

New Physics Law Unifies Several Superconducting Compounds

A research group led by Christopher Homes, Physics Department, has discovered a simple relationship that mathematically links the properties of a class of high-temperature superconductors, materials that, below a certain temperature, conduct electricity with no resistance. This new, unexpected law applies to superconductors with very different structures and compositions, and may provide clues to understanding the mechanism of high-temperature superconductivity. It is discussed in the July 29, 2004 issue of *Nature*.

"Because this law unifies many different materials, it may allow us to predict the behavior of other superconductors, giving us deeper insight into how these systems work," said Homes.

This research is the result of a collaboration between researchers at BNL, including Sasa Dordevic of Physics; the University of British Columbia; the Central Research Institute of Electric Power Industry, Japan; Stanford University, in particu-

lar, Martin Grevin of Stanford; the Stanford Synchrotron Radiation Laboratory; the University of California at San Diego; and McMaster University. The research was funded by the Office of Basic Energy Sciences within DOE's Office of Science, the National Science Foundation, the Natural Sciences and Engineering Research Council of Canada, and the Canadian Institute for Advanced Research.

"Because this law unifies many different materials, it may allow us to predict the behavior of other superconductors, giving us deeper insight into how these systems work."

— Christopher Homes

To do this research, Homes and his team focused on several members of a class of high-temperature superconductors known as cuprates, which are characterized by layers of copper oxide. They studied each material using a wide range of light, from microwaves to ultraviolet rays, and then determined its electronic properties. In some cases, they worked at the National Synchrotron Light Source, a facility that produces

infrared, ultraviolet, and x-ray light for research.

The scientists found a relationship between three of each cuprate's physical properties: direct-current (dc) conductivity (how much direct current it conducts); critical temperature (the temperature below which it superconducts); and the "superfluid density" in the superconducting state. This last property refers to how many current

carriers — electrons or "holes," which are spaces in the electron sea that act positively charged — are in the superconductor.

The new law, called a scaling relation, states that the superfluid density is proportional to the dc conductivity multiplied by the critical temperature. When the researchers plotted this relationship on a graph for each material and compared the shape of these plots, they observed that the overall result is a straight line.

"The interpretation of this result and exactly what it says about the nature of the superconductivity in these materials



Roger Stoulenburgh 04S35694

is a source of ongoing debate," Homes said, "but it should provide insight into the origins of superconductivity in these materials, or even give us a way to predict the behavior of other superconductors."

Homes also applied the scaling law to two conventional superconductors, the metals

lead and niobium, using known measurements from literature. He and his group will continue to study certain other conventional superconductors, to see if they obey the scaling law.

— Laura Mgrdichian

For more details on this research, see www.bnl.gov/bnlweb/pubaf/pr/2004/bnlpr073004.htm.

BSA Awards Tenure to Six BNL Scientists

In recommending tenure for the Collider-Accelerator (C-A) Department's Vladimir Litvinenko, a senior scientist who is deputy group leader of the electron (e)-cooling project for the Relativistic Heavy Ion Collider (RHIC), C-A Chair Derek Lowenstein noted, "Dr. Litvinenko is recognized internationally as a highly talented accelerator scientist with outstanding contributions to the optical klystron activities at Novosibirsk [Russia], and to the Duke University 1-GeV [billion-electron-volt] storage ring. His expertise will enhance the standing of BNL in the science of accelerator physics, and po-

Brookhaven Science Associates (BSA) granted tenure on June 1 to six Brookhaven scientists. They are: Larry Kleinman, Environmental Sciences Department; Vladimir Litvinenko, Collider-Accelerator Department; William Kilgore, Physics Department; Sergei Maslov, Physics; David Morrison, Physics; and Thomas Ullrich, Physics. The Bulletin will feature a description of the accomplishments of each of the recent tenured scientists over the next few weeks.

Vladimir Litvinenko Collider-Accelerator Department

sition it better in the development of major research facilities involving electron accelerators and storage rings."

Litvinenko, a tenured associate professor at Duke University, joined C-A on June 1, 2003. That year, he was elected an American Physical Society Fellow, cited for "fundamental and pioneering contributions to the physics of beams in electron storage rings and free electron lasers, including demonstrating the optical klystron and advancing the short wavelength limit of FEL [free electron laser] oscillators."

FELs combine the coherence of laser light and the intensity,

tunability, and brightness of synchrotrons into one research tool, allowing investigations of a greater variety of materials and chemical reactions. An optical klystron (OK) is a novel combination of electromagnets that wiggle the beam to produce high intensity electromagnetic radiation in a tunable frequency range. In Novosibirsk, Litvinenko led a team that built an FEL based on an OK design and known as the OK-4 (serial no. 4) FEL.

Then, from 1991, Litvinenko led the design, commissioning, and upgrades of the 1-GeV Duke FEL Facility. The OK-4 FEL, which was brought in to be united with Litvinenko at Duke in 1995, and remains the main, most versatile instrument of the facility, generating beams of photons from the visible to gamma-rays. In 1988 and 1999, it was the first in the world to extend the FEL range to the ultraviolet (UV) wavelength and the vacuum ultraviolet, respectively. Litvinenko's team also generated coherent XUV (extended UV) harmonics from the OK-4 FEL in 2002.

Litvinenko's outstanding achievements also include his extraordinary contributions to the FEL-based High Intensity Gamma-Ray Source facility at Duke University, highlighted in the December 2002 *Physics Today* as unique in the world for intensity, energy tunability, and polarization. — Diane Greenberg and Liz Seubert

Another SNS Project Milestone Achieved by BNL Teamwork

After more than two years of hard work, the BNL/Spallation Neutron Source (SNS) Project Team gathered in Building 902 to celebrate the on-time completion of the last — No. 32 — half-cell magnet assembly before shipping the unit to the SNS accelerator construction site at Oak Ridge National Laboratory in Tennessee. As one of six DOE national labs in the SNS collaboration, which is funded by the Office of Basic Energy Sciences within DOE's Office of Science, BNL is responsible for designing, manufacturing, and testing the SNS accumulator ring and beam injection and extraction beam lines. When completed in 2006, the accelerator-based SNS will produce beams of neutrons for scientific areas from physics to biology. Some of the SNS team, which includes staff from the DOE Brookhaven Site Office, Collider-Accelerator Department, and the Superconducting Magnet Division, are pictured below.



Roger Stoulenburgh 02A70704



Roger Stoulenburgh D4360504

Inside

U.S. Representative Tim Bishop meets BNL summer students from Dowling Center

BNLer's son, 2003 World Silver wrestling medalist, goes for Olympic gold

By Q&As, see how BNL's Environmental, Safety, Security & Health policy commitments apply to you.

Calendar of Laboratory Events

- The BERA Sales Office is located in Berkner Hall and is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347; or Chris Carter, Ext. 2873.
- Additional information for Hospitality Committee events can be found at the Recreation Bldg. and at the laundry, both located in the apartment area.
- Contact names are provided for most events for more information.
- Calendar events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.

— EACH WEEK —

Weekdays: Free English for Speakers of Other Languages Classes

Beginner, Intermediate, and Advanced classes. Various times. All are welcome. Learn English, make friends. See www.bnl.gov/esol/schedule.html for schedule. Jen Lynch, Ext. 4894.

Monday: BNL Gospel Choir

5:15-7 p.m. Berkner Hall. All faiths are welcome. www.bnl.gov/bera/activities/choir/.

Mon., Tues., & Thurs.: Kickboxing

\$5 per class. Mon. & Thurs. noon-1 p.m. in the gym; Tues., 5:15-6:15 p.m. in the gym; Thurs., 5:15-6:15 p.m. in Brookhaven Ctr. Registration is required. Christine Carter, Ext. 2873.

Mon., Thurs., & Fri.: Tai Chi

Noon-12:45 p.m., Brookhaven Center North Room. Adam Rusek, Ext. 5830 or rusek@bnl.gov.

Tuesdays: Welcome Coffee

10-11:30 a.m., Apartment area gazebo/playground. First Tuesday of every month is special for Lab newcomers and leaving guests. Cindy Ottmann, 849-2646

Tuesdays: BNL Music Club

Noon, North Room, Brookhaven Center. Come hear live music. Joe Vignola, Ext. 3846.

Tuesdays: Jiu Jitsu Club

6:30-7:30 p.m. in the gym. All levels, ages 6 and above. \$10 per class. Tom, Ext. 4556.

Tuesdays: Toastmasters

1st and 3rd Tuesday of each month, 5:30 p.m., Bldg. 463, room 160. Guests, visitors always welcome. www.bnl.gov/bera/activities/toastmasters/default.htm.

Tues. & Thurs: Upton Nursery School

The school is on summer break. Contact Alison Tilp, Ext. 4465, or tilp@bnl.gov, for information on Sept. enrollment.

Wednesdays: On-Site Play Group

10 a.m.-noon. Apartment area gazebo/playground. An infant/toddler drop-in event. Parents meet while children play. Kati Petreczky, 821-4131.

Wednesdays: Farmer's Market

11:30 a.m.-1:30 p.m., Berkner Hall parking lot.

Wednesdays: Weight Watchers

Noon-1 p.m. Michael Thorn, Ext. 8612.

Wednesdays: Yoga Practice

Noon-1 p.m., Brookhaven Center. Free. Ila Campbell, Ext. 2206.

Wednesdays: Open Chess Night

5-8 p.m., Rec. Hall. Christine Carter, Ext. 5090.

Thursdays: Reiki Healing Class

Noon-1 p.m., Bldg. 211. Nicole Bernholz, Ext. 2027.

Thursdays: FreshDirect Delivery

3:30-5:30 p.m., Berkner Hall parking lot.

Fridays: Family Swim Night

5-8 p.m. at the BNL Pool. \$5 per family.

Fridays: BNL Social & Cultural Club

6-9 p.m. North Ballroom, Brookhaven Ctr., dance lessons, 9-11:30 p.m. general dancing. Rudy Alforque, Ext. 4733, rudy@bnl.gov.

THIS WEEKEND

Friday, 8/20

*Jazz Guitarist Craig Boyd in Concert
8 p.m. Berkner Hall. See notice, page 3.

— WEEK OF 8/23 —

Monday, 8/23

IBEW Meeting

6 p.m. Centereach Knights of Columbus Hall, 41 Horseblock Road, Centereach. A meeting for shift workers will be held at 3 p.m. in the union office. The agenda includes regular business, committee reports, and the president's report.

Tuesday, 8/24

*Graphite Reactor Cleanup Public Mtg.

7-9 p.m. Berkner Hall. A public meeting will be held on the proposed Graphite Reactor cleanup plan. All are welcome. Open to the public. Visitors to the Lab of 16 and over must carry a photo ID.

U.S. Representative Tim Bishop Meets Dowling Center Students In Summer Program at BNL's Office of Educational Programs

On August 12, U.S. Representative Timothy Bishop (standing, seventh from right) talked to a group of pre-teacher undergraduates and high-school students from the Dowling Center for Minority Teacher Development & Training. The students attended a two-week summer session of hands-on field research with scientist mentors and classes at BNL through the Lab's Office of Educational Programs (OEP).

Also visiting BNL to see and congratulate the students on their achievements are Dowling Center Director Lizette Washington (back, second from left) and Dowling College's Assistant Associate Provost for Education Clyde Payne (back, fourth from left). Representing Battelle, Inc., one of the two Brookhaven Science Associates partners that manage BNL, is BNL's Legal Counsel, Gregory Fess (right).

Said OEP Manager, Kenneth White (left), "This was a very successful, many-partnered collaboration, made possible by the support of the Dowling Center; a generous \$5,000 gift from Battelle Inc.; the use of BNL's facilities and staff, which in turn



Joseph Rubino 0819084

are supported by DOE; and a guest lecture by Isadore Doroski from the Suffolk County Department of Health Services. With so many institutions and agencies to help, I hope that this program will run for many summers to come and serve as a first step to

give many more Dowling Center students a first-hand experience with scientific research."

The program at BNL, which was run for the Dowling Center and BNL by John Black (standing, fourth from right) and Joan Horn (standing, third from

right), included lectures and field practice for environmental research methodologies, field trips to various BNL sites, and other trips to local ecological sites including sensitive areas, recycling facilities and waste treatment facilities. — Liz Seubert

Environment, Safety, Security & Health Audit

As part of the process for three pilot organizations (Central Fabrication Services Division, Collider-Accelerator Department, and the Plant Engineering Division) to achieve Occupation, Health, Safety Assessment Series 18001 Registration (OHSAS 18001), the Lab will undergo a final audit September 22-24. If the auditors conclude that these organizations have met the mandates for registration, the Lab will be the only facility in the DOE complex to have elements of its operations achieve such status. This is the first of a four-part series that will help you understand how BNL's Environment, Safety, Security, & Health (ESSH) policy commitments apply to you. The complete policy is available on the Environment, Safety, Health and Quality Directorate (ESH&Q) website at www.bnl.gov/ESHQ/ESSH.asp or via the A to Z site index under ESSH Policy.

As a Lab employee, you should be prepared to answer questions asked by the auditors. Your answers should be specific to your own work. Examples of what to expect follow.

Know the Policy

In order to provide a safe and healthy workplace, prevent injuries and illnesses, and protect the environment, all BNL employees, facility users, contract workers, and guests have an obligation to comply with the Lab's ESSH requirements. Every person is expected to report any unsafe conditions within the workplace that may threaten his/her physical well-being or violate ESSH or relevant standards.

Q: Do you know how to perform your work safely? Do you know the hazards that are associated with your work?

A: To learn the process to help me perform my job safely, I can refer to the Work Planning and Control for Experiments and Operations Standards Based Management System (SBMS) subject area. To identify and communicate hazards and controls directly relating to my job tasks, I can refer to my work permit or my operating procedures. I know that Standard Operating Procedures and work permits identify controls for safe operations for moderate and high hazard tasks. I will ensure that my training is kept current, and I will communicate safety concerns to my supervisor or manager.

Q: Do you understand your responsibility regarding personal and co-worker safety? Are you authorized to stop work?

A: I will consider the safety of others at all times. Everyone has the right to issue a STOP WORK order if he/she perceives imminent danger to a person, property or the environment.

Q: Do you know how to report ESSH concerns?

A: Avenues for reporting ESSH concerns are:

- Alert my line management.
- Report to my department or division's ES&H Coordinator or to other safety professionals.
- Alert personnel in the Environment, Safety, Health & Quality Directorate by calling the safety hotline, Ext. 8800.
- If I am covered by a labor agreement, I may also address ESSH concerns through my union steward or safety representative.
- If I still believe a condition or practice violates BNL's standards, I may contact the Employee Concerns Manager, Ext. 2888.
- If all other avenues have proved unsatisfactory, I may call the DOE Brookhaven Site Office, Bldg. 464, Ext. 4363.

Any questions regarding OHSAS 18001 Registration or Occupational Safety and Health (OSH) issues may be directed to BNL's OSH management representative Jim Tarpinian, Assistant Laboratory Director for Environment, Safety, Health, & Quality, Ext. 8370, or tarpinian@bnl.gov.

Hispanic Dance Performance, 9/18 Sol y Sombra to Feature Flamenco Music and Dance

BNL's Hispanic Heritage Club will hold a Hispanic dance performance in Berkner Hall on Saturday, September 18, at 7 p.m. Featuring the Sol y Sombra Dance Company in a program called "Ida y Vuelta: Dances of Spain and Latin America," the performance will explore the similarities of the music and dances of these areas and will include Flamenco dance with singers and musicians, Argentinian tangos, and the national dances of Mexico.

Founded in 1984 by Maria Loreta, the Sol y Sombra Dance Company is a not-for-profit company composed of nationally recognized professionals in the field of Spanish dance and music. The company has served as a vehicle for an educational and aesthetic appreciation of Hispanic culture throughout the New York metropolitan area and beyond. Sol y Sombra's performance has been made possible in part with grants from the Suffolk County Office of Cultural Affairs and the New York State Arts Council.

Advance-sale tickets for the performance cost \$12 for adults and \$6 for children under age 10. Tickets purchased at the door on the evening of the performance cost \$15 for adults and \$8 for children under 10. Seating is limited, so purchasing advance-sale tickets is recommended.

Tickets may be purchased in advance by mail or in person. To order tickets by mail, send your ticket request and a check payable to BERA to: Brookhaven National Laboratory, BERA Sales Office, Bldg. 488, Berkner Hall, Upton, NY 11973-5000. Include your return address and phone number. Tickets will be mailed to you if your request is postmarked no later than September 10. Advance-sale tickets will also be sold at the BERA Sales Office in Berkner Hall, from 9 a.m. to 3 p.m. on weekdays. For more information, call (631) 344-3347.

— Diane Greenberg



Walk to Fund Cancer Research

The 11th Annual Walk for Beauty will be held on Sunday, September 19, in Stony Brook. The annual 4/6 kilometer walk through scenic, historic areas of the village raises funds for breast and prostate cancer research at Stony Brook University.

At the Lab, the Women's Program Advisory Committee is gathering a BNL team to "walk the walk."

A flyer, brochure with printer-friendly registration form, walker sponsor sheet, and driving directions, are available at www.bnl.gov/diversity/womens%20new.asp. All participants are responsible for their registration and fee of \$20 or \$50 for sponsors. If you have any questions or would like to help, contact Stasia Scocca, Ext. 3979 or scocca@bnl.gov.

Gretchen Cisco of NSLS Hopes Son Will Bring Home Gold

McCoy, placed fifth in 2000 Olympics, wrestles in Athens next week

For the second time in four years, Gretchen Cisco, Deputy User Administrator in BNL's National Synchrotron Light Source Users' Administration Office, will be watching from

the stands with excitement and nervous anticipation as her son, Olympic heavyweight freestyle wrestler Kerry McCoy, competes in the 2004 Olympic Games in Athens, Greece.

Cisco is no stranger to the Olympic wrestling arena, as she was present for McCoy's fifth-place finish — the result of a controversial quarter-final match — at the 2000 Games in Sydney, Australia.

120-kg. (264.5-lb.) weight class at the 2004 Olympic trials held May 21-23 in the RCA Dome in Indianapolis, Indiana.

McCoy, who now lives in Bethlehem, Pennsylvania, and is an assistant wrestling coach at Lehigh University, is a graduate of Longwood High School.

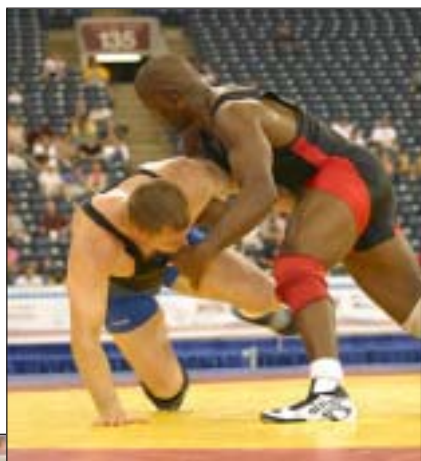
McCoy credits his mother for much of his success. "She's the most important person in my life, and I couldn't do it without her support," he said. "Any time I have a major accomplishment, she's the first person I want to thank."

McCoy will be able to thank his mother in person, because Cisco is departing for Greece next Monday, August 23, and will be among the thousands of wrestling fans in the Olympic Hall in Ano Liossia in the northwest region of Athens watching as her son competes for the gold medal.

The men's freestyle competition will be held on Friday, August 27, and Saturday, August 28, and will be televised on NBC on Friday, August 27, from 12:35 a.m. to 2 a.m. and on Saturday August 28, from noon to 6 p.m. For a complete schedule, see www.nbcolympics.com.

— John Galvin

Right: Kerry McCoy (right), son of Gretchen Cisco, National Synchrotron Light source, secured his spot on the U.S. Men's Wrestling Team by finishing first in the 120-kg. (264.5-lb.) weight class at the 2004 Olympic trials held May 21-23 in the RCA Dome in Indianapolis, Indiana.



Below: McCoy (middle row, right) pictured with the U.S. Olympic Wrestling Team.



"Returning to the mat after the loss in Sydney was a difficult decision for Kerry," said Cisco. "And things didn't go exactly as planned once he made that decision."

For example, the 2001 World Championship, scheduled to be held in New York City on September 28, 2001, was cancelled following the September 11 terrorist attacks. Then, for security reasons, the U.S. team was not permitted to participate in the 2002 World Championships, which were held in Iran.

However, things looked brighter in 2003 when McCoy placed second, winning the silver medal, at the 2003 World Championships in New York City. The gold went to Uzbekistan's Artur Taymazov, the silver medalist at the 2000 Olympics.

McCoy went on to secure his spot on the USA Men's Freestyle Team by finishing first in the

Train as a Literacy Volunteer

In Suffolk County, one in seven adults has few or no skills in basic reading and writing or English language. You can help by training as a tutor with Literacy Suffolk (LS), Inc. After an eight-session workshop in basic literacy — reading and writing — and English for Speakers of Other Languages (ESOL), you will be matched with one or more learners for tutoring at a convenient public place and/or at BNL. Volunteers meet with learners for over an hour a week, for at least one year. Four LS volunteers currently tutor BNL community members who have limited English skills.

Training sessions begin in September and October and are offered at the Mastic-Moriches-Shirley Community Library and other libraries across Long Island. Registration is \$25, reimbursed, for BNLers who complete the training, by BNL's Volunteers In Partnership. To register, or for information, contact Jennifer Lynch, BNL's ESOL Program Coordinator, Ext. 4894 or lynch@bnl.gov.

Financial Planning Seminar, 9/15

All are welcome to attend a financial planning workshop provided by Fidelity Investments on Wednesday, September 15, from noon to 1 p.m., in Berkner Hall. Workshop participants will learn how to:

- identify key factors that may influence the way you invest
- learn about the economy's impact on investment performance
- discover the ins and outs of mutual-fund investing
- learn about indexes, benchmarks, and rating services
- gain insight on risk measures, such as beta and standard deviation

Pre-registration is necessary for this workshop. Check your mailbox for registration forms. Return completed forms to Joyce Wund, Bldg. 185, by Wednesday, September 1.

Get a PerksCard For Countless Discounts!

Through BERA, PerksCards will be distributed to anyone who asks for them on Monday, September 13, in Berkner Hall lobby, 11a.m.-1 p.m. Cards will also be available in the BERA Sales office, and in various locations site wide. Once you get a card, you can go to the website below and use the BNL code to become eligible for all sorts of local, national, and even international discounts. Find out more by visiting www.perks card.com/. BERA has available other discounts for BNLers. For details, visit the BERA homepage, www.bnl.gov/BERA/.

Softball Standings

as of August 13, 2004

	W	L
Sure Fire	10	1
Mesocyclones	8	3
Bar Flies	8	3
Bombers	7	4
Chemically Imbalanced	4	7
Ten Samurai	4	7
Medical	2	9
Red Devils	1	10

Jazz Concert Tonight, 8/20

Jazz guitarist Craig Boyd, performing with his ten-piece band, will appear in concert at Berkner Hall at 8 p.m. tonight, Friday, August 20. Boyd will play selections from his debut CD, called "Back on Track," at the public concert, which is sponsored by the BNL Music Club. All visitors to the Lab age 16 and over must bring a photo ID.

Craig Boyd started taking guitar lessons at the age of six and after playing in bands since age 11, chose music as his career. He has worked as a composer, arranger, producer and studio guitarist for name groups and solo artists. Currently, Boyd is Academic Chair of Music at Suffolk County Community College, and he is also a producer and engineer for numerous musicians, including Grammy Award-winning Dave Holland.

Buy tickets for the show, at \$20 each in advance at the BERA Sales Office until 3 p.m. At the door, tickets will cost \$25 each. For more information, call Ext. 3846.

Smoking Cessation Program at BNL

There is still room in the Occupational Medicine Clinic's Health Promotion Program's on-site smoking cessation program entitled "Learn to Be Tobacco Free," which is presented by the Suffolk County Department of Health Services and demonstrates a success rate of over 60 percent.

The program will run for six consecutive weekly sessions from noon to 1 p.m. in the large conference room in Bldg. 490 beginning on Thursday, September 2. BNLers, their spouses, and family members are welcome to register. To register, or for more information, contact Michael Thorn, Ext. 8612, or mthorn@bnl.gov.

Enroll Your Child at Upton Nursery School Learning is fun for 3- and 4-year olds!

Enroll now for the Upton Nursery School, a not-for-profit, cooperative nursery school that meets at the Recreation Building in the apartment area and provides a warm, caring, and stimulating environment for 3- and 4-year-old children. Classes meet two mornings a week, and a third morning is being considered at this time.

A brown-bag lunchtime organizational meeting will be held at noon on Tuesday, August 31, at the playground in the apartment area. All interested parents are welcome to attend. Bring your lunch, meet other parents and their children, and learn more about the school. Rain location is apartment 5A.

For more information or to register your child, contact Amie Kennedy, 727-8082, abk22@care2.com, or visit the school's website at www.bnl.gov/nurseryschool.

On-Site Service Station: Tip of the Month

Anyone who is thinking about buying new tires should remember that mixing tire types or sizes, or new with partially worn tires may cause unpredictable handling, braking, or loss of vehicle control. New tires should be installed on the rear axle. The Upton Services Inc., service station will be pleased to obtain and fit tires for you while you are at work. Call Ext. 4304 for more information.

Calendar

(continued)

— WEEK OF 8/30 —

Tuesday, 8/31

***Upton Nursery School Meeting**
Noon at the playground in the apartment area. All interested parents are welcome to attend this brown-bag lunchtime organizational meeting. Bring your lunch, meet other parents and their children, and learn more about the school. Rain location is apartment 5A. For more information or to register your child, contact Amie Kennedy, 727-8082, abk22@care2.com, or visit the school's website at www.bnl.gov/nurseryschool. See notice below, left.

Thursday, 9/2

BNL Career Network Group Meeting
Noon, Berkner Hall, Room A. All are welcome. Cathy Wehrmann, Ext. 7823.

— WEEK OF 9/6 —

Monday, 9/6

Lab Closed for Labor Day Holiday
BNL will be closed on Monday to celebrate the Labor Day Holiday. No Bulletin will be issued on Friday, September 10.

Tuesday, 9/7

Caring Friends Meet
Noon, Berkner Hall, Room D. All are welcome to join an informal support group serving as a resource for individuals experiencing grief following the loss of a loved one. Call Pat Hein, Ext. 3962, or Gerry Van DerLaske, Ext. 3476.

Wednesday, 9/8

Rifle & Pistol Club Meeting
Noon, Conference Room, Bldg. 535. All are welcome. Come and learn about club activities and obtain assistance and instruction in the maintenance and safe use of firearms. Jim Durnan, Ext. 8236, or www.bnl.gov/bera/activities/tpc/.

Thursday, 9/9

***Blood Drive**
9:30 a.m.-3 p.m., Brookhaven Center. Those eligible to donate are people in good health between the ages of 17 and 75 who weigh at least 110 pounds. Restrictions may apply to individuals from the United Kingdom and Europe. Donors should have a photo ID and know their social security number. Contact Susan Foster at Ext. 2888, or e-mail donate@bnl.gov with your name, phone extension, and preferred time to donate.

***BERA-Sponsored Book Fair**
10 a.m.-2 p.m., Berkner Hall. A wide selection of books at discount prices will be on sale.

Friday, 9/10

***BERA-Sponsored Book Fair**
10 a.m.-2 p.m., Berkner Hall. A wide selection of books at discount prices will be on sale.

— WEEK OF 9/13 —

Wednesday, 9/15

***Financial Planning Workshop**
Noon-1 p.m., Berkner Hall. All are welcome to attend a financial planning workshop by Fidelity Investments. Pre-register using the form sent to your mailbox. Return completed forms to Joyce Wund, Bldg. 185, by Wednesday, September 1. See also notice at left.

Friday, 9/17

***Dance to Hacks, Trenton Horns**
7:30 p.m. Brookhaven Center North Room. Sponsored by the BNL Music Club and BNL Social & Cultural Club. All are welcome to dance or listen to the Hackensack Men and Trenton Horns. \$10 ticket. See notice on page 4.

Saturday, 9/18

***Hispanic Dance Performance**
7 p.m., Berkner Hall. BNL's Hispanic Heritage Club will hold a Hispanic dance performance that will feature the Sol y Sombra Dance Company in a program called "Ida y Vuelta: Dances of Spain and Latin America." See notice on page 2.

Note: This calendar is updated continuously and will appear in the Bulletin whenever space permits. Submissions must be received by the preceding Friday at noon to appear in the following week's Bulletin. Enter information for each event in the order listed above (date, event name, description, and cost) and send it to bulletin@bnl.gov. Write "Bulletin Calendar" in the subject line.

Book Fair, 9/9 & 10

BERA invites the Lab community to visit the "Books Are Fun" Book Fair to be held in Berkner Hall on Thursday and Friday, September 9 and 10, from 10 a.m. to 2 p.m. A wide selection of books at discount prices will be on sale.

Arrivals & Departures

Arrivals

Arantzazu Cuadra Gascon ES&T
Tadas Krupovnickas Physics
Edward Luke Env. Sci.

Departures

Young-June Kim Physics
Michael Lake Biology

From the Big Bang to the Infinitely Small

Summer Sundays

On Sunday, August 22, visitors at this year's final BNL's Summer Sunday Tour will learn what you get when you smash two beams of gold particles moving at 99.9 percent of the speed of light. With these collisions, scientists are hoping to create matter that existed in the first millionth of a second after the Big Bang. Detectors three stories tall look for the tiniest building blocks of the universe. It's astounding – and not to be missed. Tours are free and no reservations are needed. Visitors may arrive any time between 10 a.m. and 3 p.m. All visitors of age 16 and over must bring a photo ID.

Additional attractions are: a new hands-on "Light & Color" exhibit, produced by the Oregon Museum of Science & Industry; an exhibit on the 2003 Nobel Prize in Chemistry, researched in part at BNL; a demo by high-school students of a robot they built; and the "Whiz Bang Science Show," with new special effects, to be given at 10:30 a.m., noon, 1:30 p.m. and 3 p.m.

Hurry to the Hackensacks! Evening of Live Music, Dancing, 9/17

The BNL Music Club and the BNL Social & Cultural Club will sponsor an evening of dancing, sophisticated fun, and high energy, on Friday, September 17, at 7:30 p.m., featuring The Hackensack Men and The Trenton Horns. The Hacks, as they are affectionately known, have been entertaining audiences along the East Coast for nearly 20 years.

Ten talented professionals, the Hacks include two front men, drums, bass, guitars, piano, percussion and a three-piece horn section — and they dance as well as they play. The Hacks get your feet tapping to the best of live soul, R&B, swing, and rock & roll, with the music of the Temptations, Sam & Dave, Wilson Pickett, and the Blues Brothers. To facilitate dancing, the show will be held in the Brookhaven Center North Room. All tickets are \$10. Purchase tickets at the BERA Sales Office or call Ext. 5257.

School Supplies Urgently Needed

BNLers are asked to help local children in need by donating school supplies to Brookhaven Town Interface, which supplies more than 18 different agencies who help care for children in need. Notebooks, binders, paper, pencils, pens, crayons, rulers, school bags, etc., are all welcome. Donations may be left at the BERA Store in Berkner Hall, Bldg. 488, and at the Quality of Life/Recreation Office in Bldg. 179B.

Classified Advertisements

OPEN RECRUITMENT – Opportunities for Laboratory employees and outside candidates.

MK2519. SCIENTIST (S-3) – Requires a Ph.D. in nuclear engineering physics with specialization in nuclear sciences, a background in nonproliferation and nuclear safeguards and security, and the capability to independently assess safeguards activities and systems for countering SNM theft or diversion. In addition, must have familiarity with US/RF MPC&A Safeguards Cooperation Program, 15 years' safeguards experience, 5 years' management or supervisory experience, and demonstrated ability to lead a technical organization. Must hold a "Q" access authorization or equivalent. Will lead the Technical Survey Team in providing ongoing, independent, objective, focused advice to the DOE/NNSA Assistant Deputy Administrator (ADA) of the Office of International Material Protection and Cooperation (IMP&C, NA-25) by conducting annual progress reviews NA-25 Projects as assigned by the ADA, by reviewing and providing feedback on proposed Project Work Plans, by preparing technical issue papers on topics of special interest as requested by the ADA and participate in and support Program functions such as Joint Coordinating Committee Meetings. Under the direction of J. Indusi, Non-proliferation & National Security Department.

MK4107. SCIENTIST (S-3) – Requires a Ph.D. in health physics and American Board of Health Physics Certification, twenty years' experience in a broad range of radiological protection including instrumentation, hands-on field experience in operational health physics, research, program development, and emergency planning. Requires the ability to travel to non-tourist locations under austere conditions, possession of strong teamwork skills, a professional approach to all work contacts, and the ability to be very flexible and adaptable to rapidly changing conditions and requirement. Effective oral and written communication skills are a major consideration. Must have or be able to obtain and maintain a "Q" access authorization. Will provide scientific support in the areas of health physics for programs in the Nonproliferation & National Security Department including the U.S. Department of Energy's Radiological Threat Reduction Program. Under the direction of P. Moskowitz, Nonproliferation & National Security Department.

MK3151. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. in physics, chemistry or materials science, demonstrated ability for independent research on semiconductor thin films or nanostructures, experience in ultra-high vacuum (UHV) thin film or nanostructure preparation, preferably involving group IV semiconductors (Si-Ge), substrate patterning and lithography. Previous hands-on experience in atomic force microscopy and transmission electron microscopy is desirable. Research will focus on group IV semiconductor nanostructure formation and strain engineering on silicon-on-insulator substrates. Under the direction of E. Sutter, Center for Functional Nanomaterials.

MK4149. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. in experimental physics and extensive experience with conducting experimental physics programs. Experience with the handling of mercury is extremely desirable as is previous experience working with high-magnetic field. Experience with the design and handling of high-energy proton beams will also be positively considered. The successful candidate will be responsible for the on-site management of a proposed high-power target experiment at CERN. The experiment entails bringing together a high-power, high-energy (24 GeV) proton beam, a high speed (10-20 m/s) free mercury jet, and a high-field (15T) solenoidal magnetic field. Success of this experiment will lead toward the production

of intense muons beams. Relocation to the Geneva area is required. Under the direction of H. Kirk, Physics Department.

MK4163. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. in chemistry with experience in UHV surface analysis techniques (XPS, UPS etc.). Experience in one or more of the following is highly desirable: preparation and characterization of metal-oxide thin films, electrochemistry, photochemistry techniques for surface and material characterization (STM, AFM, TEM, ATR-IR, XRD, etc.), and DFT calculations. Research will involve the investigation of photochemical reactions using solar-range irradiation of metal-oxide semiconductors modified to absorb more of the solar spectrum. Studies will focus on characterizing such materials to determine the nature of their catalytic sites and on optimizing their performance by manipulating their active sites at the atomic level. Both well-defined surfaces and bulk materials will be used for this study. Under the direction of E. Fujita and J. Rodriguez, Chemistry Department.

TB2178. HEAVY EQUIPMENT MAINTENANCE SUPERVISOR (T-5) – Requires a minimum of 10 years' progressive supervisory experience in heavy equipment fleet maintenance, construction, excavation, roads and grounds. Must have detailed knowledge and experience in the operation and maintenance of, but not limited to, earth moving equipment, fixed and mobile cranes, diesel generators, elevators, material handling, roads and grounds maintenance equipment. In addition, requirements include experience working with preventive and corrective maintenance systems, estimating, project planning, the ability to coordinate and schedule multi-craft activities, possession of a Class A CDL with endorsements, working knowledge of computers and software applications, and the ability to communicate technical information on all levels of the organization. Must have demonstrated good work habits, the ability to apply Environment, Safety & Health practices in the field, and the ability to work extended hours during the winter months for snow-clearing activities. A crane operator's license is highly desirable. Will be responsible for the first line supervision of the Plant Engineering Division's heavy equipment mechanic-operator shop. Plant Engineering Division.

Motor Vehicles & Supplies

03 YAMAHA YZFR6 - spc. ed., full race exhaust, 1K mi., helmet, mint cond., \$7,500/neg. Gordon, Ext. 7182 or 433-7136.

02 HARLEY DAVIDSON SPORTSTER 883 - red pearl, extras, 800 mi., \$6,150. Karl, 477-0817.

02 HONDA ACCORD LX COUPE - a/t, a/c, p/s, p/b, p/w, excl. cond., 18K mi., \$14,900. Yongbin, Ext., 2835 or leng@bnl.gov.

02 HONDA CIVIC EX - a/t, a/c, dk. blue, sunroof, excel. cond., 32K mi., \$12,900. Ted, Ext. 7992 or 331-4820.

02 VW JETTA - 5spd., 2L, red, Monsoon radio, great shape, must sell, 27K mi., \$12,500. Rich, Ext. 5284 or 924-4237.

01 KAWASAKI ZX9R - v. gd. cond., adult owned, 6K mi., \$5,400. Lawrence, Ext. 4797 or 288-0225.

01 YAMAHA BANSHEE - ATV, 350 cc, 6spd., great cond., many extras, \$3,500. Arlene, 878-6007.

01 YAMAHA BLASTER - KNN airfilter, FMF, pipes, clutch, piston, cables, pwr. reeds, heads milled, more, \$2,000. Bill, 929-4663.

00 NISSAN QUEST - minivan, a/t, a/c, p/s, p/b, p/w, clean, dependable, many extras, 85K mi., \$10,000. Robert, Ext. 3148.

99 DODGE CARAVAN LE - 4dr., a/t, a/c, p/s, p/b, p/w, 3.3L V6, remote start, more, 82K mi., \$6,850. John, Ext. 8082 or 929-8204.

98 JEEP CHEROKEE - a/t, a/c, p/s, p/b, p/w, new shocks/tires/brakes/sterco, well main., 126K mi., \$6,500. John, 289-0557.

97 MITZUBISHI MIRAGE - a/t, a/c, great 1st. car or for around the Lab, 150K mi., \$1,400/as is. Shannon, Ext. 5415.

96 DODGE GRAND CARAVAN - a/t, a/c, p/s, p/b, p/w, seats 7, am/fm/cd/cass., well maint., 140K mi., \$3,000. Harry, 474-4410.

96 NISSAN QUEST - a/t, a/c, p/s, p/b, p/w, seats 7, excel. cond., more, 123K mi., \$4,400. Steve, Ext. 7936 or 241-8440.

96 TOYOTA CAMRY - a/t, a/c, p/s, p/b, p/w, new windshield, 4-struts, radiator, more, reliable, 90K mi., \$3,200. Martin, 874-3478.

95 MERCURY GRAND MARQUIS GS - 4 dr., roof, orig. owner, gar. kept, excel. cond., 92K mi., \$5000. Vinnie, 588-8492.

93 FORD F-250 XLT - 5spd., a/c, p/s, p/b, p/w, diesel, 4x4, tow pkg., more, 156K mi., \$4,400. Ed, Ext. 7251 or 765-4147.

93 FORD PROBE GT - 5spd., a/c, p/s, p/b, p/w, new batt., needs trans., 105K mi., \$350. Tirre, Ext. 3288 or 281-7720.

93 PONTIAC BONNEVILLE - sunroof, 167K mi., \$1,200. Ben, Ext. 4299 or 689-7326.

92 GMC SAFARI VAN - a/c, p/s, p/w, 91K mi., \$2,000. Dean, Ext. 4677.

92 KAWASKI KX80 BIGWHEEL - new cyl., piston, rings, bearings, air filter, motor gears, paint, more, \$1,100. Bill, 929-4663.

92 PONTIAC FIREBIRD - a/t, a/c, p/s, p/b, 168K mi., red coupe w/t-tops, gd. cond., \$1,000. Ed, Ext. 7786 or 929-5676.

87 FORD MT5 WAGON - 5spd., a/c, p/s, p/b, well maint. everything works, 115K mi., \$650. Gary, Ext. 2576 or 589-5490.

87 SUNLINE TRAVEL TRAILER - 22' camper, gd. cond., sleeps 6, bath/shower, tow pkg., more, \$3,400. Nancy, Ext. 4303.

SEATS - Summit polymer hi-back racing, blk. padded covers, RCI 5-pt. harnesses, new, \$150/pr. Rich, Ext. 7294 or 929-1058.

RIMS - Ford Explorer alum. deluxe, 15"x8", excel cond., \$200. Ned, Ext. 3402 or 289-3360.

Boats & Marine Supplies

25' CHECKMATE - '86 Convincer w/trailer, excl. cond., cuddy cabin, 500h, 70+ mph, many extras, \$18,000. Bob, 929-4753.

23' COBIA - '86 Galaxy w/trailer, cuddy cabin w/head, 190 Mercury i/o, sleeps 4, \$2,500. Lois, 929-4753.

19' FIBERGLASS BOAT - w/trailer, '77 w/ 70hp Johnson, will demonstrate, \$1,200. Robert, 588-2740.

14' HOLDER/HOBIE - '88 Daysailer, jib & main, mail 1 yr. old, ready to sail, excel. cond., \$1,200. John, 475-0711.

ANCHOR - Hooker 18, galvanized, suitable for 31' -34' boat, \$20. Chris, Ext. 2024 or 395-6112.

01 SEA RAY - 215 Express Cruiser, cuddy cabin, full canvas, 167 hrs., extended warr. to 5/15/06, \$25,000. Naomi, 725-4068.

Furnishing & Appliances

AIR CONDITIONER - (2) 5,000 Btu window units, \$25/ea. Tirre, Ext. 3288 or 281-7720.

BEDROOM SET - lg. country style, solid wood, 6' dresser/L-M hutch, armoire, q-headboard, more. \$350. Bill, 698-4882.

BEDROOM SETS - full/queen, \$150; 2nd bdrm. set, \$75; sm. dresser, \$10; entertainment ctr., \$50. Rita, 821-8650.

CABINET - Antique Hoosier, base only, gd. cond., \$195. Arlene, 749-2051.

COMFORTER SET - King size, reversible, w/2 shams, sheets, new, 3 pillow cases, \$40. Susan, Ext. 7235 or 399-7997.

DEN FURNITURE - "This End Up" solid pine, sofa, love seat, ottoman, coffee table, end table, 2 trays, \$550. Guy, 208-3875.

DINING ROOM - blk. lacquer table, 4 chairs, 2 arm chairs, china cabinet w/light, \$650. Je, 767-1109.

DISHWASHER - 30" portable Whirlpool, butcher block top, v. gd. cond., \$160. Joan, 744-9423.

COUCH - Ethan Allen Colonial style, \$225; 2 chairs, \$100/ea.; 2 end tables, \$95/ea. Lester, 473-5092 after 6 p.m.

KITCHENAID - stand mixer 4.5 qt., \$110; rotoslicer/shredder, \$35, all approx. 1.5 yrs. old, Steffen, 281-1573.

KITCHEN APPLIANCES - Kitchenaid elec. self cleaning range; refrig., microwave, more. Brian, Ext. 2799 or 757-1581.

MICROWAVE - \$20; 2 book cases, \$20, folding tables, dining rm. table & chairs, \$80, more. Victor, 281-1441.

WASHER/DRYER - Kenmore elec., used, work very well, will supply all required fittings, \$25. Louise, 475-6056.

Tools, House & Garden

BBQ - Kenmore propane, stnless. steel, x-lg. cooking area, side burner, rotisserie cover. 2 yrs. old, like new. \$500 neg. 205-0410.

GARAGE DOOR - 9X7 automatic Liftmaster opener, 4 windows. Arlene, 749-2051.

SEWING MACHINE - Brother LS 1520, 1.5 yrs. old, \$50. Steffen, Ext. 2079.

POWER PAINT ROLLER - Wagner model 959, brand new, \$50. Rich, Ext. 7294 or 929-1058.

WELDER - elec., Hobart, comm., on wheels, boxes of rods, 2 helmets, cables, mint cond., \$500. Annamarie, 878-8967.

WELDING MACHINE - \$200; mid-size pick-up truck tool box, \$125; vinyl bed cover, \$125. Joseph, 924-7476.

Sports, Hobbies & Pets

BIKES - men's/women's Trek 7300, MultTrack, Alfa custom alum., more, excel. cond., \$325/ea. John, 874-4049.

BOW FLEX - fully integrated, leg attachmt., pec bar in gd. cond. Susan, Ext. 2418.

POKER CHIPS - 500, 11.5 grams, alum., case w/cards & dice, new, excel. gift, 70, have several. Paul, Ext. 5829 or 289-9152.

TICKETS - preseason, Jets/Giants, 8/27, Jets/Eagles, 9/3, 4 tix per game, face value, \$60/ea. Jim, Ext. 7859 or 924-7374.

WEIGHT BENCH - heavy duty, incline/decline w/preacher, leg fly & dip attachmts, \$50. Rich, Ext. 7294 or 929-1058.

TREADMILL - Proform 740, pulse/calorie monitor, inclines, many workout programs, \$300. Marie, Ext. 5483 or 744-0790.

Audio, Video & Computers

POWERSAMPLER CARD - Creamware PCI audio card w/sophisticated software & sample cd incl., \$160. Maxim, Ext. 3621.

COMPUTER DESKS - (2) long and sm., \$15/ea. Victor, 281-1441.

DELL - 2100 blk., 1Ghz CPU, 256Mb ram, 20Gb hd, \$275; L1000cx, white, 1.1Ghz, same as other, \$250. Don, Ext. 7237 or 929-6571.

DVD/HIFI VCR COMBO - almost new, \$65; USB 2 hard drive, Gb20, \$45. Reddy, Ext. 3747.

LAPTOP - Dell Inspiron 7000 computer, 6 g hd, CD rom, floppy, 128Mb ram, Win XP, \$200. William, Ext. 7131.

TELEVISION - 25" console. \$50. Rita, 821-8650.

Wanted

HOUSE SITTING POSITION - prof. woman avail. to house-sit/manage your home long term, 1 yr. or more, refs. avail. 736-3010.

RESEARCH VOLUNTEERS - men and women, ages 18 and over, are needed for PET study. Strictly confidential, fee provided. 344-5015.

TUTOR - for English, native language is Chinese, exchange English/Chinese. Sharry, 345-5028.

Miscellaneous

KIDDIE PICNIC TABLE - Playskool, \$10. John, Ext. 4028.

STAIR LIFT - Silver Glide, excel. cond., \$1,300. Donna, Ext. 8389 or 929-0351.

SWING SET - Wood Kingdom, 3 swings, for w/slides, climbing tower, gd. cond., \$400. Lloyd, 422-6252.

UNIQUE PIÑATAS - all occasions & characters, cartoon, Disney, Sesame Street. Donna, 821-0359.

Yard & Garage Sales

RIVERHEAD - household items, more, Saturday, 8/21, 9 a.m.-5 p.m., 35 Quogue Ave. off Flanders Rd. Terry, 727-6369.

Free

DOG - Cocker Spaniel for adoption to loving home, 6-mo.-old male, blk./white, v. friendly, Mike, Ext. 2960.

JUNK CARS - removed, Rich, 589-9103.

Happenings

ART SHOW - Bank of NY, Hampton Bays, 8/28-29, 10 a.m. - 5 p.m. Jim, 447-1381.

CRAFT FAIR - and flea market at the Old Ship of Zion Church, 145 Frowein Rd., Ctr. Moriches on 8/28, 9 a.m.-4 p.m., \$30 per 12'x12' space, 878-1115 or 475-1811.

SCIENCE SCHOOL - weekends, for children ages 3-15 at SBU., math., physics, art, Russian lang., www.school-plus.com; schoolplus_sb@yahoo.com. 608-3467.

For Rent

BELLPORT - lg. 2nd flr. studio, priv. ent., yd. & deck, lots of storage, lg. bath, no smkg./pets, avail. 9/15, \$800/mo./neg. James, 567-6945.

EAST YAPHANK - brand new 1-bdrm. apt., l/r, kit, combo, full bath, priv. ent., no smkg/pets, avail 9/1, \$900/mo. Pat, Ext. 3545.

MASTIC BEACH - lg. 1-bdrm. apt., l/r, eik, tile bath, ceiling fans, prkg., cable incl., own thermostat, no smkg., avail., 9/29, \$1,075/mo. incl. all, 1/2 mo. sec., ref. 395-4592.

MEDFORD - 1-bdrm. bsmt. apt., all util incl., \$950/mo. Tony, 736-8841.

MIDDLE ISLAND - lg. 1-bdrm. apt., 5 mi. to BNL, a/c, heat & gas incl., \$875/mo. Haibin, Ext. 6151 or 921-6408.

MILLER PLACE - 3-rm. furn. apt., full kit., 9 mi., to BNL, TV/Optimum online, prof. area, mature, non smkr., 744-8386.

RIDGE - 4-bdrm. Col. w/cath. ent., 2 full bath, eik, den, l/r, Indry. rm., c/a/c, all appl., backyd., 1st and last mo. rent, 1 mo. sec., ref., \$1,990 or \$2,600/mo. w/access. apt. 209-0345.

RONKONKOMA - studio, priv. ent., kit., no smkg/pets, 1 mo., sec., avail. immed., \$750/mo. Mona, 588-1196.

RONKONKOMA - 1-bdrm. apt. w/priv. ent. full kit., bath & l/r, gd. closet space, own thermostat, util. incl., high spd. internet, no smkg/pets, sgl. occ. only, \$950/mo. Nick, 588-0180.

WADING RIVER - 1-bdrm. apt., eik, lg. l/r, full bath, priv. ent., single, non smkr., \$900/mo./util. incl. + 1 mo. sec., Richard, 929-3419, eve.

WADING RIVER - 3-bdrm. furn. house, short/long term, steps to priv. beach, pets ok, quiet cul-de-sac, avail. Sept., \$2,100/mo./incl. util., cable & modem. Tom, 929-0163.

ARUBA - Marriott/share mstr. suite, 2 bdrm. lockoff, q-bed, sofa bd, sleeps 4, kit., l/r, dr, fb, \$1,200; Studio, q-bed, sofa bd., sleeps 4, fb wet bar, \$700, wk. 11/5-12. Bob, 467-5853

For Sale

MEDFORD/GARDEN HEIGHTS- Land, 100X173K, \$150,000/neg. Scott, 698-9016.

GREENPORT - 5-bdrm., 3-bath Col., walk to Peconic Bay, priv. beach & mooring, \$585,000. Karl, 477-0817.

SHOREHAM - 4-bdrm. Col., 2.5 bath, l/r, d/r, fam. rm., 2-car gar., encl. porch, prof. Indscp., 1/3 acre, igs, 10 min to BNL, SWRSD, \$425,900. Barbara, Ext. 5896 or 744-0960.

SHOREHAM - 4-bdrm. Col., 3 bath, igg, rear deck, front porch, SWR schools, 2-car gar., \$549,000. Nancy, 878-8442.

RIVERHEAD - mobile home, 2 bdrm., 1 bath, lots of storage & closet space, park, deck, shed, 2-car driveway, Michelle, \$38,000, 727-7960, after 6 p.m.

HUDSON, FL - 3 bdrm., 2 bath, lg. Fl. rm., on canal, ceram. tile flrs., min. to Gulf of Mex., 125' concrete seawall, cul-de-sac, Lots avail. next dr., avail. now, \$250,000 w/o lot. Ext. 5319.