

Prospects For Fusion Promising

"In the past twenty years, prospects for fusion power have brightened considerably," says Jim Powell, head of the Fusion Technology Group in DAS. He will discuss these prospects in the 140th BNL Lecture on Wednesday, October 27, at 8 p.m. in Berkner Hall.

According to Powell, physicists are now optimistic about achieving plasma conditions adequate for fusion power reactors with at least two confinement approaches, tokamaks and magnetic mirrors. Large experiments now planned at Princeton (the TFTR), and Livermore (the MX), should answer most of the remaining plasma physics questions by the early 1980's and provide information for design of an experimental power reactor (the EPR), to operate in the late 80's. Increasingly, the principal potential obstacles to successful fusion power are seen as technological and economic.

In his lecture, Powell will discuss Brookhaven projects developed for ERDA's Division of Magnetic Fusion Energy, which are aimed at solving or alleviating some of the technical problems. By using solid lithium compounds with high melting points, the inherent corrosion problems of liquid lithium metal or salts can be avoided, and all solid, gas-cooled blankets used instead. The D-Li neutron source proposed by BNL will be built in the next few years and will be the principal facility testing the effects of high energy neutrons on candidate fusion reactor materials. Without such a facility, neutron damage information needed for the design of an experimental power reactor could not be obtained.

There are other technological and economic questions about fusion power and BNL programs are involved with a number of these. The negative ion neutral beam program, for example, can provide a much more efficient method for heating plasmas to ignition. Programs in magnet technology are developing new structural analysis techniques for magnet design, examining questions of magnet safety and reliability, and developing advanced high-field conductors for more efficient fusion reactors. Economic and applications studies are examining promising non-electrical uses for fusion, such as fuel and chemical production, process heat, etc., and are investigating what factors accelerate or restrict fusion implementation.

Research in the last twenty years has concentrated primarily on the physics of plasma containment. Powell expects that R and D in the next twenty years will concentrate on the technology of fusion power reactors and if successful, R and D in the following twenty year period will be concerned with factors affecting economics. Powell received his D.Sc. degree in nu-



James R. Powell

clear engineering from MIT and his B.Sc. in chemical engineering from the Carnegie Institute of Technology. He joined the scientific staff of the Laboratory in 1956 and has engaged in a wide variety of research projects including power reactors, chemo-nuclear reactors, nuclear rocket reactors, etc.; plasma physics and MHD relating to advanced reactor and energy conversion concepts; extensive spectroscopic work on transient non-equilibrium plasmas in ball lightning; cryogenic magnetic suspensions for high speed transport; and cryogenic power transmission lines. In the last few years he turned his attention to fusion technology and became head of that group in 1973.

A buffet supper will be served in the Brookhaven Center before the lecture beginning at 6:30 p.m. Reservations should be made in advance by calling Ext. 3541 before 5 p.m. Refreshments will be available in the lobby of Berkner Hall immediately after the lecture.

Blewett Honored

John P. Blewett will receive the Nuclear and Plasma Science Society's Merit Award for 1976. The award is for outstanding service in one of the fields of interest represented by the society, and carries with it \$500 and a commemorative plaque. The presentation will be made on October 20 at the Nuclear Science Symposium in New Orleans.

Since he joined the staff in 1947, Blewett has been a major contributor to all aspects of accelerator development at Brookhaven. New Special Assistant to the Director, he was formerly Deputy Chairman of the Accelerator Department and head of the Advanced Accelerator Development Division. In this capacity, he originated the ISABELLE colliding beam project.

Follow-Up On Fallout

According to Brookhaven monitors, radioiodine levels in fresh milk continue to decline on Long Island. Daily measurements have been made since it was determined that radioactive fallout from a Chinese nuclear test in the atmosphere late last month had been detected in this area.

The first evidence of unusual radioactivity here was found on October 4, when rainwater sampling by the Safety and Environmental Protection Division showed a total collection of 51 nanocuries of radiation per square meter, or nearly 100 times the normal reading of about .5 nanocuries. After another heavy rainfall last weekend, rainwater sampling indicated 7.5 nanocuries per square meter, or about 15 times higher than normal levels. Later readings showed a drop to 5.5 nanocuries.

According to health physicists, when a cloud of radioactive fallout remains aloft in the prevailing easterly world circulation, ground effects are generally negligible. The recent passing of portions of radioactive clouds over the local area occasioned greater concern because of the accompanying rainfall, which accentuated the deposition of fallout.

The main concern of Suffolk County public health officials was the level of contamination in fresh milk. Because of the large quantities of grass that cows eat, there is a consequent absorption of radioiodine into their bloodstreams and then into the milk. Thus, this pathway generally has a larger dose potential than that of inhalation. The amount of radioiodine present is reduced by half about every six days. The decay is not fast enough to materially reduce levels in fresh milk before it is consumed.

From Tuesday, October 5, the levels of radioiodine found in milk, brought in by the Suffolk County Health Department from two sample locations, were (in picocuries per liter):

	Location A	Location B
Tuesday	126	7
Wednesday	146	152
Thursday	142	200
Friday	164	280
Saturday	80	172
Sunday	121	150
Monday	95	67

The varying levels of radioiodine found in the milk at the two sample locations might be explained, said Meinhold, by whether the cows had been eating stored feed, grass, or a combination of the two.

The Environmental Protection Agency lists 4,200 picocuries as the level at which protective action should be taken in the event of a one-time deposition incident. These measurements did not at any time approach this concentration. According to Charles Meinhold, head of the Safety and Environmental Protection Division, the

standards and precautions taken are based on avoiding any possible injury to the infant thyroid. Dose calculations assume that both infants and adults drink, on the average, one liter of milk per day (although most adults probably drink considerably less). The thyroid gland in the infant is smaller by about a factor of ten than in the adult. Thus, for a given concentration of radioiodine in milk, the dose to the infant is that much greater.

In 1963, the U.S. and the Soviet Union signed a treaty banning atmospheric nuclear testing. China did not sign the agreement and minor fallout from many of the 18 Chinese atmospheric nuclear weapons tests has been detected at Brookhaven since 1964. Although there is at the most, an extremely slight public risk, Andrew Hull, head of the Laboratory's environmental protection and analytical services, confirmed that the measurement of radioiodine in milk, after this latest Chinese test, is the highest detected to date by Brookhaven scientists.

Swimming Pool Closing

The swimming pool will be closed for special maintenance Monday, October 25 to Tuesday, November 16, inclusive.

Notice to season ticket holders: As a result of this closing, season tickets will be valid until December 31, 1976.

Concert Series Begins

The 1976-77 season will open on Wednesday, October 20, at 8:30 p.m. in Berkner Hall. The harpsichordist, Kenneth Cooper will give a recital of 18th century music including works by J.S. Bach, Handel and Purcell.

Blocks of five or more tickets purchased at or before the first concert are \$3 per ticket. General admission is \$4; Students and persons over 65, \$2; Persons under 18, \$1.

The following persons (with Lab extensions noted) will be selling season tickets to the concert series.

Clemens Auerbach	2942
Geoffrey Hind	3400
Richard Holroyd	4329
Don Lazarus	4723
Myron Ledbetter	3418
Maria Pavlova	3634
Ed Popenoe	3622
Arnold Aronson	2606
Elliot Auerbach	3947
Lois Baranosky	2873
Salvador Bozzo	2010
Manny Hillman	4470
Blanche Laskee	2873
William Siegelman	3417



The incomparable Lionel Hampton - Ambassador of Jazz

Tickets On Sale For BERA Special Event

BERA's special event to end this Bicentennial year - Lionel Hampton and Pat Cooper - carries the appropriate price of \$17.76 per couple, or \$9 per person. As if either luminary wouldn't be a smash hit alone, this great deal includes both show routines plus a 30-minute wine and cheese intermission.

You have your choice of afternoon or evening show times on Sunday, November 7: 4-6 p.m. or 7-9 p.m. And if wine isn't your bag, cash bars will be open before and after each show.

So hurry on down to the Cafeteria between 11:30 and 1:30 for the best seats in the house. After today, reserved seat tickets can be purchased at the Recreation Office (Ext. 2873) in Personnel.

Lionel Hampton needs identification like Jerry Lewis needs an introduction to Dean Martin. "The Hamp" is one of America's all-time great jazz musicians. He has made personal appearances all over the world, appeared on every major musical television

(Continued on page 2)



Pasquale Caputo - better known as Pat Cooper - the hilarious Italian comic



The APS Division of Particles and Fields' annual meeting was held at Brookhaven last week and, from all accounts, it was a highly successful conference. During a break in the proceedings banquet speaker Professor Sheldon Glashow (left), Harvard University, talks with Ron Peierls,

ERDApfeln?

In keeping with the occasion, Ron Peierls (Physics) drew up the following menu for the banquet at the annual meeting of the APS Division of Particles and Fields:

MENU*

- Pâté Parton+
- p' Ribs of Beef**
- Haricot Vertex**
- Gebackene ERDApfeln**
- Dressed Salad**
- Napoleons St. Helena*

- * Supported by no visible means
- + Composed of local constituents
- ** The derivation is left as an Exercise for the reader
- * Confined, but not bound



chairman of the conference, and with Nick Samios, chairman of the Physics Department. At far right, John Connell, Springfield Technical Community College, inspects an ISABELLE magnet, part of an exhibit set up in Berkner Hall.

Trip To New York City

The Hospitality Committee is planning a group railroad trip to the city on Wednesday, November 3. Departure will be at 8:32 a.m. from the Patchogue LIRR Station. The round trip fare for adults is \$2.45, children under 6 years ride free.

Reserve a ticket by sending your fare through the U.S. mail to P.O. Box 322, Upton, New York, no later than October 28. Make checks payable to "Cash." Refunds will be made only if cancellations are received before noon on October 29.

Selected Reading

Bull. At. Sci. 32, October 1976
Three steps toward nuclear responsibility. The Democratic candidate for President indicates there will be some significant changes in U.S. nuclear policy if he is elected. J. Carter. 8-14
Illusions and realities about nuclear energy. A spokesman for the Ford Administration says the United States should continue to lead the world toward nuclear development. F.C. Ikle. 14-17

Nature 263, September 30, 1976
Soviet dissidents:
He who would dissident be. V. Rich. 361-2
Keeping the flame alight. R. Adelstein. 363-4
View from the promised land. N. Meyers. 365
Trying to keep in touch. Y. Levich. 366-7

Science 194, October 1, 1976
Technology policy and democracy. B.M. Casper. 29-35

Gym Winter Schedule

Effective Monday, November 1, the gym will be open in the evenings for BERA scheduled activities only.

- Monday** - 5:00 to 9:30 p.m.
Mixed League Volleyball
- Tuesday** - 5:00 to 9:30 p.m.
Tennis (by reservation - sign-up sheet posted in gym)
- Wednesday** - 5:00 to 9:30 p.m.
Men's League Volleyball
- Thursday** - 5:00 to 9:30 p.m.
Basketball League
- Friday**
5:00 to 7:30 p.m.
Soccer League
7:30 to 9:30 p.m.
Karate
- Saturday**
10:00 a.m. to 12:30 p.m.
Badminton & General Activities
12:30 to 5:30 p.m.
Tennis
- Sunday** - Gym closed

Cooking Exchange

For our next meeting on October 27, the Cooking Exchange will return to its international theme with a demonstration of the art of Japanese cooking.

Several of our visitors from Japan will demonstrate some of the delights of their homeland. Donna Coleman will be in charge and anyone wishing to volunteer their skills or help, may contact her at 363-8914.

That's October 27, at 12:30 p.m. in the Recreation Building.

Tickets Available

The following tickets are available at the BERA Sales & Services Office in the Cafeteria:

Metropolitan Opera (\$7.00 each)	
Oct. 19	Il Trittico
26	Le Nozze di Figaro
28	Il Trittico
Nov. 3	Die Meistersinger
11	Die Meistersinger
15	Die Meistersinger
24	Esclarmonde
Dec. 2	La Forza del Destino
6	Faust
25	Tosca
Jan. 4	Salome
7	Tosca
11	Lucia di Lammermoor
12	Tosca
20	Salome
24	Tosca
Feb. 2	Salome
3	Die Walkure
4	Lucia di Lammermoor
9	Le Prophete
24	Die Walkure
25	La Forza del Destino
Mar. 1	La Forza del Destino
7	Le Prophete
8	La Forza del Destino
17	Tosca
29	Andrea Chenier
31	Il Trovatore
Apr. 12	La Boheme
14	Lohengrin
Islanders Hockey (\$9.50 each)	
Oct. 16	Cleveland
Feb. 5	Washington
Jets Football (\$9.50 each)	
Oct. 24	Colts
Nov. 14	Buccanneers
21	Patriots
Dec. 5	Redskins
12	Bengals

Call Ext. 3347 for any questions regarding ticket sales.

Arrivals & Departures

Arrivals

Kwan M. Annan	Accelerator
Cheryl R. Brown	Plant Engr.
Linda J. Feierabend	Personnel
George W. Holmes	Reactor
William F. Kearns	Plant Engr.
Brian J. McNally	Plant Engr.
Matthew K. Reckard	App. Science
Michael D. Rowe	App. Science
Gerard Shepherd	App. Science
Yang-ho Sun	App. Science

Departures

Paul M. Haas	App. Science
Edward J. O'Connell	Safety & Env. Prot.
Peter S. Rudman	App. Science
Amerigo R. Villacara	Personnel

BERA Special Event (Cont'd)

show, made countless recordings and has performed at four Presidential inaugurations.

Hampton, once a mainstay of the old Benny Goodman band, has a style that remains fresh and exciting. He's still working after 45 years because time has not diminished the intensity with which Hamp and his famous inner circle band make their music run at almost dizzy speed.

Hampton himself is the spark that lights up the crew, as he moves from vibes to drums to piano, and even now and then, out to do a few quick turns in a hora-like number in the middle of the stage.

Songs like "Flying Home," "Midnight Sun," and "Hamp's Boogie Woogie" still work their magic when Hamp does them. He travels all over the musical spectrum with wild variations on a theme and doesn't seem to care how far he strays from the original, producing a shower of notes that results in musical fireworks.

Comedian Pat Cooper is a pleasant looking man who has probably done more, and in happier fashion, to dispel ethnic prejudice than counter-defamation organizations. He sparkles with reminiscent humor, a Brooklyn boy speaking with the impec-

cable diction of that fabled locale. Cooper makes loving fun of his family and of Italians, in a way that arouses laughs but no feelings of superiority.

He is the first comedian of his lineage to poke subtle, sardonic yet understanding fun at his Italian background. He has discovered that in making his own people laugh as they see themselves reflected in the mirror of his wit, he also makes non-Italians hold their sides too, as they identify with similar experiences.

Sales on Pat's four albums recorded for United Artists Records ("Our Hero," "Spaghetti and Other Sauces," "You Don't Have to be Italian to Like Pat Cooper," and his latest - "More Saucy Stories") are now past the 600,000 mark. - Bev Goldstein

Army/Colgate Game

Through the Long Island Industrial Recreation Ticket Discount Program, BERA members have been invited to purchase tickets for the Army/Colgate Football Game at West Point on November 13.

Tickets are priced at \$7 each and anyone interested may contact Mary Latham, Army Football 16, Lynne Avenue, Hawthorne, New Jersey 07506, as soon as possible.

A Big Fish Story

George Guydish (Plant Eng.), holder of the New York State record for white marlin (117 pounds), broke another state record by almost 100 pounds on his new 32' sport fisherman the *Scorpio*.

While night fishing about 35 miles offshore, he boated a Mako shark that shattered the state record and weighed in at 503 pounds.

Guydish and his crew - Ray DeMatteo (Graphic Arts), Joe Santoro, and Augie Pasciuta - left Moriches Inlet about 8 p.m. to try an overnight shark fishing trip, after five unsuccessful weeks of day fishing. As sharks are nocturnal, it is usually better at night. We had tried it last summer with excellent results. However, it does present certain hazards and it should not be tried by inexperienced shark anglers.

For safety we ran with another boat *Moving Violation* captained by Bill Sheu, a member of the Moriches Anglers Club of which, incidentally, Guydish is president. At about 11:30 p.m. with the boats about a mile apart we commenced fishing. Both boats had a good night with seven blue sharks landed in the 125 to 200 pound range.

At 4:50 a.m. George hooked up and this time we knew it was big. Ten minutes later the *Moving Violation* with Bill Sheu on the rod also hooked into a big one - both fish were on and the fun began!

It was over an hour before *Scorpio's* crew got their first glimpse of the fish and it was big - bigger than we realized. After one hour and forty minutes with the boat running after him continuously we managed to bring him to the boat and were very fortunate in using the flying gaff on the first try. It took another 15 minutes to tail rope him and we had our record. A 9'6" long, 62" girth, 503 pound Mako caught on 50 pound test line.

The fishermen on *Moving Violation* weren't as fortunate. The shift linkage on their boat



Ray DeMatteo (left) and George Guydish (right), with their fisherman friends, astride the big one that didn't get away.

broke and they had to fight the fish with the boat still in the water. After two hours Bill brought the fish to the boat, but the crew missed gaffing him. The fish, away again, was worse than ever to control. After five hours, he was again brought to gaff and missed!

The *Scorpio* crew, with their fish aboard several hours had been watching this and decided to put men aboard to help gaff. In four to five foot seas it was no easy task especially with a large fish on, but George and Joe went aboard without mishap.

After six hours and twenty minutes they finally brought the Mako to the boat but

fate intervened and before they could use the gaff, the line caught on a piece of trim on the stern and parted.

To get credit for a fish, a rule of the club is that no one is allowed to touch the rod or reel except the angler. Result: one hell of an exhausted and disappointed angler. It might have been bigger than Guydish's fish - we'll never know!

George who would rather fish than eat, or sleep, is, to this writer's knowledge, the only angler ever to hold two N.Y. State records at the same time.

What's he doing now? Trying for a record striped bass!
—Ray DeMatteo

BROOKHAVEN BULLETIN

Published Weekly for the Employees of Brookhaven National Laboratory

BERNICE PETERSEN, Editor

DOUG HUMPHREY, Photo-Journalist

CAROL PETRAITIS, Copy Preparation

40 Brookhaven Ave. Upton, N.Y. 11973
Telephone 516 345-2345

CARL R. THIEN, Public Relations Officer

Tune In!

#421

Today, the company sponsored car pool has achieved favorable comments, particularly in areas without competing buses, public transportation, or commercial carriers, as described in the August 10, 1976, New York Times, and while some details and personal preferences may make such an arrangement unacceptable for some companies and individuals, the use of these car pools seems to be growing, and they do have the potential of conserving fuel. Thus, this comment may serve as a stimulus to further discussion in our area.

A little over two years ago, in the midst of the gasoline crisis, it was decided that a transportation survey should be made. The survey was to be conducted for two reasons. First, to provide certain Laboratory employees with information that would assist them in the formation of car pools. Second, the survey information would provide the Laboratory with a grid-density report, which would be useful in planning mass transit service to the Laboratory in the event future fuel restrictions became more severe.

The results were to be computerized and the computer-generated matches would be distributed to those employees who indicated their desire to be included in car pool matching.

In spite of advance publicity and ease in registering, the number of responses was dismally low. Consequently the full impact of a near 100 percent participation was never experienced.

My own feeling is that the general public is so conditioned to driving their own cars (at least on this part of the Island), that enthusiasm for car pooling will not be generated until such time as gas is in great deal shorter supply than it was then. —P. Paige

Opening Tonight



Barney (Bill Love) and Bobbi (Janice Olsen) indulge in a diversion which results in a smoke screen to evade a seduction. See "Last Of The Red Hot Lovers" tonight, tomorrow night and on the 22nd and 23rd.

Holiday Trip

A special trip to Magic Kingdom in Florida is being planned by Brookhaven Town Recreation Division for members of the Magic Kingdom Club (membership cards available at the BERA Sales & Services Office). Anyone interested in taking the 4-day trip, departure date December 9, may pick up an information and reservation form in the BERA Sales Office.

Stony Brook Events

Lecture: "Stardust: The Matter Between the Stars," by astronomer Roger Knacke, October 15, 7:30 p.m., room 001, Earth and Space Sciences Building.

Jazz Concert: Pianist McCoy Tyner, October 16, 9:00 p.m. and 11:30 p.m. Stony Brook Union. Admission \$4.00. Tickets available through Ticketron.

Lecture: Author/talk show host Dick Cavett, October 17, 8:00 p.m., Stony Brook gym. Reserved seats \$6.00, at door \$5.00. Tickets available through Ticketron.

Lecture: "The Biology of Aging," by geneticist Bentley Glass, October 19, 7:00 p.m., Health Sciences Center. Admission \$2.50 Sr. citizens and students, \$7.50 all others.

Concert: Performance of an electronic music series, October 22, 8:30 p.m., Stony Brook Lecture Center, room 105.

Cafeteria Menu

Week Ending October 22, 1976

Monday, October 18	
Corn Chowder	
Beef Liver & 1 veg.	1.10
Scrambled Eggs, Sausages & fr. fr.	1.05
Tuesday, October 19	
Beef Noodle Soup	
Knackwurst & Sauerkraut	1.05
Sauerbraten & Potato Pancake	1.30
Wednesday, October 20	
Cream of Potato Soup	
Beef Chop Suey on Rice	1.05
Special	
Davy Jones Fish Fry	\$1.40 plus tax
Thursday, October 21	
Chicken Vegetable Soup	
Cheese Ravioli & 1 veg.	1.00
Roast Chicken, Stuffing & 1 veg.	1.10
Friday, October 22	
Fish Chowder	
Spaghetti & Clam Sauce	1.00
Breaded Pork Chop & 1 veg.	1.30

Sports News

Golf

The team championship of the golf league was won by J. Dioguardo and M. Iarocci who beat J. Detweiler and J. Petro on the 18th hole. In the finals of the singles competition P. Bond beat D. Hildenbrand 4 and 2.

The tournament played last week at Rock Hill attracted 20 golfers. Low gross was won by G. Korhut with an 81 followed by P. Bond with 82. Low net was won by G. Kuzmack with a 68 with B. Feindt one shot back at 69. Closest to the pin was won by G. Korhut and longest drive by E. O'Connell.

The awards night for the golf league will be held at the Recreation Building November 3. We hope all members can attend.

Basketball

We urge all basketball players interested in playing in the Lab league this year to submit their names to Dr. K. (D. Albright), Building 130, or call Ext. 2614 by October 22.

Note: Even if you have played in the League for years, the Doctor still wants you to get in touch with him.

Bowling

Black & Blue League

9/29/76: High games were Dick Skelton 201, Debbie Antonio 182, Pat Oster 179, Pat Lebitski 179. High gross pots were won by Bill Lebitski with Debbie Antonio and Pat Lebitski sharing the ladies pot.

10/6/76: Debbie Antonio had the big game of the night with a 230. The high gross pots both went to the Antonio's. Ed Sperry converted the 1-2-10 followed by Barney Brehm's conversion of the 2-4-10.

Red League

The Anachems took 8 points and increased their league lead to 10. Great team bowling by the Old Timers enabled them to take all 11 points and jump into second place. High games for night were L. Newman 225, J. Connelly 215, J. Karczowski 213, R. Wilson 212, J. Roesler 210, H. Frei 207, W. Rasmussen 207, W. Reams 203, P. Klotz 203, J. Petro 202.

Green League

After four weeks of bowling, six teams are within five points of each other. The Got-A-Hit-Ums moved into first place by taking eight points from the Charley Browns. The Pick-Ups tied for first taking eight points from the Freon Loaders for eleven. For the Wizards, C. Dodge had a 211, 675 gross, G. Meinken with a 226, 677 gross and R. Eggert a 201. The Trouble Shooters took seven points from the 76ers. For the Super Cools, B. Belligan had a 209.

Purple & White League

The Woodchucks took over first place and the Flounders are close on their heels only one point behind. For the men, nice games were bowled by Bud Pollock 212, Ben Belligan 210, and Tom Polistina 198. Betty Roche was high for the women with a 163/456 series.

'76 Race Results

5 Kilometers

Under 12		
1 Dennis Van Dervoort		22:23
2 Roy Kelly		23:53
3 Matthew Gengler		24:52
4 Lindsay Adams		25:00
Male Under 16		
1 Michael Oldham		19:01
2 Bobby Van Dervoort		19:19
3 Rich Gordon		19:24
4 Michael Dorsi		19:38
5 Tim Comstock		20:21
6 Joe Natale		20:37
7 Javier Ledesman		21:05
8 Laurence Emery		22:57
Female 16-19		
1 Melissa Powell		23:46
Male 16-19		
1 Chris Matthews		17:55
2 Chuck Murray		34:05
Female 20-29		
1 Kathy McIntyre		18:40
Male 20-29		
1 Philip Erickson		24:18
Male 30-39		
1 John Millener (Phys)		17:56
2 William Clarck (Chem)		19:22
3 Naresh Bhagat (DAS)		19:55
4 Franz Reidinger (Chem)		20:15
5 John Carew (DAS)		21:26
6 Charles Planz		21:41
7 Peter Adams (Phys Rev)		22:21
8 Terry Whitledge (DAS)		24:51
Female 40-49		
1 Anne Nauman (Bio)		24:53
Male 40-49		
1 John Brennan (PE)		20:41
2 James Bedford		24:15
Male 50 and Over		
1 Bob Phillips (Dir Off)		22:22

Cricket

On Sunday, October 10, the never-defeated Brookhaven Cricket Club again vanquished the opposition in a fiercely contested match at Oyster Bay. The Oyster Bay Cricket Club, an established Long Island team for thirty years, gathered a team consisting of several guest players from Queens and Brooklyn.

After winning the toss, Oyster Bay went to bat first and scored 40 runs at a loss of 7 wickets in the allocated 25 overs. The unusually low score of the opposition is mainly attributed to the excellent bowling of John Millener and Madhu Pandey. Glenn Snape, the wicket keeper, did a fine job of stopping the fast balls, but his hands are worse for the wear.

Two heroic outs were made by Joe Mead and Sachi Dhar by catching some difficult fly balls. Excellent fielding and superb teamwork by John Usher, Dom Geraghty, David Cox, and Grahame Williams brought our team to victory. The game ended when our 42nd run was scored due to a fine stroke by Ed Beardsworth. The highest number of runs (21) was scored by John Millener. Three players, Glenn Snape, Ed Beardsworth, and Debu Majumdar remained not-out.

This victory came as both a surprise and a pleasure for our team. Since the Oyster Bay C.C., an excellent team, was playing on its home field, complete with a specially prepared pitch with mat, our team fared well.

Our team normally practices on a somewhat uneven grass pitch, so we were not accustomed to the field. We look forward to preparing a proper pitch, with matting, so that future games with outside teams may be scheduled at Brookhaven. This is required so that BNL can compete fairly with other East Coast teams next season. This was the last formal match of our season, and any further activities during the winter will be presented in our usual newsletter.

Many thanks are due to the spiritual guidance of our skipper, Debu Majumdar, and to the many loyal spectators. Special mention goes to Gail Thompson, who kept the scores for the match, and to Claire Geraghty and Madeline Windsor for providing needed moral support from the sidelines. See you all next season, and we hope to see some new faces.

Badminton

The badminton players will inaugurate their third annual ladder tournament beginning November 8 and ending in March 1977. In addition to the men's singles and men's doubles tournament, the group will sponsor a women's singles tournament. Complete information regarding the tournament will be provided in a future issue of the Bulletin.

Entrants to the tournament should submit their names to John Binnington, Ext. 3489 as soon as possible.

Football

The Slow Pokes and Roga remained undefeated, winning two games last week and setting up their game played last night for the championship.

The Slow Pokes beat the Sweathogs 38-6 and the Old Timers 45-6. Passes from Prach to Jansson (2), F. Johnson, C. Johnson, Oldham, Nordstrom and Jesuitis resulted in Slow Poke T.D.'s in the Old Timer game.

In the Sweathog game, the Slow Poke T.D.'s were by Donaldson, Atkins, Nordstrom (2) and F. Johnson (2). The Old Timer T.D. was made by Lawson and the Sweathog T.D. by Uhl.

Roga beat the Chickens 40-0 and the Sweathogs 42-7. The Roga T.D.'s were on passes from Snead to Smith (3), James (2) and Taylor in the Chicken game. The Roga T.D.'s in the Sweathog game were by Smith (2), Gilbert, Schuman, Daniels and Rowley. Hart had the Hog's T.D. Wayne Smith also had a 3 T.D. game in the Roga - Tee-Dee game.

The Tee-Dees beat the Chickens 32-0 with Carew throwing T.D. passes to Greene (2), Hahle, Batey and Lovette.

	W	L
Slow Pokes	4	0
Roga	4	0
Sweathogs	2	2
Tee-Dees	1	2
Old Timers	0	3
Chickens	0	4

Classified Advertisements

Placement Notices

Each week the Personnel Office lists personnel placement requisitions, currently being processed. The purpose of these listings is, first, to give notice of all non-scientific staff positions being filled and, second, to give employees an opportunity to request consideration for themselves through the Personnel Office. In filling vacancies, the Laboratory's objective is to give first consideration to present employees, as follows: employees within the immediate group having the vacancy, employees within the department or division, employees within the Laboratory as a whole.

For further information regarding a placement notice, or to request consideration for an available position, contact Supervisor, Personnel Placement & Development, extension 2874 or 2882.

223. SECRETARY - AAS degree or equivalent in secretarial science and experience in general office procedures. Department of Applied Science.

224. DRIVER - Plant Engineering Division.

225. ELECTRO-MECHANICAL TECHNICIAN - Seeking AAS degree or equivalent in electro-mechanical technology. Assignment involves the operation, maintenance, and modification of the coal hydrogenation experimental equipment. Familiarity with chemical testing procedures highly desirable. Department of Applied Science.

226. VETERINARY SERVICES ASSISTANT - Position involves the care, handling and breeding of laboratory animals. Some weekend and holiday duty required. Medical Department.

227. TECHNICAL ASSOCIATE - Seeking BS degree or equivalent in electronics to plan and coordinate assignments in a broad technical field. Assignment involves the preparation of records and reports, maintenance and servicing of facilities and equipment. Direct and coordinate work efforts of other technical support personnel. Safety & Environmental Protection Division.

228. RESEARCH SERVICES ASSISTANT - Two temporary, part-time positions. Department of Applied Science.

229. SECRETARY - Part-time position involving use of IBM Redaction Memory typewriter, with knowledge of general office procedures desirable. Department of Applied Science.

230. TECHNICIAN - AAS degree or equivalent in computer/electronics technology. Specific experience with various CDC equipment, including familiarity with CDC 1604 and 3600 logic. Possible shift work. Applied Mathematics Department.

231. LABORATORY CUSTODIAN - Two positions. Plant Engineering Division.

Autos & Auto Supplies

70 PONTIAC BONNEVILLE - New radials, tape deck & converter, very good cond. \$1000. Bill Frank, 732-8216.

68 PLYMOUTH WAGON - 8 cyl, auto, ps/pb, Reese trailer hitch, mechanically very sound. \$700. 585-7094 after 6.

67 CHEVY CARRYALL - Good mechanical cond, needs body work. \$600. Paul Sparrow, Ext. 4665, 727-4859.

65 FORD WAGON - 71,000 mi, auto, ps, runs well. \$250. Ext. 4778.

71 DATSUN 510 - Std trans, red, 4 dr sedan, 2 Semperit steel radials, 30 mpg, excel cond. Nancy, Ext. 3404, 744-8487.

68 CORVETTE - 327 cu in, 4 spd, am/fm, Cragar mags. John, Ext. 3696, 281-2346.

TIRES - 2 7.00x15, 8 ply, 1 snow, 1 reg, w/rims & tubes. \$20 each. \$35 for both. 289-8212 eves.

74 CHEVY - 1/2 ton, Cheyenne super, at, ps/pb, buckets, twin fuel tanks, delux cap, camper wiring, snow tires. \$3200. Phil, Ext. 4636.

76 GMC VAN - Conversion, self contained, sleeps 4, low mi. 325-1961.

SNOW TIRES - 8.25, 14, mounted. \$35 for pair. Ext. 3148, 325-1961.

RENT A RUIN - Buy-a-blast, care-for-a-classic or buy-a-bomb with right of reverter in case of breakdown, '69 Cadillac, Ext. 3267, 473-2594.

65 PONTIAC TEMPEST - Convertible, new top, runs good. \$300. 981-5993 after 6.

75 YAMAHA - RD250B, 1400 mi, warranty. Asking \$775. 363-5303.

68 DODGE MONACO - Good running cond. \$475. Whitey, Ext. 2913.

65 CHRYSLER WAGON - Good mechanical cond. \$300. Whitey, Ext. 2913.

71 TOYOTA CORONA - 4 dr, needs hood, orig owner, 55,000 mi. \$950. Frank, 281-4179.

71 FORD RANCHERO - 4 spd Hurst, 350 cu in, am/fm stereo, 46,000 mi, ps. 654-1945.

68 RAMBLER AMERICAN - 33,000 orig mi, standard. \$600. Herb, Ext. 3403, 473-4757.

74 FIAT 128 - Dark blue 2 dr, 24,500 mi, excel cond, must sell. Bob, Ext. 3312, 924-7412 eves.

71 CHEVY - 4 wheel drive, pick up, mint cond, low mi, no rust. Bob Diem, Ext. 4662.

INTERNATIONAL RIMS - 5-hole, 14", from 73 Scout, set of 4. \$30. 289-8212.

69 OLDS 98 - Ps/pb, ac, high mi, but good transportation. \$650. Les, Ext. 4074.

BUMPER - Step down '72 pickup. Bob, 475-4382.

CAMPER CAP - For 8' pickup, wired, lights, roof rack. finished interior. \$275. 585-8395.

74 TOYOTA - Pickup, 21,000 mi, auto, cap, tape, extras. \$3100. 744-6858.

68 BSA MOTORCYCLE - 250cc, excel cond, very low mi, like new. \$500. 473-9180.

66 FORD MUSTANG - Convertible, good cond, needs 2 tires. \$475. 473-9180.

71 FORD VAN - Camper, sleeps 6, sink, stove, ice box, cabinets, air shocks, many extras, very good cond. \$3150. 473-9180.

BUCKET SEATS - Reclining high back, black, good cond, fits car or van, \$40. 473-6386.

BUCKET SEATS - Black, great cond, vinyl, low back. \$25. 473-6386.

CARRY ALL - International, good running cond, good tires, body fair. Mario, 472-1078 after 6.

SNOW TIRE - 650-13, Firestone. \$18 w/rim. 744-5871.

70 AUSTIN AMERICA - 1300, runs, needs tune-up & snows on rim. \$150 as is. Al, Ext. 3650.

73 DIRT BIKE - 100cc, m.x. chamber. \$225. Tony, Ext. 4087, 288-3535.

68 FORD WAGON - Country sedan, 302, V8, ps, auto trans, very good mechanical. \$450. Rick, 727-7304.

69 CADDY - Sedan de Ville. \$425. 399-1096, after 9:30 a.m. 878-8957.

73 HONDA 70 - Street & trail, only 140 orig mi, like new. \$350. J. Soler, Ext. 6374, 588-0147.

71 PINTO - Badly rusted body, excel eng. Jim Lynch, Ext. 4510, 698-8614.

72 HONDA - CB450, new rear tire, 9400 mi. \$750. C. Nauman, Ext. 3412, 286-3764 eves.

TIRES - Mounted 7.75x14, \$5; mounted 7.00x13, \$5; L70-15, 2 for \$25. Jim Lynch, Ext. 4510.

72 PINTO - Excel cond, must sell. \$1000 firm. 281-6191 after 5.

68 PLYMOUTH - Roadrunner, excel cond, 4 spd, many extras. Steve, Ext. 4308.

REPAIR MANUAL - 70-74 Corolla Chassis Repair Manual, clutch, brake, steering. KE & TE type body. \$4. Ext. 4798, 289-8416 eves.

66 CHEVY - 2 dr, 6 cyl, standard. \$275. Jim, Ext. 3147, 724-2898.

Boats & Marine Supplies

OUTBOARD - British Seagull, 2 1/2 hp, 40 plus long shaft, used less than 12 hrs, excel cond. \$280 new, sell \$200. C. Nauman, Ext. 3412, 286-3764.

12' ALUM VEE BOAT - & trailer, used in fresh water. \$225. 585-7094 after 6.

SEA ANCHOR - 30", \$4; 1 gal winterguard, \$2; VHF/Fm sailboat antenna, 4', \$5. Bob, Ext. 4411.

74 HOBIE 16 - Custom trailer & extras. Asking \$1850. 878-0466.

24' FIBERGLASS AUX SLOOP - Dolphin class, in-board, 7 sails, lifelines, boom tent, good cond. \$8000 Bon, Ext. 2026.

22' GARVEY - Decked over w/75 50hp Merc, good cond. will sell separately. \$1350. 286-8517.

15 1/2' MFG - 40hp Evinrude, trailer, carpeted, extras, new vinyl seats, excel cond. \$750. 473-0178.

25' CHRIS CRAFT - Asking \$1125. 399-1096 after 9:30 am 878-8957.

CLAM RAKE - 16 teeth, top cond. \$30. David, 363-6206.

Miscellaneous

AIREDALE PUPPIES - AKC males & females, good temper, no shedding, shots. John, Ext. 4076.

TENT CAMPER - 72 Bravo hotop, sleeps 8, w/slide out kitchen, all camping equipment included, portapotti, camper lamp, etc. \$950. Frank, 281-4179.

ROTISSERIE - Sunbeam carousel, like new, seldom used. \$12. 744-0979.

ANTIQUE RADIO - Console Philco, mid 20's, excel orig cond, plays superbly, box of new spare tubes. \$75 firm. Walt, Ext. 4514.

PAJAMAS - Dr. Denton, sizes 6 months - 7 yrs, \$3 & \$4, also children's misc clothing, new at reduced prices. 732-2664.

ENGLISH BABY CARRIAGE - By Marmet, excel cond, many features. \$60. 744-5448 after 5.

WASHING MACHINE - White, \$75. 821-0250 after 7. HONEYWELL STROBONAR/400 - \$25. A. Laurine, Ext. 2120.

POOL MOTOR - Leland Faraday, 3/4 hp, 3450 rpm w/impeller. \$30. A. Laurine, Ext. 2120.

STORM & SCREEN DOOR - W/hardware & closer. 2'5"x6'6", left hand hinge, white, alum. \$30. Ralph, 286-0615.

OIL BURNER - Wayne, gun type, 12 yrs old, operating cond. \$25. Ralph, 345-2485.

STEREO TAPE DECK - Reel, Akai, 4000 MK II, 1 micron gap head, sound on sound, sound w/sound, 4 months old, list \$249, asking \$175. Dominick, Ext. 3954.

SPEAKERS - 1 pair Braun 710 w/orig cartons. \$400. Bill Frank, 732-8216.

4 PIECE DRUM SET - By Ludwig w/hi hat cymbals, very good cond. \$300. Mike, 878-2486.

PHONO CARTRIDGE - Magnetic Shure V15 type II, very good cond. \$45. Hans, Ext. 4581, 281-5563.

WINTER COAT - New, never been worn, black Borgana w/gray collar, cuffs, borderline of hem, size 16, \$90. Jeanne Weber, Ext. 2003, 472-0086 after 4.

2 TWIN MATTRESSES - \$25 each; dresser w/9 drawers, 72x18x30, \$35; night table w/drawer, \$15. Ext. 3687.

2 END TABLES - \$15 each; collection of Nancy Drew books, good Christmas gift, 25¢ ea. Ext. 3687.

ANNALS OF AMERICA - 19 vols, completely new set. Ext. 3130.

BANANA SEAT BICYCLE - \$30. Ext. 3130.

FISH TANK - 20 gal, 425 Dinaflo filter, iron stand, lights, gravel & all accessories. 472-1875, Ext. 3260.

BOY'S BICYCLE - Raleigh 20", coaster brake. \$30. Foley, Ext. 3943.

POLAROID MODEL 800 - In leather case w/flash, filter, instruction book, will demonstrate. \$25. Ext. 3354.

CLEGG MARK - 3 FM xceiver Zmeller, 15 watt, 12 ch w/5 pr xtals instl, new in orig carton, w/Shakespeare whip. \$220. Ext. 3354.

DEEP WELL PUMP - Jet type, 1 hp, 220V, asking \$40. Ext. 2033.

HORSE TRAILER - Hale, 2-horse, excel cond, used 4 times. Flo, Ext. 3001, 732-9061 after 6.

10" RADIAL ARM SAW - Sears 2 hp, excel cond. \$165. Karl Rosenbaum, Ext. 4581, 878-0416 after 4.

WINCHESTER - Model 70, 243 cal Varmint barrel, case, 2 boxes ammo. \$120. Frank, Ext. 4581.

CHART OF NUCLIDES - Framed, 36"x48", in German. Come and get it! C. Eterno, Ext. 2446.

DOG GROOMING KIT - Complete & like new, orig \$65, selling for \$25. Ext. 4519.

ANTIQUES - Asst wagon wheels, \$10 & up; horse's sleigh, \$250; old trunks, oxen yokes, Edison phonograph, etc. 727-4363.

WURLITZER ORGAN - Console, 3 yr old early Amer, perfect, full manuals, pedals, auto-rhythm plus synthesizer keyboard. Cost \$5200, asking \$2900. 728-0273.

FLUTE - Artley, symphony model, closed holes, silver head, very good cond. \$125. 286-8256 after 4.

TRAVERSE RODS - 36" to 50", good working cond, 2 sets, \$5. 286-8256 after 4.

DRILL STAND - Craftsman, converts 1/4 or 3/8 elec hand drill to drill press. \$10. Bob, Ext. 4411.

AR TURNTABLE - M91E cartridge, \$70; trumpet, \$50; Bralab timer, \$25; children's mechanical swing, walker, jumper, walker, car seat. Allan, Ext. 3369, 286-0259.

STEREO EQUIPMENT - Scott Fm tuner, Dyna Pat -4 preamp, Dyna 120 amp, 60 w per channel. M. Perlman, 472-1174.

LOWREY CONSOLE ORGAN - Chimes, drums, marimbas, theatre styling. \$900. 654-4368 after 5.

SMOKE/FIRE ALARM - Detector, 1st quality, battery operated, 1 yr guarantee. \$40. Jose Madina, Ext. 3284, 924-6971.

SNOW PLOW ATTACHMENT - For riding lawn mower, hardly used. \$50. 924-6971.

10' TV TOWER - Brand new. \$20; 30' telescoping mast, brand new, \$15; light meter for camera, 1 yr old & never used. Cost \$40, sell \$15. Mike, Ext. 3198.

WINTER COAT - Girl's, jr size 9, tan suede cloth w/ orlon pile hood & trim. \$20. G. Kinne, Ext. 3334.

BOY'S COAT - Mighty Mac, brown corduroy, size 8, excel cond. \$18. G. Kinne, Ext. 3334.

COT - Fold up w/springs. \$10; child's school desks, \$5 each. 727-2861 after 2.

CREE TRAVEL TRAILER - Stove w/oven, gas refrig, self-contained, sleeps 5, \$1250. Ext. 3148, 475-1111.

BOX SPRING - Queen size, Sealy Posturpedic, excel cond. \$45. C. Nauman, Ext. 3412, 286-3764 eves.

SCREENS & STORMS - 16 wood, 5 ea 23x42", 11 ea 31 1/2x59". J. DeNardo, 281-9095.

MASTER BEDRM - Triple dresser, chest, 2 night tables, bed, modern, new cond. Ext. 3392, 475-8330.

BABY FEEDING TABLE - & high chair combo, like new. Ext. 3392, 475-8330.

RCA B&W TV - 22", 2 speakers, like new cond. Ext. 3392, 475-8330.

KITCHEN SET - Wrought iron table, white w/gold speckled top, 4 chairs, tubular steel. Ext. 3392, 475-8330.

SURFCASTING - Daiwa 11" rod and Daiwa 2000C reel. Cost \$85, must sell, \$65. Chuck, 744-1922.

BABY CARRIAGE - Sturdy metal body, excel cond. \$35. Ellen Horn, 286-8827.

WOMEN'S BIKE - W/infant seat. \$15. 928-0693.

BOY'S BEDRM SET - 2 bedframes w/headboards & footboards, chest & night table, all oak, very durable, good cond. \$125. 928-0693.

POWER ROUTER - New, 3/4 hp, router edge guide, router 5-piece bit set. \$55; 1/2", 1/2 hp drill, \$40. Ripp, Ext. 2409.

JEANS - Brown 32-30, \$5; spring coat, green checked, size 14, \$8; spring coat, size 12, \$8. Ext. 3609.

LIGHT FIXTURE - \$1; plant hangers, \$3 ea. Ext. 3609.

MEN'S SHOES - 9M, \$13; new shirts, 15-33, 15-34, \$3 ea. Ext. 3609.

SHOT GUN - Double barrel, 20 gauge, hammer, very good cond. \$70. 286-8869.

RCA TV - Colonial console, b&w, excel cond. \$70. Georgia, Ext. 2318.

DINING RM SET - Cherry wood, 53" oval table, 4 chairs, 53" hutch. Asking \$400. 732-2658.

MATTRESS - & box spring, queen size, Sterns & Foster, like new. \$50; Rival elec food & meat slicer. \$20. 286-1855.

AIR COND - 8000 btu, excel cond. \$110. 698-1035.

12 GAUGE MAGNUM - Zoli silver snipe, under over. \$250. 727-4808.

ALTO SAX - New Conn, used several hrs. \$325 firm. 298-8655, Ext. 4539/4540.

CHAFING DISH - 2 qt, Coppercraft, solid copper. \$50, orig. \$69.95. 281-3446.

PACHYSANDRA - Good ground cover. 55 plants for \$4. Peter, Ext. 2540.

MUSIC STAND - Almost antique, wood & cast iron. \$35. Allan, Ext. 3369, 286-0259.

MATTRESS - Queen size Serta & box spring w/frame, excel cond. 928-3863.

DINING RM SET - Maple tone formica, Finish table & leaf, 4 maple chairs. 928-3863.

CARRY STROLLER - Gerry w/canopy, like new. \$20. J. Louis, Ext. 4762.

FRENCH BABY CARRIAGE - Landau type & mattress, clean, good cond. \$40. J. Louis, Ext. 4762.

RECORD PLAYER - Stereo, am/fm radio, GE, in colonial cabinet. \$75. 585-7094 after 6.

ANTIQUE STOVE - Wood or coal, good cond. \$200. 727-4859.

SHETLAND SHEEPDOG - 12 weeks, male tri-color, friendly, all shots, papers. Joanne Ferrante, 751-0130 after 6.

ARM CHAIRS - 2 mahogany w/red vinyl upholstered seats. \$95 for pair. 473-5585.

BEDRM SET - Contemporary, double bed, box spring & mattress, triple dresser w/mirror, 2 night tables, chest of drawers, very good cond. 289-8224 after 6.

BABY DRESSING TABLE - Walnut wicker w/3 lg drawers. \$10; baby swing-o-matic, \$3; bouncing chair w/tray, \$3. 744-1851.

72 COX TRAILER - Sleeps 6, stove, heater, sink, refrigerator, good cond. \$750. Lundgren, Ext. 3800, 585-3794.

GARAGE SALE - Oct 16 & 17, 10-4, furniture, toys, clothing, brick-brac, etc. 56 S Summit Ave, Patchogue.

YARD SALE - Mt Sinai, small elec appliances, tupperware, etc, etc. Herb, Ext. 3403, 473-4757.

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

MT SINAI - 4 bedrm colonial, immac, 2 1/2 baths, beautifully landscaped, very reasonable. 928-3657.

ROCKY POINT - Hi ranch, sound view, mother/daughter. \$35,000 bargain. Ext. 3403, 473-4757.

SAYVILLE - Residential bldg lot, 7500 sq ft, \$9500. 289-0413.

OUR 7 RM CAPE IS FOR SALE - Please come see the house for it's very nice with 1/2 acre landscaped yard. \$33,500. 924-8813.

E PATCHOGUE - 4 lg bedrm, 2 baths, 2-car garage, enclosed porch, ac, partially wooded lot. 475-6916.

FARMINGVILLE - 2 bedrm carpeted, new kitchen, new appl, fenced yard, low taxes, good location. \$28,500. Bob, 698-1035.

SACHEM - 4 bedrm colonial, landscapd 1/2 acre, fenced, cul-de-sac, 2-car garage. 3 yrs old. Must see. \$40,990. 289-7757.

SHOREHAM - 4 bedrm contemporary, 2 1/2 baths, 3/4 acre, balcony w/water view, beach rights. \$65,000. 744-2268 after 5:30.

MASTIC - 3 bedrm ranch, appl, fenced, full basement. \$29,000. Ext. 2042, 399-0374 after 5:30.

For Rent

YAPHANK - 3 bedrm ranch, lg living rm, lg bathrm, util rm, patio, cellar, 2-car garage, 3/4 acre, very private, near expressway. \$300/month. 924-6916, avail Dec.