



Roger Stoutenburgh CNZ-201-01

Members of the Instrumentation team that designed and fabricated the advanced, two-dimensional neutron detector are: (from left) Graham Smith, Don Makowiecki, Neil Schaknowski, Jack Fried, George Mahler of the Collider-Accelerator Department, Bo Yu, Joe Mead, Veljko Radeka, and Joe Harder.

Instrumentation Designs, Fabricates Advanced Imaging Neutron Detector

Scientists from BNL and Los Alamos National Laboratory (LANL) have joined their efforts to map in unprecedented detail the structure and function of proteins, which are among the fundamental building blocks of life. Key to this effort is a state-of-the-art neutron detector, which has just been completed by BNL's Instrumentation Division scientists led by Instrumentation Head Veljko Radeka and Graham Smith.

The detector, which took three years to design and build, is the largest neutron detector ever built at BNL.

The instrument will not only exhibit the highest measurement precision of all such existing detectors, but it will also permit ten to 20 times faster data collection than has previously been possible to achieve. The detector will form the core of the Protein Crystallography Station, a large device at LANL dedicated to studying protein structures.

Proteins are very large molecules that carry out the cell's chemistry, direct organs' activities, and defend against infection. The diversity and usefulness of proteins stem from their intricate structure and shape.

"Neutrons tell you information about the hydrogen content of proteins," Smith says. "Given that about half of the atoms in a protein are hydrogen atoms, this means that neutrons provide valuable information about proteins that would not be available otherwise."

At the new station, a beam of neutrons will be directed onto a protein sample. After bouncing off the sample, the neutrons will be detected by the BNL-developed neutron detector, which will partially surround the protein sample at a distance of 70 centimeters.

"The neutron detector will allow scientists to take snapshots of changes that occur in the protein every millisecond," Smith says. "It is almost as if you are taking a movie of how the protein folds and unfolds with time."

The detector is made of eight identical segments arranged side by side inside a pressure vessel containing a rare form of helium gas, with electronics sitting on top of the vessel. When a neutron speeds into the vessel, it collides with a helium atom. Two charged particles — a proton and a triton — are ejected.

"As the proton and triton travel in the gas, they strip neighboring helium atoms of their electrons," says Radeka, a pioneer of low-background detector electronics. "The location of the electrons freed by the proton and triton is detected by the electronics, revealing where the neutron entered the vessel."

To improve the accuracy of the detector, propane is added to the gas, which limits the distance traveled by the proton and the triton to one millimeter.

"The goal was to have a detector with the largest possible angular coverage," Smith says, "so we came up with a design covering 120 degrees horizontally and 15 degrees vertically."

With this design, Smith explains, the detector would be

able to count at least one million neutrons per second over the entire area. Also, by putting eight segments side by side, but implementing each segment with its own readout electronics, the device would detect one event in all the segments at the same time. This is how Smith and his colleagues improved the counting rate from previous neutron detectors.

Before building the actual detector, the scientists had made a quarter-size prototype containing two segments. They performed tests on the prototype for about a year and a half.

(continued on page 2)

Working Group Explores Anti-Terror Initiatives

In the wake of the devastating September 11 terrorist attacks in New York, Washington, D.C., and Pennsylvania, BNL has established an anti-terrorism working group to identify innovative approaches that may help to preserve the safety and enhance the long-term security of the United States and its people.

The 31-member BNL working group builds on an urban anti-terrorism technical support organization established at the Lab in March 2001. The group is headed by Ralph James, Associate Laboratory Director for Energy, Environment & National Security, with support from Joe Indusi, Chair of the Nonproliferation & National Security Department, and Paul Moskowicz, Program Manager for Counter-Terrorism Initiatives. The working group aims to consolidate BNL's unique capabilities and expertise in anti-terrorism to develop cutting-edge, science-based technologies that could help the nation predict, detect, preempt, and respond to terrorism.

"The destructive and vicious attacks of September 11 created an enormous challenge to build an improved security framework for our nation," said James. "As vanguards for the advancement of technological solutions, scientists at Brookhaven and elsewhere are now mobilizing to answer that challenge."

The working group represents most of BNL's scientific disciplines. Many of the group's ideas emphasize improved means to prevent and protect against attacks and to provide emergency response if prevention and protection should fail. Approaches and technologies currently being explored include:

- sensors for the early detection of nuclear, chemical, and biological agents and explosives, with the ability to detect trace quantities of these materials.
- a one-of-a-kind chemical sensor to locate and identify chemical spills or ground contamination from a safe distance. Another technique under development uses microwaves to image unknown materials.
- methods to detoxify nerve gas agents using an enzyme that can degrade such compounds. This work could lead to topical lotions that protect the skin.
- structural studies of viruses to determine how these organisms attack the human body. This work may help scientists design vaccines and antidotes against biological weapons and aid in identifying these agents. Similar structural studies of chemical agents may also help design countermeasures for chemical weapons.
- a jackhammer-like device that could be used to break up concrete and other debris in enclosed spaces.
- a magnetic imaging tool designed to locate and map iron structures hidden in debris to aid in search-and-rescue missions.

(continued on page 2)



Roger Stoutenburgh DO101/001

BNL Hosts International Workshop to Discuss Reliability of Nuclear Safeguards Equipment

Since some 135 nations signed the Treaty on the Non-Proliferation of Nuclear Weapons in 1968, a vital role of the International Atomic Energy Agency (IAEA) has been to take measures known as safeguards to ensure that nuclear materials and installations obtained through peaceful technical cooperation are not diverted for use in nuclear weapons. Since 1968, BNL has a history of assisting and advising DOE and others to meet technical challenges related to the IAEA mission. From October 15 to 17, the Safeguards & Arms Control Division (SACD) and the International Safeguards Project Office (ISPO) of BNL's Nonproliferation & National Security Department hosted an international safeguards workshop at the Lab. The workshop, which focused on the design and testing of safeguards equipment for high reliability, was organized for the IAEA by SACD's James Lemley and ISPO's Michael Farnitano. It was attended by representatives of IAEA, DOE national laboratories, the U.S. private sector, academia, Canada, and Germany. The purpose of the meeting was to discuss and identify solutions to problems affecting the reliability of IAEA safeguards equipment. Said attendee Susan Pepper, ISPO, "The meeting was organized prior to the September 11th terrorist attacks. But, as international attention focuses on the potential of terrorists using nuclear weapons, the IAEA's job of accounting for and confirming the non-diversion of worldwide stocks of nuclear material is increasingly important."

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 M. Kay Dellimore, Ext. 2873.
- Additional information for Hospitality Committee events can be found at the Lollipop House and the laundry in the apartment area.
- The Recreation Building (Rec. Bldg.) is located in the apartment area.
- Contact names are provided for most events for more information.
- Calendar events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.

TODAY IS THE DEADLINE FOR HEALTH CARE, DEPENDENT DAY CARE REIMBURSEMENT ACCOUNTS

Enroll now in these accounts. Forms are available in Bldg. 185. For more information, call Benefits Office, Ext. 2877.

— WEEK OF 12/3 —

***Mondays, Thursdays: Carollers**
noon-1 p.m., Berkner Hall Auditorium. Join a group who like to sing holiday songs, carols. Reading music not required. All voices wanted, sopranos, altos, tenors, bases. Liz Seubert, Ext. 2346, lseubert@bnl.gov.

Mondays: Arts & Crafts
1 p.m., Rec. Bldg. Hospitality event. \$1 per class. "Basic Photography" participants should bring their camera and a few photographs that they have taken. Marcia Leite, Ext. 1040, mhsleite@hotmail.com.

Mondays: BNL Gospel Choir
5:15-7 p.m. Rehearsals in Berkner auditorium. Seeking new members, all faiths. Frances Ligon, ligon@bnl.gov, Ext. 3700; Sydell Lamb, lamb@bnl.gov, Ext. 3389; www.bnl.gov/bera/activities/choir/

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 Mimi Luccio, 821-1435.

Tuesdays: Toastmasters
Meetings are 1st and 3rd Tuesday of each month, 5:30 p.m.; 4th Tuesday at 12:05 p.m. in Bldg. 463. Guests, visitors always welcome. www.bnl.gov/bera/activities/toastmstrs/default.htm.

***Wednesdays: BNL Ballroom, Latin & Swing Dance Club**
North Ballroom, Brookhaven Center. Marsha Belford, belford@bnl.gov.

Wednesdays: Cooking Exchange
10 a.m., Rec. Bldg., Hospitality event. Every third Wednesday. \$1 per evening covers the cost of ingredients. Marcia Leite, Ext. 1040, mhsleite@hotmail.com.

Wednesdays: Weight Watchers
noon-1 p.m., Brookhaven Center South Room. Mary Wood, Ext. 5923.

Wednesdays: Yoga Practice
12-1 p.m., Rec. Bldg. Free. Ila Campbell, Ext. 2206.

Wednesdays: Stretch
5:15-6:15 p.m., \$4 per class. Rec. Bldg. Pat Flood, Ext. 7886.

Thursdays: Falun Dafa Class
noon-1 p.m., Free. Rec. Bldg. Falun Dafa refines the body and mind through exercises, meditation. www.falundafa.org.

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

Tues. & Thurs.: Aqua Aerobics
5:15 p.m. \$2 pool fee per class or pool pass. Mary Wood, Ext. 5923.

Mon. Tues. & Thurs.: Cardio 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.

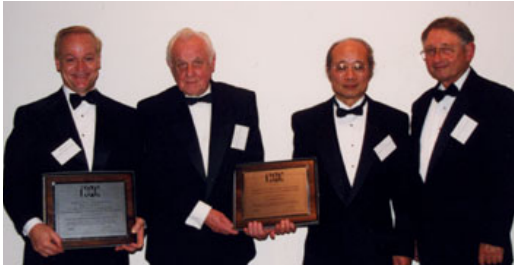
Mon., Tue. & Fri.: Tai Chi
12:15 - 12:45 p.m., Rec. Bldg. Scott Bradley, Ext. 5745, bradley@bnl.gov.

— WEEK OF 12/3 —

Tuesday, 12/4

Verizon Wireless Demo
10 a.m.-3 p.m., Berkner Lobby. Special rates on wireless service for BNLers. Harry Campbell, 516-458-9122.

BNLers Win Two R&D 100 Awards



At the award ceremony in Chicago, with Interim BNL Director Peter Paul (right), are BNL's 2001 R&D 100 winners: (from left) Ralph James, Eugene Premuzic, and Mow Lin.

On October 4, at Chicago's Museum of Science & Industry, BNL's Ralph James, Mow Lin, and Eugene Premuzic were presented with 2001 R&D 100 awards by *R&D Magazine*. The awards honor the 100 outstanding processes chosen by the magazine as the top technological achievements of the year.

James, who joined BNL in June as Associate Director for Energy, Environment & National Security, won the award for work done while he was at Sandia National Laboratory. With collaborators from Fisk University and Israel's Technion, he invented a crystal-growth process useful for producing x-ray and gamma-ray detectors. The new technique allows the growth of large single crystals of cadmium-zinc-telluride with desired electrical properties.

Radiation detectors produced from these crystals operate effectively at room temperature, require little maintenance, and

provide the capability of identifying radioactive sources in the field. These unique features will be useful in safeguarding nuclear materials, imaging gamma-ray bursts, speeding up environmental cleanup, and improving the detection of tumors and heart disease.

James is a three-time winner of the R&D 100 Award, having won previously in 1998 and 2000.

Mow Lin of the Energy Sciences & Technology Department, retired BNL scientist Eugene Premuzic, and Caithness Operating Company researchers won their R&D 100 award for inventing a new silica-recovery process. As described in the Bulletin of August 3, 2001, (go to www.bnl.gov/bnlweb/pubaf/bulletin.html), the process lowers production costs in harnessing geothermal power and could lead to new industries in states rich in geothermal resources.

— Liz Seubert

Anti-Terror Initiatives

(cont'd.)

- materials studies that could lead to "smart" buildings that are more resistant to terrorist acts involving explosives and chemical and biological agents.
- an improved way to assess security risks at office buildings, energy supply/distribution systems, airports, and other infrastructure elements, incorporating weighted analysis of threats, vulnerabilities, and consequences.
- techniques to model and track aerosols and chemicals as they move through air, and identify and assess sources and trajectories of these airborne contaminants.
- training and role-playing exercises to help first responders prepare for possible terrorist attacks.

"Our scientists are determined to apply their skills to reduce the likelihood that the pain we experienced on September 11 is ever felt again," said James. "The terrorist attacks altered the way many scientists conduct business, and it is unlikely we'll be back to 'business as usual' anytime soon."

— Peter Genzer with Patrice Pages

Advanced Imaging Neutron Detector

(cont'd.)

"To begin with, we had this feeling that we had bitten off more than we could chew," Smith says. "But as the design progressed, we realized that it would work."

Once they were satisfied with the design, from November 2000 to July 2001, the team assembled the eight blocks of the detector.

"Previous neutron detectors had, at most, three separate devices rather than eight. Also, they worked independently, which was not always convenient," comments Dieter Schneider of BNL's Biology Department, who has used earlier neutron detectors made at BNL.

"It is a tremendous achievement to have made a quasi-continuous block of eight segments that have the same properties all across and behave as a single device," Schneider says.

On July 27, the detector was shipped to LANL. To protect its delicate parts, the team carefully packed the detector into an air-ride truck containing a special platform floating on springs that acted like a cushion by dampen-

ing the jolts from road bumps. Research engineer Neil Schaknowski and electrical engineer Joseph Mead, two members of the team, traveled to Los Alamos to set up the detector at its station. Within ten days, it was up and running.

"It was a big surprise that it went so smoothly," Schaknowski says. "Having everything work successfully for the first time in this new environment was very satisfying."

Now, Benno Schoenborn, a former BNLer who is principal investigator of the project, and his collaborators at LANL are commissioning the detector before actually using it to study protein samples.

"We will collect two million data points in one millisecond — which is tremendously," says Schoenborn, who pioneered neutron protein crystallography studies at BNL before moving to LANL. "The Instrumentation scientists did a remarkable job in a reasonable time and within budget. This is an incredible feat."

— Patrice Pages

Winter Concert, 12/6

Presented by the BNL Music Club and the BNL Gospel Choir



On Thursday, December 6, at 7 p.m., the BNL Music Club and the BNL Gospel Choir will present a Winter Concert at Berkner Hall. BNL Deputy Director Tom Sheridan will be the Master of Cermonies.

Performing will be: the BNL Gospel Choir; the Kristhen Trio; musicians Henry and Kristi Diaz, a contemporary acoustic duo playing renditions of popular holiday songs; and BNL's James O'Malley, a lifetime songwriter playing original songs that he has recorded on CD.

The suggested donation is \$3. Proceeds will be donated to Little Flower Children's Services. All are welcome at this public concert. For more information, contact Joe Vignola, Ext. 3846 or vignola@bnl.gov.

Meet Melissa Bittrolff, HR Benefits Office Representative



Roger Stoulenburgh 0005101

efits." DiMeglio continued, "Melissa will serve as the Benefits Office 'front-end' customer service representative — a job that I'm confident that she will perform very well."

Bittrolff, a lifelong resident of Shirley, comes to BNL with an MBA from Dowling College and experience working for Blue Cross Healthcare and several benefit-consulting companies. She has also worked for Vytra Health Plans as the account executive for BNL.

Bittrolff, who is also excited about learning the aspects of human resources that fall outside the realm of medical benefits, will handle BNL's medical and dental insurance, flexible spending accounts and other services available through the Benefits Office.

"I have experience working with many people from BNL, given the nature of my previous position at Vytra," Bittrolff said. "I am enthusiastic about becoming part of the Lab community."

Bittrolff encourages anyone who has questions or concerns regarding the Benefits Office to contact her at Ext. 2877.

— John Galvin

Arrivals & Departures

Arrivals

Wayne Betts	Physics
Andrew Davis	C-A
Megumi Hada	Biology
Pierre-Marie Paul	Chemistry
Ronald Pindak	NSLS
John Sheehan	Env. Rest.
Rainer Soika	Magnet
Luhong Wang	Chemistry
John Whitehouse	Reactor

Departures

Stanko Brankovic	Materials Sci.
Pamela Ciufo	NSLS
Olaf Dressler	C-A
Victor Gutierrez	Quality Mgmt.
Robert Miltenberger	Rad. Ctrl.
Cheryl Williams	Instrumentation

Money Talks Seminar: Plan Retirement, Estate

To be able to take advantage of the opportunities available after retirement, one usually needs to plan ahead. American Express Financial Advisors Inc. will present a Money Talks Seminar on "Pre-Retirement and Estate Planning" on Wednesday, December 5, 5:30-7:30 p.m., in Berkner Hall. Topics will include calculating the cost of retirement, identifying sources of retirement income, determining how much you need to save, and much more.

For more information, contact Joyce Wund, Ext. 7516 or jwund@bnl.gov.

Coming Up, 12/12

Noon Recital

The Stony Brook Baroque Players will perform lyrical and virtuoso Baroque music at Berkner Hall.

Brookhaven Lecture

On Wednesday, December 12, at 4 p.m. in Berkner Hall, Stephen Peggs of the Collider-Accelerator Department will give the 368th Brookhaven Lecture, on "Proton Accelerators for Cancer Therapy and Imaging."

United Way Donations Total \$58K So Far

BNL employees have raised \$58,236 since the Lab's 2002 United Way campaign kicked off on November 7. The theme of this year's campaign is "Sharing From the Heart," and the goal is to raise \$115,000 in donations.

"We are well on our way to reaching our goal," says Susan Monteleone, this year's United Way campaign chair. "The Lab's initial response was strong and certainly suggests that we will succeed."

Beth Blevins, co-chair of this year's drive, heads the **volunteer program**. With supervisory approval, employees can volunteer for a minimum of two hours, one of which can be a work hour, at a United Way agency. BSA will donate \$20 to the fund for every hour volunteered until the end of the year, up to \$10,000. For more information about volunteer efforts,

Name	Department/Division	Ext.
Sharon Atkins	Proc. & Prop. Mgt.	3217
Thomas Baldwin	Plant Engineering	4556
Patti Bender	STQ – Plant Eng.	3145
Beth Blevins	Env. Rest./Waste Mgmt.	5630
Tracy Blydenburgh	Health Physics	4422
Gail Brown	ES&T	5850
Lois Caligiuri	Chemistry	4397
Sheryl Carey	Radiation Control	7716
Diane Carlson	Occupational Medicine	3670
Frank Cetero	Magnet	2012
Susan Cuevas	Budget Office	7414
Francine Donnelly	Waste Management	7334
Debbie Doyle	Plant Engineering	3084
Jim Durnan	Radiation Control	5993
George Elias	Plant Engineering	4556
Donald Elliott	Instrumentation	6072
Ann Emrick	Biology	5756
Beth Evelyn	QA	3689
Tirre Farmer	EP	3288
Gregory Flett	Plant Engineering	3263
Bill Fortunato	SBMS Office	7368
Sue Foster	Human Resources	2888
Linda Hanlon	ES&T	7517
Mary Lynn Heinrich	AO	7796
Tammy Heinz	Physics	5864
Marie Hobson	Fiscal Services	2456
Toni Hoffmann	Business Services	5257
Betty Ivero	Environ. Science	2452
Sharon Jones	Counterintelligence	2493

contact Blevins, Ext. 5630 or blevins@bnl.gov.

An additional way in which to participate is through the **holiday raffle** effort headed by Linda Sinatra, sinatra@bnl.gov or Ext. 6042. Groups of people are making gift baskets to donate to the raffle, which will be held at Berkner Hall on December 12 and 13, 11 a.m.-2 p.m. Drawings will be made at 2 p.m. each day.

Another raffle to be won is the **early-donor prize raffle**, to be drawn from all those who send their pledge forms in by **today, Friday, November 30**. Send your pledge form today to Liz Mogavero, Bldg. 510A, to be entered into the prize drawing.

For more information about this year's campaign, see your department/division's United Way captain (see list below) or go to www.bnl.gov/bnlweb/unitedway.html.

Name	Department/Division	Ext.
Terry Jones	Information Services	2381
Debbie Keating	Proc. & Prop. Mgt.	3888
Claire Lamberti	Data Intensive Computing	3051
Elliott Levitt	Internal Audit	2495
Mow Lin	ES&T	3064
Ali Lopez	Materials Science	3508
Jeanne Madaia	NNS	7125
Lois Marascia	Directors' Office	8600
Mindy Markstaller	Safeguards & Security	2280
Vera Meier	Staff Services	5843
Kerry Mirabella	Collider-Accelerator	2632
Liz Mogavero	Physics	3940
Sue Monteleone	ES&T	7235
Joyce Mortimer	Ind. Oversight	4229
Ed Murphy	EP	3466
Susan Perino	Fiscal	2483
Jeanne Marie Petschauer	CEGPA	2397
Arthur Piper	Collider-Accelerator	7934
Lydia Rogers	NSLS	4746
Barbara Roland	Environmental Sciences	3275
JoAnn Rula	Environmental Restoration	5768
Mike Schaeffer	Plant Engineering	7941
Sue Signorelli	ES&T	4931
Linda Sinatra	Fiscal	6042
Rich Spellman	Central Shops	3351
Linda Strome	Emergency Svcs Div	5384
Rosemary Taylor	Environmental Services	3251
JoAnn Totans	Information Services	3138
Warren Voegelin	Waste Management	3088
Kathy Walker	Safeguards & Security	7105

Poinsettia Sale

BERA will be selling poinsettias this year to benefit Jack's Dreamhouse, a division of the Timothy Hill Children's Ranch. This 106-acre working ranch, located in Riverhead, is a home for local troubled teens.

The foil-wrapped plants come in various colors: red, white, pink, marble, pink peppermint, Monet, and more. Plants cost \$8 each and prepaid orders can be made at the BERA Store, Berkner Hall, weekdays, 9 a.m.-3 p.m. Plants may be picked up on Friday, December 14.



Radio City Show

Some tickets remain for the Holiday Extravaganza at the famous Radio City Music Hall in New York City. The BERA-sponsored bus trip takes place on Sunday, December 9. Tickets, at \$99, include orchestra seats for the noon show and bus transportation. During free time in the Rockefeller Center area, shop or snack. The bus will leave BNL at 9:30 a.m. and return at 5:30 p.m.

Calling All Carollers

On Mondays and Thursdays, noon until 1 p.m., people who like singing are invited to come to Berkner Hall auditorium to sing carols and holiday songs.

All voices are wanted: sopranos, altos, tenors, bases. The ability to read music is not necessary. The group hopes to give a Christmas/Holiday concert in the cafeteria on December 18. Contact Liz Seubert, Ext. 2346, lseubert@bnl.gov.

Classified Ads (cont'd.)

Need a Service?

Maybe you want help with housekeeping or repairs, or need a dentist, or seamstress. Services are usually listed in the first Bulletin of every month. They are neither screened nor recommended by the Bulletin. A complete list of services is always available from Ext. 2345 or minter@bnl.gov.

For Sale

CENTER MORICHES - circa 1874, well kept Victorian, 4-bdrm., large kitchen, dining, vintage potting shed, garage, new roof & windows, walk to shopping centers, near Marinas/bay, low taxes, owner finance, ask. \$249,000. Ted, Ext. 4284 or 878-6898.

EAST QUOGUE - 3-bdrm., 2 bath, contemporary, pool, deck, indoor sauna, cac, central vac, 1-car garage, new kitchen, bathrooms & furnace, ask. \$335,000. Brian, 878-4356.

PATCHOGUE - custom fieldstone home, pella windows, 2 bdrm., 1 bath, extra large lr. & dr., eik, sunporch, garage, finished basement, ask. \$179,500. Bruce, Ext. 5316 or 289-0034.

RIDGE - 4 bdrm., 2 bath, lr., dr, den., eik, basement with bath in works, deck, 1-acre fenced, new boiler, windows, gutters & appliances, taxes \$4,400. ask. \$269,999. Mike, 924-2707.

SMITHTOWN - 4 bdrm., custom split-level, 2 bath, hardwood floors, Anderson windows, 2-car detached garage, residential area, Smithtown public schools. Jack, 366-2679.

FT. LAUDERDALE, FL. - vacation village at Bonaventure, Gold Crown resort, world class golf/fitness center, 3 bdrm., lockout unit, sleeps 8, trades for 2 weeks, one maintenance fee, week 51, \$8,000 neg. Ken, 281-5565.

ST. CROIX, VI - timeshare, Divi Carina Bay, 1 bdrm., sleeps 4, week 19, new upper unit overlooking ocean, 33 years remaining, private pool, casino, top rated, ask. \$8,500. Bill, 732-9102.

Gift Certificates Available at the BERA Store

The BERA Store is now offering gift certificates, available in \$10 increments, which can be used towards any purchase made at the store. The BERA Store is located in Berkner Hall and is open on weekdays from 9 a.m. to 3 p.m.

Calendar

(continued)
Wednesday, 12/5

*Money Talks Seminar

5:30 to 7:30 p.m., Berkner Hall. "Pre-Retirement Estate Planning" Check your mailbox for registration form. Joyce Wund, Ext. 7516.

Thurs. & Friday, 12/6&7

*BERA Book Fair

10 a.m. to 3 p.m., Berkner Hall. Books, ranging from children's stories to cookbooks to New York Times best-sellers. up to 70 percent price reduction. Credit cards and checks will be accepted. Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

Saturday, 12/8

*Manhattan Bus Trip

A Hospitality-Committee-sponsored bus will leave the Lollypop House at 9 a.m. and return at about 7:30 p.m. \$10 per adult, \$5 per child, children 2 years and younger are free. Pay at the Rec. Bldg. on Tuesday & Wednesday, December 4-5, 10:30 to 11 a.m. Joe O'Connor, Ext. 2212.

Sunday, 12/9

*Radio City Holiday Show

\$99 per person includes orchestra seats for the noon show, bus transportation, and free time in the Rockefeller Center area. Bus departs 9:30 a.m. from the Brookhaven Center and returns at 5:30 p.m.

—WEEK OF 12/10—

Wednesday, 12/12

Noon Recital

noon-1 p.m., Berkner Hall. The Stony Brook Baroque Players, a group of instrumentalists and singers will perform lyrical and virtuoso Baroque music.

Divorced & Separated Support Group

noon-1 p.m., Berkner Hall, Room D. Mary Campbell, Ext. 4776, maryc@bnl.gov.

Brookhaven Lecture

4 p.m., Berkner Hall, Stephen Peggs, Collider-Accelerator Department, will talk on "Proton Accelerators for Cancer Therapy and Imaging." All are welcome.

Thursday, 12/13

Blood Drive

9:30 a.m. - 3 p.m., Brookhaven Center. BNL volunteers, ages 17 - 75, in good health, weighing over 110 lbs. can donate blood. Donors should have photo identification and know their social security number. Sue Foster, Ext. 2888, or donateblood@bnl.gov.

—WEEK OF 12/17—

Monday, 12/17

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.

Thursday, 12/20

Microcomputer Club Party

noon-1:30 p.m., Alfredo's Pizzeria, Ridge. New members-to-be are invited free. Call Club President Steven Stein, Ext. 5694, or see www.bnlmcc.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. Please enter the information for each event in the order listed above (date, event name, description, and cost) and send it to bulletin@bnl.gov. Write "BETA Calendar" in the subject line.

To:

From:

This entitles you to \$10 at the BERA Sales Office Brookhaven National Laboratory Berkner Hall



Manhattan Trip

The Hospitality Committee invites BNlers to join the bus trip to Manhattan on Saturday, December 8 — right in time to see the holiday lights. The bus will depart from the Lollypop House at 9 a.m. Tickets cost \$10 for adults and \$5 for children ages 2-12. Contact Shashi Somani, Ext. 1064.

Party Reservations

Recreation Building

All who wish to reserve the Recreation Building for a department, division, or group holiday party must contact M. Kay Dellimore, Ext. 2873 or dellimore@bnl.gov.

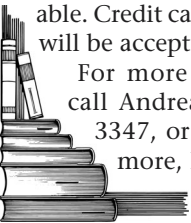
Brookhaven Center

Those wishing to reserve a room in the Brookhaven Center for a holiday party must contact Christine Ronick, Ext. 3545, or ronick@bnl.gov.

BERA Book Fair

BERA will sponsor a book fair in Berkner Hall on Thursday and Friday, December 6 & 7, 10 a.m.-3 p.m. Books will be fun reading ranging from children's stories to cookbooks to New York Times best-sellers. New, hardcover books will be in stock and sold at up to a 70 percent reduction. Some gift items will also be available. Credit cards and checks will be accepted.

For more information, call Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.



Beginner Dance Lessons Start 12/5

Register now for the next eight-week series of beginner ballroom dance lessons offered by the BNL Dance Club. The lessons start on Wednesday, December 5, and will be held from 6-7 p.m. in the North Ballroom, Brookhaven Center.

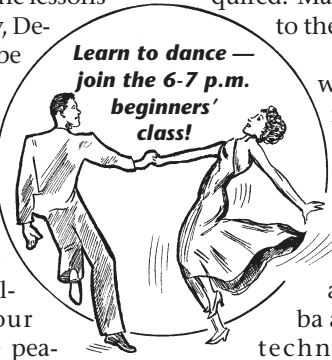
The Wednesday class features two dances for newcomers to ballroom dance: four weeks each of the peabody (12/5-1/2, no class 12/26) and the quickstep (1/9-30).

Lessons are lead by the club's professional instructor, former U.S. Ballroom Champion Giny Rae of Dance Magic studio in Smithtown.

The cost is \$30 per person for the eight-week class. To reserve your place, paid registration is required. Make checks payable to the BNL Dance Club.

Two other classes will be offered during this eight-week series: 7-8 p.m. bolero & American tango level III (4 weeks/dance, \$35 per person), and 8-9 p.m. samba and mambo/salsa technique and principles (4 weeks/dance, \$40 per person).

For more information or a registration form, contact Marsha Belford, belford@bnl.gov or Ext. 5053; or Sue Perino, perino@bnl.gov or Ext. 2483.





BERA Toy Drive

16th year of BERA participation in the Brookhaven Town Toy Drive.

The 2001 Toy Drive has begun and will run through Thursday, December 20. The annual drive helps bring happiness to young people in the local community during the holidays. Donate new toys for children of all ages at the BERA Sales Office in Berkner Hall, weekdays, from 9 a.m. to 3 p.m.

For more information, call Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

On-Site Service Station Gas Discount: 5¢

Today, November 30, the on-site Service Station has slashed the price of regular unleaded gasoline by 5 cents. For one day only, regular gas will be sold for \$1.20⁹ instead of \$1.25⁹.

MicroComputer Club Holiday Party

The BERA MicroComputer Club will hold its annual holiday party on Thursday, December 20, at Alfredo's Pizzeria, 1679 Middle Country Rd., Ridge (924-7713) from noon to 1:30 p.m.

The club will be having its traditional fare of many disks with soft sectors (pizza). Potential new members are welcome at no cost. For party reservations, contact club president Steven Stein, Ext. 5694. For more information about the club, go to www.bnlmcc.bnl.gov.

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/JOBS/jobs.html.

LABORATORY RECRUITMENT – Opportunities for Laboratory employees.

TB2434. SECRETARY (CW-2) – Requires basic secretarial skills including excellent word processing skills and computer proficiency in MS Office products such as Word, Excel, PowerPoint, Access, and Outlook. Must be knowledgeable of basic office practices and procedures; knowledge of Laboratory regulations and procedures highly desirable. Must have the ability to work under pressure, balance priorities, perform multiple tasks, and obtain and maintain a security clearance. Will perform a variety of routine secretarial tasks for two project offices in the Nonproliferation and National Security Department. Responsibilities include handling access-controlled documents, report and correspondence preparation, scheduling appointments, travel arrangements and other routine secretarial duties. Nonproliferation & National Security Dept.

TB2093. SR. ADMINISTRATIVE SERVICES ASSISTANT (A-3, reposting) – Requires an AAS in business or related field, proficiency in MS Office applications (Word, Outlook, Excel), and a thorough knowledge of Laboratory policies and procedures. Must

be able to work independently, prioritize workload, be highly organized and be capable of handling non-routine matters. Familiarity with PeopleSoft HR, GIS system, LCDS system and IPAP travel system preferred. Responsibilities will include Human Resource liaison duties, working with the Guest Information Systems including being GIS administrator for the Department, and providing administrative assistance and support to Business Manager and Chair of Department. Medical Department.

OPEN RECRUITMENT – Opportunities for Laboratory employees and outside candidates.

MK2255. POSTDOCTORAL RESEARCH ASSOCIATES (Two positions) - The RIKEN BNL Research Center (RBRC) at Brookhaven National Laboratory invites applications for theoretical and experimental postdoctoral positions for research to be carried out in RHIC spin physics. RBRC is a research center focusing on the physics program of the Relativistic Heavy Ion Collider (RHIC), hard QCD/spin physics, lattice QCD and relativistic heavy ion physics. The RBRC experimental spin physics program makes use of the RHIC collider's polarized proton capability. Members of the center include postdoctoral Research Associates (two-year appointments) and RIKEN BNL Fellows (up to five-year appointments). One theoretical postdoctoral position and one experimental postdoctoral position are expected to offered for 2002. Members of the center work closely with existing high energy and nuclear physics groups at BNL. Scientists with appropriate backgrounds who are in interested in applying should send a curriculum vitae and have three letters of reference sent to Prof. T. D. Lee, Building 510A, Brookhaven National Laboratory, P.O. Box 5000, Upton, NY, 11973-5000, before January 15, 2002.

MK2257. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. in experimental particle physics with knowledge of C++ highly desirable. Will join the Omega Group working on the D0 experiment and be expected to contribute to software development, analysis of the data and the running of the experiment. BNL is playing a lead role in both hardware and software development efforts associated with this experiment. D0 consists of a worldwide collaboration of scientist conducting research on the fundamental nature of matter and is located at Fermi National Laboratory in Illinois. Under the direction of D. Lissauer. A CV, list of publications, and three letters of recommendations should be sent. Physics Department.



NS 8854. PROJECT ENGINEER I (P-9) – Requires a minimum of a BS in HP, IH, industrial safety, or environmental science, or closely related field and seven years of experience in ES&H. Two years' experience

supervising ES&H technicians or professionals and certification as a health physicist (CHP); or industrial hygienist (CIH), or safety professional (CSP), or professional engineer (PE). An MS in these areas or closely related field is considered an equivalent qualification to certification. Certification as a Hazardous Material Manager (CHMM) and registration as a NRRP/OSH technician is preferred. Primary responsibility will be providing professional services in ES&H support to divisions/departments. Radiological Control Division. (ERAP-eligible - \$1,000)

NS2026. PROJECT ENGINEER I (P-9) – Requires a BS in science or engineering and at least ten years' experience in developing/implementing quality management programs in a fast-paced, customer-oriented environment. Excellent interpersonal and communication skills; a proven track record in the area of procurement quality in a systems-based environment; demonstrated understanding of "A Graded Approach application within Procurement" Supplier surveys and auditing; a working knowledge of Quality systems such as, or similar, to: ISO 9000, DOE Order 414.1 and/or 10 CFR 830.120 "QA"; heavy supplier relations' experience; and the ability to understand internal customer needs and expectations in a research environment necessary. Experience with the implementation of a value-based quality training program; an understanding of types of control gates in the area of a large procurement organization is desirable. Procurement & Property Management Division.

NS8083. STAFF ENGINEER (P-5, reposting) – Requires an MSEE with a specialty in the research development and design of digital and analog circuits, pulsed power system, high voltage AC and DC systems, and power electronics. Experience with fast pulsed power techniques, high power IGBT and MOSFET, and high power thytrons a plus. Collider-Accelerator Department.


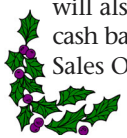
TB2049. ADMINISTRATIVE SERVICES ASSISTANT (A-2, reposting) - Requires an AAS (Database Management, Computer Technology, Business) plus at least 2 years relevant experience, as well as database maintenance skills, strong analytical, communication and interpersonal skills, and proficiency in MS Access and Word, WordPerfect, MS Outlook; knowledge of Lab policies and procedures are desirable. Involves extensive interaction with NSLS user community and staff. Utilizing various databases, primary responsibilities include issuing user appointments, monitoring training exams and issuing personal dosimeters, as well as other database maintenance, input and reporting as directed by the NSLS User Administrator. National Synchrotron Light Source Department. (ERAP-eligible - \$500)



BERA Holiday Party, 12/14

BERA will hold its Annual Holiday Party on Friday, December 14, at the Brookhaven Center, 5:30-11:30 p.m. The entire Lab community — employees, guests, facility users, and retirees — is invited to celebrate this holiday event .

The cost is \$15 per person, which includes a hot and cold buffet dinner; two drink coupons for beer, wine, or soda; coffee; and cake. Music will be provided by DJ John. There will also be raffles for door prizes, pictures with Santa, and a cash bar. Purchase tickets by Friday, December 7, at the BERA Sales Office or from any BERA Board member.



(continued on page 3)