BROOKHAVEN BULLETIN
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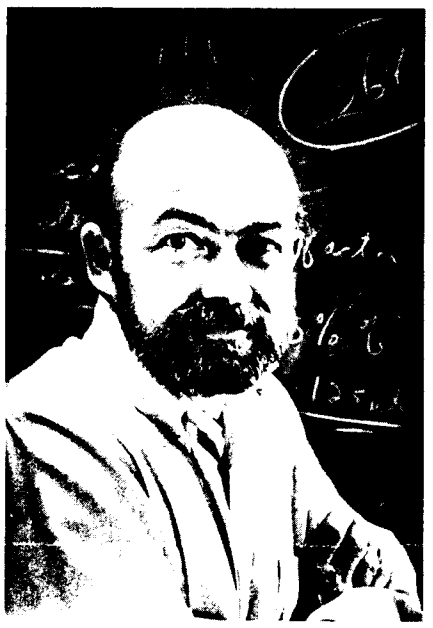
BROOKHAVEN NATIONAL LABORATORY

bnl Lecture

Molecules On The Move

All living things have the ability to move. Large skeletal muscles propel arms and legs; heart muscles pump blood through vessels that expand and contract. These are familiar activities in which cells convert chemical energy, extracted from food, into mechanical work.

Equally important are movements that cannot be seen — for example, chromosomes are pulled apart during cell division, and small packages of neurotransmitters must be moved around within brain cells in order to think. One of the important recent



Doug Humphrey

Marshall Elzinga

discoveries of cell biologists is the fact that muscles, brains and many other cells use the same basic molecular system to generate force and perform work.

In his Brookhaven Lecture on Wednesday, June 9, biochemist Marshall Elzinga will speak about his research in this area. Beginning at 8 p.m. in Berkner Hall, his talk is entitled "Molecules On The Move."

Elzinga says that while muscles are highly specialized — they do little else but contract and relax — most cells contain actin and myosin, the two crucial proteins associated with muscles. Energy is used by a complex of these proteins — actomyosin — to generate force, and an understanding of the mechanism by which this occurs is the goal of Elzinga's research.

Certain features of the actomyosin systems vary from tissue to tissue, but it is clear that a common mechanism operates in different cells. Elzinga's approach to understanding this mechanism involves studies of the basic structure of actin and myosin.

Actin is a globular protein, essentially identical regardless of source. Myosin, an extremely large protein, is unusual in having a "head, neck and tail" that are uniquely tailored for transmitting contractile forces. In his lecture, Elzinga will focus on the contractile system as it is now understood. He will also discuss new directions in muscle research.

Marshall Elzinga holds a B.A. in chemistry from Hope College in Holland, Michigan, and a Ph.D. in physiology from the University of Illinois. He first came to Brookhaven Lab in 1964, and worked three years in the Biology Department. From 1967-76, he held concurrent positions at the Boston Biomedical Research Institute and at the Harvard Medical School, in Boston, Massachusetts. He returned

(Continued on page 2)

Studying Death Sheds Light On Life

On the average, someone in the U.S. dies every 16 seconds. A shocking statistic? Yes, if you regard death as unnatural.

But look at it another way. Life and death are part of the same process. For every birth, there will be a death — sooner or later.

Salvador Bozzo and Kenneth Novak, in the Biomedical and Environmental Assessment Division of DEE, have spent the last several years studying death. Says Bozzo, scientist and M.D., "Everyone dies eventually. We're not interested in the fact that they die but when and why they die."

That information gives them an insight about the health of a population. In turn, they can better evaluate the health effects of energy production, one of the main concerns of their division. Separating energy production from other factors that affect health, however, is difficult unless they know more about what causes a death.

Bozzo says certain diseases are linked to certain socioeconomic as well as environmental conditions. This is supported by the studies he has done comparing the composition of death in three countries: the U.S., as a developed country; Japan, transitional country; and Chile, a developing country.

For the U.S., the number of deaths due to infectious and parasitic diseases was high in the early part of the century. Bozzo suggests that this was partly due to the large number of immigrants struggling to gain an economic foothold at a time when living conditions were not the best for them. As socioeconomic conditions improved, so did the general health of the population.

Japan, on the other hand, had a much lower rate of death due to infectious and parasitic diseases in the beginning of the century. The country had no immigration. Also, in spite of a high population density, the culture placed such a great emphasis on clean living conditions that incidence of infectious diseases was low. The death rate did rise slightly during the war years when the water supply, food and other factors were affected, but today, Japan and the U.S. look very much alike.

In Chile, the number of people dying from infections and parasites has not significantly changed through the century. As Bozzo says, "It's relatively easy to treat these diseases with antibiotics, so lack of medical care is not the problem. Living conditions in Chile are not as good." He expects, though, that as socioeconomic conditions improve, Chile will join the U.S. and Japan in being relatively free of these kinds of diseases.

But there is no free lunch. Bozzo says that in the U.S., socioeconomic conditions were dramatically improved by industrialization. So while deaths due to certain diseases went down, deaths due to other diseases went up, notably cardiovascular and cancer.

Bozzo links cancer with external agents such as pollution. He says U.S. males were one of the first victims of occupational exposure, and the data show a bump of cancer deaths around age 60. "That's the price this country pays for being one of the first, and the fastest, to industrialize," he says. "We don't see it in Japan, because there is now more awareness of health effects of pollution, and Japan has better controls." He adds that Chile doesn't show these numbers either, but for different reasons. The country is not very industrialized, and other causes of death overwhelm many of the health effects of pollution.

Frequently, the cause of death determines when a person dies. If, for example, a country's sanitation is poor, then a large segment of the population will die of infectious diseases long before they ever have a chance to die of chronic disorders like cancer and heart disease, which occur later in life. So the age at which a person dies is an important piece of information. Bozzo says scientists don't know for sure what a normal lifespan should be. "We do know, however, that in all countries, the probability of dying is very high near birth," he says.

Doug Humphrey

Salvador Bozzo

"Strength in a human being is not constant. The first few minutes of life are crucial. A newborn must prove the ability to live."

In developing countries, according to Bozzo, 20 to 50 percent of all newborns die within one year. In comparison, 2.5 percent die annually in the U.S. The number goes down to one percent in Japan and Sweden.

What makes the difference? Bozzo says in developed countries, people are healthier. They have better food and shelter, and children and pregnant women have better care. Along with economic well-being comes better parenting, too. So the probability of dying young decreases as the quality of life improves.

This trend can be clearly seen in the U.S. data Bozzo has analyzed, dating from 1900 to today. And he says other patterns have emerged. For example, it is well known that females have a longer life expectancy than males. Bozzo has also confirmed that taking social class into account, rich females are the healthiest group of all.

Most recently, Bozzo has been analyzing data from just the last two decades, looking at various countries around the world. He is finding that, in general, people are healthier and living longer. Even though industrialization does take its toll in pollution-related diseases, advances in socioeconomic conditions are much more significant in improving the health of a population.

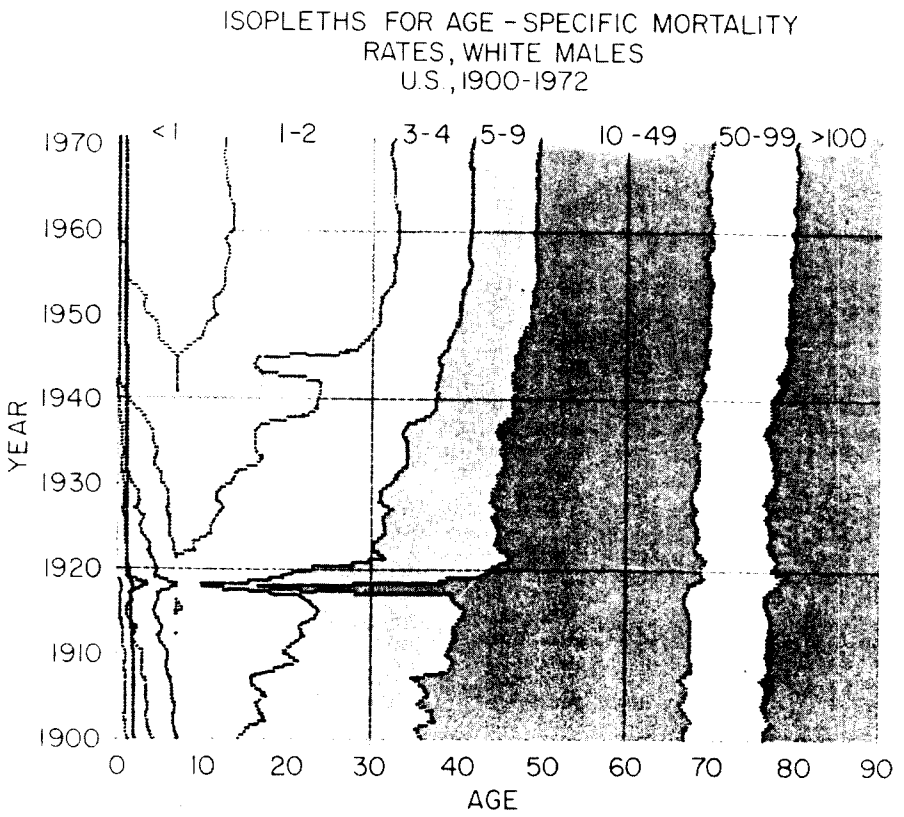
When society provides a certain standard of living, however, then personal behavior starts to have a greater effect on mortality. Bozzo's numbers show that besides the expected high probability of death in infancy, the death rate jumps up at age 20 and again at age 55.

The peak at age 20, he says, is caused by young adults leaving the nest. "They go bananas and die in all kinds of accidents."

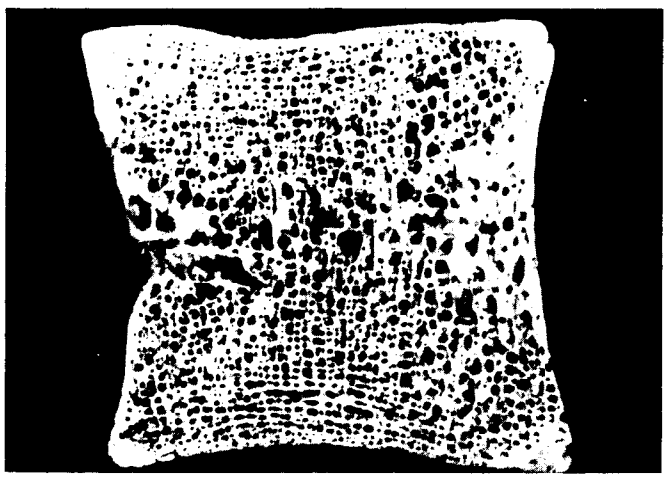
"Age 55 is when the bad habits take their toll. Life style — smoking, drinking, poor diet, no exercise — catches up with people," he continues. "So if you make it past 55, barring accidental death, you're one of the good guys."

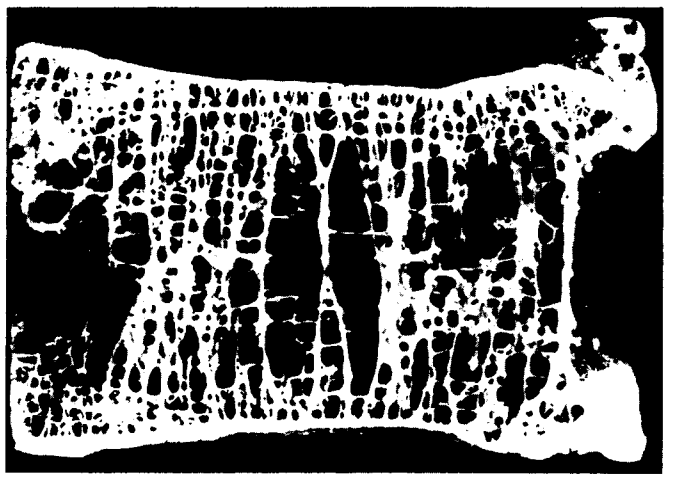
"These days, apart from the eventuality of death, the age at which you die and the underlying cause of your death is becoming more your own responsibility. It's up to you."

— Mona S. Rowe



Graphic isopleths were conceived by Salvador Bozzo as a way to visually display the change in a population's health from a historical perspective. This isopleth for U.S. white males has three factors represented: time, the age at which they die, and the probability of dying (per 100,000 men each year). The horizontal peaks around 1918 were caused by a world-wide influenza epidemic. The peak around 1942-44 was caused by World War II. The first world war doesn't show because the underlying mortality rate was so high that war deaths had no effect.





The upper photograph represents a slice through a lumbar vertebra of a young woman. The lower photograph represents a similar picture of the same lumbar vertebra of a 70 year old woman with advanced osteoporosis. The difference in both horizontal to vertical trabeculation in the vertebrae is obvious. The compressive strength of the vertebra in the older woman is considerably less than in the younger woman.

New Drug To Be Tested In Osteoporosis Treatment

In joint efforts to find effective treatments for osteoporosis, researchers in BNL's Medical Department have been affiliated with Nassau Hospital's Dr. John F. Aloia since 1973. Brookhaven's clinical program on osteoporosis is headed by Dr. Ashok Vaswani who divides his time between BNL and Nassau Hospital. Recently, Hoffman-LaRoche Inc. in New Jersey awarded these collaborators a grant to continue their research into this crippling ailment.

The grant will provide support over a three-year period to study the efficacy of treating post-menopausal osteoporosis with a new derivative of vitamin D, to which Hoffman-LaRoche Inc. has given the trade name Rocaltrol. There are two main reasons to expect that this drug could be helpful in treating osteoporosis. First, the injuries associated with osteoporosis all seem to be related to decreased levels of calcium absorption. These injuries include fractures of the spine, hip and wrist, as well as disabling back pain. Second, vitamin D is known to be important in the absorption of calcium from the diet and in the mineralization of bone.

Stanton Cohn, head of the BNL Medical Physics Group, said, "We do not expect Rocaltrol to initiate a reversal of the osteoporosis, but it may cause the bones to take up more calcium and get stronger. We're basically trying to slow the normal role of loss of calcium that occurs with age, so that the patients will sustain fewer fractures."

Osteoporosis generally strikes post-menopausal women and the appearance of one or more fractures of the spine is the primary key to diagnosing the condition. "To study this drug," said Cohn, "we are only taking patients with spinal fractures who are at the same stage in the disease."

In addition to those at BNL and Nassau Hospital, researchers at the University of Washington in Seattle and at Creighton University in Omaha, Nebraska will also participate in the study. Each group will use a variety of different techniques to measure bone weight. At Nassau Hospital, Aloia will measure bone mineral content in the spine by dual photon absorptiometry. At BNL, researchers will use whole body neutron activation analysis to determine the total amount of calcium in a patient's body.

According to Cohn, BNL and the University of Washington are the only two centers in the United States that can measure total calcium content in the body with neutron activation, but their methods differ. In the Brookhaven technique, exposure to partially moderated fast neutrons from a ^{238}PuBe source makes the calcium temporarily radioactive. This radiation is measured in an instrument called a whole body counter, revealing the calcium content and its distribution throughout the skeleton.

Cohn explained that this controlled field study is a prerequisite for FDA-approval of the drug. Those interested in volunteering for the research program must be women between the ages of 50 and 75 with one or more vertebral compression fractures. Potential volunteers can call Aloia's office at Nassau Hospital, 663-2540, or Jean Matkovich at BNL, 282-3672 (Lab Ext. 3672).

Arrivals & Departures

Arrivals

Lawrence Feldman ... Mgt. Info. Syst.

Departures

This list includes all employees who have terminated from the Laboratory, including retirees:

Clement Auguste	Accelerator
Matilda H. Austin	Physics
Henry Bednarz	Physics
Robin H. Cantor	Physics
Carlton E. Carter	Accelerator
Bernadette Christian	Energy & Env.
John P. D'Acierno	Energy & Env.
Virginia E. Diebel	Energy & Env.
Robert C. Heimerle	Accelerator
George T. Holohan	Accelerator
Patricia S.T. Hu	Applied Math.
Robert S. Hulliger	Accelerator
Warren E. Jappe	Physics
Arnold Kreisberg	Accelerator
Edward F. Landry	Energy & Env.
Mary Lou Leist	Energy & Env.
George W. Lilja	Accelerator
John T. McCafferty	Accelerator
Patricia Mackay-Iulo	Accelerator
Francis R. Martin	Accelerator
Brian J. Morris	Accelerator
Robert C. Murphy	Saf. & Env. Prot.
Henry P. Noehren	Accelerator
Henry F. Peters	Accelerator
James E. Rebman	Accelerator
Howard A. Rittenhouse	Accelerator
Manuel F. Santos, Jr.	Accelerator
Frank E. Short	Accelerator
Charles O. Theisen	Accelerator
Kaye Van Valkenburg	Energy & Env.
Rino Tulipano	Accelerator

Users Review NSLS Status

The last General Users Meeting prior to full operation of the National Synchrotron Light Source was held here Monday and Tuesday, providing an opportunity for the NSLS User community to become acquainted with the facility's research capabilities and operating procedures, and to receive detailed reports on the present status of NSLS construction.

Associate Director Martin Blume summed up that status in his welcoming remarks by saying, "This meeting comes at an exciting time. A lot of experiments are about to start." The experiments he referred to are at the VUV ring where John McTague, head of the NSLS, said, "We now have light coming out of many of these ports."

In addition, he reported, on Thursday, May 20, the first attempt was made to accelerate electrons in the VUV ring to the design energy of 700 MeV. Surpassing that, the electrons accelerated easily to 800 MeV. "This is a good sign that the machine has been very conservatively built," said McTague, adding that, "The VUV ring is essentially at an operational stage."

Now the efforts of many of the 91 people at the NSLS will be directed towards finishing the X-ray ring. Beginning next week with the installation of the first X-ray front ends, McTague expects work to proceed at a constant but prudent pace. "By Labor Day," he said, "we hope to be in the same position with the X-ray ring as we are now with the VUV ring."

The sessions that followed these opening comments provided many opportunities for open discussion between users and NSLS personnel on such issues as scheduling and the optimum spectral and source parameters of various undulator and wiggler options. Elections were also held in which Joseph Budnick (U. of Connecticut), Janos Kirz (SUNY), Dave Nagel (Naval Research Laboratory), and Jack Rowe (Bell Labs) were voted members of the Users Executive Committee. Technical representatives to the Committee were elected in the NSLS Subgroup meetings.

Doug Humphrey

The NSLS General Users Meeting gave these participants a chance to share ideas: (from left) Peter Eisenberger, Chairman of the NSLS Users Association; Elliot Pierce, Director, Division of Chemical Sciences, DOE; John McTague, NSLS Head; Martin Blume, BNL Associate Director; Don Stevens, Deputy Associate Director for Basic Energy Sciences, DOE; Roger Klaffky, NSLS User Liaison; Arie van Steenbergen, NSLS Deputy Head.

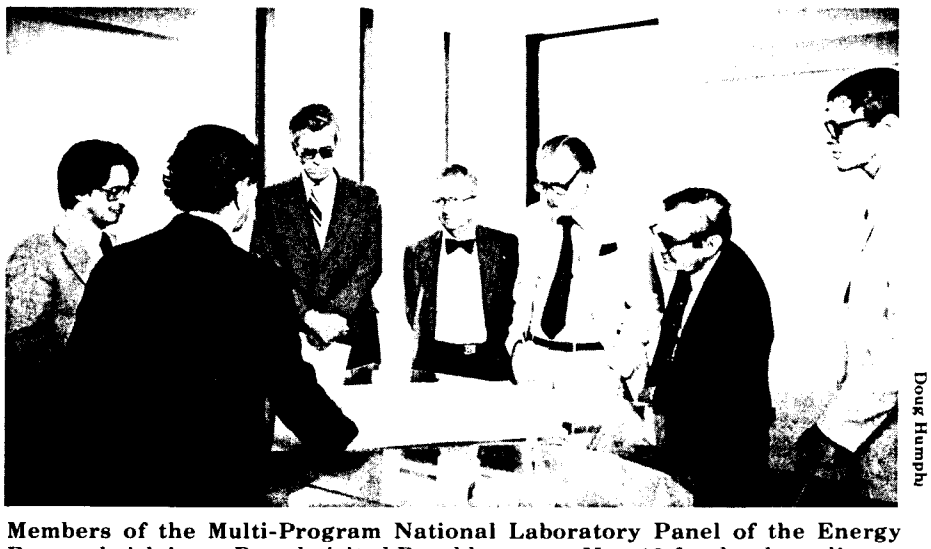
Symposium No. 32 Here Next Week

The 32nd Brookhaven Symposium in Biology will open at Berkner Hall next Monday evening, May 31. The five-day conference, chaired by Benno Schoenborn, will focus on "Neutrons In Biology — Neutron Scattering Analysis for Biological Structures." Others on the Symposium Committee are R. Douglas Carlson, Anthony Kossiakoff, Anand Saxena and Dieter Schneider.

Molecules (Cont'd)

to Brookhaven's Biology Department in 1977, where his special research interests include the biochemistry of muscle contraction and protein chemistry. Elzinga is on the Editorial Board of The Journal of Biological Chemistry and on the Research Council of the New York Heart Association.

On the evening of the lecture, a buffet supper is served at 6:30 p.m. at the Brookhaven Center. The price is $7.25, and reservations should be made by calling Ext. 3541 before 5 p.m. that day.



Doug Humphrey

Members of the Multi-Program National Laboratory Panel of the Energy Research Advisory Board visited Brookhaven on May 19 for day-long discussions with the Directorate and a look at some Lab facilities. Listening to Lab Director Nicholas Samios (left) and Associate Director Martin Blume are Dr. John Teem, President, Association of Universities for Research in Astronomy; Dr. Charles Hitch, President emeritus, University of California; Mr. Joseph Machurek, DOE; Dr. Ivan Bennett, Dean and Provost, New York University Medical School; and Dr. Herman Postma, Director, ORNL.

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Support For University Teams At NSLS-HFBR

A new program entitled "NSLS-HFBR Faculty and Student Support," recently approved by the DOE, was announced at the NSLS General Users Meeting by Roger Klaffky, Program Coordinator. The program will support faculty/student research groups performing experiments at the National Synchrotron Light Source (NSLS) as General Users, or performing neutron experiments at the High Flux Beam Reactor (HFBR).

The objective of this program is to make the exciting research capabilities at the NSLS and HFBR accessible to scientists from U.S. institutions of higher education who will have occasion to use these facilities to complement the research program at their home institution. Most of the scientists participating in the program will be members of faculty/student groups in which students will be trained in one of the diverse scientific fields represented at the NSLS and HFBR. The program is designed to defray expenses incurred during exploratory visits to BNL, and while conducting experiments at the NSLS and HFBR. It is aimed at university users having only limited grant support for their research, and will start this summer.

Limited funds are still available for this fiscal year. Scientists desiring application forms or further information should contact Klaffky, at Ext. 4974.

PSI News

Upton Chapter PSI Installation Tuesday, June 1, 6 p.m. Brookhaven Center. Checks should be made out to Saga Food in the amount of $9.50.

Softball

Scores for week of May 17.

Leagues I and II

Blue Jays 10 — Phoubars 9

It seems neither team wanted the win: back and forth for 9 innings and finally the Blue Jays scored the go-ahead run in the bottom of the ninth to win.

Six Pax 18 — Ravens 8

Wayne Rambo had two home runs for the Six Pax.

Moles 15 — Roga 9

Ice Pops 15 — Big Sticks 10

Leagues III and IV

Titans 11 — Dirty Sox 5

AMD 16 — Magnuts 2

Lights Out 22 — Medical 11

Electric Co. 35 — Random Errors 2

League V

Nads 7 — TNT 6

E-Z Riders 13 — Turkeys 6

Home runs by Dennis Hall, Fred Altrui and Larry Musso helped the E-Z Riders gobble up the Turkeys 13-6.

Survivors 4 — No Names 3

League VI

Mudville Sluggers 20 — Underalls 3

Random Sample 18 — No Feedback 5

Molesters 9 — Who Cares 6

Who's On First — The Source

Game tied at end of fourth — game called due to rain; will be made up as double-header.

Doug Humphrey

When visitors tour the Laboratory, they are escorted from place to place by employee volunteers. This past Wednesday, a luncheon was held at the Brookhven Center to thank the BNL Tour Guides for their help: (seated, from left) Edward Robson, Elaine Rowland, Betty Pergan, Tom Dickinson, Janet Sillas, Madeline Kinney, Marie Brenner, Janet Tempel (Tour & Exhibit Coordinator), Florence O'Brien, Carmen Zopf; (standing, from left) Lucien Wielopolski, Richard Seebeck, Richard Jackimowicz, George Taylor, David Comstock, Jackie Mirzadeh (Tour Organizer), Vincent Lettieri, Ron Clipperton, Vincent LoDestro, Andy Feldman, Sol Pearlstein, Payman Mortazavi, Don David, George Lilja. Not pictured: Barrie Hughlock, Carole Kerr, Janice Lamb, Jackie Larrie, Les Lawrence, Irene Ozols, Evelyn Ritter, Elizabeth Russell, Rich Sautkulis, Jean Stafford, Cathy Van Noy. Anyone interested in becoming a BNL Tour Guide should contact either Janet Tempel or Jackie Mirzadeh at Ext. 4049.

NYC Train Trip

The Hospitality Committee is planning a group railroad trip to New York City on Wednesday, June 16. 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, June 10. 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.

Nursery School

The Upton Nursery School will have its annual spring meeting on Wednesday, June 2, at 7:30 p.m. in the Recreation Building. Invited to attend are parents of children presently in the school and those whose children are registered for the next school year beginning this coming September.

On the agenda will be elections of new officers, a review of the past year, and discussions of present finances, enrollment for next year and plans for improving the school's playground.

Enrollment is still open for the next school term. Classes are two or three mornings a week, for three and four-year-old children. For applications, call Karen Brunschwig, 924-0030; Janice Thern, 924-3550; or Ruth Fernow, 928-8465.

Hospitality News

"Looking Terrific Through Fashion Accessories," a program designed to help you identify your fashion type and style, will be the theme of the Hospitality Committee's next morning coffee get-together on Tuesday, June 1, at 9:30 a.m. in the Brookhaven Center. All wives of Laboratory employees and guests are welcome. Please come and bring the children. Babysitting will be provided free of charge.

Picnic '82

This One's For You!

Saturday, July 17
Tickets on sale June 1
from
Film Service Office
Betty Pergan, Bldg. 179A, Ext. 2937
Blanche Laskee, Bldg. 185, Ext. 2873
Rosalie Piccone, Bldg. 355, Ext. 3160
$2.50/person — under 3 free
Refreshments...Entertainment
Contests

Diners Note

The Center Club will be closed Sunday, May 30, the day preceding Memorial Day, and will reopen on Monday evening, May 31.

The Cafeteria will be open from 9 a.m. until 2 p.m. on Saturday, Sunday and Monday, May 29, 30 and 31.

The Vended Food Service in Building 912 is in operation continuously.

Cafeteria Menu

Week Ending June 4, 1982

Monday, May 31		
Snack Bar Service — 9 a.m.to 2 p.m.		
Tuesday, June 1		
French onion soup	(cup)	.55
	(bowl)	.65
Meatcakes and onions w/potato pancake		1.75
Cheese omelet & 1 veg.		1.75
Hot Deli — Breaded chicken pattie Parmesan hero		1.90
Wednesday, June 2		
Turkey gumbo soup	(cup)	.55
	(bowl)	.65
Roasted fresh ham & 1 veg.		1.85
Chicken cacciatore & 1 veg.		1.85
Hot Deli — Grilled Reuben		1.80
Thursday, June 3		
Chicken vegetable soup	(cup)	.55
	(bowl)	.65
Stuffed bell pepper w/1 veg.		1.75
or w/spaghetti		1.95
Pot roast of beef & 1 veg.		1.95
Hot Deli — Pastrami	(bread)	1.75
	(roll)	1.85
Friday, June 4		
New England clam chowder	(cup)	.55
	(bowl)	.65
Shrimp, fries & cole slaw		2.10
Beef chow mein on rice		1.75
Hot Deli — Roasted turkey breast	(bread)	1.75
	(roll)	1.85

Bowling

Red & Green League

By taking both halves of the season, the Light Source became champs of the Red/-Green League. Good games were bowled by R. Wiseman 232/214/625 scratch series, R. Jones 233, J. Bohenek 229, J. Connelly 220, J. Medaris 220, C. Tomesch 211, J. Petro 206, J. Ferrero 202, W. Kristiansen 201.

White League

The Dips are the winners of the roll-offs. Congrats to Pat and Bill Lebitski, Howie Bell, Renee Flack, Bill and Jean Sells.

Purple League

The Draftecs are the winners in this league. Congrats to Ed and Irene Sperry, Al and Joyce Pinelli.

1982 Bowling Awards Party

The date is Friday, June 11 at 5:30 at the Brookhaven Center. Tickets can be obtained from John Connelly, Ext. 3284.

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.

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

1699. INDUSTRIAL ENGINEER - Requires BS in industrial engineering or equivalent and a minimum of two years experience in productivity improvement, work simplification, plant maintenance or management systems implementation. Individual will join plant maintenance management team. Plant Engineering Division.

1700. TECHNICAL POSITION - Requires broad experience in industrial type preventative and breakdown mechanical maintenance. Reactor Division.

Autos & Auto Supplies

80 SUZUKI - GS1000L, mint cond., warranty, many extras, must see, $2,900. Ext. 7187 or 981-9474.

71 VW BUG - rebuilt eng., new trans., good rubber, runs well, $550. 878-2681 eves.

73 PINTO - very good running cond., many new parts, sunroof, some rust, $799 or best offer. Ext. 4432 or 928-8379.

80 AMC SPIRIT DL LIFTBACK - 6 cyl., 4 spd., moon roof, console, radials, full instruments, digital stereo, black w/blue int., excel cond., $3,800. 732-5664.

77 TRUCK CAMPER - 11-1/2' Aristocrat, loaded, mint cond., must sell. Mike, 878-1325.

RADIAL TIRES - mud/snow, 15 P20575-R15, excel. cond., hardly used, $35/ea. Ext. 2979.

73 CHEVY C/20 PICKUP - heavy duty flatbed, auto. trans., $1,500. Howard, 924-5437.

76 KAWASAKI KZ-400 - bought new in '77, 7K mi., custom seat, many extras, asking $900. 589-8394 eves.

75 GRAN TORINO - 4 dr., a/c, p/s, excel. cond., $1,400. 924-5533, Ext. 205 days, 399-2135 eves.

76 HONDA 550(4) - 13K easy mi., fairing, trunk, roll bars, backrest, cruise control, mint, extras, $1,000. Ext. 3319.

77 KAWASAKI - 750 twin V, fully dressed, am/fm radio, 6,500 mi., many extras, excel. cond., $1,395. 475-0331.

69 PLYMOUTH SATELLITE - 318 eng., 73,000 mi., body poor, eng. good, $250. 286-2265.

80 DATSUN TRUCK - 4 cyl., long bed, auto., w/cap, mint cond., 20,000 mi., $5,500. 727-7627.

SHOCKS - rear load levellers for intermediate GM cars. Ext. 3919.

VOLKSWAGEN PARTS - eng., front end for 1970 Bug, make offer. Brian, 744-2169.

79 FORD F150 - black, 4-wheel drive, 36" tires, am/fm cassette w/power booster, roll bar, many extras, excel. cond., $7,000. 981-5993 after 6 p.m.

78 YAMAHA XS400 - special, black, 4,600 mi., elec. start, windshield, luggage rack, (2) Arais helmets, service manual, $1,300. 929-8204 after 5 p.m.

FORD CARBURETOR - new, 4 barrel, never used, asking $75. Ext. 3319 or 744-9802 after 5 p.m.

76 HONDA CB200T - 3,400 mi., windshield, luggage rack, backrest, cruise control, mint cond., asking $750. 286-3928.

78 HONDA GOLD WING - GL1000, 4,000 mi., like new, $2,600. 473-8783.

79 HONDA HAWK - 400cc, almost new, asking $1,200. 588-0805 eves.

76 OLDS STARFIRE - 5 spd., 6 cyl., am/fm cassette, good cond., excel. gas. 475-8380.

78 PLYMOUTH - Volare, 2 dr., std., 6 cyl., a/c, p/s, am/fm cass., 45,000 mi., new tires, $3,300. 924-4054.

65 YAMAHA MOTORCYCLE - 250 cc, extra engine & misc. parts, $175. Lee, Ext. 7629 or 929-3023.

RADIAL TIRE - 165x13, new, mounted on 1978 Datsun F10 wheel, asking $30; G78x14 tires, reasonable cond., $10 each or 2 for $18. John, Ext. 3292 or 286-1348.

PUSH BUMPER - w/pads, grill & headlight protector, for most American trucks, solid, $200. Jim, 588-1367.

71 VW - Super Beetle, new eng., tires & shocks, excel. running cond., $1,400. Ext. 4049 or 331-1665.

76 VW - Dasher, auto., am/fm, 4 dr., $2,400 or best offer. Marj, Ext. 3396.

72 FORD GALAXIE - a/c, snow tires, radio, many new parts, vg mileage, runs good; tire, JR-78-15. Zvi, Ext. 3516 or 924-4991.

76 FORD VAN - 6 cyl., new clutch, muffler, paneled, insulated, am/fm tape, good cond., $2,300. Ext. 5385 or 654-2076.

78 CAMARO Z28 - black 3500, 4 sp., p/s, p/b, a/c, am/fm cass., mint cond. 369-1624.

76 CHEVY PICKUP - 1/2 ton, 350 eng., 3 sp., 2-tone color, 8 ft. bed, cap, white slat wheels, air shocks, $3,200. Steve, Ext. 4297 or 929-6877.

63 CHEVY - Nova, 6 cyl., 4 dr., 194 eng., 18 mpg, running, inspected March. George, Ext. 3536.

79 MGB - convertible, 2 tops & hood cover, 31,000 mi., new tires, brakes & complete tune-up, am/fm 8-track stereo, undercoating & 5 yr. rustproofing, showroom cond. 878-0516 after 6 p.m.

74 CHEVY - Step Van, V-8, 4 sp., refrigerated, insulated, fiberglassed, heavy duty front & rear, $4,000. 654-5169.

62 OLDS - Dynamic 88, 85,000 mi., bought from orig. owner, body in extremely good cond., orig. black laquer paint, runs well, must see, $500. 585-0832.

VALIANT PARTS - slant 6, auto. trans., rear glass doors; 1971 Ford van rear 8 hole 6" bud wheels. 289-8212.

80 AUDI - diesel 5000S, 5 sp., red, p/b, p/s, a/c, am/fm cass., cruise control, 19,000 mi., $11,900. 941-4999.

75 HONDA MOTORCYCLE - 750cc, many extras, must sell, mint, $1,600. 698-5088.

TIRES - (4) H78-15 excel. cond., will mount, $100; 1973 Honda motorcycle, CB-350, good cond., $450. 878-8847.

75 CHEVY - Monza 2+2, V-8, 4 sp., new paint, custom, runs good, $2,200. 475-3415 after 3 p.m.

73 HONDA - CB750, excel. cond., custom seat, quartz light, sissy bar, asking $1,000. Ext. 5385 or 654-2076.

Boats & Marine Supplies

25' 1978 CAPE DORY - 10 HP, Chrysler outboard, extra sails, radio, compass cradle, asking $17,000. 734-6605 after 5 p.m.

20' 1976 BAYLINER - Liberty 130, Volvo I/O, cabin, trailer, extras. John, 541-4792.

16' FIBERGLAS SKI BARGE - all equip. incl., best offer. 654-1945.

DINGHY SAILS - red dacron, new $35, worth $70, 10 ft. luff, 6 ft. foot; also other surplus sails. 261-7825.

12' 1974 FIBERGLAS BOAT - 10 HP 1974 motor, 1979 trailer, make offer. Brian, 744-2169.

16' TOMB'S GARVEY CLAM BOAT - 40 HP Johnson, $850; 1977 40 HP Mercury, needs work, $150. 286-0795.

18' GARVEY - glassed in/out, self bailing, cabin, $750. 472-0499 after 5 p.m.

14' AMF SUNFISH SAILBOAT - new, never used, $1,000 firm. Gene, Ext. 5293 or 472-2547 after 7 p.m.

18' GARVEY - clam boat and 40 HP Johnson eng., plus extras, must sell, $800. John, Ext. 3292 or 286-1348.

AQUA-CLEAR MARINE ENGINE - water filters w/crystals, fits up to 250 HP, $100/pair. 331-2969.

TRAILER WINCH - heavy duty, 9 to 1 ratio, stainless steel cable, good cond., $15. Joe, Ext. 4069 or 261-7825.

27' 1960 ULRICHSON - 318 Chrysler inboard, cuddy cabin, flying bridge, good cond., $1,295. 475-0331.

14' GRUMMANS ALUMINUM BOAT - 25 HP Johnson outboard, complete with controls and trailer, clean, $750. 924-0010.

Free

BUNDLED NEWSPAPER - 100 or more lbs. Tom, 698-9130.

RABBIT - with cage. Gene, Ext. 5293.

GUINEA PIG - and hamster, both females. Lee, Ext. 7629 or 929-3023.

BABY CHICKENS - Tony, 281-0350.

KITTENS - only 3 left, 6 weeks old. Karen, Ext. 3300 or 775-5551 after 6 p.m.

FOR ADOPTION - found female Lab/Shepard mix, 1 yr. old, 55 lbs., good natured, family dog, yellow coat. Ext. 2296.

Yard Sales

STREET SALE - May 29, rain date May 30, 10 a.m. to 3 p.m., Sunrise Ave., Riverhead off Main St. by Elks Club. Ext. 4479.

MOVING SALE - May 29 & 30, 10 a.m. to 4 p.m., color TV, GE microwave, furniture, tools, books, stereo, etc., 27 Mildred Court, Nesconset. 265-3612.

YARD SALE - May 29 & 30, 10:00 a.m. to 6 p.m., 10 Auborn Ave., Shirley.

Miscellaneous

SEWING MACHINE - Sears, portable, like new, $50. Ron, Ext. 3238.

14 KT GOLD "S" CHAIN NECKLACE - w/three small diamonds, 28", $100; light blue gown, sz. 9/10, like new, worn only once, $25. Linda, Ext. 7745.

FISH TANK - 55 gal. w/pump, fully equipped, $200. Ext. 7187 or 981-9474.

CASTRO TWIN CONVERTIBLE SOFAS - opens into twin beds; Sears fan, large floor model, multiple speeds, exhaust, timer. Ext. 3392 or 475-8330.

FRESH GOAT MILK - Ext. 3284.

ROTARY LAWN MOWERS - (2) 22", need work, can make one good one, $30. 281-7873.

DIAMOND - .93 karat, set in yellow gold, appraised at $4,500, asking $3,500. 928-1483 after 4 p.m.

MAPLE DINING ROOM SET - Colonial, hutch, oval table, (4) chairs, $550. 281-6325.

FRENCH PROVINCIAL COUCH - excel. cond., silk, tufted green and gold, $75. 475-9042.

MOVING TO FLORIDA - contents of house must go, please call for appointment. 399-3314 after 6 p.m.

RABBITS GALORE - while adult male, assorted "halflings," make an offer. Roger, Ext. 3578 or 878-4864.

FULL SIZE MATTRESS - with boxspring & frame, newly purchased, $160. Ghosh, Ext. 4360 or 924-6139.

FISH TANKS - 20 gal. & 5 gal., with (2) Dynaflo filters, incand. hoods, food, access., $50. Rick, Ext. 3932.

MOUTON LAMB JACKET - fits szs. 14-16, brown, good cond., $75. 475-0144 after 6 p.m.

JALOUSIE PORCH PANELS - (10) w/screens, 55" high; 36" jalousie aluminum storm door. 472-0339.

TENNIS RACKET - Head Edge 4-1/2 L, $30. Gail, Ext. 3338.

BICYCLES - (2) 20" Ross convertible bikes, great for beginners, $35 & $45. George, Ext. 4460.

ROLLER SKATES - boy's sz. 4 or girl's sz. 6, used twice, $20; depth finder, $30. Jeff, 286-0353.

BEDSPREADS - (2) twin size, green, excel. cond., $25/both or $15/ea. Ext. 7169 or 2354.

BICYCLE - girl's 24", 10 spd., orange, 3 yrs. old, like new, $60. Ext. 3147 or 331-9171.

SALTON EGG COOKER - $8; Hankscraft air moisturizer/humidifier, clean, $8; declutching fan for GM, $20. Joe, Ext. 4212

BOY'S BLAZER - size 12, good cond. Liz, Ext. 2082.

DESK - w/attached typing table, $60; Zenith 25" console color TV, very good cond., asking $260. 281-0804 eves.

DIAMOND RING - very unique & unusual setting, .56 karat, must sell. Ext. 5138.

COLEMAN TENT - 9'x12'; upright freezer; lawn mower; C.B. base station; portable dishwasher. Don, Ext. 2225.

MANUAL TYPEWRITER - Olympia office model SG4, heavy-duty, excel. cond., $85. 581-6432.

SMALL BOY'S CLOTHES - snowsuit, 24 mos., winter coat & cap, sz. 3 or 4, jackets, shirts, slacks, sz. 4, 5, 6 & 7. Karen, 924-4968.

HOME HUMIDIFIER - Sears, automatic, console, used one season, $50. Ext. 3942.

SLIDE CAROUSELS - Airquipt, new cond., $2.50 ea., 3 for $6.50, have 30. Joe, Ext. 4069 or 261-7825.

GAME TAPE - Sinclair ZX81-ZK Ram, $85. Dick, Ext. 4255.

AQUARIUM - 29 gal. w/fluorescent hood, undergravel filter unit, $40; backpack, nylon, 24x15x8", w/magnesium alloy frame, $25; women's Dunham hiking boots, sz. 6. Ray, Ext. 7509.

COLOR TV - 13", 3 yrs. old; living room couch; hair dryer. 924-4991.

CAMERA - Canon 35 mm SLR, 55 mm 1.8, 28 mm 2.5, wide angle, strobe, filters, gadget bag, extras, mint, sacrifice, $175. 732-9102 eves.

POTTERS KICK WHEEL - w/built in bench, $50; light box for growing plants, $25. Lee, Ext. 7629 or 929-3023.

TOYS - used but in good cond., cheap, in Shirley area. Helen, 281-8848.

QUEEN SZ. SOFABED - beige & brown tweed, opens to sleep 2, orig. $599, asking $250. 924-8297.

SWIM POOL EQUIP - 3/4 HP pump, press, hoses, glass tank, deck ladder, misc. hose, cheap. Ext. 3712.

DRUM SET - 3 piece, good cond. 475-4270 after 6 p.m.

HORSEBACK RIDING HELMET - black velvet, sz. 7-1/4, like new, $7. Ext. 3390 or 751-3551 eves.

EXERCISE BICYCLE - table & 4 chairs; china cabinet; broiler/oven; blender, coffee table; stereo system; color TV; B&W TV; end tables; dressers; desk; full mattress; lamps. 924-7349.

MATCHING COMFORTER - Fieldcrest, twin, sheets, pillow cases, $30; round, walnut lamp table, traditional, $80. 928-7826 eves.

TENNIS RACKET - Dunlop Volley II, midsized 3L, string w/Staytite Nylon, Neumann leather grip, treated w/Drytack, asking $40. Ext. 2671.

FULL SIZE BED - $75; stereo, 70 amp, Scott w/cabinet, $75. Bob Wieser, Ext. 3080 or 821-9483.

CHESS CHALLENGER - Fidelity Sensory "8", $100. 475-7366.

COMPOSTING BIN - Rotocrop, PVC, separate slide-up wall panels, flip-up lid, floor ventilator, 3' ht. x 3' dia., $48. 878-0717.

MARIGOLDS - mixed colors, $1.10 per doz. Bill Stars, Ext. 4278 or 298-9648 eves.

1965 SPECIAL MINT SET - w/40% silver half, $1 silver certificate, $3; 1934 $10 Federal Reserve Note, $20. Hugh, Ext. 4424 or 924-3293.

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

COLONIAL - 4 bdrm., brick fireplace, country kitchen, 2 zone heating, private beach, financing available, $65,000. 744-5190.

S. SETAUKET - 5 bdrm., Atrium ranch, 3 baths, 2 car garage, formal dining, 1/3 acre, gas heat, Three Village schools, 7-1/2% assumable mortgage, no brokers, $89,900. 698-3074.

CONDOMINIUM - Birchwood at Blue Ridge, 15 min. from Lab, 3 bdrms., many extras, facing golf course, low $60's. 698-7213.

WADING RIVER - property, north of 25A, exclusive area, lovely wooded bldg. plot, slightly under 2 acres. Owner asking $24,500. 928-0158.

MIDDLE ISLAND - 3 bdrm. colonial, 2 baths, l/r w/fireplace, d/r, apt. in bsmt. w/private ent., 2-3/4 acre wooded, assum. mortg. 924-4054.

COLONIAL - 4 bdrm. on acre in Shoreham-Wading River School District, Axeman-Anderson boiler, 12" insulation, full basement, deck, quiet location, 10% assum. mortg., $89,000. Lee, Ext. 7629 or 929-3023.

YAPHANK - Handyman's Special, 1 family house, garage, 120x150 plot, good location. Ext. 3848 or 924-6236.

WADING RIVER - secluded 4 bdrm., colonial, 2 baths, d/r, den, fireplace, 2 car garage, full bsmt., priv. beach. Ext. 7727 or 929-4631.

MILLER PLACE - spacious tri-level ranch w/income apt., 2 bdrm., dinette-kitchen, l/r, bath upstairs, 1 bdrm., kitchen w/dinette, bath, l/r w/picture window, 2 car & storage shed, 3/4 acre, patios, etc. 744-2536 or 732-9324 after 6 p.m.

PORT JEFF VILLAGE - Harbor Hills, contemporary, 3 bdrm, 2-1/2 baths, l/r, d/r, den, eik, all appliances, central vac., $79,990. 928-6332.

For Rent

E. PATCHOGUE - Basement apt., one bdrm., large living & eating area, all util. incl. $350/mo. 475-9142.

VERMONT CHALET - beautiful furn., stone fireplace, woodland trails, pond & lake, swimming, boating, fishing, nearby Alpine slide, tennis, golf, antiques, etc., weekly rentals. 757-5599.

VERMONT - Cape Cod, 3 bdrm., fireplace, fully equipped, beautiful view, hike, fish, canoe, loaf, summer theatre, auctions, Alpine slide. Reasonable, family oriented, avail. weekly or weekends. 732-6499 after 6 p.m.

WADING RIVER - lovely house on wooded acre, 3 bdrms., 2 baths, eik, din. rm., living rm., den, study rm., 2 car garage, deck, energy efficient, 12 min. to Lab, all appl., SWR schools, $550/mo. avail. August. Ext. 3642/4391 or 929-6964 after 6 p.m.

SOUTHAMPTON - summer/vacation rental, new, spacious, 3 bdrm. ranch, minutes from ocean & bays, adjacent to golf, all appl., sun deck, fireplace. Summer season, $5,000; monthly/weekly also avail. 283-0223.

STONY BROOK - 3 bdrm., liv. rm., dining rm., eik, 2-car garage, 2 baths, $575/mo. + util., avail: Sept. 751-4868.

PORT JEFF STATION - studio apt., kitchen & priv. entrance, female only, $200/mo. + util. Ext. 3492.

BROOKHAVEN HAMLET - summer rental, 3 bdrm. house. 286-0612.

ROCKY POINT - 3 bdrm. ranch, eik, garage, w/w carpet, priv. beach, avail. June. 744-6910 after 6 p.m.

PATCHOGUE - 2 bdrm., 1 bath, furn. house w/full basement, nice yard, close to shopping, etc., $350 mo., 324 Maple Ave. 289-9014.

Car Pools

MANORVILLE - need ride to and from Lab, will pay. Ghosh, Ext. 4360 or 924-6139.

Lost & Found

FOUND - car keys near apt. 34. Ext. 3016.

FOUND - white Poodle, Brookhaven Hamlet. 286-5879.

LOST - watch, near gym area, lost Thurs. or Fri. Lydia Ryan, Ext. 2380.

Wanted

PERSON - to prototype digital circuits. Work in your spare time. 541-5419.

TIRES - C78-13 or 650-13 in fair to good cond. Susan, Ext. 4267.

MATURE WOMAN - for child care, 3 days/week, our home, own transp., Center Moriches area. Roger, Ext. 3578.

DRESSERS - 2 large, for girls room, reasonable. Pat, 281-2289.

CAMPBELLS SOUP LABELS - for St. Mary School, E. Islip, send to F. Chandler, Bldg. T-89.

CHURCH ORGANIST - Center Moriches, Estey two manual, eleven rank pipe organ. 878-1584 eves.

BUSINESS PARTNERS - excel. income potential, no investment, spare time. 698-5861 after 7:30 p.m.

TENNIS BALLS - very old. Liz, Ext. 2082.

VW BUS - good body, with/without engine. Ext. 5385 or 654-2076.

YARD WORK - weeding, planting, etc., Port Jeff immed., Sats., 2 hrs/$15. Must be reliable. 928-7826 eves.

MATURE WOMAN - to babysit 8 year old boy, Moriches Elementary area. Kathy, Ext. 4615 or 399-6585.

TAPE RECORDER - Panasonic, portable, model #2309A, good cond., reasonable price. John, Ext. 3292 or 286-1348.

BABYSITTER - Westhampton Beach area, 1 p.m.-10:30 p.m., mature person w/own transp. to my home preferred, need immed. 288-6367 mornings.

CB - for car, 23 or 40 channel, good cond. and CB car antenna; 28 mm lens for Minolta Bayonet mount, reasonable price. John, Ext. 3292 or 286-1348.

SEEKING PLAYMATES - playgroup for my daughters, Neli (2 yrs.), Henny (8 mos.), Three Village area. 928-7328.

SUBLET APT. - or house for June and/or 1/2 July, couple, no pets, responsible, refs. Vasilis, Ext. 2830.

OLD CAR - 4 or 6 cyl., not over 60,000 mi., clean. Ext. 2358 or 286-0497.

GOOD HOME - for Husky-German Shepherd, 1 yr. old, loves children, trained & gentle, moving to apt. 399-0864.

TRAINS - Lionel, any "0" gauge or "027" gauge cars, track & equip. Frank, Ext. 3120.

UTILITY TRAILER - w/body, 4' wide, approx. $100 to spend. 924-6751 eves.

Services

HOUSE SITTING - free, caring, experienced, any period after June 1. J. Allentuck, Ext. 2412.

EXTERMINATING - licensed professionals, all phases of pest control & termite specialists. No job too small, free estimates. 281-5445.

PLUMBING & HEATING - Lab discount. John, 654-8189.

VERTICAL BLINDS - mini-blinds, wovenwood shades, discount prices, completely installed. Tony, 928-9241.

ELECTRICAL WORK - reliable, reasonable. Joe, 399-0864.

ASPHALT PAVING & SEALING - Bob, 475-4382.

FIRESIDE CHIMNEY SWEEPS - fireplaces, wood, coal & oil flues. Hand brushed & vacuumed, Lab discount. Bill, 584-6425.

HOUSEPAINTING - exper. college student, interior, exterior, professional results at fraction of cost, references. John, 929-4450.

ATTENTION MOTHERS - in Shoreham/Wading River/Rocky Point, responsible, loving 13 yr. old desires babysitting/mother's helper position during summer months. Call Nancy in Shoreham, 821-9547.

SPRING CLEAN-UP - ambitious, strong, 11 yr. old desires yardwork, car washing, garage cleaning. Peter in Shoreham, 821-9547.

HOME IMPROVEMENTS - vinyl and alum. siding, alum. trim, roofing, gutters & leaders, custom carpentry, free estimates. Charlie, 744-3160.

SPACKLING - taping, anytime, anywhere, free estimate. Bill, Ext. 3277 or 286-8185 after 5:30 p.m.

AUTO CLEANING - compounding & waxing. Steve, Ext. 4297 or 929-6877 after 5:30 p.m.

HOUSE SITTING - free, responsibe, caring, any period after May 30. Vasilis, Ext. 2830.

TILE SETTERS - ceramic quarry tiles, no job too small, free estimate. E. Harris, 475-6460.