

## Looking at National Labs, Task Force Visits Brookhaven



Sharing ideas at the Alternating Gradient Synchrotron are BNL Director Nicholas Samios (left) and Task Force Chairman Robert Galvin.

Last week, on Friday, August 19, BNL senior management spent a full day in discussion with members of a high-level task force appointed by Secretary of Energy Hazel O'Leary to evaluate the national laboratories.

Chaired by Robert Galvin of Motorola Inc., the task force has been asked to examine options for change within the laboratories, as well as to propose specific alternatives for directing the scientific and engineering resources at the labs toward the economic, environmental, defense, scientific and energy needs of the nation.

The visit to BNL was the last field trip for members of the task force, who earlier this summer visited Argonne National Laboratory, Idaho National Engineering Laboratory, Lawrence Berkeley Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, National Renewable Energy Laboratory, Oak Ridge National Laboratory, Pacific

Northwest Laboratory and Sandia National Laboratories.

The day at BNL began with an overview of the Lab, presented by BNL Director Nicholas Samios. The task force then toured three of the Lab's user facilities — the National Synchrotron Light Source (NSLS), the Positron Emission Tomography (PET) Center and the Alternating Gradient Synchrotron (AGS).

General discussion with BNL management continued in the afternoon, and the day concluded with a general meeting with users and with local business, educational and community people.

Following is a sample of comments from speakers who addressed the task force during the hour-and-a-half public session:

• **Michael Zeller, Chairman of Physics Department at Yale University, and an AGS user,** emphasized the "small, rather flexible experiments" at the AGS and said "the science done here is of the highest quality." This, said Zeller, "gives the total experimental experience to our students. . . . The AGS is the one facility in the country where a new experiment can be brought to fruition in a reasonable time."

• **John Marburger, President of the State University of New York at Stony Brook,** said the university has been a "primary beneficiary of the existence of Brookhaven National Laboratory." He noted that spin-offs from the NSLS "infuse energy in our departments of chemistry, material science, geology and other areas . . ." and have had "extraordinary impact . . . on the quality of our programs across the board in the science and engineering departments."

He added that the Radiation Therapy Facility located on the BNL site is "a symbol of the strong relationship that exists in the medical area between our institutions" and pointed to collaboration with BNL on a number of new technology transfer ventures, such as the Long Island Research Institute.

"The extremely productive and close relationship between our university and Brookhaven National Laboratory looks very healthy as long as the Lab looks healthy," Marburger concluded.

• **Sunil Sinha, Exxon Corporation, and NSLS user,** said that Exxon is "probably the largest industrial user of synchrotron radiation, possibly in

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## BNL, Other Laboratories, to Aid Russians In Safeguarding Nuclear Materials

Since the breakup of the Soviet Union, nuclear safeguards specialists around the world have been concerned about the possibility that Soviet nuclear materials could be more easily diverted or stolen than before.

In recent weeks, there have been several reports that small quantities of such materials have been smuggled out of former Soviet republics and into Germany. Several arrests have been made, and experts have attempted to determine the origins of the samples, while the Russian government has maintained that its nuclear institutions are secure.

But the highly publicized interceptions of plutonium and other materials have heightened international worries about what could happen if perceived leaks in the former Soviet system are not plugged and nuclear materials fall into the "wrong" hands.

Even before the recent incidents, the U.S. Department of Energy (DOE) had programs in place aimed at improving nuclear safeguards in the former Soviet Union. BNL scientists have supported several of those programs since the autumn of 1992.

Last month, the Lab's involvement in these efforts expanded when BNL and five other DOE laboratories agreed to help one of Russia's largest nuclear research laboratories improve its control over its own nuclear materials.

The new multi-million-dollar collaboration, funded through DOE's International Safeguards Division, aims to bring the nuclear safeguards practices of Moscow's Kurchatov Institute up to par with modern standards.

As a mostly non-weapons research laboratory, the Kurchatov Institute, also known as the Russian Research Centre, is somewhat akin to BNL and other American national laboratories.

DOE officials also hope the agreement will plant seeds of nuclear safeguards improvement that will one day grow to include institutions throughout the former Soviet Union.

### A Lab-to-Lab Effort

Experts at each of the participating U.S. labs — Brookhaven, Los Alamos, Lawrence Livermore, Oak Ridge, Pacific Northwest and Sandia — will work with Kurchatov



Discussing BNL's part in a multilab agreement to advise Russia's Kurchatov Institute on safeguarding its nuclear material are Joseph Indusi and Ruth Kempf, Department of Advanced Technology.

Institute staff on different aspects of nuclear-materials control and accounting, and physical protection of these

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## RHIC Project: Major Civil Construction Completed

With the completion in late August of the accelerator enclosure at the 10 and 12 o'clock positions around the ring of BNL's Relativistic Heavy Ion Collider (RHIC) and with the addition of magnet-access tunnels at 8 and 12 o'clock, the main contract for the civil construction of the RHIC facility has been completed on time and within budget by Seacrest Construction, Inc., of Freeport.

"With this work completed, 95 percent of the conventional facilities for RHIC are done," says Michael Schaeffer, who is Manager of the Engineering and Construction Services Division within BNL's Plant Engineering (PE) Division and the RHIC Project's Conventional Facilities Coordinator.

The conventional facilities are the structures that will house the RHIC staff, the accelerator itself, the detec-

tors and all associated equipment, such as power supplies, cryogenics, etc.

While the Collider Center (Bldg. 1005S), four experimental halls, buildings to house cryogenic and compressor systems, most of the 2 1/4-mile magnet tunnel, and the beam-injection tunnel were existing structures, two more experimental halls, service buildings, utility refurbishment and

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### Coming Up

Barbara Trask, a research professor in the Department of Molecular Biotechnology at the University of Washington School of Medicine, will deliver a joint Brookhaven Women in Science and Biology Department Seminar on Thursday, September 8, at 3:45 p.m., in the conference room of the Biology Department, Bldg. 463. Her talk is entitled "Chromosomal Organization and Polymorphism Revealed by FISH." FISH stands for fluorescence in situ hybridization, a methodology that Trask has perfected for finding genes on chromosomes.

## Task Force

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the world," with six beam lines at the NSLS, in addition to several participating research teams at the HFBR. He added that having both the HFBR and NSLS located in the same laboratory has "played an enormous role in our research programs." In regard to the Advanced Photon Source (APS) under construction at Argonne, Sinha said that Exxon looks forward to using APS, "but there's no question about the fact that Brookhaven and the Synchrotron Light Source will certainly be the flagship of our basic research program."

• **John M. Kennedy, President of**

**Nassau/Suffolk Building Trades,** said he "probably could go on about all the positive things about Brookhaven National Laboratory. . . . Our craftpeople who reside in both our counties have had the pleasure of building this facility since its inception."

• **Mike Rowe, National Institute of Standards and Technology and user of BNL's High Flux Beam Reactor (HFBR),** spoke about the complementarity of BNL's two "big machines" for materials science research, the NSLS and the HFBR. "Brookhaven has a long historic and distinguished role in providing national facilities. Right now, they have

two of the best in the areas I am familiar with, in material science, biology, physics and chemistry. . . . The fact that the two are here together is very important."

• **Bill Zajc, Columbia University, member of collaboration building the PHENIX detector for BNL's Relativistic Heavy Ion Collider (RHIC),** said, "RHIC provides an absolutely world-class, unparalleled opportunity to extend heavy-ion physics into what I think is the richest research frontier one could possibly imagine."

• **Jonathan Brodie, New York University Medical Center, and PET user,** said that it has been suggested

that PET "has really changed the face of American psychiatry, and perhaps world psychiatry, by its ability, by the pioneering efforts that were done here in collaboration with many of us in the New York area" in research on such problems as Alzheimer's disease, schizophrenia and drug abuse.

• **Larry Carr, Northrop Grumman R&D Center,** said that, along with Cooperative Research and Development Agreements, or CRADAs, his company makes extensive use of the Lab's facilities, such as the Accelerator Test Facility and the NSLS, adding, "these facilities at Brookhaven are a strong ingredient in our present R&D and therefore our future competitiveness."

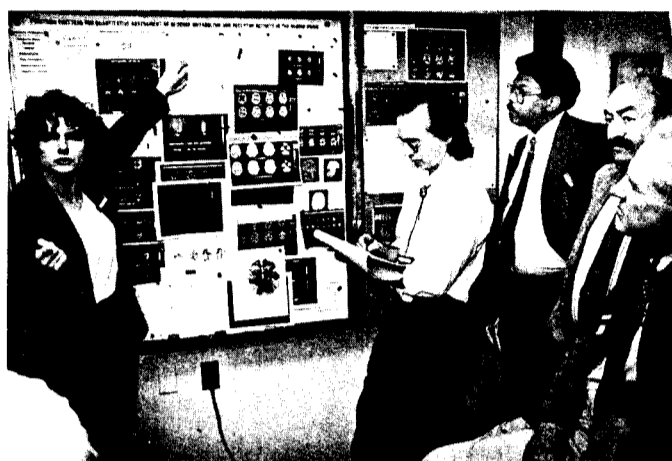
• **John Wolf, a Lab neighbor involved in his local civic group,** noted that he has been coming to the Lab's public meetings regarding areas of concern in relation to BNL's status as a Superfund site. In reference to BNL's ongoing research into the energy efficiency of oil burners and boilers, he said, "I was glad to see that the Lab worked on something like that — something practical that could be used in the home and save oil. I would like to see the Lab work on developing other forms of non-polluting energy."

• **Dorothy Patrick, Suffolk Community College,** directs the college's Educational Opportunities in Science and Technology. She commended BNL "for providing training opportunities for our faculty" and for its educational efforts on behalf of students who have profited from their experiences here.



Roger Stoutenburgh

At the National Synchrotron Light Source, BNL Deputy Director Martin Blume (right) makes a point to: (from left) Task Force member Richard Lester, Task Force Chairman Robert Galvin, AUI President Robert Hughes, Task Force member Charles Shanley, and NSLS Chairman Denis McWhan.



Roger Stoutenburgh

BNL's Nora Volkow (left) discusses research at the Positron Emission Tomograph with: (from left) Task Force member David Kerlinsky; Otto White, BNL's Safety & Environmental Protection Division; Mark Sakitt, BNL's Assistant Director for Policy and Planning; and Task Force member Henry Kendall.

## Aiding Russians

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materials. Together, the U.S. labs have formed a steering committee to track this effort; Brookhaven Senior Nuclear Engineer Walter Kato represents BNL on that committee.

BNL's assistance will come in three areas: materials control, understanding of measurement uncertainties and training. In July, Joseph Indusi, Associate Chairman of BNL's Department of Advanced Technology (DAT), signed the preliminary protocol for Brookhaven's portion of the multilab agreement. Kurchatov Vice President Nikolai Ponomarev-Stepnoi signed the protocol for Kurchatov.

Now, hard on the heels of that signing, Ruth Kempf and Les Fishbone of DAT's Safeguards, Safety and Non-proliferation Division are preparing to head to Moscow in early September for a tour of some of the institute's facilities and technical information-exchange.

Then, beginning in early fiscal year 1995, Kurchatov's staff, in cooperation with safeguards specialists from EURATOM, the European Community's atomic energy authority, will perform the first physical inventory of nuclear materials at two of the institute's facilities. During this time, plans for U.S.-Kurchatov safeguards cooperation will be passed back and forth between the continents until they are both suitable for Kurchatov's needs and acceptable under modern standards.

"They are interested in improving nuclear-material measurements and accountability to bring them into line with modern standards," Indusi explained, adding that Kurchatov will receive only technical information, some equipment and software, and funding — not complete ready-to-use safeguards systems — from the U.S. labs. "We'll ask Kurchatov to carry out the work with our cooperation, developing software, procedures and systems."

### Taking Inventory

Specifically, DAT staff will aid Kurchatov in establishing modern material-control systems, access controls at facilities where material is

stored or processed, authorizations for facilities to possess such material, containment and surveillance equipment, portal monitors, and other controls.

"If you have good material-control and an accountability system, then that provides a basis for an investigation if something is missing," especially if all institutions handling such material have such a system, Indusi continued. The lack of a complete, modern, domestic safeguards system in Russia has made it difficult or im-

possible to tell which facilities may have been the source of some of the smuggled samples recently intercepted in Europe.

Also, Indusi said, "BNL will work with the Russians to understand properly the errors associated with measurements of nuclear materials, and how these unavoidable measurement uncertainties can contribute to potential discrepancies. They need to understand the errors to understand fully the accountability system."

Finally, BNL staff will work with Kurchatov employees to develop training in the design and implementation of nuclear-safeguards procedures for a variety of facility types.

Said Indusi, "If we can show success at Kurchatov, which is most interested in cooperating and desires to place its nuclear material under modern safeguards, perhaps we can encourage the same kind of improvements at other Russian nuclear facilities." — Kara Villamil

## RHIC Civil Construction

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upgrades, and site improvements are required before RHIC can come on line by 1999.

During the 14-month duration of the main civil-construction contract, Seacrest Construction employed approximately 200 people through 30 subcontractors, poured 9,000 cubic yards of concrete, moved 55,000 cubic yards of earth, and put down 4,800 cubic yards of topsoil.

"Everything was coordinated, so the project went very smoothly, and Seacrest did a very nice job," says Schaeffer.

For their part in this successful project, Schaeffer singles out several PE staffers for credit, including: Project Coordinators George Capetan, Jack Feldman, Joe Giuffre and Tom Nehring; Structural Supervisor Bal Patel; Design Engineer Jim Wright; Construction Support General Supervisor Bill Slavinsky; Mechanical Construction Support Supervisor Bill Pinto; former Architectural Construction Support Supervisor Pete Stelmaschuk; and Electrical Construction Support Supervisor Bill Softye.

Through spring 1996, five major civil-construction tasks remain.

First, new services buildings for the magnet power supplies, cryogenic equipment and the like are being constructed by the construction company Carter Melence of Sound Beach. This work will be completed by September.

The second civil-construction task will begin in late fall, modifying the 6 o'clock hall and erecting an assembly building for the STAR experiment, one of two major RHIC detectors. So that the project can be bid on and a contract awarded, the detailed design is now being refined.

Third, the 8 o'clock hall will be improved and what is called a counting house, where data are collected, will be added for the other major RHIC experiment, the PHENIX detector. At present, the detailed design are progressing, and construction is to start in summer 1995.

Upgrading the 2 and 4 o'clock halls to house the two smaller RHIC detectors, called BRAHMS and PHOBOS, is the fourth task, which is at the engineering design stage.

Finally, refurbishing and upgrading the existing utility systems, including power, water, fire protection, and heating, ventilation and cooling, are progressing on schedule.



Roger Stoutenburgh

Pictured at the just completed 12 o'clock experimental facility of the Relativistic Heavy Ion Collider are: (from left) Jack Feldman, Michael Schaeffer and George Capetan.

Concludes Schaeffer, "By the summer of 1996, all civil construction will be done, with the exception of additional paving, lighting and site improvements. At that time, we will begin providing support where required to the accelerator staff installing magnets and other systems and to experimental groups installing detectors." — Marsha Belford

# Let's Go to the Hop!

Good golly Miss Molly —

School'll be back in session, so the BNL Ballroom, Latin & Swing Dance Club is having a September Sock Hop, in conjunction with Swing Dance Long Island. So, c'mon everybody, stroll on over to the North Ballroom on Friday, September 9 — that'll be the day. Leave your blue suede shoes at the door and rock around the clock from 7:30 to 11:30 p.m.

Don't you just know it — before the good times roll, there'll be a swing dance refresher class from 7:30 to 8:30 p.m., taught by Giny Rae and Peter Scurca of Dance Magic. Since you've got what it takes, I'm sure you'll do so fine — like poetry in motion.

Then, from 8:30 to 11:30 p.m., roll over Beethoven, because rock and roll is here to stay!

We'll let the little girl dance to and roll music Chris Patti. can tell me and I'll say sweetheart, some tossin' and ing of the Chapel



We'll let the rock of DJ Then you good-bye, good night, go home and do turnin', dream-of Love.

With every beat long to me, but be wake up little Duke of Earl will

of my heart, you be-an earth angel and Susie, 'cause the be waiting for her all the other girls

say to know him is to love him. Also tell Diana, Donna, Lucille, Maybelline, Peggy Sue, and rockin' Robin to put on their chantilly lace, make up their pretty little angel eyes and go to the hop. If they don't, we'll see who's sorry now.

I don't care if you have the rockin' pneumonia and the boogie woogie flu — see you later, alligator. Or else, little darlin', it's bye, bye love.

Great balls of fire, there's gonna be a whole lotta shakin' goin' on!

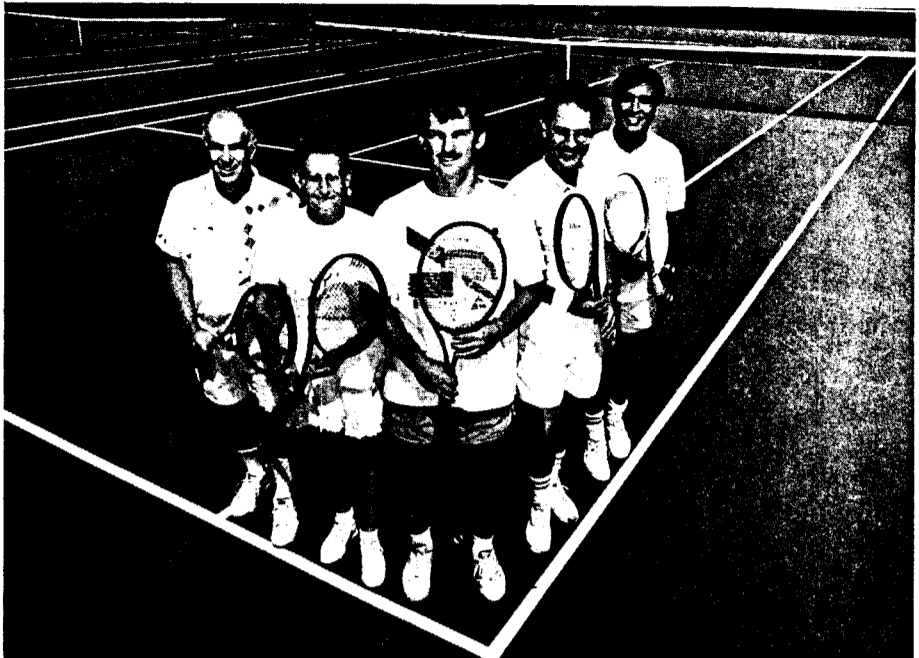
— Johnny B. Goode

p.s. Tickets for the September Sock Hop are \$5 per person and must be purchased in advance from:

- Violet Bezler, Ext. 3771, Bldg. 510B
- John Millener, Ext. 3853, Bldg. 510A
- Ron Ondrovic, Ext. 4553, Bldg. 355
- Nedy Santiago, Ext. 3402, Bldg. 197C
- Alison Tilt, Ext. 4465, Bldg. 515
- Gwyn Williams, Ext. 7529, Bldg. 725D

p.p.s. There will be a quiz on the number of song titles in the above letter and the first person whose door-prize stub is picked and who has the right answer will win, so start cramming now!

# Tennis Champs & Dance



Roger Stoutenburgh

These tennis champs will be feted at the Tennis Awards Night and Dance Party being offered tonight by the Tennis Committee. Festivities will begin at 5 p.m. with a cold buffet in the Brookhaven Center, and dancing will start at 6:30 p.m. and continue until midnight. Tickets are \$15 per person with dinner or \$5 for the dance alone. Buy them at the door or contact Rudy Alforque, Ext. 4733, or Om Singh, Ext. 5332. Singh (right) teamed up with Peter Vanier (next to him) to take the men's doubles championship for the fifth consecutive year. Bob Meier (center) was the men's singles champ for the second year in a row. In mixed doubles, Steve Shapiro and Carmen Benkovitz (both on left) won the title for the first time.

## Inside Info

**Michael Schaeffer** was named Manager of Plant Engineering's new Engineering & Construction Services Division, effective June 1.

The new division includes electrical, architectural and mechanical design and engineering personnel, in addition to Plant Engineering Division staff working on project coordination and construction inspection.

In announcing Schaeffer's appointment, PE Division Manager Bruce Medaris noted, "Mike Schaeffer brings to this position a very successful tenure managing project coordination, many years of design- and construction-project experience, and considerable skill in dealing with architectural and engineering firms. By consolidating these functions and placing them under Mike, Plant Engineering will capitalize on the most efficient use of the considerable talent involved and more effectively support the needs of our users, while reducing the overhead cost of construction."

Since February 1991, Schaeffer has also been Conventional Facilities Coordinator for BNL's Relativistic Heavy Ion Collider (RHIC) Project, responsible for seeing that the structures housing the RHIC staff, the accelerator itself, the detectors and all associated equipment are completed on time, as designed and within budget.

## Nursery School Enrollment Meeting

There will be a meeting on Tuesday, August 30, at 7 p.m., in the Recreation Building in the apartment area for parents interested in enrolling their children in Upton Nursery School this fall. This is a good opportunity to learn about the school and to meet other involved families. Enrollment packets will be available, and the enrollment fee may be paid at the meeting.

For more information, call Jane Throwe, 929-8513, or Sue Ellen Gerchman, 929-3732.

## Metropolitan Opera Tickets on Sale

Family-circle tickets for the following performances during the 1994-95 Metropolitan Opera season will go on sale on Wednesday, September 7, at the BERA Sales Office in Berkner Hall, weekdays, 9 a.m.- 1:30 p.m.

Tickets are \$24 each, with no refunds and exchanges, and employees may purchase as many pairs of tickets as they wish.

- Sat., Oct. 1 *Idomeneo*
- Sat., Oct. 22 *Tosca*
- Fri., Nov. 4 *Tosca*
- Sat., Nov. 12 *Rigoletto*
- Fri., Nov. 18 *Lady Macbeth of Mtsensk*
- Sat., Dec. 10 *Don Giovanni*
- Fri., Dec. 16 *Don Giovanni*
- Fri., Jan. 6 *L'Elisir d'Amore*
- Sat., Jan. 21 *Die Fledermaus*
- Fri., Feb. 10 *Cavalleria Rusticana / Pagliacci*
- Sat., Feb. 11 *Il Barbiere di Siviglia*
- Fri., Feb. 24\* *Der Rosenkavalier*
- Sat., Feb. 25 *Simon Boccanegra*
- Fri., Mar. 17 *La Traviata*
- Fri., Mar. 31 *Madama Butterfly*
- Sat., Apr. 8 *La Traviata*
- Fri., Apr. 21 *The Ghosts of Versailles*
- Sat., Apr. 22 *Madama Butterfly*

\*Starts at 7:30 p.m.; all others start at 8 p.m.

## Mountain & Canoe Club

The BNL Mountain and Canoe Club is planning a camping trip at the Watch Hill group camp site Friday through Sunday, September 9-11. A few hearty souls are planning to arrive by canoe from Smith Point, while others will arrive by ferry. To join us or for more information, call Alan Kuehner, Ext. 4226, or 878-6947.

## Touch Football

All employees interested in playing one-hand touch football or starting their own team for the fall, should contact Wayne Rambo, Ext. 2284, as soon as possible.

## Arrivals & Departures

### Arrivals

Srinivasan Kasturi ..... Adv. Tech.

### Departures

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

Joseph Cardamone ..... Medical  
 Leonard D. Hamilton ..... App. Science  
 Fred Hohmann ..... Fiscal  
 Jose E. Lorenzo-Diaz ..... Physics

## Service Awards

The following employees celebrated BNL service anniversaries during August:

- 35 Years**
- Joseph Bauernfeind ..... AGS
- 30 Years**
- Charles E. Botts ..... Plant Eng.
- Michael Carroll II ..... Saf. & Env. Prot.
- Darrel D. Joel ..... Medical
- Roman J. Nawrocky ..... NSLS
- 25 Years**
- Ruth Faine ..... Comp. & Comm.
- Kenneth P. Mohring ..... Staff Services
- 20 Years**
- Frances C. Bernstein ..... Chemistry
- Melville J. Bonanno ..... Plant Eng.
- George Maise ..... Adv. Tech.
- Richard C. Melucci ..... App. Science
- Sylvia Mouzakes ..... Staff Services
- John E. Pepe ..... Comp. & Comm.
- Ann W. Reisman ..... Adv. Tech.
- Maryann Reynolds ..... Adv. Tech.
- Nicholas C. Satterley ..... Cen. Shops
- Martha N. Simon ..... Biology
- John L. Usher ..... Adv. Tech.
- Donald A. Warner ..... Chemistry
- 10 Years**
- Gregory W. Bostic ..... Plant Eng.
- Robert Dyer ..... Sup. & Mat'l.
- William E. Gunther ..... Adv. Tech.
- Larry Jones ..... Plant Eng.
- John J. Popielaski ..... Plant Eng.
- Peter M. Ratzke ..... NSLS
- Raymond J. Raynis ..... Physics
- Sergio Rescia ..... Instrum.

## End-of-Summer Potluck Picnic

On Saturday, September 10, the Plant Engineering Division invites all BNLers and their families to the Recreation gazebo by the softball fields for an end-of-summer potluck picnic and get-together. Rain or shine, it will begin at 1 p.m. and continue until 6 p.m.

Picnic-goers are asked to bring enough food to share at the potluck table, and their own picnic, party and play supplies. No extra cost is involved. So come down to the gazebo that day to relax with your coworkers and family, and share some fun.

For more information, call Rich Scheidet, Ext. 5284.

## Cafeteria Menu

- Monday, August 29**
- Soup: Spicy potato kale .90/1.20
- A la Carte: Arroz con pollo 3.75
- Fitness: Pot roast 4.25
- Deli: Pastrami 3.20
- Grill: Bratwurst & peppers 3.30
- Tuesday, August 30**
- Soup: Cream of mushroom .90/1.20
- A la Carte: Eggplant Parmesan 3.65
- Fitness: Curry chicken 3.95
- Deli: Virginia ham 3.20
- Grill: Spanish omelet 3.30
- Wednesday, August 31**
- Soup: Split pea .90/1.20
- A la Carte: Tortellini carbonara 3.65
- Fitness: Cod Florentine 3.95
- Deli: Roast beef 3.20
- Grill: Monte Cristo 3.30
- Thursday, September 1**
- Soup: Chicken vegetable .90/1.20
- A la Carte: Chicken lo mein 3.75
- Fitness: Stir-fry beef 3.95
- Deli: Turkey 3.70
- Grill: Cuban sandwich 3.30
- Friday, September 2**
- Soup: Manhattan clam chowder .90/1.20
- Display cooking: Omelet 2.95
- Fitness: Flounder w/julienne veg. 4.25
- Deli: Corned beef 3.20
- Grill: Fried clams 3.30

# BROOKHAVEN BULLETIN

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## Upgraded Software

If you are missing a free software upgrade, stop by the Software Store, Bldg. 515. The store has acquired several packages in the last few months, but has no idea who owns them. The store may require proof of ownership in order for you to claim your upgrade.

## Call for Bowlers

Applications for bowling in the Tuesday night men's league in Port Jefferson and the Thursday night mixed league in Shirley are available at the BERA Sales Office. New team registrations are due by Friday, August 26.

For information, contact Debbie Botts, Ext. 7218, or Maryann Reynolds, Ext. 2352.

## Classified Advertisements

### Placement Notices

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

Each week, the Personnel Division lists new placement notices. The purpose of these listings is, first, to give employees an opportunity to request consideration for themselves through Personnel, and second, for general recruiting under open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people.

Except when operational needs require otherwise, positions will be open for one week after publication.

For more information, contact the Employment Manager, Ext. 2882, or call the JOBLINE, Ext. 7744 (282-7744), for a complete listing of all openings.

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

LS 5546. ENGINEERING POSITION - Requires a BS in engineering or equivalent with knowledge of data network design and implementation using copper and fiber optic-based Ethernet and FDDI technologies. Experience with LAN routers and T1/T3 WAN connectivity, network troubleshooting skills and familiarity with intelligent network hubs and building wiring systems necessary. Knowledge of TCP/IP protocols, UNIX systems and exposure to ATM technology a plus. Responsibilities include supporting the existing network physical infrastructure, as well as planning for growth and migration to higher speed LANs. Computing and Communications Division.

### Motor Vehicles & Supplies

92 PONTIAC GRAND AM - loaded, 25k mi., white, mint, \$12,200 neg. Bob, Ext. 7238.

92 TOYOTA PICKUP - 5-spd., 14k mi., 3" lift, 33" tires, red, audio sys., \$13,999; '86 Nissan 300ZX, 5-spd., blue, T-top, 57k mi, Viper alarm, \$5,499. 698-3842.

91 MAZDA NAVAJA LX - blue/gray, 4wd, 5-spd., 72k mi., excel. cond., \$13,500; '80 Ford F150, a/t, 4wd, good work truck, \$1,000 neg. Pete, Ext. 4028.

89 HYUNDAI - a/t, 3-dr., orig. owner, 64k mi, new brakes, catalytic converter, front axles, tires, \$1,800. Terry, 499-8377.

88 VW FOX GL - 4-dr., 4-spd., ac, am/fm cass. stereo, new Pirelli spare, 135k mi., very clean, runs well, \$2,250 neg. 878-0172.

87 PLYMOUTH SUNDANCE - 67k mi., well maintained, 2-dr., driver's door needs repair, \$3,000 neg. Wayne, Ext. 7238.

87 MERC SABLE - a/t, p/s, p/b, p/w, p/seat, tilt wheel, runs well, ask. \$2,950; '85 Honda Accord, a/t, p/s, p/b, p/w, stereo, sunroof, ask. \$2,850. Nick, Ext. 5439.

86 MONTE CARLO S.S. - a/t, p/s, p/w, high mi., as is, \$3,800. Clarence, Ext. 7238 after 5:00 p.m.

86 GRAND PRIX - new transmission, all power, V-6, engine in good cond. W. Hughes, Ext. 2138.

86 MAZDA 323 - 4-dr. sedan, 4-cyl., a/t, ac, alarm, p/w, p/s, good engine, new tires, exhaust, batt., 85k mi., needs trans. work, \$1,100. Jim, Ext. 5537.

85 MERCURY TOPAZ - 4-dr., a/t, 91k mi., new tires, brakes, batt., runs well, \$950. Ext. 2136 or 689-5062.

85 DODGE DAYTONA - turbo, p/s, p/b, ac, sunroof, p/seats, m/t, h/b, high mi., runs well, asking \$1,000. Nancy, Ext. 7976.

85 RELIANT WAGON - 4-cyl., a/t, p/s, p/b, am/fm, ac, 66k mi., new carb., v.g. cond., ask. \$2,200. Tirre, Ext. 3288 or 281-0360 eves.

85 VOLKSWAGEN GOLF - 5-spd. m/t, silver, \$1,500. Maggie, Ext. 3275, M-W, or 924-6681.

84 OLDS DELTA 88 ROYALE - 4-dr., V-8, a/t, p/s, p/b, a/c, cruise, new exhaust & tires, good cond., asking \$1,700. Chen, Ext. 4331.

84 CHEVY CAVALIER - 4-dr., m/t, 4-spd., gray, am/fm stereo, new starter, replaced clutch, runs well, \$600 or best offer. Hong, Ext. 3389 or 924-9435.

83 LINCOLN CONTINENTAL - \$2,000 neg. Udo, Ext. 2245 or 286-1592.

81 FORD GRANADA - 6-cyl., good station car, \$700. Ext. 2816 or 878-0480 eves.

81 LINCOLN TOWN CAR - excel. cond., must sell, \$1,000 or best offer. Lee, Ext. 4663.

81 CADILLAC COUPE DE VILLE - 89k orig. mi., excel. cond., must sell, best offer. Ext. 1373 or 4795.

81 CHEVY PICKUP - V-8, a/t, p/s, p/b, bed liner, no rust, good cond., \$1,695. Jim, Ext. 5400 or 878-6098.

80 VOLVO - 4-dr., runs well, dependable, \$1,000 or best offer. Pete, Ext. 4798 or 1229, rm. 19, eves. or wknds.

79 INTERNATIONAL SCOUT II - a/t, 304 V-8, p/b, excel. mech. cond., good for plow, \$1,000. 744-4974.

78 SUZUKI GS 750L - 24k mi., windshield, saddlebags, helmet, top shape, \$750. Kimo, Ext. 7254 or 473-6322.

68 CAMARO - 90% restored, 350, 25k mi. on motor, all receipts, \$6,000. 744-7343.

TIRES - P225x75R14, 2, excel. cond., \$40/ea. 698-9274.

ROOF RACKS - never used, still in package, fit any van, \$25 ea. Mike, 744-7360.

CAP - for Ford Ranger pickup, white, tinted glass, best offer. Stephen, 744-4974.

WHEEL HUB COVERS - 13", wire, brand-new, set of 4, \$60. Ext. 3305.

ALTERNATOR - Chrysler, Bosh, 90 A, good cond., \$25. 345-5783.

AMPLIFIER - Sony, 2x45W stereo, power amplifier, mounting brackets, excel. cond., must sell, \$125. Varoujan, Ext. 7718 or 395-4729.

ROOF RACK - gutter-mount HD, v.g. cond., asking \$15. Jan, 929-4522.

### Boats & Marine Supplies

20' CLAM BOAT - wide-beam, fg, cabin, self-bailing, asking \$750. 563-6680.

20' ISLAND SLOOP SAILBOAT - 6-h.p. Evinrude, trailer, autohelm, roller furling jib, sleeps 4, many extras, \$3,500. Rich, Ext. 3239 or 472-9034.

19' BOWRIDER CRUISER - fg, 115-h.p. ob., nearly new trailer, p/winch, \$2,500. Jim, Ext. 3372 or 821-0250.

16' STARCRAFT - 35-h.p. Evinrude, Cox galvanized trailer. 325-0447 after 6 p.m.

15' SEA RAY - fg, 33-h.p. Evinrude, trailer, runs well, ready for water, \$900. 874-4718 after 5 p.m.

### Furnishings & Appliances

AIR CONDITIONER - 6,000 Btu, 23"W, asking \$50. John, Ext. 7340 or 732-2702.

AIR CONDITIONER - Carrier, 29,200-28,800 Btu, excel. cond. Bob, 757-317E.

BEDROOM SET - contemp., queen-size platform bed w/cabinets, mirrored headboard, recessed lighting dresser w/mirror, armoire, \$850 neg. Carter, Ext. 7599.

DINETTE SET - wood table, 6 chairs, excel. cond., \$125. Marge, 758-0650.

DINING ROOM - contemp., china closet, table w/4 chairs, \$125. Linda, Ext. 2733 or 878-8491.

DINING ROOM - china cabinet, 6 chairs, table w/3 leaves, light tone, wood, v.g. cond., \$600. 744-1706.

DINING ROOM - oak trestle table, 6 chairs, breakfront, pads, like new, \$900; cedar chest; Lane tapestry seat, 16"x44", like new, \$70. 368-6115 after 6 p.m.

FAN - dual fan, window, \$15; floor fan, \$10; both good cond.; humidifier, Bionaire, 4-gallon, new filter, descaler, \$20. Monica, Ext. 5455.

FOOD PROCESSOR - Oskar mini, w/attachments, \$20; West End air corn popper, \$5; vinyl mini-blinds, 2, 36"x64", black, \$15/both. Theresa, Ext. 2907.

FREEZER - GE, upright, \$200; air conditioner, large, \$50; Pure-N-Simple water filtration system, new, orig. \$395, sell for \$200. Maryann, Ext. 5252.

HEADBOARD - oak, queen, footboard, w/all slats, excel. cond., \$75. 289-8105.

MICROWAVE COOKWARE - steamer/roaster, casserole, muffin pan, all new, \$10/all. Judy, 924-7077.

MOVING SALE - living room set, dining room set, bedroom set, etc. 286-1571.

RANGE - elec., self-clean, good, \$90. 475-8971.

REFRIGERATOR - GE, 18 cu. ft., light, cream color, excel. cond., \$125. John Toner, 543-7065.

REFRIGERATOR - 5 cu. ft., perfect for college dorm., used 1 yr., \$90. Pam, Ext. 7286 or 581-7656.

ROCKER - spindle, w/cushions, \$30. 289-8105.

SLICER - Rival Slice Crafter, electric, for roasts, cold cuts, etc., countertop style, \$25. Lois, Ext. 3315.

SOFA BED - Sealy, full size, 6" innerspring mattress, beige, Scotchguarded, \$450. 878-1303.

TABLES - pecan wood, 2 end tables, coffee table, excel. cond., \$100/all; contemp. dining room, hutch, table, 6 chairs, \$300. Marty, Ext. 2214.

VACUUM CLEANER - Hoover, upright, \$10. Stephen, Ext. 4477.

VACUUM CLEANER - Electrolux, \$140. Ext. 3322 or 744-9718.

WATER BED - Simmons Beautyrest, queen size, cylinder-type, frame. Nancy, Ext. 5744 or 286-0353.

### Tools, House & Garden

CHICKEN WIRE - 4 rolls, 2"x24"x50", \$7.50/roll. Bill, Ext. 3254.

GENERATOR - Generac, 4k watts, never used, like new, \$400. 744-1706.

GENERATOR - Honda EB5000X, gas, ac output 120/240V, 60 HZ, orig. \$1,700, sell for \$900, like new. 368-6115 after 6 p.m.

LAWN MOWER - push, grass catcher, excel. cond., \$25. Monica, Ext. 5455.

POOL ACCESSORIES - earth & sand filters, 1 h.p. pump, diving board, vertical hanging ladders, walk-in step ladder, more. Mike, 744-7360.

SKYLIGHT - new, 4'x10', \$500; commode, new, \$10. 281-7935 eves.

STOVE - wood burning, Tempwood, square cabinet shape, top load, like new, \$150. Marty, Ext. 2214.

STOVE - De Dietrich, coal & wood, w/hopper, \$200. Maryann, Ext. 5252 or 286-3377 after 7 p.m.

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

### Sports, Hobbies & Pets

BIKE - women's, Motobecane, 10-spd., 26" alum. frame & wheels, \$40. Monica, Ext. 5455.

BIKE - collapsible, stores easily, \$200 or best offer. Lois, Ext. 3315.

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



BIKE - 20", girl's, Huffy, excel. cond., \$25; girl's snow boots, Stride-Rite, never worn, size 2M, orig. \$37, now \$20. Linda, Ext. 5763.

BIRD - cockatiel, young, lovely, friendly, home raised, hand trained, parents on premises, \$75. 473-6432.

CIRCUIT TRAINER - Body by Jake, \$75. Garry, Ext. 4446, or Evelyn, 549-9113.

ENGLISH SPRINGER PUPPIES - AKC, parents on premises, 5 females, 4 males, born 8/5, excel. w/ children. John, Ext. 2704.

GOLF CLUBS - John Daly wide body driver, graphite shaft, brand-new, \$75. Emil, Ext. 4289 or 744-7343.

GOLF CLUBS - Master II, metal woods 1,3 & 5, True Temper Gold shafts, Golf Pride Victory Grips, \$150 neg. Gary, Ext. 4446 or 549-9113.

GUITAR - Ovation Celebrity, gray sunburst, acoustic/electric, sounds & plays well, finish cracked, \$125. 698-7428.

HOME GYM - complete all-body workout, like new, \$60; rowing machine, good cond., \$15. 472-3254.

KAYAK - for small adult or child, up to 150 lbs., good cond., all equipped, \$300. Ernie, Ext. 5092.

WEIGHTS - junior, two 3 lbs., four 8 lbs., four 15 lbs., \$45 firm; junior dive fins, Voit, size 12-1, \$10. 281-1540.

RABBIT - lop eared, w/den, fits 2 rabbits, 6'x4', \$50/all. Ext. 7340 or 732-2702.

RC CAR - Jr. T., w/remote & charger, \$100. Ext. 7225.

RC CAR & TRUCK - 4wd, radios, batteries, charger, spare parts, \$100/all. Dave, 924-4927.

SEWING MACHINE - Kenmore, in cherry wood cabinet, old, works well, \$25. Linda, Ext. 5763.

SKI BOOTS - San Macro, men's size 9-9 1/2, red, front entry, 4 clasps, excel. cond., \$65. Bob D., Ext. 5439.

VIOLIN - Knilling student, full-size, horsehair bow, case w/strap, 3 yrs. old, complete, \$400. Kyra, 541-8374.

WET SUIT - size med., 165 lbs. & under, used 4 times, \$75. 289-8105.

### Audio, Video & Computers

CAMERA - 35mm, Minolta Maxxum 7000, A.F. lens, 50 and A.F. lens 70-210, w/flash, Hoya filters, access. bag, orig. \$650, sell for \$275. Carter, Ext. 7599.

COMPACT DISK PLAYER - portable. Ext. 2007 or 751-1474.

COMPUTER - MAC SE/30, 2x5 MB ram, 40 MB HD, superdrive, math coproc., syst. 7.1, software, extnd. keyb., \$800 neg. Varoujan, Ext. 7718 or 395-4729.

COMPUTER - Commodore 64, disk, monitor OK, CPU needs repair, \$45. Jim, Ext. 3372 or 821-0250.

RECORDS - 78s, from 1930s, 1940s & 1950s, make offer. 878-4103.

STEREO - Dynaco PAT-5, preamp, stereo, 150 power amp, \$150; large Advent speakers, \$75; Onkyo tape desk, \$50. Monica, Ext. 5455.

STEREO - Fisher, 100-watt amplifier, tuner, cassette deck, turntable, speakers, portable component cabinet, \$150. Dick, 286-3372.

STEREO - Pioneer, 100 watts per channel, Dolby surround sound, 46 presets, audio, video hookups, hardly used, \$300. Emil, Ext. 4289.

VCR - GE, \$110; RCA TV 20", \$90. Ext. 3322 or 744-7718.

WOOFERS - two, 15", 175 watts, 350 peak, 70-oz. magnet, brand-new, asking \$140/pair. 924-4927.

### Miscellaneous

BOOTS - men's, Western, leather, brown, 10 1/2 D, worn once, \$75. Pat, Ext. 5406.

CHANGE MAKERS - for \$1 bills; 2 used, \$100 ea., 1 new, \$110; or \$300/all. Jan, 929-4522.

DEHUMIDIFIER - \$20; kerosene heater, new, \$20; chest of 9 drawers, \$30; wicker table lamp, \$20; stroller, \$20. Kathy, 744-2203

GOWN - Barry J, long, black, white bow on back, new, size 14, junior, \$125 or best offer. Doug, Ext. 7698.

THERMOSCAN - brand-new, never used, sealed in box, \$70. Steve, Ext. 5892.

TICKETS - 3, Arrowsmith, Jones Beach, 8/30, \$35/ea. Ext. 7931 or 289-6982.

TRANSPORTATION VOUCHERS - American Airlines, some time restrictions apply, worth \$734, sell for \$500. Dave, 475-7891 after 5 p.m.

### Free

CLEAN FILL - 25-30 yds. and 8 yds. broken up concrete, you pick up. Warren, Ext. 2080 or 924-7552.

EXERCISE BIKE - good condition. Judy, 924-7077.

KITTENS - 3, adorable, gray, need loving & caring homes. Caroline, Ext. 5224.

PARAKEETS - 2, w/cage. Ext. 3322 or 744-9718, leave message.

TV - 25" color, Zenith w/console, needs some fine-tuning, you pick up. Gerardo, Ext. 7907.

### Yard & Garage Sales

MASTIC BEACH - multifamily, 8/27-28, major appliances, toys, furn., lawn mowers, housewares, clothes, 86 Peeker Ave.

### Car Pool

PLAINVIEW - LIE exit 43, 4th driver needed. Ron, Ext. 2175 or Elliott, Ext. 2495.

### Lost & Found

FOUND - money at apartment-area laundry, Thu., Aug. 18. Ext. 1001.

LOST - corn planters, 2 missing from Bldg. 529, please return to greenhouse at rear of Bldg. 463, needed for research.

### Real Estate

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

### For Rent

BAITING HOLLOW - three beach cottages, l/r, eik, deck, priv. beach, laundry, rec. hall, near farms, Splash Splash, wineries, sleeps 4, full baths, \$400/wk. Aug.-Oct. Mike, Ext. 7861 or 698-3967.

BROOKHAVEN HAMLET - restored 1738 English cottage in country setting, 2 bdrm, 2 baths, d/r w/tp, greenhouse off kit., \$1,100/mo. + util. & sec. Sue, Ext. 2888 or 286-1474.

BELLPORT VILLAGE - secluded 2-bdrm. home on 2 1/2 acre, steps to golf & tennis, 2 baths, lots of decks, \$1,100/mo. + util. & sec. Sue, Ext. 2888 or 286-1474.

EAST PATCHOGUE - 3-bdrm. house, south of S. Country Rd., mint, quiet, gar., bsmt., appl., no pets, no smokers, \$950/mo. + util., sec. & refs. Stewart, Ext. 3291 or 589-3020.

MEDFORD - sunny, spacious, 2nd-floor, 1-bdrm. apt., eik, l/r, full bath, 5 min. to Lab, avail. 9/1, \$700/mo. incl. all. Phil or Liz, 758-8428 days.

MEDFORD - 1-bdrm. apt., l/r, kit. full bath, priv. ent., nonsmoker, single, no pets, avail. 9/1, \$550/mo. incl. all. Rich, 475-0373.

MIDDLE ISLAND - 2nd floor, lg. bdrm., l/r, d/r, den, tennis, pool, 5 min. to Lab, \$685/mo., if move in by August, \$100 off per month, avail. now. Ruoyan, Ext. 4393 or 914-624-2146.

PORT JEFFERSON - large furn. room, 20 min. to Lab, priv. area, bath, cable, nonsmoker, \$100/wk. 473-6432.

RIDGE - furn. 1-bdrm. apt., l/r, kit., bath, deck, priv. ent., 5 min. to Lab, \$625/mo. incl. util., avail end of Aug./early Sept. Niu, Ext. 7607.

ROCKY POINT - master bdrm., guest bdrm., office, l/r, d/r, eik, gar., walk to beach, no pets, \$850/mo. + util. (718) 721-4271 weekdays, or 821-6698 weekends.

SHIRLEY - 2 bdrm. to rent, share house, nonsmoker pref., \$370/per rm., 10 min. to Lab, clean and neat. Carlos, 399-6390.

SOUND BEACH - 3-bdrm. Cape, 2 baths, eik, wood stove, full bsmt., w/d, lg. yd., quiet neighborhood, close to all, avail. 9/5, \$950/mo. + sec. Susan, Ext. 2184 or 821-5836.

SPEONK - 2-bdrm. contemp. condo, 1.5 baths, d/r, l/r combo, ceramic tile, new carpet, w/d, frig., stove, d/w, cac, igp, 15 min. to BNL, 5 min. to Westhampton, \$875/mo. Rich, Ext. 7129.

CATSKILLS - 3-bdrm. chalet w/sleeping loft, fully furn., near Hunter & Windham Mts., great for music festivals, hiking, swimming, golfing, fishing, etc., Kay, Ext. 4501, or Bea, Ex. 3642.

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, fully furn., 2 baths, pool, beach, golf nearby, through Sept. \$450/wk. Guy, Ext. 3147 or 689-5378.

### For Sale

BELLPORT SOUTH - 3-bdrm. ranch, l/r w/tp, d/r, bath, full bsmt., 20'x16' deck, det. 3-car gar., shy 1/2 acre, SCSD, city water, garbage pickup, near village and dock, red, to \$119,990. Ext. 2352 or 286-3377.

CALVERTON - 3-bdrm. ranch, bsmt., eik, d/r, l/r, gar., 12'x8' shed, 60'x130' fenced yard, new roof & well, 5 mi. from Lab, \$92,000. Ken, Ext. 2012 or 369-1473.

CENTER MORICHES - 4-bdrm. Cape, 2 baths, l/r, d/r, eik w/view, sunroom, full bsmt., gar., igp w/cabana, 2 park-like acres, \$199,000. 878-1529.

EAST PATCHOGUE - 3-bdrm. cedar ranch, south of S. Country Rd., quiet neighborhood, mint cond., \$130,000. Ext. 3291 or 589-3020.

MASTIC BEACH - 3 bdrm., gar., city water, oil base-board heat, solar panels, full fin. bsmt. w/bdrm. and full bath, 12'x25' app, \$109,000. Tirre, Ext. 3288