

## Update

### SDI-Related Research at BNL

As announced in the Bulletin last fall, Brookhaven has undertaken a program relating to the Strategic Defense Initiative (SDI). This project, a \$4 million Radiation Effects Facility (REF), is for the study of radiation effects in space. The project is supported by the Air Force Weapons Laboratory and is unclassified.

Last week, on July 11, groundbreaking for REF took place on Michelson St., opposite the Brookhaven 200 MeV linear accelerator. The facility will consist of a 200-foot tunnel from the linac to a shielded target cave (irradiation test cell), adjacent to which will be a small building housing the control room. Pierre Grand, project head, says they expect to have a beam by May 1986 and to become fully operational by the end of that year.

According to Grand, a single solar proton going through a computer chip operating in space can cause computer error even though the chip itself is not damaged. NASA has had a long-standing interest in radiation effects from solar protons. Similarly, SDI is concerned about radiation effects on any susceptible space system component. Survivability of electronic components in space is important and a substantial effort is going toward developing radiation resistant devices. The studies at the REF will center on radiation effects on various materials and material conditions, mainly electronic components.

Brookhaven's linac, at 200 MeV, is about the right energy for these studies, says Grand, "and only a very small fraction of the linac beam will be used since all the effects being studied concern small proton current density on the electronics only."

Herbert Kouts, chairman of the Nuclear Energy Department, in which the new group is organized, says that "It's obvious that there's a military interest in accelerator technology these days. But what's likely to be more important to Brookhaven in the long run is the new areas of basic research in radiation effects that this facility will open up."

According to Seymour Baron, Associate Director for Applied Programs, REF was accepted because it represents advanced scientific research which fits into the Lab's mission and is within our research interests. Also the Laboratory fulfills its

role as a national resource for the government. He reiterated that REF is unclassified. "It could be," he said, "that some of the results of this basic research would have special application and the information would then be classified, but not the facility."

Last month, the Lab agreed to look at the feasibility of another SDI-related project, a neutral beam test facility, which would cost in the neighborhood of \$8.5 million. To this end, \$500,000 has been received from the Air Force to evaluate the concept and costs of such a facility at BNL. Laboratory Director Nicholas Samios says that this project, as with other Lab research, would have to fit into the style of BNL as a research center, and be open to users from other national labs, universities and industry, as well as defense contractors.

As to the purpose of such a facility, Pierre Grand says there are a number of basic questions to be answered about neutral beams. "You have to neutralize a beam in space, otherwise it becomes deflected by the earth's magnetic forces, and you have to know where the beam is going. We have an existing machine at BNL, the 200 MeV linac, and we would do some experiments to see whether some of the crazy ideas being talked about are real or not."



At groundbreaking ceremonies, last week, for the new Radiation Effects Facility on Michelson Street, some of the principals involved were (from left) Seymour Baron, Associate Director for Applied Programs; Nicholas Samios, Director; Lt. Col. James H. Head, Air Force Weapons Laboratory; David Hendrie, Director of Nuclear Physics, Office of Energy Research, DOE; and (far right) Herbert Kouts, chairman of the Department of Nuclear Energy.

The new beam would be an offshoot of the beam line used by the irradiation facility. This beam line would provide a neutral hydrogen beam for a series of experiments on the sensing and characterization of charged and

neutral particle beams. Kouts speculates that this proposed research "would develop new techniques in measurements for beam control, which may well have direct application to accelerator technology."

### BNL Transfers Cable to Industry

Under a half-million dollar contract from the Empire State Electric Energy Research Corporation (ESEERCO), a room temperature cable developed by the Advanced Technology Applications Division in the AGS Department will be manufactured by Cablec (formerly the Phelps Dodge Wire and Cable Corporation), a high-voltage cable company in Yonkers, New York. The Brookhaven cable uses a synthetic tape insulation that is a spin-off of the division's long standing work on underground power transmission using superconducting cable.

The trial cable to be made by Cablec marks the first step in transferring Brookhaven's cable insulation technology to industry. ESEERCO is a non-profit corporation funded by seven major electric utilities in New York State.

The Brookhaven cable uses polyethylene film as an insulating tape, instead of kraft paper, which is the conventional insulator now used in virtually all high-voltage underground power transmission cables in the United States.

Says Division Head Eric Forsyth, one advantage of the polyethylene-insulated cable is that it can sustain a higher voltage than a conventional cable of the same diameter. "Or to put it another way," says Forsyth, "for the same voltage, it can be a smaller cable." Smaller cable is important to cable companies, he says, because if more cable can be kept on fewer reels, transportation costs can be held down. And in large cities, where these cables are primarily used, this translates into hundreds of thousands of dollars saved.

Al Muller, deputy manager of the division, notes that the polyethylene-insulated cables will be less costly to impregnate with oil than their kraft paper counterparts. Before they are loaded into underground pipes, the

kraft paper cables are placed in a large tank where they are immersed in oil, which serves as added insulation. The synthetic cable, according to Muller, would be pulled into the pipes before oil is added, because it receives the oil better than kraft paper. "This is less costly to the utilities," says Muller.

Another key advantage is that since the Brookhaven cable is built to fit into standard underground pipes, the transition from kraft cable to synthetic cable could be smooth. "The power rating between substations could be increased without having to pull up the streets," says Forsyth.

He points out that New York State has one of the largest underground power transmission systems in the country. In parallel with the ESEERCO contract, the New York State Energy Research and Development Authority is funding a separate study of the economic and technical

feasibility of installing synthetic tape cables in new extra high voltage circuits and in retrofit applications to upgrade existing installations.

The ESEERCO contract covers a 30-month period. The synthetic tape will be made by a plastic film manufacturer, to Brookhaven's specifications. The tape will be shipped to Brookhaven for final processing and testing. It will then go to Cablec for construction of about 500 feet of cable, to be tested mechanically and electrically.

While this first cable is being built and tested, Brookhaven will be working on a more advanced design. Cablec will also build and test a cable of that design.

Eventually, if work under this first contract is successful, ESEERCO plans to have 1,000 feet of 345 kilovolt synthetic tape cable manufactured and tested under field operating conditions.

### Jobs Up for Scientists & Engineers

According to a newly released report by the National Science Foundation (NSF), employment of scientists and engineers in the U.S. increased by about 50% between 1976 and 1983. This represents a rate of increase that is nearly twice as fast as that of all professional workers and about three times as fast as that of the overall workforce.

NSF also reported that computer specialists were in the fastest growing field — a field that increased by 193% during that same period. Employment growth also was strong in the fields of the mathematical, environmental and life sciences.

The report showed that employment of women scientists and engineers

rose nearly three times faster than that of men during the 1976-83 period. In 1983, women accounted for 13% of all employed scientists and engineers — a net increase of 4% from 1976.

The NSF study indicated that blacks and Hispanics are still underrepresented among scientists and engineers despite significant employment gains made during the 1976-83 period. In 1983, blacks represented only 2.4% of all employed scientists and engineers, even though they accounted for about 9% of the total U.S. workforce. Similarly, in 1983, the Hispanic community comprised 2% of all scientists and engineers and 5% of all employed persons.

### Gamma Rays at U5

A landmark was achieved in the vacuum ultraviolet (VUV) ring of the National Synchrotron Light Source (NSLS) last month when 20 million electron volt gamma rays shot out the U5 beam port. This tunable, quasi-monoenergetic source of high energy polarized photons was obtained as a result of a head-on collision of laser light with relativistic electrons in one of the VUV ring's straight sections. A collaboration between Lucian Wielopolski, Medical, and Alfredo Luccio, NSLS, produced this result, which opens the door to new basic and applied research in the life sciences and in nuclear physics, at the NSLS.



Patrol Officers (front, from left) Richard Miraglia, Elke Dedner, Gary Gross, Kathleen McNaught, Terrence Keough, Waverly Busby, Eusebio Beniquez and (back, left) Brian McCarrick.

## Graduation Day

At the first graduation ceremony for BNL police recruits, held last July, one bagpipe player led the procession of five patrol officers. One more bagpiper was on hand for the graduation of 16 new patrol officers on Wednesday, July 10.

The new officers are: Eusebio Beniquez, Michael Buckheit, Waverly Busby, Elke Dedner, Richard Domech, Patrick Giambalvo, Gary Gross, Michael Hurley, Terrence Keough, John Klein, James McCabe, Brian McCarrick, Kathleen McNaught, Richard Miraglia, Victor Pineiro and Carolyn Tracy.

Jack Barry, Plant Engineering, made the return engagement with his bagpipes and was joined at the front of the line by John Keane, NSLS.

During the one hour ceremony held in the North Room of the Brookhaven Center, the recruits and their families were addressed by Captain Pat Cahill, training officer for the police group. Said Cahill, "I'm very proud of the performance and persistence of this group."

Others who addressed the gather-

ing were Seymour Baron, Associate Director for Applied Programs; Len Emma, Manager of the Safety & Emergency Services Division; Bernard Brennan, Superintendent of Police; and Suffolk County Police Sergeant Bruce Payton, who gave a 40-hour course on tactics to the recruits as part of their training. The recruits, in turn, awarded Payton a certificate of appreciation and Cahill a letter of thanks.

The training of the 16 began last October. In January, the officer candidates joined the four existing police squads. While Cahill continued supervising the program, they resumed their training under the watchful eyes of the lieutenants in charge of each squad: Thomas DeSimone, Thomas Gilbert, Michele Montecalvo Jr. and Kathleen Walker.

The nine-month program included lessons and practice in emergency response, patrol functions, firearm use, arrest techniques, self defense, fire and medical emergency assistance, first aid and CPR, radiation safety and site familiarity.

## Students Study Science & Society

Alexander Laszlo was a delegate to the Student Pugwash Conference last month, and here is his account of that meeting. He is currently a summer student in the Public Relations Office.

How often are we challenged to probe, ponder and discuss the ethical and social dimensions of scientific and technological decision-making? Well, at the 4th International Student Pugwash Conference on Science, Technology and Individual Responsibility, held from June 23-29 at Princeton University, young scientists, engineers and decision-makers were given the opportunity to do just that.

The conference was organized by a highly active, low-profile organization known as Student Pugwash (SP) and sponsored by the National Science Foundation (NSF), the Carnegie Corporation of New York, the Exxon Education Foundation, Cray Research Inc., and the Sloan Foundation, among others. As a non-partisan, student-run group, SP was conceived in the spirit of Bertrand Russell and Albert Einstein's "Pugwash Manifesto" given in Pugwash, Nova Scotia in 1957. The Manifesto called on all citizens, particularly scientists, to recognize their moral and ethical obligation to think in a new way about the uses of science and technology.

Einstein once said, "The unleashed power of the atom has changed everything save our modes of thinking, and thus we drift toward unparalleled catastrophes." This concern guided much of what went on at the conference. Indeed, the conference slogan, taken from the Pugwash Manifesto, was, "We have to learn to think in a new way," and the most intense debates raged over the rationale of the Reagan Administration's Strategic Defense Initiative — often referred to as SDI and commonly known as the "Star Wars" scenario.

However, the conference spanned a broader range of concerns than Star Wars. Five working groups studied the following: Individual Rights in the Information Age; Setting Priorities for Agricultural Genetic Engineering; Making Choices About the Military Uses of Space; Toxins in the World's Workplaces — Values and Appropriate Risks; and Energy and Poverty — The Effects of Emerging Energy Strategies. These groups formed the functional units of the conference. In each of them, ten to twenty students presented papers and engaged five to ten senior experts in discussion of the issues they raised.

The intensity of the week was attested to by the hours of involvement. The days were full and often spilled over through dinner and far

into the night. But little less could be expected from such a rich mix of participants spanning generational, disciplinary and national boundaries. Ninety student delegates were selected from a pool of over 500 international applicants to interact with 45 eminent senior participants including Philip Morrison, Institute Professor at MIT; Edward E. David, President of Exxon Research and Engineering; Bernard Feld, Professor of Physics at MIT; Erich Bloch, Director of the NSF; and Eula Bingham, former Director of OSHA.

So what came of it all? Although the best of the student papers will be published in the proceedings of the conference, no declarations were made and no resolutions were drawn up. And yet the bonds that were forged, the insights that were gleaned, and the awareness that was raised among the participants are things of immeasurable value. Only the future can assess the real worth of such a conference based on whether or not we collectively address the problems that it considered. David Leifer, the 23 year old Executive Director of SP, sees the conference as a way "to get people to realize that there IS an individual responsibility in science and technology and that decisions can be affected." Student Pugwash is geared toward making people aware of the problems and helping them understand the situation in such a way that it appears relevant to them. Through activities such as this conference, SP makes individuals feel they have a choice in affecting the impact of science and technology on society, and, in so doing, hopes to spur them to feel the ethical responsibility entailed by that choice.

Whether these steps will chart the path to a constructive future will depend on the willingness of individuals to become responsible activists — activists who keep in mind Russell and Einstein's plea: "Remember your humanity, and forget the rest."

— Alexander Laszlo

## Science Quiz

### Do You Have a Fine 14th- or 20th-Century Mind?

1. The ratio of the kilometer to the mile is roughly a) 1 to 10 b) 5 to 8 c) 8 to 5 d) 2 to 1.
2. Water freezes at a) zero degrees Fahrenheit b) 32 degrees Fahrenheit c) 100 degrees Celsius d) absolute zero.
3. A lunar eclipse can occur only when a) the Earth is between the sun and the moon b) the moon is between the Earth and the sun c) the sun is between the moon and the Earth d) there is a new moon.
4. The conservation-of-energy principle refers to the fact that a) it is essential not to waste natural gas and oil, for these are limited in supply b) solar heating makes use of the sun's energy, which would otherwise be wasted c) energy can be neither created nor destroyed d) nuclear power plants recycle spent fuel.
5. The splitting of an atomic nucleus into two large fragments and several smaller ones is known as a) fusion b) alpha decay c) fission d) thermonuclear energy.
6. Atoms are believed to be composed of a) protons, neutrons, and electrons b) protons and electrons c) positrons, neutrinos, and electrons d) protons and antiprotons.

7. The period of revolution of the moon about the Earth is approximately a) one year b) one month c) one day d) one hour.

8. Identify the nonastronomical objects: a) white giants and green dwarfs b) white dwarfs and black holes c) quasars and supernovae d) neutron stars and galaxies.

9. An outstanding Soviet dissident who is a physicist is a) Rostropovitch b) Sakharov c) Mendeleev d) Barys- knikov.

10. The Pythagorean Theorem states that a) in any triangle the square of the longest side equals the sum of the squares of the other sides b) in any triangle the square of the longest side equals the square of the sum of the other sides c) in a right triangle the square of the hypotenuse equals the sum of the squares of the other sides d) in an isosceles triangle the third side equals the sum of the two equal sides.

11. One type of radioactivity involves a) gamma rays b) sunspots c) pulsars d) magnetic fields.

12. Thirteen billion years corresponds most closely to the presumed a) age of the universe b) age of the Earth c) time since the dinosaurs were on Earth d) time man has been on Earth.

(Answers next week.)

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## CREF Values

July	60.35	August	66.91
September	66.75	October	66.70
November	65.69	December	67.04
January	72.01	February	72.38
March	72.35	April	71.97
May	75.52		

June \$76.40



Members of the Physics Department staff recently observed BNL anniversaries. Awards were presented by Arthur Schwarzschild, Physics Department Chairman to (from left) Leola Wells (20 years), Elizabeth Mogavero (10 years), Edwin Bailey (30 years), Jorge Ubiles (10 years), Donald David (30 years), Theodore Robinson (25 years), Charles Carlson (20 years), Kenneth Asselta (20 years) and Richard Watson (20 years).

# BROOKHAVEN BULLETIN

Published weekly for the employees of BROOKHAVEN NATIONAL LABORATORY

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If you missed your prom, don't miss the Neutron Dance. If you haven't bought your tickets for tonight's dance, you're not too late. Tickets can be purchased at the BERA Sales Office from 11 a.m. to 4 p.m. and from the ticket sellers listed below. Or you may pay for your admission, \$5 per person, at the door of the dance, in the North Room of the Brookhaven Center from 8 p.m. to midnight. Besides munchies and door prizes, admission will go to the Renate W. Chasman scholarship fund, established by Brookhaven Women in Science. Try your luck in a hula-hoop contest. If you have a date, don't be late. If you are single, come to mingle. The Singles Club will be sponsoring tables for those who wish to meet new friends and fill their dance cards tonight.

### Neutron Dance Ticket Sellers

Mary Phillips	DAS	Bldg. 426	Ext. 3282
Vicki McLane	DNE	197D	2902
Penny Baggett	AMD	902B	5154
Harriet Martin	TID	477A, 911C	3487,4853
Gail Williams	DO	460	3338
Sharon Spark	AMD	515	4111
Florence O'Brien	Med.	490	2837
Bonnie Wesolowski	Chem.	555A	4301
Rae Greenberg	Phys.	510A	3743
Mary Ann Castrogiovanni	S&EP	535	3898
Pat Webster	HEF	911A	4628

## NYC Train Trip

The Hospitality Committee is planning a group railroad trip to New York City on Wednesday, July 31. Departure will be at 7:55 a.m. from the Patchogue LIRR station. Round-trip fare for adults is \$5.00; children under five years ride free.

Reserve a ticket by sending your fare though the U.S. mail to BNL, P.O. Box 322, Upton, New York 11973. Please do not send cash. Checks or money orders, payable to BNL, must be received by Friday, July 26. Put the date of the trip, your BNL life number and your phone number on the back of your check or money order. Your tickets will be given to you at the railroad station on the day of the trip. Refunds will be made only if cancellations are received by the Monday morning preceding the trip.

## Safety Shoes

The on-site Safety Shoe attendant will be on vacation the weeks of July 22 and July 29 and there will be no safety shoe transactions for those two weeks.

## Stockroom Closing

Buildings T-206 and T-210 will be closed for inventory on July 26 and July 29. Please make all necessary withdrawals of stock prior to 3:00 p.m. Thursday, July 25. This will give Supply and Materiel Division sufficient time to prepare for the inventory. Emergency requirements can be processed by John Scharpeger, Ext. 2974.

## Last Chance For T-Shirts

The first order was sold out, so for those of you who didn't get one, here's your last chance. Unisex T-shirts are available to all employees, students and guests. They are 50/50 cotton and polyester (minimal shrinkage), in white with blue print. The cost is \$5 (tax included), and they come in unisex adult sizes, small, medium, large and extra large, and in unisex child sizes, small, medium and large.

Only cash or money orders will be accepted. Make them payable to "Renee Flack - T-shirts '85." Send or bring your order to Renee Flack, Building 460, on or before Tuesday, August 6. Please allow two weeks for delivery.



## Long Island Guide

The Public Relations Office has a limited supply of the 1985 edition of the Long Island Guide available for summer visitors. The Guide is published by Newsday, and it is a listing of what to do and where to go on Long Island. To obtain a copy, call Public Relations at Ext. 2345 or stop by our office in Bldg. 134.

The following information on ferry service is included in the Guide, and we think it is of interest to all employees:

### To Connecticut

Bridgeport & Port Jefferson Ferry Company  
102 W. Broadway, Port Jefferson. Cars and Passengers. One-hour, 20-minute trip one way. Excursions. Year-round service. 473-0286.

### Cross Sound Ferry Inc.

Between Orient Point and New London. Dock Road, Orient Point, Cars, passengers and trucks. One-and-a-half-hour trip one way. 323-2743 or (203) 443-5218.

### To Shelter Island

#### North Ferry Co.

Between Shelter Island and Greenport. Prospect Dock (Route 114), Shelter Island. Cars, passengers and trucks. Seven-minute trip one way. 729-0139.

#### South Ferry Inc.

Between Shelter Island and North Haven. South Ferry Road (Route 114), Shelter Island. Cars, passengers and trucks. Five-minute trip one way. 749-1200.

### To Fire Island

#### Fire Island Pines Ferry Service

Between Sayville and Cherry Grove from April to October. River Road, Sayville. 589-0810.

#### Davis Park Ferry Co. Inc.

Between Patchogue and Davis Park from mid-March through November, and between Patchogue and Watch Hill from mid-May through October. Brightwood Street, Patchogue. 475-1665.

#### Fire Island Ferries

Between Bay Shore and Ocean Beach, Ocean Bay Park, Kismet, Saltaire, Fair Harbor, Dunewood, Atlantique and Seaview. Year-round service, weather permitting. Maple Avenue, Bay Shore. 666-3600, 665-5045 and 665-3600.

#### Fire Island Pines Ferry Service

Between Sayville and the Pines and Cherry Grove from April to November. River Road, Sayville. 589-0810.

#### Fire Island Seashore Ferry Inc.

Between Sayville and Sunken Forest and Sailor's Haven from May to October. River Road, Sayville. 589-8980.

## Arrivals & Departures

### Arrivals

Horst Ratzke ..... NSLS  
Michael J. Sagurton ..... NSLS  
David P. Siddons ..... NSLS  
Roger P. Taneus ..... Reactor

### Departures

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

Richard J. Durose ..... Medical  
Jeffrey S. Gaffney ..... DAS  
Daniel M. Ilberg ..... DNE  
Colin D. Stewart ..... App. Math  
Walter D. Tucker ..... DAS

## Cafeteria Menu

### Week Ending July 26

#### Monday, July 22

Cream of mushroom soup (cup) .65  
(bowl) .85  
Beef turnover & 1 veg. 2.15  
Veal Madeline & 1 veg. 2.20  
Hot Deli: Turkey breast (bread) 2.05  
(roll) 2.25

#### Tuesday, July 23

U.S. Senate bean soup (cup) .65  
(bowl) .85  
Barbecue spare ribs & 1 veg. 2.15  
Southern fried chicken w/  
1 veg. & cranberry sauce 2.15  
Hot Deli: Top round of beef (bread) 2.05  
(roll) 2.25

#### Wednesday, July 24

Beef noodle soup (cup) .65  
(bowl) .85  
Pot roast of beef & oven  
roasted potatoes 2.30  
Fresh ham w/sweet potatoes &  
applesauce 2.25  
Hot Deli: Chicken patty  
Parmesan (bread) 2.05  
(roll) 2.25

#### Thursday, July 25

Split pea soup (cup) .65  
(bowl) .85  
Corned beef & cabbage 2.15  
Spaghetti & Italian sausage  
(hot or sweet) 2.25  
Hot Deli: Monte Cristo 2.15  
Special: Top your own Fruit Shortcake .75

#### Friday, July 26

Seafood chowder (cup) .65  
(bowl) .85  
Salisbury steak & 1 veg. 2.20  
Breaded fish fillet & broccoli  
spears 2.15  
Hot Deli: Hot Italian beef (bread) 2.05  
(roll) 2.25

## BERA News

### Pool/Gym Schedule

Because extensive work is being done at the Pool/Gym complex, the following schedule will be in effect during the week of July 22.

On Monday and Tuesday, July 22 and 23, the pool and all locker/shower rooms will be closed between 6:00 a.m. and 4:30 p.m., and open between 4:30 p.m. and 9:30 p.m. The normal schedule will resume on Wednesday, July 24. The gym and weight/exercise rooms will remain closed as announced in last week's Bulletin.

Note: Children will be notified of rescheduled swimming lesson dates.

### Diving Deep

The first Friday special of the season was held at the pool last week and featured the ever popular "Penny Fetch." Fifty-five children were on hand to dive for coins on the bottom of the pool.

Winners were:

Ages 4 & 5 - Meena Fatimi, Kevin Parsons, Elena Cooney  
Ages 6 & 7 - Mike Cooney, Walter Heintolt, Chris Mittenberger  
Ages 8 & 9 - Jason Huhn, Fred Wysocki, Kerry Parsons  
Ages 10 & up - Jennifer Chan, Craig Tanguay, Keith Chan

Specials are held each Friday at 3:15 p.m. Next week's program will include Relay Races.

**WANTED: Singers, dancers — specifically tap and belly dancers — comedians and musicians, to participate in this year's vaudeville show on August 23 and 24 at 8 p.m. For more information, call 286-1136.**

## Softball

### League I

#### Games of June 25

Moles 17 - Six Pax 12

Ravens vs. Phoubars

Protest upheld. Game to continue from point of protest.

Blue Jays 14 - Cool 'n Gang 6

#### Games of July 9

Moles 14 - Scram 5

Cool 'n Gang 14 - Ravens 4

Blue Jays 16 - Phoubars 12

### League II

#### Games of June 26

Dirty Sox 19 - Medical 11

Magnuts 17 - Random Errors 2

Titans 21 - AMD 18

Lights Out 7 - Faze II 5

#### Games of July 10

Medical 11 - Random Errors 6

Titans 13 - Light Out 8

### League III

Games for week of June 24 - Rained out

#### Games for week of July 8

Survivors 10 - Nads 6

Farm Team 18 - TNT 3

### League IV

Games for week of June 24 - Rained out  
Makeup game from 6/20:

Who Cares 16 - Kidz-R-Us 6

Makeup game from 6/24:

Septembers 16 - Who Cares 13

#### Games for week of July 8

Kidz-R-Us 13 - Septembers 10

Who Cares 18 - Turkeys 6

### League V

Games for week of June 24 - Rained out

#### Games for week of July 8

Simply Awesome 14 - Mudville Sluggers 13

Foul-Ups 20 - Underalls 5

Space Kadets 20 - No Feedback 17

## 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 Employment Manager, Ext. 2882.

**LABORATORY RECRUITMENT** - Opportunities for Laboratory employees only.

2291. FACILITIES OFFICE ASSISTANT - (one opening temporary — one opening regular) Responsibilities will include preparing and maintaining records, reports, work orders and files, performing computations, typing correspondence and reports. Typing skills and previous office experience required. Plant Engineering Division.

**OPEN RECRUITMENT** - Opportunities for Laboratory employees and outside applicants.

2292. TECHNICAL POSITION - Requires AAS in engineering or physical science or equivalent. Responsibilities include the monitoring of radiation and contamination at the AGS and accurate record keeping of personnel exposure. Prior training or experience in health physics very desirable. Shift work required. Safety and Environmental Protection Division.

2293. SENIOR STANDARDS INSPECTOR - Requires significant experience in all phases of mechanical inspection. Proficiency in the use of inspection equipment and non-destructive testing equipment and a basic knowledge of metals, machining, welding and sheetmetal fabrication is essential. Experience in optical tooling is desirable. Will perform all phases of in-process and acceptance inspection of purchased and Laboratory fabricated parts and equipment. Central Shops Division.

### Autos & Auto Supplies

73 PONTIAC LEMANS - p/s, p/b, a/t, a/c, low mi., excel. cond., \$1,700 neg. 473-7849 eves.

77 VW RABBIT - new tires, runs well, \$1,400. Harvey, Ext. 3758 or Sally, 821-1726.

69 GMC CARRYALL - 4x4 w/plow. Sal. Ext. 7599 or 281-2907 after 5 p.m.

81 MUSTANG - 4 spd., 51k mi., \$3,500. Lynanne, 744-3068 eves.

81 SUZUKI GS1000 - helmet, cover included, 9,500 mi., \$1,350. Ext. 2231 or 589-8533.

74 CHRYSLER NEWPORT - 4 dr., high mi., \$300 or best offer. 727-5912.

81 SUZUKI GS650G - shaft drive, 4 cycl., mags, triple disc brake, soft saddle bags, 3,600 mi., \$1,500. Bob, 924-5511 or 744-3289.

70 VW CAMPER - pop top, rebuilt engine, new clutch, runs well, no rust, \$2,400. Ext. 3107.

73 CHEVY CAPRICE - V8, a/t, p/s, p/b, body and interior good cond., runs well, \$700. Manfred, Ext. 3422 or 3190.

68 FORD FAIRLANE - station wagon, runs beautifully, recently re-conditioned, p/s, p/b, no rust, \$400. F. Horn, 589-2759.

72 PONTIAC LEMANS - 350, V8, am/fm, good mech. cond., depend. transp., \$650. 727-4859.

77 VW RABBIT - 2 dr., manual trans., good cond. Ext. 3293.

73 CAMARO - good shape, \$900; 72 trl., Tandem wheels, sleeps 6, good shape, extras, \$2,100. Ext. 2964.

76 MONTE CARLO - very good cond., \$1,550. Bud, Ext. 3083 or 878-1915.

76 OLDS - 4 spd., a/c, p/b, p/s, 350, low mi., \$1,500. Kevin, 563-1189.

78 KZ400 - low mi., good cond., \$700 firm. 281-0360.

79 MERCURY MARQUIS - 88k mi., a/c, a/t, new carb., new exhaust, damaged body. Olie, Ext. 3137 or 3019 eves.

68 VW FASTBACK - runs well, \$500. Tony, Ext. 3751.

TIRES - (1) ER78-14, (1) G78-14, \$5 ea.; (2) rims for G78-14, \$3 ea. or \$10 takes all. Ext. 7505.

77 CAMARO - type LT, 3 spd., p/s, am/fm, cassette stereo, new paint, new tires, \$3,500. Ext. 5163 or 475-6964.

70 DODGE VAN - a/t, 318, trailer hitch, \$700 or best offer; (4) Crager rims, (3) usable rubber, (1) blowout, \$60 or best offer. Ray, Ext. 3536 or 289-7615.

79 HONDA - 2 dr., 80k mi., good running cond., \$1,300. 289-0496.

74 MGB GT - mech. sound, radials, radio, 75k mi., \$1,450. Roy, Ext. 5515.

70 NOVA - a/t, p/s, runs well, new parts, good engine & trans., body needs some work, \$550. Walt, Ext. 2907 or 698-0576.

TIRES - (2) radials, 78GR14, (2) snows, 78GR15, all mtd. on GM rims, \$10-\$15. Ext. 3312.

DECLUTCHING FAN - 7 blade, for V8, \$10. Joe, Ext. 4212.

60 CORVAIR - fair cond., low mi., \$500; VW trailer hitch, heavy duty, \$15. Gene, 363-9527.

BLAZER REAR SEAT - \$50. Bill, Ext. 2050 or 281-0557.

PASSENGER SIDE DOOR - for 1973 Dodge Dart, 2 dr., excel. cond. \$10; engine and trans. for slant six Dodge/Plymouth, \$125 for both. H. Sauter, Ext. 3783.

73 OLDS CUTLASS SUPREME - whole or parts, good trans. and motor. Scott, Ext. 2269 or 473-5965.

TIRES - (2) 78GR14, mtd. on GM rims, radials, \$10. Ext. 3312.

74 BLAZER - 4x4, blue, 4 spd., 36" tires, roll bar, V8, good cond., \$2,500. Vera, Ext. 5064 or 929-8294.

CAR TOP CARRIER - excel. cond., \$30. 286-3235.

76 AMC HORNET - 4 dr., 6 cyl., p/s, p/b, am/fm stereo cassette, good cond., \$850. 475-5591 after 5:30 p.m.

74 OPEL - a/t, 4 cyl., \$500; 80 Camaro, a/t, 6 cyl., p/s, p/b, am/fm cassette, a/c, 43k mi., \$5,000. 585-4038.

82 SUZUKI RM 125 - mint cond., many new parts, helmet, \$725. 289-8253 after 5 p.m.

77 SUZUKI - 100 cc, red, good cond., \$250. John, 281-9470.

78 SUZUKI GS750 - like new, low mi., fairing, customized, many extras, \$1,400. 669-7952.

76 MERCURY MONARCH - 4 dr. sedan, a/c, p/s, p/b, new paint, excel. cond., \$1,750. Ext. 2881 or 286-3372.

75 CORVETTE - \$4,500. Roy, Ext. 4664.

77 DATSUN - pickup, w/cap, new brakes, exhaust, good transp., \$1,800 neg. 744-5069.

77 SCIROCCO - am/fm cassette, good on gas, 4 spd., orig. owner. 654-5583 after 6 p.m.

75 MUSTANG - 8 cyl., a/c, am/fm, new exhaust system, \$1,900. 543-7952.

73 CAMARO - good cond., \$900; 72 trailer, Tandem wheels, sleeps six, ready to go, \$2,100. Ext. 2964.

TRUCK TIRES - 16.5x12, mtd. on 8-lug, white spoke rims. Walt, Ext. 4028.

79 CJ5 JEEP - grey, 47k mi., 6 cyl., 258 4 spd., 21 mpg, \$3,750. Ext. 4187.

ALUMINIUM TRUCK CAP - for 8 ft. bed, has 11 running lights, excel. cond., \$150. 363-6597.

73 VOLVO 1800ES - 4 spd., w/overdrive, am/fm, CB, radar, new tires, valve job, exhaust, minor rust, \$3,200. Ext. 4167.

83 MAZDA B2000 - 38k mi., needs windshield and some body work, \$3,200, neg. 475-0954 after 5 p.m.

RADIAL TIRES - (4) w/w. (2) reg., (2) snows, LR78-15, good cond., \$85 takes all. Willie, Ext. 2333 or 732-3002.

71 VW BEETLE - 4 spd., handyman's spec., still runs, needs work. Ext. 3670 or 744-1760 eves.

76 DODGE ASPEN WAGON - 85k mi., reliable, \$1,200. Wolfgang, Ext. 4571 or 3107.

RIMS - Ford, (3) 15", mtd. on H78-15 tires, \$10 ea.; 71 Ford, runs well, a/c, new carb. and wires, etc., \$350 or best offer. Mike, Ext. 2705.

VW MUFFLER - 1960-62, brand new, \$25. Frank, Ext. 5105 or 473-3364 eves.

84 VW RABBIT GTI - stereo, 21k mi., excel. cond., \$6,500. Steinar, Ext. 3449.

73 MGB - very reliable, looks good, no rust, many extras, \$2,100. Alan, Ext. 2928 or 821-1389.

76 DATSUN B210 - good for parts. Ext. 4448.

72 BMW 2002 - lots of miles, little rust, in great shape, \$3,500. 286-2889.

82 YAMAHA 650cc - Heritage Special, clean, 1,500 mi., windshield, sissybar, \$1,200. 325-1147.

69 GMC - carryall, 4x4, with snow plow. Sal, Ext. 7599 or 281-2907.

80 SUZUKI GS1000S - 1984 KTM, 125 MXC, dirt bike. Oscar, Ext. 3357.

70 VW CAMPER - pop-top, sleeps 3-4, no rust, refrig., sink, 25,100 mi., good cond., \$2,300, neg. Ext. 3107 or 4571.

72 PONTIAC LEMANS - am/fm, good mech. cond., \$650. 727-4859.

72 FORD GRAND TORINO - wagon, a/t, fair, \$200. Ext. 5168 or 588-0677 eves.

81 TOYOTA COROLLA - wagon, 5 spd., excel. cond., good mileage. 929-3079.

70 NOVA - runs well, new parts, good eng. & trans., \$550, neg. Walt, Ext. 2907 or 698-0576.

79 MOTORCYCLE KZ400 - 5k mi., excel. cond., \$600. 473-5289.

74 VW BUG - good cond., 4 spd., orange, best reasonable offer. Al, Ext. 3404 or 744-9866.

### Boats & Marine Supplies

30' CATALINA SLOOP - diesel, inst., radio, furling wheel, many extras. Ext. 2015 or 269-2974.

SAILS - Cape Cod, good cond., \$50. (713) 641-2815.

EVINRUDE - 60 HP, elec. start, controls, gas tank, mounting brackets. 472-4518 after 5 p.m.

16' FIBERGLASS BOAT - 1971 50 HP Johnson, trailer, \$1,000. Ext. 4846 or 363-6940 after 5 p.m.

18' GLASS CRAFT - 95 HP Mercury, Gator trailer, (2) tanks, 13" wheel, \$1,200. Ext. 2333 or 732-3002.

81 MERCURY OUTBOARD - excel. cond., 70 HP, no controls, \$1,650. Gene, 363-9527.

14' PLYWOOD ROWBOAT - heavy construction, sound, needs paint, transom cut, 15" motor, \$225. Ext. 2177 or 298-4985.

26' OWENS - 1966, sleeps 4, head, galley, extras. Don, Ext. 5329 or 878-2215.

ELECTRIC MOTOR - Sears, 10 spd., like new, \$75. Ext. 4312.

20' TORNADO CAT - faster than Hobie Trapeze, 2 jibs, \$2,300. Wayne, 368-1480.

12' ALUMINUM BOAT - 6 HP Evinrude outboard, good cond., asking \$600. John, Ext. 3406 or 929-6896 after 6 p.m.

SAILFISH - good shape, at West Neck Beach, \$450. Ext. 3428 or 427-6738 eves.

### Miscellaneous

QUIET TIME BOOK - child's, handcrafted, will personalize. Bonnie, Ext. 4525 or 924-7029 after 6 p.m.

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

STEREO CASSETTE TUNER - Sanyo, C4, portable modular, Dolby equalizer, \$100. Luc, Ext. 3628 or 3089 eves.

REFRIGERATOR - GE, coppertone, excel. cond. Alice, 286-9483.

CHILD'S PIANO - portable, Jaymar, 30 keys, very good cond., \$20; woman's ski (winter) jacket, size M, almost like new, \$12. Ext. 3420 or 3177 eves.

SEARS UNIVERSAL GYM - rack, no weights, used for legs, back, triceps, chest, \$175; weight lifting bench, good cond., \$10; dining room light fixture, \$5. Tony, Ext. 4605.

OLD MILL WOOD STOVE - airtight w/blower, good cond., \$350. 286-8168 after 5 p.m.

AQUARIUM SETUP - 40 gal. S.S., complete, (5) Kissing Gouramis, 1-6 inch Gold Severum, 1-4 inch regular Severum, \$75; 55 gal. S.S., complete, breeding pair Dempsey's, extra male pair, young Oscar's, \$100. 281-3257.

GUITAR - Gibson "SG", orig. Eng. "Whammy" bridge, Dimarzio's, excel. cond., \$250. Rand, 751-1149 eves.

BIKE - 20", Royce Union, \$30; guitar w/case, \$40; barbecue grill, \$15. Donna, Ext. 4007 or 281-4871.

APPLIANCES - frost free refrigerator & elec. stove, excel. cond., goldtone, \$100 ea. Ext. 4301 or 924-9165.

POOL PUMP - w/elec. motor, on portable stand, \$35. Ext. 4240 or 286-0295.

BICYCLES - (2) 10 spd., man's light weight, Schwinn woman's model with luggage carrier, \$50 each. Ext. 4505 or 928-2803.

COOLER - metal, Coleman, \$10. Al, Ext. 7588.

FABRIC - polyester, 60" wide, beautiful colors and lengths. \$2/yd. Pat, Ext. 2452.

PAINTING - velvet horse, approx. 30" x 36", black background, white horse, wood frame, \$15. Lois, Ext. 4904.

SEWING MACHINE - 360 Singer Fashion Mate, 5 yrs. old, hardly used, excel. cond., \$65. 751-0345.

STUDIO COUCH - gold/brown striped, \$70; coffee table, matching end tables, \$40; armchair, gold velour, \$50. Norene, Ext. 7253.

HOUSEHOLD ITEMS - hi-rise, tables, chairs, lamps, bric-a-brac, pots, dishes, misc., cheap. 929-4701.

FREEZER - Sears upright, 17 cu. ft., works well, looks good, \$80. Ext. 2180 or 286-3937.

BIKE - Hot Wheels, Master of the Univ., Tonka, \$12.50. Joe, Ext. 4212.

REFRIGERATOR - frost free, goldtone electric stove, excel. cond., \$100 each. Ext. 4301 or 924-9165.

PUPPIES - Doberman, males, champ. lines, show and obedience potential, \$300. 669-1431.

END TABLE - maple, \$20; maple hutch, \$80; modern 87" black vinyl sofa, \$80. Bill, 585-2563.

LABRADOR PUPS - AKC papers, whelped 5/16/85, shots, 3 males, 1 female, 7 wks. old, \$200 firm. 281-8949.

GE WALL OVEN - stainless door, working unit, \$25. Ext. 5010 or 5018.

FREEZER - Delmonico, white, upright, good cond., holds 225 lbs., \$50; GE ref., 2 dr., white, good cond., \$50. Ext. 7678.

KITCHEN CHAIRS - (4) w/tubular metal frames, best offer; child's chest of drawers, \$5. 751-6781.

TOASTER OVEN - GE, \$20; Sears rotisserie, large size, \$25. 924-3236.

TENNIS RACQUET - Head, A. Ashe, graphite-alum., excel. cond., \$20. Ext. 3927 or 286-0334.

DOUBLE BED - spring, mattress, clean, triple dresser, all \$75. 281-7844.

FREEZER CHEST - Hotpoint, 12 cu. ft., good cond., w/manual, \$75. 584-5193.

COUCH - Castro, convertible-type, beige, good cond., \$150. Ext. 7686 or 878-0897.

CAMERA - 35 mm, Pentax Program-Plus, new, w/Vivitar flash & accessories, \$210. Mike, 331-5042.

ELECTRIC TYPEWRITER - w/stand, \$75; (2) foam camping pads, 10 ea.; (1) single, \$5; Scotts hand mower, \$30. Bruce, 924-4097.

CB CAR RADIO - Tahoe 40, \$20. 298-8601.

BEDROOM SET - colonial, double dresser, mirrored hutch, headboard, (2) night stands, 2 yrs. old, \$400. Ann, Ext. 4078.

FREEZER - 16 cu. ft., United, upright, good to excel. cond., \$250. Bill, Ext. 4173 or 929-3029.

HOT WHEELS TRIKE - Tonka, Masters of the Universe, \$12.50. Joe, Ext. 4212.

LIVING ROOM FURN. - contemporary sofa, love seat, (2) chairs, 1 yr. old, \$450. 369-1975 after 5 p.m.

FAN - heating pan, best offer, new, works fine. Seyma, Ext. 3293.

DINING ROOM SET - (5) chairs, table, serving cabinet, (2) powerful window air conditioners, \$100 ea. Ady, Ext. 4531 or 331-3785.

DOUBLE BED - metal frame, box spring and mattress, \$50. Pat, Ext. 2531 or 727-0547 after 6 p.m.

POOL TABLE - 8' Brunswick, 3/4 slate, auto. ball return, Belgium balls, (6) sticks, \$225; Craftsman table saw, 8", \$100; 10" radial arm saw, \$250. Jim Boomer, Ext. 4167.

PORTABLE WASHING MACHINE - Sanyo, new, 3 wash cycles, \$250. Peter Eterno, Ext. 4167.

JACK LA LAMME LIFETIME MEMBERSHIP - only 6 payments left, approx. \$600. 475-5591 after 5:30 p.m.

MULUCCAN COCKATOO - w/brass cage, \$1,100; Goffins cockatoo, w/brass cage, \$600. 924-3008.

GE AIR CONDITIONER - good cond., \$60; baby carriage, good cond., \$5. Ext. 4448.

SEARS VACUUM - Power Mate, works well, 4 pile adj., \$50. Frank, Ext. 3531.

STEREO CASSETTE DECK - w/4 band tuner, full logic control, \$150. Rajiv, Ext. 5161 or 924-1460 eves.

STEREO RACK - Pioneer, fully assembled, never used, walnut, smoked glass door, 19"wx15"x46", \$45. 724-6497 eves.

DINING ROOM TABLE - w/6 chairs, pine, \$275; pine end tables; rocker; other misc. items. 924-9567 after 5:30 p.m.

DRAPES - (2) pr., white, gold valances, (1) pr., green valances, (1) pr., blue valances, (2) dbl. pr., all 84"L, \$5/pr.; bridesmaid dress, size 7, lavender, \$5; evening pants, \$5. 281-7844.

GUITAR & CASE - Yamaha, classical, like new, \$210. Nick, Ext. 3988.

CRIB - white, good cond., \$25; carriage, \$15. 567-9025.

IRON - \$5; clock radio, \$10. Christina, Ext. 3107.

COLOR TV - normal size, works fine, \$80. Wolfgang, Ext. 4571 or 3107.

POOL - alum., 15'x30', incl. through wall skimmer, filter, motor/pump, vacuum & hoses, chemicals, etc., needs liner, \$350. Walt, Ext. 2907 or 698-0576.

ATARI 2600 - (7) games, \$60. 744-1750.

KITCHEN TABLE - (4) chairs, \$15; vacuum cleaner, \$20. 736-6732 eves.

JIG SAW - cast frame, 18" throat, w/motor, \$65. Ext. 2246.

COLOR TV - 13", \$130; baby walker, \$15; baby carrier, \$8. Ext. 3029.

CRIB - w/mattress, \$25; rocking chair, needs paint, \$5. Ext. 7505.

LAWN TRACTOR - Huffy H1054, 8 HP, Briggs & Stratton 26" cut, pull start, tuned up, \$450. Ext. 3428 or 427-6738 eves.

STEEL DESK - 55'x30', (6) drawers, \$45. Ext. 3079 or 3590.

DOG RUN - 20'x32', chain link, w/supports and roof, \$1,000 or best offer. 286-5829.