BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

RHIC Has Successful DOE Review

Every detail of BNL's proposed Relativistic Heavy Ion Collider (RHIC) underwent intense scrutiny during a Project Review conducted at the Lab by the Department of Energy (DOE) from May 20-22.

When the three days were over, the efforts of scores of people in the Accelerator Development (ADD), Alternating Gradient Synchrotron (AGS) and Physics Departments were deemed well worth it. The RHIC Project Review had gone well. Edward Temple, the Director of the Division of Construction, Environment and Safety in DOE's Office of Energy Research and Chairman of the review team, had indicated that a very capable RHIC team had put together a well-developed conceptual design in all technical areas.

Commenting on the review results, Laboratory Director Nicholas Samios said, "I am extremely happy with the positive reception the DOE has given to the RHIC proposal."

Paul Reardon, former BNL Associate Director for High Energy Facilities and now on leave to Scientific Applications, Inc., was extremely pleased with the thoroughness of the presentations. "This was a difficult review," he noted, "but the results were certainly worth the effort."

"This was a big and essential step forward, and we are very pleased," added ADD Chairman Eric Forsyth. "If RHIC is approved, letters of intent for experiments will be solicited in February 1988 and evaluated, so work can begin to bring detectors on line at the same time that RHIC is finished."

As proposed by BNL, construction for the RHIC project will take five years, beginning in FY 1989 and ending in September 1993. In FY 1988 dollars, the total project cost will be $329.9 million. Of that amount, about 70% will go towards research and development (R&D) and construction of the collider itself, 25% towards R&D and construction of detectors and 5% towards initial start-up.

Bringing RHIC from the drawing board to start-up will require a great deal of accelerator physics. Calling it "a sign of our increasing commitment to this area," Forsyth announced that, as of June 1, ADD's Accelerator Physics Division will be headed by Allesandro Ruggiero, formerly of Argonne National Laboratory.

In addition to Edward Temple, the DOE review team included David Hendrie, Director of the Division of Nuclear Physics, as well as representatives of DOE's Chicago Operations Office and Brookhaven Area Office. BNL's technical presentations were also reviewed by consultants from other laboratories with expertise in areas ranging from construction to cryogenics.

Describing the review process, Forsyth said, "It was a huge effort. We had to present details right down to the engineers' notebook and cost estimates for every component in RHIC. On the spot, we had to provide secretarial reports and write computer programs to perform cost analyses. And the sessions were long. Thursday's finally ended shortly after midnight."

One highlight of the review came on Friday, when testing was completed on the second prototype RHIC magnet manufactured by Brown, Boverie & Cie of West Germany. Like its predecessor tested in April, the 9.7-meter-long superconducting magnet easily exceeded its magnetic field operating requirements. Forsyth recalled that, in his review summation, Temple made very positive comments about BNL's expertise in making superconducting magnets.

RHIC: What's in a Name?

What is a Relativistic Heavy Ion Collider? That question can be answered by looking at the words that make up the acronym RHIC:

- **Relativistic** describes something traveling near the speed of light —in this case heavy ions.
- Ions are atoms that have lost or gained one or more circulating electrons. **Heavy ions** are so called because their nuclei contain many protons and neutrons.
- A **collider** is an accelerator in which two beams of particles circulate in opposite directions, smashing together at various points around the ring.

In RHIC, then, two beams of ions, which could be as heavy as gold nuclei, will zip around a ring almost 2.5 miles in circumference, colliding at six points. The colliding ions will have a combined energy of 200 billion electron volts per nucleon (GeV/n).

This immense energy is expected to create conditions never before observed. In fact, nuclear matter probably only existed at these temperatures and densities in the moments that immediately followed the creation of the universe.

Such nuclear matter is often called "quark-gluon plasma," which refers to the expected jumble of fundamental particles called quarks and binding particles called gluons. Both nuclear and high energy physicists are interested in recreating these conditions and investigating the nature of quark-gluon plasma, which explains why RHIC is a high priority for both communities.

If RHIC is funded, it will be the only machine in the world to collide two beams of heavy ions at ultra-relativistic energies. No other accelerator today can approach RHIC's proposed energies or ability to accelerate the heavier ions.

A Chain of Accelerators

RHIC will be the biggest link in a chain of BNL accelerators that includes the Alternating Gradient Synchrotron (AGS). The transformation of the AGS from purely a proton synchrotron to a hybrid that can also accelerate heavy ions began in October 1984. That's when ground was broken for a transfer line that now links the Tandem Van de Graaff accelerator, which generates the heavy ions, with the AGS. It is the AGS that has the capability of accelerating these ions to energies as high as 15 GeV/n. At the AGS, experiments with oxygen ions began last October and with silicon in March.

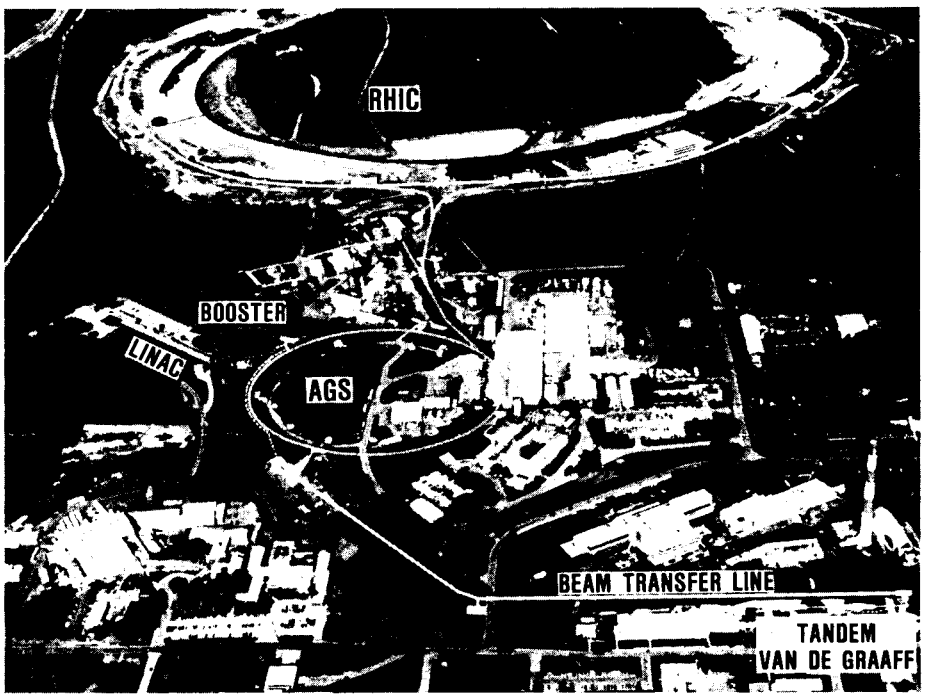
The Tandem and the AGS are the first working links in the chain of BNL accelerators that are needed to provide RHIC experimenters with heavy ions. Construction began in 1985 on the next link, a Booster for the AGS. When completed in 1990, the Booster will allow the AGS to accelerate all the heavy ion species the Tandem can generate.

While the addition of the Booster is sure to provide exciting physics at the AGS, it is also another step closer to RHIC. Once the AGS is accelerating ions as heavy as gold, it can be used as an injector for RHIC.

Over 1,600 superconducting magnets of different types must be built to do the jobs of guiding and focusing the heavy ions on their journey around RHIC. To keep the four accelerator links in this chain functioning as one strong unit will require some 230 people involved in all facets of operating the complex.

Much of the construction for RHIC is already done. The ring that will contain the beam lines, the experimental areas, the refrigeration system to provide cooling for the superconducting magnets, the Collider Center that now houses the Accelerator Development Department (ADD) — all were constructed for the Colliding Beam Accelerator (CBA), on which work ceased in 1983.

The joining of these existing facilities from CBA and the other links of the accelerator chain at BNL will produce RHIC, which BNL first proposed to the Department of Energy (DOE) in 1984. Now, as ADD Chairman Eric Forsyth points out, "By indicating that RHIC will probably be included in its budget plan for fiscal year 1989, DOE is acknowledging that a major accelerator complex for heavy ions can be a reality at Brookhaven in much less time and for much less money than would be possible for comparable facilities anywhere else."



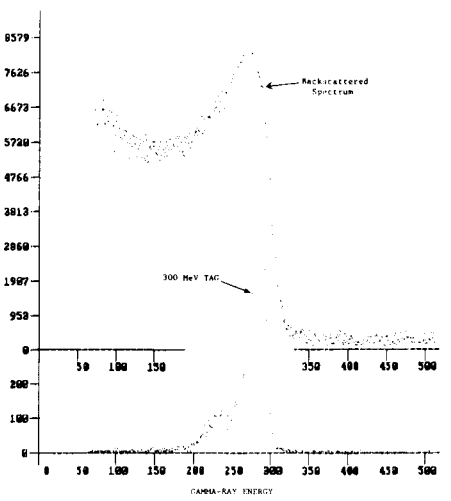
The accelerator chain for the proposed Relativistic Heavy Ion Collider (RHIC): After heavy ions are generated in the Tandem, they will travel to the Booster, then to the AGS, and ultimately to RHIC.

LEGS Reaches Second Milestone

The first spectrum of a monochromatic beam was recorded at the Laser Electron Gamma Source (LEGS) on beam line X5 of the x-ray ring of the National Synchrotron Light Source at 9:15 p.m. on Wednesday, June 28. This spectrum is proof that gamma ray energies up to 300 million electron volts (MeV) can be selected according to need.

This is the second milestone reached within a week, in establishing LEGS as a medium energy nuclear physics facility, to provide intense monochromatic and polarized gamma rays with energies up to 500 MeV.

To produce the 300 MeV gamma rays of this first spectrum, laser light was scattered off of x-ray ring electrons. The electrons gave up energy to the ultraviolet laser photons, transforming them to gamma rays in a process called Compton backscattering. The upper plot shows the "backscattered spectrum" of gamma rays, which is continuous up to 300 MeV. The lower spectrum was obtained by simultaneously detecting the lowered energy electrons and using them to "tag" gamma rays at 300 MeV.



LEGS is being developed by collaborators in BNL's Physics Department; from Frascati National Laboratory, Italy, including Physicist Franco Giordano, Aldo Cecchetti, Enzo Cima, Valerio Lollo and Ennio Turi; and from the University of Rome, including Physicist Carlo Schaerf, Franco Basti and Luigi Ruggieri.

Coming Up

Alan Carroll, a Physicist in the Alternating Gradient Synchrotron Department, will give the next Brookhaven Lecture on Wednesday, June 17, at 4:30 p.m., in Berkner Hall. His topic will be " 'Follow That Quark!' and Other Exclusive Stories."

BNL's Fabulous Forty

This is the seventh in a series of interviews with employees who observe their 40th service anniversaries during 1987, BNL's 40th anniversary year.

"The police said we could sleep in the jail, if we liked — but we took one look and got back out in the snow to the trucks!"

Charles Gargliardo, a driver in the Staff Services Division, was remembering the great 1947 snowstorm, when two or three trailer loads of BNL exhibits about the Lab's work on peaceful uses of atomic energy had to be driven up to Connecticut.

Mort Rosen

Charles Gargliardo

"We'd started out at about eight in the morning," he recalled. "The weather was bad, but we went on, over the 59th Street Bridge, through the Bronx, then along Gun Hill Road and up U.S. 1. I think we were the only ones on the road. We finally arrived at midnight in over a foot of snow — and that's when we got the offer of a bed in jail. But we preferred the trucks!"

That night was not the only one that Gargliardo spent in a snowbound truck on behalf of the Lab. Some years later, he was coming back from Denver after picking up experimental equipment being returned to BNL. He was alone, and during the difficult journey, he had to shovel the truck out of endless snowdrifts. For one whole night he was forced to a standstill, with the engine running to keep from freezing.

"That was bad enough," Gargliardo said. "Then, next morning, the water pump went, somewhere near Pittsburgh! But I got lucky — there was a tow truck just down the road, and a motel run by a guy from Yaphank! Soon I was back on my way to BNL."

Gargliardo's start at the Lab site began during Camp Upton days, when he drove as a civilian for the Army for about eight months. "Then came the Manhattan Project, then BNL," he said. "I stayed on and got life number 482. We moved everything out here from Columbia University —equipment, boxes of security reports and Mrs. [Mariette] Kuper's office! Of course there was no Long Island Expressway then. It was Jericho Turnpike [Rt. 25] all the way."

In those early days, there was no housing on site, and the drivers helped newly arrived staff find a home and move in. "At that time you got to know every single person around," said Gargliardo. "But it's still a very friendly place to work, even though there are so many more people."

Among the people Gargliardo has driven have been all the different Lab directors and many presidents of Associated Universities, Inc. (AUI). "Also, we meet the scientists at the airports and train for symposiums and conferences," he said.

Gargliardo is proud of the BNL drivers' record of getting to the train or plane on time. "We have the advantage of the cars being well maintained," he said. "If there's any problem, the Lab's Motorpool Automotive Shop fixes it. That lets us do a good job."

One time that it was especially necessary for the Lab car to run well was when Lloyd Berkner, who was President of AUI from 1951 to 1960, had a 9 p.m. train to catch in New Jersey.

"He was going to a very important meeting," said Gargliardo. "Otherwise we would never have started. There was such thick fog, you could barely see one car length ahead. I drove as quickly as possible, but it was quite a strain. After we were about halfway, Dr. Berkner insisted on getting into the driver's seat. Your eyes will get tired — it's my turn now!' he said. He drove on, and we made it!"

One historically interesting drive that stays in Gargliardo's memory was collecting the first load of graphite for the reactor. "Most of the graphite came in by train," he said. "But as I remember it, the first load was the one we picked up from Champagne, Illinois. On the return journey, we had to back the trailer into the place we had been assigned for the night. I stepped out into the road to hold up the traffic — and the first driver I spoke to turned out to be an old buddy from the Navy. That was a nice surprise."

The surprises on the job have kept Gargliardo happy to be driving at BNL for over forty years. "It's a good place to work," he said. "The changes over the years have never changed that." — Liz Seubert

Nursery School

The Upton Nursery School is now accepting applications from Lab employees who wish to enroll their three-and four-year-old children for the 1987-88 school year. For more information, call Marietta Veligdan, 874-3447.

T-Shirt Time

The Laboratory is celebrating its 40th anniversary during 1987. Now, T-shirts commemorating The First Forty Years will be available to all employees, students and visitors for $6 each (price includes tax).

These blue with white print T-shirts will be 50% cotton and 50% polyester, for minimal shrinkage. They are available in unisex adults' sizes: small (34-36), medium (38-40), large (42-44), extra large (46-48); and unisex children's sizes: small (6-8), medium (10-12) and large (14-16).

T-shirts must be ordered by July 10, and each order should be accompanied by cash or a money order made payable to "Renee Flack — T-shirts '87. No personal checks please. Orders and payments can be mailed or brought to Renee Flack, Affirmative Action Office, Bldg. 185A, Ext. 3316. Allow two weeks after deadline for delivery.

Circulate Your Blood

A three-day blood drive will be held at the Lab on June 23, 24 and 25 — so, blood donors should draw a rolled-up sleeve on their calendars for those days. A total of 416 pints were donated in two days by Lab employees last December. This time, in three days, the goal is 650 pints.

Two pledge cards are being sent to each employee so that friends or relatives may join the BNL campaign. Please sign up as soon as possible. If you need any more information, call Susan Foster, Blood Drive Chair, Ext. 5126, or contact the Blood Program Captain for your department or division (see list below):

Dept.	Bldg.	Captain	Ext.
ADD	1005	Patricia Webster	4628
	902A	Audrey Blake	5382
AGS	911	Joan Depken	4697
AMD	515	George Taylor	4144
	515	Michael Torres	4199
AUI	460	Thomas LeMaire	2496
Bio.	463	Richard Sautkulis	3386
Chem.	555A	Sophie Kostuk	4302
CSD	903	Al Campbell	2043
	462U	Christine King	7725
	462A	Frank Monroig	4986
DAS	179A	Pat Taylor	2452
DCP	355	Linda Zahra	7745
DNE	197C	Jean Ramirez	2119
	475B	Arnie Aronson	2606
DO	134	Janet Sillas	2345
DOE	464	Claire Gash	3438
Fisc.	134A	April Donegain	2459
Inst.	535B	Patrick Gilleeny	2836
Med.	490	Peter Heotis	2304
MIS	459	Robert Kaszuba	7785
NSLS	725	Lydia Lever	7976
PE	134C	Richard Schiedet	5284
	452	George Elias	4669
	326	Slim Blevins	3084
	422	Robert Zigrosser	5317
Pers.	185	Marsha Kipperman	2871
P&GA	197B	Bruce Style	2953
Phys.	901A	Cora Feliciano	7681
	510A	Liz Mogavero	3940
Reac.	750	Randi Vogt	4421
S&EP	599	Michael Carroll	2351
SMD	211	Lou Di Carlo	2302
	211	Barbara Boerjes	4956
S&SD	50	Elaine Zukowski	4177
SSD	179B	Joan Perullo	2549
	179B	William Webster	2525
TID	477B	Avril Woodhead	3482

Summer Schedule In Effect at Gym

The following summer schedule is now in effect at the gym:

Workdays:

11 a.m. - 2 p.m. general activities, employees only.

5 p.m. - 9:30 p.m. general activities, employees, families & guests.

Exception: *From Monday, June 22, until 5 p.m. Friday, June 26, athletic activities will be preempted by the Blood Drive.*

Weekends & Holidays: Closed

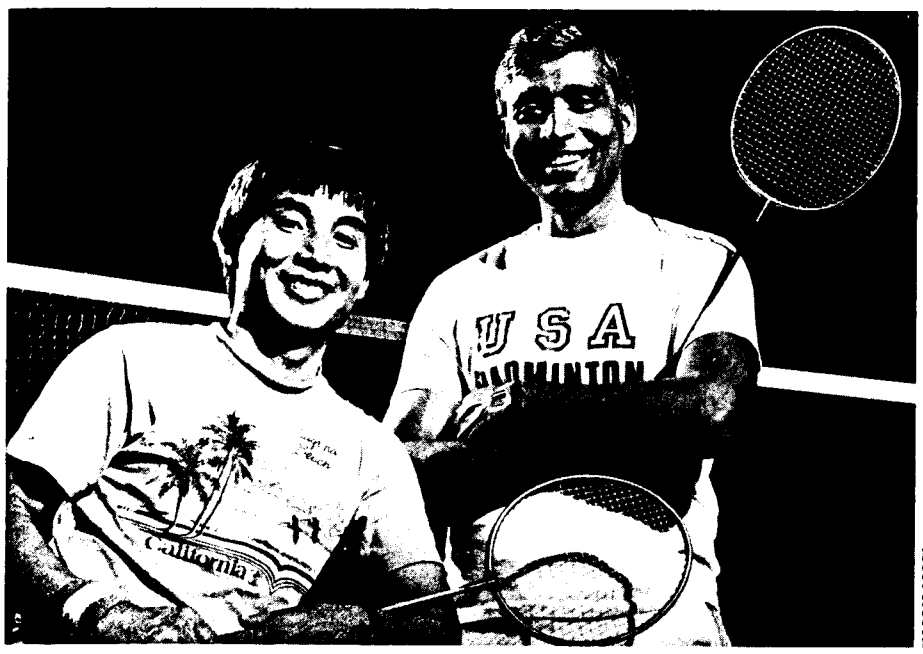
Guest Rule: One guest per employee is permitted. Advance arrangements for additional guests, up to a maximum of five at any one time, must be made at the Recreation Office in Personnel. This rule applies to all recreation facilities.

Note: Summer hours at the swimming pool will go into effect on Monday, July 6.

The Fun Olympics is just one of the activities being planned for the BNL 40th Anniversary Picnic on September 19. Can you imagine yourself as part of a crazy sports team that runs water-hat races, egg and spoon races, and any other unusual competitions the organizers come up with?

If you would like to join in the Fun Olympics, fill out the entry form and send it to Betty Pergan, Bldg. 179A, or Liz Mogavero, Bldg. 510. Age-group information is needed just to balance the teams better. Entries must be in by June 30.

Badminton Champs



Mort Rosen

The winners of a hotly contested badminton tournament held in the gym over the past few weeks were See-Meng Wong (left) and Om Singh. Singh maintained his first place position as a singles player by defeating Ken Perkins 15-12, 15-10. He also occupied the top step on the Badminton Club's Singles Ladder. In addition, Singh teamed up with Wong to defeat Nick Combatti and Kristin Elmore in a close championship doubles match. Their scores were 15-10, 10-15 and 18-13. All employees are welcome to join the badminton play in the gym. More tournaments are planned for the fall. For more information, call Bill Love, Ext. 3996.

Pick Your Own Strawberries

Srawberries — glowing red in shortcake; crushed pink with rhubarb in pie; bursting with juice and warm from the sun or delectably chilled under drifts of whipped cream. However you like them, now is the time to pick them.

For Long Islanders, the strawberry season is late this year — beginning the second week of June — and the ruby berries may be more of a delicacy because a late-spring frost killed many of the early fruit. As well, the recent heat wave was cooking the unpicked fruit in the fields. Regardless, slim pickings are still delicious, so here is a list of fields you can pick from.

Anderson Farms: Route 58, Riverhead. 727-1129 or 727-2559. Open 7 days a week from 8 a.m. 5 p.m.

John Berezny: Sound Avenue, Riverhead. 727-4661, 722-3308, or, during the day, 722-3823. Open 7 days a week, from 8 a.m. to 5 p.m.

John Condzella: Route 25A, Wading River. 929-4697. Open 7 days a week, from 8 a.m. to 5 p.m; weekends until 6 p.m.

Edward's Farm: N. Edwards Avenue, Calverton. 369-2043 (after 7 p.m.). 9 acres. Open 8 a.m. to 6 p.m. Containers available or bring regulation baskets.

Fox Hollow Farmstand: 143 Sound Avenue, Calverton. 727-1786. Open every day but Wednesday from 9 a.m. to 5:30 p.m.

Kenneth Glover: 633 Horse Block Road and Strawberry Lane, Brookhaven. 286-8721. 50 acres. 8 a.m. to 8 p.m. Containers sold.

Green Thumb: Route 27, Water Mill. 726-4989. 10 acres. Open 8 a.m. to 5 p.m., 7 days a week. Bring your own containers. Children welcome.

Hodun Farms: River Road, Calverton. 727-2618. Open 9 a.m. to 7 p.m. Containers sold.

Fritz Lewin Farm: Corner of Sound and Edwards Avenues, Calverton. 727-3346. Open 8 a.m. to 6 p.m. Containers sold.

Meadows Farm: Old Stump Road, Brookhaven. Open 9 a.m. to 5 p.m., 7 days a week. No chemicals used.

Thomas R. Muller: 9 Orchard Neck Road, Center Moriches. 878-0621. Dawn to dusk, 7 days a week. Less than 1 acre, but 2,000 quarts are expected. Quart containers for 10¢ each. Children are asked to behave.

Osborn Farm: Main Street, Wainscott. 537-1323. 6 acres. Open 7 a.m. to 7 p.m. Closed Sundays. Free quart containers. Children especially welcome.

William J. Polak Jr.: Church Lane, Aquebogue. 722-3049. 4 acres. Open 8 a.m. to 5 p.m., weekdays and weekends. Quart containers 10¢ each. Children may pick their own.

Sep's Farm Stand: Route 25, East Marion. 477-1583. 5 acres. Open 8 a.m. to 5 p.m., 7 days a week. Free quart containers. Children and adults welcome.

Wickham's Fruit Farm: Main Road, Cutchogue. 734-6441. 6 acres. Open 9 a.m. to 5 p.m., Monday through Saturday. Free quart containers. Children welcome.

Young's Orchard: 54 Sound Avenue, Riverhead. 727-5363. 4 acres. Open 9 a.m. to 6 p.m., weekdays and weekends. Strawberries sold by pound; quart containers 10¢ each. Children must be supervised.

WIS Cocktail Party

The eighth annual cocktail party of Brookhaven Women in Science (WIS) will be held on the patio of the Brookhaven Center on Thursday, June 18, from 5 to 8 p.m. Hot and cold hors d'oeuvres will be served, and there will be a cash bar.

The party is open to non-members, as well as to WIS members. Reservations are requested and may be made by sending a check for $5 per person, payable to Brookhaven WIS, to Ellen Gannon-Weider, Bldg. 535A, by Tuesday, June 16. Please include a note with your name and those of any guests you are bringing.

Softball

Week of May 18

League III

September 17 — Kidz-R-Us 14
Snakebites 14 — Farm Team 1
Foul-Ups 29 — Source 6
Survivors 20 — Mole-Esters 6

League IV

Simply Awesome 24 — Who Cares 23
Sandboxers 14 — Spacekadets 12
Underalls 15 — Mudville Sluggers 14
Hit 'n Run 16 — No Feedback 6

Week of May 25

League I

Magnuts 8 — Cool 'n Gang 7
Ravens 15 — Sudden Impact 6
Blue Jays 19 — Phoubars 9

League II

Cutting Edge 10 — Titans 4
Scrambled Legs 12 — Medical 10
AMD 27 — Phase II 6
Lights Out 8 — Binary Bombers 4
Scram 7 — Dirty Sox 5

League IV

Sandboxers 12 — Hit 'n Run 4
Spacekadets 27 — Underalls 9
Simply Awesome 26 — Mudville Sluggers 3
Turkeys (won) — Who Cares (forfeit)

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Swim Club

At the Queens College Empire State Masters Qualifying Meet on Sunday, May 31, three BNL Swim Team members qualified in 11 out of 11 events and collected 11 ribbons for top-three, age-group finishes. In addition, Wlodek Guryn placed third overall in the 50-yard breaststroke and fourth overall in the 50-yard backstroke.

50-yard Freestyle

Paul Michael	31.20	1st men 55-59
Marsha Belford	35.49	3rd women 30-34

100-yard Freestyle

Wlodek Guryn	1:02.59	2nd men 35-39
Marsha Belford	1:15.23*	2nd women 30-34
Paul Michael	1:15.56	1st men 55-59

200-yard Freestyle

Marsha Belford	2:46.70*	2nd women 30-34
Paul Michael	3:12.65	1st men 55-59

50-yard Backstroke

Wlodek Guryn	35.08	2nd men 35-39

50-yard Breaststroke

Wlodek Guryn	35.29	1st men 35-39

100-yard Breaststroke

Wlodek Guryn	1:18.10	1st men 35-39

200-yard Individual Medley

Wlodek Guryn	2:39.69	2nd men 35-39

* indicates personal record

Runners' Corner

The third annual BNL Twosome Five-Mile Road Race, dedicated to the memory of former Running Club president, Ted Landry, who was killed in a 1984 bicycle accident, was again a huge success. Under ideal, warm but overcast racing conditions, 163 runners completed the course. A women's course record was set by Jennifer McNerney (daughter of BNL Roadrunner Andy McNerney) in a blistering 28:51. The overall men's winner was Bob Giambalvo in 25:39.

In his second year as race director, Dean Chapman again assembled and directed a corps of 50 dedicated volunteers and runners from the BNL community. For the third year, radio communications between check points and the finish line were provided by the BNL Radio Club and non-Lab members of the Suffolk County Amateur Radio Operators, under BNL's George Walczyk. Race registration was coordinated by Diane Hatton. Computer experts Steve Hulbert and Nancy Lazarz provided precise tabulation of registration, timing and results.

This year's awards were framed CAD/CAM-designed certificates with winners' names and times inserted (under great stress) by Eloise Gmur and crew. Principal tactical support was coordinated by Nick Gmur and Frank Marotta, and the support of the Police and Fire Groups was again greatly appreciated. The Running Club thanks the many other volunteers who helped in the five-month-long planning and execution of this year's race.

Overall Woman

Jennifer McNerney (BERA) 28:51

Overall Man

Bob Giambalvo 25:39

Individual Women

1. Karin Braunbach - 39:13
2. Marie DeCrombugghe (BNL) - 42:52
3. Jackie Schillig - 43:22

Individual Men

1. Donald McKay - 26:54
2. Bob Moritz - 27:14
3. Eric Cramer - 28:16

Individual Wheelchair Competitors

1. Frank Corbin (BNL) - 45:59
2. Danny Sullivan - 51:21

Overall Couples

1. Jennifer McNerney (BERA) - 28:51 & Jerry Hastings (BNL) - 28:48
2. Ellen Weber - 34:54 & Bob Giambalvo - 25:39
3. Pat Slezak - 35:51 & John Ferrero - 27:42

BNL Couples

1. Sharon Zuhoski - 35:16 & Kevin D'Amico - 35:03
2. Joan Slavinsky - 45:21 & Ricky Backofen - 42:54
3. JoAnn Langan - 46:38 & Stever Lenski - 45:48

Married Couples

1. Diane Manghan - 39:01 & Brian Manghan - 27:56
2. Donna Bennett - 42:17 & Gary Bennett - 27:49
3. Linda Tanalski - 40:15 & Adam Tanalski - 34:15

Couples With Combined Ages Under 40

1. Christine Evans (BERA) - 54:57 & Benjamin Uh - 30:54

Couples With Combined Ages 40-59

1. Elisabeth Carillo - 37:02 & Adam Rich - 30:27
2. Alice Kerwick - 39:33 & Bill Gartland - 30:20
3. Stephanie Thorp (BERA) - 43:06 & Rich Thorp (BNL) - 34:26

Couples With Combined Ages 60-79

1. Denise Wolfe - 34:41 & James Kennedy - 33:12
2. Sandra Garratt - 37:29 & Robert Frederick - 30:49
3. Denise Hannon - 35:52 & George Siebert - 33:44

Couples With Combined Ages 80-99

1. Susan Curtis - 34:02 & Bob Skirkanch - 32:44
2. Mary Trotto - 40:24 & Jay Satenstein - 30:15
3. Cynthia Bermudez - 34:12 & Edward Hart - 36:33

Couples With Combined Ages 100-119

1. Joyce Murphy - 45:45 & Richard Murphy - 29:38
2. Mildred Bloom - 44:37 & Richard Bloom - 35:10
3. Maya Mottus - 48:59 & Robert Lawrence - 44:25

You Can Canoe Too!

Last year, these members of the Mountain Club spent a weekend canoeing down the Delaware River, above Port Jarvis, New York. The trip was such a success that the Mountain Club now plans to canoe the Delaware again, on June 20 and 21, camping at Bob Lander's Narrowsburg Campground. A few Mountain Club canoes are available, or they can be rented at the campground. Anyone interested in joining up for this event, should attend a short meeting on Wednesday, June 10, in the Berkner Hall lobby. For more information, call Don David, Ext. 4821.

Arrivals & Departures

Arrivals

Yu-Shin Ding ..... Chemistry
Philip Pagano..... Reactor
Patricia Williams ..... S&EP
Peter Zolliker..... Physics

Departures

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

Steven G. Kiss ..... Accel. Dev.
Antonio N. Pirraglia ..... DAS
James H. Scott..... DAS

Cafeteria Menu

Week of June 8

Monday, June 8

Chicken noodle soup	(cup)	.75
	(bowl)	.95
Sautéed beef tips w/noodles.		2.85
Chicken chimichangas w/1 veg.		2.85
Hot vegetable plate (lite-weight)		2.20
Hot deli: Sloppy Joe		2.45

Tuesday, June 9

Southern beef vegetable soup	(cup)	.75
	(bowl)	.95
Stuffed peppers w/1 veg.		2.85
Quiche Lorraine w/1 veg. (lite-weight)		2.85
Hot deli: Turkey	(bread)	2.45
	(roll)	2.55
	(hero)	2.60

Wednesday, June 10

Minestrone soup	(cup)	.75
	(bowl)	.95
All-you-can-eat special (no take-outs):		
Spaghetti & marinara sauce w/French bread		3.25
Braised liver & onions w/1 veg. (lite-weight)		2.85
Hot deli: Meatball hero		2.65

Thursday, June 11

Beef barley soup	(cup)	.75
	(bowl)	.95
Vegetable omelet w/muffin (lite-weight)		2.85
Beef kabob over rice		2.85
Hot vegetable plate (lite-weight)		2.20
Hot deli: Roast beef	(bread)	2.45
	(roll)	2.55
	(hero)	2.60

Friday, June 12

Boston clam chowder	(cup)	.75
	(bowl)	.95
Turkey à la king over rice		2.85
Broiled fish w/1 veg.		2.95
Hot deli: Corned beef	(bread)	2.45
	(roll)	2.55
	(hero)	2.60

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.

2615. LAUNDRY OPERATOR A - (Temporary to 9/6/87) Plant Engineering Division.

2616. LAUNDRY OPERATOR B - (Temporary to 9/6/87) Plant Engineering Division.

Autos & Auto Supplies

75 CHEVY MALIBU - 4 dr., 137k mi., runs well, must see, $250. neg. Ext. 2229 or 3220.

78 CORCORD - 4 dr., a/t, p/s, p/b, 6 cyl., 67k mi., am/fm cass., good cond., dependable. Ext. 2621 or 281-0360 after 6 p.m.

DELCO CARBURETOR - Rochester Dualjet 210, from 79 Chevy Monte Carlo, 8 cyl. Victor, Ext. 2395.

70-72 DUSTER DEMON DOORS - $20/each; 70-76 windshield, $20; 64 Ford Mustang, 6 cyl., 200 c.u. short block, needs rebuilding, $50. 727-3608.

81 MERCURY CAPRI - 5 spd. w/over-drive, 89k mi., sunroof, louvre, no rust, $2,400. George, Ext. 4100.

81 AMC EAGLE - 4x4 wagon, 68k mi., good running cond., $2,400. neg. 821-3086 or 744-5069.

81 TOYOTA COROLLA - 75k mi., rear-end damage, many good parts, engine, radio, tires, best offer. Ann, Ext. 3382.

79 T-BIRD - a/t, a/c, am/fm cass., 2 dr., black, many new parts, $2,000. Jerry, Ext. 7427 or 475-5591 after 5 p.m.

76 CAMARO - sunroof, a/c, am/fm, a/t, trunk rack, runs well, $750. neg. Bob, Ext. 7772 or 744-8581.

83 YAMAHA DIRT BIKE - PW80K, 80cc, never raced, excel. cond., $550. Rich, Ext. 5284 or 924-4237.

77 CAMARO - V8, a/t, black; 73 Capri, stand., decor group, many new parts; 79 Pontiac Sunbird, must sell. 744-0725, eves.

86 GMC PICKUP - loaded, 16k mi., hi-rise cap, running boards, must sell, $11,000. Bert, Ext. 2050.

81 PLYMOUTH TC3 - hatchback, body great, 46k mi., a/c. p/s, p/b, new tires, needs timing chain, $950. 499-5034.

82 OLDS CUTLASS - a/c, a/t, cruise, am/fm cass., deluxe sunroof, $5,000. 878-0391.

81 CHEVY MALIBU - classic wagon, a/c, am/fm, 73k mi., good cond. Brant, Ext. 4552 or 929-3310.

79 FORD BRONCO - must sell, big tires, asking $4,000. 821-0318.

83 YAMAHA VIRAGO - 750cc, black, mint cond., garaged, asking, $2,000. neg. Charles, Ext. 7749.

78 PONTIAC PHOENIX - hatchback, V6, a/c, p/s, new battery, muffler, radiator, orig. owner, $800. 475-8162 eves.

78 CHEVY VAN - 6 cyl., 43k mi., runs well, $900; 81 Yamaha Seca, 750cc, 6k mi., clean, new battery, front seals, rebuilt carbs., Ext. 7148 or 588-9452.

77 MGB - good cond., $2,000; 71 MGB GT, good cond., $300. both for $2,100. 929-8300.

72 PLYMOUTH SATELLITE - station wagon, dependable trans., needs tires, $400. 289-3916, leave message.

79 FIAT BRAVA - high mileage, runs well, no reasonable offer refused. Ext. 4184 or 929-3347.

72 COUGAR - convertible, 351C, 15k mi., rebuilt trans., muffler, needs body work. Ext. 4420.

85 HONDA MAGNA - motorcycle, V65, good cond., low-mileage, $30. 929-5717.

84 DODGE DAYTONA TURBO - a/c, p/w, a/t, excel. cond., low mileage, $7,300. neg. 689-1582/588-6417.

VETTER FAIRING - Quicksilver, gloss black, frame mounted, full lighting, fits 450-750 cc bikes, excel. Ext. 5110 or 363-2641.

82 KAWASAKI CSR305 - low mi., recent maintenance, excel. cond., asking $750. Ext. 2982 or 736-4877 after 6 p.m.

78 HONDA ACCORD - a/c, am/fm cass., new tires, brakes, struts, fuel pump, 5 spd., clean in & out, asking $2,200. 277-1761.

327 POWER PACK HEADS - for early model Chevy, very good, $50. Dan, Ext. 4987 eves. or 698-7322 days.

77 AMC HORNET - good for parts or in need of good mechanic, $125 neg. Sheree, Ext. 2507 or 369-1625 after 5:30 p.m.

CB RADIO - 40-channel, 5-watt, w/microphone & mounting bracket, excel. cond., $35. Bill, Ext. 2906 or 929-6189.

80 MONTE CARLO - white, asking $3,200. 475-1836.

APACHE CAMPER - solid state, fold-up, sink, stove, dinette, sleeps 6, ice box, many extras. 475-3553.

84 CJ-7 JEEP - hardtop, 4x4, 4 spd., 15X33 tires, chrome spokes, Blaupunkt stereo, excel. cond., $7,000. 821-9808.

82 HONDA CIVIC FE/DX - stand., 45 mpg, excel. cond., light blue, am/fm cass. Susan, 531-1172.

70 CAMARO SS - rebuilt 350, 300 h.p., 400 turbo, a/t, new dual exhaust w/headers, custom rims w/new tires, $2,800. Dan, Ext. 3042 or 736-6441.

70 TAGALONG CAMPER TRAILER - fully self-contained, excel. cond., extras, $1,500. Pete, Ext. 4574 after 6 p.m.

84 MAZDA PICKUP - dark gray, 18k orig. mi., w/cap, excel. in/out, $4,500. firm. 785-7230 after 6 p.m.

79 PONTIAC GRAND PRIX - a/t, p/s, p/b, a/c, am/fm stereo cass., clean, dependable, $1,500. Pat, 744-8512.

80 MAZDA GLC - 70k mi., $300. Sergiu, Ext. 3790.

79 SUBARU BRAT - 4WD, new brakes, exhaust, fenders, paint, tune-up, 40k mi., engine, $2,000. Jeanne, 395-1078.

80 CHEVY CITATION - 4 cyl., 2 dr., a/t, a/c, p/s, p/b, am/fm, $1,200 neg; Sears top rack, used once, $15. Akos, Ext. 4973/3170, 10 a.m.-5p.m.

SUZUKI 550 - immaculate cond., very low mi., windshield and travel-trunk, $1,000. Frank, Ext. 3120.

78 CHEVETTE - gray, 2 dr., 98k mi., $600. Ext. 3419 or 286-0534.

77 TOYOTA CELICA - 5 spd., good cond., $1,500. Ext. 7734 or 395-1635.

86 MONTE CARLO SS - fully loaded, T-top, low mileage. Stan, 475-0532 or 736-7352.

85 DODGE OMNI - 2.2, 5 spd., am/fm, p/s, p/b, 32k mi., excel. cond., $3,750. Ext. 3872.

83 HONDA CR80 - doesn't run, best offer. 924-8213 after 5 p.m.

78 MERCURY MONARCH - good running order but some body damage, $500. Douglas Daniels, 475-4975.

84 BMW - 650 cc., black w/fairing & saddle bags, 15k mi., very good cond., $2,800. 689-7494, eves.

TIRES - (2) P205/75D14, never used, mounted on Ford rims, $60. Ext. 4002 or 924-7658.

80 CITATION - manual trans., runs well, good cond., $675. Ext. 4053 or 589-7099 after 6 p.m.

86 DODGE CONQUEST TURBO - auto. w/O.D., a/c, unlimited warranty, loaded, mint cond., $13,200. Bob, Ext. 4561 or 744-3289.

66 MUSTANG COUPE - excel. cond. Ext. 2543 or 751-2713.

85 FORD RANGER - 4 cyl., 5 spd., low mileage, mint cond., many extras, $5,500. Ext. 2839.

Ads left out of this issue due to lack of space need not be re-submitted to appear in the next issue.

80 PONTIAC GRAND PRIX - p/s, p/b, w/1981 engine, 45k mi., must see, asking $3,200. 286-3377.

79 MAZDA RX-7 - silver, 4 spd., am/fm cass., excel. cond., must sell, $3,500 neg. Ext. 2949 or 427-2435.

73 LINCOLN TOWNCAR - 4 dr., leather int., a/c, power seats/ant., extras, $700. 928-2984.

Boats and Marine Supplies

23' INBOARD CRUISER - 2 berths, cuddy, fully equipped, 225 h.p. FWC Chrysler, excel. cond., $6,900. Carl, 286-0271.

83 BAY LINER - 86 h.p. Chrysler, trailer, asking $4,500. Ext. 2951.

74 O'DAY-20 - fully equipped, four sails, 6 h.p., galv. trailer, in water, dockage paid. 286-1331.

76 OUTBOARD - Johnson 9.9 h.p. w/tank, runs well, $500. Bob, Ext. 7772.

26' F/G SLOOP - Polaris, W. Tripp design, shoal, draft, keel/cb, 25 h.p. inboard, 7 sails, $4,500. Ext. 4368 or 928-3371 eves.

14' STARCRAFT - alum. boat, very good cond., $500. Ext. 4312.

8' FIBERGLASS - outboard, rowing or sailing dinghy, like new, $500. Al, Ext. 7588.

SAILS - Jolly Boat, (3) complete sets, mast, poles, rudders, boards, $150. Ext. 2219 or 286-0047.

14' SAILFISH - 6½' sailing pram, both good cond., make offer. Bill, Ext. 4774.

Miscellaneous

REFRIGERATOR - 17 cu. ft., avocado, good cond., $90. 928-1209.

STRAWBERRIES - u-pick, Meadows Farm, Old Stump Rd., Brookhaven, 7 days, 9 a.m. - 5 p.m., no chemicals used.

VACUUM CLEANER - Kenmore canister, attachments, excel., $60; roaster over, $20; good typewriter, $20. Ext. 4341 or 475-4005.

MOVING OUT OF STATE - furn. sets, toys, games, books, new gift items. 928-5737 after 7 p.m.

COMPUTER - Radio Shack M-100, portable, modem, RS-232 printer port, software, extras, $330. 542-1078.

TOPSOIL - delivered, 5 yds. min., $15/per yd. 924-7746 or 924-9427 after 7 p.m.

WASHER & DRYER - elec., large capacity, $100. Ext. 2697 or 744-6962.

FOOD SLICER - Rival, elec., good cond., $25. Joe, Ext. 2898.

CEILING TILES - suspended, 2'x4', new, 22¢/sq. ft. Ron, Ext. 7533 or 286-0353, eves.

BIKE HELMET - Bell, worn once, $22; Wilson softball glove, small, worn once, $10. Ext. 2733.

WINDOWS - double hung w/storms, $5 ea.; thermopane double wide, double hung, $90; sink, stainless, 21"x24" w/faucet, $30. Victor, Ext. 2395.

MATTRESS & BOXSPRING - Simmons, King size, Maxipedic, cost $599, sell $450. Barbara, 744-0960.

BATHROOM SET - complete, 40" vanity, cabinets, light, very good cond., $50 or best offer; outside & storm door, $50; small drop fertilizer, $5. Ext. 2830.

REDWOOD CHAISE - cushions, chair, excel., like new, $40; Fridgidare, side-by-side, tan, 21 cu. ft., good cond., $50. 981-0011 after 2 p.m.

LEATHER JACKET - man's size 40, good cond., $50. Walt, Ext. 4798.

LIVING ROOM - $450; single bed, $50; dresser, $50, dining set, $450; TV, $30; recliner, $60. 928-5737 eves.

BUNK BED - 7 pc. set, $450; toaster-oven, $8; lamps, $50; antique mirror, $100; patio umbrella, $35. 928-5737 eves.

SCREEN ROOM GAZEBO - 12x12', octagon, used one season, new $400, asking $175. 567-8752.

HANGING LIGHT FIXTURE - smoked crystal, $60; Seiko quartz chime table clock, Westminister, Wellington, chimes quarter hour, $95. Ext. 7338.

LAWNMOWER - 3½ h.p. Briggs and Stratton engine, rotary, 22" cut, $65; Toro lawnmower, 20" cut, 3½ h.p., elec./manual start, $85. Dan, 698-7322.

CULTIVATOR & PLOW - for 8 h.p. wheelhorse, $30; all cast iron dumbbells, 10 lb. ea., $5; hand push lawnmower, $10. 878-6637.

ELECTRIC REMOTE CONTROL CAR - car, control, charger, used less than 6 hrs., all for only $125. Ext. 4688 or 758-4590.

Free

FIREWOOD - unsplit. Ext. 2697 or 744-6962.

KITTEN - cute little calico, needs loving home, 5 wks. old. 722-3938.

Yard Sale

MASTIC - June 6 & 7, 73 Carlton Ave., 3 families, baby items & much more. 395-4910.

BELLPORT - June 6 & 7, 10 a.m. - 4 p.m., 90 Circuit Rd., multi-family, furn., tools, appliances, etc.

BELLPORT - June 13 & 14, 10 a.m. - 4 p.m., 54 Country Club Rd. (off South Country Rd.), huge sale, 35+ yrs. accumulation, no toys/clothes.

ROCKY POINT - June 6, 8 a.m. - 4 p.m., 18 Soundway Dr. 821-9178.

Car Pool

MASTIC - need transportation to and from Lab, will pay, reside on Nelson Pl. off Fulton. Jody, Ext. 2907 or 395-3963 after 6 p.m.

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

N. SHIRLEY - lg. furn. studio apt., w/kit., pvt. ent., util. inc., 1 person only, non-smoker, no pets, 5 min from Lab & stores, security, $425/mo. pays all. 281-8044.

HILTON HEAD, SC - 2 bdrm. condo, sleeps 6, beach, pool, tennis, golf, many extras, some summer openings; taking fall rentals, $400/wk. 585-9149.

SOUTH BELLPORT - elegant furn. rm., priv. bath, garage, microwave, frig., cooking, short walk to Fire Island ferry, quiet non-smoker, rent for at least 6 mos., $380 mo. pays all. 286-1479.

FLORIDA - West Coast, house, 2 bdrm., kit., l/r, bath. tele., washer, 1½ hrs. to Disneyland, ¼ hr. to Gulf Beach, 6 mins. to Weeki Wachi, fully furn. 261-2719.

SOUTHAMPTON - 3-4 bdrm. house or 2 bdrm. cottage, waterfront, renovated, furn., 2-yr. lease beginning Sept., house $1,250/mo. + 2 mo. sec; cottage $950 mo. + 2 mo. sec. Ext. 2666 or 283-5376.

MASTIC BEACH - l/r, d/r, kit., bath, lg. garden, $675/mo. Ext. 7734 or 395-1635.

CALVERTON - 2 bdrm. townhouse, 1½ bath, l/r, 5 appli., dining area, cent. a/c, f/p, patio, upperdeck, w/w, no pets, $690. 878-0874 eves.

For Sale

EAST SHIRLEY - 5 bdrm. ranch, 3 baths, 2 car garage, full bsmt., city water, 120x150, oil HWH. 399-3415.

RIVERHEAD - 12'x55' mobile home, 2 bdrm., 1½ bath, l/r, eik, new shed, dbl. drive, corner lot in adult/55 park on Peconic River. Jeff, Ext. 2907 or 727-5915 after 6 p.m.

ROCKY POINT - 4 bdrm. ranch, 2 baths, fenced yd., excel. schools, large gourmet kit., eco. gas heat, cent. a/c, low taxes, $146,990. Ext. 3123 or 821-1039.

POCONOS - 3 bdr., chalet, l/r, d/r, family rm., w/wood burning stove, kit., w/w, garage, paved roads, pools, lake, clubhouse, tennis, guarded entrances, more, sacrifice for $115,000. 286-4652.

MASTIC BEACH - 3 bdrm. ranch, l/r with f/p, formal d/r, eik, detached garage, basement, ¼+ acre, city water, walk to beach. 281-5456.

FLEISCHMANN, NY - 2 acres, off Rte. 28, walking distance to town, good fishing, hunting & skiing, good for cabin or mobile home, reasonable. 821-9808 or 929-4312.

STONY BROOK - 4 bdrm. Cape, 2 bath, prof. landscaping, 2 car garage, c/ac & vac., alarm system, 3 V schools, near shopping & schools, owner anxious. 751-2469 eves./wknds.

NORTH SHOREHAM - 4 bdrm. Colonial, 2½ baths, den with f/p, basement, fenced, patio, formal d/r. Ext. 3369.

ROCKY POINT TIDES - Hi-Ranch, 3 bdrms., 2 baths, country kit., f/r, sunrm., 2 car garage, laundry rm., 32'x16' in-ground pool, reduced price, $156,990. 821-3709 after 5:30 p.m.

Wanted

HOUSE TO SIT - by professional couple, any time from June 10 to Labor Day. Ext. 4776.

HOUSE TO SIT - free, reliable, caring, experienced, any period after May 30. Jack Allentuck, Ext. 2412.

HOUSE/APARTMENT TO RENT - for small family, near beach, July-August. Simon, Ext. 2182.

HOUSE TO RENT - August, couple w/2 children, possibly a cat, reasonable. 722-3338.

SANDBLASTER - small, portable, reasonable price. 475-2509.

TRAINS - Lionel, American Flyer, accessories, any cond., brings good price. Carole, Ext. 3362 or 924-4097 eves.

Services

*Services are listed as a courtesy to BNL employees. They are neither screened nor recommended by the **Bulletin**.*

GENERAL CONTRACTOR - carpenter, extensions, dormers, garage conversions, basements, decks, kitchens, licensed, free estimates. Jim, 698-2501.

RUG SHAMPOOING - very reasonable, Lab discount. 924-9637, leave message.

LAND CLEARING - using excellent rake on JD 450 track loader, $55./hour w/operater. Tom, Ext. 4084 or 878-1060.

TREE REMOVAL - & trimming, free estimates. Ken, 289-8212 eves.

FIRESIDE CHIMNEY SWEEPS - fireplaces, wood, coal & oil flues, caps, chimney relining, fireplace accessories. Mike, 821-9690.

TYPING - fast, accurate, resumes, $15. Ext. 2484.

SPACKLING - basements, dens, bedrooms, studies, free estimates, Suffolk, quality work, reasonable price. John, 281-3342 after 6 p.m.

BRICK WORK - patios, walks, swimming pools, Belguim block, landscape ties, 20 yrs. experience. Tony, 698-9274.

TROYBILT ROTOTILLING - will do yards & gardens. Bob, 732-9517.

CUSTOM DECKS - Ron, 289-1003 eves.

MECHANIC - tune-ups, brakes, etc. John, Ext. 4797.

LIMOUSINE SERVICE - for weddings, proms, airports, all special occasions. P.J.L. Limousine Service, 286-9382.

KAYAK LESSONS - all equipment provided by instructor, plus 1½ hrs. free time, $60/5 hrs. Tim, 281-7873.

CERAMIC TILE - professionally installed, free estimate. 585-0178 after 5:30 p.m.

MAGICIAN - balloon sculpture, professional magician, will make child's party special, Lab discount, ask for brochure. 395-3963.

PARTY TENTS - for rent, we set-up & take down. Fred, Ext. 7947 or 588-2268.

MOVIES TRANSFERRED - to VHS video cassette, expertly, reasonable price. 467-8297 eves/wknds.

CAR WAXING - interior cleaned, window tinting, minor tune-ups, reasonable. Eddie, Ext. 4257.

SPACKLING - free estimate. Kevin, 563-1189.

VIDEO TAPING - wedding ceremony, professional, reserve date, reasonable. Ext. 4498 or 286-8611 after 6 p.m.

LOADING/GRADING BOX - for hire, bluestone driveways, fill delivered/removed, work guaranteed, reasonable rates. 368-8130.