

Safer, Better Medical Imaging Method

BNL Researchers Sign CRADA

BNL and Schering AG, a German pharmaceutical company, have signed a Cooperative Research and Development Agreement (CRADA) to develop a safer, higher-quality medical imaging method. Schering will formulate an improved x-ray radiographic contrast agent, while Brookhaven develops a device to select the portion of the x-ray energy spectrum that will make that agent most visible on radiographs.

"The new agent should improve the safety of x-ray radiographic contrast imaging in general, and thereby extend the applicability of these procedures to patients who are currently excluded from these tests due to certain health conditions," says Avraham Dilmanian of the Medical Department. "It should also lead to an improvement in x-ray radiography systems that, when combined with the new contrast agent, will offer a much better image quality and a smaller radiation dose to the patients."

X-ray radiography contrast agents are dyes that absorb x-rays, making the organs containing them visible in contrast to the surrounding tissue. "However, the traditional, injectable

radiography contrast agents, which are all based on the contrast element iodine, can produce severe adverse reactions in patients with allergies, asthma, kidney diseases, diabetes, or poor general health," says Harold Atkins, who is also in Medical.

In addition, says Dilmanian, "The iodine agents are not very efficient at absorbing the high-energy portion of the x-ray spectrum used today for radiographic imaging, so they don't produce ideal contrast."

BNL and Schering aim to create a contrast agent based on lanthanides, such as the element gadolinium. Lanthanides are heavier than iodine and therefore better able to absorb high-energy x-rays. The researchers will then combine the agent with a device to select the narrow, high-energy portion of the x-ray spectrum that would be absorbed most efficiently by the new contrast agent and less by the body of the patient.

The work will proceed in two stages. First, Schering, under the direction of Hanns-Joachim Weinmann, will develop lanthanide-based contrast agents. The element gadolinium has been used with relatively little risk in



Roger Stoutenburgh

On the screens, recent images taken using a new contrast agent from Schering are being examined by: (clockwise, from left) Tigran Bacarin, State University of New York at Stony Brook (USB), Terry Button, USB, Avraham Dilmanian, Medical Department and Principal Investigator of the BNL team, Zhong Zhong, National Synchrotron Light Source Department, and Harold Atkins, Medical. Not in the picture are: Hanns-Joachim Weinmann, Schering Project Director, and Jennifer Tammam, Medical.

contrast agents for magnetic resonance imaging (MRI). Standard MRI agents, however, are not concentrated enough for x-ray radiography. Dilmanian, Atkins and their team will test these more concentrated agents using the very narrow-energy-spectra x-rays available at the National Synchrotron Light Source (NSLS).

Simultaneously, the BNL scientists will develop a monochromator, a crys-

tal device that selects a narrow spectrum of x-rays; and methods of what is called K-edge beam filtration, to be used with conventional x-ray sources.

"The monochromator and the beam filter will be tailor-made to select x-rays in an energy range that is best absorbed by gadolinium," says Zhong Zhong, NSLS Department.

Both these instruments will be (continued on page 2)

BNL Firefighter and Volunteer Jim Vaz Helps Children Save Lives



Roger Stoutenburgh

Pictured in front of the Brookhaven Fire Department (BHFD) firehouse in Brookhaven Hamlet are volunteer BHFD firefighters Captain Jim Vaz of BNL's Fire Rescue Group (left) and his "Cricket the Clown" assistant Ron Dutcher (right). With them are (front, from left) Kiara Harris, 3; Tyhanna Harris, 6, who saved her family from the fire; Erin Anderson, 6, who alerted her parents to a smoking lamp; Scott Anderson, 4; and (back, from left) Daryashia Harris, 1; the three Harris girls' mother, Tawana Smith; and Alicia Anderson, mother of Erin and Scott. At this time, Smith read a letter of appreciation she had written to the Fire Department, specifically thanking Vaz and Cricket "for showing my daughter what to do in case of a fire."

A December 7, 1999, *Newsday* headline read: "6-Year-Old Saves Family From Fire." The article described how Tyhanna Harris of Bellport, who awoke to smoke and flames shooting out from under her bunk, calmly rolled out of bed to alert her mother in the next room. Within minutes, Tyhanna and her sister Kiara, 3, with their mother, Tawana Smith, and another daughter Daryashia, 1, were all outside, barefoot but safe. The blaze consumed their entire house, despite the efforts of the Bellport Fire Department.

"My baby saved us," Tyhanna's mother, Tawana Smith, told *Newsday*. "If it weren't for her, we wouldn't be here."

How did Tyhanna know so well what to do?

One item salvaged from the fire indicates an answer: a partially destroyed Certificate of Participation issued to

"... what happened to Tyhanna's family is living proof that fire prevention works."

Tyhanna about a month earlier when, as a first-grader at Brookhaven Elementary School, she took part in the Brookhaven Fire Department's fire-safety program. The program is presented annually by Captain — now Assistant Chief — Jim Vaz, a BNL employee who works in the Fire Rescue Group and is a Brookhaven Fire Department volunteer, and his Brookhaven firefighter colleague, Ron Dutcher, who plays "Cricket the Clown."

"Brookhaven Fire Department has been doing fire prevention for about 75 years," said Vaz. "I took over the program about nine years ago, and what happened to Tyhanna's family is living proof that fire prevention works."

The program focuses on exit drills. Children act out a fire and how to exit their homes safely.

"We start with three huge images: a stop sign, an enormous drop of water, and a huge breakfast roll," said Vaz. "These represent the three basics of what to do in a fire: if your clothes are on fire, STOP to prevent further combustion, DROP to the ground and cover your face and ROLL out the fire. Also, in any fire, you STOP what you are doing, DROP to the ground to avoid smoke in the air, and ROLL to the door or window to get out." The firefighters prompt

(continued on page 2)

In Memoriam

Seymour Katcoff, Chemistry Department

The nuclear science community lost one of its pioneers on October 17, 1999, when Seymour Katcoff, a Chemistry Department research collaborator who had retired from Chemistry as Senior Chemist in 1989, died at age 81 after a lengthy illness.

Katcoff, who remained professionally active until just a few weeks before he died, made outstanding contributions to nuclear chemistry, including determining various chemical and physical properties associated with fission reaction by-products.

His career began while he was completing his Ph.D. work in 1944 at the University of Chicago, when he joined the Manhattan Project where he conducted radiochemical studies on fission products. After the war, he and co-workers published a series of papers on neutron-induced fission yields from thorium, uranium and plutonium and the ranges of their fission fragments in air. Katcoff also reported the discovery of several new radionuclides, barium-131, cesium-131, and the long-lived barium-133, now frequently used as a gamma-ray standard, as well as one of the first measurements of the neutron-capture cross section of a radioactive nuclide, barium-140.

On September 24, 1948, Katcoff joined the recently formed BNL. Chemistry's Peter Haustein recalled that an early "and very significant" study Katcoff made at the Lab stemmed from the Manhattan Project, where a very long-lived isotope of iodine had been isolated from the mass 129 fission product chain. In 1947, he had reported the preliminary determination of the neutron cross-section of iodine-129, but the half-life of this isotope was completely unknown. With Chemistry's Oliver Schaeffer and Julius Hastings, Katcoff determined that iodine-129 has a half-life of 17.2 million years. They used this result to calculate for the first time a plausible age for the universe of 3.6 billion years.

In the 1950s and 1960s Katcoff's studies centered on the nuclear decay properties of a wide-ranging series of isotopes obtained from fission and high-energy proton-induced reactions on heavy element targets. He also used nuclear track detectors to obtain the first measurements of the fission of uranium by relativistic heavy-ions.



Roger Stoutenburgh

In the 1970s, with co-workers, his research included using a 250-milligram target of plutonium-244 and rapid radiochemical separation methods to isolate 17-minute half-life uranium-242—the most neutron-rich uranium isotope presently known.

Then, in the 1980s, Katcoff participated in several experiments that set the stage for the construction and use of BNL's recently completed Relativistic Heavy Ion Collider.

Katcoff had long had a strong interest in education and in the late 1980s he established and for six years ran and taught classes in the Lab's yearly Summer School in nuclear & radiochemistry for undergraduates. This school is supported by DOE's Chemical Sciences Division and is sponsored by the American Chemical Society. A significant number of the school's graduates are now engaged in basic nuclear research, nuclear medicine, or nuclear environmental activities.

In recognition of his many achievements in nuclear science and nuclear science education, Katcoff was awarded the 1998 Seaborg Medal of the American Nuclear Society.

Noted Haustein and Garman Harbottle, also of Chemistry, "Seymour's many co-workers at Brookhaven will remember him as a tireless researcher, an extraordinarily dedicated scientist, highly effective teacher, faithful friend, and trusted colleague."

A resident of Patchogue, Katcoff is survived by his wife Edith and sons Don and Joel.

The group health plan must determine the manner of coverage in consultation with the attending physician and patient. Coverage for breast reconstruction and related services are subject to deductibles and coinsurance amounts that are consistent with those that apply to other benefits under the plan.

Reimbursement Account Deadline

According to the Internal Revenue Service, contributions to health care or dependent day care accounts not used by the end of the year will be forfeited. Therefore, do not forget to use up balances within all 1999 reimbursement accounts by claiming expenses incurred in 1999.

To do so, submit claim forms by March 31, 2000.

IRS Increases SRA Contribution

Effective January 1, 2000, the Internal Revenue Service (IRS) has increased the maximum amount per calendar year that taxpayers can voluntarily shelter in supplemental retirement accounts (SRAs) from \$10,000 to \$10,500.

While the maximum *amount* has increased, the *percentages* that eligible BNL employees may annually allocate (up to 15 percent) have not been affected by this IRS change.

Mechanical Engineering

USB/BNL Course On Site

During the coming spring semester, the State University of New York at Stony Brook (USB) and BNL will offer a three-credit graduate-level course in mechanical engineering, on Tuesdays and Thursdays, 4-5:30 p.m.

The course, MEC 631, is entitled "Special Topics in Heat Transfer – Cryogenic Engineering." The instructor will be Lin X. Jia, Collider-Accelerator Department.

To be given by USB, MEC 631 will be open to both USB students and BNL employees. Prerequisites are an undergraduate degree in engineering or physics or courses in thermodynamics, heat and mass transfer, and fluid mechanics. Those who are not interested in degree-earning credits but who are doing cryogenic work at BNL are welcome to audit the class.

The Web address for the course is <http://snap1.c-ad.bnl.gov/cryogenics/index.html>. Topics covered will include basic principles of cryogenic engineering: low temperature properties of materials and cryogenic fluids, production of low temperatures, and cryogenic systems, as well as specific study of refrigeration for research laboratories and refrigerator plants for superconducting magnets such as those used at BNL.

Through BNL's tuition assistance program, Lab employees may receive 100 percent reimbursement for tuition costs in advance. The application for tuition assistance must be completed before registration, and registration must be completed through USB before January 19. For more information, contact Marilyn Pandorf, pandorf@bnl.gov or Ext. 5251, by Wednesday, January 12.

Vehicle Registration

If you still have a red registration sticker on your rearview mirror, it has expired. New yellow registrations, valid from 2000 through 2004 depending on employee status, are now being issued.

The red stickers will continue to be honored until March 1, 2000, to allow employees time to reregister their vehicles at the Personnel and Information Security reception desk in the Brookhaven Center (Bldg. 30) lobby. To reregister, you will need your BNL ID card, driver's license and the registration card for each vehicle you want to operate on site. The office is open from 8:30 a.m. to 5 p.m., Monday through Friday, and no appointment is necessary.

Project Management Training On-Site

In January and February, the Office of Management Services will hold an intense two and one-half day training course to develop or enhance Project Management skills.

Designed for new or current project managers, team members or individual contributors, the course has received excellent evaluations from previous participants. It will be held January 19-21, from 8:30 a.m. to 12:30 p.m. on the 19th; from 8:30 a.m. to 5 p.m. on the 20th and 21st. It will also be held February 15-17.

Participants will share in action learning, individual team experiences, and a mini-simulation of a project on which they practice skills and get immediate feedback on results. Sample topics include: project management language; behaviors of effective project leaders and teams; a four-step common sense methodology; and controlling costs against budgets. To register or for information, contact Cyrena Condemi, Ext. 2634, or oms@bnl.gov.

Coming Up

On Wednesday, January 19, Li-Hua Yu, National Synchrotron Light Source Department, will give the 351st Brookhaven Lecture, which will be a talk on "High-Gain Harmonic Generation Free Electron Laser Results," at 4 p.m. in Berkner Hall.

Safer Imaging

(cont'd)

tested with the new contrast agent(s) using conventional x-ray sources at the State University of New York at Stony Brook's (USB) Radiology Department, in collaboration with Terry Button, USB. Using the method in clinical radiography will eventually require more intense x-ray tubes.

If an x-ray beam has an energy spectrum tailored to the contrast agent, the energy of a given x-ray dose contributes more efficiently to the image. Thus, the patient is only exposed to x-rays within this "useful" band.

"So the patient ends up with less x-ray exposure because the energy absorption is optimal," Dilmanian says. Alternatively, he says, for the same dose, you would get a better image.

— Karen McNulty

Vaz, BNL Volunteer

(cont'd)

the kids to shout out these three words, and the pictures help them visualize and remember it all, Vaz said.

The Clown character helps get the kids' attention, such as when he wakes up and acts out smelling smoke. "I call out 'What should he do?'" said Vaz. "All the kids yell, 'ROLL out of bed.' In the youngest classes, we lead a whole story where kids learn to avoid hot door handles, get out safely and call the fire department. By third grade, they know the drill so well, they act it for us. The main thing is, they learn exactly what to do with no panic."

Brookhaven Elementary kindergarten Erin Anderson, 6, offers more proof. When a light fixture started to smoke while she was reading one morning, she alerted her parents. They got out, then called the fire department.

"That fire was much less dangerous, it put itself out," said Vaz. "But it showed that Erin had learned the correct procedure. Thanks to the excellent support we get from Brookhaven Elementary School, the kids get a great chance to know what to do when fire breaks out."

Vaz finds his volunteer job very satisfying. "It takes time, but it's well worth it. You feel you are contributing to the community," he said.

Said Frank Marotta, who heads the Emergency Services Division which contains the Lab's Fire Rescue Group, "Jim is but one example of the many fine BNLers who serve their community as volunteers. Jim continues this tradition of service in several ways. The fire department is only one of them."

Vaz's contributions also include participating in the Lab's Envoy community outreach program and his work for the South Sungate Homeowners Association, where he is Vice President after being President for the past six years.

— Liz Seubert

Note: Assistant Principal Bette Errig of the Brookhaven Elementary School is collecting clothing, food, and other donations for Tyhanna Harris and her family, who lost all their possessions in the blaze, which was caused by faulty electrical wiring in the basement.

No Bulletin January 21

To commemorate the birthday of Martin Luther King Jr., the Lab will be closed on Monday, January 17. There will be no Bulletin on Friday, January 21.

Benefit Notes

For more information on the following, contact Nancy Concadoro between 8:30 a.m. and 1 p.m. Monday through Friday in the Benefits Office, Human Resources Division, Bldg. 185, Ext. 2877, or by calling (800) 353-5321.

Qualifying Events

Changes to medical and/or dental coverage may be made only during the annual open enrollment or within 31 days of when what is called a qualifying event occurs. Qualifying events include: birth or adoption of a child, marriage, divorce or legal separation, loss of dependent status (for instance, due to graduation), or a spouse's gain or loss of employment.

Women's Breast Cancer Rights

Federal law requires group health plans to provide coverage for the following services to an individual receiving plan benefits in connection with a mastectomy:

- reconstruction of the breast on which the mastectomy has been preformed
- surgery and reconstruction of the other breast to produce a symmetrical appearance, and
- prostheses and physical complications for all stages of a mastectomy, including lymphedema, which is swelling associated with the removal of lymph nodes.

Indian Classical Dance, January 22



The BERA Indo-American Association (IAA) will sponsor an Indian classical dance recital on Saturday, January 22, at 4 p.m. in Berkner Hall. Danseuse Archana Joglekar-Mulye, a well-known Indian film and television actress, will perform the enchanting Kathak for those in attendance.

Kathak originated in the temples of Northern India more than 500 years ago. Dancers enact stories from Indian mythology and, today, contemporary society. One of the most prominent dance styles of India, Kathak features fast, rhythmic and intricate footwork, emphasized by the tiny bells tied around the dancer's ankle.

VIP tickets for this event are \$25. Tickets for IAA members are \$9, non-members pay \$10. Full-time students and senior citizens pay \$5, children under five are free. For tickets or more information, contact: Achyut or Geeta Topé, 345-2677; Koumudi Pandya, Ext. 7734; Dhruba Ghimiray, Ext. 3849; or Srinivasan Iyer, 928-5319. Tickets may also be purchased at the door.

Hospitality Committee

The Committee invites all on-site residents, their spouses and friends to the following events. More details are posted in the laundry room and on the door of the Recreation Building. For more information, call Susan Hart, 821-4257.

Welcome Coffee

To help newcomers settle in at the Lab, coffee is served to apartment area residents every Tuesday, from 10 a.m. to 11:30 a.m., in the lounge of the Recreation Building in the apartment area. Old friends are also welcome.

Parent-Toddler Group

Parents are invited to bring their toddlers to the Recreation Building on Wednesdays, 9:30-11:30 a.m. For more information, call Sarah Zill, 821-2602.

Family Potluck Supper

Bring the family and a fairly large dish to share to a potluck supper on Friday, January 28, at 6 p.m. in the Recreation Building. Soft drinks will be provided.

Telecommunication Service Change

Effective January 10, operator-assisted service for external callers dialing BNL at (631) 344-8000 will change. Operators will be available for external callers between the hours of 8 a.m. and 6 p.m., extended from the previous time of 8:30 a.m. to 5:30 p.m. Internal operator-assisted call service will remain unchanged for the present.

Rifle & Pistol Club

The BNL Rifle & Pistol Club's next monthly meeting will be on Wednesday, January 12, at noon in the AGS second-floor conference room, Bldg. 911. For more information, call Joe Gatz, Ext. 4212, or the club's hotline, Ext. 2658; or go to www.berahome.bnl.gov/clubs/rpc/rpc.html.

BROOKHAVEN BULLETIN

Published weekly by the Media & Communications Office for the employees, facility-users and retirees of **BROOKHAVEN NATIONAL LABORATORY**

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

Computer Training

The Information Technology Division (ITD) will offer the following software classes in January, February and March. To register or to express interest in future classes, submit a Training Request Form and an ILR for the appropriate amount to Pam Mansfield, Bldg. 515. See ITD's training page at www.ccd.bnl.gov/bnl/training for registration information and course outlines or contact Mansfield, Ext. 7286 or pam@bnl.gov.

date	class	level
1/10-14	Mechanical Desktop 4	Update
1/14	C++ for C Programmers	
1/18	Front Page	
1/19	Windows Basics	beginner
1/20	Outlook	
1/21	Word	intermediate
1/24	Excel	beginner
2/2 & 3	Access	beginner
2/4	PowerPoint	beginner
2/7-10	Basic Mechanical Desktop 4.0	
2/9	Word	beginner
2/11	PowerPoint	intermediate
2/22-25	Basic Mechanical Desktop 4.0	
3/1	Word	advanced

Those interested in attending a class in Fortran Programming 90/95, e-mail pam@bnl.gov.

Excess Inventory

The Procurement and Property Management Division (PPM) has updated the excess inventory lists on the PPM homepage. Employees are encouraged to review the lists, which can be found under the "BNL Only" heading at <http://www.dcp.bnl.gov/> on the World Wide Web. Inventory items listed will no longer be reordered, and, while supplies last, are available through normal stock requisition.

GLOBE@BNL Club

The GLOBE@BNL Club's next monthly meeting will be on Friday, January 14. For more information and the meeting's location call Mike Loftus, Ext. 2960, or Chris Gardner, Ext. 4537; or go to the club's Web page at <http://members.aol.com/bnlglobe/home.html>.

Volleyball

League standings as of 12/17/1999

Open League A	Mixed League 2	
Drill.&Excav. Co.	23-4	Safe Sets 27-0
Shank, Carry&Throw	14-13	Up-Setters 21-9
Far Side	9-18	Spiked Jello 21-12
Death Volley	8-19	Inside Out 22-14
		Nuts & Bolts 7-23
Open League B	Group Sets	6-24
Bumpin Ugliers	18-9	Setups 4-26
Late Entry	18-9	
Monday Nite Live	14-13	
The Stars	4-23	
Mixed League 3	Six Samurai	19-2
Mixed League 1	Upton Ups	15-6
I Want Your Sets	16-5	Net Setters 10-11
Set to Kill	14-7	Net Workers 7-14
Rude Dogs	6-15	NWO 7-14
Scared Hitless	6-15	Butlers 5-16

Humorist David Bouchier on 21st Century Noon, Wednesday, January 12

David Bouchier, an award-winning Essayist for National Public Radio station WSHU, will give a humorous talk on "A Short History of the 21st Century," on Wednesday, January 12, at noon in Berkner Hall. The lecture is free and open to all.

Bouchier will present tongue-in-cheek insights into what he imagines the next century will be like, discussing what people in the past have imagined about it and what, in his opinion, they can realistically expect. His 45-minute talk will be illustrated with slides.

Born in London, Bouchier has 30 years' experience on both sides of the Atlantic as a journalist, broadcaster, editor, book reviewer and free-lance writer. He has taught at many univer-



sities, including the University of Essex in England and the State University of New York at Stony Brook. Bouchier has lectured widely, and he is a regular instructor at the University of Iowa Summer Writing Festival. He received a Ph.D. from the University of London.

Currently, Bouchier hosts "Sunday Matinee," on WSHU, and he writes a weekly humor column called "Out of Order" for the Sunday Long Island regional section of *The New York Times*.

Bouchier's most recent book was a collection of essays about life in America, *The Accidental Immigrant*, published in 1996. A new collection, *Only in America*, is due to be published in the spring.

Aerobics & Stretch

The BERA Aerobic Dance & Stretch Club will begin a new session of classes, with new music and dances, on Tuesday, January 11, in the Recreation Building in the apartment area. All are welcome, no prior experience is needed.

Aerobic dance classes will be on Tuesdays and Thursdays, stretch classes will be on Wednesdays, all starting at 5:15 p.m. Cost is \$4 per class or \$35 for any ten classes, plus one makeup class. For more information, call Pat Flood, Ext. 7886, or Sue Monteleone, Ext. 7235.

Defensive Driving

The training group of the Safety & Health Services Division will offer a six-hour defensive driving course on Saturday, January 29, 9 a.m.-3:30 p.m., in Berkner Hall, Room B.

The course will be taught by a Metropolitan Life instructor and is open to BNL, BSA and DOE employees, BNL facility-users, and their families, at a cost of \$23 per person. Completing the course entitles participants to a 10-percent discount on vehicle collision and liability insurance for three years.

To register, send a check made out to Empire Safety Council, in care of Scott Zambelli, P.O. Box 670, Mount Sinai, NY 11766. All checks must be received by Friday, January 21. So that your registration can be confirmed, include your phone number with your name. For more information, call Zambelli at 249-3000, Ext. 5877 (not the on-site Ext. 5877).

Arrivals & Departures

Arrivals

Ramesh C. Gupta .. Supercond. Magnet
Richard A. Izzo Plant Eng.
Ioannis P. Papaphilippou C-A
Stephen J. Schott Plant Eng.

Departures

James M. Ablett NSLS
Zion Armoza C-A
Vincent E. Chiampou C-A
Matthew L. Costen Chemistry
Gilbert DeGregory C-A
Gasper M. Giarratano Plant Eng.
Charles I. Goldstein Appl. Science
Michael A. Guacci Admin. Support
George R. Holeman Rad. Control
Robert G. Horton C-A
James Makoulis C-A
Edward A. Meier Physics
Emmanuel F. Onillon C-A
Shi Ouyang Appl. Science
Peter R. Picciano Plant Eng.
Bernard L. Stepnoski C-A
Janet Tempel CIGPA
James T. Veligdan Adv. Technology

Outreach Workshop Learning to Meditate

Mindfulness meditation is the direct and simple practice of focusing the mind to cultivate equanimity and balance in life. By stilling the body and paying attention to the mind, mental agitation and physical distractions subside and give way to inner peace and clarity.

To discuss "Learning to Meditate," clinical psychologist Cheryl Kudash will present an Outreach workshop next Tuesday, January 11, from noon to 1:00 p.m. in Berkner Hall. Sponsored by the Employee Assistance Program (EAP) of the Occupational Medicine Clinic, the lecture is open to all.

A psychologist and student of meditation for the past 20 years, Cheryl Kudash is currently coordinating a meditation program at SUNY/Stony Brook. She has studied meditation practices with Eastern and Western experts, including the faculty of the Himalayan Institute for Yoga Science and Philosophy and Jon Kabat-Zinn (author of *Wherever You Go, There You Are*). In addition, she offers meditation instruction to the public at the Setauket Wellness Center.

To register for this workshop, return the completed bottom portion of the Outreach flyer that was sent to all employees to EAP Staff Psychologist Dianne Polowczyk, Bldg. 490, before Tuesday, January 11. Participants may also register at the door.

Classified Advertisements

LABORATORY RECRUITMENT - Opportunities for Laboratory Employees.

DD8797. SECRETARIAL POSITION - (term appointment) Requires an AAS degree in secretarial science or equivalent experience, good communication skills and knowledge of Laboratory policies and procedures. Proficiency required with word processing, preferably Microsoft Word, and experience with IPAP highly desirable. Duties will include arranging conferences and meetings; coordinating domestic and foreign travel and housing for visitors; support for the international collaborations: E866 and BRAHMS; preparing collaborator appointment; maintaining filing systems; preparing and distributing collaboration reports; maintaining collaborator and publication lists and some library functions. Knowledge of e-mail, WWW and Latex for typing and editing technical papers also desirable. Physics Department.

DD8765. SR. FACILITIES OFFICE ASSISTANTS - Under minimum supervision, assists supervisors in all clerical aspects of the operation of the Utilities Division. Responsible for the daily operation of the mechanical and electrical utilities office; and the coordinating, scheduling, assigning, instructing, and checking of work performed by other office employees. Requires an intimate knowledge of utilities' operation and techniques to maintain a programmed maintenance system, capital and plant equipment records, and manufacturers' and utilities' drawings. In addition to the above duties maintains necessary records and

(continued on page 4)

manufacturers' and utilities' drawings. In addition to the above duties maintains necessary records and data as directed for use in utilities' operation and management reports. Plant Engineering Division.

OPEN RECRUITMENT - Opportunities for Laboratory Employees and Outside Candidates.

MK8522. SCIENTIST - Experienced in the application of laser techniques in high-intensity optically pumped polarized proton ion sources. Requires a Ph.D. in physics and at least 10 years' experience in beam instrumentation, polarization measuring techniques and ion sources. Under the direction of J. Alessi. Collider-Accelerator Department.

MK8796. POSTDOCTORAL RESEARCH ASSOCIATE - to work in the X-ray Scattering Group. The main areas of research will be concerned with x-ray scattering studies of complex oxides, including colossal magnetoresistance and high T_c materials, among others. Requires a Ph.D. in physics, chemistry or materials science; expertise with x-ray diffraction and familiarity with magnetism, oxides and phase transitions is desirable. Close collaboration with Neutron Scattering and other groups in Solid State Physics is encouraged. Under the direction of D. Gibbs. Physics Department.

MK8230. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in nuclear/radiochemistry with experience in nuclear reaction cross-section measurements, radiochemical separations, gamma ray spectroscopy and beta particle counting. Accelerator target design and good computer skills highly desirable. The research program involves the development of new radioisotopes for cancer therapy with bioengineered vehicles such as genes, antibodies or peptides. Under the direction of L. Mausner. Medical Department.

MK8523. POSTDOCTORAL RESEARCH ASSOCIATES - Requires a Ph.D. in accelerator physics or a closely related discipline, and a significant base of accelerator physics experience — experimental and/or theoretical. Operational experience in the control room is highly desirable, since the positions will involve active participation in the RHIC commissioning and development. Software skills in C++ are desirable, as are established skills with accelerator and/or RF hardware. The positions are in the Accelerator Physics Group or the Radio Frequency Group. The Collider-Accelerator Department operates the AGS and the AGS Booster and is in the early stages of commissioning RHIC, the superconducting Relativistic Heavy Ion Collider. Under the direction of S. Peggs. Collider-Accelerator Department.

NS8458. ENVIRONMENTAL COMPLIANCE REPRESENTATIVE (ECR) - Requires a bachelor's degree in science or engineering, and a minimum of five years' experience in evaluation and application of environmental regulations to industrial and laboratory operations. A working knowledge of RCRA, CWA, CAA, SDWA, TSCA, CERCLA and NYS and local environmental regulations, with expertise in at least one area is necessary. Demonstrated familiarity with pollution-prevention concepts is required, with strong process engineering skills and the ability to analyze projects proactively to identify and eliminate compliance problems and wastes. Responsibilities include providing senior-level technical support to Departments/Divisions to ensure compliance with applicable laws, requirements, and BNL policy. Environmental Services Division.

NS8519. ADMINISTRATIVE/BUDGET POSITION - Requires a bachelor's degree in accounting, or the equivalent, and excellent communication skills. Budget, forecast and estimating experience is highly desirable, as is familiarity with Microsoft Office products, including Outlook, Word and Excel. Responsibilities will include budget development and analysis of cost and commitment. Collider-Accelerator Department.

NS8782. TRAINING SPECIALIST POSITION - Requires a bachelor's degree in education or a related field and a minimum of five years' experience implementing training and qualification programs and evaluating training effectiveness. Excellent interpersonal, written and computer skills are necessary; advanced degree and/or application in advanced training technologies and adult learning theory is highly desirable. Responsibilities will include developing training standards and procedures for Lab-wide use; providing support and leadership for training and qualification issues; including an instructor training program and course evaluation; overseeing the job training assessment effort and program's self-assessment activities. Training & Qualifications Program Office.

NS8309. DATABASE ANALYST POSITION - (reposting) Requires a BSCS, or equivalent experience, and a minimum of one year of hands-on experience in relational database administration. Experience creating, modifying and tuning database tables, a working knowledge of SQL and SQL tuning, and understanding of the theory of data normalization is necessary. Knowledge of Windows NT client/server architecture preferable; PeopleSoft experience a plus. Business Information Systems Group/Fiscal Division.

NS8092. RF SOFTWARE ENGINEER POSITION - (reposting) Requires a BSEE or BSCS, advanced degree preferred, familiarity with the UNIX environment and real-time operating systems, background with embedded systems, C++, and assembly language. As part of a team of scientists and engineers will develop digital signal processing algorithms and control systems for high energy particle accelerators. Collider-Accelerator Department.

DD6484. OFFICE SERVICES POSITION - (reposting) Will perform clerical duties associated with handling of the reception area of the Clinic such as telephone contracts, taking messages and screening and directing calls. Duties will include scheduling lab and medical exams for employees, completing medical charts, and assisting the administrative staff in various projects. Knowledge of computers including Word and Web Requisition desired. Excellent communication and interpersonal skills required. Occupational Medicine Clinic.

NS8151. P&GA SPECIALIST C - Under direct supervision and technical direction, carries out phases of the Laboratory's graphic arts work. Works from written or oral direction to execute tasks associated with copy/duplicating and related equipment. Will also work in related bindery functions. Performance of these duties requires knowledge of some phases of graphic arts. Must possess valid NYS driver's license. Information Services Division.

DD8597. REFRIGERATION & AIR CONDITIONING ENGINEER POSITIONS - Under minimum supervision constructs, installs, repairs, maintains and operates refrigeration, air conditioning, ventilating and auxiliary and related equipment. Will perform the

same work on air compressors and vacuum pumps whether or not associated with the above equipment. Plant Engineering Division.

DD8594. HEAVY EQUIPMENT MECHANIC-OPERATOR POSITION - Under minimum supervision maintains, operates, and repairs all material handling, earth moving, road and ground maintenance, and similar equipment, including complete repair and maintenance of gasoline and diesel engines and the use of required machine tools. Plant Engineering Division.

DD8595. CARPENTER POSITION - Under minimum supervision lays out, constructs, modifies and maintains buildings and component parts from construction drawings, rough sketches or verbal instructions. Works with wood, wood substitutes and combination materials and flooring, roofing and wall materials. Uses hand, portable and fixed tools common to building construction trades. Installs cabinets, door frames, window glass, interior finishes and hangs doors. May perform Cabinetmaker duties as required. Plant Engineering Division.

DD8762. TOWERLINE PERSON POSITION - Under minimum supervision, installs, repairs, and maintains overhead and underground electrical distribution lines systems, equipment, controls and related devices, ordinarily of 2300 volts and over. Duties include rigging, electrical and mechanical work incidental to the installation, maintenance, and repair of equipment, wires, lines, instrument, and fabricated metal on structures such as meteorology towers, pile stack an water tower. Will otherwise perform duties of Electrician A. Plant Engineering Division.