BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

World's Largest Magnet Coil Goes Superconducting for AGS E821

"At 10:30 on Tuesday night—boom! It dropped to zero!" said Bill Morse, Physics Department.

"It" was the resistance to electricity in the world's largest magnet coil, which went superconducting at the first attempt on Tuesday, December 20.

The enormous coil, 15 meters in diameter, is part of Experiment 821 at BNL's Alternating Gradient Synchrotron (AGS). Morse, E821 Resident Spokesman, was describing the moment in Bldg. 919 when enough liquid helium had been added to the cooling system around the coil to cause the temperature to dive to 9.6 degrees above absolute zero, the temperature at which the coil could become superconducting.

The coil is the largest of three that will power a precision storage-ring magnet to be used to refine a measurement known as g-2, part of the magnetism of the muon particle. This test was the first to take the g-2 superconducting coils down to the temperature at which they will operate.

Said Gerry Bunce, E821's Project Manager, "It showed that the large number of welds in the 180 meters of cooling lines were tight at cold temperatures, important since the coil will soon become buried in the magnet steel and be quite inaccessible."

Roger Stoutenburgh

At the Alternating Gradient Synchrotron's muon g-2 Experiment 821, some of the people whose efforts helped the giant coil become superconducting are: (kneeling) Joe Domiano; (front, from left) Lou Addessi, Tom Tallerico, Beau Yatauro, Lin Jia, Laura Taddonio, Chien Pai, Steve Kochis; (center, from left) Dave Derryberry, Jim Cullen, Rich Hintze, Gerry Bunce, Arnold Esper, Mark McNeill, Lou Snydstrup, Bill Morse, John Benante, Terry Higgins, Lou Cannizzo; (back, from left) Jim Leskowicz, Wanshun Jiang, Bob Meier, Paul Mikaliger, Don Von Lintig, Ron O'Neill, Jon Meade, Walter Ducoing and Dan Martin.

The test was not easy, due to the large diameter of the coil. Explained Bunce, "The coldest part, the coil itself, shrank by 2.5 inches in diameter as it dropped from room temperature."

The test also verified the instrumentation system of about 80 temperature, pressure and strain sensors; the resistance just prior to the superconducting transition, which is a measure of the care taken in the coil winding process; and the refrigeration required. Said Linxiang Jia, AGS, who led the testing effort, "All matched our expectations, along with the superconducting transition temperature."

Many Lab groups contributed to this successful test. In the AGS, the coil construction technical group was led by John Benante. Welding was done by Walter Ducoing and John Meade of the Central Shops Division. The AGS Cryo Group, supervised by Arnie Esper, built much of the test equipment; the AGS Vacuum Group under Dick Hseuh handled the insulating vacuum; and Tom Tallerico was responsible for the instrumentation system. Jim Cullen is the project's chief engineer. And, from the Relativistic Heavy Ion Collider (RHIC) Project, Ron Picinich and the RHIC magnet testing facility satisfied the voracious need for liquid helium.

The next step will be to install the last coil and complete the cooling system connection to all three coils. The final milestone should come in March, when the world's largest superconducting magnet is turned on, paving the way for E821 to begin taking data in January 1996. — Liz Seubert

McWhan Named Associate Director for Basic Energy Sciences

Denis McWhan, who had been Chairman of the National Synchrotron Light Source (NSLS) Department since 1990, became Associate Director for Basic Energy Sciences (BES) on January 1.

In his new position, McWhan is directly responsible for three departments — Applied Science (DAS), Chemistry and NSLS — which have a collective staff of about 475 people. In addition, he oversees the other BES programs at the Lab, which include chemistry and materials science research. With funding of $68 million for fiscal year 1994, BES is the largest individual program in BNL's operating budget.

Roger Stoutenburgh

Denis McWhan

McWhan replaces John Axe, who had served in this position since 1990. "I would like to thank Dr. John Axe for his excellent work as Associate Director for BES," said Lab Director Nicholas Samios. "John had requested, some time ago, to be able to return full-time to his first-rate research program."

Accordingly, Axe continues as the Scientific Program Head of the High Flux Beam Reactor (HFBR) and is now Head of the Physics Department's Neutron Scattering Group.

Concerning McWhan's appointment, Samios said, "I am pleased to announce that Dr. Denis B. McWhan has agreed to accept the appointment of Associate Director for BES. His talents as a first-rate scientist coupled with his experience in industry and as a facility user make Denis an ideal person for this position."

While a search is being conducted for a new Chairman for the NSLS, McWhan will also serve as Acting Chairman for that department.

McWhan, who had a distinguished 28-year career in solid-state physics at AT&T Bell Laboratories before he came to Brookhaven, had been a frequent user of both the HFBR and the NSLS for many years before he joined Brookhaven's staff.

As NSLS Chairman, McWhan oversaw the operations of the facility where, each year, more than 2,500 researchers from all over the world perform forefront research in a variety of scientific fields using x-ray, ultraviolet and infrared radiation.

With thanks to his staff, McWhan said the NSLS has "demonstrated its full potential as a center for synchrotron radiation development and use during the last few years," and he added that he looked forward to new challenges as leader of BES.

"Researchers funded through BES have the best of two worlds," he said. "They can do exciting fundamental research, but at the same time, they can contribute to a body of science that may lead to discoveries that are extremely important for our nation's economy."

Reflecting on the future of BES and of Brookhaven, McWhan said, "Where is BNL going to be in the 21st century? We have a long tradition of building

(continued on page 2)

Coming Up

Senior Physicist William Marciano will deliver the 302nd Brookhaven Lecture on Wednesday, January 18. His talk on "2001—An Inner Space Odyssey: High Energy Physics in the Next Millenium" will begin at 4 p.m. in Berkner Hall.

Carol Creutz Chairs Chemistry Department

Carol Creutz, who started her career at BNL as a research associate in the Chemistry Department 22 years ago, became the Chair of that department as of January 1.

Creutz succeeds Norman Sutin, who has chaired the department since 1988 and has returned to research. Lab Director Nicholas Samios thanked Sutin "for serving with distinction ... these last seven years. He has made a strong request to shed his administrative responsibilities and return to his real interest, his research program. It was with regret that I accepted his request, but I expect the Laboratory to gain by his making important and exciting contributions to his research."

Creutz commented, "Dr. Sutin has done an excellent job of shepherding the Chemistry Department through difficult times, and he has been instrumental in establishing two new facilities on the Lab site — the Brookhaven Center for Imaging and Neurosciences and the Pulse Radiolysis Facility. Both facilities will open up new and exciting research possibilities. I hope to continue this progress and to help the department focus on scientific questions in which we can make significant and unique contributions."

Roger Stoutenburgh

Carol Creutz

Samios also acknowledged Creutz's contributions to the Laboratory, saying, "Dr. Carol Creutz has served on the scientific staff at Brookhaven since 1972. In this time she has demonstrated deep expertise and attained worldwide recognition for her work in the area of kinetics and mechanisms of thermal and photo-induced reactions of transition metal complexes in solution. It is a pleasure to welcome her to this new rank."

Creutz said she is pleased to be named Chair of Chemistry, and, in particular, to be the first woman to chair a department in the history of the Laboratory.

"That is a special distinction. There are more women in science now than when I was a student some 25 years ago, and I think the presence of women in such nontraditional roles broadens people's perception of what women can do. The Lab has made significant advances in its policies concerning women and families, and I hope that progress continues," she added.

(continued on page 2)

Commuter Compact: BNL Plans to Cut Traffic, Air Pollution

Fasten your seat belt — the face of BNLers' morning drive to work is about to change dramatically.

To help the environment and respond to regulation, the Lab is about to introduce a far-reaching plan to overhaul the BNL community's commuting habits.

Soon, it is hoped, many employees will travel to work in computer-matched car pools or perhaps aboard BNL-leased buses tracing established routes. Others may come alone on safe bicycle paths, or in large groups in vans initially purchased with help from Associated Universities, Inc. (AUI).

All these possibilities are aimed at changing the one-employee, one-car pattern that now dominates BNL's morning commute. The initial efforts will be funded by the Lab, with assistance from AUI and a $134,000 grant from the New York State Department of Transportation's (NYSDOT) Long Island Regional Improving Commute Program.

The impetus for BNL's need to change is the federal Clean Air Act. It requires large employers, such as BNL, to make serious efforts to help reduce the number of employee vehicles on the roads during peak travel periods, when pollutant emissions from vehicle traffic are greatest.

The present regulation sets a deadline of November 1996 for those efforts to be well under way, and it had posed a November 1994 deadline for employers to plan how they will do it.

So, in mid-November, M. Sue Davis, Associate Director for Reactor, Safety & Security, submitted BNL's plan to the Suffolk County Department of Public Works, which will pass it on to NYSDOT and the state Department of Environmental Conservation.

The plan was prepared by the Employee Trip Reduction Program Work Group, headed by Employee Transportation Coordinator Jeff Williams, Safety & Environmental Protection (SEP) Division. The group also includes: Anne Baittinger, Public Affairs Office; Leonard Chimienti, Alternating Gradient Synchrotron Department; Gary Gross, Safeguards & Security Division; Robert Kelly, Personnel Division; Eva Rothman, National Synchrotron Light Source Department; and John Schnell, Staff Services Division.

Back in February, the work group asked BNLers to respond to a survey of their commuting habits and attitudes. Sixty-six percent, or 2,244, of the Lab's full-time employees replied.

One statistic that came out of the survey is especially important for compliance with the Clean Air Act — the average passenger occupancy (APO) of vehicles entering the Lab during the 6 to 10 a.m. rush period.

For the Lab, the APO was 1.06, which means that the majority of vehicles arriving on site carried just their drivers. By November 1996, the Lab must increase its APO to 1.46, or prove to NYSDOT that it made a reasonable effort to do so.

"What that means for the Laboratory is that, on a daily basis, we have to reduce the number of employee vehicles entering the site between 6 and 10 a.m. by roughly 813 cars. This represents a 27 percent decrease in rush hour employee traffic," Williams explained.

The major focus of the Lab's compliance efforts will be to increase the number and success of BNL car pools and van pools.

In order to get more BNLers into such arrangements, a computerized ride-matching service will soon be provided. To use the service, employees will need to complete a car pool/van pool registration form which will be sent through Lab mail soon.

A special geo-coding computer software program will process information from the registration forms, and provide would-be car poolers with the names of prospective car pool-mates within a three-mile radius of their homes. The ride-matching service and other commuting resources will soon be made available through SEP.

Other services to be offered will aim to ease BNL employees' fears about alternate commuting options — such as being stranded without a vehicle if a family emergency or illness arises.

In that case, Williams said, the employee would be ensured a ride through a guaranteed-ride service currently being developed. This service will provide a support system of coworkers, department or fleet vehicles, and taxis to guarantee car poolers transportation in cases of emergency or unexpected overtime.

Many BNLers who responded to the February survey said they drive alone to work because they need their cars for work-related travel (14 percent), to run errands during the day (18.5 percent) or before and/or after work (38.4 percent). Funding from the NYSDOT grant will help pay for a seven-month trial this spring of a 22-passenger jitney bus on the BNL site that should fill some of the on-site transportation needs of car poolers and van poolers.

Other options abound. In upcoming months, the Laboratory will study the feasibility of building bicycle paths for two-wheeled commuters. Commercial buses may be leased to carry dozens of BNLers to work from six residential areas for a nominal fee. And AUI will provide assistance once again in the initial purchase of new vans, with the purchase price recouped through van pooler fares. Finally, on-site defensive driving courses may be offered free of charge to all ride-sharing commuters.

"We will encourage all levels of ride sharing, whether it is once or five times a week, with two people or as many as twelve in a vehicle," said Williams. "Every little bit helps."

— Kara Villamil

New Vanpool Needs You

If you live near the Nassau-Suffolk border, a new van pool needs you to help it get rolling, by filling its vacant spots. Using a new 12-passenger van to be purchased with help from Associated Universities, Inc., the pool will stop for passengers at the Park & Ride locations near exits 41 and 49 of the Long Island Expressway five days a week. With additional passengers, the monthly cost of the vanpool is expected to be between $92 and $113. For more information on this van pool, come to an informational meeting on Monday, January 9, at noon in the Bldg. 535A conference room. If you can't make the meeting or want more information on van pools in general, call Jeff Williams, Ext. 5587.

Carol Creutz (cont'd)

On scientific issues, Creutz said she hopes to broaden the types of research in the Chemistry Department and to strengthen the already vigorous ongoing research efforts.

The common goal of the many diverse programs in the Chemistry Department is to understand the properties of nuclei, atoms and molecules. The wide range of research includes nuclear and radiation chemistry, radiopharmaceuticals, catalysis, state-to-state chemistry, and thermal and photo-induced charge-transfer processes. As chair, Creutz will oversee the work of about 100 employees.

A transition-metal chemist, Creutz does research primarily in photochemistry and reaction mechanisms. This work contributes to the Chemistry Department's basic research on solar energy conversion.

Creutz earned her B.S. from the University of California, Los Angeles, in 1966, and her Ph.D. from Stanford University in 1971. Before she joined Brookhaven as a research associate in 1972, Creutz was an assistant professor at Georgetown University for two years. At Brookhaven, she was promoted to Associate Chemist in 1975, then Chemist in 1977. In 1980, she received tenure, and, in 1989, she became Senior Chemist.

Currently Councilor for the Inorganic Division of the American Chemical Society, Creutz was on the editorial board of the journal *Inorganic Chemistry*, 1988-91. She served on the National Science Foundation Panel on Research Opportunities for Women in 1990 and was a member of the U.S. Department of Energy's Women's Program Review in 1992. She is now serving on the National Research Council Committee on Prudent Practices for Handling, Storage and Disposal of Chemicals in the Laboratory.

Carol Creutz is married to Michael Creutz, a theoretical physicist in the Physics Department, and the couple's daughter, Lela, is a biology student at Reed College in Portland, Oregon.

— Diane Greenberg

Denis McWhan (cont'd)

forefront user facilities — the Graphite Reactor, Cosmotron, HFBR, Alternating Gradient Synchrotron, NSLS, and, currently, the Relativistic Heavy Ion Collider (RHIC).

"We must start now to identify and develop support for out next BNL user facility," he said. "We will be looking at the next generation of neutron sources as one possibility."

Further, McWhan said he will encourage more collaborations among BES programs in various departments. "Using interdisciplinary expertise can make possible new scientific creativity," he said.

While looking forward to the challenges and opportunities of his new position, McWhan also considered his roles at AT&T and BNL in the past, saying, "I feel fortunate to have been able to work at two institutions that are world-renowned for their leading research in condensed matter sciences."

McWhan earned a B.S. from Yale University and a Ph.D. in chemistry from the University of California at Berkeley. After a postdoctoral appointment at the Royal Institute of Technology in Stockholm, Sweden, he joined AT&T's technical staff in 1962. As an AT&T user, he began doing research in magnetism at the HFBR in 1974 and at the NSLS in 1984.

In 1990, McWhan joined BNL as NSLS Chairman. In collaboration with colleagues Martin Blume, BNL's Deputy Director; Doon Gibbs, Physics Department; and Jerome Hastings, Chi-Chang Kao and Peter Siddons, NSLS Department, McWhan has been developing resonant magnetic x-ray scattering, which is opening up new opportunities for the investigation of magnetic structure of surfaces, multilayers and bulk solids.

A fellow of the American Association for the Advancement of Science and the American Physical Society, McWhan was also the recipient of Bell Laboratories' Distinguished Technical Service Award in 1982.

— Diane Greenberg

Money Talks
Focus on Savings

On Wednesday, January 18, the next Money Talks lecture, entitled "Take Charge of Your Savings," will be presented from noon to 1 p.m. in Berkner Hall. At that time, a representative from the Vanguard Group will discuss investing for short-and-long-term savings goals, identifying your investment-risk tolerance, choosing an investment mix to meet your goals, and reviewing and revising your investment mix.

For more information, contact Denise DiMeglio, Ext. 2881.

BNL Spent $42M on L.I. in '94

Just as neighborhood stores would flounder if local residents did not support them, many high-tech and construction firms in the Long Island "neighborhood" depend partly on BNL's support for their continued business success.

The Laboratory buys locally when it can, and, during fiscal year 1994, it purchased some $42 million worth of supplies and services from Long Island businesses. This total accounted for about 28 percent of the Lab's purchases during the period from October 1, 1993, to September 30, 1994.

Of the 11,481 purchases made on Long Island in 1994, 8,109 totaling more than $28 million were made in Suffolk County, and 3,372 amounting to over $13 million were made in Nassau County.

Mary-Faith Healey, Manager of Brookhaven's Division of Contracts and Procurement, said, "BNL continues to benefit the Long Island business community and its economy. By procuring various goods and services through Long Island-based firms, the Laboratory has established itself as a leader in support of Long Island entrepreneurs."

New construction and maintenance of older buildings accounted for many of BNL's purchases during fiscal year 1994. For example, 6,100 square feet of experimental floor space and a new 6,300-square-foot wing for structural biology experiments are being added on to the National Synchrotron Light Source. Several maintenance projects are also under way, including the renovation of apartments used by Lab visitors.

In addition, out of Brookhaven's 1994 operating budget of $284.9 million, 54.8 percent was spent on salaries and wages and 18.7 percent went to fringe benefits. Most of these funds were also spent on Long Island.

— Diane Greenberg

Leaving the Lab — After 35 Years or More

The Bulletin salutes employees who retire with 35 or more years of service to the Laboratory.

On land, on sea, in the air and in the lab, Dan Leahy has spent 37 years helping Brookhaven's scientists learn more about the environment and how humankind affects it.

In that time, he has collected a wealth of stories about the places he's seen and the people he's worked with along the way — stories he readily shares with a healthy helping of humor. So, when asked why he retired on January 3 from his position as a Chemistry Associate I in the Department of Applied Science's Environmental Chemistry Group, Leahy gives a tongue-in-cheek reason. "I've run out of jokes, so it's time to go!" he says.

Leahy's career at BNL began on November 18, 1957, as a technician in the Nuclear Engineering Department's analytical services group, providing chemical analysis support to the entire Laboratory. There, he used the associate's degree in chemistry he had earned at the State University of New York's Farmingdale campus after leaving the Army in 1954.

"I had two weeks between being in the service and college, and chemistry was the only curriculum that was open — everything else was filled," he remembers. After graduation and a brief stint at Republic Aviation, Leahy followed the lead of his Farmingdale sweetheart-turned-wife Carol Jean and applied for a job at Brookhaven.

As he worked at BNL, rising to research lab assistant II, and then research lab assistant I, Leahy also worked toward a bachelor's degree in chemistry at Adelphi University. He completed it in 1961, shortly before becoming a chemistry associate IV. Prior to that time, his wife had left BNL to raise their four children, including one who became a BNLer herself — Kelly Bornhoft, of the Staff Services Division. And, Leahy played softball on Lab teams, including the Gnats — named, in reverse, for Hot Lab division head Lou Stang.

By the end of the 1960s, automated equipment took over much of the analytical services group's work, so Leahy found a new way to use his experience. On January 22, 1969, his group became part of the Department of Applied Science, and he worked in conjunction with the meteorology group — whose sulfur dioxide (SO_2) monitoring project he had already aided by preparing and analyzing filter packs used on stacks at LILCO's Northport power plant.

Roger Stoutenburgh

Dan Leahy

Several years later, Leahy had his one seaborne-research experience at BNL, when the fledgling oceanography group "borrowed" him in the mid-1970s to operate instruments on a research cruise.

But he was to spend much of the decade in the air. By the mid-1970s, he was routinely making data-gathering flights with then DAS scientists Cy Fink and Bob Brown in a small plane loaded with instruments, collecting air samples and analyzing them for pollutants such as SO_2, ozone, nitrogen dioxide and nitric oxide.

It was this airborne science experience that gave Leahy a once-in-a-lifetime experience, too. "I like to say that I had 426 successful takeoffs and 425 successful landings," he notes wryly.

On November 8, 1986, the left engine of the BNL research plane failed on the way home from an acid-rain research mission, and the craft crash-landed in a field near a Baltimore hospital. The co-pilot was killed, but Leahy, another BNL researcher and the pilot survived with injuries.

"I was elated to be alive," he says now. He credits the help of passing motorists who helped pull him and the others from wreckage that exploded shortly thereafter, and hospital workers who arrived by foot to give first aid at the scene.

With his airborne career behind him, Leahy concentrated on more earthbound research: environmental monitoring trips that measured greenhouse gases, acid rain and cloud-water chemistry in places as far south as Yazoo City, Mississippi, and Metter, Georgia, and as far north as North Bay, Ontario, Canada.

"One of the good things about this job is the trips you take to places where you never would have gone," he said. "I've seen a lot of little places, and some of them I'd like to go back to again to see them at a more leisurely pace."

That kind of travel will take up much of Leahy's retirement. And, he and his wife hope to spend time with their children and six grandchildren. But he also anticipates continuing some of the same kind of duties he performed as Bldg. 426's building manager — only this time at his home in Smithtown. — Kara Villamil

AIX Users Meeting

The next meeting of the AIX Local Users Group will be held on Wednesday, January 11, at 1:30 p.m. in Room 2-160 of Physics, Bldg. 510. For further information, contact Ronnie Evans, Ext. 2851.

Weight Watchers

Registration for the on-site, lunchtime Weight Watchers group will be held on Wednesday, January 11, from noon to 1 p.m. at the Brookhaven Center. The class will first meet on Wednesday, January 18 and continue for a total of eight to ten Wednesdays, depending on the number of people who sign up. With the Lab paying $10 for each participant, the cost is $89 per person. For more information, contact Mary Wood, Ext. 5923.

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In Memoriam

The following retirees passed away recently:

George W. Korn, who retired on July 6, 1992, as a senior technical specialist with the National Synchrotron Light Source (NSLS) Department, died on December 26. He was 67 years old. He had started at the Lab as an NSLS technical specialist on November 1, 1982.

Arthur Worthington, a project engineer I in the Plant Engineering Division when he retired on July 15, 1986, died on December 27 at the age of 68. He had begun his 26 years at BNL on May 16, 1960, as a designer in the Architectural Planning Division.

Atlantic City Trip

A few seats remain for the next BERA-sponsored, one-day trip to the Trump Castle Hotel and Casino in Atlantic City, on Saturday, January 14. The initial cost will be $22, but the hotel-casino will give a $12.50 coin return and a $5 return voucher. The bus will leave BNL at 9 a.m. and return about 11:45 p.m. Buy tickets now at the BERA Sales Office in Berkner Hall on weekdays from 9 a.m. to 1:30 p.m. For more information, call Andrea Dehler, Ext. 3347; Rosalie Piccione, Ext. 3160; or Kay Dellimore, Ext. 2873.

1995 New York City Train Trips

This is the only time that the 1995 schedule of special discounted trips to New York City (NYC) via the Long Island Railroad (LIRR) will be published in the Bulletin, so clip and save the information below:

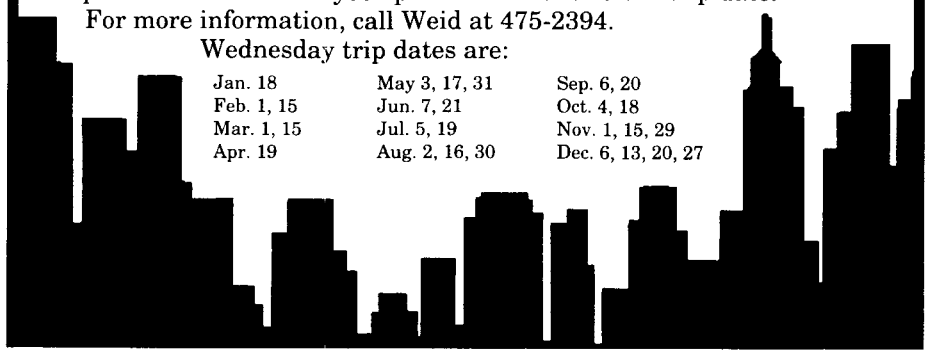
- **Saturday trips** — The Patchogue-Medford Library runs trips to NYC on the third Saturday of every month, starting in March. The train leaves from Patchogue at 8:15 a.m. Purchase round-trip tickets, at $7 each, at the library at least one week before the trip. For information, call 654-4700, Ext. 20.
- **Wednesday trips** — Diane Weid will run NYC train trips on Wednesdays as listed below, leaving from Patchogue at 7:56 a.m. The round-trip cost is $7.50 per person.

A minimum of 30 people is needed for each trip. For reservations, send a check payable to Cash to: Diane Weid, 645 Old Medford Avenue, North Patchogue, NY 11772. Checks must be received by the Monday before a trip and should include your phone number and the trip date.

For more information, call Weid at 475-2394.

Wednesday trip dates are:

Jan. 18	May 3, 17, 31	Sep. 6, 20
Feb. 1, 15	Jun. 7, 21	Oct. 4, 18
Mar. 1, 15	Jul. 5, 19	Nov. 1, 15, 29
Apr. 19	Aug. 2, 16, 30	Dec. 6, 13, 20, 27



In Stormy Weather

Listen to:

Station	Area	AM	FM
WALK	Patchogue	1370	97.5
WBAB	Babylon	1440	102.3
WBLI	Patchogue		106.1
WCTO/ WGSM	Smithtown	740	94.3
WHFM	Southampton		95.3
WHLI/ WKJY	Hempstead	1100	98.3
WLIM	Patchogue	1580	
WLIX	Islip	540	
WLNG	Sag Harbor	1600	92.1
WRCN	Riverhead	1570	103.9
WRIV	Riverhead	1390	

Or call: 282-INFO*

*Dial the letter O, *not* zero!

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

Resolve to Aerobicize!

If your New Year's resolutions include exercise, join the BERA Aerobics Dance Club in its new series of stretch and aerobic dance classes, starting Monday, January 9, with a stretch class at 5:15 p.m. in the Physics lounge, Bldg. 510. Aerobic dance classes will be held Tuesdays and Thursdays, beginning January 10, at 5:15 p.m. in the Recreation Hall in the apartment area. The cost is $30 for any 10 classes. Mats are recommended. For more information, call instructor Pat Flood, Ext. 7886, or Kara Villamil, Ext. 5658.

Hospitality Meeting

At the next Hospitality Committee get-together on Tuesday, January 10, at 1 p.m., in the lounge of the Recreation Building in the apartment area, Robert Lee, of the Lab's Safety & Environmental Protection Division, will discuss "Lead in Drinking Water."

Spouses of Lab employees and guests are welcome to attend. Please bring the children, but also bring along a toy or two. Coffee, tea and cookies will be provided.

LABVIEW Training

An information meeting on LABVIEW training will be held on Wednesday, January 11, at 2:30 p.m. in the seminar room of Bldg. 515, Computing & Communications Division. Topics to be discussed include on-site training and course outlines. For more information, call Pam Mansfield, Ext. 7286, or e-mail pam1@bnl.gov.

Arrivals & Departures

Arrivals

Michael G. Blewitt ..... Biology
Steven C. Bradley ..... Reactor
William R. Dorsch ..... Dir. Off.
Sheryl I. Gerstman ..... Sfgrds. & Sec.
Anatoli M. Gordeev ..... Physics
Wanshun Jiang ..... AGS
Scott D. Rothe ..... RHIC
Fang Shu ..... Biology

Departures

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

Violet Bezler ..... Physics
Benon H. J. Bielski ..... Chemistry
Donald P. Brown ..... RHIC
John Bunicci ..... AGS
Alfred S. Campbell ..... RHIC
Richard M. Greene ..... Biology
John T. Koehler ..... RHIC
Richard K. McMullen ..... Chemistry
Eleanor M. Mitchell ..... Adv. Tech.
Donald S. Olcott ..... Reactor
Leon Peker ..... Adv. Tech.
Maithili Sarkar ..... Adv. Tech.
Frank J. Thornhill ..... RHIC
Zygmunt W. Twardowski ..... AGS
Robert J. Warkentien ..... AGS

Water Aerobics

Water aerobics will resume for ten weeks beginning Tuesday, January 17, at the BNL pool. Classes will be held on Mondays, Tuesdays and Thursdays from 5:15 to 6 p.m. To register, call Mary Wood, Ext. 5923.

Volleyball

Standings as of December 29

Open League		League 1	
The Men and Me	28-8	Rude Dogs	22-8
GTEAM	24-12	Koopas	21-12
Farside	22-14	Network News	19-24
The Roofing Co.	15-21	Underdogs	10-23
Bud Men	1-35	Safe Sets	9-24
League 2		**League 3**	
Fossils	23-7	Silver Bullets	22-5
Net Wits	20-10	Take Five	20-7
Safe Sets II	19-11	High Volley'em	18-9
Mon. Night Live	8-12	Upton-Ups	17-10
Nuts & Bolts	14-16	For Play	12-15
Spiked Punch	12-18	DO-DAT	11-16
Jolly Vollies	11-19	Harlem Knights	4-23
Night Court	3-27	Bonnie's Bombers	4-23

Bowling

Red and Green League

J. Goode bowled a 236/226/224/686 scratch series, R. Eggert 259/220/204/683 scratch, J. Cuccia, Jr. 257/223/653 scratch, J. Griffin 226/214/203/643 scratch, R. Mulderig, Sr. 236/205/640 scratch, S. DiMaiuta 219/210/200/629 scratch, E. Sperry IV 221/217/628 scratch, M. Palumbo 216/215/604 scratch, F. Griswold 234/223, H. Arnesen 229/200, R. Larsen 223/202, J. LaBounty 210/201, A. Pinelli 226, A. Warkentien 225, K. Asselta 223, E. Larsen 213, R. Mulderig, Jr. 206, R. Raynis 203, R. Prwivo 202.

Purple and White League

M. Meier bowled 234, S. Smith 225, M. DiMaiuta 213/183, S. Logan 212/199, G. Munoz 209, J. Butler 202/190, R. Picinich 201, S. Frei 200, E. Sperry III 199/182, J. Sheehan 196/181, P. Callegari 190, K. Botts 189, T. Farmer 187, J. Meier 184, C. Wood 179, L. Farmer 177, D. Botts 170.

Cafeteria Menu

Monday, January 9	
Soup: Chicken noodle	.90/1.20
A la Carte: London broil w/mushrooms	3.85
Deli: Pastrami	3.20
Grill: Reuben	3.30
Tuesday, January 10	
Soup: Cream of broccoli	.90/1.20
A la Carte: Liver & onions	3.70
Deli: Virginia ham	3.20
Grill: Western omelet	3.30
Wednesday, January 11	
Soup: Bavarian lentil	.90/1.20
A la Carte: Pork chops	3.65
Deli: Roast beef	3.20
Grill: Italian cheesesteak	3.30
Thursday, January 12	
Soup: Beef vegetable	.90/1.20
A la Carte: Deviled hens	4.00
Deli: Corned beef	3.20
Grill: Ham & cheese	3.30
Friday, January 13	
Soup: Seafood chowder	.90/1.20
Display Cooking: Oriental entree	4.25
Deli: Roasted turkey	3.20
Grill: Fried shrimp boat	3.30

Deli, burger and other specials daily.

Classified Advertisements

Placement Notices

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

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

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

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

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

MK 2399. MAIL CLERK - Must possess a valid New York State driver's license. Staff Services Division.

MK 3310. TOOL CRIB ATTENDANT - Under minimum supervision is responsible for the operation of a tool crib. Receives and issues supplies, materials, tools and equipment. Responsible for checking conditions and quantity of items received and issued, and for maintaining stock at proper inventory level. Maintains tool crib in an orderly and efficient manner. Maintains records and performs paperwork necessary for operation of tool crib and assists in inventory. Plant Engineering Division.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

MK 6159. CHAIR, NATIONAL SYNCHROTRON LIGHT SOURCE DEPARTMENT - Candidate should have a Ph.D. in physics, materials science, biology or chemistry with extensive experience, coupled with strong proven managerial capabilities, and be a recognized authority in his/her field. Must be an able leader with strengths in dealing with university and industrial leaders. Will be responsible to continue to build participation and commitment from the outside research community, to continue to strengthen both the scientific and synchrotron source development programs, and to integrate these programs with other Laboratory departments and other synchrotron sources, and for the development of a "fourth generation" light source. Director's Office.

DD 0549. TECHNICAL POSITION - (term appointment) Requires an AAS or equivalent in electrical technology and significant experience in constructing, installing and field testing of electrical and electronic systems. Experience with PLC devices preferred. Duties include installing and testing RHIC access security equipment within the RHIC magnet enclosures. RHIC Project.

DD 0547. TECHNICAL POSITION - (term appointment) Requires an AAS or equivalent experience and the ability to work from electrical and/or mechanical blueprints or sketches in building and troubleshooting complex equipment. Experience in leak detection PPA in components and systems, and handling cryogens also required, as are excellent communication and demonstrated organizational skills. RHIC Project.

DD 3610. SCIENTIFIC ASSOCIATE POSITION - (term appointment) Requires an MS in electrical or nuclear engineering with an understanding of nuclear power-plant systems that impact on radiation exposures. Familiarity with computer networks, databases, on-line electronic communication and systems based on pattern recognition and fuzzy logic. Technical writing and editing skills desirable. Will work with the Radiation Protection Group and the Internal Dose Assessment Group of the Department's Radiological Sciences Division. Department of Advanced Technology.

LS 3805. PROGRAMMING POSITION - (temporary position) Requires a bachelor's degree in an appropriate discipline with experience in client-server, SQL/ORACLE, C programming, SunUNIX and Windows. Responsibilities include the development and customization of the Chemical Management System (CMS) application using ORACLE in a UNIX environment. Safety & Environmental Protection Division.

LS 3806. SCIENTIFIC ASSOCIATE POSITION - (temporary position) Requires a BS in chemistry or equivalent with several years' relevant experience, extensive knowledge in chemical properties, and computer literacy. ORACLE/UNIX experience desired. Responsibilities include developing, evaluating and identifying chemical properties to assure data integrity for site-wide computerized chemical inventory tracking system. Safety & Environmental Protection Division.

Motor Vehicles & Supplies

93 GEO STORM - 13k mi., m/t, alarm, $9,000 neg. or take over payments. Doreen, 321-4296 after 10 p.m.

90 MITSUBISHI PRECIS - 2-dr., 4-spd., sunroof, am/fm cass., new tires, high hgwy. mi., $1,500 neg. Ext. 7528.

90 TOYOTA CAMRY - 4-dr. sedan, a/t, p/pkg., new brakes, tires, battery, body excel., garaged, 58k mi., $8,100. Charles Ashby, Ext. 4857.

89 JEEP WRANGLER - red, 6-cyl., 2 tops, a/t, am/fm stereo, new tires, ac, $9,000. 588-9325.

89 NISSAN 4x2 PICKUP - 5-spd., 42k mi., am/fm radio, bedliner, good cond. Marie, Ext 7678.

89 NISSAN PULSAR NXXE - p/s, p/b, 5-spd., T-tops, ac, tilt wheel, am/fm cass., $5,000. 929-0663.

88 FORD F150 PICKUP - 4wd, 8-cyl., bedliner, tinted glass, chrome, 32" wheels, a/t, 103k mi., detachable stereo, 4 speakers, $6,500. Bill, 878-4356.

87 JEEP WRANGLER 4x4 - low mi., 6-cyl., a/t, ac, p/s, p/b, stereo, hard & soft tops, red w/black leather int., immac. 929-8514.

87 NISSAN SENTRA - clean, in good running cond., 109k mi., $1,950. John, Ext. 2769.

87 OLDSMOBILE REGENCY BROUGHAM - 75k mi., 4-dr., electric sunroof, white w/leather int., $4,900. 744-9802.

86 OLDS DELTA 88 ROYALE - loaded, full power, well maintained, 90k orig. mi., clean, runs well, $2,800 neg. Mark, Ext. 2494.

85 CHRYSLER LE BARON - 4-cyl., p/s, p/w, am/fm radio, 36,928 mi., one owner, v.g. cond., $2,400 neg. O. Booker, Ext. 3082.

85 FORD ESCORT - new engine, must see, mint cond. Harvey, 281-7568.

85 LINCOLN TOWN CAR - white/red int., 5.0 liter, o.d., gar., $3,500; '84 GMC Jimmy, full-size, 5L eng., 4wd, new tires, CB, $4,000. Bob, Ext. 2710 or 467-4222.

84 DODGE WINDOW VAN - a/t, ac, cruise, tow pkg., $2,100. Charlie, 543-4960.

84 HONDA CIVIC - blue, 4-dr., 5-spd., good performance, high mi., make offer. 878-0270 eves.

84 VOLVO WAGON - good body, tight eng., new tires, brakes, shocks, rear susp. pivots. a/t, o.d., 100k mi., $4,000. Ext. 3401 or 744-6229 or SWEET@BNL.GOV.

83 MAZDA GLC - new brakes, almost new tires, good cond., reliable transportation. Campbell, Ext. 4168.

79 CAMARO - easy to start, runs well, $700; rims, fit FR-78-14 tires, 2/$30; mid-size car cover, like new, $25. Ext. 5207 or 474-1629.

77 CHRYSLER NEW YORKER - V-8, new parts, good running cond., $375. 821-4983.

76 CHEVY CAMARO 350 - V-8, $850 neg.; tires, 225/70R15, 4 Dunlop-tread, $60/4; 225/70R14, Goodyear Eagle ST radials, $35/2. Ron, Ext. 4553 or 744-1194.

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

76 VOLVO 242 DL - m/t, sunroof, high mi., good cond., $1,200 neg. Steve, Ext. 3018 or 369-5181.

76 CHEVY MALIBU CLASSIC - 350 small block, Holley 4-bar. carb., Edelbrock manifold, chrome headers, B&M Quicksilver slapshift, posi rear. Phil, 286-1348.

74 MGB - convertible, on the road through 1992, new top w/zippered window, runs well, $1,500 neg. Marcia, Ext. 7796.

TIRES - 1, P215/70R14, Firestone, excel., $25; 2, P225/75R15, Goodyear, brand-new, orig. $175, now $40 ea. 698-9274.

PARTING OUT FORD F150 4x4 - front nose, 351M motor, new rear, hood, door, transfer case, steering box. Wayne, Ext. 2964.

WHEELS - 2, for Chrysler Aries or similar, w/P175/85R13 tires, good for spares. Bill, Ext. 3698.

Boats & Marine Supplies

22' HURLEY - 1971, bilge, keels, pivot mast, sleeps 4, Port-a-Potty, sink, 3 head sails, 7½-h.p. Mercury, $2,500 neg. Bill, Ext. 4201 or 567-5631.

21½' PURSUIT - 1991, deep V cuddy, 150-h.p. Yamaha, 140 hrs., o/b, loaded, '93 E-Z trailer, full canvas, mint cond., $18,000. Lloyd, 587-7876.

21' VEGA - 1965, 200-h.p. Evinrude, 1990, Gil bracket, cuddy cabin, VHF, am/fm stereo, $2,500 neg. Bill, Ext. 4201, 567-5631.

OUTBOARD - 7.5-h.p. Eska, air-cooled, short-shaft, good for small boat, hardly used, excel. cond., $150. neg. Bill, 281-6498.

Furnishings & Appliances

BEDROOM SETS - oak, w/maple, king-size bed: hardwood, armoire, dresser, 2 nightstands, king-size bed, $990. Ext. 3922 or 878-2604.

BEDROOM - double bed, dresser, chests, $700; 90" couch/recliners, $700; air conditioner, 5,000 Btu, $150; rockers/ottoman, $150. Joe, 924-7476.

BEDROOM - chest, dresser, mirror, nightstand, soft contemporary, good cond., asking $135. 473-7667.

BREAKFRONT - French provincial, medium brown, good cond., asking $50. Nancy, Ext. 7976.

CRIB - maple spindle-type, from Behrs, used once, like new, must see, asking $225. Donna, 821-3739.

DINING ROOM - 6 chairs, table, china closet, server, excel., $200. 543-4960.

DINING ROOM - breakfront, octag. table, 2 leaves, 2 armchairs, 4 side chairs; bedroom, king bed, triple dresser, chest, night table. Shirley, 689-8665.

DINING TABLE - 4 chairs, solid oak, Formica top, octagon, brown, $35. Bert, Ext. 5156 or 581-4436.

ETAGERE - rattan, 6'x6', w/glass shelves, $200; china cabinet, $40. 325-1907.

FILTER KIT - #76F, for Broan range hood, $10. Ruppert, Ext. 3254.

OVEN/RANGE - GE, self-cleaning, free-standing, v.g. cond.; GE dishwasher, must sell, $30/ea. or $50/both. TJ, 744-3308.

HOUSE CONTENTS - 3-piece wall unit, oak dining rm., Bassett bdrm. set, den furn., barbeque, 42" round Fiberglass, 6 chairs. Warner, 563-2889.

LIVING ROOM - Colonial, queen sofa bed, chair, rocker, coffee table, end tables, $250. Biays, Ext. 2946 or 281-2463.

MICROWAVE - Sanyo, compact, powerful, $120 or best offer. 475-8242.

REFRIGERATOR - 14.6 cu. ft., off-white, best offer. Maj Britt, Ext. 2381 or 1388.

TABLES - end, coffee, oval, dark walnut, like new, $100; wrought iron patio set, 4 swivel chairs, table, Formica top, indoor, $200. Marty, Ext. 2214.

Tools, House & Garden

COAL STOVE - 60k Btu, Wellington airtight, 24-hour auto feed hopper, thermostat, cooktop, glass door, asking $350 neg. Marcia, Ext. 7796.

COAL STOVE - Surdiac, excel. cond., triple wall pipe, coal included, $200. Carter, Ext. 7599 or 924-5423.

LAWN TRACTOR - Ariens, w/snow plow, grass catcher, 32" cut, 8 h.p., excel., $675. Don, 581-7656.

SNOW BLOWER - 5-h.p., self-propelled, electric start, two-stage adjustable thrower, Simplicity model 524, w/reverse, 25½" width, $750. 822-6941 after 6 p.m.

STORM DOORS - for 5' double doors, insulated glass screens, excel., $100 neg. Dick, Ext. 4337.

Sports, Hobbies & Pets

BASEBALL CARDS SETS - 1965 & '66, best offer; 1986 Fleer basketball set, best offer. Tony, 281-2027.

BIKE - 3-spd., men's, good cond., $20. John, Ext. 3292 or 286-1348.

BICYCLE - 18 spd., 20", Diamondback mountain bike, chain, bag, helmet, brand-new, mint cond., $250 neg. Charlie, 467-0351.

MOUNTAIN BIKE - Diamondback Ascent, new bottom bracket, seat, $300. Ext. 3884.

FISH TANK - 50-gallon, stand, light, asking $50 neg. Mary, Ext. 2815 or 472-4087 after 6 p.m.

SEWING MACHINE - portable, like new, white case. 924-8558 after 5 p.m.

SKIS - 3 sets, w/bindings, poles, Atomic 195, $100; Head 180, $90; Fischer 170, excel. cond., $90. Ralph, Ext. 4446.

SPA MEMBERSHIPS - Jack LaLanne Lifetime Premier Plus, low monthly fees, 2, $350/ea. Denise, 724-0036.

WET SUIT - Hot Point neoprene, hooded, size med., good cond., $70. Ernie, Ext. 5092 or 281-7873.

Audio, Video & Computer

COMPUTER - Apple LISA, runs Mac Plus operating system, 2 MB RAM, 40 MB HD, software, games, $500; Imagewriter printer, $150 neg. Don, 821-3320.

COMPUTER - Compaq Presario, 486DX, 50 MHz, CD ROM, sound blaster speakers, modem, monitor, software, joystick, never used, $1,200. Millie, Ext. 3775.

GAMES - for Super Nintendo, $25-$35. Ext. 7505.

HARD DRIVE - Conner CP3100, 104MB, SCSI w/16 bit high speed sumo controller, supports external devices, asking $200. Marcia, Ext. 7796.

PRINTER - Panasonic KX-P1124, 24-pin, multi-mode printer. Mike, Ext. 7772 or 369-3307 after 6 p.m.

SPEAKERS - JBL-XPL200, active crossover, bi-amp, MTX stands, excel. cond., low hrs., orig. cartons, orig. $3,900, asking $1,950. Ken, Ext. 2935.

SPEAKERS - DBX Satellite system, 10-175 watts, 8 ohms, 1 sub-woofer, 2 satellites, perfect cond., $100. 331-4011 after 5 p.m.

TV - Sears, solid-state, 16" screen, $100, excel. cond. Ext. 5915.

VCR - JVC, 4-head, great cond., $150 or best offer. 475-8242.

VCR - Teac MV-385, records, plays OK, needs tuner & remote, $20. Phil, Ext. 5669.

VIDEOTAPE - Windows NT tutor, getting started, new, $25. Susan, Ext. 7647.

Miscellaneous

CHRISTMAS TREE STAND - brand-new, never used, still in box, $8. Ext. 5225.

COLLECTIBLES - authentic copy of the 1919 contract to sell Babe Ruth to the Yankees, make offer. O. Booker, Ext. 3082 or 727-5912.

DIAMOND RING - 0.93 ct. w/2 tapered diamond baguettes, appraised at $5,000, asking $2,700. Mike, Ext. 4293.

ENCYCLOPEDIA - Grolier Academic American, 1990 edition, 1991-94 yearbooks, like new, orig. $1,400, asking $450. Frank, Ext. 2022 or 399-3446.

SILVER FOX JACKET - size 9. Harry, Ext. 3450.

Free

CEMENT - white masonry, 70-lb. bag. Ext. 3884.

KITTEN - beautiful. Bent, Ext. 3525 or 3867.

SOFA BED - 3-cushion, very good condition. Rich, Ext. 3386.

Lost & Found

LOST - silver earring, horses dangling on hoop, Bldg. 460 vicinity. Janet, Ext. 2345.

Wanted

ANTIQUES - paintings, Oriental rugs, furniture, for cash. Ron, Ext. 5371.

BAND SAW - metal-cutting. Frank, Ext. 5120 or 369-5815.

COAL STOVE MANUAL - for a Haas and Sohn, a copy would be fine. John Trunk, Ext. 3406.

ENGLISH TEACHER - female pref., in exchange for conversational Spanish. Malena, 341-1001.

ICE SKATES - men's size 9½, in good cond. & reasonable. Doreen, Ext. 2457.

JUNK CARS - trucks, free removal, money paid for running, late model cars. Steve, 924-8741.

NANNY - mature, loving, for sisters ages 2 & 5, M-F, 28-35 hr./wk, in our Rocky Pt. home, nonsmoker w/clean drivers lic. 821-4083 after 5 p.m.

PORT-A-CRIB - in good cond., reasonable, w/mattress preferred. Lois, Ext. 3315 or 929-4753.

SKIERS - to ski Hunter 1/25, send $42 for bus & lift to Augie Hoffmann, Bldg. 510C.

SNOW VILLAGE - Dept. 56, sleeves for various boxes. Pat, Ext. 2452.

WATER HEATER - used, electric, doesn't have to work, will pick up/remove from bsmt. Ernie, Ext. 5092.

VW BEETLE CAR PARTS - air compressor, 4 h.p. min. Rich, 929-8514.

Services

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

BABY-SITTER - experienced mother of 2, in Rocky Pt. area. Anna, 744-5392.

BRICKWORK - masonry, patios, walks, swimming pools, retaining walls, landscaping ties, Belgium block, 25 yrs. exp., Lab disc. Tony, 698-9274.

CHILD CARE - experienced mother will watch your child in my Rocky Pt. home, crafts and snacks, TLC. Lorijean, 744-5857.

CHILD CARE - mature, responsible mother will care for your child along w/2-yr. daughter, ages 2-5 pref., Wading River. Mary, 929-8613.

COMPUTERS - installations, repairs, tutoring on hardware/software, free estimates. Steven, 698-5260.

DRAFTING - architectural services, house plans, alteration design plans, building drawings, ready for permits. Richard Hintze, 929-8514.

DJ/MC - professional, rap, club, house, 50s, all occasions, demo tape avail., refs. Alex, 286-0575.

ELECTRICIAN - outlets, switches, lighting, service upgrades, repairs, lic./ins. Steve, 758-7002.

FINANCIAL REVIEW - of your life insurance and annuity program for future pension maximization and tax savings. Rich, 744-4816.

HOME IMPROVEMENT - carpentry, drywall, spackling, painting, plumbing, ceramic tile, storage sheds, free est., Lab disc. Don, 744-2921 after 5:30 p.m.

HOUSE CLEANING - reasonable, very efficient, refs. Marty, 395-4566 any time.

JEWELER - special orders, repairs, honest, affordable, no job too large or small, Kelly, 821-5239.

LOCKSMITH - sales & service, 10% Lab discount, keys cut during lunch; house cleaning, reasonable, very efficient, refs. Pete, 399-2813 after 5 p.m.

MASSAGE THERAPY - reasonable, gift certificates avail. 399-6585.

PAINTING - special/regular finishes incl. marbling, ragging, sponging, combing, graining & murals on floors, walls, ceilings & trim. Phil, 286-1348.

PAINTING - interior/exterior, Sheetrock, tape, spackle, wallpaper, stain, polyurethane, refs., insured. James, 399-4912.

SHEETROCKING - spackling. free est. Kevin, 567-6621.

SNOW REMOVAL - driveways plowed, senior citizen rates avail. 286-1467.

TREE SERVICE - Robert, 281-2746.

TYPING SERVICES - term papers, resumes, letters, pick up, drop off, quick. Willie or Cathryn, 821-7327.

VIDEOGRAPHER - capture those precious moments on video, will tape weddings, parties, all occasions. Larry, 281-7240.

In Appreciation

Thanks to all who attended my great farewell send-off. Your friendship will always be treasured.

— Frank Thornhill

Thank you to my friends and co-workers for your caring and sympathy upon the loss of my mother.

— W. Voegelin & family