BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

Tandem + AGS = Totally New Physics at BNL

A new era of experimentation began at the Alternating Gradient Synchrotron (AGS) on Saturday, October 25, when a beam of oxygen ions collided with targets of AGS Experiment 825 (E825). The energy of the oxygen ion beam was 14.6 billion electron volts per nucleon (GeV/n). The event marked the first time that heavy ions had been extracted from the AGS ring and sent down a beam line to a target in an experimental area.

Until an oxygen beam was first introduced in the AGS ring last April, the 26-year-old accelerator had never harbored any particles but protons. This new capability was made possible through the Tandem/AGS Heavy Ion Project, the main thrust of which was to connect two existing BNL machines — the Tandem Van de Graaff Accelerator facility and the AGS — via a beam transfer line.

Project Head Horst Foelsche explained, "It was realized that connecting the two resources would be a particularly simple and effective way to get to high energy, heavy ion interactions quickly." It has been theorized that in such interactions, which create extremely high temperatures and densities, physicists may be able to detect new states of matter, often called quark matter. With funding from the Department of Energy, ground was broken for the Tandem/AGS Heavy Ion Project on October 17, 1984.

Two years later, E825 began its first run. The E825 collaboration is hosted by BNL and includes Lawrence Berkeley Laboratory, Oregon State University, Purdue University, the University of Oslo and the Studsvik Science Research Laboratory in Sweden. In earlier experiments, to determine the products from target fragmentation, the collaborators had bombarded targets of carbon, aluminum, vanadium, copper, silver and gold with high energy protons and lower energy heavy ions (2 GeV). This week, they bombarded the same targets with higher energy oxygen ions. Now the scientists are beginning to compare the heavy ion and proton results, looking for anything unusual.

On this initial run, E825 received beam for about 40 hours. Peter Haustein, Chemistry, a BNL collaborator on E825, explained that this relatively short run will provide "a quick survey of the landscape of target fragmentation. It will be very useful, though it's much too early to tell exactly what we've got."

This week, as the experimenters welcomed oxygen beams as intense as 3×10^8 (300,000,000) ions per pulse, Foelsche said that start-up of the experimental physics operation was essentially on schedule. In all, nine experiments will be collecting preliminary data and calibrating their equipment during this first round of heavy ion experimentation, which will continue at the AGS through November 9.

Mort Rosen

Monitoring heavy ion operations in the AGS main control room are a few of the many people responsible for the successful commissioning of the oxygen ion beam: (seated) Don Barton, physicist in charge of AGS systems; (standing, from left) Ed Gill, senior technical associate; Physicist Leif Ahrens; and Jay Woods, senior technical specialist.

Another of those studies is E802, which aims to look at the particles produced at the extreme densities created in nuclear collisions in the AGS. A collaboration between BNL, Hiroshima University, Lawrence Berkeley Laboratory, MIT, the University of Tokyo and INS, and Waseda University, this experiment includes BNL Senior Physicist Harvey Wegner, who said, "The new oxygen ion beam in the AGS is the fulfillment of over ten years of thinking about ways to increase the energy of heavy ion experimentation at BNL."

From 1975 to 1983, Wegner recalled, he worked with many others, including Senior Physicists Chellis Chasman and Peter Thieberger, who is now deputy head of the Tandem/AGS Heavy Ion Project. They considered several schemes in which the Tandem could serve as an injector for a more energetic machine. These were never funded, and it was only after Wegner and Thieberger developed a high current, pulsed source of negative ions for the Tandem and demonstrated that the Tandem could accelerate such pulsed beams, that it became possible to inject heavy ions directly into the AGS.

The time was ripe. It was 1983, and the idea of quark matter, said Wegner, "had turned on the imaginations of physicists all over the world. There are few things more exciting than making an accelerator run in a way that's never been done before. And there's nothing more exciting than the possibility of making a new form of matter under the sun."

In their search for a new form of matter, most experimenters want more than the present oxygen beam. By the time the first full run of heavy ion physics begins next spring, a sulfur beam should be added to the heavy ion repertoire.

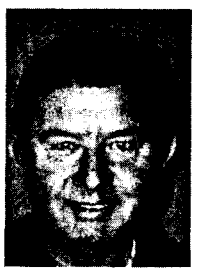
Being able to accelerate sulfur beams will involve using both of the Tandem accelerators that make up the Tandem facility. Only one Tandem is needed to accelerate oxygen to an energy suitable for transfer to the AGS. Sulfur is a heavier ion, however, and it needs much more acceleration in order to attain the necessary energy. So, said Foelsche, "The two machines will be joined, one feeding the next, to provide the proper energy sulfur beams. Right now, the Tandem staff are working hard to get the sulfur source operating in the second Tandem. And the AGS staff are tuning up to improve beam capture and overall system performance before sulfur will be attempted."

With the commissioning of the oxygen beam at the AGS, experiments with very high energy ions are about to start both in the U.S. and in Europe. The Super Proton Synchrotron (SPS) at CERN, the European Center for Particle Physics, has recently accelerated oxygen ions to 200 GeV/n, while the AGS can reach energies of 14.6 GeV/n.

The two programs are complementary: Where the SPS is limited at present to oxygen at high energies, the AGS, at lower energy, is aiming to accelerate the heavier nucleus of sulfur and, with the Booster that has received Congressional approval, even heavier ions in the future, up to and including gold. Eventually, BNL hopes to inject the AGS beam into the proposed Relativistic Heavy Ion Collider (RHIC), thus taking a giant step towards achieving the highest collision energies available. The complementarity between the CERN and BNL programs should allow physicists

(Continued on page 2)

Steamfitter Dies



Stanley Dobzeniecki

Steamfitter Stanley Dobzeniecki died on Wednesday, October 29, at the University Hospital at the State University of New York at Stony Brook. Dobzeniecki, whose immediate cause of death was a pulmonary embolism that occurred during surgery, was one of three BNL steamfitters to be hospitalized with burn injuries on October 10, following an accident in the Laboratory's steam-heat distribution system. William Peterson died the following day, and Alfred Schlendorf has been released from University Hospital. A fourth accident victim, Edward Erhardt, was treated at the BNL clinic at the time of the accident, then released.

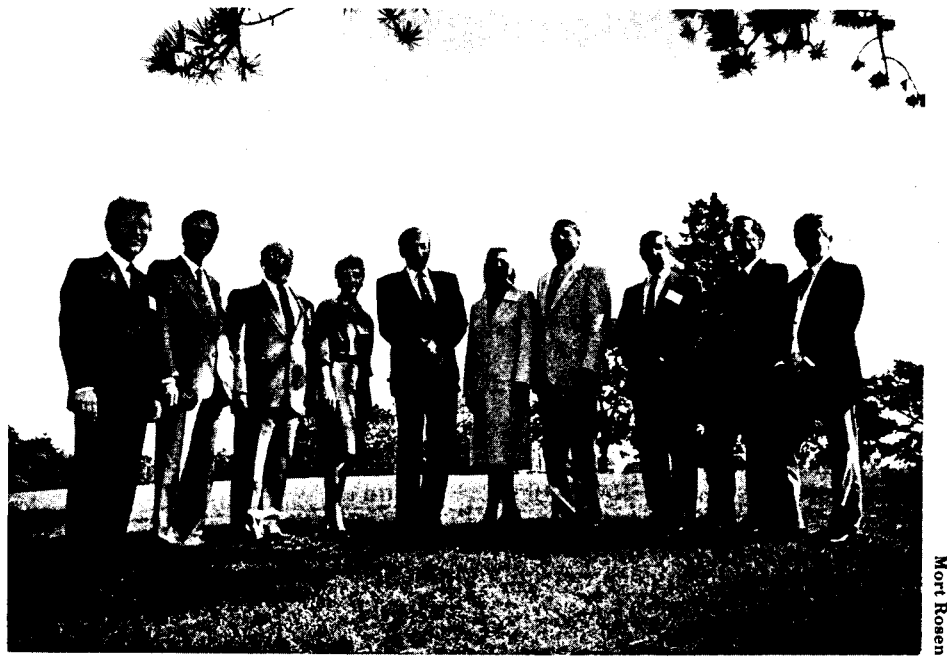
The cause of the accident is now under investigation by the Department of Energy. Until more is known, work on the new steam distribution system will be on hold.

Stanley Dobzeniecki, who was 61 years old, lived in Bellport. He came to BNL in 1961. He is survived by his wife Teresa and a daughter Jane.

Workshop: A Question of Leaching

When solidified, radioactive waste forms are exposed to water, radioactivity can be released into the environment. This process is called leaching. How suitable are available data and models to provide a basis on which to assess the long-term possible leaching behavior of waste packages in their disposal environment? This was the question facing 30 invited experts from Canada, Europe and the U.S., who met at BNL from October 13-16 for The Second International Workshop on Leaching of Low and Medium Level Radioactive Waste Packages Under Disposal Conditions.

The workshop, sponsored by the Commission of European Communities (CEC) and BNL, was held under the Department of Energy/CEC Agreement for Exchange of Information. Some of the attendees included: (from left) Ernst Warneke, Federal Republic of Germany; Wolfgang Krischer, Belgium; Peter Colombo, BNL, co-host and organizer; Kathleen Hauser, BNL; Rainer Simon, Belgium, European co-host and organizer; Eena Mai Franz, BNL; Timothy Johnson, U.S. Nuclear Regulatory Commission; Guy Baudin, France; Nicolo Cadelli, Belgium; and Lewis Meyer, U.S. Environmental Protection Agency. "At the first international meeting of this type, held at Cadarache, France, in November 1984, gaps in various areas of technical knowledge were identified," said Colombo. "After the recent meeting, it was evident that the work of the past two years had addressed a great number of these needs."



Mort Rosen

Pooling their efforts to reach the $75,000 goal for the 1986 United Way Campaign are BNL department and division representatives: (from left) Marge Stoeckel, Mark Walker, Joan Perullo, Elinor Adams, Marge Desmond, Bob Jansson, Angela Boccio, Stephanie Lamontagne, April Donegain, Lou Di Carlo, Linda Morrell, Jim Licari, Lois Marascia, Peter Haustein, Patricia Harlin, Ralph Perry, Arline Willsey and Jim Gilmartin. Not pictured are Karen Adelwerth, Nicholas Alonzo, Audrey Bangel, Barbara Boerjes, Joe Collins, Terry Ann Jones, Rita Kito, Carol McFadden, Trudy Neuhoff, Rosalie Piccione and Ron Wittlock.

—photo by Rosen

Together We'll Make It!

Twenty-seven representatives from BNL's various departments and divisions are in the frontlines of the 1986 United Way campaign. They're the ones who coordinate fund-raising drives in each building. Why did they agree to take on this time-consuming and difficult responsibility?

"I volunteered to be a United Way representative because I believe in it," said Joan Perullo, Staff Services. "I visited some facilities for the handicapped. I saw a spastic child who couldn't use her arms. She had a band fixed round her head with a paintbrush attached to it, and she was so happy — painting. There were also retarded people making the minimum wage by packaging sports equipment. It makes me proud to have a small part in bringing some independence to people who want to have a normal life."

"Feeling good that people are being helped through my efforts is a plus in this work," agreed Mark Walker of Central Shops. "Years ago I was in a rock band. We gave free concerts to people with cerebral palsy, and I'll never forget how they enjoyed it. I don't have time now, so I give money instead. If you give generously, it makes you feel good."

"I am doing it because I care," Terry Ann Jones, Photography and Graphic Arts, said. "I want the whole world to feel the same way about United Way."

Ralph Perry, Instrumentation, said his wife works for the Board of Cooperative Educational Services. "Everyday, she sees all these children who need help. From personal experience, she knows that because United Way supports so many different programs, many of these children can achieve a normal or near-normal life. That's why I want to help."

The many different programs supported by United Way here on Long Island have already helped 930,000 Long Islanders. That's one in three. Have you or your family had surgery in the past? Chances are your hospital was supported by United Way. Does anyone you know have cancer? The American Cancer Society is helped by United Way. If you prefer to give your contribution to one specific agency, just enter its name in the space provided on the yellow card you got in the mail this week. Any donation is welcome. And if you have any questions, your department's United Way representative will gladly help.

— Liz Seubert

In Memoriam

It has been learned that **Clarence Duncavage**, who retired from the Central Shops Division last March, died on October 27. He was 63 years old, and had joined the Laboratory on November 4, 1963. He and his wife Eleanor lived in Vincentown, New Jersey.

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Louis A. Harson, principal architect and head of the Facilities Planning Group of Plant Engineering, died on October 28, at the age of 60. Among other professional organizations, he was a member of the American Institute of Achitects. Harson was the unofficial historian of Camp Upton and the originator of the Camp Upton museum at the Exhibit Center. He came to the Lab in September 1963 and was a resident of Miller Place. He is survived by his wife Audrey, a former BNL employee; a son Louis Jr.; a daughter Hope Manning; and a grandson Benjamin.

Services will be held today at 2 p.m. at the Bryant Funeral Home, 411 Old Town Rd., Setauket. Contributions may be made in Louis Harson's memory, to the Miller Place/Mount Sinai Historical Society, P.O. Box 651, Miller Place, N.Y. 11764.

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Edward E. Shelton, who retired as Manager of the Plant Engineering (PE) Division in 1982, died October 29. He was 69 years old. He started his career at BNL with the Cosmotron in 1952, and moved to PE in 1967, becoming manager in 1971. Since his retirement, he had performed consulting services for PE and for the Alternating Gradient Synchrotron (AGS) Department. He was a resident of Setauket and is survived by his wife Edna, a son Kirk, a daughter Victoria and two grandchildren.

A memorial service will be held today in the AGS Seminar Room, Bldg. 911, at 11 a.m. The family requests no flowers. Contributions may be made in Edward Shelton's memory to the Multiple Sclerosis Society.

Weight Watchers

New and continuing members may sign up for a new, eight-week, on-site Weight Watchers session on November 4-6 and 13. The cost for new members is $29, as the Lab will pay the other half of the fee; continuing members will pay $58. The sessions will begin the week of November 18 and continue through the week of January 20, with no sessions held from December 23 to January 2. Beginning on November 13, all Weight Watcher meetings will be held in the Snyder Seminar Room, AGS, Bldg. 911. For more information, contact Health Promotion Specialist Elaine Friedman, Bldg. 490, Ext. 2699.

Arrivals & Departures

Arrivals

Sven-Johan V. Heselius ... Chemistry
Veronica Varlack ..... Staff Services

Departures

The list includes all employees who have terminated from the Laboratory, including retirees:

Suknan S. Chang ..... Biology
Bruce E. Miller ..... DNE
Kenichi Nomoto ..... Physics

All film badges will be changed tomorrow. Please place your badge in its assigned rack space before leaving work today.

Art Auction Tomorrow

This scene was painted by Will Moses, who may be one of the artists featured in the Art Expo and Auction, sponsored by Brookhaven Women in Science (WIS), on Saturday, November 1, in Berkner Hall. Prices at the auction will start at $25 (credit cards accepted). A preview of the artwork will begin at 7:30 p.m., and the auction is scheduled for 8:30 p.m. This event is a fundraiser for WIS's Renate W. Chasman Scholarship Fund. It is open to the public, and the $5 admission is a tax-deductible contribution to the scholarship fund. Tickets can be purchased at the door.

Tandem/AGS (Cont'd)

working at both machines to draw conclusions about states of nuclear matter that have never been observed before.

Commenting on the commissioning of the new oxygen beam at the AGS, Foelsche said," This was the result of a tremendous team effort by several departments and divisions of the Lab." The Tandem Operations Group provided the source and preaccelerator, and, together with the AGS, assembled the transfer line. The AGS RF Group built a new radio frequency system. A new computer control system was provided by the AGS Controls Group, which brought the new RF system under computer program control.

Further, The Tandem and AGS Instrumentation and Physics Support Groups put together an extensive system of beam-observation instruments. AGS and Tandem groups coordinated the installation of large amounts of beam hardware and miles of power and control cable, and prepared the experimental areas. Management controls were provided by The Management Systems Group of the Accelerator Development Department, and the Contracts & Procurement Division provided active and enthusiastic follow-through. — Anita Cohen

the Great American SMOKEOUT

If you smoke, consider taking a vacation day from smoking. If you don't want to take all 24 hours off, think about taking just a day off from smoking at work. The day is Thursday, November 20 — the tenth annual Great American Smokeout.

Sponsored by the American Cancer Society, the Great American Smokeout is a day smokers, en masse, give up smoking for just one day. That day could be the first of a future of nonsmoking. Last year, almost half of the nation's 54 million smokers kicked the habit for the day.

As he mentioned in a memorandum to all employees, Laboratory Director Nicholas Samios applauds the Great American Smokeout campaign. He encourages BNL employees who smoke to try a day without cigarettes and asks those who don't smoke to support their co-workers who are attempting to quit. In the memo, Samios announced that, to promote better health for all employees, all cigarette vending machines will soon be removed from site.

For the Great American Smokeout, Health Promotion Specialist Elaine Friedman will make available to all employees pamphlets explaining the dangers of cigarette smoking, and how individuals can reduce their risk of cancer and lead healthier lives. In addition to the health education materials, she will distribute "Thank you for not smoking" signs for employees to post.

In deciding whether to join the Smokeout, smokers should consider these facts:

- More than 320,000 Americans will die prematurely this year of diseases linked to smoking, and, at every age, there are more deaths among cigarette smokers than among non-smokers.
- The risk of developing lung cancer is ten times greater for smokers than for nonsmokers. Those who smoke two or more packs of cigarettes a day are 15-25 times more likely to die of lung cancer than non-smokers.
- It is estimated that 30% of all cancers are caused by smoking, and smoking has been implicated as a cause of cancer in parts of the body other than the lungs, including the mouth, pharynx, larynx, esophagus, bladder and pancreas.
- Eighty to 90% of long-term lung diseases, like emphysema and chronic bronchitis, are related to smoking. A smoker's risk of death from emphysema and chronic bronchitis is 6.5-15 times that of a nonsmoker.

Holiday Party Reservations

Recreation Building

Laboratory organizations and BERA activity groups interested in reserving the Recreation Building in the Apartment Area for holiday parties are invited to send representatives to a meeting on Wednesday, November 5, at 1:30 p.m., in the Conference Room of Bldg. 185A.

As in past years, reservations will be made in the order determined by a lottery, which will be held for those attending the meeting.

As long as dates are still available through Friday, November 14, subsequent reservations may be made by contacting the Recreation Office, Ext. 2873.

Brookhaven Center

Reservations for parties at the Brookhaven Center may be arranged by calling Jean Byrne, Staff Services, Ext. 2553.

NYC Train Trip: Big Apple Circus

Tickets are available on a first-come, first-served basis for the Big Apple Circus on Saturday, December 27, and Wednesday, December 31. Showtime is 2 p.m. The price of $22 includes round-trip train fare and admission to the show. Send check or money order, payable to Cash, to BNL, P.O. Box 322, Upton, NY 11973. If you would like to receive a confirmation of your ticket purchase, please send a stamped, self-addressed envelope along with your check. The reserved tickets for the circus, as well as the train tickets, will be given out at the Patchogue LIRR train station on the day of the performance. Train departure times are 8:41 a.m. on Saturday, December 27, and 7:55 a.m. on Wednesday, December 31.

Service Awards

The following employees received service awards during the month of October:

Thirty-five Years

Peter Colombo — Nuclear Energy
George J. Dienes ..... Physics
Joseph Weneser ..... Physics

Thirty Years

Kenneth E. Boehm .. Photo. & Gr. Arts
John F. Donnelly ..... Accel. Dev.
Martha A. Heine ..... Medical
Lee C. Rogers ..... Instrumentation

Twenty-five Years

David R. Brady ..... Physics
Edward T. Erhardt ..... Plant Eng.
Ralph G. Fairchild ..... Medical
John H. Scarpeger ..... Sup. & Mat'l

Twenty Years

Frank L. Candiano ..... Plant Eng.
Johannes Claus ... Accel. Development
Chester Dolinski ..... Central Shops
Russell S. Dunn ..... Safeguards & Sec.
Thomas P. Lanigan ..... Plant Eng.

Ten Years

Jane D. Bennett ..... Budget Office
Benjamin Burr ..... Biology
Neva C. Delihas ..... Biology
William F. Kearns ..... Plant Eng.
Michael D. Rowe ..... Applied Science
Richard J. Scheidet ..... Plant Eng.
Gerard Shepherd ..... Medical
Lorillard G. Smith Jr. ..... App. Math
Manomohan Subudhi .... Nuc. Energy
Benjamin M. Turner ..... Sup. & Mat'l
Ronald P. Webster .... Applied Science

BROOKHAVEN BULLETIN

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Generator Notice

High Tech Power Inc. still has generator-option kits waiting for people who purchased them in March of this year. To arrange for pickup and/or installation of the items you ordered, phone the company at 737-6600.

Also, free four-prong 240-volt plugs are still available at the BERA Sales Office in Berkner Hall. If you haven't gotten yours yet, bring your receipt to pick one up.

A word of advice: The one-year warranty on the Generac generators will expire soon. If you have not already done so, test run your machine, being sure to add oil per manufacturer's instructions.

This is the last notice on generators. The volunteer-committee that organized the group buy of generators last year after Hurricane Gloria has disbanded. If you have any generator problems, contact High Tech, the factory-authorized service representative in this local area.

Hospitality News

A demonstration of stenciling on cloth will be presented by Susan Kirby at the next Hospitality Committee get-together on Tuesday, November 4, at 9:30 a.m., in the Brookhaven Center. Spouses of Laboratory employees and guests are welcome. Coffee, tea and danish will be served.

Materials will be provided for you to try your hand at this interesting craft. It would be helpful, however, if you would bring along a pair of scissors.

Please come and enjoy the morning with us. Bring children; babysitting will be provided free of charge.

Indoor Soccer

The Soccer Club has moved indoors. Pick-up games are on Fridays starting at 5:30 p.m. in the gymnasium. We will continue to play outdoors at the BERA field on Wednesdays at noon. For more information, call Enrique Abola, Ext. 4383.

Bowling

Pink League

Ellie Kristiansen bowled a 186, Sandy Asselta 183, Andrea Epple 182, Maryann Reynolds 180/179, Maria Apelskog 179, Fern Coyle 177, Renie Rosati 170.

Red/Green League

H. Arnesen rolled a 222, J. Medaris 213, N. Combatti 209, R. Larsen 206, T. Prach 204, J. Connelly 200.

White League

E. Sperry IV bowled games of 218/211, B. Malachowsky 218, K. Griffin 208, R. Murgatroyd 208, J. Niemczyk 206, T. Erickson 200, B. Jones 200, D. Riendeau 192. Four Of A Kind are in first place after position night.

Tonight is Halloween night — the night of the Great Pumpkin. And if you're wondering what to do with any leftover not-so-great pumpkins, the Cooperative Extension Association says that pumpkin is a great source of vitamin A, minerals and fiber. Pumpkin can be used in soups, breads, pies, shakes — even the seeds can be roasted and eaten. For a free leaflet on pumpkin storage, preparation and use, send a stamped, self-addressed, legal-sized envelope to "Pumpkin," Cooperative Extension Home Economics Program, 246 Griffing Avenue, Riverhead, NY 11901. — Long Island Farm Bureau photo

Note to Diners

The Cafeteria will be closed on Saturday, November 1. On that day, snack bar service will be available from 9 a.m. to 2 p.m. at the Brookhaven Center.

Equipment Demo

Davis Electronics, a multi-line distributor of electronic components, will display various products from Alco/Augat, RDI/Augat, Belden Electronics Wire & Cable, Amp Products Corp., Cherry Switch, Hammond Manufacturing, Plastic Systems Inc., and Vector Corp.

The seminar will be held on Monday, November 3, from 10 a.m. to 3 p.m., in the lobby of Berkner Hall. All are invited.

Cafeteria Menu

Week of November 3

Monday, November 3		
Chicken noodle soup	(cup)	.70
	(bowl)	.90
Baked herbed chicken w/1 veg.		2.60
Baked skinless chicken w/1 veg. (lite-weight)		2.60
Beef noodle casserole w/1 veg.		2.60
Hot deli: French bread pizza		2.35
Tuesday, November 4		
Okra Creole shrimp soup	(cup)	.85
	(bowl)	.95
Pot roast of beef w/1 veg.		2.60
Broiled fish w/1 veg. (lite-weight)		2.75
Hot deli: Grilled Reuben		2.45
Wednesday, November 5		
Turkey rice soup	(cup)	.70
	(bowl)	.90
Chicken cashew stir-fry over rice		2.75
Cheddar broccoli quiche w/1 veg. (lite-weight)		2.60
Hot deli: Turkey	(bread)	2.40
	(roll)	2.55
Thursday, November 6		
Split pea soup	(cup)	.70
	(bowl)	.90
Vegetarian lasagna w/garlic bread (lite-weight)		2.65
Shrimp & broccoli stir-fry over rice		2.85
Antipasto assortment plate		2.35
Hot deli: Corned beef	(bread)	2.45
	(roll)	2.60
Friday, November 7		
New England clam chowder	(cup)	.70
	(bowl)	.90
Broiled fresh fish w/1 veg.		2.80
Macaroni & cheese casserole		2.45
Hot vegetable plate (lite-weight)		2.25
Hot deli: Pastrami	(bread)	2.45
	(roll)	2.60

In the Swim

Four members of the BNL Swim Club each placed second overall in their respective age categories for the 1986 season of Empire State Masters swimming competitions. Holding the awards they received on October 23 are: (from left) Toshi Sugama (men 35-39), Laurie Hastings (women 30-34), Swim Club President Marsha Belford (women 25-29) and Team Captain Peter Heotis (men 30-34).

Swim Club

The Swim Club will offer coaching on the breaststroke on Thursday, November 6, at 5:15 p.m. at the BNL pool. The breaststroke pull, whip kick and the turn in breaststroke will be taught, and different drills to improve your breaststroke will be practiced. A short, all-breaststroke workout will be held after the clinic. For more information, call Marsha Belford, Ext. 5053, or Peter Heotis, Ext. 2304.

Afro-American Culture Club

Annual Halloween Costume Party

Friday, October 31, 1986
Recreation Hall
9 p.m. - 2 a.m.

Tickets: $3 in advance
$4 at the door

21 and over please

Prize for most original costume
Dance Contest
All are welcome.

For ticket information call:

	Ext.
Barbara Simpson	7009
Bruce Penn	7213
Bettie Sylvester	7711
April Donegain	4425
Fran Ligon	3709

The Afro-American Culture Club is a BERA-sponsored organization.

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position, with consideration given to candidates in the following order of priority: (1) present employees within the department and/or appropriate bargaining unit, with preference to those within the immediate work group; (2) present employees within the Laboratory as a whole; and (3) outside applicants. In keeping with the Affirmative Action plan, selection decisions are made without regard to age, race, color, religion, national origin, sex, handicap or veteran status.

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all non-scientific staff positions; second, to give employees an opportunity to request consideration for themselves through Personnel; and, finally, for general recruiting purposes. Because of the priority preference policy stated above, each listing does not necessarily represent an opportunity for all candidates. As a guide to readers, the listings are grouped according to the anticipated area of recruitment.

Except when operational needs require otherwise, positions will remain open for one week following publication date.

For further information regarding a placement listing, contact the Employment Manager, Ext. 2882.

THE VACANCIES LISTED BELOW HAVE BEEN EXEMPTED BY THE DIRECTOR'S OFFICE FROM THE CURRENT FREEZE ON OPEN REQUISITIONS.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees only.

2489. CENTRAL SHOPS CLERK - Under supervision, will perform various clerical duties including typing and word processing. Previous relevant experience including experience with computers is required. Central Shops Division.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

2490. OFFICE SERVICES/ACCOUNTING POSITION - Requires a minimum of two years' college accounting credits. Responsibilities include assistance in various aspects of General Accounting, i.e, A/R, capital equipment, inventories and other accounting analyses. Reposting of Job No. 2484. Fiscal Division.

2491. TECHNICAL POSITION - Requires AAS in electronic technology or equivalent experience in the nuclear science field. Knowledge of control and process instrumentation and reactor safety systems and the ability to obtain a "Q" clearance is required. Will be assigned to the Reactor Division Instrumentation Group. Reactor Division.

2492. ELECTRICIAN A - Under minimum supervision, lays out, constructs, installs, maintains, repairs and operates systems, equipment, controls and related devices. Requires minimum of five years' industrial electrician experience. Plant Engineering Division.

Autos & Auto Supplies

79 MERCURY MARQUIS WAGON - 302 V8, a/c, p/s, p/b, a/t, am/fm stereo, roofrack, high mileage, good cond., $1,650. 821-0695.

TIRES - (4) Michelin, X2X, 175 SR14, good cond., $60./best offer. Ext. 2676.

75 CHEVY MONZA - 64k mi., good cond., $850. 758-6136 after 5:30 p.m.

77 PLYMOUTH TRAILDUSTER - 4x4, a/t, p/s, a/c, 76k mi., new parts, body fair, mech. good., $1,850. neg. Ken, Ext. 2350 or 588-2389.

78 BOBCAT - in/out excel. cond., 82 engine, 4 cyl., new clutch, runs well, high mileage on old engine, sunroof, $900. Lou, Ext. 4417.

79 MERCURY MONARCH - must sell, 6 cyl., 4 dr., a/t, a/c, p/s, 71k mi., best offer. Uehara, Ext. 3028/4078.

82 MAXIMA - full power, sunroof, two-tone brown, garaged, very good cond., 80k highway mi., $5,700. Mark, Ext. 5176.

75 FORD - a/c, a/t, p/b, p/s, am/fm, new trans., reliable transportation. $550. Ext. 7901 or 821-9328.

77 OLDS TORONADO - a/t, a/c, full power, am/fm, dependable, in/out clean, needs muffler. $825. Frank, Ext. 3976 or 399-1307.

74 FORD MAVERICK - 6 cyl., 93k mi., good local transportation. $450. Ext. 4502.

68 CHEVY IMPALA - hardtop, 307 V8, p/s, p/b, runs well, body rust. $300. 472-1314.

81 TOYOTA COROLLA SR5 - a/t, a/c, p/s, p/b, stereo, sunroof, louvers, excel. cond., $3,400. Lisa, 822-3868.

69 PLYMOUTH - 4 dr., 318 std., needs tires, brakes, runs, $250; 75 Olds Starfire, complete or parts. Bill, Ext. 4988 or 698-4882 after 6 p.m.

74 CHEVY VEGA - good local transportation, $300. Tom, Ext. 4453 or 473-8739 after 6 p.m.

66 FORD MUSTANG - not running, $500. 399-0942.

86 KX 80 - dirt bike, excel. cond., must see, asking $800. Ext. 4672/4904 or 929-4753 after 5 p.m.

79 HONDA 750F - ¼ fairing, clubman bars, $800. Fred, Ext. 5032 or 744-2655.

79-80 HONDA CIVIC ALTERNATOR - new cond., $30. Ext. 4530 or 261-2719 after 5 p.m.

76 MONTE CARLO - very good cond., needs front end work. $500. 874-3796.

78 PONTIAC SW - am/fm stereo, p/s, p/b, new tires, excel. running cond., must see. 751-7408 after 3 p.m.

78 PONTIAC PHOENIX - V6/231, a/t, p/s, runs well, asking $795. Ext. 7593 or 878-0653.

84 MAZDA GLC 4 - htchbk., 5 spd., 24k mi., new muffler. $3,500. Harada, Ext. 3714.

80 MERCURY MARQUIS - Brougham, excel. cond., 56k mi., $3,500. Ext. 2949 or 427-2435 after 6 p.m.

79 BUICK LeSABRE - 350 V8, a/c, 4 dr., power steering wheel & locks, am/fm, good cond., asking $1,800. Ext. 7795 or 589-8331.

84 PLYMOUTH RELIANT - p/s, p/b, a/c, 47k mi., 4 dr., $4,900. 294-3287.

79 DODGE PICK-UP - 318 standard, dark brown, $1,500. John, 283-8774.

79 PONTIAC LeMANS - a/c, a/t, p/s, p/b, am/fm, $1,925; 80 Toyota Tercel, htchbck., a/c, a/t, am/fm stereo cass., new tires, $2,325. 331-4538.

81 CADILLAC COUPE DeVILLE - very clean. Roy, Ext. 7936 or 878-8129.

SNOW TIRES - (2) Dunlop GR78-15, steel belted, on Olds five hole rims, $60. Ext. 3392.

TIRES - 175 R14, Michelin radial, $10; 6-95-14 Polyster Good Year, $10. Jan, Ext. 4263.

78 MERCURY ZEPHYR - excel. cond., 6 cyl., 4 dr., p/s, p/b, a/t, 75k mi., orig. owner, $1,400. Nancy, 924-8160.

75 FORD CLUB WAGON - V8, good running cond., new tires, $600. Oscar, 924-3449.

77 DATSUN B210 - hatchback, 4 spd., a/c, am/fm, excel. cond., new clutch, front suspension, $1,295. 928-4683.

WESTERN WHEELS - (4) Cyclone II, cast aluminum, 15x7, w/locks and all parts, 4-lug, $200. Sue, Ext. 4931.

71 PICKUP - C-10, 350, V8, 3 spd., good cond., $1000 or trade for Quad; Cap, 8', insulated, windows on 4 sides, asking $150. Ext. 4638, beeper 572.

79 OLDSMOBILE - Cutlass Supreme, 2 dr., a/t, a/c, p/s, p/b, am/fm cass., pastel green, 62k mi., good cond., $2,300. Ext. 3170.

83 NISSAN STANZA - 4 dr., 5 spd., 38k mi., extras, excel. cond., $4,800. 744-4611 after 6 p.m.

85 RENAULT ENCORE - am/fm, new tires, 31k mi., 40+ mpg, excel., $3,500. Ed, Ext. 3293 or 477-2880.

80 DATSUN 200SX - htchbk, am/fm, a/t, sunroof, $2,200. 928-4069 after 5 p.m.

79 TOYOTA COROLLA - 2 dr. 5 spd., runs well, asking $1,100. 472-1735.

73 CADILLAC - Coupe DeVille, good cond., $250; 72 Monte Carlo, good cond., $500. 399-4480.

OIL FILTER - dual, for Ford, $2. Morris, Ext. 4192.

TIRES - (4), G78/15, $20, set; (4) L78-15, $30, set. Lou Pergola, Ext. 3499.

81 CHEVETTE - 4 dr., 4 spd., 30 mpg., good cond., $950; 65 Avalon travel trailer, 17½', sleeps 6, stove, refrig., toilet, good cond., $900. Joe, Ext. 5131.

77 FORD FAIRMONT - p/s, p/b, a/c, 3 spd., 100k mi., $1,100. Ramesh, Ext. 4805 or 924-8113, eves.

76 VOLVO WAGON - 78k mi., excel. cond., a/t, p/s, p/b, a/c, garaged, $2,750 or best offer. Ralph, Ext. 2368 or 928-6654.

TIRES - (2), 205/75R14, all season radials, excel., $25 ea.; Snows (2), very good, $20 ea.; (1) 10x15, AT Tracker, new $65. Tony, Ext. 2462.

SUZUKI GS250T - plus extras, excel., $399. Jack, Ext. 4411 or 929-8287.

81 KAWASAKI - LTD440, excel. cond., under 5k mi., asking $750. Dick, Ext. 4313.

75 MERCURY MONTEGO - p/s, p/b, a/t, a/c, am/fm cass., runs well, some dents/rust, $600 neg. 585-4038.

82 FORD BRONCO - 4x4, XLT, V8, 4 spd., alum. rims, loaded, must see, $9,500. 862-6970, eves.

80 OLDSMOBILE TORONADO - red, V8, diesel, all pwr, orig. owner, $2,800 neg. Ext. 3794.

70 DODGE DART - low mi., good cond., best offer, 289-0687.

69 CHEVY - pickup, V8, a/t, ladder rack, good work truck, $500. 744-4386.

50 FORD - pickup, restored in 1983, collision damage, $1,400. Roger, Ext. 4677 or 878-8847.

Boats & Marine Supplies

75 OUTBOARD - 9.9 hp Johnson, must sell, $375. Ext. 7772 or 744-8581.

28' OWENS - 1963, sleeps 4 +, galley, engine needs work, $1,800. Bert, Ext. 2050.

16' SAILBOAT - fiberglass, w/trailer, best offer by Nov.1 secures. Peter, Ext. 2826 or 928-8579.

8' SAILING DINGHY - fiberglass, like new, $550. Al, Ext. 7588.

19' SEA RAY - aqua, recond., outdrive, needs work, best offer. Roger, Ext. 2384.

17' PROLINE - 1974, center console, fiberglass, 50 hp Johnson o/b, w/trailer, excel. cond., $2,400. 878-2849 after 4 p.m.

19' RENKEN BOWRIDER - 120 hp Volvo I/O (150 hrs.), full canvas, trailer, all excel. cond., $3,900. Ron, Ext. 7533 or 286-0353.

Miscellaneous

SPREADER - fertilizer, gravity driver, $8. Ext. 2830.

BUNK BED - crew quarters type w/dresser, all new, dark wood, immaculate, $275. Tom, Ext. 4084 or 878-1060.

MATTRESSES - 2 w/box springs and frames. Only three months old. 821-0794 after 6 p.m.

RACING SKIS - cross country, size 37, boots used twice, sacrifice, $150. 928-9752, eves.

DRAPES - for 7'x8' (approx.), window, very good cond., $18. Morris, Ext. 4192.

PICTURE WINDOW - double pane, alum., w/2 double hung side windows, good cond., $40. 399-4480.

RADIATORS - cast iron, various sizes, $6 and up. Bob Sr., 689-9234, eves.

BABY ITEMS - pram, stroller, tub, potty seat, back carrier, feeder seat, busy box, bumper pads, reasonable. Diana, 286-0243 afrer 5 p.m.

SINK - bathroom, dark brown, w/walnut cabinet, like new, $60; tank & toilet, mint green, $25. 924-4097.

MATTRESS - box spring, queen size, $60. 286-3211.

GOOSE DECOYS - 16, floating type, plastic, $110. 475-4199.

PIANO - Everett, upright, looks good, needs tuning, 10 yrs. old., asking $450. 744-6826, eves.

TURBO OVEN - Faberware convection; knitting & ribbon machine w/table; men's skis, 205 cm, 200 cm, boots size 10 med; woman's skis. 475-0509.

SOFA BED - queen size, red contemporary, $180; 4-piece maple bedroom set, $300. or best offer. Ext. 2683 or 751-2469 eves/wknds.

COLOR TV - 19" RCA, $100; dining room table w/4 chairs, $100. 281-8943.

QUIVER ARROWS - Bear Bow, left-hand sights, like new. $100. Ext. 4312.

REFRIGERATOR - Sears, 18' cu. ft., $50; girl's bike, $15; boy's 20" bike, $20. 751-7408 after 3 p.m.

KITCHEN/DINING ROOM TABLES - (5) chairs, excel. cond., $100. 929-4701.

TYPEWRITER - Smith-Corona Graphtext 90, w/graph capacity, including adapter, new, $100. Ext. 2625 or 467-8297.

FURNITURE - Early American, maple, Colonial, 5' loveseat, & 7' sofa, removable print cushions, $450. Frank, Ext. 4581 or 277-0464.

COATS - woman's fake fur, size 12, $25; woman's suede w/fur collar, size 16, $40; (3) bowling balls, $5/each. 744-9822.

PIANO - Wurlitzer, pine, Colonial, excel. cond. 298-4398 eves.

COUCH - brown naugahyde, $100; Hide-a-bed couch, $75; Ash triple dresser, $45. Ext. 4615 or 928-8522.

HOSPITAL BED - w/mattress, $40; (2) oak butcher's meat hook racks, $20; duck box boat, $25. 878-6637.

VHS VCR - Sharp, w/camera battery VC 363 remote, 105 channel, cable ready, $450. 567-5239 after 6 p.m.

REFRIGERATOR - Hot Point, frost-free, excel. cond., $200. Ext. 4968.

ROLLER SKATES - kid's size 12; ice skates, kid's size 1, $5/each. Ext. 2432.

PIANO - Yamaha console w/bench, ebony, excel. cond., $1,400. Ext. 7194 or 929-3683.

FISHER AMPLIFIER - 700-T, $50; Garrard turntable, $25; (2) speakers, $25. 286-0466.

REFRIGERATOR - 5 cu. ft., good for college room, excel. cond., $85. Jim Pontieri, 475-9131 after 5 p.m.

RADIAL ARM SAW - 10" Sears, w/cabinet, $200. 722-4489.

FIREWOOD - split, full cord, delivered, $100. 924-8143 after 5 p.m.

COLOR TV - 19" Sony, $125; Kenmore sewing machine, $50. Bawa, Ext. 3357.

BICYCLE - 20" Schwinn, good cond., combination girl/boys, w/training wheels, $25. Ext. 3313.

MOVIE CAMERA - super 8mm, movie editor, regular 8mm, best offer. Mark, Ext. 5350.

3M DISKETTES - 5¼", ds/dd, new $10/10. Jim, Ext. 3372.

CHESS COMPUTER - Novag Super Constellation, printer, all extras, $450 value, asking $200. Donna, Ext. 2754.

Car Pools

QUEENS - van pool, 2 seats avail. Fred, Ext. 3254.

HUNTINGTON/GREENLAWN - 1 person needed. Jim, Ext. 5057.

MASTIC - needs ride to/from Lab, 8:30-5 p.m. shift, will pay. Jody, Ext. 2907 or 295-3963.

GREENPORT - or vicinity, looking for rider. Ed, Ext. 3293 or 477-2880.

PLAINVIEW - LIE exit 43, need 4th driver, non-smoker. Elliott, Ext. 2495.

Lost & Found

LOST - Woman's gold Seiko watch. Ext. 3854.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, creed, sex or national origin of the applicant.

For Rent

HILTON HEAD, SC - 2 bdrm. condo, sleeps 6, many extras, beach, pool, tennis, golf, fall special, Lab employees & families only, $300/wk, $200/5 days. 585-9149.

SHIRLEY - 1 mi. to Smith Point, 8 mi. to BNL, immaculate, 3 bdrm. ranch, l/r, d/r, eik, util. room, w/w, appl., fenced-in yard, quiet st., $750 & util. 744-5448 after 5 p.m.

HOLBROOK - spacious, newly decorated 4 bdrm. home, 1½ baths, country kitchen, dishwasher, new stove & windows, dining area, enclosed sunroom, closets & storage, avail. Nov. 1, $900 + util. Ext. 2529 or 588-7989 eves.

VERMONT - vacation, 3 bdrm. house, f/p, fully eqipped, beautiful view, x-country & downhill skiing, reasonable, family oriented, avail. weekly or weekends. 732-6499 after 6 p.m.

MASTIC BEACH - ⅛ mi. from water, 2 bdrm., l/r, kit., bath, porch, $525 + util. Nick, Ext. 4979.

SOUND BEACH - 1 bdrm. apt., l/r, kit., full bath, w/w, unfurn., pvt. ent., single only, refs., 2 mos. sec., $550 inc. util. 744-0725, eves.

SHIRLEY - 3 bdrm. apt., pvt. ent., newly decorated, new appl., cable tv, $800 inc. util. 399-3991 or 395-3659.

RIDGE - spotless, 1 bdrm. in waterfront home, furn., full bath, l/r, eik, pvt. ent., off street parking, minutes from BNL, suitable for single person. $525 mo. + 1 mo. sec. dep., cable & util. inc. 929-6945, leave message.

MIDDLE ISLAND - 1 bdrm. apt., eik, l/r, d/r, cac & heat, included, dishw., w/d, pvt. ent., recreational facilities. $675 mo. Rich, 742-2674.

SETAUKET - 3 bdrm. house, den, f/p, quiet street borders on greenbelt, new paint, 3V schools, $975 mos. 689-7487, eves.

N. SHIRLEY - 5 min. from Lab, 1 bdrm., lg. l/r, kit., dining area, $600 inc. all. 924-9055.

For Sale

RIDGE - 1.12 acre parcel, 103' frontagex487' depth, ideally located, 60% cleared level, 40% wooded, $49,900. 924-3236.

SHOREHAM, NORTH - 4 bdrm., 2½ baths, den, f/p, bsmt., fenced, patio, formal dining room. 744-1750.

CALVERTON - 4 bdrm. townhouse, all appl., w/w, all new Anderson windows, 12x18' deck in wooded setting, 15 min. to BNL, $79,500. 878-2233.

POCONOS - 3 bdrm. chalet, l/r, d/r, family rm. w/wood burning stove, kitchen, w/w, garage w/elec. door opener, circular driveway, paved roads, pools, lake, clubhouse, tennis, all entrances guarded 24 hrs., more, $115,000. neg. 286-4652.

MILLER PLACE - N. of 25A, 3 bdrm. ranch, finished bsmt., 2 zone heat, cedar shake, all trim, low taxes, 75'x100' plot, $127,900. 744-2973.

MOUNT SINAI - 3 bdrm., 2 bath ranch, l/r, d/r, den, full fin. bsmt. w/bar, deck, cac, fp, burg. alarm, new carpet, all appl., new paint/wall paper, fenced, ⅔ acre, side entry, 1 car gar., $183,000. Ext. 4260 or 928-5737.

Wanted

14" RIMS - for Chevy, must be usable over disk or drum brakes. Morris, Ext. 4192.

IDEAS - for skits, monologues, songs, etc., about BNL's 40-year history. Janet, Ext. 2345 or Bldg. 134.

HOUSEKEEPER - cleaning, laundry, ironing, occasional child care, Mon.-Thurs., 9 a.m.-12 noon, non-smoker. 744-4611 after 6 p.m.

TRAINS - Lionel, American Flyer, accessories, any cond., brings good price. Carole, Ext. 3362 or 924-4097 eves.

HOUSE TO RENT - 2 bdrm. min., Bellport, Brookhaven or E. Patchogue. Bill, Ext. 2378.

17' CANOE - alum. or fiberglass. John, Ext. 7671.

SOMEONE TO - level & grade fill area, approx. 30'x75'. Ext. 2492 or 475-8658 after 7 p.m.

ANIMAL LOVER - to adopt homeless cat, before cold weather sets in. Anne, Ext. 5055.

In Appreciation

We want to thank all of you who donated to our Walkathon for the American Cancer Society. The Barclays Bank branch that collects the most money will receive a plaque; we would like very much to see it in our bank branch in memory of Joann Hansen, who died of cancer last May. We are very close to winning, so if you would still like to contribute to help us reach our goal, please see Carol Neger at the bank, Ext. 2895.

— The staff at the Upton Branch
of the Barclays Bank

Ads left out of this issue due to lack of space need not be re-submitted to appear in the next issue.

Classified Ad Policy Deadline is 4:30 p.m. Friday for publication Friday of the next week.