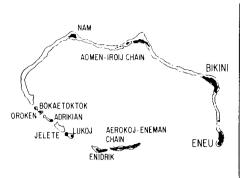
October 10, 1975

Volume 29 - Number 41

## The Road Back To Bikini



Bikini atoll - a ring of coral islands surrounding a lagoon. The island of Bikini is the largest island.

The Bikini atoll was the site of 23 nuclear tests from 1946 to 1958, and prior to the tests, the Bikinians were resettled on Kili island, facts that may have faded into history for many of us. But Nat Greenhouse and other health physicists at Brookhaven are actively engaged in the final stages of preparation for the return of the Bikinians.

The Medical Department's fine work on medical surveys of other Marshallese peoples is, of course, well known and documented. In 1974, because of the excellent reputation of Brookhaven with the Marshallese and the well-established procedure for moving personnel around the islands, ERDA asked Brookhaven to do the ongoing radiological surveys of Bikini.

The first Brookhaven radiological survey was made on Bikini in March-April 1974, and was primarily an orientation tour for Nat Greenhouse and Joseph Ash of Health Physics. Greenhouse participated in several other surveys. He went again in December 1974; in April 1975; and lastly, in June 1975 in a survey sponsored by Lawrence Livermore Laboratory.

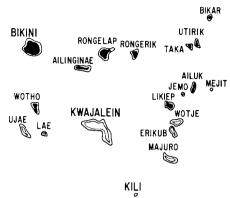
The purpose of the radiological surveys was to look at the sources of radiation exposure, both external and through the food chain in the environment, determine the population and individual radiation doses, and insure that these doses not go over the radiation protection guide lines.

The external radiation measurements can be made in the field, and are expected to comprise only about one-third of the dose limit.

The food chain is the critical area. Nat Greenhouse and his teams have brought back soil samples, fish caught in the area, locally grown fruits and vegetables and



Although his outfit is not associated with the Pacific, Nat Greenhouse, Health Physics, found it a functional garb for his work in the area.



The Marshall Islands, site of BNL surveys. Many of the Bikinians were relocated in Kili (south) prior to testings.

animals when they can. The team has to barter with the inhabitants for the animals. Breadfruit and pandanus trees were planted several years ago and are just now mature enough to determine whether there is a potential problem. The samples are analyzed at Brookhaven for radioactive content.

Data from the June survey will not be available until the end of the year and will then be put into the computer to predict what the long range doses will be.

Transportation and living quarters for the Health Physics group is the "Research Vessel Liktanur," the Landing Craft Utility (LCU) that the Medical Department teams have used on their surveys. It was named after a woman, whom Marshallese legend has it, invented the sail for their canoes. Air-conditioned trailers, outfitted for living, as a mobile clinic or for other research activities, can be put aboard at Kwajalein for whatever is needed on each particular trip.

Preparations for the return of the Bikinians began back in 1968, at President Johnson's request, after initial surveys indicated that certain areas of Bikini were safe for habitation.

In the next two years, the Department of the Interior asked ERDA for guidance on building houses on Bikini atoll. ERDA indicated that in the atoll, the islands of Bikini and Eneu were safe to inhabit, but Eneu was preferred as it had very little residual radioactivity. In fact, background radiation levels are lower than on Long Island.

However, as Bikini was the traditional residence island of the people, they preferred to live there. It is the largest island in the atoll, about three miles long and three-quarters of a mile wide. The smaller islands were used for various purposes, for example, some were set aside for family picnics.

Since about 1970, there has been a floating population of 60 to 80 people living on Bikini, many of whom are Bikinians. They have been involved in reconstruction efforts – clearing away debris, stripping off the old vegetation, replanting and maintaining coconut plantations and food crops. The Department of Interior has built some forty houses. The people are subsidized with imported foods, eating only small amounts of home-grown produce.

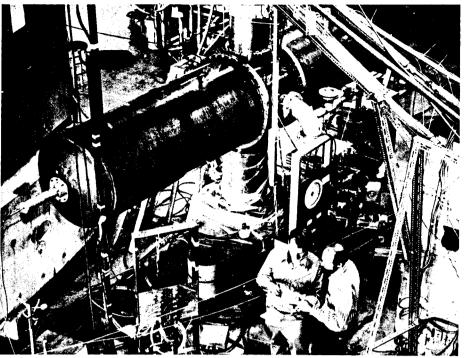
Preliminary findings show that the present houses at Bikini island are safe to occupy because they are near the lagoon beach where radiation levels are low. It has been (Continued on page 2)

### **BNL Artists Arise!**

The sixth BERA Members Art Exhibition will open Tuesday evening, November 11, in Berkner Hall. The exhibit will continue on weekdays through Friday, November 21. All BERA members are invited to submit their paintings, drawings, and handicrafts. Based on the success of previous exhibits of the artistic efforts of the BNL community, the Art Committee expects a large number of entries of all media and an extremely interesting and enjoyable show.

Registration forms are available in the BERA Sales & Services Office, 11 Brookhaven Avenue. Be sure to get yours promptly, as they must be returned by October 28, in order to be included in the catalogue.

Plan to exhibit and to attend the opening party, to which all the Laboratory community is invited.



Al McInturff (left), head of the dipole magnet project and Ken Robins, member of the magnet team, conferring under the ISABELLE magnet which was successfully tested October 6.

## **ISABELLE Magnet A Success**

"It's another milestone for Brookhaven," said Al McInturff, head of dipole magnets for the ISABELLE project. At 0700 on Monday, October 6, the 4.25 meter (14 foot) Mark II full-scale magnet exceeded the design magnetic field of 4 Tesla. It reached 4.02 Tesla.

"The successful operation of the superconducting magnet is the single most important step in the research and development program leading to the construction of ISABELLE," said Harald Hahn, Head of the ISABELLE Division in the Accelerator Department. ISABELLE is the name of Brookhaven's proposal for the world's largest particle accelerator.

"The magnet tested is full size both in length and aperture," Hahn continued. "It meets the most important specification, that is, it did reach the operating field without premature quenches."

Such performance is unusual in magnets of this type which are notorious for exhibiting the phenomenon of "training." A magnet is said to train when it quenches at successively higher fields on each energizing until the short sample limit is approached. Only a few magnets have exceeded 90% of their potential field even after training and none have been nearly as large as the ISA-BELLE magnet.

Development of superconducting magnets at BNL has been in progress for more than ten years and numerous small models

have been built to perfect the techniques used in the construction of the full scale model. The most recently tested magnet is actually the second full scale model built to date.

The first one, tested in June of this year, exhibited considerable training, quenching initially at 30 kG. Improvements in construction techniques have eliminated the shortcomings observed in this first model.

Two dipoles and a quadrupole magnet will be used in a subunit of the proposed ISABELLE structure for studying the properties of a large system and demonstrating the feasibility of the control system. The magnets used in this "half-cell" will incorporate further refinements aimed at reducing the cost of the magnet system.

According to McInturff, the next step is to measure the magnet's field quality in ultimate performance, and to measure the thermal and electrical characteristics in general.

Just two weeks ago, McInturff presented a paper on "ISABELLE Full-Scale Dipoles" at a conference in Alushta, U.S.S.R.

In addition to McInturff, other members of the dipole team in the Accelerator Department are Bill Sampson, Per Dahl, Ken Robins and Rudy Damm.

As to the future, Hahn says they will build a number of magnets with all the details of the real machine, which are expected to be ready by the summer of 1976.

### Chinese Scientists Tour BNL



Laboratory Director George Vineyard renews acquaintance with Professor Chou Pei-yuan, head of the Chinese delegation, at the start of their day-long visit on October 2.

Brookhaven Bulletin October 10, 1975

#### What's The Weather?



Connie Nagle consults facsimile maps showing weather data received from U.S. Weather Bureau in Washington.

## She Is Weather Wise

To most of us, the weather is an occasion for groans of despair or cries of rejoicing, or is simply a conversation-filler, but to Constance Nagle, Brookhaven's Climatologist, it is her daily bread.

Connie works on weather charts down in the hold of a building officially called Meteorology T-51, but unofficially known as "The Bilge." Her main job is to make climatological studies and keep records of weather observed at the Laboratory, for Laboratory purposes only. As she says, "I deal with past weather, or as it is known in the Army 'dead' weather."

A WAC in World War II, she joined the Air Force in the Korean War, and while there, attended weather schools. After eight years in the military, she had had enough. "I was mentally starved and very much wanted to go to school." So she left and entered the University of Illinois where she received a master's degree in climatologygeography. On a tip from an army friend at Mitchell Field, she learned of Brookhaven and joined the staff 17 years ago. At that time, there were few places, other than weather bureaus, where she could ply her trade. Now, because of environmental studies, the field has widened.

The weather, as everyone knows, is difficult to predict and forecasters are not given to wild statements. According to Connie, one would need 30 years of records at one location in order to get an accurate idea of the area's climate.

Connie's weather data is put to a lot of uses. During the last energy crisis, she was called upon to provide degree day data as a factor in helping determine the allocation of fuel resources at the Laboratory.

She is in the process of making wind flow studies from wind data collected from BNL meteorological instruments located at Tiana Beach, Brookhaven Airport and Smith

With the current interest in locating the proposed Solar Energy Research Institute on Long Island, she gets many requests for basic climatological data on Long Island and other regions.

October through April is the snow "sea-Since the Lab opened, Connie's records show that the winter of 1966-67 had the most snow. Thirty-two inches fell in both February and March of '67, bringing the total to 74½ inches for the season. We even managed a couple of "snow days" that year.

In determining whether the Lab stays open or closed, on days of inclement weather, the Meteorology staff will prepare as much information as they can during the day, but after 5 p.m. it is up to the Laboratory administration to make the decision. The budget does not allow for an aroundthe-clock weather staff.

"It is true," says Connie, "that under certain conditions, we are 5°-10° colder than, say, Patchogue, because of the open area and the sandy soil which loses heat quicker." Because of the proximity of the ocean, there is generally more chance of rain than snow on the South Shore and the dividing line is about the middle of the

Outside the Meteorology Building is a standard weighing gauge which measures

the amount of precipitation, and snow depth can be measured simply by inserting a stick gauge which is divided into inches.

Weather and hurricanes in particular, are likened to the female of the species. The last big hurricane to come right over us was "Donna" in 1960. "Gladys" which just passed us by, reached the same intensity but remained at sea. "Right now, it's pretty quiet," says Connie.

The dictionary defines a weather hen as "an inconstant woman." According to Connie, there were not many women, inconstant or otherwise, in the weather field when she started. Now, a great many more are making it a career.

One of Connie's reasons for choosing Brookhaven was that it was away from the city. "I like to be outdoors all the time, camping, hiking, all sports." A devotee of the Southwest, she hopes to return to Arizona on vacation next January. When not involved with her work or sports activities, she paints landscapes.

But no matter where she goes, or what she plans, the first order of the day is to check the weather.

### **Holiday Closings**

Monday, October 13, is Columbus Day. The on-site branch of the Banker's Trust of Suffolk will be closed and so will the U.S. Post Office. Then it will be business as usual for the rest of

### Bikini Survey

(Continued)

recommended that any additional houses should be built on Eneu, and new subsistence crops planted on Eneu. Based on the present estimate, restrictions will have to be placed on edible food items grown on Bikini island, with the exception of coconuts which do not pick up much radiation. Copra (dried coconut meat) is the only real industry in this area, and is exported to the Philippines and Japan.

Some 400 Bikinians are eligible to return to their homeland. This number includes the Bikinians who were removed from the island, their direct decendants or relations through marriage. According to Marshallese custom, each family has certain inherited land on which only they may live. After the disruptions of the 20th century, it is now hoped that Bikinians will accept the restrictions recommended and be able to return to their atoll in the near future, perhaps in 1976.

## **Arrivals & Departures**

#### Arrivals

Michael Bannon	Accelerator
John W. Humphrey	Accelerator
Thomas H. Ku	Applied Science
William E. Schoenig	Physics
Henry Schwicardi	Plant Engrg
Terry E. Whitledge	Applied Science

#### Departures

Jean B. Crawford	. Director's Office
Mark W. Horovitz	Applied Math

### **Selected Reading**

New Sci. 67, August 21, 1975 SOS: No answer to a cry for help. M. Sherwood.

Soviet scientists in Israel. E. Harriman. 425-7

Hiroshima pilgrimage. W. Patterson. 428-30

New Sci. 67, August 28, 1975

Scientists and their images. P. Hills and M. Shallis. 471-5

Cocoyoc revisited. J. Tinker. 480-3

N.Y. Times Mag., September 28, 1975 Knowledge dethroned. R. Nisbet. 34+

Science 189, September 19, 1975

Meeting on unity of the sciences: Reflections on the Rev. Moon. J. Walsh. 975-6

Johnson Health Policy Fellows: Joining the scientific and political. B. J. Culliton. 977-80



Al Kuehner, BNL (left) with Marshallese assistant and Vic Nelson, University of Michigan (right), set up environmental radiation monitoring equipment for a survey.

# Camera At The Ready

A fast, portable camera, the Polaroid SX-70, is now available to any Laboratory employee for official short term use.

The SX-70, the latest addition to the Photography loan pool, is unique in that color photographs can be taken as fast as the photographer pushes the shutter release. Hard dry prints pop out immediately and develop within minutes. The durable color prints are about four inches square and require no coating.

Multiple exposure at a rapid rate is a big advance over the older Polaroid. With the SX-70, the photographer can document a dynamic situation as it develops

The camera can be a useful tool in many areas. "It's a quick way to produce on-thespot reference material," says Biology Associate Jeanne Wysocki, who uses it in studies of tobacco plants to determine possible causes of genetic tumors.

The Graphic Arts Division uses the SX-70 to document paste-ups of layouts for posters and book covers. The paste-ups are a combination of many elements, and it is valuable to have a record of the original concept and its progression through various stages to the final product.

The camera is available for both on and off-site use. Film and flash bars for the SX-70 are carried as stock items. Information about the availability of this useful camera can be obtained by calling Ext. 2388, or by stopping at the Photography Building, 10 Pennsylvania Ave.

# Sickle Cell Program

Sickle cell anemia is a hereditary blood disorder found primarily, but not exclusively, in persons of African descent. The sickle hemoglobin is found in other groups, particularly those from countries bordering the Mediterranean Sea, and from Northern Africa and Southern Asia.

In 1972 the Long Island Sickle Cell Project (LISCP) was federally funded to provide a coordinated program to the Long Island area by furnishing counseling services and educational programs.

Tuesday, October 21, LISCP will conduct a program at Brookhaven in the Berkner Hall Auditorium, from 11:30 a.m. to approximately 12:30 p.m. All interested employees are invited. Members of the Project will discuss the many misconceptions and problems associated with sickle cell anemia and sickle cell trait. Those who wish may have a simple blood test taken, the results of which will be sent directly to the individual involved.

### **Optician On Vacation**

There will be no dispensing of safety glasses on October 15 and October 22 due to the optician's vacation. For emergency dispensing of plano safety glasses, contact the Health Physics & Safety Office, Ext. 4267.

## **Official & Special Events**

Tuesday, October 14 Mandel School for Medical and Dental Assistance Tour Wednesday, October 15 Skills Unlimited Tour Saturday, October 18 Desk and Derrick Club Tour



Jeanne Wysocki at work in the Biology greenhouse photographing tobacco plants.

Brookhaven Bulletin October 10, 1975

### **Trips To NYC**

The Hospitality Committee is planning a group railroad trip to the city on Wednesday, November 5.

Departure will be at 8:59 a.m. from the Patchogue Long Island Railroad station. The cost for the train round trip will be \$2.45. Children under 6 years of age ride free.

An optional feature of the trip will be a one and one-half hour guided tour of the Lincoln Center for the Performing Arts. The tour will include the Avery-Fisher Hall (formerly Philharmonic Hall), the New York State Theater, the Library, the Museum, the Beaumont Theater and, perhaps, the Metropolitan Opera House. The cost for this tour and one-way subway fare to the Center will be \$2.75 each.

Please sign up for the train trip (with or without the optional guide tour) by calling Ruth Dimmler, 751-6342 or Rosemary Jewett, Extension 3089, no later than October 29.

### **Football Notes**

💶 by Jack Brennan 🛘

The Old Timers have first place by themselves as they defeated Roga 31-19 and the Slow Pokes 25-18. In the Roga game, Bob Garron, Walt Reams (2 T.D.'s) and Frank Martin (2 T.D.'s) did the Old Timers' scoring.

Roga scorers were Ed Taylor (2 T.D.'s) and Ted Daniels. Roga kept on the heels of the Old Timers with a 14-6 victory over the Chickens. Daniels and Losquardo had the Roga T.D.'s; E.P's by Taylor and James. The Chicken's lone T.D. was by Bob Vignata. The Slow Pokes entered the victory ranks with a 38-0 victory over the Chickens. Flec Johnson had another three T.D. night, while Dennis Nordstrom scored two T.D.'s George Oldham had two E.P.'s.

W

	**	
Old Timers	4	0
Roga	3	1
Slow Pokes	1	3
Chickens	0	4

### **Parents Take Note**

If your child has not recently brought home a survey form from school concerning your place of employment, don't forget to ask about it.

Public Law 874 makes it possible for a school district to receive federal financial assistance for the public school attendance of children having a parent employed in a civilian capacity on federally-owned or federally-leased property. You fit the requirements if you were employed by Brookhaven on or before September 26, 1975.

Apparently, some parents have not seen these forms. Make a note to check up on it, so that your school does not lose out on financial aid.

### **BERA Concert Series**

The 1975-76 Concert Series will open on Thursday, October 30, in Berkner Hall with a performance by the world renowned pianist Walter Klein.

Other concerts scheduled for this season are the Alban Berg Quartet from Vienna who will appear here on November 17, and a trio composed of Samuel Baron, flute, Ronald Roseman, oboe, and Peter Wolf, harpsichord, who will perform in January. In February the celebrated American pianist Ruth Laredo will play here and finally, in March, the Bartok String Quartet from Hungary.

Artists who have played here in past seasons have been almost unanimous in their praise of the excellent acoustics of Berkner Hall. Similarly, artists who have used the Steinway piano have praised this exceptional instrument. The BERA concert series, presents the listener with one of the best opportunities on Long Island to hear fine music under fine conditions.

All performances will start at 8:30 p.m. Single admission will be \$3.50 for adults, \$1.75 for full time students with I.D. and for persons over 65 years, and \$1.00 for persons under 18 years. The BERA Concert Committee urges adults to take advantage of the considerable savings available during the pre-season sale. At or before the first concert, tickets will be available in blocks of 5 or more for \$2.50 each.

### **Up And Away**



Al McInturff, a physicist in the Accelerator Department, pursuing his avocation at the Long Island air show last weekend. A pilot and a member of the Long Island Sky Divers, he participates in about a dozen air shows a year. For news of his vocation, see page 1.

#### Down Under



While down below, John Mikutowicz, a research assistant at Wood's Hole, prepares to dive into the ocean, about five miles off Tiana Beach during the retrieval of a research spar buoy for Brookhaven's COBOLT project.

### **NY Nets Fans Notice**

As members of the Long Island Recreation Association, BERA has been offered the opportunity in participating in a tickets consignment program for six Nets basketball games during the '75-'76 season. The first game will be between the Nets and St. Louis on Friday, October 31.

For this game, 26 \$7 tickets, which will be sold for \$3 each, will go on sale at the BERA Sales & Services Office on Wednesday, October 15, at 7:30 a.m. on a first-come first-served basis. Unsold tickets must be returned to the Nets ticket office one week prior to game date.

The other games in this special series

Friday November 21 Denver
Sunday December 21 Virginia
Tuesday January 20 Denver
Sunday March 7 San Antonio
Tuesday April 2 Kentucky

We anticipate that tickets for the above dates will be sent to us approximately three weeks before each game. Watch the *Brookhaven Bulletin* for specific sales dates.

### **Bowling News**

Cathy Van Noy

Pink League

The "Medi-Tarsals" have taken over first place from the "Gutter-Getters" who have moved into second place. High games were rolled by C. Van Noy 208, C. Eterno 185 and A. Bangel 172. High Gross pot was won by Alice Alberico with a 227.

#### Red League

The "Anachem" had a good night rolling a team series of 3107. A. Pinelli won a club award for a 686 gross. Two hundred games for the L. Newman 232, M. Punda 209, J. Scesny 204, R. Wilson 203, W. Kristiansen 200.

#### Black "N" Blue

Congratulations to Diane Schug on her 218 game. Other highs for the night were Kit D'Ambrosio 172, Iride Ferrero 168 and Ellie Murgatroyd 161. Pots were won by Diane Schug 274 and Bill Sells 228.

#### Purple and White

Betty Roche has a nice scratch game of 185. The "red hot" Ben Belligan rolled a 205 and 209 for a 586 triple. Ed Sperry had a 200. Lorraine Petro leads high gross series with 646 and high gross single of 240. The "Flounders" have a big lead on first place with a fine 24-4 won-lost record.

### Volleyball

Winter is approaching and thoughts turn to indoor sports such as volleyball. Plans are now being made for the 1975-76 season. Those of you who helped make last year a success should be gathering your players together for the coming season.

There will be both a mixed (men & women) and men's league. The rules have been revised to insure the women an opportunity to compete and participate equally with their male teammates and opponents. All employees are eligible to play, and in the case of the mixed league, spouses of participating players are also eligible. All you need are sneakers and a comfortable outfit.

Roster forms are being sent out to last year's captains. Those of you who are interested in playing and are not already on a team should call and put your name in the player's pool. Everyone in the players pool will be assigned to a team at the first captain's meeting. The entrance fee will also be set at the captain's meeting.

Anyone interested in practicing, may join the players on Wednesdays at noon time in the gym or Thursday evenings after work in the gym. Tentatively, the season will start in mid-November.

Anyone interested in playing and in need of information, roster applications, or the player's pool should call Pat Oster, Ext. 4763.

## Cafeteria Menu Week Ending October 17, 1975

Monday, October 13		
Corn Chowder		
Beef Liver & 1 veg.		1.05
Scrambled Eggs, Sausage &	fr. fr.	1.05
Tuesday, October 14		
Beef Noodle Soup		
Knockwurst & Sauerkraut		1.05
Lasanagna & 1 veg.		1.15
Wednesday, October 15		
Cream of Potato Soup		
Beef Chop Suey on Rice		1.05
Davy Jones Fish Fry	\$1.25 plus tax	
	-	
Thursday, October 16		
Thursday, October 16 Chicken Vegetable Soup		
• *		1.00
Chicken Vegetable Soup		1.00 1.10
Chicken Vegetable Soup Cheese Ravioli & 1 veg.		
Chicken Vegetable Soup Cheese Ravioli & 1 veg. Roast Chicken & 1 veg.		
Chicken Vegetable Soup Cheese Ravioli & 1 veg. Roast Chicken & 1 veg. Friday, October 17		
Chicken Vegetable Soup Cheese Ravioli & 1 veg. Roast Chicken & 1 veg. Friday, October 17 Clam & Celery Soup		1.10

### O BROOKHAVEN BULLETIN

## Published Weekly for the Employees of Brookhaven National Laboratory

Bernice Petersen, Editor
CAROL GOLDSTEIN, Copy Preparation

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

CARL R. THIEN, Public Relations Officer

### **Tennis Ladder**

The tennis ladder season closed on September 30, after a very successful year. The top five in the final standings are: women – 1. Iwai, 2. Emery, 3. Saitta, 4. Williams, 5. Burt; men – 1. Elmore, 2. Koetzle, 3. Bhagat, 4. Goldman, 5. Shapiro.

There was a flurry of action in the last week of the season, with John Elmore beating out Tom Koetzle for the number one spot on the men's ladder by winning two of three challenge matches. Altogether, a total of 28 matches were played in women's singles and 96 matches in men's singles. The most improved players are Gail Williams, who moved from number eight up to number four, and Steve Shapiro, who moved from number 20 up to number five position.

### **Cooking Exchange**

Solve the mystery of the artichoke! Explore the wonders of the vegetable kingdom! Come join the Cooking Exchange on Wednesday, October 15, at 12:30 p.m. in the Recreation Building.

Same fee – 75¢ for materials plus 25¢/child for babysitting.

Some tasting privileges following the cooking demonstration.

### Slo-Break Basketball

Although football season is still in full swing, it's time to start organizing for the basketball season. Last year a players' pool was formed and team captains were given the opportunity to choose players. This led to a fairly well balanced league and we hope to run a similar pool this year.

For those who haven't participated in the past, the term "slo-break" refers to a 4-second clock which keeps the ball in the back-court after the ball changes hands enabling everyone to reach the opposite end of the court without fear of a fast break developing. This is a boon to the out-of-shape and seasoned veterans.

Last year a scrimmage game was arranged to help accustom new players to some of BNL's special rules. The date for this game will be annouced soon.

Interested players should give their names to Walt Brooks, Ext. 3978, as soon as possible. The possibility of playing on either Tuesday or Thursday night exists, so if you have a preference please let me know.

—Walt Brooks

### Bike Race This Weekend

The 17.5-mile BNL Fall Bike Race is scheduled to start at 10 a.m. Sunday, October 12, weather permitting. Rain date is Sunday, October 26.

Participants will register the day of the race beginning at 9 a.m. The registration fee is \$1 and minors under 18 must have their registration forms signed by a parent. Forms are available in advance from Jerry Kinne, Director's Office, Ext. 3334 or Tom Barber, Bldg. 815, Ext. 4513.

The race is open to all BNL employees and their invited guests. Certificates showing finish position will be awarded to all participants in several categories: men, junior (under 16), senior (under 40) and veteran (over 40); and to junior and senior women.

The race will have one or two bunch starts and participants are advised to wear protective head gear, although its use is not required. The race route is the same as previous races.

### Runner's Corner

Go west young man – er ma'am – This seems to exemplify the enthusiasm shown by the increased number of women joining the BNL road runners in the 3000-mile BNL/LLL challenge race.

To date, five women have started. These include Frances Caruso, Applied Math; Jean Burt, DAS; Wen-shi Yu, DAS, Gail Waite, DAS, and Gwenda Sango, DAS. Ann Nauman, Biology, who is recovering from a foot injury (not due to running) also expects to join the race. Over 30 people are now involved. Any others are always welcome and can receive information and the Roadrunner's Guidelines from Gus Prince, Ext. 2001

Ext. 2901.

Don't forget the 5 and 10-mile runs on Sunday, October 26.

### 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

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

214. TECHNICAL SPECIALIST - Involves interpretation and implementation of OSHA safety standards as they apply to cranes and other material handling equipment within an established safety program. Requires a good background in mechanical technology with experience in maintenance and operation of material handling equipment especially desirable, and ability to communicate effectively with operating groups in order to assure compliance with safety standards. Health Physics & Safety Division.

215. COMPUTER SCIENCE ANALYST - Applied Mathematics Department.

216. NUCLEAR REACTOR OPERATOR - Training up through AAS degree or equivalent in electro-mechanical technology with experience in reactor operations, radiation safety, and maintenance of reactor systems desirable. Shift work. Reactor Division.

217. SECRETARY - Department of Applied Science.

218- RESEARCH SERVICES ASSISTANT - To provide field work and laboratory assistance in the waste water recycling program. Clerical skills and a background in microbiology desirable. Department of Applied Science.

219. TECHNICIAN - AAS degree or equivalent in mechanical technology to install and maintain equipment in the Experimental Planning and Support Division. Shift work. Accelerator Department.

220. ECONOMICS ASSOCIATE - Minimum BS degree or equivalent in Economics with experience in regional or developmental economics. Regional studies program. Department of Applied Science.

221. DATA SERVICES ASSISTANT - Temporary parttime position. Department of Applied Science.

222. BIOLOGY ASSOCIATE - MS degree or equivalent in Biology with Plant Physiology background. Acid-rain program. Department of Applied Science. 223. COMPUTER SCIENCE ANALYST - Temporary

part-time position. Department of Applied Science.

### Autos & Auto Supplies

2 TIRES - E78-14, used. \$15. Mike, Ext. 4652.

67 VW - Like new, must see, trade considered. \$995. 475-8710.

71 CHEVY SPORT VAN - 6 cyl, standard, 66,000 mi, new brakes, tires, & mounted snows. \$1925. John, Ext. 4520.

SNOW TIRES - Mounted on 15" Ford rims, used less than 500 miles. \$50. Ext. 2409.

65 CORVAIR - Running cond, needs tune-up & new muffler, excel 2nd car. \$150. 878-1731 after 6.

69 VW BUG - Excel cond, sunroof, new tires, 62,000 mi. Jean, Ext. 3298, 878-2172.

SNOW TIREES - 650-13, Goodrich. \$8 for pair. Ext.

3354. 2 SNOW TIREES - H-78-15, Goodyear, mounted on

Chevy wheels, very good. \$60. George Woodson, Ext. 3043, 727-5532. RACEMASTER SLICKS - 700-14, 11.00-15, 18.00-16, \$25 each pair; (2) 6-volt VW starters, \$10 each. Ext.

4058, 286-0436. ADOPTER - Corvair engine to VW transaxle, plate &

flywheel, \$75; pair air shocks for Camaro, \$10, Ext. 4058, 286-0436. 68 RAMBLER AMERICAN - 6 cyl, 2 dr, auto, r&h, good

cond. \$475. 281-6191 after 5. 68 FIAT - 4 dr, still gets 28 mpg, fair cond. \$350.

Dom, Ext. 4851, 732-6995.

2 SNOW TIRES - Whitewall, Dunlop, like new, fit 6.85-15 & C78-15. \$15 each. 473-7460 after 5:30.

70 CHEVY IMPALA - 4 dr, V8, auto, ps, ac. \$950. Wall, Ext. 4660.

72 PONTIAC - Luxury Lemans, 2 dr hdtp, light blue, vinyl roof, ac, bucket seats, console, rally wheels, fully equipped, excel cond. Must sell \$2500. 331-9139

1 TIRE - E-78-14, absolutely brand new. \$20 firm. 281-6130 eves.

after 6.

63 VOLKS - Body excel, runs fairly well, full sun roof, extras. \$200. Phil, Ext. 4173 after midnight.

72 VOLVO - 142S, auto trans, ac, new steel belted radials & brakes, extras, recently tuned, low mi, excel cond. 732-5829.

TIRES Laramie big wheel on Chevy rims w/VW adopters, simulated mag hub caps, 2 wheels, new. \$100. Fred, Ext. 4407, 864-1214 after 6.

71 FORD - 4x4,  $\frac{3}{4}$  ton, equipped for beach  $\frac{w}{10}$ /2' Cree camper, fully equipped. \$4,500 firm. 472-2750.

68 OLDS - 4 dr, good cond. \$350. F. Mignone. 281-9504. 2 SNOW TIRES - Used, 6.50x13, (2) 4 ply B78-13,

used 1 week. All 4 \$60. Ted, Ext. 4278.

2 CHROME RIMS - 4 hole, deep dish reverse with 775-14 tires. Asking \$40. Brian 732-1913.

1962 FORD PICKUP - Rebuilt engine, all new brake system. \$300. Ron, 473-8995 after 6.

TIRES - Recaps & used, most sizes, extra rims available. Ken 289-8212 eves, no Lab calls!

2 SNOW TIRES - 7.00-13 w/wheels, \$15; (1) 6.95-14 & (1) C78-14, very good cond. \$5 each. 928-0950.

67 VOLKS - Rebuilt eng, 5 new steel radials, new clutch & brakes, clean. \$850. Mike 864-9639 after 6. 2 SNOW TIRES - H78-15 Goodyear belted, very good, mounted. \$60. George Woodson, Ext. 3043, 727-5532.

SNOW TIRES - Radial, 175-14, w/w, mounted on Mercedes rims, used 1 season. \$50/pair. 325-0233 after 6.

67 CAMARO - 327 V8, 4 barrel, ps/pb, power soft top, 20 mpg hwy, good cond. Asking \$850. 924-5622

67 FORD ENGINE - 352, \$75; hand winch approx 10 tons, \$35. 589-9103.

69 FORD RANCH WAGON - 308 cu in V8, ps/ac, good cond. \$1000. Ext. 4308.

TIRES - (3) 685-15", (3) 645-13", asst cond. 475-0144

TIRES - E78-14 on Chevy rims, excel tread. \$25/pair. Bob, Ext. 3512, 929-4270.

TRAILER HITCH - Fits 63-71 Ford Fairlane Torino station wagon. \$10. 473-7460 after 5:30.

2 TIRES - E70-14 mounted on rims w/adopters for VW, excel cond. \$40. 286-1510.

AUTO SPEAKERS - 6"x9" coaxial, audio vox, 18 oz magnets, new. 924-4193 after 5.

4 TIRES - Dunlop B78-14, w/w, 4 ply rating, 6 months old. 4000 mi. \$17.50 each. 878-0123 after 5.

72 INTERNATIONAL - Travelall, ¾ ton, 4 wheel drive, ac, many extras, excel cond. Jeff, Ext. 3284, 929-6398.

66 CHEVY IMPALA - Trans needs work, otherwise in good cond. \$79. Ext. 3268.

73 VEGA GT - Gray & black, am/fm/8 track tape deck, ac, steel belted radial tires, power disc brakes, extra clean. Asking \$2200. Ext. 4173, 477-1251 after

71 MAVARICK - Std 750, 27,000 mi; 74 Vega, \$650 & take over payments, 18,000 mi. 273-7931.

65 AMER MOTORS - Sedan, snow tires, clean, good rubber & gas mi, new battery, plugs, points, winterized. \$175. Jack, Ext. 2462.

#### **Boats & Marine Supplies**

34' BALTZER - Twin Chrysler engines, camper back, excel fishing or family boat. 331-1718.

23' PEMBROKE - Sport fisherman, complete refinish, flying bridge, full canvas, d/f, extras, excel cond. Asking \$1850. Laird, Ext. 4068, 298-5092

59 VIKING KETCH - 8 hp Volvo, sleeps 2, head, 2 sets sails. \$2000 firm. 878-0707.

17½' SLOOP - Sleeps 2, Marconi rig, 4' draft, British Seagull outboard motor. \$1000 firm. 878-0707.

16-17' CENTURY - All mahogany, 25 hp, all elec, controls & gauges, trailer up to 19' w/new tires, rims & bearings, excel cond. \$395. Phil, Ext. 4173 after mid-

BOSTON WHALER - Sport 14', 40 hp Johnson, very good w/trailer. \$1200. Fred, Ext. 4407, 864-1214

SUNFISH - Alcort, very good cond w/trailer. \$450. Fred, Ext. 4407, 864-1214.

19' DIXIE RUNABOUT - 85 hp Merc, trailer, many extras, like new. 878-1912 eves.

26' STEEL CRAFT - Sleeps 4, excel family boat, many extras, new head, cushions, 100w radio. Sacrifice \$1500. George 581-4318 after 6.

33' RICHARDSON - Sedan, 185hp Chrysler, sleeps 5. \$4000. 289-1873 after 6.

\$40, 286-0799 after 4.

TRAILER - 40' office trailer, can be converted into home trailer. \$1500. 475-5903.

DRAPES & LAMPS - For living rm & den. Call for description & size, Ext. 4622.

BROILER OVEN - Broilking Rotisserie, used once. \$25.

Mary Smith, Ext. 4622.

DOLL HOUSE - Large handcrafted wooden A-frame w/lights, real shingle roof. \$75. 286-0799 after 4.

PLAYBOY MAGAZINE - 100 lbs, 1957-74, few missing, best offer; HO train set, beautiful setup w/lake, mountains, airstrip, many extras; \$100; aquarium w/

bubbler & heater, \$20. 286-0799 after 4. OAK TABLE - Sturdy round table & 4 chairs, early American painted decoration, good shape, \$125; antique pine bureau, \$40; antique school desk & chair,

COAT - Red knit, dbl breasted, jr 12, like new, spring/ fall, \$8; mirror, door, gold-like, med frame, \$3; ring, 4 pt diamond in 14k white gold setting, approx size 7 727-7796

REFRIGERATOR - 17 cu ft Sears, 10 yrs old, \$35; Lady Kenmore elec 2 oven stove w/rotisserie, \$35. 363-6845.

DINING RM TABLE - W/6 chairs, comes w/pad, extends to 6', also glass top matching color server. \$140. 363-6845.

TRAVEL TRAILER - Coachman Middy, self-contained, sleeps 4, refrig, stove, head, furnace, can be used w/ compact car. Ready to go \$1400. L. Decker. Ext. 4317.

LP GAS SPACE HEATER - 20,000 btu. \$25. Ext. 4058, 286-0436.

LUMBER - (2) 2x8x16'. \$7. Mike, Ext. 4851.

SINGER SEWING MACHINE - Zig-zag, 4 yrs old. \$55. Becky, 281-3460.

ADDING MACHINE - Smith Corona figurematic elec w/tape, excel cond. \$35, 744-3274 eyes.

NOISE REDUCTION UNIT - Dolby TEAC, An-180. \$160. Oays 744-6356.

CRIB - W/mattress, very good cond. \$10. 734-7342.

BICYCLE - 10 speed Raleigh Grand Prix, like new, extras, \$115. Ron 473-8995 after 6.

EMPIRE TURNTABLE - 598 II troubador & 2 Ze/x 1000 cartridges, excel cond. \$180. 744-3274 eves.

SPANISH GALLEON - Collector's item, handcrafted

in Mexico, 48" high, 60" long. \$375. 584-5785. JUDO UNIFORM - New, \$20 firm. 281-6130 eves.

DINETTE SET - Table 3'x4' w/10" leaf, wood grained formica, 4 matching chairs w/covered seats, matching curtains. \$50. Pam, Ext. 4256, 581-7656.

TWIN BED - Box spring & frame. Joe Ash, Ext. 4210. ELEC GUITAR & AMP - Good cond. 289-0753.

HOLLYWOOD BED - Walnut frame, eclipse mattress, wedges & covers included, excel cond. 585-2559 after

CAMERA - Nikon w/F1.4 lens, 74 model. \$400. Mike 878-2486.

LAMB COAT - Black Persian, size 12-14 w/syrolian mink It gray collar & hat to match. Reasonable. 698-

MEN'S TOPCOAT - Wool, English, size 40, only worn a few times, like new. \$20. Ann 286-2280.

HI FI SPEAKERS - Audio eng sound, 24"x10"x12". \$25. Hank, Ext. 3935.

RIDING OUTFIT - Riding pants, jacket & hat. \$50. Good cond. Valerie 286-8835.

GUITAR - Sears silvertone w/case, excel, \$20; Columbia encyc, 6 yrs old, like new, 22 vol. \$15. 928-0950. WINTER COAT - Girl's, size 10, brown suede look, princess lines, hood lined w/white fur, good cond, \$10; navy denim overall style jeans, girl's size 12-14, worn twice, \$5. MacKenzie, Ext. 4490, 286-0999.

ICE SKATES - Boy's figure, like new, size 6, \$5; boy's hockey, used once, size 7, \$10. 928-0950.

AMER INDIAN JEWELRY - Xmas presents, sterling silver & turquoise rings, bracelets, necklaces, earrings, Navajo, Zuni, Hopi. Marie 588-5586.

TENT - Attaches to side of VW or free stands, good cond. \$100 firm. 473-9180. PARKING STOP LIGHTS - 5", \$2; small red & yellow

clearance lights, 504 for trailers & rv's. Frank 727-AIR PUMP SUPPLIES - #2 Condi, enough air for 80

tanks, 10-20 gallons, long, accessories. Ed Harmer, Ext. 3499, 585-4176. FIGURE SKATES - Sears size 9 men's w/black boots; 1 pair size 8 women's w/white boots, insulated, worn

only once. \$4/pair. Ron, Ext. 4310/3206 eves. 10" FAN - Oscillating commercial heavy duty, 3 spd, end of season price, \$4; photoflood set, 4 switched

lamps, any reasonable offer. Ron, Ext. 4310, 345-3206 eves. GE ELEC RANGE - 4 burner, \$45; gas range, 4 burner, \$35; black Angus broiler, \$5. George, Ext. 2434,

567-4403. TATAY GUITAR - Half size classical, ideal for beginner, excel cond. \$75. 286-2265.

ELEC CURLERS - Lady sunbeam, used only once, \$15; Polaroid camera, Big Swinger, w/case, almost new, \$15. 928-0297. HEADBOARD - For single bed, formica, excel for

student, w/built-in shelves for books, drawers & fluorescent light. \$25. 928-0297.

STORM WINDOWS - & screens, perfect cond, mostly standard sizes, 4 yrs old. 735-1144 after 6.

SPARTON RADIO - W/police & short wave; 78 auto record player, solid mahog, but painted, 1940's, good. \$25. 727-1617.

BABY CRIB - \$15; dressing table folding, \$8, both for \$20, good cond. 727-1617.

PIPE VISE - Plumber's, on stand. \$20 firm. 727-1617.

NIKORMAT CAMERA - El w/50mm F2 lens, 35mm sinale lens reflex, self timer, shutter spd from 4-1/1000 sec, auto control & manual, 6 months old, under warranty. \$365. 735-1144 after 6.

WASHER/DRYER - Frigidaire combo, stacked type, ideal for apts, mobile home or small laundry rm, harvest gold, excel cond. 369-2136.

LIVING RM SET - Mediterranean, crushed velvet, full sofa, love seat, 3 matching tables & console, lamps & drapes like new. 369-2136.

PIONEER AMP - Quad model QA-800, solid state w/ phase shift & matrix decoding, many controls, output 20 rms/channel, \$175, Ext. 4121

VIOLIN - 1/2 size, very good, \$55; trumpet, \$35; ballet slippers, black, never worn; size 13C. ness, Ext. 4581, 751-2655.

FREE GOLDEN HAMSTERS - Ideal pets for your children, Van Zelst, 744-0534.

SHIRTS - Pullover, men's med, blue & brown. \$10 for 2. Ext. 3609.

HEADBOARD - King size, \$30; satin drapes, 10' wall area, green, \$50; chandelier, black wrought iron, 10arm, \$50; sofa bed, rolls out from bottom to sleep w, Danish modern, \$125. 581-9199.

TELEVISIONS - B/W Zenith 21" portable, \$50; B&W Zenith 19" portable, \$25; B/W Motorola 19" table model, \$40; Panasonic 19" color table model, \$125. All in working cond. 581-9199.

POCKET CALCULATOR - 8 digit, 12 function, \$15. Bob, Ext. 4551.

MOVIE CAMERA - Argus super 8, model 811, elec eye needs fixing. \$15. 473-7460 after 5:30.

RUG - 9x12, new nylon sculptured broadloom, royal ming blue, fully bound, doesn't match newly painted room, \$75, 325-0233.

 $\label{eq:WHEELCHAIR} \textbf{WHEELCHAIR} \textbf{-} \textbf{Folding, lightweight, almost new}.$ \$100.475-5894.

WATER BED - King size, deluxe, liner & heater incl, excel cond. \$90. 286-1510.

SKIS - Kastel w/trapper boots, size 10, bindings & poles, new. All for \$150. 286-1510.

ROUND AREA RUG - 9x12, fringe & padding, multicolored design, excel cond, \$100; marble round coffee table, 40", 100, 265-0845. DINETTE SET - Howell formica top table, 36"x47",

extra leaf &5 chairs, excel cond. \$75 or best offer. 475-8658 after 7.

#### Wanted

COMMUNICATION RECEIVER - Can be tube type, repairable, no c.b., reasonable. Bill Sanchez, Ext.

3 BEDRM HOUSE - To rent starting Dec. 1 within 10mi of Lab. 924-6745.

HOUSEKEEPER/HELPER - To start in Jan, 2 small children, light cleaning & cooking, Shoreham area. 744-4611.

FORD ENGINE - 1949-51, 226, Ext. 3515, G. Hrabak, Bldg. 480.

LABELS - Campbell's soup & bean needed. Send to  ${\sf F}.$ Chandler, Bldg. T-89. OLD CAR CLUB - Anyone interested in joining an

established old car club contact Mike, 281-3460. FLUTE - Reasonable, beginner's. 286-3508 after 6.

LOAN OF LIGHT TRUCK - Or car w/utility trailer & driver to assist w/bicycle race Sunday. Gerry, Ext. 4841, 289-5433.

VOLUNTEER DIRECTOR - For musical, BNL theatre group's production of "Charlie Brown" contact Rita Straub, Ext. 3618.

MOTORCYCLISTS - To join or form motorcycle club, call George Stenby, Ext. 2012/2048. RAW HONEY - Would like to buy from bee keeper

within 10 mi area of Blue Point. 363-6940 after 5. FREE LAWN MOWERS - Or engines waiting to be discarded, novice mechanic needs experience. Mor-

### ris, Ext. 4312. Carpools

BELLPORT - Driver wishes to join existing carpool or to cooperate w/others in starting new carpool. David, Ext. 3501.

E. ISLIP - 2-man carpool desires other members. Ext. 4532.

WADING RIVER - I would like to share ride. 8:15 - 5. Shu-Chen, Ext. 3850/3857.

E. SETAUKET - Univ apt, Ward Melville high school area, drivers wanted. Les, Ext. 4148.

### Services

GARAGE SALE - Oct 16-17, 61 N Howells Pt Rd, Bellport, clothing, musical instruments, furniture, floor tiles, many household misc items. Ext. 4669.

GARAGE SALE - Misc housewares, tools, toys, etc, great bargains, Sat, Oct 11, 10-4, 9 Leisurely Lane. Bellport, left turn off S Howells Pt Rd. 286-0799 after

ASPHALT PAVING - 475-4382.

YARD SALE - Lots of goodies, Fri/Sat/Sun, Oct 17-19, 10-4, 4 Atlantic St off Carman Blvd, Brookhaven Hamlet.

YARD SALE - Sat Oct 18, 10 am, 3 Brown's Lane, rugs, misc.

### 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

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

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

Life No.

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

Carpools Lost & Found Services

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

.... Ext. ...

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