



Negotiating Teams For Lab and Union "Making Progress"

Talks between Laboratory and Union negotiators have continued since August 4 with sessions lasting an average of 8 hours each.

Three meetings between Lab and Union were held last week, and up to press time for the Bulletin, meetings had been scheduled for each day of this week. According to those present at the sessions, in "face to face" meetings, "Some progress has been made on both sides."

The Laboratory negotiating team is made up of Personnel Manager Joseph Washburne, John White, Ric Villacara, B.C. Frazer, E. Shelton, J. Spiro, I. Polk, and R. Chase.

The Union is represented by President Charles Geonie, Jr., Paul Kelly, John Scandizzo, and International Representative, Dorothy Husted.

From the start of the strike on July 1, until August 4, three meetings were held under the sponsorship of the Federal Mediation and Conciliation Service. At each of these three meetings, relatively little was accomplished. As of the fourth meeting, last Wednesday, the negotiating pace has accelerated, and except for a weekend break, meetings were held at the King's Grant Motel in Plainview every day and usually far into the evening hours.

Strikers have continued to maintain a picket line across the entrance road to the Laboratory, and have opened a trailer-type office on the grass divider strip of the William Floyd Parkway. Laboratory operations continue with only minor inconvenience with volunteers maintaining essential service positions.

IBEW Rejected By Computer Operators

By a vote of 18 of the 19 eligible voters in the Applied Mathematics Department, a proposal to designate Local 2230 of the IBEW as bargaining agent for computer operators was defeated by a vote of 5 in favor and 13 against.

The election, run by the National Labor Relations Board, was held on Friday, August 6 in the Gymnasium at Brookhaven Lab. Those eligible to vote were all computer operators employed in the Applied Mathematics Department during the payroll period as of the week ending July 18, 1971.

Rejection of the IBEW as bargaining agent by 72% of those voting in a secret ballot was more than sufficient to decide the issue. NLRB rules require only a simple majority for a valid decision.

Summer Movie—Cat Ballou

Cat Ballou, directed by Elliot Silverstein (*The Happening*, *A Man Called Horse*), is one of the most popular parodies of the Western genre.

Jane Fonda plays Catherine Ballou, a well-bred schoolteacher returning to her father's ranch after living for several years in the East. When she discovers that her father's land is being threatened by a group of outlaws headed by silvernosed Tim Straun (Lee Marvin), she hires legendary gunslinging Kid Shelleen (also Lee Marvin), who proves to be perpetually drunk.

Stubby Kaye and Nat King Cole appear throughout the film, singing the comic "Ballad of Cat Ballou." Lee Marvin won the Academy Award as Best Actor for his dual performance.

Cat Ballou will be shown on Friday, August 13 at 8:30 p.m. in Berkner Hall. Admission for adults will be \$1.50, and for those under 18, \$.75.

Safety Shoes

There will be no issue of safety shoes on Monday, August 23rd, and Thursday, August 26th, due to shoe fitter's vacation.

Jordanese Visit



Abdullah Toukan, honors student in physics at the University of Liverpool, England, and son of the Jordanian Ambassador to the United Nations, visited BNL last week. On holiday from school, he took advantage of an opportunity to see physics first hand. His visit started in the Tandem Van de Graaff with Dr. David Alburger, then continued at the AGS, where he is shown above with Dr. Fred Mills, Department Chairman, and Dr. Marty Plotkin (right). Abdullah had also expressed an interest in learning more about the use of radioisotopes in agriculture and medicine, so in the afternoon he visited the Biology Department where he talked with Dr. Harold Smith and toured the greenhouses and labs. This was followed by a tour of the Medical department and a talk by Dr. Claire Shellabarger.

Massive Radiation Dose To Lymphocyte Shows Surprising Result In Experiment

In a preliminary experiment conducted by Dr. Robert Conard of the Medical Department, a lymphocyte from human blood was exposed to a total of 720 rads over a period of four hours with no apparent effect on its motility. This is several hundred more rads than what would be considered a lethal dose for humans.

For some time Dr. Conard has been interested in the effects of radiation on lymphocytes and their response to phytohemmagglutinin, a derivative of the kidney bean which stimulates the lymphocytes to transform and divide (mitosis). Lymphocytes have been known to be very radiosensitive, and the object of this preliminary experiment was to attempt to see changes in the motility of the lymphocytes induced by radiation under living conditions.

Dr. Conard has developed a unique technique that allows him to study a single cell in vitro under the microscope as it is being irradiated. First, a small cobalt wire about the size of a human hair was irradiated with neutrons from cobalt-60 for several months. From the lymphocyte cultures growing in an incubator maintained at body temperature of 98.6 degrees F, he put a sample on a glass slide and covered it with a cover slip sealed with vaseline.

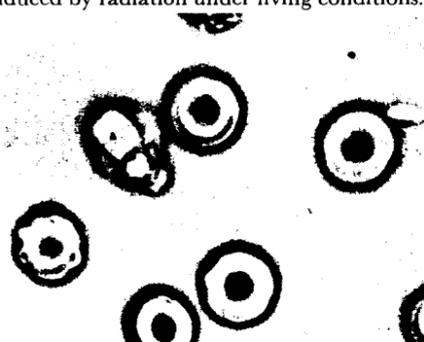
By blowing a warm current of air across the microscope stage, the body temperature was maintained so the cells could stay viable. By focusing on one lymphocyte in the center of the microscopic field, Dr. Conard took movies of its normal motility under phase microscopy, one frame per second with magnification of 200x.

He then put the radioactive cobalt wire mounted in a circular plastic frame on the condenser of the microscope which was brought up immediately beneath the stage, where it remained for four hours. As the cell received 180 rads an hour, Dr. Conard was able to visually observe and record on film what was happening.

"This is an ample dose that we felt would ordinarily kill a lymphocyte because it is radiosensitive," stated Dr. Conard. "But this lymphocyte continued apparently normal motility as if nothing were there. It was a little disappointing to us, because we had thought we might see an immediate effect and we might even see the cell shrivel up and die. Yet it went along with certainly no very obvious change in its motility pattern for the entire four hours."

Because the slide is rather temporary, effects on the cell after four hours could not be observed. At this point Dr. Conard only guesses that perhaps it takes longer for the cell to die or that it may have been injured all the time and the injury did not manifest itself during the four hour period.

"Of course, this is only one experiment," Dr. Conard said. "We intend to carry out some more movies. I would like to see, for instance, what happens to an irradiated cell going into cell division. Does it stop it? Does it slow it down? With this method, one can pinpoint the radiation and watch what



This motile lymphocyte (center left) is being irradiated with 180 rads per hour for four hours.

is happening during irradiation whereas in most radiation experiments, this is not possible."

Dr. Yang Oh, who is working with Dr. Conard, is isolating purified proteins from phytohemmagglutinin that are being tritium-labeled. Drs. Conard and Oh are using this potent tool for the study of intracellular action of the proteins in normal and leukemic cells.

Selected Reading

New Scientist & Sci. J. 51, July 29, 1971
Science v. the bureaucrats. S. White. 252-3
Entrepreneur extraordinary. T. Eiloart talks to D. Hamilton. 268-70

Eng. Sci. 34, May-June 1971
A time of metamorphosis. R.L. Sinsheimer. 18-20

Science 173, July 30, 1971
Mike McCormack: A potential "Mr. Science" comes to Congress. D. Shapeley. 408-10

Notice

Employees and guests who make purchases for delivery on site by other than the U.S. Mail should be advised that almost no deliveries are being made on site due to the strike. A few of our employees and guests have been inconvenienced by having their personal purchases placed in storage off site along with the Laboratory's goods. If the U.S. Mail cannot be utilized, you may wish to make other arrangements.

Sugar And The Pill Makes Fat Faster Apart From Calories

Most diet-conscious Americans are well aware that sugar is fattening, but what they may not know is that table sugar has the ability to stimulate production of fat in the body in some way apart from its calorie content in the diet. In addition, the fat-producing effects in women taking oral contraceptives can be even greater.

These conclusions are borne out in tests conducted during the past two years by a team headed by Dr. Walton W. Shreeve and including Drs. Ching-Hui Wu, Mitsuri Hoshi, and Ryuichi Kikkawa at Brookhaven. The study included ten female and two male patients, most of whom were obese, and all of whom were first put on a high starch-low sugar diet (9:1 ratio), then on a high sugar-low starch diet (9:1). Both diets contained the same amount of cal-



Nurse Mary Craig watches over a patient whose breath is collected for the analysis of carbon dioxide that has been labeled with carbon-14.

ories (about 2,500 daily) and the same total carbohydrate (about 60% of total calories).

After seven to ten days on each diet the patient was given by mouth about one-half cup of dissolved sugar labeled with carbon-14. Blood samples were then taken at one, three, six, and twelve hours after each "meal" of the labeled sugar. The blood specimens were fractionated to separate out the serum lipids, which were then analyzed in a scintillation counter to determine the carbon-14 content.

In each case the concentration of carbon-14 in the major kind of blood fat (serum triglycerides) attained a peak around the three-to-six hour period and then declined. After the high sugar diet, however, the percentage of the labeled sugar converted to the blood fat was two to five times greater than in the same patients when on the high starch diet.

As expected from earlier studies, the concentration of the total serum triglycerides (labeled and unlabeled) also sometimes increased after the high sugar diet, but not as much or as often as the increase in carbon-14 content. The findings, therefore, support the concept of increased formation of fat with possibly increased turnover and transfer to other tissues from the blood.

Among five female patients who were tested under conditions of concurrently taking or not taking a common oral contraceptive, it was noted that four of them showed a greater increase in amount of carbon-14 in the fat (some as much as two-fold increase) while taking the "pill" with a high sugar diet than when on the high sugar diet without the "pill." This suggests particular caution about sugar in the diet, irrespective of calorie content, of women taking an oral contraceptive.

The primary source of production of blood fats in the body is the liver, from which they enter the bloodstream. A long-known stimulant to fat production is insulin, which originates in the pancreas. As part of the research program, Dr. Shreeve and his colleagues studied what effect the high sugar diet had on insulin production. They found that during the first hour or two after taking the test sugar by mouth there was, on the average, 15% more in-

(Continued on page 2)

Sugar-To-Fat Pathway Studied



Dr. Walton Shreeve (left) measures uptake of sucrose-carbon-11 in an obese patient with a pho-gamma counter. Dr. Ching-Hui Wu (right) assists.

sulin in the blood when on the high sugar than when on the high starch diet. This may help explain the changes in blood fats.

Insulin itself is stimulated into production partly by an increase in blood glucose and partly by proteins that are produced during absorption in the mucous membrane lining of the intestine and stomach and circulate through the bloodstream to the pancreas. To test whether the absorption rate is increased after the high sugar diet, sugar tagged with gamma-emitting carbon-11 (half-life of 20 minutes) was used because the absorptive process could be followed by a gamma-sensitive counter outside the body. In some patients after a high sugar diet the disappearance of sugar-carbon-11 from the gastrointestinal area was faster as was the appearance of carbon-11 in the blood. This supports the concept that the high sugar diet conditions the gastro-intestinal tract to more rapid absorption of sugar. Further supporting this view is the finding that the oxidation of the sugar-carbon-14 to carbon dioxide (obtained from the breath) was, on the average, about 20% faster when the patients were on the high sugar diet.

Dr. Shreeve concluded that a high or excess sugar diet, even with moderate calories, causes undue strain on the insulin-producing pancreas and in general promotes excessive formation of fatty substances in the bloodstream. This affects a large percentage of the world's population, because abnormally high levels of blood fats are known to exist in persons with diabetes, obesity, coronary artery disease, many women while taking oral contraceptives, and in a number of other less common diseases and disorders.

Dr. Shreeve noted further that so far no category of normal or diseased persons appears to be exempt from the various metabolic effects of a high sugar diet, as tested. Whether or not certain individuals are genetically or otherwise more susceptible to the effects, and thus run a greater risk of developing diseases associated with higher levels of blood fats, is a subject requiring

considerably more research. He also feels that his research results support the idea that small, frequent meals are preferable to large, infrequent meals.

The work of Dr. Shreeve and his group is supported by the U.S. Atomic Energy Commission, Division of Biology and Medicine. The carbon-14 was obtained from commercial sources and the carbon-11 labeled sugar, because of its short half life, was produced on site in the Brookhaven Cyclotron by Drs. Alfred P. Wolf and David R. Christman of the Chemistry Department. External counting and visualization was performed by the Nuclear Medicine section under the direction of Dr. Harold Atkins. A preliminary report was given by Dr. Shreeve at a meeting of the American Society of Biological Chemists in San Francisco on June 14.

Recreation Facilities Schedules

- Swimming Pool**
(Open Monday through Friday)
12:00 noon - 1:30 p.m. Employees Only
1:30 p.m. - 1:30 p.m. Employee/Family/Visitors
- Gymnasium**
(Open Monday through Friday)
- Mondays**
5:00 p.m. - 8:30 p.m. Basketball
8:30 p.m. - 9:30 p.m. General Activities
- Tuesdays**
5:00 p.m. - 7:00 p.m. Judo Club
5:00 p.m. - 9:30 p.m. General Activities
- Wednesdays**
5:00 p.m. - 9:30 p.m. General Activities
- Thursdays**
5:00 p.m. - 7:00 p.m. Judo Club
5:00 p.m. - 9:30 p.m. General Activities
- Fridays**
5:00 p.m. - 9:30 p.m. General Activities
- Recreation Building**
(Tuesdays through Thursdays)
5:00 p.m. - 10:00 p.m.
- Tuesdays 8:00 p.m. - 10:00 p.m.
During July & August Summer Student Choir
- Wednesdays 8:00 p.m. - 10:00 p.m.
During July & August Folk Dancing

August Retirees



Mildred H. Dobert, a Draftsman in the Mechanical Engineering Department who has worked at Brookhaven since March 31, 1952, will retire on August 31.



Agnes Romard, a Research Services Assistant in the Medical Department who has been employed at BNL since June 15, 1953, retired on August 6.

Letters To The Editor

Editor's Note: Letters answering J. McGrath's request for opinions about the strike from staff members not on strike were published last week. This week excerpts from some of the many letters are published. No letters were received by the Bulletin supporting the strike even though most letters expressed concern for the striking individuals.

Dear Sir:

I would like to respond to the suggestion that the reactions of nonstrikers to the strike would be of interest. I should point out to begin with that while I have worked on site full time for over 9 years, I am a guest, not employed by either AUI or the AEC. On the one hand, this may keep me free of some bias; on the other, there is much that I can learn only second hand. What the net distortion is, I cannot judge.

First, I assume that the statements of the union demands, as presented in the Bulletin at the start of the strike, are accurate. Such a set of demands, presented at a time when the Lab is being forced to retrench, when staff members are being released and many of these that stay are called on to give up all or part of even a cost-of-living raise, strikes me as outrageous. I realize they were made with the expectation that they would be reduced in the process of negotiation; even so, they should have been more reasonable, in my view.

Incidentally, I suspect that one of the demands is being presented to the wrong party. I am told that the retirement program is carried by TIAA; and to the best of my knowledge, it is TIAA and not individual institutions that controls such matters as the possibility of lump-sum payments.

Regardless of the issues, I must say that the union's case has not been helped by the way its public relations have been handled. To take a couple of concrete examples: I am certain that there are among the nonstrikers a number who felt that the parody of the 23rd Psalm passed out on the first day of the strike was in such poor taste as to be offensive; I happen not to have been bothered by that aspect, but I regarded it as a very poor parody. Again, the tactic of having a line of pickets amble across the entrance road in such a way as to just avoid blocking traffic is not likely to arouse anyone's sympathy, especially not that of someone who has to gentle his way around the end of the line. These may seem like only minor irritants; but so is a mosquito bite, and the normal reaction to a mosquito bite is to swat the mosquito, not try to placate it.

As for one of the primary issues, Exhibit B, it is natural and normal for the union to want to protect and extend its jurisdiction. If this were an ordinary industrial plant, the extension might well be logical. The problem here is that experimentation by its nature involves the unanticipated, and the experimenters must be in a position to exercise a high degree of freedom and flexibility. Unfortunately, union rules are commonly such as to deny them that possibility. Some of my friends among the scientific staff have said that they feel their research activities would be seriously hampered by an extension of union jurisdiction of the sort requested. If the union wins, it may find that it has started to strangle itself.

—George L. Trigg

Dear Sir:

My opinion, fellows, is to come back to work — the horse is not only out of the barn but also beaten to death. . . .

—T-109

Dear Sir:

When first we heard about the strike
We thought "We're out of luck
Without the telephones we use
We surely will be stuck."

In spite of storm and rain and strikes
Phys. Rev. must operate
But how were we to overcome
This sudden blow of fate?

Without the phones we use so much
To prod our referees
No longer can we keep in touch—
All operations freeze.

Without the phones we are quite like
A sail without a breeze
Beyond a doubt a lengthy strike
Will bring us to our knees.

Our thanks to those who valiantly
Stepped into the breach
And worked so hard that we in turn
Our referees could reach.

They keep our phones a humming
Good calls and bad alike
And so we're still the madhouse
We were before the strike.

—The Physical Review

Published Weekly for the Employees of Brookhaven National Laboratory

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Public Relations Officer

Arrivals & Departures

Arrivals

None

Departures

Caryl V. MacDougall.....ADP
Agnes A. Romard.....Medical
Richard W. Serianni.....Biology

Cafeteria Menu

Week Ending August 19, 1971

Friday, August 13	
Manhattan Clam Chowder	
Fried Fillet of Sole w/Tartar Sauce & French Fries	.95
Codfish Cakes w/Spaghetti	.80
Baked Beef Loaf w/Savory Gravy & 1 Veg.	.85
Monday, August 16	
Cream of Tomato Soup	
Breaded Pork Chop w/Applesauce & 1 Veg.	.95
Beef Ravioli w/Parmesan Cheese & 1 Veg.	.90
Beef Livers w/Smothered Onions & 1 Veg.	.85
Tuesday, August 17	
French Onion Soup	
Salisbury Steak w/Brown Gravy & 1 Veg.	.85
Frankfurters Rolled in Bacon w/Baked Beans & Cole Slaw	.85
Sliced Turkey & Stuffing w/Cranberry Sauce, Giblet Gravy & 1 Veg.	.90
Wednesday, August 18	
Vegetable Soup	
Chinese Pepper Steak on Rice	.90
Old Fashioned Chicken Pie w/Biscuit Crust	.95
Flounder Stuffed w/Crabmeat, Tartar Sauce & 1 Veg.	.90
Thursday, August 19	
Turkey Noodle Soup	
Grilled Monte Cristo Sandwich, Currant Jelly & Potato Chips	.85
Veal Pattie w/Noodles Oregano	.85
Braised Beef a la Mode & 1 Veg.	.95

Dear Sir:

To the involuntary strikers, I and many others are darn unhappy about your predicament.

I remember talking with some of you before the strike wherein we agreed that a strike would be extremely stupid especially in view of the calamity caused by the recent layoffs. . . .

Most of you men whom I consider friends agreed that it would be tactless, greedy, mean and terribly inconsiderate to be demanding money and goodies while watching the victims of the recent layoff leaving, some of whom were your own fellow workers and friends of many years at the Lab.

I am no company pet and I was, am, and will be just as worried about being laid off as any one of you, and just as eligible.

—Rino Tulipano

Dear Sir:

I wonder if the members of the I.B.E.W. realize that a strike action can be really effective only if the product of an employer is turned off or if its activities are severely hampered? BNL's product, research, is practically impossible to turn off. Those who do their research at a desk are virtually unaffected by the strike. Others, who work with major facilities such as accelerators, are experiencing only minor inconveniences and all programs appear to be operating full blast with no sign of a let-up in the foreseeable future. Even if these facilities were to come to a grinding halt, as some strikers might hope, most of the experimental scientists could spend months catching up on data analysis, paper writing, and experiment planning. . . .

Most of us feel sorry for the individual strikers and their families. But with the financial picture the way it is at the Laboratory I am afraid that the strikers have gotten some advice and leadership that can be questioned. It is difficult for scientists, many of whom are going to wind up this year with an effective increase of 3%, to work up a great deal of sympathy for people who are demanding 18% a year three years in a row.

—David Alburger, Physics Department

Polymer Portrait



A variety of Lab departments have become involved in the polymer-cement concrete studies. The Machine Shop grinds the samples perfectly flat; the Metallurgy Division performs some of the testing; and the Photography group periodically takes pictures of the samples. Pictured here are Carl Johnson (left), Terry Gordon (center), and photographer Mort Rosen (right).

**Practical Project
On Cement-Plastic
Building Material**

In one of the smellier labs in the Radiation Division of the Department of Applied Science, summer student Terry Gordon and his advisor, Carl Johnson, are conducting polymer-cement concrete studies in an effort to devise a feasible low-cost fabrication method for this material.

When concrete is mentioned, most people think of cement. Actually the definition of concrete is any solid aggregate held together with a binding agent. Normally, the binder is cement. In these polymer-cement concrete studies, however, a liquid chemical called a "monomer" such as methyl methacrylate is used as the binder.

The procedure for impregnating precast concrete with this monomer involves basically a lengthy five-step process including overdrying the concrete, evacuating the dried sample, soaking it in monomer, wrapping the specimen, then polymerizing it by radiation, or by a combination of heat and radiation, or by heat and chemical



Terry Gordon examines a polymer-cement concrete sample. Terry is a summer student and will be a senior chemistry major at Jarvis Christian College in the fall.

catalyst. The liquid monomer, which has permeated the concrete, hardens into a plastic.

From the practical outlook, this is a time-consuming process which increases the cost of the end product. Terry and Johnson are involved in reducing this method to a one-step process by incorporating the monomer right in with the cement as it is being made, thus eliminating other handling costs.

"We did some survey experiments on it before," said Johnson, "and it didn't look very promising, because the strength was slightly lower than concrete itself. We are trying to redo those tests now. From the few tests that we have made, the samples are an almost equivalent strength as regular cement concrete."

The polymer-cement concrete samples are subjected to a variety of tests under acid conditions, salt conditions, distilled water conditions and freeze-thaw cycles, some taking as long as a year or more to obtain conclusive data. The researchers are concentrating, however, on making the new material stronger than regular concrete.

Polymer-cement concrete will have many potential applications when practi-



Carl Johnson (left) and Terry Gordon (right) can see the bond formations between the rock particles and the monomer under the microscope.

Mixed Softball

by Georgia Irving

Both games of August 3, 1971 were exciting. This seems to be due to the improvement in fielding ability of both the girls and guys. Naturally this makes the game more competitive and enjoyable for all.

Chemistry beat the Saints 9-4 in the first game. Partially due to the above stated improvements, the only homerun for Chemistry was hit by John Crump; Dann Haas couldn't get a good hit all night. Doug Turner (Chemistry) played a very nice game in left field, making many of the outs and De Seay helped by catching a fly ball at 3rd base.

I want to mention the fine playing of Frank Short (Saints) who played 3rd base with a splint on his left hand. It seems he caught too many flies last week.

There was some confusion in the last inning when Ruby Burwell (Saints) missed home plate trying to score. John May did score however, during the little discussion at the plate.

The second game was a Gotcha victory of 13-3 over the Mixed-Ups. It seemed to be a close game at first when both sides went down in order. Georgia Irving made a double play by catching a fly at 3rd and throwing out runner Peter Chen (Mixed-Ups) at first. Actually Peter was not running; what were you dreaming about Peter?

Red Cullen had a home run in the 3rd inning with a grounder to Fred Lawson (Saints) who over ran the ball and just didn't recover it in time.

The Gotcha's had 6 runs in the 5th including Jim Price's home run followed by a surprise base hit by Ronnie Burholt; too bad they got her at second.

Another improved player is Vicki May the Gotcha's catcher. She surprised her husband John by catching a pop foul and getting a couple of nice clean base hits this week.

And in conclusion I want to thank the fans who show up each week to cheer on their favorite team; it's been a nice turn out this season.

Soccer

John McCafferty

BNL - 1 Grumman - 0

Saturday, August 7th, found Grumman's soccer team at BNL. A physically strong team, they nevertheless were facing a confident BNL squad that is getting used to winning. Five minutes after starting time Cox of BNL sent a sizzler over the crossbar, one of the seven he would duplicate during the game. Ten minutes before half time, Cox hit the crossbar and the ball coming out was hit on the run by Meijer beating the Grumman goalie completely.

The second half turned into a bruising type of play resulting in several scoring attempts by Grumman. When they could get past Fairchild and Pfister (who were playing one of their best games this year) they found Chen always in position and made some of the saves look easy especially several hard shots by Campisi.

Best for BNL - Meijer, Cox and Fairchild. For Grumman - Campisi.

A rematch is planned for early September.

cal fabrication techniques can be developed. For instance, when interconnecting voids that exist in ordinary hardened concrete are filled with polymer, water permeability in the newly-developed material is greatly reduced. Thus, abrasion and erosion resistance is much greater.

Interest in possible applications has been shown by several governmental agencies including the Office of Saline Water, the Army Corps of Engineers, and the Bureau of Public Roads.

These studies are part of an overall departmental Concrete-polymer Materials Program at BNL that is funded primarily by the AEC Division of Isotopes Development, with additional support from the Department of the Interior's Bureau of Reclamation and the Office of Saline Water.

-Johnson

**BNL Bowling Leagues
Now Forming**

Good exercise in a healthy atmosphere.. good competition . . . good fun with good friends. . . that's bowling, America's most popular indoor sport with almost 30 million men, women and children enjoying it regularly. Although bowling is a popular modern game, it is also one of the world's oldest. As far back as 5,000 B.C. the children of Egypt played a game similar to our 20th Century bowling.

Bowling is also one of BNL's oldest sports. As far back as the '40s our first leagues were formed and have run uninterrupted into the '70s. That history shows it's been a consistent favorite of many of our employees who sign up to bowl time after time. Why not see if it's your favorite, too. If you're a novice or haven't bowled at all - so what! There's always a helping hand around happy to show you how. Contrary to popular belief, your thumb won't stick in the ball nor will you go down the lane with it.

If you're concerned that bowling is too serious, you haven't seen our leagues in action. Oh, there are some "competitors," but the majority are at the lanes for a good time.

If you're concerned about the expense, we have cut the entry fee almost in half so that it only costs \$4.00 per man and \$3.50 per woman to join. The men's fee is a little higher because their membership in the American Bowling Association costs a bit more than the gal's fee in the Women's International Bowling Congress. The fee this year only covers those sanction fees and a very small amount for special Awards. The alley proprietors give you a buffet at the end of the season, BERA supplies the awards and pays for your league secretary.

Pick up an entry blank at the Recreation Office. Leagues now forming are:

Men	Port Jeff Bowl	6:15 Tues.
	Patchogue Rec.	6:00 Wed.
Ladies	Port Jeff Bowl	6:15 Tues.
Mixed	Port Jeff Bowl	7:00 Wed.
	Patchogue Rec.	7:00 Thurs.

If there is sufficient interest, an attempt will be made to arrange other nights, times, or places of your choice.

Football Notes

by Jack Brennan

Time to pick up your entry blanks for the coming BNL Touch Football Season. The game is now a non-blocking, primarily passing game. Six men constitute a team, with a ten man maximum roster; twelve men with shift workers.

Entry blanks should be in by August 23rd with a \$25 team entry fee. Season should begin around the first week of September.

For more information call one of the League Officers. President - Bob Barone, Ext. 7356, Vice President - Ed Taylor, Ext. 396, Secretary - Jack Brennan, Ext. 2814.

Diamond News

by Dean Easler

Almost all the reporting last week came from the National League as the Pop-Ups continued to tally in the win column by defeating the Deadwoods 20-17. It was a slugfest for both teams with the Pop-Ups lapsing on defense in the 5th to allow the Deadwoods eight runs. They went on to win, however, with Steve Eisman hitting a home run for the winners.

Chemistry defeated the Six-Pax by an 18-11 score with Dan Haas homeing twice and Tom Iarocci and Dave Comstock once each. Tom Iarocci had six RBI's as he was 5 for 5 in the contest. John Yandell followed this up with a 4 for 4 night at the plate.

One Laboratory League score has Bio-Meds outlasting the Charlie Browns 14-10, as Bob Bores went 4 for 4 with two round-trippers, Dick Ruffing and Tom Weldon, all homered for the Bio-Meds with the 4-base hit accounting for 9 of the 14 runs.

Classified Advertisements

Autos & Auto Supplies

67 SUNBEAM MINX - 4 dr sedan, auto trans, r/h, 25 mpg, good mechanically, looks good also. Asking \$850. JU1-8412.

64 CHEVELLE SS - 2 dr hdtip, auto trans, r/h, mechanically good, body needs paint. Asking \$399. JU1-8412.

71 ALFA ROMEO 1750 SPIDER - Fire-engine red & blk on top, am/fm radio, must sell. Ext. 2180.

68 PONTIAC GRAND PRIX - Green/blk vinyl top, air cond, r/h. \$1795. G. Hughes, Ext. 598, 727-6676.

64 TEMPEST CUSTOM CONV - R/h, good cond. \$300. G. Hughes, Ext. 598, 727-6676.

69 LAND ROVER 88 - New tires & valves, lockout hubs, removable hard top, excel cond. \$1200. 878-4268.

NEW 6.40x14 P RELLI TIRE - In orig wrapping. \$10. 878-0071 after 6.

DELCO PLEASURIZERS - Air shocks for VW, 1000 mi. \$35. 281-6325 after 6.

71 VW SUPERBEEETLE - Auto stick shift, r/h, perf cond, 6000 mi, owner leaving country. Best offer over \$1750. W.S. Hillman, Ext. 2962, HR2-1397.

71 FORD BRONCO - V8, hubs, bckts, rear seat, limited slip, radio, tire carrier, extras. \$3400. Barbara, 286-8633.

63 VOLVO - 4 dr sedan, very good running cond. \$425. 744-8917 after 6.

60 CHEVROLET - 2 dr hdtip, very clean body, new tires, tape player, custom rolled & pleated int, needs trans. \$200. 581-0932.

7.35x14 TIRE - Good cond. Ext. 353, 475-5894.

6 CYL MOTOR - For use in '64 Pontiac Tempest or Chevy, used only 1 yr. 924-3113 after 5:30.

66 CORVAIR - Good cond, 2 dr, 2 new Dulp 13"s, new clutch. \$250. 475-7227 after 5.

68 BUICK SKYLARK - 350 cc, w/air, ps, auto trans. \$1800. Gary, 285-5240.

65 VW SEDAN - Excel running cond, new brakes-muffler, good body, lt blue. \$595. Ext. 322.

2 KEYSTONE 15' MAGS - W/locks; 2-9.00x15 tires, new cond. \$80. 924-3082 after 6.

68 PLYMOUTH SATELLITE - 9 seat wagon, V8, ps, h.d. brakes & susp. Ext. 7285.

65 PONTIAC TEMPEST - Std trans, new batt, brakes, tires & mufflers. \$550. R.P. Comes, Ext. 7362, eves Ext. 7813.

69 CAMARO Z28 - 302 cu in, 290 hp, 4 spd Hurst, blue, 33,000 mi. \$1800. A.F. Nauman, Ext. 388.

Boats & Marine Supplies

BOSTON WHALER 1969 - Sakonnet, 65 hp & 7 1/2 hp Mercurys, depth finder, tach, trailer, extras, excel cond. \$3100. Barbara, 286-8633.

12' INTERCLUB - Fiberglassed, dinghy & trailer w/ winch, dacron sail, alum mast. \$275, will haggle. John, 941-4562.

25' WHEELER SPORT-FISHERMAN 1961 - Fiberglass, w/'69 F.W. cooled 225 hp Chrysler, 200 hrs. 286-8062.

15' THOMPSON LAFSTRAKE - Good cond, ready for water. 924-3170.

22' GARVEY - Decker over clam boat, excel buy. \$350 firm. 475-4557.

17' FIBERGLASS O'DAY DAY SAILOR - Trailer, main & jib, 3.5 hp outboard, an ideal family boat. Asking \$1000. Garfield, 286-0824.

9 1/2' SAILING DINGHY - Fiberglass hull, dacron sail, sturdy & dry, used only 1 season, excel cond, extras. P. McHugh, Ext. 7163, 586-3579.

20' RACING SLOOP - Mahog hull, outboard, all sails, in water, excel cond. \$1800. 862-8084 after 6.

50 LB NAVY ANCHOR - 18 tooth clam rake for mud. L. Decker, Ext. 2431/629.

Miscellaneous

EXPERT HAIR SERVICE - Coloring, styling, cutting, permanent wave. 2E1-2593.

MINI BIKE - Bonanza Trail, front & rear shocks, 3 1/2 Tecumseh eng, jack shaft, like new. \$150. HR3-9275.

WEDDING GOWN - Never worn, size 10, silk organza, Alencon lace bodice w/pearl appliques, long sleeves, long lace train. 757-0160.

COCKTAIL DRESS - Size 9, never worn, blk top w/ beautiful intricate white skirt, cost \$45, will sell \$10; blond fall set in Grecian style w/curls, 100% human hair, \$20. Marlene, Ext. 7711.

68 "WHEEL" TENT TRAILER - Hdtp, sleeps 9, dbl dinette, elec, still new cond. \$975. Ralph, Ext. 481, 744-8921.

AIR CONDITIONER - Westinghouse, window mount, deluxe, 10,500 BTU, 110 v, almost new. \$165. Chen, 744-3425.

MOVING SALE - Table saw; 12 pc cherry wood din set; piano; Castro conv sofa; rm air cond; outboard motor; ping pong table plus more. 744-8950.

FREE - Beautiful hamster, good health, good temper, w/cage. Ext. 7726/7273.

GREAT DANE PUPS - AKC reg, 3 wks old, health checked, shots, brindel, fawns (show stock). 281-8344 after 3.

CAMERA & ACCESSORIES - 35 mm SLR Honeywell Pentax, H3V, w/clip-on light mtr, 3 lens, 35 mm, 55 mm, 135 mm, flash, extension tubes & camera case. \$225. V. LoDestro, 744-1408 after 6.

ROCKING HOBBY HORSE - Spring activated, \$10; leg-o-matic card table & chairs, \$15; fireplace tools, \$10; hot tray, \$3. Barbara, 286-8633.

ALL METAL HARDWARE - From 1900 doctor's buggy, springs, axles, etc, woodmaker could make bed & wheels - good winter project! \$10. Harry, Ext. 7272.

SLIDE PROJECTOR - Kodak Cavalcade No. 500, auto timer, remote control, 14 trays, like new cond. \$40. Naomi, Ext. 2919.

GIRL'S RIDING BOOTS - Size 3, excel cond. \$8. 286-8517.

2 FINCHES - Plus standing cage. \$10. 286-8517.

KITCHEN SET - Chrome & formica, grey & blue, ideal for fam rm or every day use. \$35. P. Towey, Ext. 602.

SCHWINN 10 SPD - \$40. Don, Ext. 7168/7360.

PANASONIC AM/FM STEREO - W/Garrard changer, good cond. \$80. R. Goldberg, Ext. 7243 days, Ext. 2377 eves.

GIRL'S BICYCLE - 26", new tires, tubes. \$10. Ext. 7630.

24" REEL PWR MOWER - Jacobsen Estate, w/grass catcher & Tecumseh edger/trimmer, both excel cond. \$200. Ext. 2408/439.

CONV SOFA - Makes full bed, needs cover, reasonable. Ext. 7372, 286-3462.

GE HAIR DRYER - Very good cond. \$9. Ext. 7170/2324.

TRAILER HITCH - For 69 VW bug. L. Decker, Ext. 2341/629.

MARVEL ELEC BASS AMP - 20 watts, 12" speaker can be used for other elec instruments. \$50. Dave, Ext. 2593.

ELEC "HOLLOW BODY" BASS GUITAR - 2 heavy duty pickups, vol-tone controls, like new. \$60. Dave, Ext. 2593.

GIBSON WAH-WAH PEDAL - For elec guitar or organ, like new. \$40. Dave, Ext. 2593.

ELEC GUITAR - Solid body, 4 pickups, individual controls, w/case, excel cond. \$70. Dave, Ext. 2593.

PIANO - Baby grand by Cable, full keyboard, bench incl, excel cond. \$800. Dave, Ext. 2593.

KITCHEN CABINET - To fit under soffit, 36"lx15"hx 12"d. \$20. Les, Ext. 7762.

DRUM SET - Compl set, 3 tom-toms, bass, snare, hi-hat, cym. Orig \$200, sacrifice \$125. 475-7227 after 5.

BESSON TRUMPET - & fiberglass case, used only 3 yrs, \$50; surfboard, 7'4" Channin-Diffenderfer lding, \$65. 475-4557.

GIBSON REFRIG - 16 cu ft, frost-free copper, 3 yrs old, \$175; GE washing machine, working cond, \$25. 286-3419.

AKC COLLIE PUPS - Tris & sables. Males \$100, females \$75. 585-6723.

ENCYCLOPEDIA BRITANNICA - 13th ed, full set, intact, any reasonable offer. L. Dahl, Ext. 2861.

FRENCH HORN - "F", less than 1 season's rental for the beginner. \$50. Marty, Ext. 366.

COLLIE - Tri color, good companion for older children, 1 1/2 yr, needs lots of room \$75. 924-4879.

WASHING MACHINE - Sears Kenmore, 3 cycle, good cond. \$50. 924-4879.

FENCE - 2x4 in mesh, 11 gauge, 4', approx 100' w/11, 6 angle iron posts. \$29. 924-4879.

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

SHOREHAM 4 bedrm colonial, 2 story, cedar shingle house, 2 1/2 baths, liv, din & fam rms, 2 car garage. \$35,500. 744-6657.

SHOREHAM - Inc Village, custom ranch, 4 bedrms, 3 baths, panelled liv rm, fireplace, playrm, 2 car garage, 3/4 acre landscaped wooded plot, beach & tennis. 744-3425.

SETAUKET - N of 25A, \$13,500 down 6% balance, spacious, 5 bedrms, din rm, den, foyer, on almost 3/4 acre wooded hill. \$48,700. Marty, Ext. 366, 751-8408.

MEDFORD - Custom colonial, lg liv rm w/fireplace, formal din rm, 32' country kitchen, paneled den, 4 bedrms, 1 1/2 baths, rec rm, att 2-car garage, 1 1/4 treed acres w/lg playhouse. 289-1614.

For Rent

2 1/2 RM BSMT APT - Separate kitchen, priv entrance, util incl. LT9-5951.

BELLPORT - 2 1/2 rms & bath upstairs w/priv entrance, furn. Util incl in rent of \$145-lease. 286-8850.

SETAUKET - N of 25A, 5 bedrms, 2 1/2 baths, din rm, den, liv rm w/fireplace, 2 car garage, all appliances, w/wo option. \$475. Marty, Ext. 366, 751-8408.

Wanted

TO RENT - 4 rm apt or house, business couple, no children or pets. Maximum \$150/mo rent. 281-9398 after 5:30.

HELP, HELP, QUICK, QUICK - If someone doesn't take these kittens, I'm going to be sick. Marie, 281-8716.

4' FLUORESCENT FIXTURES - W/dual lamps. Ralph, Ext. 7352.

WILL DO PROFESSIONAL ALTERATIONS - Or other sewing, also instruction. Ext. 523.

PLUMBER - To install compl bathrm, reasonable estimate appreciated. JU1-8412.

BUNK BED - 724-8950.

1655 OR 6.85x15 SNOW TIRES - For Volvo. M. Strongson, Ext. 2727.

TOM'S TV REPAIRS - Have your TV expertly repaired in the evening at minimum costs. 878-0567 after 5:30.

ORGANIST - To play for sm church in Middle Island. Ext. 2829, 924-8213 after 6.

TREE REMOVAL & CHAIN SAW WORK - Also light hauling. Ken, 924-4539 eves.

VW TIRE - Used, good for spare. Norm, Ext. 525.

FREEZER - Reasonable. Ext. 640 between 12:00 & 12:45. 727-3608 after 5.

MINI-BIKE OR GO-CART - Any cond. Hersey, Ext. 7167, AN5-6326 eves.

EXPERIENCED BABYSITTER - Would like to babysit 1 or 2 children in my home - Medford (Pa. Ave.), reasonable. 289-8116.

PEOPLE - Last call for Sept group flight to Europe, we still need a few people. \$160 round trip. R. Horwitz, Ext. 2725.

BABYSITTING JOBS - Experienced 13 yr old wishes babysitting jobs in Coram-Middle Island area. 732-2204 after 12:30.

HOUSE OR APT TO RENT - On a month-to-month basis, in CSD No. 4, from 9/15. 286-0161.

HOME - For 2 altered male cats. 289-4947 after 7.

CAMERA - 35 mm, single lens reflex, in good cond. Ext. 2959, 286-0295.

CAR - To be driven to Florida for you on or around Aug 29-30; good, safe driver available. K. Hayes, Ext. 2876.

PIANO - Sm console or spinet, full keyboard, good cond. 757-0160.

Carpools

DRIVER WANTED - For existing carpool, vicinity Exit 32 So. State Pkwy & points west. Plotkin, Ext. 7103.

JOIN OR START CARPOOL - Stony Brook/Strathmore vicinity. M. Strongson, Ext. 2727.

DRIVERS - To compl existing carpool from Babylon/N. Babylon area. George, Ext. 2154.

Lost & Found

LOST - Jacket, brown w/gold single buttons, w/ initials P.T. on inside. 732-8309.

LOST - Women's sunglasses, silver frames & dark lenses. Ext. 7238.

Tennis News

The Men's Singles Tourney appears to be bogged down in the doldrums of inactivity and is now two weeks behind schedule. The Tennis Committee wishes to remind all participants that it is the players' responsibility to keep the tournament on schedule. The Committee has no way of knowing if there has been a forfeit until it has been notified by the insertion of a note to that effect into the pocket on the schedule board in the gymnasium.

The posted results (August 10) since last week's report are:

Men's Singles
First Round: Passell-Bornstein, 6-3, 6-2.
Second Round: Feldberg-Passell, 6-4, 6-4.

Classified Ad Policy

Deadline is 12 noon Friday for publication 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. Firearms offered for sale or trade may not be brought on site.

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.
7. Ads should be restricted to 20 words or less and typed or printed on the form provided, and must bear the employees signature.

<input type="checkbox"/> For Sale: Auto & Auto Supplies	<input type="checkbox"/> Wanted	Check <input checked="" type="checkbox"/> the heading applying to your ad.
<input type="checkbox"/> For Sale: Boats & Marine Supplies	<input type="checkbox"/> Carpools	Print or type your ad in 20 words or less.
<input type="checkbox"/> For Sale: Miscellaneous	<input type="checkbox"/> Lost & Found	

Ads concerning 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, Room 112, 40 Brookhaven Avenue.

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(Name & Phone No. To Call)

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

Send to: Brookhaven Bulletin, 40 Brookhaven Avenue

Three more matches each are needed to complete both the first and second rounds.

The Walter W. Merkle Men's Doubles
First Round: Elmore, Bailey-Feldberg,
Carsten, 6-3, 6-1. Second Round: Aus-
kern, Kevey-Koetzle, Passell, 6-0, 6-3.

One more match in each of the first and second rounds will determine the finalists.

Ladies' Singles
Second Round: Stevens-Michael, 6-2,
4-6, 6-1.

Two matches must be played to complete the first round. Then, three matches are needed for the second round. Please, ladies, make every effort to get back on the schedule.

The Mixed Doubles had no activity this week. Again we urge the contestants to get out and play!

Attention Movie Fans

The French Group of BNL will devote its August meeting to a showing of Francois Truffaut's film "Jules et Jim" with English subtitles. The film will be shown on Thursday, August 19 at 8:15 p.m. in Berkner Hall.

Starring Jeanne Moreau and Oskar Werner, this film ranks among the great lyric achievements of the screen. It tells the story of a friendship between a German (Jules) and a Frenchman (Jim) and their twenty-year love for the same woman.

The purpose of the French Group of BNL, which meets approximately once a month, is to stimulate interest in French language and culture through films, lectures, play readings, etc. Everyone is welcome to the meetings; admission is \$1.50 for non-members.

Folk Dancing

There is still time to brush up on your dancing before you take that package tour this summer. Don't go to Athens without learning the Syrto, Kalamatianos, and many other great dances. In Stockholm the Swedish Hambo is the thing, and in Manila - Tinkling. The Brookhaven Folk Dance Group will teach you these and many others, every Wednesday, starting at 8:00 p.m. at the Recreation Hall, in the Apartment Area. Beginners and old hands, singles or couples, young and old - all are welcome - the only requirement is enthusiasm.

Personnel Services At the Recreation Office Open Daily 9:00 a.m. to 1:00 p.m.