

## Model Estimates Crop Losses

Four years ago, Paul Moskowitz wasn't studying crop damage. But because of a bit of intuition on his part, he is today.

Moskowitz is an environmental health scientist in the Biomedical and Environmental Assessment Division, DEE. In 1978, he obtained from the U.S. Environmental Protection Agency (EPA) a set of computer tapes containing a model that could be used to estimate effects of air pollutants on agricultural crops. He had a feeling crop damage was an upcoming issue, so he stored the tapes on a shelf.

Two years later, EPA called. Did he still have the tapes? Could he work on a new project for them?

EPA had funded a new program, called the National Crop Loss Assessment Network (NCLAN). A mix of federal and private research institutions, NCLAN was formed to assist EPA in assessing effects of ozone, sulfur dioxide and nitrogen dioxide air pollutants on crops.

As a first step in this program, EPA wanted the model updated. William Medeiros and Elizabeth Coveney were brought on to the project, and with Moskowitz, they put into the model more current agricultural and air quality statistics. Then, after reporting on their work to EPA, the trio abandoned the model.

According to Medeiros, it had some inherent problems. The estimates of crop loss in response to oxidant dose were based on subjective judgments rather than actual field measurements. Also, air pollution exposures were developed from an inaccurate estimation technique.

But in the process of trying to improve the model, notes Medeiros, they "brought together some fairly unique data bases and cleaned up some of the statistics." The group did more refining and finally produced a new model, which they call DAMAGE.

Using this model, they have estimated the national-level effect of oxidants on alfalfa production. And in continued support of NCLAN, Medeiros

has used DAMAGE to estimate effects of oxidants on soybeans, corn and wheat, for the states of Illinois, Indiana, Iowa, Mississippi and Ohio. NCLAN will use his results to analyze the economic costs and benefits of controlling air pollution.

The group has also used DAMAGE to assess national-level effects of acid rain on soybeans. "Acid rain is an international issue, and soybeans are the second largest cash crop in the U.S.," says Medeiros.

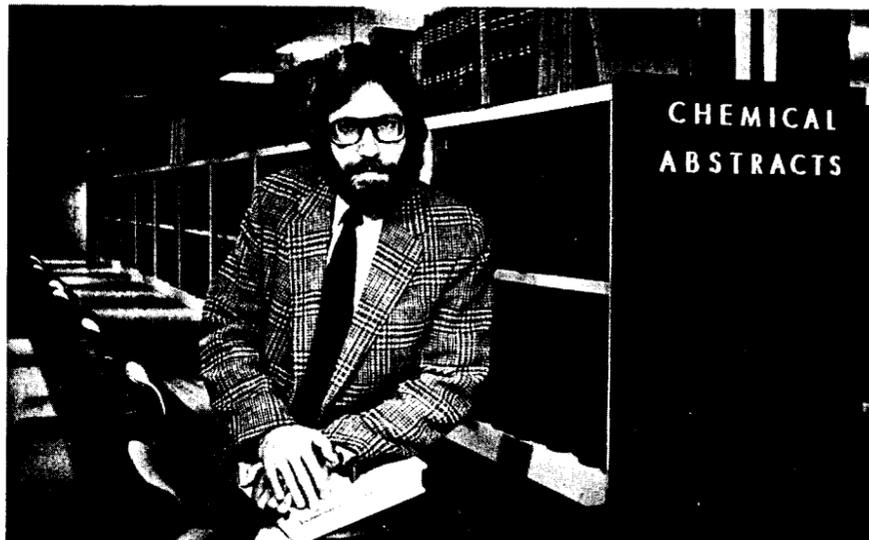
Recently, with supplemental funding from the DOE Office of Health and Environmental Research, the group used statistical approaches to examine the combined effects of oxidants and acid rain on soybean yield. At current pollution levels, the model estimates a five to ten percent reduction in yield, across the nation.

Coveney says they are confident of their numbers because the dose-response functions derived from their data bases have similar response characteristics to those derived from field experiments. For example, the model's estimates of crop loss due to acid rain are quite similar to numbers reported by Lance Evans and coworkers who do field work on acid rain and soybeans at BNL. Similar comparisons have also been made with NCLAN-generated data.

Moskowitz, Medeiros and Coveney never go out into the field to conduct their research. "We sit in offices and mix data sets," says Moskowitz. "Our talents lie in making the best use of data collected by others to examine relationships that haven't been directly studied." In this respect, the group's national estimates of crop loss are useful to regulatory and research agencies.

"EPA sets standards to protect public health and welfare, and included in their considerations is an implied trade-off of costs versus benefits. Our work provides direct support to these activities," says Moskowitz.

(Continued on page 2)



Ken Ryan

Doug Humphrey

## Library Services Grow

In the 21st Century B.C., an unidentified Babylonian established the earliest known library — a collection of clay tablets. As technologies developed, tablets were replaced with scrolls, then came bound books, periodicals and microfilm. Now, almost 4,200 years later, on the brink of 21st Century A.D., computers are changing libraries once again.

The BNL library system took a major step in this direction in 1980, by joining the OCLC Online Computer Library Center, Inc. Essentially, OCLC is a national network in which each of the titles held by its members is catalogued in great detail.

Not only does OCLC provide members with a means of locating titles on a national basis, but it also gives BNL a comprehensive data base. Research Library personnel, headed by Marilyn Galli, are now wrapping up a retrospective cataloguing of all BNL volumes. Ken Ryan, manager of the Technical Information Division (TID), said "The completion of this major objective will leave the BNL data base in excellent shape."

TID is responsible for research report processing and editing, as well as the main Research Library housed in Bldg. 477. In addition to the contents of the shelves there, the data base contains books found in the several special libraries and private collections scattered around the Lab site. "What we have is one massive data base that ties all the disparate libraries together electronically, if not administratively," said Ryan. "From here we can go in a number of different directions to manipulate the data. Some very useful products can be developed."

Most likely, the first such product will be a microfiche catalogue listing the contents of the data base — over 50,000 titles — and their locations on site. The next logical step would be to make this information available to Lab personnel on an on-line basis. Once that happens, a simple barcoding system, similar to that now used on grocery products, could be used for checking out books. In a scenario of the future, anyone in need of a particular book could sit at a terminal, check the data base and find out just where the book is — all in a matter of moments.

While the data base will help improve library users' access to books, another Research Library innovation will soon be helping to improve access to its collection of professional journals.

The Research Library presently subscribes to nearly 1000 journals, with another 1700 or so going to other on-site locations. "We are trying to

maintain a viable number of subscriptions," said Ryan, "and we have not cut any out; in fact, we just added some periodicals during our recent orders. But our space keeps getting less and less. And, since we must keep back issues for many years, we were running into real problems."

As a temporary solution, about 1000 shelves in Bldg. 477 were cleared of almost 20,000 journal volumes which were boxed and warehoused. Since then, users' requests for back issues have been handled on an individual basis, requiring that someone from the Research Library retrieve them from the warehouse. This obviously inefficient procedure will be alleviated within a month or so, when the journals are moved to the newly designated Library Annex in Bldg. 184.

With shelving and photocopier in place, the library annex, together with the Research Library, will give access to several decades of journal volumes. Beyond that, some journals can be consulted on microfilm. Microfiche records (a form of microfilm) have also "gotten the reports explosion under control," said Ryan. Over one-half million reports are now on file in the Research Library.

The improvements at the Research Library are all part of what Ryan called "an attempt to address the concerns of users." Ryan has been working at this since he came to BNL last February. "I believe in full service," he explained. "I want to encourage people to come through the door, to present their ideas and make their problems known. This is the role of a good librarian. We may not win the Nobel Prizes, but we can contribute to them."

The Research Library is generally open to users on evenings and weekends, as well as during regular working hours. For more information about using the library after hours, call Ext. 3483.

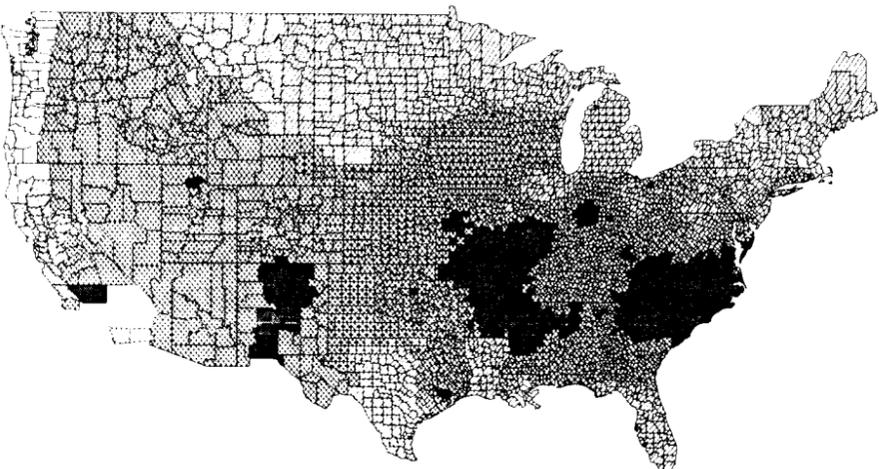
— Anita Cohen

For a look at BNL's special libraries, see the related story on page 2.



Mort Rosen

From left, Elizabeth Coveney, Paul Moskowitz and Skip Medeiros discuss the computer model, DAMAGE, they developed to assess effects of air pollution on crop yield.



Daily seasonal oxidant levels in the U.S. Darkest areas indicate greatest pollution. The model estimates that soybean yield in these areas would be reduced by 14%. Note that air quality estimates for southern California are excluded from this map because of the complexity of the meteorology in the area.

### BNL Lecture Rescheduled

John Weeks' lecture on reactor corrosion, "Can Hindsight Plus Research Improve Foresight?" has been rescheduled for Wednesday, October 6, at 8 p.m. in Berkner Hall. Also on the evening of the lecture, a buffet supper will be served at the Brookhaven Center at 6:30 p.m. The price is \$7.50 and reservations should be made by calling Ext. 3541 before 5 p.m. that day.

## Vacation Carryover

One of the Cost Cutting Committee's major recommendations will go into effect on September 25, 1983. As of that date, employees may carry over 31 days of vacation, rather than the current 36 days. This means that the Laboratory will save about \$1,500,000 in Fiscal Year 1983, and that vacation will be credited on the basis of the fiscal year, rather than the calendar year.

The question has been asked — how does this save money? In non-accounting terms, it goes like this. When an employee accrues a vacation day, the Lab must charge a day's salary to a vacation expense account and establish an escrow account. Consequently, all vacation earned, but not taken, is charged to the expense account and the amount is put into escrow. However, when an employee earns two days vacation and takes five days off, for instance, three day's pay is taken from the escrow account and credited to the expense account, thereby reducing the amount of money the Lab must keep in escrow.

This is the process by which the Lab will save about \$1,500,000 in FY 1983, when the vacation time used up will exceed that accumulated in the same period. Money can then be released from the escrow account and be well spent elsewhere.

## Inside Info

Betsy Sutherland, a biochemist in the Biology Department, has been appointed to the editorial board of the monthly journal *BioScience*. Sutherland replaces Richard Setlow, chairman of BNL's Biology Department, who represented the areas of molecular and cellular biology. Sutherland's current research focuses, in general, on the chemical changes produced in cellular constituents by ultraviolet light, and, more specifically, on the structure and mode of action of the *E. coli* photoreactivating enzyme.

## Crops

(Cont'd)

"At the same time, DOE is concerned about promoting energy technologies that are safe, from health and environmental perspectives," he adds. "Our analyses provide necessary information to make those decisions. This kind of modeling approach begins to place some perspective on the magnitude of crop loss associated with different air pollution levels. But even though we can estimate what the magnitude is, whether it's one percent, ten percent or a hundred percent, we cannot define what the regulatory or research response should be.

"We, as scientists, must provide administrators with the best information available, because, ultimately, decisions will be made. And as consumers, we will have to live with the benefits or costs associated with those decisions."

## Arrivals & Departures

### Arrivals

Harpal S. Arora ..... Nuclear Energy  
 Norman S. Cernyar ..... Accelerator  
 Carl J. Costantino ..... Nuclear Energy  
 Veronica J. Craig ..... Applied Math.  
 Jerry L. Gaeta ..... Ph. & Gr. Arts  
 Michael J. Levine ..... Medical  
 Michael C. Ogilvie ..... Physics  
 Michael T.A. Weinert ..... Physics  
 Kazutaka Yamamoto ..... Medical

### Departures

This list includes all employees who have terminated from the Laboratory, including retirees:  
 Frank Amendola ..... Medical  
 Christopher J. Lister ..... Physics  
 Stephen L. Padwa ..... Applied Math.

# Special Needs Served by Special Libraries

Every area of research has its special literature. When the books, journals, reports and other information that embody this subject are collected in one place, the result is a special library.

Harriet Fadem is the only TID-based branch librarian on site. She serves two special libraries at BNL, one in the Accelerator Department, Bldg. 911, and the other at the National Synchrotron Light Source, Bldg. 725. As she sees it, "A special library is very different from a public library, or even a university library. You are catering to a special group of people and, primarily, you are an information person."

The information people at the other special libraries on site are Donna Albertus of the Nuclear Safeguards Library in Bldg. 197C; Pat Aud, who services libraries for DEE's Energy Technology Division, Bldg. 120, and the National Center for the Analysis of Energy Systems, Bldg. 475; Sandi Lane, librarian for both DNE's Nuclear Waste Management Division, Bldg. 830, and HTGR Division, Bldg. 703; and Helen Todosow, who runs the Nuclear Safety Library in Bldg. 130 for the Department of Nuclear Energy.

Though these libraries cover a variety of subjects and most are not linked administratively, all the librarians on site work together in what TID manager Ken Ryan called, "a very good informal network." Lane summed it up when she said, "There is

good communication among all the librarians."

Computerization is one thing the librarians communicate about. Each librarian has a desk-top terminal from which she can conduct searches for information requested by a user. Instead of buying and shelving thousands of volumes, these librarians subscribe to information retrieval services, which supply data bases of information pertinent to their specialities.

A search for the right report or other information on a particular topic can take anywhere from a minute to an hour. "It's a matter of planning your strategy so you don't waste valuable on-line time," said Aud, "The hardest part is getting people to think of acceptable descriptive terms that will



Donna Albertus



Helen Todosow



Harriet Fadem

—photos by Rosen



Pat Aud (standing) helps library user B.J. Carreras.



Sandi Lane

get your search going in the right direction."

Searches can provide users with a great deal of information in a very short time. "We get 13 or 14 reference requests a day, and many of those involve searches," said Todosow. "We couldn't exist without computers."

As information people, the Lab's special librarians help their users in many other ways. "Sometimes I act as a clearing house," Fadem said. "Very often I'll put two people in touch with each other who have asked the same question. I also let people know what's new in the library. It doesn't do any good to put things on a shelf if no one knows it's there." And Albertus put it this way, "I do everything from ordering books to creating an in-house data base — I'm responsible for everything in the library. I try to know my users so I can understand what everyone needs. Every contact helps in this work."

And the work can be demanding. Todosow, who is assisted by Cathy Green, described her library as "a very busy place. Our users are meeting a deadline, so we are meeting a deadline. We usually feel it when something is 'hot.'" In general, this scene is typical of the on-site libraries. "There's a lot of concern here for the library," said Albertus, "and it's a continual meeting place for the group it serves." And describing the work she does with her assistants Mary McGrath (NWM) and Eileen Pinkston (HTGR), Lane said, "There's no tangible output in this field, so sometimes nobody really knows what you do. You just do it quietly and fast."

The daily activities of BNL's special librarians definitely contradict traditional stereotypes. "People have an image of a librarian as someone who holds onto old publications," said Aud. "That's a hard image to fight, but we've made a lot of progress. People are suddenly seeing us as more of a resource than a custodian. It's slowly evolving."

— Anita Cohen

## Equipment Demo

Data Systems Design, manufacturers of DEC Compatible and Multibus Winchester Disk, Floppy Disk, and Streaming Tape Systems, will present a technical seminar in the lobby of Berkner Hall on Tuesday, October 5, at 1:30 p.m. All are invited to attend.

## CREF Values

August	48.26	September	45.89
October	47.61	November	49.61
December	48.33	January	47.49
February	44.88	March	44.48
April	46.32	May	44.53
June	43.34	July	\$42.41

August \$47.05

## Looking For A Club? Take Your Pick.

When the workday's over at BNL, many Lab employees participate in one of the activities sponsored by BERA. So if you're a physicist who's also a camera buff, a secretary with a yen to learn judo, an engineer seeking bridge play-

ers, or anyone else with a specific interest, you'll probably find other BNL'ers who share your enthusiasm by checking out the groups listed here.

Activity	Description	Contact	
		Name	Phone
Aerobic Dance Club	Classes held 2-3 times per week.	Jayne Cutt	7597
Afro-American Culture Club	Meets regularly to promote cultural awareness and encourage inter-cultural exchange.	McHarrell Thomas	2963
Archery Club	Uses outdoor range year-round; provides free instruction to beginners.	Joseph Bauernfeind	5131
Art Committee	Organizes professional and employees' exhibits.	Eleanor Dahl/ Per Dahl	7125 3500
Astronomy Club	Shares interest in the skies through observation and lectures.	Cesar Sastre	4077
Aviation Club	Meets monthly to promote understanding, safety, enjoyment of flying; all are welcome.	Ronald Dobert	4082
Badminton Club	Plays year-round; holds winter tournaments in gym.	John Guthy	4411
Basketball League	Teams compete regularly in gym.	Stanley Gilbert	4445
Bowling League	Leagues bowl at local alleys, Sept.-April	Richard Larsen	3810
Bridge Club	Plays duplicate bridge weekly at Brookhaven Center	Colin Durston	2598
Camera Club	Meets monthly; uses club's darkroom facilities for black & white and color processing.	Lewis Jacobson	7636
Camping Club	Organizes campouts spring, summer, and fall, at Lab and off-site; holds monthly meetings.	Charles Watson	3254
Choral Group	Rehearses four-part harmony, particularly in Nov. & Dec. for annual Christmas concert.	John Weeks	2617
Concert Committee	Organizes series of music concerts at Berkner Hall	Donald Lazarus	4643
Cooking Exchange	Meets alternate Wednesdays, Oct.-May, for international cooking demonstrations.	Adrienne Usher	289-7658
Cricket Club	Plays at ball fields, spring, summer and fall.	David Cox	3818
Exercise Club	Informal exercises during noontime hour.	"Whitey" Caiazza	2913
Fly Tyers Club	Fresh-water fans meet weekly year-round.	John McCafferty	475-1008
French Club	Meets year-round for discussions, lectures, movies, dinner parties.	Michael Levine	4575
Golf League	Teams compete weekly; holds tournaments at local courses; May-August.	Ronald Webster	2845
Ham Radio Club	Uses club's transmitting equipment in Recreation Bldg., meets year round.	George Walzcyk	4243
Handball Club	Plays at noontime on courts at AGS Heliotron Area.	Gerald Bennett	7590
Judo Club	Meets weekly in gym.	Robert Marascia	4672
Microcomputer Club	Meets weekly to discuss growing microcomputer technology.	James Hainfeld	3372
Motorcycle Club	Plans frequent outings; meets monthly.	William Carapezza	2373
Mountain & Canoe Club	Plans year-round trips; meets as necessary.	Patrick Thompson	7635
Nursery School Committee	Operates classes for 3 and 4 year old children of Lab employees, Sept.-June.	Donna Miltenberger	924-0590
Quilting Club	Meets twice a month	Bernice Benz	928-1068
Racquetball Club	Uses Royal Racquetball Club courts in Coram.	Richard Horwitz	4134
R/C Model Aircraft Club	Flys radio-controlled model planes during scheduled weekends, April-Oct.	Ken Morton	7772
Rifle & Pistol Club	Holds shoots year-round at BNL range and elsewhere; meets monthly.	Otto Jacobi	4406
Runners Club	Schedules meets spring and fall; holds planning meetings as necessary.	Jeanne Penoyar	2634
Soccer League	Plays Mondays, 5:30 p.m. at ball fields; plays in gym during winter.	Kenneth Batchelor	4674
Softball League	Leagues play from May-Aug. on ball fields.	Charles Bohnenblusch	4758
Special Events Committee	Organizes events, including picnics, dinner-theatres, and contemporary entertainment.	Rosalie Piccione	3160
Table Tennis Club	Plays at noontime in Recreation Bldg.	Charles Zein	3950
Tennis Committee	Sets rules for court use; organizes tournaments.	Eena-Mai Franz	7103
Theater Group	Aims to present two full-scale productions each year.	Sandra Lane	7159
Touch Football League	Plays in ball fields, Sept.-Oct.	Edwin Taylor	7589
Volleyball League	Plays in gym, twice weekly, Nov.-March.	Dennis Weygand	3737

**BROOKHAVEN BULLETIN**

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### NYC Train Trip

The Hospitality Committee is planning a group railroad trip to New York City on Wednesday, October 6. Departure will be at 7:55 a.m. from the Patchogue LIRR station. Round-trip fare for adults is \$3.50; 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, September 30. Please make checks payable to "Brookhaven National Laboratory," and put the date of the trip, your BNL life number and your telephone number on the check. Your tickets will be given to you on the train. Refunds will be made only if cancellations are received by the Monday morning preceding the trip.

### Racquetball

Persons interested in playing racquetball should call Pam Brown on ext. 7108, or attend a meeting on September 28 at noon, in room 10, Bldg. 902B.

### Cafeteria Menu

#### Week Ending October 1, 1982

<b>Monday, September 27</b>	
Cream of mushroom soup	(cup) .65 (bowl) .75
Veal pattie Parmesan & 1 veg.	1.85
Ham & potato au gratin & 1 veg.	1.85
Hot Deli — Meatball hero	1.90
<b>Tuesday, September 28</b>	
Lentil soup	(cup) .65 (bowl) .75
Roast turkey w/stuffing & cranberry sauce	1.90
Corned beef & cabbage	1.90
Hot Deli — French toasted ham & cheese	1.75
<b>Wednesday, September 29</b>	
Beef noodle soup	(cup) .65 (bowl) .75
Hungarian beef on egg noodles	1.95
BBQ spare ribs & 1 veg.	1.90
Hot Deli — Top round of beef	(bread) 1.95 (roll) 2.05
<b>Thursday, September 30</b>	
Split pea soup	(cup) .65 (bowl) .75
Sautéd chicken breasts on white rice	1.90
Salisbury steak & 1 veg.	1.85
Hot Deli — Pastrami	(bread) 1.85 (roll) 1.95
<b>Friday, October 1</b>	
Fish chowder	(cup) .65 (bowl) .75
Beef hash & 1 veg.	1.80
Breaded fish fillet & 1 veg.	1.85
Hot Deli — Clam boat	1.90



Last week, Olga Betancourt and her friend, Nedy Santiago, were both interviewed for the "Speaking Out" feature. As things turned out in print, Olga's words were used with Nedy's picture. We regret the error and hereby try to rectify it — that's Olga on the left and Nedy on the right.

### Quilting Club

The BERA Quilting Club will meet on Tuesday, September 28, at 7 p.m. in the Recreation Building. Quilted and patchwork clothing will be the topic of discussion. Bring along any examples of this type of clothing which you have made. Also, if you wish, bring some handwork to do during the meeting.

New members are always welcome. For more information, contact Bernie Benz, 928-1068.

### Screen Strain

Eyestrain as a side effect of VDT use will be the topic of the September 29 meeting of the MICOM Users' Group at 2 p.m. in the Large Seminar Room, Bldg. 510A. Dr. Laura Sbarra, Head of Industrial Medicine, and a representative of the Safety and Environmental Protection Division, will present evidence on this subject and answer questions.

### Bowling

#### White League

High games were bowled by J. Griffin with a 203/220 for a 603 scratch series, F. Brown 214.

#### Red & Green League

R. Larsen had games of 237/204 for a 623 scratch series, K. Riker 224, K. Asselta 211/203, H. Marshall 210, T. Prach 207, R. Wiseman 203, J. Medaris 203, R. Jones 201.

#### Purple League

P. Wasson rolled a 210, J. Connelly 204/195 for a 553 scratch series, J. Pinelli 196.

#### Pink League

D. Johnson bowled a 207/519 scratch series, M-G Meier 194, C. Beckner 178.

### Motorcycle Club

The club will take a local ride on Monday, September 27, to explore some of the back roads through Manorville and Calverton, leaving from the cafeteria parking lot at 5:15 p.m.

### Runners' Corner

On Sunday, October 17, the BNL Roadrunners will hold the 11th Annual Fall Races. This series of races consists of:

30 kilometer prediction run to start at 8:30 a.m. (registration 7:30 - 8:15). Splits given at 10 km and 20 km. Finish times will be compared to estimated times given at registration.

10 kilometer and 5 kilometer fun runs to start at 9:30 a.m. (registration 8:00 - 9:15).

Except for the Jack Baer Memorial Awards to the first male and first female BERA member running in the 10k race, no awards will be given. Registration is free, as are refreshments. Races are run on accurate wheeled courses and timing is by Chronomix.

Anyone wanting to help with the race and/or further information can call Bill Thomlinson, Ext. 3937, or Gus Prince, Ext. 5079.

## 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. In keeping with the Affirmative Action plan, selection decisions are made without regard to age, race, color, religion, national origin, sex, handicap or veteran status.

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all non-scientific 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.

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.

The vacancies listed below have been exempted by the Director's Office from the current freeze on open requisitions.

**LABORATORY RECRUITMENT:** Opportunities for present Laboratory employees.

1758. SENIOR P&GA SPECIALIST, GROUP LEADER (Dark Room) - Photography and Graphic Arts Division.

1759. BUYER - Requires a BS in a business or engineering discipline, or equivalent, complemented by a minimum of 5 years' experience in subcontracting machine shop and electro-mechanical fabrication. Knowledge of government procurement regulations highly desirable. Duties include all phases of procurement process. Contracts & Procurement Division.

**OPEN RECRUITMENT:** Opportunities for present Laboratory employees and outside applicants.

1760. SENIOR STATIONARY ENGINEER - Requires demonstrated experience in the maintenance, repair and operation of high pressure boilers firing #6 fuel oil. Current stationary or marine engineer license is highly desirable. Plant Engineering Division.

### Autos & Auto Supplies

79 HONDA HAWK - motorcycle, 400cc, better than new, asking \$995. 588-0805 eves & weekends.

70 DODGE DART - slant 6 cyl., new brakes & exhaust system, \$700. 281-4392 days or 281-7200 after 5 p.m.

CAP - 8', aluminum door, windows, cabinet, roof rack, \$100 or best offer. 724-2886.

75 VW RABBIT - am/fm, radials, 28 mpg, good cond., \$1,600. 981-2192 after 5 p.m.

SNOW TIRES - w/rims, (2) GR-78x15, radials, almost new, \$75. Nick, Ext. 2524.

79 PLYMOUTH HORIZON - excel cond., a/t, am radio, \$3,800. Leo, Ext. 4615.

76 MUSTANG II - 4 cyl., 4 spd., 69,000 mi., 2 new tires, \$1,500. Lori, 286-8407.

77 AMC HORNET - hatchback, p/s, p/b, a/t, a/c, am/fm, good mech. cond., some body work, \$1,900. Leo, Ext. 4615.

78 DODGE MONACO - 2 dr., V8, a/c, new radial tires, 72,000 mi., good mpg, good cond., \$3,200. 286-8517 after 5:45 p.m.

80 SUZUKI TS - trail & street bike, 100cc, mint cond., 960 mi., asking \$650. Eric, 475-2946.

80 PONTIAC SUNBIRD - brown, a/t, a/c, am/fm, excel. mpg, 33,000 mi., excel. cond., \$4,800. 981-5993 after 6.

76 CHEVROLET PICKUP - C30, p/s, p/d/b, am/fm 8-track, low mi., new brakes & tires, excel. cond. 265-4715.

76 HONDA CB750K - garaged, low mi., show room cond., \$1,950. 265-4715.

75 CHEVY MONZA - 4 cyl., 4 spd., vinyl, radial, good mpg., excel. cond., \$1,250. Ext. 3047 or 924-7637.

1978 MERCURY BOBCAT - 4 cyl., a/t, great mi., mint, \$3,650. Mike Tesla, 422-1846.

77 KAWASAKI KZ650 - elect. ignition, Kerker headers, new rear tire, hwy. pegs, custom seat, sissy bar, excel. running, \$1,000. 281-4392.

71 PINTO PARTS - John, Ext. 4976 or 744-4386.

78 SCOTTSDALE K-20 CAMPER PACKAGE - loaded, 37K, 4 wheel drive, new plow & related equip., \$7,500. 281-4392.

VW RABBIT SEATS - bucket, black, best offer. Lloyd Davis, Ext. 3952/4803 or 325-0389.

78 MAZDA GLC - 4 cyl., a/t, am/fm, great mi., excel. cond. 928-6819 after 6 p.m.

73 NOVA HATCHBACK - am/fm cassette, mag wheels, excel. cond., \$1,550. Ext. 4120 or 736-1534 after 5.

78 VIKING POP-UP CAMPER - sink, stove, heater, awning, and other extras, immaculate cond., garaged, \$2,500. 728-0338.

80 MONTE CARLO - V6, buckets, p/s, p/b, radio, low mi., excel. cond., \$6,990. 473-0178 eves.

66 VW BUG - rebuilt engine, runs great, recently inspected, \$450 or best offer. Paul, Ext. 7644 or 744-2733.

77 HONDA - motorcycle, 400cc, Super Sport, garaged, like new cond., must sell, \$700. 281-2257 after 5 p.m.

80 SUZUKI GS1000L - shaft drive, custom seat, luggage rack, extras, mint cond., \$2,700. Ext. 7187 or 981-9474.

74 GREMLIN - stick shift, a/m radio, great mileage. 728-2223 after 6 p.m.

78 DODGE MONACO - 2 dr., V8, a/t, a/c, new radial tires, 72,000 mi., good mpg, good cond., \$3,200. 286-8517 after 5:45 p.m.

71 FORD TORINO - V8, 302 engine, a/c, 2 dr., excel. running cond., new trans., asking \$850. 924-6613.

75 AMC PACER - a/t, p/s, 6 cyl., 1/m 8-track, new tires, clean, mechanically sound, \$1,200. 586-2174 eves.

76 TRIUMPH SPITFIRE - convertible & factory hardtop, low 26,000 mi., luggage rack, \$3,500. 567-5619 eves.

68 GT FORD MUSTANG - runs well, good restoration vehicle, best offer. Tom, Ext. 3296 or 728-6438 eves.

81 FORD RADIO - am/fm, new \$167, selling for \$50. Pete, 472-1392 days or Ext. 3305 eves.

79 HONDA - CM400T, 2,000 mi., garaged, must sell, \$1,000. Ext. 7125.

69 BUICK - sports wagon, excel. running cond., new tires, brakes, radiator, \$600, avail. end of Sept. Ext. 2964.

FORD GENERATOR - 12V, \$20. Frank Rumph, Ext. 4581 or 588-3565.

74 OPEL - Manta Loxus, rebuilt engine, a/t, am/fm radio, new tires & muffler system, good gas mi., \$1,400. 475-3262 after 6 p.m.

79 HONDA - dirt bike, model Z50R, 50cc, hardly used, excel. cond., must sell, \$300. 878-0516.

76 CHEVETTE - auto., price negotiable. Gabriel, Ext. 3817.

80 DELTA-88 - diesel, a/c, p/s, p/b, cruise cont., many extras, 19,000 mi., \$6,200. AT9-0913 after 5 p.m.

56 FORD - truck (F-100) & parts; 74 Camaro parts; 68 GTO parts, must sell (cheap). Don or Fred Paf-frath, 499-1214.

72 CHEVY MALIBU - p/s, a/c, excel. running cond., \$850. 744-0106 after 6 p.m.

78 DODGE ASPEN - 6 cyl., auto., p/s, p/b, a/c, am/fm stereo cassette, \$2,700. 399-4972.

71 FORD LTD - new brakes, a/c, a/t, p/b, excel. cond., \$500; snow tires, B78-13, new, \$40/pr. Ext. 3606.

68 VW - auto., needs new muffler, \$300. 821-1704 days or eves.

76 FIAT - 131 Mirafiori, blue, 4 dr. sedan, new cond., true 36,000 mi., am/fm stereo, a/t, \$2,500. 273-5574 weekdays after 4 p.m.

BUICK TRANSMISSION - 56.57 dynaflo, ser. #1342992-6, \$175; Buick straight head, 8 cyl., 3-1/4 in. dia., ser. #1640827-2, \$100; Mercedes slant head, 6 cyl., complete except for valve cover, \$275; late 30's, early 40's Buick stand. trans., short tail, ser. #3170827-2, \$100. 878-0201.

68 AMC REBEL - auto., 6 cyl., new batt., (2) tires, brakes, 60,000 mi., some rust, \$450. Ext. 4695 or 744-1917.

72 DODGE POLARA - p/s, p/b, am/fm, excel. cond., \$650. Ext. 3738 or 3129 (home).

71 MERCURY COMET - 6 cyl., 95,000 mi., 22 mpg., very good cond., \$800. Joseph, Ext. 4789.

### Boat & Marine Supplies

TRAILER TIRE - brand new, \$20; #5-70-8 boat strap, \$5; Mercury gas can, \$8; box cleats & morse controls, make offer; Johnson prop, 40 HP, refinished, never used, \$25. 475-2998.

62 CHRIS CRAFT - wood cabin cruiser, 25'10", sleeps 4, full canvas back, 327 V8. Bill, 822-5144.

80 CRUISER - 20' Beachcomber, 150 HP Johnson, power trim/tilt, Cuddy Cabin, Porti-Potti, compass, horn, windshield, wipers, bilge pumps, full canvas, E-Z load trailer, elec. double cable winch, immaculate, \$11,500. 981-5993.

WOODEN BOAT - 28' Columbia, sleeps 4, Pace-maker 220FWC eng., depth finder, compass, CB, good cond., \$1,500. 399-2149.

WESTWIND - 17' w/60 HP Evinrude, good cond., extras, best offer, \$850. Damian, 744-5079.

TRAILER - for 14'-16' boat, good cond., new lights, \$125. Rick, Ext. 2907.

### Yard Sales

BAKE SALE - Center Moriches, corner R.R. Ave. & Main St., Sept. 25, 11 a.m.-5 p.m. Raindate, Oct. 2.

GARAGE SALE - Mt. Sinai, 46 W. Cliff Dr., 2 family, 9/25-9/26, 10 a.m.-4 p.m.

### Free

TWIN BED - box spring good, mattress soft. Ext. 7505 or 689-8605.

ALASKAN MALAMUTE - AKC, spayed female, beautiful, gentle, affectionate. 472-0029.

### Miscellaneous

KITCHEN CABINETS - solid pine (base & wall), custom built, wrought iron hardware, porcelain knobs, suspended drawers, excel. cond., simply don't fit new kitchen. David, Ext. 3576 or 286-8229.

HANG GLIDER - \$250; kayak, paddle & air bags, \$180; blank BASF cassette tapes, PRO II, CrO<sub>2</sub>, C-90, \$2.75 ea. Ext. 2521 or 928-8379.

DIAMOND SET - large, \$350; sterling silverware set of 8, \$1,250; men's/women's ring, \$75. 475-0144.

MAPLE TREES - 8', you dig; ceramic knobs; cabinet hinges & hardware. Walt, Ext. 7154.

RADIAL ARM SAW - like new, w/bench blades, etc. Erwin, 924-6895.

DELTA WORK SHOP - 8" saw, extra blades; Dado router disc sander; drill press. Ext. 7611 or 728-2223.

CRAFTSMAN 4" JOINTER-PLANER - with 1/2 HP motor & stand, \$125. 929-6830.

BEDROOM SET - 2 single beds, chest of drawers, 2 night tables, new cond. Ext. 3392 or 475-8330.

PENN COAL STOVE - 60,000 BTU, also burns wood, 1 season old, must sell, best offer; 24 cement blocks, 8x8x16, ideal for coal bin, \$15; firewood, 12 ft.<sup>3</sup>. Ext. 3890 or 924-4250.

ELECTRIC RANGE - Tappan, 30", white, drop in, good cond., \$40. 281-8274.

APPLIANCES - elec. refrigerator, green, 14 cu. ft., \$100; range, green, \$80, both good cond. Ray, Ext. 5042.

AM/FM STEREO - Emerson, model #M2460, multi-plex receiver, stereo cassette recorder, \$100. Don, Ext. 5373 or 286-0999.

DISHWASHER - Kenmore, portable, power miser, excel. cond., remodeling, \$100. 473-9137 after 5 p.m.

KODIAK BOW - 60 lb. left hand recurve bow with arrow quiver. like new, \$35. R. Mele, Ext. 2514.

FISH TANK - 55 gal., deluxe, 5 yr. warranty, 600 supreme filter, fluorescent, stand, heater, silent giant, gravel, rocks, \$125. 924-6613.

MIRRORED COMPACTS - battery lighted, \$5 ea.; Maserati sunglasses, fold-away, gold or gun metal frames, \$15 ea. Bob, Ext. 3284.

ANTIQUEN ANNIVERSARY CLOCK - must see, \$150; old table lamp, hand painted, custom shade, \$15. 589-5126.

HANGING LAMP - wrought iron & wood, four lights, on chain, \$20; assorted Spanish decor pieces; paintings; bust; lamp, etc. Lois, Ext. 4904 or 929-4753.

ANTIQUEN ZENITH AM RADIO - with 3 ft. cabinet, \$50; snowmobile suit, \$25; 10 gal. aquarium stand, \$5. Ext. 3954.

STEAM CABINET - Nusuana portable, fiberglass, 110V, 3 yrs. old. Ext. 3992 or 298-4937.

RIDING LAWN MOWER - Bradford Wildcat, 26" cut, floating deck, 8 HP, 19.44 cu. in., 4 cycle, \$175. 281-4392.

PEN WATCHES - \$5 ea.; credit card calculators, \$8 ea., nice Christmas gifts. Pete, Ext. 3508 or 399-2813 after 5 p.m.

RANGE HOOD - 30", stainless steel, ductless, \$25. Ruth, 667-7314.

LATCHRUG KIT - 26"x40", Cornucopia by Bucilla, paid \$35, now \$20. 744-9677.

MEN'S BIKE - AMF Roadmaster, 26", balloon tires, good cond., \$75. Josephine, Ext. 4144.

WOMAN'S BIKE - Ross Gran Tour II, light weight, 10 spd., w/rack & generator, asking \$190. Ext. 3890 or 924-4250.

CAPTAIN'S BED MATTRESS - 751-8158.

FISH TANK - 55 gal., with pump, stand, filter, hood, gravel, \$125. Ext. 7187 or 981-9474.

RIDING LAWN MOWERS - 6 HP, 22" cut, Briggs & Stratton; 5 HP, 22" cut, Briggs & Stratton, \$50 ea. 289-6490.

COLONIAL AND ANTIQUEN FURNITURE - queen size pine bedroom set, tiffany lamp, wicker, adirondack chairs, and more. Ext. 2145.

SUPER DART RACE CART - 5 HP, mags, disc brakes, chrome bumpers, nurf bars, asking \$400. 289-5825.

COCKTAIL TABLE - and end tables, with black slate tops, also Spanish artifacts. 924-0223.

MATTRESS/BOX SPRING - queen size, used, \$25; bowling shoes, ladies size 10, used twice, \$12. Ext. 3173.

CHROME CHANDELIER - with six chromes and glass globes. Ed, 585-2088 after 4.

WOMAN'S BICYCLE - Schwinn, 26", coaster brake. David, Ext. 7646 or 286-8229.

ATARI CARTRIDGES - Trick Shot by Imagic, (straight pool), Ice Hockey & Grand Prix, \$15 ea. 744-8063.

CANNING JARS - quarts, glass top; B/W TV. Ext. 2950.

BUMPER CARRIER - motorcycle, \$20. Frank Rumph, Ext. 4581 or 588-3565.

ROYAL VACUUM - upright w/attachments, like new, \$75; hanging light fixture, hobnail milkglass, \$15. Ext. 2434 or 589-4407.

BRASS BED - queensize w/headboard, mattress, frame & dresser, like new, \$550, neg; living room set, couch, love seat, 2 chairs, 2 end tables, new, \$825, neg. 399-2149.

NIKONOS IV A - w/35 mm, F2.5 lens, still new, \$250. 744-1081 after 3 p.m.

BUNK BEDS - by Workbench, natural wood, good cond., \$250. 744-5079.

COUCH - full size, brown velour, excel. cond., \$100; bdrm. set, mattress & box spring, dresser, night stands w/drawers. \$150. Ext. 4100.

GAS GRILL - w/tank, roll cart & redwood shelves, needs top grill, \$45. George, Ext. 4227 or 751-0894 eves.

COLOR TV - 19" Sanyo, solid state, needs new power supply, \$50. 751-1826.

FREEZER - G.E. upright, manual defrost, 14.8 cu. ft., \$200; exercise bike, new cond., \$50. Dave, Ext. 7922 or 369-1792 before 8 p.m.

REFRIGERATOR - white, 17.5 cu. ft., lrg. bottom freezer, excel. working cond., \$265. 273-5574 after 4 p.m. weekdays.

FISH TANK - 20 gal., complete starter set, incl. pump filter, cover w/light, extras, \$50. Chuck, Ext. 4483 or 567-1272 eves.

BOY'S BIKE - 24" Raleigh, \$30; boy's ice skates, size 4, \$5; games, toys, etc. Ext. 3129 (home).

CAMERA - Vivitar 35EE, \$50. Janet, Ext. 2345 or 929-8152.

LENS - F2.8 Vititar 28mm, Macro Solicor 35-105mm, Macro Sun. 80-240mm, all Nikon mounts. 929-4326.

STONES - natural, round, 3/4"-1-1/2", for driveways or landscaping, you haul, 3 yds., avail. at \$15/yd. 289-1883.

DISHWASHER - GE portable, excel. cond., \$50. 286-2155.

TICKETS - (2) I Musici, SUNY, October 2, \$12 ea. Dave, Ext. 2694.

FREEZER - Whirlpool, upright, 20 cu. ft., 5-1/2 yrs. old, asking \$250. 751-6418.

### 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

EAST SETAUKET - Story Book Ranch, 4-5 bdrms., 2-1/2 baths, den, 2-car garage, walk to Univ., almost 1/2 acre, mint cond., assum. 9-1/2% mort. (wrap-around also available), \$89,500. Ext. 7111 or 751-7268 eves.

PORT JEFF. STA. - 3 lg. bdrms., roomy eik, full unfin. bsmt., low taxes, 1/3 acre lot on quiet dead-end street, north of 25A. Ext. 3388, or 331-3329.

MEDFORD - Birchwood at Blue Ridge, condominium, 3 bdrms, many extras, facing golf-course, 15 min. from Lab, 50's. 698-7213.

RIVERHEAD - mobile home, R&R Family Park, 12'x50'w/12'x15'master bdrm. extension, 3 bdrms., 2 sheds, deck, \$15,000. Dave, Ext. 7922 or 369-1792 before 8 p.m.

### For Rent

N. SHIRLEY - attractive studio apartment, private ent., furnished, excel. location, 5 min. from Lab & stores, mature working person, security, \$300 pays all. 281-8044.

SETAUKET - 4 bdrm. colonial, 2-1/2 baths, 2-car garage, prime area, walk to SUNY, no pets, avail. Oct. 1, 1982, util. inc. Ext. 2611 or 751-4098 after 5.

SHIRLEY - professional wishes to share 3 bedroom home, with same, fireplace, very comfortable. 399-3910 eves.

VERMONT - 3 bdrm. house, f/p, fully equip., beautiful view, apple picking, foliage, alpine slide, woodland trails, x-country & downhill skiing, reasonable vacation, family oriented, avail. weekly or weekends. 732-6499 after 6 p.m.

REMSENBURG - winter rental, furn., 6-room contemporary passive solar house located in picturesque meadow, Sept. thru May, \$385/mo. 325-0582 after 6 p.m.

NO. BRENTWOOD - 1 bdrm. apt., brand new, separate ent., patio, \$400/mo., sec. & refs., all utilities & cable included, no pets. 435-8650 after 5:45 p.m. & weekends.

BAYPORT - 1-1/2 acres, 3 bdrms., bath, living rm., kitchen, 2-car garage, partially furnished, oil hot water, Nov. - May, \$600/mo. or for sale, \$150,000. Ext. 3420 or 472-9159 after 6 p.m.

### Carpools

S. PATCHOGUE - on time carpool in operation, 10 yrs., opening for paying rider, add'l. in Oct. Alyce, Ext. 2902.

WANTAGH AREA - fill 5 man pool, drive 1 day a week, on time. Charlie, Ext. 4351.

FRANKLIN SQUARE - carpool. Ext. 7666.

LAUREL/MATTITUCK - Carmen Falkenbach, Ext. 2663 or 298-4931 after 6 p.m.

ELWOOD/E. NORTHPORT AREA - 1 driver needed for a 5 man pool. Fred, Ext. 4407.

### Wanted

NEW MEMBERS - business & professional women's club, nat'l., int'l. affil., Interested? Alyce, Ext. 2902.

PIANO INSTRUCTOR - for beginner. 924-0960 after 6 p.m.

LOCAL MARY KAY REPRESENTATIVE - we've lost ours. Ext. 4301 or 4371.