

Early Results From High Voltage Study Show No Health Effects

If you stand under a high voltage transmission line with a radio and a fluorescent bulb, you will likely get static from the radio and a dim glow from the bulb.

What will happen to you? That question was raised a decade ago, when 500-kilovolt and 765-kilovolt overhead lines were being installed across the country. In recent years, a 765-kilovolt line has been proposed for New York, to bring cheap Canadian electric power down to New York City and Long Island.

The New York transmission line has raised the health issue again, however, and as the result of court action, the state and private power companies involved are supporting a broad research program to determine the possible adverse health effects resulting from exposure to the electric and magnetic fields of overhead high voltage transmission lines. Some 16 separate cell, animal and human studies are being done at various laboratories.

BNL was awarded an animal study, which is being carried out by the Medical Department, in collaboration with the Safety and Environmental Protection Division (S&EP). The BNL project, under Medical's Arland Carsten, is examining effects of a combination of electric and magnetic fields on mice. Medical has a long history of doing small animal research, and S&EP has done work on magnetic fields.

According to Carsten, some epidemiological studies done elsewhere have claimed that people who live under transmission lines or work in switchyards have higher suicide rates and an increase in leukemia and childhood cancer. He says these studies are



The Medical Department team working on the high voltage study are, from left, Arland Carsten, Dan Benz, Sharon Moore, Ann Mutschler, Vanessa Samuels and Marta Nawrocky.

under scrutiny, however, and are being reexamined.

"There's no question you can feel an electrical field," says Carsten. "Just put an arm near the screen of an operating TV, and you can feel the hair stand up. This, however, does not mean that it is harmful."

Whether there is an adverse health effect from high fields of electricity and magnetism is another question. Other studies have shown there is no effect. Says Dan Benz, who works with Carsten on this project, "If you ask my personal opinion, I'll say I don't expect to find anything. But I could be wrong. As a scientist, I have an open mind."

Indeed, preliminary results show nothing obvious, but the research isn't

yet complete.

The project started in October 1982, and the first year was spent designing, building and calibrating three identical animal apparatus in three identical rooms. That effort was directed by John Baum, in S&EP, with the help of others in that division.

The first experiment began in April 1984.

One room exposes the animals to 60-hertz alternating current fields of 50 kilovolts per meter and 10-gauss magnetic field (the earth's magnetic field is about 1/2 gauss direct current). The second room is 15 kilovolts per meter and 3-gauss. The control room gives zero values for both fields.

General toxicology practice dictates that experiments should be done at

high exposure levels, on the premise that if there isn't a problem at a high level, there probably won't be at a low level, and effects may be detected using fewer animals. Hence, what the animals receive in the first room is about four times higher than the 10-12 kilovolts per meter a person generally would receive standing under a 765-kilovolt transmission line.

The BNL study is specifically looking for three kinds of damage: genetic, or damage to the DNA; cytogenetic, or damage to the chromosomes; and effects on general breeding and growth.

Genetic damage is detected as dominant lethal genes, which result in dead embryos. For this part of the study, mice are mated, and near the end of gestation, the embryos are examined. In addition, the number of corpora lutea on the ovary are counted, which tells how many eggs came out of the ovary. That number is compared to the number of fertilized eggs, or embryos, to get the fertilization and implantation rates. Also noted are the number of embryos that died early in pregnancy, which is often due to chromosome problems, and the number of late deaths, which are due more to maternal problems. Finally, the viable embryos, which average eight in a litter, are counted. By comparing all the numbers, genetic effects can be determined for different exposure groups.

Cytogenetic effects can be determined by looking for sister chromatid exchanges in the bone marrow cells of the mice. Each of the two halves of a chromosome that is ready to divide is called a chromatid, and the two halves of the same chromosome are called sister chromatids. When a cell is ex-

(Continued on page 2)

Representing DOE

"When the United States Government, represented by the Department of Energy (DOE), wishes to convey to the Lab its desires — as well as its money, it does so through me," says David Schweller, manager of the Department of Energy's Brookhaven Area Office. Schweller and his staff of 12 are the government employees assigned to directly oversee the operation of Brookhaven National Laboratory.

"DOE spends its money through eight operations offices around the country," explains Schweller. "We are one of five area offices under DOE's Chicago Operations Office, and about 10% of DOE's money is spent through Chicago Operations. Area offices actually spend the government's money through contracts such as the one between DOE and Associated Universities Incorporated [AUI] for the operation of BNL."

The United States Government has had a contract with AUI since 1946, which was last renewed in 1983. Under this agreement, AUI operates the Lab, and DOE funds the Lab's operation. Schweller is a Brookhaven Area Office contracting officer for DOE, and the money for the Lab goes through him. He estimates that \$2.9 billion has come from the government to the Lab since the latter's inception in 1946.

"My job is to look at the Lab as an institution," explains Schweller. "Whatever venture the Lab were to embark upon, with its concomitant resource and manpower requirements, I have to make sure that not only is it consistent with DOE policies and



David Schweller

regulations, but also that it does not adversely affect the Lab.

"We are not responsible for the content of the research that goes on at the Lab, with two exceptions," continues Schweller. "We have to review programs that are funded by DOE off the normal budget cycle, and work that is done for any other Federal department or the private sector to determine the impact on the institution. We do not get involved with the research programs unless someone's funding is not coming through."

To appraise the Lab's operation, Schweller meets regularly with members of the Laboratory Directorate, and his staff interacts with department and division heads. Schweller calls upon experts from Chicago Operations to assist him in

assessing areas like health, safety and security. The written appraisals are then given to the Laboratory management.

"Through the use of headquarters program officers, DOE annually appraises a third of the Lab's research programs, so over a three-year period, we look at BNL's total research program management," says Schweller. "In addition, every year we specifically assess all administration functional areas such as procurement, property management and safety at the Lab, and provide this information to the Lab, AUI and DOE management."

DOE issues orders regarding the administration of safety, security, property management, travel and other functions at its national laboratories. The Chicago Operations Office provides Schweller with guidance regarding how to carry out these orders. He and his staff pass along their interpretation to the Lab and must approve the procedures developed, in turn, by BNL.

"DOE orders are particularly detailed with regard to health, safety and security," explains Schweller. "Since we hold the Lab management harmless in the operation of this institution, we insist that they faithfully adhere to our interpretation of DOE orders." The operation of potentially hazardous facilities, for example the HFBR, must be approved by DOE.

"We want the Lab's procedures to follow the federal norm," says Schweller, "but we do not want to

encumber the Lab with the strict rules and regulations of the Federal government. The national labs are not operated by the Federal government, though they operate on behalf of it, because the government does not wish to unduly restrict the labs by the application of Federal requirements."

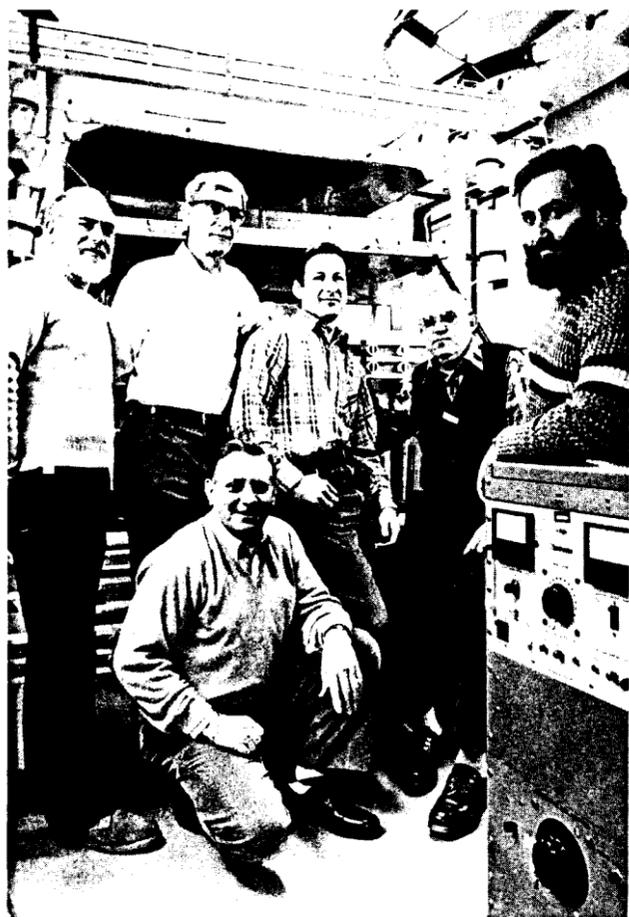
Schweller must review and approve such miscellaneous items regarding the operation of the Lab as the annual wage and salary package for BNL employees, employee benefits, equal opportunity and affirmative action plans, the assignment of Soviet-bloc scientists, construction activities, consultants receiving over \$250 per day and any awards.

The Brookhaven Area Office supervises other operations besides the Lab, though BNL is their largest and principal concern. The office supervises all DOE construction at MIT, Yale, Harvard and Rochester, and runs the Radiological Assistance Program for the northeastern states.

Before joining the Federal government in 1962 as a reactor safety engineer, Schweller, who holds a B.S. in engineering physics, worked as an engineer and reactor physicist in private industry.

"When I moved into management, I found a different creativity and gratification in assisting the Lab to grow and thrive," explains Schweller. "Though I have a dual role as advocate of the Lab and advisor to it, I get the most pleasure from the Lab's success. So overseeing this scientific facility has its own rewards."

— Marsha Belford



Mort Rosen

The animal apparatus used in the high voltage study was designed, built and calibrated by members of the Safety and Environmental Protection Division. From left are: Jim Smith (kneeling), Joe Balsamo, John Baum, Frank Stepnoski, Joe Klemish and Al Kuehner. Missing from the photo is Paul Zahra.

High Voltage (Cont'd)

posed to a mutagen or a carcinogen, exchanges between parts of the sister chromatids become more frequent.

General growth statistics on the animals are also kept, including weight, sex ratio and litter size. It takes about six months to do a complete breeding experiment, which means studying three generations of mice. At this point, one experiment on one strain of mice is finished.

A preliminary review of this data shows no obvious effect of the electric and magnetic field exposure in the dominant lethal genetic study, no significant induction of sister chromatid exchanges in the cytogenetic study, and no obvious effect in the three-generation breeding study. A cautionary note from Carsten and Benz is that the data have not yet undergone careful statistical analysis.

Over the next six months, another strain of mice will be studied. This current program ends in October. After that, the BNL group hopes to do similar studies on rats and to add a long-term study to see if electric and magnetic fields will induce leukemia in mice.

—Mona S. Rowe

United Way Wrap-up

The BNL 1984-85 United Way Campaign raised \$63,010 from 913 employees, exceeding what was raised during the 1983-84 campaign by \$1,409. Though participation fell from 33.25% to 29%, BNL United Way campaign coordinator Cheryl Williams thanks all those who did give for digging deeper into their pockets and donating more per person than the year before. "I hope more people will give to United Way during future campaigns, so that the total dollars donated each year can continue to grow," says Williams.

Pick a Student

Completed applications for the 1985 Summer Student Program will be available for review in the Office of Academic Relations, Bldg. 460, 2nd floor, from February 19 to March 1.

Guidelines regarding the selection of summer students have been distributed to research department offices. If interested, please contact your department coordinator. Staff members are invited to review applications to select students to work under their supervision from June 3 to August 16.

Inside Info

Several BNL'ers were affected by last week's announcement that Kristi Ann Dell, a senior at Bellport High School, had been named one of 40 finalists nationwide in the 44th annual Westinghouse Science Talent Search. In reaching the finals, Dell submitted an archaeological project, based on artifacts she had collected over three summers on an Indiana farm. From her research she concluded that the farm had been an Indian site between 10,000 B.C. and the 19th century, possibly home to the Paleo Indians. Dell worked on the project in an independent study course, under the guidance of science teacher Carole Escobar, who is also a BNL tour guide for Public Relations.

Despite this triumph, archaeology is only "sort of a hobby" for Dell, who says she is interested in a career in medicine. In 1984, Dell had a chance to view such a career firsthand at BNL, when she worked in the Medical Department as a summer intern. Her advisor then was Medical Associate Brenda Laster, who received a letter earlier this month from the Program Director of the Science Talent Search informing her that Dell had named Laster as the "one person who has been most influential in the development of my career."

Dell's parents are Janice Dell (Personnel) and George (Fritz) Dell (HEF), who was one of the 40 finalists in 1949.

HMO Enrollment

A representative of the Blue Cross and Blue Shield Health Maintenance Organization will be at Berkner Hall on Wednesday, February 13 and 20 between 11:30 a.m. and 1:30 p.m. to answer questions about the BC/BS Community Health Plan of Suffolk. Employees are reminded that the deadline for enrollment in the HMO is February 28, with coverage effective March 1, 1985 through February 28, 1986. Those wishing to enroll in this plan must send their completed application forms to Personnel Services, Bldg. 185 (Ext. 2877).

On Site

Q: What's being constructed by Bldg. 197?

A: A small addition is being built and attached to a modular section of building 197, to provide 1,200 square feet of additional office space for the Department of Nuclear Energy. Conventional construction was chosen for the addition because, in this case, it proved to be more cost effective than a modular addition would have been.



Alex Reben

The Employee Relations Committee is appointed by the Director to hear non-bargaining employees' work-related problems which have not been resolved by their supervisors. The committee is one avenue employees have to air their complaints or grievances. According to its chairman, Ed McFadden, the committee very often acts as a sounding board and enables employees to get a third-party opinion. "Sometimes just talking to us and getting advice is all that is needed," says McFadden, "and if we don't feel we're the right ones to handle the matter, we refer it to one of the other agencies of the Lab's Employee Relations Program." Each year, two new members are appointed to the committee for a term of two years. The current committee is pictured above, and if you have a problem, any member may be contacted for assistance. Standing, from left, are Madeline Windsor (Tech. Information, Ext. 5069); Edward McFadden (App. Math., Ext. 4188); James Costanzo (Reactor, Ext. 4040); and Betty Heldman (Medical, Ext. 3699). Seated are new committee members Vincent Racaniello (NSLS, Ext. 7336); and April Donegain (DNE, Ext. 2903). Pat Fox, (DAS, Ext. 2939), not present for the photo, is also a member of the committee.

Arrivals & Departures

Arrivals

Gregory M. Condemni..... AGS
Wing Fai Fung..... AGS
Razvan M. Mariotti..... AGS
Antonio N. Pirraglia..... DAS
Arnold N. Stillman..... AGS
Diana L. Toledo..... Biology
Kent R. Williams..... AGS

Departures

None

Coming Up

Physicist Yousef Makdisi, AGS Department, will talk about "Spinning Tops and Protons" at the next Brookhaven Lecture. The lecture will be given at 4:30 p.m. on Wednesday, February 20, in Berkner Hall.



Two "super-mini" computer systems are used to operate the National Synchrotron Light Source and they are on line 24 hours a day, every day. One is used to run the machine and the other for software and hardware development. If one fails, the other can be used as backup. But computers are dynamic things and the state of the art changes rapidly. To provide direction for updating the NSLS system, the first accelerator computer control workshop was held at Brookhaven from January 21-24. Attending were 35 experts in this field, 17 from other labs. The workshop was organized by Bryan Culwick and John Smith. Culwick, who heads the NSLS

Computer Systems Group, says that the demands now made on the system have exceeded the capacity of the original equipment. But keeping computers up to date is a "tricky business," says Culwick. "Even if you are putting in a new system, you have to update the old one in the meantime. In so doing, you might end up making the old as good as the new." The accelerator computer control experts plan to keep on giving each other the benefit of their experiences. Another meeting will be held in October at Los Alamos and, according to Culwick, it is likely to become an annual event.

—photo by Reben

BROOKHAVEN BULLETIN

Published weekly for the employees of BROOKHAVEN NATIONAL LABORATORY

BERNICE PETERSEN, Editor
MONA S. ROWE, Associate Editor
ANITA COHEN, Reporter
MARSHA BELFORD, Reporter

35 BROOKHAVEN AVE., UPTON, N.Y. 11973
Telephone (516)282-2345

Valentine Hysteria

February 14th — Valentine's Day
Oh, dear dear God!
I can't believe that I forgot
To get my love a card!

Well, I won't have time this morning
I just can't get away.
Oh, if only I had warning
I'd have done it yesterday.

Well, maybe I'll have time at lunch
To find a store nearby
Where I can pick up something
Halfway decent, if I try.

Oh, is it four o'clock already?
Wow, how the time just flew.
My head is pounding, pounding,
Wondering what to do.

To go home empty-handed
Is something I don't dare
For she'll cry and yell all night
About how much I don't care.

Oh great! A stationery store
That's open — what a lift!
Wrap the candy pretty, please.
It's a special gift.

I'm home, hon. Happy Valentine's Day
Here's something special, too
That I picked out with extra care
Especially for you.

And, so I stand here smiling
As she opens gift and card
That I paid for with my sanity
But now, my just reward.

Oh, thank you so much honey
For the card and gift you bring.
But, you know, you really didn't have
To get me anything!

— Joseph P. Nolan
Plant Engineering



BERA News



The Venettes Cultural Workshop has produced some dancers who are talented enough to dance on Broadway, but that is not the goal of the workshop, says its director, Mary Baird. "I want them to learn an art and appreciate it," she says. "They're getting a good environment with positive role models. Our goal is cultural awareness." Three hundred students, who range in age from three to 20 years, attend workshops in Wyandanch and Huntington. Some of the students will show what they can do in the next Black History Month event which will be held on Saturday, February 9, at 7 p.m., Berkner Hall. The dance program includes ballet, jazz, Afro, tap and modern dance. Tickets for the show are \$2 for children under 12, advance sale, or \$3 at the door; adults are \$4 in advance, or \$5 at the door. Advance tickets may be purchased from Fran Ligon, Bldg. 460, Ext. 3709.

Stockroom Closing

Building T-91 will be closed for inventory on February 21 and 22. Please make all necessary withdrawals of stock prior to 3 p.m., February 20. This will give Supply & Materiel sufficient time to prepare for the inventory. Emergency requirements will be processed through Michael Guacci, Ext. 2976.

PSI News

The monthly meeting of Professional Secretaries International, Upton Chapter, will be held on Monday, February 11, in Berkner Hall, Room C, at 6 p.m. The program for the evening is entitled "A Will — Do you or Don't you Need One," and will be presented by Peter S. Danowski Jr. and Priscilla A. Corkrey of the Peter S. Danowski law firm in Riverhead. For further information and/or directions, contact Juanita Heyliger at 282-3490, or Audrey Blake, 282-5382. Guests are welcome.

Cooking Exchange

On Wednesday, February 13, members of the International Cooking Exchange will demonstrate some unusual recipes that are sure to make a Valentine party special.

Cooking Exchange meetings are held in the Recreation Building on the second and fourth Wednesdays of each month from 12:30 to 2:30 p.m. Meetings are open to employees and their immediate family members. A one dollar donation entitles those present to a copy of the day's recipes, samples of the prepared dishes and coffee or tea. Babysitting is provided at 50 cents per child.

Call Urska Stritar, Ext. 3096, or Dee Polychronakos, 744-3578, for more information.

Aviation Club

The Aviation Club will hold its next meeting on Wednesday, February 13, at noon in Room D, Berkner Hall. Anyone interested in aviation is welcome to attend. Contact Audrey Karzenski, Ext. 3962, for information on club activities and trips.

Basketball

January 31

Hollywood	
G. Mack	12
R. Kowalski	6
D. Nordstrom	8
E. Meier	24
R. Domenech	2
G. Grigg	1
D. Hall	13
A. Richardson	7
	<hr/> 73

Coasters	
R. Doty	16
M. Williams	12
L. Smith	6
B. Allen	29
M. Fulkerson	8
	<hr/> 71

Runaways	
S. Gilbert	10
T. James	20
P. Johnson	22
G. Smith	6
G. Shepherd	8
T. Mooney	1
	<hr/> 67

Longshots	
J. Garrison	13
J. Gaeta	2
R. Seymore	12
P. Brown	6
L. James	9
E. Taylor	5
L. Walcott	16
	<hr/> 63

Singles Club

The February meeting of the Singles Club will be on Tuesday, February 12 in the lobby of Berkner Hall from 12:15 to 12:40 p.m.

Bowling

Red/Green League

High games were bowled by E. Meier 242, T. Holmquist 236, H. Marshall 225, R. Larsen 218/214/611 scratch, J. Morris 202, E. Sperry IV 202, T. Prach 201, S. Dimaiuta 200, J. Ferrante 200.

Purple League

Gil Spira rolled a 222, Bob Jones 200, Mary Austin 179, Jean Stelmaschuk 178, Marilyn Picinich 175, Maria Apelskog 170.

White League

The Gropers bowled a 933 gross game with Sandy Asselta rolling a 248, Ken Asselta 214/213, Sharon Smith 198/191. Other good games were bowled by Ed Sperry 223, Ben Belligan 213/203, Frank Gaetan 211, Caryl MacDougall 207, Betty Jellett 190.



Alex Reben

Why does Steve Musolino of S&EP have cupids on his curtains? Because he asked for them. These two winged infants with bows and arrows, representing the ancient Roman god of love, do not decorate Musolino's office just for Valentine's day, but every day. They were a present from his co-workers, who, along with Musolino, have a history of whimsical gift-giving.

Musolino went on leave-of-absence from September 1983 through August 1984 to do his Ph.D. course work in health physics at the Georgia Institute of Technology. Before he left, Joe Balsamo, Lynn Kalbach, Joe Klemish, Alan Kuehner, Bob Miltenberger, Jim Smith and Paul Zahra presented Musolino with a lunch box and a school bag holding blunt scissors, crayons, construction paper, and a finger painting smock — all the usual things one needs to do one's Ph.D.

However, before he left for school, Musolino obtained housewarming gifts for Balsamo: one plastic and two concrete pink flamingoes. Three weeks after Musolino left, the others grouped the flock on Balsamo's new lawn the first night the Balsamo family moved into the house they had built in Wading River.

Last summer, Ed Lessard called Musolino in Georgia to ask where a piece of electronic equipment was located. He also asked Musolino what color he wanted to have his office walls painted since his office was being moved from Bldg. 535 to Bldg. 129. "I asked, 'What about curtains?'," says Musolino, "and Lessard replied, 'Sure, anything you want.' So, naturally, I asked for pink curtains with white cherubs." What he got was white curtains with pink cupids.

Kuehner mentioned Musolino's request to his wife Nancy, who does many crafts, including trapunto. She enlarged the drawing of a cupid for the pattern, cut two ovals out of pink polyester, sewed them on to white cotton backings, embroidered the outline of the cupids' bodies, plumped them up with polyester batting, stitched their bows and arrows, and painted their wings tan and their hair gold.

The trapunto cupids were hung on Musolino's office curtains before he returned. "Knowing this group, I really wasn't surprised when I first saw them," claims Musolino, "and now, I've grown rather fond of them."

Motorcycle Club

Members of the Motorcycle Club will meet on Monday, February 11 at 5:15 p.m. in the Recreation Building.

More on Auto ID's

After Safeguards and Emergency Services (S&ES) announced the placement of the 1985 vehicle identification stickers on the upper rear of the driver's window, several objections were heard.

The most import concern was that this placement might be a violation of the law. The New York State Police and the Suffolk County Police Highway Department had already been contacted by S&ES before this placement was selected. The police advised that the sticker placement on the side window was acceptable as long as normal driving vision was not adversely affected. They rejected a request to affix the sticker to the front windshield, instead.

Tests by S&ES showed that the side window placement did not interfere with driving ability, nor was the sticker damaged after repeated opening and closing of the window.

S&ES prefers that employees use the recommended placement because it facilitates sight checking of vehicle occupants and keeps traffic flowing. But if, for some reason, you cannot do this, two options are available: On four-door vehicles, the sticker can be placed on the upper forward corner of the rear window on the driver's side; or, the employee can stop and show his ID card each time he enters the site. (The latter option, of course, will hold up everybody at the entrance).

Stickers are now being distributed and should be put in place by February 15.

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.

2178. TOOL AND INSTRUMENT MAKER, GROUP LEADER - (DAS Staff Shop) Central Shop Division.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

2179. TECHNICAL POSITION - Requires AAS degree in mechanical technology or equivalent and a minimum of five years' experience in the installation, operation and maintenance of UHV components and systems. A thorough knowledge of the maintenance and repair of leak detectors, turbomolecular sputter ion pumps and related equipment necessary. Background in electronics desirable. National Synchrotron Light Source Department. Reposting of Job #2097.

2180. TECHNICAL POSITION - Requires AAS degree in electronic technology or equivalent and background in complex electronic and electro-mechanical equipment, including vacuum systems. Will construct, repair, modify and operate equipment and facilities at the Tandem Van de Graaff Accelerator. Work schedule includes a rotating shift part of the time. Physics Department.

2181. P&GA OFFICE SPECIALIST - Under general supervision will perform complex and diversified clerical functions. Requires two years' post high school training or equivalent plus relevant work experience at an advanced clerical level. Photography and Graphic Arts Division.

Autos & Auto Supplies

79 MERCURY CAPRI - 4 cyl., excel. cond., stereo, avail. 3rd week of February, \$2,990. 924-4928.

82 SUZUKI RM125 - dirt bike, mint/cond., used only weekends, water cooled, w/equipment, \$800 firm. John, 281-3342 after 6 p.m.

74 CHEVY LUV PICKUP - rebuilt engine, mech. excel., am/fm cassette, \$2,000. 821-0729.

79 VOLARE - 6 cyl., new brakes, 3 spd., a/c, p/s, p/b. Diana, 331-4162.

TIRES - (2) Pirelli-P3, 175SR14, low mi., \$75/pr. Ext. 2253.

63 WAGONEER - 260 c.i., 4 WD, new tires and rims, mint cond. Artie, 399-6033.

74 TOYOTA COROLLA - excel. engine, good body, new tires, am/fm cassette, \$950. Charlie, Ext. 3950.

77 BMW 320i - sunroof, am/fm, fog lights, \$5,400. 286-0422 eves.

71 CHEVY IMPALA - V8, a/t, a/c, p/s, p/b, 82k, good cond., \$850. Ext. 2673 or 744-8632 after 6 p.m.

72 PONTIAC LeMANS - V8, a/c, p/b, p/s, 56k, new exh./carb., \$995. Ext. 4171 or 878-1280.

SNOW TIRES - C78-13 on rims, price neg.; VW tuneup kit, 1964-67, price neg. Susan, Ext. 4267.

77 MONTE CARLO - full power, cruise, tilt, am/fm, tape, new brakes, water pump, battery, 70k, \$2,500. 732-1842.

80 MONTE CARLO - 6 cyl., a/c, p/w, low mi., radio, \$4,500. 473-0178 eves.

83 HONDA - VT-500c shadow, 150 miles, wrecked but good for salvage, shaft drive, many good parts. Ext. 2238.

76 DATSUN 710 - runs well, needs minor work, good rubber, asking \$775. Chas, Ext. 2021 or 878-8901.

FLOOR MATS - front/rear, dark blue rubber, fits compacts, used 1 week, clean, \$7.50. Tom, Ext. 4664.

72 CADILLAC - 4 dr., new tires, timing chain, starter, runs well, \$700. Ext. 4597 or 924-8213.

TIRES - (2) L78-15, on Buick rims, \$40. Chuck, Ext. 3525.

78 MAZDA GLC HATCHBACK - 5 spd., \$1,500. Ext. 4524 or 643-5579.

81 TOYOTA TERCEL - 4 spd., excel. 36 mpg, rust-proof, metallic rust color, excel. serv. record, Michelin tires, \$3,600. Ext. 2830 or 543-0487.

79 CJ7 RENEGADE JEEP - 4 WD, 8 cyl., auto., am/fm cassette, CB, sunroof, other accessories. 286-3865 after 5 p.m.

73 FORD 100 - pickup w/cap, A-1 cond., many extra parts, \$1,300. 331-5118 between 5 & 9 p.m.

71 TOYOTA COROLLA - good transp., 2 dr., 4 spd., \$250 firm. Dawn, 588-9699 after 5 p.m.

CARTER CARBURETOR 750 - CFM, AFB, competition series, like new, \$80. Gil, Ext. 2352 or 744-9016.

83 MAZDA GLC - custom, 2 dr., hatch, am/fm, a/c, mint cond., 40 mpg. Ext. 3293 or 736-5130.

TRAILER HITCH - class 2, for mid-size GM cars, \$50. Ext. 2799 or 757-1581.

PICKUP TRUCK CAP - fiberglass, \$250. John, Ext. 4312.

75 PLYMOUTH CHARGER - excel. cond. in/out, \$1,700 or best offer. 924-0960.

WHEELS (4) - for 1985 Jaguar XJ6, brand new, boxed, orig. cost, \$1,100 asking \$600. 266-1688.

79 FORD F100 PICKUP - custom, a/c, V8, 3 spd., cap, runs well; 81 Ford Fairmont wagon, 6 cyl., auto., a/c, 52k miles, like new, best offer; 80 Chevy Citation, 4 spd., 6 cyl., 2 dr., am/fm, immac. cond. 821-9296.

78 FORD PINTO WAGON - 4 spd., 4 cyl., \$1,550. Joe, Ext. 4661 or 878-2203.

69 DART SWINGER - everything new, body fair, \$2,000 invested, sell for \$600. 929-6531 after 6 p.m.

70 CHEVY NOVA 307 - V8, high mi., \$350. Joe, Ext. 4212.

FUEL FILTER/WATER SEPARATOR SYSTEMS - Racor, for all diesel vehicles, \$55. Augie, 821-0379.

VW PARTS - generators, starters, clutches, flywheels, assorted engine parts. Fred, Ext. 4407.

70 MAVERICK - auto., 6 cyl., am/fm, good tires and brakes, new battery, dependable, \$375. Ext. 2621 or 281-0360 after 6 p.m.

TIRES - (4) 12x16.5, 8 lug, Cooper, mounted on 9.75x16.5 rims, \$300. Walt, Ext. 4028.

81 TOYOTA TERCEL - 4 spd., like new, highway miles, \$3,600. Ext. 2830 or 543-0487.

75 VW BUG - excel. cond., am/fm, snows, 2 extra rims, \$1,400. Bill, Ext. 2906 or 929-6189.

74 VEGA - mint cond., \$900 or best offer; 70 Ford, dependable, \$300 or best offer. John, 878-0939 after 6 p.m.

75 FORD TORINO - 79k, p/s, p/b, rebuilt a/t, very clean; 62 Mercury Comet, 4 dr., auto., 48k, clean, runs well. Andy, Ext. 4014.

ENGINE CRANE - 3/4 ton, 4" steel casters, 3 ton hydraulic piston, spreader chain, excel. cond., \$375. 289-0413.

70 DODGE WINDOW VAN - V8, 318, auto, trailer hitch, new trans., \$750. Ray, Ext. 3536 or 289-7615.

76 MONARCH - 2 dr., p/s, p/b, good cond., high mi. Ext. 3592 or 744-9475.

Boats & Marine Supplies

23' O'DAY - 1982, 7.5 HP Mercury, lots of equipment, 4 sails, in A-1 cond., asking \$14,500. 473-1067.

20' O'DAY - 6 HP, galvanized trailer, k/cb, sleeps 4, head, galley, extras, ready to sail, excel., \$6,800. Ext. 2906 or 929-6189.

19' RANKEN - 1983, all fiberglass, w/canvas top, I/O, low hrs, excel. cond., \$6,800. 665-2915 after 5 p.m.

MUSHROOM MOORING - 250 lb., w/chain, \$250. Harry, Ext. 7578 or 744-2715 after 6 p.m.

SEA OX 115 - 1980, w/Evinrude trailer, extras, best offer. 821-9296.

Miscellaneous

WOODBURNING STOVE - Franklin, orig., circa 1855, \$200; large pot belly stove, from Bayshore RR Sta., \$150. Kevin, 281-8031.

HEATERS - hydronic horizontal unit, used, various sizes and prices. 744-3289.

COUCHES - 8' and 4', gold velour, modern, walnut trim, excel. cond., \$200. Lydia, Ext. 2380 or 929-8142.

CAR SEAT - infant/toddler, Strolee, like new, asking \$35. 654-2041.

WURLITZER ORGAN - double keyboard, w/bench, rhythm, many voices, excel. cond., \$600. Ext. 5110.

HANG GLIDER - Quick Silver B, flown once, \$500. 286-1829.

CAMPER TRAILER - 1974 Fleetwing, 13', sleeps 4, self contained, newly decorated, excel. cond., \$1,550. 929-3079.

CRIB - & mattress, \$40; convertible carriage, \$20; twin bed headboard, \$15. 399-4394.

OPERA TICKET - (1) Meistersinger, Feb. 22, balcony, row E, \$21. Dave, Ext. 2694 or 941-9022.

TRUNDLE BED - mint cond., \$100. 369-0419.

GUITAR - 1984, Fender Stratocaster, ivory, Fender tremolo, hard shell case, excel. cond., \$375. Dave, Ext. 5215.

SLED - Flexible Flyer, \$2; auto exhaust analyzer, \$5; Hydrohearth fireplace grate, \$15. Victor, Ext. 2395.

PING PONG TABLE - w/net and paddles, full size, folding, excel. cond., \$35. Joe, Ext. 3464 or 281-7683.

SKI BOOTS - Nordica brand, never used, size 13M, \$40. Ext. 4018.

LIVING ROOM SET - excel. cond., yellow & tan sofa, \$100; love seat, \$75 or \$150/ both; multi-stripped sofa, shows wear, \$50; nylon carpeting, sea green, sculptured, 12'x14', 12'x16', runner 30' x 15', any part, \$3/yard. 727-6481.

CRIB - w/mattress, \$25; breast pump, \$3; electric bottle sterilizer, \$10. Wick, Ext. 4372 or 924-0582.

SKIS - Cobra Vogel Zebra, 195 cm, Tyrolia bindings, poles, \$55. Ext. 7160.

275 GAL. FUEL TANK - gauge vent, all piping, \$40. Don, Ext. 2808.

DOUBLE TOASTER - Proctor-Silex T204B, excel. cond., \$5. Ext. 3077 or 3902.

EARTH STOVE - wood/coal burning, stack kit included, A-1 cond., \$375 firm. 588-4703 after 5 p.m.

CONTENTS OF HOME - moving, furniture, dishes, pictures, knick-knacks, etc. Michele, 289-0405 after 6 p.m.

KEROSENE HEATER - used 2 seasons, \$100; formica kitchen table w/four chairs, \$30. 286-8356.

SOFA - L-shaped sectional, excel. cond., \$200. 289-0012.

TELEPHONE - GTE, white, rotary 13, replaceable decorative face mats, almost new, in box, \$20. Jag, Ext. 5080 or 751-1884.

ANTIQUÉ COUCH - circa 1830; Electrolux polisher; shop vac.; door knobs; 6-1/2" masonry blade; dumbbells. Paul, Ext. 4156.

SKI BOOTS - size 10, Kastinger, used twice, \$25. Ray, Ext. 3536 or 289-7615.

SKI BOOTS - men's size 9, women's size 7-1/2; roof rack, sturdy, fits VW Beetle. 286-9158.

OAK OFFICE DESK - old, w/disappearing typewriter; IBM selectric, w/2 type fonts, \$300/both. 281-2002.

Free

DOG - Airedale mix, 9 yrs. old, well behaved, protective, loyal companion. 286-8424.

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 Rent

NORTH SHIRLEY - 2 bdrms., large l/r, kitchen, bathroom, basement, sep. ent., \$525 + 1/3. 924-9429.

YAPHANK - Colonial Woods condo., 2 bdrms., 5 min. to Lab., pool, tennis, furniture avail., avail. end of February, \$600 per month. 924-4928.

NORTH PATCHOGUE - one bdrm. apt., pri. ent., w/w. cable hook up, single only, no pets, \$430 includes all. Carol, 289-3917.

EAST PATCHOGUE - S. of S. Country Road, 2 bdrms., l/r, eik, priv. ent., \$400/mo. + util. (no pets). Walt, Ext. 2907 or 698-0576.

HAMPTON BAYS - large 1 bdrm. apt., w/w, pine, cedar walls, yard, mature couple or single, no pets, \$350/mo. + heat/util. 728-2104 eves.

ENGLAND - 20 min. from Oxford, secluded Cotswold barn, near Thames, for rent or exchange in summer months. Farley, Ext. 4773 or GB-036787-238.

PATCHOGUE VILLAGE - 2 bdrm. apt., \$460/mo. + util., 2 mo. security. 289-0012.

SOUND BEACH - 4 room apt., patio, walk to beach, \$485 pays all. 821-9296.

ROCKY POINT - 3 bdrm. ranch, excel. cond. & location, carpets, fenced yard, full basement, all appliances, avail. immed., \$750 + util. 744-4611 after 6 p.m.

FARMINGVILLE - furnished bdrm., share kitchen and bath, \$300/mo. incl. utilities, security. 289-5704 after 5:15 p.m.

For Sale

MILLER PLACE - colonial, 4 bdrms., formal l/r and d/r, country kitchen, 4 baths, family room w/brick wall fireplace. 331-1718.

LAKE PANAMOKA/RIDGE - mint 3 bdrm. ranch, l/r, d/r, 1 bath, private fenced yard w/18' above ground pool with deck, walk to private lake, asking \$91,000. 929-8748.

MASTIC BEACH - 2 bdrm. ranch, attic w/stairway, oil heat, crawl space, basement, low taxes, \$48,000. 929-4701.

IRVINE, CALIFORNIA - 4 bdrms., 3 baths, 2 car garage, beautiful ceramic tiles, sprinkler system, 13 years old, \$165,000. Ext. 2389 (day) or Ext. 3131 (eves.).

MASTIC - 4 bdrms., 2 full baths, split level, family room, basement, 2 car garage, patio, shed, fenced, nicely landscaped, many extras, move in cond., \$88,000. Ext. 3589 or 281-3635.

BROOKHAVEN HAMLET SO. - custom built, 2,000 sq. ft., cedar ranch on secluded 1/2 acre, sunken l/r, w/fireplace in conversation pit, BBQ in kitchen, 3 bdrms., den, 2 bath, block to boat dock, \$142,500. 286-0065 eves. and weekends.

N. CORAM - townhouse, w/w, fenced yard, basement, O/HW, redwood deck, 2 zone heating, washer/dryer, A-1 cond., \$75,000 firm. 331-5118 before 9 p.m.

RIVERHEAD - 5 rm. ranch, gas heat, town water, average taxes, assumable mtg., \$6,000 cash. Ext. 4289 or 399-3815.

Wanted

MODEL AIRPLANE ENGINES - radio control, sizes 80 and up, used or new. Jack, Ext. 3261.

CAMPBELLS SOUPLABELS - send to F. Chandler, Bldg. T-89, (for St. Mary's School, East Islip).

RECORDS - 45 rpm and some lps of the 50's and 60's era. Frank, Ext. 3120.

ELECTRIC GENERATOR - 110 volts AC, Honda-portable, Onan-light plant, or equivalent brand. Doug, Ext. 7521 or 732-7634.

REFRIGERATOR - working cond., 28" max. width, reasonably priced, will pick up. 929-4663.

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

FOLDING BICYCLES - (2). Walter, Ext. 4605.

HOUSE/APT. - South Shore, summer months, near water, rent or house sit. Farley, Ext. 4773.

TIRES - Pirelli or Michelin, size CR78-14 or equivalent. Ext. 4393 or 589-3272.

OUTBOARD MOTOR - 6-8 HP, short shaft, will consider motor requiring repair. Ext. 2799.

Classified Ad Policy

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

- The Brookhaven Bulletin's classified section may be used only by active and retired Laboratory employees.
- All items for sale or rent must be the advertiser's property.
- Ads for material acquired for resale in association with a full or part-time business cannot be accepted.
- Ads for the sale or trade of firearms will not be accepted.
- Ads not carried because of space restrictions will be held for publication in the next issue.
- Ads are run only once and must be resubmitted if they are to be repeated. One ad per person per week.
- 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: Miscellaneous Lost & Found Free
 For Sale: Boats & Marine Supplies Car Pools Wanted

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)