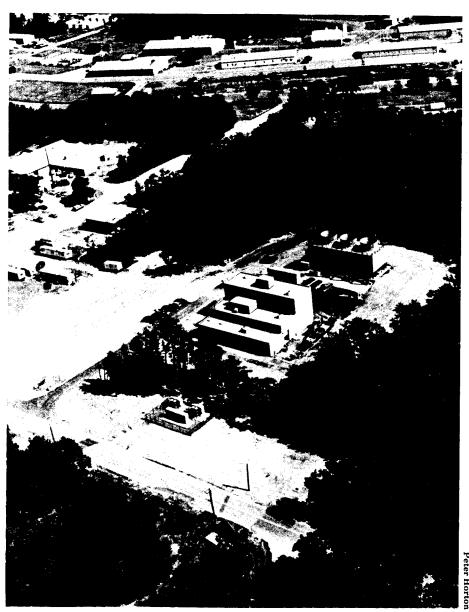
BROWHAIFN BULLETIN Vol. 44 - No. 9

BROOKHAVEN NATIONAL LABORATORY



A bird's-eye view of BNL's Central Chilled Water Facility (center), with its three-cell cooling tower out back.

New Chilled Water Plant Serving Six BNL Buildings

Yesterday, the \$15 million Central Chilled Water Facility (CCWF) — Bldg. 600 on Rochester Street — was turned over to the Operations & Maintenance Division of BNL's Plant Engineering (PE) Division, as the plant officially began serving the site with chilled water for air conditioning and process cooling, as well as compressed air for laboratory, instrument and service use.

Completed in December, the new facility produces 5,000 refrigeration tons of chilled-water cooling and 1,500 standard cubic feet per minute (scfm) of compressed air. It is projected to reduce the Lab's operating and energy costs, as well as save about 2,400 gallons per minute (gpm) of well water.

Six buildings have so far been hooked up to the plant. By the mid-1990s, twelve more buildings will be connected when the CCWF's future phases are funded and completed.

Already, the CCWF has earned the Lab a \$400,000 rebate from the Long Island Lighting Company (LILCO).

Last summer, Energy Management Engineer Mark Toscano pointed out that, by replacing the inefficient air-conditioning systems in Bldgs. 490, 463, 510, 515, 701/703 and 801 with the new plant, BNL would qualify for the \$400,000 rebate under LILCO's "Dollars and Sense" program. While the check was handed over on January 24, the money was earned on December 19 (Continued on page 2)

John Axe Joins Directorate

Senior Physicist John Axe, who is Scientific Program Head for the High Flux Beam Reactor (HFBR), has been named Associate Director for Basic Energy Sciences, effective March 1.

In this capacity, Axe assumes responsibility for the chemical and material sciences programs within BNL's Chemistry, National Synchrotron Light Source (NSLS) and Physics Departments, the Department of Applied Science and at the High Flux Beam Reactor (HFBR).

Axe takes over these duties from BNL Deputy Director Martin Blume. From 1981-84, Blume served as Acting Associate Director for these areas. When named to his present post in 1984, Blume continued as Acting Associate Director, and was also responsible for the Computing & Communications Division, the Technical Information Division, and the Public Affairs Office.

While maintaining authority over the latter three, Blume has handed over his Associate Director responsibilities to Axe.

Says Laboratory Director Nicholas Samios, "I am delighted that John has accepted this very important post, with responsibilities in these expanding areas of research and operations."

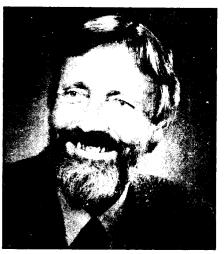
Axe explains, "I look forward to working with the department chairmen to continue to promote and expand not only the scientific programs at the HFBR and NSLS, but also the core programs in the chemical and material sciences."

Of the approximately \$60 million budget for BNL's chemical and material sciences, about two-thirds goes to the HFBR and the NSLS — "so concern for these two complementary yet unique facilities are a major part of my new job," says Axe, who will continue his responsibilites as HFBR Scientific Program Head.

"The facilities are very different," continues Axe. "The HFBR will be 25 years old this fall, but it is still a state-of-the-art research reactor. So it is my job to help ensure that it has as distinguished a future as it has had a past. Towards that end, it is vitally important to get both the reactor and the scientific program at the HFBR going again. After that, one of my personal priorities will be working on getting line-item status for the HFBR instrumentation upgrade in the 1992 budget.

"As for the NSLS, it is young and still growing — but it is the finest, most productive synchrotron facility in the world," adds Axe. "To make sure it can increasingly meet its users' needs, the problems of staffing and space must be addressed. As well, the possibilities for a new, positron injector and satellite facilites building on existing strengths in materials and accelerator design should be investigated."

Of his remaining responsibilities as Associate Director, Axe says, "I will continue to insist that our scientific programs are as good as the best programs at other institutions that send their scientists to use our facilities. Over the past few years, however, the challenge in chemical and material sciences has been to do quality research with less than costof-living increases in funding for the core programs. This year again, the President's 1991 budget looks lean for these programs, so I'll be working with the department chairmen to seek additional support."



John Axe

Trained as a chemist, John Axe received a B.S. in chemistry from the University of Denver in 1956, and earned his Ph.D. in chemistry from the University of California at Berkeley in 1960. After working for IBM for seven years, Axe joined the staff of BNL's Physics Department in 1969, principally to study structural phase transformations using neutron scattering at the HFBR. He was appointed HFBR Scientific Program Head in 1988.

In 1969, Axe was elected a fellow of the American Physical Society; in 1973, he was the corecipient of the Bertram Eugene Warren Diffraction Physics Award of the American Crystallographic Association; in 1976-77, he was awarded a John Simon Guggenheim Fellowship; and, this January, he was named winner of DOE's 1989 annual award for Sustained Outstanding Research in Solid State Physics.

- Marsha Belford

Tiger Team Visit to Focus on Environment, Safety & Health

This is the first part of a four-part series about the "Tiger Team" and other environmental, safety and health initiatives of the U.S. Department of Energy, and their relationship to BNL.

Since last fall, Tiger Teams have been on the prowl at various facilities operated by the U.S. Department of Energy (DOE). On March 26, a DOE Tiger Team will arrive at BNL, to begin an assessment of how the Lab is currently complying with requirements pertaining to environment, safety and health (ES&H).

The Tiger Team assessments are one point of the ten-point initiative announced last June by Secretary of Energy James Watkins, to strengthen environmental protection, safety



At one of the field inspections recently conducted for supervisors in conjunction with refresher workshops on OSHA, outside consultants Thomas Mazour (center) and Edward Tapley (back right) discuss issues related to compressed gas cylinder storage.

and waste-management activities in DOE.

"This visit is important to the Lab," said Robert Casey, Head of BNL's Safety & Environmental Protection Division (S&EP). "We want to demonstrate to the Tiger Team that we are responding to the new expectations for ES&H that now apply to all DOE contractors."

Tiger Teams are composed of technical experts drawn from DOE and DOE-contractor organizations, but the type and number of team members is specific to each site being assessed. For the BNL visit, the team will have 30 to 35 members divided into three contingents — one to look at environmental compliance, another to concentrate on health and

(Continued on page 2)

Chilled Water (cont'd)

of last year, the date on which BNL demonstrated to LILCO that the facility was ready to operate.

"It was a complex project," says Martin Fallier, Project Engineer for the central plant and the underground piping. "Besides building the central plant, it involved laying down 2.5 miles of underground piping, modifying existing piping within the five buildings, and installing a sitewide, energy-management control system (EMCS) to regulate the heating, ventilation and air-conditioning equipment in the buildings connected to the CCWF.'

The overall project was supervised by Project Manager Edward Murphy. Oversight of the design and early construction was provided first by Project Engineer Mark Culp, then by Fallier and Project Engineer Paul Coleman. Project Engineer Thomas Nehring supervised the electrical design and construction.

To prepare for plant operation, PE Quality Assurance & Training Engineer Patricia Bender last fall organized a total of 355 eight-hour days of training for the air-conditioning operators now running the CCWF, as well as the electricians, plumbers and steamfitters who help maintain it. In conjunction with the plant's coming on line, four site shift-supervisor positions were filled to monitor the site operations around the clock and to bring in the appropriate PE crews as needed.

To start up the plant and its sitewide systems, assistance was provided by PE Operations & Maintenance Project Engineer Walter Bay,

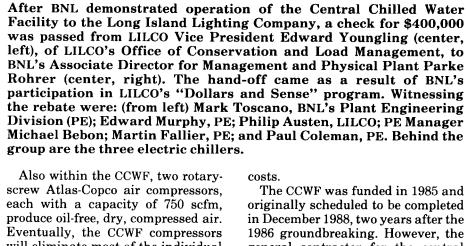
Operations Supervisor Kenneth Davis, and Site Shift Supervisors Thomas Butler, Richard Jones, Philippe Ouvrard and John Scesny.

United Engineers & Constructors of Massachusetts designed the plant and piping. Chicago Bridge & Iron of Delaware laid the underground piping, and Botto Mechanical of Hicksville modified the existing building piping. The EMCS was developed and installed by Barber Colman of Illinois.

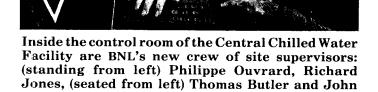
To make chilled water, Bldg. 600 houses three 1,250-ton capacity, electric centrifugal chillers, and one 1,250-ton steam-absorption chiller, all manufactured by Trane of Wisconsin. Under most circumstances, the cooling load will be carried by the electric chillers. However, since the steam-absorption chiller requires less electricity, it will be used on highdemand days to lower the Lab's electric bill.

Within a closed loop, the CCWF delivers up to 12,000 gpm of water chilled to 42°F to the buildings connected to the plant. Within each building, the heating, ventilation and air-conditioning equipment is controlled either locally or remotely by the computerized EMCS at the CCWF. Waste heat from the chillers is rejected to the atmosphere by a threecell, 15,000-gpm cooling tower manufactured by Hamon-Sobelco of New Jersey.

Photos on these pages Stoutenburgh.



will eliminate most of the individual compressors in different buildings, thereby improving efficiency and saving operations and maintenance



The CCWF was funded in 1985 and originally scheduled to be completed in December 1988, two years after the 1986 groundbreaking. However, the general contractor for the central plant defaulted on its contract with the Lab in June 1989 - with \$1 million in work still to be completed.

'At that point, the original contractor's bonding company gave us two options: Either they would provide another contractor to complete the contract - which would likely have taken nine months, or the bonding company would pay BNL to assume the responsibility for completing the work ourselves," recalls Fallier.

To qualify for the \$400,000 LILCO rebate, the CCWF had to be operational by the end of 1989. Therefore, BNL chose the second option.

With the Lab acting as its own general contractor, Senior Contracts Administrator Michael Furey of BNL's Division of Contracts and Procurement negotiated with the original subcontractors to complete their work. Any tasks not covered by existing subcontracts were completed by BNL contract labor supervised by General Supervisor William Slavinsky and Construction Support Supervisor William Pinto.

As a result, the CCWF was completed within the new timetable and old budget - thus earning the \$400,000 LILCO rebate.

— Marsha Belford



Behind the Central Chilled Water Facility and its cooling tower are some of those who worked on the project: (from left) Walter Bay, Plant Engineering Division (PE); Kenneth Davis, PE; Michael Furey, Division of Contracts & Procurement; Martin Fallier, PE; Marilyn Gibbons, PE; Edward Murphy, PE; Paul Coleman, PE; Mark Culp, PE; and Thomas Nehring, PE.

Tiger Team (cont'd)

safety, and a third to examine management practices in support of ES&H

During its weeks at BNL, the Tiger Team will focus on the following E&SH areas:

- The Lab's compliance with applicable DOE and other federal, state and county environmental regulations covering such topics as air and liquid effluents, storage and handling of hazardous materials and waste, environmental review of facility construction or modification, and environmental monitoring.
- BNL's compliance with applicable regulations from DOE and the Occupational Health & Safety Administration (OSHA), covering such topics as radiation protection, industrial safety, industrial hygiene, emergency planning and fire protection.
- Adequacy of Brookhaven's ES&H management programs, including planning, organization, resources, training and the Lab's relationship with regulatory agencies.
- BNL's conformance with applicable industry ES&H practices considered "best" or "accepted."
- Identification of root causes of any problems turned up.

In order to gather this information,

Tiger Team members will visit all areas of the Lab over the three weeks starting March 26. "We can expect a rigorous review of our programs," said Casey. "We also expect stronger programs as a result of this ES&H review and its follow-up. As such, we welcome this assessment."

Meeting OSHA Standards

Another part of Secretary Watkins's ten-point initiative addresses compliance with OSHA regulations. Accordingly, within the health and safety contingent of the Tiger Team, four members will concentrate on BNL's conformance with these rules and regulations.

OSHA, which comes under the U.S. Department of Labor, issues federal standards for occupational health and safety, inspects facilities for compliance, and issues violations for noncompliance. Due to an agreement between the Departments of Labor and Energy, DOE is the only government agency not subject to OSHA jurisdiction. However, under that agreement, DOE has always been required to have equivalent standards, and Watkins has stated that rigorous compliance is necessary for DOE contractors.

At BNL, the OSHA-trained Tiger Team members will do "strict comcommonly understood safety prac-

Deitz gave a partial listing of some of the most common violations: failure to guard machines properly, failure to use personal protection equipment such as safety glasses and

S&EP's hazard communication program, Deitz pointed out, provides training and maintains a Material Safety Data Sheet for each chemical in use at BNL, indicating its safe usage, storage and disposal.

that there are few reasons that justify not wearing the proper items. "The Lab provides the equipment, and areas are often posted," he said. "Nonetheless, we want to reemphasize the wearing of safety equipment and adherence to other safety practices — such as machine guarding identified in the BNL Safety Manual."

The BNL Safety Manual, Deitz emphasized, "has a firm footing in the OSHA regulations. Compliance with the manual is a major step in ensuring that the OSHA regulations are met.

As part of the Lab's preparation for the Tiger Team, some 350 BNL supervisors have been involved in refresher workshops on OSHA over the past three weeks. These workshops have featured field inspections for many of the participants, so they could uncover potential violations firsthand, then bring their new awareness back to their workplace and their employees.

'This is a time of self-assessment for the Laboratory," Casey stressed. "It is important for this institution to be in compliance with the requirements established by the federal. state and county governments. It is expected, and nothing less will be acceptable." - Anita Cohen

Next week: The National Environmental Policy Act.

pliance" inspections. In any instance where the Lab is not strictly complying with an OSHA standard, a violation will be issued. In previous visits to other DOE facilities, OSHA inspectors have commonly cited hundreds of violations.

From previous Tiger Team assessments done elsewhere, a common thread has appeared. Said John Deitz, S&EP's Section Head for Industrial Safety & Fire Protection, "Most of the violations at DOE facilities have stemmed from failure to follow tices. Many of the deficiencies could easily have been corrected by the facilities' management.'

hard hats, and an inadequate program for communicating information about hazardous chemicals.

As for safety equipment, Deitz said

Inside Info

Seymour Baron has been reappointed for three years as Associate Director for Applied Programs. In this position, he will continue to be responsible for research programs within the Department of Applied Science, the Department of Nuclear Energy, as well as the technology-transfer activities of the Office of Research & Technology Applications.

In announcing the reappointment, Laboratory Director Nicholas Samios noted, "The events of the past few years have reemphasized this country's interest in energy, environmental safety and technology transfer to industry. I am certain that, under Sy's leadership, the staff will continue to make significant contributions to the programs in these areas."

The Brookhaven Bulletin has won a second-place "Award of Excellence" in the 1989 annual competition sponsored by the New York Chapter of the Society for Technical Communication.

Pick a Student

Applications for three summer programs run by the Office of Education Programs (OEP) will be available for review through March 9, from 9 a.m. to 4:30 p.m., in the Solarium, Bldg. 490, Medical Department. Use the Clinical Research Center entrance and follow the signs.

The three programs are:

- Summer Students The 39 year-old, traditional summer program will provide junior and senior undergraduates with ten-week summer research appointments, June 11 to August 17. OEP pays the individual stipends of \$200 per week and round-trip transportation. The sponsoring department pays for the student's housing at \$75 per week.
- Summer Interns This is similar to the Summer Student program except that appointments are offered to students who have participated in a prior High School Honors Program conducted by the Department of Energy (DOE) at several DOE labs. Generally, these students are finishing their freshman year of college, but a few may be recent high school graduates. OEP pays all costs associated with these students stipend, travel and housing.
- Teacher Research Associates This DOE program provides an eight-week summer research appointment, June 25 to August 17, to secondary-school teachers of science, mathematics or technology. All applicants have been nominated by their school systems; some were recruited from Nassau and Suffolk Counties, while others come from across the nation. OEP pays all costs associated with these individuals stipend, travel and housing.

For more information, call OEP, Ext. 4503.

Adults' Swim Lessons

Registration for swim lessons for adult employees and their dependents 18 years old and older are now being accepted at the pool.

Classes will begin on Wednesday, March 7, at 5:15 p.m., and continue for eight consecutive Wednesday evenings. A \$25 fee is due at the time of registration.

BROOKHAVEN BULLETIN

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

ANITA COHEN, Editor MARSHA BELFORD, Assistant Editor LIZ SEUBERT, Reporter

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Winners' Circle

A quality assurance engineer in the Director's Office, Victor Gutierrez has also volunteered as a BNL tour guide. In this capacity, he would escort visiting groups to various areas around the Lab. Though experts in those areas would explain the work done there, Gutierrez found that, in the initial meeting with his group, he was sometimes asked questions that he could not answer. His recommendation that tour guides be provided with introductions to the areas to be visited earned him a \$25 award from the Employee Suggestion Program.



Equipment Demos

On Tuesday, March 6, Crouse-Hinds will present the products of its ECM Division from 10 a.m. to 3 p.m., in Berkner Hall. The ECM Division offers electrical construction materials for industrial and explosion-proof environments.

Representatives of Daisy Cadnetix, Inc. will be in the seminar room of Bldg. 515, Computing & Communications Division on Wednesday, March 7, at 1:30 p.m., to demonstrate their complete printed circuit board design package, including digital and analog analysis, thermal analysis, and fabrication. The design package will run on a SUN workstation. All are invited to attend. For more information, call Pam Mansfield, Ext. 7286.

Bowling

Red/Green League

A. Sauerwald had a 259/219/202 for a 680 scratch series, A. Warkentien 234/206/600 scratch series, J. Muller 225, R. Mulderig 216/200, E. Sperry IV 213, K. Riker 212, N. Franco 200.

White League

Ed Beadle had a 235/621 scratch series, Joe Fernandez 214, Sharon Jones 204, John McCarthy 200, Caryl MacDougall 194, Lynn Warkentien 188. Purple League

Kay Conkling had a 211, Ben Belligan 209, Ed Sperry IV 201, Pat Manzella 188. Pink League

Tracy Ryan had a 182/177, Maryann Reynolds 182/175, Donna Cunningham 175/174

Scotch Doubles Rescheduled

The Scotch Doubles Tournament has been rescheduled for Sunday, April 1.

Softball Captains

There will be a softball captains' meeting on Tuesday, March 20, in Room B, Berkner Hall, at noon. Election of league offices, league fees and submittal of preliminary rosters will take place at this first meeting.

Service Awards

The following employees celebrated their BNL service anniversaries during the month of February:

40 Years

James G. Cottingham......Accel. Dev.
35 Years
Veronica H. Brooks......Medical
30 Years
Charles E. Anderson.....Accel. Dev.
Joachim Fischer.....Instrum.
25 Years

25 Years
Charles Bohnenblusch......AGS
Yreana Renée Flack......Dir. Off.
Joseph F. Gatz III.....Medical
20 Years
Elaine Taylor......Accel. Dev.

Social Club Events

The BNL Social Club still has tickets available for the following events at Nassau Coliseum:

• N.Y. Saints Lacrosse - Saturday, March 17, lower third tier, tickets \$9.50 each, money due by Monday, March 5.

• Ringling Brothers and Barnum & Bailey Circus - Friday, March 23, tickets \$13.50, money due by Monday, March 5.

• Olympic & World Figure Skating Champions - Sunday, April 1, second tier, \$35 all tickets, money due by Tuesday, March 13.

The club is also organizing these "super trips":

• National Parks Tour - August 11, 13 days, .\$1,529 each double, \$1,499 each triple, bus from BNL to JFK, \$100 deposit due now, balance by May 31.

• Germany: Oktoberfest or Passion Play Tours - 8-10 day Passion Play tours start in May, discount prices for BNL employees start at \$1,285 double; Oktoberfest discount prices for BNL employees start at \$899 double, 8 days starting in September or October; both tours are on an individual basis, no quota required for BNL discount.

Contact Doris Terry, Ext. 7610, Bldg. 197C, for Coliseum tickets or Germany brochures.

Volleyball

Revenge

Upton-Ups

Slammers

Standings as of February 23
Open League Leag

GIIM	41.1	Opiagraus	41-4		
Magnum	47-10	Dinkers	9-12		
Phoenix	31-26	Cannonballs	32-19		
Me and the Boys	22-32	Xrayted	25-26		
Jet Setters	20-34	Rude Dogs	14-37		
Dig It	17-37	Up-Setters	12-39		
Penetrating		Network News	9-39		
Vollies	9-45				
			League III		
League II		League III	[
League II Fossils	41-4	League III Lethal Women	I 31-8		
	41-4 36-9				
Fossils		Lethal Women	31-8		
Fossils Nuts & Bolts	36-9	Lethal Women MISfits	31-8 30-9		
Fossils Nuts & Bolts Pteropods	36-9 25-20	Lethal Women MISfits High Volley'em	31-8 30-9 24-15		
Fossils Nuts & Bolts Pteropods Sourcerers	36-9 25-20 21-24	Lethal Women MISfits High Volley'em Nutcrackers	31-8 30-9 24-15 22-14		

15-30 Bad Gnus

14-31 Turkeys

11-34 Spikes

Hospitality News

The Hospitality Committee will hold an informal get-together on Tuesday, March 6, at 9:30 a.m. at the Brookhaven Center—a good opportunity to get acquainted with the people who live in the apartment area on site, especially newcomers to BNL.

Spouses of Laboratory employees and guests are welcome. Bring the children, as babysitting will be provided free of charge. Refreshments will be served.

Women's Support Group

The Hospitality Committee announces the formation of a Women's Support Group, which will meet the third Tuesday of each month, from 10 a.m. to noon, at the Recreation Building in the apartment area on site. The group's function will be to discuss any problems or concerns facing women. Perhaps you have been at the Lab for awhile and have a lot to offer those who are just arriving. Why not come and join the group and share your experiences? Wives of Lab employees and guests are welcome.

Photo Classes

Beginning Thursday, March 8, at 5:30 p.m., the BNL Camera Club will once again offer a series of photography classes.

If you are interested in learning how your camera works, how to compose your photos, when to use different lenses, how to get the optimum use of flash equipment, how to use filters, or how to take professional portraits, or do your own darkroom work — or, if you are just interested in making your casual or vacation pictures more interesting and exciting — these photography classes will provide you with the means to improve your pictures and obtain more enjoyment from them.

For more information and to register, call Lew Jacobson, Ext. 5193.

On the Menu

At the Cafeteria

Luncheons served 11:15 a.m. to 1:30 p.m.; grill open to 4 p.m.

Monday, March 5
Soup: Lentil .75/.95
Entree: Special taco bar (each) .90
Entree: Chicken à la king over biscuit
w/1 veg. 3.10
Fitness: Broccoli quiche w/1 veg. 3.10
Carvery: Pastrami sandwich .3.10
Grill: Western omelet sandwich w/fries 3.00

Tuesday, March 6
Soup: Cream of mushroom .75/.95
Entree: Braised short ribs of beef w/veg. 3.10
Entree: Baked manicotti
 w/Italian bread & 1 veg. 3.10
Fitness: Baked chicken
 w/cranberry glaze & 1 veg. 3.10
Carvery: Hot roast beef sandwich 2.85

Carvery: Hot roast beef sandwich
Grill: Reuben 2.85

Wednesday, March 7
Soup: Chicken gumbo .75/.95
Entree: Roast loin of pork, gravy & veg. 3.10
Entree: Baked meatloaf & gravy w/veg. 3.10
Fitness: Baked fish
w/mushroom wine sauce & 1 veg. 3.10

Withushiroom wine sauce & 1 veg. 3.10
Grill: Pizza burger w/fries 2.85

Thursday, March 8
Soup: Cream of broccoli .75/.95
Entree: Chicken potpie w/1 veg. 2.95
Entree: Chesse tortellini primavera .3.00
Fitness: Pasta w/tuna sauce & 1 veg. 3.10
Carvery: Hot corned beef sandwich .2.85
Grill: Gyro sandwich .3.00

Friday, March 9

Friday, March 9
Soup: Manhattan clam chowder .75/.95
Entree: Baked fish Gardener w/1 veg. 3.10
Entree: Chicken breast hero w/fries Fitness: Vegetarian pizza bagel 2.00
Carvery: Hot turkey sandwich w/cranberry sauce & gravy 2.85
Soup & sandwich special: deduct 25¢

from any sandwich w/bowl of soup

At the Brookhaven Center — Dinner served from 5 to ~8 p.m.; grill open to 11 p.m.

Mon.: Honey-dipped chicken w/mashed potatoes & gravy 3.85

Tue.: Stuffed peppers w/oven-browned potatoes 3.85

Wed: Potato pepper onion & sausage here

w/oven-browned potatoes 3.85

Wed.: Potato, pepper, onion & sausage hero
w/cole slaw & fried mushrooms 3.85

Thu.: Open-face hot turkey sandwich w/gravy,
mashed potatoes & cranberry sauce 3.75

Fri.: Catch of the day 3.75

Gas Pumps Reopen

The on-site Friendly Gulf Service Station resumes pumping gasoline today.

Arrivals & Departures

Arrivals

Raymond R. Axmacher P&GA
James J. Biamonte Plant Eng.
Corazon J. Cabahug Medical
Xiaodong Cheng Biology
Edward Richards S&EP
Frederic Sauerbrun Reactor
John E. Willi Plant Eng.

Departures

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

Miguel A. Corporan ... Physics
Joseph Ferrante ... Accel. Dev.
John C. Herrera ... Accel. Dev.
Hong Lae Kim ... Chemistry
Arnold V. Feltman ... AGS
Frank Mignano ... Plant Eng.
James T. Pedersen ... S&EP
Karl R. Pond ... Fiscal

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

Basketball

Games for week of February 22

Warriors	61	Celtics	45			
T. Mayo	25	D. Hoggard	19			
G. Mack	12	B. Turner	11			
K. Biery	10	J. Wells	8			
C. Edwards	8	P. Brubwier	6			
A. Ratti	4	R. Wells	1			
S. Cramer	2					
Three-point shots: T. Mayo (4)						
Runaways	43	Scram	40			
J. Desmond	13	E. Gregory	13			
P. Brown	12	T. Powers	9			
G. Shepherd	9	J. Duggan	6			
T. Blum	5	P. Lang	6			
R. Mease	2	S. Nappi	4			
M. Wani	2	J. Barkwill	2			
Three-point shots: T. Powers, G. Shepherd						
Bulls	63	Knicks	61			
P. Johnson	29	E. Hobson	27			
S. Gilbert	18	L. Walcott	18			
B. O'Brien	8	F. Thompson	10			
G. Smith		T. Mendez	3			
C. Victoria	4	G. Thompson	3			
		S. Gilbert (2),				
Hobson (4) P. Johnson (2), L. Walcott (3)						

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

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 other-

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.

4175. RESIDENCE CUSTODIAN - Staff Services Division

4176. SECRETARIAL POSITION - Requires knowledge of office practices and excellent communication skills. Will assist Division secretary in preparing technical reports, making travel arrangements and preparing vouchers. PC experience required; WordPerfect experience desired. Department of Nuclear Energy

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

4177. TECHNICAL POSITION - Requires AAS in $\begin{tabular}{ll} mechanical technology or equivalent experience. \\ \hline \end{tabular}$ Experience in piping and mechanical assembly is desired. Duties will include the fabrication, assembly and operation of cryogenic systems. Accelerator Development Department.

Motor Vehicles & Supplies

88 ISUZU PICKUP - 12k mi., ac, stereo, new tires, dark blue, 5 yr./50k mi. total warranty & free tow service, mint cond., \$6,000. Phil, 821-2940.

87 JAYCO MOTORHOME - 25', 460 motor, awning, gen., bath, sleeps 6, asking \$32,000. Lois, Ext. 4904 or Bob, Ext. 4672, 929-4753.

87 BUICK REGAL LIMITED - 2-dr., black, leather seating, 3.8 litre turbo, a/t, T-top, alarm, 744-8090

86 DODGE CHARGER - p/s, p/b, ac, am/fm radio, excel. cond., asking \$3,000. Ext. 3160 or 289-5704 after 5 p.m.

85 PONTIAC FIREBIRD - all power, alarm, 43k mi., ac, T-top, am/fm stereo, auto cass., V-8, 5.0,

orig. owner, mint cond., \$7,500. Joe, Ext. 7777. 83 CHEVY S-10 PICKUP - 4-spd., long-bed, 67k

mi., v.g. cond. 325-0447. 82 BRONCO - full-size, 302 V-8, a/t, ac, captain's

chairs, tow package, excel. cond., \$5,800. Brian, Ext. 2799 or 757-1581.

82 MERCURY COUGAR - s/w, V-6, a/t, p/s, p/b, new tires, trailer hitch, 75k mi., \$550, 475-6981.

82 CADILLAC FLEETWOOD BROUGHAM - 78k orig. mi., mint in/out, new tires, brakes, \$5,200. 878-6007

82 BERLINETTA CAMARO - ac, p/s, runs excel., mint cond. inside, slight work needed outside, Ttop, Alpine stereo, \$2,300. Tony, Ext. 2314.

81 FORD ESCORT - 4-spd., am/fm, high mileage,

runs well, \$450. Ext. 2015. 81 KAWASKI 440 LTD - 11k mi., new chain,

sprockets, sissy bar, v.g. cond., ask. \$600, 474-5715. 80 VW RABBIT - high mileage, navy blue, light blue int., bucket seats, ac, 4-spd., good cond., very reliable, \$500. Ext. 5265.

80 PONTIAC BROUGHAM - diesel, needs transmission work, \$250 or best offer. Ray, 289-0883. 80 MERCURY - 4-dr., gray, am/fm stereo cass.,

best offer. O. Booker, Ext. 3082 or 727-5912.

80 DATSUN 310 - new exhaust system, am/fm cass., runs well, asking \$880. Ext. 3536.

79 MAZDA 626 - 2-dr., 5-spd., am/fm, 31 mpg, some rust, runs well, \$800. John, Ext. 5487.

79 DATSUN B210 WAGON - for parts or restoration, best offer, Ed, Ext. 2477.

79 COLEMAN CAMPER - Valley Forge, sleeps 6, stove, electric brakes, \$1,200. Mike, 698-0574.

79 DATSUN 210 - good running cond., needs windshield & exhaust, best offer. 821-0354 after

78 TOYOTA COROLLA - 5-spd., sedan, drives well, best offer. 864-1684.

78 CHEVY MINI MOTOR HOME - loaded, 64k mi., p/s, p/b, stereo, cruise, much more. Ext. 3499 or 928-5883.

76 CHRYSLER NEW YORKER - 4-dr., ac, a/t, am/fm, 440 V-8, runs well, looks OK, \$850. Gary, Ext. 5046 or 345-2206.

71 FORD RACK DUMP TRUCK - split body w/trailer hitch, new engine, brakes, hyd. pump, \$2,500. Rich, 363-6845.

68 CHEVELLE SS - 396, 4-spd., ground-up restoration, mint cond., \$8,500. Ken, 473-7460.

TIRES - 4, Goodyear Wrangler radials, standard Jeep size, good cond., asking \$150, rims incl. Pete, 878-8058.

DATSUN AIR-FLOW BOX - for fuel injected cars. Janet, Ext. 2345 or 929-3910.

TIRE - new, Firestone 721, 235/75R15, Eldo rim, make offer. Ernie, 588-4987. LANDSCAPE TRAILER - 18', partially enclosed,

electric brakes, \$1,500. Rich, 363-6845. HEADERS - for small block Chevy, \$30. Roger,

Ext. 7518 or 878-8847. NOMAD TRAVEL TRAILER - 18', self-contained,

full bath, sleeps 5, excel. cond., \$2,800 neg. John Ext. 3302 or 924-0651. TIRES - 3, 165/SR/15 radials, \$10 ea.; 4, Goodyear, P185/80R/13, M&S, \$30 ea. Ext. 4597 or 924-8213.

CAP - Leer, for full-size pickup truck. Jim, Ext. 5400 or 878-6098.

SNAPON TUNEUP CENTER - 3 meters, \$250; Snapon brake bleeder, \$125; 20-ton air-assisted hydraulic jack, asking \$200. 474-5715.

TIRES - 4, P235/75R15, Uniroyal radials on Chevy 6-lug rims w/hub caps, rotation marked, like new, \$200. Bob, 744-3289.

Boats & Marine Supplies

31' CORVETTE SLOOP - classic shoal draft, fg, Atomic 4, 7 sails, wheel steering, 2-spd. winches, asking \$16,000. McGeary, 363-2796.

28' PROWLER TRAILER - 1987, self-contained. never driven on road, excel. cond., asking \$9,900. Diane, 567-6853.

25' MORGAN SAILBOAT - keel c/b, new sails, ob., great all-purpose boat, \$6,000. Steve, Ext.

23' ODAY - cruising, racing, 6 sails, VHF, Loran depth/speed, Dodger, solo handling, extras, excel. cond., \$13,500. 286-1024.

141/2' SUNFISH - Alcort AMF, w/sail & board, needs some work but sails. Georgia, Ext. 2384.

Sports, Hobbies & Pets

PIANO - Winter, sheet music, bench, excel. cond., \$400. Ext. 7777 or 472-6459 after 6 p.m.

SKI BOOTS - Solomon SX-90, woman's, size 8, like new, \$60. Nancy, 331-1372.

SKIS - Atomics, 120's, Tryola 470 bindings, poles, great for kids, \$60, 878-1178.

PIANO - Conn, upright, French provincial, mahogany, excel. cond., \$1,350. Joanne, Ext.

ELECTRIC ORGAN - Wurlizer, double keyboard w/rhythm & instruments, \$600. Frank, 281-9523.

SKI BOOTS - Solomon SX81, woman's, rearentry, size 7, white; Raichle Reviva rear-entry, size

7LS, white, \$50/per pair. Karl, Ext. 7977. DRYSUIT - man's, Poseidon, large, must sell, asking \$500. 474-5715.

CLARINET - beginners, excel. cond., \$125; advanced Signet, \$250; Rossignol 170 skis, new, \$75. Jim, Ext. 3372.

SCUBA EQUIPMENT - 80 H2 tank, BC, 2 wet suits, regulator w/digital console & octopus masks, fins, lights, more, \$1,000. Pete, 878-8058.

Tools, House & Garden

BARBEQUE GRILL - Weber, charcoal, excel. cond., \$40; DeVilbiss cool mist humidifier, \$10. Mark, Ext. 5350 or 369-0793.

COAL STOVE - Haas Sohn, 5,000 Btu, v.g. cond., \$125. Braband, Ext. 3082.

LAWN SPREADER - Scotts, drop spreader, like new, \$20. Joe, 474-3287.

REFRIGERATOR - Sears; G.E. stove, rangehood, avocado, \$50/all. Tony, 281-4799.

BEDROOM SET - triple dresser, chest, mirror & night table, \$450. Ext. 7777 or 472-6459 after 6

DINING ROOM SET - Mediterranean, all wood, 6' wide, 6 chairs, \$1,500 neg. 281-3293.

BAR - 5', 2 stools, \$125. 931-4667 after 7 p.m. DRESSER - 9 drawers, 58" x 17" x 31", \$30. Julie,

CHINA CLOSET - pine, good cond., \$250. Walter, Ext. 4958 or 821-9451

WASHER - Kenmore, good cond., good for apt., \$150 or best offer. O. Booker, Ext. 3082 or 727-

OVEN - GE, cabinet-mounted, almond, excel., \$50; Hardwick gas cook-top, almond, excel., \$50. Ext. 2888 or 286-0422 after 6 p.m.

Audio, Video & Computers

STEREO AMPLIFIER - Hitachi HA-4500, 45W, p/c, \$50. Doug, Ext. 2945.

PRINTER - Apple Imagewriter LQ, letter-quality, side carriage, latest version, like new, extras, \$800. Bill Marin, Ext. 2382.

CAMERA - Sony Handycam 8mm, deck, hard case, complete, \$650. Mark, Ext. 5350 or 369-0793. AM/FM TUNER - Pibneer SX-838, Jensen 50

speakers, w/15" woofers, \$225. Joe, Ext. 4772.

COLOR TV - 25", \$150; Atari 2600 w/assorted games, \$30. Walter, Ext. 4958 or 821-9451.

COMPUTER - Amiga 500, w/1084 video monitor, for music student. Bill, Ext. 4312.

STEREO - Pioneer Quartz, direct-drive turntable, PL-540, albums, best offer. Georgia, Ext. 2384. COMPUTER - Apple Lazer 128, monitor, software, new, \$350 neg. 345-3970 after 6 p.m.

Miscellaneous

BABY BOTTLE WARMER - Gerber, like new, \$5. Mark, Ext. 5350 or 369-0793.

GOWNS - spring/summer, ideal for proms & weddings, worn once, dry cleaned, size 6/8. Ext.

MUSIC BOX - porcelain, plays "Easter Parade," \$35; walnut night table, \$20; antique iron, \$35; handmade cat ring, \$45. Kathy, 744-2203.

MET OPERA TICKETS - 2, Puccini's Manon Lescaut, Sat. matinee, March 17, dress circle, \$50/each. Carmen, Ext. 4135.

Free

DWARF RABBIT - white w/gray feet, ears & tail, water bottle, dish & cage. A. McNerney, Ext. 7693. CATS - young female, declawed, litter-box trained, very affectionate, please adopt. Ext. 4049 or 744-8087

Yard & Garage Sales

MASTIC - March 3 & 4, 28 Kameo Drive. 399-

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.

CALVERTON - 2-bdrm. townhouse, w/w, 11/2 baths, appl., patio, \$750. 878-0874 after 5 p.m.

FARMINGVILLE - efficiency apt., priv. ent., cooking facilities, ½ bath, no pets, nonsmoker. Ben, 698-6436.

ISLIP TERRACE - 2-bdrm. apt., I/r, kit., full bath, no pets, \$725/mo. + util. & 1 mo. sec. 821-3762.

LAKE RONKONKOMA - 1-bdrm. apt., eik, I/r, bath, priv. ent., cable, w/w, own thermostat, 20 min. BNL, ½ mi. LIE, Exit 60, \$675/mo. all, 1 mo. sec. 588-2477 after 5:30 p.m.

MEDFORD - 1-bdrm. apt., eik, I/r, full bath, priv. ent., cable, own thermostat, use of yard, 15 min. to BNL, \$675 all. Betty, 758-2653.

MIDDLE ISLAND - Artist Lake, 1-bdrm. condo, upper unit, priv. balcony, cac, clubhouse w/pool, tennis, 10 min. to Lab, \$650/mo. incl. heat, avail. April. 345-5294.

MT. SINAI - 3-bdrm. Cape, det. gar., full bsmt., d/r, f/p, eik, in historic district, sale or rent, low taxes. Bob, Ext. 4707.

PORT JEFFERSON - spacious studio, full kitchen, furn. or unfurn., priv. ent. cable, immaculate, \$475 all. Joanne, 473-5196.

PORT JEFF. STATION - 1-bdrm. apt., all new, \$625/mo. includes all. Peggy, 473-9114.

RIDGE - 1-bdrm. apt., priv. ent., i/r, eik, new appl., 5 min. to Lab, avail. April 1, no pets, reasonable rent. Ext. 5076 or 744-4615.

SHIRLEY - 1-bdrm. apt., eik, full bath, priv. ent., w/w carpeting, single working adult, \$575 includes util. 281-1840 after 6 p.m.

SHIRLEY - 1-bdrm. apt., eik, f/p, l/r, all util incl., furn, or unfurn, waterview, walk to beach, cable, \$650/mo. Mathew, Ext. 5105.

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, 2 baths, tennis, golf, beach, pool, Mar. \$300/wk., Apr.-Sept. \$425/wk. Guy, 689-5378.

NORTH MYRTLE BEACH, SC - 1-bdrm. condo, sleep 4, tennis, fitness, indoor/outdoor pool, beach rights, next to Bay, golf, March-May, \$245/wk. Joann, 472-6742.

For Sale

MASTIC - modified Cape, 3 bdrms., 1 bath, 1/r, d/r, kitchen, bsmt., encl. patio, fenced, 3 appl., SCWA, low taxes, energy efficient, 10 min. to Lab, \$105,000, neg. Debbie, Ext. 4269 or 399-4356.

MEDFORD - 3-bdrm. Colonial, 1% baths, eik,

d/r, l/r, den, gar., 0.4 acre, \$139,900. 286-1571. MIDDLE ISLAND - 3-bdrm. condo, 2 full baths. fenced, patio, tennis, pool, 6 mi. to Lab, \$107,000. Ext. 3922 or 878-2604 eyes.

MIDDLE ISLAND - Lake Pointe, 2 bdrms., all appl., CAC, wood deck off master bdrm., pool, tennis, clubhouse, maint. fee 85% tax deductible, ask. \$78,500. Bob, 924-7316,

MIDDLE ISLAND - Coventry Manor, 3-bdrm. tounhouse, 2 full baths, I/r, d/r, kitchen, laundry rm., 5 appl., cac, pool, tennis, ask. \$104,000. Ext. 3160 or 289-5704 after 5 p.m.

PORT JEFF. VILLAGE - 6-bdrm. farm ranch, 1/3 acre, 3 baths, 1/r-d/r, fam. rm. w/fp, 3-zone oil heat, #6 school dist., 3-car gar., oak floors. Tallon, 473-3987 or 282-4847.

REMSENBURG - 3 bdrms., 2 baths, deck, gar., low taxes, quiet section, close to bay, furn., \$215,000. 288-1234.

ROCKY POINT - 3-bdrm. high ranch, I/r w/brick fp, cath. ceiling, d/r, large kit., 2 baths, bsmt., cac, deck, 2-car gar. w/elec. doors, beach rights, 0.34 acre, \$154,900. Kochman, 744-1057.

WEST SAYVILLE - 4-bdrm. high ranch, I/r, d/r, eik, 1½ baths, a/c, 2-car gar., gas heat, Sayville SD. \$145,000. Meade, 499-8816.

YAPHANK - 3-bdrm. condo, 21/2 baths, fin, bsmt., wood floors, ac, 5 min to Lab., \$120,000. 751-2216.

PALM BAY, FLA - 2-bdrm. condo near Melbourne, 2 full baths, I/r, d/r, kit., w/d, pvt. screened patio, completely furn., heated pool, near beach, malls, \$70,000. Ginny, 698-8514 after 5 p.m.

TAMPA, FLA. - Paradise Village M.H.P., 1982 Liberty Mobile Home, 14'x56', 2 bdrm., 1 bath, all appl., cac and heat, awning & shed. Glenn,

Wanted

OUTBOARD MOTOR - 8 or 9 h.p. Don, Ext. 5329,

pager 0361 or 878-2215. LIONEL TRAINS - good price. Bruce, 924-4097. TIMING LIGHT - inductive pickup, reasonable,

metric automotive tools, floor hydraulic jack, heavy duty. Bill, Ext. 4312 or 281-6498. SINGER/BASS PLAYER - for hard rock band, Zep, Aerosmith, Zebra, etc. Ken, 473-7460.

TWO HOUSEMATES - to share 4-bdrm. house E. Setauket, 5 min. from univ., \$287.50/mo. + util. Ext. 2963.

TRUCK - used, heavy duty, like F250 or Dodge Ram, for gardening, lawn work. Bob, Ext. 4707.

OUTBOARD MOTOR - 10-15 h.p., prefer Johnson/Evinrude, must be in good cond. Paul, Ext. 7697 or 689-2829 eves.

VCR - Chris, Ext. 4572, pager 0163 or 265-0163.

FRIENDS - to attend farewell party for Barclays Bank, Thursday, March 30, at the rec. hall. Rosalie, Ext. 3160.

CANNON - old, working or not. Mark, Ext. 4289.

Services

Services are listed in the first Bulletin of every month as a courtesy to BNL employees. They are neither screened nor recommended by the Bulletin. Services forms are available in the Bulletin lobby, Bldg. 134.

VIDEO - Flair Video, some spring dates avail., call to see a demo tape. Ray, 878-1947.

DJ SERVICE - Long Island's finest, weddings, etc. 744-7157. TAXES - prepared, reasonable, confidential. 281-

4008 after 5:30 p.m. LOCKSMITH - bonded, sales, service, 10% Lab discount, keys cut during lunch. Pete, 399-2813. LANDSCAPING - spring cleanups, tree work,

mulching, land clearing, wood chipper for hire, reasonable rates, insured. Jack, 345-5695. INCOME TAX - preparation in your home by experienced professional with IRS enrollment,

Lab discount. Jack, 864-2236 eves.

PROPERTY MANAGEMENT - take charge of rental and residential property, collect rent, maintenance and care. 878-1178.

TYPING - complete desktop publishing, 20 yrs. exp., Lab discount. 281-0268 until 9 p.m. daily. BRICKWORK - patios, walks, swimming pools, retaining walls, landscaping ties, Belgian block,

WORD PROCESSING - professional, fast, 8 yrs. sec'y exp., IBM PC Wordstar, letter quality. reasonable. 928-7571 after 6 p.m.

20 yrs. exp., Lab discount. Tony, 698-9274.

SEAMSTRESS - clothes made and alterations done at reasonable prices. Donna, 924-1684. SHEETROCKING & SPACKLING - free estimates.

Kevin, 563-9855 WORD PROCESSING SERVICE - manuscripts. resumes, letters, quality work fast, reasonable, 14

years' secretarial exp. 924-2012 after 4 p.m. RUG SHAMPOOING - very reasonable, Lab discount. Jerry, 924-6019 days.

puterized profit/loss/cash flow evalutions, loan payments rearranged, much more. 395-3251. YARD MAINTENANCE - spring clean-up, lawn mowing, more. Wading River, Baiting Hollow &

ENTREPRENEUR/BUSINESS SERVICE — com-

Shoreham, low rates. 929-8876, leave message. PLUMBING & HEATING - alterations & repair work by Jim Morris, ret. BNL emp. 472-1205.

PLUMBING - repairs, installation, heating, boilers, etc., free estimates. Joe, 345-3923.

HOUSECLEANING - by bonded, insured people, regular service or one time cleanings. 874-2056. AUTOMATIC LAWN SPRINKLERS - free esti-

mates, professional layouts, repairs, alterations courteous service, BNL discount. Lou, 928-7042. HOUSE CLEANING - very efficient, responsible worker, reasonable rates, Sayville, Patchogue

area. Linda, 589-9258. CHILD CARE - mother of 3-year-old girl avail. to care for your infant or child, reasonable, refs.

Robin, 345-0298. TUTORING - grade K-6 and Special Ed., my home. 475-2509.

CHIMNEY SERVICE - cleaning, repairs, rain caps installed, BNL discount. Henry, 731-7560. SEASONED FIREWOOD - oak, split, stacked, delivered, full cord, 4'x4'x8', \$135 cord, \$75 half

cord. 698-2501. ROTOTILLING installed, reseeded, flowerbeds, custom service.

Bob, 732-9517.

years. John, 732-2472.

Sat. & Sun. Andrew, 981-5696.

AUTOMOBILE DETAILING - complete interior, exterior, cleaning, waxing, low prices, experienced. Ken, 744-8512, leave message.

PAINTING - interior, reasonable rates, quality work. Pat, 924-2298 eves. TV, STEREO, VCR REPAIR SERVICE - 35+ years

exp., pick up and delivery at BNL. Dick Hildenbrand, 732-5071. BABY-SITTING - reliable college student avail. to baby-sit your child afternoons, weekends from

Patchogue to Wading River, Sharon, 929-6495. TAX RETURNS - professionally prepared. Mau-

rice, 928-6930. TAXES - prepared by Tax Consultant, your home or mine, reasonable, serving Lab people for 15

FEEL SECURE - your home guarded while away, radio-equipped cars, exp., reasonable, 24 hours. 395-3872.

COLLISION WORK - tune-up, brakes, clutch, gen., engine repairs. Ray, 289-0883, after 6 p.m. BABY-SITTER - responsible 12-year-old boy, for

COMPUTER SERVICE - loans, amortization schedules incl. variable interest, real estate analysis, more, free samples. 395-3251.

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