

## BNL Scientist Wins DOE's \$50K 'Chunky Bullet' Award

Physicist Yimei Zhu of the Materials Science Department (MSD) is the first BNL scientist to win a DOE "Chunky Bullet" award. For convincingly explaining, in lay terms, why his research in electron microscopy is important and worth funding, Zhu won \$50,000 in funding from DOE's Office of Basic Energy Sciences (BES). Open to scientists working on DOE BES-supported research programs, the award was established three years ago, replacing the old BES Annual Award for Outstanding Scientific Accomplishment.

"I am pleased and honored that our research has been recognized by DOE," Zhu says. "Looking at atoms and electrons is so fascinating that I want to share the excitement with both scientists and nonscientists."

To compete for a Chunky Bullet award, scientists submit 200-word summaries of their major research accomplishments, accompanied by visual materials, all to be understandable by a general audience. After the text and supporting materials are selected by DOE BES, scientists are not only offered the cash award, but their material is also later used to support the DOE BES request within the President's budget.

### TEM Technique Discussed

In his Chunky Bullet text, Zhu describes a technique that he and MSD's Lijun Wu and Johan Taftø, University of Oslo, developed using the state-of-

the-art transmission electron microscope (TEM) in MSD, working in collaboration with MSD's Masaki Suenaga and MSD Interim Chair David Welch.

BNL's TEM is one of three of the most advanced TEMs in the world, making it a rare resource for probing the electronic, magnetic, and optical properties of materials on the atomic level.

Unlike optical and x-ray microscopes, which use light to magnify objects and look at their inner structures, an electron microscope projects electrons — tiny particles that are basic constituents of matter — toward a sample of solid material. The electrons that pen-

etrate the sample or are transmitted through it reveal its atomic structure.

By looking at how the waves created by the electrons interfere with each other after they cross the sample, Zhu and his collaborators developed a technique that produces a very detailed image of the atomic structure in the sample, which is unavailable by any other means.

"With this technique, we can see the misalignment of atoms at the level of a billionth of a meter with an accuracy of a trillionth of a meter, the smallest scale ever reached," Zhu says. "We can even see the cloud of electrons that surrounds the atoms."

One of Zhu's team's recent achievements with TEM was highlighted in the award's text: revealing details of the atomic-level constituents of superconductors — materials which, below certain temperatures, conduct electricity with no energy loss. These observations should provide more insight into superconductivity mechanisms.

Zhu's team is also using the TEM to investigate the origin of magnetism at the atomic level. The scientists studied the magnetic properties of clusters of thousands of atoms, each cluster behaving like a tiny magnet, and determined how they interact with each other.

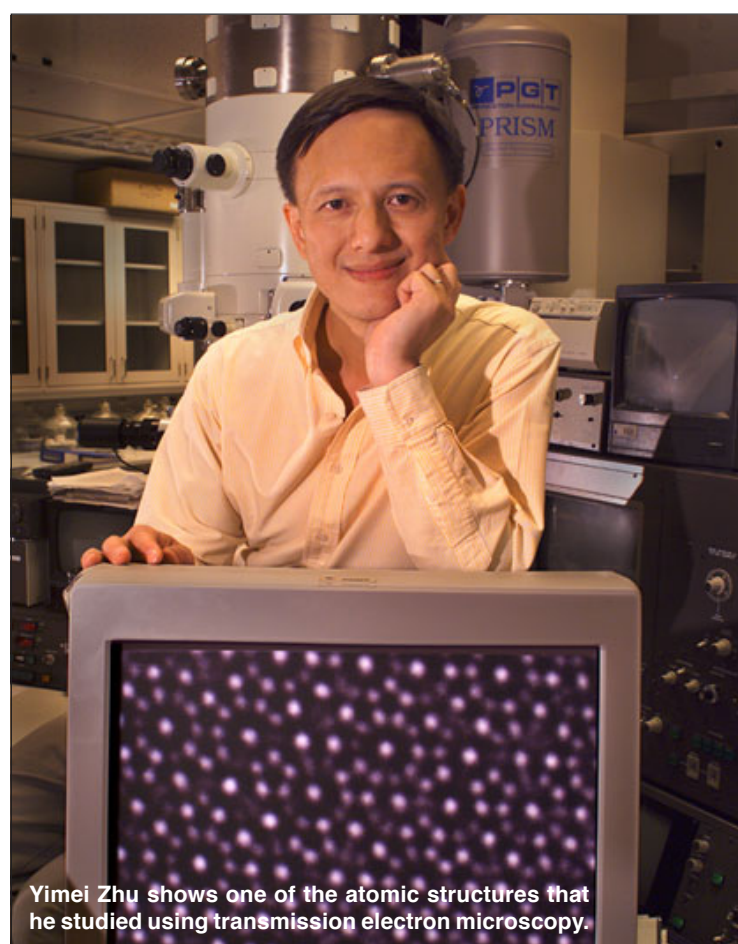
"So far, scientists' knowledge of magnetism is based on bulk measurements," Zhu says.

(continued on page 2)

### Electron Microscopy Receives Extra Funds

In addition to winning a DOE "Chunky Bullet" award for his research in electron microscopy, BNL's Yimei Zhu and his team also received a \$1-million increase in annual funding from DOE, starting in July of last year.

This budget increase is part of the National Nanoscience Initiative, a major scientific endeavor that is a top priority of the current administration. The extra support will enable Zhu to build a more powerful electron microscope to help keep BNL at the forefront of nanoscience research.



Yimei Zhu shows one of the atomic structures that he studied using transmission electron microscopy.

Roger Stoughton/bnl 00160599

## Sambamurti Memorial Lecture, 3 p.m., July 18 Probing Matter-Antimatter Asymmetry in the Universe

Modern theories of particle astrophysics suggest that the early universe was populated with equal amounts of matter and antimatter, which should have annihilated into pure light a long time ago.

"But it is obvious that this did not happen," says James Olsen, Princeton University. "The striking asymmetry observed in the universe today implies that matter and antimatter are not treated equally under the laws of physics."

To learn more about current research into matter and antimatter symmetry, the Lab community is invited to join Olsen on Thursday, July 18, when, as BNL's 2002 Sambamurti Memorial Lecturer, he will talk on "How to Measure a Triangle: Probing the Matter-Antimatter Asymmetry in the Universe." The talk will be given at 3 p.m. in the Physics Department's Large Seminar Room, Bldg. 510.

As Olsen will recall, the first direct laboratory evidence of matter-antimatter asymmetry was discovered in 1964 by James Cronin and Val Fitch, who were studying the decays of K-meson particles at BNL's Alternating Gradient Synchrotron. They found that a certain decay that

would be forbidden if there were perfect symmetry between matter and antimatter, actually occurs in two out of every thousand K-meson decays.

This observation, for which Cronin and Fitch shared the 1980 Nobel Prize in physics, forever altered physicists' understanding of fundamental symmetries in particle interactions.

Olsen will describe how the currently accepted theory of elementary particle physics, referred to as the Standard Model, predicts the amount of matter-antimatter asymmetry, but falls far short in accounting for the imbalance observed in the universe today. By studying matter-antimatter asymmetry in the laboratory, Olsen will say, physicists hope to find new physics to explain this discrepancy.

Toward this end, in 1999, the BaBar experiment at Stanford University and the Belle experiment in Japan began an ambitious program using millions of B-meson particles to study the subtle differences between matter and antimatter with unprecedented precision.

Olsen will describe how, last summer, 37 years after the groundbreaking work of Cronin (continued on page 2)

## 375th Brookhaven Lecture, 4 p.m., July 17 Mark Miller Talks on Clouds, Climate, Soda Straws



Clouds play an important role in the flow of energy to and from the Earth and can act either to amplify or attenuate the warming of the global climate, depending on the properties of the cloud systems involved.

To understand more about clouds' behavior and, therefore, to be able to predict future climate changes, the more-than-300 scientists in DOE's Atmospheric Radiation Monitoring (ARM) Program use cutting-edge observational instruments at five surface-measurement sites — three in the tropical Western Pacific, one along the North Slope of Alaska, and one "super site" in the Southern Great Plains of the United States.

Scientists use these sites to observe cloud properties and cloud behavior in the atmosphere directly above the site — essentially, looking up through a soda straw.

To learn about how scientists monitor the cloud structure in the atmosphere above the ARM sites while simultaneously observing changes in the Earth's surface energy and large-scale atmospheric conditions, join Scientist Mark Miller of the Environmental Sciences Department (ESD), as he presents the 375th Brookhaven Lecture, "Clouds and Climate Through a Soda Straw," on Wednesday, July 17, at 4 p.m. in Berkner Hall.

Miller will be introduced by ESD Chair Creighton Wirick.

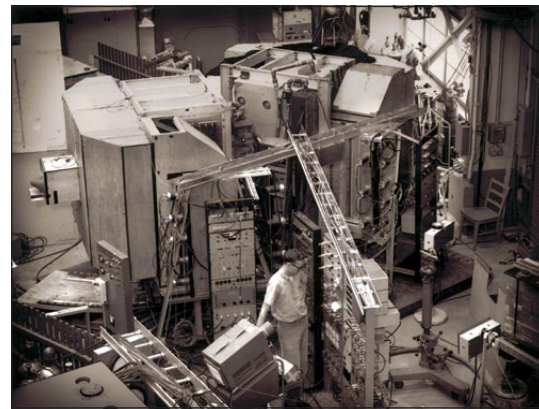
As Miller will explain in his talk, researchers are also using the data from measurements above the ARM sites to fine-tune the results of large-scale global climate models (GCMs), which predict the future climate using large numerical simulations.

With other ARM scientists, Miller pushes cloud-sensing capabilities to new heights to help bridge the gap between observations made on the behavior of clouds, which apply to areas of about four square kilometers, and the much larger scale with which cloud behavior must be quantified for use in GCMs.

Miller, who arrived at BNL in 1994 on a DOE Global Change Postdoctoral Fellowship, joined ESD in 1996. He received his M.S. and Ph.D. in meteorology from the Pennsylvania State University and currently serves as Chair of the ARM Program's Cloud Properties Working Group and sits on the United States Global Change Research Program's Water Cycle Steering Committee.

Brookhaven Lectures are free and open to the public. Refreshments are offered before and after the talk. To join the lecturer for dinner at an off-site restaurant, call Sharon Zuhoski, Ext. 3359. — John Galvin

A 1963 photo of BNL's Alternating Gradient Synchrotron Experiment 181, with which James Cronin and Val Fitch discovered evidence of matter-antimatter asymmetry.





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 Ronick, 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](http://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](mailto:wood2@bnl.gov).

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

Noon- 12:45 p.m., Rec. Bldg. Scott Bradley, Ext. 5745, [bradley@bnl.gov](mailto:bradley@bnl.gov).

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: Aqua Aerobics

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

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](http://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: Weight Watchers

Noon-1 p.m., Brookhaven Center South Room. Mary Wood, Ext. 5923, [wood2@bnl.gov](mailto: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](mailto:belford@bnl.gov) or Ext. 5053, or [www.bnl.gov/bera/activities/dance](http://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](mailto: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](http://www.falundafa.org).

Fridays: BNL Social & Cultural Club

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

— THIS WEEKEND —

Friday, 7/12

GLOBE Meeting

The Gay, Lesbian, and Bisexual Employee Club at BNL will hold its monthly meeting at 7 p.m. For the meeting's 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](http://www.bnl.gov/bera/activities/globe).

— WEEK OF 7/15 —

Tuesday, 7/16

Health Promotion Program Seminar

Noon, Brookhaven Center South Dining Room. "Your Sense of Humor" will be presented by Rick Shields of CIGNA Behavior Health. Registration is now complete. Linda Rundlett, Bldg. 185.

Wednesday, 7/17

VoiceStream Wireless Demo

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

Cycletrons Motorcycle Club Picnic

Noon. Join the BNL Cycletrons Motorcycle Club at the gazebo by the softball fields for a picnic on national "Ride to Work Day." Frank Dusek, Ext. 2022, [frankd@bnl.gov](mailto:frankd@bnl.gov).

Meet the Brookhaven Advocacy Council  
Its Members Can Help Resolve Your Issues



The 2002 Brookhaven Advocacy Council members are: (front, from left) Samantha Lin, Secretary, Ext. 3471, Bldg. 527; Mike Loftus, Chairperson, Ext. 2050, Bldg. 902A; Pat Benjamin, Co-Chairperson, Ext. 4688, Bldg. 911A; (middle, from left) Lillian Kouchinsky, Ext. 8772, Bldg. 460; Dan Schiappa, Ext. 4988, Building 902A; Lisa Zimmerman, Ext. 2773, Bldg. 490; Jeff Rothman, Ext. 4914, Bldg. 725B; and (back, from left) Ed Kaplan, Ext. 2007, Bldg. 197D; Ed Diaz, Ext. 4639, Bldg. 452; and Ray Costa, Ext. 8227, Bldg. 130M. Not shown is Brenda Thomas, Ext. 2471, Bldg. 134J.

The Brookhaven Advocacy Council (BAC) was established one year ago in response to recommendations from the Diversity Focus Group, which was formed as a result of the 1998 Employee Survey. A key component of BNL's commitment to fairness, BAC functions as an independent council, reporting directly to the Lab Director. BAC members advise and make recommendations on concerns and issues that involve BNL employees, guests, facility-users, and the Lab's quality of life. Members have access to all pertinent, uncensored information — within BNL confidentiality guidelines — in order to assist in resolving concerns or issues.

The BAC welcomed four new members to its council this month. To find them, a BAC nominating committee, composed of employees with experience on similar committees, had put out a call for four new candidates in an April 19 Bulletin article. A request for candidates also appeared in the Director's message in the April 22 Monday Memo. From the resulting slate of recommendations, the Director selected the BAC members. The elected were considered by job classification, race, and gender, following the BAC bylaws.

BAC members serve for three years, with terms generally expiring on a staggered basis. Their responsibilities include timely and confidential responses to concerns or issues reported to them.

The BAC will seek to resolve the concern or issue and, if necessary, report it to the Lab Director

for review and action. After the concern or issue has been resolved, the individual involved will be contacted periodically to ensure that no acts of retaliation have occurred.

According to Mike Loftus, current BAC Chair, "In its first year, the BAC investigated eleven cases and looked at six issues. Many of the cases are closed while some are still being investigated. The Council is very careful to ensure that all concerns and issues brought to the Council's attention will be kept strictly confidential. We are trying to provide a service to employees, guests, and users where we can help when they feel that no one else is listening."

Loftus explained that the Council has also created a BAC feedback form so that employees, guests and facility users may share their experiences at BNL prior to their departure. The Council also intends to expand on its outreach program to communicate to BNL staff BAC's role and the mechanisms for raising concerns and issues to BAC members.

Once a month, as announced in the Bulletin's Calendar of Laboratory events, the BAC holds an open meeting from 12:30 to 1 p.m. for employees, guests, and facility users to share their concerns or issues. The next session will be on Thursday, July 18, in Berkner Hall, Room C. More information is available on the Web at [www.bnl.gov/bac](http://www.bnl.gov/bac).

To bring a concern or issue to the BAC's attention, call its Hotline, Ext. 4200, or contact a member from the list in the caption above.

Sambamurti Lecture

(cont'd.)

and Fitch, both of these "B-factory" experiments presented the first observations of the matter-antimatter asymmetry outside the K-meson system.

The results were a triumph for the Standard Model, as Olsen will relate, because the measurements and theory were in perfect agreement.

However, the mystery of the matter-antimatter asymmetry in the early universe is not yet solved. Olsen will show why the BaBar and Belle experiments continue to take data at ever-higher rates, searching for that first hint of a crack in the Standard Model: "a crack that may lead to new fundamental discoveries about elementary particle physics and the origin of the universe," he will explain.

James Olsen earned his B.S. at the University of California at Davis in 1992 and his Ph.D. at the University of Wisconsin, Madison, in 1998, both in physics. In 1998, he joined the University of Maryland as a postdoctoral research associate and worked on the BaBar experiment at Stanford. In February, 2002, while continuing to work on the BaBar experiment, he became Assistant Professor at Princeton.

The Sambamurti Memorial Lecture was established in 1992 to commemorate the work of Aditya Sambamurti, a BNL physicist who died of cancer in 1992, at age 31. Each year, an outstanding young physicist whose professional interests overlap those of Sambamurti is selected to deliver the lecture.

'Chunky Bullet' Award

(cont'd.)

"When the size of magnetic materials gets small, nobody knows how their physical properties change," Zhu continues. Small magnetic materials could be used to create new recording media such as CDs or magnetic tapes, with a storage density 1,000 times as high as in current magnetic storage devices, he explains.

Using TEM, Zhu and his collaborators also expect to gain new insight into carbon nanotubes, tiny structures a few billionths of a meter in size, which show promise for use as faster logic gates in future computers, among other applications.

Investigating nanostructures at the atomic level has just started, according to Zhu. "For all the excitement the current electron microscope has brought to our team, we are still left with many nagging questions about the behavior of atoms and electrons," he says.

BNL is building a more powerful TEM with the extra \$1 million to be received each year from the National Nanotechnology Initiative (see box, page 1), as well as a recently awarded \$1.8-million grant from the New York State Office of Science, Technology & Academic Research, and a \$1.4 million DOE BES fund. The instrument will have an energy resolution comparable to the beam lines at National Synchrotron Light Source, but its spatial resolution will be much higher, Zhu says.

"I am confident that, especially with the new TEM, our research will lead to materials that will become part of our lives in the future," Zhu concludes.

— Patrice Pages

In Memoriam  
Richard Dodson

Richard W. Dodson, founding Chairman of the BNL Chemistry Department, died on June 13, at the age of 87.

Dodson had received his B.S. in 1936 from the California Institute of Technology (CalTech) and his Ph.D. in nuclear chemistry in 1939 from The Johns Hopkins University. After a period as a National Research Council Fellow at CalTech, Dodson joined the National Defense Research Committee in 1940, to do chemical warfare research at CalTech and Northwestern University. In 1943, he became Group Leader, then Assistant Division Leader of the Chemistry Division at the Los Alamos Scientific Laboratory. After the war, he returned to Cal Tech until, in 1947, he joined Columbia University, becoming Professor by 1953.



Richard Dodson, 1966

In 1947, Dodson was also asked to join the staff of the recently founded BNL to build and lead the Chemistry Department. He served as Acting Chair for 18 months, intending to return to Columbia, but in 1948 he acceded to requests of his chemistry colleagues and then Laboratory Director Leland Haworth to become Chemistry Chair. Two decades later, when he returned to full-time research in 1968, Chemistry's 1947 staff of ten, who had worked in former Camp Upton barracks, had grown into a department of more than 100 members, housed in the present Bldg. 555, which was dedicated in 1966.

Dodson had also served as Secretary of the Atomic Energy Commission's General Advisory Committee, 1951-56.

As a senior chemist, from 1968 until his retirement in June 1982, and afterward as a research collaborator, Dodson pursued his research interests of radiochemistry and physical chemistry, studying the kinetics of electron-transfer reactions and complex-ion equilibria.

Retired Senior Chemist Gerhart Friedlander, who was Dodson's successor as Chemistry Chair, said, "Dick Dodson's vision and his unerring sense for excellence in scientific research shaped the Chemistry Department and made it an outstanding research institution. Beyond that, he created the very special, collegial atmosphere that all those who joined the department in the early years remember fondly. Dick was a wonderful human being, a great friend, and a true scholar. He was passionately devoted to BNL and worked tirelessly to help make it the outstanding institution that it is."

A resident of Santa Rosa, California, Dodson is survived by his wife Mary Ellen, sons Robert and Don, and five grandchildren.



**BWIS Invites BNL  
Summer Reception,  
Chasman Scholarship  
Presentation, 7/18**

Brookhaven Women in Science (BWIS) invites the BNL community to a summer reception and presentation of the 2002 Chasman Scholarship, on Thursday, July 18, at 5:15 p.m., in the Physics courtyard, behind Bldg. 510. Refreshments will be served. For more information, call Loralie Smart, Ext. 2425.

**Noon Recital, 7/24**

In Berkner Hall, at noon on Wednesday, July 24, Musical Director Paul Schenly will present three rising stars from Pianofest in the Hamptons. See <http://music.bnl.gov>.

**Attend One-on-One  
Retirement Planning, 7/24**

The Vanguard Group invites you to spend 30 minutes one-on-one with a licensed Vanguard representative at the Lab to talk about financial issues. Meet with a representative between 9 a.m. and 5 p.m. on Wednesday, July 24.

You may learn about: investing for long-term goals such as retirement; selecting funds for your savings; and making the most of the services and investment tools available to you.

Schedule your 30-minute session by calling Vanguard, 1-800-662-0106, Ext. 69000.

**Service Awards**

*The following employees celebrated BNL service anniversaries during March 2002:*

**35 Years**

Carmen Benkovitz ..... Env. Sci.

**30 Years**

Collos Lamb ..... PPM  
Paul Akins ..... Plant Eng.

**25 Years**

Richard Kuczmariski ..... Plant Eng.  
Eugene Von Achen ..... Instrum.  
Kathleen Tuohy ..... Physics

**20 Years**

Joseph Levesque ..... Emg. Svcs.  
Graham Smith ..... Instrum.  
John H. Taylor ..... EENS

**10 Years**

Vincent Harris ..... C-A  
Michael Falletta ..... Magnet  
Guy Hartsough ..... Rad. Ctrl.  
Charlotte Buck ..... Fiscal  
Melinda Markstaller ..... SSD  
Gordon Rawn ..... Rad. Ctrl.

*The following employees celebrated BNL service anniversaries during April 2002:*

**40 Years**

John Jackson ..... Magnet  
John Slavik ..... C-A  
E. Eric Klug ..... Rad. Ctrl.

**35 Years**

E. Paul Valli ..... C-A  
Irene Rosati ..... Biology

**25 Years**

Robert Malone ..... NSLS  
Frederick Squires ..... Plant Eng.  
Kathleen Hygom ..... HR  
Gary Schaum ..... Emg. Svcs.  
Hsiao-Chaun Hseuh ..... C-A  
Bonnie McGahern ..... Budget  
Dean McDonald ..... C-A

**20 Years**

Manuel Rosa ..... Plant Eng.  
Henry Ashby Jr. .... C-A

**10 Years**

Yannis Semertzidis ..... Physics  
Kevin Fox ..... Finance & Admin.  
Kenneth Hartmann ..... C-A  
Dannie Steski ..... C-A  
James Stillwell ..... Rad. Ctrl.  
Marilyn Pandorf ..... HR  
Steven Moss ..... S&H Svcs.  
Brian Rohena ..... Plant Eng.  
Lawrence Lettieri ..... Env. Svcs.  
Joseph Cracco ..... Rad. Ctrl.

**Join in Aqua Aerobics at the BNL Pool**

Join water-aerobics for the next six Tuesdays, 5:15-6:15 p.m. The fee is \$2, or use a pool pass. Register with Mary Wood, Ext. 5923.

**BNL Gives 290 Pints to L.I.'s Blood Supply**



Roger Stoutenburgh 0574002

This year, in recognition of BNL's continuous support through donations to Long Island's blood supply, a plaque was presented to BNL Interim Director Peter Paul (above) and BNL Blood Drive Chair Susan Foster (right) by Long Island Blood Services' Diana Zaferiou (left), Manager of Corporate Relations, and Christine Dingfelder (second from right), Manager of Business Development. Foster thanks all those who participated in BNL's recent blood drive, including those employees who attempted to donate but were unable to for various reasons. BNL's June 13 and 14 blood drive resulted in donations of 290 more pints for Long Island medical emergencies. Says Foster, "These donations were more important than ever, since Long Island permanently lost 25 percent of its blood supply after new federal guidelines restricted importing blood from Europe." The restriction had been imposed to avoid introducing into the United States the rare and often fatal disease known as variant Creutzfeldt-Jakob, the human form of mad cow disease. — Jane Korop-sak

**Arrivals & Departures**

**Arrivals**

Michael Demers ..... Plant Eng.  
Keith Jackson ..... Plant Eng.  
Kathleen Nasta ..... CEGPA  
Michele Pergola ..... NNS  
Vivekananda Ponnaiyan ..... C-A  
Yugang Tan ..... C-A  
Firoza Zaroni ..... S&H Svcs.

**Departures**

Gintautas Buzorius ..... ESD  
Katrina Hensley ..... Central Shops  
Anita Salvati ..... Waste Mgmt.  
Malry Tardd III ..... Plant Eng.

**Adult Drawing Class**

The Hospitality Committee invites the Lab community to join Orit Orion, an artist from Israel, on Thursday, July 18, 9:30 to 11:30 a.m. in the Recreation Bldg., for a drawing class for adults. Bring your own equipment — pencils and paper will be enough. Orion's work is currently exhibited in the Agora Gallery, 415 West Broadway, New York, Tuesday through Saturday, from noon to 6 p.m.

For more information, contact Hospitality Chair Monique de la Beij, 399-7656.

**Hospitality Committee  
Manhattan Bus Trip**

The Hospitality Committee invites all BNLees to take a bus trip to Manhattan on Saturday, July 20. Bus departs from the Lollipop House at 9 a.m. and will leave the city at 6 p.m. Buy tickets at \$10 per adult, \$5 per child ages 2-12, at the Recreation Bldg., Tuesday and Wednesday, 7/16 and 7/17, 10 a.m.-1 p.m. For more information, call Lisa Fugleberg, 205-5128, or Joe O'Connor, Ext. 2212.

**BERA Events**

Buy tickets for the following events at the BERA Sales Office in Berkner Hall on weekdays from 9 a.m. to 3 p.m. For more information, contact Andrea Dehler, Ext. 3347 or [dehler@bnl.gov](mailto:dehler@bnl.gov).

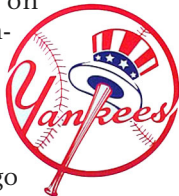
**Fishing Trip, 8/3**

Join BERA's first fishing trip aboard the Captain Bob, sailing out of Mattituck on Saturday, August 3. Tickets cost \$49 per person and include the boat trip, bait, tackle, fishing rods, and the initial tip for the mate. Boat departs the dock at 8 a.m. sharp and returns at 3 p.m.

Directions to the dock can also be obtained at the BERA Sales Office. For more information, contact Andrea Dehler, Ext. 3347, [dehler@bnl.gov](mailto:dehler@bnl.gov), or Sue Cataldo, Ext. 4461, [cataldo@bnl.gov](mailto:cataldo@bnl.gov).

**NY Yankees, 9/13**

Join BERA on Friday, September 13, for a bus trip to watch the New York Yankees take on the Chicago White Sox.



Tickets cost \$55 and include round-trip bus transportation. The bus will leave from the Brookhaven Center at 4 p.m. and will return at approximately 11:30 p.m.

**Atlantic City Trip, 9/21**

The next BERA-sponsored, one-day trip to Atlantic City will be on Saturday, September 21, at a cost of \$25 per person. The name of the hotel-casino and the amount of the coin return will be announced later.

The bus will leave the Brookhaven Center at 8 a.m. As usual, there will be free movies, games, and rolls or donuts on board; bring your own juice and coffee. After a seven-hour stay in Atlantic City, the bus will return around 11:30 p.m.

For more information, call Andrea Dehler, Ext. 3347, or Chris Ronick, Ext. 2873.

*Weight Watchers*

The first of ten sessions of Weight Watchers at work will be held on Wednesday, July 17, at noon, in the Brookhaven Center South Dining Room.

There is still room available for a few more participants. The registration fee is \$89, which includes ten sessions, but no registration will be accepted after the first session. To register, or for more information, contact Mary Wood, Ext. 5923, or [wood2@bnl.gov](mailto:wood2@bnl.gov).

**BNL Food  
July  
Drive**

*Pickup next week*

Please remember to bring canned food to fill the bins in each building. Hungry people in Brookhaven Town depend on your generosity. Or, send a check to BNL Food Drive, c/o Rita Kito, Bldg. 460, or Donna Wadman, Bldg. 599.

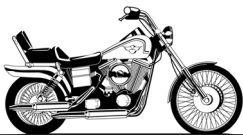
**Defensive Driving**

A defensive driving course will be held on Saturday, August 10, from 9 a.m. to 3:30 p.m. in Berkner Hall, Room B.

To register, send a check by August 2 for \$26 per person, made out to Empire Safety Council, in care of Scott Zambelli, P.O. Box 670, Mount Sinai, NY 11766. Include your telephone number in case you need to be contacted.

**Ride to Work Day, 7/17**

National "Ride to Work Day" is Wednesday, July 17. Bring your bike and join BNL's motorcycle club, the Cycletrons, noon-1 p.m., at the gazebo by the softball fields. For more information, call Charles Gardner, Ext. 5214, or Frank Dusek, Ext. 2022.



**Calendar  
Wed., 7/17 (cont'd.)**

**375th BNL Lecture**

4 p.m., Berkner Hall. Mark Miller, BNL Environmental Sciences Department, will present "Clouds and Climate Through a Soda Straw."

**Thursday, 7/18**

**\*Adult Drawing Class**

Free. 9:30-11:30 a.m. Recreation Bldg. Sponsored by the Hospitality Committee, Orit Orion, an artist from Israel, will give this class for adults. Bring your own pencils, paper, etc. See notice below, left. Orion's work is in the Agora Gallery, 415 W. Broadway, New York, Tuesday-Saturday, noon-6 p.m.

**Radisson Macarthur Airport Hotel Demo**

10:30 a.m.-2:30 p.m., Berkner Hall. A representative will present information about the newly renovated hotel as well as the recently added grand ballroom. A raffle will be held for a weekend gift certificate for two as well as a raffle for dinner for two in Churchill's Hotel Restaurant. Nick Wilson, 758-2900.

**BAC Meeting**

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

**\*Sambamurti Memorial Lecture**

3 p.m., Physics Department Large Seminar Room, Bldg. 510. James Olsen, Princeton University, will present "How to Measure a Triangle: Probing the Matter-Antimatter Asymmetry in the Universe." See story on page 1.

**\*BWIS Reception, Chasman Scholarship Presentation**

5:15 p.m. in the Physics Bldg. courtyard. Brookhaven Women in Science invite all BNLees to their summer reception and presentation of the 2002 Chasman Scholarship. For more information, contact Loralie Smart, Ext. 2425.

**Saturday, 7/20**

**Manhattan Bus Trip**

Adults \$10, Children 2-12 years old \$5. Bus departs from the Lollipop house at 9 a.m. and leaves the city at 6 p.m. Buy tickets at the Rec. Bldg., Tuesday, 7/16, and Wednesday, 7/17, 11 a.m.-1 p.m. Lisa Fugleberg, 206-5128, or Joe O'Connor, Ext. 2212.

**— WEEK OF 7/22 —**

**Monday, 7/22**

**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. Union members may take part in a raffle of the union car.

**Wednesday, 7/24**

**BSA Noon Recital**

Noon, Berkner Hall. Musical Director Paul Schenly will present three rising stars from Pianofest in the Hamptons. See <http://music.bnl.gov>.

**Thursday, 7/25**

**BERA Bridge Club**

7 p.m., Brookhaven Center. South Room. Morris Strongson, Ext. 4192, [mms@bnl.gov](mailto:mms@bnl.gov).

**— WEEK OF 7/29 —**

**Tuesday, 7/30**

**VoiceStream Wireless Demo**

10 a.m. - 2:30 p.m., Berkner Hall. Special rates will be presented to BNLees on VoiceStream's wireless network. Richard Goll, (516) 343-5900.

**Saturday, 8/3**

**\*BERA Fishing Trip**

\$49 per person. The Captain Bob leaves the dock in Mattituck at 8 a.m. and returns at 3 p.m. Buy tickets at the BERA Sales Office, 9 a.m.-3 p.m. Andrea Dehler, Ext. 3347, or Sue Cataldo, Ext. 4461.

**— WEEK OF 8/5 —**

**Thursday, 8/8**

**BERA Bridge Club**

7 p.m., Brookhaven Center. South Room. Morris Strongson, Ext. 4192, [mms@bnl.gov](mailto:mms@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](mailto:bulletin@bnl.gov). Write "Bulletin Calendar" in the subject line.*



**AMERICAN INSTITUTE OF PHYSICS  
POSITION:** Journal Publisher

The American Institute of Physics (AIP) is seeking a Publisher, Journals and Technical Publications, to assume challenging responsibilities for the editorial and financial well-being of AIP's journals and conference proceedings, the quality and features of the publications in all media, and their relevance and service to their communities. Component responsibilities include: working with the Editors of AIP's eight journals on matters concerning journal quality, scope, and timeliness; managing AIP staff responsible for oversight of the operations of the remote journal offices and their interface with AIP Production; working with AIP Senior Vice President, Publishing, and publishing business staff on product pricing; generating and implementing plans to improve AIP online product features; coordinating and working with AIP electronic publishing and information technology experts in formulating future plans and visions; providing leadership and building commitment to AIP's publishing goals; overseeing site licensing of AIP's online products and working with AIP's Marketing Division to attain AIP's goals in multi-site and consortium licensing; managing AIP's Rights and Permissions staff and policy development; acquiring or developing new journal products; working with Marketing to develop promotional plans; and overseeing AIP's Scientific Classification Section. An advanced physics-related degree is required, with preference for significant experience with scientific/technical publishing. Exceptional written and oral communication skills are a must, as are the abilities to function both as a team member and as a team leader. Reports to the AIP Senior Vice President, Publishing. The Institute offers a challenging work environment and an excellent benefit package. Send resume, including salary history, to: Theresa C. Braun, Vice President, Human Resources, American Institute of Physics, Suite 1NO1, 2 Huntington Quadrangle, Melville, N.Y. 11710 or Fax to 516 576-2295. Visit our website at [www.aiphrry@aip.org](http://www.aiphrry@aip.org).

**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](http://www.bnl.gov/HR/jobs/default.htm).

**LABORATORY RECRUITMENT** - Opportunities for Laboratory employees.

TB7453. CENTRAL SHOPS OFFICE SPECIALIST – Under general supervision and administrative direction, performs complex and diversified clerical functions in assigned areas of Central Shops Division. Requires a broad knowledge of specialized work applications and the use of computers. Works from written or oral direction.

Qualifications typically consist of a minimum of two years of post high school training or equivalent, plus relevant work experience at advanced clerical level. Central Shops Division.

**OPEN RECRUITMENT** – Opportunities for Laboratory employees and outside candidates.

MK8824. – POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. in an engineering or applied science discipline, skills in computer modeling and simulation of complex systems, and familiarity with electrical power systems. Will participate in a research program on the development of new modeling approaches to the reliability and security of electrical power networks and their interdependencies with other (e.g. communication) infrastructures. Under the direction of R. Bari, Energy Sciences and Technology Department.

MK2332. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. in biochemistry, chemistry, plant science or related discipline. Strong understanding of metabolism and molecular genetics, and experience with plant genetics is desired. Will be involved in work related to improving the quality of plant fatty acids and storage oils under the Oilseed Engineering Alliance CRADA. Under the direction of J. Shanklin, Biology Department.

NS 2061 SCIENTIFIC ASSOCIATE II (P-5, Project Appointment) – Requires an MS in a computer or physical science field plus two years' relevant experience. Good knowledge of UNIX, LINUX, shell programming, SQL, C, C++, Java, and HTML are a must, familiarity with Phyton a plus. Will play a key role in the implementation of an integrated data collection system at the X6A beam line. Will support the X6A computer environment; keep the web page; assist users during data collection and also participate in instrumentation and R&D methods. National Synchrotron Light Source Department.

**Summer Concert at BNL  
Features Blues & Rock, 7/13**

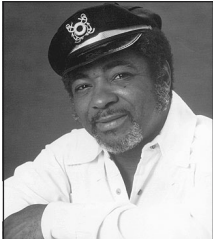
**Music by Sam 'Bluzman' Taylor, George Bostick, Hadicus Road, the Muddy River Band**



The groups at BNL's July 13 summer concert include the Muddy River Band (above), which will also play at the Riverhead Blues Festival on Friday, July 19, at 9 p.m. Other than drummer Mike DiGeronimo, the group is from BNL: (from left) Sean Stoll, Joe Rubino, John Ostaszewski, Joe Vignola, and Joe Carbonaro.

BNL will hold an outdoor summer concert, featuring local blues and rock groups, on Saturday, July 13, from noon to 6 p.m., on the lawn adjacent to Berkner Hall. To be held rain or shine, the free concert is open to the public. All visitors age 15 and over must bring a photo ID to be admitted on the Laboratory site. All concertgoers are advised to bring their own blankets or chairs.

Appearing live on stage at the concert will be Blues Hall of Fame inductee Sam "Bluzman" Taylor, and three bands featuring musicians who work at BNL: George Bostick, Safeguards & Security Division, who plays Chicago blues guitar; Hadicus Road, a classic rock band, which



**A star performer on July 13 will be Sam "Bluzman" Taylor.**

includes guitarist Gregory Condemi, Radiological Control Division (RCD); and the Muddy River Band, an acoustic rock band, which includes BNL's Joseph Carbonaro, Nonproliferation & National Security Department; John Ostaszewski, Magnet Division; Joseph Rubino, Information Services Division; Sean Stoll, Physics Department; and Joseph Vignola, RCD.

The BNL cafeteria will be open from noon to 2:30 p.m. Also, the Whiz Bang Science Show, which features lively interactive demonstrations of basic scientific principles will be presented during the afternoon. For more details, contact the BNL Music Club, Ext. 3846 or [jjv@bnl.gov](mailto:jjv@bnl.gov). — Diane Greenberg

Roger Stoutenburgh cns-27-01

Michael Herbert d6490602

**Happenings**

The Abundant Joy Ministry & Mary Humphrey presents the gospel therapeutic musical/drama/comedy "No More Pain" at Bellport High School, 7/27. For information, contact Tiffany Minter, Ext. 7692.