your 3-to-4-year-old child, contact Amie Kennedy, 727-8082, abk22@care2.com, or visit the school's website at www.bnl.gov/nurseryschool.

Thursday, 9/2

BNL Career Network Group Meeting

Noon, Berkner Hall, Room A. All are welcome. Cathy Wehrmann, Ext. 7823.

— WEEK OF 9/6 —

Monday, 9/6

Lab Closed for Labor Day Holiday

BNL will be closed on Monday to celebrate the Labor Day Holiday. No Bulletin will be issued on Friday, September 10.

FaST Program Is Scientist-Approved



Roger Stoutsburgh D040904

Talking with Myron Strongin (third from left), Physics Department, and Aaron Schuetz (second from left), DOE Office of Science's Workforce Development for Teachers & Scientists program; are: (from left) Tanina Bradley, North Carolina Agricultural & Technical State University (NCAT) student; Abebe Kebede, NCAT faculty member; and Christopher Jessamy, NCAT student, who all three worked in this laboratory with Strongin as part of the 2004 FaST program organized by BNL's Office of Educational Programs.

The BNL scientists in the 2004 Faculty and Student Teams (FaST) program had nothing but praise for it at the concluding poster session and ceremony, held August 11-12 in Berkner Hall.

For 10 weeks in the summer, FaST unites a BNL researcher with two students and a faculty member from a university or college with limited research capabilities and funding.

The BNL researcher gains three collaborators for a research project, and the students and faculty perform research using equipment and facilities they may not have at their home institution.

This year there were five faculty-student teams, hosted by the Office of Educational Programs.

FaST is funded by the DOE's Office of Science and supported by the National Science Foundation.

"For me, this program was a lifesaver," said Peter Siddons, National Synchrotron Light Source. FaST revived a project he'd abandoned due to lack of time. He oversaw faculty member Elhag Shaban and students Clifford Williams and Shayla Wilkinson from Southern University in Louisiana, who explored new electron multiplier structures for synchrotron x-ray detector systems.

Siddons also said the format of the program worked out well. "It's a big investment of time to take on full-time students during the year, but with FaST the faculty member acts like a buffer. He could answer many of the students' questions, but, at the same time, I talked to the students every day," he said.

Terrence Sullivan, Environmental Sciences Department (ESD), agreed. "This has been very good for me. We took in a lot more data than I would have done alone." He worked on a study of mercury deposition from a power plant with faculty member Reginald Blake and students Rafael Pena and Akini Bando from the City University of New York (CUNY) New York City College of Technology.

"This program is a great way to establish relationships between BNL staff and school faculty in a way that meets both of our needs," said James

Wishart, Chemistry Department. He worked with a team from Brooklyn College, CUNY: students Neel Khanna and Andre Grange and faculty member Mark Kobrak. They studied anion-based liquids and their properties.

The other two BNL scientists in the program were equally supportive. Myron Strongin, Physics Department, hosted a team from North Carolina Agricultural & Technical State University. Faculty member Abebe Kebede and students Tanina Bradley and Christopher Jessamy investi-

gated the molecular electrical properties of gold-germanium thin films.

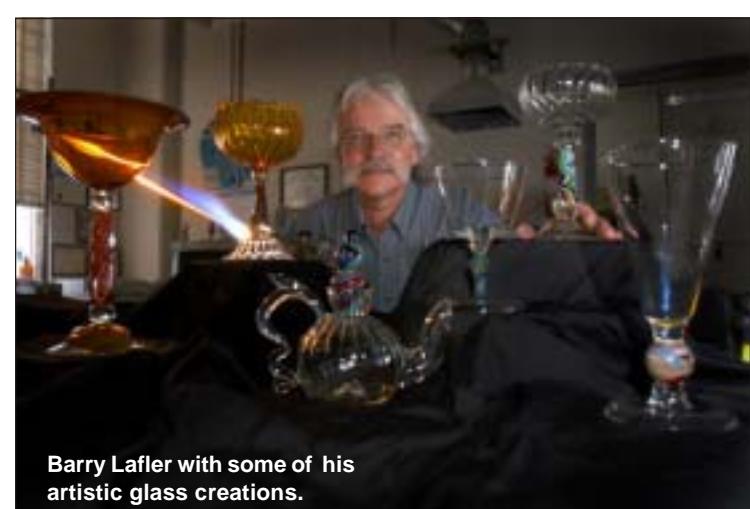
Carmen Benkovitz of ESD helped faculty member Jyh-Cheng Liu and students Thomas Hronopoulos and Matthew Weber, all from New Jersey City University, to develop a software program to analyze environmental data.

Researchers interested in participating in the FaST program should contact Noel Blackburn in the Office of Educational Programs, Ext. 2890 or blackburn@bnl.gov.

— Laura Mardichian

(cont'd.)

BNL's Scientific Glassblower Honored



Barry Lafler with some of his artistic glass creations.

ber of the American Scientific Glassblowers Society since 1981, and he has held many posts in the organization, including that of President, from 1999 to 2000. He has also taught and demonstrated glassblowing techniques in numerous settings, including the Urban Glass NY Contemporary Glass Center, the Corning Museum of Glass, the Art League of Long Island, and Gallery North in Setauket, NY.

In the fall, Lafler will start a new adventure in glassblowing. He is planning to open his own shop — Island Glass Studio, 93 West Main Street in Patchogue — where he will offer a product line of his unique glassware for sale. He also will make custom-made glassware based on customers' specifications. In addition, he will offer courses in scientific glassblowing for beginners and established students of the craft, as well as courses in the proper care of glassware.

But, on weekdays, you'll still find Lafler in the glassworking shop in Bldg. 555, molding glass tubes into scientific apparatus and tools of all sorts — a challenge he still enjoys.

— Diane Greenberg

Benefit Office Reminder: Proof of Student Status

All medical and dental plan participants are reminded to submit an updated proof of student status to the Benefits Office, Bldg. 185, for the upcoming college semester. Benefits will submit this to the insurance company on your behalf. To be eligible for benefits, children over age 19 must be unmarried, full-time students attending an accredited college or university, and primarily supported by you. For more information, call the Benefits Office, Ext. 2877 or 5126.

Fidelity Investment Counseling, 9/15

A Fidelity Investment representative will be at the Lab on Wednesday, September 15, to hold sessions with individual employees interested in learning more about their retirement-savings and investment options. Schedule one of the 45-minute appointments by calling (800) 642-7131.

Got Interests? Join a BERA Club!

Anyone for tennis? Anyone feel like singing or jamming? How about softball, amateur radio, photography, golf, weightlifting, camping, public speaking? As many BNLers know, all these and a range of other hobbies and lifelong interests are enthusiastically pursued by people at the Lab, all under a big umbrella: BERA.

What is BERA?

BERA, which stands for Brookhaven Employee Recreation Association, was created on December 5, 1947, as the Employees' Recreation Association (ERA). First ERA, now BERA, aims at developing fellowship and understanding among BNL employees through the promotion of social, physical, cultural and special interest programs. BERA is supported by Brookhaven Science Associates, the organization that manages the Lab for the U.S. Department of Energy.



Who is a BERA member?

Many people in the Lab community do not realize that almost everyone associated with BNL is a BERA member. The term "employee" covers all Lab facility users, guests, visitors, retirees, subcontractors, and their families, and all these members are warmly invited to join in BERA activities.



Who Runs BERA?

An eight-person volunteer Executive Board nominated and elected by Lab employees, guests and users, governs BERA. In addition, Recreation Supervisor Christine Carter of the Staff Services Division oversees clubs and events, assisted by Joanne Rula; and Andrea Dehler, who runs the a BERA Sales Office and keeps track of ticket sales for trips organized by BERA and the BERA clubs to areas of interest, sporting and theater events, and concerts. Many other BERA and Recreation staff members work to make BERA clubs, events, and facilities enjoyable.



BERA Today

Today, BERA continues to encourage and coordinate recreational and cultural activities for members, who report back that through BERA, they become better acquainted and benefit from group participation and teamwork. Altogether, there are 57 Clubs that individuals can join, and, if there is enough interest within a new group, a new club can be formed. To learn more about BERA and the clubs and activities that are sponsored, see, for example, the notices on this page for the Ballroom Dance, Family Camping, and Toastmasters Clubs, and go to www.bnl.gov/BERA/. — Liz Seu-

CN2-5-00
Photos by Roger Stoutsburgh

Come, Join the BNL Family Camping Club!

When the BNL Family Camping Club is together, we are one extended family," says Penny LoPresti, a club member. The club currently has 33 camping families, with 25 children between them.

"Through the activities and trips the club takes, we all come to know our fellow co-workers and their families well. It does not matter if a family is tent camping or traveling in a large rig, everyone is an important part of the group," LoPresti emphasizes.

The club's 25 children range in age from one to 17 years. "It is wonderful how they all get along," says LoPresti. Club members have arranged that the youngest members have been given a course on the use of a compass and emergency whistle, and the teens are instructed on fire safety and the correct use of a campfire.

Camping activities run from April through December. Club members go on outside trips together and also enjoy campouts at the BNL campsite.

"Members like knowing that they are camping in an environment that is safe and friendly," states Tom Seda, club president. "Occasionally, co-workers in the Fire or Police Groups stop by to say a quick hello. Also, it's always a plea-

sure when members of the ball club come over in the evening, after a game, for a quick hot dog or just to chat. We are close to home — close to work — and can go bike riding without dodging vehicles. We can enjoy the quiet sunsets at night while watching the wild animals roam."

For more information, see the club website at <http://www.bnl.gov/bera/activities/camping>.

Come Camping, 9/18

The club is having a membership drive on Saturday, September 18, and BNLers who are campers, or have an interest in becoming campers, are welcome to join in.

There will be planned activities for children, lots of food, and evening music provided by Ray Dumont.

Come and camp on September 18. All you need to do is let the club president, Tom Seda, Ext. 5350 or seda@bnl.gov, know. The club members look forward to camping with you and having you become part of the extended family!



Invitation! BNL Toastmasters'

Tall Tales and Humorous Speech Contest, 8/31



At a previous Toastmasters' Humorous Speech Contest, member Pat Astre displays his PUN: Pat's Unobtrusive Noteholder, with which he won the Speech Contest.

All are welcome to visit the BNL Toastmasters at 5:30 p.m. on Tuesday, August 31, to hear the members' "Tall Tales and Humorous Speech Contest," which will be held in the Biology Department's Room 160, Building 463. Join the group for the evening to enjoy some funny speeches and an exciting competition! Before coming, guests are asked to contact Beth Lin, bylin@bnl.gov, or 631-344-3372; or Amy Halsted, halsted@aps.org or 631-591-4232.

Train as a Volunteer Literacy Tutor

In Suffolk County, one in seven adults needs help in reading, writing, or English-speaking skills. You can help: volunteer with Literacy Suffolk (LS), Inc., to take an eight-session training workshop in tutoring basic literacy and English for Speakers of Other Languages (ESOL). Tutors are matched with learners for tutoring sessions, which run for over an hour a week, for at least one year.

Jennifer Lynch, BNL's ESOL Program Coordinator, explains that four LS volunteers currently tutor BNL community members who have limited English skills. "These volunteers help BNL's visitors to improve their English communication and also welcome them into American society," she said. "They are such an asset."

Training classes begin in September and October. A \$25 registration fee will be reimbursed by the Lab's Volunteers In Partnership program to BNLers completing the training. For details, contact Lynch, Ext. 4894 or lynch@bnl.gov.

Learn to Dance

The BNL Ballroom Dance Club resumes weekly lessons with instructor Giny Rae in the North Ballroom at the Brookhaven Center on Wednesday, September 8. Join a friendly group and have fun. Lessons are open to BERA members and their guests (one guest per member). The initial six-week series, which costs \$24 per person per series, will be:

5:15 - 6 p.m. Introductory/Newcomer - Swing, Foxtrot, Mambo
6 - 7 p.m. Beginner - Swing, Foxtrot, Mambo
7 - 8 p.m. Advanced beginner - Rumba, Cha-Cha, Tango

To sign up or for information, contact John Millener, Ext. 3853, millener@bnl.gov or Madeline Windsor, Ext. 5069, windsor@bnl.gov.

On-Site Nursery School Enrollment

A informational meeting on enrolling your three-to-four year old child at the on-site Upton Nursery School will be held at noon on Tuesday, August 31, at the playground in the apartment area. All are welcome. Rain location is apartment 5A. See also the Calendar, page 2, or www.bnl.gov/nurseryschool, or contact Amie Kennedy, 727-8082 or abk22@care2.com.

Arrivals & Departures

Arrivals

Luis Jaramillo Env. Rest.
Ewart Orr NSLS
Jeannette Santos Env. Rest.
Molly Scannell CA-D
Stefan Tafrov Biology
Emerson Vernon Instrum.

Departures

Karen Adelwerth PPM
Kelly Warren Medical

Support the Farmers' Market

Delicious Greek pastries; stir-fry veggies; plants and flowers; preserves and honey; quilts and other handcrafted items for unique gifts — all this is available at the Farmers' Market outside Berkner Hall every Wednesday, 11:30 a.m.-1:30 p.m. through the summer.

Remember to stop by!

Children's School Supplies Urgently Needed

Please donate school supplies to help local children in need. Notebooks, binders, crayons, school bags, etc., are all welcome. Leave gifts at the BERA Store, Berkner Hall; or the Recreation Office, Bldg. 179B.

Financial Planning Seminar, 9/15

All are welcome to attend a financial planning workshop provided by Fidelity Investments on Wednesday, September 15, from noon to 1 p.m., in Berkner Hall. Workshop participants will learn how to:

- identify key factors that may influence the way you invest
- learn about the economy's impact on investment performance
- discover the ins and outs of mutual-fund investing
- learn about indexes, benchmarks, and rating services
- gain insight on risk measures, such as beta and standard deviation

Pre-registration is necessary for this workshop. Check your mailbox for registration forms. Return completed forms to Joyce Wund, Bldg. 185, by Wednesday, September 1.

Calendar

(continued)

Tuesday, 9/7

Caring Friends Meet

Noon, Berkner Hall, Room D. All are welcome to join an informal support group serving as a resource for individuals experiencing grief following the loss of a loved one. Call Pat Hein, Ext. 3962, or Gerry Van DerLaske, Ext. 3476.

Wednesday, 9/8

Rifle & Pistol Club Meeting

Noon, Conference Room, Bldg. 535. All are welcome. Come and learn about club activities and obtain assistance and instruction in the maintenance and safe use of firearms. Jim Durnan, Ext. 8236, or www.bnl.gov/bera/activities/rpc.

*Ballroom Dance Lessons Start

5:15-8 p.m. Wednesdays. North Ballroom, Brookhaven Center. 3 sets of lessons sponsored by BNL Ballroom Dance Club, \$24/series. See notice, below, left. Register with John Millener, Ext. 3853 or millener@bnl.gov, Madeline Windsor, Ext. 5069, windsor@bnl.gov.

Thursday, 9/9

*Blood Drive

9:30 a.m.-3 p.m., Brookhaven Center. Those eligible to donate are people in good health between the ages of 17 and 75 who weigh at least 110 pounds. Restrictions may apply to individuals from the United Kingdom and Europe. Donors should have a photo ID and know their social security number. Contact Susan Foster at Ext. 2888, or e-mail donate@bnl.gov with your name, phone extension, and preferred time to donate.

*BERA-Sponsored Book Fair

10 a.m.-2 p.m., Berkner Hall. A wide selection of books at discount prices will be on sale.

Friday, 9/10

*BERA-Sponsored Book Fair

10 a.m.-2 p.m., Berkner Hall.

— WEEK OF 9/13 —

Wednesday, 9/15

*Financial Planning Workshop

Noon-1 p.m., Berkner Hall. All are welcome to attend a financial planning workshop by Fidelity Investments. Pre-register using the form sent to your mailbox. Return completed forms to Joyce Wund, Bldg. 185, by Wednesday, 9/1. See also notice below, left.

Friday, 9/17

*Dance to Hacks, Trenton Horns

7:30 p.m. Brookhaven Center North Room. Sponsored by the BNL Music Club and BNL Social & Cultural Club. All are welcome to dance or listen to the Hackensack Men and Trenton Horns. Ten professionals, the Hacks include two front men, drums, bass, guitars, piano, percussion and a three-piece horn section. Your feet will tap to live soul, R&B, swing, and rock & roll. Tickets are \$10, buy them at BERA Sales Office or call Ext. 5257.

Saturday, 9/18

*Hispanic Dance Performance

7 p.m., Berkner Hall. BNL's Hispanic Heritage Club will hold a Hispanic dance performance that will feature the Sol y Sombra Dance Company in a program called "Ida y Vuelta: Dances of Spain and Latin America." See notice on page 4.

Sunday, 9/19

Walk for Beauty, Aid Cancer Research
BNL Women's Program Advisory Committee leads a BNL team in a 4/6 kilometer walk around Stony Brook Village to aid research on breast and prostate cancer. See www.bnl.gov/diversity/womens%20new.asp. All are welcome.

— WEEK OF 9/27 —

Wednesday, 9/29

Costco Wholesale Club Demo

11 a.m.-3 p.m., Berkner Hall. Costco Wholesale Club (Price Club) will present BNLLers with special offers, including a \$45 annual membership that includes two membership cards and an additional \$10 cash card. Kendra, 366-1506.

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.

Environment, Safety, Security & Health (ESSH) Audit

How can you help support BNL's ESSH policy?



As part of the process for three pilot organizations — the Central Fabrication Services Division, the Collider-Accelerator Department and the Plant Engineering Division — to achieve Occupation, Health, Safety Assessment Series 18001 Registration (OHSAS 18001), the Lab will undergo a final audit scheduled for September 22-24. If the auditors conclude that

these organizations have met the mandates for registration, the Lab will be the only facility in the DOE complex to have elements of its operations achieve such status. This is the second of a four-part series that will help you understand how BNL's Environment, Safety, Security & Health (ESSH) policy commitments apply to you. The complete policy is available on the Environment, Safety, Health & Quality Directorate (ESH&Q) website at <http://www.bnl.gov/ESHQ/ESSH.asp> or via the A to Z site index under ESSH Policy.

As a Lab employee, you should be prepared to answer questions that the auditors might ask. Your answers should be specific to your own work. Below are some examples of what to expect.

Know the Policy

All members of the Lab will work to continually improve ESSH management systems and performance, reduce risks, conserve resources and prevent pollution.

Q: What does this really mean to me, and my organization?

A: Continual improvement is a regular part of daily activities. Our goal is to eliminate the source of problems, and also ensure that systems do not stagnate — that they remain vigorous and relevant. As a BNL employee I will continually review systems and processes that relate to my work, and seek opportunities to do things better and maintain a safe, healthy, and secure workplace. I can make suggestions for improvement via department/division occupational safety and health committees or directly to management. If I choose, I may participate in occupational safety and health "management reviews," such as the ISO 14001 review for environmental stewardship.

Q: What is your responsibility if a spill or inadvertent release to the environment should occur?

A: I report the spill by calling Ext. 2222 and then notify my supervisor. The Lab has a team of emergency responders who control and contain the release and coordinate any cleanup activities.

Q: If you had an idea on how to prevent pollution or reduce risk of injury, what would you do?

A: If it were a simple idea that I could implement, I would implement it. If it required planning assistance or funding, I would contact our environmental or occupational health and safety support staff for help.

Any questions regarding OHSAS 18001 Registration or Occupational Safety & Health (OSH) issues may be directed to BNL's OSH management representative James Tarpinian, Assistant Laboratory Director for Environment, Safety, Health & Quality, Ext. 8370 or tarpinian@bnl.gov.

—Jane Koropsak

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.

LABORATORY RECRUITMENT – Opportunities for Laboratory Employees.

TB2180. PAINTER B POSITIONS (temporary, until 9/30/04) - Under general supervision, performs a variety of tasks associated with the painting trade requiring some knowledge of the trade. May be assigned prep work by a supervisor and may assist a journeyman in the application of materials. Plant Engineering Division.

OPEN RECRUITMENT – Opportunities for Laboratory employees and outside candidates.

TB3541. RESEARCH SERVICES ASSOCIATE (term appointment CW-2) – Requires 18 to 24 months' prior work experi-

ence, of which one year should normally be at the Laboratory as a Research Services Assistant. Under general supervision, will provide general laboratory assistance to the Radiobiology Group. Responsibilities include ordering and managing general laboratory supplies, maintenance, record keeping; performing standard and repetitive phases of spectrophotometer-based bioassays and data entry, assisting in animal experiments, and complying with data security conditions of CRADA agreements. Employment is contingent upon successful completion of a background check by the DEA (Drug Enforcement Agency). Medical Department.

Motor Vehicles & Supplies

04 TOYOTA COROLLA LE - a/t, a/c, p/s, p/b, p/w, \$0 down, \$248.77/mo., 22K mi., \$12,500. Chris, Ext. 4237 or 225-5680.
02 HONDA CIVIC EX - a/t, a/c, p/w, dk. blue, moonroof, excel. cond., 32K mi., \$12,900. Ted, Ext. 7992 or 331-4820.
02 YAMAHA BLASTER - many upgrades, perf. cond., \$1,800. Keith, 744-8215.

01 TRAILER CAMPER - Kodiak, 19', sleeps 6, a/c, oven, refrig., extras, excel. cond., \$9,200. Barbara, Ext. 2585 or 929-1981.

BNL Homepage News

Coming Soon: New Web Template, New Features



Published weekly by the Media & Communications Office for the employees, facility-users, and retirees of Brookhaven National Laboratory.

Hispanic Dance Performance, 9/18

Sol y Sombra performs Flamenco Music and Dance



BNL's Hispanic Heritage Club will sponsor a Hispanic dance performance in Berkner Hall on Saturday, September 18, at 7 p.m., featuring the *Sol y Sombra* Dance Company in a program called *"Ida y Vuelta: Dances of Spain and Latin America."*

Advance-sale tickets at the BERA Sales Office in Berkner Hall cost \$12 for adults and \$6 for children under age 10. At the door, tickets cost \$15 for adults and \$8 for children under 10. For more information, call Ext. 3347.

COUCH - Ethan Allen Colonial style, \$225; 2 chairs, \$100/ea.; 2 end tables, \$95/ea. Lester, 473-5092 after 6 p.m.

DRYER - Westinghouse, \$100; vacuum cleaner, Miele Solaris Turbo, almost new, \$529/obo. Eli, Ext. 7179 or 720-933-4100.

FURNITURE - Vintage 60s scand. k/d sectional, modular youth furn., desk, lamps more. George, Ext. 5298 or 929-8770.

WALL OVEN - GE True Temp digital, \$200. Barbara, Ext. 929-1981.

Tools, House & Garden

LAWN MOWER - Briggs and Stratton Quantum X.T.E., 5.5hp, pwr. gear, front driven, \$65. Wayne, 698-1184.

STORM DOOR - Forever, 36" wide, hardware incl., \$75. Philip, 363-2070.

TABLE SAW - 10" Delta Contractors, sliding fence, stand, mobile base, excel. cond., \$400. Brian, 474-7892.

Sports, Hobbies & Pets

FOOSBALL TABLE - Sportcraft, excel. cond., \$115. Marc, Ext. 8292.

HEAVY BAG - 50lb., \$10. Rich, Ext. 7294 or 929-1058.

PLANES - radio control, ultra sport, 60 size ext., Smith mini bipe, 40 size extra, 40 size cap. William, 475-7620.

PC GAME - Everquest Evolution, famous online adventure game bundled w/a few ext., \$10. Maxim, Ext. 3621.

PRINTER - Dell A920 3-in-one color, new, 4800x1200/res., win2000 XP compatible, \$50. Mary Anne, Ext. 7114 or 369-2889.

SPEAKERS - Advent Legacy, wood finish, 28"hx16"wx10"d, 10" bass, excel. cond., \$150/pr., Jack, 929-8287.

Audio, Video & Computers

COMPUTER DESKS - (2) long and sm., \$15. Victor, 281-1441.

COMPUTER MONITOR - Trinitron, 20" for PC/Mac, gd. cond., \$175. Ted, Ext. 7992 or 331-4820.

DELL - 2100 blk., 1Ghz CPU, 256Mb ram, 20Gb hd, cdrw, \$275; L1000cx, 1Ghz, same as other, \$250. Don, Ext. 7237 or 929-6571.

PC GAME - Everquest Evolution, famous online adventure game bundled w/a few ext., \$10. Maxim, Ext. 3621.

PRINTER - Dell A920 3-in-one color, new, 4800x1200/res., win2000 XP compatible, \$50. Mary Anne, Ext. 7114 or 369-2889.

SPEAKERS - Advent Legacy, wood finish, 28"hx16"wx10"d, 10" bass, excel. cond., \$150/pr., Jack, 929-8287.

Miscellaneous

BACKPACKS - different types, all excel. cond., \$2-5/ea. Peter, Ext. 2913.

DIRTBIKE - Suzuki TS-100, 2-stroke eng., on/off rd., runs, but needs work, \$300; Mini Bike, 3.5hp eng., \$350. Greg, 926-8819.

GUITAR - Ovation Ultra, 6-string elec., acoustic, gig bag, great sound, excel. cond., \$350. Joe, 878-2203.

INGROUND POOL BAR - round table w/recessed cup holders 2 stools, 72" umbrella, more, new in box, \$250. Rodney, 751-7023.

POOL PUMP - 1.5hp, 16" sand filter w/valve, used 2 mos., vac., hose, much chems. paperwk., \$150. Leslie, 225-0642.

RINGS engagement/wedding - 14K gold, diamond G/H SI1, .5-.7 ct ctr.; men's gold band, size 12, \$3,500/set. Kathy, Ext. 3926.

Free

FIREWOOD - you pick up. Joe, Ext. 2384.

PRINTER - HP Officejet 350, works okay, needs new cartridge. Yugang, Ext. 3485.

Wanted

BOOKS - willing to accept all unwanted books, any cond., all subject areas, Courtney, Ext. 3018 or 347-453-5749.

PIANO TUNER - for upright Knabe, Shoreham area. Laura, 744-4611, eve.

PRINTER CARTRIDGES - empty laser/inkjet for donations to non-profit animal rescue organization. Peter, Ext. 2913.

RESEARCH VOLUNTEERS - men and women, ages 18 and over, are needed for PET study. Strictly confidential, fee provided. 344-5015.

SHOTGUN - Remington 870 in 410Ga., Joe, Ext. 3783 or 929-8321.

For Rent

BELLPORT - lg. 2nd flr. studio, priv. ent., yd. & deck, lots storage, lg. bath, no smkg/pets, avail. 9/15, \$800/mo./neg. James, 576-6945.

EAST YAPHANK - brand new 1-bdrm. apt., l/r, kit. combo, full bath, priv. ent., no smkg/pets, avail. 9/1, \$900/mo. Pat, Ext. 3545.

FARMINGVILLE - 1 bdrm., l/r, eik, full bath, pvt. ent., no smkg/pets, \$1,000/incl. heat/elec., 1 mo. rent/sec./ref. req. Bob, 736-1131.

MEDFORD - 1-bdrm. bsmt. apt., all util. incl., \$950/mo. Tony, 736-8841.

MILLER PLACE - 3-rm. furn. apt., full kit., 9 mi., to BNL, TV/Optimum online, prof. area, mature, non smkr., 744-8386.

MILLER PLACE - spacious 3-bdrm. ranch, 2 bath, w/d, dishwasher, screened porch, energy effic., fenced yd., no smkg/pets, avail., 9/15. \$1,750/mo. Paula, 473-3349.

RIDGE - 4-bdrm. lg. Col., w/cath. ent., 2 full bath, eik, den., l/r, Indry. rm., c/a/c, all appl., 1st and last mo. rent, 1 mo. sec., ref., \$1,990 or \$2,600/mo. w/access. apt. Greg, 209-0345.

SHOREHAM - 1 furn. bdrm. in BNL family house, 10 min. to BNL, sep. bath, priv. prkg., \$520/mo., incl. all util. & cable/wireless, single, Zhangbu, Ext. 3955 or 764-3539.

SOUND BEACH - cottage on dead end rd., lg. l/r w/walk out deck & closed in porch, lg. bdrm, full kit. & bath, no smkg/pets, avail. 10/5, \$975. Lou, 833-6484.

WADING RIVER - 3-bdrm. furn. house, short/long term, steps to priv. beach, pets ok, quiet cul-de-sac, avail. Sept., \$2,100/mo./incl. util., cable & modem. Tom, 929-0163.

ARUBA - Marriott/share mstr. suite, 2 bdrm. lockoff, q-bed, sofa bd., sleeps 4, kit., lr, dr, bf, \$1,200; Studio, q-bed, sofa bd., sleeps 4, fb wet bar, \$700, wk. 11/5-12. Bob, 467-5853.

For Sale

MEDFORD/GORDON HEIGHTS - Land, 100X173K, \$50,000/neg. Cornell, 698-9016.

WADING RIVER - 3-bdrm. ranch, park-like acre, 2 baths, l/r, d/r, bfst., mod. kit., f/t, f/p, patio, 20x40, igp, 2.5 gar, cac, oil/fair, igs., \$599,000. George, Ext. 5298 or 929-8770.

Happenings

CRAFT FAIR - and flea market at the Old Ship of Zion Church, 145 Frowein Rd., Ctr. Moriches on 8/28, 9 a.m.-4 p.m., \$30 per 12'x12' space, 878-1115 or 475-1811.

Farewell Gatherings

MEMORIAL SERVICE - for Julia Thompson, 61, University of Pittsburgh, and BNL guest physicist, who died on August 16, 2004. A principal investigator