

BNL to Design, Build Accumulator Ring, Transport Lines For \$1.3B National Spallation Neutron Source at ORNL

In Berkner Hall on Monday, November 23, about 100 BNL and DOE staff gathered to celebrate the culmination of three years of collaborative effort with DOE's commitment of \$1.3 billion for a Spallation Neutron Source (SNS), to be built at Oak Ridge National Laboratory (ORNL).

BNL's part in this five-lab collaboration will be to design and build the accumulator ring and two transport lines for the SNS, which, on its scheduled completion in 2005, will be the world's most powerful accelerator dedicated to producing neutrons for experiments in materials science and biotechnology (see box, page 2).

Work on this innovative machine has been divided among the five participating labs. Lawrence Berkeley National Laboratory will contribute the ion source from which the protons originate, and Los Alamos National Laboratory will provide the linear accelerator that accelerates the protons to an energy of one billion electron volts for the accumulator ring to be created by BNL. The one-megawatt-power protons will then smash into the spallation target, the responsibility of ORNL, and the resulting neutrons will pulse through experiment systems provided by Argonne National Laboratory and ORNL.



Discussing the accumulator ring that BNL will design and build for the Spallation Neutron Source (SNS), which is to be constructed at Oak Ridge National Laboratory by five DOE-funded laboratories, are: (from left) Alternating Gradient Synchrotron (AGS) Department Chair Derek Lowenstein; SNS Ring System Team Leader Bill Weng, AGS; DOE on-site Brookhaven Group Project Manager Michael Butler; BNL Director John Marburger; and BNL Deputy Director for Science & Technology Peter Paul.

The BNL share of the project will be about \$160 million over the next seven years. At its peak, the BNL construction team will involve about 100 people.

"The Lab is totally committed to this important project," said Laboratory Director John Marburger at the Berkner Hall celebration. "It takes

advantage of the extraordinary experience BNL has in accelerator-physics and technology, and it contributes to a facility that will strengthen the nation's position in neutron science. I am confident that our part of this project will be well executed because of the quality of the team assembled under Bill Weng."

SNS Ring System Team Leader Bill Weng, former head of the Alternating Gradient Synchrotron (AGS) Accelerator Division, had managed the successful project to design and build the Booster. This small-but-mighty pre-accelerator has helped increase the intensity of the beams produced by the AGS since 1992 and will provide high-mass heavy ions for the Relativistic Heavy Ion Collider (RHIC), due to operate in 1999.

Despite some similar parameters, the SNS ring will be very different from the Booster, making the project "extremely interesting and challenging," said Weng.

Peter Paul, BNL Deputy Director for Science & Technology, commented that the project requires "science, technology and people — what BNL does best," he said. "BNL is known for the quality of its people in designing, building and operating big machines."

(continued on page 2)

341st Brookhaven Lecture Lessons Learned From 1997: The Lab's Most Tumultuous Year

Dramatic events overshadowed the celebration of BNL's fiftieth anniversary year in 1997. The January announcement of a leak of tritium-containing water near the High Flux Beam Reactor, DOE's cancellation in May of the half-century-old arrangement to manage BNL, and the selection of another manager announced in November, eclipsed the news of BNL's forefront research and important scientific discoveries.

The intense coverage by the media and impact on the Lab of this tumultuous time will be described by Robert Crease (above), when he gives the 341st Brookhaven Lecture, "Breakdown: The Events of 1997 at BNL," on Wednesday, December 16, at 4 p.m., in Berkner Hall. He will be introduced by Lab Director John Marburger.

An observer with several vantage points, as Lab Historian and as Associate Professor and Director of the graduate program in philosophy at the State University of New York at Stony Brook (USB), Crease believes that the story of this fateful year embodies important lessons about the connection between science and society.

With a Ph.D. from Columbia University, Crease joined USB in 1987, and, early in 1989, began working part-time as BNL's historian. He is the author of the book *Making Physics: A Biography of Brookhaven Na-*



tional Laboratory, 1946-1972, which is due to be published by the University of Columbia Press in 1999.

Other books that Crease has authored or coauthored include *Peace and War: Reflections on a Life at the Frontiers of Science*, with the late theoretical physicist Robert Serber; *The Play of Nature: Experimentation as Performance*; and *The Second Creation: Makers of the Revolution in Twentieth-Century Physics*, with Charles C. Mann.

He contributes to the *Encyclopedia Britannica* and the *American National Biography*, and he is a former contributing correspondent to *Science*. Crease is also involved with Project WISE (Women in Science and Engineering), a joint BNL and USB enterprise.

Coffee and cookies will be served in the lobby before the lecture, and refreshments will be offered afterwards.

Those who wish to join the lecturer for dinner at a restaurant off site may call Liz Seubert, Ext. 2346, by noon on Wednesday, December 16.

— Diane Greenberg

BNL Employees' Perspective '98 Employee Focus Groups Meet

To address four issues of Lab-wide significance that were identified through the recent employee survey (see Brookhaven Bulletin of August 21, 1998), four employee focus groups have been meeting weekly for two to three hours a week since November 18 (see story, page 3).

The issues being addressed by these groups are: communication, diversity, employee involvement, and training & development (see Brookhaven Bulletin, November 6, 1998).

The recommendations of each group are due by February 18, 1999. Beforehand, the leaders of each group will present their groups' intermediate findings to the Employee Survey Steering Committee on January 6, 1999.

Before each group's first meeting, Laboratory Director John Marburger addressed all the groups' members (see photo below), saying that the cycle of surveying employees, analyzing their survey results, employing focus groups of employees to develop recommendations based on those results, and instituting change based on those recommendations "is now a part of life at BNL."

He added, "It is something that will happen approximately every two years and I hope go on forever."

Marburger promised "to take seriously" the recommendations to be made by the focus groups and to invest in the suggested solutions. As he explained to the focus group members, "You give the Lab your time, and the Lab will give back with its resources." — Marsha Belford



Laboratory Director John Marburger (right) addresses members of focus groups concerning: employee-involvement (foreground), communications (center), diversity, and training & development (background). — photos on this page by Roger Stoutenburgh

BNL Hosts IEEE Nuclear Science Symposium, Medical Imaging Conference in Toronto

The year 1998 was one of firsts both for the Lab and the Nuclear & Plasma Sciences Society of the Institute of Electrical & Electronics Engineers (IEEE): For the first time, BNL hosted the 1998 annual Nuclear Science Symposium & Medical Imaging Conference, and the conference was held outside the U.S. — in Toronto, Canada, November 8-14.

This year, the conference attracted more than 900 scientists and engineers, allowing researchers involved in detector development for physics and medicine to come together within one forum.

"Since it has often been researchers with backgrounds in nuclear science working in the area of medical imaging who have developed such revolutionary new technologies as computerized tomography, magnetic resonance imaging, positron emission tomography (PET), digital x-rays, and more, it is very important to provide a forum for the nuclear science and medical imaging communities to come together to discuss new ideas, which is one of the goals of this conference," said Conference General Chair Craig Woody, who is Deputy Group Leader of the PHENIX experiment at BNL's Relativistic Heavy Ion Collider (RHIC).

Among the BNL scientists who spoke during the Nuclear Science Symposium was Medical Department Chair Nora Volkow, who discussed "Imaging Drug Effects in the Brain" to illustrate how the use of PET detectors has enabled medical breakthroughs, particularly in the field of drug addiction. Instrumentation Di-



At the 1998 Nuclear Science Symposium & Medical Imaging Conference (NSS & MIC) are: (standing from left) Bo Yu, BNL; NSS & MIC general chair Craig Woody, BNL; NSS luncheon keynote speaker Martha Krebs, Director of DOE's Office of Science; Peter Paul, BNL's Deputy Director for Science & Technology; Instrumentation Division Chair Velko Radeka, BNL; and Zheng Li, BNL; (seated from left) Medical Department Chair Nora Volkow, BNL; conference secretary Bonnie Sherwood, BNL; conference treasurer Vinnie Polychronakos, BNL; and conference registration chairman Graham Smith, BNL. Absent from picture: conference course instructor Paul O'Connor, BNL.

vision Head Velko Radeka and scientist Paul O'Connor helped teach a course on nuclear pulse-processing applications, which involves the digital and analog circuitry used in the detection of subatomic particles. In addition, numerous other talks and papers were presented on high-energy and nuclear physics particle detectors that BNL scientists work on, including the PHENIX and STAR detectors for RHIC, and the ATLAS detector for the CERN Large Hadron Collider.

Martha Krebs, who is the Director of DOE's Office of Science, was the

keynote speaker at the Nuclear Science Symposium luncheon. In her address, entitled "Science for America's Future," she emphasized the important role that nuclear physicists play in advancing scientific and medical breakthroughs.

In addition to BNL's hosting the event, the Virginia-based Thomas Jefferson National Accelerator Facility organized the scientific program for the Nuclear Science Symposium, and the University of Michigan was responsible for the Medical Imaging Conference program. — Amena Saiyid

Spallation Source (cont'd.)

DOE's confidence in BNL's proven accelerator-development expertise and leadership was expressed by DOE's on-site Project Manager Michael Butler, speaking for George Malosh, who manages DOE's on-site Brookhaven Group. Butler also explained the national importance of this DOE project: "We're going to do well, go forward and make this a great success. This collaborative effort among national laboratories will be a new paradigm for future DOE large construction projects."

During the ceremony, Weng briefly recalled the history of the present work: DOE had initiated it as a five-lab collaborative project in 1995 (see Bulletin, April 4, 1997), but, at BNL, it had been spearheaded by a 1992 task force led by Arie van Steenburgen, National Synchrotron Light Source (NSLS) Department, for a five megawatt design, based on a rapid-cycling synchrotron concept instead of the accumulator.

As Derek Lowenstein, AGS Chair, summed up, not only for the five participating labs, but also for many departments and divisions within this Lab — AGS, Chemistry, Instrumentation, NSLS, Physics, Plant Engineering, and the Relativistic Heavy Ion Collider Project — this celebration was "the culmination of many years of preparation, and the start of many more years of work to come."

— Liz Seubert

What Is a Spallation Neutron Source?

A spallation neutron source is a type of accelerator that produces pulses of neutrons by smashing protons with sufficient energy into heavy-metal targets.

The neutron pulses are then accumulated into a beam to be aimed at a sample of the material being studied. Upon penetrating the material, the neutrons interact with it and scatter. By measuring the way that the neutrons are scattered, researchers obtain information about the material's structure and properties.

BNL scientists are involved in an international collaboration to develop new heavy metal targets using proton beams from the Alternating Gradient Synchrotron.

Also, the Instrumentation Division is developing detectors for neutron-scattering experiments, and researchers in the Chemistry Department are already using a spallation source in England.

In addition to neutron spallation sources, another way to get neutrons for scattering experiments is from research reactors, such as BNL's High Flux Beam Reactor, shut down at present.

However, while the continuous neutron beam from a research reactor is ideal for mapping specific particle energy and momentum changes, spallation sources, which produce neutrons in pulses, are excellent for surveys of many different energy and momentum changes that occur simultaneously.

Thus, although reactor and spallation-based source capabilities overlap to some extent, for experimenters, their use is largely complementary.

Information gained from neutron-scattering experiments at reactors and spallation sources are used to guide the development and production of products ranging from cars to computers, paints to plastics, and new, time-released medicines to lifesaving bulletproof vests.

— Liz Seubert

R2A2 Week December 14-18

As Lab Director John Marburger explained to supervisors and managers at a meeting on December 3 (see photo below), "Everyone at the Lab, including myself, has roles, responsibilities, accountabilities and authorities — and these are to be summarized next week in job descriptions henceforth known as R2A2s."

In a subsequent letter to all employees, Marburger wrote, "We need

to record these [R2A2s] for three reasons: to make sure someone gets assigned responsibility for doing all the work that needs to be done — and knows it; to make sure that each person has the authority needed to carry out their work; and to identify to whom each person is accountable for what they do. The process of making this basic information explicit for each employee avoids a lot of misunder-

standing. It also solves the very common problem of not providing authority or accountability commensurate with assigned responsibility. The responsibilities in R2A2s are also the framework for setting individual goals which are necessary for objective employee evaluations."

So, between December 14-18, supervisors and employees together will complete an R2A2 for each employee. To help them, R2A2 guidance has been issued to each organization's R2A2 representative. Lab staff may access this information on the R2A2 home page at <http://www.bnl.gov/PERSONNEL/R2A2> (capitalize the last two words). Completed R2A2s will be reviewed through mid-January, when supervisors will confirm the final versions with employees.

According to the Human Resources Division's Compensation Manager Bob Kelly, who heads the R2A2 effort, "When this initial period is complete, supervisors and employees will have established an explicit understanding of the employee's current responsibilities and associated accountabilities and authorities. This understanding should provide assurance to each of them that the job is performable and will get done."

— Liz Seubert



Roger Stoutenburg

CCD Alpha Cluster Retires 12/31

As was announced at last January's Monthly Information eXchange (MIX) meeting of the Computing & Communications Division (CCD), the four computers within the Alpha VMS cluster will be retired on December 31. Declining usage, increased operating costs, and the desire to use the UNIX operating system site-wide were cited as the reasons for the Alpha retirement.

As a result, Alpha users have had

to relocate their files and e-mail, but, while most of these users have responded to CCD's request to do so, not all have.

Therefore, to complete the transfer before the end of the year to the computers of their choice, the remaining Alpha users are asked to contact John Bennett, jrb@bnl.gov, Ext. 4153, or Paul Kessler, kessler@bnl.gov, Ext. 4156. While transfers still will be possible in the new year, doing them will have to be CCD's lowest priority due to limited staff and system unavailability, and there will be a charge for this service.

During the January 1999 MIX meeting, remaining Alpha cluster issues will be discussed, including access to the Compaq/DEC support line, media and update services, and the final disposition of Alpha hardware.

CCD Training

CCD, with Briarcliff College, will offer Microsoft Certified Engineering courses, starting in February 1999. Information packets are available in Room M2-62, Bldg. 515. Registration begins on Thursday, December 17, at 8:30 a.m. For more information contact Pam Mansfield, Ext. 7286 or pam@bnl.gov.

Outreach Workshop Today at Noon

Today at noon, "The Heart and Mind: The Psychology of Coronary Artery Disease" will be discussed by clinical psychologist Leslie Bowling during the next Outreach workshop. Sponsored by the Employee Assistance Program of the Occupational Medicine Clinic, the lecture is open to all.

Hospitality Committee Holiday Party 12/18

The Hospitality Committee invites all apartment residents and their families to a holiday party on Friday, December 18, from 5:30 to 7 p.m. in the Recreation Building in the apartment area. Soft drinks and finger food will be provided. RSVP by Wednesday, December 16, to Susan Hart, 821-4257, or Julie Kim-Zajonz, 929-0405.

Amateur Radio

The BERA Amateur Radio Club will next meet at noon on Friday, December 18, in Room A, Berkner Hall, for its annual holiday party. During the business meeting beforehand, nominations for club officers will be accepted. All BERA members and licensed amateur-radio operators are invited to attend.

For more information, call Chris Neuberger, Ext. 4160, or Nick Franco, Ext. 5467.

Arrivals & Departures

Arrivals

Matthias P. Messer Physics
Joseph Piacentino Jr. RHIC

Departures

Luis J. Addressi AGS
Heinz Pernegger RHIC
Barbara Schmidt Human Resources
Nathan T. B. Stone Physics

Spotlight on 56 Employees in FY 1998



For extending short-term extraordinary efforts in response to departmental or divisional needs, 56 BNL employees were honored with \$500-after-tax Spotlight Awards during fiscal year 1998. The 20 present for this photo are:

Front row, from left: Kara Villamil, Media & Communications Office (M&CO); Diane Carlson, Occupational Medicine Clinic; Mike Buckley, National Synchrotron Light Source (NSLS) Department; Donna Buckley, NSLS; Nelson Cause, Plant Engineering (PE) Division; and Janet Tempel, Community Relations Office.

Second row, from left: John Woods, Alternating Gradient Synchrotron (AGS) Department; Fred Benjamin, Financial Services Division (FSD); Joan Perullo, Administrative Support Division (ASD); Jackie Mooney, Physics Department; and Kathy Einfeldt, Physics.

Third row, from left: Phillip Kuczewski, Relativistic Heavy Ion Collider (RHIC) Project; George Hughes, Safety & Health Services (S&HS) Division; Rudy Zantopp, (S&HS); and Frank McNeill, Reactor Division.

Fourth row, from left: Barrett Clay, AGS; Andrew Sauerwald, RHIC; Joe Greco, RHIC; Doug Wood, RHIC; and Robert Doty, Department of Advanced Technology (DAT).

Those not present include, from the AGS: Brian Briscoe, Mary Campbell, Joseph Lombardo, Siegfried Naase, Frank Scheifele, and Freddy Severino; ASD: Catherine Glaser and Paula Pozzoli; Central Shops Division: Christopher Robertson; Contracts & Procurement Division: Terry Buck; DAT: Laura Ayres and Karen Savino; Department of Applied Science: Raymond Edwards; FSD: Gregory Mack; M&CO: Mona Rowe; NSLS: Charlotte Wrigley; Office of Economic Development & Technical Transfer: Arlene Wolochuk and Maria Yanez; Physics: Robert Liegel and Elizabeth Mogavero; PE: Robert McKay and Shantilata Subudhi; Reactor: Nicholas Houvener, Richard Scott, and Pamela Yerry; RHIC: Frank Cullen, Joseph DeLong, Ann Lamberti, Sue Norton, Andrew Sauerwald, Scott Seberg, Robert Soja and James Stolfi; Safeguards & Security Division: Joseph Musorrafti; S&HS: Dean Atchison, Kenneth Boland, and Joseph Cracco.

Gorman-Metz Scholarship Alert

Application forms are now available for the 1999 Gorman-Metz Scholarship, which is offered to children of BNL employees. The annual scholarship is a one-time, \$5,000 award for a student who has a disability, as defined by the Americans With Disabilities Act, and who is matriculating at an accredited institution to pursue a graduate or professional degree, with preference given to studies in science, engineering or math.

If approved by the Gorman-Metz Scholarship Committee, then other courses of study may be deemed eligible. Undergraduates will be considered if there are no graduate-student applicants.

The application deadline is March 1, 1999, and the scholarship winner will be selected by May. The names of applicants and their parents will be kept confidential. The name of the scholarship winner will be announced only with the consent of the recipient and his or her parents.

For applications and more information, contact the Diversity Office, Bldg. 185A, Ext. 3318.

Free Pizza!

The BERA Microcomputer Club will hold its annual holiday "soft-sector disks" (pizza) party at noon on Thursday, December 17, at Alfredo's Pizzeria on Route 25 in Ridge.

All existing and potential members are invited to attend this free celebration to mingle and learn more about the club.

To make reservations to attend this party, call Steve Stein, club president, Ext. 5694. For more information about the club, go to Web site at www.bnlmcc.bnl.gov.



Here Comes Santa Claus!

For the 16th consecutive year, Santa Claus (Lieutenant Chuck LaSalla) and his Elf (Firefighter Frank Palmeri Jr.) will be coming to Upton town — to wish everyone happy holidays and distribute candy canes along with good cheer, compliments of the Lab's Fire/Rescue Group of the Safety & Health Services Division.

On Monday, December 21, using Fire Engine #2 as their sleigh, Santa and his elf will first visit BNLe's children at 10 a.m. at the Child Development Center and at 10:30 a.m. in the Little Red School House.

The merry crew will make their rounds of the offices, labs and shops on site from 9 to 11 a.m. on Thursday, December 24. To make your reservation to have Santa and company visit your workplace at a specified time that day, call the North Pole, Ext. 2351, with your request, before Monday, December 21.

Defensive Driving

The training group of the Safety & Health Services Division will offer a six-hour defensive driving course in two 3-hour classes, to be held on December 15 & 16, from 6 to 9 p.m., in Berkner Hall.

The fee is \$20 per person. To register, call Scott Zambelli, 249-3000 at extension 5877 (not the on-site BNL Ext. 5877).

BNL Bambis Are Fine

Why, recently, have fewer deer been seen browsing on the grass?

Jan Naidu, Safety & Health Services Division, asked the New York State Department of Environmental Conservation (NYSDEC) this question.

The answer is that this year's bumper crop of acorns allows deer to enjoy a favorite food deep in the woods. Decreasing daylight due to the approach of the winter solstice allows less time to spot deer. The main reason why NYSDEC is confident that the deer population is unchanged is that the count of deer at checkpoints has remained the same as in past years.

Calling All Carolers

The BNL Choral Group will present its annual holiday concert on Tuesday, December 22, in the cafeteria. Rehearsals are at noon in Berkner Hall on December 15 & 17. All are welcome. For more information, call Kara Villamil, Ext. 5658.

BNL Employees' Perspective '98

How to Contact Focus Groups, Members

In coming up with recommended solutions to the four issues being tackled in employee focus groups (see story on page 1), focus-group members are expected "to talk to other employees, to get as many people involved in the process as possible and find out what is on employees' minds today," explained Lorraine Merdon, who is Chair of the Employee Survey Steering Committee (ESSC) which organized the focus groups.

In addition, BNLe's who have comments or suggestions are themselves invited to make contact with any of the focus-group members listed below, or to get in touch with the group leader, point of contact or ex-officio member of the appropriate committee.

Besides attending their group's weekly deliberations and seeking input from other employees, focus-group members have been asked to keep the discussions within the group confidential, and, if requested, to keep confidential any suggestions made to them by employees. Employees who wish to give input anonymously are invited to call the focus-group hotline, Ext. 8200, or to send intra-Lab mail to Merdon at the Diversity Office, Bldg. 185A.

The leader of the group on: communication is Sheila Bubka, Ext. 3144, Bldg. 535A, bubka@bnl.gov; diversity, Jan Naidu, Ext. 4263, Bldg. 535A, naidu@bnl.gov; employee involvement, Bill Graves, Ext. 2095, Bldg. 725D, wsgaves@bnl.gov; and training & development, Arnold Peskin, Ext. 4161, Bldg. 515, peskin@bnl.gov.

The point of contact is, for: communication, Lucy Quirk, Ext. 8624, Bldg. 460, quirk@bnl.gov; diversity, Susan Cuevas, Ext. 7414, Bldg. 460, cuevas1@bnl.gov; employee involvement, Beth Blevins, Ext. 5630, Bldg. 860, blevins1@bnl.gov; and training & development, Pam Mansfield, Ext. 7286, Bldg. 515, pam1@bnl.gov.

In addition, each focus group has one or more ESSC members as ex officio participants. The ex-officio members are, for: communication, Robert Kinhead, Ext. 5322, Bldg. 134, kinhead@bnl.gov; diversity, Terry Buck, Ext. 5475, Bldg. 355, tbuck@bnl.gov, and Lorraine Merdon, Ext. 3318, Bldg. 185A, merdon@bnl.gov; employee involvement, Susan Foster, Ext. 2888, Bldg. 185, foster2@bnl.gov; and training & development, George Greene, Ext. 2296, Bldg. 820M, greenel@bnl.gov, and Marilyn Pandorf, Ext. 5251, Bldg. 185, pandorf@bnl.gov.

In addition to those listed above, the following employees are members of communication focus group: Karen Adelwerth, Marilyn Banks, Rolf Beuttenmuller, Patricia Cahill, Joe DeVoe, Andrew Feldman, John Gallagher, Robert Kaszuba, Cathy Lombardo, Bonnie Sherwood, Susan Signorelli, Alan Smith, and Lisa Toler.

The diversity focus group also has as members: Patrice Benjamin, Al Borrelli, Anne Dunbar, Renée Flack, Ed Gallagher, Kathleen Hauser, Michael Jacobellis, C.R. Krishna, Leon Lawrence, Hue-Anh Pham, Upendra Rohatgi, Sol Rosario, Mike Schlender, Brenda Thomas, Patricia Valli, and Samuel Velazquez.

The employee-involvement focus group includes: Marsha Belford, Jeanne D'Ascoli, Daniel Farge, Gobi Gopinath, Conrad Koehler Jr., Melinda Markstaller, Ed McFadden, Joseph Modjeska, Jennifer O'Connor, Arthur Scholtz, Robert Soja, Gregory Stawski, Ken Sutter, and Phyllis Tinsley Smith.

Additional members of the training & development focus group are: Frank Biele, Richard Conte, Joe DeLong, Bruce Dionne, Linda Feierabend, Geeta Joshi-Tope, Christopher Jung, Noreen Michelsen, Daniel Oldham, Keisha Washington, and Geen Yee.

BROOKHAVEN BULLETIN

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No Bulletin 12/25, 1/1

Due to the holidays on Thursday and Friday, December 24 & 25, and on Friday, January 1, 1999, there will be no Brookhaven Bulletin issued on those two Fridays. Notices for publication in the Bulletin of Friday, December 18, must be submitted by noon on Monday, December 14.

BERA Toy Drive

Next Friday, December 18, is the last day to bring in new toys as donations to Brookhaven Town's annual holiday toy drive. Take your toys, for infants through teenagers, to the BERA Sales Office, Berkner Hall, Tuesday through Friday, 9 a.m. to 1:30 p.m.

Equipment Demos

On Tuesday, December 15, from 10 a.m. to 2 p.m., in Berkner Hall, DIRECTwireless will display its products and offer a special promotion for BNL employees. For more information, call 673-0288.

On Thursday, December 17, from 11 a.m. to 3 p.m., in Berkner Hall, CTP Wireless will discuss the AT&T wireless services corporate cellular rate it offers BNLers.

The service includes airtime rates of 20 cents per minute, 40 minutes of airtime and more for a monthly \$19.99 charge. Four free digital phones will be displayed. For more information, call 585-2900.



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 complete list of all job openings; use a TDD system to access job information by calling (516) 344-6018; or access current job openings on the World Wide Web at <http://www.bnl.gov/JOBS/jobs.html>.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates

MK7651. SCIENTIST - Requires a Ph.D. in theoretical nuclear physics or strong interaction theory, with interest in pursuing research in the theory of heavy-ion collisions at ultra-relativistic energies. This position will be a joint appointment as a staff physicist in the nuclear theory group and with RHIC at the RIKEN BNL Research Center. The program at the Center is focused on strong-interaction physics and QCD theory. Under the direction of R. Pisarski, Physics Department.

MK7884. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in material sciences in the fields of corrosion, electrochemistry, or organic coatings of metals, and a comprehensive background in corrosion, chemical properties of organic coatings or x-ray absorption techniques. Will carry out research directed toward locating the presence of corrosion under paints on aluminum and other metals, and developing techniques to determine the location and extent of corrosion. Under the direction of H. Isaacs, Department of Applied Science.

MK7883. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in material science or physics in the fields of corrosion or electrochemistry, and a comprehensive knowledge of highly localized physical and chemical microprocesses. A background in x-ray absorption and scattering or electrical/ionic transport in solids is desirable. Will conduct research related to corrosion, passivity and breakdown processes of coated and uncoated metals and alloys, employing advanced x-ray and novel measuring techniques to determine corrosion and oxidation processes on a scale at which they take place. Under the direction of H. Isaacs, Department of Applied Science.

MK3575. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. and expertise in operating a low-temperature single-particle chamber. Will participate in investigations to study the physics and chemistry of stratospheric aerosols and their role in ozone depletion. Under the direction of L. Newman, Department of Applied Science.

MK7730. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in accelerator physics with theoretical and experimental capabilities, and experience in lattice design, non-linear magnetic field

Support BNL's Community Effort

Give to the United Way

Is anyone in your family expecting a baby? What would happen if, like 7 percent of newborns, he or she failed his first hearing test? At six weeks, another test would be given. In little Tommy Osborne's case, he was diagnosed with severe hearing impairment, and, at four months old, he was fitted with two hearing aids. Through the program organized by the Long Island Hearing & Speech Society, he is now responding to sounds and has begun to talk like any other two-year-old child. With United Way funding, the society is able

to afford hearing tests for all newborns and detect impairment that could cause significant speech and language development.

Has anyone you know got cancer? Perhaps that person is undergoing chemotherapy, losing hair and in terrible pain. One United Way-affiliated agency, Cancer Care, offers patients free counseling and introduces them into support groups with other cancer patients of around the same age.

"We can talk about issues such as relationships, loss, fear — that others can't hear or don't know how to respond to. We inspire and encourage one another," said a Can-

cer Care support-group member.

At BNL, Tirre Farmer is coordinating this year's United Way drive with the help of co-coordinator Patti Bender and tireless assistance from Liz Mogavero, who receives the donations. "There are 160 agencies helped by the United Way, and the more you know about them and the work they do, the more thankful you are that they exist," said

Farmer. "Without United Way funding, some of these agencies would close, and all would have to curtail services. In the first ten days of our fund drive 13 percent of BNL employees have donated \$71,965,

which is wonderful. I hope very much that everyone who has not yet sent in their pledge will do it now. Even if you give generously to other charities, by helping in the BNL effort, even with a small donation of \$5 or \$10, you help show BNL's commitment to the Long Island community."

To see a display of the programs provided to the community by the American Red Cross, which is partly supported by the United Way, visit Berkner Hall, Wednesday, December 16, 11 a.m.-1 p.m.



LONG ISLAND'S UNITED WAY

Volleyball

League standings as of October 23

Open League A		Mixed League 2	
Death Volley	16-5	Safe Sets	19-2
Spikers	15-6	Spiked Jello	14-4
Far Side	9-12	Monday Nite Live	15-6
Shank/Cary&Throw	2-19	In Sideout	12-9
		How-Bout-Dis	8-13
		Setups	6-15
		Just-4-Fun	4-14
		Nuts & Bolts	3-18
		Mixed League 3	
		Upton Ups	14-1
		Mixed League 1	
		Group Sets	10-5
		Bikers&Spikers	12-3
		Six Samurai	7-5
		Set to Kill	9-6
		NWO	7-8
		Scared Hitless	7-8
		Net Setters	3-12
		Rude Dogs	2-13
		Butlers	1-11

Bowling

Purple and White League - 11/19

M. Meier 246/198/614 scratch series, M. Guacci 236, E. Meier 233, D. King 210/191, S. Logan 206/180, B. Mullany 203/196, J. Zebuda 201/192, L. Simes 209, A. Pinelli 201, P. Callegari 200, J. McCaffrey 196, C. VanSickle 176/173, J. Holmstrom 183, Donna King 179.

Purple and White League - 12/3

G. Mehl 240/203/613 scratch series, K. Burns 225/191, M. Guacci 211/210, E. Sperry III 235, J. Zebuda 211, J. McCarthy 198, C. Johnson 188, A. Wynkoop 187, M. Wool 185, L. DiPierro 177, D. Keating 174.

Red and Green League - 11/24

R. Mulderig Sr. 290/233/208/731 scratch series, M. Meier 254/223/661 scratch, R. Mulderig Jr. 245/204/632 scratch, K. Koebel 235/229/640 scratch, H. Dawson 213/209/610 scratch, G. Miltenberger 213/212, E. Larsen 239/622 scratch, J. Mayeski 237, K. Asselta 234, J. Griffin 228, R. Larsen 217, R. Raynis 217, E. Sperry IV 209, L. Mulderig 200, A. Pinelli 200.

Red and Green League - 12/01

E. Larsen 257/251/213/721 scratch series, R. Raynis 256/218/672 scratch, K. Koebel 206/203/607 scratch, R. Mulderig, Sr. 250, B. Miltenberger 219, J. Mayeski 218, J. Griffin 215, T. Sullivan 206, G. Miltenberger 203, O. Mirjah 203.

effects, space-charge effects, and accelerator operation. Will participate in the design, construction, installation, and commissioning of the Spallation Neutron Source accumulator ring and transport system. Under the direction of Y. Y. Lee, Alternating Gradient Synchrotron Department.

NS8040. TRAINING POSITION - Requires a degree in a technical field, extensive practical experience in the mechanical or electrical trades, excellent organizational and communication skills, and the ability to handle multiple priorities and meet deadlines. Proficiency in Microsoft Word and Access is necessary; previous training experience is desirable. Will administer and coordinate the Plant Engineering and Central Shops training efforts to ensure compliance with DOE orders and other applicable regulatory requirements. Responsibilities will include developing training plans to ensure that technical, ES&H and QA training needs are identified; providing necessary training; assuring that licenses and certifications are maintained; and developing procedures and lesson plans. Plant Engineering Division.

NS7481. WRITER/EDITOR POSITION - (term appointment) Requires a bachelor's degree or equivalent, comprehensive experience in procedural and technical editing and writing, familiarity with Netscape and MS Word-style sheets, excellent interpersonal communication and team building skills, speed and accuracy in note taking, and the ability to synthesize meaning and intent into clearly written documents. Experience with HTML, Web-page development and flow-charting software is desired. Under general direction, will provide writing, editing, coding, and other communications support for the production of scientific, technical and administrative documents for publication electronically on WWW, CD or other media, or in print. Information Services Division.

DD7553. REGISTERED NURSE - (term appointment) Requires NYS license, preferably a BS with ACLS certification, to join a research team evaluating the safety and efficacy of boron neutron capture therapy for glioblastoma multiforme. Will be responsible for direct patient care, strict adherence to study protocols, including monitoring vital signs and managing I.V. lines, as well as the ability to learn and conduct laboratory research. Must be able to accommodate unscheduled overtime. Medical Department.