

## AUI Board Names New Trustees

Dr. Dixy Lee Ray, former chairman of the AEC, and later, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs, was one of three new Trustees elected to the Board of Associated Universities, Inc. at its annual meeting in Green Bank, West Virginia.

The first woman chairman of the AEC, Dr. Ray is also the first woman to serve on the Board of Trustees. Since her resignation from the State Department last June, she has returned to her home in Fox Island, Washington, and is currently lecturing and



Dixy Lee Ray

traveling. She will fill the unexpired term of William D. McElroy, Chancellor of the University of California at San Diego, who resigned.

Other trustees elected for a three year term were Dr. Donald N. Langenberg, Director of the Laboratory for Structural Matter at the University of Pennsylvania, and Dr. John W. DeWire, Associate Director for the Laboratory of Nuclear Studies at Cornell.

Old friends of AUI who devoted many years to the management of BNL and NRAO, Carl C. Chambers, University Professor at the University of Pennsylvania, and Boyce D. McDaniel, Director of the Laboratory of Nuclear Studies at Cornell, were presented with commemorative plates, one bearing the BNL seal and one with that of NRAO, as well as certificates of appreciation.

In a special communication to the *Bulletin*, Dr. Gerald F. Tape, President of AUI said:

"Dr. Carl Chambers' long and distinguished service to AUI spanned 20 years and included two terms as Chairman of the Board. His wide range of experience, especially in the various fields of engineering and management, was extremely helpful in Board deliberations, in particular, during the establishment of NRAO at Green Bank and continuing through the major period of growth for both NRAO and BNL.

"Dr. Boyce McDaniel's contributions during 12 years of service as a Trustee were of great value to AUI. His own direct responsibility for accelerator development was particularly helpful to the Board in its review of BNL programs, and his experience in the management and operation of large research facilities permitted him to play a significant role in the early design and construction phases of the VLA project.

"I am deeply grateful to Drs. Chambers and McDaniel for their unfailing attention to the work of AUI and their many valuable contributions to BNL and NRAO. I know I speak for all Trustees when I say we will miss Carl and Mac."

Dr. Charles K. Bockelman, Deputy Provost for the Sciences at Yale University, was elected Chairman of the Board and is succeeding Dr. LaRoy B. Thompson, Senior Vice President and Treasurer of the University of Rochester, who has served for the last two years.



Ralph Nelson, Nuclear Reactor Operator, under the dome of the HFBR.

## Partners In Affirmative Action

Harvey Thomas, a long time development engineer at Brookhaven, has assumed his new job as Assistant to the Director for Affirmative Action.

Thomas, Harlem born and raised, graduated from New York University as an electrical engineer. After various engineering jobs in the city, he joined the Mechanical Engineering Division of BNL in 1954.

A popular person and highly competent engineer, he was selected to succeed Peter Chen, the former head of Affirmative Action who left BNL in June to join NASA. Thomas combines technical and administrative skill with a firm commitment to civil rights.

"For the past 20 years he has worked on all of the major accelerator projects - the cosmotron, AGS and bubble chamber," said Irving Polk, head of the Mechanical Engineering Division, "and in all of these projects, he has been an excellent engineer. I fully expect he will continue his stellar performance in his present position."

As affirmative action head Thomas said his objective is to see that minority groups are not under represented in the workforce, or concentrated in lower echelon positions.

Thomas has the responsibility for identifying problem areas and recommending specific steps to achieve equality of opportunity. He also advises the Director of the progress made in each part of the Laboratory towards this goal.

Thomas sees training programs as an essential tool in the realization of this goal. Although Brookhaven currently has a number of such programs in effect, he hopes the Laboratory will continue to be involved in as many training programs as it can efficiently undertake. He also encourages employees to take advantage of the Tuition Refund Plan to prepare themselves for more responsible jobs.

The other half of the Affirmative Action team is Renee Flack, Equal Opportunity Assistant, who transferred to this office in 1971 to assist Chen. Flack, also New York born, came to Brookhaven in 1965 as a secretary in Purchasing after several jobs in the city, including a two-year period at the

national headquarters of the NAACP (National Association for the Advancement of Colored People).

Besides assisting in the administrative work of the office, she acts as counselor and "house mother" to minority students working at Brookhaven in the several student programs - Brookhaven Semester Program, Summer Student Program and Preface (a cooperative program between ERDA and Howard University). The "plant lady" as she has been dubbed because her office resembles a greenhouse, helps students adjust to the new environment of the Laboratory and the surrounding communities.



Renee Flack and Harvey Thomas, Affirmative Action team.

Both Thomas and Flack have been engaged in affirmative action programs for a number of years. Thomas acted as coordinator of Affirmative Action in the Accelerator Department from 1970.

Flack has been active in the local NAACP for eight years and in other community organizations. She also assists people to find adequate housing in Brookhaven Town (Continued on page 2)

## 10 Year Milestone For The HFBR

Any goblins seen cavorting on site tonight will not really be goblins, but HFBR people celebrating the tenth birthday of this research reactor.

Ten years ago today the HFBR (high flux beam reactor) achieved criticality. Since then, as Julius Hastings, a co-inventor of the HFBR and head of the users committee, says, "it's been functioning like a Swiss watch." There is general agreement that this remarkable record in running the reactor is due to the fine work of the Reactor Division and its overseer, Robert Powell.

In the past decade, the HFBR has been used by physicists, chemists and biologists to answer a wide range of questions.

In solid state science, the experimental investigation at the HFBR of phase transitions and their relationship to theoretical work has resulted in a marked advance in the field. In crystallography, experiments have proven the reactor to be a valuable tool. The Chemistry Department, for example, has come up with a definitive set of structures for the amino acids which are the fundamental building blocks in protein.

Biologists have engaged in experiments in protein crystallography: hydrogen atom locations in proteins, and determination of the water of hydration. Another major area of investigation is the structure of membranes. Benno Schoenborn, a senior biophysicist, said that "the new technique developed at the HFBR is an extremely effective way of analyzing biological structures, as compared to classical x-ray diffraction analysis."

Besides Laboratory scientists, the users include researchers from universities, industry and other government laboratories.

In addition to Julius Hastings, the other inventors of the HFBR were the late Jack Chernick, Joseph Hendrie, Kenneth Downs and Herbert Kouts.

Kouts received the E.O. Lawrence Memorial Award in 1963 "for the development

of new experimental techniques in reactor physics and their application to a better understanding of theoretical models of chain-reacting systems."

Joseph Hendrie, who received the Lawrence Award in 1970 was cited for "his outstanding contributions to the physics and engineering of versatile research reactors and for important contributions and recognized leadership in promoting the safety of large power reactors."

Bob Powell said recently that "as a research facility it was well designed and well built to begin with and it has performed well."

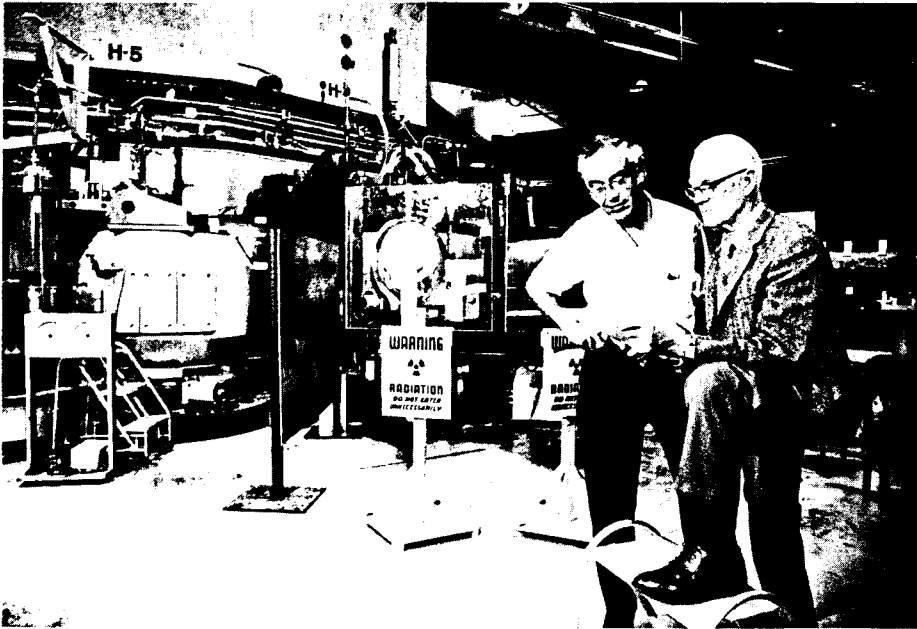
Gen Shirane and John D. Axe, physicists, received the 1973 Bertram Eugene Warren Diffraction Physics Award for their work on lattice and molecular dynamics, primarily as studied by inelastic scattering of neutrons at the HFBR. Shirane also received the American Physical Society's Buckley Prize for similar work.

The core of the reactor consists of a charge of fuel elements with highly enriched uranium<sup>235</sup>. This uranium undergoes fission and produces a small number of neutrons in every fission event. Out of this number, 40 percent have to be used to create the succeeding generation. Of the remaining 60 percent, some are lost and the rest are used by the experimentalist. The reactor has nine beam tubes, or pathways, through which the neutrons stream out. In

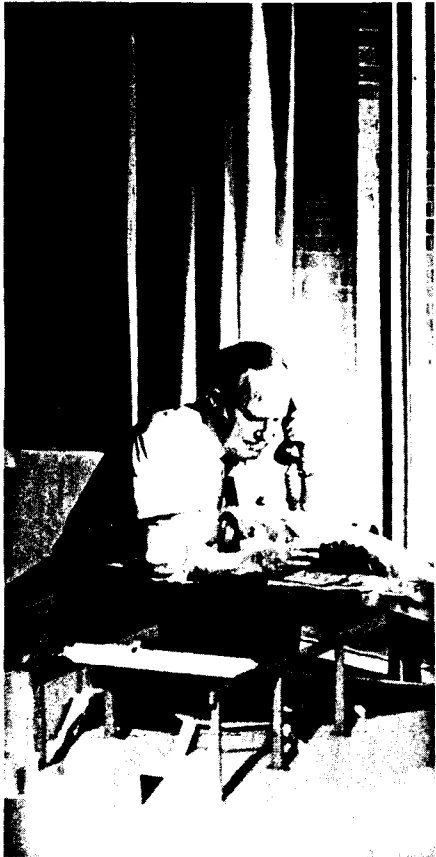
(Continued on page 2)

### Commager Here Monday

Remember Monday, November 3 at 8 p.m. You are invited to Berkner Hall to hear Henry Steele Commager present an AUI Distinguished Lecture on "The Idea of the University - Revisited." A famous historian, Professor Commager's work is known throughout the world. This opportunity to hear him should not be missed.



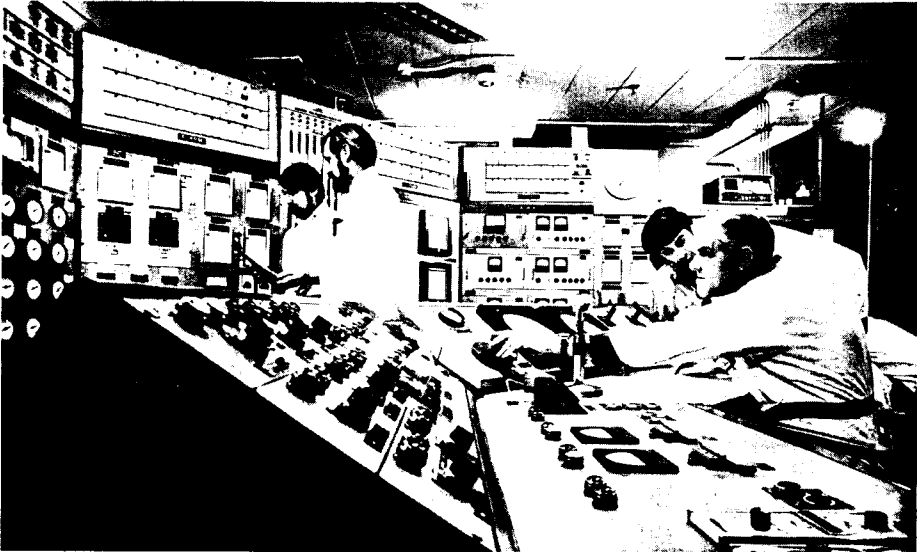
Julius Hastings, Senior Chemist and head of users committee for HFBR (left), discusses operating schedule with John Floyd, Reactor Research Coordinator, on the experimental floor.



Robert Fuchs, Staff Assistant, takes call in lobby by model of HFBR.



In foreground, Gil Pitcher, Associate Engineer, looks into oscilloscope as Howard Farrell, Technical Supervisor, checks test equipment at Reactor Instrument Maintenance Shop.



In the Control Room of the HFBR, from left, Mike Brooks, Reactor Operations Engineer; Dick Adams, Reactor Shift Supervisor; and Nuclear Reactor Operators Dick Tache and Fred Griswold at the console.



Throughout the years, Robert Powell, head of the Reactor Division, has explained the operation of the HFBR to many a group. Here, in 1971, Powell (far right) shows a model of the reactor to visiting legislators.

### HFBR 10 Years Old (Cont'd)

some cases, more than one experiment can make use of the same stream of neutrons. There are currently about 12 or 13 experiments set up around the reactor.

The HFBR runs 24 hours a day, seven days a week for a "reactor cycle" which is about two weeks. It is then shut down and the burned up fuel is replaced. Experiments are highly automated. For example, there is a newly completed computer network which simultaneously takes care of ten experiments.

Jack Floyd, who will retire this year, has been Research Coordinator for the reactor and responsible for the active scheduling. David Rorer, a physicist, has joined the Reactor Division to assume this responsibility on Floyd's retirement.

The research reactor is one of two high flux reactors in the United States, the other is at Oak Ridge. In the rest of the world, the only reactor with similar flux characteristics is at the Institut Laue-Langevin in Grenoble.

As to the future of the HFBR, requests have been made to raise the power level from 40 megawatts to 60 megawatts which will bring the flux close to that of the reactor at Grenoble. Hastings is convinced that "we'll be able to celebrate a happy 20th birthday as far as the prospects for this reactor are concerned."

## Election Day Hours

The normal working hours for the Laboratory on Election Day, Tuesday, November 4, will be from 0830 to 1500. All employees working this schedule will be paid an additional two hours at straight time so that they will not suffer a loss of base pay. Nonexempt employees in positions that require a full eight hours of service will be paid for ten hours of work at straight time.

Time cards for nonexempt employees working the normal Election Day schedule should show 1500 as time out and "E" in the EXCEP column.

All other nonexempt employees' time cards should show time actually worked and "E" in the EXCEP column.

## Solar Energy On View

Check out the solar energy exhibit today at Berkner Hall and tell your friends to come and see it over the weekend. The exhibits will be on view *Saturday* from 9:15 a.m. to 12 noon, and from 1:45 p.m. to 4 p.m.; on *Sunday* from 9 a.m. to 4 p.m.

The conference on Saturday is open to all for a fee of \$10. The hours are from 8:30 a.m. to 12:30 p.m., and from 1:30 to 4:00 in the afternoon.

## '76 Research Opportunities

The National Research Council (NRC) has announced the Research Associateship Programs for 1976. These programs provide scientists and engineers with opportunities for postdoctoral research on problems in the fields of Atmospheric & Earth Sciences, Chemistry, Engineering, Environmental Sciences, Life Sciences, Mathematics, Physics, and Space Sciences.

The NRC administers the Research Associateship Programs on behalf of and in cooperation with selected federal research organizations which have laboratories at about 80 geographic locations in the United States.

Appointments are awarded on a competitive basis. The competition is open to recent recipients of the doctorate and in some cases to senior investigators. Some are open to non-U.S. citizens.

Approximately 250 to 300 new awards will be made in 1976. Stipends (subject to income tax) will range from \$15,000 upwards. Grants will be provided for family relocation and for professional travel during tenure.

Postmark deadline for applications is January 15, 1976, and awards will be announced in April.

Further information concerning application materials and specific opportunities for research is available from the Associateship Office, JH 606-P, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

## Halloween Caution

Once a time of light-hearted pranks, dressing up in spooky costumes and collecting a treasure of candy and apples, Halloween shows signs of becoming a truly frightening experience.

The Consumer Products Safety Commission recently issued a warning bulletin asking parents to make sure costumes are flame retardant, to beware of suffocating masks, to watch out for lighted candles in jack-o'-lanterns and to check the goodies children bring home.

In recent years, some disturbed adults have taken to inserting dangerous substances in the "treats" they give to children. So check where your child goes and what he brings home.

## Spring Registration

Advanced registration for the spring semester at Stony Brook for regularly enrolled students will be on Monday, November 3, from 10 a.m. to 12 p.m. in the conference room of the Radiation Division, Bldg. 318.

Courses in Mathematics being given at BNL include: MSA 569, Section 2, with Professor Schreiber on Mondays from 5:30 to 8 p.m.; and MSA 504, Section 1, with Professor Greenspan on Thursdays from 5:30 to 8 p.m.

The following courses will be offered on the Stony Brook campus at 4 p.m. or later: MSA 506, MSA 691, MSA 569, MSA 503 and MSA 527.

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

## Letters To The Editor

To the Editor:

The family of Harvey Spiess acknowledges with grateful appreciation your kind expression of sympathy.

— The Family of Harvey Spiess

To All Personnel,

My family and I wish to extend to you our thanks for your kindness and thoughtfulness during our time of sorrow.

— The Robert Quick Family

## Reporters Wanted

The *Bulletin* is looking for acute observers to alert us to news for your newspaper. These need not be "heavy" items, just leads to people, incidents, funny happenings, and the like. If something comes to your attention which you think would be interesting to readers of the *Bulletin*, let us know.

Also, the "Tune In" boxes have been replenished. If there is something you want to know, but don't know who to ask, take a form and write about it. Your letter will be numbered and forwarded without your name to the appropriate office for a response. Messages of general interest will be published in the *Bulletin*.

## It's A Small World

On Wednesday, November 12, the Hospitality Committee will borrow a popular theme, and invites women who are employees and wives of employees to attend a Small World Tea and Sherry Party at the Brookhaven Center, from 3 to 6 p.m. Please note that employees are invited to attend outside of working hours. Babysitting is available in the Gym free of charge.

Rare and unusual dolls, doll houses and miniature accessories have been assembled for an interesting display of the small world of yesteryear. There will be good little things to eat, and of course, tea and sherry, as well as the fun of an afternoon spent meeting old friends and new acquaintances.

Mark the day: Wednesday, November 12, from 3 to 6 p.m.

## Affirmative Team (Cont'd)

through the U.S. Department of Agriculture Farmers Home Administration.

Thomas does not feel his job stops at the gates of the Laboratory. Interacting with the outside community is also important. "Here at the Lab we can't take the position that we are interested only in science. We also have a social commitment."

The report on the Affirmative Action program which has just been submitted to ERDA, indicates, on the whole, a good record of minority representation at the Laboratory. But it is a continuing effort. As Laboratory Director George Vineyard noted in a policy statement included in the report, "we have made advances we can be proud of, but much remains to be done."

## Art Show Deadline Here

Today is the last day to register art work for the BERA Employee Art Show, opening on November 11.

Articles already submitted include oil paintings, silk screen prints, furniture, weaving and wall hangings and indicate an interesting variety of works for the show. We are all proud of the artistic talents and craftwork of the BNL family, and this exhibition is always a popular one.

Perhaps some people are shy about their work. Persuade them today to join in!

## Bank Holidays

The on-site bank, Bankers Trust of Suffolk, will be closed on November 4, Election Day, and November 11, Veteran's Day.

## Arrivals & Departures

### Arrivals

Gail A. Borruso	Medical
Robert Gordon	Applied Science
George D. J. Green	Biology
Eileen M. Kelly	Reactor
Angelika Papazoglou	Applied Science
Paul E. Poleski	Applied Math.
Peter Soo	Applied Science

### Departures

None

## French Club Meeting

The BNL French Club will gather for a social evening on Tuesday, November 11, at 7:45 p.m., at the Recreation Building in the Apartment Area.

The emphasis will be on planning coming events for the new season and casual conversation in French. A 20-minute color film, "Jour d'Ete en Bretagnes," will be shown.

New members and friends are encouraged to join us for what promises to be a "sym-pathique" evening.

## Official & Special Events

### Monday, November 3

- Navy Meeting
- AUI Distinguished Lecture - H.S. Com-mager - Berkner Hall
- ERDA Molecular Sciences Review (November 3-5)

### Tuesday, November 4

- Election Day

### Thursday, November 6

- Chemical & Physical Processes in Com-bustion Meeting - Berkner Hall (November 6-7)

### Monday, November 10

- Conference on Effects of Energy Related Activities on the Atlantic Continental Shelf - Berkner Hall (November 10-12)

### Tuesday, November 11

- US Coast Guard Academy Tour

### Wednesday, November 12

- Navy Meeting

### Thursday, November 13

- Springfield Community College Tour

### Friday, November 14

- Fordham University Tour

## Tennis Awards

Invitations for the Tennis Awards Party to be held on November 5 at 5:15 p.m. in the Recreation Building have been sent to all tournament and ladder participants. Those planning to attend may bring guests. There will be a charge of \$2 per guest, payable by Monday, November 3, to cover additional expenses. Please notify Marge Stoeckel, Ext. 2459, or Tom Koetzle, Ext. 4384, if you plan to bring guests.

## Cafeteria Menu

### Week Ending November 10, 1975

#### Monday, November 6

Cream of Mushroom Soup	
Chicken a la King on Rice	1.10
Cheese Omelet & 1 veg.	1.00

#### Tuesday, November 7

French Onion Soup	
Beef Stew on Rice	1.20
Stuffed Cabbage & 1 veg.	1.20

#### Wednesday, November 8

Split Pea Soup	
Breaded Flounder & 1 veg.	1.10
<b>Special</b>	
Spaghetti w/Meat Sauce & Garlic Bread	
All You Can Eat	\$1.00 plus tax

#### Thursday, November 9

Cream of Chicken Soup	
Beef Hash & 1 veg.	1.00
Veal Pattie & 1 veg.	1.20

#### Friday, November 10

Fish Chowder	
Broiled Filet & 1 veg.	1.10
Braised Beef & 1 veg.	1.20

## Don't Forget

November 5  
Painting Loan Pickup  
Occupational Therapy Room  
Medical Department

## Women Demonstrate At Physical Review



Women employees of the *Physical Review* staged an impromptu demonstration in the corridors of their office on Wednesday to indicate their support of the Equal Rights Amendment. Asked to comment, Simon Pasternack, a Senior Editor of the *Physical Review*, said he had no objection to the demonstration and was in favor of ERA.

## A Spirited Reading

Don't forget to be on hand for the Theatre Group's reading of "Blithe Spirit" on Monday, November 3, in the Exhibit Hall (Stage II) at 8 p.m.

## Soccer

The Brookhaven National Laboratory soccer team will meet St. John's University in a return match on Saturday, November 1, 2 p.m. at the Brookhaven Recreation Park. An exciting game is foreseen and interested players should contact Ralph Fairchild, Ext. 3649.

The indoor league will commence play on Friday, October 31, at the Gym. Interested participants can join a team at that time. Playing time will be between 5:30 and 7:30 p.m.

## Volleyball

Volleyball rosters were due last Friday, however, there is still room for a few more players especially ladies. If any of you ladies are interested in getting some exercise and/or making new friends and have spare time on Monday evening - try volleyball. Call Pat Oster, Ext. 4763.

There will be a captain's meeting on Wednesday at noon in the small conference room, second floor, in Bldg. 911 (AGS). Election of officers will be held at this time and the schedule for the coming season will be set up. Please try to attend.

## Come Bat The Bird Again

The badminton ladder tournament will begin on Tuesday, November 11, for both singles and doubles. As of this date, 20 single entries are in along with five doubles teams. All former contestants who have not yet signed as well as any newcomers are urged to send their name and telephone number to John Binnington, Bldg. 477, as soon as possible.

## Getting Ready For Halloween



Maureen McTague, 5-year old daughter of Carole and John McTague, prepares for Halloween. Other members of the McTague family that will be trick-or-treating in the apartment area are 12-year-old Kevin, 11-year-old Cathy and 10-year-old Margaret. McTague, a Professor at UCLA, is currently engaged in research in the Physics Department. —Humphrey

## The Run

It was a cool, overcast autumn morning: At 10:07 a.m. on October 26, 1975, Jerry Kinne fired the starting pistol and sent 22 runners off on their 10.1-mile journey.

Larry Farrell brought in a winning time of 57:35, a course record. First place honors among BNL employees went to Gus Prince. Gus, however, ran a close second to Vincent Hayes for the most interesting running gear. Veteran Dave Cox successfully staved off a barrage of challenges from MacKenzie, Piel, Bari and Thomlinson.

An interesting note about the perimeter run is that for the 11 runners who also entered the first perimeter run on September 29, 1972, the average time per mile decreased from 7:40 minutes per mile to 6:97.

The most exciting aspect of the day's events was the size of the turnout. Thirty-three runners entered the 5-mile race and the overall turnout of 55 runners indicates that the BNL track meet is becoming established as one of the relatively few amateur long distance meets in Suffolk County.

As was also the case in the 10-mile run, all starters in the 5-mile run finished the race. Paul Hnizdo of Shoreham was the winner of the 5-mile run and was followed closely by Andrew McNerney, the son of Andy McNerney. Unlike the 10-mile run, youth dominated the race.

On the veteran side of the 5-mile run, Dan Cornish outpaced Jack Brennan, the perennial favorite. The large number of women entrants in the 5-mile run is also noteworthy.

Finally, all of the runners owe a special thanks to Bob Powell who, along with Gus and his merry men, made the essential arrangements of the day's events.

All finishers will receive a certificate of participation that records their place of finish and time. —Bob Bari

### 10-Mile Race

#### Under 16

1	David Levine	66:20
---	--------------	-------

#### 16-39

1	Larry Farrell	57:25
2	Martin Brekeller	61:30
3	Kurt Pasler	64:24
4	Andrew McNerney	66:21
5	Stephan Krasney	67:07
6	Bob Bari	70:07
6	Bill Thomlinson	70:07
8	Bill Piel	70:54
9	David Edwards	71:54
10	Dan Bray	74:05
11	Ron Weider	74:07

#### Over 40

1	Gus Prince	63:22
2	William Heinbockel	63:45
3	Ernie Warburton	65:18
4	Dave Cox	69:55
5	Don Mackenzie	70:01
6	Arthur Duffy	72:49
7	Art Harris	77:04
8	Stuart Glass	81:06
9	Richard Britton	82:58
10	Vincent Hayes	85:51

### 5-Mile Race

#### Female Under 16

1	Pura Garcia	50:23
2	Elizabeth Bregenzer	50:24
3	Debbie Palatta	52:26
4	Karen Hippmer	52:27
5	Desiree Weeks	52:28
6	Kathy Sullivan	52:29
7	Eliza Abrams	56:56
8	Peggy Black	56:57
9	Tracy Somerville	63:21

#### Male Under 16

1	Paul Hnizdo	32:03
2	Andrew McNerney	32:29
3	Mike Oldham	32:44
4	David Heinbucker	33:52
5	Jeff Gross	35:50
6	Jim Lingg	36:47
7	Mark Waite	48:03

#### Females 16-39

1	Karen Popp	41:36
2	Jean Burt	47:17
3	Gail Waite	53:31

#### Males 16-39

1	Corky Lahey	33:09
2	Stephen Goodwin	33:23
3	Don Endres	33:36
4	Sam Baumgarten	33:54
5	Naresh Bhagat	34:48
6	John Beerman	35:51
7	Henry Makowitz	36:19
8	Hugh Issacs	38:10
9	Peter Adams	38:24

#### Over 40

1	Cornell Cornish	36:34
2	John Brennan	37:01
3	Robert Phillips	38:57
4	Jack Detweiler	40:34
5	Frank Endres	45:29

