the Bulletin

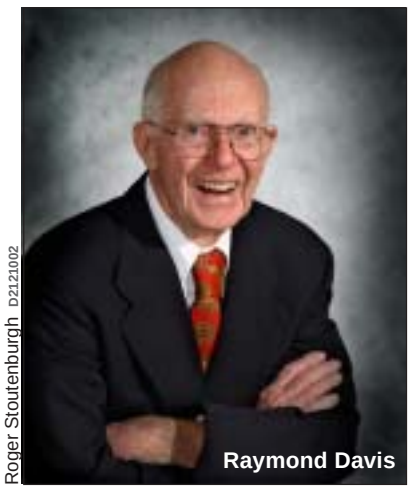
BROOKHAVEN NATIONAL LABORATORY

Vol. 57 - No. 37 October 24, 2003

BNL's Davis Wins Fermi Award

On October 9, Secretary of Energy Spencer Abraham named John Bahcall, Raymond Davis Jr. and Seymour Sack as winners of the 2003 Enrico Fermi Award.

This presidential award recognizes scientists of international stature for their lifetimes of exceptional achievement in the development, use or production of energy (broadly defined to include the science and technology of nuclear, atomic, molecular, and particle interactions and effects).



Roger Stoutenburgh D2121002

Raymond Davis

The award was presented on October 22 in Washington, D.C., at the "Nuclear Energy & Science for the 21st Century: Atoms for Peace Plus Fifty" conference which marks the 50th anniversary of the speech by President Eisenhower to the United Nations General Assembly on the peaceful uses of the atom.

Bahcall and Davis were honored for their research in neutrino physics, Sack, for his contributions to national security. The winners will receive a gold medal and a citation signed by the President and Secretary of Energy. Sack will receive a $187,500 honorarium, while Bahcall and Davis, who share an award, each receive a $93,750 honorarium.

"The contributions these distinguished scientists have made to understanding the world around us and to our national security are immense," announced Abraham. "Their lifetime of innovative research follows in the tradition of Enrico Fermi, the great scientist we commemorate with this award."

Bahcall and Davis were cited for "innovative research in astrophysics leading to a revolution in understanding the properties of the elusive neutrino, the lightest known particle with mass." Bahcall, a theorist, and Davis, an experimentalist, helped determined that neutrinos have mass and that electron neutrinos oscillate into many "flavors" on their way from the sun to the earth.

(continued on page 3)

Research at Cornell, BNL Leads to Chemistry Nobel

Roderick MacKinnon, a visiting researcher at BNL's National Synchrotron Light Source (NSLS), has won half of this year's Nobel Prize in Chemistry for work explaining how a class of proteins helps to generate nerve impulses — the electrical activity that underlies all movement, sensation, and perhaps even thought.

The work leading to the prize was done primarily at the Cornell High Energy Synchrotron Source and at the NSLS.

The proteins, called ion channels, are tiny pores that stud the surface of practically all living cells. These channels allow the passage of potassium, calcium, sodium, and chloride molecules called ions. Rapid-fire opening and closing of these channels releases ions, moving electrical impulses from the brain in a wave to their destination in the body.

Mort Rosen CN4-548-88

NSLS at BNL

Starting in 1998, after ten years of studying the biophysics of ion channels, MacKinnon published a series of structural solutions — high-resolution molecular-level "snapshots" of ion channels, produced at Cornell and BNL. These structures literally showed the scientific community how electrical signaling occurs.

MacKinnon, a biophysicist and self-taught x-ray crystallographer, is a professor at Rockefeller University and an investigator at the Howard Hughes Medical Institute. He shares this year's chemistry Nobel with Peter Agre of The Johns Hopkins University School of Medicine.

— Karen McNulty Walsh

For more information on MacKinnon's research and the facilities involved, go to the following:

- *www.bnl.gov/bnlweb/pubaf/pr/2003/bnlip100803.htm*
- *www.bnl.gov/bnlweb/pubaf/pr/2003/bnlpr043003.htm*
- *www.bnl.gov/bnlweb/pubaf/pr/2003/NSLS_backgrounder.htm*
- *http://nslsweb.nsls.bnl.gov/nsls/*
- *www.rockefeller.edu/*
- *www.chess.cornell.edu/*
- *www.hhmi.org/.*

NASA, DOE Dedicate New NASA Facility at BNL

Roger Stoutenburgh D1321003

As BNL Director Praveen Chaudhari (center) wields the scissors at the opening of BNL's new NASA Space Radiation Laboratory, with him behind the ribbon are: (from left) Dennis Kovar, DOE Office of Nuclear Physics Associate Director; Michael Butler, DOE Brookhaven Area Office; Patricia Acampora, New York State (NYS) Assemblywoman; Derek Lowenstein, Collider Accelerator Department Chair; John Schumacher, NASA Chief of Staff; Timothy Bishop, U.S. Representative, NYS 1st District; Chaudhari; Raymond Orbach, DOE Office of Science Director; General Jefferson Howell Jr., Johnson Space Center Director; Shirley Strum Kenny, Brookhaven Science Associates Board Chair; astronaut John Grunsfeld, Chief NASA Scientist; Marvin Gunn Jr., DOE Chicago Operations Office Manager; Mary Kicza, NASA Associate Administrator for Biological & Physical Research; Michael Holland, DOE Brookhaven Area Office Manager; and Walter Schimmerling, NASA Space Radiation Health & Biology Program Scientist.

On Tuesday, October 14, National Aeronautics & Space Administration (NASA) Chief of Staff John Schumacher and DOE's Office of Science Director Raymond Orbach joined BNL Director Praveen Chaudhari and invited guests in a ceremony to mark the opening of the new NASA Space Radiation Laboratory (NSRL) at BNL.

The $34-million facility, jointly managed during a four-year construction project by DOE's Office of Science and NASA's Johnson Space Center (JSC), is one of the few places in the world that can simulate the harsh cosmic and solar radiation environment found in space.

The new facility employs beams of heavy ions extracted from BNL's Booster accelerator, the best in the United States for radiobiology studies. The NSRL features its own beam line dedicated to radiobiology research, as well as state-of-the-art specimen-preparation areas.

Scientists from NASA, from national laboratories and institutes in the U.S. and Europe, and from universities in the U.S., Europe, and Japan will use NSRL.

At the ceremony, after a welcome from Praveen Chaudhari, BNL Director; Michael Holland, Manager of DOE's Brookhaven Area Office, and Shirley Strum Kenny, Brookhaven Science Associates Board Chair, John Schumacher, NASA Chief of Staff; Raymond Orbach, DOE's Office of Science Director; and U.S. Representative Timothy Bishop, First District of New York State, all gave brief talks, as did General Jefferson Howell Jr., NASA's JSC Director, and Dennis Kovar, Associate Director of DOE's Office of Nuclear Physics in the Office of Science (see excerpts below).

The ribbon was then cut, formally opening the new facility. Tours of the NSRL followed, and the visitors learned about some of NSRL's ongoing studies. After lunch, the NSRL tours continued, and many visitors also took a bus to BNL's Science Museum to see a new Mars exhibit (see page 2). Two free public lectures were also scheduled that day: at noon, Ronald Ernst of NASA's Education Services Program at the Goddard Space Flight Center discussed "The Past, Present, and Future of NASA," and at 4 p.m., astronaut John Grunsfeld, NASA Chief Scientist, talked about "Servicing the Hubble Space Telescope: Answering Fundamental Questions About Our World and Our Place in the Universe."

— John Galvin

For more information, including more about earth-based research on space-radiation risks, go to www.bnl.gov/bnlweb/pubaf/pr/2003/bnlpr101403.htm, and view the event from www.bnl.gov/video.

"It is my pleasure to welcome all of you to the NSRL inauguration. Whenever two institutions come together to perform a common mission, that day is a very special day, and that event is a very special event. This Laboratory has a very broad base in science. We want NASA to take advantage of our strengths."
— Praveen Chaudhari, BNL

"It's extremely satisfying to me and those in my office to know that the completed NASA Space Radiation Laboratory is meeting NASA's expectations. I do believe that the successful partnership that we have here with NASA and DOE can be a model for other interagency partnerships."
— Michael Holland, DOE

"Today we begin to study the effects of cosmic rays on the gallant men and women who explore the frontiers of space. What we can learn can also lead us to new understandings of the broadest significance to the health of all people."
— Shirley Strum Kenny, BSA

"The excitement, the intellectual dynamite, the exploratory nature that human beings possess call for exploration [in space]. What we are doing here is putting together the fundamentals that will enable us to construct the vehicles that we need and the protection that we need in order to carry out the destiny of man. NASA is very fortunate to have that as its charge. And we are very fortunate to be working with them in this facility."
— Raymond Orbach, DOE

"This laboratory [NSRL] is going to play a key part in helping us go out beyond lower Earth orbit. Because of NASA's dedication to the human side of it, we have some wonderful scientists and engineers who work very hard to learn more so that we can exist in a place with no atmosphere . . .We are excited about the days ahead."
— General Jefferson Howell Jr., NASA

"At NASA, our three mission areas are: understanding and protecting our home planet, exploring the universe and searching for life, and inspiring the next generation — all three are things that will go on right here [at NSRL at BNL]."
— John Schumacher, NASA

"It's an occasion to celebrate the very special partnership between DOE, NASA, and Brookhaven Lab that made this all possible. When we look to the future, we'd like to assure NASA that we in Nuclear Physics, the Office of Science, and BNL are committed to ensuring that the space radiation laboratory mission is successfully achieved."
— Dennis Kovar, DOE

"This new facility [NSRL] allows the process [advancement and dissemination of knowledge] to go forward in a fashion that I am certain will be productive, not just for the people of the first congressional district, but for all of us, throughout the world."
— Timothy Bishop, U.S. Congress

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. Hall) 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 —

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

Weekdays: Free English for Speakers of Other Languages Classes
Beginner, Intermediate, and Advanced classes. Various times. All are welcome. Learn English, make friends. See www.bnl.gov/esol/schedule.html for schedule. Jen Lynch, Ext. 4894.

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

Mon., Thurs., & Fri.: Tai Chi
Noon- 12:45 p.m., Brookhaven Center North Room. Adam Rusek, Ext. 5830 or rusek@bnl.gov.

Tuesdays: Welcome Coffee
10-11:30 a.m. Rec. Hall. 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: Singles Club
5:15 p.m., Brookhaven Center. Contact: Jean, Ext. 4391.

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. Hall. Pat Flood, Ext 7886.

Tuesdays & Thursdays: Aqua Aerobics
5:15-6:15 p.m. Christine Carter, Ext 2873.

Wednesdays: On-Site Play Group
10 a.m.-noon. Rec. Hall. An infant/toddler drop-in event. Parents meet while children play. Suzanne Surrow, 476-6610.

Wednesdays: Farmer's Market
11:30 a.m.-1:30 p.m., Berkner Hall parking lot

Wednesdays: Weight Watchers
Noon-1 p.m. Michael Thorn, Ext. 8612.

Wednesdays: Yoga Practice
Noon-1 p.m., Brookhaven Center. Free. Ila Campbell, Ext. 2206.

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

Wednesdays: Exercise 101
5:15-6 p.m., Rec. Hall. $4 per class or $35 for 10 classes. Stretching, low-impact aerobics, and other exercises. Pat Flood, Ext 7886.

Fridays: Family Swim Night
5-8 p.m. at the BNL Pool. $5 per family.

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

Fridays: Jiu Jitsu Club
6-7 p.m. in the gym. All levels, ages 6 and above. $10 per class. Tom, Ext. 4556.

— WEEK OF 10/27 —

Monday, 10/27

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.

Tuesday, 10/28

***Health Promotion Program Talk**
Noon-1 p.m., Hamilton Seminar Room, Bldg. 555. Join author and registered dietician Brenda Davis when she presents "Cutting Edge Vegetarian Nutrition: Good Nutrition Information for Vegetarians and Non-Vegetarians." Check your mailbox for registration forms. Michael Thorn, Ext. 8612.

Friday, 10/31

***Children's Halloween Party**
5 p.m., Rec. Bldg. The Hospitality Committee invites the Lab community to wear a costume to the party and to bring a cold dish to share. At 7 p.m., everyone will go trick-or-treating on site. Parents may wear costumes, too! Monique de la Beij, 399-7656.

***BERA Halloween Party**
6-11 p.m., Brookhaven Center. All BNLers age 18 and over are invited. There will be a DJ, dancing, costume prizes, a light dinner, and cash bar. Tickets, at $10 per person, can be purchased at the BERA Sales Office now through Wednesday, October 29. Everyone must have a ticket. Christine Carter, Ext. 5090.

In Memoriam — Thomas Albertina

Thomas Albertina, who had served BNL for 35 of his 55 years, died on December 21, 2002. He had been on long-term disability after combating a long illness.

Albertina joined what was the Applied Mathematics Department (AMD) as a computer operations trainer on January 16, 1967.

"Tommy was a excellent computer operator and totally reliable team member," said Ed McFadden of the Information Technology Division (ITD), who had worked with Albertina for many years. "As he became more senior, he led and trained many others. He was very popular in the division and on his 35th anniversary, we all went to Berkner to celebrate with a party for him. Although he was not well, it was a happy occasion, and he knew how highly he was valued by his co-workers."

As AMD evolved into ITD, Albertina was involved with all the major projects undertaken. He handled many backup systems, including, for example, the Vax Cluster backups, Abars and the Epoch systems. Co-workers recall that his strength was in dealing with projects that needed persistence and attention to fine detail.

Arnie Peskin, recently retired, who headed the Computing & Communications Division, recalls, "About a dozen years ago, the computing facility changed from a manpower-intensive operation to one that was more automated and required fewer operations staff. As one of the senior operators, Tom helped ease that significant and somewhat painful transition."

In November 2000, Albertina joined the Physics Department as a senior technical specialist. Robert Liegel, his supervisor there, recalls, "Thom was in charge of printer maintenance. He always gave his best efforts to the job and looked ahead to ensure that everything would run smoothly. I would not classify Thom as a 'trouble maker.' But, if normal printer maintenance did not fully occupy his time, he would travel the building looking for trouble — printer trouble, that is.

"It was during this period that his illness was diagnosed," continued Liegel. "Even with a gloomy future, Thom maintained a cheerful attitude. He greeted everyone with a smile and warm hello until his speech became difficult, at which time he carried printed flash cards with appropriate greetings. During his time here, he engrained himself into the hearts of everyone he met. I constantly received notes, e-mails, and letters of appreciation on the quality and dedication of his work."

"Thom was my neighbor in Lake Ronkonkoma for about 30 years," said Tom Lambertson, who manages Central Shops. "He always referred to his wife Lillian as 'my bride,' and he was always on the go with his sons, following their progress and encouraging them. Thom had a work ethic like no other — work was what he had to do, and he had to do it to perfection . . . like the handlebar mustachio he was so proud of. 'Gotta have the comb and the wax Tom . . . keep it right!' he would say. I miss Thom, and smile in memory of him."

Thomas Albertina, a resident of Lake Ronkonkoma, is survived by his wife Lillian and sons Keith and Cory.

— Liz Seubert

New Mars Exhibit Opens at BNL's Science Museum

Built by Plant Engineering's Cabinet Shop; Lit by the Electrical Shop

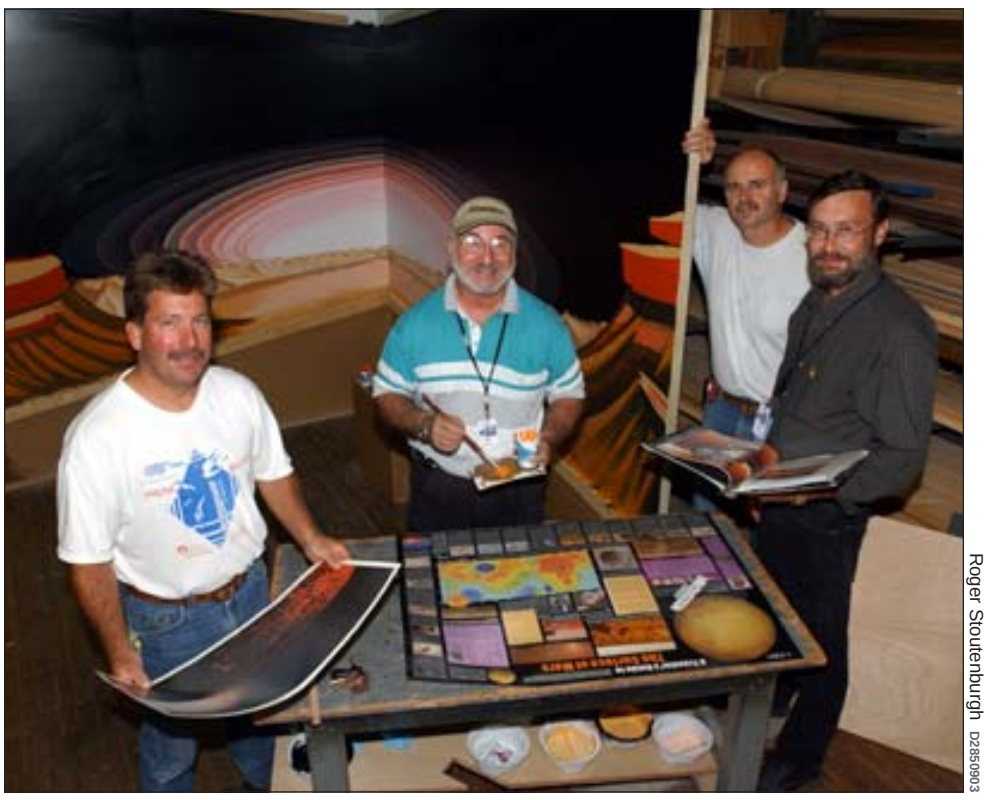
The new out-of-this-world "Marscape" exhibit in the BNL Science Museum was a big hit with the first visitors to view it — approximately 200 students from three local school districts last week.

Gail Donoghue, Science Museum Director, had the idea of building a new educational exhibit on Mars, which she hoped would be ready for the ribbon-cutting day of the new National Aeronautics & Space Administration Space Radiation Laboratory (see story on page 1). She met with Bruce Laakman, Multicraft Supervisor of the Cabinet Shop in the Plant Engineering (PE) Division, and he thought that it could be done. Laakman, with his team, Vincent ("Cappy") Susinno, Chris Frosina, and Jim Giacalone, went to work building the exhibit, which they completed in less than four weeks.

Says Laakman, "I see this as another fine project built at BNL, for BNL, by BNL employees. This four-person collaborative team enjoyed the challenge of creating something unique."

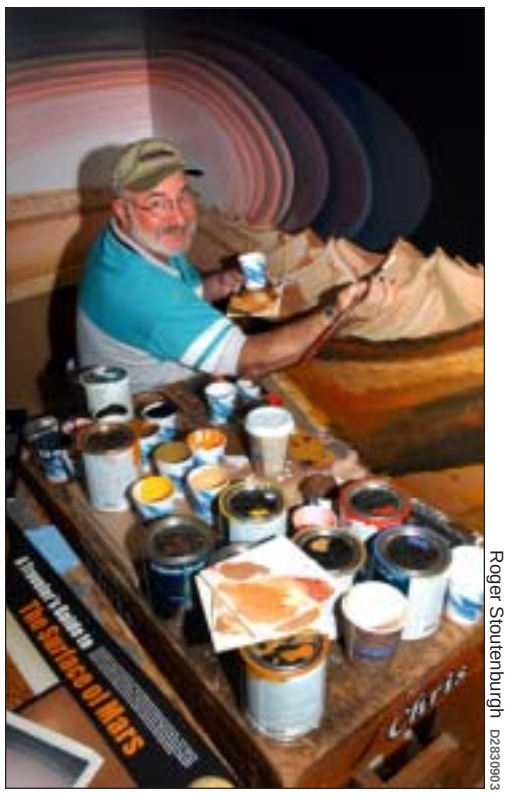
Adds Donoghue, "The cabinet shop did a wonderfully creative job. And John Read, of PE's Electrical Shop, gave the exhibit its museum-quality lighting effect. We have already seen how much visiting students and the BNL community enjoy the exhibit. This is only the beginning of our NASA partnership, and we look forward to more programs in the future for students from first to eighth grade."

— Jane Koropsak



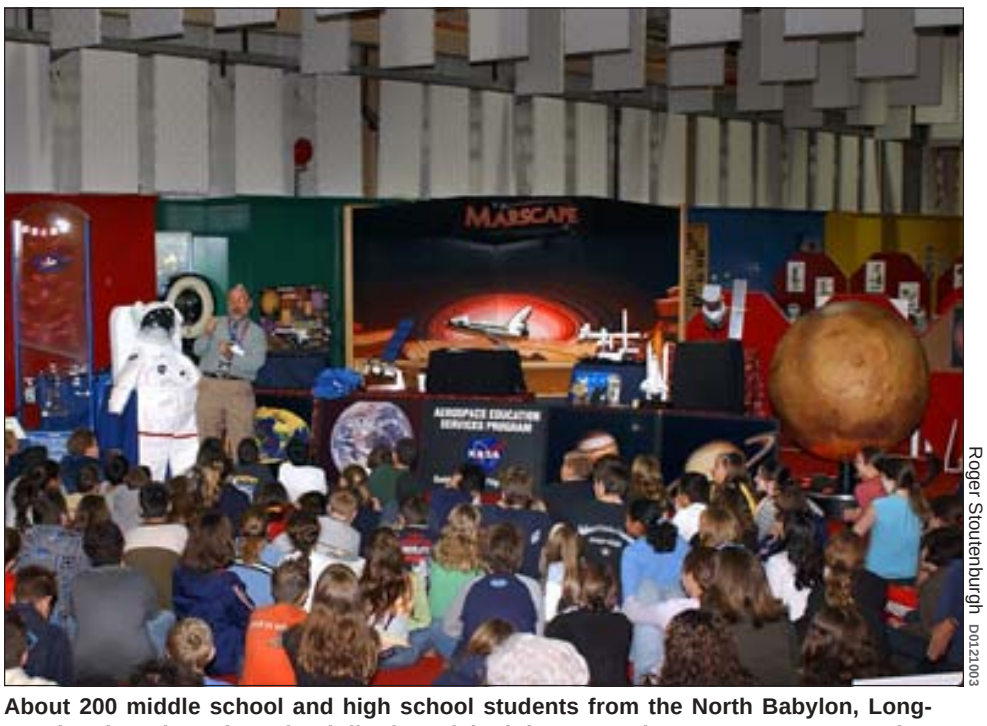
Roger Stoutenburgh D2850903

The four-person collaborative team in the Plant Engineering Division's Cabinet Shop who built the Mars exhibit for the BNL Science Museum are: (from left) Chris Frosina, Cappy Susinno, Jim Giacalone, and Supervisor Bruce Laakman.



Roger Stoutenburgh D2830903

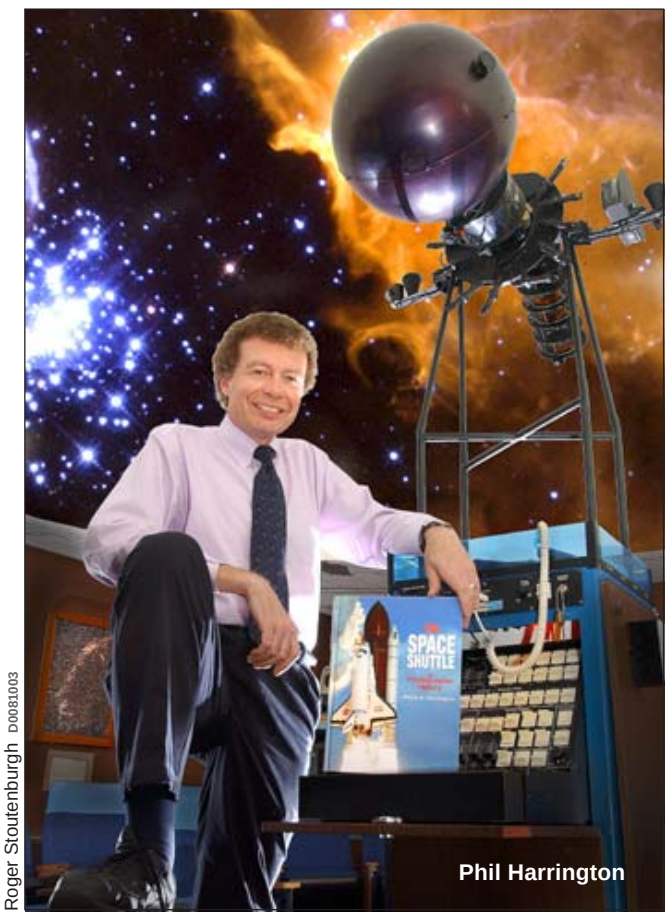
BNL sign painter Cappy Susinno adds a finishing touch to the Mars exhibit. More of Susinno's paintings will be on display during the upcoming Lab community art show (see page 4).



Roger Stoutenburgh D0121003

About 200 middle school and high school students from the North Babylon, Longwood and Rocky Point school districts visited the BNL Science Museum on October 15 to learn all about living in space from Ronald Ernst (above, left), a member of the National Aeronautics & Space Administration (NASA) Aerospace Education Services Program. They also toured the new interactive exhibit on Mars recently installed in the museum. Ernst's series of talks were given in conjunction with the commissioning of the NASA Space Radiation Laboratory at BNL (see story, page 1). In this photo, Ernst is telling Rocky Point middle school and high school students about the features of a model of the $20-million, 300-pound space suit that astronauts wear on space walks.

Excitement, Passion of Space Shuttle Inspires Book by BNL's Phil Harrington



Roger Stoutenburgh D0081003

Phil Harrington

"Vibrant — dynamic — exciting" — that's how BNLer Phil Harrington describes the U.S. space shuttle program, and that's how he hopes his words show it in his book, *The Space Shuttle, A Photographic History*, which appeared in May of this year. The book combines stunning photos by the astronauts themselves as well as Roger Ressmeyer of the Corbis agency, captioned by Harrington, with his tale of history, science, and adventure that presents the shuttle astronauts as the heroes, the great explorers of modern times, "pushing the limits of discovery," and "leaving the safe haven of planet Earth and venturing out into the cosmos."

Harrington wrote for a broad spectrum of readers, he says, so he aimed at being "technically accurate, but not dull." The book aroused instant interest. Within a few weeks of its appearance, Harrington had been interviewed on about two dozen radio shows across the country, and was invited to Washington, DC, to appear on several television shows to talk about the book. He also did a book signing at the Smithsonian's National Air & Space Museum. "For a short time, it seemed I became an instant celebrity — just add water!" he jokes.

Harrington has been fascinated by stars and space ever since he watched an eclipse of the moon for a sixth-grade class assignment. He has published six books in this field since 1990. But how did he come to write about the shuttle?

"I had just compiled a list of astronomical events for a 2004 wall calendar on astronomy for Browntrout Publishers, which produces some great calendars," Harrington explains. "A few weeks after the Columbia disaster last February, my editor at Browntrout asked if I'd be willing to work with them to create a photographic history of the shuttle. The book, intended to be a celebration of the program both in picture as well as in word, would trace its development and commemorate its many successes. I was honored, and immediately set to work."

In addition to the wealth of information Harrington sent them for the calendar, Browntrout had plenty of other evidence of his talent for writing in this field. His first book, *Touring the Universe Through Binoculars*, published in 1990 by John Wiley & Sons, was written to show the beauty and information available to anyone who has a pair of binoculars and knows where and how to look at the sky.

Star Ware, The Amateur Astronomer's Ultimate Guide to Choosing, Buying, and Using Telescopes and Accessories is another Harrington book published by Wiley. First published in 1994, *Star Ware* is now in its third edition. Another successful book published in 1994, *Astronomy For All Ages* (Globe Pequot Press), was co-authored with Edward Pascuzzi, a physics teacher at Glen Cove High School. The book contains more than 50 "get-acquainted" activities that are designed for adults and children who want to learn about the night sky together.

"That book seems useful for many people," comments Harrington. "We included activities for several different ages, and a wide range of people enjoy using it."

Other inviting books Harrington has produced include *Eclipse* (Wiley, 1997), which has been translated into German, Chinese, and Polish, and *The Deep Sky, An Introduction* (Sky Publishing, 1998), in which, he says in his description of the book, he hopes to pass on some of the enthusiasm and love of observing distant star clusters, nebulae, and galaxies that he received as a youth reading accounts by the famous amateur astronomer Walter Scott Houston in *Sky & Telescope* magazine.

Harrington's latest book, *Star Watch, The Amateur Astronomer's Guide to Finding, Observing, and Learning about Over 125 Celestial Objects*, was released this July by Wiley. Its aim is to introduce the night sky to new backyard stargazers.

Harrington's broad educational background includes a bachelor's degree in science education from Wagner College on Staten Island, another, in mechanical engineering, from New York Institute of Technology (NYIT), and a master's degree in environmental technology, also from NYIT. By day, he supervises on-site safety and health course development as a member of the Lab's Training & Qualifications Program Office.

So, when does he write?

"Mostly, I write in the very early morning," he says. "There's just me and my dogs, everyone else in the house is asleep, and I can concentrate."

Harrington's power of concentration allows him to complete not only books, but also articles on the sky and stars. He is an editor of *Astronomy* magazine, the world's largest periodical on the subject, and contributes several articles each year. From 1982 until 1998, he also taught adult education classes at the Vanderbilt Planetarium in Centerport. His courses included introductory astronomy, observational astronomy, telescopes and equipment, and astrophotography. Presently, he teaches courses in planetary and stellar astronomy at the Riverhead campus of Suffolk County Community College.

"I enjoy educating people," says Harrington. "At BNL, I am teaching people things they need to know for their jobs, which I find very satisfying. But through my books, articles, and classes on the sky and stars, I hope I am giving information about a side of life that people may not need to know, but that will give them incredible beauty, wonder, and adventure as they forget the earth and commune with the universe."

— Liz Seubert

Ray Davis wins Fermi Award *(cont'd.)*

Davis, 88, received his B.S. and M.S. degrees in chemistry from the University of Maryland and his Ph.D. degree from Yale University. From 1948 to 1984 he was a member of BNL's Chemistry Department, retaining a guest appointment after 1984, when he became Research Professor at the University of Pennsylvania. He was awarded the Nobel Prize in Physics in 2002.

The Fermi Award, which dates to 1956, is administered by DOE for the White House. It honors the memory of Enrico Fermi, leader of the group of scientists who, on December 2, 1942, achieved the first self-sustained, controlled nuclear reaction at the University of Chicago. For more information on the 2003 awards and on Raymond Davis, go to www.bnl.gov/bnlweb/pubaf/pr/2003/doepr100903.htm and www.bnl.gov/bnlweb/raydavis/, respectively.

Past BNL recipients of the Fermi Award:

Maurice Goldhaber, 1999, for research in fundamental nuclear and particle physics, and scientific leadership;

Richard Setlow, 1988, for his contributions to radiation biophysics and molecular biology, and discovery of DNA repair processes;

Gerald Tape, 1987, for advancement of atomic energy worldwide, and advocacy of nonproliferation on nuclear weapons;

Ernest Courant, 1986, for contributions to particle-acceleration physics, and invention of strong focusing; and

M. Stanley Livingston, 1986, for development of particle accelerators, and discovery of strong focusing.

Arrivals & Departures

Arrivals

Santanu Chaudhuri	Chemistry
David Grills	Chemistry
Michael Kretschmann	ESD
Laura Mgrdichian	CEGPA

Departures

Stephen Bueltmann	Physics
Michael Curtis	Plant Eng.
Emmanuel Dador	OMC
Brendan Fox	Physics
Elaine Landry	C-A

Aqua Aerobics

All are welcome to join either or both of the seven-week Aqua Aerobics sessions beginning on Tuesday, 11/4, and Thursday, 11/6. All sessions run 5:15-6:15 p.m. at the BNL swimming pool.

To attend once a week costs $20, twice a week costs $40. Mail a check to BERA, care of Christine Carter, Bldg. 179B. Payment for each session of seven classes must be made in advance, not weekly. Call Ext. 5090 for more information.

Health Promotion Program Talk, 10/28

Join author and registered dietician Brenda Davis from noon to 1 p.m. in the Hamilton Seminar Room, Bldg. 555, where she will present "Cutting Edge Vegetarian Nutrition: Good Nutrition Information for Vegetarians and Non-Vegetarians."

Learn the fine details of the nutrients of concern to vegetarians or vegans — specifically protein, iron, calcium, vitamin D, vitamin B12 and essential fatty acids.

Davis is a leader in her field and an internationally acclaimed speaker. She is a past chair of the Vegetarian Nutrition Dietetic Practice Group of the American Dietetic Association and is author of five books. She will sign copies of her books, *The New Becoming Vegetarian* and *Becoming Vegan*, before and after her talk.

Check your mailbox for registration forms. For more information, call Michael Thorn, Ext. 8612.

Calendar

(continued)

Saturday, 11/1

***Diwali 'The Festival of Lights'**

3:15 p.m., Berkner Hall. Tickets bought by 11/24 cost $11/adults, and $7/children ages 5-12. After 11/24, tickets cost $12 /adults, and $8/children ages 5-12. Contact Piyush Joshi, Ext. 3847, joshi@bnl.gov; Kumi Pandya, Ext. 7734, pandya@bnl.gov; Achyut Topé, Ext. 5672, tope@bnl.gov; or Sharadha Sambasivan, Ext 4862, sharadha@bnl. gov by 10/30. See also page 4.

— WEEK OF 11/3 —

Tuesday, 11/4

Caring Friends Meet

Noon, Berkner Hall, Room D. An informal support group meets to serve as a resource for individuals experiencing grief and the many emotions following the loss of a loved one. Gatherings are on the first Tuesday of each month. All are welcome. For more information, call Pat Hein, Ext. 3962, or Gerry Van Derlaske, Ext. 3476.

Wednesday, 11/5

Noon Recital, Harpist Boldachev

Noon. Berkner Hall. Following acclaimed harp recitals last year in Prague and Llangollen, Wales, 13-year-old Sasha Boldachev appears at BNL on his first U.S. concert tour.

WEEK OF 11/10

Tuesday, 11/11

BNL Closed to Honor Veterans' Day

No Bulletin will appear this week.

Wednesday, 11/12

Brookhaven Lecture

4 p.m., Berkner Hall. John O'Hara, Energy Sciences & Technology Department, will talk about understanding and improving crew performance in complex systems.

Thursday, 11/13

Community Advisory Council Meeting

6:30 p.m., Berkner Hall, Room B. Open to the public. See http://www.bnl.gov/community/CAC.htm.

Saturday, 11/15

***Defensive Driving**

9 a.m.-3:30 p.m., Mount Sinai High School. $35/person. See notice, page 4.

— WEEK OF 12/1

Tuesday, 12/2

Caring Friends Meet

Noon, Berkner Hall, Room D. An informal support group meets to serve as a resource for individuals experiencing grief and the many emotions following the loss of a loved one. All are welcome. For more information, call Pat Hein, Ext. 3962, or Gerry Van Derlaske, Ext. 3476.

Saturday, 12/6

Shopping Trip to Peddler's Village

$15 per person. Bus leaves BNL at 9 a.m. and returns to BNL at 7 p.m. Peddler's Village is a country village in Pennsylvania with 70 specialty shops that sell a wide variety of merchandise. Purchase tickets at the BERA Sales Office. Christine Carter, Ext. 5090.

Sunday, 12/7

Radio City Holiday Show

$76 per person. Sold out. Christine Carter, Ext. 5090.

— WEEK OF 12/8

Thursday, 12/11

Community Advisory Council Meeting

6:30 p.m., Berkner Hall, Room B. Open to the public.

— WEEK OF 12/15

Thursday, 12/18

Blood Drive

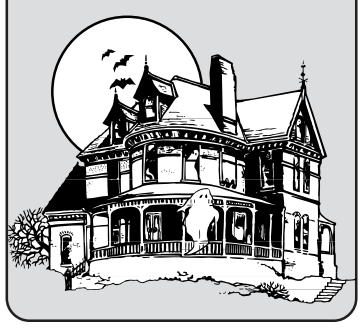
9:30 a.m.-3 p.m., Brookhaven Center. Susan Foster, donateblood@bnl.gov.

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.

BERA Halloween Party, 10/31

All BNLers age 18 and over are invited to the annual BERA Halloween Party on Friday, October 31, from 6 to 11 p.m., in the Brookhaven Center.

There will be a DJ, dancing, costume prizes, a light dinner, and cash bar. Tickets, at a cost of $10 per person, can be purchased at the BERA Sales Office now through Wednesday, October 29. Everyone must have a ticket. For more information, contact Christine Carter, Ext. 5090.



Children's Halloween Party, 10/31

The Hospitality Committee will hold an on-site children's Halloween party on Friday, October 31, in the apartment area Recreation Hall. The building is open from 4:30 p.m., and the party starts at 5 p.m. Wear your favorite costume to play games at the party. Bring a cold dish to share. Parents may wear a costume too! After the party, at about 7 p.m., everyone will go trick-or-treating on site.

For more information, call Monique de la Beij, 399-7656.

Defensive Driving, 11/15

A Defensive Driving course will be held on Saturday, November 15, 9 a.m.-3:30 p.m., at Mount Sinai High School, on the north side of Route 25A, in Mount Sinai, about 1 mile west of Route 83. To register, send your telephone number on a check made out to Empire Safety Council for $35 per person, in care of Scott Zambelli, P.O. Box Mount Sinai, NY, 11766. Reach Zambelli at 331-6599, Ext. 13.

Classified Advertisements

Placement Notices

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

OPEN RECRUITMENT – Opportunities for Laboratory employees and outside candidates.

MK2502. ASSISTANT SCIENTIST/ENGINEERING POSITION – Requires a Ph.D. in human factors, industrial engineering or similar field and five years' experience in the human factors of complex systems. Work will involve conducting research in the effects of advanced technology on human performance in complex human-machine systems such as nuclear power plants. Research results will be used to develop design guidance and evaluation methodologies for such systems. Will use various research methods such as literature analysis, modeling, subject matter expert knowledge elicitation, field studies and experiments. The level of this position will depend on the education and experience of the candidate with possible levels ranging from an engineering professional to assistant scientist. Under the direction of J. Higgins, Energy Sciences & Technology Department.

MK2819. POSTDOCTORAL RESEARCH ASSOCIATE (2 positions) - Requires a Ph.D. in biochemistry, biophysics or related field. Gold Labels will be developed to target genetic tags on expressed proteins for identification of subunits and alignment for image processing of cryoelectron micrographs. Work will involve coordinating chemical design and synthesis of specialized gold nanoparticles and genetic expression of tagged proteins and using a CryoEM JOEL 2010F 200 keV field emission with 2k CCD and STEM attachment. Major emphasis will be in using the EM and performing reconstructions. Under the direction of Dr. James Hainfeld, Biology Department.

MK3143. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in physics, chemistry, materials science or engineering. Will join an interdisciplinary team to pursue basic research in biomineralization and its applications to biomimetic composites and thin films, emphasizing organic-mediated mineralization processes. Will apply novel synchrotron x-ray and microscopy methods to *in-situ* studies, including microbeam diffraction and scattering from nanopatterned surfaces. Experience in several of the following areas is highly desirable: synchrotron x-ray, electron or light scattering; soft condensed matter or organic thin films; scanning probe techniques. This is an opportunity to develop and utilize cutting-edge synchrotron science in biomimetic and nanostructured materials at BNL's National Synchrotron Light Source and the Center for Functional Nanomaterials. Under the direction of E. DiMasi, Center for Functional Nanomaterials.

MK2821. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in biochemistry, molecular biology or related field. The primary interest of the group is the use x-ray crystallography to understand the structural basis of transmembrane active processes via membrane channels and transporters (http://bnlstb.bio.bnl.gov/biodocs/structure/Fu.htmlx). Several representative channels and transporters have been cloned, over-expressed and purified in pipeline for crystallization and structural determination. This position will offer comprehensive training from molecular biology through membrane biophysics to structure biology of membrane proteins. Preference will be given to a trained crystallographer who wishes to develop an independent research career in the near future. Under the direction of Dax Fu, Ph.D., Biology Department.

NS3171. SR. APPLICATIONS ANALYST (I-5, term appointment) – Requires a bachelor's degree in information technology, electrical engineering or physics and two years' experience in software development. Extensive knowledge of and experience with Oracle database, MySQL database, MS Access and C++ programming and web-page development required; experience with software applications in high-energy physics is highly desirable. Responsibilities include maintaining and developing a database for high-energy physics experiment detector production, supporting users for data entries and data access to the databases, and developing database-related software in C++, and shell scripts in a Linux environment. Physics Department.

TB3467. MEDICAL ASSOCIATE IV (P-1, term appointment) - Requires a bachelor's degree in a physical science (physics, chemistry, or engineering), graduate degree in physics desired. Experience with UNIX and C-language is required; experience in MATLAB, SPM, IDL, and/or AVS is desirable. Under general supervision will acquire, analyze, and organize MR data using computer workstations, will interact with MR Clinical Investigators and perform MRI scans for clinical projects. Responsibilities will include computer and software maintenance and performing maintenance and service on the 4-Tesla Whole Body MRI scanner. Medical Department.

TB3469. RESEARCH SERVICES ASSOCIATE (CW-2, part-time, term appointment) - Under general supervision provides general laboratory assistance to the Neuroimaging Program. Requires experience in behavioral studies in rodents, autoradiography, microsurgery, histochemistry, and Excel. Responsible for harvesting of neural tissue, embedding and cryosectioning this tissue, histological processing of tissue, stereotaxic surgery, behavioral testing and general laboratory maintenance. Employment is contingent upon successful completion of a background check by the DEA (Drug Enforcement Agency). Medical Department.

Motor Vehicles & Supplies

02 HYUNDAI ELANTRA - a/t, a/c, CD changer, alarm, remote, excel. mech. & body cond. 18K mi., $10,500. Rod, 751-7023

02 NISSAN SENTRA - a/t, a/c, p/s, p/b, p/w, 18K mi., excel. cond. 19K mi., $10,500. Nancy, 744-0266.

01 CHEVY SILVERADO LS - a/t, a/c, p/s, p/b, p/w, K 1500 4x4 ext. cab, new tires & brakes, 6 ft. bed, tow pkg., bedliner, smitty bars, 48K mi., $17,500. James, Ext. 4026 or 298-9748.

00 CHEVROLET BLAZER ZR2 - a/t, a/c, p/s, p/b, p/w, 2 dr, high rider, moon roof, mint cond., 41K mi., $15,000. Vinny, 286-3446.

00 HYUNDAI ELANTRA WAGON - a/t, a/c, p/s, p/b, p/w, excel. cond. & gas milage, am/fm stereo, roof rack, orig. owner, 97K hwy. mi., $3,500. Arlene, Ext. 3827.

99 DODGE INTREPID - a/t, a/c, p/s, p/b, p/w, fully loaded, immaculate in/out, 60K, $8,800. Rich, 286-1842.

98 JEEP WRANGLER - a/c, p/s, p/b, 5 spd., 2 tops, am/fm cass., 4WD, alarm, mint, 61K mi., 11.5K mi. Chris, Ext. 7908 or 929-7225.

98 PONTIAC BONNEVILLE - a/t, a/c, p/s, p/b, p/w, mechanically great, remote start, alarm, 33 mpg highway, 98K mi., owner since 14K mi. Bruce, Ext. 7640 or 567-3294.

95 OLDSMOBILE NINETY-EIGHT REGENCY - a/t, a/c, all power driver & passenger seat, leather int., sunroof, 87K mi., $5,300. Rodney, 751-7023.

94 CHRYSLER CONCORDE - a/t, a/c, p/s, p/b, p/w dark green, 4 dr., 6 cyl., looks gd., runs well, 97K mi., $1,800. James, Ext. 4026 or 298-9748.

94 FORD EXPLORER - a/t, a/c, p/s, p/b, p/w, 4x4, navy blue w/gray cloth interior., runs well, gd. cond. tinted windows, 164K mi., $2,000. Mary, Ext. 6344 or 929-3388.

94 JEEP CHEROKEE - a/t, a/c, p/s, p/b, p/w, 4WD, 4 dr., alarm, am/fm cass., clean, 94K mi., $5,200. Denise, Ext. 5055 or 929-7225.

93 DODGE CARAVAN - 3L, V6, p/l, p/w, new Alpine radio, CD player & windshield, 82K mi., $3,900. Mike, Ext. 5319 or 698-8028.

93 VW EUROVAN - a/t, a/c, p/s, p/b, p/w, 5 cyl., 4 wheel ABS, PopTop, white, gd. cond., 133K mi., $6,400. Leigh, 653-7924.

92 CHEVY - a/t, a/c, p/s, p/b, p/w, 4WD, w dr., gd. for student, gd. cond. 111K mi. $2,500 Maryann, Ext. 2353 or 286-5155.

92 HONDA ACCORD EX - 4 dr., blk., gd. cond., 93K mi., $2,500. Joseph, 399-1756.

91 FORD LX WAGON - 30K mi., excel. cond., ask. $1,600. Rich, 872-5074.

91 TOYOTA CAMRY - white 4dr, a/c, a/t, p/w, p/d, cc, am/fm cass,, fold down rear seat, excel. cond., 99K orig. mi., $3,000 obo. Lonny, Ext. 5333 or 941-1057.

86 ALFA ROMEO GTV 6 - red, 5 spd., leather, orig. owner, new valves & brakes, 92K mi., gd. cond., $3,250. Peter, Ext. 2913.

86 OLDSMOBILE DELTA 88 - a/t, p/s, low mi., runs well, 68K mi., $600 obo. Helen, Ext. 2552 or 209-9621.

85 FORD RANGER PICKUP - bedliner & cap, 85.5K mi., $1,200. Walt, 7424-9423.

78 MERCEDES BENZ 300CD - gd. cond., $2,500. Cynthia, 363-2790.

69 VW BEETLE - 5 spd. blk, convertible, new interior, rebuilt eng., 133K mi., $3,000. Jim, Ext. 5537.

Boats & Marine Supplies

22' CRUISERS INC. BARNEGIT - '87 w/trailer rebuilt 350 Chevy & O/D, new parts, mint, $7,000; Sea Doo jet ski w/trailer, $850. Paula, 516-798-2599 or 516-860-9339.

Furnishing & Appliances

COUCH - 3-pc. gray, peach & beige sectional, excel. cond., $900. Cynthia, 698-9016.

DRYER - XL Roper electric, $125 neg. Greg, Ext. 7810.

CABINETS - kitchen, for quality/measurements, photos, e-mail phraner@bnl.gov, $1,000 neg. Mary, 265-3808.

LOVE SEAT - cream leather, gd. cond., $50; Tiffany-style cream light fixture hangs from ceiling, $5. MaryAnn, Ext. 5124.

LOVE SEAT & TABLE - Rattan, $40; brass/glass tables, $40/set. Nancy, Ext. 4303.

SLEEPER - queen sleeper/sofa w/matching love seat, plum, 2 yrs. old. $525; blue recliner, $55. Rodney, 751-7023.

TABLE & BED - 36" round Formica (almond) w/2 upholstered chairs, $200; king waterbed, ea. half adjusts individually, excel., $500. Bonnie, 878-0898.

VACUUM CLEANER - Hoover, upright, excel. cond. $25. Pete, Ext. 5114.

Tools, House & Garden

CHIPPER - TroyBuilt, chips up to 3", used 2 times. $750 new, $525 obo. Henry, 727-7227.

LEAF VACUUM - Billy Goat, 5hp w/shrub attach., best offer over $250. Tim, 208-0408.

TOOL BOX - aluminum diamond plate for sm. pick up, excel. cond., $60. Paul, Ext. 5829 or 289-9152,

Sports, Hobbies & Pets

BICYCLE - girl's 16" pink bike, very gd. cond., $10. Yongnian, Ext. 7022.

BICYCLES - boy's 20" full suspension, 6 spd., $20; men's 5 spd. 27" Schwinn Suburan St. bike, $10. Richard, Ext. 5741.

BINOCULARS - Aitchison & Co. w/case, gd. cond., $10. Peter, Ext. 2913.

COOKTOP - 3-burner stove, gd. cond. for RV, motor home, trailer, or pop-up, ask. $75. Tim, 208-0408.

EXERCISE BIKE - Schwinn stationary bike, computer read-out, orig. $300, excel. cond., $100. Jim, 924-7374.

EXERCISE - equipment: Ab Swing, hardly used, $60; Ab Slide, $10. Rachel, Ext. 3500.

MOTORMARINE II CAMERA - underwater camera, new o-rings, gd. cond. Ext. 4420.

WRIST-WEIGHT SET - $5. Morris, Ext. 4192

Audio, Video & Computers

COMPUTER - Dell, 1.1Ghz CPU, 20Gb HD, 256Mb RAM, CDRW/DVD, Win 2000, MS Office, NIC, keyboard, & mouse, $350. Don, Ext. 7237 or 929-6571.

DELL LATITUDE LAPTOP - CPI D 266XT, Pentium II-266, 64mb RAM, 4.3Gb hard drive, 13.3" screen, Netgear NIC 10/100 network card, CD drive, sound, Dell mouse & AC charger, ask., $225. Maureen, Ext. 5179.

SONY PLAYSTATION - PS1 w/2 games, $40. JK, 751-1884.

Free

ELECTRONIC TUBES - old, assorted audio & power tubes. Rolf, Ext. 2305.

Miscellaneous

CAR SEAT - 20-40- lbs, $15; 4 wood kitchen chairs, dk. brown, $10. Robin, 744-3902.

GO-CART - off road Manco go cart, 5.5 hp Briggs eng. w/torq converter, disc brakes & roll cage, $700 obo. Robert, 289-9533.

GO-CART - Manco, like new, roll cage, $400. JoAnn, Ext. 7009.

GUITAR - Alvarez acoustic model 5220, mint. cond.; new Shaller turners-new case, $450 firm. John, Ext. 3805 or 277-3805.

PIANO - Winter upright, last tuned in 2000, played beautifully at that time. $800 obo. Gary, Ext. 7045.

PIANO - Kawi upright console, mint, $3,500 obo. Henry, 727-7227.

PIÑATAS - unique, all occasions & characters, cartoon, Disney, Sesame Street, etc. Donna, 821-0359.

Wanted

ACOUSTIC GUITAR - 2 for adults first learning to play. MaryLynn, Ext. 7796.

GUINEA PIG - friendly, that likes to be handled, for a 5 yr. old. Alice, Ext. 3286.

TREADMILL - slightly used treadmill w/hear monitor, 2+ hp. Jackie, Ext. 3743.

RESEARCH VOLUNTEERS - men and women, ages 18 and over, are needed for MRI study. Strictly confidential, fee provided. 344-2773.

VACUUM TUBE TESTER - Hickok, B&K, EICO etc., in gd. working order. Jonathan, 878-3430.

In Appreciation

To all my friends of Local 2230, just a note to say thanks for the fruit basket. Your kindness will never be forgotten.

—TerryClark/MMC

Happenings

GOLF FUND RAISER - for Habitat For Humanity. 18 holes of golf incl. cart at Middle Island Country Club for $25 per player, 11/18. Tee times betw. 8 & 10 a.m. Reserve your time by 11/14, 631-924-4966, Ext. 100.

Farewell Gatherings

FAREWELL GATHERING - for Bob Jansson, Thursday, 10/30, 6 p.m. Rock Hill Country Club, Manorville, $30 per person, cash bar, send payment to Toni Hoffman, BSD, Bldg. 1005.

FAREWELL GATHERING - for Sheryl Carey, Joe Gatz, Joe Jahelka, Lynn Kalbach, Joe Klemish, & Frank Stepnoski — 187 years at BNL. Wed., 10/29, 5 p.m., Riverhead Polish Hall. Buffet dinner & gifts, cash bar, $35/person. RSVP TODAY, 10/24. Beth Lettieri, Ext. 8035, or Jean Ramirez, Ext. 7064.

Services

A list of services offered by BNLers is on the web at www.bnl.gov/bnlweb/pubaf/bulletin/services.htm. or from Ext. 2345.

BERA Indo-American Association Holds Diwali

'The Festival of Lights,' 11/1

On Saturday, November 1, join the BERA Indo-American Association in celebrating the Indian tradition of Diwali — The Festival of Lights. All are welcome to join the festivities, which will be held at Berkner Hall. The program includes a full cultural program starting at 3:15 p.m., followed by an authentic Indian dinner at 7 p.m.

Tickets purchased through October 24 cost $11 for adults and $7 for children ages 5-12. Tickets purchased after October 24 cost $12 for adults, and $8 for children ages 5-12.

To reserve your tickets, contact Piyush Joshi, Ext. 3847, joshi@bnl.gov; Kumi Pandya, Ext. 7734, pandya@bnl.gov; Achyut Topé, Ext. 5672, tope@bnl.gov; or Sharadha Sambasivan, Ext 4862, sharadha@bnl.gov, by Tuesday, October 30.

Children ages 13-17 are welcome to participate in a short story presentation. For more information, or to participate, contact Milind Diwan, Ext. 3327, or diwan@bnl.gov. To participate in an Art-Rangoli display or Mithayi contest, contact Kumi Pandya, Ext. 7734, or pandya@bnl.gov.

Wanted: BNL Art and Crafts for Fall Show

BNL artists, sculptors, crafters: Your most beautiful, eye-catching work is needed for the BNL Art Society's upcoming Thanksgiving Art and Crafts Show, to be held at Berkner Hall from Monday to Wednesday, November 24-26, from 11:30 a.m. to 1 p.m. An evening reception with refreshments will also be held on Monday, November 24, from 5 to 7 p.m.

BNL employees, retirees, facility-users, guests, contractors, and their family members 15 years of age and older may all contribute. More than one piece may be entered by an exhibitor, to be shown as space permits. Enter your finest skilled and creative works for the Lab community to enjoy.

Exhibits for the show must be brought to Room C, Berkner Hall, after 2 p.m. on Friday, November 21. To be included in the catalog, complete a form for each work entered and return them by Monday, November 10, to Robert Chrien, Bldg. 510A. Copies are acceptable. For more information, contact Chrien, Ext. 3903, chrien@bnl.gov, or Liz Seubert, Ext. 2346, lseubert@bnl.gov.

Entry Form

BNL Art & Crafts Show, November 24-26, 2003

Name: _____

Home phone: _____

Name of BNL contact: _____

BNL extension: _____

Type of art/craft: *(painting, sculpture, photo, pottery, quilting, etc.)*

_____

Title of work, if there is one: _____

Description: *(medium/material, size)* _____

_____

PLEASE PRINT CLEARLY AND RETURN TO ROBERT CHRIEN, BLDG. 510A, BY NOVEMBER 10.

the Bulletin

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

LIZ SEUBERT, editor
JOHN GALVIN, reporter
ROGER STOUTENBURGH, photographer

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

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