

5 Employees Recognized For Sustained Contributions To BNL Science, Technology

n January 30 in Berkner Hall, five BNLers were honored with the Science & Technology Award, a \$5,000 prize that may be won in any scientific or technical discipline other than engineering and computing. They are: Yu-Shin Ding, Chemistry Department; John Dunn, Biology Department; Yannis Semertzidis, Physics Department; Bo Yu, Instrumentation Division; and Yimei Zhu, Materials Science Department. Their accomplishments are described below. - Marsha Belford

Yu-Shin Ding

Diagnosis and treatment improvements within the field of nuclear medicine are driven by advances in radiotracer chemistry, and Yu-Shin Ding, a senior chemist who joined the Chemistry Department in June 1987, is being cited for five pioneering achievements that have moved the field of radiotracer chemistry and BNL's positron emission tomography (PET) imaging program forward. In addition to being one of the most accomplished chemists in her field, Ding is known as a mentor of the next generation of radiochemists.

Recently, Ding developed a radiotracer for imaging the binding sites within the brain for nicotine, a chemical in cigarette smoke thought to be responsible for addictiveness of smoking. In a study proposed to the U.S. Food and Drug Administration (FDA), this new radiotracer will make it possible to investigate how these binding sites function to make the nicotine in cigarette smoke addictive. *(continued on page 2)*

John Dunn

As the first member of the BNL scientific staff to earn a second Science & Technology Award, John Dunn, a senior microbiologist in the Biology Department who joined BNL in July 1972, is being cited for three different but related accomplishments all made within the last three years.

First, Dunn and his collaborators developed a safer, more broadly effective vaccine for Lyme disease, the tick-borne illnesses pandemic on Long Island. Now licensed to the Baxter Healthcare Corporation, this vaccine is one of the first to have been created by bioengineering. To make the recombinant vaccine antigen, Dunn and his colleagues first determined the sequence of OspA, an outer surface protein; then crystallized it and determined its structure at the National Synchrotron Light Source; next identified the parts of the protein that generate protective antibodies; and, finally, engineered a novel protein that elicits an immune reaction against several of the Lyme disease bacteria.

Yannis Semertzidis

Cited for his work on Experiment 821 at the Alternating Gradient Synchrotron, Yannis Semertzidis, a physicist who joined the Physics Department in 1992, is being honored for being a leader and innovator in helping to carry out the precise measurement of the anomalous magnetic moment of the muon to ~0.5 parts per million (ppm). As a result of his contributions and others, this experiment is very sensitive to new physics and, in fact, has yielded results that differ from the predictions of the Standard Model, a discrepancy that cannot be tested with more resolution until the Large Hadron Collider at CERN comes on line later this decade.

As the experiment was being constructed, Semertzidis first served as the electrostatic quadrupole team leader. As such, he and his team introduced a new design that quenched the low energy electron trapping, thus eliminating spurious background effects and making the operation of the quadrupoles reliable. They also succeeded in measuring the quadrupole electric field to better than 1 percent (continued on page 2)



With Interim BNL Director Peter Paul (back, right) are the recipients of BNL's 2002 Science & Technology Award: back, from left, Yannis Semertzidis, Physics Department; Bo Yu, Instrumentation Division; (front, from left) Yu-Shin Ding, Chemistry Department; Yimei Zhu, Materials Science Department; and John Dunn, Biology Department.

Bo Yu

For developing detectors to perform charged-particle tracking and neutron and x-ray scattering, Bo Yu, a physicist in the Instrumentation Division, is cited for using his fundamental understanding and intuitive grasp of the physics underlying these devices to develop stateof-the-art detectors with unsurpassed position resolution. Yu, who came to BNL in January 1992, is particularly well recognized for his high position-resolution gas-based radiation detectors.

At BNL, Yu's detectors have been and are used, respectively, in heavy-ion experiments first at the Alternating Gradient Synchrotron (AGS) and now at the Relativistic Heavy Ion Collider (RHIC). Building on his experience with fixed-target heavyion experiments at the AGS, Yu made significant contributions (continued on page 2)

Yimei Zhu

Although the transmission electron microscope (TEM) has existed for generations, it had provided mostly qualitative information about the arrangement of atoms and defects in a sample, until Yimei Zhu, a senior scientist in the Materials Science Department, advanced TEM techniques to provide quantitative information. Zhu is cited for not only advancing transmission electron microscopy, but also applying the microscope's new capabilities to the study of high-temperature superconductors (HTS), magnetic materials and other challenges in materials science.

Zhu, who joined BNL in September 1988, spent his first years at the Lab in studying microstructural and electronic defects that are important to HTS. Acknowledging Zhu's accomplishments and potential in the (continued on page 2)

(continued on page 2)



BSA Distinguished Lecture Scientist-Author Carl Safina Talks on World Fisheries, 2/20

Prize-winning author and scientist Carl Safina will give a BSA Distinguished Lecture on Thursday, February 20, at 4 p.m. in Berkner Hall. The title of his lecture is "History and Destiny of World Fisheries." The author will also sign copies of his two recently published books after the lecture. (continued on page 2)

'Lessons Learned' Contributors Recognized, Awarded

ast November 21, at an awards luncheon held at the Brookhaven Center and

Lattended by Interim BNL Director Peter Paul, Deputy Director for Operations Tom Sheridan, and Interim Associate Laboratory Director for Environment, Safety, Health & Quality Ken Brog, 22 BNL authors of 18 Lessons Learned (LL) communications received special recognition for their contributions to the LL program during 2002.

Six of the authors, who were responsible for drafting five of the LL communications, were presented with monetary awards for their contributions. They are: Ed Lessard, Collider Accelerator (C-A) Department; Dave Passarello, C-A; Michael Gaffney, Magnet Division; Bob Colichio, Radiological Controls Division (RCD); Tom Roza, Plant Engineering Division; and Patrick Sullivan, RCD. The award-winning LL communications can be read on SBMS at https://sbms.bnl.gov/lessons/ ll00t011.htm.

BNL's LL Program Coordinator, Ed Sierra of the Quality Programs & Services Office, explains that the LL program systematically reviews positive and negative operating experiences at the Lab and across DOE and industry. BNL's LL program identifies sources of information relevant to work or operations, analyzes that information for both good as well as adverse work practices, and then takes appropriate actions in response to these improvement opportunities.

"Everyone who submitted LL communications this past year helped to share knowledge derived from experience," comments Sierra. "Through this program, lessons that are learned at the Collider-Accelerator Department, for example, can be shared with the rest of the Laboratory. This will promote desirable future outcomes and minimize the occurrence of undesirable ones."

Sierra emphasizes that it is important to share positive experience. "A job that is going particularly well is often not reported by employees," says Sierra. "But by documenting cases where outcomes are desirable, we can retrace our steps when faced with similar tasks in the future."



Pictured at the 'Lessons Learned' awards luncheon were: (front, from left) Mike Gaffney, Safety & Health Services Division (SHSD); Dave Passarello, Collider-Accelerator (C-A) Department; Lessons Learned (LL) Coordinator Ed Sierra, Quality Management (QM) Office; Derek Lownstein, C-A Chair; Peter Paul, Interim BNL Director; LL Administrator Joyce Mortimer, QM; and Nick Gmur, National Synchrotron Light Source (NSLS) Department; (back, from left) Bob Casey, NSLS; Joe Levesque, Emergency Services Division; Mike Buckley, NSLS; Tom Dilgen, Magnet Division; Ken Sullivan, Energy Sciences & Technology Department; Steve Coleman, Waste Management Division; Bill Gunther, Life Sciences (LS) Directorate; Tom Roza, Plant Engineering Division; Robert McNair, Office of Independent Oversight (IO); John Usher, IO; Steve Layendecker, Radiological Control Division; Otto White, SHSD; Robert Colichio, (LS); Lori Cunniff, Environmental Services Division; and Stasia Scocca, QM.

Sierra initiated the incentive program in March 2001 to encourage participation in the LL program. To choose the awardees, a panel of independent judges, themselves previous award recipients, evaluated each lesson against criteria to determine which of the 18 communications had the most potential impact on BNL operations. This year's LL incentive program period commenced on January 1. For more information about the LL program, contact Ed Sierra, Ext. 4080.

The Bulletin

February 14, 2003

(cont'd.)

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 inform
- 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. Mary Wood, Ext. 5923, or wood2@bnl.gov.

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

Noon- 12:45 p.m., Brookhaven Center North Room. Adam Rusek, Ext. 5830 or rusek@bnl.gov. Mondays: BNL Dance Club Ballroom, Latin & Swing Practice

5:30-7 p.m. North Ballroom, Brookhaven Center, except Lab holidays. Jean Logan, jlogan@bnl.gov or Ext. 4391.

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: BNL Music Club

Noon, North Room, Brookhaven Center. Come hear live music. Joe Vignola, Ext. 3846. Tuesdays: BNL Dance Club Individual & Couples instruction

5-11 p.m. North Ballroom, Brookhaven Center. Ron Ondrovic, ondrovic@bnl.gov or Ext. 4553. 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

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

Tuesdays & Thursdays: Aqua Aerobics 5:15-6:15 p.m. Mary Wood, Ext 5923. Wednesdays: On-Site Play Group 10 a.m.-noon. Rec. Bldg. A infant/toddler drop-in event. Parents meet while children play. Svet-

lana Agafonova, 205-5065, 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 Camp-bell, Ext. 2206.

Wednesdays: Open Chess Night 5-8 p.m., Rec. Hall. Christine Carter, Ext. 5090.

Wednesdays: Exercise 101

5:15-6 p.m., Rec. Bldg, \$4 per class or \$35 for 10 classes. Stretching, low-impact aerobics, and other exercises. Pat Flood, Ext 7886. Wednesdays: Dance Club Group Lessons

5-9 p.m. North Ballroom, Brookhaven Center. Marsha Belford, belford@bnl. gov or Ext. 5053. Fridays: Family Swim Night

5-8 p.m. at the BNL Pool. \$5 per family. Fridays: BNL Social & Cultural Club 8-11:30 p.m., Brookhaven Ctr., social. Rudy Alforque, Ext. 4733, rudy@bnl.gov. Saturdays: BNL Dance Club Monthly Ballroom Dance Social

8-11:30 p.m. Ballroom, Latin & swing danc-ing, North Ballroom, Brookhaven Center. 3/15 4/12 5/17 Marsha Belford

Scientist-Author Carl Safina Talks on World Fisheries

In his talk, Safina will discuss fish as wildlife and explore the role of overfishing, fishery discards, fish farming, and humanaltered habitats in the world's oceans, which are continuously changing. Safina will discuss the implications of these changes for both sea life and human communities. He will also discuss how people's seafood choices can add momentum to a new movement of consumerled efforts to improve fisheries and restore abundant marine life.

Carl Safina has been close to the sea all his life, growing up on Long Island and fishing since childhood. He started his scientific career studying at-sea feeding ecology of seabirds. Since 1990, he has worked to put ocean fish conservation issues into the wildlife conservation

mainstream. Safina is author of more than a hundred publications, including Song for the Blue Ocean (Henry Holt Co., 1998) and Eye of the Albatross: Visions of Hope

Yu-Shin Ding (cont'd.)

Another recent success is Ding's development of a completely new route to synthe-

size the anti-seizure drug gammavinyl-GABA (GVG), which will soon be employed in clinical trials for treating cocaine addiction. Applying this new method, Ding was able to label GVG with carbon-11. Because it has only a 20.4-minute half-life, carbon-11 labeled GVG will be useful in imaging the effectiveness of this addiction treatment.

Catechol-O-methyltransferase (COMT) is an enzyme that is found in elevated levels in breastcancer patients, and Ding was the first to develop a radiotracer for imaging COMT. Recently approved imaging studies of breast cancer patients will get underway presently, to help understand the disease at the molecular level, including the role of this enzyme. Ding has also developed a rapid way to synthesize carbon-11 labeled BPA, so that it can be imaged in braincancer and melanoma patients.

John Dunn

(cont'd.) Dunn is also noted for performing the first semi-compre

and Survival (Henry Holt Co., 2002), books that the author will sign after his talk. He is also a coauthor of the *Seafood Lover's* Almanac (Audubon, 2000).

Safina received a Ph.D. in ecology from Rutgers University in 1987, and he has been vice president for marine conservation at Audubon, a visiting fellow at Yale, and a member of The Explorers Club®. He is president of Blue Ocean Institute, a new, nonprofit organization dedicated to ocean conservation. Safina is a recipient of the 1991 Pew Scholars Award in Conservation and the Environ-

ment, the 2000 Lannan Literary Award, and the 2000 MacArthur Foundation Fellowship, popularly known as the Genius Prize. - Diane Greenberg





Carl Safina will discuss world fisheries at the BSA Distinguished Lecture on February 20. Meantime, a BNL microfishery was spotted on site by photographer Roger Stoutenburgh, who snapped this blue heron looking for lunch one freezing day two weeks ago.

Semertzidis

accuracy, which permitted verification of the calculated value. Helping the

(cont'd.)

kicker magnet team with one challenging aspect of the design of the kicker magnet used for the direct injection of the muon beam into the E821 storage ring, Semertzidis achieved the design goal of 0.1 ppm for the effect of the magnetic field generated by residual eddy currents 20 to 700 microseconds after injection.

Next, he designed a laser system to measure the 0.1 ppm variation in the magnetic field, and his measurements of the magnetic field due to the eddy currents showed a systematic error well below 0.1 ppm.

Selected to be the analysis coordinator for muon decay data taken in 1997 and 1998, Semertzidis overcame one of the largest systematic errors by developing an ingenious approach. For the analysis of data taken in 2000, he was deeply involved, especially in overcoming one form of systematic error. Expanding on the E821 experiment, he has proposed a new, very sensitive method to search for electric dipole moments in storage rings.

tracking chambers for the AT-LAS particle physics experiment at the Large Hadron Collider, now under construction at CERN in Switzerland.

In addition to developing detectors for physics, his expertise and experience has been sought by other fields. Most recently, for example, his help has been enlisted for developing devices for positron emission tomography imaging of small animals, and gamma-ray spectroscopy

BNL funding in new microscopes.

Zhu made outstanding contributions in two areas. First, he developed a new convergentbeam electron diffraction technique, which he and his colleges applied to produce the first quantitative valence-electron charge distributions in complicated crystals, and to improve the resolution when imaging defects in crystals. Second, Zhu developed new analytical methods for retrieving phase of the electron-wave in electron holography and Lorentz microscopy, which were applied to

Get to Know Your Lab! **Tour MRI Facility**

The next employee tour "attraction" will be the Magnetic Resonance Facility (MRI) facility. The group will meet at Berkner Hall Lobby at noon on Friday, February 21. William Rooney of the Chemistry Department will take visitors to see the MRI facility with its 4-Tesla magnet and discuss the experimental program. The group will return to Berkner Hall by 1 p.m. It is suggested for safety reasons that anyone with a pacemaker or artificial metal implants should not attend the tour. Transportation will be by BNL van.

Money Matters Healthline Lecture Series, 2/25 'When Illness **Strikes: A Legal Update'**

On Tuesday, February 25, at noon in Berkner Hall, a Healthline Lecture on "Money Matters - When Illness Strikes: A Legal Update" will be facilitated by George Roach, Esq. Topics covered will include the most up-todate changes in the Medicaid law, the financial impact of catastrophic illness in caring for elderly parents and loved ones, and basic estate planning. Roach, the attorney in charge of the Legal Aid Society of Suffolk County's Senior Division, has been with the Legal Aid Society for the past 24 years, dealing exclusively with the problems of the elderly and the elderly poor.



Office of Science significantly expanded his research program and awarded



(cont'd.) TEM field, DOE's

February Is Black History Month

See the Black History Month poster exhibit on display during the month of February in Berkner Hall lobby.

-THIS WEEKEND -

Friday, 2/14

Valentine's Day 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 ID and know their social security number. Susan Foster, Ext. 2888, donateblood@bnl.gov.

Valentine's Day Tea

Noon-2 p.m., Rec. Bldg. Cookies, snacks, tea, and coffee will be provided by BNL's English for Speakers of Other Languages program. Bring your own lunch. Paper will be supplied for Valentine's Day cardmaking. Jen Lynch, Ext. 4894.

Valentine Dinner

6 p.m., Recreation Hall. Offered by the Hospitality Committee. See notice on page 4. Monique de la Beij, Ext. 7656.



the messenger RNAs (mRNAs) of human blood platelets, which help blood clot. Dunn and his team perfected methods to handle and amplify small quantities of platelet mRNA, which will enable the molecular analysis of human diseases involving platelets.

Third, Dunn and company extended what is called the SAGE method for analyzing eukaryotic mRNA to perform quantative analysis of microbial genomes. To do this, Dunn was the first to use a newly discovered restriction enzyme that increased nucleotide tag specificity more than a thousandfold. This genome signature-tag methodology is a new technology that can be used to address DOE's interests in bioremediation and carbon management.

Bo Yu hensive, quant-

ative analysis of

to high-accuracy position readout of detector subsystems in RHIC's PHENIX

(cont'd.)

experiment and is a key contributor to the PHENIX and STAR upgrades.

Outside the Lab, for example, his devices are employed in neutron scattering studies of protein crystal structure at Los Alamos National Laboratory, and his neutrondetector concepts will be employed in instrumentation planned for the Spallation Neutron Source, now under construction at Oak Ridge National Laboratory. By advancing concepts that he originally employed in x-ray scattering detectors, Yu has developed conceptual designs of muon-

produce reliable quantitative measurements of parameters in functional materials.

In establishing and operating its new Center for Functional Nanomaterials, BNL will employ Zhu's expertise and experience with TEM in the study of materials on the nanoscale. To advance nanoscale structural analysis, Zhu is working as part of a team assembled by DOE to propose the development of new generation microscopes having even higher spatial resolution.

Arrivals & Departures	
Arrivals	
Yong Cai	Env. Sci.
Hong Wang	Biology
Departures	
John Carter	Ctrl. Shops
Norman Cernyar	NSLS

Defensive Driving

A six-hour defensive driving course will be offered on Saturday, March 22, 2003, 9 a.m.-3:30 p.m., in Berkner Hall, Room B. To register, send a check for \$26 per person, made out to Empire Safety Council, care of Scott Zambelli, P.O. Box 670, Mount Sinai, NY 11766. Include your telephone number in case you need to be contacted. No checks will be refunded after March 14.

Reserving Rooms Just Got Easier Learn all about it, Wednesday, 2/26

BNL's Conference & Meetings Services is set to introduce new software that will help provide faster and more efficient services to those who reserve meeting space. Called a meeting room viewer and scheduling tool, the new software will be available from the BNL and the Staff Services' Division home pages and will be available starting late February.

"This software is fast and easy to use, and it will be a very positive change," says Ruth Comas, Conference Support Supervisor. "For example, users will be able to see the reservations of all conference rooms in one view, and thus find and reserve available rooms very quickly. The person reserving the room will

then receive an e-mail confirmation of the reservation."

Comas and her colleagues, Patricia Carollo, Bryan Hanlon, and Brenda Ward, provide services for conferences and meetings held at Berkner Hall, the Brookhaven Center, the Medical Large Conference Room, and the Hamilton Seminar Room in the Chemistry Department. Services include scheduling conference rooms, setting up and breaking down meeting equipment and furniture, providing audio/visual equipment, and delivering coffee breaks and cold lunches on site.

On Monday, February 26, at 10:30 a.m., Comas will introduce the new software to BNL customers at Berkner. The software presentation will be followed by a presentation by representatives of



Preparing to unveil new software this month that will allow users to see the reservations for all conference rooms in one view, are (from left) Staff Services Division's Patricia Carollo, Conference Support Assistant; Ruth Comas, Conference Support Supervisor; Brenda Ward, Special Service Attendant; and Bryan Hanlon, Special Services Assistant.

Black History Month Events

Talk by Rashad Robinson, Tuesday, 2/18, noon

Talk by Maurice DuBois, Friday, 2/21, noon

Talk by Queen Afua, Thursday, 2/27, noon

To honor Black History Month, BNL's Afro-American Club sponsors:

Organizer and advocate Rashad Robinson, the Field Director of

Two-time Emmy award-winning anchor/reporter Maurice

Herbalist and holistic health specialist Queen Afua, author of

bestsellers Heal Thyself for Health and Longevity and Sacred Woman:

A Guide to Healing the Feminine Body, Mind, and Spirit, will talk on

the Center for Voting and Democracy, will talk on "Celebrating

Our Past and Fighting for Our Future," in Berkner Hall, Room B.

DuBois of News Channel 4, co-anchor for "Today in New York,"

which airs on weekdays, 5-7 a.m., will talk about his life experi-

Flik International Corp., BNL's food service contractor, of seasonal catering specialties.

"I look forward to the transi-

ence, noon-1 p.m., in Berkner Hall.

Daffodil Days

ing daffodils to benefit the

American Cancer Society. A

bunch of ten fresh-cut flow-

ers is \$7. These beautiful

spring bouquets may be

picked up on Tuesday,

March 25. Paid reservations

are being taken at the BERA

Sales Office in Berkner Hall.

BERA will again be sell-

tion to the new software, and I am confident that the users will agree that it has many benefits," Comas says. - Patrice Pages

Music Club Music Coming Soon! Tomorrow, February 15, 8 p.m. Songwriters Make Music

The BNL Music Club and the East End Songwriters Guild present the first of a "Songwriters Series," open to the public. This event will begin with a "Songwriters-in-the-Round" followed by a concert featuring singer-songwriters Cathy Kreger and Terry Winchell. Tickets cost \$8 in advance and \$10 at the door. For more information, see www.bnl.gov/bera/activities/music/.

March 1, 8 p.m. **Kerry Kearney Band, Guests**

Eileen

four-piece band:

"Little



The BNL Music Club and the Long Island Blues Society will present Kerry Kearney's Band in "The Gathering of the Slides." Michael Falzarano, Kane Daly, Little Toby Walker, and Amy Helm will be featured as special guests. Showstopper Kearney is known as a mas-

ter of open tuning slide guitar, and he will perform with his

Little Toby Walker

Steamroller" Murphy on drums, Frank Celenza on bass, Tony Campo on keyboards, and Charlie Wolf on harp. Admission: \$10 in advance, \$12 at the door. For more information, go to www.bnl.gov/bera/ activities/music/.



"An Afrocentric Approach to Healthy Eating and the Attributes of Holistic Lifestyle," noon-1 p.m., in Berkner Hall, Room B.

Weight Watchers

Registration for the next Weight Watchers at Work session will take place on Wednesday, February 26, at noon in the Brookhaven Center South Room. The first class starts on March 5. The cost will be \$99 for 10 or more weeks depending on the number of participants. Contact Mary Wood, Ext. 5923 or wood2@bnl.gov

Long Island Weather of 2002 — Mild and Warm, No Hurricanes, Light Snowfall

Beautiful!" That's how meteo-rologist Victor Cassella of the Environmental Sciences Department described last year's Long Island weather. In fact, 2002 was a warm year, with an average annual temperature of 52.7° Fahrenheit (F), almost high daily temperatures were three degrees above average The winter was particularly mild, with four days reaching above 60°F in January and February. The entire winter of 2001-2002 brought only 5.5 inches of snow, the second lowest seasonal snowfall since the Lab started recording weather statistics in 1949. The summer brought sunny skies, with rainfall well below average. Precipitation for the entire year, however, was 52.07 inches, above the average of 48.5 inches. "Higher than average rainfall came late in the year, in September through December," Cassella explained. "Also, while several hurricanes came up the coast, none affected Long Island in 2002." Two monthly weather records were broken in 2002. February was the driest month on record, with only 1.16 inches of precipitation. The previous record was 1.18 inches of rain-

fall for that month in 1980. April was the warmest month on record, with an average temperature of 51.4°F, beating the 1991 record of 51°F.

One record-low daily temperature and fifteen recordrecorded in 2002. Those who planted their tomato plants early were worried about frost as the temperature dipped to the freezing point — $32^{\circ}F$ — on May 19, beating the previous low temperature of 32.5°F for the date set in 1956. Record highs were recorded in January,

February, April, July and August. The most dramatic high temperatures occurred on January 29, when the thermometer hit 69.5°F. 11.5°F higher than the previous record set in 1974, and on April 16, when the temperature reached 89.5°F, also 11.5°F higher than the record set in 1976. Some Long Islanders who were viewing a parade or lounging on the beach on the Fourth of July might recall the heat of that holiday. The temperature reached 96.5°F that day, the highest maximum temperature for the year.

try snowfall, the 18 inches of snow recorded in late 2002 is slightly above average.

Cassella predicted in January 2002 that the spring of that year would be wetter than usual, and he was right on target, since March through June were wetter than normal. Also a year ago, he predicted heavier than usual snowfall for the winter of 2002-2003, a forecast that, so far, has come true. He now predicts a wetter and cooler spring than usual, so BNL should brace itself!

Calendar

(continued)

Saturday, 2/15

*Songwriters Make Music

8 p.m., Berkner Hall. The BNL Music Club and The East End Songwriters Guild present "Songwriters Series," open to the public. Admission: \$10 . See notice on page 3 or www.bnl.gov/bera/activities/ music/ for more information.

Sunday, 2/16

GLOBE Meeting

The Gay, Lesbian, and Bisexual Employee Club at BNL will hold its monthly meet-ing. 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.

— WEEK OF 2/17 —

Wednesday, 2/19

Science Education Forum

Noon-1 p.m., Bldg. 438. All are welcome to join a discussion on interesting and timely issues in science education. Re-freshments will be provided. Bring your own lunch. Brian Murfin, Ext. 7171.

380th Brookhaven Lecture

4 p.m. Berkner Hall. Elan Ben-Zvi, National Synchrotron Light Source, will give the lecture on the cooling of the Relativistic Heavy Ion Collider.

Thursday, 2/20

BAC Meeting

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

*BSA Distinguished Lecture

4 p.m., Berkner Hall. Author Carl Safina, Blue Ocean Institute President, will talk on "History and Destiny of World Fisheries." All are welcome to at-tend this free public lecture.

— WEEK OF 2/24 —

Monday, 2/24

IBEW Meeting

6 p.m., Knights of Columbus Hall, Rail-road 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.

TUESDAY, 2/25

Healthline Lecture

Noon, Berkner Hall. Join George Roach, an attorney working with the Suffolk County Legal Aid Society for the past 24 years, when he presents the Healthline Lecture "Money Matters -When Illness Strikes: A Legal Update." He will cover the most recent changes in the Medicaid Law, explore the financial impact of catastrophic illness in caring for elderly parents and loved ones, and discuss basic estate planning. Check your mailbox for registration forms. Mary Wood, Ext. 5923.

Wednesday, 2/26

BERA Ski Trip to Camelback \$50 per person. See notice, below, left. Sign up at the BERA Sales Office in Berkner Hall. Andrea Dehler, Ext. 3347; Bob Marascia, Ext. 7779; or Christine Carter, Ext. 2873.

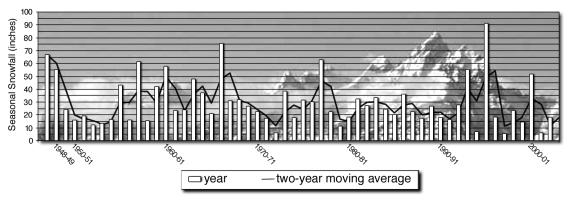
Saturday, 3/1

Kerry Kearney Band, Guests in 'The

Kerry Kearnev

In contrast to last year's pal-

BNL Seasonal Snowfall Winter 1948-49 — Winter 2002-03



— Diane Greenberg

Gathering of the Slides

8 p.m., Berkner Hall. The BNL Music Club and the Long Island Blues Society. See notice at left.

— WEEK OF 3/3 —

Wednesday, 3/5

WIENER and CAEN Product Demo

10 a.m.-2 p.m., Berkner Hall. "Tools for discovery," including low- and highvoltage power supplies, modular pre-amps, and more, will be presented to BNLers. Andreas, (937)324-2420.

BSA Noon Recital

Noon, Berkner Hall. Konevets Quartet, on tour from Leningrad, sing Russian orthodox liturgical, folk, and popular music. http://music.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.

Nutrition Workshops

The Occupational Medicine Clinic (OMC) and the Health Promotion Program offer two workshops, each with four sessions, on the following Mondays: 2/24, 3/24, 4/28, and 5/19. These workshops are limited to 15 people each. To register, contact Mary Wood, Ext. 5923 or wood2@bnl.gov, by February 17.



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

NS8091. TELEPHONE OPERATOR – Under general supervision, places incoming and outgoing local, toll, and long distance commercial and FTS calls in the operation of multiple position switchboard. Must be familiar with Laboratory organization, personnel, and methods of locating individuals not listed and of contacting emergency personnel at all times. Maintains necessary records of toll charges and performs related telephone clerical duties. Information Technology Division.

OPEN RECRUITMENT – Opportunities for Laboratory employees and outside candidates. NS2637. PROCUREMENT OPERATIONS MANAGER (M-1, ERAP Eligible \$1K) – Requires a BA in business administration or a related field (MBA and/or professional acquisition certification strongly preferred), extensive management experience in the Federal contracts environment, and detailed howledge of the Federal Acquisition Regulations (or equivalent in DEAR or DFAR). Demonstrated management track record in procurement organizations, exceptional communication and interpersonal relationship skills and high degree of customer orientation required, as is an exceptionally high degree of personal integrity and

accountability. Experience with and understanding of automated procurement systems is very desirable; management, and particularly procurement experience in a large technical/scientific organization is also desirable as is experience within the DOE complex. Will be responsible for management of the Laboratory's procurement operations, subcontract administration, credit-card program, and the small business programs. Procurement & Property Management Division.

NS2794. MANAGER, CLINICAL RE-SEARCH CENTER (A-8) - Requires a BS in a health-related field, with strong administrative skills and clinical research experience. Strong organizational skills, the ability to work independently and demonstrated ability to interpret and apply Federal and other applicable regulations to the BNL clinical research program is necessary. Minimum of five years' relevant work experience in one or more of the following areas is required: clinical research, hospital administration, pharmaceu-ticals, and infectious diseases. Reporting to the Medical Department chair or designee for day-to-day operational issues, will provide line management and technical support for the successful coordination and completion of clinical research activities at the Clinical Research Center (CRC). This consists of the direct supervision of administrative, technical, and medical staff responsible for the day-to-day operations of the CRC, and communicating with the clinical research teams to ensure the protection of human subjects who participate in clinical research at BNL. Will be responsible for maintaining the CRC policy and procedures, conducting and documenting self-assessments and reviews, and participating in committee activities and special projects. Employment is con-tingent upon successful completion of a background check by the Drug Enforcement Agency. Medical Department.

NS2607. ASSISTANT STAFF SPECIALIST (A-4, ERAP Eligible \$1K) – Requires an AAS in database management, computer technology or business, at least 5 years' relevant experience, ability to create and maintain databases, strong analytical, communication, interpersonal and customer services skills. In addition, proficiency in MS Word and Access is required. Knowledge of Outlook and Laboratory policies and procedures is highly desirable. Responsibilities will include exten-sive interaction with the NSLS user community and staff, responding to inquiries, coordinating meetings including the annual user's meeting, retention of records and beam-line renewal documentation, and collecting and analyzing data. Will maintain several databases and meeting-reporting requirements as directed by the NSLS User Administrator, will act as back-up for proposal submissions, user appointments and terminations, will monitor user training and direct the work of other staff. National Synchrotron Light Source Department.

TB2608. TECHNICAL SPECIALIST (T-2) -Requires a BS in electrical technology or mechanical technology, or a BS in computer science, or an AAS degree or equivalent in these fields plus at least one year of relevant experience. Primary responsibility will be NSLS experimental safety operations. Duties will include safety systems checkouts and monitoring user safety and conduct of experiments at the beam lines, including the hydrogen target system. Shift work is required. National Synchrotron Light Source Department.

Motor Vehicles & Supplies

02 YAMAHA YZF R6 - blue & white, excel. cond., 7,500 mi., \$7,000. Shannon, 516-456-5838.

01 HYUNDAI TIBRON - black, loaded w/ extras, spoiler, 19K tran. warr., \$13,000 firm. Barbara, 732-7186.

95 KAWASAKI KX125 - dirt bike, runs very well, fast, must sell, \$600. Charles, Ext. 5462. 95 MAZDA PICKUP - red, extra cab, 4-cyl.,

115K mi., \$3,200. Dennis, 878-9592. 98 DODGE CARAVAN - all power, V6, 7/8 pass., 4-dr., excel. cond., 69K mi., \$8,000. 281-5565.

96 FORD EXPLORER - dark green, 92K mi., all power, leather int., very clean, \$7,500. John, 473-9114.

95 MERCURY VILLAGER GS - all power, excel. cond., garaged, front & rear a/c, roof rack, \$4,900 neg. Joe, Ext. 4826 or 821-3762.

94 FORD ASPIRE - 5-spd., 105K mi., \$900. Charles, 924-5638.

94 HONDA CIVIC - black, 2-dr., 5-spd., 141K mi., runs well, needs alignment & some body work, \$1,450 neg. Henry, Ext. 3413 or 399-6947.

94 MAZDA PICKUP - 5-spd., p/s, 4-cyl., 180K mi., runs, body in good shape, needs head gasket, \$1,500 neg. 774-5616.

93 NISSAN NX2000 - black, 5-spd., all power, 82K mi., T-roof, new tires, rebuilt tran., new clutch, excel. cond., \$3,000. Ext. 2391 or 653-6694.

92 NISSAN SENTRA - 5-spd., 2-dr., 136K mi., a/c, good cond., new brake system & ignition system, \$1,400. Ext. 2362.

91 FORD TAURUS - 6 cyl., 4-dr., a/t, 95K mi., runs well, \$750. 689-5985.

90 TOYOTA CAMRY - a/t, a/c, p/w, 166K mi., cruise, sunroof, orig. own., \$900. P.K., Ext. 5648. 89 TOYOTA COROLLA LE - 5-spd., a/c, p/ s, p/b, 166K mi., runs well, \$1,300. Steven, Ext. 7862.

87 CHEVY SILVERADO BLAZER - new tranny, rear end & throttle body, black, \$4,500. John, 929-6403.

86 FORD MUSTANG - white, a/t, p/s, 91K mi., 4-cyl., good cond.. Joe, Ext. 5353 or 475-8183. 84 VOLVO 240DL - 5-spd., p/s, p/b, 375K

mi., \$750. John, 878-3152. 83 HONDA WAGON - 67K orig. mi., auto., a/c, great on gas, \$1,100. Chas, Ext. 5462

or 288-2080. TRAILER - 24 ft., sleeps 8, gas stove, oven,

shower, toilet, \$1,500. 286-8304.

TRUCK LINER - for mid-90's, 6' Toyota, \$50. Pat, 331-4336.

Furnishings & Appliances

BEDROOM FURNITURE - oak, queen size headboard w/frame, 2 night tables, triple dresser w/mirror, armoire, \$450. Peter, Ext. 2460.

BEDROOM SET - Colonial oak, queen-size bed, 2-drawer nightstands, men's 6-drawer bureau, lady's 7-drawer bureau, \$750. Mary, Ext. 6344.

COUCH - 3-pc., I/r sectional, white & seafoam, green, \$275, lighthouse picture, blues & pinks, peach frame, \$50. Vicky, 724-8200.

DINETTE - contemp., oval table, 60" x 42", mica finish, 4 chairs, good cond., \$300. Mark, Ext. 2238.

DINING ROOM SET - Broyhill, 40-yr.-old table, 2 leaves, buffet, china cabinet, 6 chairs, table pads, \$600. Victor, 585-2084.

FREEZER - Kenmore, 11.7 cu. ft., 3 yrs. old, excel. cond., \$150. 369-2716. FURNITURE - Jennifer Convertible, queen

size sofa bed & matching chair, \$600. Lane double recliner, \$300. Donna, Ext. 2826.

GAME TABLE - solid pine, 36" dia., 4 captains chairs, good cond., \$100; small recliner, walnut w/black cushions, good cond., \$30. Robert, 928-1806.

HOME AIR PURIFIER - Honeywell HEPA filtration floor standing air purifier, suitable for a large room, removes pollen & odors, excel. cond., \$65. Arthur, Ext. 7934.

KITCHEN SINK - double, cast iron, top mounted, white, kitchen sink w/single lever faucet, excel. cond., \$150. Ext. 5070 or 874-4460. VACUUM CLEANER - Fantom upright

bagless, onboard attachments, HEPA filter, \$75 neg. Kelly, Ext. 7746 or 580-2940. VACUUM CLEANER - canister type w/all controls on handle, micron filtration bag, many more features, excel. cond., \$75. Arthur, Ext. 7934.

Sports, Hobbies & Pets

BABY JOGGER COMPANY TWINNER II top-line dbl.-jogger athletic stroller, canopy, basket, grape color, holds 100 lbs. max, orig. \$520, \$260 firm. Gail, Ext. 2874.

FISH TANK - 30 gal., assorted tropical fish, heater, Aqua Clear filter, Python Cleaner, rock formations, supplies, etc., \$65. Linda, Ext. 2733 or 395-6784.

PIANO - small baby grand, mahogany, excel. cond., \$1,800. Tom, Ext. 2391 or 653-6694. TREADMILL - Sears Proform, fold-up space saver, 3 yrs. old, excel. cond., \$350. 369-2716. WETSUITS - excel. cond., bodyglove & quicksilver, a ³/₂ and a ⁵/₄ winter suit. Zeb, 516-807-6896.

Audio, Video & Computers

CD PLAYER - NEC single disk CD player w/ remote, excel. cond., \$25. Arthur, Ext. 7934. KEYBOARD - Yamaha DX-7, good cond., 61 keys plus RAM cartridge, industry classic, \$400. Tom, Ext. 4396.



YAMAHA A/V RECEIVER - Yamaha natural sound RXV492 enhanced Dolby pro-logic receiver, 75 watts/channel, multiple sound fields, incl. multibrand remote, excel. cond. & sound quality, \$125. Arthur, Ext. 7934.

Miscellaneous

TUITION WAIVER - Dowling College, good for three undergrad credits, \$850. Ext. 5899.

Lost & Found

RHINESTONE EARRINGS & BRACELET - lost on 1/27/03, near Bldg. 134. Please call Sue, Ext. 2483.

Free

HAMSTERS - great for children. Costas, Ext. 6235.

SAILBOAT - 30 ft., wooden double-ended, sleeps 4, sails, winches, galley, head, needs work, moving to West coast. Stuart, 286-8304.

Wanted

APARTMENT - 2-3 bdrm. apt., w/proximity to LIE, 1 year, starting in July. Burt, Ext. 8362. BERA LIFEGUARDS - part time, needed for year round or summer only employment, 18 yrs. or older, life guard certification required, teaching certificate a plus. Ext. 5090 or 8481.

For Rent

YAPHANK - Lg. 1 bdrm., full bath, I/r, kitchenette, ground-level, very bright, sep. front ent., util. incl., \$1,000/mo. Phil, 345-0930.

Happenings

ART SHOW -Nick Weih's paintings (boats, trees, etc.) in 2-man show, Pt. Jeff. Art Gallery, 116 E. Main St., Feb. 1-28, Wed., Fri. eves. 6-9 p.m.; Sats., Suns., 11 a.m.-7 p.m. CONCERT - Sat., March 1, 4 p.m., Southampton College, Sam Carr, Physics Department, will play the Beethoven Choral Fantasy with the Peconic Youth Symphony Orchestra. Tickets by donation.

In Appreciation

Thank you to everyone for their kind words following the passing of my mother. — Richard Casella



r Stoutenburgh D0550203

At this time of year, male turkeys often display their magnificent tail feathers to attract females before the nesting season — perhaps as a way to say, "Will you be my valentine?"



BEAR - I genuinely love you, and I like you too! xos, buska herself!!!

MR. RAIN - I'll always cherish the times we shared. My heart belongs to you. I miss you. Love, Sunshine.

DEAR PRETTY LADY - Never doubt how much I care. I dream of you often. Miss you. Love always, your buddy.

BUDDY - You are the joy in my heart...the meaning in my life. You are my world, my love. Happy Valentine's Day. Love, #1 EVERYONE knows that BNL stands for Buzz 'n' Linda. "Always a Passion for Discovery."

I WISH for everyone the love, trust & respect that I have with my Connie. Artie Mango MG - 2 years and getting better all the time.

MG - 2 years and getting better all the time. May we always enjoy each other's friendship. SL.

BABE - I love the things you do for me everyday. How about a romantic dinner? Can't wait to see Mickey Mouse. Love, me. COUNTRYMAN - The best things in life are Remember, I'm on your side. Love Always, Me. SARA - thanks for 291/2 fantastic years!

PPYNE - Wishing "only you" a better '03.

SARA - thanks for 29½ fantastic years! Love Bill. B.B. - go out and blow the stink off of you! Is

B.B. - go out and blow the stink off of you! Is probation up yet? Hugs & kisses. Guess who. BOOMBAH - thanks for making my heart "sing" these past 5+ years . I love you so much - Boombah.

DUCK - times have been tough but my love

WEEBLE - you may wooble, bump into walls and even fall down occasionally, but I still love you just the way you are. A-

KIDDO - thanks for always being there for me! Love your mom!

MOMMY - thanks for feeding & walking me. Love Maggie.

TO MY SM - there's just no rhyme or reason, only a sense of completion. Happy Valentine's Day! Love always, your Snook. ILYA - ILYC. ILYG. YTBF! LMTWGR! LL. KELLY - You really are "my better half" You are my heart, my conscience, and my anchor to what is truly important in life. How you do everything you do in spite of what you have to deal with never ceases to amaze me. Happy Valentine's Day, Rick. MUFFIN - In good times & in bad, in sickness & in health. Patience, forgiveness,

and love. Just me & you. Muffin Lover. DJ - Sharing your love life and family with me has been a blessing from God. Thanks! Love, Joseph. Remember to CAV.

Duduy.

PEELY and Weely together forever.

POOKIE BOY - Almost 35 and we're still alive! I love you to pieces. Keep hangin' in there. Stinky.

STINKY - I always knew it had to be you because you are electrifying. Love, Bumpy.

DEAR NL - I hope you will be my Valentine again this year. Love, BL.

DEAREST JACKIE - I love you for so many reasons, both great and small, but most of all, I love you just because you're you. Love, Bruce.

JOE VB - LIFESGR8 even after 25 years going steady with you. Love, DJ

LOVER - A rose of my love, A wind of my style, An evergreen tree of my seasons, Darling, Lily.

SVELTZ - The past 24 years have been the best blessing. I love you. You are exquisite. Love, Bobby Rocknbuck

BETH, NANCI, MONICA, RUTH - You add sunshine to Bldg. 703. Happy Valentine's Day from a secret admirer. to hug you, kiss you, and love you. Happy Valentine's Day. Your Blue Ribbon Gal.

SPONGE PAINTER - The color of my love grows brighter by the brush strokes of your amazing talents. With all my love, Fisherman.

DEAR MY CHILDREN - Rena & Nao: I love both of you forever. From Mom.

CECIL - Roses were white,

Candles sparkling bright, In blueberry delight,

Airlifted to Pleasure Island.

Happy Valentine's Day! oxox, Babydoll.

ALEX RADULESCU - Your wife Mariana loves you with all her heart. Kisses & hugs forever.

DEAR MIKE - I'm missing your warmth and closeness. Love, you know who.

NEIL & LIAM - You boys are growing up so fast. Slow down! We love you both very much. Always keep smiling. Happy Valentine's Day! xoxo, Love, Mommy & Daddy.

MY FOUR BOYS - You're the bestest boys in the whole wide world. I love you. Happy Valentine's Day! Hugs & Kisses, Mommy. for you will never ever end. Love Mike.

DEAR JEANNE - loving you has been the most gratifying part of my life. Have a great Valentine's Day. Love Tim.

MY MAIN MAN - you're my husband, my best friend, my one & only. You are always in my heart so we are never apart! I love you so much!! Love Vern.

JUN - to my loving husband, who is always right on time, "Happy Valentine's Day." Love Always, Sha.

DONNA MARIE - with each passing year you become dearer to me. Happy Valentine's Day. Love Stevie.

STUD MUFFIN - Happy "V" day from red hot, brown sugar, trampoline queen, purple passion, puppy cuddles, coco, silent screamer, cinnamon.

TO OUR DANCING ROMEO - you made us proud. Love from all the girls.

HONEY - let's go dancing every Friday. I enjoy learning new dances with you.

ERIC - congratulations on your upcoming high school graduation and I wish you are going to your dream university. Love Dad.

-, -, -

HI HON - all these years and it's still getting better. Are we havin' fun or what? Luv, wm.

DEAR HONEY - I found a thrill when I found you - at last!! All my love, me.

JEFF - 12 years and it keeps getting better! Can't wait to sail into our future. All my love, Jessie.

LISA - Valentine's day is made for lovers So I'm writing you this poem, To let you know how much I care And tell you that the love we share Has filled my life, my heart, my soul And hope we will never let go. Love, Tony T.

TO GR8GAL - I'm so lucky.....lucky, lucky, lucky, lucky, lucky, lucky....

10396 - Thank you for making every day special. You will always be my one and only "Sea of Love". BTW, I'm so impressed by your skiing! I can't wait for this weekend! Forever Yours, 709.

RONNIE 2-SHOES & JIMMY WOOBOOS - you have made my life complete. Couldn't ask for more! Happy Valentine's Day! Love, Bun. JG - What a rough year for you, especially finding out who really cares. Together, we got through it. Love does conguer all!! NG

SNOOK - Thanks for being a friend, a lover, and my backbone. You are loved so much. Love you, no hair.

BUNZER - 1/5 to Hayden, 1/5 to Mason. 1/5 to you, 1/5 to me. and 1/5 to us. Love, me

TO A GREAT WIFE & GRANDMA - Happy Valentine's Day and Happy Birthday, Chau-Chai. Love, Min

SWEETIE - I just want to say thank you for your patience, understanding, but mostly for the love we share everyday.

SNOOKIE LUMPS - You make me want to be a better man. I love you more every day, Slick.

RIB - I love you for everything that you do. You are my wife, my lover, the mother of two beautiful boys, & my best friend. Happy Valentine's Day. Love, Fred.



Bulletin

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LIZ SEUBERT, editor JOHN GALVIN, reporter ROGER STOUTENBURGH, photographer On the World Wide Web, the Bulletin is located at www.pubaf.bnl.gov/bulletin.html. A Weekly Calendar listing scientific and technical seminars and lectures is found at www.pubaf.bnl.gov/calendar.html. Bldg. 134, P.O. Box 5000 Upton NY 11973-5000 phone (631)344-2345, fax (631) 344-3368 e-mail: bulletin@bnl.gov