

Victor W. Cohen Dies After Long Illness

Dr. Victor William Cohen, a physicist at Brookhaven National Laboratory since 1947, died on August 17 after a ten-year battle with cancer. He was 63. His struggle against cancer was described by his wife, Grace Cohen, as one of "courage and determination."

While at Brookhaven he conducted basic physics research in the measurement of the spins and magnetic moments of radioactive nuclei. His methods of measurement involved radio-frequency nuclear resonance, microwave spectroscopy and molecular beams. For the past 15 years he has specialized in high precision atomic beam techniques for the measurement of nuclear hyperfine interactions and magnetic moments. In the early 1950's he designed an atomic beam apparatus which was in active use at the Laboratory from 1954 to 1969. At the end of this past June, the machine was donated to the Smithsonian Institution's Museum of History and Technology at Dr. Cohen's request. It will be put on display as an example of a "typical" atomic beam apparatus.

The prototypes for this machine were constructed and used at Columbia University in the 1930's by Nobel Laureate I.I. Rabi and his students. Dr. Cohen, who received his PhD from Columbia in 1934, was Rabi's first doctoral student.

At Columbia University, 1931-34, Dr. Cohen worked with Professor I.I. Rabi in the pioneering work of the application of molecular beams to the measurement of the spin of atomic nuclei. The initial application of this technique was to the elements Sodium and Cesium. The spins of these nuclei were of particular importance at that time because of the uncertain interpretation of optical hyperfine structure in terms of nuclear spins and associated magnetic moments. The optical spectra of Sodium and Cesium had previously been studied with conflicting results. The atomic beam work on these elements demonstrated clearly that the basic understanding, as expressed by Breit and Rabi in 1931, was correct and that the optical results had been misinterpreted. Professor Rabi continued this research with other co-workers and it led in 1944 to his award of the Nobel Prize in Physics.

In the summer of 1940 V.W. Cohen joined the Bureau of Ordnance, Navy Department, as a civilian physicist. In the period of 1940-41 work was done on the ship's magnetic compass to protect it from the effects of the degaussing equipment used as a defense against magnetic mines. From 1941-44 he entered the field of underwater acoustics. He was project manager of the development of an antisubmarine acoustically guided torpedo which proved to be very effective in the period 1943-44.

In 1944 Dr. Cohen transferred to the National Bureau of Standards to work on the development of the Bomb Director, a device for precision dive bombing. After the war this work terminated, and he began the organization of a vacuum tube development laboratory. This work was an adjunct to the Ordnance Development Division, the group that developed the proximity fuse. Its tasks involved research directed toward special electron tubes of interest to military and civilian applications. Among the developments of this group were tubes the size of a grain of rice and a vacuum tube transmitter the size of a thimble.

For many years, Dr. Cohen was the organizer of a series of international confer-



Victor W. Cohen

ences on atomic and molecular beams and on atomic physics. Last month he was honored at the Fourth International Conference on Atomic Physics, held in Heidelberg, Germany, for his contributions to the field of atomic physics and the conference series. Because of his illness he could not attend. In a letter to Dr. Cohen, G. zu Putlitz, the chairman of the conference organizing committee, says, "I believe that these conferences on atomic physics (the Brookhaven Series and later this series) would not have been possible without your constant support, initiative and dedication. For all these merits we wanted to honor you at the occasion of the opening of the conference."

In addition to his scientific work, "Bill" Cohen was an ardent naturalist, with an enduring interest in mountain climbing, hiking and photography. He was a member of the American Physical Society, Sigma Chi and Epsilon Chi.

He is survived by his wife Grace, of 63 Everett St., Patchogue; and three children, Richard Morris Cohen, of Texas; Dorothy May Cohen, of Colorado; and Ruth Selda Wohlt, of New Guinea. He is also survived by a sister, Lenore Cohen Rosenfield and a grandchild, William Paul Wohlt, of New Guinea.

Private funeral services were held Monday, August 19. A Memorial Hour will be held at the Brookhaven Center on August 28 at 1:30 p.m.

Our Lady in Payroll

There is a good reason why one never has cause to complain about his paycheck at BNL, and that reason is because you have a friend in Payroll named Olga Vario. Olga has been in the Fiscal Division since 1947, and since the onset of computerization of the Payroll Department she has been Payroll Supervisor.

"The reason that Payroll has such a fine reputation is because we have a good rapport with the Laboratory employees," says Olga. "And without my assistant Evelyn Blank, combined with the cooperation of the other girls, Eilene O'Laughlin, Lois Zeidler, Viola Malloy and Muriel Caldwell, Payroll couldn't possibly function as smoothly as it does."

The Payroll Department at BNL is responsible not only for the issuing of paychecks but also for the application of all benefits, which originate in Personnel but must come through Payroll before the Lab employee receives them. Payroll is responsible for making up both the BNL payroll and also the AUI payroll. "The taxes of National Radio Astronomy Observatory are also reconciled in our office," says Olga.

"I came to Upton before the Laboratory got its AUI contract," recalls Olga. "You can tell I was one of the first employees because my life number is 34! When I first came to the Lab I was asked to be a hostess because of my background in languages. I really found a niche for myself at the Lab."

Olga received a B.A. from Hunter College and an M.A. in Languages from Fordham University. While still a student at Hunter, Olga taught at then the only French-sponsored school in New York, Ecole Maternelle Francaise. Olga speaks, reads, and writes French, Italian, Spanish, and German. Recently, she also took a course in Chinese. "But I'm not what you would call fluent in it," admits Olga. "I realized, with the help of my professors, that

(Continued on page 2)

Neutrons Detect Art Forgeries

Have you ever thought that the Mona Lisa hanging in Paris' Louvre Museum might be a forgery? One shudders to think of such a preposterous suggestion, but there have been many artists whose styles have been copied with such exactness that forgeries of their paintings have gone undetected.

One such artist was the 19th century American painter Ralph A. Blakelock (1847-1919). Between 700 and 900 paintings have been attributed to Blakelock, and it has been estimated that as many as two thirds of these could be forgeries. Since 1920, until a few years ago, there was not much interest in his paintings on the art market. But with the revived interest in 19th century American painting, attention has been refocused on the problem of Blakelock forgeries.

Five years ago, Maurice Cotter, professor of physics at Queens College and Research Collaborator in the BNL Chemistry Department, applied a technique developed at the Lab ten years ago by Edward Sayre to the study of paintings by Blakelock.

The technique, known as neutron activation autoradiography, allows the investigator to identify highly individual characteristics of an artist's style which could go undetected using conventional authentication methods such as X-ray radiography. Both X-ray radiography and autoradiography are used to determine the choice of materials used by the artist and the way in which he applied them.

However, X-ray radiographs can only show the distribution of dense pigments such as lead white, while neutron activation autoradiography can show the distribution of several paint pigments other than lead white. Therefore, both of these techniques may be used together when studying a painting.

In neutron activation autoradiography, a painting is exposed to a beam of thermal neutrons (10^{-9} neutrons/cm² sec) for 45 minutes to one and a half hours, in the patient irradiation port of the Brookhaven Medical Reactor. The various elements present in the paint pigments generate radioisotopes.

An autoradiograph is made by placing a piece of photographic film over the activated painting. As each of the radioisotopes decay with different half lives, the radiation emitted from the painting will be dominated in turn by radiation from different elements.

Therefore, a series of autoradiographs are made at different time intervals after

activation which show the structural distribution of elements in the painting. The dark areas in an autoradiograph correspond to those elements emitting radiation at the time the autoradiograph is taken. Gamma ray energy spectroscopy is used to identify the various radioisotopes in the painting.

Probably one of the most important aspects of neutron activation autoradiography, as a method of authenticating paintings, is its non destructive nature. It does not require chipping off bits of paint or damaging the canvas in any way.

After five years, 20 paintings attributed to Blacklock have been examined at Brookhaven, using neutron activation autoradiography. Four features characteristic of Blakelock's paintings have been identified. High concentrations of manganese and sodium have been detected in most of his paintings. Autoradiographs of Blakelock's paintings have shown that he often used the wooden end of his paint brush to apply an arsenic or antimony bearing pigment in the form of "squiggles"; thin, uneven ap-

(Continued on page 2)

Youth In Recreation

"I've really enjoyed working at the Laboratory this summer. I've had a lot of fun, and I like working with small kids," says Wayne Treadwell, a Youth on Campus (YOC) Program participant. "When I came and applied for this summer job I had hopes of working in the recreation department because I love all kinds of sports. I guess I was lucky enough to get placed doing what I enjoy doing most."

Wayne runs the basketball clinic for children on Tuesdays and Thursdays. The clinic teaches the kids the fundamentals of basketball and helps them learn about sportsmanship and fair play. Although the special summer events were organized prior to the beginning of the YOC Program, Wayne helps Richard Parsons and Barbara Smalle with the children's activities.

"I think that there is a need for organized recreation for youngsters everywhere," says Wayne. "Sports helps you to get along with other people and develop friendships."

Wayne, who graduated from Center Moriches High School this past June, plans to attend Suffolk Community College in the fall. "I felt that I needed to learn a lot more," says Wayne. "Also I realize that



Wayne Treadwell

you have to have a good education in order to get a good job."

As far as his future is concerned, Wayne is somewhat undecided about what he wants to do. "I've been giving a lot of thought to majoring in business because I like working with figures and doing paperwork. But I've also been thinking of going into physical education. I'd like to coach a high school basketball team." While at Center Moriches High School, Wayne played center on the basketball team, and also played soccer and baseball. "Basketball was what I was most interested in. I participated in the other sports but basketball is my thing. I am really looking forward to going to college in the fall, and

(Continued on page 2)

Memorial Hour

A Memorial Hour will be set aside at the Brookhaven Center, Brookhaven National Laboratory, at 1:30 p.m. on Wednesday, August 28, for those who wish to pay their respects to the memory of Dr. V.W. Cohen. Members of the general public, as well as Laboratory employees, are welcome to participate in the Memorial Hour.



Woman in Red, an 8½ by 11 inch oil on canvas by Marian Blakelock. An art dealer painted over her original signature and forged Ralph Blakelock's signature in the lower right corner. The remnants of her signature can be seen in autoradiographs of the painting.

Neutrons

(Continued)

plications of thick paint. It was also discovered that he frequently applied a mercury containing pigment as a very thin paint which ran down in "dribbles," leaving brush strokes that resembled water color strokes.

"One does not expect to observe every one of the Blakelock characteristics in each of his paintings, but certainly the occurrence of several of them in one painting will lend credence to an attribution of that painting to Ralph A. Blakelock," says Cotter.

The painting career of Ralph Blakelock was surrounded by tragedy. In 1899, on the same day as the birth of his ninth and last child, Blakelock was diagnosed as having dementia praecox and was confined to a mental institution where he spent most of the last 20 years of his life. His lyric moonlight scenes and poetic landscape paintings were not appreciated by the art world of his time until after his confinement. It was then that they began to draw high prices, but neither he nor his family benefitted much from it. As the value of his work rose so did the number of forgers copying his work.

To help provide for their large family, Blakelock's daughter, Marian, began selling her paintings. Because she had been taught by her father, her style closely resembled his. One unscrupulous art dealer used this to his advantage by buying her paintings at a low price, replacing her signature with her father's, and selling them for high prices as authentic Blakelocks.

When Marian Blakelock discovered what the art dealer was doing, she suffered a mental breakdown and was also confined to an institution.

An autoradiograph of *Woman in Red* revealed a second, partially destroyed signature under what was thought to be an authentic Ralph Blakelock signature. The partially destroyed signature is similar in many ways to Marian Blakelock's signature. For this reason, it is believed that *Woman in Red* is one of the paintings sold as a Blakelock but painted by his daughter.

In his study of the paintings by Ralph Blakelock and other 19th century American artists, Maurice Cotter has worked closely with Pieter Meyers and Lambertus Van Zelst, research chemists at the Metropolitan Museum of Art; and Charles Olin, of Great Falls, Virginia, who used to be the painting conservator at the Smithsonian Institution. Ed Sayre, BNL Chemistry Department, has been supervising the research project. More recently, Kathleen Taylor of Chemistry has also been working on the project.

Public Sale of Motor Vehicles

Twenty (20) vehicles, located at Warehouse T-87, will be available for Public Sale.

Inspection will be permitted from September 26th, during the hours of 9 a.m. to 4 p.m., except Saturday and Sunday.

Bids will be opened on September 30th, 1974, at General Services Administration, Business Service Center Bid Room, 26 Federal Plaza, New York, N.Y.

This will be an informal competitive bidding. Bid forms may be obtained at building 87 and 211. For further details, please call Extensions 2303 or 2977.

Marian Blakelock

The upper signature is a blow-up of the signature from an authentic Marian Blakelock painting. The lower signature is an enlargement of the partially destroyed one seen in autoradiographs of *Woman in Red*.



This autoradiograph of *Woman in Red* was exposed for 20 minutes, 13 minutes after the painting has been activated by a beam of thermal neutrons.



This autoradiograph was taken nine days after the painting had been activated and is a result of a ten-day exposure.



An X-ray radiograph of *Woman in Red*.

Youth

(Continued)

playing basketball for Suffolk Community," says Wayne.

This is the first YOC Program that Wayne has participated in, although his brother Howard Jr. and sister Pam were previous YOC students. "I found out about this program from my brother and sister. It has helped me see what it's like to work at a busy place like BNL."

After finishing college, Wayne also plans to do some travelling around the United States. "There are a lot of places I'd like to see, especially out west - California, for one," admits Wayne.

One of ten children, Wayne lives on the Poospatuck Indian Reservation in Mastic with his parents Howard and Marzillie Treadwell.

-Angela Hill

Piano Concert

Pianist Jeffrey Marcus will present a concert at Berkner Hall on Tuesday evening, August 27, 1974, at 8:30 p.m. The program will include Variations in F minor by Joseph Haydn, Sonata in D Major, Opus 10, No. 3 by Ludwig von Beethoven and Carnival by Robert Schumann.

Mr. Marcus is a graduate of the Juilliard School of Music and holds a Masters in Performance from the State University of New York at Stony Brook. He has performed throughout the eastern United States, both as a soloist and in chamber groups. With the noted soprano Elizabeth Patches, Mr. Marcus recently appeared in a concert sponsored by the Polish government at Lincoln Center. The two artists have completed concert tours of Poland and Iceland and were the first American performers to appear on Interviznia, televised throughout eastern Europe. They have also appeared on radio stations WQXR and WNYC in New York.

Jeffrey Marcus is a resident of Coram and is well known to local students of the piano.

General admission for this concert will be \$2.00.

Reports Available

The following reports are now available to the Laboratory staff and to affiliates of the AEC, AUI, and BNL. Others may purchase it from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22151. Staff members should call Ext. 3484:

- | | |
|--|--------|
| BNL-50402 | \$5.45 |
| Mine Safety and Underground Support Structures Rock Impregnation and Pumpable Rock-bolt Development. | |
| Final Report - June 1973 | |
| C.H. Waide, M. Reich, J.R. Powell, | |
| C. J. Klamut, P. Colombo and M. Steinberg | |
| BNL-50414 | \$5.45 |
| Guidelines for Gamma-Ray Spectroscopy Measurements of ²³⁵ U Enrichment. March 1974 | |
| L.A. Kull and R.O. Ginaven | |
| BNL-50421 | \$4.00 |
| Operating Manual for the PSE&G Hydrogen Reservoir Containing Iron Titanium Hydride. February 1974. | |
| G. Strickland and J.J. Reilly | |

Hedy West to Sing At BNL September 5

Traditional music will be heard in Berkner Hall on Thursday evening, September 5, when Hedy West performs, to her own banjo and guitar accompaniment, a program which she is just about to take on a concert tour of Africa and Germany.

Hedy West, who comes from the hill country of North Georgia, is among the best women singers of the American folk song revival. Many of her regional songs were passed on from her great grandmother, who accumulated a treasury of ballads and lyrics in the course of an unsettled childhood, shifting from one Southern state to another. Other songs, from the coal mines, were learned from her father. Of this most engaging and varied tradition, Hedy West is a superb exponent; no contrivances but pure artistry and conviction.

Recent years have been spent in England and Germany, absorbing the traditional ballads of those countries. All of this background will be represented in the program selected by Hedy West for her BNL concert.

For further information, see next week's Bulletin and listen to the recordings (on Vanguard, Topic, Fontana, Folk Legacy, Folk Variety, Philo).

Selected Reading

- New Sci. 63, July 11, 1974
 Last chance for sanity. F. Barnaby. 63-4
 Why do animals live in groups? T. Clutton-Brock. 72-4
 Why we need an energy \mathcal{L} . J. Lessey. 85
 Keeping an eye on technology. A. Pugsley. 86-7

Letters To The Editor

Dear Sir:

To all of our friends at BNL, thank you for the many acts of kindness and expressions of sympathy on the loss of our son, Brendan. We will always remember him for the love and happiness he gave us during his short life.

The O'Leary family



Olga Vario

Payroll

(Continued)

I had a natural affinity for languages. I would have liked to have gone into the foreign service, but could not, for personal reasons," recalls Olga. "I am interested in various cultures. I might have liked to have been an archeologist."

"The Lab has changed so much since I first started here," says Olga, reminiscing. "The feeling of being a family is gone because there are so many more people and departments. We're an organization now."

Everyone on site knows where Payroll is and how it affects them personally. "Money is important to everyone," says Olga. "We have a great responsibility to BNL employees. People want to know what they are being paid, and why there are specific deductions. We are a service department and we must have the finesse needed when one deals with the public constantly."

"One of my greatest rewards of working here is the fact that I am in a position to help many people," states Olga. "I enjoy helping people. So many people know me, that I don't know, it's astounding. I've been here so long, that nearly everyone associates the name Olga with Payroll. Sometimes the association is assumed for more than what it's worth and I'm addressed: Olga Payroll! I've been able to make a lot of friends because of my position and for this I am grateful. There have been visiting aliens who have remembered me and sent me a token of their appreciation. It's all the little niceties that people afford me that really mean a lot. With me, helping people is more than just a job."

Being a woman in such a responsible position has made Olga more aware of what the Women's Movement is all about. "I have always felt that women should be given the same employment opportunities as men. Women should receive equal pay if they're doing the same job as a man. I know that I had to prove myself more in this position because I was a woman. But I have to thank Mr. Burchill who had to face strong opposition to his appointment of me. It made me proud when, on the occasion of my 25th anniversary at the Lab, Mr. Burchill came up to me and said, 'Olga, I've never been disappointed in you.'"

In 1972 Olga was appointed, by Laboratory Director George Vineyard, to the Affirmative Action Committee. "I've learned about the problems facing minorities and women at BNL. We've come a long way but we still have far to go," admits Olga. "The ratio of female to male Lab employees should be improved."

Olga, who lives in Patchogue, says, "My hobbies help to keep me busy. I like all of the fine arts, especially music and the opera." Olga plays the piano and enjoys anything creative.

Olga has one other distinction at the Lab - she is to date the only Olga who has ever worked at BNL.

—Angela Hill

BROOKHAVEN BULLETIN

Published Weekly for the Employees of Brookhaven National Laboratory

CARL R. THIEN, Editor
 JEAN BURKE, Assistant Editor
 CLAIRE LAMBERTI, Editorial Assistant

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

YOC's Learn Key Punching



Pat Wilson (center), AGS, trains YOC students Martha Acero (left) and LaVerne Manning in key punching.

Contest Day

The Morning Recreation Program's special event last week was Contest Day. The kids were broken down into three groups; children ages four, five and six; seven, eight and nine; and ten years and older. Contests included the balloon fan, tight rope walking, bubble gum and cracker blow, musical plate and wand balance.

The winners were selected by the total of individual points scored. For example, if they finished first in an event they would have received 5 points, second place would have received 3 points and third place received 1 point.

The children with the highest points were: 4-5-6 year olds, Melinda Chan, Claudia Meyer and Douglas Mook; 7-8-9 year olds, Youlie Kalogeropoulos, David Miles and Erik Meyer; 10 year olds, Peter Kaufman, Beth Maynard and Manjuatha Chikkappa.

Pool Schedule

Because swimming lessons will shortly be ended, the following pool schedule will be in effect:

- Monday and Tuesday, 8/26, 8/27**
- 11:30 - 1:00 employees only
- 1:00 - 2:30 swimming lessons
- 1:45 - 9:30 employees/families/guests
- Wednesday, Thursday, Friday, 8/28, 29 and 30**
- 11:30 - 1:30 employees only
- 1:30 - 9:30 employees/families/guests
- Saturday and Sunday, 8/31, 9/1**
- 1:00 - 6:00 employees/families/guests

Pool closed Labor Day, Monday, Sept. 2. Starting Tuesday, September 3:

- Weekdays (Monday through Friday)**
- 11:45 - 1:30 employees only
- 5:00 - 9:30 employees/families/guests
- Saturday and Sunday**
- 1:00 - 6:00 employees/families/guests

Pool Streakers??

The Undressing in Water and Cup Race Contests were held at the pool last Friday. Both events were fun and exciting for both contestants and spectators. The Undressing in Water Contest was for children over 10 years of age and the Cup Race was held for age groups 5-6, 7-9 and over 10.

Winners for the Cup Races were: Age 5-6, 1st - Jody Miles and David Goldberg; Age 7-9, 1st - David Miles, 2nd - Jennifer Curtiss, 3rd - Adam Walters; Over 10, 1st - Jackie Curtiss, 2nd - Judy Bryden, 3rd - Kathy Russell.

Winners of the Undressing in Water Contest were: 1st - Wendy Sondericker, 2nd - Beth Maynard, 3rd - Susan Alonzo.

Found At The Pool

The Recreation Staff has gathered an abundance of articles lost at the swimming pool and would like to dispose of as much of it as possible. If you have lost any of the items listed below, please see the lifeguard at the pool who will be happy to return them to you.

Clothing -

Small boy's blue jacket with gold stripes on the arms, small green sweater, small boy's blue jacket; small girl's white sweater; small boy's red bathing suit, small boy's blue bathing suit, small girl's one piece bathing suit; infant's blue bathing suit, small boy's blue and white bathing suit, khaki jacket and shorts, 2 small BERA t-shirts, red and white bathing cap, man's red and blue basketball shirt (#3 imprint); child's two piece multi-colored suit, pair small green sandals, pair blue sneakers with red reflectors, pair woman's blue sneakers, pair men's black and white striped sneakers.

Miscellaneous -

Pair green swim fins, red inflatable arm band, child's white diving mask, dozens of towels in assorted sizes and colors.

All of the above will be disposed of if not claimed by September 30, 1974.

Arrivals & Departures

Arrivals	
Wen-Tong P. Lu	Applied Science
George Maisie	Applied Science
Martine E. O'Connor	Medical
Elizabeth L. Roche	Applied Science
John L. Usher	Applied Science
R. Viswanathan	Physics
Donald A. Warner	Chemistry

Departures	
Alexander W. Chao	Accelerator
Lita H. Fields	Applied Math
Brenda M. Floyd	Biology
Kenneth C. Gray	Physics
Bruce A. Martin	Applied Science

In Memoriam
Victor W. Cohen of the Physics Department who had been employed at the Laboratory since June 16, 1947, died on August 17, 1974.

Joseph M. Benincasa of Supply & Materiel Division who had been employed at the Laboratory since November 10, 1958, died on August 19, 1974.

CREF Unit Values

1973			
January	\$50.36	February	\$47.11
March	46.44	April	43.69
May	42.06	June	41.40
July	44.80	August	44.06
September	46.63	October	47.06
November	41.30	December	42.61
1974			
January	\$40.75	February	\$40.83
March	39.32	April	37.58
May	35.11	June	34.29
July	\$31.71		

Hospitality News

Once more the Hospitality coffee will be an evening get-together. We will meet on Tuesday, September 10, from 8:00 to 10:00 p.m., in the apartment area recreation building. Mrs. Elke Brengard will again show us her outstanding patch- and quilt-work. Everyone is welcome.

Clubhouse

(Not So Confidential)

Phoubars upset by the Streakers. It seems that the Phoubars were counting their playoff money too soon! They forgot the old proverb that a bird in the hand is worth two in the bush. The Phoubars have now lost two in a row and are in danger of losing the second half. The Converts are in the enviable position of really turning the League upside down. If the Converts can beat the Streakers and the Charlie Browns defeat the Phoubars it would be a three way tie for first place. What a way to finish a season. It would certainly bring our attendance up over the million mark! A few weeks ago we were talking of the demise of the C.B.'s. Now we must retract that statement and say that they are very much alive. Maybe the Phoubars should be called the "over the hill gang." The Converts lost last week after tying the score in the top of the 7th inning.

This reporter was very much affronted last week when he received a phone call asking if he were going to write a column this week. I have written this column every week regardless of the outcome of any game and I assure you I will continue to do so no matter happens in the future. I happen to believe that it's not whether you win or lose but how you play the game.

—B. Brehm

BNL Softball University League

The Brookhaven A's lost (did you hear that A's you lost), to the Oh-Kays with a score of 13-3, which broke their 5 game winning streak. The Oh-Kays played a great game, but, as far as the A's are concerned it certainly wasn't one of their best games.

LeRoy James, the left fielder for the Oh-Kays played a fantastic game, I would call him the Jimmy Wynn (The Toy Cannon) of baseball. Jim Garrison, the Oh-Kay's center fielder most certainly is a track star, he was all over the field. LeRoy and Jim don't be surprised if next week you two aren't scheduled to work overtime and have to miss the game (smiles).

All I can say to the A's is next we've got to get it all together.

—J. Benbow

Cafeteria Menu

Week Ending August 30, 1974

Monday, August 26	
Cream of Celery Soup	
Cheese Omelet w/French Fries	.95
Franks and Beans	1.00
Tuesday, August 27	
Beef Barley Soup	
Lamb Stew w/Rice	1.15
Country Fried Chicken & 1 Veg.	1.00
Wednesday, August 28	
Minestrone Soup	
Spaghetti w/Meatballs	1.00
Broiled Fish & 1 Veg.	1.10
Special - Build Your Own Hero	1.25
	Tax Incl.
Thursday, August 29	
French Onion Soup w/Croutons	
Beef Chow Mein on Rice	1.05
Baked Macaroni & Cheese w/1 Veg.	1.00
Friday, August 30	
Fish Chowder	
Fish 'n' Chips w/Tartar Sauce	1.00
Baked Beef Hash w/Chili Sauce & 1 Veg.	1.00

SUNY Offers Eng Courses

This fall, "English as a Second Language" will be taught at the State University of New York at Stony Brook at the beginning, intermediate, and advanced levels. The course is designed to give foreign-speaking individuals a chance to improve their speaking, reading, writing and listening comprehension of the English language.

The courses, which begin September 3, will include laboratory work. Registration will be on Monday, August 26 through Friday, August 30, between 9 a.m. and 4 p.m. It is not necessary to be a regular student at Stony Brook to enroll in the courses.

For further information, contact Susan Chanover, Director, International Student Office, 353 Administration Building, S.U. N.Y. at Stony Brook, Stony Brook, N.Y. or telephone 246-6050 or 246-6051.

Labor Day Food Service

At the Cafeteria the snack bar will be open from 9:00 a.m. to 2:00 p.m. daily on Saturday, Sunday, Monday, and Tuesday, August 31st through September 3rd.

The Tap Room at the Brookhaven Center Club will be closed on Saturday, Sunday, and Monday, reopening at 5:00 p.m. on Tuesday evening, September 3rd.

The Vended Food Service in Building 912 will be in operation throughout the Labor Day weekend.

Upton Nursery School Starts Classes Sept. 9

Upton Nursery School is a co-operative pre-school for the three and four year old children of Brookhaven National Laboratory employees.

The children attend school two or three mornings a week and participate in a varied program including art, music, outdoor activities and field trips.

The teachers are professionals and the classes are small enough to give each child the attention he needs. The teacher is 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. Car pools are also available.

There are still openings for the coming year. If you are interested in enrolling your child please call Anne Garrett, 286-1825, for further information.

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.

HEALTH PHYSICS TECHNICIAN - Shift work. Health Physics & Safety Division.

SECRETARY - Part-time position. Accelerator Department.

SECRETARY - Part-time position. Purchasing Division.

CUSTODIAN - Plant Engineering Division.

TECHNICIAN - Vacuum experience. Accelerator Department.

COOK/BAKER - Medical Department.

SENIOR DRAFTSMAN - Plant Engineering Division.

CHEMISTRY ASSOCIATE - Department of Applied Science.

SOCIAL WORKER - Part-time position. Medical Department.

SECRETARY - Department of Applied Science.

Auto & Auto Supplies

61 CHEVY PICKUP TRUCK - Moving, no reasonable offer refused. Dale, Ext. 2022, 281-8579.

TRAILER HITCH - For 1971-72-73 Mercury Montego. Dale, Ext. 2022, 281-8579.

64 FORD FAIRLANE - Good running cond, make a reasonable offer. Van Zelst, Ext. 4357, 744-0534.

73 SUBARU STATION WAGON - 17,000 mi, 25 mpg, front wheel drive, excel cond. \$2300. 878-1895.

68 CHEVY - 4 dr, sm V8, auto trans, excel running cond, body good. \$575. 286-9197 after 5.

70 MONTE CARLO - 4 new tires, ps, disc brakes, no air cond. \$1400. Ext. 2460, 744-9822.

74 CHEVY 1/2 TON - 7000 mi, perf cond, extras. 281-6325 after 6.

CHROMED VALVE COVERS - For 283 or 327 Chevy V8 eng, very good cond. \$6/pr. Harry, Ext. 3783.

72 HONDA CB350CC - Excel cond, luggage rack & extra batt in dry storage. \$750 firm. George, 698-4808.

70 FORD WAGON - V8, auto trans, ps/pb, 9 psgr. 744-0548.

70 JAVELIN - Auto trans, 6 cyl, very good cond. \$1200. Ext. 2877, 929-4818.

71 CADILLAC - Black & white, full pwr, orig owner, 38,000 mi, excel cond. \$3400 firm. Rosalie, Ext. 3160, 289-5704 after 5:30.

63 VW - 120,000 orig mi, still runs well, body rusted, G. Smith, Ext. Ext. 4285, 473-7902.

71 CHEVY VAN - Excel cond, 3 spd trans, trailer hitch & brake unit, FM-8 track stereo unit & many other extras. R. Dilg, 289-3429 after 6.

65 CHEVY PICKUP - W/camper, sleeps 6, self-contained. \$2500; camper only, \$1900. George, Ext. 2534.

Classified Ads

Auto & Auto Supplies (Continued)

68 CHEVY WAGON - Belair, 6 psgr, 307 V8, auto trans, r/h. \$700. George, Ext. 2534.
 HOOKER HEADERS - For '65-70 396-427 full size Chevy, \$40; Holley cast iron intake manifold w/heads (w/o springs) for 396, \$25. Claire, Ext. 2346, 281-8306 after 5:30.
 WEIAND ALUM INTAKE - For '64 Plymouth & Dodge, \$30; posi rear for '64 Dodge. Claire, Ext. 2346, 281-8306 after 5:30.
 USED TIRES - Most sizes. Ken, 289-8212 eves.
 2 VW WHEEL RIMS - 15". \$10. B. Espensen, Ext. 3992.
 70 MUSTANG - Air cond, ps, vinyl roof, good cond. \$1495. 744-2821.
 73 OLDS CUTLASS - Burgundy w/white vinyl top, air cond, radials, showrm cond, avail 9/15. 653-4951, 653-6966.
 64 VOLVO WAGON - Running cond; also 1964 Volvo sedan for parts; both/\$250. Hersey, Ext. 4574.
 69 PONTIAC FIREBIRD - 6 cyl overhead cam, good cond. \$800. 281-7093.
 72 SUZUKI "500" - Excel cond, low mileage, sissy bar, w/2 helmets. Jeff, 929-6398 eves.
 68 FORD STATION WAGON - Good cond, best offer. Ext. 4896.
 68 CHRYSLER NEWPORT - 4 dr sedan, very good cond, best offer. Ext. 4896.

Boats & Marine Supplies

23' CHRIS CRAFT - Chry Crown 6, sleeps 2, head, in water, moving, no reasonable offer refused. Dale, 281-8579.
 14' STARCRAFT ALUM - 25 hp Evinrude, Sea Lion trailer, sub flooring, steering wheel, controls, etc, all 1973, less than 5 hrs on all. \$1150 firm. 281-8684 after 6.
 18' CHRIS CRAFT - 33 hp Evinrude outboard, boat in water, ready to go. Priced at \$425. 878-2864.
 18' DAY SAILER - Stainless steel hull & heavy weighted keel. \$800. Platner, Ext. 3922, 744-3235.
 15' THOMPSON - Recently fiberglassed bottom, good cond. \$75. 286-9197.
 17' THOMPSON - W/40 hp Evinrude, excel cond, trailer, other extras. Tom, 289-4606.
 MARINE HOLDING TANK - Monotank T-100. \$120 list, make offer. W. Dieffenbach, 475-8710.
 16' "M" SCOW SAILBOAT - All best racing hardware, many improvements, trailer, will demonstrate, dacron sails. 286-0868.
 FIBERGLASS HYDROPLANE 1971 - Purple metalflake, very strong, holds 50 hp. Sacrifice, \$125. Ext. 4460.
 24' SLOOP - 22 hp inboard, 4 berths w/foam cushions, recently overhauled & painted, stable boat for family cruising, in water. Asking \$3000. 286-1454.

Miscellaneous

PULLMAN CARRIAGE TRAILER 1973 - 24', sleeps 5, self cont, many extras. \$5900. Marie, Ext. 3155/3143, 732-6137 eves.
 FREE - Spayed female dog, approx 2 yrs old, extremely lovable, very good w/children, has had shots, before Sept 1. Louise, Ext. 3325, 289-7391.

DRYER - Whirlpool, excel working cond. \$75. Dale, Ext. 2022, 281-8579.
 GLASS SLIDING DOORS - Screen, frame good cond. 472-0460 after 5.
 CLARINET - B-flat, Noblet model 40, very good cond, has played many good concerts. \$90. Joe, Ext. 3386, 475-4897.
 KITCHEN - Birch cabinets, formica counter tops, dbl sink, elec wall oven, counter top stove, portable dishwasher, avail late Aug. 744-7338.
 HAM RADIO - Heathkit Apache Xmtr, perf, \$95; compl station for sale, best offers, delivery arranged. Rich, 201-828-9421.
 OLD ENGLISH SHEEPDOG PUP - Female, 9 wks old, shots, AKC, beautifully marked. \$250. Jeff, 929-6398.
 KENMORE WASHER/DRYER - Very good cond, several wash & dry cycles. Asking \$300. Mira, 928-6032.
 REFRIG - Top freezer, refrig 21 cu ft, auto ice maker, water dispenser, only 3 mos used, new \$560. Best offer. 928-6032.
 B/W TV - 23" GE w/stand, excel cond. \$60. Ext. 3010 days or eves.
 COMPL DIN SET - Beautiful, yours for reasonable offer, got to see it to believe it. 281-5385.
 DIN RM SET - Contemp walnut, table, 4 chairs, china closet & buffet, excel cond. \$175. R. Skelton, Ext. 3463/2006, 473-4558.
 WALL MIRROR - 30" X 40"; 2 end tables, \$12; traverse rods, brass, to 150"; drapes; hanging lamp. 475-5838.
 DIN RM TABLE - 4 chairs, tablecloths, matching china closet, lt finish, contemp, excel cond. 363-8919.
 LL BEAN CALFSKIN "KNOCKAROUNDS" - Lt blue, anti-skid sole, ladies 6 1/2M. Orig \$16, worn once - now \$12. Ext. 3489.
 NAME CALLER - Automatically dials 38 numbers, cost \$60; also transformer, cost \$10; both/\$25. Ext. 3435.
 GIRL'S BICYCLE - Royce Union, 3 spd, good cond. \$25. Pat, 584-7050.
 ENCYCLOPEDIA - Colliers, 1959 ed w/yrbks thru 1973, excel cond. \$100. Trigg, Ext. 2540, 286-1262.
 ORLON YARN - All colors, will deliver to Lab or pick up at my home. \$2.50/lb. Ann, Ext. 3143, 732-9384 after 6.
 TRAILER - Single axle, flat bed 6'x8', excel cond. \$100. 289-3427 after 6.
 BRUNSWICK BOWLING BALL - Black Beauty man's, w/case, brand new, never drilled. \$25. Ann, Ext. 3143, 289-3427 after 6.
 6-METER TRANSCEIVER - 50w to final, converter uses car radio as tunable IS w/good Heathkit mobile supply. \$45. 475-3149.
 STEREO TURNTABLE - Zenith, 78, 45, 33 1/3 rpm, AM/FM, very good cond. \$50. 475-3149.
 HUMIDIFIER - Oasis model, walnut fin alum case, auto humidity control, A-1 cond. \$50. 475-3149.
 RF SIG GEN - Lafayette TE-4, has provision for xtal marker. \$20. 475-3149.
 CASE TUMBLER - For cleaning ammo brass, Boston gear reduction drive, lg cap. \$35. 475-3149.
 6-METER TRANSCEIVER - 10w to final, w/mobile pwr supply & halo ant. \$25. 475-3149.

STEREO - Panasonic model #7076 w/Garrard turntable, headphones, 2 yrs old, excel cond. \$100. Joe, Ext. 4477.
 CAMERA - 35mm SLR Pentaflex w/case, f2.8 50mm lens, like new. \$60. Joe, Ext. 4477.
 CALCULATOR - Line-operated table model, Commodore C-8, less than 6 mos. old. \$50. Joe, Ext. 4477.
 GO KART - 3 1/2 hp, slicks, new tie rods. 751-0835.
 WHIRLPOOL AIR COND - 23,000 BTU, like new, hardly used. \$250. John, 281-5809.
 CAMPER - 62 VW. Ray, 231-7158 after 6.
 FREE - 3 lovely kittens need home, 6 wks old, 2 blk, 1 blk w/brown streaks. Ruth, Ext. 4106.
 70' MOBILE HOME - All util, 1/2 acre, Delaware. 325-1961.
 IRON RAILING - New, approx 40', 2 posts & fittings. \$30. 325-1961.
 CAMERA - Collector's folding Eastman Kodak 1920's model, good cond. \$15. M. Greene, Ext. 4484.
 BICYCLE BUILT FOR 2 - Good cond. \$50. G. Woodson, Ext. 4526, 727-5532 after 5:30.
 GE MANGLE - Best offer. 286-8957 after 12 noon.
 YORKSHIRE TERRIER PUP - AKC, adorable tiny toy, health guaranteed. Ext. 2902, 475-2627 after 5:30.
 RIDING MOWER - 32" cut, snapper 8 hp, bagging attachment, used 1/2 season, sacrifice. \$500 firm. Bob, 473-7377.
 PORTABLE KENMORE WASHER - Auto, lg loads, 3 cycles, 2 spin spds, lint filter, excel cond. \$125. 289-8167.
 ELEC GUITAR - "Dan Electro," single bar pickup, hollow body, soft case. \$25. 585-8322.
 3 CUSHION SOFA - Good cond, w/slipcover. \$25. 475-8079.
 HAND-SPLIT CEDAR SHAKES - 20 bundles, 1 1/4 - 3/4, 24" length. \$11/bundle., M. Dohrman, Ext. 4215, 473-2614.
 ENG SADDLE - Used, clean, good cond, w/new stirrup leathers, irons, girth & felt pad. \$50. 475-9294.
 FRENCH PROV COUCH & CHAIR - Like new, excel cond. \$125. 732-8877 after 5.
 CASSETTE TAPE PLAYER & RECORDER - W/adapter, \$45; 11 cassette tapes, \$3 ea. George, Ext. 2534.
 150 CESSNA AIRPLANE 1966 - 8835G, good cond. \$3800. George, Ext. 2534.
 LAWN MOWER - 20", in operating cond, Briggs-Stratton eng. \$5. Katcoff, Ext. 4341, 475-4005.
 OLD RADIO - Sell reasonably; elec h/w heater, 32 gal, \$20; 21" b/w TV, floor model, plays, beautiful cabinet, \$5. O. Booker, Ext. 4719.
 COAT - Camel color, winter coat, dbl breasted, size 18 +, worn less than 1 season, also several gowns. Gail, Ext. 2902.
 MISC BABY FURN - All in excel cond. Bonnie, 732-0171 after 6.
 SINGER ZIG ZAG SEWING MACHINE - Incl cabinet, good cond. \$50. Bonnie, 732-0171 after 6.
 SHETLAND RUG SHAMPOOER & POLISHER - 2 spd motor, used once, \$25; GE portable 20" fan, \$15; Sears exercycle, brand new cond, asking \$45. Bonnie, 732-0171 after 6.
 SIGNET WOOD CLARINET - 1 yr old, hardly used. \$90. M. McKeown, 286-1169.
 "RAM" SANDWEDGE - Spalding #8 iron, hardly used, 2 doz new balls. \$20. B. Espensen, Ext. 3992.
 SINK - Old kitchen type, porcelain on cast iron, approx 24"x42", free if you take it away. Ext. 3434, 472-1097.
 TYPEWRITER - Royal standard, \$25; trumpet, \$35. Ext. 3434, 472-1097.
 MONORAL HI-FI COMPONENTS - Eico tuner, Marantz preamp, Heathkit 25w pwr amp. I. Meyer, Ext. 3038, 929-4326.
 2-32x48" CHAIN LINK GATES - \$25; asstd fence hdwre, \$10. Hank, Ext. 3499, 472-0553.
 BRITANNICA JR ENCYCLOPEDIA - New, best offer; sewing machine, straight & zigzag, \$35. Ext. 4896.
 BOY'S RAINCOAT - W/removable lining, size 17, worn only a few times. \$15. 286-1454.

SHOREHAM - 2 story, 4 bedrms, 2 1/2 baths, lg country kitchen, fireplace, fam rm, full bsmt, 2-car garage, 1/2 acre, 5 yrs old, 7 1/2% assumable mort. \$59,000. 744-9455.
 3 ACRES - Sylvan Ave, Miller Place. \$20,000/acre. Jo, Ext. 4210.
 PATCHOGUE VILLAGE - Legal 2 fam, 4 1/2 up, w/w, 4 1/2 down, removal of 1 door converts to 1 fam-4 bedrm house, excel cond. 289-3427.
 MEDFORD - 3 bedrm condominium, clubhouse, golf course, 1 1/2 baths, din rm, w/w. \$2000 over closing costs, full price \$33,990. Ray, Ext. 4227, 281-2572 after 6.
For Rent
 MILLER PLACE - Furn rms for 4 mos starting Sept 8. 928-6032.
 SAG HARBOR - Sm house, from Sept to June. 475-6717 late eves or weekends.
 SHOREHAM - Compl private house, 1 acre, 4 bedrms, 2-car garage, bsmt, private beach, 6 mi from Lab. 744-8246, Ext. 4131.
 TO SHARE - 2 bedrm furn house, 5 mi from Lab. Franz, Ext. 4337, 924-5294 eves & weekends.
 BELLPORT - Luxurious waterfront house, landscaped, priv, beach deck & dock fully furn & equipped, liv, din, 4 bedrms, study, kitchen w/new washer, dryer, dishwasher & 2-oven stove, avail 9/15-6/15. \$375-450/mo depending on usage & responsibility. 286-8744, 286-1017.
 MOD APT ON WATER - All util incl. \$200 firm. R. lerardi, 475-4930.
 JAMESPORT - Bungalow on LI Sound, avail 8/25 thru Labor Day. Marty, Ext. 4062, 722-3789.
Wanted
 UTIL SHED - Metal or wood, must be at least 5 1/2' high. 289-5607.
 TOP QUALITY TUBE PREAMP - Such as Marantz 7C, Audio Research SP-3, will pay top cash. Bob, Ext. 4139, 289-5235.
 LEAD GUITAR - To play & sing for a rock band. Ray, 878-2486.
 TELEPHONES - Very old, need not be working. Saxon, Ext. 3435.
 HOME - For my sister & me, she's a tiger, I'm blk & fawn, we love kids & tolerate dogs, ready when school starts. Carol, 586-3579.
 APT SIZE COOKING RANGE - Bottle gas, reasonable price. 585-8322 after 5.
 APT OR SM HOUSE - Bellport area, for older woman, reasonable. 286-8256.
 BABYSITTER - For 5 yr old boy, working hours Sept 4-12, prefer onsite or Manorville area. Roger, Ext. 3578, 289-7391.
 PWR SAW - 8-10" radial or table saw; mitre box to make very accurate 45° cuts; Stanley corner vise. John, Ext. 4143, 286-1348.
Carpools
 WANT TO JOIN OR ORGANIZE CARPOOL - From Commack area. P. Newhouse, Ext. 2042, 864-2536.
 DRIVER WANTED - To compl existing 4-member carpool from Riverhead. Pat, Ext. 4519.
Services
 DOG TRAINING - Next 10-wk course begins 9/13 in Riverhead Armory, beginners \$25; advanced \$20. 727-1218 days.
 ELEC MOTORS REPAIRED - Swimming pool motor repair & rebuilds, pwr tools, etc. Ray, 231-7158 after 6.
 HOME MAINTENANCE SERVICE - 281-6325 after 6.
 PICKUP TRUCK/DRIVER - W/muscles for hire eves, weekends, any size job, any distance, by mile or by hr. 589-3269 after 5.
 FISHERMAN - Do you want your catch deliciously smoked? 744-9411 after 5:30.
 HOME OWNERS - Expert land clearing, grading road constr, tree removals, cleanups & all related services. M. Sautter, 732-5549, 924-3338.
 TYPING - Term papers, manuscripts, etc. Claire, Ext. 2346, 281-8306 after 5:30.
 TREE REMOVAL & CHAIN SAW WORK - Experienced, free estimates. Ken, 289-8212 eves.
 CERAMIC TILE/CEMENT/TERRAZZO - Professional work at reasonable prices, call for estimates. John, Ext. 4143, 286-1348, 281-8848.

Classified Ad Policy

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

- The Brookhaven Bulletin's classified section may be used only by active and retired Laboratory employees.
- All items for sale or rent must be the advertiser's property.
- Ads for material acquired for resale in association with a full or part-time business cannot be accepted.
- Firearms offered for sale or trade may not be brought on site.

- Ads not carried because of space restrictions will be held for publication in the next issue.
- Ads are run only once and must be resubmitted if they are to be repeated.
- Ads should be restricted to 20 words or less and typed or printed on the form provided, and must bear the employees signature.

Check the heading applying to your ad. Print or type your ad in 20 words or less.

- | | |
|--|---------------------------------------|
| <input type="checkbox"/> For Sale: Auto & Auto Supplies | <input type="checkbox"/> Wanted |
| <input type="checkbox"/> For Sale: Boats & Marine Supplies | <input type="checkbox"/> Carpools |
| <input type="checkbox"/> For Sale: Miscellaneous | <input type="checkbox"/> Lost & Found |
| | <input type="checkbox"/> Services |

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).