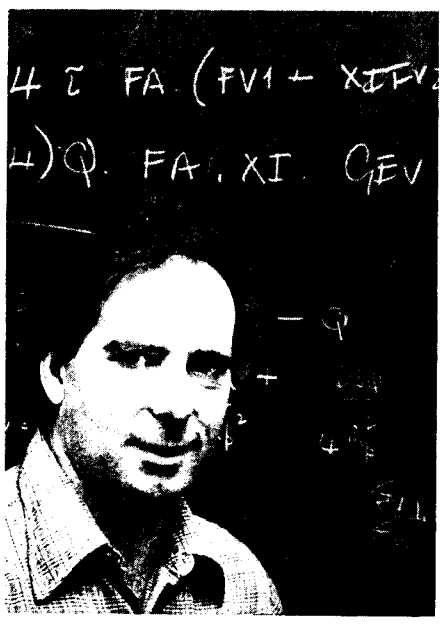
BROOKHAVEN BULLETIN
Vol. 36 - No. 9 March 5, 1982
BROOKHAVEN NATIONAL LABORATORY

BNL Lecture

The Latest On Neutrinos

Are neutrinos really massless and do they conserve lepton number when they interact with other particles? Certainly these ideas are firmly embedded in the standard theory describing the weak interactions of elementary particles. Until recently no experiment attempting to measure the neutrino mass had yielded a positive result, and there was no experimental evidence for lepton number non-conservation.

In recent years both experimental observations and theoretical de-



Michael Murtagh

velopments have led to a reexamination of these postulates. Physicist Michael Murtagh will discuss these latest findings and theories in a Brookhaven Lecture on Wednesday, March 17. Beginning at 8 p.m. in Berkner Hall, the lecture is entitled "Searching for Neutrino Oscillations."

According to Murtagh, astrophysicists have known for a long time that the universe contains dark matter, non-luminous bodies. For example, the gravitational fields of galaxies are much stronger than can be accounted for by the mass of the stars making up the galaxies. One possible explanation of this is that neutrinos have a very small (but not zero) mass and that there are enough of them to account for the missing mass in the galaxies.

In his lecture, Murtagh will describe a decade-long experiment being done by a Brookhaven chemistry group. Led by Ray Davis, the group has been measuring electron neutrino rates from the sun in an attempt to test the therory of solar energy production. Their observed neutrino capture rate is significantly lower than that expected from current solar model calculations. One explanation for this apparent disagreement is that even though the number of electron neutrinos leaving the sun is calculated correctly, there is some probability that by the time they reach the earth they are no longer electron neutrinos but some other kind of neutrinos to which the experiment is not sensitive. This phenomenon of "neutrino oscillation" can only occur if lepton number is not conserved and if at least one neutrino has a non-zero mass.

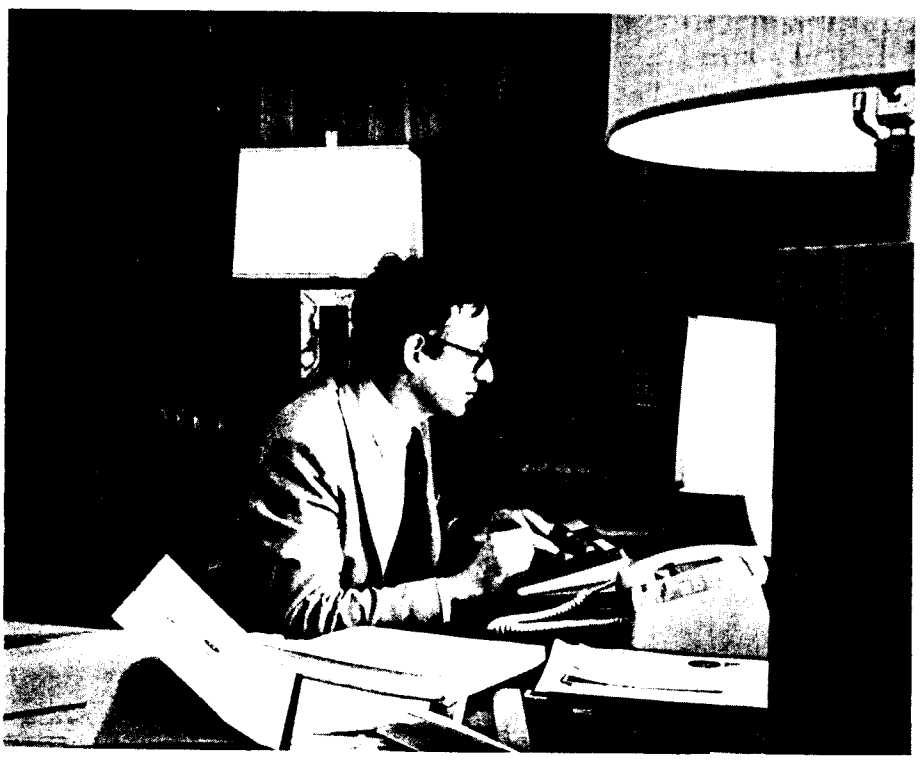
Recent theoretical activity has centered around Grand Unified Theories. These are theories which attempt to describe all classes of particle interactions in a single framework. In general these models can accomodate, and in some cases may even require, heavy neutrinos and lepton number violation.

More significantly perhaps in the past year a tritium beta decay experiment has reported a non-zero value for the electron neutrino mass and a reactor experiment has claimed to observe a neutrino oscillation effect.

For a variety of reasons there is considerable interest today in precise laboratory experiments aimed at measuring the neutrino mass or at observing neutrino oscillations. Murtagh will discuss how this latter search is of particular interest at Brookhaven, since accelerators can produce intense beams of neutrinos. No accelerator experiments to date have yielded evidence for neutrino oscillations. However, a new round of much more sensitive experiments is just getting under way. In particular, two major AGS experiments dedicated to searching for neutrino oscillations have just been approved and should produce significant results over the next few years.

A native of Ireland, Michael Murtagh holds a B.Sc and M.Sc in Physics from the National University of Ireland. He came to the United States in 1967 to continue his education, and in

(Continued on page 3)



Office automation and electronic desks may seem years away from reality, but the computer terminal is already an important part of Ron Peierls' office. Here, he uses his terminal to check his LBL "mailbox." (See story "Electronic Mailbox" page 2.)

Winsche Elected To NAE

Warren Winsche, deputy director, has been elected to the National Academy of Engineering. Election to the Academy is the highest professional distinction that can be conferred on an engineer. Winsche was cited for "innovative contributions to processing of spent nuclear fuel, design of nuclear reactors, production of radioisotopes, and alternate energy systems."

Forty-nine engineers were elected to membership in the Academy and six as foreign associates. This brings the total U.S. membership to 1109, with 97 foreign associates.

Other BNL staff elected in previous years were Joseph Hendrie in 1976 and Herbert Kouts in 1978.

The National Academy of Engineering is a private organization established in 1964 to share in the responsibility given the National Academy of Sciences under its Congressional charter of 1863 to examine questions of science and technology at the request of the Federal Government.

Winsche entered the field of atomic energy in 1945 as Group Leader for Chemical Processes at Clinton Laboratory, now ORNL. He came to Brookhaven in 1946 as head of the Pile Engineering Division where he was concerned with the design of the Brookhaven Graphite Research Reactor and the Hot Laboratory. In 1952 he joined the Atomic Energy division of E.I. duPont de Nemours as Senior Research Supervisor and later Research Manager of their Chemical

Warren Winsche

Separations Engineering Division. At Du Pont he was involved in the design and operation of the chemical processes at the Savannah River Plant. He returned to BNL in 1962 as chairman of the Nuclear Engineering Department (later Applied Science). He was named Associate Director for Energy in 1975, and Deputy Director in 1979.

Training Ends But Savings Begin

Eighteen first-line supervisors have completed the first Resources Management Training Program given at BNL and, by all accounts, it was very successful. After short but intensive training in problem identification and problem solving, the supervisors' mission was to come up with a verifiable cost-saving idea within eight weeks, and each did so. The result is a first year saving to the Lab of $308,819, and approximately $180,000 each year thereafter.

Working closely with the first-line supervisors, were six second-line supervisors and six support-team personnel. "Perhaps the most important outcome of this program has been the improvement of communications between the various levels of management," said associate director Vincent O'Leary, "giving each a better understanding of the duties and problems of the other. The fact that this cooperation also leads to money-saving projects for the Lab is an additional benefit."

The first and second-line supervisors were drawn from Plant Engineering, Photography & Graphic Arts, and Supply & Materiel. Support team personnel were from the Director's Office, Personnel, Budget, Contracts & Procurement, Safety & Environmental Protection, and Fiscal.

The cost saving suggestions ranged from relatively large undertakings to small items. Among them: better arrangements have been made with an outside contractor to dispose of scrap paper from the Laboratory, whereby the contractor is giving us a more favorable price for the material he purchases; shift copy work from machines using a per copy charge, to one on which a minimum charge is paid and currently not used to billed rate; and change operating schedules for certain air handling equipment. Looking at smaller areas, it was suggested that an equal type of plastic laminate be substituted for higher-cost formica, and a less expensive caulking gun for the current stock item. Also recommended was the provision of a service truck set up to carry commonly used materials and tools so that trips to the warehouse could be eliminated.

Because of the enthusiastic response to the first program, Bill Hempfling, Training & Development Admin-

(Continued on page 2)

Inside Info

George Vineyard was selected as Citizen of the Year by the Suffolk County Chapter of the National Society of Professional Engineers. Joseph Hendrie accepted the award on behalf of Dr. Vineyard who is on sabbatical leave in California.

The engraved plaque was presented by Patrick R. Vecchio, Supervisor of the Town of Smithtown at the Chapter's Annual Awards Dinner on February 25. The Citizen of the Year award is given to a non-engineer who has made an outstanding contribution to the social, technological or economic status of Suffolk County. Chosen as Engineer of the Year was Donal Devine, Town Engineer of the Town of Smithtown.

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Veljko Radeka has recently been reappointed Head of the Instrumentation Division for a term of five years. He has served in this capacity since 1972.

—Photos this page by Humphrey

Another Chance To Quit

Once again, the Laboratory is offering smokers the opportunity to quit through a structured program developed by the American Lung Association. The program includes films, lectures and discussions. Dr. Judith Katsin, head of the Employee Assistance Program, and Caroline Kramer, R.N., Occupational Medicine Clinic, will conduct the six session workshop scheduled from noon to 1 p.m. on March 22, 24, 29, 31, April 5 and 7. Meetings will be held in the Large Conference Room of the Medical Building, and employees who wish to participate are asked to get prior approval from their supervisors. The $15 fee is a tax deductible donation to the American Lung Association.

The first program of this kind at BNL which was offered last fall was extremely well-received, and close to 25% of the participants did stop smoking (the expected rate). In a recent poll of participants, all but one respondent out of 21 said they found the workshop helpful even if they hadn't quit smoking.

Employees who are interested in attending the upcoming workshop should send in the registration form below as soon as possible to reserve a space. People who were placed on the waiting list from the first clinic will be given preference. If there are any additional questions, contact Dr. Katsin at Ext. 4567.

TO: Smokers Withdrawal Workshop
EAP, Building 490

I wish to attend the workshop.

Name: _____

Ext.: _____ **BNL Mailing Address:** _____

The Power Pinch

"A lot of women hesitate to report sexual harassment because women: (1) don't think they'll be believed; (2) will be punished by smaller raises or cruddy jobs; (3) will be ostracized by male and female employees; (4) will be accused of inviting the advance; (5) have guilt feelings that perhaps it was invited subconsciously; (6) fear publicity; (7) are unsure exactly what is harassment and what is just interaction of people." Harvard Business Review, March-April, 1981.

In early 1980 the Equal Employment Opportunity Commission published guidelines on sexual harassment in the workplace, holding that it violates Title VII's (of the Civil Rights Act) prohibition against sex discrimination. In May, 1980, Laboratory Director George H. Vineyard issued these guidelines to supervisory personnel.

The issue of sexual harassment is complex, and because it is of national concern (a recent study of federal employees revealed that 42% of the women and 15% of the men had experienced sexual harassment on the job), the Laboratory will offer a program on the subject to all employees on March 9, to be repeated on March 11, at noon in Berkner Hall. The program will consist of a 28-minute film and a discussion period, and is planned not to exceed one hour. All employees — men and women — are encouraged to attend, and supervisors are being requested to release employees for the period that the program exceeds the lunch break.

The film is called, "The Power Pinch: Sexual Harassment in the Workplace," and its narrator is actor Ken Howard. It explores what sexual harassment is, why it happens, who is involved, and how it can be prevented. Candid interviews with executives, attorneys, psychologists, and victims shed light on the emotional, economic, and legal repercussions of sexual harassment incidents, while pointing out the variety of coping techniques designed to deal with this problem. "The Power Pinch" emphasizes that we all share the responsibility for keeping sexual harassment out of the work place.

The program will be introduced by deputy director Warren Winsche, and the discussion led by staff psychologist Judith Katsin and women's program coordinator Gail Williams. After the discussion period, additional information (including the EEOC guidelines) will be handed out to employees.

New Boxes At P.O.

With the addition of 224 new post office boxes, the on-site U.S. Post Office now has 419 mailboxes available to fill the personal postal needs of those who work and live at BNL.

Here's what the Upton Post Office offers:

- window service, Monday-Friday, 9 a.m.-5 p.m.
- two mail deliveries, Monday-Friday, by 9 a.m. and again by 4 p.m., with a morning delivery on Saturday.
- access to mailboxes 24 hours a day, seven days a week.

Post office boxes come in three sizes and two styles. Older boxes have a window and are opened with a combination. The new boxes are windowless and open with a key. Small size boxes in both styles can be rented for six months for $2.50. Medium boxes and large boxes are $3.50 and $5.50 for six months, respectively.

For more information, stop by the Upton Post Office, Bldg. 179, or call Postmaster Marianne Vitale, Ext. 2539.

Concert Reminders

The Dixie Bandits, a local ensemble, will present an evening of Dixieland jazz tonight, in Berkner Hall at 8:30 p.m. Tickets, at $4 for adults; $3 for students and senior citizens; and $2 for those under 18, will be available at the door.

On Thursday, March 11, **The American Brass Quintet,** a group of America's leading brass virtuosi, will present the fourth concert of the 1981-82 BERA Concert Series. This performance of a variety of pieces for brass instruments is scheduled for 8:30 p.m. in Berkner Hall. Admission is $7 for adults, $4 for students and senior citizens and $3 for those under 18. Tickets will be available at the door.

The Electronic Mailbox

It is imperative that Ms. Doe contact Mr. Jones directly. When she first phoned him, two days ago, Mr. Jones was away from his office. When he returned her call later that day, Ms. Doe was in a meeting. And so it has gone, back and forth, their business postponed almost 48 hours until both are available to converse at the same time...

If Ms. Doe and Mr. Jones had been part of a computer network equipped with electronic mail, things might have gone quite differently:

Using her unique password, Ms. Doe logs in at a computer terminal, types a message and Mr. Jones' address, and sends the message on its way. Mr. Jones is out of the office at this time, but when he returns, he will see a message on his terminal, indicating that there is mail in his "mailbox." Using his password, he reads Ms. Doe's message.

This is not science fiction. Today, electronic mail capability is frequently included in computer operating systems such as those for the VAX computers increasingly used by departments at BNL, including Applied Math, ISABELLE and Medical. However, most VAX users at BNL have not yet gotten into the electronic mail habit.

Ron Peierls, head of the Applied Math Department, is one who has. On a daily basis, he logs in to a VAX computer operated by Lawrence Berkeley Laboratory (LBL) in California for DOE's Applied Mathematical Sciences Program. Peierls can connect to this VAX in one of two ways: either by telephone or via the ARPANET, a nation-wide computer network that connects government-sponsored research centers.

"With rare exceptions," says Peierls, "any communications sent to me from the research program in Washington, D.C., always come by electronic mail to my LBL 'mailbox' and I read them at BNL. I send reports to Washington the same way."

In the mid-seventies, Graham Campbell, a computer scientist in Applied Math, was involved in studies of how ARPANET could improve collaborative efforts between various laboratories. Today, both he and Peierls can use the network to send mail to program participants at any other sites with ARPANET-connected computers.

Besides sending and receiving mail, Peierls can do a number of other things on these systems. He can set up distribution lists to forward the same message to many people. After reading his mail, he can delete it, edit it, forward it to someone else, file it and/or print it. If he goes out of town, he can read his mail wherever he is, as long as there's a terminal handy with telephone access to the computer that has his "mailbox." And anything he chooses to do, he can do in a matter of moments.

Despite being a relatively lonely user at BNL, Peierls foresees change. "It seems likely that, at some point, the Lab must consider to what extent it's going to get involved in automated office systems like electronic mail," he says, pointing out that before it becomes widely available, a number of questions must be answered: Will it be an offshoot of a computer system, a word processor or something else? Will it operate by cable or by telephone line? How will you deal with inevitable computer down time?

When issues such as these are resolved, Peierls feels that using electronic mail, for business and for pleasure, will become as routine as picking up the telephone or stopping by the post office. "Nobody doubts that it's coming," he says, "the question is 'How fast?' That's the kind of world we live in."

— Anita Cohen

Training (Cont'd)

istrator, plans to conduct two more programs for different groups during the month of March. He says that not only is the initial training important, but ways are now being devised to make the concepts learned part of the daily routine at the Lab.

Participants In Training Program

First-Line Supervisors
James Carroll
Tage Carlsson
Walter Chornoma
Richard Dietz
Grace Fales
Peter Fennelly
Joseph Hanson
Warren Hulse
Edward Iberger
Edward Leitgeb
Raymond Moore
John Niemczyk
Robert Rasmussen
Andrew Slavinsky
Bruce Style
Nelson Tyler
Mary Wigger
Genevieve Zaharakis

Second-Line Supervisors
Roy Barone
Arnold Benson
Bill Bottinger
John Scandizzo
John Scharpeger
George Scott

Support Team
Vincent Bilms
James Desmond
Marsha Kipperman
Harry Klein
Roy McWilliams
Robert Von Hollen

Congressional Aide At BNL

Doug Jerry

Michael Hathaway (second from left), legislative assistant to Senator Alfonse M. D'Amato (R.-NY) spent an afternoon at the Lab last month. Escorted by deputy director Warren Winsche (foreground) he visited the Superconducting Transmission Line research facility where he talked to Bill Harrison (left) and Tom Muller. Hathaway was also briefed on ISABELLE and the National Synchrotron Light Source, and had discussions with the Director's Office.

BROOKHAVEN BULLETIN

Published weekly
for the employees of
BROOKHAVEN NATIONAL LABORATORY

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Neutrinos (Continued)

1974, he received his Ph. D in Physics from Harvard University.

He has been in BNL's Physics Department since 1973, first working on bubble chamber experiments, and is now involved on a large neutrino experiment at the AGS designed to study elastic neutrino scattering from electrons and protons. The collaboration doing this experiment has just received approval to begin a neutrino oscillation search at BNL.

On the evening of the lecture, a buffet supper is served at 6:30 p.m. at the Brookhaven Center. The price is $6.50, and reservations should be made by calling Ext. 3541 before 5 p.m. that day.

NSF Forecasts Promising Technologies

The Space Shuttle, genetic engineering, robots — if you believe these innovations will not have an immediate impact on American society, guess again. According to a report entitled *The Five Year Outlook on Science and Technology 1981,* recently sent to Congress by the National Science Foundation, these are among the areas of science and technology that are likely to have relatively near-term effects on solving some of the problems of the society we live in. Here are some of the specific expectations cited in the report:

- The Space Shuttle — Among other activities, this will offer a wide range of opportunities for astronomical studies, remote sensing of Earth and materials processing techniques.
- Genetic engineering — Recombinant DNA and other research of this type will influence all the life sciences through new vaccines and drugs, improvements in agricultural crops and new methods of animal husbandry.
- Robotics and artificial intelligence — Combined with research on very high speed integrated circuits, these will impact industrial manufacturing processes and the next generation of intelligent military systems.
- Materials science — National defense, the aeronautics industries and, eventually, other U.S. industries will be affected by the development of stronger, lighter, more heat-resistant materials from domestic raw materials.
- Remote sensing satellites — These will provide information about renewable and nonrenewable natural resources and residential development patterns.
- Information sciences — This field will produce better ways of storing and retrieving immense amounts of information and will improve analytical tools used to assess, compare and manage risks.
- Electronics technologies — Using results from the cognitive and behavioral sciences, these will provide improved training methods for military personnel, for the continuing education of scientists and engineers and for students at all levels.

BERA Election

During the week of March 15-19, on-site employees will be invited to cast their ballots in the 1982 BERA Board election. Voters will select two candidates from the slate of four to replace Donald David and Patricia Oster whose terms as BERA trustees will expire on April 30.

About the candidates:

Richard Holroyd, a chemist, in the Chemistry Department, is primarily involved with BERA as a member of the Concert Series Group. In the past he played on a volleyball team.

Sandra Lane, senior librarian in the Department of Nuclear Energy, is now president of the Theater Group. Also in the Theater Group she has directed a play, appeared in several productions, and served as vice president/-secretary. In other BERA activities Sandi was secretary of the volleyball league and publicity chairman for a BERA dance.

James Roesler, technical associate, Safety & Environmental Protection Division, has been involved in a number of BERA activities including softball, bowling, touch football, and basketball. In 1974 he was selected by the BERA Board to serve on the Nominating Committee.

Joseph Skelly, physicist, Accelerator Department, is active in the Theater Group both on-and off-stage. He served on the Executive Board for three years and is presently chairman of the House Committee. Joe has assisted in a number of BERA special activities such as the annual dances, and the Eglevsky and Alvin Ailey dance performances. He has also served as a trustee on the Upton Nursery School Executive Committee.

Sandi Lane

Joe Skelly

Dick Holroyd

Jim Roesler

Mort Rosen

Voting Schedule

Monday, 3/15	Cafeteria	11:30- 1:00
Tuesday, 3/16	"	"
Wednesday, 3/17	"	"
Thursday, 3/18	"	11:30-12:30
" "	Bank	1:00- 2:30
Friday, 3/19	Bank	10:00- 2:30

Absentee votes will be accepted from employees who will not be on-site during voting week. Send a signed memo with candidate selections to BERA Board President, Patricia Oster, Building 911A. To be valid, all absentee votes must be received by noon on Friday, March 19.

Volleyball

Mixed League Standings as of 3/1/82

A Division	
Mixed Ups	8-1
Teddybares	8-1
High Society	5-4
Dinkers	4-2
Las Bolas	1-5
Nuts & Bolts	1-8
Leftovers	0-6
B Division	
Semi Tough	5-1
KMA	4-2
TNT	3-3
Big Boopers	2-4
Puff & Stuff	2-4
Quirks	2-4

Arrivals & Departures

Arrivals

Anthony D. Blackett ..... Biology
Thomas C. Cromer ..... Accelerator
Thomas F. Delasant ..... Mgt. Info. Syst.
Marie L. Kalousek ..... Instrumentation
Joseph W. Levesque ..... Saf. & Env. Prot.
Lawrence Musso ..... Saf. & Env. Prot.
Solomon Shteyn ..... Biology
Ralph D. Wilson ..... Saf. & Env. Prot.

Departures

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

Thomas E. Gangwer ..... Energy & Env.
Gerard A. Haubert ..... Mgt. Info. Syst.
Linda L. Olmer ..... Saf. & Env. Prot.
Dhanwant S. Sethi ..... Energy & Env.

Motorcycle Club

There will be a meeting of the Motorcycle Club on March 8, at 5:15 p.m. in the Recreation Building. The movie "On Any Sunday" will be shown and refreshments will be available. All are welcome.

Bowling

White League

The Flounders have moved into first place. High games were bowled by K. Asselta 208, N. Carter 203, J. Griffin 200, J. Petro 199/190, M. Brenner 189, M. Stoeckel 186, N. Erickson 193, P. Manzella converted the 1/2/10 and 4/9/10.

Red & Green League

R. Larsen rolled games of 212/230 (614-638 series) raising his average to 191, J. Morris 241/220 (607-661 series), R. Wiseman bowled a 600 scratch for the fifth straight week with games of 221/211 (612-660 series). Other good games were D. Schiappa 224, J. Ferrante 218, J. Connelly 212, J. Cochrane 205, M. Iarocci 203, N. Parrinello 201, W. Kollmer 201, J. Bohenek 200, A. Almasy 200.

Pink League

H. Keeley bowled a 210, M-G Meier 205, D. Johnson 204, J. Thiede 175, M. Connelly 171.

Types Of Crops

The terms annuals and perennials probably make you think of flower varieties, but the Cooperative Extension Association of Suffolk County reminds us that vegetables also come in these two categories. Annuals are crops such as beans, tomatoes and onions that are planted each year. Once planted, perennial vegetables will live for more than two years.

Asparagus, rhubarb and horseradish are perennial vegetables that grow well on Long Island. However, before you try to grow them, here are some things you need to know:

- They do not adapt to a very small garden.
- They require special soil preparation.
- They will occupy one section of land for several years.
- Unless you continue to tend the area after the crop is harvested in the spring, it will become a weed patch.
- Asparagus must be cultivated for three years before you get your first spear.

If you still want to include both annuals and perennials in your garden, give each type of vegetable its own growing space. Plant perennials on one side of the plot because they will occupy the same space for five to fifteen years, and you will not disturb the roots when preparing soil for annual crops.

Cooking Exchange

An "English Tea" will highlight the next meeting of the Cooking Exchange on Wednesday, March 10. Trumpington ladies' crunchy chocolate biscuits, cream scones and Banbury tarts are some of the delicious treats that will be demonstrated.

The Cooking Exchange is open to all on-site employees and their immediate families. Meetings are held on the second and fourth Wednesdays of each month from 12.30 to 2:30 p.m. in the Recreation Building. For the $1.00 admission fee those present at the meetings receive copies of the recipes prepared and also a sample of each dish along with coffee and tea. Babysitting is provided at 50¢ per child.

Ruth Fernow, Club Chairman, will answer any questions. Call her at 928-8465.

Special Train Trip

In addition to the regular Wednesday LIRR trips to New York City, the Hospitality Committee will sponsor a group trip to the city on **Saturday, March 20.** Departure will be at **8:31 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, March 11.** Please make checks payable to "Brookhaven National Laboratory," and put the date of the trip, your telephone number, and your BNL life number on your check. Reservations will be accepted on a first-come, first-served basis. Your tickets will be given to you on the train. Refunds will be made only if cancellations are received by Monday, March 15.

Softball

A captain's meeting will be held on Thursday, March 11, at noon in the Snyder Seminar Room of the AGS, Building 911, first floor. All teams wishing to participate should have a representative at this meeting. Any new teams wishing to join the BNL Softball league are urged to attend. Anyone wishing further information, please call Charles Bohnenblusch, Ext. 4758.

Cafeteria Menu

Week Ending March 12, 1982

Monday, March 8		
Cream of potato soup	(cup)	.60
	(bowl)	.70
Cheese omelet w/hash browns		1.70
Sweet and sour pork on rice		1.75
Hot Deli — Sausage & pepper hero		1.85
Tuesday, March 9		
Beef noodle soup	(cup)	.55
	(bowl)	.65
Meatcakes and onions w/potato pancake		1.75
Southern fried chicken and stuffing		1.75
Hot Deli — Texas jumbo chili and cheese dog		1.75
Wednesday, March 10		
French onion soup	(cup)	.55
	(bowl)	.65
Roasted top round of beef "sliced to order" w/baked potato & sour cream & 1 veg.		2.05
Kielbasa w/sauerkraut		1.75
Hot Deli — Monte Cristo		1.80
Thursday, March 11		
Chicken and rice soup	(cup)	.55
	(bowl)	.65
Grilled chopped steak w/mushrooms & onions & 1 veg.		1.85
Stuffed pepper and spaghetti		1.75
Hot Deli — Chicken fillet sandwich w/lettuce & tomato or a zesty tomato sauce	(bread)	1.75
	(roll)	1.85
Friday, March 12		
New England clam chowder	(cup)	.60
	(bowl)	.70
Meatless baked ziti & 1 veg.		1.70
Shrimp Sukiyaki over rice		1.75
Hot Deli — Breaded fish fillet	(bread)	1.75
	(roll)	1.85

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.

1658. SECRETARIAL POSITION - Requires AAS in secretarial science or its equivalent plus demonstrated secretarial and administrative abilities. Candidate must have substantial office experience and possess excellent oral and written communication skills. Working knowledge of shorthand and experience with word processing equipment, or the willingness to learn, is required. Director's Office.

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

1659. SYSTEMS/DP ANALYST (2 positions) - Requires a bachelor's degree or significant relevant programming experience in COBOL. Required experience includes systems design utilizing data base techniques. Knowledge of Hewlett Packard 3000 hardware is highly desirable. Responsibilities will include designing on-line financial applications. Management Information Systems Division.

Autos & Auto Supplies

68 VW BUG - recond. eng., new clutch, new paint, very clean, must be seen. $1,875. 281-2431.

75 OLDS - Cutlass Supreme Sports Coupe, auto., 260 V-8, stereo, cassette, swivel front seat, powder blue, white int., immaculate. Must see, $2,800. Ext. 3381 or 286-1024.

76 AUDI - good running engine, needs trans. work, body excel. Best offer. 744-2715.

80 SUZUKI - GS1000L shaft drive, luggage rack, many extras, warranty. $3,000. Ext. 7745, 981-9474.

79 HARLEY DAVIDSON - Sportster XLCH, low milage, excel. cond., extras. $3,100. Wayne, 878-8459 after 6 p.m.

76 FORD PICKUP - p/s, 6 cyl., cap, auto trans., 67,000 mi. $2,500. Bud, Ext. 3083 or 878-1915 after 5:30 p.m.

78 TRANS AM - excel. cond., mint, new brakes, T-top, custom paint, gold, beige int. $5,500. Roy, Ext. 4664 or 744-8779.

66 MUSTANG COUPE - parts. Also rebuilt Mustang 6 cyl. eng. $200. 732-8316, after 2 p.m.

60 CHEVY PICKUP - restored, blue, wide oval tires, rebuilt 307 eng., new paint. $1,800. Ext. 3703 or 298-8173.

74 HONDA - 450cc, good cond. $450. 585-0238.

72 CHEVY WAGON - good running cond., just tuned. $550. Frank, Ext. 4173.

AUTO ROOF CARRIER - 37"x37"x5", new, $18. Jag, Ext. 5080 or 751-1884.

72 HARLEY DAVIDSON - FLH police special, 1200cc, all stock, $3,000. John, Ext. 4973 or 798-3766.

CAP - for pickup, Winnebago, insulated, good cond., $175. 924-5418 after 6 p.m.

TIRE - 165SR15, new, never used, mounted on Volvo rim, cost $75, will sell $50. 698-9739.

76 VW DASHER - 4 dr., auto, am/fm, best offer, $3,000. Marjorie, Ext. 3396.

80 CHEVY DIESEL PICKUP - a/t 3-speed w/overdrive, p/s, p/b, a/c, dual 20 gal. tanks, undercoat & rustproof, bed liner, cap, extras, excel. cond., $8,300. Ext. 4751 or 473-1967.

72 DODGE POLARA - 4 dr., hdtp, p/s, a/t, p/b, 108 kmi, just inspect., best offer. Ken, Ext. 3564.

CAP - for 8' pickup, $75. Steve, 585-8395.

72 FORD PICKUP - w/cap, R&H, body good shape, $1,200. Joe, Ext. 4255 or 585-6269.

75 OLDS - Cutlass Supreme Spt. Cpe., auto, 260 V8, stereo cass., swivel front seat, powder blue, white int., immaculate, must see, $2,800. Ext. 3381 or 286-1024.

79 YAMAHA - 650 special, mag wheels, many extras. excel. cond., best offer over $1,400. Fred, 924-3556.

81 LYNX COUNTRY WAGON - auto, cruise control, air, loaded, excel., $5,900. Frank, 623-1211 days.

74 HONDA - 450cc, good cond., needs regulator & odometer cable, $500. 732-0144.

66 VOLVO 122S SEDAN - runs but needs love, $350. Randy, Ext. 3809 or 744-8609.

78 FORD WINDOW VAN - p/s, p/b, a/c, captain's chairs, am/fm stereo, mint cond., $3,500. 929-4123.

71 SPITFIRE - engine good, tires excel., suspension good, no dents, runs but needs work, $500. Ray, 589-3485.

79 KAWASAKI - 400cc, rack, sissy bar, new shocks, chain, sprockets, K-81 tires, 60-65 mpg., $1,100. Mike, Ext. 5206.

77 TRUCK CAMPER - 11 ft. Aristocrat, loaded, mint cond. Mike, 878-1325.

73 PINTO WAGON - 4 spd., runs well, $500. Alan, Ext. 2928 or 821-1389.

70 FORD MAVERICK - 3 spd., 28 mpg, good engine, body needs work, $350. Anand, Ext. 2117, eves 928-5529.

Boats & Marine Supplies

16' SUPER SPORT - 1974, 50 hp Evinrude, 1974 trailer, Powerwinch, CG gear, many extras. Asking $2,600. 744-6892.

TYLERCRAFT 24' SLOOP - twin reel, sleeps 4, enclosed head, new motor, new sails. R. Boie, Ext. 4232.

ICE BOX - 2 cu. ft., $20; Wilcox hi. cap. bilge pump, $15; Radio Shack CB antenna, $10. Carl, Ext. 4420.

17' SAILBOAT - f/glass explorer, full sails, etc., pre-season special, $595. Joe, 286-2372 eves.

18' BOAT - Barbour wood, (Lapstrake), 40 hp. Evinrude motor, trailer, all for $800. 929-8642.

25' WOODEN DORY - $50; 20' fiberglass boat, $350. Kochis, Ext. 2023 or 744-0047.

21' CRUISER INC. - 1973, 165 hp, OMC I/O, depth finder, CB, full new canvas, excel. cond., 924-4054.

Free

SHEPHERD - to the PERFECT loving family. 9 yr. old, white, very good disposition, good watch dog. 281-0804 evenings.

ALUMINUM CABINET - 924-4054.

PUPPY - 6 wks. old, German Shep., female. 924-4054.

NEWSPAPERS - 5' stack, you pick up in Yaphank. Ext. 4761 or 924-3556.

PUPPY - 12 mo. old, Husky/German Shep., warm, good w/children. 399-0864.

Yard Sales

MOVING SALE - Saturday, Mar. 6, toys, furniture, all must go, Shoreham. 821-9346.

ATTIC SALE - antiques, collectables, bric a brac, furniture, wood stoves. 41 Nottingham Dr., Middle Island, March 12-14. 924-0323.

Miscellaneous

SKI BOOTS - Henke, women's sz. 5, leather w/buckle, $10. Georgia, Ext. 2772 or 286-8869.

BOY'S 3-PIECE SUIT - w/white shirt, sz. 10, navy blue, polyester, like new. $15. Ext. 2926.

COLLIE PUPS - AKC registered, 6 wks. old. Tom, 929-8427.

GE DRYER - needs belt, $25; Kenmore washer, needs repair, $10; carpet/floor cleaner, $8. 929-8642.

KITCHEN TABLE - white oval formica and two wood tressel benches in v.g. cond., asking $50/set. 281-0360.

GAS OVEN - counter top range w/built-in cabinets, $200. Georgia, Ext. 2772 or 286-8869.

MAPLE DEN SET - couch, rocker, chair $150; picnic table, canope, benches, $100. 929-8642.

STOVE - Petit Godin, wood/coal, white stove pipe & metal bestos chimney kit, $600. John, Ext. 3082.

10" TABLE SAW - Craftman, excel. cond, $170. 499-0637 after 6 p.m.

PAN AM COUPONS - 2 for 1. Ext. 3985 or 265-3612.

KITCHEN CABINETS - 25 doors, 8 drawers, Birch, excel. cond. Make an offer. Sally, 751-1401.

HANGING BATH SINK - faucet, towel bars, legs, good cond., $35. 924-3565.

DEEP WELL PUMP - 2 stage, total overhauled, $95. 924-3565.

STEREO - receiver and two speakers, excel. cond., still in original boxes, $200. 286-3149.

WINDOWS - 10 lights 24 x 66-1/8 (2); 18 x 66 (2) unpainted, never used, further particulars, Make an offer. Ext. 2265.

CAMERA - 35mm SLR minolta SRT 102; 50mm 1.17 lens & filter; shutter 0-1000, asking $150. Ext. 3284 noon or 281-0360 after 6 p.m.

1/2 HP MOTOR - sol. valve, pump, usable Sears model 600 washer. 473-9223 after 5 p.m.

ELECTRONIC THERMOMETERS - new, $10. Charlie, Ext. 3935 or 325-0968.

ROTARY PHASE CONVERTERS - 10 hp, $250; 7 hp, $200; transistor phase converters, $75. 924-7817.

KING SIZE BED - excel. cond., box spring, mattress, frame. Value $459, selling $200. 924-8297.

HOME MOVIE CENTER - 8 mm Revere Turret camera, projector, screen, floodlights, & editor, $100. Peter, 698-3822 eves.

ANSWERING MACHINE - new, Call Jotter, answers all calls, orig. $89, selling $60. Roy, Ext. 4664 or 744-8779.

JALOUSIE WINDOWS - (8), 1 door, full length, $75; high chair, $7; Remington Rand portable typewriter, v/g cond., $35. 727-1617.

BEDSPREAD - twin sz., w/sham, bone & rust DuBarry pattern, never used, $20. Clarence, Ext. 3357.

FURNITURE - contemp., good conds., liv. rm couch, 2 chairs, dinette set. Franz, Ext. 7103 or 744-3235.

PUPPY - Siberian Husky, male, 12 wks. old, AKC, $150. 399-2677.

GERBILS - 3 mos. old, hand raised, gentle, sell in pairs only, $3. Bill S., Ext. 3848 or 732-5864.

TAMBERG RECEIVER - sacrifice, AIWA, tape deck, AR turntable w/Ortofon cartridge, AR 92 speakers, asking $700. Ext. 2034 or 475-2598 after 6 p.m.

25" COLOR TV - Sylvania, good cond., $100. Ext. 3922.

ROLLER SKATES - sz. 6, blue, excel. cond., $5. 286-2435.

BASF BLANK TAPE CASSETTES - C-90, chrome, Ferrite FeCr & metal, reason. Ext. 2521 or 928-8379 eves.

YARN - custom blended, by the oz. or lb. Jean, 698-3645.

UTILITY BOX - (tools, etc.), Sears, ideal for installation on pickup truck, $50. Bob, 744-0818 after 5 p.m.

FREEZER - $200; b/w TV, needs repair, $25; girls bike, $45. Paul, Ext. 4156.

BEDDING - 2 sets, 4 pieces, DeLux Shifman, twin sz., good cond., $75/set. 475-8658 after 6:30 p.m.

OIL BURNER GUN - Wayne retention head, brand new, never used. 585-4741.

COLONIAL LOVE SEAT - & matching chair; knotty pine end tables & cocktail table. 472-3994.

POLYESTER PANELS - 5 prs., pinch pleated, 96" length, off-white, attached 18" valiances (3 w/gold, 1 w/blue, 1 w/green), $6/pr. 281-7844.

UPRIGHT FREEZER - approx. 6'x3', works fine, Jordan Co., $100. 924-6751 eves.

IBM TYPEWRITER - model C, office type, good cond., $225. Ext. 2268 or 727-5194.

BATAVUS MOPED - good cond., $300; 2 end tables & coffee table, $50 for all 3. Kochis, Ext. 2023 or 744-0047.

BIKE - Fugi Grand Tourer, black, excel. cond., must see to appreciate, water jug & pump, $175. Ron, 878-1731.

CAIRN TERRIER - AKC reg., orig. price $350, best offer; hamburger maker, $5; toaster, $5; wooden chest, $20; bar stools (3), $5 ea.; chest of drawers, $20; bicycle, 10 spd., like new, $75; VW hub caps, $5 ea. 924-4054.

C.B. TOWER - 40' tilt, Wilson "Y" quad antenna, rotor, cable & many other extras, $150; all wood credenza, beautiful for dining rm. or liv. rm.; black Japanese Silkie chickens. 751-5539.

CAR RACING SET - Aurora, AFX, GT (plus) cars, new pwr. transformer, extra tracks & cars, hardly used, like new. Mark, 744-8063 days.

CASSETTE DECK - Panasonic, w/dolby, excel. cond., $85. John, Ext. 3698 or 288-3892.

SLEEPER COUCH - grey velour; twin box spring & mattress; 2 desks; dressers; baby items; and much more. Moving. 331-3724.

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

ROCKY POINT - 4 bdrm., 2 bath, f/p, deck, deeded beach rights, solar hot water, extra insulation, finished basement, acre, more. 744-7587.

MIDDLE ISLAND - 2-3 bdrm., liv. rm., kit., bath, 1 car garage on acre, North of Jericho, $35,900. Joann, 744-2821 or 473-8670.

LAKE PANAMOKA - 3 bdrm., high ranch, eik, d/r, full basement, 1 car garage, 1 block to beach. 924-4054.

MIDDLE ISLAND - 3 bdrm., colonial, 2-3/4 wooded acres, eik, liv. rm., f/r, s/s, w/w carpet, 2 baths, apt. in basement, kennel. 924-4054.

SHOREHAM - 3/4 acre wooded plot. Steve, Ext. 2023 or 744-0047.

MILLER PLACE - contemporary ranch house, w/$-saving heat, 4 bdrms., eik, l/r, den, fenced yard, excel cond., Rustic Acres, $72,500, financing avail. 331-3724.

For Rent

ROOM - furnished, share kitchen, l/r, bath. Food plan available, $250/mo. incl. util. Roy, Ext. 4664 or 744-8779.

PORT JEFFERSON STATION - north of 347, 3 bd. rm. house, gas heat, avail. April 1, $425/mo. + util., no pets. Peter, Ext. 2744, 2734 or 928-2469 eves.

E. SETAUKET - 3 bd. rms., playroom, 3 miles from N. Shore beaches, 3 months (June-August), 3 miles from SUNY. Ext. 2620, 751-6765.

ROCKY POINT - 3 rm. apt., 8 mi. from Lab, ideal for business couple, priv. ent., util. incl., w/w carpet, $325. 744-7083.

LAKE PANAMOKA - studio apt., priv. ent., priv. garage. $300/mo. w/util. Don Shuette, Ext. 3084.

E. SETAUKET - high ranch, 7 rms., 3 bdrms., f/r, 3 baths, 2 car garage, 2 mi. from beach, 3 mi. from SUNY, 3 mo. (June-August). Ext. 2620 or 751-6765.

Car Pools

STONY BROOK-SETAUKET - No. 25A, need 1 driver for existing car pool. Karl, 2984.

BELLPORT - on time car pool, 8:30-5 p.m., existing car pool looking for a 5th member. George, Ext. 7564.

HUNTINGTON/GREENLAWN - driver needed for existing car pool. Jim, Ext. 5057.

YAPHANK - paying rider to Lab, 8 a.m., on time, Dawn, Ext. 3541 or 281-2070.

W. PATCHOGUE/BLUEPOINT - person to share driving. Ext. 4070 or 475-7272.

Wanted

TRAINS - Lionel, American Flyer, accessories, any condition brings good price. Carole, Ext. 3362, 924-4097 eves.

PLASTIC EGGS - from Leggs panty hose. Ed Pluta, Ext. 2957.

PRESSURE COOKER - Canning pot. 727-1617.

APARTMENT - middle to western Suffolk, 4 rms. needed. Lori, 289-3076 days, 328-3173 eves.

POSTAGE STAMPS - used, especially foreign. Please mail to Leonhardt, Bldg. 911A. Thanks.

MOTORCYCLES - bent, broken, any age or cond. Kevin, 281-8031.

ENGINE - 350 Olds or G.M. to fit '72 Delta trans. Reasonably priced, please. Gordon, Ext. 4040.

CEDAR CHEST - good cond. Noel, Ext. 3690 or 744-5278.

DRUM SET - used, good cond., reasonable. 732-9517 eves.

TIRE BALANCER - any cond. 325-0928 after 6 p.m.

KRAUSER SADDLEBAGS - for BMW motorcycle. 878-8847.

TIRES - 1200 x 16.5 with rims. Bob, 399-0125.

AMBITIOUS PERSON - $200-$300/mo., 6-8 hrs/wk. 698-5861 after 7:30.

CAMPBELLS SOUP LABELS - send to F. Chandler, Bldg. T89. (For St. Mary School, East Islip.)

HOUSEMATE - 2 b/r condo, Holtsville, 5 appl., $225 incl. all util. Female please. Ext. 3199 or 475-6622 eves.

ENCYCLOPEDIA - Britannica, pre 1974, 14th edition. Mulki, Ext. 2902.

MICROMET FEEDER ASSEMBLY - useable cond. Fred Kuehl, Ext. 4823 or 588-2268 after 5 p.m.

BABY FOOD JARS - large size. Jim, Ext. 2957.

LATHE - small for model work; watches/clocks for student watchmaker to repair. George Hrabak, Ext. 3536.

10 SPD. BIKE - 26-27" frame, repairable o.k., reasonable. Bill Sanchez, Ext. 3848 or 732-5864.

SIX LUG RIMS - to fit 7.00-15 tires; mushroom anchor, 150 lbs., or a small dinghy. Richie, Ext. 3815 or 924-5329.

BABY SWING - w/hard seat. Ext. 4070 or 472-3994.

Services

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

FIRESIDE CHIMNEY SWEEPS - fireplaces, wood, coal & oil flues. Prof. sweeped, insured. Lab discount. Mike, 584-6425.

MOTORCYCLE ACCESSORIES - for street, dirt. Ext. 2311.

CARVING KNIVES SHARPENED - on a flat stone. $10 per knife. A razor edge. Dave, Ext. 4755.

HOME IMPROVEMENTS - carpentry, roofing, masonry, painting, complete, int./ext. Free estimates. 281-0360.

HOUSE CLEANING - and/or babysitting. Hours flexible, experienced, can provide refs. Cathy, 281-0360.

HOUSE SITTING - caring, responsible, after April 10, any duration, plan your vacation now. J. Allentuck, Ext. 2412.

BICYCLE REPAIRS, reasonable, free est. Jeff, 286-0353 after 3 p.m.

LIMO SERVICE - luxury, chauffered, for proms, weddings, airport, all occasions. Roy, Ext. 4664 or 744-8779.

VINYL SIDING - aluminum trim, free est., licensed & insured. Wayne Hulse, 878-8459 after 6 p.m.

TILE SETTERS - ceramic Quarry tile, no job too small, free estimates. E. Harris, 475-6460.

REGISTERED BROKER - financial management & advice, stocks, bonds, tax-free income, IRA's. Gene, M-F 829-9168, weekends 744-8659.

ASPHALT PAVING - & sealing. Bob, 475-4382.

INCOME TAX PREPARED - by profess. acount., very reason. rates. Bob, 286-5829 eves and weekends.

PROFESSIONAL INCOME TAX SERVICE - by exper. preparer, IRS enrolled, on-site preparation. Jack, Ext. 7942 or 864-2236.

SOUND DISCRIMINATORS - protect your home, apt. or business for as little as $265, custom system. 399-3806.

WALLPAPERING - reasonable, no job to small. 472-3994.

TAXES - prepared by tax consultant, your home or mine, reason. John, 732-2472.

AUTOMOTIVE REPAIRS - & tune-ups, Lab discount. Glenn, 281-7873.

TAX RETURNS - exper. prepared, very reason. rates. Bill, 821-9081.

Classified Ad Policy

Deadline is 4:30 p.m. Friday for publication Friday of the following week.

1. The Brookhaven Bulletin's classified section may be used only by active and retired Laboratory employees.
2. All items for sale or rent must be the advertiser's property.
3. Ads for material acquired for resale in association with a full or part-time business cannot be accepted.
4. Ads for the sale or trade of firearms will not be accepted.
5. Ads not carried because of space restrictions will be held for publication in the next issue.
6. Ads are run only once and must be resubmitted if they are to be repeated. One ad per person per week.
7. **Property for sale or rent cannot be accepted on this form. Special Real Estate Ad Forms are available at the office of the Brookhaven Bulletin, Building 134.**

☐ For Sale: Autos & Auto Supplies
☐ For Sale: Boats & Marine Supplies
☐ For Sale: Miscellaneous
☐ Car Pools
☐ Lost & Found
☐ Services
☐ Wanted
☐ Free

Please print your ad below in 15 words or less using one word per block. Include name and phone number to call.

Note: The following must be completed for your ad to appear.

NAME (Please Print) .....

Employee's Signature ..... Life No. ..... Ext. .....

Send to: Brookhaven Bulletin, Building 134 (Ext. 2345).