BROOKHAVEN BULLETIN
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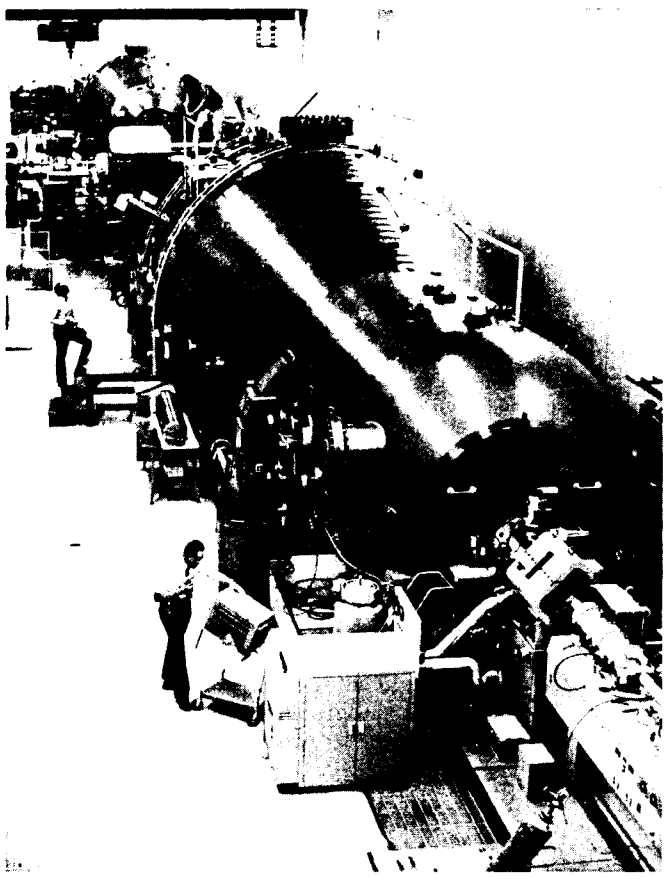
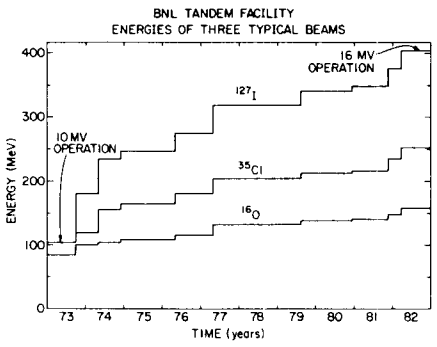
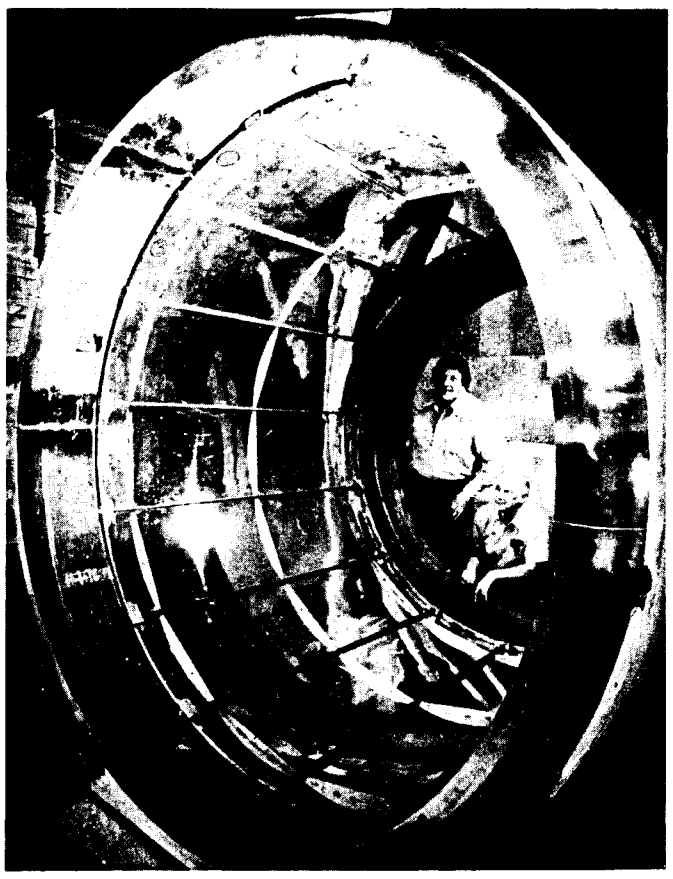
BROOKHAVEN NATIONAL LABORATORY



Mort Rosen



Left, the two BNL Tandem Van de Graaff accelerators. The machine in the foreground has just been upgraded to 16 million volts. Peter Thieberger (foreground) views the oscilloscope screen; Bob Lindgren observes Chuck Carlson working on top of the accelerator. Above, history of the maximum energy for some typical beams. Right, Mario Manni and Frank Rumph inspect the inside of the new Van de Graaff terminal shield. Being installed this week, the shield may soon permit even higher voltages.



Doug Humphrey

Tandem Continues Fine Tradition: Reaches 16 MV

Last week another superlative was added to the long list compiled by the Tandem Van de Graaff Facility. The Tandem operated at 16 million volts for three different experiments of groups from Rochester, MIT and BNL. This high voltage allowed an experiment using the highest energy heavy ion beam ever delivered by an electrostatic accelerator, 350 MeV zirconium-90.

The event is a result of the latest upgrading efforts by the Tandem operations group, headed by Peter Thieberger. Ironically, it also comes at a time when budget problems loom over the facility, unfortunate because as Thieberger says, "Right now, we have the best electrostatic accelerator running." Oak Ridge National Lab in Tennessee is de-bugging a new facility which should be capable of producing even greater energies, but "the BNL Tandem can be expected to continue to have the most reliable operations for some time."

The Tandem went into operation in 1970 under the direction of Harvey Wegner. Robert Lindgren recalls, "Back then we could barely make 10 MV." Lindgren, who supervises the machine operation, says critical parts have been changed through the years to upgrade the voltage capability.

1973 — Insulation gas changed from 100% nitrogen and carbon dioxide to a 50/50 mix with sulfur hexafluoride.
1976 — Original aluminum electrode acceleration tubes replaced with stainless steel.
1977 — Rubber belt charging system changed to insulated metal links.
1980 — Installation of improved, BNL designed, resistor voltage dividers.
1981 — Acceleration tubes lengthened

The latest change led to last week's increase in operating voltage. Design engineer Mario Manni, assisted by Frank Rumph, did the detailed design work for most of the improvements at the Tandem. Manni explains that although the new parts (some machined at the Tandem and by Central Shops) were installed last September, the machine had to be conditioned before it could operate at the higher voltage. Even while the machine was being conditioned, experiments requiring lower voltages were run because of the demand for machine time.

The Tandem is above all a user facility, dedicated to accommodate research scientists in nuclear and atomic physics. The constant upgrading has made it a unique facility for nuclear physics studies, with a world-wide reputation for being efficiently run. That's partly why demand for beam time is more than twice what is available.

Half of the beam time is used by scientists who come from institutions all over the world. Many come for single experiments, others do a major portion of their nuclear physics research at the BNL facility. Such is the situation for physicists at the Massachusetts Institute of Technology, whose experiment last week was the one in which the Tandem achieved it's record-breaking beam energy. Says MIT's Marty Beckerman, "BNL is the only place in the country where this experiment could have been done. Brookhaven's Tandem is rather unique in that we can specify a particular beam and energy, and they will come up with it."

The Tandem has accelerated isotopically pure beams of over a third of the elements in the periodic table, says Mike McKeown, who is in charge of ion source development. At the other end of the line, target maker Irving Feigenbaum has made hundreds of different targets — whatever is required by an experimenter.

According to Ottmar Kistner, who oversees scheduling users on the machine, about 60 experiments are done a year, with the machine running almost around the clock. For the most part, an outside user can arrive with a minimum of baggage, because the Tandem has such up-to-date experimental equipment available. Also, technicians Ken Asselta and Bernie Comfort are on hand to set up experiments.

Recently, the data acquisition computer was upgraded to accommodate the new and bigger experiments now possible. Roger Lee, of the computer support group which also includes Bob Scheetz and Betty McBreen, says the computer memory has been doubled and a second central processing unit added to make data taking and analysis easier and faster.

Another improvement is a new detector for the QDDD, an experimental apparatus that separates particles by momentum. Physicist Craig Thorn, designer of the detector, says the Tandem is going to such high energies that a zoo of particles will come out of an interaction between the beam and a target. The new detector will do a better job of sorting them.

Benefitting from the new detector will be a major program of experiments done by BNL physicists to study the structure of nuclei at high angular momentum. Peter Bond, a member of the experimental group, says, "The combination of the QDDD, together with the high energy and excellent beam quality of the BNL Tandem, makes this facility unsurpassed for high resolution nuclear physics studies."

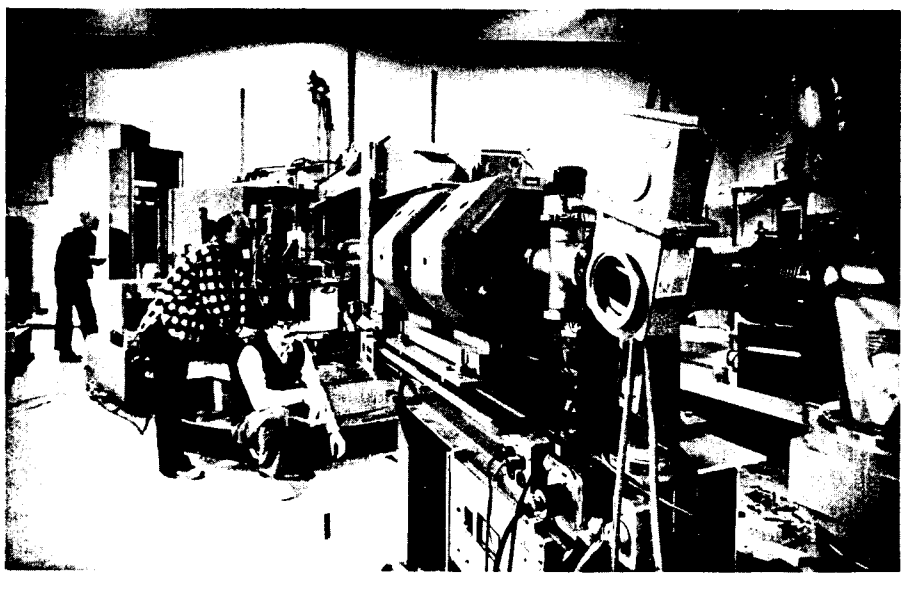
What is the energy limit of the facility? Peter Thieberger says, "We haven't reached it; we're still working on improvements." He points out that the three-stage facility, using the two accelerators together, will soon be equivalent to a single 20 MV machine. "Thanks to excellent support from DOE's Division of Nuclear Physics, we have upgraded beyond what anyone thought was possible years ago."

The great dream he shares with others at the Tandem is to build a booster cyclotron, which has been designed by a group led by Chellis Chasman. The cyclotron would accelerate beams from the Tandem to 10 to 20 times present energy. These beams can in turn be injected into the AGS and finally into ISABELLE. The tremendous high energy heavy ions thus achieved will be necessary to discover and study new forms of matter and energy at super high densities.

Besides the people already named, many others have contributed to the Tandem's successful operation and development. Supervisors and operators of the machine, who also do upgrading and maintenance, are Hans Abendroth, Greg Borsella, Chuck Carlson, Frank Ogilvie, Tom Russell and George Virtes. Ted Robinson and Leroy James design and build electronic equipment. The operation of the facility on weekends involves a group of local high school science teachers whose efforts are organized by Joe Roberge. Many of the accelerator components were fabricated in the facility's local machine shop by Bill Dunne, Charles Hebrance, and Ken Orsini. Secretaries for the entire facility are Sandy Long and Lore Barbier.

"It takes years to develop the tradition we have here of providing the best service to the scientific community," Thieberger says. "It's an investment difficult to replace and certainly worth protecting."

—Mona S. Rowe



Doug Humphrey

Ernie Warburton (left, Peter Bond and Craig Thorn getting ready for an experiment using the QDDD magnetic spectrometer.

Pianist In Last Concert Of Season

Pianist Boris Bloch will present a concert on Thursday, April 1 at 8:30 p.m. in Berkner Hall. This is the final performance in the BERA Concert Series for 1981-82.

Boris Bloch

Bloch was launched into an international career when he won the prestigious Young Concert Artists International Auditions in 1976 in the New York and the Grand Prize in the Busoni Competition in Italy in 1978. He was born in Odessa, U.S.S.R. and completed his studies at the Moscow Tchaikovsky Conservatory.

The program on April 1 includes such favorites from the piano repertoire as Schumann's Fantasiestücke, Op. 12, and Beethoven's Sonata No. 17 in D Minor, Op. 31 No. 2, "The Tempest." Bloch will also play some unusual pieces, including Tchaikovsky's Meditation and The Interrupted Dreams; Stravinsky's Serenade en La; and P. Pabst's Concert Paraphrase on Tchaikovsky's "Eugene Onegin."

Tickets for the concert will be available at the door. Adults are $7; students and senior citizens, $4; and those under 18, $3.

HMO Enrollment Open To March 31

The Laboratory is offering eligible employees the annual option of enrolling in the Blue Cross/Blue Shield Community Health Plan of Suffolk Inc. as an alternative to coverage under the AUI Group Medical Insurance Plan. The deadline for enrollment in the Blue Cross/Blue Shield Plan is March 31, with coverage becoming effective April 1.

The BC/BS Community Health Plan of Suffolk is a New York State certified Health Maintenance Organization (HMO) Plan, which serves residents of the five western townships of Suffolk County and the eastern part of Nassau County. The facility is affiliated with two hospitals: St. John's Episcopal Hospital in Smithtown; and, for more specialized services, Long Island Jewish-Hillside Medical Center.

The BC/BS HMO provides continuity of care under the direction of an internist (or pediatrician, for children), who is in effect the member's private physician. In addition to primary care physicians, specialists in such areas as gynecology, opthalmology, urology, dermatology and neurology, as well as registered nurses and supporting health care personnel, are on staff.

The BC/BS HMO facility is equipped to take X-rays and laboratory tests, and to provide immunizations, allergy treatments, eye examinations, well-baby care and physical examinations. Care is available 24 hours a day, seven days a week.

The Laboratory will pay the full premium cost for employees and their dependents covered by the BC/BS HMO Plan for the new enrollment period, April 1, 1982 through March 31, 1983.

Employees who are interested in the BC/BS HMO Plan are encouraged to visit the facility at 3001 Express Drive North, Hauppauge (intersection of LIE, Exit 57 and Veterans Memorial Highway). Open house dates for BNL employees have been scheduled for Saturday, March 20 at 10 a.m. and Wednesday, March 24 at 7 p.m.

Employees wishing to enroll or terminate their membership in the BC/BS HMO Plan can obtain the appropriate forms at Personnel Services, Bldg. 185 (Ext. 2877).

Donors Wanted For Medical Study

Scientists in the Medical Department are involved in several programs investigating the characteristics of human blood cells and the bone marrow from which the blood cells originate. Much of this work involves the study of blood and bone marrow from patients with blood related disorders. However, in addition to characterizing patient samples, it is necessary to make comparisons with samples from normal individuals. In other studies the effects of various environmental pollutants on normal bone marrow and blood cells are examined in culture systems. These studies all require blood and bone marrow samples from normal, healthy individuals.

To meet this need a program was established several years ago whereby Brookhaven National Laboratory employees may be compensated $10 for the withdrawal of up to 50 milliliters of blood and $50 for up to 10 milliliters of bone marrow.

A list of individuals wishing to participate will be maintained at the Hospital and as the need for marrow and/or blood for the laboratory studies arises, individuals will be called. Obtaining blood for laboratory studies is in no way a part of the blood donor program sponsored by the American Red Cross to provide blood for patients.

To participate in this program the individual must be a Brookhaven National Laboratory employee, at least 21 years of age and in good health. Since samples will be taken during regular working hours (8:30 a.m. - 5 p.m.), absence from one's regular duties must be approved by the individual's supervisor. The total time required in the Medical Department for taking a blood sample will be approximately 10 minutes; for taking a bone marrow sample, approximately 30 minutes.

Any employee interested in participating in these studies may obtain further information by telephoning Extension 3672.

I.B.E.W. Meeting

Local 2230, I.B.E.W. will hold its regular monthly meeting on Thursday, March 25, at 6 p.m. in the Knights of Columbus Hall, Railroad Ave., Patchogue. There will also be an afternoon meeting at 2 p.m. for shift workers in the Union office at 31 Oak Street, Patchogue. On the agenda will be regular business, committee reports and the President's report.

New Towels Save $$

Over the next few weeks, all C-fold paper towel dispensers on site will be removed and replaced with roll-type dispensers. According to John Scharpeger of the Supply & Materiel Division, this move will have three effects that will be beneficial to the Laboratory. It will save approximately $18,000 annually, reduce maintenance requirements and provide employees with a better product.

Through the combined efforts of personnel in Supply & Materiel, Contracts & Procurement and Plant Engineering, a contract has been negotiated with a vendor to supply roll-type paper towels that are much more absorbent than the C-folds. Recently, the new towels were tested on site in the new dispensers. It was found that, on the average, one 12-inch strip of roll-type towel replaces three C-fold towels. In practical terms, this means that the Lab will need to buy about one-third less paper towels and dispensers will require refilling only about one-third as often.

CREF Values

March	52.85	April	52.39
May	52.56	June	51.94
July	51.19	August	48.26
September	$45.89	October	47.61
November	$49.61	December	$48.33
January $47.49			

February $44.88

Arrivals & Departures

Arrivals

Thomas M. Poole ..... Staff Services
Ann P. Porteous ..... Saf. & Env. Prot.

Departures

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

Beth P. Salata ..... Director's Ofc.

Choosing A Tree

Before you decide what variety of tree you wish to plant, you must decide whether your home needs summer shade or winter wind protection.

Deciduous or leaf-bearing trees can be a real boon in New York's sweltering summers. A healthy shade tree can provide enough cooling so your family may not even wish for air conditioning. And if you have an air conditioning unit, you'll find shade trees will make the unit cheaper to operate, according to Cooperative Extension specialists.

Evergreen trees should not be planted for shade. They do not have a canopy to protect a home from the summer sun, and they block sunlight in winter. However, evergreen trees are ideal as a winter windbreak. Plant the evergreens about 50 feet from the house, to minimize drifting snow. Even trees less than five feet tall are effective as a windbreak. Low, dense foundation plantings of evergreens also will act as a windbreak.

Japanese Businessmen At BNL

Officials of the JGC Corp., Tokyo, Japan, spent a day at the Lab on March 15. The company is a large architectural engineering management firm. The visitors held discussions with Walter Kato, deputy chairman of the Department of Nuclear Energy, (DNE) and toured the ISABELLE site, the National Synchrotron Light Source and the HFBR. At DNE they talked with Donald Schweitzer (right) head of the Nuclear Waste Management Division and with staff member Robert Barletta (center), about the Lab's radioactive waste research program.

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BERNICE PETERSEN, Editor
MONA S. ROWE, Assistant Editor
ANITA COHEN, Reporter

35 BROOKHAVEN AVE., UPTON, N.Y. 11973
Telephone (516)282-2345

NYC Train Trip

The Hospitality Committee is planning a group railroad trip to New York City on Wednesday, March 31. Departure will be at 7:55 a.m. from the Patchogue LIRR station. Round-trip fare for adults is $3.50; children under six years ride free.

Reserve a ticket by sending your fare through the U.S. mail to P.O. Box 322, Upton, New York 11973, no later than **Thursday, March 25.** Please make checks payable to "Brookhaven National Laboratory," and put the date of the trip, your BNL life number and your telephone number on the check. Your tickets will be given to you on the train. Refunds will be made only if cancellations are received by the Monday morning preceding the trip.

Opening Tonight!

Doug Humphrey

The BNL Theater Group's lively production of "The Play's The Thing", a classic comedy by Ferenc Molnar, will be presented at 8:30 p.m. on March 19, 20, 26, and 27 in Berkner Hall. The cast consists of (from left) Anthony Fainberg, Peter Irving, Bob Kinsey, Joseph Indusi, Sandi Lane, Bill Love, Kurt Fuchel, and Neil Baggett. Get your tickets ($2 for students under 18 or senior citizens, $3 for others) from the people listed below, or at the door.

Ticket Sellers:

BERA Sales Office ..... Berkner Hal
Neil Baggett 510F-Physics
Penny Baggett 902B-ISABELLE
Kurt Fuchel ..... 515-Appl. Math
Georgia Irving ..... 460-Director's Office
Bob Kinsey 197D-DNE
Sandi Lane 830-DNE
Joe Skelly 911B-Accelerator
Bonnie Wesolowski 555-Chemistry

Sodium and Hypertension

Sodium is a mineral essential for life. Hypertension is high blood pressure. Exactly how they are related is not known, but it has been recognized that restricting sodium consumption may lower blood pressure in certain hypertensive patients without the need for medication. In others, such restriction may reduce the need for higher doses of medication.

Everyone needs some sodium in the diet - at least 230 mg a day, the equivalent of $^1/_{10}$ teaspoon of table salt. But most Americans take in 45 times that amount, or approximately 10 grams (10,000 mg) per day. A diet containing 250 mg of sodium per day is a severe restriction, usually impractical outside a hospital setting. Values of 2 grams (2000 mg) and 4 grams (4000 mg) per day represent moderate and mild restrictions respectively and are easier to attain.

The difficulty in restricting sodium consumption is that sodium seems to be in almost everything. It occurs naturally in most foods and is found in many beverages, including tap water. Fresh foods are generally low in sodium, although dairy products tend to have a high sodium content. Sodium is an artificial addition to just about every processed food on the market, from canned fruit to bacon. It is contained in food additives such as MSG (monosodium glutamate), sodium phosphate, sodium nitrite, and in artificial sweeteners such as sodium saccaharine. In addition, medications such as laxatives and antacids may have significant amounts of sodium. Table salt is 40% sodium and is the main source of that mineral in the American diet.

Unfortunately, since it can be so difficult to follow a restricted sodium diet, many people find it easier just to take medications. But even then, most of the antihypertensive medications will work more effectively if sodium intake is lowered. Salt substitutes should not be used without a physician's advice, since they are high in potassium and may be dangerous when taken with certain medications.

One suggestion for patients on special diets is to prepare lunches in advance and freeze them instead of purchasing something from the delicatessen or fast food restaurant. For example, leftover turkey on fresh rye bread freezes well and numerous sandwiches can be made in advance. The same is true for meatloaf, roast beef, chicken, etc. In addition, cooked chicken parts freeze well and will usually defrost by lunch time, yielding a satisfying low calorie, low sodium meal if combined with fresh vegetables.

Following is a list of some common food items and their sodium content taken from a 1979 Consumers Report article and from a list compiled at BNL. For a more comprehensive list, stop by the clinic.

— Caroline Kramer, R.N.
Occupational Medicine Clinic

Food	Mg of Sodium
1 apple or orange	1-5
1 tomato	1-5
1 carrot	15-25
3 ounces chicken or turkey	50-70
1 stalk celery	65
1 slice rye, whole wheat, or white bread	100-150
1 cup whole milk (8 oz)	120
1 olive	182
1 ounce processed cheese	200-300
$^1/_2$ cup canned tomato juice	240
1 tbsp. ketchup	220
$^1/_4$ cup canned mushrooms	240
1 ounce Kelloggs corn flakes	260
1 tbsp. Wishbone Italian dressing	315
$^1/_2$ cup Jello instant chocolate pudding	404
3 ounce canned tuna	470-628
1 pkg Herb Ox instant broth	818
1 tbsp. soy sauce	858
3 ounces processed ham	940
8 ounce serving Campbells Beans and Franks	958
1 Swanson fried chicken dinner	1152
1 dill pickle	1137
1 serving Chef Boyardee beefaroni	1186
1 Big Mac	1510

Volleyball

Mixed League Standings

A Division	
Teddybares	11-1
Dinkers	9-3
Mixed Ups	9-3
High Society	7-8
Nuts & Bolts	5-10
Las Bolas	1-8
Leftovers	0-9
B Division	
Semi Tough	9-3
TNT	9-3
Puff & Stuff	7-5
KMA	5-7
Big Boopers	4-8
Quirks	2-10

Cafeteria Menu

Week Ending March 26, 1982

Monday, March 22		
Cream of mushroom soup	(cup)	.60
	(bowl)	.70
Western omelet w/hash browns		1.70
Beef liver & onions w/1 veg.		1.70
Hot Deli — Grilled Reuben		1.75
Tuesday, March 23		
Beef vegetable soup	(cup)	.55
	(bowl)	.65
BBQ spare ribs & 1 veg.		1.80
Salisbury steak & 1 veg.		1.75
Hot Deli — Roasted turkey breast	(bread)	1.75
	(roll)	1.85
Wednesday, March 24		
Chicken okra Creole	(cup)	.55
	(bowl)	.65
Pot roast of beef & 1 veg.		1.85
Turkey chow mein over rice		1.70
Hot Deli — Sandwich steak w/fresh peppers and onions	(bread)	1.80
	(roll)	1.90
Thursday, March 25		
Beef barley soup	(cup)	.55
	(bowl)	.65
Veal pattie parmesan & 1 veg.		1.75
or with spaghetti & sauce		1.95
Seafood platter		2.05
Hot Deli — Meatloaf hero w/BBQ sauce		1.85
Friday, March 26		
Clam & celery bisque	(cup)	.60
	(bowl)	.70
Tuna noodle casserole		1.70
Ham & broccoli crepes & 1 veg.		1.70
Hot Deli — Clam boat		1.85

Discovering your driver's license expired improves driving habits.

Softball

Reminder: this is your last chance to enter your team in the BERA Softball League. All rosters must be sent to Charlie Bohnenblusch or your League Representative by April 2.

Individuals who are not already on a team and are interested in playing softball should call Sharon Smith, Ext. 3995.

Bowling

White League

The Portsiders remain in first. High games were bowled by K. Griffin 192, M. Belligan 181, M. Brenner 179, K. Asselta 219, D. Adams 203/214/211 for a 628 scratch series, J. Ferrante 191/201, N. Carter 186/182/209.

Pink League

R. Rosati bowled games of 163/175/171, C. Beckner 173, F. Briening 203, D. Johnson 170/174/179, M-G Meier 174, H. Keeley 176/180/197, E. Kristiansen 188, M. Connelly 185, M. Apelskog 186.

Red & Green League

High games were bowled by D. Jesaitis 213, E. Sperry 200, J. Ferrante 203, A. Almasy 200, J. Morris 202, C. Bohnenblusch 212, J. Medaris 200, W. Sells 200, R. Eggert 214, E. Sperry IV 209, M. Iarocci 200, D. Schappa 200.

Purple League

The Draftecs are in first place. C. Tomasch rolled a 266, G. Spira 201, B. Benson 210, E. Shute 199, D. Feitler 189.

L.I. Industrial Tournament

M. Iarocci had games of 203/205/201 for a 609 scratch, J. Morris 220, D. Larsen 220/610 scratch.

Runners' Corner

The Brookhaven Roadrunners will meet on Thursday, March 25 at noon in the Conference Room of Building 318 (across from the bank). All members, and other experienced runners, beginning runners and walkers are welcome. Plans for the Spring Race on May 16 will be discussed. Applications for local races will be available. Bring your lunch.

Classified Advertisements

Autos & Auto Supplies

77 TRUCK CAMPER - 11½' Aristocrat, loaded, mint cond. Mike, 878-1325.

AUTO ROOF CARRIER - 37"x37"x5", new, $18. Jag, Ext. 5080 or 751-1884.

78 HONDA - 400cc, well maint., 6000 orig. mi., some extras, must see, $1,000. Ext. 2926.

68 VW BUG - recond. eng., new clutch, new paint, very clean, must be seen, $1,875. 281-2431.

76 VW DASHER - 4 dr, auto, am/fm, $3,000 or best offer. Arnie, Ext. 2606.

76 HONDA MOTORCYCLE - CB400F, 13K mi., all stock, mint, $800. Ext. 3146 or 654-2617.

67 FORD CUSTOM 500 - runs good, p/s, 4 dr, $450. Ext. 3395 or 325-1537.

78 TRANS AM - excel. cond., 4 spd, 400 eng., T-top, new brakes, gold ed., beige int., $5,500. Roy, Ext. 4664 or 744-8779.

CHEVY BLAZER PICKUP - compl. nose unit, excel. cond., no rust, $500 or best offer. 286-1522 eves only.

81 HONDA - 7,000 mi., CX500, excel. cond., $2,000. Fatimi, 286-8740 after 8 p.m.

72 DODGE CHALLENGER - R/T, 340 eng., auto, good cond. in/out, extras, must sell. 281-2257 after 5 p.m.

77 HONDA - 400cc, Super Sport, 4 cyl, excel. cond., excel. mi, must sell, $1,000. 281-2257 after 5 p.m.

74 VW SUPER BUG - stick shift, a/c, rear window defog., a/m radio, new tires, $3,000 firm. 286-8706.

72 GMC WINDOW VAN - heavy duty suspension, 2 rear seats, $1,600 firm. 286-8706.

72 HARLEY DAVIDSON - FLH Police Special, 1200cc, all stock, $2,800. John, Ext. 4973 or 798-3766.

70 AMC REBEL - 4 dr, good cond., economical, best offer over $300. Ext. 4341 or 475-4005.

77 VW RABBIT - a/t, 4 dr, am/fm, new tires, very good cond., uses reg. gas, $2,950. 744-9832.

G-70 WIDE OVAL TIRES - new, w/chrome 15" Crager rims and locking nuts, $150. Ext. 4220.

73 VW SUPER BEETLE - convertible, excel. shape. GR 5-4199.

80 VESPA 125 - 55 mph, 110 mpg, 700 mi., best offer. 928-8060 before 8 p.m.

HD AIR SHOCKS - Sears, $40. Ext. 4270.

72 VW SQUAREBACK SEDAN - a/t, excel. running cond., $1,200. Sy, Ext. 3600 or 289-8182.

70 KARMANN GHIA - mint cond., stereo, mag wheels, must be seen, $2,300. Sheryl, Ext. 5174 or 924-7610.

RIMS - 15" for Cadillac, 2/$15; 65-66 Mustang, orig. rear bumper, no dents, $15; 65-67 Mustang convert. well cover, new, $15. 929-8105.

77 DODGE ASPEN - 2 dr, 6 cyl, p/s, p/b, a/c, radio, vinyl top, 48,000 mi., excel. cond., $2,800. Ext. 3525 or 331-3724.

73 PLYMOUTH FURY - 4 dr sedan, 318 eng., good mech. cond., $325. 924-0960.

74 HONDA 350 - good cond., $550. 878-8847.

77 HONDA 750F - Super Sport, 10,000 mi., clean, runs excel., many extras. Jim, Ext. 4095.

67 CHEVELLE - Super Sport, needs work, no eng., best offer. Ed, Ext. 4095.

73 PINTO WAGON - 4 spd, runs well. Alan, Ext. 2928 days or 821-1389 eves and weekends.

75 MG MIDGET - mint cond., new tires, shocks, tops, immaculate, must see. Damian, 744-5079.

Boats & Marine Supplies

CLAM BOAT - 22' Garvey, 125 HP Johnson, excel. cond., $2,200. Steve, Ext. 2663 or 475-2537.

TYLERCRAFT 24' SLOOP - twin keel, sleeps 4, encl. head new sails, new eng. R. Boie, Ext. 4232.

15' WINNER COBRA - 125 HP Johnson, galv. trailer, mint cond., $3,450. 331-1754, 5-11 p.m.

15½' MFG TRI-HULL - 50 HP Mercury, trailer, full canvas, excel. cond., $1,800. Al, Ext. 4445.

LASER SAILBOAT - w/Harken block and hand trailer, very good cond., $800. 325-0928.

TRU-TRIM POWER STEERING - for Mercury V-6 outboards. List $229, asking $100. Brian, Ext. 4121.

22' FIBERGLASS - Seaskiff and trailer, V-6 I/O, extras, fast and economical. Charlie, Ext. 3935 or 325-0968.

21' FIBRE FORM - new I/O, stove, refrig., sleeps 5, head, SSVHF, depth finder, many extras, $3,500. Ext. 4270.

23' ALLMAND - fiberglass, 150 HP Mercury I/O, cuddy cabin w/trailer, $3,500. 475-2679 eves.

MARINE ENGINES - (2) Chrysler Royal straight eight, $175; propeller, 22x22, left hand, mint cond., $100. 878-8847.

25' DORY - $50; 20' fiberglass boat, $350. Ext. 2023 or 744-0047.

Yard Sales

TAG SALE - March 20, Oak La. (off Northside Rd.), Wading River, 10 a.m.-4 p.m. Eriksen, 929-8642.

Miscellaneous

BOY'S 3-PIECE SUIT - w/white shirt, sz. 10, navy blue, polyester, like new, $15. Ext. 2926.

ENCYCLOPEDIA BRITANNICA - 1968 edition, plus yearly books, $650 value for only $250; grandfather clock, walnut, all wood, Westminister chimes, $400. 924-6354.

TYPEWRITER - Smith Corona portable, $40 firm. Ext. 2041.

MET OPERA TICKETS - Fidelio, Apr. 2, DC Box 3, Seats 2 & 3, outstanding but partial view, $32. 928-7826 eves.

WOMENS 27" BICYCLE - 5 spd., $40; vinyl saddle bag, new, $4. Jack, Ext. 4411 or 929-8287.

KING SIZE BED - $300; 110 lb. barbells, $20; Wen Coping saw, $20; Coleman 3-burner stove, $25. 924-8297.

BOY'S "BOTANY" VESTED SUIT - navy blue, sz. 14, worn once, perf. cond., cost $65, asking $25; "Marmet" Carbed Carriage, brown, good cond., cost $125, asking $25. 472-2743.

48" ROUND COFFEE TABLE - Ethan Allen, w/plate glass top, $75; solid maple king size headboard, only $10. 286-1331 after 5 p.m.

FISCHER "400" STEREO RECEIVER - walnut cabinet, two speakers, $90. John, Ext. 4680 or 5329.

RECLINERS - 2 rocker/recliner chairs, tan naugahyde, very good cond. 473-8387.

GUITAR - Egmond, beginners, mint cond., $25. 286-2435.

COFFEE TABLE - white marble top, cherry wood, 40"x23"x17", good cond., $70. Ext. 4231.

GENERATOR - 3500 watt, 115V, cast iron, Briggs engine w/automatic idle control, $500. 924-6996.

FIREPLACE - brand new, free standing, wood burning, screen all around, $75. Ext. 4702 or 928-7769 after 6 p.m.

TUB ENCLOSURE - glass, 5', $30; lawnmower, J.C. Penney, 3 HP, 22" wide cut, 8 yrs. old, $30. Bill, Ext. 3355 or 472-4684 after 6:30 p.m.

YARN - custom blended by the oz. or lb. Jean, 698-3645.

DOG HOUSE - for large dog, well made, $30. John, Ext. 7601.

ANDERSON WINDOW - approx. 2'x4', $10; white formica counter tops; double stainless sink; Aries helmet, full face, sz. med., black, new, $70; pool pump, 3/4 HP, $50. Ron, Ext. 7101 or 289-1003.

CAST IRON STOVE - Comforter, wood or coal. 475-0509 after 6 p.m.

TOYS - hardwood blocks, $10; hamster Habitrail, w/extras, $10; rock tumbler, $10. 473-2473.

EXTERIOR DOOR - new, 2'8"x6'8"x1-3/4', 3 windows, Right, prehung, fir, $110. 924-6582.

BATAVUS MOPED - $300; (2) air conditioners, 5,000 and 7,000, $75. Ext. 2023 or 744-0047.

PIANO - Gulbransen Spinet, lovely tone, warm cherry finish, excel. cond., $600. Jerry, Ext. 3930 or 286-2854.

26" GIRLS BICYCLES - (2), excel. cond., $15/ea. Ext. 3254.

FULL SIZE BED - box spring, mattress & frame, very good cond., $150. Ext. 3473.

FREEZER - $200; girls bike, $45. Paul, Ext. 4156.

POOL - 24'x4', w/all equip.; chandeliers; Deming water pump w/30 gal. tank; buffet; medicine chests; headboards. Jake, Ext. 4532.

POOL - 18' round, Marathon steel, HP Hayward D.E. filter, skimmer, ladder, solar/winter covers, all misc. access. complete, 2 yrs. old, $750. 929-6692.

C.B. TOWER - 40" tilt, Wilson "Y" quad antenna, rotor, cable & many other extras, $150; all wood credenza, beautiful for dining/living room; black Japanese Silkie chickens. 751-5539.

CAR RACING SET - Aurora, AFX, GT (plus) cars, new pwr. transformer, extra tracks & cars, hardly used, like new. Mark, 744-8063 days.

RATTAN SWING CHAIR - w/o stand, for child, never used, $30. Dave, Ext. 4148.

B.I.C. TURNTABLE - manual, auto, w/new Pickering cartridge, like new cond., $50. Larry, Ext. 3935.

BICYCLE - boy's 24" Schwinn, 10 spd, $40. 581-7656.

COUCH PILLOWS - hand crocheted, ruffled, variety of colors, $10-$15/ea. 751-2867.

SWIVEL EASY CHAIR - black, $40; decorator floor lamp, $25; hamburger maker, new, $4. Ext. 4164.

TUMBLING BARRELS - machine and (2) rubber lined barrels, 110 volt, $150. Fred, Ext. 4407.

BLANK BASF CASSETTES - prof. series and metal, reasonable. Ext. 2521 or 928-8379 eves.

CEILING TILES - white, sculptured, $.10/ea. 281-7844.

SKIS - 180 cm Hart, 160 cm K-2, Head bindings, 6, 8 Munari boots. HR 2-1473.

MEDICAL THERMOMETERS - electronic, brand new, $10. Charlie, Ext. 3935 or 325-0968.

MEN'S STRETCH SKI PANTS - 33-34 R, dark blue, brand new, never worn, orig. $150, asking $85. Ext. 4727.

HORSEBACK RIDING BOOTS - French, ladies sz. 8, $25. Ext. 3887 or 286-0353.

FUEL TANK - 275 gal., heavy gauge, capacity gauge with legs, $75. 286-0904 after 5 p.m.

MATTRESS - queen size, firm, good cond., $25. 736-3573 after 5 p.m.

SEWING MACHINE - Singer, old but good, $25. Ext. 2456.

ELECTRIC WALL OVEN - 24" Hardwick, very good cond., $85 or best offer. 929-8105.

SLEEPER COUCH - grey velour; twin box spring & mattress; white wooden louver doors; chairs. 331-3724.

POOL - above ground, 4'x16', new pump, many extras, you haul, $150. Lew, Ext. 3502 or 286-8166 after 4:30 p.m.

UPRIGHT FREEZER - approx. 6'x3', works fine, Jordan Co., $100. 924-6751 eves.

COUCH - queen size, convertible, orange & brown stripes, matching chair, good cond., $250. 698-6437 eves.

BARBER CHAIR - porcelain, 1940's, great conversation piece, $150; electric barber pole light, $120. Mike, 669-9482.

COAL STOVE - excel., used one season, $1,000 new, now $600. 286-0422 after 6 p.m.

WINDOWS - (3) double hung, six over one, 2'6"x4'10", complete w/frames, hardware & combination windows, $20 each unit. 475-2287 after 5 p.m.

MEXICAN POTTERY - a/m car radio; 10 spd bike. Ext. 4660.

BICYCLE - men's 12 spd, Fuji Grand Tourer, black, excel. cond., water jug, pump, must see to appreciate, $165. Ron, 878-1731.

WINDOW SHADES - motorcycle helmets; VW Dasher hub caps; kitchen chairs; wooden cabinet; smoker. 924-4054.

Real Estate

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

For Sale

YAPHANK - 3 bdrm ranch, full heated basement, 2 lg. rms for apt. or home bus., ½ acre, beautiful location, 7% assumable mortgage, 4 mi. from Lab. 924-6895.

MIDDLE ISLAND - 2-3 bdrm, l/r, kit., bath, 1-car garage on acre, north of Jericho, $35,900. Joann, 744-2821 or 473-8670.

MANORVILLE - 3 bdrm, 2 bath, 2 story, wood stove, farm, barn, 2-car garage on 1 acre, $44,500. 878-0357.

NORTH PATCHOGUE - high ranch, l/r, d/r, kit., 3 bdrm, 1 baths, large paneled fam. room, garage, utility room, prime area, walk to schools, assumable mortgage, low taxes. Owner, $39,000. 929-6984.

MILLER PLACE - contemporary ranch w/$ saving heat, 4 bdrm, eik, l/r, d/r, den, fenced yard, mint cond., financing avail. Rustic Acres, $72,500. 331-3724.

265'x125' LOT - in Florida, near Ocala in "Invernes." For information, 281-6099.

3/4 WOODED ACRE - Shoreham. 744-0047.

For Rent

FURNISHED ROOM - share kitchen, l/r, bath, food plan, $200/mo. incl. util. Roy, Ext. 4664 or 744-8779.

BERKSHIRES CHALET - 3 hrs. from NYC, 3 bdrms, 2 baths, fully equipped kitchen, elec. heat, deck w/spectacular view, near lake, hiking trails, near ski areas. Available weekly or weekends. 929-6946 after 6 p.m.

MASTIC PARK - 2 bdrm apt., near water, $325 w/heat, security & references. 281-7844.

YAPHANK - 6 mi. from Lab, 2 bdrm, garage, gas heat, 1 acre, avail. May 1, $350/mo. Ext. 3304 or 751-8671 eves.

CENTER MORICHES - 2 bdrm house w/basement, nice area, some furniture for sale, l/r set, carpet, washing machine, avail. June 1, $325/mo. plus util. Ext. 2456.

SETAUKET - studio apt., pvt. ent., w/w carpeting, fireplace, security deposit required, near SUNY, avail. April 1, $300/mo. pays all. 751-7491

WADING RIVER - April thru June, house on cliff w/panoramic view of LI sound, $325/mo. Ext. 2440 or 744-5707.

Car Pools

BELLPORT - 8:30-5:00, on-time car pool, looking for 5th member. George, Ext. 7654.

Lost & Found

FOUND - at the Bill Mackey Dance Theatre, Berkner Hall, leather ladies glove. Ext. 4070.

Wanted

WITNESSES - to accident March 12, main entrance to Lab, 5:05 p.m., involving red Honda and brown Mercury Lynx. Contact Becky, Ext. 4386 or 286-8807.

OLD AIR CONDITIONERS - for a/c student, free, will pick up. Carl, Ext. 5329 or 281-7627 after 6 p.m.

GOLF CLUBS - matched set, woods or irons, used, reasonable. Charlie, Ext. 7773.

CHEST OF DRAWERS - and washing machine. 928-3653.

GAME MEAT - Ext. 4959.

MOTORCYCLES - bent or broken, any age or cond. Kevin, 281-8031.

BOBBY MAC CAR SEAT - good cond. 722-4821.

CASE - for 3/4 violin. R. Boie, Ext. 4232.

AMBITIOUS PERSON - $200-$300/mo., 6-8 hrs/wk. 698-5861 after 7:30 p.m.

WOMAN - to share large 3 bdrm house in beautiful wooded area, 5 min. from Lab. Ext. 4660.

HOUSE - to rent, professional family with 2 infants, 3 bdrms, furn. or unfurn., occupancy 5/1/82. Ext. 7114.

TIRES - G78x14, non-radial, good cond. Ralph, Ext. 4171.

HOUSEMATE - 2 bdrm condo, Holtsville, 5 appl., $225 incl. all util. Female please. Ext. 3199 or 475-6622 eves.

PIANO - baby grand or grand piano, good cond. Ext. 3502 or 286-8166 after 4:30 p.m.

QUILTERS - to join newly forming group. Beth, 282-3186 or Bernie, 928-1068.

CAMPBELLS SOUP LABELS - for St. Mary's School, East Islip. Send to F. Chandler, Bldg. T-89.

Services

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

TYPING - reasonable rates. Ext. 7108 or 727-1887 after 5:30 p.m.

ASPHALT PAVING - and sealing. Bob, 475-4382.

TYPING SERVICES - 744-4047.

HOUSE SITTING - free, experienced, caring, any period after April 15. Jack Allentuck, Ext. 2412.

T.J. AUTO SHAPING - compound & waxing, clean up. Tim, 281-7873 after 4:30 p.m.

FIRESIDE CHIMNEY SWEEPS - spring cleaning special, fireplaces, stoves, oil flues, professionally cleaned, insured. Bill, 584-6425.

CARVING KNIVES SHARPENED - on a flat stone, a razor edge, $10 per knife. Dave, Ext. 4755.

PLUMBING AND HEATING - Lab discount. John, 654-8189.

TAXES - prepared by tax consultant, your home or mine, reasonable. John, 732-2472.

INCOME TAX - prepared by professional accountant, very reasonable rates. Bob, 286-5829 eves and weekends.

RESUMES - prepared, typed, printed, cover letters. Bill Polvent, 821-9081.

LIMO SERVICE - luxury, chauffered for proms, weddings, airports, all occasions. Roy, Ext. 4664 or 744-8779.

HOUSE CLEANING/CHILD CARE - experienced, good refs, excel. w/children, Port Jeff. area. Katie, 331-3959.

SMALL APPLIANCE REPAIRS - vacuums, typewriters, heaters, etc., No. Patchogue. 654-3900.

TILE SETTERS - ceramic Quarry tiles, no job too small, free estimates. E. Harris, 475-6460.

BABYSITTING - experienced, reliable, 18 yr old, days, nights, weekends, now thru summer, references upon request. Jodi, 924-7832.

BURGLAR ALARMS - for your boat, home, or office, free survey, custom system. 289-3974.

VENTURE CAPITAL - consultant will prepare your business plan and provide introductions. Ext. 2069.

Classified Ad Policy

Deadline is 4:30 p.m. Friday for publication Friday of the following week.

1. The Brookhaven Bulletin's classified section may be used only by active and retired Laboratory employees.
2. All items for sale or rent must be the advertiser's property.
3. Ads for material acquired for resale in association with a full or part time business cannot be accepted.
4. Ads for the sale or trade of firearms will not be accepted.
5. Ads not carried because of space restrictions will be held for publication in the next issue.
6. Ads are run only once and must be resubmitted if they are to be repeated. One ad per person per week.
7. **Property for sale or rent cannot be accepted on this form. Special Real Estate Ad Forms are available at the office of the Brookhaven Bulletin, Building 134.**

☐ For Sale: Autos & Auto Supplies ☐ For Sale: Boats & Marine Supplies ☐ For Sale: Miscellaneous ☐ Car Pools ☐ Lost & Found ☐ Services ☐ Wanted ☐ Free

Please print your ad below in 15 words or less using one word per block. Include name and phone number to call.

Note: The following must be completed for your ad to appear.

NAME (Please Print) .....

Employee's Signature ..... Life No. ..... Ext. .....

Send to: Brookhaven Bulletin, Building 134 (Ext. 2345).