BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

Looking Ahead

This is the last in a series of articles on energy by Harry Davitian, National Center for Analysis of Energy Systems.

For at least the next decade, U.S. energy consumers face still higher prices and the continued possibility of supply disruptions. This bleak assessment is based on underlying, irreversible trends in our energy resource use patterns.

For most of this century, the U.S. experienced a golden age in its use of energy. Large quantities of petroleum and natural gas were discovered and quickly exploited. Now, production from these high quality resources is declining. In contrast to these easy to extract, easy to use, relatively benign resources, we must now rely increasingly on coal, uranium, oil shale, and renewable (i.e. solar, geothermal, wind, and waste) resources.

It is much more costly to convert these resources into energy forms that are easy to use, and their extraction and conversion (especially of the non-renewable ones) tend to have unpleasant side effects.

National malaise

Building new energy supply facilities that rely on these more plentiful resources will take decades and require massive capital investments. In the meantime, we have allowed ourselves to become dangerously dependent on imports. The balance between our energy supplies and demands remains subject to the stability and the whims of the leadership of a few foreign countries, some of which have no basic economic need for their huge oil revenues.

The Iranian revolution, which halved the oil production of OPEC's second largest producer, and the recent fundamentalist insurrection in Saudi Arabia, the world's leading oil producer, demonstrate the fragility of that balance.

We seem to be suffering from a national malaise regarding our energy situation. Until recently, polls indicated that the American public did not believe the problem was serious. Many seem to think that shortages and increasing prices are simply the consequences of an immense oil company plot. Oil company machinations are undoubtedly a reality, just as they have been for most of the last century. However, to argue that oil companies are not just exploiting the situation, but actually are themselves the problem, is delusory. Insofar as such beliefs delay serious efforts to deal with our energy problems, they are harmful to all of us.

Change will need encouragement

Much of the technology for using energy more efficiently exists and can be economically justified. Houses, commercial buildings, cars, appliances, and industrial equipment requiring only a fraction of the energy needed by those currently in use have already been demonstrated. In many cases, 50 percent reductions in energy consumption are easy to achieve. In some cases, as much as 80 percent can be cut. The problem now is to get consumers to demand the very best in energy efficient performance.

To demonstrate just how far we have to go, consider that builders on Long Island still build, and consumers still buy, houses with only three and one half inches of insulation in the walls, six inches in the attic, with no polyethylene vapor barrier, with inefficient heating systems, and with no consideration given to passive solar design concepts. These energy-wasteful building practices have already been abandoned in many parts of the country. Yet questioning home buyers are frequently told that it is just too difficult and expensive to convert from past techniques to more modern energy (and money) saving designs.

This type of situation is unacceptable if we are to begin to take control of our energy future rather than continue to leave it in the hands of a few distant countries and a few large energy companies. When in the market for a new appliance, car, or

(Continued on page 2)

Doug Humphrey

P.O. Richard Baulch and Capt. Bernard Doran are congratulated by Lab Director George Vineyard for their excellent performance during an unexpected incident on site. (See story below.) Police Supervisor Bernard Brennan (right) said both officers will receive exceptional merit awards.

The Great Chase

Cops – robbers – a wild 45-minute chase – sirens screaming – a shot rings out! A scene from "The French Connection?" No. It all came down at the Laboratory around 1 a.m. on June 4.

Patrol Officer Beeler was on duty at the main gate presiding over the usual calm comings and goings, when, suddenly, two vehicles came barreling down the road and ran the red light into the Lab. As they zoomed past, the man in the second vehicle, a green Toyota, yelled at Beeler, "I'm a cop. Get the police."

Capt. Doran was at HQ when Beeler's call came in. He immediately assigned P.O. Rackett to barricade the gate, and for P.O. Baulch to get his patrol vehicle and join him in the pursuit.

The object of the chase was a brown Ford pickup, with a man driving and two standing in the rear. It proved to be an elusive quarry. The two patrol cars and the green Toyota sped all over the site in hot pursuit of the brown Ford. The two men in the rear of the pickup heaved objects at Doran and, at one point, the driver rammed the front of his car. For 45 minutes the wild chase continued, and the peace of the night was shattered by the wailing sirens, the flashing lights and the orders to "stop" blaring forth from the public address system.

The brown Ford screeched into the old dump site off Brookhaven Avenue, past the Recreation Park. Baulch blocked the entrance with his car and got out of the vehicle. As the pickup's driver realized he was hemmed in, he kept turning the car around and driving directly at Baulch.

Without losing his cool, the patrol officer pulled out his service revolver and fired one shot into the Ford's left front tire, bringing it to a standstill.

As Doran and Baulch nabbed the driver, the other two men jumped out the back of the truck and fled into the woods. Baulch took off after the fugitives, but was unable to find them. The Suffolk County Police had been notified and they arrived on the scene with five units, an emergency van and a police dog. They continued the search, with the aid of Lab patrol units, until dawn. The dog had picked up the scent of the men from the pickup truck, but lost it when the escapees apparently dropped back onto the paved roads.

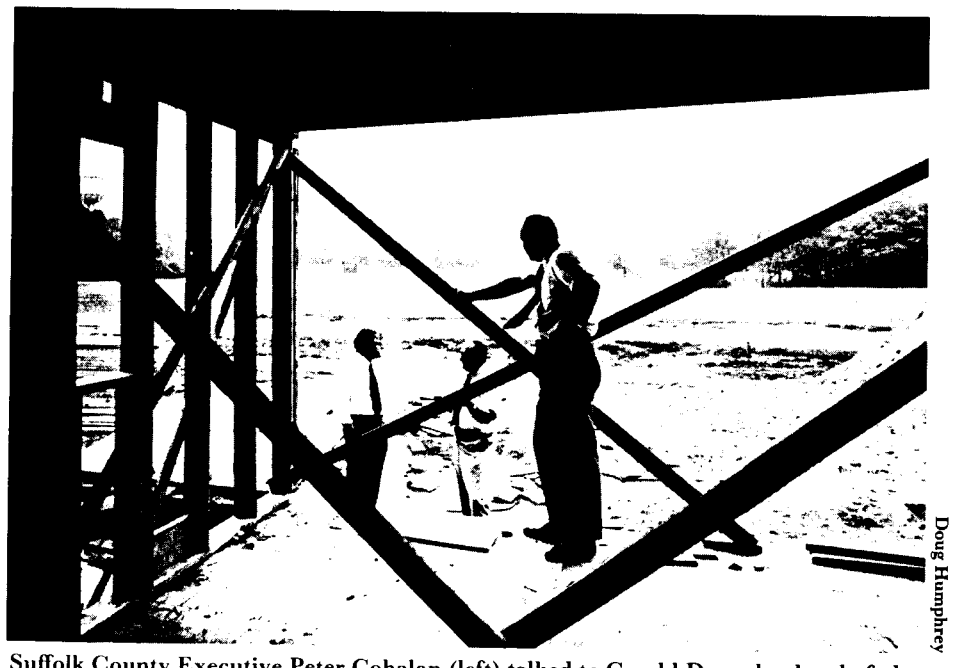
The man in the green Toyota was an off-duty police officer who had been assaulted by the trio as he broke up a robbery in Middle Island. He was in pursuit of them when they veered into the Lab. He made the arrest of the man who was caught on site. At this writing, it is understood the other two men have been identified but are still at large.

On behalf of the Lab, a charge of criminal trespassing has been filed against the driver by Capt. Doran, and P.O. Baulch has charged him with reckless endangerment. The brown pickup has been impounded on site and will remain here until disposition of the case.

Both Doran and Baulch say they have had enough excitement for some time, and will be quite happy to return to routine.

Laboratory Security Officer, Bob Young, said this is the first time that there has been an incident of this kind on site, and that they were indeed proud of the "cool professionalism" exhibited by the Lab police.

County Chief Comes To Brookhaven



Doug Humphrey

Suffolk County Executive Peter Cohalan (left) talked to Gerald Dennehy, head of the Conservation Program Management Group, at the site of the Brookhaven House during a visit to the Laboratory on Monday. Hosted by Associate Director Vincent O'Leary (foreground), Cohalan received a briefing on the Laboratory's research and a day-long tour of its principal facilities. Cohalan took office in January as Suffolk County Executive, and this was his first visit to BNL.

Inside Info

In recognition of his research activities on dynamics of marine ecosystems, **John J. Walsh,** head of the Oceanographic Sciences Division (DEE), was recently awarded the Gold Medal of Science from the Université de Liege, Belgium. The medal was presented to Walsh at the Twelfth International Liege Colloquium on Ocean Hydrodynamics. Although approximately 20 medals have been given to physical scientists of the oceanographic community over the last 12 years, this was the first time a biologist had been so honored. At the same meeting, Dr. A. Aitsam of the Academy of Sciences of the Estonian S.S.R., Tallinn, U.S.S.R. was also awarded a Gold Medal for his research in the Baltic Sea.

Weekend Tour

Scientists in the Marshall Islands Radiological Safety Program will be doing this weekend's mini tour at the Safety and Environmenal Protection Division. Visitors will see slides of the Marshall Islands, showing all aspects of the program. Analysis equipmen will also be displayed.

In addition to the mini tour, the complete tour of the Lab includes a viewing of "Brookhaven's Quest," a guided bus tour of the site, and a visit to the Exhibit Center.

Equipment Display

A demonstration van from the Varian Industrial Equipment Group will be on site from 10 a.m. to 2:30 p.m. at the parking lot adjacent to the cafeteria. The equipment to be displayed includes portable leak detector, new direct drive mechanical pumps, ionization gauge controls, sputtering targets and evaporative metals, vacuum hardware, and smart gauge diagnostic control.

Energy (Cont'd)

house, we can insist on one that incorporates the best in energy saving technology. In existing houses, we can cut back on our consumption by making investments in energy-saving equipment and alternate energy systems that are more in tune with the higher cost of conventional energy.

There is no question that we will have a very different energy system in the United States 30 years from now. Whether the process of change is smooth and orderly or chaotic and painful, is something we can all help decide by our actions today.

—Harry Davitian

Service Awards

The following employees will receive service awards during the month of June.

Twenty-Five Years

James Costanzo.....Reactor
Donald J. David.....Accelerator
Ralph J. Giallorenzo.....Accelerator
Gertrude H. Neuhoff.....Energy & Env.

Twenty Years

Robert A. Dagradi.....Accelerator
Joseph Ferrante.....Accelerator
Kurt Fuchel.....Appl. Math.
Michael A. Guacci.....S&M
Rosemary Kanuga.....Medical
Theodore G. Robinson.....Physics
Thomas A. Wild.....Accelerator

Ten Years

Barbara J. Alston....AUI-Washington, D.C.
Lois J. Baranosky..... Energy & Env.
Frank M. Dusek.....Accelerator
Howard A. Gordon.....Physics
Pearl M. Hicks.....Technical Info.
Thomas M. Mogavero.....Physics
Manuel F. Santos, Jr......Accelerator
Alvin J. Vestal.....Central Shops

Children's Program

Registration applications for the 1980 Children's Summer Recreation Program may be picked up at the BERA Sales Office between 9:00 a.m. and 1:00 p.m., or at the Recreation Office between 8:30 a.m. and 5:00 p.m.

For information call the Recreation Office, Ext. 2873.

Selected Reading

Am. Sci. 68 (3), May-June 1980
Atmospheric aerosols and climate. O.B. Toon and J.B. Pollack. 268-78

Science 208 (4448), June 6, 1980
Ending sex discrimination in academia. W.J. Broad. 1120-2

Sci. News 117 (22), May 31, 1980
An enzyme may treat slipped disks. 342

U.S. News & World Report 88 (22), June 9, 1980
Can alliance survive? 21-3

Members of the Eglevsky Ballet Company will fly across the stage at Berkner Hall next month.

The Eglevsky Comes To BNL

Long Island is not only known for a hockey team that performs with verve and skill on ice, but for a ballet company whose grace and artistry on the boards have brought it into the front ranks of regional dance troupes in the United States.

Principal dancers from this exciting group, the Eglevsky Ballet Company, will give a special midsummer performance at Berkner Hall on July 17 at 8:30 p.m.

The company was founded nearly 20 years ago by the Russian-born André Eglevsky, a "danseur noble" who performed with many of the world's major ballet companies. Because of his long association with the outstanding directors and choreographers of his day, he was able to develop a remarkable repertory for his company. And, over the years, these dancers have delighted audiences around the country.

André Eglevsky died in 1977, and Edward Villela, the former star of the New York City Ballet, assumed artistic direction of the company in August 1979. On his appointment, he said that the company's repertory would combine a contemporary approach to dancing and choreography with 19th century classicism, and stressed that "vitality will be its intrinsic, inherent quality."

Reviews of the company's performances in their first season under Villella's direction have been highly favorable. Newsday's Bob Micklin wrote recently that "if there is a dance company in the New York metropolitan area that has demonstrated more artistic growth in the short space of one season than the Eglevsky Ballet, I'd like to know about it."

Balletomanes will want to get their tickets well in advance to be sure of a chance to see a striking performance by members of this company. Their program will be announced in the *Bulletin* at a later date. Tickets are one price only, $9, and may be purchased from any of the following:

	Bldg.	Ext.
Jerry Bunce	911	4771
Janet Hoefling	184	2400
Gail Williams	460	3338
Blanche Laskee	185	2873
BERA Sales Office	Berkner Hall	3347

Cryogenic Conference

Doug Humphrey

Last week, Brookhaven hosted a Topical Conference sponsored by the International Cryogenic Materials Conference. Arranged by Masaki Suenaga, BNL, and Al Clark, National Bureau of Standards, the conference focused on filamentary A15 superconductors. Some of the conference participants took a tour of the Lab. At the High Voltage Transformer building, Fifth Avenue demonstration site, Bill Harrison, Accelerator, talked about the Power Transmission Project.

Blue Angels Film

A Navy "Blue Angels" Flight Team film entitled, "Threshold," will be shown at Berkner Hall on Tuesday, June 10 at 7:30 p.m. Tickets will be available at the door: $2.00 for adults and $1.00 for children. The BNL Aviation Club is sponsoring this event and has extended an invitation to the public. Tell your friends. Refreshments at intermission.

Arrivals & Departures

Arrivals

Donna M. Albertus.....Nuclear Energy
Millicent J. Baggett.....Applied Math.
Neil V. Baggett.....Director's Ofc.
William T. Banfi.....Accelerator
Richard W. Biscardi.....Accelerator
Alina R. Commerford.....Medical
Peter P. De Leo.....Physics
Andrew J. Feldman.....Contr. & Proc.
Ronald S. Hauser.....Central Shops
James J. Jonke.....Accelerator
Robert J. Le Roy.....Accelerator
Daniel M. Sheppard.....Central Shops
Yona Siderer.....Biology

Departures

Paul M. Curtis.....Chemistry
Deborah M. Fannan.....Central Shops
Frank R. Garafola.....Physics
Cheryln Horne.....Applied Math.
Deborah A. Jones.....Applied Math.
Martin W. Kendig.....Nuclear Energy
Clifford Schnepf.....Nuclear Energy
Stephen L. Nicolosi.....Nuclear Energy
Richard J. Sutter.....Physics
William R. Wilson.....Reactor

NYC Train Trip

The Hospitality Committee is planning a group railroad trip to the city on Wednesday, June 18. Departure will be at 7:55 a.m. from the Patchogue LIRR station. Round-trip fare is $2.45, children under six years ride free.

Reserve a ticket by sending your fare through the U.S. mail to P.O. Box 322, Upton, New York 11973, no later than **Thursday** June 12. Make checks payable to "Brookhaven National Laboratory." Your tickets will be given to you on the train. Refunds will be made only if cancellations are received by the Friday preceding the scheduled trip.

Volleyball

The season's end volleyball awards party is being planned for Friday, June 20, at 5:00 p.m. in the Recreation Building.

All team members are invited to take part in the festivities, which will include a cold buffet and drinks.

If you have any questions call your team captain, or Ken Sutter, Volleyball Committee Chairman.

Motorcycle Club

The last meeting before our summer break is Monday, June 9 at 5:15 p.m. in the Recreation Building. Let's get together on ideas for warm weather fun.

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Bicycling

The BNL Spring Race is "go" for June 8, with registration from 8:30 a.m., the two-lap bunch start at 9:00 a.m., and the single lap, 16 mile time trials at 9:10. The starting point is the BNL North Gate on Wm. Floyd Parkway.

Medallions will be awarded for best time in 6 categories in the time trials: junior (under 16), senior and veteran (40 or over), men and women, and one for best time prediction (no watches allowed). In the bunch start, medallions go to the first three places, men and women, and one for best lap. Since only experienced riders are expected in this event, there are no age categories. In addition, certificates will be sent to all who finish either event.

Bowling

Approximately 200 BNL bowlers and their guests gathered at the Brookhaven Center on May 30 to honor the champions of the various BNL Bowling Leagues. Thanks to the outstanding planning and work by Betty Jellett, Committee Chairwoman, and Dick Larsen, President Bera Bowling Board, this year's party was a huge success.

Applications for next season must be submitted by June 30, and can be obtained from the various league secretaries or at the Bera Sales Office located in the Cafeteria.

Cafeteria Menu

Week Ending June 13, 1980

Monday, June 9		
Chicken rice soup	(cup)	.40
	(bowl)	.50
Batter fried steak & 1 veg.		1.50
Franks & beans		1.35
Hot Deli – Pastrami	(on bread)	1.40
	(on roll)	1.50
Tuesday, June 10		
Navy bean soup	(cup)	.40
	(bowl)	.50
Roast chicken w/stuffing & 1 veg.		1.45
Chopped steak & 1 veg.		1.40
Hot Deli – French toasted grilled ham & cheese		1.35
Wednesday, June 11		
Clam & celery soup	(cup)	.45
	(bowl)	.55
Fish & chips		1.40
Saga's homemade lasagna & 1 veg.		1.40
Hot Deli – Philadelphia steak & cheese hoagie		1.50
Thursday, June 12		
Cheese chowder	(cup)	.45
	(bowl)	.55
Chicken pattie parmigiana & 1 veg.		1.45
Corned beef & cabbage		1.45
Hot Deli – Beef taco stroller		1.50
Friday, June 13		
Fish chowder	(cup)	.45
	(bowl)	.55
Beef sukiyaki on toasted Chinese noodles		1.45
Fish cakes w/noodles and cream sauce		1.40
Hot Deli – Hot Italian sausage & pepper hero	(on bread)	1.35
	(on roll)	1.45

R/C Aircraft Club

Members are urged to attend a meeting on Thursday, June 12, at noon in room D, Berkner Hall. Among the subjects to be discussed will be another bulk fuel purchase. Also, volunteers are needed to help with the displays and answer questions at the show on June 20. So mark your calendar. For information call Bob Larson, Ext. 4656, Jim Durnan, Ext. 2485, or John Nicolellis, Ext. 4243.

Mountain Club

The Mountain Club will meet on June 10 at 7:30 p.m. in the North Room of the Brookhaven Center. Anyone interested in the Delaware River canoe trip, the weekend of June 21, should attend the meeting.

Softball

League I

Ravens 10 - Blue Jays 8

The Ravens used their big hits to good advantage, while the Blue Jays were satisfied with the singles. LeRoy James was 2 for 2 with a home run plus 2 walks. Dennis Hall had a 2 run homer and Ed Taylor was 3 for 4. Nick Pisco was 4 for 4 for the Jays.

Six Pax 8 - Deegenerates 4

After the first inning the Deegenerates were not able to put an offense together. Meanwhile Brian Briscoe was having a 4 for 4 evening and Ralph Brown had a home run for the Pax.

Phoubars 19 - Source I 10

The Phoubars had their hitting shoes on. Garry Millensen had 4 hits including a home run. "Bucky" Buckman had 3 hits including a home run. Jim Rowehl had a home run.

League II

Titans 28 - Cardinals 3
AMD Bombers 14 - Moles 6
Roga 27 - Dirty Sox 5

League III

Huff & Puff 16 - Brewmasters 14

Outstanding defense by John Reed gave Huff & Puff the victory in a close game.

Brewmasters 8 - Ice Pops 5

A 7 run rally in the 6th inning capped off by a home run by Lon Cannizzo gave the Brewmasters the victory.

Nuke Powers 16 - Huff & Puff 9

Great pitching by Bob Von Hollen was the difference as the Nuke Powers came on strong. A home run by Mel Bonnano put the Nuke Powers ahead to stay.

Big Sticks 31 - Binary Bombers 6

13 runs in the first inning and home runs by Kutchera, Miller, Lettieri and McCafferty helped the Sticks to bomb the Bombers.

Medical 12 - Lights Out 11

A tremendous home run in the 7th inning by John Elmore brought Medical from behind to douse the Lights.

League IV

E-Z Riders 10 - Thrids 5

Larry Musso ended the game with a fantastic play. A great team effort.

Diamonds 13 - Random Sample 4

Home runs by Ken Asselta and Ted Erickson, good hitting by Ellen Gannan and 3 nice fielding plays by Linda Asselta led the Diamonds to victory.

Survivors 22 - Turkeys 6

Bootie Woodson and Ken Sutter had home runs. Jackie Larrie and Ken Sutter went 4 for 4.

League V

Who Cares 18 - Mudville Sluggers 10

No Names 15 - Source III 7

Herbie Harris went 3 for 4; John Hiemczyk went 2 for 4; Debbie Reeves and Mitch Perrier went 2 for 2. Seven runs in the 2nd inning and 5 runs in the 4th led the No Names to their victory.

TNT 25 - No Feedback 10
TNT 10 - Who's On First 6

Bob Larson built this quarter scale biplane. It's modeled after biplanes of the early 1900's. The double wings gave planes of that era extra lift to compensate for low-powered engines. Larson's biplane will be on display at the static show sponsored by the BNL Radio Control Model Aircraft Club on Friday, June 20, at Berkner Hall. —photo by Humphrey

No Strings Attached

They call themselves Sunday flyers. But although they are not pilots, they fly model planes that are no different from pilot-operated, small aricraft. In fact, members of the BNL Radio Control Model Aircraft Club build and fly planes that have rudders, elevators, ailerons, throttles, and even retractable landing gear.

The seventeen club members hold a variety of jobs around site. What brings them together in this sport is the pleasure of building their own aircraft and the challenge of flying them.

Bob Larson, club president, says that flying these model planes by radio control is quite different from sitting in the pilot seat of a regular aircraft. Since the planes move in all directions relative to the flyer, and have so many controllable features, great skill is required to fly them. Larson estimates that it takes 20 hours to learn basic flying techniques like taking off and landing. Trick flying takes many more hours of practice.

Most club members build their planes out of balsa wood kits. Larson says that a simple kit model takes about 30 hours to build. But since not all designs are available in kit form, some people take the time to build from scratch. Larson has even wired all the electronics himself, although most people buy a radio set ready to install. According to Larson, an average beginner's kit costs about $30 and the electronics gadgetry costs about $200. The radios are generally interchangeable among planes.

According to Jim Durnan, vice president, club members are constantly building new planes. They like to have planes of different designs. But they also build out of necessity, because planes do crash occasionally. Even mid-air collisions sometimes occur. Most of the time, however, crashes are due to mechanical or electrical failures.

The model planes run on a mixture of methanol, castor oil, and nitro methane. Methanol is a fuel and castor oil is a lubricant. Nitro methane adds richness to the mixture for more power and cooler running.

A typical flight lasts about 15 minutes, although some of the really small planes carry only about one-half ounce of fuel and fly only three to four minutes.

Club members fly year round, except when it's raining or snowing. In the dead of winter, they even put skiis on their planes so they can take off and land in the snow.

They use a field out in the east end of the Lab site. In good weather, a group of them can be found flying their planes almost every lunch hour.

On Friday, June 20, club members will put on a static show at Berkner Hall, Rooms B and C, from 11 a.m. to 2 p.m. Ten to fifteen planes will be displayed, including a quarter scale biplane and a powered glider. The glider has an eight-foot wing span. Once aloft it's flown on thermal air-currents.

Durnan says that the static show is a good introduction to the sport. Club members will be on hand to answer questions.

Runners' Corner

An overcast, drizzling day presented great running weather for the 258 runners at the annual BNL Spring Roadraces. Justin Gubbins and Bob Moritz led 100 finishers across the line in the 15 km event, setting a new course record of 51:02. The top woman runner, Janice Cross of Port Jefferson, also set a new record running the course in 61:53. Jerry Sbarra (61:32) and Jackie Howe (72:17) were the top BERA male and female finishers.

In the 5 km event, 158 runners turned out. Brian Mangham raced to the overall men's championship in 15:32, while Susan Gill, daughter of Ed Gill (Accel) led all women finishers in 20:03. John Millner (18:51) was the first BERA male to finish. Complete race results will be mailed to all participants and published in the next Runaround.

The BNL runners showed their overall team strength by racing to the Belle Terre Team championship on May 25. The team of Ted Landry (2), Curt Fincher (7), John Ferrero (10), Dick Fuller (17), and John Brodowski (20) bested a strong field including the Gubbins Racing Team. Other strong BNL finishers on the hilly course were Bill Thomlinson, Jerry Sbarra, Elaine Landry, Ed Gill, Don MacKenzie, Leif Ahrens, Brian Morris and Jack Brennan. Individual trophy winners included the Landrys, Fuller, Brodowski, Brennan and MacKenzie.

In marathon news, 15 BNLers competed in the Newsday Long Island Marathon with Curt Fincher (2:53:04) and Jerry Hastings (2:53:54) leading the way. Many of the BNL runners raced to their best performances:

John Brodowski	3:07:30
Bill Thomlinson	3:16:34
Jerry Sbarra	3:19:00
Sushil Satija	3:24:28
Terry Frei	3:27:00
Dennis Nordstrum	3:40:39
Dave Penoyar	4:01:50
Jim Vaughn	4:08:49
Karen Watts	4:20:03
Ed MacDougall	4:27:54
Jack Baer	4:40:30
Brian Morris	4:57:11
Art Harris	5:10:04

Meanwhile, at the Boston Marathon, Gary Struvz cruised to a 3:03 time under hot, sunny skies.

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.

The determination of the best-qualified candidate for available positions will be based upon education, experience and other job-related criteria. Such factors will be evaluated and measured against the demonstrable requirements of the available vacancy, as well as the Laboratory's Affirmative Action objectives.

The Laboratory is committed to a policy of Equal Opportunity in its selection and placement of personnel. Its objective is equality of opportunity in employment, training, and promotion without regard to race, color, religion, national origin, sex, age or handicap.

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. 2882.

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

1368. MEDICAL ASSOCIATE - Requires BS in microbiology or medical technology or equivalent experience in a clinical microbiology laboratory. May be required to work occasional weekend duty. Will work as a technologist in the clinical bacteriology laboratory of the research project. Medical Department.

1369. ENGINEERING ASSOCIATE - Requires MS degree or equivalent in civil or mechanical engineering. Familiarity with reference energy systems construction, basic statistical analysis, and energy data soures is essential. Knowledge of fossil and/or solar energy technologies is desirable. Will work on a variety of regional and international energy assessments for the Regional Studies Group in the National Center for Analysis of Energy Systems. Department of Energy and Environment.

1370. TECHNICIAN POSITION - Involves mechanical testing of materials, preparation and examination of samples, operating of furnaces and pressure vessels. Should also be familiar with the use of electronic equipment and chemicals. AAS degree or experience in metallography is desirable. Department of Nuclear Energy.

1371. REACTOR STANDARDS ENGINEER - BS or equivalent required. Should have reactor operating and management experience as well as experience in the application of nuclear standards (ANS, ANSI, IEEE, RDT), Regulatory Guides and Regulations. Requires excellent technical writing skills. Reactor Division.

Autos & Auto Supplies

73 VW 412 WGN - orig owner, maint manual, 80,000 mi. $1800. Vin, 281-9411.

JEEP HARD TOP - Ext. 3267.

74 CHRYSLER NEWPORT - needs starter, rear exh, $500; (2) 15" VW rims, 5 holes, $7. 727-5912.

70 FORD MAVERICK - new batt, a/t, good running cond. Asking $400. 929-4133.

73 PONTIAC FIREBIRD - 350 eng, a/t, ps/pb, dk green, good cond. $2000. 928-8522.

77 GT TOYOTA CELICA Q/L - 5 spd, std trans, st tape, excel cond, 40,000 mi. Fraser, 475-3848.

72 CHEVELLE - 62,000 mi, ps/pb, a/c. Asking $750. Ext. 2023, 732-8241.

74 260-Z 2+2 - 67,000 mi, luxury + performance. $4000. Ext. 3591, 265-0501.

78 DATSUN 510 - 4 dr, a/t, 20,000 mi, Blaupunkt stereo, new tires. $4800. Joe, Ext. 4447, Ext. 2512 after 5.

72 CHEVY STA WGN - ps/pb, new brakes/batt/tires (2). $650. Len, Ext. 4487.

70 CHRYSLER - a/t, ps/pb, new trans, 6 tires, 93,000 orig mi, 2nd owner. 669-9202.

73 DUSTER - 340, auto, flr, posi, headers, mags, 46,400 mi. 821-0144 after 5:30.

76 DATSUN PICKUP - w/cap, s/t, AM/FM radio, asking $2500; 80 Chevy Citation, V6, 3000 mi, p/s, a/t, polyglycoat Rusty Jones, asking $5700. 331-1847 eves.

74 CUTLASS SALON - p/s, p/w, a/c, rear defrost, tilt wheel, good cond. $1500. Debbie, Ext. 7908.

67 CHEVY PICKUP - 327-V8, a/c, a/t, camper cap, fin inside, excel cond. Reasonable. 979-6675.

TIRE - F60-15, brand new, polyglas, on Chevy rim. $35. Joe, Ext. 2005.

78 CAMARO LT - 350, 4 spd, ps/pb, blk/red int, T-roof, rear spoiler, posi rear, pinstriping, AM/FM-8 trk stereo, 60 radials. $5200. Gary, 281-3850.

73 CHEVY BLAZER - std drive, good mech cond. $900. 751-0833 after 6.

TIRES - (2) 670-15 on Ford rims. $15. Bookless, Ext. 4510.

69 FORD FAIRLANE - 4 dr sedan, a/t, ps/pb, 302-V8, AM radio, new batt, running. $200. 736-2534 after 6.

76 BUICK SPECIAL - V6, ps/pb, AM/FM, orig owner. Ext. 3487, 273-7743 after 6.

73 FORD GALAXIE 500 - 4 dr, r/h, a/t, ps/pb, a/c, stereo AM/FM radio-8 trk, good tires, paint, 59,000 mi. $1350. Ext. 4532, 277-4091.

75 CAMARO TYPE LT - all pwr, tilt wheel, leather int, new tires, rims & shocks, garaged 2 yrs, 29,000 mi. 878-0516.

TIRE - 6.00-14, 6-ply rating, H.T. nylon for Toyota, Datsun pickup. $11. Tim, Ext. 7982, 727-7741 after 6.

Boats & Marine Supplies

OUTBOARD MOTOR - Eska 3.5 hp. $60. Ext. 4767, 363-2796.

20' SHARPI - all glass inside & out, self bailing 85 hp Merc outboard. Ext. 3284, 924-6172 after 5:30.

20' COBIA - fiberglass cabin, 75 Johnson 115 hp outboard, excel. $3450 or offer. 286-9260 eves.

OUTBOARD MOTORS - Evinrude 30 hp compl rebuilt & tuned, $225; Evinrude 7½ hp reconditioned & tuned, $175; both excel. Ext. 2416, 265-5218.

22' CHRIS CRAFT - 6 cyl motor. $200. 286-9197.

OUTBOARD ENG - 25 hp Evinrude 1977, $550. John, Ext. 4724, 588-7224.

SAILFISH - fiberglass, mahog int. $250. Sue, 286-0407.

115 HP EVINRUDE - low hrs, excel cond. $700. Bob, Ext. 3309.

10' HYDROPLANE - 8' hydroplane; 2 Hurricane Mercurys; many extras. Best offer. 286-9197.

DEPTH FINDER - APELCO Analog, readout 0-120'. $40. 744-5867.

MERCURY OUTBOARD - gas tank. $15. Ext. 3354.

16' FIBERGLASS RUNABOUT - 40 hp Johnson, recently overhauled, elec start, trailer. $1000. 728-8584 after 5.

16' PEN YAN MARQUIS - 75 hp Evinrude eng, 1979 Shoreline trailer, tanks, canvas, skiis, extras, good cond, ready for water. $1350. 924-3581.

1961 THOMPSON I/O - w/trailer, Volvo, eng, very good cond, ready for water. Asking $1250. S. Waski, Ext. 3284, 929-4787.

CLAM BOAT - 16' Garvey, fiberglass bottom, 1975 40 hp elec start Mercury w/full controls. $990. Ext. 4309.

SUNFISH - mint cond, garaged. $525. Brian, Ext. 4121, 757-1581.

GRAY MARINE - 4-75 eng manual, trans gauges, shaft, prop. $350. Ext. 4028, 661-9155 after 5.

18' THUNDERBIRD CUDDY - fiberglass, 115 hp Johnson, navy top, equipment, 4 wheel tilt trailer. Hank, 286-9659 eves.

FLASHING DEPTH GAUGE - Heath, 60 & 240 range, excel cond. $45. Ext. 2610, 744-5709.

Yard Sales

MILLER PLACE - 386 Radio Ave, Sun June 8, 10 a.m., 3 families, clothing, household, plant items & more.

PATCHOGUE - 131 Jennings Ave, June 7-8, 10 a.m. 6 p.m., 2 families, many items. For info call Marty, Ext. 3910.

Miscellaneous

MARIGOLD PLANTS - mixed colors, $1.10 doz., deliv every Tues. Bill Stars, Ext. 4278, 298-9648 eves.

LG WOODEN TOY BOX - w/cushion top. $15. Ext. 4592.

SCIENCE - 1972-1979 inclusive, make offer. Anne, Ext. 3404, 286-3764.

19" B/W TV - old but working. $15. Fran, Ext. 3379, 589-3485 eves & weekends.

TENNIS RACQUET - Wilson wood, light wgt, used 1 summer. $10. Debbie, Ext. 7908.

FISH AQUARIUM - compl set-up w/heavy metal stand w/shelf, chrome cover w/fluorescent lamp, filter, heater, extras. $25. Ext. 3771, 878-1471.

8-TRK RECORDER - Audiovox. George, Ext. 3783.

TRIPOD - 5'; also 3-phase, 10KW elec heater; best offer. J. Skora, Ext. 2819.

19" GE COLOR TV - table model, new picture tube, tuner. $80. Joe, Ext. 4581, 286-9390.

LA-Z-BOY RECLINER - rocker, avocado, $75; dinette, round woodgrain formica table w/4 swivel bckt chairs, $75. Jack, 475-7067.

BABY ITEMS - 2 pine bar stools, twin bed light fixtures, etc. 929-6748.

MEN'S BICYCLE - single spd, 26", $15; hand vacuum, 110V, $5. Walter, Ext. 3397.

STRAWBERRIES - pick your own, first picking of field, baskets extra, call for day & time field will be open. Jim, 289-0876, 286-0024.

GOULD JET PUMP - 1 hp, 115/230V, back pressure valve. $125. Joe, Ext. 2975.

PORTABLE WASHING MACHINE - very good cond, was $280 new. $115. Ext. 7699, 744-7153.

2 SINGLE BEDS - w/box springs & matt, dresser, cheap. Ady, Ext. 4531/7152.

CRIB - full size, good cond. $25. 727-5819 after 6.

KITTENS - 3 males, 1 blk & white, 1 striped, 1 pure gray. Free. Joyce, Ext. 4105.

SEARS ELEC DRYER - 220V permanent press, cotton, air. $35. Larry, 654-1945.

OLYMPUS FLASH - Auto 310, absolutely perf cond, w/instructions & box, excel. $80. Louise, Ext. 3617.

GE WASHING MACHINE - heavy duty, $30; 30"x20" bathrm vanity, new, $20. Dee, Ext. 3675, 475-8008.

DUTCH RABBIT BABIES - $2.50 ea. 878-2372.

20" BICYCLE - girl's 3 spd, banana seat Schwinn, needs minor repair, good cond. $15. 265-1072.

KEROSENE HEATERS - buy now, save on fall price increases, economical, clean, efficient heating units. 567-6821.

LAWNMOWER - Toro ride-on, old but runs well. $50. Ken, 924-3756.

AIR COND - window unit, $75; CB radio & trans, RCA 14T260, $50; Regency 4 channel scanner, $40. A. Muller, Ext. 3057, 878-0357.

TURNTABLE - Garrard MII40, $20; ski boots, buckle ladies 9½M, $20; ladies lace 9½M & 9N, men's 12M & 9½M, all w/carriers, $5/pr. 924-5192.

BRUNSWICK POOL TABLE - full 1" slate, other features, all access, excel cond. Joyce, 724-0564 after 5.

DOBERMAN PUPPIES - AKC, blk, excel disposition & line, both parents on premises. 727-7185.

CASEMENT A/C - 12,000 BTU, 230V, $120; 30 gal fish tank w/stand, compl set-up, $60. Larry, Ext. 3365, 698-8009 after 6.

BUYING DOLLS & TEDDY BEARS - must be old or unusual. 475-4199.

RIFLE - ERMA EM1, semi-auto carbine, cal 22 L.R. $125. Hilton, Ext. 3354.

SILVER TOY POODLE - female, for adoption to good home; pine hooded cradle, $75; 2 van bench seats, $15 ea; 9/10 C diamond solitaire, $250. Marisa, Ext. 2077.

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

LOTS FOR SALE - 115'×175' located in Ronkonkoma; 100'x100' located in Shirley, south of Wm Floyd. 281-1599.

CENTRAL ISLIP NORTH - 1 acre, hi-ranch, 8 rms, 1½ baths, 24x28 sunken patio, possible M/D, many extras. Yani, Ext. 2514, 234-8564.

MEDFORD - close to LIE, mother/daughter, all newly remodeled on ¾ acre incl buildable lot, upstairs 3 bedrms, DR/LR w/fp & w/w down stairs, eik, 1 bedrm, L/R, sep elec & heat. $53,000. 475-2769 after 5.

SHOREHAM - 4 bedrm colonial, eik, D/R, L/R, fam rm, 2½ baths, 1 acre fenced & landscaped, 2-car gar, full bsmt. Priced to sell. Joann, 744-2821.

LAKE GROVE - lg home, assumable 8½% mtg, 6 bedrms, 3 baths, eik, L/R, D/R, den, plus sep 3 rm apt for income or M/D, 3-zone heat, fully insul, Sachem schools. $56,000. 585-5154 eves.

BELLPORT - 3 bedrm house, bayview, split level w/lg den on lower level leading to prvt back yard, 2 baths, 2 fp, eik, D/R, gar, avail June 15. Ext. 4207.

CENTER MORICHES - prvt 3 bedrm house, waterview, fp, eik. $32,000. 878-4361.

BELLPORT SOUTH - immac Dutch colonial, 4 bedrms, 1½ baths, landscaped acre, garden, fruit trees, play house, walk to beach, shops & golf, gas heat, city water. 286-2320.

BAYPORT SOUTH - 3-4 bedrms, L/R, 22x24 fam rm, fp, a/c, modern eik, efficient oil-hw heat, piped gas installed, lg fenced, landscaped yard. $56,500. 472-1012.

MEDFORD - 8½ assumable mtg, 3 bedrms, L/R, D/R, 2 baths, 2-car gar, fp, bar, lots of extras, fenced yard, negotiable rate. $55,000. Joan, Ext. 7981, 286-0742 after 6.

CENTEREACH - immac hi-ranch, 4 bedrms, 1½ baths, all appl, a/c, gas heat, coal stove, fenced yard, 8x10 wood shed, taxes $1520, many extras. Larry, Ext. 3365, 698-8009 after 6.

MASTIC BEACH - 4 bedrm cape, form D/R, eik, L/R w/Franklin stove, shed, encl porch, 160x100, taxes $1000/yr, near water & stores, Farmers 8½%mtg. $28,000. 281-0360.

CENTER MORICHES - L-ranch, full bsmt, fp & wood stove, w/w, a/c, D/W, refrig, dbl oven, newly decorated fenced yard pool, landscaped, s/s, near beach & marina, 20 min to Lab, 8% mtg. $48,500. 878-4984.

SOUND BEACH - 9 yr old cedar ranch on ¼ acre, 3 bedrms, full bsmt, OHW heat, re-insul attic, oak floors, deck, shed, stockade fence, great starter home. $33,500 FHA avail. Dan, Ext. 2012, 744-6148.

BAYPORT - ½ acre, close to everything, gas heat, 3 bedrm ranch, 1½ baths, sun rm alum siding, many extras. Ext. 4223, 472-1216.

HOUSE - Pt Jefferson, Setauket, Stony Brook, quiet area, 3-4 bedrms, D/R, eik, bsmt, $50,000-$65,000, lg down payment. Jim, Ext. 3501, 928-6491 eves.

PROPERTY FOR SALE - Wading River, N of 25A, exclusive area, lovely wooded building plot, slightly under 2 acres. Owner asking $20,000. 928-0158, no brokers.

ROCKY POINT - 3 bedrms, full bsmt, gar, fenced-in prop, s/s, ranch, 4 yrs old. $37,000. 744-2288.

CENTER MORICHES - spacious 4 bedrms, 2 baths, L/R, w/fp, lg country kit, att 3 rm apt/fp, full bsmt, lovely grounds, 1¼ acre/waterfront. Low 80's. Ext. 4058, 878-0642.

BELLPORT VILLAGE - 3 bedrm ranch, lg eik, att gar, patio, stockade fenced rear yard. $36,000. 286-0795.

WESTHAMPTON - Remsenburg area, cape cod, cedar shingles, 3 bedrms, 2 baths, lg eik, fam rm, deck, fp low taxes. $65,000. Ext. 4396, 325-8158.

MASTIC BEACH - 3 bedrm ranch, corner lot, roofed patio, pleasant loc near water. Low 30's. 281-7531.

For Rent

WADING RIVER - historic, 3 bedrms, lg kit w/high beamed ceiling, fp, recent re-insulation, ¼ acre, year-round rental, summer rental 8/1/80-Labor Day considered. $400/mo. Ext. 3974, 929-4068.

MIDDLE ISLAND - 6 mi from Lab, condo-townhouse, 3 bedrms, 2 baths, 5 appl, use of club house, swimming pool, tennis court. Franz, Ext. 4337, 744-3235 eves.

PORT JEFF HARBOR - 3 bedrm house in ¾ acre wooded land, prvt beach, walking distance to country club. $500/mo + util, starting July 1, 1980. 331-1788 after 6.

RIVERHEAD - 2 bedrm house, no pets. $230/mo, util extra, 1 mo security. 727-5621.

N. PATCHOGUE - new 2½ rm apt, eik, full bath, free Cablevision, prvt ent, 15 min from Lab, furn/unfurn, working couple or single female only. $250 incl util. 654-2831.

POCONOS - chalet in prvt community, sleeps 6, tennis, hiking, swimming, riding, boating nearby, by week or weekend. 289-2159 after 6.

2 SM BEDRM HOUSE - 15 min from Lab. $250/mo + 1 mo security. 878-1915 after 6.

MASTIC BEACH - 5 rm house, fenced yard. $250 + util. 281-8538.

Wanted

BICYCLE - men's 26" std bike. Ext. 4846, 363-6940 after 5.

MATURE WOMEN - to babysit for 1½ & 3½ yr old, 8:00-4:30, M-Fri, our house, must be dependable, ref. 878-4664 after 5.

BUNK BEDS - to buy (reasonable) or borrow (if not for sale, June-Sept). Louise, 878-4864.

HOUSEKEEPER - wanted for Sept, teacher hours, live in or out, Shoreham area. 744-6118.

MANUAL - mechanical or owner's for 1961 Messerschmidt car, in any language. Eric, Ext. 2973 after 5.

FURN HOUSE - 2 or 3 bedrm, for July, Bellport vicinity. George, Ext. 7637, 286-2639.

CANOE PADDLES - new or used. Michele, Ext. 2927.

BOY'S BIKE - 20" single spd, reasonable. Janet, Ext. 2324, 475-7025.

ADULT SIZE TRICYCLE - inexpensive. 698-2114 after 6.

TRUNK - for college-bound student. Kurt, Ext. 4116.

PEREGO UMBRELLA STROLLER - mesh playpen; girl's clothing sizes infant thru 10. 298-4093.

SWIMMING POOL LINERS - old, torn, etc, for ecology project, will pick up liners. Ernie, Ext. 3357.

AUTO RADIATOR - any make. Ext. 2916.

UNFURN APT - 1 or 2 bedrm, near BNL. Ext. 2841.

CHEVY 6 CYL MOTOR - preferably late model 250 cid, price & cond negotiable. John, Ext. 4688.

HOUSE - 3 or more bedrms, w/bsmt, in S. Huntington/Melville area. Bill, Ext. 7688.

Car Pools

VAN POOL - from Miller Place to BNL. Don, Ext. 3284.

NORTHPORT AREA - Laurel & 25A, wish to share driving w/1 other. Ext. 2514.

BELLPORT - wish to join existing 4-5 man car pool beginning June 16, home on Country Greens Drive. George, Ext. 7654.

NYC - I am interested in joining/starting a car pool between NYC & BNL. S. Ghoshroy, Ext. 4641.

MATTITUCK/GREENPORT - car/driver needed to compl 5-person car pool. Bill Stars, Ext. 4278.

PATCHOGUE - Holbrook Rd area, join existing car pool. Dino, Ext. 2485.

LIE EXIT 41 - 1 or 2 people needed to continue car pool. Mike, Ext. 3340.

FARMINGVILLE - regular or occasional rider wanted for car pool (8:30-5:00). Walt, Ext. 2907/2913, 698-0576.

Lost & Found

LOST - motorcycle helmet, silver flake/blk, silver stars, flip frame, shield. Art, Ext. 4921.

Services

AUTO REFINISHING - all areas of work performed, discount rates for sm car refinishing. Ext. 2546, 744-4047.

HOUSE SITTING SERVICES - free, experienced, Lab vicinity, June, Aug only. J. Allentuck, Ext. 2059.

CAR WAXING - wash & wax. $20, your home or mine. Steve, Ext. 4297, 543-9008.

EXPERT TUTORING - math, French, German, elem subjects, certified teacher, my home. $10/hr. 941-4328.

FRESH CLAMS - $1.50/dozen. Ken, Ext. 3354, 654-2831.

KNIVES SHARPENED - on flat stone, a razor edge. Dave, Ext. 4755.

JEWELRY REPAIR - gold & silver jewelry repaired & polished. Dan, Ext. 3289, 938-3051 after 6.

FRESH FISH - caught daily, weakfish, blackfish, fluke, live wgt or fillet. Jim, 289-1117.

MOWING & OTHER SERVICES - you supply mower, I do mowing. 286-3742 after 6.

HARBOR FANTASIES - lessons & rentals, hobie cats, sunfish, wind surfers & water skiing. 324-9606 days.

COMPL LAWN MAINTENANCE - lawn mowing, spring clean-ups. Tony, 281-0350.

ASPHALT PAVING & SEALING - Bob, 475-4382.

Ads left out of this issue due to lack of space need not be re-submitted to appear in next week's issue. Please note that ads may not be more than 15 words long and must be received in the Bulletin office by 4:30 p.m. Friday, for inclusion in the following week's Bulletin.

Classified Ad Policy Deadline is 4:30 p.m. Friday for publication Friday of the next week.