BROOKHAVEN BULLETIN
Vol. 42 - No. 14 April 8, 1988
BROOKHAVEN NATIONAL LABORATORY

Peter Horton

Conferring during the Workshop on the RHIC Performance are: (from right) Workshop organizer Alessandro Ruggiero, head of the Accelerator Physics Division in the Accelerator Development Department; Thomas Ludlam, Physics Department, spokesman for the RHIC Task Force; and accelerator scientist Daniel Boussard of CERN, who was an important contributor to the suggestions made regarding the performance of BNL's proposed Relativistic Heavy Ion Collider (RHIC).

Workshop Yields Suggestions For Optimizing RHIC Performance

The conceptual design for BNL's proposed Relativistic Heavy Ion Collider (RHIC) was finalized some time ago. That design would allow gold heavy ions to collide at six points in the RHIC ring, yielding an average luminosity of $5 \times 10^{26} cm^{-2} s^{-1}$ at 100 billion electron volts per nucleon.

As impressive as that performance would be to the nuclear and high energy physicists who are pooling their resources to work on RHIC, higher performance is always desirable. That is why the "Workshop on the RHIC Performance" was held at BNL, March 21-26, to address the question: "Is there any physical limitation built into the RHIC design that would prevent the upgrading of the accelerator's performance at some future date?"

In considering this question, "We did not stress superconducting magnets or basic design configuration because we have confidence in them," said Workshop organizer Alessandro Ruggiero, head of the Accelerator Physics Division in the Accelerator Development Department (ADD). "We concentrated on the ultimate performance of this project."

"This is the time to look at possible improvements to performance," added ADD Chairman Eric Forsyth, "before we commit ourselves to a firm design. Some of the non-cryogenic components can still be refined at this stage of the game."

Increasing luminosity and decreasing the size of the region where the heavy ions interact were the two primary areas of performance discussed by some 40 physicists participating in the Workshop. Attendees included about 20 staffers from ADD and the Alternating Gradient Synchrotron Department, plus another 20 drawn from CERN, INFN Naples, the Continuous Electron Beam Accelerator Facility, Lawrence Berkeley Laboratory, Fermi National Accelerator Laboratory (Fermilab), and Argonne, Los Alamos and Oak Ridge National Laboratories.

Several suggestions resulted from the Workshop, and BNL Director Nicholas Samios commented, "It was a pleasure to hear the sum-up on Saturday on these imaginative ideas, and I was especially impressed by the productivity of the participants."

The group's consensus, Ruggiero said, was that these performance upgrades are attainable, if three suggestions — mostly inferred from recent experience on colliding beam performance at the SPS Collider at CERN — are followed:

- To reach RHIC's optimum overall performance, decrease the angle at which the two beams of heavy ions collide.

- To increase luminosity by a factor of 20 in two to four of the six interaction areas, avoid beam collision in the other areas to reduce the perturbation from beam-beam interaction affecting the luminosity. This could increase the luminosity for gold-gold collisions to $1 \times 10^{28} cm^{-2} s^{-1}$, and for proton-proton collisions, from 1×10^{31} to $2 \times 10^{32} cm^{-2} s^{-1}$.

- To reduce the length of the interaction region, increase the radio frequency (rf) used to accelerate bunches of heavy ions. Raising rf from 25 megahertz (MHz) to 200 MHz, for example, would produce shorter bunches and, thus, a smaller interaction region.

Ruggiero explained that none of these suggestions is beyond the scope of RHIC's conceptual design. They will be considered globally in any future plans for upgrades of RHIC performance, though some might have to be implemented at this time.

Also investigated was the possibility of stochastic cooling of the bunched RHIC beams, a technique for keeping the beam size down to a useful, small dimension.

Relying on the experience in the field at Fermilab and CERN, the Workshop concluded that cooling is feasible and could be clearly of benefit to the RHIC project. While RHIC would not rely on the cooling technique initially, Ruggierio explained, "It could certainly play a crucial role in a subsequent stage, and we at BNL should learn about it."

Left Over From Camp Upton, Land Mine Detonated Safely

A land mine, apparently a World War II artifact from the site's days as the U.S. Army's Camp Upton, was safely detonated by the Emergency Services Section (ESS) of the Suffolk County Police Department, in a controlled explosion at about 4:45 p.m. on Tuesday, April 5. The mine was discovered by employee Michael Tesla, Plant Engineering, during a lunchtime walk in the woods.

Though no one knows why a live device would have been left on the site after the Army closed the training camp in 1945, ESS Sergeant Bruce Payton said that the detonation gave "every indication that it was a live antipersonnel mine."

Roy McWilliams, the Safety & Environmental Protection Division's representative on the Lab's Firearms Committee, advises that anyone coming across recognizable military munitions or other unidentifiable objects should immediately contact Lab Security on Ext. 2238. "Don't worry about false alarms," he said. "We want employees to be safe — not sorry."

Payton, who also serves as a Consultant to BNL's Safeguards and Security Division, agreed. "Absolutely do not touch any device or disturb it in any way," he warned. "If it's a live device, the longer it lies around, exposed to the elements for many years, the more unstable it becomes."

Also in agreement was Michael Tesla, who found the land mine just east of the boiler room near Bldg. 208, where he works as a Heating & Maintenance Engineer. As Tesla recalled the incident, "My partner Kenneth Andersen and I usually look for old bottles, things like that. As we were returning, I happened to notice this round thing. I thought it was a hydraulic jack for the car."

Tesla picked up the partially buried, 10-inch tall object and brought it to Anderson. As they examined it, they noticed the imprint: "Mine Antipersonnel M2A1." Tesla put the mine down gently, then immediately went to call Security.

In retrospect, Tesla recognizes that picking up the device was potentially very dangerous, and he advises others who might find themselves in a similar position, "Don't even touch it. It pays to be cautious. It's the best thing."

Peter Horton

The land mine discovered by Michael Tesla.

Axe Named to New HFBR Position

John Axe, a Senior Physicist in the Physics Department, has been appointed to the newly created position of Scientific Program Head for the High Flux Beam Reactor (HFBR), effective April 1.

Mort Rosen

John Axe

In this position, for which Axe reports to BNL Deputy Director Martin Blume, Axe is responsible for the organization and promotion of the research efforts at the HFBR, including work by Participating Research Teams and by general users. In addition, he will be in charge of the development and installation of new experimental equipment at the Reactor.

In announcing the appointment, Blume noted, "Neutron scattering and other research efforts using neutron beams have long been a great strength at BNL in such diverse areas as chemistry, materials science, biology and nuclear physics. Brookhaven scientists — Dr. Axe among them — and outside users have made many important discoveries at the HFBR, and we expect that the new responsibilities given Dr. Axe will strengthen and broaden this program."

Most recently, Axe has been collaborating on HFBR experiments examining the behavior and structure of some of the new high temperature superconductors. Such research may help explain the mechanism of high temperature superconductivity, a step that will help put these new materials to use yielding lower cost, resistance-free electricity.

In 1973, their joint work on phase transformations and lattice dynamics, primarily as studied by inelastic scattering of neutrons at the HFBR, earned Axe and Senior Physicist Gen Shirane, Physics, the Bertram Eugene Warren Diffraction Physics Award of the American Crystallographic Association.

Axe, who is a Fellow of the American Physical Society and a member of the Society of Scholars of The Johns Hopkins University, has been at BNL since 1969.

A Committee for Art's Sake

"Art and science cannot exist but in minutely organized particulars," wrote William Blake in 1818, and most artists and scientists of any century would agree.

So too, from another viewpoint, would the members of the BERA Art Committee, who are responsible for the "minutely organized particulars" of the many and varied art shows enjoyed at BNL.

"Many shows are arranged using talent from within BNL," said Clare Sheppard, Art Committee Chair since 1987. "We hold shows annually, for pictures, crafts and photographs. The standard is high, and we get good attendance. People like to see what their friends' hobbies can produce."

This fall, Sheppard said, a show is planned that will be even more original than usual — the first of its kind. Scheduled for October 24-26, it will be an exibition of scientific data —with aesthetic appeal. So, besides being authentic "science," each piece of data will be a stimulating design in its own right.

"For example," explained Walter Mangel, who joined the Art Committee last year, "the abruptness and different types of power depicted in bubble chamber photographs — an interesting mosaic pattern of kernels in a mutant ear of corn — the flow of symbols in a page of a mathematical proof— the patterns of copper wire on a magnet — interesting points of view in engineering drawings. Any of these is potentially of value as a design."

"We hope that everyone will start thinking now of possible exhibits for this 'Data' show," said Sheppard. "Perhaps some entries could be on exhibit in their own departments afterwards. That would be in line with the Art Committee's general aim of promoting the display of art at BNL."

Another type of show that has been successful from the Art Committee's inception in 1957 brings outside talent to the Lab. These shows are organized in collaboration with different art galleries. After initial arrangements are settled by the Art Committee Chair, the Committee visits the gallery and, in consultation with the gallery director, chooses the exhibits.

The next such show, from the Pindar Gallery in Soho, is scheduled for August 1 - 5. "We thought we'd bring some of New York out here for the summer visitors," said Sheppard. "The Pindar is at the center of the newest and most interesting modern art in New York. We're expecting a very exciting exhibition."

In looking at the future plans of the Art Committee, it is also interesting to glance back at some of its 29-year history. Garman Harbottle, who became a member during the early 1970's, remembers some great shows, such as the one in April 1973. At that time, BNL staff loaned items from their private collections: Works by Picasso, Braque and Whistler, and from ancient Egypt, T'ang China, Persia and 18th century Greece were all on display at the Lab.

Then in August 1975, the work of five well-known Long Island artists — Robert Dash, Betty Parsons, Irma Selz, Sid Solomon and Faith Stern — was exhibited here in a collaborative show with the Benson Gallery.

"Some of the artists were able to come to the opening," recalled Harbottle. "It was quite an occasion. Even at that time, many of the pictures would have sold for about $5,000. Now, they would be considerably more."

Works of art from gallery shows at BNL are usually for sale, but this is handled entirely by the gallery and the prospective buyer.

"The Art Committee takes no commission on sales," said Harbottle. "We go and get the exhibits, arrange them, hang them — and after the show, get them back. I think it's well worth doing. It gives people here a chance to be in touch with circles other than scientific." — Liz Seubert

Mort Rosen

Posed in a play of light and shadow reminiscent of a Rembrandt painting are members of the BERA Art Committee (from left): Elaine Lowenstein, Robert Chrien, Walter Mangel, Garman Harbottle, Clare Sheppard. Not pictured are Vivian Aronson, Susan Chrien, Neva Delihas and Vera Ramakrishnan.

See Trees Grow in Brooklyn — And an Art Museum

Another Art Committee activity will take BNL'ers to art, rather than bring art to BNL. A bus trip to the Brooklyn Museum and the nearby Botanical Gardens will be held on Saturday, May 7.

The Botanical Gardens are famed for cherry blossoms, a Japanese Hill-and-Pond Garden, and a Shakespearean Garden.

The Brooklyn Museum has a wide variety of art from all over the world on permanent exhibition, and some special exhibits, which include the contemporary work of 40 Israeli artists, progressive taste in decorative arts, a Gordon Matta-Clark retrospective and a Donald Sultan survey.

The bus will cost $15, museum entry is $4 and there is a voluntary contribution to the Botanical Gardens. The bus will leave from the parking lot opposite Berkner Hall at 9 a.m., and leave Brooklyn by 3:30 p.m. Further information and tickets are available from Clare Sheppard, Ext. 3946, or Sue Chrien, 286-0037.

Runners' Corner

At the Dix Hills Four-Mile Road Race on March 26, Terry Sullivan led the BNL Roadrunners and every other runner across the finish line for the fourth successive year. Despite wet and windy conditions, Sullivan went from start to finish in 19:40.

The Roadrunners placed second in the race's corporate division, with help from Sullivan and as a result of a 22:51 by Russ Tonkyn and age-group wins by Mel Cowgill, in 23:28; Don MacKenzie, 25:24; and Sharon Zuhoski, 26:12.

The Roadrunners will enter teams in two upcoming races: the Lerner Cup 10-Kilometer Race in Plainview on April 9 and the New Jersey Waterfront 10-Kilometer on April 24. To join in these events or for information on other running matters, contact Skip Medeiros, Ext. 2665, or Gus Prince, Ext. 5079.

Bowling

Red/Green League
High games were bowled by J. Petro 218, L. Schairer 213, R. Jones 212, E. Sperry IV 212, R. Mulderig 209, M. Guacci 204, J. Ferrante 202, K. Riker 201.

White League
Ted Erickson rolled a 210, Clem Auguste 209, Jim Griffin 202, Tom Holmquist 201, Maria Apelskog 198, Kathy Griffin 190, Denise Monteleone 181.

L.I. Industrial Tournament
The BNL Bowling Team finished in seventh place out of a 16-team field. R. Mulderig had games of 233/217 for a 617 scratch series, E. Sperry IV 203, E. Meier 201.

Golf

The BERA Golf Association will meet on Friday, April 8, at 5:15 p.m., in the lounge of the Recreation Building.

Basketball

Scores as of March 31

First Game

Knicks 60		Hollywood 53	
W. Cummings	16	E. Meier	19
M. Lawrence	16	D. Nordstrum	12
Q. Harrison	14	G. Mack	9
L. Walcott	5	J. Ripka	5
T. McGill	4	B. Gunther	4
T. Mendez	3	L. James	4
G. Thompson	2		

Three-point shots: Cummings, Meier (2), Mendez

Second Game

Runaways 64		Longshots 51	
P. Johnson	16	B. Rowley	11
T. James	12	F. Thompson	10
J. Desmond	11	F. Malone	9
S. Gilbert	11	J. Garrison	8
R. Moran	8	T. Mayo	8
B. Doty	6	J. Wells	3
		S. Springston	2

Three-point shots: Desmond, Garrison, Mayo, Rowley, Wells

Third Game

Penetrators 67		Celtics 48	
J. Cyr	22	P. Browne	15
R. Tonkyn	18	P. Ratzke	11
T. Comstock	11	M. Fulkerson	8
T. Abbott	8	J. Gaeta	8
R. Domenech	4	C. Edwards	2
G. Smith	4	N. Schaknowski	2
		A. Ratti	2

Three-point shots: Gaeta

Nursery School

The Upton Nursery School is now accepting enrollment of three- and four-year-old children for the 1988-89 school year. The school, a cooperative preschool held on site in the Recreation Building, is open to families of BNL employees and their relatives.

For more information, call Marypat Takacs, 727-3218, or Marietta Veligdan, 878-6098.

BROOKHAVEN BULLETIN

Published weekly
by the Public Affairs Office
for the employees of
BROOKHAVEN NATIONAL LABORATORY

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Garden Plots

Garden plots, located in the apartment area, will be available next week for on-site residents who wish to grow their own flowers and vegetables. Gardening equipment also is available. To secure a plot, please call Sharon Hall, Ext. 3032.

Cooking Exchange

The International Cooking Exchange will hold a sampling and demonstration of regional Italian cooking on Wednesday, April 13, from 12:30 to 2:30 p.m., in the Recreation Building in the apartment area. Such dishes as pasta with squid sauce, roast fish with olives, zucchini pie and a ricotta cake with nuts will be prepared.

Admission, at $2 per person, is open to all members of the Laboratory and their families. Babysitting will be provided for 50¢ per child. For further information, please call Tina Sferlazzo, Ext. 3107.

Note to Diners

The Cafeteria will be closed on Saturday, April 9. On that day, snack bar service will be available from 9 a.m. to 2 p.m. at the Brookhaven Center.

Leap Into Spring!

If you don't know how to do-si-do, don't be a wallflower: Learn how to square dance and contradance at the "Leap Into Spring" benefit dance, sponsored by Brookhaven Women in Science. As instructions will be called out as you dance, no prior experience is necessary.

To benefit the Renate W. Chasman Scholarship Fund, the dance will be held on Saturday, April 16, at 8 p.m., at the Brookhaven Center. Admission is $5 per person, and tickets may be purchased in advance from:

	Bldg.	Ext.
Robin Appel	510C	2420
Eva Emmerich	911A	2197
Susan Eng	515	7988

As well, tickets may be purchased on your way to the Cafeteria, on Thursday and Friday, April 14 and 15, from 11:30 a.m. to 1 p.m.

Clearing the Air About the Lab's Policy on Smoking

In 1985, the Laboratory issued a policy on smoking, which states that:

1. Smoking is prohibited in conference rooms, seminar rooms and auditoriums.
2. Employees working in private offices may designate their work spaces as no-smoking areas, and visitors to these offices are obliged to honor this designation.
3. Employees who share a work location in which smoking is a problem should first try to solve the problem among themselves and, if necessary, with their supervisors' help. If a smoking problem cannot be resolved within a department or division, employees and supervisors can call on Susan Foster, Employee Relations Counselor in the Personnel Division, for help.
4. For safety reasons, the Laboratory prohibits smoking in certain work areas.

To identify no-smoking and smoking areas, three wall signs and two tabletop placards are now available as stock items from the Supply & Materiel Division. An order form with the descriptions and stock numbers of these items will be mailed to all department and division managers, supervisors and administrative offices.

To further discourage smokers from lighting up, it is suggested that ashtrays be removed from designated no-smoking areas.

BNL does have one smoke-free building: By designation of its thirteen occupants, Bldg. 51 is a no-smoking work environment. As the sign over the front door states, no one in this building smokes, and the message is that visitors to the building are not invited to smoke.

Because its air is changed over eight times an hour, thus virtually eliminating smoke from the area, the Cafeteria in Berkner Hall has not been designated a no-smoking area. The rate of air exchange in the Cafeteria meets the American Society of Heating, Refrigeration and Air Conditioning Engineers standard for cafeterias and is achieved by the use of modern air-handling equipment.

For pamphlets and other information about the health effects of secondhand smoke, contact Health Promotion Specialist Elaine Friedman, Bldg. 490, Ext. 2699, Tuesdays and Thursdays.

"If cigarette smoking in your office — or lunchroom, lounge or hallway — is a problem, don't just sit there and suffer," advises Susan Foster. From resolving about a dozen smoking problems over the past two years, Foster reports that, in the majority of situations, there is a satisfactory solution for nonsmokers and smokers alike.

"Most smokers are considerate of the desire of nonsmokers to work in a smoke-free environment," Foster states, "but, first, they must be politely made aware that their smoking is a problem."

Two of the wall signs now available from stock.

NO SMOKING

NO SMOKING

Solutions that Foster has worked out include the use of desktop and room-size cigarette smoke filter units in work areas, the restriction of smoking to certain times in lunchrooms and lounges, and promises by smokers not to light up around certain of their nonsmoking coworkers.

Employees and their supervisors who wish to discuss a smoking vs. no-smoking conflict with Foster can reach her on Ext. 2888.

Seventh Graders Grade Visit to BNL

"I was not bord one bit."

"It was really neat to see the glass melt like that and then dry up in a second."

"It was great fun and very educaational."

"The lunch was great. And so was the attractions."

Some thank-you letters are dull reading. Others are anything but — such as the letters sent to Donald Metz by one of the groups of seventh and eighth graders who have spent a Saturday at the Lab. The visits are part of a program funded by Associated Universities, Inc., that has been running at BNL for two years.

"Our aim," said Metz, Head of the Office of Educational Programs, "is to make sure the kids who come to BNL realize that science is both interesting and fun. The spontaneous enthusiasm of these letters, which were not corrected in any way by the school, indicates that we're on the right path."

Metz explained that these grades were picked because, at this stage, students are usually eager to absorb new impressions. The opportunity to visit the Lab widens their experience and can give them ideas for future careers.

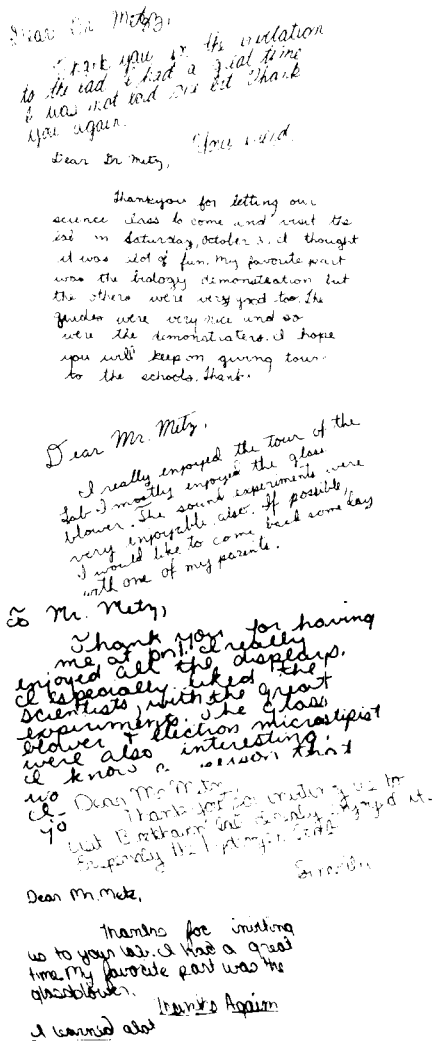
The day at the Lab starts early, in a bus sent by BNL to the school to pick up about 30 students and two teachers. First, three tour guides take the visitors to see the site, including the Exhibit Center and a special display of glassblowing by Irvin Meyer, who retired from the Chemistry Department in May 1984 and is now a BNL Consultant.

Then, either Enrique Abola or Robert Beuhler from the Chemistry Department may demonstrate some intriguing aspects of chemistry. Or, from the Biology Department, Myron Ledbetter or Jack Van't Hof may give a brief introduction to elementary microscopy. The students are always interested. One letter comments: "I also liked when we got to see blood cells on microscopy TV. I never knew that inside of my tongue I had all those cells."

Lunch at the cafeteria comes next, followed by a presentation of physics and biology experiments and a special effects science show in the afternoon.

"The show packs in as much razzle-dazzle excitement as possible," said Metz. "For example, to illustrate an uncontrolled chemical process, we get an empty Pringle's potato-chip can, punctured top and bottom. We fill it with hydrogen, and light it at the top. As the hydrogen slowly burns, oxygen is drawn in at the bottom, and when the mix of gases gets to a certain point — it explodes. The kids love it. One of the letters picks this so-called 'hydrogen bomb' as the high point of the day."

Presenting the science show is a team of high school teachers, working in four pairs. Afterwards, the students are given some souvenirs from the Science Store, which, again judging



from the letters, are much appreciated. Then the bus returns them to their school.

Said Metz, "Science teachers find that when the students return to class, they're eager to learn more about the demonstrations they saw at the Lab, and want to use some of them in the classroom later."

Every year, from 16 to 20 classes of seventh and eighth graders come to the Lab for their first taste of "big science." As noted in yet another letter sent to Metz: "The only thing bad about it was that it ended."

— Liz Seubert

To Your Health
Radon on Long Island

It is a colorless and chemically unreactive gas, the densest known. It is also highly radioactive and occurs naturally within minerals. However, it naturally diffuses out of rocks and soil, into whatever is situated above, be that the atmosphere, surface water — or a home. As it has been found in houses in concentrations that are dangerous, homeowners have come to fear it.

It is radon, and "Radon on Long Island" will be the topic discussed at the next Health Promotion seminar, on Thursday, April 14, at noon, in Berkner Hall, Room B. All BNLers are invited to attend.

The speakers will be Norman Rohrig, Supervisor of the Health Physics Group of the Safety & Environmental Protection (S&EP) Division, and Robert Miltenberger, Supervisor of S&EP's Environmental Monitoring Group.

They will present a video tape on radon in houses — how it is detected and monitored, and what homeowners have had to do to about the problem. They will also review U.S. Environmental Protection Agency standards and solutions regarding radon and discuss the ongoing monitoring programs undertaken by the Departments of Health in New York and New Jersey.

In Memoriam

It has been learned that **Charles K. Pospisil,** who retired from the Laboratory in 1969, died on March 16. He was 82 years old.

Pospisil joined BNL in April 1951, as a Technician in the Metallurgy Division of the Reactor Science and Engineering Department. In 1952, his work transferred to the Nuclear Engineering Department. In 1969, he became a Technical Specialist in the Metallurgy Lab of the Department of Applied Science.

Charles Pospisil is survived by his wife Kathryn, of Bayonet Point, Florida.

•

Joseph P. DeRosa, a Custodian in the Plant Engineering Division, died on April 1, at the age of 34. He had been at BNL for nine years, since March 13, 1979.

He was a resident of Manorville and is survived by his wife Alice and three children: Jessica, Jeanette and John.

Equipment Demo

Combine a laser-disk video with a touch-screen computer and you have the makings of Interactive Video Instruction (IVI) — a cost-effective training system.

A demonstration of how IVI can be used to introduce new computer software will be offered by representatives of Applied Learning International, Inc. (ALI), on Tuesday, April 12, in the Applied Math Seminar Room, Bldg. 515. From the many courses offered by ALI, the following four will be demonstrated:

9:00 a.m. - VM/SP Concepts and Facilities
10:30 a.m. - DB2/SQL: Selecting, Retrieving and Updating Data
1:00 p.m. - Lotus 1-2-3
2:30 p.m. - dBASE III PLUS

The two morning courses will be geared to mainframe users, while PC users will be most interested in the afternoon sessions.

These sessions are open to all interested persons. For more information, call Ron Wittlock, Ext. 4112.

AA Meetings

Alcoholics Anonymous (AA) meetings are being held at the Lab every Tuesday at 5:30 p.m. All employees, others with current BNL identification cards and their spouses are invited to participate. To find out the location of the meetings, call the Employee Assistance Program, Ext. 2733. As participation in AA is confidential, you will not be asked to identify yourself when making the inquiry.

Arrivals & Departures

Arrivals

Joseph F. Domiano ..... AGS
Steven A. Hoey ..... S&EP

Departures

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

James Amandola ..... Sup. & Mat.
John S. Bookless ..... DAS
Ida M. Curry ..... Accel. Dev.
Miriam W. Kroon ..... DAS
Otto R. Medeck Jr. ..... S&EP
Michele F. Montecalvo Jr. ..... S&SD
Francis S. Ogilvie ..... Physics

Stony Brook Event

Hair, the smash hit musical of the 60's, opened yesterday at the Fanny Brice Theatre at the State University of New York at Stony Brook. The show will run at 8 p.m. through April 23, with 2 p.m. matinees on April 10, 17 and 24. The theatre is located in the Cafeteria Building of Stony Brook's Eleanor Roosevelt Quad. For tickets and information, call 632-6819.

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

Cafeteria Menu

Week of April 11

Monday, April 11

Beef noodle soup	(cup)	.75
	(bowl)	.95
Veal steak Italian-style w/1 veg.		2.95
Chicken pot pie w/1 veg.		2.85
Stuffed tomato cold plate (lite-weight)		2.25
Hot deli: Roast breast of turkey	(bread)	2.75
	(roll)	2.85
	(hero)	2.95

Tuesday, April 12

Garden vegetable soup	(cup)	.75
	(bowl)	.95
Beef short ribs Madeira w/1 veg.		2.95
Baked fish supreme w/1 veg. (lite-weight)		2.85
Hot deli: Chicken patty on a bun		2.75

Wednesday, April 13

Minestrone	(cup)	.75
	(bowl)	.95
Chicken breast supreme w/1 veg.		2.95
Italian lasagna w/meat sauce & garlic toast		2.85
Triple scoop salad plate (lite-weight)		2.25
Hot deli: Baked ham	(bread)	2.75
	(roll)	2.85
	(hero)	2.95

Thursday, April 14

Navy bean soup	(cup)	.75
	(bowl)	.95
Roast loin of pork w/gravy & 1 veg.		3.05
Beef stroganoff over noodles		2.85
Chef's salad cold plate (lite-weight)		2.25
Hot deli: Pastrami	(bread)	2.75
	(roll)	2.85
	(hero)	2.95

Friday, April 15

Manhattan clam chowder	(cup)	.75
	(bowl)	.95
Country-fried steak w/gravy & 1 veg.		2.85
Fish New Brunswick w/1 veg.		2.85
Baked fresh fish w/1 veg. (lite-weight)		2.75
Hot deli: Sloppy Joes on a bun		2.85

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.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees only.

2826. CUSTODIAN, GROUP LEADER - (temporary 5/9/88 - 10/7/88) Staff Services Division.

2827. MAIL CLERK - (temporary 5/10/88 - 8/26/88) Staff Services Division.

2828. RESIDENCE CUSTODIAN - (3 temporary openings 5/9/88 - 10/7/88. Staff Services Division.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

2829. TECHNICAL POSITION - Requires an AAS degree in mechanical technology or equivalent with extensive familiarity with and operation of mechanical test (tensile impact and constant extension rate) equipment. Must be able to be respirator qualified (half-mask) and be willing to work with radioactive materials. Requires experience in metallurgical mounting and polishing techniques. Department of Nuclear Energy.

2830. TECHNICAL POSITION - Requires an AAS degree in electronic technology or equivalent with experience in troubleshooting and building of analog and digital equipment. Work will involve troubleshooting and repair of high current power supplies and related equipment. Must be able to set up and use various test equipment and work from electronic schematics, verbal instructions and rough sketches. Computer experience helpful. Will be working a rotating shift schedule. Alternating Gradient Synchrotron Department.

Autos & Auto Supplies

82 DATSUN B210 - deluxe, 4 dr., low mileage, runs well, $2,000. 567-4792.

82 VW JETTA - 2 dr., 5 speed, sunroof, white, asking $3,800. Tony, Ext. 2023.

84 BUICK REGAL LTD - a/c, p/w, alarm, cass., equalizer, black, 57k mi., excel. in/out, $6,800. 345-3970 eves.

80 DODGE OMNI 024 - a/t, a/c, p/s, p/b, am/fm 8-track stereo, 66k mi., many new parts, engine needs work, $250. Ext. 2679 or 472-6922.

73 VW 412 - 4 dr., a/t, rebuilt engine, runs well, $250. Yang. Ext. 3663.

79 FORD BRONCO - custom V8, a/t, stereo, black, very good cond., $3,990. Ext. 3302 or 924-0651.

85 DODGE COLT E - 4 speed, hatchback, am/fm cass., a/c, tinted windows, excel. cond. Rosemarie, Ext. 3555 or 878-6431.

78 FORD WINDOW VAN - excel. work van, 6 cyl., needs work, $400. Ext. 4446 or 654-3989 after 5 p.m.

SMALL BLOCK PARTS - high performance, for Ford. Wayne, Ext. 3499.

72 YAMAHA 650 - many extras, $300; 69 Honda Dream 305, excel., $400. Kevin, 281-8031.

73 SUPER BEETLE - rebuilt carb., tune-up, custom, excel. cond., dependable, asking $700. Al, Ext. 3988.

81 LINCOLN MARK VI - Signature series, black, 2 dr., loaded, all options, moonroof, CB radio, $7,450. Fred, Ext. 3259 or 473-8622.

79 OLDS DELTA 88 - 350 eng., a/t, a/c, am/fm tape, new tires & exhaust. Ext. 7539 or 821-9834.

STEP BUMPER - for GM truck, new, $75; Goodyear tire, MS, 31-10x15, new, $50; manual for 83 Ford & 78 Camaro, $15/ea. Ext. 2462.

TIRES - Pirrelli STL radials, 195-13 on rims, for Datsun, $20/ea. 878-8177.

66 TRAVELMATE POP-UP TRAILER - sleeps 6, good cond., extras, asking $550. 472-1409.

81 CHEVETTE - new clutch, timing belt, battery & exhaust, 4 speed, 110k mi., $600. Ext. 5288 or 878-8177.

73 VOLVO 164E - a/c, 4 dr., runs well. 878-2179 after 6 p.m.

77 CHEVY CAPRICE CLASSIC - 4 dr., V8, p/s, p/b, a/c, runs well, $500. 475-2509 after 4 p.m.

79 CAPRICE - needs work, body good, a/t, p/s, p/b, a/c, am/fm cass., asking $750. Ext. 4118 or 928-5714.

81 HD SPORTSTER - low mileage, all chrome, showroom cond., $3,995. 360-0935.

77 TOYOTA CELICA GT - 87k mi., very good mech. cond., needs radiator, stereo, $1,100. Rick, Ext. 3932 or 472-9789.

81 MUSTANG - a/c, p/b, a/t, 4 cyl., $1,800. 588-7228.

83 BUICK REGAL - a/c, p/s, am/fm, beige landau top, excel. cond., $5,800 neg. Ext. 2964.

CAR SPEAKERS - 4½", coax, $10; 6"x9", triax, $40; removable radio case, $15. Willie, Ext. 3803.

84 RENAULT ENCORE - 4 dr., a/c, 53k mi., red, mint cond., $2,800; 74 Volvo, runs well, $700. Torsten, Ext. 3817 or 878-1210.

82 STANZA - 4 dr., hatchback, 5 speed, sunroof, am/fm stereo, a/c, $950. Bruce, 924-4097 after 5 p.m.

80 TOYOTA CELICA - 5 speed, sunroof, good cond. Bill, Ext. 2378.

77 OLDS - p/s, p/b, a/c, rebuilt trans., runs well. 725-4515.

81 YAMAHA 1100 - Midnight special, 12k mi., excel. cond., $2,200. Bob, Ext. 2957 or 878-4556 eves.

79 FORD PINTO WAGON - 4 speed, am/fm, 94k mi., reliable, good cond., $700 neg. Graham, Ext. 4253 or 331-4171.

77 MERC MARQUIS - luxury int., runs well, body damage, 122k mi., $200. Sam, Ext. 4023/5211 or 929-3721.

78 PLYMOUTH VOLARE - 56k mi., p/s, p/b, beige louvers, $1,800. Bob, 473-9016.

84 FORD MUSTANG - am/fm tape, p/s, p/b, a/c, sunroof, alum. wheels, excel. cond., asking $5,700. Ext. 4846 or 363-6940.

84 CHEVETTE - new tires, a/t, am/fm cass., excel. cond., $3,200. 878-0874 after 5 p.m.

TRANSMISSION - Ford F-250, 4 speed, $300; 5 h.p. industrial electric motor, $150, must sell. 744-3968.

84 TRANSAM - black, T-tops, new V8 engine, low mileage, full power, am/fm cass., louvers, mint, $8,800 neg. 277-5641.

85 FORD RANGER PICKUP - long bed, 5 speed, 6 cyl., excel. cond., $6,200. Darrin, 765-5220 after 5 p.m.

86 BUICK SOMERSET - custom blue, a/c, digital dash, excel. in/out. Ginger, Ext. 2276 or 472-6613 eves.

86 SUZUKI SCOOTER - excel. cond., $300. 821-0250.

Boats & Marine Supplies

18' WOODSON - 115 h.p. Johnson, new controls, new winch w/trailer, $2,500 neg. Jim, 369-1829.

14' BLUEJAY SAILBOAT - w/trailer, as is, best offer. Ext. 7657 or 924-2933.

18' VIKING CABIN CRUISER - 140 h.p. Evinrude, Shoreline trailer, mint cond., asking $8,900. 331-1754 after 6 p.m.

8' DINGY - fiberglass, good cond., $499. 744-7406 eves.

12' SAILBOAT - high freeboard, motor mount, 2 jibs. 744-6059.

22' SEARAY - 1974, hardtop, new canvas, swim platform, good cond., extras, $6,500. 369-2838 after 5 p.m.

14' CHECKMATE - w/trailer, gauges, controls, gas tank, new seats, carpet, good cond., $600. Ext. 4688 or 929-8294.

15' RUNABOUT - fiberglass, 50 h.p. Evinrude, trailer, skis, $1,200. Vincent, Ext. 4660.

19' SPORTCRAFT - new covers, 1979 90 h.p. Mercury, 230 hours, $1,500; w/o engine, $600; trailer winch, for heavy load, $25. Ext. 5288 or 878-8177.

½" CHAIN - coil-proof, galvanized, mooring chain, $2.25/per foot. Ext. 5314 or 399-1679.

23' EUROPEAN - crafted fiberglass, deep keel sloop, sleeps 4, 6 h.p., excel. cond., in-water, will demo., make offer. 938-8353.

Miscellaneous

MOVING SALE - furniture, oil burner motor, 1-yr.-old, lawn mower, much more, good prices. 281-2257 day & eves.

AZALEAS & SHRUBS - large assortment, $10/flat. Ken, call 744-0722 to order.

METS TICKETS - 2, April 14, 1:35 p.m. game, loge box, great seats. Mike, Ext. 7941.

FLOWERS & VEGETABLES - large selection, delivered week of May 9, 4-pack, 80¢/pack. 727-6818 after 3:15 p.m.

SOFA & MATCHING LOVESEAT - w/foam cushions & loose pillows, $125. 751-1884.

SKIS - 3 pairs, 160, 170 & 180cm, Salomon bindings, $10/ea; ski boots, 2 pairs, Nordica, sizes 9 & 12, good cond., $5/ea. Pat, Ext. 2452.

FIREWOOD - cheap. 395-4737.

VITAMASTER EXERCISE TREADMILL - non-electric, heavy-duty, excel. cond., $100 or best offer. Ext. 2198 or 744-4662.

TANDBERG TAPE DECK - reel-to-reel, w/30 tapes, $150. Augie, Ext. 3884.

BUILDING MATERIALS - used, deck lumber, doors, 4'x8' Andersen window, will deliver, $100. Fred, 261-5735.

KENMORE WASHER - 4 cycle excel., electric dryer, good cond., you pick up April 9 or 10, $50. Ext. 2981 or 473-7809.

WEIGHT LIFTING BENCH - medium size, $35; stereo/TV console, good cond. $50. Tim, 281-7873 days.

SCREENS & STORM WINDOWS - wood, 9 each, good cond., $35. Cliff, Ext. 3794.

ALBERTA SPRUCES - 4-5', 2 years old, very dense, $40/ea. you dig; $50/ea. I'll dig. John, 744-5867.

KENMORE ULTRA SEWING MACHINE - stitch 12, model 15612, used twice, asking $225. 473-5074.

PARAKEET - w/cage, cover & seed catcher, $12. Ext. 5277.

COLEMAN POP-UP - sleeps 7, range, ice box, 115V outlets, water tank, etc., mint, asking $3,695. Frank, Ext. 4273.

AKAI TAPE DECK - reel-to-reel, 7" reel, very good cond. 981-5993 after 5:30 p.m.

MICROWAVE CART - light wood, excel. cond., $45. Ext. 4262.

PEUGEOT BMX BIKE - boy's model, excel. cond., $75. Walt, Ext. 7154.

TABLES - 2 end tables, 1 coffee table, good quality, hardwood, glass tops, traditional style, $300. 475-2509 after 4 p.m.

SWIMMING POOL LADDER - stainless steel, $40; 10' diving board, $75; 16' curved slide, $150. Tony, Ext. 2462.

FOLDING HIGH CHAIR - balloon pattern, $20; Hegstrom carriage/stroller, like new, $70. 744-3069.

ORGAN - Wurlitzer-Orbit D-40, hardly used, 3 rows, full-size, keyboard w/digital synthesizer, bench, $1,600. Ext. 4013 or 924-0474 eves.

ANTIQUE PEDESTAL TABLE - 48" diameter, oak, w/6 chairs, refinished, $500. 475-0002 after 5:30 p.m.

MODEM - Hayes 1200B, w/Smartcom II, $275. Elaine, Ext. 5329.

CENTURY CAR SEAT - $15; rocking horse, $20; high chair, $15; exercise bicycle, $15. Ext. 3803.

FIREPLACE - new, red, bell-shaped, free standing, $150. 924-7677.

PENTEX ME CAMERA - 35mm, assorted lenses, electronic flash, w/bag, $150. Ext. 4680 or 286-1331.

GE REFRIGERATOR - 15 cu. ft., gold, very good cond., $20. Bob, Ext. 2957 or 878-4556.

KITCHEN TABLE - 36" diameter, white formica, w/leaf, $15. Barbara, Ext. 3437.

NINTENDO GAMES - Karate Champ, Ice Climber, Ten-Yard Fight, Rush-N-Attack, Epxy 500 joystick. 475-4792.

SEARS KENMORE GAS DRYER - $50. Rich, Ext. 3499 or 435-4316.

GE ICEMAKER - for GE refrigerator, good cond., $35. Gene, Ext. 5319 or 363-9527.

TOPSOIL - screened, delivered, 5-10 yards minimum, $16/per yard. 924-9427, leave message.

KENMORE ELECTRIC RANGE - self-cleaning, 4-5 years old, white, mint cond., asking $300. 281-8274.

ATARI XE COMPUTER - game system, 3 months old, $125. 928-8465.

PEUGEOT BIKE - 10-speed, classic, mint cond., luggage rack, alloy crank, many new components, $100. Ext. 7644 or 929-4295.

ONEIDA SILVERWARE - 72-piece; mahogany chest, $75; Hamilton Beach mixer, $15; Oster dome hair dryer, $10. Ext. 2529.

STUFFED CHAIR - gold, floral design, good cond., $30. Jane, Ext. 3433 or 325-1797 eves.

GLASS-TOP TABLE - $20; charcoal barbeque grill, excel. cond., $15. Ext. 5076 or 744-4615.

BRIDEMAIDS' DRESSES - & accessories, periwinkle blue satin, used once, sizes 8-10, beautiful, $60. Ext. 7108.

POOL SUPPLIES - 16x32 solar cover & reel, Pace chlorine tabs & granules. Ext. 4727.

MAN'S BICYCLE - 3-speed, new, orig. $162.50, sell for $85. Ext. 2679 or 472-6922.

BMX BIKE - 20" boy's, Peugeot, good cond., $65; Atari game w/12 cartridges, good cond., $40. Walter, Ext. 3499 or 757-6392.

POLAROID CAMERA - auto 250, w/case, flash, cable release, $35; Aquarius computer w/16k memory, printer, $120 neg. Ernie, 588-4987.

KEYBOARD ADAPTER - & PC keyboard for PC Jr., $75. Bernie, Ext. 4842.

COFFEE & END TABLES - $100; chair & ottoman, $75; 19" b&w TV, $35; Waring blender, $20; punch bowl, $25. Ellie, Ext. 3395 or 325-1537.

IBM TYPEWRITER - model C, good cond., recent overhaul, long platen, $100. Dave, Ext. 2622 or 941-9022.

Free

PUPPIES - ½ Shih Tzu, 6 weeks old. 744-2715.

LIVING ROOM COUCH - fair cond. Ed, Ext. 7786.

Car Pools

BOHEMIA/OAKDALE - 2 drivers needed for car pool. Frank, Ext. 2314.

BABYLON/BAYSHORE - need 2 riders to form 4-person car pool, 8:30 a.m.-5:00 p.m. Mike, Ext. 2705.

BAYPORT/BLUE POINT - need 1 driver. Phil, Ext. 3500 or 363-2070.

Real Estate

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

For Rent

MIDDLE ISLAND - 3 bdrms., 2 baths, eik, fp, 2-story, carport, wooded 2 acres, avail. April 1, $900/mo. + util. John, Ext. 3675 or 924-3528.

BAITING HOLLOW - 5 bdrm. contemporary, new, near golf course, $1,290/mo. + util. 821-2002 or 331-7060 eves.

HILTON HEAD, SC - 2 bdrm. condo, sleeps 6, beach, pool, golf, tennis, April-Sept. $420/wk. 585-9149.

NORTH SHIRLEY - 3 bdrm. apt., excel. cond., 1 mile to Lab. 924-1374, (215) 758-3930 or (215) 867-8064 after 5 p.m.

CATSKILLS, GILBOA - 2 bdrm. chalet, deck, fully furn., elec. heat, woodburning stove, TV/VCR stereo, full kitchen, great fishing, hiking, relaxing. Ted, 928-1445 eves or beeper #506.

NORTH SHIRLEY - 1 bdrm. apt., w/w carpet, working couple or single perferred, no pets, non-smoker, 5 min to Lab, $550/incl. all. 924-6877.

LAKE PLACID, NY - modern 2 bdrm. A-frame, loft, sleeps 8, swimming, boating, golf, tennis, hiking, available weekly. 757-1775 after 3 p.m.

MEDFORD - spacious 1 bdrm. apt., eik, full bath, large l/r, w/w carpeting, cable TV, private ent., $650/mo. + 1 mo. sec. Liz or Phil, 758-4368.

PORT JEFFERSON - furnished room, private bath & entrance, $350/mo. incl. util. 473-7739 after 6 p.m.

For Sale

PORT JEFFERSON - Harbor Hills, 3 bdrm. ranch, 3 baths, wooded golf course setting, balcony, deck, patio, 2-car garage, 3-zone gas heat, $259,900. Ext. 3791 or 928-7154 eves.

PORT JEFFERSON - Harbor Hills, 4 bdrm. split ranch, d/r, eik, family room w/fp, brick patio, winter waterview, 24'x44' bsmt., excel. cond., $199,000. Ext. 4483 or 473-3689.

HILTON HEAD, SC - 3 bdrm. condo, sleeps 8, 2 baths, washer/dryer, wet bar, 6 tennis courts, 3 pools, whirlpool, golf, ocean view, asking $89,000 or will rent. 929-8912.

SETAUKET - north of 25A, 6 rm. cape, 2 baths, 2-car garage, wooded area, 3-Village schools, asking $190,000. 751-1401.

BELLPORT - 4 bdrm. Colonial, 3½ baths, l/r, d/r, kitchen, pantry, sunroom w/jacuzzi, 3 screened porches, attic, 2-car garage, walk to village & bay, asking $675,000. 286-0269.

HOLIDAY, FL - Sandpiper, 3 bdrms., 2 baths, oversize garage, corner lot, cathedral ceilings, laundry rm., clubhouse facilities, asking $80,000. 744-3968.

SETAUKET - huge 4 bdrm. Colonial, 2½ baths, 2-car garage, cac, cul-de-sac, fin. bsmt. w/1 bdrm., mint cond. in/out. 751-5849.

STONY BROOK - mint 4 bdrm. Colonial, 2½ baths, eik, d/r, l/r, 2-car garage, new siding, Andersen windows, ½ acre, 3-Village school district, asking $225,000. 689-8605 eves & wknds.

EAST QUOGUE - 3 bdrm. ranch, 2 baths, l/r with fp, d/r, eik, fin. bsmt., new deck & patios, ½ acre, 20x40 in-ground pool. Ext. 4470.

DAVENPORT, NY - Delaware County, 5.38 acres w/stream, off private road, walking distance to state land, deeded fishing rights to Charlotte Creek. 281-4871 after 6 p.m.

COPIAGUE - 3 bdrm. colonial, 1½ baths, kitchen, d/r, den, l/r, patio, must sell, $158,000. 789-8195 after 6 p.m.

SETAUKET - north of 25A, 3 bdrm. ranch on hilltop setting, 2 baths, open living space, fp in den, 2-car garage, patio, beautiful landscaping, private. Ext. 7560 or 689-7494.

NORTH SHIRLEY - 5 bdrms., 3 baths, 2 kitchens, l/r, d/r, family rm., ½ acre, deck, 10 months old, many extras, will help with closing fees, $165,000. 395-5188.

HOLBROOK - 3 bdrm. center-hall ranch in Timberidge Dev., 2 baths, l/r, d/r, eik, den w/brick fp, 2-car gar., all brick front, new carpet, new bath in master bdrm., prof. land., Sachem 5-schools, $176,990. Ext. 2679 or 472-6922.

Wanted

ROOM OR STUDIO APT - for rent, below $350/mo. for all, near Lab, non-smoker, clean. Bob, Ext. 2136.

BOBCAT CEMENT MIXER - wet saw, to buy or rent. Tony, 698-9274.

OUTBOARD MOTOR - not running, 35 h.p. or less. Ext. 2081 or 878-9384 eves.

ROOMMATE - prof. female, non-smoker, to rent spacious 2 bdrm. apt in St. James, $400/incl. all. Angela, 444-1359 or 751-8955 after 6 p.m.

CEMENT MIXER - Al, Ext. 2043.

SUMMER HOUSING - for visiting couple, furnished, 1-2 months, starting June or August. Tang, Ext. 3869 or 5186.

1969 PLYMOUTH - Belvedere, Satellite, R.R., GTX, rear bumper or complete car, running or not. Beeper #506.

HOUSE RENTAL - 2-4 bdrms., starting June, summer or year-round, N. Shore/Fork, prefer Mattituck/Cutchogue S.D. Ext. 7657 or 924-2933.

SAILBOAT - Force 5, Zuma or Minifish, used. 744-7406 eves.

BASEBALL CARDS - any cond., young boy wants to start collection. 924-4070.

HAMMOCK FRAME - & Coleman canoe. Pete, Ext. 3297 or 821-9547.

In Appreciation

I would like to extend my thanks to my friends at BNL for their sympathy and support in response to the death of my father.

— Doan Hansen