BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

Seven Honorees: Excellent Performance in Many Areas

The seven staff members who received the Laboratory's two highest honors on December 14 have each excelled in their individual areas.

The outstanding research performances of Michael Brennan, Alternating Gradient Synchrotron (AGS) Department, and Gen Shirane, Physics Department, earned each of them the Research and Development (R&D) Award, symbolized by an engraved memento and accompanied by a pre-tax award of $5,000.

The Brookhaven Award, the highest honor bestowed on support area employees for outstanding service, went to: Joseph Hanson, Photography and Graphic Arts Division; Bruce Penn, Department of Advanced Technology; Alfred Roebuck, Physics Department; Ralph Sanders, AGS Department; and Neal Tempel, Biology Department. Each received an engraved memento and a pre-tax award of $2,000.

BNL Director Nicholas Samios presented the awards to the recipients in December ceremonies. "I am extremely pleased with this program in that it honors outstanding performance in a tangible way and thereby expresses the Laboratory's appreciation of these individuals for their efforts," he said. "The honorees this year are a distinguished group drawn from many areas of the Lab, and I wish them all well."

The R&D Award, the highest of the four honors in the Employee Recognition Program, rewards distinguished contributions to the Lab's research and development mission made over a period of one or more years by a member of the scientific staff or employee on the engineer/scientific associate/computer analyst schedule. The Brookhaven Award draws its winners from employees on the latter schedule, as well as staff within the administrative and two lowest management salary grades, employees within the technical support/ supervisory classifications, and those on the clerical wage scale. All told, over 75 percent of BNL employees are eligible to win one of these two awards.

Each nominee's name and supporting materials for their nomination were submitted by their department to the five-member selection committee for the appropriate award. Those committees, whose members include members of the Directorate, department chairmen and division heads, send their selections to the Laboratory Director for final approval.

Below is a summary of each 1993 R&D Award winner's work; stories about the Brookhaven Award winners are on page 2.

J. Michael Brennan, AGS

In nominating Physicist J. Michael Brennan, Alternating Gradient Synchrotron (AGS) Department Chairman Derek Lowenstein noted, "Dr. Brennan has established himself as one of the world's preeminent accelerator physicists in the area of rf acceleration systems, and, as the foremost accelerator rf expert at this Laboratory, his expertise in the rf area makes him indispensable to the AGS and RHIC."

When Brennan came to Brookhaven's AGS as an associate physicist from the State University of New York at Stony Brook in October 1986, he was already quite experienced in the accelerator field. While at Stony Brook, he contributed to the design, development and operation of a superconducting linac. Among his contributions was a quarter-wave resonator, which he coinvented with BNL's Ilan Ben-Zvi and which has been adopted by laboratories around the world.

At the AGS, Brennan joined the RF Group and, along with James Alessi, was given responsibility for the new radio-frequency quadrupole (RFQ) linac, which replaced the Cockcroft-Walton (C-W) as the preinjector for the AGS and was successfully commissioned in 1988.

Since the RFQ preaccelerator does not take up as much space as the C-W did, Brennan had enough room to fit what is called a fast-beam chopper into the beam-transport line between the hydrogen ion source and the RFQ. Invented by Brennan and BNL's John Brodowski, the chopper cuts the pulses of beam into packets that are in phase with the rf acceleration system within the AGS ring before the beam reaches the RFQ. This eliminated high-energy beam losses that previously occurred in forming stable beam bunches and, by reducing beam loss and thus radiation background, was significant in allowing the AGS to reach its present high intensity.

Also to avoid beam loss, Brennan developed a very high frequency dilution cavity, which was installed in the AGS ring. In the AGS, particles in each beam bunch go through a particular transition at a certain energy. To allow the particles to make this transition without beam loss, Brennan devised a cavity that spreads out the particles in each bunch, so the particles don't bunch too densely, thereby causing the beam to become unstable.

In 1988, Brennan was promoted to Physicist, and, in 1989, he was appointed Head of the AGS RF Group, a position he continues to hold. In addition to this responsibility, he also took charge of the design and construction of the low-level rf system for the AGS Booster, which serves as the preaccelerator for protons from the Linac and heavy ions from the Tandem Van de Graaff.

To synchronize the energy, frequency, phase and timing of the transfer of the beam from the Booster to the AGS, he created a low-level rf system that fulfills the diverse requirements of low intensity heavy ions to maximum intensity protons. In 1991, the Booster was commissioned in an impressively short time, largely due to the performance of Brennan's low-level rf system.

Since 1989, Brennan has taken the lead in the AGS rf upgrade, which is essential for both the present high-energy physics program at the AGS and the future heavy-ion physics program at the Relativistic Heavy Ion Collider (RHIC). In 1991, following detailed analysis, Brennan's $9-million, three-year rf upgrade plan was approved, and, since then, a set of ten new power amplifiers and a new low-level beam-control system have been built and installed in the AGS.

— Marsha Belford

R&D Award Winners

BNL's R&D Award winners for 1993 are J. Michael Brennan (left) and Gen Shirane.

– Photos in this issue by Roger Stoutenburgh

Gen Shirane, Physics

When proposing Gen Shirane for the R&D Award, Physics Department Chairman Peter Bond said the Senior Physicist is "recognized as the world's leading expert in the utilization of neutron scattering techniques as probes in solid state physics. His career has produced numerous scientific papers, many of which opened up new fields or provided the key experiment in unraveling difficult solid state problems."

Even before he first came to BNL in 1956, Shirane had established himself as an investigator of the physics of ferroelectric crystals while still at the University of Tokyo, from which he received his doctorate in physics in 1954. But he didn't meet up with the neutrons that were to shape the remainder of his career until 1956, during a one-year fellowship working at the Brookhaven Graphite Research Reactor.

After leaving BNL for several years for Pittsburgh's Westinghouse Research, Shirane returned to the Lab and neutron-scattering research at the invitation of George Vineyard, then Physics chairman and later Laboratory Director.

In the 31-year BNL career that has followed, Shirane has used BNL's High Flux Beam Reactor (HFBR) as the source of neutrons for his investigations of phase transitions and magnetic properties of many materials, including superconductors.

Neutron scattering works this way: As neutrons pass through a crystalline sample, they are deflected from their original paths in ways that, when interpreted, give details about the sample's lattice structure and magnetic properties. Shirane calls the HFBR an excellent tool for neutron scattering, with its high flux, low background and excellent spectrometers.

After discovering how useful the technique could be, Shirane's early neutron-scattering studies focused on structural phase transitions, including research with BNL's John Axe that led to the confirmation of the soft mode theory of such transitions, which include shifts in ferroelectric and structural properties. Largely for those studies, Shirane was awarded the American Physical Society's Buckley Prize, and was co-winner, with Axe, of the American Crystallographic Society's Warren Award, in 1973. Shirane's group has continued to study phase transitions, including current work on chromium and an oxide of germanium and copper.

Later in the 70s, Shirane teamed up with Bob Birgeneau, now at the Massachusetts Institute of Technology, to study the structure and dynamics of two-dimensional magnets. He later returned to that area when high-temperature superconductors entered the limelight in recent years, again working with Birgeneau. While this work is basic in nature, it may lead to the development of practical new superconducting materials.

Shirane and Birgeneau's current experiment, now in its preliminary stages, is a study of spin waves in high-temperature superconductors. Using spin wave information in such materials as lanthanum-strontium-copper oxides, the researchers speculate they may determine the mechanism by which superconductivity, the decreasing of electrical resistance at low temperatures, occurs.

In 1989, the same year he was elected to the National Academy of Sciences, Shirane's career was recognized by his colleagues in a symposium to honor his 65th birthday. But that milestone did not mark the end of his career; Shirane has only recently stepped down as group leader to return to full-time research, and plans to continue traveling to visit collaborators abroad.

— Kara Villamil

Bruce Penn, Advanced Technology

As Department Administrative Manager for the Department of Advanced Technology (DAT), Bruce Penn was nominated for outstanding contributions to the DAT's management, particularly in his development and practice of personnel and fiscal policies.

Penn is cited for demonstrating strong leadership in designing DAT's budgeting procedures, implementing a computerized budget module that displays year-to-date expenses and cost projections simultaneously, and for streamlining the department's subcontracting process and tracking system. As well, Penn is praised for being a staunch advocate and active participant in the Lab's and DAT's equal-opportunity-employment program. In addition to his long-term contributions, Penn was commended for the development, presentation and implementation of the closure of a significant program, saving DAT over $1 million with minimum impact on the staff.

Penn came to BNL in 1980, as a staff assistant in what was then the Department of Nuclear Energy. Moving steadily up the ladder, he assumed his present title in 1992. – M.B.

Ralph Sanders, AGS

Senior Research Engineer Ralph Sanders was cited for his outstanding contributions over the past 28 years to the design, construction and operation of the radio frequency (rf) acceleration systems in the Alternating Gradient Synchrotron (AGS), and his importance to the present AGS RF Upgrade Project.

Coming to BNL in 1965, Sanders' first assignments focused on the rf and the low-field correction systems for the AGS Conversion Project, which increased AGS proton beam intensity.

In 1979, as a member of the Heavy Ion Fusion Group, he designed rf systems for heavy-ion accelerators, including the Multiple Electrostatic Quadrupole Array Linear Accelerator, or MEQALAL. Returning to the AGS RF Group, he led two projects that helped provide new AGS beams for physics research: In 1981, he steered the design and construction of high-gain amplifiers for position monitors and the acceleration of polarized-proton beams; and, when appointed AGS RF Group Leader in 1984, he oversaw the development of the first system to accelerate heavy ions.

Named RF Group Leader for the Booster Project in 1987, Sanders headed the design and construction of the rf systems for both the proton beam and the heavy-ion beam, helping the AGS to deliver the world's highest-energy gold beams, since 1992.

Now with the AGS RF Upgrade Project, which will raise proton intensity by a factor of four, he is responsible for improving the AGS power amplifier and tuning system. — M.B.

Brookhaven Award Winners

Holding the engraved mementos they received to commemorate their 1993 Brookhaven Awards are: (from left) Ralph Sanders, Alfred Roebuck, Neal Tempel, Joseph Hanson and Bruce Penn.

Joseph Hanson, Graphic Arts

If you stacked all the printed paper that goes through the Copy Service Center in one month, the pile would be over 400 feet high. And sitting on top might be the man who coordinates the staff and machines that turn that paper into documents: Joseph Hanson.

Hanson, a Technical Supervisor in the Photography and Graphic Arts Division, received his Brookhaven Award for an outstanding 15 years of overseeing the operations of the center, also known as Quick Copy. In that time, demand has increased and deadlines have remained just as tight, but Hanson and the staff he has assembled have kept up the pace, working two shifts and sometime more, and weekend hours to get the job done.

Before taking over the Quick Copy service, which produces everything from scientific preprints to budget materials, in 1978, Hanson worked for nearly 15 years as a Quick Copy press operator. Since becoming Quick Copy head, he has overseen major duplication-technology changes — including the installation of the latest DocuTech system, which eventually will allow Quick Copy employees to turn a computer file into a bound document on one machine. – K.V.

Neal Tempel, Biology

Neal Tempel's Biology Department title, Senior Staff Specialist, does not even begin to describe all that he does.

In receiving the Brookhaven Award, Tempel was recognized for excellence as the department's Building Manager, ES&H Coordinator, Energy Coordinator, and ALARA Representative, and as the one responsible for long-range planning, general building maintenance and hazardous-waste collection.

In the latter capacity, he has organized, set up and maintained a 90-day hazardous waste collection area recognized as outstanding by BNL's hazardous waste management group.

Tempel started in Biology in 1966 as a biology associate, designing and maintaining innovative instrumentation for scientists in the Ecological Program and, in later years, the Environmental Mutagenesis Program.

In the early 1970s, he performed much of the atmospheric and field work for an extensive study of the ecology of Flax Pond, a marsh on Long Island's North Shore. As well as handling safety and physical concerns for the department, he is certified as an Electron Microscopy Technologist and is often sought out for information on plants and ecological matters. — K.V.

Alfred Roebuck, Physics

When researchers in the Physics Department need a part or gadget specially designed or made to keep their research going, they call on Alfred Roebuck and his staff at the Physics Machine Shop.

As a Senior Technical Supervisor, Roebuck routinely takes on difficult challenges and solves them — enthusiastically, quickly and cheaply, and with a pleasant and professional manner. For example, several years ago, he assisted in a study of the High Flux Beam Reactor's (HFBR) thimbles by devising a way those sample-irradiation channels could be cut and welded underwater if necessary. From day to day, he advises staff and visiting scientists on the best approach and materials to use, and often finds himself designing solutions not only in the shop, but in his spare time, too.

This kind of effective advice and creative problem solving has made Roebuck and his staff of six extremely valuable to Physics Department scientists working at the Alternating Gradient Synchrotron, the HFBR, the Tandem Van de Graaff and the National Synchrotron Light Source, as well as those in the department's smaller facilities.

A 32-year BNL employee, Roebuck spent eleven years in the Central Shops Division before taking the helm in the Physics shop in 1973 to serve the needs of diverse physics researchers. – K.V.

Officials Needed For Science Bowl

Secretary of Energy Hazel O'Leary is supporting a National Science Bowl competition to be held April 22-25 in Washington, D.C. As a result, Brookhaven will hold a regional competition Sunday, February 6, between 9:30 a.m. and 2:30 p.m., for 48 schools from Nassau and Suffolk counties.

The Science Bowl is an oral competition in which two teams of four students each attempt to answer toss-up and bonus questions. If you've seen *Brainstormers* or *College Bowl*, this competition is similar, except that the questions are about science.

The Office of Educational Programs is recruiting rules judges, timekeepers and moderators for that day. For these BNL Science Bowl officials, there will also be practice sessions at luncheon meetings on January 20 and 27, and February 4. If you're interested in serving in one or more of these capacities, contact Bill Lynch, Ext. 4000, or lynch@bnl.gov, to get the competition rules, schedule and list of officials' duties.

See a Winner, Be a Winner

Stop by Berkner Hall through January 28, to see a display featuring last year's R&D 100 Award winners from U.S. Department of Energy laboratories. Among them is the Long Trace Profiler II, an optical device which was developed by, among others, Peter Takacs, Instrumentation Division.

You may also want to consider entering the next R&D 100 competition, with any new product that was completed and delivered by a federal laboratory, or became available for contract or licensing between January 1 and December 30, 1993. BNL pays all entry fees and any expenses associated with winning an R&D 100 Award.

Applications are now available from Dorry Tooker, Office of Technology Transfer (OTT), Bldg. 902C, Ext. 2078. OTT must receive all entries by February 18.

Sybase Users

The next meeting of the Sybase Local Users Group (SYLUG) will be on Wednesday, January 19, at 2 p.m., in the CCD Seminar Room, Bldg. 515, where Uniface Corporation will demonstrate their application-development environment that supports most RDBMS engines, operating systems and networking environments.

Further discussion on third-party interfaces will follow as time permits. Call Susan Eng, Ext. 7988, or send E-mail to sge@bnl.gov for details.

Microcomputer Club

At the next meeting of the BNL Microcomputer Club on Thursday, January 20, at noon, in Room A202, Bldg. 911, club president Irving Montanez will demonstrate how to use the club's newly purchased CD-ROM drive. Club members in good standing will be able to borrow the drive and the accompanying compact discs for one week at a time.

All are welcome; bring your lunch. For further details, call Montanez, Ext. 2540.

Speakers Bureau

The following speakers have given talks on behalf of the Laboratory:

Steven Kane, SEP/RHIC: Gardiner Manor School, Bay Shore, "Proving the Big Bang Theory at BNL," June 4.

Ralph Fullwood, DAT: Brookhaven Free Library, "The Curie Family," Sept. 8.

Janet Tempel, DO: L.I. Museum Association Annual Conference, "Museum Outreach: To Go or Not to Go," Sept. 27.

Gwyn Williams, NSLS: Long Island University/C.W. Post Merit Fellowship Program, "Synchrotron Radiation: A New Light on Nature," Oct. 7.

Janet Tempel, DO: Association of Science & Technology Centers Annual Conference, "Outreach: Serving an Expanded Audience," October 16; "Excellence in Small Science Centers," Oct. 17.

James Powell, DAT: The Greater New York Mensa 1993 Regional Gathering, "Back to the Future — Ahead to the Past," Nov. 1.

Janet Tempel, DO: Science Teachers Association of New York State Annual Conference, "Science Centers to Classrooms: Hands-On Science Activities That Work," Nov. 1.

Vinod Mubayi, DAT: Miller Place Elementary School, "BNL in General," Dec. 8.

Got a Problem? They Can Help!

BNL's Employee Relations Committee (ERC) is dedicated to helping non-bargaining, non-scientific employees solve work-related problems that they have not resolved with their supervisors. The eight members are appointed to three-year terms by the Laboratory Director, to whom the group is responsible.

As part of BNL's Employee Relations Program, the ERC reviews employees' complaints and attempts to hear all sides of an issue prior to making a recommendation. Information discussed with committee members is strictly confidential, and no action is pursued without the complete agreement of the employee involved. Shown here are the ERC's new, continuing and outgoing members: (from left) Mark Davis, Reactor Division; Susan Foster, Personnel Division (Employee Relations Counselor, ex officio); Mary Durham, Plant Engineering Division; Dennis Klein, National Synchrotron Light Source Department; ERC Chair Mary McGrath, Department of Advanced Technology; Carl Jacobs, Physics Department; new member Marie Hicks, Technical Information Division; outgoing member Veronica Evans, Computing & Communications Division; new member William McGahern, Alternating Gradient Synchrotron Department; and outgoing member Michelle Cummings, Management Information Systems Division. Not shown is Ann Emrick, Biology Department.

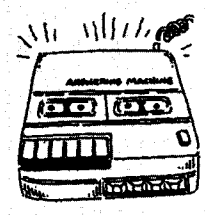
To bring a problem to the ERC's attention, call its special number, Ext. 4005, or contact a current member: Davis, Bldg. 750, Ext. 2165; Durham, Bldg. 134, Ext. 7143; Emrick, Bldg. 463, Ext. 5756; Foster, Bldg. 185, Ext. 2888; Hicks, Bldg. 477, Ext. 3802; Jacobs, Bldg. 510, Ext. 2244; Klein, Bldg. 725, Ext. 2743; McGahern, Bldg. 911, Ext. 2171; or McGrath, Bldg. 197, Ext. 2815.

Other Helpful Avenues

In addition to the Employee Relations Committee (ERC), employees seeking to resolve work-related problems, complaints or questions have several other avenues open to them. These include:

- **Employee Assistance Program** — Clinical psychologist Joseph Gisondo manages this program, which can assist employees with mental health problems affecting job performance, provide information on mental health issues and offer counseling to employees for such difficulties as alcohol and drug abuse, and family, marital or personal problems. For confidential counseling with either Gisondo or clinical psychologist Dianne Polowczyk, call Ext. 4567.
- **Employee Relations Counselor** — Susan Foster holds this position and is available to talk to non-bargaining unit employees. Contact her in Personnel, Bldg. 185, at Ext. 2888. If she cannot resolve the problem, with the employee's consent, she may refer it to the ERC chairperson.
- **Equal Opportunity Program** — With an issue related to the Lab's equal employment opportunity effort, you should contact Glenn Jennings, Assistant to the Director for Equal Opportunity, or call your department or division's Equal Opportunity Representative, who serves as a liaison to the Office of Equal Opportunity.

- **Rumor Hotline** — The Rumor Hotline, Ext. 2751 — ASK1 — was established last year so that employees may call to have rumors about the Lab verified.



Though callers must leave their names and extensions so that someone in the Public Affairs Office can get back to them with an answer, Public Affairs will keep the employees' identities completely confidential.

- **Tune In!** — The Tune In! program, run by the Editor of the Brookhaven Bulletin, is designed to give employees a confidential means of directing questions or complaints to members of management who then respond in writing. The bright orange and white Tune In! forms should be found in special boxes in most buildings. If your building's box is empty or if you can't find a box, call Public Affairs, Ext. 2345, for forms.
- **Women's Program Coordinator** — In this position, Victoria McLane addresses the job-related problems of women. Contact McLane at Ext. 5205, Bldg. 197.

What's Up With What's Falling Down?

The weather over the Lab has seemed a bit crazy recently, with ice and snow and rain all falling from the sky in just one week, and often all at the same time.

"You name it, it's been in there," said the Lab's weather forecaster, Victor Cassella, Department of Applied Science. Cassella explained that the nor'easter that blasted the East Coast during the first days of 1994 was still affecting our weather late last week, even though it and its counterclockwise winds were parked over Greenland.

But how is it possible to get the kind of mixed bag of precipitation we had, all at one time? The phenomenon of snow flakes and ice pellets (not hail, which is bigger) falling simultaneously was caused, Cassella said, by the layered nature of the atmosphere at the time.

In other words, precipitation from the warmer upper layer started out as rain, but as it fell and encountered a colder lower layer, it turned to ice and mingled with the cold layer's gentle flakes. And, from there, it all fell to earth together to create the road-clogging, school-closing, traffic-aggravating mess we all dealt with.

– Kara Villamil

Arrivals & Departures

Arrivals

Michael Botlo	Physics
Edgar B. Cahoon	Biology
Emmanuel F. Onillon	AGS
Yuan-Liang Wang	App. Science

Departures

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

Robert E. Mills	App. Science
John W. Powers	AGS

TGIF Social Tonight

Start your weekend right after work — at the Thank-Goodness-It's-Friday Social, sponsored every month by the BNL Ballroom, Latin & Swing Dance Club. From 5:30 to 11 p.m. in the North Ballroom of the Brookhaven Center, dance to taped music or bring your own dance CDs. The suggested donation of $1 buys more dance music. Food and beverages are available at the Center Club. For more information, call Brenda Riddle, Ext. 4524; or John Millener, Ext. 3853.

Hospitality Committee

The Women's Forum, conducted by Marion Davis-Parzen and sponsored by the BNL Hospitality Committee, will meet Tuesday, January 18, from 10 a.m. to noon, in the lounge of the Recreation Building in the apartment area. Join the group to discuss concerns facing women in general and at the Lab in particular. Wives of Lab employees and guests are welcome, and those who have been at the Lab a while are particularly invited to share their experiences with newcomers.

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ANITA COHEN, Editor
MARSHA BELFORD, Assistant Editor

Bldg. 134, P.O. Box 5000
Upton NY 11973-5000
Tel. (516) 282-2345; Fax (516) 282-3368

Aerobic Dance

To start the New Year on the right foot, the Aerobic Dance Club will begin a new session next week.

Classes in aerobic dance will be held Tuesdays and Thursdays, at the Recreation Building in the apartment area. Stretch classes will be on Mondays at the Physics lounge, Bldg. 510. All classes run from 5:15 to 6:30 p.m., and mats are recommended.

Either or both classes may be taken, and each ten-week session of aerobic dance or stretch costs $30, payable at registration preceding the first class, as follows:

- **Stretch** - Monday, January 24.
- **Aerobic dance** - Tuesday, January 18, or Thursday, January 20.

For more information and to verify location, call Pat Flood, Ext. 7886, or Janet Sillas, Ext. 2345.

WordPerfect Users

"Upgrading to WordPerfect 6.0 for Windows: What's New?" will be the topic of the next meeting of the WordPerfect Users' Group. It will take place on Tuesday, January 18, from 10 to 11 a.m., in the CCD Division seminar room, Bldg. 515.

Seating is limited, so call group moderator, Pat O'Connor, Ext. 7341, to confirm your attendance today.

All Hands on Deck

Calling all hands to the first meeting of the BNL Bridge Club for the 1994 season, on Tuesday, January 18, at 7:30 p.m., in the Brookhaven Center. For more information, or if you would like to play but don't have a partner, call club president Willem van Asselt, Ext. 7778 or 924-6129.

It's Blatantly Unofficial!

This Blatantly Unofficial BNL Record was set since our last report and was true at the time of submittal.

Most simultaneous phone calls from two different people with the same name (Carl Johnson), received by BNLers in adjacent offices.

— Joe Carbonaro, Department of Advanced Technology

If you think you can top this record, or if you have another record to report, submit your entry to the Brookhaven Bulletin, Bldg. 134. While all entries must have some relation to the Lab, the categories and superlatives are limited only by your imagination and experience — and whether the claim can be corroborated by someone else. A copy of the Blatantly Unofficial Record Book is available for inspection in the Public Affairs Office, Bldg. 134.

Entry for "Blatantly Unofficial BNL Records"

(Please print) Name _____

Department _____ Ext. _____

Corroborator's name _____

Department _____ Ext. _____

Proposed record _____

_____

Date proposed record was set _____

Bowling

Red/Green League

R. Mackinnon bowled a 257/200/651 scratch series, M. Guacci 246/242/200/688 scratch, R. Mulderig 224, H. Arnesen 223, A. Warkentien 221/221/614 scratch, B. Giuliano 216, R. Larsen 214, R. Mulderig Jr. 212, R. Raynis 209, E. Larsen 206, K. Riker 206, S. DiMaiuta 200.

The Pinheads beat out the Sandbaggers by two points to become the first-half champs.

Purple League

Ray Raynis bowled a 227/241/642 scratch series, Manny Dador 215, Pete Stelmaschuk 209/201, Debbie Keating 199, Tirre Farmer 190/190, Pat Bounauito 178, Linda Farmer 178, Maria Yanez 174/171.

White League

John McCarthy bowled a 220, Lorainne Roecklein 201, Carol MacDougall 200/187, Gerry Riker 184, Elaine Zukowski 180, Jeanne Penoyar 178, Sharon Smith 174, Terry Meier 173.

Note to Diners

Due to the Martin Luther King Jr. holiday, the Cafeteria will operate only snack bar service from 9 a.m. to 2 p.m. on Monday, January 17. The Brookhaven Center Club will be closed on Sunday, January 16, but will reopen January 17, from 5 p.m. to 9 p.m.

Cafeteria Menu

Monday, January 17
Martin Luther King Jr. Day
Snack bar service - 9 a.m. to 2 p.m.

Tuesday, January 18

Soup: Chicken & rice	.80/1.10
A la Carte: Chicken piccata	3.65
Fitness: Sole w/red onion & tomato	3.75
Deli: Hot roast beef sandwich au jus	2.95
Grill: BBQ pork sandwich	2.95
Salad: Chef's salad	

Wednesday, January 19

Soup: Cream of spinach	.80/1.10
A la Carte: Baked manicotti	3.35
Fitness: Chicken w/mushroom-Dijon sauce	3.65
Deli: Virginia ham	2.95
Grill: Monte Cristo	2.95
Salad: Fresh fruit	

Thursday, January 20

Soup: Beef barley	.80/1.10
A la Carte: Chicken Kiev	3.65
Fitness: Braised beef w/veg.	3.65
Deli: Corned beef sandwich	2.95
Grill: Cuban sandwich	
Salad: Oriental chicken	

Friday, January 21

Soup: Cajun seafood gumbo	.80/1.10
A la Carte: Display cooking – pasta	
Fitness: Flounder Florentine	3.75
Deli: Hot turkey sandwich w/gravy	2.95
Grill: Fried clams w/cheese	
Salad: Cantaloupe bowl	

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.

SCIENTIFIC RECRUITMENT - Doctorate normally required. Candidates may apply directly to the department representative named.

SCIENTIST - Trained in accelerator physics, including several years' postdoctoral experience, preferably in the areas of accelerator design and analysis, and/or operations and commissioning. An extensive background in the development of high-level accelerator controls software and/or accelerator-physics modeling is required. Contact: Stephen Peggs, RHIC Project.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

DD 2845. SECRETARIAL POSITION - Requires an AAS or equivalent experience, excellent communication skills, IBM PC or Macintosh experience, and familiarity with WordPerfect and the IPAP Travel System. Will perform complex secretarial duties for the Advanced Systems Analysis Group, such as file maintenance, preparation of correspondence and administrative paperwork, travel arrangements, desktop publishing and typing. Department of Advanced Technology.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

NS 0527. PROJECT PLANNING POSITION - (term appointment) Requires a bachelor's degree in a relevant discipline, advanced degree preferred, and extensive experience using earned-value concepts in a validated C/SCSC system environment. Substantial experience in cost-account planning and administration, including variance analysis and the generation of EACs in support of monthly CPRs, is necessary. Must be knowledgeable in the use of computers, LOTUS and Dbase III/IV. RHIC Project.

Motor Vehicles & Supplies

91 GEO METRO - 5-spd., 36k mi., blue, 2-dr., 50+ mpg, $3,995. Joe, Ext. 2898.

89 VW CABRIOLET - convertible, ac, a/t, Blaupunkt, 58k hwy. mi., excel. cond., $10,500. 821-0686.

87 CAMARO - red, black int., V-6, a/t, p/s, cruise, p/w, am/fm cass., tinted windows, alarm, excel. cond., Jennifer, 732-8124.

87 HYUNDAI - 55k mi., ac, radio/cass. stereo, 2-dr., fwd, $1,200 neg. Lee, Ext. 4353.

86 NISSAN PICKUP - new tires, 5-spd., 44.6k mi., runs well, excel. cond., must see, asking $4,000. Scotty, 736-8553.

86 CAMARO - new engine, brakes, exhaust, rebuilt trans., excel. cond., ask. $4,500. Ext. 3334 or 744-2404.

86 MAZDA B2000LX PICKUP - 5-spd., am/fm, light blue, 90k mi, excel. running cond., asking $2,200. Rob, 727-7404 after 5 p.m.

85 TOYOTA COROLLA - 4-dr., a/t, ac, fwd, radio cass., reliable, $2,000 neg. Alastair, Ext. 5334.

83 FORD FAIRMONT - a/t, p/s, ac, radio, 114k mi., 6-cyl., good cond., moving, $450. Li, Ext. 4472.

81 CADILLAC SEDAN DE VILLE - many new parts, runs well, $1,100. 475-8242.

80 VOLVO 240 - 4-dr., good cond., runs well, $1,400 neg. Ramesh, Ext. 3267.

RIMS - for Ford pickup, aluminum; '69 Mustang rear seats, like new; truck & Mustang parts, cheap. Wayne, Ext. 7238.

WHEELS - 2, for Chrysler Aries or similar w/tires, P175/80R13, good for spares, $35. Bill, Ext. 3698.

TIRE - Goodyear mud & snow, 10x15, new, $50; wire wheel covers, 14", Buick emblem, new, $50. 329-1277.

Boats & Marine Supplies

ANCHOR - 400 lbs., w/ball & chain, like new, $300. Bob, 689-9234.

ICE EATER - model #500, 7A, water bubbler, protect your boat in water, used 1 season, disc. for $320, sacrifice $175. Harvey Richardson, 588-2477.

OUTBOARD - 1975, 65-h.p. Johnson, good for parts only, best offer. 563-6680.

Furnishings & Appliances

BED - captain's, 1-yr.-old, 3 drawers, incl. mattress, $150. Pam, 475-2541.

BEDROOM SET - queen water bed, triple dresser & mirror, men's dresser, dark pine, good, all $500, parts. F. Kuehl, Ext. 7947 or 588-2268.

LIVING ROOM SET - sofa, 2 chairs, 3 tables, etagere, stereo w/cabinet, lamp table, assorted wall hangings & draperies. Ext. 3334, 744-2404.

LIVING ROOM SET - sofa, 2 recliners, 2 end tables, coffee table, lamp stand, all Col., $500. Tom, Ext. 5265.

RECLINER - swivel rocker; woman's bicycle, $25 ea. or name own price, all good cond. 286-0376.

WASHER & DRYER - Kenmore, heavy-duty, like new, ask. $350; beds, 1 queen, 2 twin. Shruti, 821-1963.

Tools, House & Garden

MOWER - Woods model L306V, 6' cut, belly mower for farm tractors, very good cond. Brownie, Ext. 4028.

OIL BURNER - Beckett, high retention head w/all controls, B&G circulators, all still in operation, must see. Bob, 689-9234.

SNOW BLOWER - Ariens, 8-h.p., 2-stage, forward/reverse, chains, v.g., $475. 329-1277 after 6 p.m.

STOVE - Surdiac coal, Southport model, excel. cond., ask. $200. Ext. 3334, 744-2404.

SWIMMING POOL - 18' round, 4' deep, sand filter, 1½ h.p. pump, ladder, many accessories, only $250 delivered. Don, Ext. 7237 or 744-2921.

Sports, Hobbies & Pets

COCKATIELS - babies and breeders, all colors. Denise, 549-5929.

EXERCISE BIKE - Schwinn Exercycle DX900 w/manual, cost $270, like new, $130. 472-0029. Don Schweitzer, Ext. 3510.

KNITTING MACHINE - Toyota KS950, does Fair Isle weaving, tuck, slip, and lace patterns, w/punch cards & stand, used 5 times, ask. $400. Cheryl, Ext. 2272.

PIANO - Baldwin Acrosonic, mahogany, excel., ornate, $1,700 neg. Lenore, Ext. 2954.

SCUBA WEIGHT BELT - pellet-type, brand-new, $60. 722-3905.

STATIONARY BICYCLE - w/upper body exercise, $40. 331-9887.

STEP MACHINE - Body Tech by Avita, excel., radio, walkman, orig. $200, ask. $100; weight bench, Weider w/butterly attach., like new, ask. $50. 563-6680.

TRAMPOLINE - 16' dia., new w/tarp cover, orig. $300, must sell $200. Heather or Mark, 924-1634 after 5.

Audio, VIdeo & Computers

CAMCORDER - Hitachi S-VHS, many features, like new, orig. $1,200, sell for $675. L. Arnold, Ext. 5462.

COMPUTER - IBM PS/2, model 30, 65 MB hard drive, 5¼" and 3½" floppies, math co-processor, mouse, IBM mono monitor. Tom, Ext. 4563.

COMPUTERS - Macintosh SE/30, $650; Plus, $250, both in good cond. Ted, Ext. 7992 or 331-4820.

COMPUTER - PC, 640K RAM, 8087, clock/cal., par/ser, 60 MB HD, 360k floppy, amber mono. monitor, software, ask. $225. Alan, Ext. 2928 or 929-0461.

GAMES - Super Nintendo, $30/ea. Ext. 7505.

PRINTER - Apple LaserWriter, good cond., $500. Ted, Ext. 7992 or 331-4820.

SOFTWARE - Novell 4.0, in orig. box, new, suitable for small company. Stella, 632-2210.

TV - color 19", excel. cond., $100; Toshiba VCR, $25. Ramesh, Ext. 3267 or 821-1963.

Miscellaneous

FABRICS - African prints, many different colors and prints. Ext. 4430 or 369-5704 after 6 p.m.

HIGH CHAIR - Prego, $35; Prego stroller, $45; Century car seats, $25/ea.; booster seats, $10/ea.; play pen, $20; crib, $50. John, Ext. 3921 or 689-6117.

JACKETS - leather, med., motorcycle, zip. lining, gray black, like new, $65; brown leather, $10; cashmere dress jacket, charcoal, $25. Craig, Ext. 4986.

SEAT - Gerry double guard, child's auto booster seat, like new, $25. Steve, Ext. 2897.

TICKETS - 2 for *Electra* at the Met, Sat. matinee, Jan. 22, balcony, $71 40. Ext. 4330 or 286-1236.

TICKETS - Met opera, *Lucia Di Lammermoor*, Sat. matinee, Jan. 29, Row L, orchestra center. Ext. 3922.

Free

CAT - Amer. Curl, male, w/all papers and shots, 2 yrs. old., gorgeous, excel. disposition. Harvey, 821-1726.

Lost & Found

FOUND - black spare tire cover in Gym parking lot by P.O. on 1/3 at 8 p.m. Ken, Ext. 4514 or Beeper 0860.

Car Pools

SETAUKET - Main St., looking to join immediately or for others to form pool. Amir, Ext. 3707.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, creed, sex or national origin of the applicant.

For Rent

CALVERTON - 2-bdrm., on the lake, lg. living area, parquet floors, cathedral ceiling, hot air heat, pleasant, quiet, nice view, $650/mo. + util. Mike, Ext. 3430.

RIDGE - 3-bdrm. ranch, 1½ baths, fenced yard, all appl., 3 mi. to Lab, $950/mo., w/additional studio apt., $1,250. immed. occupancy, option to buy. Carol, Ext. 2673 or 744-8632.

ROCKY POINT - 1-bdrm. co-op, new appl., dishwasher, ac, private patio, heat included, $650/mo. Sheryl, Ext. 7716.

ROCKY POINT - 2-bdrm. apt., eik, $550/mo. + util. Ext. 4516 or 744-8901 eves.

ROCKY POINT - 3-rm. apt., $525/mo.+; 4-rm. apt., $575/mo.+; both have oil heat, wood stove, near beach, single or couple preferred, no pets. 744-5282.

SELDEN - 3-bdrm. ranch, l/r, d/r, deck, kit., full bath, 2-car gar., quiet neighborhood. $1,000/mo. + util. John, 732-7568.

SHOREHAM - new, partially furn. 1-rm. apt., full bath, kit., private ent., immed. occup. 821-4318.

S. JAMESPORT - restored Victorian, 1-bdrm., l/r, eik, shared guest rooms, nonsmoker, no pets, single pref., $500/mo. + util., 1-yr. lease, Mike, Ext. 4181.

WADING RIVER - waterfront apt., fully furn., newly renovated, l/r w/fp, eik, bdrm., full bath, deck, pvt. beach, single, no pets, $675/mo. all. 929-4113.

CATSKILLS - 3-bdrm. chalet w/sleeping loft, fully furn., near Hunter and Windham Mts., great for skiing. Kay, Ext. 4501, or Bea, Ext. 3642.

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, full furn., 2 baths, beach, golf nearby, tennis on site, $300 Jan./March. Guy, Ext. 3147 or 689-5378.

KEY WEST, FL - 4/16-23, condo on water, sleeps 2, kit., pool, priv. beach, gym, marina, boat rental, hot tub, w/d, tiki bar, walk to town. Sheryl, Ext. 7716.

LAKE PLACID, NY - 3-bdrm. condo in town, 2 baths, walking distance to village, skating oval, arena and restaurants, shuttle service to Whiteface, views of Lake Placid and Whiteface. Tom, Ext. 4631.

For Sale

BAYSHORE - Brightwaters Farms, 3-bdrm. Col., 2 baths, l/r, fd/r, eik, den, bsmt., shed, attic storage, fenced agp, 35 min. to Lab, $135,000. Bill, Ext. 2762 or 665-3782.

CALVERTON - 2-bdrm. townhouse, 5 appl., carpeted, cac, fp, patio, upper deck. Ext. 3558.

MANORVILLE - 2¼ wooded acres w/pond, $45,000. Jack, Ext. 4095, 345-3490 after 6 p.m.

MIDDLE ISLAND - 3-bdrm. ranch, owner transferred, l/r, d/r, eik, oak floors, wood-burning stove, full bsmt., gar., dead-end street, lg. fenced yard, 10 min from BNL, $109,900. Mary, 924-6235.

RIDGE - 3-bdrm. ranch, l/r, den, eik, gar., vinyl siding, lg. fenced yard w/igs, cul-de-sac, $132,000. 924-2298 eves., weekends.

RIDGE - 3-bdrm. townhouse, 1½ baths, lg. l/r, 5 min. to Lab, $69,900. 924-4734.

WADING RIVER - 3-bdrm., 2½ bath Col., custom kit., Jennair, 2-car garage, gazebo, shed, igs, igp, deck, steam bath, SWRSD, 1.1 acres, $239,000. 929-8323.

YAPHANK - two ¾-acre bldg. lots, level, wooded, all permits, $59,000 ea. 924-6019.

YAPHANK - 4-bdrm. Cape, country setting, full bsmt., hardwood floors, bath, HWH, 5 mi. to Lab, low taxes, sacrifice, $112,000. Sheila, Ext. 3144 or 345-5625.

PORT CHARLOTTE, FL - ¼-acre bldg. lot, $10,900. 929-8323.

Wanted

BICYCLES - and/or tricycles for students at Upton Nursery School. Sue, 929-3732.

BOAT - 21', center console, Mako type, nothing pretty, to use for clamming. 563-6680.

CAMERA BODY - Pentax MX. Marty, Ext. 5054 or 286-5897.

DOGHOUSE - good condition. Ext. 7143.

DRYER - used, electric clothes dryer in good cond. at reasonable cost. Pat, Ext. 3275.

EARRINGS - Avon heartful hoops, clip, small hearts, goldtone, lost one earring. Ext. 2733 or 878-8491.

ICE SKATES - boy's size 4, toddler's size 6, 7, 8, woman's size 7½, man's size 12. Sheila, Ext. 3144.

NURSERY SCHOOL STUDENTS - Upton Nursery School still has spaces available for spring session. Shruti Budhani, 821-1963.

SKIERS - to ski Windham 1/26, Hunter 2/9, $43 for bus and lift, send payment to Augie Hoffman, Bldg. 510C.

SKI EQUIPMENT - woman's 7½ boots, skis, children's skis, sizes 7, 8, 1. Sheila, Ext. 3144.

TAPE PLAYER - for Chevy Celebrity. Bill, Ext. 3698.

TRAINS - Lionel & American Flyer, priv. collection, pays top $. Ext. 7100 or 924-4097.

In Appreciation

I thank all my friends, basketball buddies and Post Office customers for their concern and encouragement during my recovery. I'll be back behind the window, better than ever with my bionic hip, in February. — Ralph Garappolo

Thank you for your kind support and help during our most difficult time with the tragic death of our beloved daughter, Ellen. — Lily & K.C. Liu

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