

'Blue Waters' Mystery Solved Unique structures in molybdenum blue solutions reveal possible new solute state

For nearly 200 years, scientists have known that the elements molybdenum and oxygen can form various large molecules, which usually impart a unique blue color to aqueous solutions. Only recently have scientists been able to isolate these molecules. But no one was able to explain their supramolecular structure in solution, until now.

In the September 18, 2002 issue of the Journal of the American Chemical Society, Tianbo Liu of BNL's Physics Department describes the unique "blackberry" structure, which may represent a new, stable solute state never seen before.

"The nature of 'molybdenum blue solutions' has remained a fascinating enigma for inorganic chemists since the late 1700s and early 1800s," said Liu.

In 1826, scientists discovered the first so-called polyoxomolybdate (POM) molecules with a chemical formula of Mo₅O₁₄ and realized that the electronic state of the molybdenum atoms was responsible for the blue color in solution. However, the molybdenum blue solutions contained many more complicated molecules. For a long time, scientists were unable to isolate these molecules.

Recently, however, Liu and other scientists have isolated several different polyoxomolybdate molecules from various molybdenum blue solutions — all "giant" compared to other inorganic molecules (see www.bnl.gov/ bnlweb/pubaf/pr/2002/ bnlpr_spotlights_2002.htm).

Unlike other water-soluble inorganic compounds, such as common table salt (NaCl), giant POMs do not exist as single ions in water. Instead, they cluster together. But scientists were still unable to understand the structures of these aggregates, even with the help of electronic microscopes.

Now, using static and dynamic laser-light scattering techniques formerly reserved for larger particles and polymers — Liu has deciphered the structure of these inorganic POM clusters.

"Once we found how big these molecules were [2.5-5.1 nanometers, or billionths of a meter, aggregating in clusters as large as 70-300 nanometers], we realized we could use laser-light scattering to decipher the structure," said Liu.

The laser-light scattering technique works similar to the way we see objects by looking at the light that bounces off of

them, except that the scientists use highly focused laser light and detectors that can "see" details on a much smaller scale than the human eye.

Using these techniques Liu was able to determine the radius of the individual particles and the particle clusters, the size distribution of the clusters, how far from the center the mass of the clusters is distributed, and the mass of the clusters. Putting all these pieces together, Liu has concluded that hundreds of individual POM molecules form hollow, spherical clusters, where all of the molecules are clustered around the surface of the sphere.

Yet this solution to the structural enigma has now opened another mystery, says Liu. "What is the new physics behind this structure?" he asks.

Unlike sodium and chloride ions, which distribute evenly in solution, and unlike larger, charged particles like DNA or proteins, which form large clusters and precipitate out, POMs form stable clusters and remain in solution.

"We believe we are seeing a new, thermodynamically stable state for solutes, where largesize, single molecules with a limited amount of charge on the surface will all form hollow

Tianbo Liu spherical clusters," says Liu. The hollow vesicle structure allows the particles to remain suspended. Liu likens the new structure to a blackberry.

"We are still looking for theoretical explanations for the new solute state," says Liu.

He has found that some other giant molecules with different shapes also adopt this new structure in solution, suggesting that the hollow spherical structure may be a universal state for certain solutes.

— Karen McNulty Walsh

Ecological Research Helps Preserve, Protect Long Island's Pine Barrens

From the top of a boom truck, Richard Wilkens clamps a portable photosynthesis meter onto one of the leaves of an oak tree standing in front of the truck. After waiting for about a minute - so that carbon diox-

ide starts flowing through the meter — Wilkens enters data and presses buttons. Then he reads the number displayed on the screen, 320, and records it in his logbook.

This number, the concentra-

tion of carbon dioxide in the leaf (in parts per million), is one of a long list of values recorded by Wilkens, an ecologist at Dowling College, to assess the health of the oak trees at

serve are already losing their leaves. The culprit: orangestriped oak worm caterpillers.

"In October, all this area looks like a moonscape," Wilkens says, sweeping his right arm around him. "The trees are nearly completely defoliated, with thousands of tons of leaves being eaten by these voracious oak worms."

But the oaks do not die, and the leaves are regenerated the following year. "It is not clear, however, if the trees will be that resilient for many more years," says Dirk Vanderklein, an ecologist of Montclair State University in New Jersey, working with Wilkens on oakdefoliation research. "We are the Upton Ecological and Retrying to figure out, year after search Reserve, year, how these trees are responding, for example, by seea 530-acre portion of BNL's ing if they show changes in 5,265-acre site. photosynthesis. Although au-Wilkens's and Vanderklein's tumn is just project is one of many aimed at identifying and protecting starting, the the reserve's natural resources, trees of the rewhich have been managed by the U.S. Fish and Wildlife Service (FSW) for the U.S. Department of Energy since the reserve was established in November 2000. The reserve is managed by Peter Kelly, a FWS biologist, and Timothy Green, BNL's cultural and natural resource manager.

Besides having its oak tree leaves defoliated over the last three or more years, the reserve is also undergoing invasion by non-native plants, such as Japanese barberry shrubs, the Oriental bittersweet vine, and the bush honeysuckle vine. Two other projects are now potential invasive vines and develop methods to control them," Lerdau says.

Lerdau and Ashton are currently growing invasive, native, and non-invasive species of vines in a greenhouse and are starting field experiments at the reserve to test the effects of mammal and insect herbivores on each of the three types of vine. The two researchers expect to begin collecting data in the summer of 2003.

Other invasive plants seem to spread differently at various sites of the reserve. Jessica Gurevitch, a SBU ecologist, is investigating why some sites seem to be overrun with inva sive plants, while other sites appear to be relatively untouched by them, and are dominated by native species. "This spread of invasive species depends on many environmental factors - natural or man-made - such as fires, insect defoliation, different levels of soil nitrogen, and light conditions," Gurevitch says. To test which of these factors inhibit or encourage the proliferation of invasive species, Gurevitch is carrying out experiments for the next two years within and outside the reserve. In addition to managing scientific projects, the FWS is also conducting biological inventories of the reserve's flora and fauna. Scientists led by FWS's Kelly have listed 220 species of plants and 162 species of mammals, birds, reptiles, and (continued on page 2)



(Top) Richard Wilkens (front), an ecologist at Dowling College, and BNL's Denis Joyce, Plant Engineering, measuring carbon-dioxide intake of leaves on one of the oak trees within BNL's Upton Ecological and Research Reserve.

(Right) Since the beginning of July, orangestriped oak worms have been showing up in droves in the oak trees of BNL's Upton Ecological and Research Reserve. The eggs hatch in the beginning of July, and the larvae eat the oak's leaves for five to six weeks, from July to September.



providing insight into these invasive plants.

"Vines are the most aggressive plant invaders and are changing plant communities and ecological processes," says Manuel Lerdau, an ecologist at Stony Brook University (SBU). "In particular, invasive vines are the most dangerous group of invasive plants facing the northeastern United States. But, despite the amount of research that has been done on invasive plants, we still do not know what makes some species of vines successful invaders."

To address these questions, Lerdau and SBU doctoral student Isabel Ashton are comparing both invasive and non-invasive vines with native vine species by looking at differences in physiology, growth, and susceptibility to damage from animals and diseases. "These data will help identify

The Bulletin

(cont'd.)

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 Lollipop House and the laundry in the apartment area.
- The Recreation Building (Rec. Bldg.) is 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.

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. Mary Wood, Ext. 5923, or wood2@bnl.gov.

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

Noon- 12:45 p.m., Rec. Bldg. Scott Bradley, Ext. 5745, bradley@bnl.gov.

Mondays: BNL Dance Club Ballroom, Latin & Swing Practice

5:30-7 p.m. North Ballroom, Brookhaven Center, except Lab holidays. Jean Logan, jlogan@bnl.gov or Ext. 4391.

Tuesdays: Welcome Coffee

10-11:30 a.m. Rec. Bldg. Hospitality event. Come and meet friends. The first Tuesday of every month is special for Lab newcomers and leaving guests. Hospitality Chair Monique de la Beij, 399-7656.

Tuesdays: BNL Music Club

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

Tuesdays: Aqua Aerobics

5:15-6:15 p.m. \$2 pool fee per class or use pool pass. Mary Wood, Ext 5923.

Tuesdays: BNL Dance Club Individual & Couples instruction

5-11 p.m. North Ballroom, Brookhaven Center. Ron Ondrovic, ondrovic@bnl.gov or Ext.

Tuesdays: Toastmasters

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

Tuesdays & Thursdays: Aerobics

5:15-6:30 p.m., \$4 per class. Rec. Bldg. Pat Flood, Ext 7886.

Wednesdays: On-Site Play Group

10 a.m.-noon. Rec. Bldg. A infant/todler dropin event. Parents meet while children play. Svetlana Agafonova, 205-5065.

Wednesdays: Farmer's Market 11:30 a.m.-1:30 p.m., Berkner Hall parking lot

Wednesdays: Hispanic Heritage Club 11:30 a.m., Berkner Hall, Room D. All are welcome. Carmen Narvaez, Ext. 3254, or www.bnl.gov/bera/activities/hispanic.

Wednesdays: Weight Watchers

Noon-1 p.m., Brookhaven Center South Room. Mary Wood, Ext. 5923, wood2@bnl.gov.

Wednesdays: Yoga Practice

Noon-1 p.m., Brookhaven Ctr. Free. Ila Campbell, Ext. 2206. Wednesdays: Exercise 101

5:15-6 p.m., Rec. Bldg. \$4 per class or \$35 for 10 classes. Stretching, low-impact aerobics, and other exercises. Pat Flood, Ext 7886.

Wednesdays: Dance Club Group Lessons 5-9 p.m. North Ballroom, Brookhaven Center. Marsha Beford, beford@bnl.gov or Ext.5053. Thursdays: Science Discussion Group 12:30-1:30 p.m., Berkner Hall, Room A or D. Patrice Pages, Ext. 3270, pages@bnl.gov. Thursdays: Falun Dafa Class

Noon-1 p.m., Free. Rec. Bldg. Falun Dafa refines the body and mind through exercises, meditation, www.falundafa.org amphibians known to inhabit BNL. "The reserve will protect and preserve a unique ecosystem for about 27 endangered and threatened species within New York State, including the tiger salamander, the banded sunfish, and the stiff goldenrod," Kelly says.

The impact of these scientific projects will also extend beyond the reserve, which is part of New York's Central Pine Barrens, 102,500 acres of central and eastern Suffolk County that includes parts of the towns of Brookhaven, Riverhead, and Southampton. The center of this area is a mosaic of pitch pine and scrub oak forests, coastal plain ponds, marshes, and streams.

"Our broader mission is to gain a better understanding of the Central Pine Barrens ecosystem," Kelly says. "Through our efforts and DOE's sponsorship, we are starting to achieve this mission, so that the reserve can be considered a test ground and a model."

The research conducted at the reserve by the FWS is also serving the Lab as a whole, which has been experiencing an overpopulation of deer. Ecologists agree that a healthy deer population contains between ten and 30 deer per square mile, which would equal between 80 and 250 deer on site. But the Lab currently harbors more than 1,600 deer, according to BNL's Green. "The Lab's biggest ecological urgency is deer overpopulation," Green says. "It has been known since 1992, but the number of deer has been increasing since. As a result, the deer on site are not healthy, and their high density also increases the presence of deer ticks and the potential for car accidents involving deer, which usually result in the death of deer and generally cause significant damage to the car."

Ecological Research Helps Preserve, Protect Long Island Pine Barrens

To assess the environmental impact of deer overpopulation, Kelly and his colleagues have built deer "exclosures," which — unlike enclosures — deer cannot access. After looking at differences in vegetation between the exclosure and the area including deer, the scientists can make appropriate deer-management decisions.

Green and Kelly also would like to increase access to the reserve for Lab employees, by making the reserve a natural park in which employees could walk along its 12 miles of trails to see various animals and plants along the way.

"We would like to build an information kiosk and provide Lab employees with information pamphlets, so that they can appreciate the diversity of the fauna and flora within the reserve," Kelly says.

The reserve already offers educational programs to local high school and college students, who conduct practical



Ecologist Richard Wilkens of Dowling College explains how he measures the rate of photosynthesis of oak tree leaves in the Upton Ecological and Research Reserve. His measurements are helping to understand how the oak trees are affected by leaf defoliation.

field research and later analyze the results of their experiments.

For example, last summer, students from Suffolk County Community College conducted ecological projects at the reserve. This fall, students from Longwood High School will pursue research activities there.

"We would like the students to learn the scientific process of research in environmental programs," Green says. "For example, the literature says that defoliation by oak moths does not have any effect on the trees. But this has happened in four years straight, so students can start making hypotheses about potential effects on the trees and then test their hypotheses."

Green envisions the reserve as a "user facility" that will attract more scientists to investigate the reserve's ecosystem further and participate in the current resource-management decisions.

"I hope that, in the long run, researchers will take advantage of the reserve as a user facility," Green says. "The ecological reserve could then be expanded to accommodate virtually any non-destructive research. The reserve is not only a beautiful place to visit and enjoy, but also a natural laboratory that can provide scientific results to help us improve it." — Patrice Pages

Benefits Changes Outlined

To keep BNL's overhead rate down while maintaining the valued fringe benefits available to employees, Interim Director Peter Paul this week announced proposed cost-saving steps affecting employee benefits.

Based on recommendations made by an advisory committee, chaired by Derek Lowenstein, and recognizing feedback from an employee focus group, the plan attempts to balance the business needs of the Laboratory while minimizing the impact of these changes on employees. According to Human Resources Director Bill Hempfling, one of the overriding concerns of the committee was to assure that, despite upwardly spiraling medical costs, BNL would continue to offer excellent medical benefits that enable em ployees to receive high-quality healthcare. BNL has submitted its proposed benefit plan changes to DOE and is awaiting final approval. If approved, the changes would go into effect on January 1, 2003. These changes would not apply to the members of the IBEW, whose contract with the Laboratory expires on July 31, 2003. IBEW benefit-plan changes will be a subject of negotiations.

employee +1, employee +2 or more). The dollar amount for employee contributions is not based upon the cost of the plan (i.e., PPO or HMO) chosen by the employee.

Since the cost to the Laboratory for HMO coverage is considerably less than that for the PPO, employees enrolled in an HMO are paying a greater percentage of the actual cost to the Laboratory. Under the new scenario, employee contributions will be a percentage of the actual cost to the Laboratory and will be based upon salary, dependents, and plan chosen. The contribution rates will be as follows:

- Employees earning less than \$40K will contribute 10 percent of the actual 2003 cost of the plan.
- Employees earning between

- medical plan costs. The committee recommended two measures that are designed to deal with this concern:
- The Laboratory is eliminating the option of using out-of-network pharmacies in the PPO plan. If an employee/retiree resides more than 25 miles away from an in-network pharmacy, CIGNA will reimburse that person for the cost of up to a 30day supply of the drug minus the applicable co-payment.
- An annual prescription-drug deductible in the amount of \$100 per person, \$300 per family, will be implemented in the CIGNA-PPO plan. For the HMOs, this feature will be dependent upon the HMO's ability to make such a change in their plan design.

• Currently, participants in the CIGNA-PPO who use innetwork medical providers pay only the required co-payment mula, with a maximum benefit of 39 weeks of severance, will remain in effect. For voluntary layoffs, however, the Laboratory will use the same formula butthen reduce the benefit by 50 percent. As a result, the maximum severance payment for a voluntary layoff will be 19.5 weeks.

All these changes combined will rreduce the fringe rate by \$4.9 million for FY03. Of that amount, approximately \$3.14 million will be in the area of medical benefits for employees and retirees.

Over the next several weeks, the HR Division will be providing employees with additional information regarding the plan changes. To give all employees an opportunity to make informed decisions about plan selection, the open enrollment period will be delayed. Usually occurring during the month of October, open enrollment will this year commence on October 21 and end on November 27.

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Fridays: BNL Social & Cultural Club

8-11:30 p.m., Brookhaven Ctr., social. Rudy Alforque, Ext. 4733, rudy@bnl.gov.

Fridays: Science Museum Tours

11 a.m.² p.m. BNLers are invited to a free tour of the BNL Science Museum. No reservations are needed. Gail Donoghue, Ext. 2838.

Saturdays: BNL Dance Club Monthly Ballroom Dance Social

8-11:30 p.m. Ballroom, Latin & swing dancing, North Ballroom, Brookhaven Center. 10/5, 11/9, Tuesday 12/31, 1/25. 2/15, 3/15, 4/12, 5/17. Marsha Belford, belford@bnl.gov or Ext. 5053.

- THIS WEEKEND -

Friday, 9/27

*BERA Book Fair

10 a.m.-3 p.m., Berkner Hall. Credit cards and checks accepted. Andrea Dehler, Ext. 3347.

— WEEK OF 9/30 —

Thursday, 10/3

BERA Bridge Club

7 p.m., Brookhaven Ctr., South Rm. Morris Strongson, Ext. 4192, mms@bnl.gov. The following is a brief overview of the changes:

• The Laboratory would eliminate the practice of charging a flat dollar amount for employee contributions to the medical plan. Under the present contribution structure, employees are charged a dollar amount based upon their salary and the number of dependents (i.e. employee only,

- \$40K and \$70K will contribute 15 percent of the actual cost.
- Employees earning between \$70K and \$100K will contribute 19 percent of the actual cost.
- Employees earning over \$100K will contribute 24 percent of the actual cost.
- All those who retire(d) on or after January 1, 2002, will be required to contribute 20 percent of the actual cost.

Once DOE approves the plan, the HR Division will provide employees with a table showing the actual dollar amounts for employee contributions under each provider. There will be a significant differential in employee contributions for the HMOs verses the PPO plan.

• Prescription drug costs are rising at an annual rate greater than 25 percent, and this rise accounts for approximately 50 percent of the upward spiral of to the provider. There is also a \$250 individual/\$650 family annual deductible for out-ofnetwork services. In addition to the deductible amounts, there are also annual out-ofpocket maximums of \$1,200 per person/\$2,400 per family.

Under the new plan, both the out-of-network deductibles and out-of-pocket maximums will increase. The deductibles are going to be \$500 per person/ \$1,500 per family per year and the out-of-pocket maximums will be \$2,500 per individual/ \$7,500 per family per year.

- The Laboratory also plans to provide domestic partner medical and dental benefits for qualified, same-sex couples.
- Voluntary severance plans will also be affected. There will be no change in those instances where employees are involuntarily laid-off. The present for-

BNLers Donate 199 Units of Blood

199 units of blood were collected at BNL's latesummer Blood Drive, which was held at the Lab on September 12.

Blood Drive Chair Susan Foster, Human Resources Division, thanked those who volunteered to donate for taking time out of their busy work days to help meet this vital community need.

BNL Starts New Rad Control Tech Training

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Save the Dates: October 21-25

The Lab's annual week of health, safety and fitness -Healthfest — turns ten this year, and you are invited to join in the celebration. So that you may take part in the Healthfest walk, run, mountain bike ride, health fair, and more, save the dates of Monday, October 21, through Friday, October 25. More information will follow in next week's Bulletin and in flyers delivered via intra-Lab mail.

Volunteers Wanted

Volunteers are needed to help with all the events at Healthfest 2002, the Lab's 10th annual week of health, fitness, and safety, which will be held October 21-25.

To volunteer to help with the walk, run, health fair, mountain bike ride, or any of the other events, call Mary Wood, Ext. 5923, or e-mail wood2 @bnl.gov.

National Nuclear Data Center Celebrates 50 Years of Service

The National Nuclear Data Center (NNDC) at BNL will celebrate its golden jubilee on Monday, November 4. To mark the NNDC's50 years of continuous service to the nuclear physics community and applied users, all former and present staff members and colleagues of the Data Center are invited to an afternoon of reminiscences, followed by a reception and dinner on Monday, November 4.

The NNDC traces its roots back to 1952, when the name Brookhaven Neutron Cross Section Compilation Group was adopted for the group, which was then headed by Donald J. Hughes in the Physics Department. In 1955, this group, which was also known as the Sigma Center, published the first edition of the well-known reference book Neutron Cross Sections, BNL-325.

In 1961, after Hughes' death, the Sigma Center became a division of the then Nuclear Engineering Department. In 1967, the Center was renamed the National Neutron Cross Section Center by the U.S. Atomic Energy Commission. In 1977, its name was changed to its present name, when its staff was given the additional responsibility for nuclear structure and decay data by the Energy Research and Development Administration, the predecessor of the U.S. Department of Energy. Those interested in attending the 50th anniversary celebration should look at the registration form at www.nndc.bnl.gov. Using staff reminiscences, a history of the NNDC is being prepared for this celebration, including information on all known staff members. Therefore, all former staff members are asked to contact Marion Blennau, Ext. 5087 or blennau@bnl.gov.

our existing employees and six new employees have begun a new career: They are participating in BNL's new training program for Radiological Control Technicians (RCTs).

Initiated by Steve Layendecker and Gordon Rawn of the Radiological Controls Division (RCD), this program is designed to train employees to become qualified RCTs and obtain national certification through the National Registry of Radiation Protection Technologists (NRRPT). "Finding qualified RCTs to work at BNL is difficult because of the dwindling supply of these technicians nationally," said Layendecker. "Under this program we can 'homegrow' our own technicians."

Those who applied for the training went through a rigorous selection process conducted by the RCT Joint Evaluation Board, which includes Rawn plus Marilyn Pandorf of the Human Resources Division, Rosa Palmore of the Diversity Office, and Cheryl Burns of RCD. "The program is off to a good start," says Rawn, who is

Motor Vehicle Sale

Twenty-five (25) motor vehicles located at warehouse T-87 will be offered for public auction by the Government Services Administration. Pictures of each motor vehicle with all pertinent information will be posted at www.gsaauctions.gov on or about Tuesday, October 1, and will be available for seven days thereafter. During this time, anyone may bid on the vehicles. Call Jerry Quigley, Ext. 4527, if you want to inspect the vehicles on site.

the program's lead instructor. "The trainees have already completed Level I of the academic requirement, and all ten have qualified for field work."

The selection criteria and standards for the program's academic and field requirements were developed by Layendecker and Rawn, who worked with Pandorf and Lorraine Merdon and Palmore of the Diversity Office. "The program also gives some BNL employees an opportunity to experience working with a highly diverse team which shares the same career goal," adds Palmore. "The Diversity Office and Laboratory management looked at it as an opportunity to bring qualified women and minorities into a profession that is not typically diverse."

The training program consists of seven levels of academic training and fieldwork. Trainees must successfully complete approximately 440 hours of classroom training over three years, while meeting the American National Standards Institute (ANSI) requirement for 4,000

Arrivals & Departures

Arrivals

Divine Adika S&H Svcs. **Departures**

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Pool Closed Tomorrow

Because of a total water shutdown, the BNL swimming pool will be closed tomorrow, Saturday, September 28. The pool and locker rooms will be without steam and hot water today and tomorrow, September 27 & 28.

'Take Our Sons to Work Day,' 10/14

On Monday, October 14, BNLers are again invited to bring their sons ages 11 to 15 to the Lab to participate in the on-site activities planned for the annual Take Our Sons to Work Day.

An equal-opportunity response to the Lab's annual "Take Our Daughters to Work Day" held in April, the October day for Lab employees' sons is dedicated to helping boys focus on their future in the working world, to see what career and employment opportunities await them, and to discover what their parents do for a living and if their future livelihood will involve science.

To register boys for the day, complete and return the registration form mailed to all employees to: Susan Foster, Human Resources Division, Bldg. 185, by Friday, October 4. Participation is limited, so register your son early. A waiting list will be established; if a registered son is unable to attend, then notify Foster, Ext. 2888, so another boy may go in his place.

This year, the Lab will again host several boys from the Little Flower School in Wading River. If you are interested in being a host parent

hours of practical experience necessary to attain RCT status.

As the trainees pass through the different steps of their apprenticeship, they will become qualified to perform various radiation contamination and airborne radioactivity surveys, including beta dose rate, hot particle, and pulse beam surveys. They will also be trained to perform particulate and charcoal sampling and field analysis for beta activity, and become qualified to handle hazardous waste.

One employee-participant, Pat Sullivan, formerly of the Plant Engineering Division, comments that he was so interested in becoming a radiological control technician that he was planning to take the challenge exams.

"I was happy to be selected to participate in this program because BNL has given me the opportunity to embark on a new career," said Sullivan. "Everyone involved in the program has been helpful, and all the participants are looking forward to the upcoming field training." - Jane Koropsak





BNL DANCE CLUB

North Ballroom, Brookhaven Center • MONDAY: ballroom, Latin & swing dance practice, 5:30-7 p.m., contact Jean Logan, jlogan@ bnl.gov or Ext. 4391.

NEW! • TUESDAY • STARTS 9/24! individual and couples instruction, taught by Patti Panebianco and Anthony Scory of New York DanceSport Centre, 5-11 p.m., contact Ron Ondrovic, ondrovic@ bnl.gov or Ext. 4553.

• WEDNESDAY: group classes, 5-9 p.m.; individual and couples instruction 9-10 p.m., taught by Giny Rae and Peter Sciurca of Dance Magic, contact Marsha Belford, belford @bnl.gov or Ext. 5053.

•SATURDAY: dance social once a month, first social on October 5th, 8-11:30 p.m., contact Marsha Belford, belford@bnl.gov or Ext. 5053

Book Fair, Today

Calendar

(continued)

Thursday - Friday, 10/3-4

Pine Barrens Research Forum

Berkner Hall. This year, the 7th annual forum will focus on problem species. Paper presentations are scheduled on Thursday from 8 a.m. to 5 p.m. and field trips to the Fire Island National Seashore and the Peconic River Pilot Projects are planned for Friday. For more information, contact Tim Green, Ext. 3091, tgreen@bnl.gov.

Saturday, 10/5

*Bronx Zoo Bus Trip

\$10 per adult, \$8 for children ages 2-12. Additional entrance fee must be paid at the zoo. Bus leaves the Rec. Bldg. at 9 a.m. and departs the zoo at 5 p.m. For more information and reservations, contact Sarah Paul, 776-2349. Defensive Driving

9 a.m. to 3:30 p.m., Berkner Hall, Room B. The course is open to BNL, BSA, and DOE employees, BNL facility-users and guests, and their families. To register, send a check by September 27 for \$26 per person, made out to Empire Safety Council, in care of Scott Zambelli, P.O. Box 670, Mount Sinai, NY 11766. In-

clude your telephone number in case you need to be contacted. **BNL Dance Club Monthly Dance Social**

8-11:30 p.m. Ballroom, Latin & swing

dancing, North Ballroom, Brookhaven Center. Marsha Belford, belford@ bnl.gov or Ext. 5053.

— WEEK OF 10/14 —

Wednesday, 10/16

BSA Noon Music Recital

Noon, Berkner Hall. The Daedalus String Quartet. For more information, see http://music.bnl.gov.

377th Brookhaven Lecture

4 p.m., Berkner Hall. Elio Vescovo. National Synchrotron Light Source Department, will give the next lecture on the topic of magnetism in ultra-thin films.

Thursday, 10/17

BERA Bridge Club 7 p.m., Brookhaven Ctr., South Rm. Morris Strongson, Ext. 4192, mms@bnl.gov.

— WEEK OF 10/21 —

Thursday, 10/24

BERA Bridge Club

7 p.m., Brookhaven Ctr., South Rm. Mor-ris Strongson, Ext. 4192, mms@bnl.gov.

— WEEK OF 10/28 —

Monday, 10/28

IBEW Meeting

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

- WEEK OF 11/4 —

Thursday, 11/7

BERA Bridge Club

7 p.m., Brookhaven Ctr., South Rm. Mor-ris Strongson, Ext. 4192, mms@bnl.gov.

Saturday, 11/9

for one of these boys, then please indicate so on the registration form.

Those parents who work in potentially hazardous areas who themselves are unable to arrange for hosts for their sons must indicate on the registration form that a host is needed. For more information, contact Foster,

Ext. 2888.

With instruction from Carol Otto of Community Involvement, Education, Government, and Public Affairs' s Museum Program, two BNL sons learn how electricity can be produced using a magnetic field.

BERA is sponsoring a Book Fair in Berkner Hall today, Friday, September 27, 10 a.m.-3 p.m. Books will be fun reading, ranging from children's stories to cookbooks to New York Times best-sellers. New, hardcover books will be in stock and sold at up to a 70 percent reduction. Some gift items will also be available. Credit cards and checks will be accepted.

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

Bronx Zoo Trip

The Hospitality Committee invites all BNLers to a bus trip to the Bronx Zoo on Saturday, October 5, at a cost of \$10 per adult, \$5 for children ages 2-12. An additional entrance fee must be paid at the zoo. The bus will leave the Recreation Building at 9 a.m. and leave the zoo at 5 p.m. For more information and reservations, contact Sarah Paul, 776-2349.

BNL Dance Club Monthly Dance Social

8-11:30 p.m. Ballroom, Latin & swing dancing, North Ballroom, Brookhaven Center. Marsha Belford, belford@ bnl.gov or Ext. 5053.

— WEEK OF 11/18 —

Thursday, 11/21

BERA Bridge Club

7 p.m., Brookhaven Ctr., South Rm. Mor-ris Strongson, Ext. 4192, mms@bnl.gov.

— WEEK OF 11/25 —

Monday, 11/25

IBEW Meeting

6 p.m., Knights of Columbus Hall, Railroad Ave., Patchogue.

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.

Classified Advertisements

Placement Notices

The Lab's placement policy is to select the best-qualified candidate for an available position. Candidates are considered 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, disability or veteran status. Each week, the Human Resources Division lists new placement notices, first, so employees may request consideration for themselves, and, second, for 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; call the JOBLINE, Ext. 7744 (344-7744), for a list of all job openings; use a TDD system to access job information by calling (631) 344-6018; or access current job openings on the World Wide Web at www.bnl.gov/HR/jobs/ default.htm

OPEN RECRUITMENT – Opportunities for Laboratory employees and outside candidates.

MK2726. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in chemistry or related field with experience in fast kinetic techniques such as pulse radiolysis or stopped flow; protein expression and purification and enzyme kinetics desirable. Research will involve expression, isolation and purification of enzymes study of enzyme function using pulse and steady-state radiolysis. Under the direction of D. Cabelli, Chemistry Department. NS2790. MEDICAL ASSOCIATE II (P-5) Requires a bachelor's degree in a health-related profession plus five years' related experience. Experience in phlebotomy, monitoring EKG, blood pressure and pulse, ordering supplies, lab work and record keeping necessary. Must be highly organized in order to work rapidly within restricted time frame. Under broad assignment, performs research with radioactive tracers as part of the PET Imaging studies. Will assist in human subject recruitment, behavior evaluation, and primate research studies. Employment is contingent upon successful completion of a background check by the Drug Enforcement Agency. Medical Department.

NS8059, CYBER SECURITY STRATE-GIC PLANNER (I-9, reposting) - Requires a BS in a technical area, ten years of related technical experience; MS preferred. Excellent communication and customer service skills, utilizing those skills to develop strong working relationships with peers and customer groups required. Experience developing and professionally documenting computer security strate-gies; knowledge of hardware/software options for security systems/applications required. Must be self-motivated, an in-dependent worker, and possess the ability to communicate at all levels. Will act as a strategic planner for integrating multiple technologies; influences current and future application of technology architectures. Will interface with other IT, func-tional and scientific organizations to ensure that user requirements are factored into plan for security architecture. Can plan and manage projects with broad support for the science mission of the Lab, specifically addressing cross-technology and cross-platform issues. Balances needs of scientific users against requirements of the DOE, partnering with Lab Management at all levels. Communicates tactical and strategic plans to the Lab's technical and management communities, ensuring that plans meet Cyber Security requirements for the DOE and for BNL and that plans integrate needs of the BNL user community. Information Technology

95 DODGE GRAND CARAVAN - a/t, a/c, p/s, p/b, 90K mi., good cond., \$3,800. Ray, Ext. 8287.

94 HARLEY SPORTSTER 883 - 7k mi., excel. cond. Dennis, Ext. 7578.

94 PLYMOUTH ACCLAIM - a/t, a/c, 100K mi., \$1,000. Ext. 3046.

94 VOLVO 940 - orig. own., garaged, excel. cond., burgundy/tan, 107K mi., \$5,800. Ext. 2347 or 929-6442.

95 SATURN SL2 - 5-spd. manual, 4-dr., 4cyl., all power, 128K mi., excel. cond., Blue Book value \$3,175, ask. \$2,850. 744-0026.

93 DODGE GRAND CARAVAN - a/c, all power, 148K mi., 7 pass., 2 removable benches, rear a/c, reliable, good cond., \$1,500 neg. 580-1432.

93 FORD ESCORT SW - 5-spd., a/c, p/s, p/b, cruise, 105K mi., economical, runs well, looks good, Blue Book value \$2,155, ask. \$1,800. Tom, 286-2505.

91 HONDA ACCORD EX - fully equipped, auto., sunroof, orig. own., new tires, v.g. cond., 120K mi., \$3,950. 325-0447 after 5:00 p.m.

89 VOLVO 740 WAGON - a/c, all power, 146K mi., good cond., no rot, reliable trans., sunroof, third seat, \$3,400. Chris, Ext. 2024 or 395-6112.

87 CAMARO - auto, trans, p/s, p/b, am/ fm, 6 cyl, runs good, 141 K mi., \$800. Dennis, Ext. 7578.

87 TOYOTA CAMRY WAGON - 5-spd., a/ c, p/s, p/b, 153K mi., orig. own., runs good, clean in/out, \$1,000. Tony, Ext. 5295.

76 LANCIA SCORPION - 5-spd., 2-dr., mid eng. sports car, 107K mi., drive while you restore, \$2,800. John, Ext. 2788.

TRAILER HITCH CLASS I - hidden hitch, fits 1996 & later Dodge, Plymouth, & Chrysler minivans, w/plug-in wiring harness, \$50. Rich, Ext. 2216 or 734-7342.

Boats & Marine Supplies

32' O'DAY - '76, no trailer, 30 h.p. Atomic 4, 5'5" draft, autohelm, VHF, GPS, depth finder, knot meter, second owner, must sell, \$16,900. Steve, Ext. 7936 or 331-3471.

26' SILVERTON, '78, Flybridge updated int., sleeps 4, full cabin, Windlass Depth Finder, VHF, GPS, Loran, new canvas, many new parts. 878-7851.

25' CATALINA SAILBOAT - swing keel, pop top radio, 9.9 Evinrude battery charger roller, \$6,500. Joe, Ext. 5236.

23' PEARSON P23 - '79, Pearson 23K, galley unit, light package, 4 berths, 4' draft, lead fin keel, 3 sails, v.g. cond., make offer, \$,5,200. John, Ext. 2788.

21'6" CRUISER - '76, new canvas top, 200 outboard Yamaha depth finder, all new cabin cushions, fishwells, etc., \$7,500. Mike, 281-5160.

19'6" AQUASPORT - cuddy, raised canvas top, '76, 110 h.p. Evinrude '87, w/trailer, power winch, VHF, DF, \$4,900. Mike, 567-9424.

19' RINKER - '87, 75% of int. restored, w/trailer, \$2,000 obo. Kathy, Ext. 7105 or 289-4439.

19' SEASWIRL 1850 WA STRIPER - '00, w/trailer, canvas cover, depth/fish finder, excel. cond., \$16,000. David, 395-3484.

16' TANZER - '84, 4 h.p. Evinrude eng., 16' Daysailer w/jib & mainsail, trailer, \$550. Marty, Ext. 2521 or 874-3478.

15' STOWE ADIRONDACK/MANSFIELD CANOE - fiberglass, 15' L, 40" w, sand color, new, never in water, new \$899, ask. \$525. Jim, Ext. 7971 or 286-1358.

SEADOO XP JETSKI - '96, low hours, trailer, \$4,000. Frank, 277-0464.

BOAT WENCH - 12v, almost new, used on 16' boat, \$200.924-6751.

Furnishings & Appliances

BEDS - twin, maple frames, best offer. Anita, 874-3606.

BOOKCASE - steel, 7' high, 3' wide, 12" deep, 5 adjustable reinforced shelves, \$20. Brian, 474-7892 or digital pager Ext. 7163. BUNK BEDS - This End Up, twin-size, lad-

Tools, House & Garden

CASEMENT WINDOWS - 4 Andersen C16, 2' wide x 6' tall, 2 left & 2 right venting, white clad, screens & hardware, finished trim, excel. cond., cost \$300 ea., \$800/all. 744-8673.

LAWN MOWER - elec., GrassMasters LawnPup, compact, powerful, detachable grass catcher, extra blade, cost \$190, ask. \$65. Linda, Ext. 2733 or 395-6784.

LEAF BLOWER - echo, excel. cond., gas powered, \$85. Ext. 3783 or 929-8321.

PEDESTAL SINK - white w/4" on-center faucet; Crane toilet, white, pre-1996 high vol., excel. cond., \$20 each or \$35/both. 744-8673.

Sports, Hobbies & Pets

DOG CRATE - good cond., measures 21"w x 36"l x 24"h, \$45. Bill, pager, 452-1726.

GOLF CLUBS - Ping I2 irons, 3-SW, new graphite shafts & ping pals putter, 2 sets, Callaway woods steel & graphite, also blade irons 3-SW. Ernie, Ext. 5735.

GUITARS - like new, Ovation Balladeer acoustic/elec, \$450; Fender DG10-12 12 string acoustic, \$250. Wendy, 722-3328.

HOCKEY GEAR - Bauer skates, size 11, helmet, gloves, leg & elbow pads, pants size 36-38, carry bag, all used, \$125/all. Chris, Ext. 2024 or 395-6112.

PET CAGE - 25" x 22" x 22" H, heavy cage, chrome plated steel, cost \$85, ask. \$35. Peter, Ext. 4094.

Audio, Video & Computers

MICROCASSETTE RECORDER - for dictation and taping lectures, hand held, battery operated, good cond., \$3. Peter, Ext. 2913.

NINTENDO 64 - 23 games, 2 controllers, 2 rumble packs, 1 regular and 1x4 memory card, \$300. Kiyoshi, 697-9204.

PIANO KEYBOARD - Yamaha electronic portable piano keyboard, \$15. Nancy, Ext. 4303.

SANSUI SPEAKERS - 2 large mahogany speakers, each contains 6 speakers, very nice, \$50/pair. Rolf, Ext. 2305.

TV - Panasonic, 32" color TV, cable & DVD ready, excel. cond., \$450. Louisa, 286-5932.

DELL DIMENSION XPS T450 - Pentium III 450, 15 GB HD, 128mb ram, ATI Tech, 3D Rage Pro video card, 3 com 10/100 nic, \$350. Andrew, Ext. 3246.

SUB WOOFER BASE TUBE - 1 JBL 12 in. sub woofer bass tube, 450 watts, \$40. Richie, Ext. 4030.

Miscellaneous

DOLLHOUSE TOY BOX - Today's Kids, w/bookshelf, \$40; Intex pool filter, \$40; Conair bath spa, \$10; Shiatsu massager, \$10; Caruso hairsetter, \$10; Little Tykes table & chairs, \$20. Donna, Ext. 2716 or 878-2425.

POOL - 18' above ground pool, used 1 year, needs a new liner, comes w/all accessories, must sell, \$650. Beth, Ext. 4144 or 447-6517.

TICKETS - 10/4, Billy Joel & Elton John, Continental Arena, NJ, section 115, 2 tickets, \$95/ea. John, Ext. 3910.

Yard & Garage Sale

PATCHOGUE - 73 Buckley Road, (north of Sunrise Hwy.) 9/28 & 9/29, 9-5, Ext. 7517.

Free

DUAL DECK VCR - needs work, Grace Lee Whitney's post StarTrek memoirs. Morris, Ext. 4192.

Wanted

HOUSEKEEPER -clean house once/ week, Shoreham area, non-smoker. 744-4611.

RESEARCH VOLUNTEERS - healthy nonsmoking men and women, ages 18 and over, are needed for MRI study. Strictly confidential, fee provided. 344-2773.

TUTOR - organic chemistry, college-level.
Florin, Ext. 7354.

WEIGHING-SCALE COLLECTORS - discussion group forming. Bob, Ext. 4326.

Exercise 101 Class Begins 10/2

The Aerobic Dance and Stretch Club announces the start of a new class, called Exercise 101, on Wednesday, October 2, from 5:15 to 6 p.m. in the Recreation Building. The Wednesday classes include stretching, very-low-impact aerobics, and other exercises to promote core strength. The cost is \$4 per class or \$35 for ten classes with one make-up class.

For more information, contact Pat Flood, Ext. 7886; or Susan Monteleone, Ext. 7235.

Calendar Correction

The calendar that was issued by the Health Promotion Program at last year's Healthfest incorrectly listed Columbus Day as observed on Monday, October 7. This year, Columbus Day will be observed on Monday, October 14. The Health Promotion Program regrets any inconvenience that this error may cause, and asks all BNLers to correct their calendars accordingly.



Gift Idea: L.I. Entertainment Discount Book

No new ideas for a gift? Stop by the BERA Sales Office weekdays from 9 a.m. to 3 p.m to purchase a copy of the 2003 Entertainment Book, which costs \$20 and provides many discounts to Long Island attractions, restaurants, movies, hotels and motels. The book may be used immediately, and it does not expire until the last day of November 2003.



CHRISTMAS SPECTACULAR TIXS ON SALE NOW

Attend Individual Retirement Planning, 10/16

The Vanguard Group invites you to spend 30 minutes individually with a licensed Vanguard representative at the Lab to talk about the financial issues. Meet with a representative between 9 a.m. and 5 p.m. on Wednesday, October 16.

You may learn about: investing for long-term goals such as retirement; selecting funds for your savings; and making the most of the services and investment tools available to you.

Schedule your 30-minute session by calling Vanguard at 1-800-662-0106, Ext. 69000.

NORTH PATCHOGUE - share house, spacious bdrms., parking avail., close to Lab & shops. 447-6899.

ROCKY POINT - 31 Walnut Street, 3-4 bdrm apt., 1 bath, w&d, d/w, new carpet, painted, new tile, deck, \$1,700/mo., incl. oil & water. 744-3308.

ROCKY POINT - 9 Lavender Street, 1 bdrm apt., oil, electric, water & cable incl., no chil-

For Sale

BAITING HOLLOW - Victorian, 3 yr. old, 4 bdrm., 2.5 baths, hdwd. floors, bsmt., 2 car garage, ²/₃ acres, excel. cond., \$329,900. Ron, Ext. 4363.

EAST MORICHES - 3-bdrm, 2 full baths, new country kitch., new appli., f/p, skylights, family room, all-seasons room, finished bsmt., IGP w/ brick deck, patio, new windows, beach & boating rights, \$360,000. Nancy, 878-5449.

NS8854. PROJECT ENGINEER II (P-7, reposting) - Requires a minimum of a BS in health physics, industrial hygiene, industrial safety or environmental science or closely related technical field and five years of experience in environment, safety, and health, including one year of experience supervising environmental. safety, and health technicians or professionals. Registration as NRRP/OHS Technician or Certification as a Hazardous Materials Manager (CHMM) is preferred. Primary responsibility will be providing professional services in ES&H support to divisions/departments. Radiological Control Division

Division

Motor Vehicles & Supplies

01 ISUZI RODEO - silver, a/c, all power, 4-dr., 4wd, am/fm cass., 6 cyl., 10,600 mi., must sell, \$19,995. Vicki, 431-3231.

00 HONDA SHADOW ACE 750 - 2 tone black, silver, excel. cond., 4,800 mi., many extras, \$4,500. Mark, Ext. 4666 or 208-2910. der-end, w/foam mattresses, excel. cond., paid \$550, now \$275. 744-8673.

COFFEE TABLE - dark walnut, Colonial, 4' diagonal round, \$50; bread maker, new, \$40. Jim, Ext. 5537.

CONVECTION/MICROWAVE OVEN - 700 watt, Panasonic NE-9970, \$75 obo. Christie, Ext. 4916.

DINING ROOM TABLE - Danish-style oval teak, w/2 sleeves & 6 chairs w/fabric, ask. \$200; Jennifer convert. couch w/Sealy matt., tan w/small flowers, ask. \$100. Lori, Ext. 8370.

DISHWASHER - GE Potscrubber undercounter, \$75 obo. Travia, 289-9533.

FURNITURE - loveseat & queen size sofa sleeper, purple/grape color, 2 yrs. old, excel. cond., \$575. Rod, 751-7023.

POANG CHAIR - IKEA birch frame, high back, black leather, like new, \$40. et468@optonline.net.

WALL UNIT - almond, fits 35" TV., glass doors, approx. 90" wide, was \$1,600, ask. \$325. John, Ext. 3302 or 924-0651.

For Rent

BAY SHORE - cozy, 1 bdrm. apt., second floor, w/off street parking, Brightwaters area, single working person preferred, no pets, \$800/mo & 1 mo. sec. Ken, 665-7459.

BELLPORT VILLAGE - 4 bdrm, 2 baths, furn., screened porch, deck, one car garage, walk to bay & stores, \$2,000/mo. Louisa, 286-9389.

EAST PATCHOGUE - bsmt. apt., w/full windows, sep. ent. & pking, 2 bdrm, 1½ baths, satellite in 2 rooms, sep. heat, \$1000/mo. all incl. Mary, 286-0638 or 7143.

HAMPTON BAYS - share full house, 30 min from Lab, 3-bdrm., $1\frac{1}{2}$ bath, IGP, $\frac{1}{2}$ mile to Peconic Bay, no pets/smokers, \$800/ mo., incl. all. Matt, Ext. 2238.

MIDDLE ISLAND - furn. room, 5 mins to Lab, w/amenities, \$600/mo. incl. all, avail. 10/1. 345-5492.

MANORVILLE - brand-new 1 bdrm apt., full bath, priv. ent., single, non-smoker preferred, \$800/mo. incl. all. Ext. 3849 or 727-1866. dren, \$850/mo.; Rocky Point, 19 Harding Street, 3 bdrm apt., 1 bath, oil & water incl., no children, \$1,600/mo. Fatma, 744-3308.

SOUTH HAVEN ESTATES - 1 bdrm apt., full kitchen, bath, l/rm, priv. ent., no smoking or pets, 5 mi. to Lab, 1 mo. security & 1 mo. rent, \$850/mo. Ron, Ext. 2189.

WESTHAMPTON BEACH VILLAGE - 221 Mill Road, 1 bdrm, 1 bath, incl. heat & water, no children, \$1,000/mo. 288-1843.

ENGLEWOOD ISLES, FL. - 5 min. to gulf beaches, 30 min. from Sarasota, heated pool, screened lanai, 3 bdrm/study, 2 baths, avail. 12/15/02 to 1/5/03. 941-460-1724.

FT. LAUDERDALE, FL. - Gold Crown Resort, timeshare week 51, world class golf/ fitness center, 3 bdrm. lockout, sleeps 8, trades for 2 weeks, 1 maint. fee, \$8,000. Ken, 281-5565.

ORLANDO, FL. - 1 bdrm villa, 1 mi. from Disney, week of Sat. 4/26/03 to Sat. 5/3/ 03, Westgate Vac. Villas Timeshare, I/rm, d/rm, fully equipped kitchen, washer, dryer, 2 baths, bdrm w/lg. jacuzzi, sleeps 4, overlooking tennis court & pool, \$675. Vicki, 698-5322. EAST MORICHES - waterfront condo, Villas on the Bay, 2 bdrm, 2 bath, end unit, jacuzzi, hd. wood floors, f/p, cac, finished bsmt, Ig. deck, garage, pool, tennis, dock, \$349,000. Michael, Ext. 2499 or 878-4258.

HAMPTON BAYS - 2-story, 13 yrs. old, cedar shingles, 3 bdrms., 1.5 baths, oil heat, full bsmt., on 1/2 acre S of Montauk Hghwy, \$350,000. Barbara, Ext. 7526.

PATCHOGUE - Victorian 4-bdrm, 2-bath, eik, det. garage, well maint., \$250,000. Kathi, Ext. 7661 or 289-1629.

ST. JAMES - 2 bdrm ranch, eik, near town, fenced yard, updated windows, new roof, \$279,900. Starr, 584-2392.

FLORIDA - timeshare week, on Gulf, heated pool, hot tub, rated most desirable for trading, priced for quick sale. Lynn, 744-5096.

STORE - Irish imports, est. over 3 yrs., turn - key op., business dist., main road, priced to sell. 209-0924, 10:30 a.m. - 4:30 p.m.

Bulletin

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