

## Institutional Plan Reviewed on Site

Each fiscal year (FY), Brookhaven and the other national labs are required by the U.S. Department of Energy (DOE) to put forth a five-year Institutional Plan, outlining each lab's mission, the future of its scientific and technical programs, and its facilities and support-structure needs.

BNL's preliminary FY1996-FY2001 institutional plan was published in May and forwarded to DOE for perusal. The draft was presented by BNL and reviewed by DOE on site on July 31, during a day-long meeting chaired by Martha Krebs, Director of DOE's Office of Energy Research, which provides the majority of the Lab's funding.

That morning, Laboratory Director Nicholas Samios presented the Institutional Plan's overview of the Lab's mission and discussed the strategies to carry that mission into the future, which are outlined in that document.

Denis McWhan, BNL's Associate Director for Basic Energy Sciences, elaborated on the Phase III plans to upgrade the National Synchrotron Light Source (NSLS), to maximize its scientific output. He also discussed the proposal to build another user facility centered on a deep ultraviolet (UV) free-electron laser: It would provide picosecond and sub-picosecond pulses of coherent UV radiation with wavelengths from 300 to 750 nano-

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During the day-long, on-site review of BNL's Institutional Plan, Martha Krebs (second from left) toured the Lab's soon-to-be-commissioned Magnetic Resonance Imaging (MRI) Facility. Accompanied by BNL Director Nicholas Samios (third from left) and AUI President Robert Hughes (fourth from left), Krebs is seen looking into the bore of the 1-meter-in-diameter, high-field superconducting magnet. As Charles Springer (left), Chemistry Department, is explaining, this magnet is the heart of the MRI device and will eventually hold an examination table on which a patient will be placed for brain imaging. Future MRI research by the Chemistry and the Medical Departments into the effects on the brain of schizophrenia, Alzheimer's disease, brain tumors and substance abuse was explained to Krebs by Nora Volkow (right, top), Medical, and Joanna Fowler (right, bottom), Chemistry.

Roger Stoutenburgh

## Posthumous Honor For Ralph Fairchild

Last month, among those honored by the Health Physics Society (HPS) was Ralph Fairchild, a BNL scientist who was a member of the Medical Department from 1961 until his death in 1991, at the age of 55. As an individual who contributed in an outstanding way to the development of scientific knowledge for the beneficial use of radiation, Fairchild was permanently memorialized by an HPS 1995 Distinguished Scientific Achievement Award presented in his name.

Fairchild's achievements were described at the HPS awards luncheon on July 27 in Boston, Massachusetts, by Stephen Musolino, a health physicist with the Relativistic Heavy Ion Collider Project, who coordinated the HPS Greater New York Chapter's nomination of Fairchild for the award.

Musolino had worked on his doctoral thesis under Fairchild and knew him as "a man devoted to his work, who never looked for personal recognition. He is one of the very few individuals who showed me the real meaning of determination and principle."



Ralph Fairchild

As Musolino recounted, Fairchild's best-known work was in the field of boron neutron capture therapy (BNCT) for the treatment of malignant brain tumors. He recognized the neutron beam-related causes for the failure of initial clinical trials in the 1950s, and remedied the problems by designing and testing an epithermal neutron beam. He also encouraged the synthesis of tumor-seeking boron compounds and evaluated their efficacy.

Also, Fairchild was the first to describe the physical and biological characteristics of brachytherapy using californium-252 sources. He contributed to the design of iodine-125 plaques for treating ocular melanoma. He evaluated several agents for use in treating malignant melanoma, and identified radiolabeled thiouracil as the most significant biomolecule for diagnosis and therapy.

The breadth of Fairchild's approach to research is typified by his applying the BNCT binary model to a new, promising concept for cancer treatment, photon activation therapy (PAT). Although PAT has not yet been clinically proven, a proof of principle has been carried out at the National Synchrotron Light Source (NSLS) in a collaboration with William Thomlinson, NSLS Department, and Brenda Laster, Medical.

Added Musolino, "Ralph was referred to as the 'intellectual glue' bonding the efforts of BNCT investigators throughout the U.S., Japan, Europe and Australia, and this was because he gave completely of himself to his students and collaborators who have carried on with his work. His generous nature permitted him to share willingly, completely and unselfishly, a trait that fostered the international collaborations that still exist today."

Clinical trials of BNCT have been under way at BNL since September 1994.

— Liz Seubert

## Idea About Power Earns \$10,000 for Two at AGS



Roger Stoutenburgh

Receiving their \$5,000 checks from Alternating Gradient Synchrotron (AGS) Department Chairman Derek Lowenstein (center) are BNL Employee Suggestion Award winners John Butler (left) and David Knoernschild (second from left). Adding their congratulations are the winners' supervisor, Michael Brennan, AGS, and program coordinator Susan Foster, Human Resources Division.

It was late one night in the radio-frequency (rf) control center at the Alternating Gradient Synchrotron (AGS). Technical Specialists David Knoernschild and John Butler were finishing up some work, discussing the high idle currents of some of the rf system power supplies.

"John had just come back in after adjusting a supply with a high current and joked about how much money he had saved," recalls Knoernschild. "Then, while we were taking a break, we were saying, 'Wouldn't it be great if we could cut that power down?'"

Suddenly, the two realized they could — and the idea they had that night in mid-1994 earned them \$5,000 each this month under the Employee Suggestion Program. It was only the second time that the maximum amount of \$10,000 has been given.

(continued on page 2)

## Helping Korea With ALARA

On Monday, August 14, Yong Kyu Lim, President of the Korea Institute of Nuclear Safety (KINS), and Nicholas Samios, BNL Director, signed a memorandum of understanding on behalf of their respective institutions. The memorandum confirmed a new agreement between BNL and KINS in the area of ALARA, which stands for "As Low As Reasonably Achievable," and which refers to limiting radiation exposures to workers and the public.

Implementation of the ALARA principle in the nuclear industry has been stimulated and assisted by BNL since 1983, when the Nuclear Regulatory Commission (NRC) sponsored the initiation of the BNL ALARA Center, now in the Department of Advanced Technology. Since then, in fulfillment of its mission, the BNL center has analyzed and distributed information on ALARA techniques around the world.

Recently, the Korean Congress passed a law requiring that ALARA recommendations on radiation exposure be implemented in South Korea, creating the need for a Korean ALARA Center to work with the Korean nuclear industry. At KINS's request, BNL's ALARA Center is assisting in this endeavor. The International Atomic Energy Agency is also involved in the BNL and KINS collaboration, sponsoring the current month-long expert visit in Korea by



Peter Horton

Yong Kyu Lim (front, center), President of the Korea Institute of Nuclear Safety (KINS), and BNL Director Nicholas Samios shake hands after signing a memorandum of understanding. Also present are: (back, from left) Jae Ho Song, Manager, KINS International Cooperation Department; Robert Bari, Chairman, BNL's Department of Advanced Technology (DAT); John Baum, Head of DAT's Radiological Sciences Division; and Martin Blume, BNL Deputy Director.

Tasneem Khan, Executive Manager of the BNL ALARA Center.

— Liz Seubert

# Toward Better Integration of Math, Science, Technology in Schools

Fourteen 5-member teams, each made up of three teachers plus two administrators from four schools on Long Island and ten in other parts of the state, were in Berkner Hall at 9:30 a.m. on June 5. There, they worked on such problems as designing and ultimately testing a box of a fixed size that would keep a cube of ice of known volume from melting. While their immediate purpose was to demonstrate how this activity could be used to teach properties of materials and needed measurements, their broader aim was to plan for better integration of math, science and technology in NYS schools.

The 70 participants (some of whom are pictured at right), along with 10 speakers from state and private sector educational institutions, were all at a conference on Math, Science and Technology Integration in New York State (NYS), organized at BNL on June 5 & 6 by the Office of Educational Programs (OEP). Sponsored by NYS and the U.S. Department of Energy, the conference was held to plan strategy: how to generate enthusiasm for math, science and technology in schools by proving to students that these disciplines are relevant to real-life situations. Topical workshop sessions on, for example, interdisciplinary curriculum issues, resource needs, and training and support, were reported on and discussed. OEP has been approached by NYS to help organize another such conference next year, perhaps in Albany.



## In Memoriam

**Klaus Ehinger**, a tool and instrument maker in the Central Shops Division (CSD), died July 30 of a massive heart attack at the age of 60.

A native of Germany who emigrated to Canada in his youth and to the U.S. later in life, Ehinger came to BNL in October 1988, as an experimental machinist, after several years



**Klaus Ehinger**

as a foreman at Gatto, Inc., of Hauppauge. He held a technical degree from a school in Germany.

In June, 1989, he was made a tool and instrument maker in the Heavy Machine Shop, and a year later moved to the Instrumentation Staff Shop of CSD in the Instrumentation Division. There, he participated in the fabrication of intricate scientific equipment. He returned to the Heavy Shop in

August 1994.

"He was a good worker and a skilled craftsman, and he'll be missed," said CSD Manager Richard Spellman.

For health reasons, Ehinger began a medical leave in December 1994, and a leave of absence in March of this year. He went on long-term disability on June 2. He is survived by his wife Patricia, his daughter Jill, son John, daughter-in-law Gail, and granddaughter Ashleigh.

Former Meteorologist **Gilbert Raynor**, who had entered a coma on July 24, 1984, as a result of contracting Rocky Mountain spotted fever, died on July 18 at the age of 76.

Raynor began his BNL career on March 31, 1952, as a weather technician B in the then Meteorology Group. After moving up the technical staff ranks and earning his B.S. in applied physics, he was moved onto the scientific staff in 1963 as an assistant meteorologist. Raynor became an associate meteorologist in 1966 and was named to his final title in 1969. Along with his group, he became a member

of the Department of Applied Science (DAS) in 1972.

"Gil Raynor was a tremendously productive and highly respected meteorologist who was known for his innovative design of experiments and

for always going one step beyond the expected," recalls retired Senior Scientist Paul Michael, who was head of DAS's then Atmospheric Sciences Division (ASD), in which Raynor worked.

For instance, in studying acid rain, "Gil made a landmark series of measurements, by performing sequential sampling by time or amount of precipitation in rain events, thereby adding to the understanding of



**Gil Raynor**

the precipitation chemistry within an event," Michael recalls.

Raynor held four patents for three inventive sampling devices used in ASD's experimental program.

Raynor also had a passion for bird watching — he was a bird bander for the U.S. Fish and Wildlife Service since 1938 and conducted breeding-bird censuses for the Service and the National Audubon Society. His family believes that Raynor was bitten by a tick carrying the Rocky Mountain spotted fever parasite while birding at Montauk, as the regional coordinator of the breeding-bird atlas being compiled by the New York State Department of Environmental Conservation.

Having come down with the flu-like symptoms of the disease and then entering the coma, Raynor was placed on long-term disability in 1985 and was retired from BNL in 1986.

A resident of Manorville, Gilbert Raynor is survived by his wife Marion; nine children, including Jeffrey, who works in the Supply & Materiel Division and is a resident of Manorville; and ten grandchildren.

## \$10,000 Idea

(cont'd.)

The award came as a result of Butler and Knoernschild's money-saving idea for the AGS's rf power amplifiers: a circuit that essentially turns the power supply on and off as the acceleration cycle requires it.

Called a Tetrode Grid Voltage Controller, the circuit cost only \$8,000 to implement. But it is already cutting the Lab's electric bill by up to \$124,000 each year — and, at 64 cents per kilowatt hour (kWh) and 2,400 kW a day, that's a lot of energy saved.

The AGS has made the circuit part of its standard rf equipment and is seeing other benefits: For one, cooling costs are reduced by the decreased load on the system. Even more interestingly, the change has allowed the voltage to be manipulated to serve the AGS physics program's requirements better. And the idea is already being readied for other systems at the AGS, including the Booster, and could be used at other accelerators, too.

Since the suggestion was outside the usual realm of the pair's responsibilities as technical specialists who upgrade and maintain the rf system, it qualified for the program. Of course, joked Butler, "Now we have to build all these things," that are made possible by the voltage controller.

### Cycling Within a Cycle

Every 3.8 seconds when the AGS is running, a bunch of protons is injected into the ring, accelerated and extracted to users' beam lines. More than 22,000 of these cycles take place each day of the seven months of an AGS run.

It takes approximately 1.8 seconds

of each cycle for the beam to be injected and accelerated. In the two seconds that remain, the beam is extracted, and the rf system sits ready for the next cycle to begin.

Butler and Knoernschild proposed that during that time, it would be more efficient to turn off the rf tube, or tetrode, that enables the amplifiers to accelerate particles.

If the power wasn't needed, they reasoned, a lower "quiescent" current

or resting state could be used for the entire two seconds. Then, the voltage could be turned back up for 1.8 seconds when another bunch of particles comes into the AGS.

So, encouraged by RF Systems Group Leader J. Michael Brennan, they built a prototype for the circuit needed to do the trick. By last November, they were ready to submit the suggestion to the then Personnel Office for consideration. It made its way

## Also in the Winners' Circle . . .

Some of the other BNLers who have recently won awards through the Employee Suggestion Program are:

**Joseph Zeneski**, a Central Shops Division machine maintenance mechanic who looked to fish tanks for inspiration for his suggestion — air bubblers for the cooling systems of grinding and cutting machines in his division. Since the bubblers keep the coolant from congealing, eliminate foul odors and reduce frequency of coolant replacements, an annual savings of \$4,000 is expected, and Zeneski was awarded \$400. His award may be increased if an evaluation later this year shows that more money has been saved by installing the devices on additional machines.

**Nicholas Houvener**, a reactor support specialist in the Reactor Division who recognized that a standard, recognizable disposal bin for wipes contaminated with organic solvents would make it more likely that they'd be disposed of properly and safely — as hazardous waste. The Safety & Environmental Protection (SEP) Division urges the use of these containers, which are available through the Supply & Materiel stockroom as item K-60618. SEP's Karl Shurberg can be reached at Ext. 3158 for more information about the proper disposal of wipes contaminated with solvents. Houvener received \$150 for his safety-minded suggestion.

**Bruce Martin**, an advanced computer analyst for the Relativistic Heavy Ion Collider Project who got an award for asking "Who turns out the lights?" in the Bldg. 911 library. Martin noticed that the lights were left on over nights and weekends, and suggested that timers be installed to save energy. Because the Plant Engineering Division's Energy Management Group had not yet targeted the area for energy-conservation practices, Martin received an award of \$88, one-tenth the expected savings from his suggestion.

through a review process that scrutinized the duo's calculated savings and technical specifications, and the award was announced in late July and presented in early August.

"This experience shows two things," said Brennan. "One, these guys have a very good attitude toward their job — they're not just putting in their time and collecting a check. They have their heads in the game and are thinking about how to do a good job and make their projects better than designed."

"Second, the Lab is a great place to work for someone with this attitude," he continued. "No one is ever discouraged from making a suggestion, no matter what position they have. At BNL, there are no reins on brains."

Butler and Knoernschild are both graduates of DeVry Technical Institute in Woodbridge, New Jersey. Butler, who has been at the Lab seven years this month and plans to spend his award on his September wedding, has his bachelor's degree in electronic engineering technology. Knoernschild, who just celebrated ten years at BNL, has an associate's degree in electronics technology and deposited his winnings in the bank in preparation for a nice vacation, possibly to Bermuda.

Both wanted to thank Brennan, as well as Alex Zaltsman, AGS operations engineer, for their help and encouragement. And, they said, the Employee Suggestion Program staff in the Human Resources Division, Susan Foster and Karen Adelwerth, made the whole process worthwhile.

"The program is a good idea," said Knoernschild. "It makes people think about things a little more."

— Kara Villamil

**Institutional Plan** (cont'd.)

meters, for time-resolved studies in chemistry, surface and solid-state physics, biology and materials science.

BNL's Center for Neutron Science Head John Axe reviewed the need to construct six new scientific instruments and upgrade six existing ones at the High Flux Beam Reactor (HFBR), to increase its utilization and make available neutron spectrometers not found in the U.S. at present. Axe also spoke on the feasibility studies of a pulsed spallation neutron source, an accelerator that would produce pulses of neutrons by impacting energetic protons into a heavy metal target.

BNL's Associate Director for Life Sciences Richard Setlow talked about combining BNL's existing PET and SPECT imaging capabilities with the functional MRI now under construction into BNL's Center for Imaging & Neuroscience. It will be dedicated to neurological investigations, such as elucidating the basic mechanisms of substance abuse in search of pharmacological agents to counteract the craving for addictive substances.

The status of the construction of BNL's Relativistic Heavy Ion Collider (RHIC) was reported by RHIC Project Head Satoshi Ozaki. Then, Thomas Kirk, BNL's Associate Director for High Energy & Nuclear Physics, spoke on the physics justification for RHIC; the building of the two major detectors for RHIC, called STAR and PHENIX; and the plans for a number of complementary smaller experiments.

The complementary nature of BNL's environmental research in oceanography, and atmospheric and terrestrial sciences was discussed by James Davenport, Chairman, Department of Applied Science. Specifically, research into the natural and anthropogenic processes at the continental ocean margins, and into the bioremediation of pollution by microbial degradation of contaminants, was presented.

William Studier, Chairman of the Biology Department, discussed the proposed establishment of a Genome Sequencing Center. There, fully automated, highly efficient sequencing of the human genome could take place using primer walking — a BNL-developed technology for large-scale DNA sequencing that could allow the human genome to be sequenced within the time and budget of the national Human Genome Project.

Lastly, Joel Sussman, Head of the Protein Data Bank (PDB), discussed the complementary nature of the Lab's structural biology research performed at the NSLS, HFBR and BNL's scanning transmission electron microscope, or STEM. He reviewed PDB's national importance to structural biology, molecular genetics and genome studies, and the expansion of the PDB from a computerized depository of three-dimensional structures of proteins to include the structures of other biological macromolecules, which has necessitated the PDB's moving in 1996 to a Biology addition now under construction. — Marsha Belford

**BWIS Awards Chasman Scholarship To Huntington Woman**

Kristen Curry Grace of Huntington has won the Brookhaven Women in Science (BWIS) Renate W. Chasman Scholarship this year and was presented the \$2,000 award in a ceremony held at Berkner Hall on August 11.

Upon accepting the award, Grace commented, "I am honored to receive this award from such a prestigious institution as Brookhaven Lab. . . . It is motivation for future success, and it encourages me to work harder."

BWIS has offered the Chasman Scholarship annually since 1986 to a Long Island, Brooklyn or Queens woman reentering school at the junior or senior undergraduate level or at the first-year graduate level in a degree-oriented program in the natural sciences, engineering or mathematics.

Grace, who returned to college in 1992 after a five-year hiatus since high school, will be a junior this fall at the State University of New York (SUNY) at Stony Brook, where she is pursuing a B.S. in biochemistry.

She plans to participate in Stony Brook's Undergraduate Research and Creative Activities program, then go to medical school after graduation. This summer, Grace started working part-time at Cold Spring Harbor Laboratory, assisting in genetic research.



Peter Horton

**Brookhaven Women in Science (BWIS) Coordinator Mary Wood (left) presents Kristen Curry Grace with BWIS's 1995 Renate W. Chasman Scholarship.**

The Chasman scholarship honors the late nuclear theorist Renate Chasman, whose work with Ken Green is the basis for the design of the storage rings at BNL's National Synchrotron Light Source and elsewhere.

— Diane Greenberg

**Do you take for GRANTED**

— That every kid in Brookhaven Township can have peanut butter & jelly sandwiches for lunch?

**Make it a GIVEN-**

Give peanut butter, & jelly, or mayo, tuna or canned goods to the **BNL FOOD DRIVE**, or send a check to Carole Kerr, Bldg. 460. PICKUP ALL NEXT WEEK.

**C/W Dance Lessons**

The BERA Country/Western (C/W) Dance Club is planning its next session of classes, to be held on Tuesdays after work beginning in September. The cost, ability level and number of sessions offered will be determined by the number of people who commit to taking these classes. Class size will be limited. So, whether you are a greenhorn or an old hand, reserve your place in the C/W dance class by calling Marilyn Johnson, Ext. 2546, before next Friday, August 25.

**Softball**

**Final Standings**

League E1		League M1	
Blue Jays	13-1	Goodtimers	9-3
Phoubars	11-3	StingRays	9-3
System	10-4	Gour-Mets	7-5
Jerky Boys	7-7	Snake Bites	7-5
Six Pax	6-8	Parke Avenue	6-6
Titans	5-9	Personnelities	3-9
Up & Atom	3-11	Strike Force	1-11
CCD	1-13		

**Results as of August 11**

League E2		League M2	
Big Sticks	10-1	OER-Wellheads	8-3
Lights Out	8-3	No Names	7-4
Hammerheads	8-3	Skeleton Crew	7-4
Phase Out	7-4	Varmints	6-5
Contaminators	7-4	Stray Cats	4-5
Hy Tech	6-5	Ground Hogs	3-7
Scram	6-5	What's on 2nd	3-8
Sure Fire	5-6		
Out of Control	3-8		
Feds	3-8		
Bombers	2-9		
Medical	1-10		

**Scoring Notice**  
If winning teams do not submit score sheets to their League representatives, unreported scores will be recorded as losses for both teams.

**Informational Meeting For Upton Nursery**

Providing preschooling for the three- and four-year-old children of BNL employees, guests, on-site contractors and their families since 1965, the Upton Nursery School is an on-site, parent-run cooperative nursery school that meets three mornings a week from September through June in the Recreation Building. The school provides small classes and a warm environment, involves the parents in their children's preschooling, and has a reasonable tuition. The Upton Nursery School is not affiliated with the Child Development Center.

The nursery school is now accepting registration for the 1993-94 school year; non-English speaking children are welcome. So parents may learn more about the school, there will be a meeting on Wednesday, August 30, at 7 p.m. in the Recreation Building.

For information or to register your child, call Janice Steski, 929-3859.

**Arrivals & Departures**

Arrivals	
Dion G. Durnford	App. Science
Fesseha G. Mariam	RHIC
Departures	
None	

**Bowling**

**Call for Bowlers**

Applications for the Tuesday night men's bowling league in Port Jefferson and the Thursday night mixed league in Rocky Point are available now at the BERA Sales Office, Berkner Hall, weekdays, 9 a.m. to 1:30 p.m.

All BNL employees, retirees, on-site contractors and their families may join. You do not have to be a great bowler, just a willing one! For more information, call Debbie Botts, Ext. 7218, or Maryann Musso, Ext. 2352.

**Attn: Team Captains**

New-team registration is due today. All bowling team captains will meet on Wednesday, August 23, at noon, in Room D, Berkner Hall.

**Register to Vote**

*The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex.*

*Congress shall have power to enforce this Article by appropriate legislation.*

In honor of the 75th anniversary of the passage of the 19th Amendment to the U.S. Constitution (text above), which was proposed by Congress on June 4, 1919, ratified on August 18, 1920, and extended the right to vote to women, BNL's Women's Program Advisory Committee and Brookhaven Women in Science will be registering new voters.

The on-site voter-registration drive will take place today, August 18, through next Friday, August 25, from 11:30 a.m. to 1:30 p.m. in Berkner Hall. All U.S. citizens, regardless of sex or political affiliation, who have yet to participate in the electoral process are invited to register, so they too may cast their ballots in exercising this unalienable right.

Over this week as well, there will be a display on American women's suffrage, in the lobby of Berkner Hall. It will review how the right for women to vote was first proposed in 1848, and how the nationwide struggle was led by Elizabeth Cady Stanton, Lucretia Mott, Susan B. Anthony, Lucy Stone and other feminists of their day.

For more information, contact BNL's Women's Program Coordinator, Vicki McLane, Ext. 5205.

**Retirement Counseling**

A TIAA-CREF representative will visit the Lab on Wednesday, Thursday and Friday, September 20-22, to answer BNL employees' questions regarding the TIAA-CREF retirement plan in one-on-one counseling sessions. Questions employees might have include:

- What are the differences between TIAA and CREF?
- How should I allocate my money between TIAA and CREF?
- How can I save on taxes?
- What options and flexibilities do I have for my existing dollars with TIAA-CREF?
- What are my options for the retirement years?

To arrange a 45-minute appointment, call Joyce Wund, Human Resources Division, Ext. 7516, by next Friday, August 25.

**Microsoft Training**

The next Microsoft ACCESS class is scheduled for Thursday and Friday, September 21 & 22. Classes both days will meet from 8:45 a.m. to 4 p.m. in the PC Training Room of Bldg. 515. To register, send an ILR for \$200 to Pam Mansfield, Bldg. 515, by August 31. For more information, call Mansfield, Ext. 7286.

**WordPerfect Users**

On Tuesday, August 22, from 10 a.m. to 11 a.m. in the CCD Seminar Room, Bldg. 515, the WordPerfect Users Group will meet to discuss WordPerfect's Internet Publisher (WPIP), and how to convert documents to hypertext markup language (HTML). In addition, users are invited to bring macros to share with the group.

Space is limited, so please call Donna-Ree Rodriguez, Ext. 7261, to reserve a seat.

**Addled Addresses**

- Prucavin Natl. Lab
- BrookHaven Industrial Labs

**BROOKHAVEN BULLETIN**

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The Brookhaven Bulletin is printed on paper containing at least 50 percent recycled materials, with 10 percent post-consumer waste. It can be recycled.

# Cafeteria Menu

## Monday, August 21

Soup: Cream of tomato	.90/1.20
A la Carte: Sausage & peppers	3.65
Lite: Escalopini turkey in pasta	3.85
Deli: Pastrami	3.20
Grill: Meatball hero	3.30

## Tuesday, August 22

Soup: Chicken noodle	.90/1.20
A la Carte: Chicken w/ salsa	3.95
Lite: New England boiled dinner	3.95
Deli: Turkey w/stuffing	3.20
Grill: Pastrami & Swiss on pumpernickel	3.30

## Wednesday, August 23

Soup: Beef barley w/mushrooms	.90/1.20
Display Cooking: Asian kitchen	4.75
Deli: BBQ brisket of beef	3.20
Grill: Steak w/garlic bread	3.30

## Thursday, August 24

Soup: Vegetarian vegetable	.90/1.20
A la Carte: Stuffed pepper	3.65
Lite: Spinach & feta quiche	3.65
Deli: Leg of lamb w/rosemary	3.20
Grill: BBQ pork	3.30

## Friday, August 25

Soup: Seafood Creole	.90/1.20
A la Carte: Chicken cacciatore	3.85
Lite: Baked cod w/lemon-mushroom glaze	3.95
Deli: Pork loin	3.20
Grill: French dip	3.30

## Classified Advertisements

### Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position. Consideration is given to candidates 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, handicap or veteran status.

Each week, the Human Resources Division lists new placement notices. The purpose of these listings is, first, to give employees an opportunity to request consideration for themselves through Human Resources, and second, for general recruiting under 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, or call the JOBLINE, Ext. 7744 (282-7744), for a complete listing of all openings.

Current job openings can also be accessed via the BNL Home Page on the World Wide Web. Outside users should open "http://www.bnl.gov/bnl.html", then select "Scientific Personnel Office" for scientific staff openings or "Employment Opportunities" or "BNL Human Resources Division" for all other vacancies.

**OPEN RECRUITMENT** - Opportunities for Laboratory employees and outside candidates.

LS 9042. COMPUTER ANALYST POSITION - (part-time) Requires a bachelor's degree or equivalent, experience in service-oriented work with computers and networks, excellent oral and written communication skills, and experience in hardware/software and modern networking approaches. Hands-on hardware/software experience installing peripherals and troubleshooting small computer workstations is also required. Experience with TCP/IP, UNIX, VMS, FORTRAN, C, IBM RS/6000s, Suns, PCs and Macs is desirable. Responsibilities include supporting the computing activities in the Department. Chemistry Department.

### Motor Vehicles & Supplies

93 CHEVY SUBURBAN 4x4 - 2500 series, loaded, black w/silver, 24.5k mi., 454 tow pkg., like new, \$29,500. Ted, Ext. 4284.

92 CAVALIER - 2-dr., a/t, p/s, p/b, p/l, ac, am/fm cass., 31k mi., mint cond., \$6,300. Tom, 281-6498.

92 DODGE 250 PICKUP - 3/4-ton, loaded, 26.7k mi., 4 yrs. left on warr., loaded, \$16,000; '89 Sun Lite slide-on camper, 9 1/2', has everything, \$4,700. 732-1913.

90 TOYOTA CELICA - 2-dr. coupe, loaded, excel. cond. Frank, Ext. 3120.

89 CHEVY CORSICA - 4-dr., 4-cyl., ac, a/t, cruise, tilt, high mi., excel. cond., reduced, \$2,800. Gabriel, Ext. 2707 or 341-1087.

89 FORD ESCORT - like new, must see, 80k mi., economical, \$2,550. 474-2792.

89 HONDA CRX - 5-sp., silver, ac, 45 mpg, excel., \$4,500. John, Ext. 7671 or 765-1299.

89 MERCURY TRACER - accident victim, right front quarter smashed, rest excel., a/t, am/fm, ac, p/b, red, \$500. Tom, Ext. 7707.

89 NISSAN STANZA - 6-cyl., 4-dr., 39k mi., ac, sunroof, p/w, excel. cond., \$6,000. Terry, Ext. 4666 or 928-2840 eves.

89 PONTIAC GRAND PRIX - p/w, p/seat, ac, 2-dr., 51k mi., \$6,000 neg. Bill, 924-1346.

88 OLDS CUTLASS SUPREME - loaded, bal. on warr., new batt., tires, 78k mi., excel. Tom, 878-5854.

87 CHEVY CAVALIER - V-6, 5-sp., sunroof, ac, excel. mech., very clean, \$2,800 neg. Mickey, Ext. 7908 or 473-7460.

87 DODGE COLT - new trans., runs, needs work, \$550 neg.; '87 Hyundai Excel, 54k mi., am/fm cass., a/t, needs flywheel, runs, \$600 neg. Kim, 878-1514.

86 FORD - s/w, white, fully loaded, one owner, 51k mi., mint cond. asking \$4,850; '84 Cadillac Eldorado, clean, runs well, low mi., reasonable. 727-7741.

86 HONDA ACCORD LX - 4-dr., 5-sp., full power, well maint., 113k mi., trailer hitch, asking \$2,900. Louise, Ext. 5487 or 874-2805.

86 OLDS - new tires, radiator, alternator, shocks, rebuilt engine, tranny, \$1,900 neg. 447-5965 eves.

86 PORSCHE 944 - turbo, red/black, loaded, 86k mi., mint, \$10,000. Ext. 2183.

86 TRANS AM - 5-star rims, T-top, 5-sp., 70k mi., must sell, \$4,200 neg.; '79 Titan motor home, 25', fully equip., ac, 440 eng., sleeps 6, \$5,900. John, 348-7666.

85 CHEVY S10 - best offer. Jesus, Ext. 4879.

85 DODGE CARAVAN - 7-pass., beige/woodgrain, 4-cyl., runs, looks good, \$2,000. Noreen, 765-1667.

85 NISSAN PULSAR - black, ac, sunroof, new tires, 5-sp., excel. cond., \$1,500 neg. Gaby, Ext. 3906 or 689-5908 after 5 p.m.

85 TRANS AM - conv., white w/black top, only 500 made, full power, 5-sp., 350 cu. in. TPI, \$8,000. Frank, Ext. 4220 or beeper, 279-3539.

83 CAMARO - 4-sp., sunroof, rebuilt eng., new struts, clutch, windshield, rad., exh. sys., radio, ask. \$1,750. Russ, 325-0563.

83 FORD LTD - 4-cyl., 4-dr., black, runs well, \$800; '82 Cadillac Coupe de Ville, blue, needs cam shaft, \$500. 399-6367.

83 BMW - 633csi, 5-sp., burgundy, beige leather int., sunroof, custom wheels, cruise, 4-speaker stereo, p/w, \$5,300. Ray, Ext. 7224.

83 HONDA PRELUDE - a/t, 2-dr., sunroof, 100k mi., runs well, must see, asking \$1,950. Baorui, Ext. 2045 or 689-5062.

82 MERCURY ZEPHYR - runs well, good station car, \$500. Brian, Ext. 2750 or 821-4234 eves.

82 YAMAHA VIRAGO - 920cc, 9k mi., new battery, clutch, master cylinder, runs well, looks good, asking \$1,050. Henry, Ext. 5725 or 727-7227.

80 CHRYSLER LEBARON - 4-dr., 6-cyl., good cond., asking \$800. Ext. 4597 or 924-8213.

80 CJ-5 - hardtop, \$400 or best offer. Rich, Ext. 3499.

80 DODGE UTILITY PICKUP - 318 motor, heavy-duty, lift gate, good cond., \$1,800 neg. Mike, Ext. 7861.

79 OLDS DELTA 88 - runs well, needs muffler, \$300 or best offer. Mauro, Ext. 4234.

74 FORD E-300 - set up for locksmithing, will sell with or w/o equipment, make offer; seats, 2, bucket, swivel, adjustable, \$25 ea. Pete, Ext. 5105 or 399-2813.

74 HONDA CB175 MOTORCYCLE - 24,850 mi., gar., excel. cond. \$525. Ext. 3172 or 929-4446.

73 VW THING - needs restoration, \$300. Gary, Ext. 3751 or 589-5490.

69 BUICK SKYLARK - 4-dr., hardtop, 350 V-8, a/t, p/s, p/b, runs well, best offer. Joe, Ext. 3893 or 653-4836.

68 CAMARO - red, all metal, 350, 25k mi. on motor, looks good, runs well, \$5,000. Emil, Ext. 4289 or 473-3120.

AIR FILTERS - for Chrysler, AFL-52 Sears/Lee brand, new, \$9/4. Susan, Ext. 7647.

CAP - A.R.E. fg., w/windows, for 8' bed truck, blue, excel. cond., \$550 neg. Joe, Ext. 2350.

CAP - A.R.E., 8' truck, alum., side compartments, white, \$200. 325-2707.

COVER - tonneau, for pickup truck, 8' bed, removable frame, 1 yr. old, like new, \$200. Tom, Ext. 5258.

ROLL BAR - alum., w/4 lights for pickup truck, excel. cond., asking \$200. David, 289-2925 eves.

STEREO - am/fm cass., clock, antenna power, 18 preset channels, 6 mo. old, excel. cond., \$189 new, must sell, \$100. Varouj, Ext. 7718.

TIRES - 2 Goodyear P225/75R14, like new, \$40 ea.; 1 Firestone P215/70R14, \$20. 698-9274.

TIRES - 4, radials, P195/75R14, v.g. cond., \$60. Arlene, Ext. 3827.

### Boats & Marine Supplies

28' CARVER - 1990 Mariner, twin 305 Crusaders FWC, FB, swim platform w/shower, sleeps 8, extras, mint cond., \$47,900. John, Ext. 7039 or 929-4450.

19' CRUISERS - fg, 115-h.p. Johnson, tilt galv. trailer, p/winch, \$2,100. Jim, Ext. 3372 or 821-0250.

18' HOBIE CAT SAILBOAT - 1990, w/trailer and gear box, \$2,800. 473-1456.

17' MARK TWAIN - w/Highlander trailer, no motor, \$400. George, Ext. 3783 or 874-3873.

16' HOBIE CAT - trampoline, 3 yrs. old, galv. trailer, \$1,200. 475-0818.

WINDSURF BOARD - w/sails, \$125. Frank D. Ext. 2022 or 399-4480.

OUTBOARDS - lower unit, OMC, V-6, \$150; lower unit for older 40-h.p. OMC, short shaft, new, \$125. Bart, Ext. 2005 or 924-6761.

KAYAKS - 2 Perception Whitewater, med. cap., large cap., skirts, flotation incl., \$400 ea., \$700 both. Scott, Ext. 5319 or 929-4563.

MYLAR - 150% genoa for 27' Catalina tall rig, v.g. cond. Brian, Ext. 2799.

TROLLING MOTOR - Sears Die Hard, 12-V, 1.5-lb. thrust, like new, \$65. Ext. 2769.

25' SEA RAY SUNDANCER - sleeps 4, full head, galley, 260-h.p. Mercruiser i/o, low hrs. canvas, DF, radio, swim platform, \$12,900. Ray, Ext. 7224.

16' STARCRAFT - alum., new navy top, 50-h.p. Evinrude, elec. start, trailer w/new elec. winch, \$1,900. 924-6751.

SAILBOARD - BIC, beginner's, excel. cond., \$250. Ext. 3466.

### Furnishings & Appliances

BED - queen-size, Osterpedic mattress, boxspring & frame, brand-new, you pick up. \$300. Donna, 224-1447 eves.

BUNK BEDS - heavy-duty, v.g. cond., less than 2 yrs. old, orig. \$369, now \$200. O. Booker, Ext. 3082 or 727-5912.

CHINA CLOSET - & hutch, solid oak, 48" wide, leaded glass doors, new cond., orig. \$2,000, now \$750. Joe, 281-8943.

COUCH - best quality Ethan Allen, orange plaid upholstery, excel. cond., \$135. Les, Ext. 2920.

DESK CHAIR - antique, oak, \$50; antique sewing machine, oak cabinet, \$200; Oriental rug, neutral shades, \$50. Sheryl, Ext. 4400.

DINING ROOM - Henre Don, pedestal table w/leaf & pad, 6 chairs, 2 lighted cabinets, cherry wood w/Formica, orig. \$9,500, now \$2,250. Sue, 288-0465.

DISHWASHER - Hot Point Potscrubber, full cont., black rev. panels, good cond., \$110. Frank, Ext. 4220 or Vita, 277-0464.

FREEZER - 16 cu. ft., United, \$250; table, 66"x33", seats 8, \$40. Dave, Ext. 5460.

FREEZER - G.E., 18 cu. ft., upright w/lock, excel. cond., must sell, \$300 neg. Ext. 5740 or 744-8386.

FREEZER - Gibson, upright, \$60. 473-6432.

LAWN FURNITURE - glass-top table, chairs, chaise lounges, good cond. 325-0447.

MICROWAVE OVEN - w/turntable, \$50; cooler for travel, \$4; soccer ball, \$4. Gary, Ext. 3625/1273.

SOFA - sectional, burgundy, w/full-size bed & recliner, excel. cond., \$500. 924-0960.

SOFA - antique, Queen Anne, barrel back, 6' long, carved mahogany trim, beige tapestry w/blue flowers, excel. cond. Kathy, Ext. 2267.

TABLE - antique, oak, 45" round, \$350; chairs, antique, bentwood, \$25 ea; captain's chairs, solid wood, \$50 ea. Joe, 281-8943.

WATERBED - all wood, 12 drawers, large headboard, v.g. cond., must see, \$430 neg. Carlos, 399-6390.

AIR CONDITIONER - 8,000 Btu, works well, \$75. Tom, Ext. 5258.

BEDROOM - pecan, includes twin mirror triple dresser, armoire w/shelves plus 2 drawers, full/queen hdbd., nightstand, ask. \$100. Carole, 924-4927.

BLENDER - Panasonic, 7 spds. timer, 5 cup cap., s/s blades, new, \$25; Sunbeam Mixmaster, 10 spds., 2 bowls, 2 blades, black metal base, \$35. 475-7257.

COFFEE TABLE - carved wood frame w/thick glass top, \$150. Ann, Ext. 7611.

COUCH - love seat & coffee table, \$300 neg. Don, Ext. 7237.

DAY BED - Victorian, \$150; pine desk, \$25; pine hutch, \$75; pine bookcase, \$30; Kenmore sewing mach., \$25; Royal elec. typewriter, \$35. 929-8514.

DISHWASHER - Sears, 18", almond, portable, butcher block top, needs new sink connection, \$100 firm. Pat, Ext. 4647.

FREEZER - upright; 2 chain saws; Graveley tractor w/snow blower. 363-7032.

HUTCH - pine, round table w/2 leaves, 4 captain's chairs, excel. cond., \$300; Pioneer stereo cabinet, \$20. 928-5291.

KITCHEN SET - table w/leaf, Formica top, chrome legs, 4 chairs, wicker back w/chrome legs, excel. cond., \$70. Ext. 2183.

RANGE - Kenmore, self-cleaning, elec., almond, 4 yrs. old, range hood. Eileen, 929-5521.

REFRIGERATOR - G.E., 20.8 cu. ft., good cond., \$175. Pete, 286-4805.

REFRIGERATOR - G.E., 13 cu. ft., manual defrost, large freezer, \$35 neg. Carole, 924-4927.

SOFA BED - 7', beige, muted floral, practically new, \$1,000 orig. sell for \$300, you pick up in Brooklyn. Janet, Ext. 2345.

SOFA BED - queen-size, rust color, good cond., \$175. Lois, Ext. 3315 or 929-4753 eves.

TABLE - country kitchen, white ceramic top, 58"x37", 4 white chairs to match, asking \$200. Mike, Ext. 4547 or 878-6859.

WALL UNIT - 68"hx44"w, \$50; bedroom set, platform bed w/3 drawers, dresser, end table & desk, \$180. 924-4927.

WASHER - Sanyo, portable, 1 yr. old, orig. \$350, now \$130. Ext. 4522.

WASHER - G.E., large-capacity, works well, \$65 neg. 732-1913.

WASHER & DRYER - Sears, white, elec. dryer, good cond., \$75 ea. Norman, Ext. 4446 or 399-1125.

### Tools, House & Garden

BELT SANDER - 10 sanding belts, excel. cond., \$30. Hank, Ext. 7595.

BASEBOARDS - elec. heat, 220V w/3 thermostats, various lengths; 20" Craftsman mowers, side throw, \$40; rear bag w/2 bags, \$50. Joe, Ext. 5340.

HEATING UNIT - Miller Gun, v.g. cond., \$50. O. Booker, Ext. 3082 or 727-5912.

LAWN MOWERS - Murray, 22", conv. mulcher, '95 model, \$125; Sentinel, 20", side discharge, '95 model, \$75. Bart, Ext. 2005 or 924-6761.

LAWN MOWERS - 3 1/2-h.p., 22" cut, \$60; 3-h.p., 20" cut, \$60, rotary type. Dan, Ext. 4220 or 698-7322.

TREES - Japanese maple, \$10-\$45+. 265-6542.

TUB ENCLOSURE - almond, fg, new, good cond., \$40. Kevin, 471-6416.

WELDING OUTFIT - gas w/small tanks, \$100. Bart, Ext. 2005 or 924-6761.

CEILING FAN - 52", wood w/brass, works well, \$20. Tom, Ext. 5258.

LADDER - Werner Job-Master commercial, extension, 20' max., 17' working length, orig. \$90, \$45 or best offer. Carole, 924-4927.

LAWN MOWER - Toro, riding, rear engine, 12-h.p., 32" cut, \$1,000. 654-5568.

LAWN TRACTOR - Cub Cadet, 42" cut, 3-pt. hatch, hydrostatic, 12-h.p. Kohler, new batt., cig. lighter, excel. \$1,400 neg. Rich, Ext. 7251 or 765-2314.

WOOD STOVE - Vigilant, 1 yr. old, like new, all attach., must sell, \$450 neg. Tom, Ext. 5258.

### Sports, Hobbies & Pets

BICYCLE - woman's Ross lightweight 10-sp., 17" wheel, 19" frame, drop-style racing handlebars, red, excel. cond., \$40. Linda, Ext. 2733 or 395-6784.

BIKE - man's 12-sp., Diamondback GT, red, Shimano gears, excel. cond., \$150. Rich, Ext. 7013.

BICYCLE - boy's basic, v.g. cond., \$40; bike safety helmet, like new, \$10. Ext. 2056 or 473-7246.

EXERCISE BIKE - Sears, \$25. Liz, Ext. 2346.

FIGURINES - starting lineup, baseball, football, basketball, for sale or trade. John, Ext. 4482 or 821-4280.

HAMSTER HOUSES - two, lots of tubes & other gear, \$10 for all. Gail, Ext. 7985.

ROWER - exerciser, DP Bodytone 300, independent action shocks, many positions for multiple routines, \$35 or best offer. Bill, 924-6940 after 4 p.m.

WEIGHT BENCH - excel. cond., gray leather w/incline adjustments, \$25. Kathy, Ext. 2267.

BICYCLE - girl's 24", 10-sp., \$25. Jim, Ext. 2432 or 821-9178.

BIKE - boy's Huffy, \$25. 928-5291.

BIKE - woman's 12-sp., Shogun, Shimano gears, quick release wheels, road bike, hardly used, \$100. Jim, Ext. 5537.

DOGHOUSE - Dogloo for med.-size dog, new, orig. \$115, sell for \$75, has door and mat to fit. Carol, Ext. 3325 or 472-3332.

EXERCISE EQUIPMENT - Nordic Gold Flex weight trainer, multi-station w/power meter, 36 stations, hardly used, must sell, ask. \$700. Joann, 584-3830.

EXERCISE EQUIPMENT - Nordic Track Sequoia, good cond., \$250. Pete, 286-4805.

HOCKEY EQUIPMENT - Mylec goalie pads, \$10; Vic street hockey blocker, \$10; Franklin goalie glove, \$15.; Vic Jr. pro goalie glove, \$5. 472-3254.

INFANT'S CARRIER SEAT - for bicycle, 2 avail., \$5 ea. Ext. 3751 or 589-5490.

ORGAN - Lowery, fair cond., double keyboard, \$200 or make offer. Jim, 924-4290.

ORGAN - Wurliitzer, Centura Deluxe, like new w/Orbit III synthesizer, \$525. 654-0812.