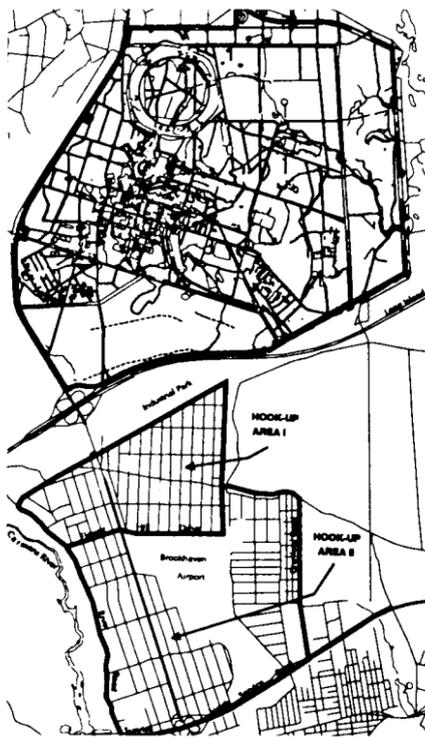


## DOE Offers Public Water Hookups to 300 More Homes South of BNL



BNL (outlined at top) and public water hookup areas I (about 450 homes) and II (about 300 homes).

This past Tuesday, the U.S. Department of Energy (DOE) announced a decision to extend its previously announced offer of public-water hookups to about 300 more homes in the northern Shirley area. With the newly announced hookups, DOE expects to provide access to public water to a total of approximately 750 homes south of the Lab.

Some 450 homes were offered public water access in January because the solvent trichloroethane had been detected in groundwater near BNL's southern boundary.

Although there was no indication that contamination from the Laboratory was affecting the drinking water wells of any homes south of BNL, DOE took the precaution of offering public water hookups to all homes in the area bounded on the north by Colin Road and Carleton Drive, on the west by River Road, on the south by Flower Hill Drive and on the east by Sleepy Hollow Road.

At the same time, domestic wells in this area are being tested for contaminants. So far, 394 wells have been

analyzed: Seven have tested at or above the New York State Drinking Water Standard for particular chemicals, though none of the contaminants is believed to have come from BNL.

The newly extended area is bounded on the north by Flower Hill Drive, on the west by River Road, on the south by Sunrise Highway and on the east by Cranford Boulevard.

"DOE management heeded the concerns of elected officials — including Senator Alfonse D'Amato, Congress-

man Michael Forbes and Brookhaven Town Supervisor Felix Grucci — and North Shirley residents over the water supply as a result of groundwater problems near Brookhaven," said Carson Nealy, Manager of DOE's Brookhaven Group. "Our indications are that residential wells at these additional homes are not affected by contamination from Brookhaven, but we are taking this step to remove uncertainty that residents might have about their wells."

## Brookhaven Town to Honor Dawson for Science Excellence

Sally Dawson, a senior physicist in the Physics Department, is one of 11 women who will be honored on Sunday, March 24, for their accomplishments and contributions to Brookhaven Town. The women will be the guests of honor at the town's tenth annual women's recognition awards ceremony, as part of its observance of National Women's History Month.

Dawson will be recognized for her excellence in science. The other awards will be given for contributions to the arts, business, communications, community service, education, government, law, medicine, religion and sports.

Brookhaven Women in Science (BWIS) nominated Dawson for the honor. On behalf of BWIS, Louise Hanson, who holds a joint appointment in the Office of Educational Programs and Department of Applied Science, said, "Dr. Dawson has had an extremely productive and scientifically rewarding career as a theoretical high energy physicist, an unusual career for a woman."

As a theoretical particle physicist, Dawson performs two basic roles with the aid of powerful computer programs: She attempts to reveal the secrets of unknown phenomena by developing new theories to explain the workings of the physical universe. And she interprets experimental data to confirm existing theories.

Since joining Brookhaven in 1986, Dawson has worked on many theo-



Sally Dawson

retical questions, including determining characteristics of a hypothetical elementary particle called the Higgs boson. Dawson is coauthor of *The Higgs Hunters' Guide*, a technical manual that describes the physics of the Higgs and many of the experiments launched to find the particle.

If the Higgs is found, it would help validate the basic theory of matter known as the Standard Model. But, Dawson said, "If the Higgs is not found, it would be just as interesting. It would mean new physics, and we would have to make revisions of the theory of matter as we now know it."

Dawson also helped formulate predictions for the recently discovered top quark, a particle whose existence was confirmed last year by two rival experimental teams, one including BNL physicists, working at the Tevatron collider at Fermi National Accelerator Laboratory (Fermilab).

After receiving her bachelor's degree in physics from Duke University in 1977, Dawson earned master's and doctorate degrees from Harvard University in 1978 and 1981, respectively.

Dawson started her career as a research associate at Fermilab, 1981-83. She then moved to Lawrence Berkeley National Laboratory for three years, before coming to BNL as an assistant physicist in the Physics Department in 1986. Named an associate physicist in 1988, she was promoted to Physicist and received tenure in 1990. In 1994, she was promoted to Senior Physicist.

Dawson has presented more than 65 invited scientific talks and served on national and international committees. Currently, she is an editor of *Physical Review* and a fellow of the American Physical Society.

—Diane Greenberg

## Alburger Turns Up the Heat: 13 Phototubes Released



David Alburger with stored phototubes, still embedded in cement but recoverable through his newly developed process.

For years, 54 phototubes, each 13 centimeters (cm) in diameter lay stored in a BNL warehouse. Phototubes are used in experimental apparatus to convert photons into electrical pulses that can be registered in a pulse-height analyzer.

Although these very high quality phototubes have a replacement value of about \$600 each, they were stuck — cemented firmly onto the lead-glass blocks forming the array of detectors from a 1970s experiment at the Alternating Gradient Synchrotron.

Last year, members of the Laser Electron Gamma Source (LEGS) group of the Physics Department were building a new experiment using 176 lead-glass detectors, at the National Synchrotron Light Source. They needed 13-cm phototubes, which they recovered from a completed experiment, using standard heating techniques. But, although the team successfully transferred about 100 tubes, they found that the last few could not be budged from the original apparatus. They had to obtain a dozen or so 13-cm

phototubes elsewhere.

That's how the story began.

Recently accepted for publication in the *Review of Scientific Instruments (RSI)* is an article on "Removal of phototubes from Pb-glass detectors III," by David Alburger, a guest scientist in the Physics Department since his retirement as a senior physicist in 1990. Pb is how lead is denoted on the Periodic Table of the Elements.

That's how the story ended!

In between, the LEGS group had asked Alburger, who is somewhat of a specialist in detaching phototubes, to see what he could do. This specialization dated from a 1980s BNL experiment that included about 308 lead-glass detectors with cemented-on phototubes fabricated in the early 1970s at CERN, the European particle-physics laboratory.

"By the time we got them, about 18 or so of the phototubes were unsatisfactory and had to be replaced," said Alburger. "To loosen the epoxy, you could heat the entire detector in an

(continued on page 2)

## Public Meetings: Videos Available

Videotapes of the following Superfund-related public meetings, conducted on site by the Office of Environmental Restoration, are now available for checkout from the Research Library, Bldg. 477:

• **December 6, 1995** — At this two-and-a-half hour meeting on Operable Unit IV, held in the Chemistry Department's Hamilton Seminar Room, BNL staff reviewed the project's Feasibility Study and Proposed Remedial Action Plan, then fielded the public's questions.

• **January 16, 1996** — Held in Berkner Hall, this four-hour meeting on Operable Unit I Groundwater, attracted more than 650 community members and focused on discussion of the Engineering Evaluation and Cost Analysis Report for the groundwater remediation project at the Lab's south boundary. This project includes the original proposal for hookup to public water of homes in northern Shirley.

## PE Review Course

Part A of the professional engineers (PE) review course will be offered on site by Suffolk Community College on Tuesday evenings, from 5:15 to 9:15 p.m. The first half of the course, EN 41, will be offered from April 2 through June 25; the second half, EN 42, will be given from August 20 through October 22.

Entitled "Fundamentals of Engineering," the course is designed to help engineers pass the professional engineering exam. Topics to be covered include: mathematics, applied math, electrical circuits, fluid mechanics, thermodynamics, chemistry, materials science, statistics, dynamics, mechanics of materials and engineering economics.

Participants will earn five credits for completing both halves of the course, and employees may request tuition reimbursement. For more information, contact Marilyn Pandorf, Ext. 5251, or Bob Lambiase, Ext. 4749. Registration will be held on Monday, April 1, at noon in Berkner Hall, first come, first served.

## Computer Training

Seats are still available in the following computer training classes; to register, contact your department or division's training coordinator, or call Pam Mansfield, Ext. 7286, or Julie Guhring, Ext. 5196:

### For the PC

- int. WordPerfect for Windows Apr. 22
- beginner EXCEL Apr. 25
- beg. WordPerfect for Windows Apr. 26
- beginner Word Apr. 30

### For the Macintosh

Macintosh system 7.5 Apr. 25

The following UNIX courses are available; to register, send an ILR for the appropriate amount to Pam Mansfield, Bldg. 515, by March 25:

- **UNIX fundamentals**, Apr. 15-19, 8:30 a.m.-noon, \$300;
- **PERL programming**, Apr. 15-19, 1-4 p.m., \$300;
- **Solaris system administration**, May 13-17, 8:30 a.m. - 4 p.m., \$600.

## Great Adventure — Tickets on Sale

The Six Flags Great Adventure Amusement Park will open Wednesday, April 3, on a limited schedule until May; for the full schedule and discount tickets, stop by the BERA Sales Office, Berkner Hall, weekdays, 9 a.m. to 1:30 p.m. BERA is now offering early-bird tickets at \$20 each, which must be used by June 28. For regular-season tickets, BERA prices are \$25 for the \$34.98 adult admission to the park and \$28 for the \$38.16 park-safari combo.

Great Adventure still features "The Great American Scream Machine," the "Batman" ride, and "The Viper." In June, the indoor roller coaster "Skull Mountain" will open, and a water-stunt show will premiere.

For more information, call Andrea Dehler, Ext. 3347.

## Stony Brook Events

The University Hospital Auxiliary of the University Medical Center (UMC) at Stony Brook is offering the following events. For more information, call 444-2699:

- **Les Ballets Trockadero de Monte Carlo** — tonight, Friday, March 22, at 8 p.m., at the Staller Center for the Arts, with champagne supper to follow at University Faculty Club; to benefit patients at University Hospital; tickets are \$60 each.
- **Lecture: "Electromagnetic Fields and Breast Cancer on Long Island"** — M. Cristina Leske, M.D., MPH, Department of Preventive Medicine, UMC; Thursday, March 28, at noon, in the Health Sciences Center, level 3, lecture hall 6.

## One Employee's Efforts Can Go a Long Way

Bob Casey, Head of the Safety & Environmental Protection Division, received the following letter last week. "It made my day," said Casey, who has been having a lot of long days lately, dealing with the difficult issues facing the Laboratory.

"Lab management is so busy putting out fires that we need this kind of feedback to see how our efforts are going," Casey said. "And, as this letter shows, sometimes the best efforts are not management's but are those of employees relating to BNL's neighbors as their neighbors — people who live in the same community and share the same concerns, hopes and dreams."

March 11, 1996

Dear Mr. Casey,

This letter is to tell you about what happened on my way home from work on Tuesday last. I stopped at a store just south of the Lab. While waiting on line to pay, I overheard a conversation between the girl at the cash register and the woman ahead of me. They were talking about the Lab, and I felt sick when I heard what they said:

- Real estate people canvassing the neighborhood, advising people to sell now, before house prices plummet, as they surely will once the extent of the contamination and the "cover-up by the Lab" are revealed.
- People phoning other people almost daily, begging residents to join in trying to shut BNL down. Claiming all kinds of cancers are the Lab's fault.
- Lawyers, trying to get residents to sign up for the

lawsuit against BNL, hinting of big money they'll receive when they win and how this money is well deserved, because of their having to put up with the Lab as a neighbor!

• A doctor who claims he can prove the Lab is irradiating the public. He has asked that any baby teeth being kept as childhood mementos be turned over to him, and he will prove we are harming people by the tests he will do on the baby teeth.

I felt awful hearing this, but then along came a ray of hope, albeit a small one.

The woman shopper said she met a Lab employee at a public meeting who seemed sincere. This person answered all hostile questions calmly, dispelled some fears, felt for their concerns and volunteered to speak with neighborhood groups. They said the employee had children, lives in the area and talked at a level they could relate to. They also said this person didn't have a hidden agenda, unlike lawyers, real estate people, politicians, or a lot of others with selfish motives and interests.

What a relief to hear that our neighbors are starting to question the zealots attacking BNL! It is terrific to think that one employee could help them rethink things. People like this make a difference. I heard it with my own ears.

Very truly yours,

Kate Vodopia, Medical Department

## Alburger

(cont'd.)

oven, or dip it in a vat of hot chloroform. But the oven method often damaged the lead-glass block and could harden, not soften, the cement, and a vat of chloroform presents safety problems."

Alburger devised a simple apparatus that was used under a fume hood and required only about 40 cubic centimeters (cc) of chloroform, inserted around the end of the tube with an eyedropper. The temperature of the chloroform was raised gradually to below its boiling point of 61°C by about 100 cc of water, poured inside the tube and heated to about 70°C with an immersion heater. After about two hours the heated chloroform loosened the cement, releasing the tube.

RSI accepted Alburger's note on the method for publication in 1987.

A few months later, with BNL physicists Yasuyuki Akiba, John Olness and Michael Tannenbaum, Alburger modified the apparatus to use a similar technique with undamaged phototubes that were needed elsewhere. "The main change was in the way we heated the chloroform," explained

Alburger. "Instead of water, we used standard flexible electric heating tape wrapped and tied around the end of the tube. It showed no effect from the hot chloroform, but the whole operation took about two hours longer."

The successful methodology appeared as "Removal of phototubes from Pb-glass detectors II" in RSI of September 1987.

So, when Alburger went to inspect the present phototubes in the warehouse, he was no stranger to such a task. "But the overhang of the 13-cm diameter tube on either side of the 7.5-cm by 15-cm end of the detector made it difficult to contain the chloroform at the cemented joint," he said. "I took one of them to my office and thought about it."

He solved the problem by cutting two glass blocks and clamping them with rubber gaskets against the sides of the detector to square off the base under the phototube. After that, the previous method of firmly sealing the chloroform around the tube could be used with minor adjustments and the same procedure taken — but this time, only 20 to 30 cc of chloroform were

required for each tube.

"I did 13 phototubes at the rate of one per day, with 100 percent success and all testing good," said Alburger. "But there are still another 41 in the warehouse, which, if needed by another experiment, can be recovered."

— Liz Seubert

## Lab Car to Meet Train at Ronkonkoma

Effective Monday, April 1, Long Island Railroad (LIRR) passengers coming from New York City and heading for BNL will be picked up weekdays by a Lab car at the Ronkonkoma station, not at Patchogue as in the past.

Therefore, the courtesy car will leave the Transportation Office, Bldg. 179, at 8:30 a.m. to meet the train arriving at Ronkonkoma at 8:57 a.m. This is the LIRR train that departs from Penn Station in Manhattan at 7:39 a.m., Monday through Friday.

## Housing Needed For Summer Guests

Unfortunately, BNL's on-site housing cannot accommodate all the guests who come to BNL for a summer of research. So the Housing Office, for the third consecutive year, is having Marie Betzold assist visitors who are unable to secure housing on site find some place to stay off site.

Betzold is now establishing an inventory of available rentals. If you have or know of furnished apartments, condos or houses that would be suitable for BNL guests and their families, please call her, Ext. 4489.

## Retirement Counseling

A TIAA-CREF representative will visit the Lab on Thursday and Friday, April 25 & 26, 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?
- What options and flexibilities do I have for my existing dollars with TIAA-CREF?
- What are my retirement options?

A limited number of 45-minute appointments are available; to arrange one, call Joyce Wund, Human Resources Division, Ext. 7516.

## 50 YEARS AGO THIS WEEK

This series, which recounts the earliest days of Associated Universities, Inc. (AUI), and BNL, will run as appropriate throughout 1996 and 1997, the 50th anniversary years of AUI and BNL, respectively.

• **March 23, 1946** — Meeting at Columbia University includes 17 scientists and administrators representing nine universities that had agreed to sponsor a research laboratory in the northeast. Lee DuBridge, Chairman of the Department of Physics at the University of Rochester, is elected chairman of the meeting, and Norman Ramsey, Associate Professor of Physics at Columbia, is elected executive secretary.

After preliminary discussion, the group unanimously passes the following resolution: "RESOLVED: That Columbia University, Cornell University, Harvard University, The Johns Hopkins University, Massachusetts Institute of Technology, University of Pennsylvania, Princeton University, University of Rochester, and Yale University, being interested in promoting the establishing in the northeast region of the country (of) a government research laboratory for nuclear science and in cooperating with other institutions of this region in the operation of such a laboratory, do now join for the furtherance of these interests in an association through representatives duly authorized by the heads of these universities, to be known as the Initiatory University Group."

With that, the Initiatory University Group, or IUG\*, proceeds to establish its rules of procedure and appoints a Plan-

ning Committee. Consisting of nine scientific representatives, the committee will discuss scientific plans with the Manhattan District, while major policies will be determined by the IUG as a whole.

To pay for secretarial help and the salaries of administrative personnel during this initial period of planning, an interim arrangement is made whereby Columbia University charges these expenditures to an existing contract with the Manhattan District. A preliminary budget for expenses is prepared.

• **March 27, 1946** — Mariette Kuper becomes the first employee of the IUG, and later the second employee of BNL, as Executive Aide to the Director. \*\* Clarke Williams agrees to spend half of his time on this program since he is already employed under the Manhattan District contract with Columbia. At DuBridge's request, Ramsey and Columbia Dean George Pegram continue their efforts with no compensation, devoting all the time they can spare from their regular duties.

\*\* "Fortunately," noted Norman Ramsey in the 55th Brookhaven Lecture, "it was not pronounced ugh."

\*\* Kuper's first assignment, said Ramsey, "was to figure out how she could possibly be paid." (To be continued on March 29.)

# BNL Builds Bridges With Young Scientists, Engineers & Inventors

Challenges and opportunities offered at BNL often have exciting outcomes for area students, as in these three examples.

## Work at BNL Ripens Into \$10,000 Prize

**Daniel Durand**, a junior at the Shoreham-Wading River High School, has won the second prize of a \$10,000 bond in the annual Duracell/National Science Teachers Association Scholarship Competition. In this contest, ninth through twelfth grade students design and build devices that are educational, useful or entertaining and powered by one or more Duracell batteries.

To do the research on his winning device, which measures the ripeness of fruit, Durand came to BNL last November and worked for several hours a week under the guidance of Physicist **Craig Thorn**, Physics Department, whose work often entails building scientific instruments.

Durand's device, which is called the RipeRanger, works by determining the degree to which infrared beams are absorbed by the sugar in the fruit. The higher the degree of absorption, the riper the fruit. Small and light enough to be held in one hand, the RipeRanger could conveniently be used by shoppers in a supermarket.

As part of the prize, Durand, his parents and his science teacher, John Holzhapsel, will be flown to St. Louis, Missouri, March 27-31 to participate in the prize presentation.

—Liz Seubert

## Oh! The Tension!



Roger Stoutenburgh

Watching intently as his basswood model bridge awaits crushing in a BNL stress-testing machine, Half Hollow Hills East High School student **Joe Maniscalco** is hoping that his bridge holds up to a strain many times its 24.7-gram mass. As it turned out, it did, bearing up to 20724.984 grams, or 839 times its mass — good enough for 11th place in the 11th Annual BNL Model Bridge Contest, held by the Museum Programs group of the Public Affairs Office on Saturday, March 2. In the background, gazing at a close-up view of Maniscalco's bending bridge on a video screen, is **Penny Byrne**, Museum Programs. Over 260 students from 22 Suffolk County high schools entered the contest, with 167 making the cut to compete in the final round. The contest's first and second place honors went to two East Islip students, **Mitchell Kirshy** and **Dina Girone**, whose bridges took 1,778 times and 1,023 times their own weight, respectively. **Daniel Fostvedt** of Longwood High School took third with a bridge that held 1,021 times its weight, while aesthetic accolades went to a bridge built by **Abe Kaplan** of Half Hollow Hills East. **Kirshy** and **Girone**, students of East Islip teacher **Bill Lynch**, a former member of BNL's Educational Programs staff, are eligible to compete in the International Bridge Building Contest in Florida in May.

— Kara Villamil

## BERA Elections Next Week

Four BNLers are running for two spots on the Executive Board of the Brookhaven Employees Recreation Association (BERA); they are: **James Durnan**, Safety & Environmental Protection Division; **Charles Gardner**, Alternating Gradient Synchrotron Department; **Ed Meier**, Physics Department; and **Rosalie Piccione**, Division of Contracts & Procurement. See last week's Bulletin for background on each candidate. During four-year terms, which begin May 1, the two who are elected will help decide recreation policy for all BERA members.

So, not only must you decide for whom to vote, but you also must cast a ballot. Eligible voters include all BNL employees, on-site AUI and DOE employees, and those employed by permanent on-site contractors. Election times and polling places are listed below.

However, if you will not be on site March 25-29, then you may cast an absentee ballot today, March 22, in person at the Recreation Office, Bldg. 185. For more information, contact Recreation Supervisor **M. Kay Dellimore**, Ext. 2873.

Date	Time	Place
Monday, March 25	11:30 a.m. to 1:30 p.m.	Berkner Hall
Tuesday, March 26	11:30 a.m. to 1:30 p.m.	Berkner Hall
Wednesday, March 27	11:30 a.m. to 1:30 p.m.	Berkner Hall
Thursday, March 28	10 a.m. to 2 p.m.	Credit Union
Friday, March 29	10 a.m. to 2 p.m.	Credit Union

## Arrivals & Departures

### Arrivals

**Margaret L. Goudikian**...Financial Serv.  
**Matthew J. Kessler**.....Central Shops  
**Ming Wu**.....Advanced Tech.

### Departures

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

**Robert J. Sullivan**.....RHIC  
**Xianliang Zhou**.....Applied Science

## C-W Dance Lessons

The BERA Country-Western Dance Club will sponsor eight weeks of lessons at 5:30 p.m. for beginners and intermediates, and at 6:30 p.m. for couples, starting on Tuesday, April 9 (not April 19, as misprinted in last week's Bulletin). Instructed by **Judy and Paul Cutler**, the one-hour classes will be held in the North Room of the Brookhaven Center. The per-person cost is \$25 for the 5:30 p.m. class and an additional \$10 for the couples class. Registrations must be paid by Friday, March 29. For more information, call **Marilyn Johnson**, Ext. 2546.

## IBEW Meeting

Local 2230, IBEW, will hold its regular monthly meeting on Monday, March 25, at 6 p.m. in the Knights of Columbus Hall, Railroad Avenue, Patchogue; a meeting for shift workers will be held at 3 p.m. in the union office. The agenda includes regular business, committee reports and the president's report.

## Strut Your Stuff

This year's WalkAmerica for Healthier Babies, sponsored by the March of Dimes, will take place on Sunday, April 28 — and BNLers will once again, as they have for over a decade, go the distance with their friends and families to help Long Island's future generation.

BERA encourages all employees to sign up for this worthy cause. So, to motivate everyone for the walk, a representative from the March of Dimes will be in Room B, Berkner Hall, from 11:30 a.m. to 1 p.m. on Thursday, March 28, to show a film, answer questions and distribute sign-up sheets. If you cannot attend, but would like to sign up anyway, pick up registration forms from **Andrea Dehler** at the BERA Sales Office, Berkner Hall, weekdays, 9 a.m. to 1:30 p.m., Ext. 3347.

## Camera Club

Here is your chance to learn how to take better pictures: At its next meeting, at noon on Wednesday, March 27, in Room C, Berkner Hall, the BERA Camera Club will begin a series on basic photography techniques. The Kodak instructional video "Introduction to Photography" will be followed by a question-and-answer session. All interested photographers are invited to attend. For more information, call **Ripp Bowman**, Ext. 4672.

## Orchids & Dinosaurs: March Art Bus Trip

Join the Art Society's Orchids and Dinosaurs bus trip to New York City on Saturday, March 29, leaving BNL at 8 a.m., returning by 8 p.m. The Greater New York Orchid Show in the Winter Garden of the World Financial Center is free; the new dinosaur exhibit, and many other glories of the American Museum of Natural History cost \$7, or \$10 including a giant-screen film; bus cost is \$17. Call **Liz Seubert**, Ext. 2346 or 286-8563, evenings, for information or reservations.

## Another Semifinalist In Westinghouse Talent Search for '96

The Bulletin recently learned that another student named one of the 300 semifinalists in the nationwide 1996 Westinghouse Talent Search also had performed her research at BNL: **Esther Kim**, a Kings Park High School senior, investigated the bioconversion of coal as a volunteer in the laboratory of Chemist **Mow Lin**, Department of Applied Science's Biosystems & Process Sciences Division. From last summer through fall, Kim looked into the "The Biological Upgrading of Lignite and Bituminous Coal."

Since world oil reserves are depleting rapidly, the search is on for another source of energy. Used as the primary source of fuel energy from the 17th through the early 20th centuries, coal is being reconsidered as an alternative energy option because of its abundance. When combusted, however, coal releases atmospheric pollutants, particularly sulfur that contributes to acid rain. In addition, the fly ash generated by combustion contains toxic and radioactive metals, which are a disposal problem.

Based on Lin's research that has shown that certain bacteria can effectively dissolve impurities in coal without altering its energy content, Kim examined the effect that strains of *Sulfolobus*, *Acinobactor* and *Arthrobacter* bacteria had on degrading a low-rank coal, North Dakota lignite, and a higher rank coal, Kentucky No. 8. She proved that these bacteria effectively removed the sulfur and metals, and depolymerized both coals, concluding that further testing is now necessary to evaluate the economic and engineering feasibility of this method of coal bioconversion.

— Marsha Belford

## Amateur Radio

The BERA Amateur Radio Club will meet at noon on Thursday, March 28, in Room D, Berkner Hall. All Lab employees, guests and licensed amateur-radio operators are invited to attend. For more information, call **Chris Neuberger**, Ext. 4160, or **Nick Franco**, Ext. 5467.

## Hospitality Committee

Master gardener **Nancy Kuehner** will share her green-thumb tips for successful gardening on Long Island at the next meeting of the Hospitality Committee, from 9:30 a.m. to 11:30 p.m. on Tuesday, April 2, in the Recreation Building in the apartment area. All spouses of Lab employees are invited. Bring the children, but also a toy or two for their amusement.

## Bowling

### Red and Green League

**J. Griffin** had a 258/214/660 scratch series, **E. Sperry IV** 202/202/201/605 scratch, **G. Weresnick** 255/221/657 scratch, **R. Larsen** 248/203/639 scratch, **R. Eggert** 233/213, **T. Prach** 223/202/602 scratch, **B. Giuliano** 212/212/602 scratch, **E. Larsen** 205/200, **J. Goode** 245, **G. Mack** 227, **R. Mulderig** 223, **S. DiMaiuta** 220, **A. Warkentien** 212, **B. Geib** 205, **R. Rayns** 205, **K. Asselta** 204, **J. Cuccia** 203.

### White and Purple League

**R. Wiseman** bowled 233/227/217/677 scratch, **D. Riley** 204/203/189, **S. DiMaiuta** 236/221/646 scratch, **J. McCarthy** 207/199, **M. Guacci** 200/195, **A. Pinelli** 199/183, **R. Larsen** 248, **E. Sperry IV** 221, **Don King** 198, **P. Wynkoop** 190, **Diana Fisher** 189, **N. Fewell** 184, **R. Picnich** 181, **M. Picnich** 179, **M. Yanez** 175, **K. Conkling** 173, **Donna King** 173, **Fran Brown** converted the 5/7 split.

# BROOKHAVEN BULLETIN

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

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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.



## Wanted: Lifeguards

Lifeguard positions may become available at the Lab swimming pool, Bldg. 478. To be considered for such positions, those holding Red Cross Lifeguard certification may send their resumes or submit applications to Recreation Supervisor M. Kay Dellimore, Human Resources Division, Bldg. 185.

## Kids' Swim Lessons

Eight weeks of swim lessons for children will be given at the BNL pool, Bldg. 478, from 4 to 4:45 p.m. on Thursdays and Fridays. The Thursday class will run April 11-May 30, while the Friday class will be April 12-May 31.

The cost for each eight-week class is \$40 per child; for each class, the child must pay the \$2 daily entrance fee or present a season pass. No make-up classes will be scheduled. Sign up at the pool during its open hours; for more information, call Head Lifeguard Susan Dwyer, Ext. 3147, after 4 p.m.

## Volleyball

### Standings as of March 14

Open League		League I	
Pass, Set & Crush	46-14	Bikers 'n Spikers	50-16
Monday Maulers	44-16	Rude Dogs	51-18
Far Side	29-31	Scared Hittless	33-36
Spikers	26-37	No Names	25-44
Bud Hitters	8-55	Underdogs	12-57

League II		League III	
Spiked Jello	42-9	Silver Bullets	38-10
Safe Sets	41-10	Just 4 Fun	33-15
Fossils	29-22	Joy of Sets	31-17
Monday Nite Live!	28-23	Harlem Knights	29-19
Jolly Veggies	23-28	Upton Ups	28-20
Nuts & Bolts	18-33	DO-DAT	21-27
Volley Folly	14-37	High Volley'em	20-28
Night Court	9-42	New Comers	10-38
		OER	6-42

## Basketball

### Games on March 14

Scram 58		Storm Troopers 31	
John Duggan	21	John Jones	8
Gerry Shepherd	17	Alex Ratti	7
John Skonieczny	6	Robert Prophet	6
Jim Rank	4	Robert Traylor	5
Pat Moylan	3	Ron Simpson	3
Al Boerner	2	George McKillop	2
Alan Jones	2		
Tim Powers	2		
Joe Barkwill	1		

Bulldogs 77		Mustangs 60	
Doug Aichroth	24	Wayne Cummings	25
Tracey Fountaine	19	Kiley Reynolds	14
Brian Hobson	11	Charlie Edwards	9
Simon North	8	Jim Desmond	4
Pete Ratzke	7	Greg Mack	4
Jerry Gaeta	3	Jerry Cook	2
Mike Mallardi	3	Bill Gunther	1
Chuck Bennett	2	Hal VanDeroef	1

Three-point shots: Aichroth (3), Fountaine (3), Cummings, Hobson, Mallardi

## 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 (344-7744), 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.

**LABORATORY RECRUITMENT** - Opportunities for Laboratory employees.

DD 10486. SECRETARIAL POSITION - (part-time) Requires an AAS in secretarial science or equivalent experience, excellent oral and written communication skills, and demonstrated organizational skills. Will provide varied secretarial support to the Division Manager. Requirements include knowledge of IPAP and JCARS systems and WordPerfect. Central Shops Division.

DD 3508. MAIL CLERK - (temporary, on/about 5/6/96 to 9/6/96) Must possess a valid New York State driver's license. Administrative Support Division.

NS 3509. RESIDENCE CUSTODIANS - (temporary, on/about 5/6/96 to 9/17/96) Staff Services Division.

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

NS 2205. COMPUTING/ANALYST POSITIONS - (term appointments) Requires an advanced degree in physics or computer science (physics preferred), and experience in the design and implementation of on-line systems for high energy or nuclear physics experiments. Experience in at least one of the following areas is highly desirable: object-oriented analysis and design, high-speed networks, databases, VME, VxWorks and EPICS. Will work in a team environment using software-engineering methods to design and implement the on-line computing system for the PHENIX experiment at RHIC. Physics Department.

NS 0581. ENGINEERING POSITION - (term appointment) Requires a BSCE or equivalent and several years' experience with the planning, designing and installing of structural systems. Specific experience with reinforced-concrete design for radiation protection is required, as is proficiency with AutoCAD and in-depth knowledge of ACI and AISC codes. Project management as well as field construction experience is necessary. Experience with the facility interface of large accelerator-physics experimental detectors is desired. RHIC Project.

### Motor Vehicles & Supplies

95 CR125 DIRT BIKE - low mi., mint cond., \$3,500. Dan, Ext. 4605.

94 CHEVY S10 PICKUP - low mi., 4-spd., bed cover, many extras, like new, mint cond. 727-3863.

94 FORD F150 FLARESIDE PICKUP - XLT pkg., a/t, ac, all power, V-8, 25k mi., CD, bed liner, bed cover, many extras, \$15,700. Steve, Ext. 2496.

93 GEO - convertible, a/t, ac, am/fm cass. stereo, air bag, aqua w/black top, 26k mi., excel. cond., \$8,500. Ext. 2168 or 744-4948.

92 CUTLASS SUPREME - fully loaded, excel. cond., \$9,000. Roseann, Ext. 3142 or 447-2110 eves.

92 METRO - 22k mi., 2-yr. factory warr., 5-spd., am/fm, 45 mpg, blue, \$4,200. Joe, Ext. 4496.

91 MERCURY CAPRI XR2 - convertible, red, turbo, loaded, 53k mi., \$6,500. Ext. 5300 or 477-8117.

89 FORD ESCORT - 83k mi., am/fm cass., runs well, v.g. cond., asking \$2,100. Leite, Ext. 1067.

89 DODGE SPIRIT - 4-dr., 4-cyl., brown, ac, a/t, am/fm, cruise, 99k mi., runs well, \$1,500 neg. Peng, Ext. 3869.

88 MITSUBISHI MIRAGE - 4-cyl., a/t, ac, am/fm, white, no rust, must sell, \$2,800, neg. Ext. 5898 or 341-1075.

88 MAZDA 626LX - 4-dr., sunroof, ac, a/t, all power, 137k mi., new battery, \$3,750. Jack, Ext. 4037.

87 NISSAN 200SX - red, 2-dr., 5-spd., radio/cass., cruise, 79k mi., orig. owner, runs well, asking \$2,699. Ext. 7604.

87 ACURA INTEGRA LS - a/t. Ext. 3053.

86 DODGE COLT VISTA - m/t, 5-spd., ac, high mi., runs well, moving, must sell, \$1,200. Ext. 2707 or 344-1087.

86 HONDA ACCORD - 5-spd., 2-cr., 84k mi., sunroof, alarm, new clutch, tires. Sanjay, 632-2402.

85 CHRYSLER FIFTH AVENUE - 4-dr., V-8, fully loaded, leather int., 86k mi., v.g. cond., \$2,500. Marvin, 791-4342.

85 BRONCO - tan, a/t, ac, cruise, custom rims, excel. int., new brakes, tune-up, runs well, \$5,595 neg. Bill, 321-4411.

85 FORD LTD - V-6, p/s, p/b, radio, new parts, dependable transportation, ask. \$700. Najeh, Ext. 1022.

85 CHEVY S-10 PICKUP - w/cap, black, p/s, p/b, runs well, needs some work, asking \$1,300. Ext. 5462 or 288-2080 after 5 p.m.

82 GMC VANDURA 2500 - p/s, p/b, a/t, many new parts, excel. work van, asking \$2,200. Bob H., Ext. 7802 or 654-3989.

82 CHEVY CAMARO - needs engine, \$275 obo. Frank, Ext. 2022 or 399-4480.

81 TR-7 - convertible, 5-spd., 58k mi., runs well, best offer. Bichoneau, Ext. 3749.

79 FORD TRUCK PARTS - hood, door, fenders, 4x4, 4-spd. tranny, CB radio, like new, B&M shifter, 302 alum. manifold. Wayne, Ext. 3084.

77 BUICK ESTATE WAGON - runs well, \$400. Doug, Ext. 4484.

WINDSHIELD - '57 Chevy model 210, misc. windows, \$50 all. Bob, 878-4297.

### Boats & Marine Supplies

31' BAHAM SPORT FISHERMAN - 1987, twin 454's, 225 hrs., sleeps 4, full canvas, electronics, outriggers, loaded, stored indoors, \$33,500. Gene, 286-0263.

22' WINNER - cuddly cabin, dual batts., fish well, captain's chair, new steering, pulpit, rebuilt 175-h.p. Evinrude, \$3,500. 997-4515.

17' CHRIS CRAFT - cuddly cabin, fg, 85-h.p.-Evinrude o/b, V4 galv. Shoreline roller trailer, extras, v.g. cond., moving, \$1,200. Joe, 281-7683.

16' STARCRAFT - alum., 50-h.p. Evinrude, trailer, \$850. 475-0831.

### Furnishings & Appliances

CRIB & ROCKING CHAIR - clear maple wood, excel. cond., \$175/both neg. Evelyn, 549-9113.

DESK - large L-shaped, needs refinishing, \$125; dryer, electric, \$75. Walter, Ext. 4958 or 821-9451.

DINING ROOM TABLE - Queen Anne style, 60"x40" oval, cherry finish, 4 chairs, \$125 447-6528.

ENTERTAINMENT CENTER - Broyhill, oak, fits 27" TV, orig. \$2,400, now \$825. 929-8514.

LIVING ROOM SET - v.g. cond., must see, asking \$300. Pete, Ext. 4581/5105 or 399-2813 after 5 p.m.

LIVING ROOM SET - 3-pc. sectional, Italian Provincial, excel., \$175; kitchen set, Colonial, \$50. Sandberg, 473-6432.

REFRIGERATOR - Gibson, 16.4 cu. ft., frost-free, white, \$100. Steve, Ext. 7862.

SOFA BED - Workbench, excel. cond., \$175; portacrib playpen w/foam mattress; dehumidifier, large, Sears, w/new humidistat, \$55. Ext. 2004.

TABLE - 36" round, glass top, w/black pedestal & 2 match. chairs, \$175; TV, 27" Fisher, color, stereo, hardly used, \$225. Linda, 874-8259.

WALL UNIT - dark wood, 3-sections, one w/glass doors, all w/drawer & lower storage, orig. \$1,200, ask. \$350. Tirre, Ext. 3288.

WASHER/DRYER - Maytag, propane gas, stackable, almond, 27"x24"x72", excel. cond., orig. \$1,100, asking \$400. Henry, Ext. 5725 or 727-7227.

WASHER/DRYER - heavy-duty, 6 mos. old, excel. cond., \$450. 727-1592 after 6 p.m.

WICKER CHAIRS - 2, white, small table, excel., \$90 firm. 929-5742.

### Tools, House & Garden

HEATERS - 2 units, kerosene, \$75/both. Walter, Ext. 4958 or 821-9451.

KITCHEN COUNTERTOP - 5' long, w/matching cabinets, sink, faucet, v.g. cond., \$75. 363-6940 after 5 p.m.

LIGHTING KIT - for lighting path, Sears, low voltage, never used, \$25. Ext. 2004.

PATIO SET - 6-chairs w/cushions & matching umbrella table, 40"x90", green PVC, covers for all, orig. \$2,000, now \$1,000. John, 395-5922.

TREES - spruce, white pine, cedar, Doug. fir, b&b, sheared, excel. for yd./priv., 4'-8", \$20-\$75 ea., depending on selection, quantity. Tom, 878-1060.

### Sports, Hobbies & Pets

BICYCLE - touring, 28", 10-speed, w/pump & tubes, mint, \$120. Ext. 5898 or 341-1075.

BICYCLE - Dyno BMX, 20", boy's, good cond., orig. \$200, now \$80. Ext. 5080 or 751-1884.

BIRD CAGE - 24"x14"x20", good cond., \$25. 447-6528.

CLARINET - Yamaha, student, ebonite, mint cond., \$175 firm. Henry, Ext. 5725 or 727-7227.

FISH TANK - 55-gal. w/stand, Fluval filter, misc. extras, \$250. 981-5993.

PING-PONG TABLE - good cond., best offer over \$100. 286-3742.

SKI BOOTS - Koflach, size 9 1/2, front-entry, 4 buckles, used 5 times, excel. cond., paid \$300, now \$50 obo. Don, Ext. 7237 or 929-6571 after 5:30 p.m.

SKIS - Atomic 200cm w/bindings, boot size 11, poles, bag, lock, \$250; snowboard, Budweiser Frog logo, brand-new, never used, \$399. Bill, 321-4411.

SOLO FLEX - all papers, excel. cond., \$400. Pat, Ext. 7705.

WEIGHT SET - Olympic, 340 lbs., new E-Z curl bar, dumbbells, bench, \$375. 286-5962.

### Audio, Video & Computers

ANSWERING MACHINE - Phone Mate, dual cassette, \$40. Ext. 2004.

AUDIO COMPONENT SYSTEM - Fisher, 2 speakers, \$60; barbecue w/gas tank, spotless, excel. cond., \$50. 475-7257.

BASS HEAD - Gallien Kruger 200 rb, 100 watts, 3-band eq., chorus, \$115. Jim, 924-7374.

BOOKS - *Internet for Dummies*, \$10; *Microsoft Works 3 for Windows* w/tutorial software, \$10. Bill, 878-4356.

CD PLAYER - Yamaha, single disc, \$110. Tom, Ext. 7287 or 744-4535.

COMPUTER - Apple Macintosh Performa 450, 4/120 fax modem, SUGA color monitor, loaded w/software, must sell, orig. \$2,200, now \$900. 744-9664.

COMPUTER - Toshiba Notebook, 8MB, 200MB, color, \$1,200. Mike, 967-6146.

COMPUTER - Packard-Bell 486DX266, 420MB HD, CD-ROM, multimedia, 16-bit sound card, software, monitor, Epson printer, asking \$1,400. Ext. 7507.

HARD DISK - Western Digital 170M, almost new, 3-yr. warr., \$115. Ext. 5080.

MAC PRINTER - Seikosha, excel., \$100. 929-5742.

STEREO - Proton amp/rec., CD player, cassette deck, 2 Boston speakers. Janet, Ext. 2345 or 929-3910.

TV - Toshiba, color, 14", \$80. Ext. 2707 or 344-1087.

TV - Sanyo, 19", no remote control, \$40; printer, Epson, 9-pin dot matrix, cheap. Tom, Ext. 7899.

TV - Goldstar, 19", like new, asking \$120; VCR, RCA, asking \$120. Najeh, Ext. 1022.

VIDEO GAME - Nintendo deluxe joystick, NAS Advantage, controller, 18 games w/TV, \$300. John, 395-5922.

### Miscellaneous

ANIMAL-HOODS HEAD - wearable wildlife, many accompanied by accessory, \$12 ea., proceeds to benefit Upton Nursery School. Sue Ellen, Ext. 3417.

BABY'S ITEMS - Najeh, Ext. 1022.

FOX COAT - full-length, size 14-16, excel. cond., \$475. 473-5063.

RECORD COLLECTION - 1940s through 1960s, make offer. 363-6217.

TICKETS - Broadway musical *Sunset Boulevard*, April 27th, 8 p.m., 2 orch. seats, 15th row, center, \$70 ea. Don, Ext. 5533.

### Real Estate

*Real Estate advertised for sale or rent is available without regard for the race, color, religion, sex, age, national origin, disability or veteran status of the applicant.*

### For Rent

BELLPORT - house to share, priv. room, large l/r, eik, refrig., w/d, \$375/mo. + 1/2 util. David, 286-1633.

E. PATCHOUE - large studio, new bathroom, kitchen, priv. ent., \$500/mo. incl. util. & cable. 289-5882.

E. PATCHOUE - 1-bdrm. apt., immac., sunny, priv. ent., own thermo, l/r, kit., clean, nonsmoker, single, no pets, \$575/mo. incl. all. 654-0019.

FARMINGVILLE - 1-bdrm, l/r, large kitchen, d/r, priv. yd. w/brick patio, circular driveway, completely renovated, everything brand-new, move in 4/1, \$850/mo. + util. 736-1344.

MANORVILLE - 2-bdrm. townhouse, 1 1/2 bath, gar., fp, cac, d/w, w/d, skylights, pond view, very bright, 1 yr. old, \$1,000 + util. Eric, Ext. 5875.

MASTIC - 2-bdrm. basement apt., priv. ent., l/r, mod. kit, 15 min. to Lab, no smoking, \$600/mo. + 1 mo. sec., incl. all util. & cable. Ext. 3426 or 399-3381.

MIDDLE ISLAND - 1-bdrm. garden apt., upper w/terrace, full bath, new appl., tennis, pool, laundry, ac, \$650 incl. heat, will rent w/option to buy. 821-5484.

MILLER PLACE - 1-bdrm. apt., brand-new, kitchen, 15 mins. to Lab, immed. occupancy, \$700/mo. 395-4220 after 3 p.m.

PORT JEFFERSON STATION - 1-bdrm. house, eik, d/r, l/r, full bath, w/w bsmt., priv. yd., deck, w/d, no pets, \$750/mo. + util., avail. 4/1. Mike, 698-3967.

ROCKY POINT - 2 bdrm. bsmt. apt., l/r, kit., full bath, no smoking, no pets, \$650/mo. incl. all. Bichoneau, Ext. 3744.

ROCKY POINT - large 1-bdrm. apt., city water, cable, separate ent., no pets, no smokers. \$130/wk. incl. all. 744-5895 after 6 p.m.

WADING RIVER - large studio apt., unfurn., full kit., near beach, driveway parking, quiet neighborhood, 15 min. to Lab, elec. & heat incl., \$500/mo. Bill, 722-4489.

YAPHANK - Whispering Pines, 2-bdrm. townhouse, l/r, d/r, attached gar., w/d, pool, clubhouse, short/long-term lease, \$900. Ramesh, 924-8113.

HILTON HEAD, SC - condo, sleeps 6, fully furn., 2 bdms., 2 baths, tennis, beach, golf nearby, \$350/wk. Guy, Ext. 3147 or 689-5378.

VERMONT - ski house near Mt. Snow, sleeps 7, avail. week, wknds., \$125/night, 3-night min. Lloyd, 627-7589.

### For Sale

BLUE POINT - 2-bdrm. ranch, 1 bath, l/r, eik, deck, shed, gas heat, 87'x100', corner property, \$115. 363-6289 eves.

EASTPORT - building lot, 120'x180', close to school, walk to stores, 15 mins. from Lab, town of Southampton, \$50,000. 325-0013.

FARMINGVILLE - 5-rm., 2-bdrm. house, modern kit., new appl., new bath, new carpet, new windows, siding, 1/2 bsmt., w/d, OHW, detached gar., taxes \$2,430, \$104,000. Mark, 654-0268.

MASTIC BEACH - 4-bdrm., eik, 2 bath, fin. bsmt., all appl., ag pool w/deck, dead end, city water, recent paint, solar hot water, 2-zone heat, new ac, asking \$98,500. Tirre, 281-0360.

MILLER PLACE - 4-bdrm. Col., 0.53 acre, 2 1/2 baths, eik, l/r, d/r, fp, den, remodeled kit. & baths, 16'x32' ig pool, deck, sunstone patio, gar., full bsmt., cul-de-sac, N. of 25A, \$189,900. Nick, 744-5021.

N. SHIRLEY - 3-bdrm. ranch, 2 baths, l/r w/cathedral ceilings, lg. eik, gar., full bsmt., alarm sys., fenced 1/2 acre, 2 large decks, pool. John, 395-5922.

RIDGE - 3-bdrm. ranch, 2 1/2 baths, country