



Wild Whales — Their Lives and Songs

Songs of Humpbacks and Finbacks, and recent field studies of the rare Right Whale, will be the subject of next Thursday's lecture at Berkner Hall.

Color slides and sound recordings made of whales, the largest mammals in existence, as they roam the oceans of the world, will make up a large part of the 15th AUI Distinguished Lecture.

Dr. Roger S. Payne of the Institute for Research in Animal Behavior (operated jointly by the New York Zoological Society and Rockefeller University) will be the Laboratory's guest speaker on Thursday, March 2. Dr. Payne began his animal studies on the directional sensitivity of the ears of bats. He later became interested in whales after seeing what man had done to a small whale washed up on the beach, and decided, "... to use the first possible opportunity to learn enough about whales so I might have some effect on their fate."

In 1971, a record entitled "Songs of the Humpback Whale" was produced from recordings Dr. Payne made with underwater microphones off the coast of Bermuda. It was in World War II, when sonar research



Roger S. Payne

led to the development of underwater listening devices, that it became known that many species of whales were able to vocalize. Since then more than 25 species have been recorded.

The humpback whale at maturity is more than 50 feet in length and weighs several hundred thousand pounds. One reviewer reported that "Songs of the Humpback Whale" sounded somewhat similar to a symphony orchestra warming up, with a quality of repetition that makes the whale music a song rather than a hodgepodge of random sounds. "It hints that the whale has organized his tonal capabilities," the reviewer stated.

Dr. Payne got his A.B. degree in Biology from Harvard in 1956, and his Ph.D. from Cornell in 1961. From 1961 to 1966 he did postdoctoral research at Tufts University, and from 1966 to 1972 was Assistant Professor, Rockefeller University, and Research Zoologist, New York Zoological Society. He is a trustee of the Environmental Defense Fund.

The August 1971 issue of Science published an article, "Songs of Humpback Whales," which was co-authored by Dr. Payne and Mr. Scott McVay. In it, the authors stated that "It is clear, however, that, regardless of where a song may begin, the whale continues the sequence of themes in the same irreversible order," and, "The playful behavior of humpbacks near Bermuda in April and May has suggested to some observers that they are courting. The whales slam their tails on the surface of the water (lobtailing), wave and slap their fins on the water (finning), and frequently and repeatedly jump (breaching)."

To see and hear the whales on slides and tape, and learn about these mammoths of the sea from one of the foremost experts, don't miss being at Berkner Hall on Thursday evening, March 2, at 8:30 p.m. Admission is free, no tickets required.

Meet Me At The Center, Deer!



Henry Boyd, Staff Services, shows how a deer went through the window of the Brookhaven Center damaging only the screen and four panes of glass.

The Deer Who Came To Dinner

This was not the first time that a deer became curious enough about the humans in Brookhaven National Lab to enter one of the buildings, but it was the first time that one came into the Brookhaven Center at cocktail time.

On Wednesday, February 9, at dusk the patrolmen from Security were lowering the American flag when a deer chased by a pack of dogs came running by. Bill Scott, Medical, saw the deer as he headed straight for the window of the Center. "He sort of put on the brakes for a moment, and then he jumped right through the screen and window and disappeared from sight."

Inside, Henry Boyd, Staff Services, was in the Tap Room where there were only a few customers, when he heard a crash. "It sounded like a waitress had dropped a tray of dishes," said Boyd, "and then someone shouted 'A deer came in!'"

Boyd rushed to the lobby where he found a groggy deer starting down the stairs to the reception desk. The deer looked toward the dining room, and then turned toward the North Room where receptions are usually held.

Tap Room patrons, waitresses, and Boyd followed and quickly opened the doors to the outside and shooed the deer out.

As the deer left the Center, patrolmen in a jeep followed and managed to chase the pursuing dogs in one direction while the deer made his escape in another direction.



The window screen probably saved the deer from serious cuts when he jumped through this window in the Brookhaven Center.

The deer was not seriously cut, and appeared to be in good shape as he ran away. The window of the Center was neatly broken and could easily be repaired. Fortunately, furniture had been removed from the lobby for cleaning, and nobody was injured when the deer came hurtling through.

A half hour after the incident happened, the mess in the lobby had been cleaned up, and guests started to arrive for a pre-lecture buffet without being aware of the cause of the nervousness of the waitresses for the rest of the night.

Medical Service Awards



On Tuesday, February 15, Dr. Eugene P. Cronkite, Chairman of the Medical Department, presented members of his department with Ten and Twenty Year Service Awards. Recipients of the awards were: (Standing, L-R) George Leith, 10 yr.; Ralph Fairchild, 10 yr.; Robert Nicholas, 10 yr.; and Dr. Paul Papavasiliou, 10 yr.; (Seated, L-R) Joan Shane, 10 yr.; Mary Coyle, 20 yr.; Jeanette Fischer, 10 yr.; and Edna Zollo, 10 yr. Absent for the picture were Alfred Celentano, 20 yr.; Norma Gillespie, 20 yr.; Spencer Commerford, 10 yr.; and Frank Amendola, 10 yr.

Rare Particle Beam Opens New Vistas In Physics Research

Time dilation is a part of Einstein's Theory of Relativity which predicts that if any of us takes a trip in space at nearly the speed of light, when we return to earth we will be younger (by earth standards) than our twin who stayed behind. This effect is now being used here at BNL to tame a rare and elusive sub-atomic particle called the omega-minus.

Most omega-minus particles normally live for less than one-billionth of a second and travel only a few inches before they disappear by decaying into other particles. Because of the time dilation effect, the omega-minus hyperons being produced in the AGS and traveling at just under the speed of light now live over ten times as long — if you can call ten-billionths of a second a long lifetime — and some travel more than 12 feet before they disappear. This brings them within the realm of "easy" observability and measurements by the physicists working at BNL.

Only thirty omega-minus particles have been observed throughout the world since the particle was originally discovered at the AEC's Brookhaven National Laboratory 7 years ago. Now, a group of scientists working at the AGS are routinely producing them in an observable fashion at the rate of one every hour.

The omega-minus is the rarest of a group of three rare particles being produced. The other two are the sigma-minus and the xi-minus. They belong to a family of particles called hyperons. One of these, the sigma-minus, has been produced at the almost phenomenal rate of 100 per second. However, only one out of a thousand of these sigma-minus hyperons will decay in the rare mode the scientists are looking for. Yet in two days they recently recorded more than 1500 of these rare events, surpassing the grand total of 1000 established over a previous span of more than ten years in all of the laboratories of the world.

The observation of these sigma-minus decays is expected to shed some light on the existence of quarks which some theorists say are the ultimate building blocks of matter. Theory predicts the quarks come in three varieties. To simplify the explanation, we will call them A, B and C. Theory further says that the sigma-minus hyperon contains three quarks in a special combination of A, A, and B, and it can decay in a number of different ways. For example, if an A quark decays, the products of the sigma-minus decay will be different than if the B quark decays. Since the Quark Theory says the sigma-minus contains two A quarks, it should decay twice as often in the first way, other factors being equal. If it doesn't there is something wrong with the Quark Theory of hyperon decay.

The high production, essentially pure, hyperon beam here at BNL now makes it possible to study the decay rates in a way never before possible. According to Dr. J. Marx of Yale, the indications are that

(Continued on page 3)

This Week On "The World of BNL"

"The World of Brookhaven National Laboratory" is a weekly radio program which had its premier airing last Sunday. This coming Sunday, February 27, will feature Jack Cusack, Head of the High Intensity Radiation Development Laboratory, speaking on the subject of food preservation.

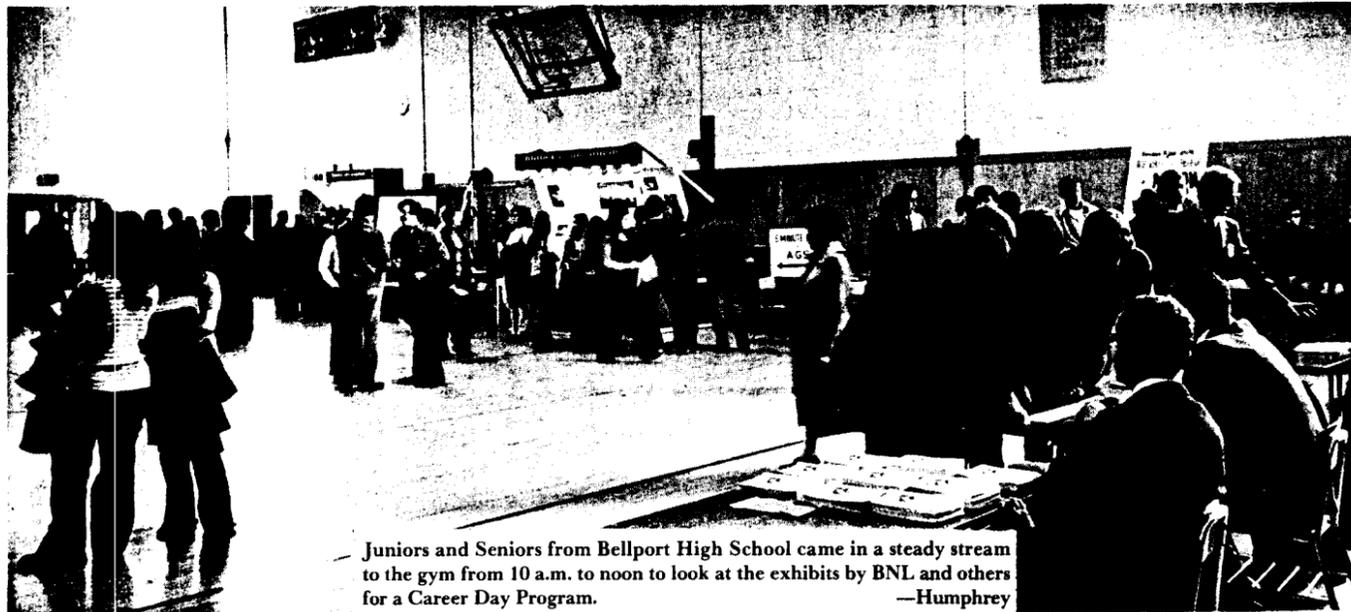
The 15-minute program is broadcast every Sunday morning over WBLI-FM (Patchogue) at 8:15 a.m., and over WGLI-AM (Babylon) at 11:15 p.m. The program is recorded here at BNL in the Laboratory of the researcher being interviewed and is broadcast as part of the public service programming of the two radio stations. Arrangements for the weekly broadcast were made through BNL's Public Relations Office, which also does the "on the spot" recording.

Published Weekly for the Employees of
Brookhaven National Laboratory

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NORBERT J. DERNBACH
Public Relations Officer



Juniors and Seniors from Bellport High School came in a steady stream to the gym from 10 a.m. to noon to look at the exhibits by BNL and others for a Career Day Program. —Humphrey

**Summer Student Program
Applications On Display**

Completed applications for the Brookhaven Summer Student Program are on display at the Office of Scientific Personnel. Members of the scientific staff desiring to supervise a summer student are invited to review the applications and make their selections. Requests for student assignments should be made through the appropriate department chairmen before March 7.

Eighty students will be selected from over 330 juniors and seniors majoring in science, engineering and mathematics. The program provides research experience for potential scientists and teachers and is supported by the AEC Division of Nuclear Education and Training. Appointments are from June 12 to August 25 and students receive stipends of \$100 per week while at Brookhaven.



Dan Brown, Medical, passed out information about careers in Health Sciences.



John Walker, AGS, shows students equipment engineers are involved with at the AGS.



Jerry Hudis, Chemistry, chats with a potential chemist.

Next Concert Tuesday

The next concert in the BERA Concert Series will be presented by the Philadelphia String Quartet on Tuesday, February 29, at 8:30 p.m. in Berkner Hall.

The Philadelphia String Quartet was formed 16 years ago by former members of the Philadelphia Orchestra, and has received tremendous critical acclaim both at home and overseas. The Quartet was noted for the epic six-concert Beethoven-Bartok-Schoenberg cycle it gave in New York in 1963-64, sponsored by Carnegie Hall.

The program at BNL will feature quartets by Mozart, Debussy and the contemporary Chilean composer Gustavo Becerra. Admission is \$4.00 for adults, and \$2.00 for those under 18.

French Group of BNL

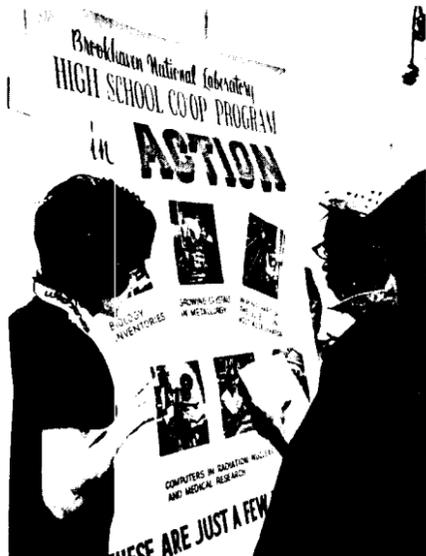
The next meeting of the French Group will feature an evening of French chansons. Such favorites as Piaf, Brassens, Montand, Brel, Ferrat, Barbara and others will be heard in some of their greatest performances.

Refreshments will be served, and everybody is welcome. Admission is \$1.50 for non-members.

Date: Friday, February 25
Time: 8:15 p.m.
Place: Recreation Building
(note change in location)

**Baffa Symphony Performs
In Bellport High School**

The Baffa Symphony Orchestra will perform in Bellport High School at 3 p.m. on Sunday, March 5, 1972. The program will include Copland's Fanfare for the Common Man, Bach's Brandenburg Concerto No. 3, Von Weber's Clarinet Concerto, and Scheherazade by Rimsky-Korsakoff. Tickets are available at the door. Adults \$2.00; students \$1.00.



Jean Petterson, Personnel, explains the workings of the High School Co-op Program at Brookhaven.



Graham Campbell, Applied Math, demonstrates computer techniques to a group of students.



BNL Fire Chief Thomas Newham talks to a group of youngsters who are interested in a career as firefighters.



Meyer Steinberg, DAS, shows the practical side of a career in chemical engineering.

**Careers Day
At Bellport High**

The second annual Careers Day at Bellport High School was sponsored again by the Bellport Rotary Club. Brookhaven Lab had several exhibits, and sent a delegation of staff members to man exhibits and advise students.

Careers in research, engineering and health sciences were the main offerings from Brookhaven, backed up by exhibits ranging from a movie about the AGS, a display of concrete polymer, a computer exhibit, and an exhibit by BNL's firemen.

Vernon Buchanan, AGS, a member of the Bellport Rotary, acted as liaison agent. Alf Christoffersen, Public Relations, was coordinator for Brookhaven.

Gym Closes For Dance

The Gymnasium will be closed for all physical activity from Monday, March 6th through Monday, March 13th (5:00 p.m.) in order to prepare for the scheduled Country Western Dance on March 10th.

See you at the Dance.

Doub — Not Daub

A story in last week's *Bulletin* reporting on a recent luncheon meeting of the New York Metropolitan Section of the American Nuclear Society incorrectly spelled the name of AEC Commissioner Doub. Commissioner Doub was appointed to the AEC at the same time as Chairman Schlesinger in July 1971.

CREF Unit Values

1971			
January	\$41.37	July	\$41.24
February	41.57	August	44.01
March	43.14	September	43.85
April	45.23	October	41.84
May	43.81	November	42.38
June	43.58	December	46.21

For additional information, or answers to questions about the Retirement Plan, contact Monroe Petty, Ext. 2106.

1972
January \$48.27

METS Tickets

Mets tickets will go on sale soon. Watch next week's *Bulletin* for details.

Hospitality News

February's hospitality morning coffee will be on Monday, the 28th, in apartment 8A here on site, from 10 a.m. to noon. Mrs. Amelita Llacer will give a demonstration in cake decorating . . . yummy yummy. Everyone is welcome — bring the children.

Arrivals & Departures

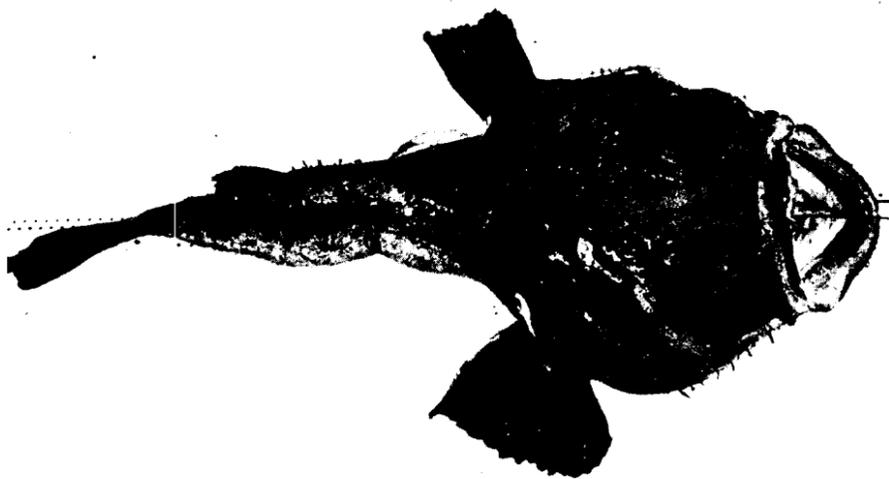
Arrivals

Marion Johnson P.E.P.
Carlos M. Ortiz P.E.P.
Helen M. Stern Medical

Departures

None

Don't Step On Me!



This 40-inch Goosefish was found at the mouth of Flax Pond by caretaker Mickey Cusano and given to Neal Temple to bring back to Brookhaven Lab. The Goosefish (*Lophius americanus*) will eat almost anything that he can fit into his huge mouth, including small sharks, skates, eels, flounders, lobsters, squid, starfish, and even ducks, gulls and sea turtles as well as unwary bather's toes! Other names for the Goosefish are monkfish, angler, allmouth, and fishing frog. This fish is sometimes found dead or almost dead near shore during the winter, although fortunately for our toes it moves offshore during the warmer months.

Rare Particle Beam (Continued)

quarks do exist in hyperons, but to date no quarks have been actually observed and their decays in hyperons will require a great deal more study.

Beyond any shadow of a doubt, however, the hyperon beam has ushered in a new era of high energy physics. The physicists are as excited about the method of getting the hyperons as they are about the results they are getting.

Physicists knew that hyperon particles, including the omega-minus and sigma-minus, were routinely being produced, but were being lost in the intense radiation created when billions of protons traveling at almost 186,000 miles per second suddenly hit a target with up to 33 billion electron volts of energy in Brookhaven's Alternating Gradient Synchrotron (AGS).

What is routine to the high energy physicists, however, can be mind-boggling to others.

Instead of letting the beam crash suddenly into a target, the main beam of the AGS is allowed to "coast" around its half-mile circumference a hundred thousand times or so, at essentially the same speed and energy. Using special magnets the beam is moved so that the outer layer of protons in the beam is peeled off during the "coasting" period. To use an analogy, imagine a potato spinning like a toy top. If a potato peeler were placed in a position against its outer edge, a continuous layer would be peeled off.

The next step is the critical one for "mass" production of the rare negatively charged hyperons. Normally, when a proton beam hits a target, every sort of subatomic particle is produced and they fly off in every direction. The trick is to get rid of everything but the negatively charged hyperons, and do it close to the target where they are produced before they decay and disappear.

The highest energy hyperons move the fastest (99.95% of the speed of light) and thus have the largest time dilation effect. It is these that are selected. They are produced along the direction of the proton beam, but the protons, being positively charged, are directed by the magnet away from the channel reserved for the negatively charged hyperons. Under the combination of all of these conditions, time dilation does indeed dramatically extend the lifetime and distance traveled by these rare hyperons from an inch or so to more than 12 feet, thus giving space for the shielding and detection equipment. This is a practical application of the fundamental principle of Einstein's Theory of Relativity and both the method and the results are considered to be a breakthrough in the field of high energy physics.

The hyperon beam required about three years of planning and construction. Data collection began in February of 1971. In May, 1971, the AGS was shut-down to allow the new LINAC to be connected to the main ring and other phases of the AGS conversion project to be completed, and all experiments were temporarily halted. In October, 1971, the hyperon beam was resumed and is scheduled to run until May, 1972.

The experiment is being carried out by



Neal Temple, Biology, holds a 40-inch goosefish found at Flax Pond.

Selected Reading

- Bull. At. Sci. 28, February 1972**
The interaction of man and the environment: The situation today and outlook for the future. E.K. Fedorov. 5-10
- The scientist and his indentured professional societies. R. Nader. 43-4
- Sci. Policy Rev. 4, No. 4, 1971**
Wither science and technology? What is in store for our scientific technological establishment. G. Strasser. 3-12
- Influences on the course of science and technology. The integrity of purpose. E.E. David, Jr. 13-20
- Israel-Egypt science gap. D.S. Greenberg. 21-7

Opera Tickets Available

Metropolitan Opera tickets may be purchased at the Recreation Office daily between 9:00 and 1:00.

The following is a list of dates and operas for which there are tickets still available.

February	Tues. 29	La Forza Del Destino
March	Tues. 14	La Fille Du Regiment
	Thurs. 30	La Fille Du Regiment
April	Tues. 18	La Fille Du Regiment

physicists from Yale University, the National Accelerator Laboratory, and Brookhaven National Laboratory under the leadership of J. Sandweiss and W. Willis from Yale and J. Lach from the National Accelerator Laboratory. Other members of this team are J. Marx, P. Nemethy, V. Hungerbuehler, W. Tanenbaum, and R. Majka from Yale and M. Atac, R. Stefanski, A. Roberts, D. Theriot, J. MacLachlan, and P. Gollon from the National Accelerator Laboratory and C. Wang (AGS Experimental Planning and Support Division) from Brookhaven National Laboratory. This collaboration is conducting the first set of experiments.

A similar facility has just been brought into operation at CERN, the cooperative European Laboratory in Geneva, and one can undoubtedly say that experimental and theoretical physicists are on their way to clarifying basic ideas about the structure of matter.

The collaborative hyperon beam research of all three institutions is funded by the AEC Division of Research.

BERA Election Results

George Oldham, present BERA Executive Board Trustee, has been re-elected to serve a three year term. Newly elected Trustees are Patricia Towey to serve a three year term and Charles Flood to serve a two year term. All three will take office on March 1, and will join incumbents, Lynn Kalbach, Paul Kelly and Leslie Lawrence.

George Sabine and the BERA Executive Board wish to thank the members of the Nominating Committee, as well as all the candidates, for their enthusiastic interest in the Association.

Bowling News

Grace Fales

Red League

Highs for the week of 2/8 were: J. Petro 236/606, R. Larson 204, and J. Berech 209. Week of 2/15: E. Reams 215, J. Weiss 211, R. Vignato 202, R. Adams 202/205, J. Baer 201, and R. Larsen 209.

Green League

The Sandbaggers ran out of steam. They held a 9 point edge going into the night but the Bubble Boys took them for 7 points and reduced that lead to 2. "It's a new bowl game." Highs for the night were: V. Bilms 202, S. Kiss 200, K. Riker 224, J. Scesny 215/204/601 series. R. Marlow 216, and C. Zavesky 212.

Pink League

The Hopefuls were the only team to make a clean sweep of all 7 points, enabling them to enjoy a comfortable margin in 1st place. There were many games in the 150's, but Lynn Kalbach 160 and Kay Hunt 161, did just a bit better than the rest of us. Diana Bartelt, after slamming the ball into her ankle, finally decided to aim for the pocket and rolled 185/460. Grace Fales was a slow starter, but zeroed in at the end with 201/482. Bowling is fun !!!

Black and Blue League

Lou Caisey not only rolled 187/190/208 for a 585 series, but also gained the distinction of being the first in this league to win a 678 gross club award. Congratulations, Lou!! Rick, of Rick and Dick, rolled a 222/514, while Dick had a 182/531. Allan Diebel was right in there with a 511 and Joe Mayeski was in dreamland again and came through with a 201/504. Kit D'Ambrosio had a 168/451, and Helen Caisey a 163. Thanks Kit and Helen for keeping the gals in the news.

Attention All Bowlers

The annual Nassau-Suffolk Long Island Bowlers Benefit Tournament will be held from Feb. 28th to March 5th. Entry fee is \$1.00 and the tournament is run on a 100% handicap basis. The proceeds, after prize money, goes to hospitalized veterans, children and the aged in our area. Anyone who has not entered, please see your League Secretary before bowling next week.

IBEW Meets Tonight

Local 2230 IBEW will hold its regular monthly meeting at 8 p.m. tonight, February 24, in the K of C Hall, Railroad Avenue, Patchogue. There will also be an afternoon meeting at 2 p.m. today for shift workers in the union office at 31 Oak Street, Patchogue. On the agenda will be regular business and the president's report.

Fire Captain Retires



Edward J. McFadden, a Fire Captain in the Plant Protection and Security Division who has been employed at the Laboratory since December 16, 1957, will retire on February 29.

COUNTRY WESTERN DANCE

FRIDAY, MARCH 10, 1972

9.00 p.m. - 1.00 a.m.

AT
BROOKHAVEN NATIONAL LABORATORY GYMNASIUM

PRESENTED BY
BERA Family Camping Club

FEATURING
HANK POELING

AND
THE COUNTRY BOYS
Square Dance Caller

Rudy Franklin

Admission: Employee/Escort \$3.00 ea.
Visitor \$3.50 ea.

A Side of Beef

When the committee for our upcoming March 10th Dance sat around the table trying to think of unique door prizes - many suggestions were offered. Since the theme is Country Western, a side of beef seemed appropriate. However, we felt the winner might have difficulty both in carrying it home and storing it - so we settled for something less staggering - A Standing Rib Roast. All you have to do to take it or one of our other Door Prizes home is attend the Dance and hope you have the lucky ticket.

This is a come-comfortable affair - wear your jeans, wild shirts or whatever.

Returning, by popular demand to supply the musical entertainment from 9:00 p.m. to 1:00 a.m. will be Hank Poeling and the Country Boys. Joining Hank, and handling the calling we'll have Rudy Franklin. The dancing will be mixed so that everyone will have an opportunity to join the fun.

Sorry there will be no reservations for this one. They won't be necessary. You may buy your tickets at the door and there'll be room for all. The Doors will open at 8:30 p.m. The cost for you and yours will be \$3.00 each. Your friends are welcome and their cost is only \$3.50 each.

In addition to a full evening of entertainment we provide ice, potato chips, cheese twists. You may bring your own inventions or purchase beer and sodas at a modest cost.

For a special treat, try our "Chuck Wagon Special" a delicious taste treat prepared especially for you by the wives of our Camping Club.

Volleyball News

Odelli Ozer

The Men's League Spikers prepared themselves for their showdown with the Cool Tools next week by defeating a weakened AEC team 3-0. The Cool Tools - Spikers game will most probably determine the champion of the second half.

In other games Jerry Levine's new team, the Set Ups, defeated his old team, the Atom Spikers, 2-1 in a very close game. Chemistry moved into third place by taking 3 games from the Particle Detectors.

The Mixed League championship was clinched by the Gotcha's who won their three games including two very close ones against the Jets and the Boomerangs. The Jets moved into second place by defeating the Boomerangs for the second week in a row. On the other hand the Active Sites who lately have been playing very well had an unlucky night dropping four games, thus assuring themselves of a spot in the League cellar. The standings as of February 17th are as follows:

Men's League		
	W	L
Spikers	9	0
Cool Tools	8	1
Chemistry	6	3
Set Ups	6	6
AEC	3	6
Atom Spikers	4	8
Particle Detectors	0	12
Mixed League		
Gotcha's	15	1
Jets	10	6
Boomerangs	10	7
Trolls	5	8
Spikers	4	11
Active Sites	3	14

Stony Brook Events

A chamber music concert and opera performance, two films on Chile, and a crafts bazaar are among events open to the public this week at the State University of New York at Stony Brook.

Sunday, February 27

The Smithsonian Marionettes present a children's puppet show, "Tom Sawyer," in the Stony Brook Auditorium, with performances at 1 p.m., 3:30 p.m., and 5 p.m. Admission, 25¢.

Monday, February 28

Philosopher David Benfield continues his lecture series on "Logic" at 5 p.m. in Lecture Center Room 101.

An exhibition of oils and acrylics by Christine Zackrone continues in the Stony Brook Union Gallery from 10 a.m. to 5 p.m., through March 3.

Tuesday, February 29

The Hillel Jewish students organization presents "An Evening with Shlomo Carlbach," a Hebrew rock-folksinger, at 9 p.m. in Roth Cafeteria, as part of the celebration of the Purim holiday.

The International Film and Lecture Series presents two films on Chile. "Venceremos," a film about Chile before the 1970 elections, will be shown with English subtitles. "Conversations with Allende," in English, depicts an interview with Socialist President Salvador Allende, who was elected in 1970. The program begins at 7:30 p.m. in Stage XII Cafeteria.

Professor of Art Leopoldo Castedo continues his discussion of contemporary Latin American life styles, focusing on the intellectual and artistic forms, in his lecture series on "Latin American Cultural Development," at 5 p.m. in Room 150 of the Light Engineering Building.

Professor of English David Erdman continues his discussion of poet William Blake at 5 p.m. in Room 146 of Social Sciences Building "A."

Wednesday, March 1

Professor of English Martin Stevens continues his lecture series on Chaucer's *Canterbury Tales* with a discussion of "The Marriage Group: The Wife, the Clerk, the Merchant and the Franklin" at 5 p.m. in Room 135 of Social Sciences Building "A."

Dr. Melvin Ruderman of Columbia University discusses "The Surface of a Neutron Star" in a Physics Colloquium at 4:30 p.m. in the Physics Building Lecture Hall.

Distinguished Professor of English Alfred Kazin continues his lecture series, "20th Century Literature," at 5 p.m. in Room 102 of the Light Engineering Building.

Thursday, March 2

A crafts bazaar by students and area residents is open in the Stony Brook Union Lobby from 11 a.m. to 4 p.m.

The Center for Continuing Education presents two Orson Welles films: "The Magnificent Ambersons," which he directed, starring Joseph Cotton and Agnes Moorehead; and "The Lady from Shanghai," starring Welles and Rita Hayworth. The program begins at 8:30 p.m. in Room 100 of the Lecture Center.

Friday, March 3

The Music Department's Chamber Orchestra conducted by David Lawton will perform Richard Strauss' "Serenade for Winds," op. 7, and Mozart's "Concerto No. 1 in G Major (K. 313) for Flute and Orchestra." Melba Ai will be the flute soloist. After the chamber orchestra performance, students will stage Stravinski's one-act opera, "Mavra." The Chamber Orchestra performance begins at 8:30 p.m. in Room 105 of the Lecture Center.

Saturday, March 4

Eugene Stoutenstein will perform works for the tuba by Persichetti and Hartley, in a recital for the Master of Music degree, at 8:30 p.m. in Room 105 of the Lecture Center.

Cafeteria Menu

Week Ending March 2, 1972

Friday, February 25

Fish Chowder
Fried Fillet of Sole w/Tartar Sauce & French Fries .95
Codfish Cakes w/Spaghetti & Tomato Sauce .80
Baked Beef w/Gravy & 1 Veg. .85

Monday, February 28

Cream of Tomato Soup
Breaded Pork Chop w/Applesauce & 1 Veg. .95
Beef Ravioli w/Parmesan Cheese & 1 Veg. .90
Beef Liver Smothered in Onions & 1 Veg. .85

Tuesday, February 29

French Onion Soup
Salisbury Steak w/Brown Gravy & 1 Veg. .85
Frankfurt's Rolled in Bacon w/Baked Beans .85
Sliced Turkey w/Stuffing, Cranberry Sauce, Gravy & 1 Veg. .90

Wednesday, March 1

Vegetable Soup
Chinese Pepper Steak on Rice
Old Fashioned Chicken Pie w/Biscuit Crust .95
Flounder Stuffed w/Crabmeat, Tartar Sauce & 1 Veg. .90

Thursday, March 2

Turkey Noodle Soup
Grilled Monte Cristo Sandwich & Pickled Beets .85
Veal Patty w/Noodles Oregano .85
Braised Beef a la Mode & 1 Veg. .95

Classified Advertisements

Positions Available

The Brookhaven Bulletin each week will list job openings which have come to our attention and may be of interest to Lab employees. Each listing will be repeated (if still available) only once.

PAYROLL CLERK - Payroll experience preferred. Fiscal Division.

SCIENTIFIC TYPIST - For new manuscript typing pool. Require excellent typist; knowledge of science and math terminology helpful. Photography and Graphic Arts.

For further information, please contact Employment Supervisor, Ext. 2109 or 2513.

Auto & Auto Supplies

57 CHEVY BODY - 2 dr, fair cond, accel dual point distributor w/coil, 488 posi rear, reasonable. John, Ext. 2971.

CRAGAR MAGS - Chrome w/lugs & caps for Ford or Chrysler products, reasonable. John, Ext. 2971.

69 OLDS CUTLASS "S" - 350 V8, ps, r/h, w/w, bckts, gauges, 4 spd, new rubber on front, excel cond. \$1795. 929-6398.

61 JEEP WAGON - Immaculate, 4w/d, Warner locking hubs, 5-8.25x15 tires, 5-8.25x15 snows, 5-9.00x15 w/w, must be seen. \$1095. 929-6398.

66 COMET CALIENTE - Yellow/blk vinyl roof, 6 cyl, good cond. \$600. Ext. 7222.

66 1/2 ton CHEVY PICKUP - W/8' self-contained camper. \$1650. 281-8695.

65 FORD COUNTRY SEDAN - 289 V8, r/h, ps. Asking \$425. Frank, Ext. 2598.

63 CHEVY II - 6 cyl, auto trans, good transportation, doesn't burn oil. \$150. B. Barnes, Ext. 2392.

69 AUSTIN AMERICA - Low mileage, 4 spd auto, front w/d, good running & reliable. \$1000. Tony, 281-5050.

64 CHEVY - V8, auto trans, 6 tires, mounted snows, very good running, many new parts. \$350. Tony, 281-5050.

71 VW BUG - Green, 17,500 mi, excel cond. Asking \$1550. Joe, 588-7631.

67 DATSUN CONV SPORT CAR - New tires, points, plugs, fan belt, coil, batt, exhaust pipe & muff. \$750. JU1-5786.

64 MERCURY COMET - Inoperable, lots of spare parts - some new; Sears batt; starter, excel int & body, good tires. A.M. Vasquez, Ext. 7133.

2 RIMS - 72 Impala, new. \$6 ea. M. Brenner, Ext. 2588.

VW WHEELS - \$2.50 ea. 581-0932 after 6.

66 CHEVY IMPALA - Ps/pb, good rubber, mech perf. \$600. 473-0178 eves.

68 MUSTANG - V8, auto trans, ps, vinyl top, 37,000 mi, snows. \$1450. Finn, Ext. 7132.

64 CORVETTE - 2 tops, 4 spd. \$1750. Bob, Ext. 411.

62 CORVETTE - White/red int, new eng & front end, 4 on the floor, 327 340, Thrushes. \$1600. 727-1917.

65 MUSTANG - Gold int & ext. \$550 firm. 281-2208 after 6.

67 CORVETTE - 427, 4 spd, white w/red, wire wheels, AM/FM, must sell. \$2500. 727-7788 after 6.

62 FORD FAIRLANE - Good cond. G. Raynor, Ext. 7157, 727-5194.

CAR RADIO - AM, only 1 yr old, excel cond. \$20. 584-7050 after 6.

66 CORVAIR MONZA COUPE - 4 spd, good cond, \$350; 66 Corvaire Monza conv, need work, \$125; 62 T-Bird conv, Mich X radials, needs some work, \$125. Stuart, 475-0294.

64 DODGE 880 - New brakes, shocks & tires. \$600. 744-2083.

64 DART WAGON - 720 series, dependable 2nd car, new auto trans, ps. \$250. E.W. Anderson, Ext. 7654/2835, 289-0742.

64 OLDS VISTA CRUISER - 30,000 mi on eng & trans, very good cond. \$500. 289-8236 after 6.

2 SNOW TIRES - F70x14, on Mustang rims, studded, used 1 season, excel cond. \$30/both. Ext. 2798.

70 PONTIAC GRAND PRIX - 2 dr green, vinyl top, air cond, AM/FM, tape deck, other extras, 21,000 mi. \$3200. 363-2763.

65 CHEVY 1/2 TON PICKUP - 1970-387 eng, all new tires. \$1000 or best offer. 289-8323.

66 VW ENG - 6 v, 40,000 mi, excel shape. C. Schmidt, Ext. 573, 744-3312.

65 CHEVROLET WAGON - V8, std. trans, new tires, batt. 289-3114.

69 CHEVY IMPALA CONV - Perf cond, air cond, 4 new tires, full pwr. Carsten, Ext. 2893.

64 CHEVY II - 6 cyl, 4 dr sedan, r/h, new seat covers, good cond. \$295. 289-1099 after 5.

72 MUSTANG - Ps, p/front disc brakes, 302 V8, auto trans, brown/brown vinyl top, ginger int, sport wheel covers, w/w, 3000 mi. \$3600. Ext. 7637.

VW RIMS - Good cond. Both for \$7.50. Jeanne, Ext. 7637, 286-1290 eves.

67 RAMBLER REBEL 770 - Ps, auto trans, 6 cyl, 4 new tires. 475-4596.

Boats & Marine Supplies

14' RUNABOUT - Wood w/fiberglassed bottom, reinforced transom, remote steering, needs inside work. \$50. Andy, Ext. 2797.

23' BROADWATER CABIN CRUISER 1964 - 9' beam, sleeps 4, 120 hp. Bob, Ext. 2556, 929-4753.

Miscellaneous

SECTIONAL COUCH - 3 pc, blue contemporary, like new. 289-1003.

66 AVION 25' CAMPER TRAILER - Sleeps 4. Bob, Ext. 2556, 929-4753.

MEN'S HOCKEY SKATES - Size 9. \$5. Joe, Ext. 371.

CRIB W/MATTRESS - Good cond. \$25. Judy, 924-8456.

EISENHOWER PROOF SILVER DOLLAR - In orig mint wrapping. Ext. 2725.

FIGURE SKATES - Size 4, like new, \$5; Cub Scout den mother's uniform, size 14, excel cond, \$6. George S., Ext. 2151, 929-4818.

MAGNUS SIX-CHORD ORGAN - W/bench, bks, like new. \$20. I. Merritt, LT9-5126.

WHIRLPOOL DRYER - Elec, compl reconditioned. \$59. JU1-5786.

AURORA HO RACE TRACK - 32 tracks, 24v transformer, 9 cars, hop-up kit, 2 controls, excel cond, must sell. \$30. Ext. 638 after 4.

ARM CHAIR - Red naugahyde, excel cond. \$20. 584-7050 after 6.

WEBCOR STEREO - Reel tape recorder, 2 speakers. \$30. Liliane, Ext. 2180, 744-5219 eves.

PORTABLE TYPEWRITER - French-German-Spanish-English, manual, excel cond, \$20; ladies' figure ice skates, excel cond, size 5, \$10. Liliane, Ext. 2180, 744-5219 eves.

RUBBER TREE - In clay pot, 5' tall, 2 stems, full healthy foliage. \$25. Liliane, Ext. 2180, 744-5219.

HAMMARLUND HQ-170 REC - W/Ameco 144 mhz conv & preamp, H4 gains, 14 AVQ vert ant, 10-14m, all excel cond. \$350. Frenchie, HR2-1875.

70 ROVER 15' TRAILER - Lots of extras, priced for quick sale. Ken, Ext. 7821, 744-6174.

COLOR TV - Admiral 21", 6 yrs old, recent overhaul, good picture & sound. Charlie, Ext. 573, 744-3312.

FISH TANKS - 10 gals, 55 gals, pumps, pwr filters, heaters, undergravel filters, etc. C. Schmidt, Ext. 573, 744-3312.

BOOK OF KNOWLEDGE - 20 vol in 10 bks, excel shape. Charlie, Ext. 573, 744-3312.

BABY CARRIAGE - Stroller, playpen, high chair & kitchen table w/4 chairs; all reasonably priced. 878-0734.

WINCHESTER LEVER ACTION CARBINE - 22 cal w/case, in brand new cond. \$50. B. Barnes, Ext. 2392.

STEAM IRON - Works very well, I have 2. Ext. 7420.

ENGLISH SPRINGER SPANIEL - Male, AKC reg, liver & white, 6 mos, good w/children. I.J. Muzinich, 473-6370.

OAK FIREPLACE LOGS - Custom cut, delivered & stacked, well seasoned. Ken, 289-8212 eves.

IMPACT WRENCH - Pneumatic 3/8" drive. Ken, Ext. 7638.

POLAROID CAMERA 250 - Flash attachment, portrait kit, leather case, 2 yrs old. \$100. Paul, Ext. 7505.

CB MOBIL - 4 channel Polly II, 23 chan base, 30' tower, 3 element beam. CDR rotor. \$300. 281-8695.

PORTABLE STEREO - W/AM-FM radio, good working cond. \$50. Richard, Ext. 7733, 744-5219 eves.

OVERSTUFFED ARM CHAIR - Red naugahyde cover, excel cond. 286-8448 after 5.

OLD PHONOGRAPH RECORDS - National Geographic magazines, foreign coins. O. Booker, Ext. 2411.

CAMERA - 2 1/4x3 1/4 Speed Graphic w/case, flash gun & cut film holder. \$40/all. L. Galanter, Ext. 2205.

CAMERA & LENSES - Leica IIIC w/synchro, shutter, normal, wide angle, portrait & telephoto lenses, Ima-rect finder, sunshade & filters. L. Galanter, Ext. 2205.

LG STEAMER TRUNK - 744-2083.

ELEC WALL OVEN - 744-2083.

BACKHOE & FRONTEND LOADER - Model 160 Dynahoe, new paint job & new bushings in backhoe, perf cond, best offer. 744-0548 after 6.

16" ROUND COPPER PLAQUE - \$5; wrought iron TV table (swivel top), \$5; hand meat slicing machine, \$3. 727-1617.

OIL PAINTING ON CANVAS - In frame 1924. \$15. 727-1617.

SKI RACK - 3-6 pairs. \$5. Ext. 7219.

70 ROVER - 15' TRAILER - Lots of extras, priced for quick sale. Ken, Ext.7821, 244-6174.

CORD WOOD - Oak, delivered, \$50/cord; waffle iron & sandwich grill, \$2. 727-1617.

Classified Ad Policy

Deadline is 12 noon Friday for publication the following 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.

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

Wanted
 Carpools
 Lost & Found

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 112, 40 Brookhaven Avenue.

(Name & Phone No. To Call)

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

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