BROOKHAVEN BULLETIN
Vol. 44 - No. 32 August 10, 1990
BROOKHAVEN NATIONAL LABORATORY

Spending to Save Energy

Since 1973, energy conservation programs have saved the Lab more than $160 million in energy costs.

For BNL to save this much money over the years, the In-House Energy Management Program (IHEM) of the Office of Projects & Facilities, U.S. Department of Energy, has invested $31 million in over 50 energy conservation projects on site. As a result of the aggressive energy conservation efforts by the Energy Conservation Group in BNL's Plant Engineering Division, BNL receives the largest portion of IHEM funds of any DOE laboratory.

To review how well these projects were implemented in the past as well as to hear about energy conservation plans for the future, DOE recently conducted an energy management review on site.

From July 30 to August 1, Energy Conservation Group Manager Gregory Flett and Energy Conservation Engineer Mark Toscano reported on the group's retrofit projects for existing buildings and energy-conservation criteria for new ones. They also discussed improvement of the central steam plant's performance, the reporting of energy consumption and conservation, and energy conservation projects for research equipment.

Peter Horton

Pictured at BNL's recently commissioned Central Chilled Water Facility during the U.S. Department of Energy's (DOE) energy management review are: (from left) John Searing, DOE Brookhaven Area Office; Mark Toscano, BNL Plant Engineering Division (PE); Gregory Flett, BNL PE; Victor Petrolati, In-House Energy Management Program Coordinator, Office of Projects & Facilities Management, DOE Washington, D.C.; Ado Adami, DOE Chicago Operations Office; and Mark Culp, BNL PE.

Super Send-Off For Super Science Students

Peter Horton

The 59 students who participated in this year's High School Honors Research Program were the guests of honor Tuesday evening at a banquet and awards program held in Berkner Hall. The affair was the culmination of two intensive weeks during which the students — the best and the brightest from 49 U.S. states, Washington, D.C., Puerto Rico and eight foreign countries — performed team experiments at the National Synchrotron Light Source and presented reports on their work.

Shown above, heading a banquet table with one group of students, are (center back, from left) Peggy Dufour, U.S. Department of Energy (DOE), Special Assistant to Energy Secretary James Watkins; BNL Director Nicholas Samios; and Jane Monhart, Deputy Area Manager,DOE's Brookhaven Area Office.

After dinner, two plaques were presented to each student — one from DOE, which sponsors the nationwide program each summer, and one from BNL's Office of Educational Programs, which organizes the program on site. In addition, two students chosen by their peers — Quanchesca Ward, from the state of Washington, representing the U.S. contingent, and Armando Butanda Ochoa of Mexico, representing students from foreign countries — gave valedictory addresses.

The High School Honors Research Program was one of several summer student programs featured in last week's Bulletin. For the second and final part of this Summer Student Special, please turn to page 2.

Bone Marrow Transplantation Subject of Haworth Lecture

Dirk van Bekkum, Director of the Radiobiological Research Institute of the Organization for Health Research, The Netherlands, and Professor of Radiobiology, Erasmus University, Rotterdam, arrived Wednesday, August 8, to begin his first two-week residence of three visits to Brookhaven as the Lab's seventh Haworth Distinguished Scientist.

The first Haworth Distinguished Scientist in BNL's Medical Department, van Bekkum is known for his research in radiation biology and oncology; the formation of the cellular elements of the blood, or hematopoiesis; and graft transplantation and its immunological consequences, specifically graft vs. host disease.

Also known as secondary disease, this ailment may strike after an individual receives a tissue transplant; it results when the T lymphocytes, a type of white blood cell, from the tissue graft react against the host's tissue.

As he will discuss in his lecture of Lab-wide interest, van Bekkum and his colleages found that, by removing the T cells from the graft, the incidence of graft vs. host disease can be greatly reduced — but the rate of transplanted tissue rejection increases.

"Bone Marrow Transplantation: Developments and Restrictions of Its Application in Clinical Medicine and in the Treatment of Radiation Victims," will take place on Wednesday, August 15, at 4 p.m. in Berkner Hall.

A pioneer of methods for concentrating stem cells, van Bekkum lectured yesterday on "The Capture and Use of the Elusive Hemopoietic Stem Cell." In his talk, he discussed the difficulties of obtaining enough hemopoietic stem cells — the undifferentiated precursors of human blood cells — to study them in culture.

For his final lecture, van Bekkum will talk about "The Contribution of Radiation Biology and the Hemopoietic Stem Cell to the Understanding of Hemopoiesis." This will take place on Thursday, August 16, at 3 p.m. in the large conference room of Medical, Bldg. 490.

Dirk van Bekkum received his medical degree in 1950 and his Ph.D. in 1952 from the State University, Leiden, The Netherlands. A member of the Royal Academy of Arts and Sciences, The Netherlands, and the New York Academy of Sciences, van Bekkum became a member of the Order of the Lion of The Netherlands when he was knighted in 1987.

The Haworth Distinguished Scientist appointments were established by Associated Universities, Inc., in 1983, in memory of BNL's second director, the late Leland J. Haworth, who headed the Lab from 1948-61.

Once appointed Haworth Distinguished Scientist, a researcher with an international reputation in a field related to Lab programs spends from one to three weeks a year in residence at BNL for three consecutive years.

Attention: Summer Students

As part of his stay as a Haworth Distinguished Lecturer, radiobiologist and immunologist Dirk van Bekkum invites interested students to lunch informally with him on Tuesday, August 14. To attend, bring your own lunch to Room A, Berkner Hall, at noon that day.

A Dose of Dose Assessment

The best way to deal with radiological and chemical emergencies is to prevent them. But, because accidents can happen, the U.S. Department of Energy's (DOE) guidelines and policy for responding to such emergencies are very carefully planned to minimize adverse effects.

Assisting DOE with the task of establishing these plans is the Subcommittee on Dose Assessment (SDA), which held its last meeting at BNL July 10-12. About 50 people from DOE and DOE contracting facilities, including Battelle, EG&G, Martin Marietta and BNL, brought their various areas of expertise to work in groups whose final recommendations assist DOE in deciding policy and guidelines. The groups covered such areas as planning action guides for radiological or chemical releases, modeling and characterizing atmospheric releases and sources of potential hazards, and standardizing air sampling procedures.

Among some of the attendees gathered outside the Medical Research Building were SDA cochairs Brenda Holder (back, left) and Neil Barss (front, third from right), both from DOE headquarters at Germantown, Maryland; and BNL meeting host James Brower (back, third from right) of the Safety and Environmental Protection Division. Not present was meeting organizer Rudolf Engelmann, also of DOE Germantown.

Roger Stoutenburgh

Impressions: Summer Students Talk About BNL

Every summer, 50 to 60 college students come to BNL for 10 weeks of laboratory experiments, a first glimpse at an accelerator or nuclear reactor, cycling, swimming, dormitory living, and even learning a little something about the business of science.

They're part of the Summer Student Program, the oldest and largest of BNL's various summer programs for students. Begun in 1952 to give future scientists a chance to work alongside today's scientists, the program boasts 51 undergraduate or graduate students assigned to 14 departments or divisions this summer.

This year, the Bulletin decided to ask these students a few questions about their internship, such as: how they heard about the program, why they wanted to come, and what they enjoyed or disliked about the BNL experience.

Most of the respondents heard about the program from notices posted on bulletin boards at their schools, though some heard through classmates, friends, or relatives.

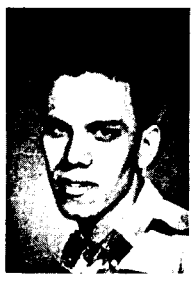
Catherine Taylor, recent graduate, University of Virginia.

Some students, like Catherine Taylor, had participated in the Science and Engineering Research Semester (SERS) program during the past year.

A chemistry major, Taylor had three reasons why she wanted to return to her internship in the Department of Applied Science (DAS) for the summer: "1. Research experience. 2. I enjoyed working with my advisor, Dr. Toshifumi Sugama, in the fall, and he invited me back to continue my research. 3. BNL is 20 minutes away from the beach."

Most of the summer students knew little or nothing about BNL before coming here, or thought the Lab was purely a physics research facility.

The vast majority, of course, said they came to BNL to gain valuable laboratory research experience.



George Penesis, senior, Cooper Union.

"I came to BNL to see real physicists and what they do, to help me decide if I wanted physics as a career," says George Penesis, a mechanical engineering student working with Scientist Dick Hseuh in the Alternating Gradient Synchrotron Department.

Ellen Krantz, second year master's student.

"It seemed like a good place for a hands-on internship," says Ellen Krantz, a library science major from Columbia University, who is working at the Medical Library under the direction of Technical Information Division Manager Diane Mirvis. "The idea of getting out of the city for the summer was also appealing."

Linda Zier, electrical engineering major.

Linda Zier, a senior at the State University of New York at Stony Brook, had a different motivation for wanting to work in the Accelerator Development Department under Research Engineer Robert Lambiase.

"I wanted to be in the summer program because I'm tired of shoveling horse dung. Last summer I cleaned stalls at a nearby horse farm just so I could see horses every day. The thrill wore off."

But Zier has a more serious reason as well. "Without a degree and connections in high places, it's difficult to find a summer job that is mentally challenging."

Many students noted that the opportunity to meet interesting people at work and in the dorm has been one of the most rewarding features of their summer on site.

Kara Plemel, senior, Clarke College.

"I have enjoyed the people I work with in the Biology Department," says Kara Plemel, a molecular biology major who is working with Biophysicist Venki Ramakrishnan. "Everyone has been so friendly and has welcomed me wholeheartedly — even those whose names I couldn't remember at first."

Michael Kowalok, Franklin and Marshall College.

Michael Kowalok, a graduate student in physics who is working with Senior Scientist Victor Bond in the Medical Department, says this is the aspect of BNL he enjoys the most. "I thought that I had been exposed to a healthy number of minorities and foreign cultures during college. But that exposure pales in comparison to my experience at BNL."

It's hard to say whether BNL is an enclave of particularly happy employees or if the students who come here are a particularly harried lot, but many commented on the easygoing, friendly atmosphere they found in the workplace.

Yi-Chyi Wu, University of California, Berkeley.

"What I enjoy most is the relaxed atmosphere — very different from the stress and grind of a regular school year," says chemistry graduate student Yi-Chyi Wu, who is working with Chemist John Smalley in DAS.

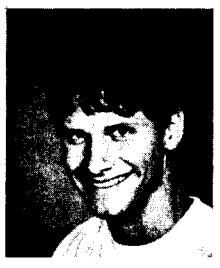
William Klages, senior, Clarkson University.

"I've enjoyed being able to learn at a comfortable pace," says William Klages, a mechanical engineering student working with Project Engineer Rajeshwar Yadav in the design section of the Plant Engineering Division.

Several students, perhaps envisioning a summer running errands or washing test tubes, were pleasantly surprised by the opportunities provided to do independent research.

Jessica Kadel, senior, Florida Institute of Technology.

"'Lab life' is somewhat different from my expectations," says Jessica Kadel, a marine biology major working in the Oceanographic Division of DAS. "Many people here are friendly, exciting and eager to share information on their research and experiences. My advisor, Dr. Sharon Smith, has encouraged me and two other summer employees to pursue areas of our own interest. We now have several experiments of our own design going on."



Joseph Quartemont, senior, University of Wisconsin.

Joseph Quartemont, a chemistry and math major working with Chemist Bruce Klemm in DAS' Chemical Sciences Division, says his expectations were more than fulfilled. "I expected my job to entail some computer work and some hands-on experimental work. So far, I have had enough computer work to satisfy that desire."

Now for the bad news. The overwhelming majority of respondents said there were two things they didn't like about summer at the Lab.

George Penesis was among those who noted how students without cars were virtually stuck on site. He offered a creative solution to the problem: "Let students use official cars for shopping outside campus." Unfortunately, his idea is illegal, because government cars may be used only for official Lab business.

The other problem cited by many respondents is the lack of air conditioning in the dormitories. As Linda Zier puts it, her unair-conditioned dorm room is so hot, "Just the other day the matron opened up my door and shoved a batch of cookies in to bake."

— Lisa O'Rourke

Hearing-Impaired Students — Getting Their Message Across

BNL has always been a place where foreign scientists and students, with different backgrounds and different native tongues, could come to share cultural as well as scientific information. Now, for the first time, hearing-impaired students from Gallaudet University in Washington, D.C. have brought their own unique experiences and method of communication to the Lab.

Robert Thomas, Program Manager in the Office of Educational Programs (OEP), explains that BNL scientists and Gallaudet faculty are working together in an offshoot of the Lab's Summer Student Program to match carefully chosen Gallaudet students with BNL mentors. The program is starting out small, with only three hearing-impaired students among the 50 or so who come to the Lab for ten weeks of research experience.

When those three students — Eva Holloway, Delbert McGowan and William Wood — express themselves in the flashing gestures of sign language, they may stand out from their fellow students; but they decided to come here for reasons very similar to those of the rest of their cohort.

Holloway, a recent graduate of Gallaudet with a major in biology and a minor in chemistry, thought a summer at BNL would be the perfect segue from undergraduate to graduate studies. "Since I didn't know what I wanted to study in graduate school, I thought if I could participate in the program, maybe I would find out what I like and dislike," she says.

Holloway works with Physicist Ralph Fairchild and Medical Associate Brenda Laster in the Medical Department, testing the growth and survival of rat brain tumor cell lines when exposed to certain drugs and then irradiated.

Both McGowan, a junior in biology, and Wood, a senior in physics and mathematics, said they came to BNL to get hands-on experience. McGowan works with Senior Scientist Darrel Joel and Medical Associate Marta Nawrocky in the Medical Department, running neurological tests on rats with brain tumors and refining an x-ray treatment for those tumors. Wood works with a group of summer students under Physicists Alan Carroll and Gerry Bunce, assembling EVA, the largest "straw tube" detector of its kind ever built, for a new AGS experiment.

On BNL's side, says Thomas, the rationale behind this program is identical to that for the other summer student programs. "We are making every effort to maximize the contributions people can make in all the educational programs. People who are hearing impaired may be at a certain disadvantage, but they can contribute in other ways."

But the real credit for the program's inception goes to Brenda Laster. She approached OEP with the idea after meeting a knowledgeable and enthusiastic hearing-impaired woman at a seminar who made a deep impression on her. "I realized how capable

(continued on page 4)

Delbert McGowan (left) and Eva Holloway show OEP Program Manager Robert Thomas the projects that they are working on as summer students in BNL's Medical Department. Both are doing research on various aspects of rat brain tumor cells.

Photos on these pages by Roger Stoutenburgh.

Graduate Student Programs

In Pursuit of Advanced Degrees

What happens to participants in BNL's Summer Student Program after the program ends?

Well, they could become Nobel laureates, as did Chemist Roald Hoffmann, who was a summer student in the Chemistry Department in 1957. Or they could become physicists and directors of national laboratories, as did current BNL Director Nicholas Samios, an alumnus of the first summer student class of 1952.

Whether they attain these heights or not, it is likely that many participants will go on to pursue advanced degrees in science. That's the case with Ken Ritley, who was in the program in 1988, right after he completed his bachelor's degree at Sonoma State University, California.

Ken Ritley

After his summer stint at BNL, Ritley went as planned to graduate school. "I am currently a graduate student at the University of Massachusetts and work in the positron-physics group in BNL's Physics Department," Ritley noted. "I have just earned my M.S. degree for research about how positrons — a common form of antimatter — provide one of the best probes of important solid-state-physics phenomena. Currently, I am working on a theoretical model of how this process works.

"But my story doesn't end there," Ritley continued. "I originally chose the University of Massachusetts in order to pursue theoretical high-energy physics. But after working here as a summer student for ten weeks in Dr. Kelvin Lynn's solid-state physics group, I became so enthused about solid-state physics that this fall I will pursue this topic for my Ph.D. at the University of Illinois — one of the most well-known schools for this type of physics in the world!

"So my excellent experiences here at BNL have had a fantastic impact on my choice of a career goal!" concluded Ritley.

Though Ritley may be among the most enthusiastic, he is far from the only graduate student at BNL this summer. Throughout this year, some 423 graduate students from 106 institutions have come to BNL to perform all or part of their thesis research. Like Ritley, some of these students work under the guidance of a BNL staff member, in close collaboration with the student's faculty advisor and institution.

Others come to Brookhaven as part of user groups at one of the Lab's facilities, such as the Alternating Gradient Synchrotron (AGS), the High Flux Beam Reactor and the National Synchrotron Light Source. In the past, for instance, graduate students were members of the three experimental teams that made Nobel Prize-winning discoveries at the AGS — the muon-neutrino in 1962, CP violation in 1964, and the J particle in 1974.

While graduate students may be found on site throughout the year, many of them, like Ritley, are also at BNL this summer. And for other graduate students, BNL is strictly a summer place.

This year, the Lab's summer graduate students include 11 participants in the Health Physics Summer Training Program: Margaret Dunn, Rutgers University; Jessica Hirschfelder, University of California, Berkeley; Shelby Kawa, University of Michigan; Terrance Kraus, San Diego State University; Stephen Lief, Rutgers; David Marsden, Rutgers; Susan McGowan, University of Lowell; Jesus Pena, University of Puerto Rico; Thomas Piccoli, Lowell; Gary Schroeder and William Ulicny, both of the University of Pittsburgh.

As in previous summers, these students have come to BNL to take advantage of the Lab's facilities and gain practical experience in health physics, as a supplement to other graduate studies. Over the ten-week period that began June 11, they have undertaken a rigorous program of

(continued on page 4)

Teacher Research Associates

Translating Science From the Lab to Lesson Plans

As a high school science teacher at the residential Indiana School for the Deaf (ISD), Teresa Huckleberry has her work cut out for her.

Not only must she translate scientific concepts of biology, earth science and physics into nontechnical language, but she must also convey these concepts to her students via American Sign Language.

This summer, Huckleberry — who has a bachelor's degree in biology and deaf education from Ball State University, and a master's in secondary education from Butler University — has her work cut out for her as well.

As one of the 16 Teacher Research Associates (TRA) sponsored by the U.S. Department of Energy (DOE) at Brookhaven, Huckleberry must not only learn new scientific concepts and technical skills through her research in BNL's Biology Department, but she must also translate her newly acquired knowledge into lesson plans and instructional materials for her students at ISD.

Since 1983, Brookhaven's Office of Educational Programs has offered high school teachers the opportunity for a summer of research at the Lab. In 1989, DOE began formally funding the TRA program at 14 of its laboratories, including BNL, to update teachers' knowledge of science and technology.

Nominated for the TRA program by the Indiana Department of Education, Huckleberry is only one of two

Teresa Huckleberry

TRAs from the Hoosier State in this year's DOE program. And, she is the first TRA from Indiana at Brookhaven.

In addition to TRAs selected from the national pool, each DOE lab selects half of its summer teachers from the local area. For Brookhaven, this means teachers from Nassau and Suffolk County high schools. Brookhaven's TRA program runs this year from June 25 to August 17.

Long Island teachers in BNL's program this year include: Allison Corcoran, St. Anthony's High School, Huntington; Tracy Ferry, Glen Cove High School, Glen Cove; Deborah Miller, Hewlett High School, Hewlett; John Short, Harborfields High School, Greenlawn; John Stile Jr., Oceanside High School, Oceanside; Edward Tracy, St. Mary's High School, Manhasset.

TRAs from out of state are: Alerta Angeles, Woodrow Wilson High School, Washington, D.C.; Victor Amendolara, Paramus High School, New Jersey; Michael Baylinson, Woodrow Wilson High School, Washington, D.C.; Rina Broyer, Union High School, New Jersey; Laurence Burton, East High School, Utah; Richard Hedeman, The Hotchkiss School, Connecticut; Elizabeth O'Bara, Dublin High School, Ohio; Joseph Slater, Chelsea High School, Massachusetts; Adah Stock, Los Fresnos High School, Texas.

Joining the DOE TRAs at BNL is Frank Benjamin, a teacher from Darmstadt Junior High School, West Germany, who is sponsored by the U.S. Department of Defense.

At the end of their assistantship, the teachers present research reports to their scientific and teaching colleagues. As well, they must plan how to impart their research experience

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More Summer Opportunities

The U.S. Department of Energy's (DOE) emphasis on education and BNL's close relationship to major institutions of higher learning provide impetus for many summer programs for students at the Lab. Those that weren't covered in this or the previous issue of the Bulletin are listed below:

- **Environmental Education Outreach to Minorities:** Begun this year by the Office of Educational Programs, this program brings teachers from the South Bronx to the Lab for four weeks of on-site instruction about the environment. The teachers use this training as the basis for courses in their high schools, in collaboration with Bronx Community College. About 50 of these teachers' students also make day trips to BNL to learn about the environment.
- **Inner-City Outreach Program:** Minority ninth and tenth graders with an interest and ability in science, one from each of the boroughs of New York City, come to BNL in July or August for four weeks of science classes and to visit Lab facilities. This program is co-sponsored by a New York high school consortium program called "Gateway to Education."
- **Minority High School Research Apprenticeship Program:** This program places four minority high school students in a one-on-one relationship with BNL scientis ts involved in health-related fields. Applicants come from a pool of students who have previously participated in BNL's Minority High School Summer Apprenticeship Program featured in last week's Bulletin. This six-week program is supported by the National Institutes of Health.
- **Science and Engineering Opportunities for Minorities and Women:** Select minority and women students who have completed their freshman or sophomore years in college and are pursuing studies in science or engineering are chosen by BNL scientific staff for 12-week research work assignments.
- **Summer Intern Program:** Eight recent high-school graduates who participated in the DOE High School Honors Program the previous summer and plan to pursue a degree in science in college are chosen to work with specific BNL staff members for ten weeks.

Past & Present Students Meet

During the first week of their internship, BNL summer students had a chance to met with a former BNL summer student, Nobel laureate chemist Roald Hoffmann, who was visiting the the Lab as the 20th Pegram Lecturer. Hoffmann and the students discussed the road to becoming a scientist, science and the media, and the science vs. liberal arts dichotomy in education today. At left, an interpreter presents the discussion in sign language for three hearing-impaired students from Gallaudet University who are participating in the summer student program.

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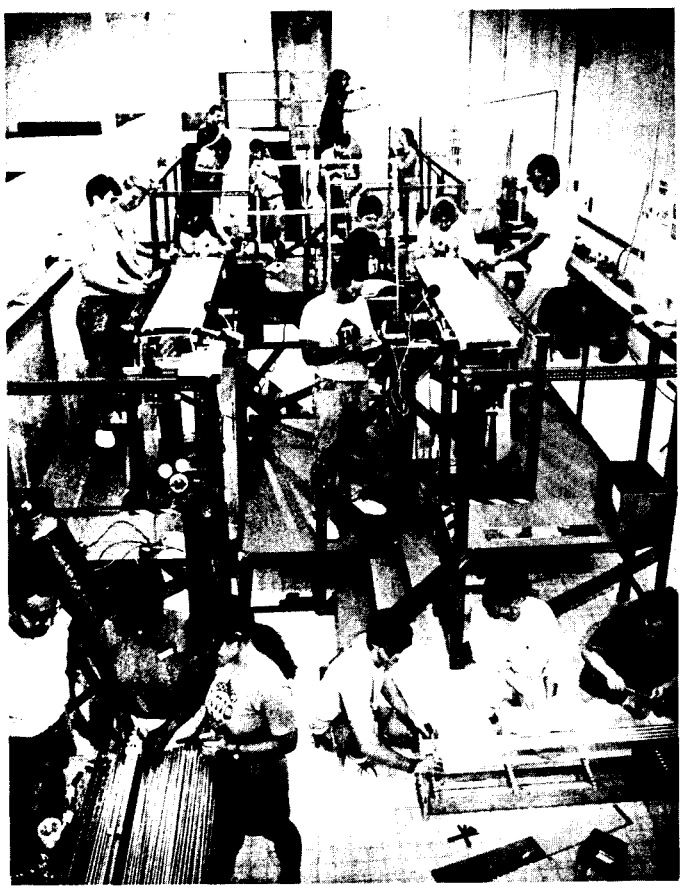
To Beat the Detector Deadline



Roger Stoutenburgh

Eighteen summer students are working with BNL Physicist Alan Carroll and his collaborators to build EVA, a new "straw tube" detector being constructed for Alternating Gradient Synchrotron (AGS) experiment 850 (E850).

Starting in March, 1991, EVA will collect data on the behavior of protons when they bombard heavy nuclear targets at high energies. Some of the students are participating in BNL's Summer Student Program, some are entering graduate programs at the State University of New York (SUNY) at Stony Brook, and others are undergraduates studying under experiment collaborators from Southeastern Massachusetts University (SMU), University of Minnesota (UM), Mount Holyoke College (MH) and Pennsylvania State University (PS). Student help is essential to meet the tight deadline for the completion of the straw tube detector.

Physicist Fernando Barbosa from SMU (front row, far left) and BNL Physicist Associate Maryanne Kmit (front row, fifth from left), both of whom helped design the detector, supervise the students, who form the largest student work group at BNL: (front row from left) Tisha Thornton, Dillard University; Susan Schwartz, University of Colorado; Brian Harris, SUNY Stony Brook; and Michael Vjaloh, PS; (second row) Mark Martin, SMU; (third row from left) Charles Barton, SMU; Bill Huber, UM; Karin Breiter, PS; Sarah Baker, SMU; and Katie Baumgardt and Derek Dahlgren, UM; (fourth row from left) Juliana Tu, Ming Ouyoung, and Jimmy Lai, UM; and Sabah Yunus, MH; (fifth row, from left) Bill Wood, Gallaudet University, and Tia Sircar, MH. Not pictured is Chi Ng, SUNY Stony Brook.

Teacher Research (cont'd)

and results to their students.

Huckleberry explains, "My deaf students learn best when demonstrations, hands-on experiences and lab work are presented first and then discussed to bring out the theoretical concepts."

Therefore, "My lab experience here at Brookhaven is a tremendous opportunity for me," she adds, "and it should be a tremendous benefit to my students."

Within BNL's Biology Department, Huckleberry is working with Richard Setlow, Avril Woodhead and Eleanor Grist to study how ultraviolet light induces cancerous skin tumors, called melanomas, in laboratory-bred fish — a cross between a platyfish and a swordtail.

"This is the first time that I have been involved in research," admits Huckleberry. "From this experience, I'm learning that science is not all glamour and definitive, instantaneous results — there are a lot of mundane, tedious tasks, like cleaning out fish tanks and looking at slide after slide.

"But," she continues, "I am learning scientific skills and techniques that I could not be taught elsewhere — and I am thinking of how to do similar, but smaller-scale research with my students."

In addition to having been selected for the TRA program, Huckleberry is receiving another honor this summer.

For her efforts to introduce ISD students to aerospace science and technology, she will receive one of the annual Frank G. Brewer Civil Air Patrol Memorial Aerospace Awards for individual excellence. Huckleberry will receive this award in Reno, Nevada, at the national board meeting, August 10-11, of the Civil Air Patrol, an auxiliary of the U.S. Air Force.

This award is the result of Huckleberry's efforts three years ago, when she convinced the U.S. Space Camp in Huntsville, Alabama, to open its program to her deaf students and secured a $4,000 grant from the Lilly Endowment to support the pilot program.

Then Huckleberry raised $10,000 in 1989 and again in 1990, so 19 students could afford to go the first year and another 18 the second.

As a result of the success of the pilot program for deaf students, Space Camp has begun other programs for students with different special needs. — Marsha Belford

Graduate Students (cont'd)

specific experiences in various radiological techniques and instruments and have attended lectures and seminars given by BNL staff. The students have worked on a variety of research subjects and worked with Safety & Environmental Protection Division staff members on projects that span their entire visit.

Other graduate students are on site this summer as part of the GEM Program, run by the National Consortium for Graduate Degrees for Minorities in Engineering, Inc. and administered on site by the Office of Equal Opportunity.

In the GEM Program, Native American Indian, Black American, Mexican American and Puerto Rican students pursuing advanced degrees at consortium-member graduate schools also obtain practical engineering experience through summer internships at the work sites of consortium employers.

As a consortium employer, BNL has welcomed four GEM students this summer: Lisa Brown, Morgan State University; Jeffrey Chavis, University of Maryland; Alan Price, City College of New York; and Jon Polk, New York Institute of Technology. The four conclude their 12-week stay at the Lab later this month.

— Anita Cohen

Hearing Impaired (cont'd)

hearing-impaired people are, and I thought, why don't we help them at BNL?" Laster recalls.

McGowan, who is also visually impaired, says many people have to be convinced of disabled people's capabilities. "We have a challenge to prove that whether we are hearing impaired or visually impaired, we can do the job just as well or even better than they can," he says.

Wood agrees to some extent. "The advantage of being in physics is that it doesn't depend on human ears, so I grabbed the opportunity. The challenge in the field to me is when people talk about physics and I ask them what they are talking about. They usually leave out a little information, and I have to figure things out for myself."

Such glitches in the communication process are the most obvious, routine hurdle the hearing-impaired students must overcome here. BNL provides the students with portable teletype devices so they can communicate by phone. The Lab also arranges for interpreters for the students' weekly meetings with their mentors and Thomas, and for on-site events the three want to attend.

But the students are largely left to their own devices — including writing, speaking, lip reading, gestures and even using the computer — to communicate with others at BNL. In this situation, the three often find themselves in the role of instructor rather than student.

"I usually write to communicate," Wood says. "I taught some students the sign-language alphabet to start with, so we don't have to depend on paper and pen."

"Some of the people I work with do know some signs, but I depend primarily on fingerspelling," says McGowan. "I try to lip-read with those who don't sign or when there isn't paper available, but there is also a lot of predicting what they will say."

"At first, I had to use my voice only; later I taught a few people some sign language," says Holloway. "I am very impressed that some of the other students were enthused about learning sign language." But Holloway says the program could benefit from a permanent on-site interpreter.

Thomas says he hopes to have more interpreters available next year; he also wants to bring in more Gallaudet students and recruit more BNL scientists to mentor them. The program ran smoothly this year, he says, partly because the Gallaudet students "accommodate to hearing people well and help hearing people communicate with them."

Those qualities — flexibility and the ability to solve problems — are certain to serve Holloway, McGowan, and Wood well in their scientific careers. — Lisa O'Rourke

Addled Addresses

- Brookhaven Natl. Laboratory
  Upton, Lily NY
- Mr. Ole Hansen - Bldg. 901A
  901A Brookhaven National Labs
  Bldg. 475
  Upton, NY 11973
  Dear Mr. 901A
- Brookheaven National Laboratory
  Uptown, NY 11713
- Brookmaven National Laboratory
- Brkhvn Nation
- Brookhaven National Labrator

Coming Up

Makio Ogawa, a professor of medicine and the Director of the Division of Experimental Hematology at the Medical University of South Carolina, will be the Lab's third Van Slyke lecturer.

"Hemopoietic Stem Cell Proliferation and Differentiation" is the title of his talk, to be given on Monday, August 20, at 8 p.m. in Berkner Hall.

For information on Ogawa's schedule while he is at the Lab on Monday, contact Eugene Cronkite, Ext. 7538.

Winner's Circle

In today's winners' circle is **Elaine Lowenstein**, a public affairs assistant in the Public Affairs Office who was awarded $100 for two suggestions that she submitted to the Employee Suggestion Program (ESP).

Last fall, Lowenstein noticed that the two Kwanzan cherry trees in front of Berkner Hall were suffering from San Jose scale. On her suggestion, personnel from the Biology Department and Plant Engineering Division examined the trees. They agreed that the plants were in danger of dying. The trees were treated and are now doing fine. And Lowenstein received $50.

She earned her second $50 for suggesting that less-expensive wooden stirrers replace plastic stirrers in the Cafeteria and at meetings on site. In addition to saving the Lab money, Lowenstein's idea reduces non-biodegradable waste.

Notaries on Site

Sometimes you need to get a document notarized but are not sure where to find a notary on site. Look no more. A poll of the various offices has brought to light a fair number of notaries public, and one may be just around the corner from you. If you know of any notary who has been missed, please call the Bulletin office, Ext. 2345.

Accelerator Development	
Melanie Covitz	1005S
Alternating Gradient Synchrotron	
Penny Lo Presti	911A
Applied Science	
Patricia Fox	179A
Ellen Fredrickson	179A
Florence O'Brien	51
Betty Pergan	179A
Virginia Richardson	475
Joan Sperry	179A
Associated Universities, Inc.	
Frank Federmann	134A
Computing & Communications	
Muriel Kolomick	515
Contracts & Procurement	
Roseann Callister	355
Barbara Pringle	355
Director's Office	
Renée Flack	490
Michael Goldman	460
Carole Joyce	460
Carole Kerr	460
Marvin Laster	460
Ruth Ann Lutz	460
Donald Robbins	460
DOE Brookhaven Area Office	
Timothy Drawbridge	464
Joan Shands	464
Management Information Systems	
Katherine Boggi	459
Nuclear Energy	
Cheryl Conrad	130
Lois Marascia	197C
Personnel	
Donna Dowling	185
Kay Dellimore	185
Photography & Graphic Arts	
Dolores Janes	197B
Physics	
Sandra Sanchez	510A
Safety & Environmental Protection	
Susan Carlsen	129A

See Supplement for more notices and for Classified Ads.

Scoop of the Week

For the third time in the three years that the Bulletin has run the Scoop of the Week contest, Kenneth Ritley, a graduate student working in the Physics Department, has earned himself a scoop. This year, he contributed the idea for the story "In Pursuit of Advanced Degrees."

Also for week eight, one scoop each goes to Richard Setlow, Avril Woodhead and Eleanor Grist, all Biology Department, for suggesting "Translating Science From the Lab to Lesson Plans."

Throughout the summer, the Bulletin is trading hot tips for scoops of frozen yogurt. To enter the Scoop of the week contest, rush your news and feature scoops to the Bulletin, Bldg. 134, or call Ext. 5053. If you scoop the Bulletin's informed sources, and a story based on your idea is published, you'll win an official certificate, which is redeemable for frozen yogurt at the Cafeteria.

BERA Bus Trip To Atlantic City

The next BERA-sponsored, one-day trip will be to Resorts Hotel and Casino on the Boardwalk in Atlantic City on Saturday, September 15. The initial cost will be $20, but the hotel-casino will give a $5 coin return and a deferred bus-return voucher.

The bus will leave the Brookhaven Center promptly at 9 a.m. and return at about 11 p.m. There will be an extra pickup at LIE Exit 63 if necessary.

Tickets are on sale now at the BERA Sales Office in Berkner Hall, weekdays from 9 a.m. to 2 p.m. If you have any questions, call Louisa Barone, Ext. 3347; Rosalie Piccione, Ext. 3160; or Kay Dellimore, Ext. 2873.

On the Menu

At the Cafeteria

Luncheon served 11:15 a.m. to 1:30 p.m., grill open to 3:45 p.m., Cafeteria closes 4 p.m.

Monday, August 13	
Soup: Chicken vegetable	.75/.95
Entree: Steak dinner	3.10
Entree: Fried catch of the day	3.10
Fitness: Spinach quiche	3.10
Carvery: Hot pastrami sandwich	2.85
Grill: Grilled cheese, bacon, tomato on rye	2.85
SPICE: School days — history	
Tuesday, August 14	
Soup: Pasta gumbo	.75/.95
Entree: Southern-fried chicken	3.10
Entree: Stuffed peppers	3.10
Fitness: Ham & green bean casserole	3.10
Carvery: Hot roast beef sandwich	2.85
Grill: Cook's choice	2.85
SPICE: School days — math	
Wednesday, August 15	
Soup: Country Italian bean	.75/.95
Entree: Seafood Newburg over rice	3.10
Entree: Baked chicken	3.10
Fitness: Broccoli cheese casserole	3.10
Carvery: Black Forest ham sandwich	2.85
Grill: Shrimp basket	2.95
SPICE: School days — gym	
Thursday, August 16	
Soup: Navy bean	.75/.95
Entree: Chinese pepper steak over rice	3.10
Entree: Cajun fish	3.10
Fitness: Chef's special	3.10
Carvery: Hot corned beef sandwich	2.85
Grill: Grilled Reuben	2.85
SPICE: School days — reading	
Friday, August 17	
Soup: New England clam chowder	.75/.95
Entree: Baked catch of the day	3.10
Entree: Chicken fricassee	3.10
Fitness: Vegetarian lasagna	3.10
Carvery: Hot turkey sandwich	2.85
Grill: Tuna melt	2.75
SPICE: School days — science	
Breakfast w/coffee, 7:30 - 10:30 a.m.	2.65

Mon.: 2 eggs, bacon & pancakes
Tue.: Western omelet, French fries, toast
Wed.: Spanish omelet, home fries, toast
Thu.: 2 eggs, bacon, cheese on croissant, fries
Fri.: French toast, 2 eggs, bacon, home fries

After-Tournament Tennis Party

The annual after-tournament tennis party will be held at 5:15 p.m. on Thursday, August 16, at the tennis courts. The rain location is the Physics Department, Bldg. 510. Tournament participants and other tennis buffs are invited.

Cancelled: BERA Picnic

Because of low ticket sales and general lack of interest, the BERA picnic scheduled for Saturday, August 25, has been cancelled.

If you have already purchased tickets for this event, you may obtain your refund by returning your tickets to the person who sold them to you. BERA thanks those of you who did purchase tickets.

Golf Tournaments

The fifth 1990 BGA golf tournament will be held on Monday, August 20, at the Indian Island County Golf Course, Riverhead. The tournament will be held under stroke-play rules. Call Joe Mayeski, Ext. 2575, to arrange a tee-off time, which will run between 10 a.m. and about 12:30 p.m., depending on the number of people who signed up.

Greens fees are $12 for Suffolk County residents; riding carts are available for $22, pull carts $3. The sign-up deadline is August 17. Try to have a complete foursome before calling. In the event of rain, please call the Pro Shop, 727-7776.

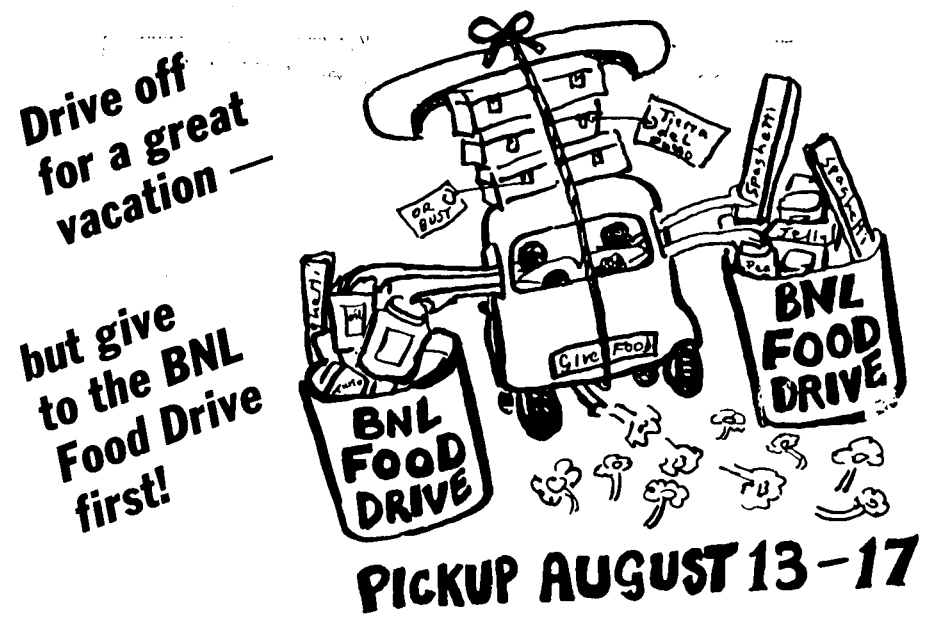
Seventy-three golfers participated in the BGA outing at the Swan Lake Golf Club. The winners of the gross and net prizes were:

Flight	Gross	Net
A	Joe Depace	Mike Losquadro
B	Joe Roecklein	Howard Vetter
C	Tony Baltz	Don Gates
D	Charlie Flood	Bob Sabatini
E	Frank Zafonte	Russ Lowell

Prizes for long drive went to John Usher and Brant Johnson, while Barry Karlin and Joe Roecklein took closest-to-the-pin awards.

Note to Employees:

Attendance at lectures, meetings and other special progams held during normal working hours is subject to supervisory concurrence.



And please send Finast and King Kullen receipts to Carole Kerr, Bldg. 460.

Call for Bowlers

Although summer is not yet over, it's time to "think bowling" again!

Applications are now available at the BERA Sales Office. Priority registration for existing teams is due by August 17; new team registration is due by August 24.

The women's league is sending out an urgent plea for new bowlers. Without many new members, the league will have to fold.

Don't let this happen — join up for a night of fun. You do not have to be a great bowler, just a willing one! Interested women should contact Donna Cunningham, Ext. 4599, or Maryann Reynolds, Ext. 5241.

Arrivals & Departures

Arrivals

Barbara L. Crothamel.....MIS
Richard M. Greene.....DAS
Philip Pagano.....Reactor
Mark P. Sabat.....Plant Eng.
Mark A. Thompson.....DAS

Departures

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

Alfred A. Bertsche.....Accel. Dev.
Jau-Der J. Chen.....Biology
Allan Kolker.....DAS
Ake Kvick.....Chemistry
Frederick R. Lemke.....Chemistry
Florence J. Lin.....Chemistry
Marco R. Plumley.....DNE
David W. Potter.....Instrumentation
Chyng-Yann Shiue.....Chemistry

Catch a glimpse of
GLANCE
playing in Berkner Hall
weekdays, 11:30 a.m. to 1:30 p.m.
Show changes every Tuesday.

Equipment Demos

Mike Gallup, Hewlett Packard workstation marketing manager, will present HP's workstation strategy in an HP Apollo seminar, to be held in the CCD second floor seminar room on Wednesday, August 15, from 10 a.m. to noon.

Directions for distributed computing, entry-level workstations, operating systems, investment protection, compatibility and standardization are among the areas to be discussed. The installed user base at BNL and discount agreements will also be described.

Call Ted Daniels, Ext. 5555, with any comments or questions. All are invited to attend.

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New equipment used in video microscopy will be exhibited by the Micro Vue Corporation on Thursday, August 16, from 10 a.m. to 2 p.m. in Berkner Hall. Those who use microscopes are invited to bring sample slide specimens to view, record and print, using Micro Vue's latest video technology.

Classified Advertisements

Placement Notices

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

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all non-scientific staff positions; second, to give employees an opportunity to request consideration for themselves through Personnel; and, finally, for general recruiting purposes. Because of the priority preference policy stated above, each listing does not necessarily represent an opportunity for all candidates. As a guide to readers, the listings are grouped according to the anticipated area of recruitment.

Except when operational needs require otherwise, positions will remain open for one week following publication date.

For further information regarding a placement listing, contact the Employment Manager, Ext. 2882.

The vacancies listed below have been exempted by the Director's Office from the current freeze on open requisitions.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees only.

4306. OFFICE SERVICES POSITION - Requires a minimum two years' office experience, IPAP experience highly desirable. Duties will include extensive data entry of purchase orders and RFQs, as well as filing and general clerical duties. Contracts & Procurement Division.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

4307. SAFETY ENGINEER POSITION - Requires a bachelor's degree in science or engineering, experience in the investigation and analysis of safety incidents, certification as a professional in one of the major safety fields, and demonstrated skills in computer applications and development of data bases, statistical analysis and nuclear regulatory matters. Duties will include incident investigations, tracking and analysis. Safety & Environmental Protection Division.

4308. TECHNICAL POSITIONS - Requires AAS in health physics or equivalent and an emphasis on engineering or physical science. Responsibilities include routine radiation and contamination surveys. Will be required to participate in respirator, industrial hygiene and general safety training programs. Shift work required. Must be able to obtain and maintain a security clearance. Safety & Environmental Protection Division.

4309. ASSISTANT BUYER POSITION - Requires AAS in an appropriate field or equivalent experience. Will be responsible for the economical and efficient procurement of various tangible commodities with low monetary value. Will coordinate the complete procurement function from requisition to delivery in accordance with standard contracts and procurement operating procedures. Contracts & Procurement Division.

4310. TECHNICAL POSITION (Quality Assurance) - Requires AAS in a technical field and QA/QC experience. Duties include participation in QA audit, surveillance, corrective action, inspection and test activities. Knowledge of computers desirable. Must be able to obtain and maintain a security clearance. Reactor Division.

4311. SAFETY ENGINEERING POSITION - Requires an advanced degree in science or engineering and knowledge of safety requirements applicable to DOE or commercial nuclear facilities. Certification in a safety discipline or 3-4 years' relevant experience necessary. Will plan and schedule work, as well as assign personnel and perform evaluations. Will be involved in administering procedures, conducting unusual occurence investigations and training development. Alternating Gradient Synchrotron Department.

4312. ENGINEERING POSITION - Requires BS/MS in environmental engineering and a minimum of five years' experience in environmental restoration and/or waste management. Experience in assessment of radioactivity in environmental samples is a plus. Familiarity with federal and state environmental regulations, and QA highly desirable. Will coordinate various environmental restoration projects, technical document reviews, and oversight of remedial and removal action contractors. Safety & Environmental Protection Division.

Motor Vehicles & Supplies

87 BRONCO II XLT - 5-spd., ac, cruise, p/w, 30k mi., ext. warr., visor, running boards, alarm, more, excel. cond.. Richard, Ext. 2231/5149.

86 CHEVY CELEBRITY - s/w, a/t, 5-spd., ac, am/fm, excel. cond., ask. $3,900. Chen, 799-3636.

84 HONDA AERO 125 MOTOR SCOOTER - 8k mi., 2-pass., new battery, extras, reliable, good cond., $400. Frank, Ext. 7519 or Vita, 277-0464.

83 TOYOTA COROLLA - am/fm, a/t, 4-dr., 63k mi., brown, v.g. cond., 582-3163 after 7 p.m.

79 ELDORADO - convertible, new top, green, low mi., am/fm, new brakes, classic, $2,500 neg. Bob Tisch, Ext. 2214 or 589-3173.

79 SUNLINE TRAVEL TRAILER - 21', sleeps 6, full awning, new tires, brakes & battery, excel. cond., $3,800 neg. Artie, Ext. 4988 or 325-0743.

77 NOVA - orig. owner, new brakes, tires, water pump, reliable transportation, excel. cond., $450. Nick, Ext. 5467.

76 FORD GRAND TORINO - 4-dr., V-8, ac, runs. $200. Ray, 878-1947.

73 BRONCO 4x4 - needs work, asking price $500. Ext. 7238.

72 PORSCHE 914 2.0 - badly rusted, trailer, new muffler, other parts, $100. 929-3759 after 8 p.m.

31 CHRYSLER - all orig., low mi., runs well, excel. cond., $7,000. Ext. 3160 or 289-5704 after 5 p.m.

CAP - 7½', fiberglass, fits GMC 515 or Chevy 510 long bed, good cond., $275. Dave, 757-6392.

CAR RADIO & SPEAKERS - new, in carton, Audiovox, am/fm, $20. Albert, 727-6481.

TUSS BOX - $45; ladder rack for mini pickup, asking $85. J. Guthy, Ext. 4411.

FORD LTD II - 4-cyl., 4-dr., gray, ac, cruise, 80k mi. w/15 on new engine, $2,200 or best offer, v.g. cond. Ext. 4284.

89 DODGE SHADOW ES - 4-dr., fog lights, window tint, star rims, white, am/fm cass., pin striped int., $12,500 or best offer. Neil, Ext. 2907.

88 PLYMOUTH CARAVELLE - 4-cyl., 4-dr., 36k mi., all options, $6,500. 325-0567.

88 MUSTANG LX - Trick Edition, white w/blue int., loaded, extended warr., car cover, 30k mi., $7,500 or best offer. Emil, Ext. 4289.

87 TOYOTA SUPRA - p/seats, anti-lock brakes, loaded, 5-spd., 42k mi., $13,500. Witkover, Ext. 4607.

87 JAYCO MOTOR HOME - 25', rear bath, 17k mi., awning, gen., ac, sleeps 6, Ford 460, excel. cond., Bob, Ext. 4672 or 929-4753 eves.

87 TOYOTA PICKUP - 2wd, long-bed, p/s, p/b, a/t w/o.d., bedliner, good cond., excel. work truck, asking $13,500. Greg, 475-2509.

86 SUBARU GL-10 TURBO WAGON - 15 mo. warr. unlimited mi., loaded, 5-spd., 82k mi., asking $5,890. Henry, Ext. 5385 or 727-7227.

86 SUBARU GL WAGON - like new, 30k mi., all power options, 5-spd. Mike, Ext. 3755.

86 CHEVY S-10 TRUCK - 38k mi., excel. cond., asking $4,200. Henry, Ext. 7828.

85 RIVIERA - good shape, leather interior, loaded, $5,500. Kathy, 728-5647.

84 SUBARU GL - black, 74k mi., ac, stereo tape deck, 5-spd., 4-cyl., fwd, $2,500. Mike, 475-8406.

83 DATSUN - 115k mi., am/fm, a/t, $400. Bertrand, Ext. 3166.

83 BUICK REGAL - 6-cyl., 4-dr., ac, p/b, p/s, am/fm, 102k mi., new brakes, battery, $1,500 neg. Vili, Ext. 5306 or Ext. 3125 after 6 p.m.

83 DODGE COLT - 2-dr. h/b, 4-spd., am/fm, new head, 90k mi., 37-38 mpg, good cond., asking $500. Frank, Ext. 7772 or 751-9209.

82 BUICK REGAL - 6-cyl., 4-dr., ac, am/fm, new exhaust, brakes, battery, 78k mi., excel. cond., $2,500 or best offer. Steve, Ext. 5567 or 821-9048.

82 PLYMOUTH HORIZON - 44k mi., $995; '81 Ford 250 pickup, 75k mi., a/t, a/c, $1,750. 472-4228.

82 PONTIAC GRAN PRIX - ac, p/w, 6-cyl., blue. Bert, Ext. 5156 or 581-4436.

82 CHEVY CITATION - good cond., runs well, reliable, paint faded, $375. Ext. 7697 or 689-2829 eves.

82 BUICK REGAL LTD. - 6-cyl., 4-dr., ac, am/fm cass., 93k mi., very clean, runs well, must see, $2,800. Frank, 929-8317.

82 MERCURY LYNX - ac, p/s, tape/radio, great tires, excel. cond., well kept, great on gas, must see. 924-8558.

82 RELIANT - s/w, m/t, engine & body v.g. cond., great mpg, new brakes, battery, clutch, $875. Bill G., Ext. 5829.

82 DODGE ARIES WAGON - $1,100. Ext. 2475 or 751-4539.

81 AUDI 5000S - most amenities, 92k mi., good cond., $2,250. 289-5770.

81 KAWASAKI 440 LTD - 12k mi., new tires, brakes, battery, chain sprockets, sissy bar, v.g. cond., must sell, moving, asking $700. 474-5715.

81 FORD FAIRMONT WAGON - 4-spd., 4-cyl., radio, new brakes & other parts, well-maint., asking $700. Koon, Ext. 2963 or 3020 after 6 p.m.

81 HONDA ACCORD - 5-spd., am/fm cass., sunroof, new clutch, very clean, $1,500. Pat, 698-2756.

81 CHEVY CAPRICE - V-6, excel. running cond., $9,800 mi., asking $2,200. Henry, Ext. 7828.

80 CHEVETTE - a/t, ac, 4-dr., runs well, body good, new brakes, shocks, springs, rear bearings, $750. Herman, 744-3443.

80 CHEVETTE - 4-cyl., 4-spd., runs well, high mi., $400. Walter, Ext. 4958 or 821-9451.

80 DATSUN - 5-spd., am/fm cass., 95k mi., runs well, $300. Dong, Ext. 5510 or Ext. 3134 after 5 p.m.

79 AMC CONCORD - 102k mi., runs well, good local transportation, $400. Youwen, Ext. 7735 or 345-0348.

79 VW RABBIT - needs engine, everything else works like a charm, must sell, $200. neg. Seth, 744-0485.

79 CHEVETTE - good running cond., $300. 286-1169.

78 HONDA MOTORCYCLE - 400cc Hawk w/shield, $250. 473-8716.

78 TOYOTA COROLLA - 119k mi., 2-dr. h/b, new trans., brakes, & batt., am/fm, runs well, $650. Yannis, Ext. 5324 or Ext. 3182 after 7 p.m.

73 VW 412 - sedan, new brakes, int. good, ext. faded, runs well, reliable, $375. Paul, Ext. 7697 or 689-2829 eves.

71 CHALLENGER - w/trailer, bracket race car, excel. cond., many extras, asking $7,900. Chris, 234-7954.

68 LINCOLN CONTINENTAL - needs work, $350; '79 Moped Puch Jawa, excel. cond., w/baskets, $150. Keith, 474-3863.

66 CHEVROLET CAPRICE - orig. cond., 396, ac, p/s, p/b, a/t, console, buckets, $3,500. Fran, Ext. 2092.

TIRES - 4, Uniroyal, P2.35/7.5R15, steel-belted radial, 4/$50, firm. 878-6637.

CAP - for short-bed pickup, $25. 286-0795.

Boats & Marine Supplies

25' WELLCRAFT NOVA - 260 MC, VHF, CB, very clean, runs well. Jack, 281-4008.

32' CRUISER - w/flying bridge, in water, twin V-8 Palmer eng., runable, poor cond., many useful parts, $300. Ext. 3288 or 281-0360 after 6 p.m.

29' THOMPSON DAYTONA - 1987, twin 190 i/o, Merc., FWC, radar, Loran, camper back, loaded, 878-6067.

25' RINKER FIESTA-VEE - 1989, complete galley, head w/shower, sleeps 4 comfortable, hot water, dock power, many other extras. Dick, 325-1677.

20' O'DAY - day sailer, sleeps 4, head, fresh water, 3 sails, 6-h.p. ob., VHF radio, galv. trailer. 286-1331.

19' REINELL - 1972, deep-vee, hull excel., $150. Bart, Ext. 4446 or 924-6761.

19' O'DAY MARINER - 6-h.p. under warranty, anchor, tent, cushions, main, jib, all excel. cond., $2,800. Dave, Ext. 2109 or 472-9199.

17' O'DAY - day sailer, good cond., w/4-h.p. Evinrude eng. & trailer, asking $1,800. Dick, Ext. 2881 or 286-3372.

13' BOMBARD - 1987, inflatable, '87 30-h.p. Mariner, trailer, w/access., excel. cond., great scuba diving, must sell, moving, $3,500. 474-5715.

MFG - 1962, fiberglass, 75-h.p. Johnson, Gator trailer, needs some work, motor running but needs part replaced. Ext. 7697 or 689-2829 eves.

JET SKI - 1988, 650 SX Kowaski, mint, must see, must sell, ask. $3,000. Scott, 395-5660 after 5 p.m.

JET SKI - 1987, 650 SX, w/extras & trailer, excel. cond., $2,650. Danny, Ext. 2012.

Furnishings & Appliances

DRESSER - double, w/nightstand, asking $150. 654-4661 eves & wknds.

BEDROOM SET - antique, white, canopy bed, dresser, desk, cabinet. Ext. 2106/2493 or 929-4270.

REFRIGERATOR - dorm-size, 4.8 cu. ft., excel. cond., $100. Ext. 5559.

ICE BUCKET - oak, $18; amber Depression cake plate, $20; tressel table, $35. Kathy, 744-2203.

WOOD BAR - 6' long, 2 wood swivel chairs, good cond., $50. Ernie, Ext. 3357 or 281-7873.

CLOTHES DRYER - J.C. Penney, runs well, $25; rattan chairs & corner table. Dave, Ext. 5460.

ELECTRIC RANGE - double ovens, you pick up, asking $130; Hotpoint upright freezer, large, $75 or best offer; GE refrigerator, $20. 878-1572.

DINING ROOM FURNITURE - Colonial, $275; children's desk, $20; lace wedding dress, size 10-12, $25. 345-3778.

LIVING ROOM FURNITURE - couch, recliner, 2 chairs, 2 gold velvet barrel chairs, cocktail & end tales, lamps. 751-0923.

REFRIGERATOR - Coldspot, white, 16 cu. ft., old but works well, $25. Ruth, Ext. 7226.

CHEST FREEZER - Sears, 23 cu. ft., good cond.; Electrolux vacuum, needs minor work. Mark, Ext. 4347.

CHINA CLOSET - pecan finish, w/sliding glass door, 3 drawers, 36" wide, v.g. cond. Gene Rohde, Ext. 5320 or 363-9527.

BEDROOM FURNITURE - Ethan Allen, 7-piece, single bed, antique white; teen bedroom set, blue/white, 6-piece, $250. 286-1213 eves & wknds.

MATTRESS - queen-size, $20; compact food processor, $15; mixer, $5. Ext. 3136.

CHAIR - barrel, dark brown, swivel, excel. cond., $35. 473-7667.

DINING ROOM - 9-piece, table w/leaves & pads, china closet, buffet; Gibson freezer, 12.8 cu. ft., upright, $100. 744-1194.

ENTERTAINMENT CENTER - chestnut, glass & wood doors, 2 drawers, $250; light blue couch, modern, 2 yrs. old, orig. $500, ask. $195. 724-7758.

BED - queen-size, $95; bookshelves, $19; office desk, $21; stand, $15, moving, neg. Ext. 3731 or 331-7299.

BED - double, brass headboard; living room couch; 2 side tables; 2 lamps; dining room set w/6 chairs & covers. Peter, 475-0831.

DISHWASHER - Sears, 18", $100; file cabinet, 2-drawer, $15. 878-9369 after 6 p.m.

FREEZER - 2 yrs. old, compact, portable, $45; extension ladder, aluminum, $35. 724-7758.

LOVE SEATS - 2, blue & white, light yellow flower pattern, like new, $300/both. Tom, 744-7343.

BEDROOM SET - full boxspring & mattress w/headboard, triple dresser w/mirror, nightstand, $75. Ext. 3288 or 281-0360 after 6 p.m.

TABLE - 22" tall, $8; tabletop fan, 22" tall, $8. Jessica, Ext. 2328 or 3001.

KEYHOLE DESK - antique, solid oak, orig. hardware; Tiffany sterling silver, numbered. 821-0695.

AIR CONDITIONER - GE Carry Cool, portable, 4,000 Btu, fits 22½"w x 14½"h minimum opening, excel. cond., $65. Brian, Ext. 7519 or 234-9487.

KITCHEN SINK - faucet, counter & oak cabinets, above & below, 5' long, $350; portable dishwasher, $43. Bill, Ext. 2378 or 758-3284.

CHAIRS - 2, Pennsylvania House & Queen Anne, good cond., autumn colors, brocade upholstery, asking $145/set. Cathy, Ext. 2063.

DEHUMIDIFIER - Westinghouse, 12-pint, $25. Mel, Ext. 2285.

DESK - mahogany, executive, high-back swivel chair, blue, excel. cond., $400. Herman, 744-3443.

COUCH - Country Set, 2 chairs, coffee table, end table, lamp & wall unit to match, $350/all. 698-5762 after 6 p.m.

HOPE CHEST - Lane, $75; china cabinet, $125. Walter, Ext. 4958 or 821-9451.

ENTERTAINMENT CENTER - $30; dining room table & chairs, $10. Youwen, Ext. 7735.

FURNITURE - Adirondak, from full scale plans, kits or fully assembled, P.O. Box 632, Mastic, NY 11950 or Brandt, Ext. 3580.

Tools, House & Garden

GENERATOR - Kohler, 1,500, new Kawasaki engine, $400. Bart, Ext. 4446 or 924-6761.

WORKBENCH - 30"w x 8'l, 2" solid top, 2" pipe legs; 20' extension ladder. Peter, 475-0831.

LAWN MOWER - electric, 3 yrs. old, $50; prof. battery charger, on wheels, $60. Jim, 724-7758.

DOORS - 2, sliding glass, 30"x80"; glass panels w/alum. frames, 16", 18", 22" & 33"w, 3' & 4'l, good for greenhouse, $30/all. Victor, Ext. 2395.

BRICKS - used, large amount. 325-0447.

WINDOWS - single, 24"x34"; double, 32"x68", w/storms, $25. 286-0795.

COAL STOVE - Rosieres, small, brown enamel, $50. Ext. 5080.

LAWN TRACTOR - Wheelhorse, 36" deck, Kohler 10 h.p. eng., industrial type w/dozer blade, 5' snow plow, $1,500. Dan, Ext. 2012 or 698-7322.

LAWN TRACTOR - Sears LT/8, 36" cut, dual blade, headlights, 3-spd. manual, runs very well, $450. Ed, Ext. 7649.

HEATERS - Berko, electric, portable, convection, 1,000W; Sears, radiant, 1,500W, $15/ea. Albert, 727-6481.

TOILET - American Standard, fawn beige, good working cond., $40. Pat, Ext. 2452.

Sports, Hobbies & Pets

GO-KART ENGINE - Briggs & Stratton, excel. cond. 689-9234.

GIRL'S BIKES - 2, both excel. cond., 20", $25; 10", $15. Bart, Ext. 4446 or 924-6761.

TENNIS RACKET - Head Comp Pro, grip 4⅜, excel. cond., $45. 473-7667.

BICYCLE - man's, Raleigh, 12-spd., 27" frame, alloy wheels & handlebar, excel. cond., $165. 929-4886 after 6 p.m.

TRICYCLE - 10", red, v.g. cond., $10. Ext. 7915 or 744-0722.

DOG CHAIN - tie out/runner, 20' & 15', new; dog collar, 20", new. Ext. 2950.

NINTENDO SET - w/Gauntles, Super Mario 1, Contra & Duck Hunt, like new, $125. Gary, Ext. 3580.

WETSUIT - woman's, size M/L, excel. cond. Ext. 4923.

Audio, Video & Computer

GRUNDIG RADIO - am/fm, stereo, rec. player, cabinet, 57"L x 32"H x 15½"D, $25; queen size bed, $25; maple desk, 42" x 20", $15. 878-6637.

VCR - Sharp, remote control, $150; Panasonic stereo rack system, $150; Toshiba 20" color TV, $200. 399-4399.

COMPUTER - Commodore-128, 1571 disk drive, 4120 Thomson color monitor, almost new, $500. Jag, Ext. 5080 or 751-1884.

STEREO RACK SYSTEM - Soundesign, dual cass. w/high-speed recording, turntable, tuner, graphic equalizer, $79. Kan, Ext. 3731 or 331-7299.

VIDEO RECORDER - Sony, reel-to-reel, ½" tape, 7" reels, $20; GE antique console radio, $20. Victor, Ext. 2395.

TV - GE, color, 13", remote control, auto program, 2 mos. old, warranty still valid, orig. $250, asking $200. Koon, Ext. 2963 or 3020 after 6 p.m.

TURNTABLE - Gerard, excel. cond., $40; antique movie projector, runs well, $75; antique records. 924-8558 after 5 p.m.

TV - RCA, color, 15", excel. cond., $150. Bernard, 345-3579.

COPIER - Canon PC115, enlarge & reduce, extra toner, $650 or best offer. 399-3430.

TERMINAL - Hazeltine VT132 STD, Okidata 82A dot matrix printer, excel. cond., all offers considered. Dick, Ext. 3752.

MONITOR - Apple II, monochrome, like new, $25. Mel, Ext. 2285.

Miscellaneous

SNEAKERS - new, size 6, $12; woman's shoes, $5; new jackets, $6; cassettes, almost new, all kinds of artists, $2. Warren, Ext. 4939.

STROLLER - Cosmos, w/carriage feature, good cond., $30. Ext. 4985 or 331-8459.

WOMAN'S DRESS - brand-new, taffeta & chiffon, size 7-8-10, $20 neg. Carmen, 924-0960.

PAPERBACK BOOKS - 280, good cond., $25/all; Thermo Jet whirlpool foot bath, $8. 878-6637.

T-SHIRTS - Team Schrödinger Cat in a Box, custom-made, small, medium, large, X-large, $10, XX-large, $12. Roger, Ext. 2732.

BOTTLES - old, 6¼ and 6½ ounce, Coca Cola. O. Booker, Ext. 3082 or 727-5912.

CONCERT TICKETS - 2, Frank Sinatra & Don Rickels, Jones Beach, Aug. 26, 8 p.m., $25/each. Bill, Ext. 7230.

Free

SHRUBS - large, good for landscaping purposes, you dig up. Doreen, Ext. 2456.

PACHYSANDRA - dig your own, appointment only. Pat, 722-4706 after 6 p.m.

DOOR - 3' x 6'8" entry door, pick up only. Mel, Ext. 2285.

KITTENS - one male, orange & white, one female, black & white, very cute and fluffy. Brenda, 924-3004, leave message.

FIREWOOD - from piled-up oak trees. Ext. 3152.

CATS - orange tigers, 1 year old, neutered males, gentle, love people. Tim, Ext. 3436 or 727-7741.

Car Pools

CENTER MORICHES - ride needed to BNL, will share expenses. Bob, Ext. 3932.

PLAINVIEW - Exit 43 LIE, need fourth driver. Elliott, Ext. 2495.

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

BROOKHAVEN HAMLET - top floor apt., l/r, bdrm., eik, full bath, priv. ent., next to wildlife preserve, walk to water. Dorry or Linc, 286-8689.

BELLPORT VILLAGE - 1-bdrm. upstairs apt., kit.-l/r combo, full bath, w/w, walk to village, beach, single, nonsmoker, no pets, $575/mo. + 1 mo. sec. Jim, 758-0393 after 6 p.m.

CALVERTON - 2-bdrm. townhouse, 1½ baths, w/w, appl., patio, deck, $650/mo. Ext. 3563 or 878-0874 after 5 p.m.

EAST SETAUKET - room to rent in house, l/r, kitchen, d/r, avail., Aug. 15, $300/mo. + util., 25 min. to Lab. Darryl, Ext. 4561 or 928-3416.

GORDON HEIGHTS - 1-bdrm. apt., furn., priv. ent., extras, no children or pets, $550/mo. includes all. Renee, Ext. 3316 or 698-1362.

MORICHES - 1-bdrm. apt., Pine Hills South Country Club, 5 appl., patio, clubhouse w/sauna & swimming pool, 10 min. from Lab., $700/mo. includes heat., avail. Oct. 1. Les Ext. 3403.

N. SHIRLEY - furn. apt., bdrm. & l/r combo, eik, w/w, skylight, priv. ent., nonsmoker, no pets, $490/mo. util. incl., sec. 281-8044.

PORT JEFFERSON - 3 bdrm., l/r, bathroom, walk to village, no pets, nonsmoker, $950/mo. + util. Ext. 3705 or 689-1877.

PORT JEFF VILLAGE - 1-bdrm. apt., upstairs, kitchen, full bath, avail. Sept. 1, $600/mo. Extr. 4847 or 473-3987.

PORT JEFF VILLAGE - 3-bdrm. apt., 2 baths, kitchen, l/r, den w/fireplace, gar., use of country club, golf, tennis, priv. beach, $1,200/mo. incl. util., avail. Sept. 1. Tallon, 473-3987 or 282-4847.

PORT JEFF VILLAGE - 2-bdrm. ranch, bsmt., 1½ car gar., all appl., gas heat, walk to harbor, avail. Sept. 1., $950/mo. + util. Ext. 4094 or 751-6575 eves.

RIDGE - furn. studio apt., carpeted, kitchen, bath, fenced-in yard, 5 min. from Lab., nonsmoker, $500/mo. 744-8632.

SOUND BEACH - 2-bdrm. house, Miller Place schools, wooded lot, cathedral ceilings, great room, d/r, kit., recently remodeled, $825/mo. + util. & deposit. Erik, 929-6945 or Ext. 4603.

STONY BROOK - 3-bdrm. Colonial, 2½ baths, l/r, d/r, eik, ⅓ wooded acre, new appl., 5 min. to SUNY, immed. occup. 751-8351.

WADING RIVER - 3-room apt., eik, full bath, one person, no pets, nonsmoker, $500/mo. incl. all, avail. Sept. 8. Janet, Ext. 2345 or 929-3910.

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, 2 baths, tennis, golf, pool, beach, Aug. & Sept., $425/wk, Oct & Nov. $300/wk. 689-5378.

For Sale

BABYLON VILLAGE - 2-bdrm. ranch, waterfront, fd/r, 60x100 bulkhead w/boat slip, gas heat and hot water, city water & sewer, low taxes, $199,500. Bill, Ext. 7136, 661-9155 after 6 p.m.

CALVERTON - 2-bdrm. townhouse, 1½ baths, 5 new appl., Andersen windows, w/w carpet, 2 decks, fenced, assum. mortgage, $87,000. Steve, 369-9884.

CENTEREACH - 4-bdrm. hi-ranch, l/r, d/r, eik, 2 full baths, fam. rm. w/fp, deck, pool, fenced yard, $139,000. 698-8514.

CORAM - Tanglewood Hills, 4-bdrm. ranch, 2 baths, 2-car gar., huge attic, gas heat, fenced, sewers, new carpet & paint, $130,000. 928-7154 after 7 p.m.

EAST MARION - beautiful 1 acre building lot, adjacent to Greenbelt. 325-0447.

FLANDERS - 1-bdrm. cottage, completely remodeled, vinyl siding, cac, cedar bath, all appl., LP heat, $79,000. Henry, Ext. 7828.

MIDDLE ISLAND - Coventry Manor, 3-bdrm. townhouse, 2 baths, kit., l/r, d/r, laundry rm., cac, 5 appl., patio, pool, tennis, carpet, ask. $102,000. Rosalie, Ext. 3160 or 289-5704 after 5 p.m.

N. SHIRLEY - 3-4 bdrm., l/r,, d/r, 2 baths, ½ bsmt., new appl., laundry rm., 2 decks, pool w/deck, ½ acre, near LIE, Lab, Longwood School, $134,000. Kathey, 345-3778.

RIDGE - 3-bdrm. townhouse, 1½ baths, cac, w/w, all appl., upstairs newly carpeted, encl. redwood patio, storage rm., low monthly maint., 5 min. to Lab, red. to $93,000. Mary, 924-4328.

SETAUKET - N. of 25A, custom house, 4-5 bdrm., 2-car gar., deeded beach rights, 473-4666.

SHOREHAM - 3-bdrm. Colonial, 1½ baths, l/r, d/r, eik, den, fin., bsmt. w/sep. work room, gar., low taxes, 7 miles to Lab. $169,000. 821-9513.

PLAM BAY, FL - 2-bdrm. condo, near Melbourne, 2 full baths, l/r, d/r, kit., w/d, priv. screened patio, furnished, heated pool, near beach, malls, $65,000. 698-8514 after 5 p.m.

TAMPA, FL - Paradise Village Mobile Home Park, 1982 Liberty Mobile Home, 14'x56', 2-bdrms., 1 bath, fam. park, all appl., cac, awning, shed, excel. cond., Glenn, 477-8699 after 6 p.m.

HUBBARDTON, VT - 38 deeded acres on town-maintained road w/power, phone, view of Lake Bonnoseen, ask. $39,000, neg. Tom,, Ext. 2823.

Wanted

14' ALUMINUM BOAT - 324-8150 eves.

TUBED AUDIO COMPONENTS - working or not, by Macintosh, Marantz. Jim, Ext. 4584.

O+ BLOOD/PLATELETS DONORS - for 5-yr.-old Alisha, leukemia victim, daughter of M. Sussman, S&EP, ongoing need. Ext. 4212.

COMMUNICATIONS RECEIVER - Collins, Hallicrafter, Hammarlund, sensitive. Ralph, Ext. 2180.

CHILD'S PLAY TOYS - outdoor. 475-1254.

VIOLIN - ½ size, in good cond. 821-1637.

HOUSEMATE - room in 4-bdrm. house in Ridge, 5 min. from Lab., $290/mo. + ¼ util., avail. Sept. Mike, Ext. 2671 or 924-2865.

ANIMAL LOVERS - to provide home for husband and wife cats, female calico, male black and white, both neutered. Cathy, Ext. 2063.

ROOMMATE - to share 2-bdrm. house in Poquott Village, Pt. Jeff. area, charming surroundings, near water, $400/mo. + ½ util. Lorraine, 928-7015.

LAWN MOWERS - old, complete gas-engine type only. Dan, Ext. 2012/698-7322.

CAR - old, large, for enduro race, motor, tranny and brakes must work, body can be trashed, free or cheap. Mike, Ext. 7861.

WITNESSES - to motorcycle/auto accident at Main Gate about 1:15 p.m., Fri., Aug. 3, any info helpful. Ext. 3172.

On-Site Services

FRIENDLY BROOKHAVEN SERVICE STATION - weekly special: lube oil & filter, check belts & hoses, $18.95. Ext. 4034.

In Appreciation

The family of Francis T. Green wishes to send our sincere appreciation to all of our wonderful friends at BNL. — Frances & Cathy Green

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