



## Christoffersen Commemorated



On June 26 and 27, 724 pints of blood were donated by BNL to the Greater New York Blood Program. Following donations, John Butler, Greater New York Blood Program Administrator, presented a plaque to the BNL community commemorating the late Alf P. Christoffersen who was instrumental in getting the blood program underway at the Lab. The inscription on the plaque reads, "For dedication in developing a successful employee blood program contributing much to the health of the Suffolk Community." Associate Director Vincent O'Leary accepted the plaque on behalf of the Lab. Pictured from left to right are: John Butler; Dorothy Schroeder and Claire Lamberti, who coordinated the BNL blood program this year; and Vincent O'Leary.

## Preface Precedes Progress

The BNL Affirmative Action Office, in conjunction with Howard University has instituted the first Preface Program in BNL's history.

The BNL - Howard Preface Program was designed to acquaint the college bound high school graduate with the actual working procedures of his chosen profession. The 11 students, 7 males and 4 females, will all be majoring in a branch of engineering, either electrical, mechanical, or civil. They have been assigned to five departments: 3 to AGS, 4 to DAS, 1 to Instrumentation, 2 to Applied Math, and 1 to PE.

The participants in this program are incoming freshmen at Howard University in Washington, D.C. All are winners of national or collegiate scholarships, and many have been named in Who's Who Among American High School Students. These guest research assistants hail from as close

as Cromwell, Connecticut and from as far away as Brookhaven, Mississippi. They arrived Sunday evening and were officially welcomed to BNL during a Monday morning conference by Glenn Price, Head Office of Academic Affairs; Peter Chen, Assistant to the Director for Affirmative Action; Renee Flack, Equal Opportunity Assistant; and the students' department supervisors. During the conference, general introductions were made and the history of the Lab discussed. Each student then met with his or her advisor for a brief departmental orientation.

It is hoped that the Preface Program, which is jointly sponsored by the AEC and Howard University, will continue annually at BNL. The program will end on August 9, allowing time for the students to prepare for their studies at Howard.



The Preface Program Students "kept on truckin'" until they reached BNL this week. They are, from l to r: Lydia Barnwell, Washington H.S., Atlanta, Georgia; Monte Richards, Norcom H.S., Portsmouth, Virginia; Tommy Friday, Brookhaven H.S., Brookhaven, Mississippi; George Reid, Archmere Academy, Claymont, Delaware; James Baker, McKinley Tech., Washington, D.C.; Deborah Parham, Petersburg H.S., Petersburg, Virginia; Sonny Collier, Rogers H.S., Newport, Rhode Island; Laura Dean, McKinley Tech., Washington, D.C.; Gairy Bagwell, Onancock H.S., Onancock, Virginia; Beverly Albert, Douglas H.S., Baltimore, Maryland. Not present for this picture, Anthony Blackman, Cromwell H.S., Cromwell, Connecticut.

## Particles See New Simplicity Of Nature

Using the accelerator at the Fermi National Accelerator Laboratory, a group of 16 experimentalists discovered that the proton and the neutron increase in size or "cross section" when they are bombarded by beams of particles at very high energies. Also, at these high energies, the characteristic differences between the various elementary particles begin to diminish, indicating that a new simplicity of nature may be revealing itself.

The experiment was a collaboration between physicists from BNL, FNAL and the Rockefeller University. The team was led by Thaddeus Kycia, BNL; Winslow Baker, FNAL; and Rodney Cool, Rockefeller University. Both Cool and Baker were past employees of Brookhaven. Cool came to BNL in 1949 and was appointed Associate Director for High Energy Physics in 1966, a title he held until 1970 when he was appointed professor at Rockefeller University. Baker was at the Lab from 1959 to 1965.

The results of the experiment were presented in a paper, delivered by Kycia, at the 17th International Conference on High Energy Physics at the Imperial College in London on July 2.

The cross section of the proton and neutron was measured using a high precision technique, with an accuracy of about one part in 500, developed at Brookhaven over the past ten years under Kycia's leadership. It involves bombarding a target consisting of liquid hydrogen or deuterium with a beam of different particles under highly controlled and stable conditions. In the FNAL experiment beams of six different sub-nuclear particles were used: plus and minus pi mesons, plus and minus K mesons, protons and their antimatter twins antiprotons. The probability with which the beam particles interact with the target particles defines the size or cross section of the particles. The higher the probability, the larger the cross sections.

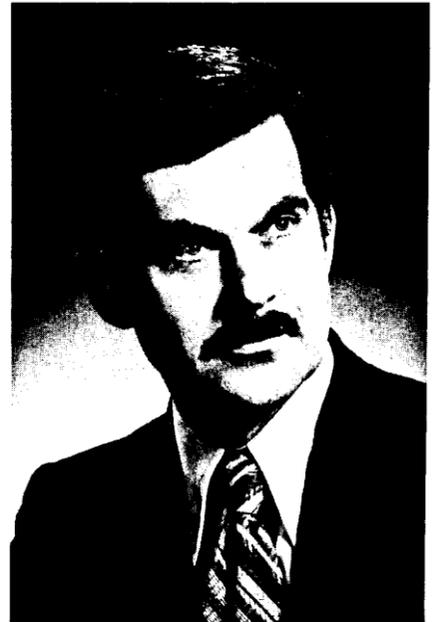
The six sub-nuclear particles were produced when a beam of protons from the main Fermi Lab accelerator collided with a beryllium target. This produced a secondary beam containing the particles used in the experiment. The secondary beam was directed to collide alternately with the two targets; one of hydrogen whose nucleus is composed of protons and one of deuterium, whose nucleus is made up of protons and neutrons.

As the energies of the bombarding particles were increased from 50 to 200 GeV, the cross sections of all but the antiproton were seen to increase. The cross section of the antiproton has been known to decrease rapidly at energies below 50 GeV but the experimenters found that the decrease was markedly slowed down from 50 to 150 GeV and the cross section remained constant between 150 and 200 GeV. This indicated to them that the antiproton cross section would probably begin to increase at energies above 200 GeV.

This, then, would indicate a universal phenomenon. This phenomenon could help physicists unravel the mysteries of the nuclear force that binds together the particles of the nucleus. There is as yet no general theory in existence that explains the actions of this force. The FNAL experiment will be continued up to 400 GeV, the present maximum energy potential of the Fermi Lab accelerator.

Prior to 1971, it was expected that the faster a beam particle passes a target particle, the less chance of interaction and therefore the smaller the particle size. The first hint that particle cross section increases with energy, came out of experiments at the U.S.S.R. Serpukhov Accelerator where scientists were working with beams of positively charged K mesons at energies up to 50 GeV. In 1973, scientists at the European Center for Nuclear Research (CEDN) in Geneva, Switzerland, reported an increase with energy of the size of the proton during proton-proton collisions. Because of the design of the intersecting storage ring accelerator, the scientists at CERN were limited to proton-proton interactions only.

The FNAL experiment was the first one in which six different particle types were used to measure proton and neutron cross sections at these high energies. For five of the six particles the neutron cross section



Thaddeus F. Kycia

was almost equal to the proton cross section at very high energies. Not only were the neutron and proton cross sections almost the same, but the cross sections of the beam particles and their antimatter twins were similar. This concurs with the theory put forth by the Russian theorist Isaak Ya. Pomeranchuk in 1958, which states that the difference between the cross section of a particle and its antimatter twin approaches zero at ultra high energies on the same target.

In addition to Kycia, Cool, and Baker, other members of the FNAL total cross section experiment and authors of the paper to be published in the journals of the American Physical Society are: from Brookhaven - Alan S. Carroll, I-Hung Chiang, Kelvin K. Li, Peter O. Mazur, Paul M. Mockett (now at the University of Washington), David C. Rahm, and Roy Rubinstein (now at FNAL); from FNAL - David P. Eartly, Giorgio Giacomelli (Institute of Physics, Padova, Italy), Peter F.M. Koehler, Klaus P. Pretzl (now at the Max Planck Institute), and Alan Wehmann; from The Rockefeller University - Orrin D. Fackler.

The results of the experiment at FNAL demonstrate the need for higher energies than available with existing accelerators. If greater energies could be achieved then the phenomenon of particle cross section rising with energy could be studied further. One possible source of higher energies would be the proposed Intersecting Storage Accelerator, more commonly known as ISABELLE. Although the proposal is for a proton-proton colliding machine like the one at CERN, but capable of much higher energies, possible future additions to the machine could include provisions to collide (Continued on page 2)

## International Workshop On 3D Reconstruction

From July 16 thru 19, a group of 60 selected researchers will meet at Brookhaven for an interdisciplinary workshop supported by a National Science Foundation grant, on the reconstruction of three-dimensional images from their projections.

According to Workshop Director Robert Marr, the attendees will come from as far away as New Zealand, Switzerland, England, Germany, Sweden, Canada, as well as many United States universities and institutions.

After welcoming remarks by Laboratory Director George Vineyard on Tuesday morning, a keynote address will be given by R.N. Bracewell of Stanford University. Dr. Bracewell will give an overview of three-dimensional reconstruction.

Workshop sessions will convene each morning in the Hamilton Seminar Room of the Chemistry Building, and continue with only meal breaks throughout each afternoon and evening. On Thursday there will be a banquet in Berkner Hall, and the workshop will end after lunch on Friday, July 19.

**BNL's Gift For Life**



Phil Borzi, Supply and Materiel, presents the key of a surplus BNL ambulance to Fred Schaller, Civil Defense, while Associate Director Vincent O'Leary (left) and James Gilmartin, Health Physics and Safety, look on. Civil Defense has subsequently donated the ambulance to the Manerville Community Ambulance Group, of which Gilmartin is a director, which was previously without ambulance service.

**BROOKHAVEN BULLETIN**

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**Interns Complete Two-Year Program**

On Friday, June 28, Glenn Tinnie and Lee Shelby graduated from the first Affirmative Action Administrative Intern Program.

The program was begun for the purpose of developing personnel who were to be oriented in the administrative procedures and methods of the Laboratory. Upon completion of this two-year program these individuals would be qualified to assume responsible administrative positions in almost any area of the Lab.

Many applications for the program were filed and two persons were chosen, one female and one male. Lee Shelby and Glenn Tinnie, the successful candidates, have now reached the end of the intensive program they undertook two years ago.

To acquaint the candidates with the various phases of administrative detail, Glenn and Lee were assigned to work in various departments. Lee began in Medical and Glenn went to Administrative Data Processing, a field in which he already had an extensive background. Each department in which Glenn and Lee were assigned was responsible for their learning progress. The overall training exposure was to connect the areas associated with the department last visited and those to be visited.

"I had absolutely nothing to lose and everything to gain. The program was something that I thought I would really enjoy," says Glenn Tinnie. Glenn, who holds a B.A. in Business Administration from Dowling College, came to BNL in September of 1967. He was assigned to the Department of Applied Math where he worked as a computer operator. Because of a willingness to get involved Glenn felt that the program would be to his benefit. "The program is definitely worthwhile. It is important being involved in administration. I've learned what BNL is about and how it functions."



Glenn Tinnie and Lee Shelby.

Now that the program is completed Lee Shelby recalls, "I hadn't realized the vastness of BNL. I just never knew how many people are involved in the work that goes on here." Ms. Shelby, who presently attends Southampton College, came to the Lab in October of 1971 as a secretary in the Office of Scientific Personnel. "I would like to see the program continue but with a greater emphasis on relevant departmental administrative work," says Lee. "It's been a great challenge. I had hoped to be chosen, but I didn't know what kind of chance I stood, I just tried anyway."

The program was originated after investigation by a committee reporting to Lab Director George Vineyard consisting of Al Finn, Medical; Ron Manning, Physics; James Stangby, Biology; and Harvey McChesney, A.G.S. In addition, a Selection and Review Committee was established which included Finn; Peter Paige, Personnel; Harvey Thomas, AGS; and was chaired by McChesney. The late Alf Christoffersen acted as Program Administrator and Secretary to the Committee. "Chris was the

**Paul G. Kelly**

Paul G. Kelly, 41, Sign Painter in Plant Engineering, died on Saturday, July 6. He had been employed at BNL since January, 1961. After a Mass on Wednesday morning at St. Joseph the Worker R.C. Church in East Patchogue, he was buried in Holy Sepulchre Cemetery, Coram.

In addition to his involvement with community and church affairs, Mr. Kelly was able to find time to be a devoted husband to his wife Eileen, and beloved father to his four children, Paul Jr., Kevin, Brian, and Eileen.

Paul was a member of the BERA Board from 1969 to 1973, and an active participant in many Lab activities. His most recent effort was as chairman of the Special Events Committee, which ran the most successful employees' picnic a few weeks ago.

Paul served on the Affirmative Action Advisory Committee, and was an active member and officer of Local 2230, IBEW, currently serving as Vice President and member of the negotiating committee.



When asked to comment on Paul's death, BERA Board member Pat Towey said: "What can you say about a friend? What can you say to a friend? I know I forgot to thank him for his friendship - for knowing him and family and the closeness of being included in his circle of activities."

"We worked together on two community theatre activities, doing two shows for local churches and he approached them the same way he did everything else - completely. He had patience with people, young and older than young, and always made you feel that you were doing something right and good."

"I forgot to thank him for this - and for his feisty Irish wit and that dreadful ukelele that he would bring out at parties. Everyone taunted him about it but waited until he started playing and then joined in the fun."

"Those who worked with him on the BERA Board, special event committee, union work and church activities probably never really turned around and said 'Thanks, Paul, you're a friend.' I know I never did -"

"I can't now - you see Paul Kelly, my friend, passed away this week."

"I must remember to turn around and thank a friend."

greatest help to us," says Lee. "We came to him for assignments and encouragement. When we had problems adjusting or getting the kind of work we were interested in doing, he was instrumental in helping us in every way."

After reviewing and considering all applicants the Committee made recommendations to Associate Director Vincent O'Leary who made the final choice of Shelby and Tinnie.

Mr. O'Leary along with the Selection and Review Committee held periodic conferences with Lee and Glenn to discuss their progress, to obtain their personal reactions and to develop suggestions and improvements for future internship programs. "I would like to see the program continue especially since I would like to see more minority personnel in decision making positions," says Glenn. With regard to future trainees Lee advises, "Go in with an open mind and extract as much knowledge as you can." In a final statement Glenn summed up the reasons for Lee's and his success, "self motivation is the key factor." And Glenn Tinnie and Lee Shelby both know this is true.

**AD Summer Seminars**

The Accelerator Department has arranged a series of seminars for the Brookhaven Summer Students and other interested individuals. These seminars will be given on Fridays at 11:00 a.m. in the Hartland Snyder Seminar Room, Bldg. 911, 35 Lawrence Drive. The subjects and speakers are as follows:

- Evolution of the AGS Experimental Program - D. Berley (July 12).
- AGS Computer Control - B.B. Culwick (July 19).
- Review of Solar Energy - J.G. Cottingham (July 26).
- Superconducting Magnets - G.K. Green (August 2).
- Search for  $\pi$ - $\mu$  Atoms at the AGS - M. Schwartz (August 9).
- Superconducting Transmission Lines - E.B. Forsyth (August 16).

**Cafeteria Menu**

Week Ending July 19, 1974

<b>Monday, July 15</b>	
Cream of Mushroom Soup	
Sausage & Scrambled Eggs w/French Fries	1.00
Roast Beef & 1 Veg.	1.20
<b>Tuesday, July 16</b>	
Turkey Noodle Soup	
Beef Hash & 1 Veg.	1.00
Spaghetti & Sausage	1.00
<b>Wednesday, July 17</b>	
Vegetable Soup	
Barbequed Fresh Ham & 1 Veg.	1.15
Broiled Filet & 1 Veg.	1.10
Build Your Own Hero (Tax Incl.)	1.25
<b>Thursday, July 18</b>	
Split Pea Soup	
Macaroni & Cheese & 1 Veg.	1.00
Chopped Steak & 1 Veg.	1.00
<b>Friday, July 19</b>	
Manhattan Clam Chowder	
Fish & Chips	1.00
Chili Con Carne on Rice	1.00

**Particles** Continued

beams of protons with beams of electrons, deuterons or antiprotons.

ISABELLE would accelerate two proton beams, one clockwise and the other counterclockwise, to a maximum energy of 200 GeV. When these two beams collide, a combined energy of 400 GeV would be released. This would be seven times more energy than produced by the ISR at CERN. Although the proton beam at FNAL can reach a maximum energy of 400 GeV, the energy released when the beam strikes a stationary target is only about 28 GeV. In accordance with Einstein's theory of relativity, the highest energies can only be achieved in a head on collision between two moving particles.

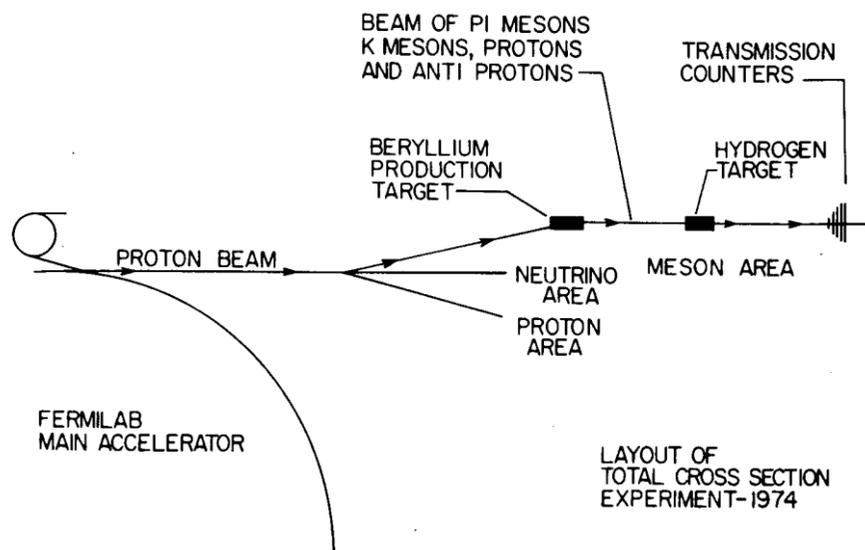
A subpanel of the High Energy Physics Advisory Panel to the AEC recommended that ISABELLE be constructed at BNL. The HEPAP Subpanel on New Facilities, chaired by V.F. Weiskopf of the Massachusetts Institute of Technology, met for a week at the end of June in Woods Hole, Massachusetts. The purpose of the meeting was to discuss future needs for high energy facilities and to determine the next major steps required in this field over the next decade. Out of the meeting came the following recommendations:

"The authorization in FY 76 of the LBL-SLAC proposal for the construction at SLAC of a 15 GeV electron-positron colliding beam facility ("PEP") with a design luminosity of  $10^{32} \text{ cm}^{-2} \text{ sec}^{-1}$ ."

"Providing funds in FY 76 of 3 to 4 million dollars for BNL to complete fabrication of prototypes of superconducting magnets, with the aim of making a request for early construction at BNL of a proton-proton colliding beam facility ("ISABELLE") with a design luminosity of  $10^{33} \text{ cm}^{-2} \text{ sec}^{-1}$  and a beam energy of at least 200 GeV."

"Funds be provided to support an accelerator development program at FNAL directed toward the long-term goal of fixed target and/or colliding beam systems in the region of 1000 GeV and above."

Whether the AEC will allocate funds for the construction of ISABELLE at BNL is uncertain. Based on rumors coming out of Washington "we are in good shape but not in the clear yet," says Accelerator Chairman Mark Barton. "There are still a lot of hurdles but 1984 will not be the year of Big Brother but the year of Big Sister - ISABELLE," he said in a talk before members of the Accelerator Department after his return from Woods Hole. Barton and William Sampson were consultants to the HEPAP Subpanel on New Facilities.



Layout of the total cross section experiment at the Fermi National Accelerator Laboratory.

## IBEW Meets July 25

Local 2230, IBEW will hold its regular monthly meeting on July 25 at 8 p.m. in the Knights of Columbus Hall, Railroad Avenue, Patchogue. There will also be an afternoon meeting at 2 p.m. for shift workers in the Union Office at 31 Oak Street, Patchogue.

On the agenda will be regular business, committee reports, and the President's report. Because this meeting is the last regular meeting before the Collective Bargaining Contract with the Laboratory expires, there will be a special report on the current negotiations.

## Letters To The Editor

Dear Sir:

On behalf of the Manorville Community Ambulance Group, I would like to thank everyone at the Laboratory who helped us acquire the surplus Federal ambulance - Vince O'Leary, Director's Office; Phil Borzi and Grace Fales, Supply & Materiel Division; John Jewett and Marvin Laster, AEC office. Because of their concern, our Group will now be able to provide an ambulance service to the residents of Manorville, an idea that just a few months ago seemed to be an Impossible Dream.

Sincerely,  
Jim Gilmartin

Manorville Community Ambulance Committee

Dear Sir:

Thank you for making it possible for my husband to receive blood through BNL. May God bless you all.

Mrs. Uriarte

*Editor's Note:* Mr. Uriarte is the father of Ruth Gonzales, Applied Math. Several weeks ago BNL's Blood Program provided him with 18 pints of blood when he underwent open heart surgery.

## June Retirees

**Joseph Damm**, a Tool & Instrument Maker in the Central Shops Division, who has been employed at BNL since November 29, 1964, retired on June 30.

**Walter J. Maresco**, a Steamfitter A in Plant Engineering who began work at the Laboratory on June 2, 1947, retired on June 30.

**Fred Meisenzahl**, a Master Metal Worker in the General Shops Division, who has been working at BNL since August 10, 1957, retired on June 30.

**Joseph Rolfes**, a Helper A in the Central Shops Division, who has been employed at the Laboratory since July 16, 1962, retired on June 30.

**John R. Stehn**, a Physicist in the Department of Applied Science who has been employed at BNL since March 1, 1961, retired on June 30.



Fred Meisenzahl



Walter J. Maresco



John R. Stehn



Joseph Damm



Joseph Rolfes

## Arrivals & Departures

### Arrivals

Joshua L. Alspecter ..... Physics  
Metin Arik ..... Physics  
Frank W. Barvenik ..... Applied Science  
Naresh K. Bhagat ..... Applied Science  
James E. Cain ..... Biology  
Alfred S. Campbell, Jr. .... Central Shops  
Dwight A. Dieterle ..... Applied Science  
Charles L. Dunford ..... Applied Science  
Willie Hill ..... Medical  
George A. Jeffrey ..... Chemistry  
Roland R. Keller ..... Physics  
Michael I. Kern ..... Applied Math.  
John R. Lehner ..... Mech. Engrg.  
Alberto N. Martino ..... Medical  
Philip J. Moffa ..... Physics  
Cynthia M. Morgan ..... Applied Science  
Hisamitsu Nakadomari ..... Applied Science  
Robert M. Neilson, Jr. .... Applied Science  
Karen M. Schaich ..... Medical  
Janet G. Sillas ..... Director's Office  
Supramaniam Srinivasan ..... Applied Science  
David R. Stampf ..... Applied Math.  
Gordon Stubbings ..... Accelerator  
Mitchell D. Travers ..... Applied Math.  
Steven A. Wattlely ..... Mech. Engrg.  
Italo Zanzi ..... Medical

### Departures

Richard B. Britton ..... Accelerator  
David W. Doroski ..... Applied Science  
Robert L. Eisner ..... Physics  
David R. Goosman ..... Physics  
David T. Keating ..... Physics  
Georges W. London ..... Physics  
Karen L. Luczak ..... Purchasing  
Donald F. Maynes, Jr. .... Accelerator  
Betty Mazzarella ..... Physics  
Jorge S. Mendez ..... Medical  
Pu Shen ..... Physics

## Friday Night Movies

Starting on July 19th and continuing each Friday evening for five weeks, BERA will again present the Summer Film Series. The screenings will be shown in Berkner Hall at 8:00 p.m. As last year, the admission cost will be minimal - one dollar for adults and fifty cents for those under 18.

The first movie is entitled "Escapade in Japan" and was filmed entirely in the seldom-seen corners of the real Japan. The plot involves two little runaways who have nothing in common but dirty faces and an unholy love of mischief. You'll see exotic sights, their strange friends and the thrilling dangers the kids encounter in a faraway land. This is an award-winning film that should be seen by children as well as adults.

As a little extra attraction we will show "Coney Island U.S.A." This is a Venice Festival award-winner produced by Valentine Sherry and narrated by Henry Morgan. It's a kaleidoscopic humorous interpretation of New York's fabulous Coney Island.

Other films in the series will include "Fahrenheit 451" on July 26, "The Wrong Box" on August 2, "Comedy Night" on August 9, and rounding out the season with "Music Man" on August 16.

## Upton Nursery School Has "Gone Fishing" For Summer Vacation

After a very happy year at Upton Nursery School we've packed away our toys and games for summer vacation. Our four year olds are looking forward to kindergarten in the fall and our three year olds are looking forward to another fun-filled year at Upton Nursery School.

Upton Nursery School is operated for the benefit of the children of Brookhaven National Laboratory employees. It is a non-profit, self-supporting, co-operative nursery school for children three and four years of age.

The children attend school two or three mornings a week and participate in a varied program including art and music, outdoor play, dramatic play and other activities that help prepare the children (in a fun way) for elementary school.

Our teachers are professionals and are assisted by one parent in each class at each session. Parents cooperate in the running of the nursery school which enables us to keep the tuition fee low.

There are still openings for the 1974-1975 school year. If you are interested in enrolling your child please call Shelly Federmann, 732-0974, for further information.

## Official & Special Events

Tuesday, July 16

International Workshop on Three-Dimensional Image Reconstruction Techniques (July 16-19) - Chemistry Seminar Room

Wednesday, July 17

Navy Meeting - 7:30 p.m., Brookhaven Center

Friday, July 19

Movie - 8:30 p.m., Berkner Hall

Friday, July 26

Movie - 8:30 p.m., Berkner Hall

Monday, July 29

German and Finnish Students Tour

Friday, August 2

Movie - 8:30 p.m., Berkner Hall

## French Group Sponsors Bastille Day Picnic

On Sunday, July 14, the French Group of BNL will celebrate Bastille Day with a do-it-yourself picnic and barbecue at the Recreation Hall in the apartment area. "Le Quatorze Juillet" is a national holiday in France, where it celebrates the anniversary of the overthrow of the Bastille in 1789, at the beginning of the French Revolution. Thus, it has a significance comparable to our Fourth of July. A typical Parisian July 14th traditionally includes a military parade, followed in the evening by a display of fireworks, and dancing through the night in numerous small squares of the city. We can't hope to match this, but we expect to have fun at an informal celebration for members of the French Group and anyone else who is interested.

Festivities will begin at 6 p.m. Barbeque facilities, soft drinks, coffee, and dessert will be provided, but aside from this, you're on your own with respect to food and drink. To paraphrase the sign often posted outside small roadside cafes: "On doit apporter son casse-croute." There will also be records to provide music for dancing (but not in the street, please).

All members of the BNL community are invited; however, it will help with the planning if you notify in advance either Morris Perlman (Ext. 4344) or Josette Auerback (286-3742).

## Archery Club

The members of the Nimrod's Archery Club would like to express their thanks to those who waited patiently in line to try their hand at shooting the bow at our archery exhibit during the BERA Picnic '74.

For those of you who would like to become more proficient at this fine sport of archery, please feel free to contact either Joe Bauernfiend at Ext. 3274 or Bob Lundgren at Ext. 2434.

The Club maintains a 14-target field range in the woods behind the baseball fields on lower Brookhaven Avenue. Most of our members are there at noon hour (weather permitting). Please feel free to come see us about archery at any time.

—Bob Lundgren

## BERA Golf

Since our last *Bulletin* article, your BGA has held two open tournaments (all employees invited) and is one-third the way thru its league play.

The June outing saw 10 teams compete in BGA's first-even "scramble" tournament (handicapped best ball) on the Spruce course at Middle Island. Some beer and dogs were served afterwards at the on-site Rec Hall. Winners were: Feindt & Scharpeger (31); Korhut/Mayeski & DiLullo/Rice (tie at 35); Closets to the pin - Joe Mayeski; Longest drive - Les Lawrence; Low gross - George Korhut 40).

The July outing, on the county layout at Riverhead, was unfortunately not broadly advertised and attendance suffered. Fourteen "golfers" showed up and most of us retired to the Carving Board afterwards. Winners were: Low net - Jack Scharpeger (with a blistering 9), J. Dioguardo (32); Closest to the pin - Ralph Taylor; Longest drive - Ralph Taylor; Low gross - Les Lawrence (39).

Next tournament will be during the week of August 5. Stay tuned.

Current league leaders are: League I - Feindt & Scharpeger; League II - Bull & Taylor; League III - Casey & Lawrence; League IV - Sampson & Snead.

## Summer Recreation Program Underway

The BERA Summer Recreation Program has begun in the Recreation Building and the Swimming Pool. In the morning, on-site children are enjoying play sessions at the Rec Building from nine to eleven thirty, and in the afternoon children of employees are actively engaged in swimming lessons from one to two thirty at the Pool.

It is not too late for you to register your children for either program. Children must be four years of age for the morning play sessions and forty-eight inches tall for swimming lessons. For information call Ext. 3247 or visit the Recreation Summer Office behind the Gymnasium between nine and four daily.



The on-site children's Recreation Program got off to a flying start this week, with some 50 youngsters signed up for the fun. The program, held in the apartment area recreation center, features special weekly contests and events as well as the more familiar fun and games. Above, 9-year old David Miles, son of Melvin Miles in DAS, on the jungle gym climbing bars.

## Tennis Tournament News

The annual BNL tennis tournament starts tomorrow, Saturday, July 13, at the BNL courts, at 9:30 a.m., weather permitting. The draw, with scheduled playing times, has been posted at the courts, in the gymnasium (NE entrance), and at the BERA sales office in Berkner Hall. Entrants are reminded that failure to appear within 15 minutes after their match is scheduled may result in a forfeit.

The schedule is for singles to be played Saturday and doubles on Sunday. If it rains Saturday, Saturday's schedule will be played Sunday.

Nonparticipants in the tournament should note that the courts will be reserved for scheduled tournament matches Saturday, Sunday, Monday and Tuesday from 5:15-6:30 p.m., and possibly some courts scheduled during these hours the remainder of the week. Finals are scheduled for the following week at 5:15 p.m. The tennis committee regrets any inconvenience that may result from this schedule.

—A. Auskern

## Adult Swimming Lessons

Adult swimming instructions will begin this year Monday, July 15th. Two classes will be held, one on Mondays from 5:30-6:30, and one on Wednesdays from 5:30-6:30. Registration is \$10.00 for seven (7) lessons. Register at the Swimming Pool early for either the Monday or Wednesday class. Enrollment is limited to 15 persons per class!!

## BNL Mountain Club

After a winter of hibernation the BNL Mountain Club is on the prowl. Some activities are planned to meet the interests of those present at the July 2 meeting. A backpack trip to the Catskills is scheduled for the July 27 weekend. Interested hikers or would-be hikers, can contact Carl Peridier, Ext. 4581 or Tom Clifford, Ext. 4102 for information on the trip.

Some evening canoeing on our local rivers will be organized by Dick Watson, Ext. 3788 and John Hoftiezer, Ext. 3995. Give them a call if you are interested - you don't need a canoe.

There was also talk of an overnight bike trip to the East End by some of the summer students but no hard plans were made.

## Pool Regulations - Parents Please Note

All parents who have registered their children for the summer swimming program should heed the following items:

1. Children not accompanied by parents should be instructed to remain in the pool area and not wander on site.

2. Children should sit on the benches outside the pool until it opens at approximately 12:50 p.m.

3. Children are to line up (single file) when the door opens. All children are to show season passes or buy tickets. (all children over 6 years old - 50¢ admission each day.)

4. Bring a towel - do not leave valuables in lockers.

5. Remember - **Safety First**, any child who consistently disregards safety regulations will be eliminated from the pool program. (Note: The lifeguards' duty is safety only - they will not provide change for the vending machines. Please provide your children with change when they come to the pool.)

6. Upon completion of the swimming lessons (approx. 2:30) children will be asked to leave the swimming pool and either shower or sit at the pool deck until the pool reopens at approximately 3 p.m. Please inform your children of this.

7. No children are allowed in the gymnasium until 5 p.m.

## Selected Reading

Bull. At. Sci. 30, June 1974

Toward a humane balance between life and death. A. Carrillo-Flores. 10-12

Nature 249, June 14, 1974

In defense of the anonymous referee. 601  
The Cavindish tradition. B. Pippard. 602-3

The Atom (Los Alamos) 11, May-June 1974  
Mecca on the mesa. B. Storms. 1-5

Trans. Amer. Geophys. Union 55, July 1974  
Meeting energy needs. P.H. Abelson. 644-7

## 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.

TECHNICIAN - A.A.S. degree or equivalent in mechanical technology and experience in handling polymeric materials. Department of Applied Science.

OFFICE SERVICES ASSISTANT - Purchasing Division.  
SECRETARY - Part-time. Department of Applied Science.

OFFICE SERVICES ASSISTANT - Temporary position. Library experience desirable. Department of Applied Science.

OFFICE SERVICES ASSISTANT - Technical Information Division.

### Autos & Auto Supplies

71 VW BUS - Good cond, clean, new tires, excel mech shape, economical transp, loads of room. \$2000. WA9-4173 after 5.

65 CHEVY - 6 cyl, 4 dr, good cond. \$300. George, Ext. 2534.

66 BUICK SKYLARK - Am/fm radio, new brakes & tires, 1 pr unused snows. Rip, Ext. 4672.

MOTORCYCLE SEAT - For 350 Honda. W. Lundgren, Ext. 3800, 585-3794.

71 YAMAHA DTI - 250 cc Enduro dirt & road motorcycle, good cond. \$435. P. Hichborn, Ext. 4662, 929-4133.

66 COMET CALIENTA - 4 dr sedan, 289 cu in, auto trans, very clean. \$600. George, Ext. 2534.

55 CHEVY PICKUP TRUCK - Good cond. \$150. B. Dee, Ext. 2333.

71 CHEVY MONTE CARLO - Auto trans, air cond, fm stereo radio, good rubber, 35,000 mi, clean. \$2295. Webster, Ext. 2564.

TIRE - 1-6.95x14 used, fair cond. \$3. Bill, Ext. 3354.

67 CHEVY STATION WAGON - Sm V8, auto trans, ps. \$250. 589-4874 after 6 & weekends.

65 BUICK SKYLARK - Excel running cond, new Sears tires under guarantee, recent muff. Sharon, 281-4140.

73 SUBARU STATION WAGON - Front w/d, 15,000 mi, 27 mpg. \$2500. 878-1895.

HOOKER HEADERS - For '65-70 396-427 full size Chevy, \$40; headers for '66 Chevy Nova sm block, \$40; Holley cast iron intake manifold w/heads (w/o springs) for 396, \$25. Claire, Ext. 2346, 281-8306 after 5:30.

### Miscellaneous

GREAT DANE PUPS - 6 wks old, AKC reg. \$100-\$125. Rosie, 281-4118.

NIKON BELLOWS - Slide copier & lens reversing ring, new cond, will not sell parts separately. Charlie, Ext. 2957, 744-3312.

12 GAUGE FRANCHI AUTO SHOT GUN - W/poly choke, new cond, sacrifice. 475-6938.

DIN RM TABLE - 4 chairs, tablecloths, matching china closet, light finish, contemporary, excel cond. \$150. 363-8919.

CUTE TELEPHONE TABLE - W/attached chair, \$8; 10 gal fish tank w/access, \$9; baby bounce or rocking chair, excel, \$6. Geisler, Ext. 3449.

PORTABLE WASHING MACHINE - Excel cond, clean, uses tap water & 110v, has spin-dry cycle. \$85. Ext. 3182/4832.

21" TV - B/w floor model, plays, beautiful cabinet. \$20. George, 698-6051.

ROBERTS 770X TAPE RECORDER - Excel cond, \$200; compl set Great Books of the Western World & bookcase, \$175. C. Kramer, Ext. 3941, 744-8632 after 6.

CARRIAGE/CAR BED - Baby plaid folding, \$20; slip covers, 2 pc sectional, brown tweed, \$8; 12x16½ stacking 4-drawer file cabinets, metal. 289-1754.

MAPLE YOUTH BED - \$9. Ginny, 475-7227.

LAWN MOWER - Locke 9 hp, 3 reels, cuts a 6' swath w/one pass. Ext. 4028, 653-5238.

RIDING BREECHES - Stretch, girl's size 16, excel cond. Ext. 3741.

DEN COUCH - Orange tweed, \$20; orange leatherette chairs (2), \$5; 3 shelf white metal serving cart wheels, \$4. 289-1754.

BOY'S BIKE - 20" Huff, brand new, selling cheap. 732-3895.

DBL BED - Walnut headboard, mattress & boxspring. \$50. John, Ext. 3354.

PISTOL - 38 cal S&W Airweight, 2" barrel. 281-8274.

ACCORDION - 120 bass, built-in pickups, excel cond, best offer. Charlie, Ext. 3954.

150 CESSNA AIRPLANE 1966 - 8835G, good cond. \$3800. George, Ext. 2534.

TRAILER - Corsair 1970, sleeps 6, self-contained, toilet, shower, oven, range hood/fan, gas/elec re-frig, extras. \$2200. 475-9295 after 6.

DOBERMAN PINSCHER PUPPIES - AKC, 1 red male, 1 red female. 281-8274.

PORTO-ORGAN - 5 octaves, 10 voices, vibrato bass keys, pedal, low mileage, ideal for combo. Asking \$200. Claude, 744-8449.

WEIAND ALUM INTAKE - For '64 Plymouth & Dodge, \$30; posi rear for '64 Dodge. Claire, Ext. 2346, 281-8306 after 5:30.

67 VOLVO 122S - 4 dr, low mileage, excel in & out. 589-3608.

JUDSON SUPERCHARGER - For TR-3 or TR-4, like new, w/instructions, \$80; wind wings for TR-3, \$10. A. Walker, Ext. 4592, 924-3794.

65 CHEVY ¾ TRUCK - Self-contained camper, fresh water tank, gas heat, 2 dbl beds. \$2700. George, Ext. 2534.

CAR TOP LUGGAGE RACK - \$10. John, Ext. 3354.

BRUNSWICK BOWLING BALL - Black Beauty men's, w/case, brand new, never drilled. \$25. 289-3427 after 6.

ORLON YARN - All colors, will deliver to Lab or pick up at my home. \$2.50/lb. Ann, Ext. 3143, 732-9384 after 6.

ELEC HOT WATER HEATER - 52 gal, Rheem glass lined, 2 yrs old, like new. \$75. Don, Ext. 3511.

10" RADIAL ARM SAW - Craftsman, stand, caster, drawers, new. Ext. 2113.

PANASONIC STEREO TAPE RECORDER - RS7555, 2 yrs old, built-in spkrs, needs cleaning. Asking \$50. 281-0901 eves.

REFRIG/FREEZER - Frigidaire 2 dr, excel cond except needs gasket. \$35 F.O.B. Setauket. P. Michael, Ext. 2264.

AIR COND - Rac window, brand new GE 14,000 BTU at wholesale cost, 115v, 12 amp. \$250. Ext. 4622.

SURF ROD - Conventional type, almost new, \$15; surf reel, Penn leveline 350, w/35 lbs lines, almost new, \$18. 744-2506.

HAIR MATTRESS - Twin size, Stearns & Foster, immac cond. \$25. 941-4328.

2 KAPOK LIFE PRESERVERS - Child's med, good to 90 lbs, perf cond. \$2 ea. 941-4328.

MOTOROLA COLOR TV - 24", works great, w/TV stand, \$100; beautiful beveled wall mirrors, must see, best offer. 281-5709.

PHOTOCOPY MACHINE - Works perfectly, \$10 or best offer; 2 sm transistorized guitar amps, \$10 ea. 281-5709.

19" TV - Portable, w/stand, \$25; sewing machine, overhauled, Singer, \$20. J. Mendez, Ext. 3191.

GIRL'S BIKE - 24", 3 spd, excel cond. \$25. Ext. 4896.

WASHER - 3 spd, \$45; refig, needs freon, \$25. 928-6538.

TENNIS RACKETS - Wilson Jack Kramer Valiant & Wilson Jack Kramer Cup, both med wgt, 4½ grip. \$15 ea. 744-5096.

FREE - Adorable tricolor kitten 6 weeks old. Ext. 3482.

BABY CRIB - Good cond, firm mattress. \$40. Mira, 928-6032.

FISHER STEREO RECEIVER - FM tuner & BSR turntable, in walnut cabinet, excel cond, cheap. Ext. 4149.

MINI TRAIL BIKE - 1973 Gemini, 80cc, must be seen. \$250. H. Rhodus, Ext. 3284, 924-3522.

GARRARD SL95 AUTO CHANGER - Excel cond. \$40. Ext. 4302.

SLACKS - 30W30L boy's, \$3; jackets 12-20, \$4 & \$5; birdseye maple bureau w/mirror, \$35. A. Munsterman, 744-5871.

CAMERA - Petri FT 35mm w/55mm lens, capro flash unit w/recharger & 8" cable release. Susan, Ext. 3462.

TRAILER - Single axle, flat bed 6'x8', excel cond. \$100. 289-3427 after 6.

### Boats & Marine Supplies

21' SLOOP - Gaff rig, FG over wood, compl equipped, 1971 Evinrude 4 hp. Ben, Ext. 2902.

14' STARCRAFT ALUM BOAT 1973 - 1973 Sea Lion trailer, 1973 Evinrude motor, sub flooring, steering wheel, controls, etc. \$1200 firm. 281-8684 after 6.

4 HP EVINRUDE O/B 1971 - Used 4 hrs, w/gas can. \$140. Ben, Ext. 2902.

200 LB MUSHROOM ANCHOR - And mooring float. \$35. B. Espensen, Ext. 2992.

1962 LUHRS SKIFF - Sleeps 2, galley, head, 109 Gray marine eng, very good, very reasonable. Less than \$1000. 589-0461 after 5.

8' HOMEMADE HYDROPLANE - W/18 hp Johnson, gas tank & controls. \$250. P. Doering, 265-0391.

LUHRS SKIFF -21' LOA, lg cockpit, cabin w/2 bunks, 125 hp Norberg eng, good cond. \$625. WA9-4173 after 5.

SAILBOAT - Jersey Sneak Box 17' w/trailer. \$75. Don, Ext. 4417, 286-1205.

6 GAL OUTBOARD MOTOR GAS TANK - \$10. John, Ext. 3354.

16' WOODEN BOAT - Fiberglassed bottom, used as stable platform for clamming, needs work on transom. \$15 & it's yours. R.M. Brown, 286-1214.

3 HP OUTBOARD MOTOR - 1973 Sears, 10 hrs old, excel cond. \$75. Don, Ext. 4650, 473-7809.

24' AUXILIARY SLOOP - 22 hp inboard, sleeps 4, wood & fiberglass, in water, good cond. 286-1454.

### Real Estate

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

### For Sale

YAPHANK - 2 bedrm ranch, garage, bsmt, 16' eat-in kitchen, 2 baths, 25' liv rm, din rm, util rm, 1 acre fenced. \$45,000 mort held by owner. Ken, 924-3882 till 7.

CUSTOM HIGH RANCH - 9 rms, 2 baths, w/w, thermo-pane windows & screens, 1 car garage, Nesconset-Smithtown area. \$37,000. 878-2545 after 5:30.

E. PATCHOGUE - 2 acre mini farm, 3 bedrm ranch, fireplace, ideal for horses. 289-7649.

MASTIC BEACH - Lg 6 rm ranch, 3 bedrms, center hall, liv rm/lg stone fireplace, din rc, full bsmt, 2-car garage, full attic, lg patio, oil h/w heat, w/w, appliances, beautifully landscaped corner plot 100x120, waterfront rights, principals only. \$38,000. 281-5050.

PATCHOGUE - Roe Blvd area, pleasant 2½ story home, close to shopping, 5 bedrms, 2 baths, fin bsmt, fam rm, eat-in pine paneled kitchen, garage, 3 air cond, 60x200'. \$38,500. 289-3246.

YAPHANK - Claredon Dev, 2 story colonial, 8 rms, 2½ baths, full bsmt, 2-car garage, fireplace, redwood deck, all appliances, many extras. Asking \$51,500. 924-5128.

PT JEFF STA - 4 bedrm colonial, 2½ baths, ½ acre, lovely setting. \$45,000. 473-6325 after 6 & weekends.

PATCHOGUE SHORES - 5+ rm ranch, 2 lg bedrms, low taxes, 1½ car garage, fenced back yard, excel for investment or retirement. Asking \$26,200. 286-3647.

### For Rent

FURN RM - Kitchen privileges. W. Lundgren, Ext. 3800, 585-3794.

PATCHOGUE VILLAGE - Sm house, furn, close to bay & docks, avail Aug thru Dec, possibly longer. \$225/mo. Ext. 3818, 475-0154 after 7.

2 BEDRM HOUSE TO SHARE - Female, 5 mi from Lab. Ext. 4337, 924-5294 eves & weekends.

### Classified Ad Policy

#### Deadline is 12 noon Monday for publication Friday of the same 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.

For Sale: Auto & Auto Supplies  
 For Sale: Boats & Marine Supplies  
 For Sale: Miscellaneous

Wanted  
 Carpools  
 Lost & Found  
 Services

Check  the heading applying to your ad.

Print or type your ad in 20 words or less.

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 111, 40 Brookhaven Avenue.

(Name & Phone No. To Call)

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

Send to: Brookhaven Bulletin, Building 460, 40 Brookhaven Avenue (Ext. 2345).