



Dr. Alvin M. Weinberg (left) talks with Laboratory Director George Vineyard in his office. Dr. Vineyard later introduced the lecturer to a full house in Berkner Hall as "one of the fathers of energy policy."

To Be Or Not To Be

The argument over nuclear power is fast "taking on the color of a religious war," said Alvin Weinberg, Director of the Institute for Energy Analysis, Oak Ridge Associated Universities, in a lecture at Berkner Hall on Tuesday.

A strong proponent of nuclear power, Dr. Weinberg said the fears of the opposition seemed to focus on proliferation, safety, and unlimited technological growth. He indicated that he thought improved technology and controls could take care of the first two objections, but that if "growth is intrinsically bad, then it is doubtful that nuclear energy can survive."

Weinberg said that technologists look at proliferation as a political problem, while politicians look on it as a technical problem. He urged those in the reactor development community to "use their ingenuity to come up with technological fixes that don't solve the problem of proliferation, but do at least separate the question of proliferation from the question of power."

As the supplies of uranium are finite, Weinberg said that the first phase of nuclear power, using conventional reactors, would run out some time in the next century. Beyond that point, he sees breeder reactors as the prime source of energy. But the problems of a big system, on the order of 1,000 breeder reactors, call for innovative solutions, he said.

In this connection, he suggested the establishment of large nuclear centers in isolated areas which would contain not only the re-

actors, but the waste disposal sites as well. The centers would be under strict security, rather like World War II plants, and would be manned by a "nuclear cadre" of dedicated professionals. He said that "80 of the present 100 nuclear power sites could be expanded into large systems."

He also thought that resident IAEA inspectors on these sites would help decrease the proliferation problem, because they would be very sensitive to any possible "hanky-panky."

Weinberg would place the management of the nuclear power generation centers into the hands of groups of corporations or other consortia, or the government, and leave only the distribution of the power to the utility companies. He said that "the nuclear system is much more complex than fossil fuel systems, and places demands on the utility industry that is beyond its traditional role."

He proposed that if a commitment were made to breeder reactors as the basis for an ultimate nuclear energy system, then "we should examine not only a single line of breeder development, but several lines of breeders."

"Bridge To Tomorrow," a film on nuclear power in which Alvin Weinberg appears, will be shown at Berkner Hall, on Friday, May 27, at 1:30 p.m. The film was produced by the National Rural Electric Cooperative Association.

Tube Comes To Light

The inner container of the 80-gallon drum of nuclear wastes that was retrieved from the ocean floor last summer finally came to light the other day. "It was more of a job than we thought it would be," said



Bill Vogel (left) and Walt Becker move toward the final stage of removing the concrete around a container of radioactive waste which was retrieved from the ocean floor.

Peter Colombo, head of the Radioactive Waste Program. The eight-inch thick concrete surrounding the inner container was very hard, he said, and in excellent shape. It took a lot of drilling to release the imbedded tube.

The six-inch metal container was not breached but had caved in on one side, resulting from the extreme pressure during its 10,000 ft. descent to the ocean floor. From preliminary tests, the cylinder is expected to contain Cobalt-60. Now chemical, metallurgical, and radiochemical analyses will be conducted to confirm its contents and to determine the amount of corrosion of the steel tube.

Since last November when the jet engine shipping container was opened, the unveiling of the tube has been proceeding step by step. First the 80-gallon outer drum was transferred to the "hot-cell" for sampling and coring, where more than 40 metal samples were taken for corrosion analysis.

When the carbon steel outer container was peeled back and removed, the concrete monolith was exposed. It was photographed and about 12 core samples were obtained for radiochemical analysis and chemical stability studies.

A detailed report on the condition of this cask, which lay on the ocean floor for almost twenty years, will be released in about two months. The study is being undertaken

(Continued on page 2)

The Budget Goes To Washington

Over 150,000 pieces of paper, securely wrapped and tied, were hand delivered by a BNL driver to the ERDA offices in Washington last week. Spelled out in detail on these pages was Brookhaven's budget request for the fiscal year starting October 1, 1978 - \$121,770,000 for operating expenses and \$18,704,000 for related capital equipment. The Laboratory is also seeking authorization for nine construction proposals.

For Assistant Director Henry Grahn, whose job it is to see that the budget arrives in Washington by the appointed date, the removal of these packages from his office is cause for celebration. He and his staff have worked overtime every night and most Saturdays since January complying with the precise and complex instructions for the submission of the budget. It is also a time of rejoicing for the departments because the 189's don't have to be tackled for another year.

Here, then, are some of the items proposed in this 2,728-page document:

Funding for high energy physics heads the list at over \$38 million, which would provide, among other things, an increased running time of 40 weeks at the AGS. There will be heavy emphasis on research and development for ISABELLE, both accelerator-related and toward the eventual construction of particle detectors.

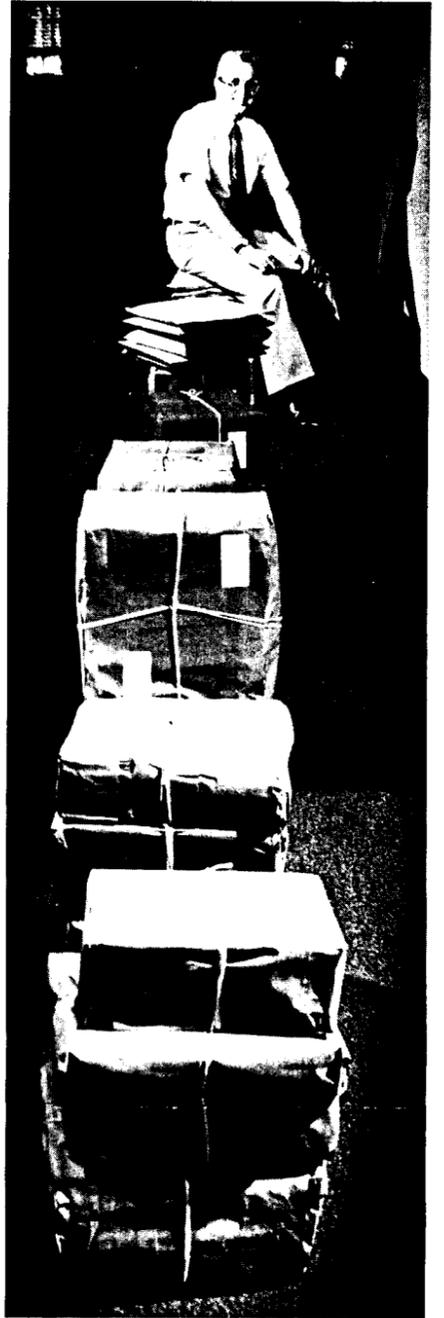
An ERDA budget category listed as "Basic Energy Sciences" requests \$23,345,000. The programs include nuclear science; molecular, mathematical and geo-sciences; materials sciences; and an advanced energy project called "Thermal Energy Storage Using Magnesium Hydride."

Over \$19 million is being requested for environmental research and development. Although this covers research in several departments, the main portions are for activities of the Medical and Applied Science Departments. These involve environmental policy analysis, assessment of biological and environmental costs of energy systems, regional energy studies, human health studies, and research in atmospheric sciences, oceanographic sciences, and terrestrial ecology.

Research programs of the Medical, Biology, Chemistry and Applied Science Departments dealing with life sciences and biomedical applications will require an operating budget of over \$6 million.

Nuclear physics programs are listed for over \$5 million, as are energy storage systems.

There are projected increases for coal research and solar energy development, and significant jumps are planned for research in magnetic fusion and heavy ion fusion.



Hank Grahn rests at the end of the trail - the submission of the FY '79 budget.

In the construction category, ISABELLE remains the number one proposal. If the current move in Congress to authorize \$10.5 million for this accelerator this year, is successful, then, of course, the project would be off and running this fall, instead of next.

Also being proposed is an environmental sciences building, estimated at \$12,500,000, which would bring together under one roof the interdisciplinary environmental sciences

(Continued on page 2)

Biology Symposium



Some participants in the Symposium in Biology talk between sessions at Berkner Hall. Clockwise, Dr. Beatrice Mintz (Institute for Cancer Research), Dr. Frank Ruddle (Yale Univ.), Dr. Charles Thomas, Jr. (Harvard Medical School and Symposium Lecturer), Dr. Robert Pollack, SUNY at Stony Brook), and Dr. Carl Anderson (BNL Symposium chairman). The conference on "Genetic Interaction and Gene Transfer" which attracted scientists from the United States and abroad and has been meeting since Tuesday, ends today.

Budget (Continued)

programs of the Applied Science, Biology, and Medical Departments.

For research in nuclear medicine a Variable Energy Cyclotron, at \$4,000,000 is being requested.

In the pursuit of greater energy efficiency for the Laboratory plant, a Central Energy Conservation Facility is proposed in the budget. And a new home is being sought for the Photography and Graphics Arts Division which is currently housed in a number of antiquated World War II buildings.

What will actually come to pass is, of course, up to ERDA and Congress, but it is interesting to see what the Laboratory would like to see happen, a year hence. In past years money actually received has always been less than that requested.

Programs related to reactor safety and technical assistance to licensing staffs are funded by the Nuclear Regulatory Commission and will be contained in a separate budget to be submitted to the NRC later this summer. The budget forecast for FY 1979 for the operations of these programs will be in the neighborhood of \$10 million.

CREF Values

1976			
January	\$40.31	February	\$39.76
March	40.75	April	40.10
May	39.69	June	41.60
July	41.21	August	40.94
September	41.59	October	40.62
November	40.40	December	42.66
1977			
January	\$40.27	February	\$39.30
March	\$38.73		
April	\$38.73		

Cooking Exchange

On June 1st, the men will be the star attraction at the Cooking Exchange, bringing with them all sorts of delectable goodies - even pizza! Don't miss this once-a-year spectacular. Please join us on June 1st, at 12:30 p.m. in the Recreation Bldg.

Special Concert

On Wednesday, May 25 at 8:30 P.M. the BERA Concert Group will present a concert by pianist Lee Hoiby in Berkner Hall. Admission to the concert will be free. Donations to help cover the expenses of the program will be welcome.

Of Scandanavian descent, Lee Hoiby was born in Madison, Wisconsin. As a child, he explored on his own the realm of piano playing; one of his earliest compositions, "The Storm," he recalls as being "very dramatic, full of arpeggios." Early studies with Gunnar Johansen were followed by intensive work with the celebrated Dutch virtuoso, Egon Petri. Shortly thereafter, Mr. Hoiby began concertizing, both as recitalist and as orchestral soloist.

When he was twenty-two, he turned seriously to composition, attending the Curtis Institute of Music in Philadelphia, where he studied with Samuel Barber and Gian Carlo Menotti. He has won international reputation as the composer of Summer and Smoke, an opera on Tennessee Williams' play, After Eden, a ballet, Galileo Galilei, an oratorio, Concerto for Piano and Orchestra and the Sextet for Piano and Winds.

In addition to appearing in solo recital,



Lee Hoiby

Mr. Hoiby has been soloist with various symphony orchestras. His concert and orchestras appearances have taken him to virtually every large music center of the United States. In September he will give his New York Debut in Alice Tully Hall with the same program he will play at Brookhaven.

Seminar

Professor William Epstein, of the University of Victoria in British Columbia, will give a seminar on "Ways of Curbing Nuclear Proliferation" on Tuesday, May 31, at 3 p.m., at the Walter Hamilton Seminar Room in the Chemistry Building.

Until his retirement in 1973, Professor Epstein was for many years the Director of the Disarmament Division of the United Nations Secretariat and has been continuously involved in work on arms control and disarmament in an official capacity since 1950. He has participated in many official conferences on disarmament, including those on the Nuclear Test Ban, on Nuclear Non-Proliferation, and on the Denuclearization of Latin America. He is the author of the recent book, "The Last Chance: Nuclear Proliferation and Arms Control."

Film Service Sale

The BERA Film Service Office will have a special pre-holiday sale on Thursday and Friday, May 26 and 27. Mailers, film, flash bulbs and batteries will all be sold at a 15% discount.

Make it a point to stock up at this saving and have your cameras ready to take those once-a-year pictures of Mary or Johnny all dressed up in their Cub Scout, Brownie or Little League uniforms marching in the Memorial Day parade.

The office is open each weekday from 11:00 a.m. to 3:00 p.m. The phone extension is 3347.

IBEW Meeting

Local 2230, I.B.E.W. will hold its regular monthly meeting on May 26, 1977, at 8 p.m., in the Knights of Columbus Hall, Railroad Ave., Patchogue. There will also be an afternoon meeting at 2 p.m. for shift workers in the Union office at 31 Oak Street, Patchogue. On the agenda will be regular business, committee reports and the President's report.

Arrivals & Departures

Arrivals	
Peter R. Fish.....	Plant Engrg.
Gary K. Mosley.....	Safety & Env. Prot.
Departures	
Leonard M. Naphtali.....	Applied Science

Ocean Cask (Continued)

at the request of the Environmental Protection Agency to determine the feasibility of a program to permit controlled ocean dumping of radioactive wastes.

In a related matter, ERDA has been conducting tests to determine how well containers used to transport nuclear materials can withstand severe accidents on land. In two crash tests conducted at Sandia Laboratories earlier this year, 22-ton casks mounted on a tractor-trailer rig were slammed head-on into a massive concrete wall at impact speeds of 61 and 84 MPH, respectively. ERDA reports that the casks suffered only minor external damage and there was no breakage or leaking of the contents.

Next week, they plan to have a rocket-propelled train smash into the midsection of a 25-ton nuclear fuel shipping cask at 70 to 80 miles per hour. The final test in the series, in which a cask will be crashed into a wall and then set on fire, will be conducted late this year.

Lecture Tonight

"Viking and Beyond," by Bruce C. Murray, Director of the Jet Propulsion Laboratory, California Institute of Technology, in Berkner Hall at 8 p.m.

A Rare Opportunity

Starting September 1, up to six Brookhaven employees will attend Suffolk Community College full time. They will go off to school with tuition, fees and books paid, and will also receive a salary from the Laboratory.

This opportunity was outlined in a memorandum to all employees from Personnel Manager Joseph Washburne last week, announcing the establishment of a Technician Training Program.

The way the program will work is this: participants will attend the college full time for one semester at full pay, and the following semester will return to the Lab for on-the-job training as technicians in one of the scientific departments. They will continue in this manner until an Associate's degree has been awarded, to a maximum of four years. The length of time required will depend on the number of college credits a participant may have accumulated on his own, prior to the start of this program. Appointments will be made for a minimum of one semester and a maximum of four semesters.

To be eligible, applicants should have demonstrated some technical proficiency and have worked full time at the Laboratory, preferably for at least six months. They should be at a rate of pay no higher than \$194 per week, or no more than Labor Grade 3, if an IBEW bargaining unit employee.

Participants will be selected on the basis of their experience, education, work record and interviews. Employees who are interested in competing in the program should submit a completed application, school transcripts, or certification of training to the Personnel Office, 58 Brookhaven Avenue, no later than June 24, 1977. Peter Paige, on extension 2885, will be glad to answer any questions.

A Television Special

"The Key To The Universe," some of which was filmed at Brookhaven, will be shown on Tuesday, May 24, at 8 p.m. on Channel 13, and Thursday, May 26, on Channel 21 at 8:30 p.m.

This is a two-hour special report on the most recent theories of high energy physicists and astrophysicists about the links between the macroworld - the overall view of the stars and galaxies, and the micro-world - the atoms and their components.

Among the prominent scientists who will appear on the program is Samuel Ting of MIT whose discovery of the J-particle at Brookhaven led to his receiving the 1976 Nobel Prize for Physics, with Burton Richter of the Stanford Linear Accelerator for his simultaneous discovery of the same particle which he named psi. The film footage taken at Brookhaven features Ting's experiment at the AGS.

Other research facilities to be shown are FermiLab, LBL, SLAC, NASA Ames Research Center, CERN, Kitt Peak National Observatory and McGraw-Hill Observatory.

Cafeteria Menu
Week Ending May 27, 1977

Monday, May 23	
Cream of mushroom soup	
Chicken a la King on rice	1.10
Cheese omelet & 1 veg.	1.15
Hot deli - pastrami	
Tuesday, May 24	
French onion soup	
Chinese pepper steak on rice	1.25
Barbequed spare ribs & black eyed peas	1.35
Hot deli - Sloppy Joe	
Wednesday, May 25	
Split pea soup	
Breaded flounder filet & fr. fr.	1.20
Hot deli - Baked Virginia Ham	
Special	
Spaghetti w/meat sauce & garlic bread	
ALL YOU CAN EAT	
1.20+tax	
Thursday, May 26	
Cream of chicken soup	
Beef hash & 1 veg.	1.15
Veal parmigiana & 1 veg.	1.20
Hot deli - Meatballs	
Friday, May 27	
Manhattan clam chowder	
Broiled filet & 1 veg.	1.15
Meat loaf & 1 veg.	1.15
Hot deli - Roast Beef	



Paul Akins, who was in charge of arrangements for the Brothers of BNL show and buffet supper last Saturday night at Berkner Hall, presented awards to the Ms. Savoy contestants, a feature of the evening. From left, Donna Mason (second runner-up), the winner Melody Howard, and Carolyn Smith (third runner-up). Below, part of the large audience at the show who later enjoyed supper and dancing in the cafeteria. — photos by Rosen



BROOKHAVEN BULLETIN

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Trips To New York City

The Hospitality Committee is planning two group railroad trips to the city. The first one will be Wednesday, June 8, and the second, Tuesday, June 14. (For those who would like to visit the Museum of Modern Art, it is open on Tuesdays.) Each trip will be limited to 120 persons. Departure will be at 8:32 a.m. from the Patchogue LIRR Station. The round trip fare is \$2.45, children under six ride free.

Reserve a ticket by sending your fare through the mail to P.O. Box 322, Upton, New York 11973, no later than Thursday, June 2, for the first trip, and Thursday, June 9, for the second trip. Make checks payable to "Brookhaven National Laboratory," and indicate on check which trip you are taking. If you are planning on taking both trips, please send a check for each one. Your tickets will be given to you at the train station. Refunds will be made only if cancellations are received at least two days before the planned trip.

Public Tours

The Central Scientific Computing Facility will be featured in tomorrow's tour of the Laboratory. Because of the holiday weekend, no tour has been scheduled for Saturday, May 28.

Sports News

Bicycling

The BNL 17.5 mile (28 km) Spring Race, around the Lab on June 5, is open to employees and their families and guests. Employees may count this as one of the two biking events required to get a BERA participation credit, but everyone who finishes will get a certificate. This is a family race - even the kids can do it (with parents permission, if under 18). If more than 12 senior racers enter, it will be a bunch start, otherwise it'll be time trials. Entry fee is \$1.00, registration from 9 a.m., race starts at 10:00. Give it a try - you'll have fun, even if you're not a pro.

This past weekend, eight signed up at BNL to join the Bicycle Clubs of L.I. on the annual Tour of Eastern Suffolk (TOES). The weather was perfect, and about 40 people enjoyed the 105 mile, two-day trip from Yaphank to Shelter Island and return. The route is similar to the Riverhead Run, an annual 1-day, 65 mile tour which starts at Riverhead on July 10 this year.

Badminton

The fourth annual Badminton Ladder Tournament, participated in by over 30 players, concluded this month.

A new winner in the men's singles was Naresh Bhagat of DAS, with John Guthy of DAS finishing a close second. The trophy for the doubles tournament was taken away by John Elmore and Naresh Bhagat.

A badminton first featured a women's singles tournament with Diane Grannan, Biology, as the winner and Gail Williams of the Director's Office as runner-up.

By popular demand, an elimination tournament has just concluded. John Elmore defeated Ed Platner and Naresh Bhagat won over John Guthy in the semi-finals.

The final match was hard fought and featured many long volleys. John Elmore, who has dominated the Brookhaven court for the last three years, won the two-out-of-three game contest.

Playcrafters



A raft of Brookhaven employees and their kin will participate in the Playcrafters production of "Carousel," at the Bellport High School, Beaver Dam Road, on May 26, 27, 28 and 29, at 8:30 p.m. All seats are reserved and for tickets, call 286-8443. Above are Jane Love (foreground) and clockwise, Frank Castellano, Joe Skelly, Lewis Snead, Dick Rothe, Bob Kinsey, Sue Kinsey, Bill Love and Mickey Snead. Other BNLers participating will be Bob Gibbs, Larry Schiro, David Dew-Hughes, Denise Dew-Hughes, Glenn Snape, Angela Castellano and Clarence Pittenger.

Softball

A record breaking twenty-four teams are signed up in this year's softball program with the Mixed League expanded to eight teams including many wives and husbands.

The season started off a little muddied for the Employees' League last week, but the players overcame the obstacles and played good games.

The Employees' League reported results were as follows:

League I (Tues.)

Ravens 20 - Blue Jays 5

Highlights: Jim Garrison with a HR, Mike Losquandro with a 3B, and good pitching by Bob Brown.

League IV (Tues.)

Nuke Powers 11 - Charlie Browns 3

The Powers had an all-team effort in their victory and the Browns looked good in their new shirts.

The Power Packers over Medical was a good game that lasted eight innings to determine the winner.

League II (Wed.)

Circuits 14 - Bubble Boys 6

The Circuits had a good night with Woody going 3-5 with two 3 B's Mike Z. with a 3 B and 2 B, and Cornell going 4 for 5. John Schmidt had a good pitching effort.

Dirty Sox 11 - Six Pax 10

The Dirty Sox had 2 HR's and were pleasantly surprised by their draft from the players' pool who came through with one of the homeruns. Ken Asselta had a HR for the Pax and M. Cunningham went 4 for 5.

League III (Wed.)

In the Phoubars over the Streakers game no scores were reported but the Phoubars were glad to see Arnie playing again.

No report for the Metallurgy - Sweat-hogs game.

League I (Thurs.)

Old Timers over Hawks

Since the Old Timers had a bowling roll-off on Tuesday, they played their game on Thursday and kept up their winning ways for the week.

The Mixed League is scheduled to begin its season this week and, hopefully, game results will be reported in next week's column.

Note To Team Captains: Please report scores and highlights to Mac Thomas for the Employees' League and Karen Schaich for the Mixed League.

Tennis

The tennis season has arrived and unfortunately the popularity of the sport has grown to the point that even six courts are insufficient during those times when Lab employees are free to play.

Due to this existing situation the Tennis Committee has established court use priority to Lab employees at noon and after work on weekdays and all day on weekends and holidays.

Those not employed by the Lab should feel free to use the courts outside those priority times or when the courts are not under demand by employees.

Bowling

It was a total "how sweet it is" victory for the women last Saturday at Port Jeff Bowl when the Pink League champs, The Pinsplitters, asserted themselves and with a record of 4-0 won the BNL Championship. The last woman's team to win the BNL Championship was seventeen years ago in the 1959-60 season when the Odds & Ends took the honors. Showing no mercy, the Pinsplitters whipped through 4 games against the other league winners and now reign supreme as the BNL Champions. Congratulations to Marge Stoeckel (Captain), Grace Fales, Renie Rosati, Carol Beckner, and Kay Conkling for a superb team effort. High games were Marge Stoeckel 188/172, Kay Conkling 179/158, Renie Rosati 166/153/152.

The Old Timers were "second best" with Walt Reams having a 207/183, Dick Adams 193, Jack Fontana 186, Jim Roesler 183.

The Good Guys and The Sparks tied for third with Rich Murgatroyd bowling a 194/192, Jere Austin 183, Ben Belligan 176 for The Good Guys and Jim Carroll rolling a 180, Bob Rasmussen 174, Ed Malcolm 171/167 and Jeff Follenius a 171 for The Sparks.

The Power Meds were fourth with Fred Hohmann bowling a 212, Dick Skelton 186, and Bill Kristiansen 177.

Also, many thanks to the official scorekeepers, Rosalie Piccione and Grace Fales.

Don't forget the Bowling Award Party tonight at the Brookhaven Center from 5:30 p.m. to ?

Golf

The first tournament of the year will be played at the Bellport Golf Club on Tuesday afternoon, May 24.

It will be an 18-hole tournament, open to all BNL employees, with tee-off times from 12 - 1:30.

If you are interested, contact Vinnie Racaniello, Ext. 4592.

Runners Corner

The day dawned bright and clear bringing perfect running weather for the BNL Running Club's Spring Meet on May 15. One hundred and twenty-five runners turned out, 52 of them BERA members. The BNL runners ran superbly and captured the overall men's and women's titles in both the 5 and 10 km events. John Millener (Phys.) won the 5 km race with a time of 18 min. 26 sec. The women's honors went to Elaine Landry (DAS) with a time of 23:41. Wayne Dankner (DAS) won the 10 km race in 35:48, the women's division taken by Jean Burt (DAS) in 48:05.

One of the highlights of the day was the course record shattering run of Bob Rindfleisch from Selden in the 20 km race. His time was a superb 69 min, 29 sec. Karen Fernandez from Patchogue won the women's 20 km event in 91:28. The BERA trophy in the 20 km race was won by Ted Landry in 72 min. 41 sec. Ted's victory completed a husband-wife double win. That must be some kind of record! The complete results for the race will be mailed to participants.

The BNL Runners Club is always deeply indebted to the volunteers who make these races a success. Bob Powell's super efficient team of registration personnel and timekeepers again did a great job. We are also grateful to the Lab security force, and to the support which we received from BERA for this event.

Runners are reminded of the Belle Terre 4.7 mile race to be held this Sunday, May 22 at the Belle Terre Community Center. The event starts at 10 a.m. The next BNL race will be the Fall race, scheduled for October 2.

Following are the results for the BERA members:

5 km	
Overall Place	
1	John Millener, Phys.....18:26
2	Bob Tucker, PR.....19:24
5	Martin Kendig, DAS.....19:44
6	Thomas Viale, DAS.....19:48
7	Louis Adessi, AGS.....19:58
8	Steve Amoretty, TID.....20:33
9	Alan Poletti, Phys.....20:58
12	Rowland Hautsch, DAS.....21:40
13	Hugh Isaacs, DAS.....21:46
14	Terry Whitledge, DAS.....21:55
15	Bob Phillips, DO.....22:31
17	David Alburger, Phys.....22:44
18	Peter Adams, PR.....22:58
22	Elaine Landry, DAS.....23:41
24	John Baer, Phys.....23:50
29	Charles Briening, ISABELLE.....25:35
30	Alan Nathan, Phys.....25:48
31	Gail Waite, DAS.....26:15
36	Ann Commerford, Med.....28:53
10 km	
1	Wayne Dankner, DAS.....35:48
7	Bill Clark, Chem.....39:14
9	Andy McNeerney, Acc.....39:28
12	John Elmore, Med.....40:24
13	Bill Kropp, DAS.....40:30
14	Jim Guppy, DAS.....40:54
16	Bill Thomlinson, Phys.....41:57
17	Richard Fuller, Phys.....42:29
18	Don MacKenzie, DAS.....42:32
19	Dave Cox, Phys.....43:08
21	Dave Judkins, DAS.....43:45
23	Carl Dover, Phys.....44:49
25	Dave Penoyer, DAS.....44:57
28	Naresh Bhagat, DAS.....44:57
29	Henry Makowitz, AMD.....44:58
31	Michael Kenny, Phys.....44:58
34	Jeremiah Sbarra, Med.....45:38
35	Franz Reidinger, Chem.....46:34
36	Lou Commerford, Med.....46:42
37	Gerry Kinne, DO.....46:59
39	Jon Scott, DAS.....47:41
40	Jean Burt, DAS.....48:05
43	Bob Thomas, Chem.....50:48
44	Steve Shapiro, Phys.....51:19
45	Peter Rathvon, AUI.....55:40
46	George Mooney.....58:08
20 km	
3	Ted Landry, DAS.....72:41
7	Gus Prince, DAS.....79:18
11	Dave Edwards.....85:59
12	John Beerman, DAS.....87:32
13	Bill Piel, Phys.....90:00
23	Arthur Harris, AMD.....99:45
24	Sol Pearlstein, DAS.....105:28

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position, with consideration given to candidates in the following order of priority: (1) present employees within the department, with preference to those within the immediate work group; (2) present employees within the Laboratory as a whole; and (3) outside applicants.

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all nonscientific staff positions; second, to give employees an opportunity to request consideration for themselves through Personnel; and, finally, for general recruiting purposes. Because of the priority preference policy stated above, each listing does not necessarily represent an opportunity for all candidates. As a guide to readers, the listings are grouped according to the anticipated area of recruitment, as indicated below. Except when operational needs require otherwise, positions will remain open for one week following publication date.

For further information regarding a placement listing, contact the Personnel Placement Supervisor, Ext. 2874 or 2882.

LABORATORY RECRUITMENT: Opportunity for present Laboratory employees.

184. STOCK CLERK - Supply & Materiel Division.

OPEN RECRUITMENT: Opportunity for present Laboratory employees and outside applicants.

185. CHEMISTRY ASSOCIATE - BS or equivalent in chemistry to perform high level analyses on environmental samples. Department of Applied Science.

186. METEOROLOGY ASSOCIATE - BS or equivalent in meteorology or computer science with background in mathematical modeling relating to meteorology or air pollution. One year grant supported position. Department of Applied Science.

187. TECHNICIAN - AAS or equivalent in mechanical technology or engineering science to assist in the operation, maintenance and repair of the 7-foot bubble chamber and the 8 degree bending magnet. Shift work. Particle Detector Division, Accelerator Department.

188. SECRETARY - Requires good communication skills. Temporary position. Department of Applied Science.

Autos & Auto Supplies

68 CHEVY IMPALA - Convertible, blue, new muffler, battery, snows. \$350. Ext. 2874, 281-2004 after 5:30.

VW TIRES & RIMS - 585 x 15. \$10 & \$15. Free installation & leak testing. Fred, Ext. 4597 at lunch only.

69 DODGE RART - Auto trans, good cond, 48,000 mi. \$1,000. Sergio, Ext. 3525/3187.

RIMS - 2-15" 5 hole VW, \$5; 2-13" 5 hole, \$3. 727-5912.

TIRES - Used and recaps, also exten rims. Ken, 289-8212 eves.

70 INT'L VAN - COD all alum body excellent, tandem wheels, engine needs work. \$600. Ext. 3312, 878-2591 eves.

75 SUZUKI - 550, excel cond. \$1250. Bob, Ext. 3313.

TIRES - 2 Goodyear polyglass belted, G78-15 less than 20 mi. \$25 each firm. Bill, 475-2409.

69 PONTIAC GRAND PRIX - Ps/pb, AC, very good cond, must sell. \$750. Dale, 736-0926.

CUSTOM HONDA - Yosemite Sam, completely chromed, custom paint, two racing eng, many extras. Best offer. Lyzak, 928-0158 after 6 p.m.

73 SQUIRE - Station wagon, auto, air-heater-radio, roof rack, low mileage, perfect cond. Lyzak, 473-8783.

69 FORD LTD - Station wagon, auto, pb/ps, 10 pass. \$375. W. Lundgren, Ext. 3800, 585-3794.

72 COX CAMPER - Sleeps 6, sink, heater, ice box, stove, table, extras. W. Lundgren, Ext. 3800, 585-3794.

76 BLAZER - 4 WD, Cheyenne, ps/pb, auto, am/fm, white spoke wheels, 11-15 tires, rust proofed. \$5995. 363-2940.

GOODYEAR - Steelgard radial HR 78 x 15 WW, Goodyear 155 x 13 radial will mount on your rims, like new. Fred, Ext. 4597.

69 FORD - Station wagon 302 eng, ac/pb, new brakes, new tires. \$650 or best offer. Steve, 929-4561 after 5 p.m.

66 CHEVY CORVETTE - Convertible, 327 c.i., auto, p/s, am/fm, radials, low miles, excel cond. \$3200. 588-1884.

70 COUPE DEVILLE - Excel cond. \$1400. 281-0268 before 4 p.m.

70 MAVERICK - 6 cyl, std, 77,000 mi, good trans. \$450. 289-7383 anytime.

SWISS COLONY - 73, truck camper, 11 ft, excel cond, complete, self contained, must sell. Ext. 4058 or 286-0436.

74 KAWASAKI - 400 MACHII, 5,000 mi, excel cond. \$700. 289-7383 anytime.

72 OLDS DELTA 88 - Am/fm, stereo, ps/pb, ac, very good cond. \$1400. Mac, 744-0296.

2 FOR 1 SALE - 1953 and 1954 Alpines, restorable cond, use one for parts, both for \$300. Mac, 744-0296.

58 VW - Eng and transaxel excel, for road or future dune buggy. \$150. Brian, 732-1913 after 2.

73 BLAZER - 4 w/d, ps/pb, hd cooling and springs, am/fm stereo, extras. \$2990. R. Young, Ext. 4271.

75 FORD GRANADA - 4 dr, 6 cyl 250, auto, ps/pb, am/fm, 23,000 mi. \$2895. 661-8298.

74 BUICK LE SABRE - 4 dr, ac/ps/pb, 31,000 mi plus, good radials, excel cond, green. \$3100. 265-2765.

69 FORD CAMPER - F250 special with 1 1/2 ft slide in camper, crawl thru boot, 4 cu ft refrig, stove w/oven. 286-1097.

67 VW - Squareback, new brakes, shock absorbers, fuel pump, coil rebtl carb. Asking \$450. Steve, 286-0944.

69 CHEVELLE - 396-375, 12,000 mi, new M22 trans, 411 gears, 2 elec fuel pump, Harley carb, extras. \$1800. 924-7310.

71 WINNEBAGO - Ac, Dodge, 41,000 mi, generator, sleeps six. \$7500. PY 6-1317 after 6 p.m.

72 CAMARO - 350 V8, 3 spd, auto, posi rear, ps, HD susp, 46,000 mi, clean. \$2200. 475-5349 after 5 p.m.

71 CHEVY MALIBU - 2 dr, ps, auto, new battery, carb, starter, cassette stereo, must sell, moving. Asking \$1400. Ippei, Ext. 4076, 345-3098.

74 GREMLIN - 23,000 mi, auto, ps/pb, extras. Dick, 286-8906.

75 COX (CADET) - Pop-up camper, sleeps 4, excel. \$895. 727-1617.

SELECT USED TIRES & RIMS - All sizes installed and leak tested free, flats repaired. \$2. Fred, 475-4935.

TAILGATE - Late model Chevy-White. \$20. 878-0201.

70 AMC HORNET - Very good cond, auto. \$950. 281-5498.

68 COX CAMPER - New canvas, fully equip, excel cond. \$750. 281-5498.

73 VEGA - Hatchback, auto, radio, green, 57,000 mi, 7 wheels, good running, wild buy at \$650, have all bills since purch new in Aug 1973. Saxon, 929-4701.

66 BUICK SPORTWAGON - Ps/pb/ac, good cond. \$400. 588-4311.

69 MUSTANG - Conv, auto, 6 cyl, 72,000 mi. Naresh, Ext. 2073.

75 AUDI FOX - 4 dr, radials, std, new brakes, excel cond. \$2500. Ext. 3593.

67 FORD SW - Ps/auto, runs well, rusty body, make offer. Mike, Ext. 4851.

70 CHEVY MALIBU - Vinyl top, am/fm, tape deck, bucket seats, ac, rear speaker, tinted windows, good tires, reworked eng. \$900. 473-9180.

70 VW CAMPER - Excel cond, sleeps 4, pop top, am/fm, Michelin tires, trailer hitch. F. Paffrath, Ext. 4407, 864-1214 after 6.

2 TIRES - F78-14, fabric radials on rims, like new. \$50. Rich, Ext. 2495, 928-4527.

70 WAGON - Olds vista cruisa, 53,000 mi, rebtl trans, under warranty, ps/pb/ac, 9 passenger. \$1450. Rich, Ext. 2495, 928-4527.

74 PONTIAC VENTURA - Excel cond. \$1100. Bill, Ext. 4715, 941-4820.

75 RABBIT - Deluxe int/ext option, am/fm stereo, 25,000 mi, extra wheels w/snows, dealer serviced, excel cond. \$2500. Wingard, Ext. 4665.

70 CHRYSLER - 2 dr, ps/pb, p/seats & windows, ac, very good tires, excel cond. Ext. 3319, 751-7140.

70 HONDA - 450 Scrambler, good running cond. \$500. Doug, Ext. 2070.

71 YAMAHA - 350 cc, excel cond. \$525. Ext. 3688.

Boats & Marine Supplies

31' BALTZER - Family boat w/camper back, sleeps 4, twin 126 Chrysler eng. Asking \$3500. 331-1718.

24' SAILBOAT - International 110, half ownership. 744-4965 or 744-8240.

36' EGG HARBOR - 1962 Sport Fisherman, 2 new 75 eng, sleeps 7, s/s, depth, CB, Mint. 799-6478.

23' CLAM BOAT - Decked over Garvey. \$1000. 589-0182 after 5 p.m.

FLYING JR SLOOP - Fiberglass, alum spars, spinnaker, trailer. \$750. Ext. 4597 or 929-4940.

17' BOAT - Clamming or fishing, trailer, brand new, extras. \$1200. 286-8582 after 5 p.m.

18' SKIFF - Seats 8, 4 cyl inbrd, great for Bay fishing. \$695. Tom, 325-1033.

19' THOMPSON - Cuddy cabin, 60 twin 40 hp Evinrudes, extras, good family boat, needs some work. \$600. 653-4647.

18' THOMPSON - In/outboard, elec winch, cox tandem trailer, good cond. 727-5912.

76 JOHNSON - Outbrd, 9.9 hp, w/tank & hose, hardly used. 286-0975 after 7 p.m.

24' LUHRS - Wood skiff, hardtop, in water, 135 hp Palmer rebtl, new gas tank, fuel line, bilge pump. \$2500. 475-3783.

65 HP MERC - 1970, est 250 hrs and in good shape, trailered only, comes with controls & extra props. \$500. Lew, Ext. 3502 or 286-8166.

14' BLUE JAY - Jib, main & spinnaker, fitted boat cover, Yarborough tilt trailer. \$450. Ext. 3579 or 744-8007 after 6 p.m.

13' WOOD BOAT - Steering & motor controls, fiberglass bottom, trailer. Asking \$200. 289-0886.

JOHNSON - 40 hp, 1967, excel cond, all elec, generator, all controls, tanks, spare props. \$325. Ext. 4058 or 286-0436.

21' JERSEY SKIFF - Cutty cabin, navy top, 200 hp FWC eng & refitting 1970. Make offer. Ron, Ext. 4082, 289-1003.

20' DEEPVEE - Fiberglass runabout, F.W. 165 hp V8, valve job 1976, very good cond, extras. Price negotiable. 286-0237 after 6 p.m.

20' FLYING DUTCHMAN - Equipped for solo racing, includes main, jib, genoa, spinnaker & extras. Asking \$900, but will negotiate. Ext. 2070, 2008, 928-5875 after 6 p.m.

Miscellaneous

GARAGE SALE - Antiques, household items, sample pillows, crafts, etc. May 20, 21, 10 - 4 p.m. Rain dates, May 27 - May 28, 9 Thornwood Way, Setauket.

CUB SCOUT COUNTRY FAIR - Crafts, plants, home-made foods, clothing, auction (1 p.m.) raffle (CB radio). May 21, 10 a.m. - 4 p.m. Rain date, May 22, 1 - 4 p.m. Elementary School, Fireplace Neck Rd., Brookhaven.

GARAGE SALE - Large, 76 Oak Street, Northport, May 20, 21, 22. 757-9385.

SUMP PUMP - New unused Sears 1/2 hp, float switch, 1 1/2-in NPT discharge. \$35. Hendrie, Ext. 2912.

RAFFLE TICKETS - Cub Scout fund raising for 40-channel CB. Ron Manning, Ext. 3887, Physics Bldg, rm 1-60.

UPRIGHT VACUUM - \$10; 2 window frames, 25x20, \$2.50 each; flower basket, \$2; asst. screens; flood lights, 150 watts, \$2 each. 475-9257.

ANTENNA TOWER - 30-60'. Tom Perdikoilys, 924-6646.

TELETYPE - Mega data video, terminal/keyboard, 2600 character storage, 12" CRT. Tom, 929-6646.

BEDRM SET - Danish mod, very good cond. \$350; kitchen set - table & 4 chairs. \$75. 475-8330.

TAIL GATE - Late model Chevy, white. \$20. 878-0201.

CAMPER - 1975 Cox cadet, sleeps 4, used 6 times, good cond. \$875 firm. 727-1617.

HIGH CHAIR - Colonial style, wood. \$12.50; 2 3-drawer dressers, \$10 ea. 727-1617.

LILY OF THE VALLEY - 20 for \$1; evergreen firs, 18"-22", 2 for \$5, dig your own. 727-1617.

LAWN SEEDER - & fertilizer spreader, 24". \$8.50. 727-1617.

PRESSURE COOKER - Presto 6 qt, \$8; lg Presto canning pressure cooker, \$9.50 or both for \$16. 727-1617.

CUT COINS - Hand crafted, to your taste. 924-3236.

PARSONS TABLE - 20h, 30w, 60l, gold lacquer, excel, \$20; Empire 398 stereo turntable, \$30; air conditioner, 8000 btu, 110V, Whirlpool, \$50; portable stereo w/speakers, \$5. 751-8158.

EXERCISE BICYCLE - \$10. Pete, Ext. 3297.

MOWER - Graveley, good for weeds & brush as well as grass, good cond. \$200. R. Ince, 286-0682 after 6.

POOL - 10x2 steel wall w/filter, used 1 season. \$40. 475-6938.

LIVING RM FURN - Couch & chair, contemporary, excel cond. \$100. 878-1538.

CHANDELIER - 5-light, wood & brass w/5 white frosted globes, never used. \$25. Helen Browell, 727-6833.

BRICKS - Unused, red clay. 5¢ each. Ext. 4362.

TENT TRAILER - 1970 Krown hdtip, fully equipped. \$1200. 363-6940.

GIBSON GUITAR - 56 Les Paul Jr, all orig w/carry case, good cond. \$300 firm. Ed, 727-3608.

CAMPGROUND GUIDE - Rand McNally, park & trailer guide. \$4.50. Bill, Ext. 4636.

WELL PUMP - Burks 110 or 220, check valve, good cond. 653-4571 after 5.

TWIN BOX SPRING - & mattress, like new. 744-6362.

GARAGE SALE - Antiques, household items, May 21 & 22, 7 Chapel Ave, Brookhaven Hamlet.

Ads left out of this issue because of lack of space need not be re-submitted in order to run in next week's issue.

Real Estate

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

For Sale

WADING RIVER - 3/4 bdrm cape, 3/4 treed acre, landscaped, fp, w/w carp, full bsmt w/patio doors. \$54,000. 929-8313 after 5:30.

MEDFORD PINES - Live cheaply, mother/daughter, entrances, 7 appliances, 2 baths, 4 bdrms, \$5000 over mortgage. David, 924-7516.

PT JEFF STA - 3 bdrm Col, wooded 1/2 acre, large FR & off in fin bsmt, 5 appl. \$33,500. 928-4922.

BELLPORT VILLAGE - 3 story house, wooded lot, Colonial 1/2 acre, 3 bdrms, 1 1/2 baths, fp, hardwood floors, must sell. \$37,900. John, Ext. 4321, Ext. 4531.

ROCKY POINT - 4 bdrm Colonial, 2 1/2 baths, lr, dr, eik, family rm w/fp, fin bsmt, central ac, 2 car garage, wooded setting, assumable mortgage. \$46,500. Ext. 4362 or 744-7667.

ROCKY POINT - Beautiful house on 150 ft x 200 ft lot, lg L shaped lr with fp & dining area, 3 bdrms, 1 1/2 baths, kit, w/w carp, small cabin on property included, well kept, walking distance to beach. \$49,500. 744-3556.

BELLPORT - Pleasant location, built-in pool, brick walls, mod kit, w/w carp in open upstairs & dining area, fp, 2 bdrms, over-large garage, double cellar. \$39,000. 286-3368 eves.

SELDEN - 2 bdrm expansion ranch, high ceiling expansion attic, lr din area, kit, bath, att garage, s/s 1/2 acre, all appliances, fenced, 8 yrs old. Low 30's. 698-5818.

7 MILES FROM LAB - 4 bdrm Ranch, sunken lr w/ Franklin stove, 3 sets of sliding glass doors, one leading to 12 x 12 greenhouse, fenced yard, car port, in-ground pool 16 x 32, 1/2 acre, many extras, stone waterfall w/kidney shape goldfish pond. Moving must sell. \$45,000 or best offer. 281-5412 by appointment only.

STONY BROOK - S section, just reduced for quick sale, 3 + bdrms, 2 1/2 baths, w/w, many extras, must see. Ext. 4663, 751-5479.

BELLPORT - 3 bdrm Ranch, 2 yrs old, on 1/2 acre, landscaped & partly wooded, lg kit, full bsmt, 5 appl, low down payment, mortgage assumable. \$32,500. 286-1440 eves.

BOHEMIA - Farm ranch, wooded 1/2 acre, 3 bdrms, 2 full baths, fp, ldr, 1 1/2 garage, extras. \$45,750. 589-3242.

N. MASSAPEQUA - 3/4 bdrm, split level, 2 car garage, a/c, fp, 6 appl, w/w carp, 2 baths, huge den. \$45,000. PY 6-1317.

SHOREHAM - 5 min to Lab, 3 bdrm ranch, landscaped & wooded 1/2 acre, low taxes, many extras. \$34,500. 744-6772.

MT SINAI - New custom Colonial, 3 bdrms, dr, full bsmt, oak floors, 2 car garage, 1/2 acre. \$45,900. 473-1833.

SHOREHAM - Contemporary lg 4 bdrm ranch on 1 acre wooded lot, 2 1/2 baths, fp, w/w carp, bsmt, patio, landscaped, priv beach, former Clarendon model, immaculate, 2 years. Mid \$80's. Ext. 2439 or 744-1428.

MILLER PLACE PARK - 4 bdrm, 2 complete baths, den, lr, dr, lndry rm, 2 car garage, 1/2 acre, 3 blocks to school, 2 blocks to Sound. \$42,000. Mary Smith, Ext. 4622.

SHOREHAM NORTH - 4 bdrm lg Colonial, 2 1/2 baths, den with fp. \$55,000. Principals only. 744-3660.

For Rent

VERMONT CAPE - Fully equip, fantastic views, fishing, boating, swimming, golf, etc. Reasonable. 732-6499 after 6 p.m.

CORAM - Strathmore "E," furn house, June 1 - July 15, 3 bdrm, 2 baths, study, fam rm, fenced. 350/mo util incl. 345-3791 days, 928-5124 eves.

VERMONT CHALET - Furn, stone fp, lake, ponds, trails, fishing, canoeing nearby golf, tennis, summer theatre, music festivals, week, month, and season rates. 757-5599 after 4 p.m.

HOLBROOK - 1 or 2 furn rms, bath, priv entrance. 981-1871.

SHOREHAM - Month of July, 3 bdrm ranch with priv beach. \$500 plus util. 744-6648.

BLUE POINT - Apt. H. Lewis, 475-3657.

WADING RIVER - Efficiency opt, 2 1/2 rms, elec & gas incld. \$175/mo. Ext. 3699, 929-6769.

APT FOR RENT - Patchogue area, 2 bdrms, kitchen, lv rm, newly decorated. \$250/mo (incl heat). Walt, Ext. 2907, 698-0576.

Wanted

RIDERS TO BOSTON - Via Orient Ferry, lvg Friday, June 3, return Sunday. Barry, Ext. 3370, 286-2439.

GIRL SCOUT UNIFORM - For summer camp, size 10 or 12. Joan, 744-3919 or Jack, Ext. 4447.

GOLF CLUBS - Also tennis racket, both jr size, good cond, reasonable. 286-3742 after 6 p.m.

HOME - For 4 kittens, 3 pure white, 1 b&w, 3 males, 1 female, weaned. 929-4522.

LECTURE SUMMER COURSE - In histology, also materials & books relating to subject. Daniel, Ext. 3640 or 286-0703, eves.

EMPTY JARS - Screw top, 2 qt or larger. Also Tasters Choice jars, any size, will pick up. Anne, Ext. 3412.

WOMAN TO SHARE APT - With two working women, 10 min from Lab, carpet, ac, dishwasher, gas heat included. Diane, 246-6512, 698-7001 after 7 p.m.

TYPING - Lite, sewing, & babysitting, Medford area. 475-0144 after 6 p.m.

BEDSPRING - For mattress approx 36" x 75". Ext. 2345, 472-1735 after 6 p.m.

LADDER - For 4 ft swimming pool. Gail, Ext. 3653, 878-4664.