Japanese Lab Establishes RHIC-Based Research Center at BNL

As a result of a recent decision by the Japanese Parliament, in fall the Japanese laboratory known as RIKEN will establish the RIKEN BNL Research Center at Brookhaven, for the study of theoretical and experimental nuclear physics related to BNL's Relativistic Heavy Ion Collider (RHIC).

The Center will host about 30 nuclear theorists each year, including postdoctoral students, five-year fellows and visiting scientists. The Center's first director will be world-renowned theoretical physicist T.D. Lee, who won the 1957 Nobel Prize in physics for work done as a BNL visiting scientist in 1956. Lee is now a professor of physics at Columbia University.

"The RIKEN BNL Research Center will be dedicated to the nurturing of a new generation of scientists who can meet the challenge that will be created by RHIC," says Lee.

This is RIKEN's second RHIC-centered collaboration with BNL: The first was begun in September 1995, with \$20 million to do spin-polarized proton physics research at RHIC so as to clarify the spin structure of the particles within the atomic nucleus.

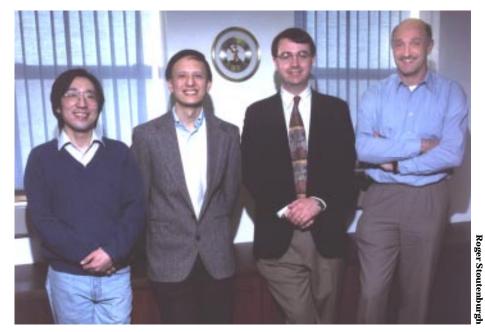
"This collaboration builds on a long history of scientific cooperation in the physics community," says Martha Krebs, Director of Energy Research



Gathered to discuss the establishment this fall of the RIKEN BNL Research Center at Brookhaven is the preparatory committee, which includes: (back, standing from left) BNL Director Nicholas Samios; Satoshi Ozaki, Head of BNL's Relativistic Heavy Ion Collider Project; Shoji Nagamiya, University of Tokyo; Fujio Sakouchi, RIKEN; Thomas Kirk, BNL Associate Director for High-Energy & Nuclear Physics; Minoru Yanokura, RIKEN; (front, seated from left) Peter Bond, Chairman of BNL's Physics Department; Hiromichi Kamitsubo, RIKEN; and

RIKEN BNL Research Center Director T.D. Lee, Columbia University.

Four Brookhaven Scientists Awarded Tenure



BNL's newest tenured scientists are: (from left) Chi-Chang Kao, National Synchrotron Light Source Department; Yimei Zhu, Department of Applied Science; John Shanklin, Biology Department; and Pavel Rehak, Instrumentation Division.

Employee Meetings Address Concerns of All BNLers

For the past two weeks, the communications arm of the Lab's High Flux Beam Reactor (HFBR) Tritium Remediation Project has been holding meetings with employees from BNL departments and divisions and from other groups on site to address concerns about current issues affecting BNL.

The meetings, which continue throughout April (see box on page 3 for next week's schedule), have averaged about two hours each, as employees have stayed well beyond the planned hour, into their lunch periods and beyond, in order to understand the issues better.

As space permits, the Brookhaven Bulletin will reprint some of the questions and answers addressed in the meetings. Employees who still have questions after the meetings are encouraged to submit them to Susan Foster, the internal communications liaison to the HFBR Tritium Remediation Project, at Bldg. 185, or e-mail foster2@bnl.gov. Those questions will be treated confidentially; if your question is of general interest, then it may also be answered in the Bulletin.

Following are two of the most commonly addressed concerns:

Does the tritium plume that is believed to be leaking from the spent-fuel pool of the HFBR facility present a hazard to anyone, on or off site?

No. As explained by Bob Miltenberger and Gary Schroeder of the (continued on page 3)

When the Board of Trustees of Associated Universities, Inc., met last January 30, they voted to award tenure, effective April 1, to four Brookhaven scientists.

The new additions, who bring the Lab's roster of tenured scientists to 151, are: Chi-Chang Kao, National Synchrotron Light Source (NSLS) Department; Pavel Rehak, Instrumentation Division; John Shanklin, Biology Department; and Yimei Zhu, Department of Applied Science (DAS).

"It's a pleasure to welcome this distinguished group of individuals to the tenure ranks," said Laboratory Director Nicholas Samios.

According to BNL's Scientific Staff Manual, tenure appointments recognize "independent accomplishment of a high order in the performance of original research or of other intellectually creative activity appropriate to the purposes of the Laboratory." Such accomplishments and intellectual cre-(continued on page 2) within the U.S. Department of Energy. "Locating a prestigious new research center at BNL is also a tribute to the quality of science that is carried out there."

As a result of the first RIKEN collaboration, RHIC, when commissioned in 1999, will not only be the world's highest energy collider of heavy ions, but it will also be the highest energy collider of spin-polarized proton beams in the world. RHIC is primarily being constructed to collide beams of heavy ions at relativistic energies of 100 billion electron volts per nucleon, to explore hot and dense states of nuclear matter with the ultimate goal of creating what is called quark-gluon plasma.

Now, as a result of this second RIKEN-BNL cooperative venture, results from RHIC experiments will be evaluated by some of the top nuclear theorists in the world, who can both advance the understanding of nuclear physics and suggest new RHIC experiments. The Center will eventually expand to include experimentalists performing their own studies.

Comments BNL Director Nicholas Samios, "With RHIC and the RIKEN BNL Research Center both in our stable of world-class research facilities, BNL has strengthened its positions as a leading center of both experimental and theoretical physics and will continue to foster the interplay between the two."

Formally known as Rikagaku Kenkyusho, or the Institute of Physical & Chemical Research, RIKEN is a semi-governmental research institute located north of Tokyo and supported by the Japanese government's Science & Technology Agency. Like BNL, RIKEN is a multi-program laboratory, employing a scientific staff about a third of the size of Brookhaven's, with research ranging from the physical to the life sciences, and with facilities that will include an 8-billion-electronvolt synchrotron x-ray source now under construction.

"The Center is clearly a highly significant landmark in RIKEN's efforts to promote international collaboration," concludes RIKEN President Akito Arima.

Adds Samios, "The RIKEN BNL Research Center will exemplify the truly international nature of science, while advancing our understanding of the universe's basic matter. We envision this as a world center for cuttingedge research." — Marsha Belford

Lab Advisory Committee Calls Open Meeting on Director Search

The Advisory Committee that Associated Universities, Inc. (AUI), has formed to assist in the search for a new BNL Director will hold an open meeting on Monday, April 14, from 12:30 to 1:30 p.m., in Berkner Hall.

All are invited to come to hear about the process by which the new Director will be chosen; to make your opinions known, especially about the qualifications you feel are important in a new Director; and to help articulate a vision for Brookhaven's next 50 years.

In addition to being at the meeting to listen and answer questions, the Committee welcomes your contacting them individually, as follows: Jim Davenport, chair, Ext. 3789, e-mail daven@bnl.gov; Sam Aronson, cochair, Ext. 2051, e-mail aronson2@bnl.gov; John Axe, Ext. 3821, e-mail axe1@bnl.gov; Gerry Bunce, Ext. 4771, e-mail bunce1@bnl.gov; Joanna Fowler, Ext. 4365, e-mail fowler@simbrain.chm.bnl.gov; Doon Gibbs, Ext. 4608, e-mail doon@solids.phy.bnl.gov; Henry Grahn, Ext. 3317, email hgrahn@bnl.gov; Ruth Kempf, Ext. 7226, e-mail kempf@bnl.gov; William Studier, Ext. 3390, e-mail studier@bnl.gov; and Otto White, Ext. 4248, e-mail white2@bnl.gov.

You may also e-mail suggestions to the AUI Search Committee via Barry Cooperman, chair, cooprman@pobox.upenn.edu, or Paul Martin, co-chair, martin@deas.harvard.edu.

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Four Awarded Tenure (cont'd.)

ativity have characterized the BNL careers of the four newly tenured scientists, as follows:



• Physicist C hi - C hang Kao, NSLS — By developing newtools to pursue problems of current interest, Kao has made original and im-

portant contributions to the use of synchrotron radiation to study condensed-matter physics.

Kao's work on soft x-ray reflectivity from surfaces of magnetic materials such as iron, and his research on the science and instrumentation for inelastic x-ray scattering, which addresses both magnetism and electronic structure, make him unique and crucial to the development of these techniques as probes of condensed matter.

As one result of a key experiment at the NSLS on iron, Kao demonstrated that it is possible to make measurements that reveal important information about the surface and interface of thin-film magnetic materials. It is notable that, unlike typical methods used to study this problem, the coherent elastic scattering process Kao used has no complicated final-state effects.

In addition to this and related research, Kao's work on the science and instrumentation for inelastic x-ray scattering has had worldwide impact on the technology. He also successfully took complete responsibility for constructing, commissioning and developing the scientific program for inelastic x-ray scattering on the X21 beam line at the NSLS. The four-crystal monochromator he developed provides a resolution of just a few tenths of an electron volt.

Kao has identified and addressed another broad area for development—resonant inelastic scattering, which he used, for example, to make the first observation of an important charge transfer system in nickel oxide.

Kao earned his Ph.D. in chemical engineering from Cornell University in July 1988, and, a month later, he started as a postdoctoral research associate at BNL. He became an assistant physicist in 1990, associate physicist in 1992, and physicist in 1994.

Changes in Cafeteria Prices and Hours

Effective Monday, April 21, prices at BNL's Cafeteria will be increased and the Cafeteria's operating hours will decrease.

Ken Mohring, of the Staff Services Group of the Administrative Support Division, explained that prices at BNL's Cafeteria have not changed for almost three years. Consequently, prices have fallen significantly below those on the outside and do not accurately reflect operating costs incurred by Flik International Corp., which has been the Laboratory's food-service contractor since last May. This market adjustment, said Mohring, "will bring our prices closer to those of comparable food services in the local area."

The change in operating hours is expected to affect the smallest number of customers while providing operating economies. Cafeteria hours will change from the current hours of 7 a.m. to 3:30 p.m. to new hours of 7:30 a.m. to 2:30 p.m.

"As with any changes that affect employees, these decisions were not taken lightly by Laboratory management and were made only after a careful and thorough evaluation," said Mohring.

If you have questions about these changes, phone Mohring at Ext. 2715.

• Physicist Pavel Rehak, Instru-

mentation — Rehak has made significant, original contributions that are key to the Lab's research and development program on all particle and photon detectors. He



is a forefront resource in solving instrumentation and measurement-related problems in experimental sciences ranging from physics to medicine.

Rehak's most important contribution has been the unconventional idea and ultimate, extremely successful realization of the silicon drift detector (SDD), with Emilio Gatti.

This innovative concept was used in two experiments at CERN's Super Proton Synchrotron, CERES and WA98; has made possible the silicon vertex detector for the STAR experiment under construction at BNL's Relativistic Heavy Ion Collider; and is planned to be used in other experiments, such as ALICE at CERN's Large Hadron Collider. The SDD has inspired other devices — an example being an x-ray detector for astrophysics experiments at the Max-Planck Institute in Munich, Germany.

Among other contributions, Rehak recently devised a technique to reduce significantly a serious shortcoming in position-sensitive gas detectors — broadening due to parallax in certain experiments. In principle, the idea can be used and retrofitted in most planar, two-dimensional detectors.

Earning a first doctoral degree, RNDr, in natural sciences, at the University of Prague, Czech Republik, in 1969, Pavel obtained a second Ph.D., in high-energy physics, at the *Scuola Normal Superiore*, Pisa, Italy, in 1972.

After two years at *Kernforschung-szentrum*, Karlsruhe, Germany, he joined Yale University, being assigned to CERN. In 1976, he came to BNL's Physics Department as an associate physicist, was promoted to physicist in 1979, and received a continuing appointment in 1981. He transferred

Money Talks

Understanding Your Retirement Options

In a one-hour seminar sponsored by the Human Resources Division, a TIAA-CREF representative will discuss the BNL's employees' retirement options under the AUI retirement plan. To be presented at noon on Tuesday, April 29, the talk will cover cash withdrawals, minimum distributions, annuities, survivor benefits and more.

To register, return the completed bottom portion of the Money Talks flyer recently sent to all employees to Denise DiMeglio, Benefits Manager, Bldg. 185, by Tuesday, April 15. For more information, call Ext. 2881.

Computing Corner

The Computing & Communications Division (CCD) is offering the following: LabVIEW Training

Scheduled for May 5-9, a five-day LabVIEW training class will include three days of introductory and two days of advanced training. The classes will meet from 8:30 a.m. to 5 p.m. in the Human Resources Division training room, Bldg. 459. The training fee for this class is \$1,500.

To register, send an ILR for that amount to Pam Mansfield, Bldg. 515, by Friday, April 18. For more information, contact Mansfield, Ext. 7286 or e-mail pam@bnl.gov.

to Instrumentation in 1994.

• Biochemist John Shanklin, Biology — In 1981, Shanklin earned his B.S. in biology from the University of Lancaster, England, and, from the University of Wiscon-



sin-Madison, earned an M.S. in forestry and a Ph.D. in horticulture, in 1984 and 1988, respectively.

After three years of postdoctoral research in molecular genetics at Michigan State University, Shanklin joined BNL in 1992. He focused primarily on characterizing fatty acid desaturases, enzymes that introduce double bonds at specific positions in the long hydrocarbon chains of fatty acids.

Using an interdisciplinary approach that included molecular, biochemical, and physical and crystallographic techniques, he developed information that allowed him to redesign the desaturase enzyme to create new enzymes with desired properties.

Recently, a dramatic result was obtained in a collaboration with scientists from Stanford University in which a desaturase enzyme was successfully remodeled, or morphed, to create a hydroxylase enzyme. This may be the first example of changing the outcome of an enzymatic reaction to introduce a different functional group.

Shanklin's work has important implications for the understanding of basic biochemical mechanisms, relationships between enzyme structure and function, and ultimately, lipid and oil production in crops. It also has commercial potential for modifying plant oils to provide alternate and renewable sources of chemicals currently obtained from petrochemicals.

In the five years since he joined BNL, Shanklin's contributions in this area have revolutionized the field of lipid biochemistry, establishing him as a world leader on this topic.

Shanklin joined Biology in 1992 as an assistant biochemist, becoming a associate biochemist in 1994, then a biochemist in 1996, when he also became an adjunct professor in the Biochemistry Department at the State

Outreach Workshop

Bridging Gender Worlds at Work

In the 1950s, most women stayed home to care for the children and do the housework, while men went out to work. Today, as a result of a gender revolution over the last 40 years, both women and men are secretaries, electricians, division managers and department chairs, and both men and women now have the option of parental leave from the workplace.

As a result of these drastic changes within the home and the workplace, men and women have had to build better bridges between the genders. "Bridging Gender Worlds in the Workplace" will be discussed in the next Outreach workshop series sponsored by the Employee Assistance Program (EAP). To be presented by a popular Outreach speaker, clinical psychologist Don-David Lusterman, the lecture will be held on Tuesday, April 15, from noon to 1 p.m. The lecture will be available afterwards on audiocassette in the Research Library, Blg. 477.

To register for this workshop, return the completed bottom portion of the Outreach flyer recently sent to all employees to Dianne Polowczyk, Bldg. 490, by Monday, April 14. For more information about EAP, call Ext. 4567.

University of New York at Stony Brook.

• Scientist Yimei
Zhu, DAS — Zhu
specializes in
atomic structure
of materials, particularly structural defects and
their relation to
physical properties. Zhu's high



level of accomplishment makes him an outstanding member of his generation in the area of electron microscopy and materials science research.

Zhu's primary tool is transmission electron microscopy, a technique of critical importance in materials science that complements structural information obtainable at both the NSLS and the High Flux Beam Reactor. Zhu's capabilities make him essential to the success of several DAS research programs over the long term.

At BNL, the majority of Zhu's research has focused on the structure and properties of nanometer-scale lattice defects in cuprate superconductors. His key insight into the mechanism of how the most promising bi-cuprate superconductor is formed offers a basis for designing improved material-fabrication processes.

Zhu also recently used and developed advanced techniques to reveal unexpected chemical and structural features of grain-boundaries in permanent magnets made of the rare-earth iron-B compounds, helping provide new understanding of how processing methods affect these materials' magnetic properties.

Also, his world-class research on grain boundaries and interfaces in the high-temperature superconductor $YBa_2Cu_3O_{7-x}$ has been recognized as providing both conceptual advances and experimental evidence, with an exceptional depth of analysis characteristic of his work.

Zhu received his B.S. in materials science at Shanghai Jiao-Tong University, China, in 1982, and both his M.S. and Ph.D. at the Center for High-Voltage and High-Resolution Electron Microscopy from Nagoya University, Japan, in 1985 and 1988, respectively. He joined DAS in 1988 as an assistant scientist, became an associate scientist in 1990, and was named a scientist in 1993.

— Liz Seubert

Bake Sale Monday

The Upton Nursery School (UNS) will hold its annual Spring Bake Sale on Monday, April 14,, from 11:30 a.m. to 1:30 p.m. in the lobby of Berkner Hall. Proceeds will be used to buy much-needed equipment for the school.

Open to children of Lab and AUI employees, guests and on-site contractors and their families, UNS is a nonprofit cooperative nursery school, which holds classes from September through June, from 8:30 to 11:30 a.m. on Mondays, Tuesdays and Thursdays. UNS employs three teachers and involves the children's parents in its structured, nonacademic program.

For more information, contact the UNS registrar, Ksenia Zheludev, 281-3769, or UNS president, Sue Ellen Gerchman, 929-3732.

Atlantic City Trip

The next BERA-sponsored, one-day trip to Atlantic City to Trump Castle Hotel and Casino on Saturday, May 17 will initially cost \$23, but the hotel-casino will give a \$12.50 coin return and a \$2.50 deferred voucher (not a \$12.50 deferred voucher as printed in last week's Bulletin). Buy tickets now at the BERA Sales Office in Berkner Hall, weekdays, 9 a.m. to 1:30 p.m. For information, call Andrea Dehler, Ext. 3347, or Kay Dellimore, Ext. 2873.

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Employee Meetings (cont'd.)l

Safety & Environmental Protection (SEP) Division, who have been taking turns discussing groundwater monitoring in these meetings, the tritium plume does not present a hazard to anyone's drinking water for several reasons:

• The plume is contained within the center of the Lab site. The plume measures 300 feet wide, and its leading edge — defined as where the tritiated water is at the Environmental Protection Agency's (EPA) drinking water standard for tritium of 20,000 picocuries per liter (pCi/L) — has been found to be about one mile north of the southern boundary. Tritium that is below the drinking water standard and up to 6,500 pCi/L has been found about two-thirds of a mile from the south boundary. So this tritium plume has not moved off the Lab's site.

• The plume is flowing south from the High Flux Beam Reactor. None of the Laboratory's drinking water wells is in this pathway. As the Plant Engineering (PE) Division's alternating representatives Bill Chaloupka, Chris Johnson and Lance Warren have explained to meeting attendees, three of BNL's potable wells are located north of the HFBR, in the opposite direction of groundwater flow; the other three are located in the west-

Meetings on Tap

Employee meetings on issues of

concern continue today with em-

ployees from the Safeguards &

Security Division, Flik Inter-

national Corp. and other Lab

contractors gathering in Berkner

• Mon., Apr. 14, Department of Ap-

plied Science, 10 a.m., Berkner Hall.

Tues., Apr. 15, U.S. Department of

Energy, Brookhaven Group, 11

• Thu., Apr. 17, **Physics Department**,

11 a.m., large seminar room, Bldg. 510.

• Fri., Apr. 18, Director's Office, Hu-

man Resources Division and on-site

employees of Siemen Rolm and the

National Weather Service, 11 a.m.,

in the Bulletin on the Friday be-

fore they are scheduled.

Future meetings will be listed

a.m., Bldg. 464 conference room.

Meetings next week are:

Hall, at 2:30 p.m.

Berkner Hall.

ern part of the center of the Lab, out of range of the plume.

BNL's remediation efforts have been discussed at the meetings by a rotation of speakers including Tom Burke, Bill Gunther, Mike Hauptmann and Bob Howe, from the Office of Environmental Remediation, and Douglas Paquette, from SEP. They have explained that the plume will not present a hazard because the Laboratory is committed to stopping its progression. Now that BNL has

found the leading edge of the plume, the Lab is installing extraction wells and a pump-and-treat system, so that water from the plume near Princeton Avenue, where tritium levels are no

Avenue, where tritium levels are no higher than 6,500~pCi/L, can be extracted. Any volatile organic chemicals (VOCs) also found in the water will be removed by filtration before the tritiated water is discharged into a recharge basin.

Due to natural dilution with other water extracted at Princeton Avenue, the tritiated water will enter the re-

BROOKHEVEN BULLETIN

charge basin at approximately half its

by the Public Affairs Office for the employees of BROOKHAVEN NATIONAL LABORATORY

ANITA COHEN, Editor MARSHA BELFORD, Assistant Editor

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Backed by a view graph showing the locations of monitoring wells installed on site to define the tritium plume, Douglas Paquette, Safety & Environmental Protection (SEP) Division, discusses the Lab's remediation plans with employees from the Instrumentation and SEP Divisions this past Tuesday in Berkner Hall. Other speakers that day included: (front row, from left) Susan Foster, HFBR Tritium Remediation Project; Gary Schroeder, SEP; Bill Chaloupka, Plant Engineering Division; and Ken White, Reactor Division.

original concentration. Once that water merges with the groundwater, it will take about 19 years for it to reach the Lab's southern boundary. In those years, the tritiated water will naturally be further diluted, and it will lose more than half its radioactivity through natural decay.

So, when it reaches the boundary, that water will contain barely detectable levels of tritium. Nonetheless, monitoring wells at the Lab's south-

ern border will be in place so the tritium levels can be measured. Extraction wells will also be in place at the southern boundary, to extract and return any water to the recharge basin if necessary.

As Miltenberger and Schroeder point out, even if nothing were done to the plume at Princeton Avenue, that water would still be safe to drink because its tritium concentration is less than one-third of the drinking water standard. If the plume were al-

lowed to proceed from there without extraction, natural dilution and decay would probably reduce the tritium in the water to barely detectable levels by the time it reaches the Lab's southern border.

Although these levels are acceptable to regulators within Suffolk County, New York State and the federal government, BNL recognizes that these levels are not acceptable to the Lab's neighbors or to elected officials because they still lower the quality of Long Island's sole-source aquifer. As Leland Willis, Vice President for Environment, Safety & Health for Associated Universities, Inc., who has attended most of these meetings emphasizes, by pursuing the pumping option, BNL will be doing all it can to contain the contamination on the site and to allow it to degrade before reaching the southern boundary.

In the 1980s, when rising tritium levels were seen in the Lab's drinking water well #1, why didn't BNL pursue the possibility that the tritium was coming from the HFBR?

Potable well #1 was located about 900 feet south of HFBR. As Schroeder and Miltenberger have explained, in the 1980s, tritium was found in this well at levels well below the drinking water standard, but clearly rising. After three years of increased tritium, the well was taken out of service because it held concentrations of VOCs that were over that drinking water standard. The maximum level of tritium ever seen in this well was about 30 percent of the EPA's drinking water standard for tritium.

In hindsight, the SEP representatives say, it seems clear that the source of the rising tritium levels in well #1 was most likely the plume now emanating from the HFBR. In fact, this well could very well have been drawing the plume into its "zone of capture" and preventing it from following its natural inclination southward.

In the 1980s, however, no one suspected the plume's existence. And, points out Ken White, Reactor Division, who has been briefing those at the meetings on activities at the HFBR, there was no indication that the spent-

Spring Fling

Concert on Sunday

in Berkner Hall, at 2 p.m.

Tickets are still available for the

Buy tickets today at the BERA Sales

BERA concert this Sunday, April 13,

featuring pianist Marc-André Hamelin

Office, from 9 a.m. to 1:30 p.m., or at

the door on Sunday, for \$14 general

admission, \$9 for seniors, and \$5 for

students and youths under 18. For

more information about the concert,

call Ext. 3550 for a recorded message.

BERA's second seasonal TGIF party, the Spring Fling, will be held on Friday, April 18, at the Rock Hill Country Club, off Clancy Road in Manorville, starting at 6 p.m. The cost is \$5 to cover hors d'oeuvres and entertainment; a cash bar will be available. The party is open to all BERA members and their friends, and no reservations are required. For more information, call Charles Gardner, Ext. 5214.

Arrivals & Departures

Arrivals

Vjacheslav F. Solovjov.....App. Science **Departures**

This list includes all employees who have terminated from the Lab, including retirees:

David A. Hannum......Adv. Technology Carl C. Schnoor......Plant Eng.

Equipment Demo

MSC Industrial and L.S. Starrett Company will hold a precision measuring-tool forum in Berkner Hall from 9 a.m. to 2 p.m. on Tuesday, April 15. Stop by to see the lastest technology available in measuring equipment.

Correction

In the April 4, 1997, Bulletin story "Low-Level Tritium Found South of Underground Tank," the radioactive-waste collection tank into which the underground tank was originally designed to drain was incorrectly noted to be behind Bldg. 801. The tank is in the basement of Bldg. 801.

fuel pool was leaking.

When the HFBR opened in 1965, the pool was designed to the thencurrent standard, so leakage through the structure was not expected nor was it evident in initial tests. Further, as of 1965, the Nuclear Regulatory Commission had not yet issued any warnings that similar pools were experiencing premature leakage. So, when tritium levels rose over a three-year period in well #1, the Lab looked for other possible sources.

The SEP and PE speakers agreed that, at the time, it was thought that the most likely source was the underground sewer lines that collect effluent from the Lab's many buildings and transport it to the sewage treatment plant. Well #1 was located just east and north of a sewer line coming down from the HFBR, the facility from which most of the Lab's tritiated effluent originates. These World War II-vintage sewer lines were suspected of some leakage near well #1 that was being drawn into the well's zone of capture.

In response, the Lab undertook a three-year analysis and upgrade of its sewer lines. Additionally, two monitoring wells were placed south of well #1 to see if the tritium problem was more widespread. The monitoring wells showed no tritium, and the problem was thought to be confined to well #1's drawing in sewer-line leakage. Now it is known that the two monitoring wells were just too far east to show the plume.

As Miltenberger and Schroeder explained, because well #1 had been taken out of service due to VOCs, it was no longer possible to sample it in future years to see if tritium levels were still rising. Since it was not operating regularly, it would have had to be flushed before sampling. That would have resulted in several thousand gallons of VOC-contaminated water that would have had to be stored and treated as hazardous waste. Since the tritium levels, though rising, had been

Cycle-Trons Ride Again!

below the drinking water standard,

and since the Lab believed the source

of the tritium had been found, no fur-

ther testing was then believed neces-

— Anita Cohen

Having biked off into the sunset in the mid-80s, the BNL Cycle-Trons ride again! So, the Lab's motorcycle club is looking for new members to participate in rides, swap meets, cycle shows, etc. If you are interested, then contact Frank Dusek, Ext. 2022 or e-mail dusek@bnl.gov, or Charles Gardner, Ext. 5214 or e-mail chuckg@bnl.gov.

For more information, check out the Cycle-Trons' home page on the World Wide Web, located at http://www.berahome.bnl.gov.



Job Info on TDD

Individuals who have hearing disabilities or impairments can now access information about job openings at BNL via a telecommunications device for the deaf, or TDD.

By calling the TDD phone number, (516) 344-6018, people will learn about the kinds of jobs currently available at the Lab. They'll be given the World Wide Web site address, http://www.bnl.gov/JOBS/jobs.html, where they can read the full description for each job. Or they can leave their names and addresses so they can receive the complete listing by mail.

Classified Advertisements

Placement Notices

The Laboratory'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.

SCIENTIFIC RECRUITMENT - Doctorate usually required. Candidates may apply directly to the department representative named.

POSTDOCTORAL RESEARCH ASSOCIATE - (additional position) Trained in accelerator, high energy or nuclear physics, to work on the RHIC Project. Will address accelerator-physics design issues, develop high-level controls software and participate in accelerator commissioning. Experience in accelerator operations is desired, and strong proficiency in accelerator hardware and/or software is preferred. Contact: Stephen Peggs, RHIC Project.

POSTDOCTORAL RESEARCH ASSOCIATE - Trained in chemistry, with experience in organometallic and/ or inorganic chemistry and in handling air-sensitive compounds. Experience with NMR spectroscopy, organometallic synthetic procedures, kinetic and mechanistic studies, photochemistry, and catalytic reactions is preferred. Collaborative research between the Photochemistry/Radiation Chemistry Group and the Homogeneous Catalysis Group will be encouraged, including new studies in aqueous organometallic chemistry. Contact: Morris Bullock, Chemistry Department.

POSTDOCTORAL RESEARCH ASSOCIATE - Trained in chemistry, with experience in transition-metal organometallic chemistry and handling air-sensitive compounds. Experience with NMR spectroscopy is required. Experience in organometallic synthetic procedures, kinetic and mechanistic studies, gas chromatography and catalytic reactions is preferred. Research involves organometallic chemistry-synthetic, kinetic and mechanistic studies, with emphasis on metal hydrides. Contact: Morris Bullock, Chemistry Department.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

DD 2243. SECRETARIAL POSITION - Requires an AAS in secretarial science or equivalent experience, a thorough knowledge of Laboratory policies and procedures, and excellent communication skills. Computer proficiency also required with scientific word processing and e-mail, TeX experience desirable and shorthand experience preferred. Will perform diverse secretarial duties for the RIKEN BNL Research Center. Responsibilities will include preparing technical manuscripts and correspondence, handling administrative duties for conferences and meetings, and arranging foreign and domestic travel. Will act as point of contact for visiting staff. Physics Department.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

RP 2000. SECRETARIAL POOL POSITIONS - Requires an AAS in secretarial science or equivalent experience, as well as excellent communication and PC skills. Familiarity with WordPerfect 6.1 for windows, spreadsheets (Excel) and graphics software (Harvard Graphics) highly desirable. Will provide secretarial support on a temporary, part-time basis as needed to various departments at the Laboratory. Human Resources Division.

Real Estate Ads to Run On Third Friday of Each Month

Effective this month, classified advertisements for Real Estate for sale, for rent, or for sale or rent will run only once a month, on the third Friday of the month. Therefore, Real Estate ads submitted for this week will run in next week's Brookhaven Bulletin, as will any additional Real Estate ads received by the Bulletin office in Bldg. 134 by noon today.

Anyone who wishes to preview the Real Estate ads submitted for this week may contact the Public Affairs Office, Ext. 2345.