

Nobel Laureate Melvin Schwartz Returns to BNL As Associate Director for High Energy & Nuclear Physics

Deciding that it "was time to go back to physics," Nobel laureate Melvin Schwartz has returned to Brookhaven as the Lab's Associate Director for High Energy and Nuclear Physics.

In assuming this position effective January 1, he became responsible for both the Physics and Alternating Gradient Synchrotron (AGS) Departments, as well as the Instrumentation Division and the Center for Accelerator Physics.

Schwartz returns to physics after 11 years as full-time president of Digital Pathways, Inc., in Mountain View, California. Founded by Schwartz in 1970, it is one of the major computer-security companies in the world.

While in the corporate world, Schwartz was awarded the 1988 Nobel Prize in Physics, along with Leon Lederman and Jack Steinberger. They were cited for the 1962 experiment at BNL's Alternating Gradient Synchrotron that employed the first neutrino beam ever used in high energy physics and resulted in

the discovery of the muon-neutrino.

Announcing Schwartz's appointment, Laboratory Director Nicholas Samios noted, "Mel has had a distinguished career, highlighted by innovative and creative experiments in particle physics. Clearly, the most famous was the classic neutrino experiment at Brookhaven which discovered that there were two distinct neutrinos, the electron and muon neutrino."

Schwartz replaces T. Laurence Trueman, who served as Associate Director since September 1988 and has left the position to resume research in theoretical particle physics.

Thanking Trueman, Samios noted, "Larry took on this position at a very difficult time and did a superb job during his tenure. He organized vital support in DOE and in our user community for new facility construction, as well as for ongoing research programs. We all wish him well and expect to tap his judgment and advice on science policy issues."

"I decided to go back to a lab that still has the spirit of creativity, but



Melvin Schwartz

does not have an authoritarian management stifling that spirit — a lab that still allows young physicists to do their own thing and make their own decisions," explains Schwartz.

"So Brookhaven is the logical place for me to be," he continues. "The Lab has a glorious past and a great future, especially with RHIC."

It's All Physics

With \$13.5 million in funds from the U.S. Department of Energy, construction of RHIC, Brookhaven's Relativistic Heavy Ion Collider, is to begin this fiscal year. The heavy-ion collisions in RHIC are expected to produce conditions so extreme that scientists will be able to observe phenomena that have not occurred in the natural universe since the Big Bang.

While construction of the collider itself is under the jurisdiction of RHIC Project Head Satoshi Ozaki, approval of RHIC experiments will be overseen by Schwartz. So, the new Associate Director is encouraging nuclear and particle physicists within BNL's Physics and AGS Departments "to think in terms of RHIC to do completely new physics."

"At high energies with heavy ions, it's no longer particle physics versus nuclear — it's all physics, one very unified whole," comments Schwartz. "At RHIC, all sorts of phenomena should emerge from multiple particle collisions which will be of interest to particle and nuclear physicists alike — new states of matter that may never be produced any other way."

While waiting for RHIC to come on line, Schwartz will champion BNL's existing accelerator. "The AGS used to run 40 weeks a year, but now there is only money enough for a 15-week run — and I think that this is a real tragedy because the AGS has a far richer program today."

With the construction of RHIC in Brookhaven physicists' own backyard and the upgrading of the AGS, (continued on page 3)

Budget Picture in Focus for FY 1991; Still Developing for FY 1992

Four months into fiscal year 1991 (FY91), BNL's budget picture for the year has come into full focus — just as President George Bush introduced his federal budget proposal for FY92.

For FY91, it is now clear that the Laboratory will be receiving some \$27.9 million dollars more in total funding than was spent in FY90. Most of these additional monies, however, are for new or remedial initiatives. Thus, they do not affect Brookhaven's core programs, most of which stay at or near the same level as in FY90.

As the President just made his FY92 budget proposal public last Monday, its details will not be fully known for some time — though the budget is known to include \$49.3 million for BNL's Relativistic Heavy Ion Collider (RHIC) construction project.

Commenting on the budget situa-

FY 1991 DOE Operating Budget for BNL

(Dollars in thousands)

Program	FY 1990 Actual	FY 1991 Pres. Budget	FY 1991 Current Budget	Change From Pres. Bud.
High Energy Physics	60,751	61,515	59,355	-2,160
Superconducting Super Collider	19,086	17,500	18,354	+854
Nuclear Physics	23,465	25,570	24,263	-1,307
Materials Sciences	39,525	51,344	49,612	-1,732
Chemical Sciences	16,188	17,203	17,380	+177
Biological & Environ. Research	21,801	21,497	21,341	-156
Environ. Restoration & Waste Mgmt.	3,371	8,341	10,732	+2,391
Atomic Energy Defense Activities	9,412	6,807	8,590	+1,783
All Other	10,155	9,950	11,559	+1,609
Total DOE	203,754	219,727	221,186	+1,459

tion, BNL Director Nicholas Samios said, "Although the total Laboratory budget is higher in FY91 than the previous year, the distribution is such that it will cause some difficulties in several areas of the Lab. In particular, I am disappointed that our research activities are being hampered, and that the HFBR upgrade project was not ultimately included for construction in FY92."

This year's budget picture developed slowly. Though the President submitted his FY91 budget in January 1990, it was not approved by Congress until the end of October, after FY91 had begun. Then, on November 5, 1990, the President signed the Energy and Water Development Appropriations Bill, which includes most of the U.S. Department of Energy's (DOE) funding. As most of BNL's funding comes from DOE, the Laboratory's Budget Office closely monitored the progress of this bill.

"This appropriations bill significantly modified DOE's original request to Congress for its FY91 funding," said BNL Budget Officer Donald Robbins. "Considering the reductions the government faced under Gramm-Rudmann, DOE fared reasonably well. However, as enacted, the bill included many Con-

gressional directions on how the funds could be spent, as well as unspecified cuts that DOE had to apply to its programs. DOE had to deal with these before allotting funding to its many contractors, including Associated Universities, Inc. This took quite a bit of time and was just recently resolved."

Overall Increase in FY91

For BNL, the resolution means that the Lab will receive some \$221.2 million in funding from DOE in FY91, up almost \$1.5 million from the President's original proposal (see chart, "FY91 DOE Operating Budget for BNL"). According to Robbins, "That's not unusual — we usually receive more funding from DOE during a given year than originally earmarked for us in the President's budget."

In addition, BNL's FY91 DOE funding is \$17.4 million more than the amount spent in FY90.

When funding from the Nuclear Regulatory Commission and other agencies is added to the DOE total, however, BNL will be receiving about \$329.7 million in FY91, down about \$1.25 million from the President's submittal (see chart, "BNL's FY91 Budget Summary").

(continued on page 2)

Brookhaven National Laboratory

FY 1991 Budget Summary

(Dollars in thousands)

	Pres. Bud.	Current Estimate
Operating		
DOE	219,727	221,186
NRC	10,763	14,500
Other	39,110	36,300
Total Operating	269,600	271,986
Capital Equipment		
Research	14,803	16,380
General Purpose	4,450	4,250
Total Equipment	19,253	20,630
Construction		
AIP, GPP, ARAM	13,147	12,712
Support Facilities	4,566	4,623
Environ'l. Mgmt.	5,940	5,434
RHIC	15,000	13,500
Energy Mgmt.	3,500	840
Total Construction	42,153	37,109
Total BNL	331,006	329,725

New Telescope Slated for NRAO

By 1994, a new, 328-foot diameter radio telescope should be standing on the site at the National Radio Astronomy Observatory (NRAO) in Green Bank, West Virginia, where a 300-foot telescope in service since 1962 collapsed due to metal fatigue in 1988.



The \$55-million contract to construct the world's largest, fully steerable radio telescope was awarded by the National Science Foundation, which funds NRAO, to Radiation Systems, Inc., a public corporation which has built several much smaller telescopes for NRAO since 1985. Like Brookhaven, NRAO is managed by Associated Universities, Inc., so it is considered BNL's sister laboratory.

Gathering radio waves from astronomical objects in space, the new, 500-foot-tall, 10-million-pound instrument will be the most accurate antenna of its size in the world. Made up of 2,000 reflector panels each with its own motor, the receiving dish will have a surface area of 2.3 acres, with a tolerance of five-thousandths of an inch. This sensitive and powerful dish will permit astronomers to make observations at shorter wavelengths than with the old telescope.



Love Notes

From BNL Employees
To Their Valentines

DAD - There is a new little man in my life but you will always be my #1 Dad. Happy Valentine's Day. Love, JoAnn.

2 MY JOSEPH - UR the best thing that has ever happened 2 me. Love your DJ. P.S. - this was free.

CHESH - Let's hope this is the one. Every day a beginning of ever more. I love you. Atilla.

JEANNE - Happy Valentine's Day. I'll love you forever. Please be my Valentine. Love, Tim.

KT - Thanks for brightening many a day; as for me I think you're a perfect straight A, and wish you a great Valentine's Day. SA.

DONNA-MARIE - To my beautiful, loving, and devoted Valentine. Glory! Love, Steven.

MOMMY, KENNETH LEE, KEVIN LEE - You are my Valentines. Daddy.

DENNIS - You make me jump - you make me fly - my head spins - my heart forever pounds . . . only for you. M.

TO MY HONEYS - I loves yous more today than I dids yesturdays.

ROSE - Our love has survived this past year and shall continue forever. Joel.

CHAU CHAI - Happy Valentine's Day and birthday to you on Feb. 14, and Happy Chinese New Year. M.H.

TO BETTI - I'le mia corre é tuto per tay. Be my Valentine this wonderful day.

RICHIE - I love you. Always and forever, Kate.

THERESA - You have made me the happiest person in the world. I love you, John.

TO THE RUDEST DOG - My palpitating heart races along knowing that this is our seventh Valentine's Day! Love, Squeeks.

PORCUPINE - Glad you're still around. P.S. Keep the "sweecrets" coming. Love only me.

TO BRYAN - Love ya much!!! Nicky.

JOANNE - I love you every second of every day - you are the "bestest" daughter in the whole wide world! Mommy.

DEAR L.V. - Thanks for a wonderful five months, looking forward to many more, I love you! J.V.

BABE - Thinking of you, I smile. I feel a kick and know I am the luckiest woman ever. Love, K.

TO MY VALENTINE "THE BEST" - Today I love you more than yesterday but not as much as tomorrow. D.C.

HAPPY VALENTINE'S TO MY "PEAR" - My "one and only" love! After eleven years I love you more! Your "Nené" Carlos.

TO MY HONEY BUNNY & MY LITTLE PRINCESS - Where would I be without you both. I love you. Neilly.

SWEETHEART - I love you always & forever. Happy Valentine's Day. Love, Cassandra.

J - Step by step . . . Hopefully, we'll begin to understand one another, and forever reach the top of the stairs! Love, Pumpkin.

DAUGHTER - When I needed comfort and understanding you were there. Love, Dad.

MR. FROZEN ASPARAGUS - Can't we work at getting our junk and Jack London? I love you! Green Swimsuit.

HARRIET - You have my word on this: I'll respect you like crazy. Love, John.

SWEETIE - I love you a bushel and a peck and a hug around the neck. With Love, Koty's Mother.

BRYAN - Tell me baby do you need my lovin, tell me baby are you thinking of me? Tell me baby! Kind of satisfaction guaranteed! Love ya, your Pie.

DEAR PR - I love you for letting me be who I am and for being there when I need you! Love, Sugar.

"J" - Roses are red, violets are blue, baby I'll always be crazy about you. Love, The T. Monster.

DEAR C.I. - Time has proven to me just how much your love means to me. Love always, J.

WANTED - Valentines (male) for eligible ladies. To apply, send note (no photo required) to: "Lonely Ladies," c/o Bulletin, Bldg. 134.

DEAR HONEY - Remember I'll always miss, need and love you. Me.

RALPH - Looking forward to spending the rest of my life with you. Happy Valentine's Day. With all my love, Sue.

HAPPY VALENTINE'S DAY - to the new business manager. Love always.

THE NEXT OPEN FRAME - Yani and I will be there for you with no claps. Happy V-Day! Babe.

TURQUOIS - A color I thought would never run. I hope you prove me right, cause Purdie and I love you. Happy V-Day.

TO THE MOST WONDERFUL DAD - a daughter could ever ask for. Happy Valentine's Day. Love, C. Bell.

L.M.F. - I love you more than ever. Thank you for making it all happen. All my loving, J.A.S.

HAPPY VALENTINE'S DAY - to my only true love. "Anything for you my love" today, tomorrow, forever. Pussycat.

TO THE BEST TEAM EVER - You know who you are. Love, Mom! "Charlie Too."

MIKE - Happy 20th Anniversary. I'll always love "only you." Eileen.

KOOKY BIRD - Keep hope and promise in your heart for the magic of our love will not keep us apart. Slugo.

MARIE - You sexy thing. I love you forever. Lover John.

NONA - To the most wonderful wife in the world. Love you forever. Bob.

TO EDDIE C. - Let's raise your blood pressure higher! No number of pills will help you tonight. Love, Me.

TO SITTER - work and school, you just get up and go, that's why Robert and I love you so.

ALMOND AKA RAMON - I guess all men aren't creeps. Thanks for the fun. Remember, be kind to the elderly. Boots.

HAPPY ANNIVERSARY! - Let's go to the woods and scare the animals (or they can scare us!). I love you.

Their Love Ballooned at BNL



Roger Stoutenburg

How many balloons does it take to fill an office with love? One or two might have done it, but just to make sure that John Vandenkieboom got the message, his fiancée Lillian Grajeda filled his Department of Nuclear Energy [DNE] office with close to 50 balloons - and a single red rose - last Valentine's Day.

Celebrating their love at BNL was appropriate for this couple because they met on site as students in the summer of 1989, he in DNE and she in the Department of Applied Science. Though Lillian now works elsewhere, the romance continues - they were married last September.

A Valentine's Equation . . .

If Music be the Food of Love

Valentines can multiply by Love

To get:

To make their Hearts Sing

By putting the Food in the

Personal checks, as well as receipts from King Kullen and Finast, which give rebates, are also very welcome. Send them to Carole Kerr, Bldg. 460.



of radioactive-waste reduction - \$5.5 million;

- Construct a new addition to the Heavy Machine Shop - \$1.4 million;
- Replace the Lab's aging, unreliable, inefficient and undersized boiler. Expected to be about 10 percent more efficient, the new boiler will have more efficient heat transfer, burners and controls - \$3.2 million.

Although current DOE funding shows a net increase over the proposed FY91 Presidential budget, many core programs, including high energy physics (HEP), nuclear physics (NP) and materials sciences (MS), suffered decreases at this step. Compared to FY90, however, HEP and NP remained at essentially the same amount, while MS increased by about \$10 million for operation of the High Flux Beam Reactor (HFBR) and the National Synchrotron Light Source.

Though a sizeable increase had been expected for continuing new programs in biological and environ-

mental research that DOE initiated last year, funding for this program was flat in FY91.

As a result, explained Robbins, "There has been some impact on personnel staffing levels in these programs. To avoid involuntary reductions in our work force, the Laboratory has been working to relocate the staff affected by these funding reductions. However, there may be some personnel that we will be unable to place in other programs."

Dealing With FY92

"Now that we have almost resolved the FY91 budget, we can get ready to deal with the FY92 budget!" said Robbins.

Although President Bush has presented his new budget to Congress, it will be several weeks until enough details are available concerning the monies earmarked for BNL to allow funding levels to be assessed. In the

MONICA - misses and loves Donald Ray Simpson her Texas star. I hope to see you soon. Happy Valentine's Day!

HI HONEY - Our first Valentine. Future looks bright. Must be your contacts. Love always, Tony.

MOON glint on armor, Dark knight moves in the shadow; Your Lady, waiting.

WOK - You're the best mom and wifey in the world! Happy Valentine's Day! Love, D.J., Booberry, and the Nuggy-Master.

DEAR B.B. & SCOOTER - The two most important men in my life, "Happy Valentine's Day." I love you.

MY SWEET RENEE - Thinking of you makes me feel so happy & I miss you in my arms. I love you. Your boyfriend.

PI - I'll be yours if you'll be mine; would you be my Valentine? I love you. xoxoxo.

TO GERRY AND PAUL - Let's make it last forever. Lisa Tuls.

TO MY SNOW BUNNY - I love hopping through our winter wonderland together. EL.

DEAR MILLI & VANILLI - Even though you're a fake, make no mistake, we still think you're great! Love, The Cheerleaders.

TO MY NAT VANCE - Who knew at a glance, I was the love of his life, so he made me his wife, and I never knew there could be such love, he must have been sent from up above. I ♥ U, KG.

DEAR CUDDLES - I'm looking forward to spending our first Valentine's together, hope you feel the same. Your lovable type-A person.

DEAR L.S. - I love you more and more each passing day. Love, P.M.

DAD - Don't be fooled by imitations - this ad's for you: Thanks for listening and talking - both are important in a father-daughter relationship. xoxoxo, your favorite.

Budget

(cont'd)

Overall, however, that translates to an increase of about \$27.75 million over FY90.

Some of this increase, as previously reported, represents first-year construction funding for RHIC, which has been approved for \$13.5 million in FY91. So far this year, DOE has allotted \$11.3 million of this amount to BNL.

Demonstrating its commitment to helping the Laboratory meet its environmental obligations, DOE has increased funding in this area, from \$3.4 million in FY90 to almost \$10.75 million for FY91.

Another positive funding note is that DOE continues to provide funding to maintain and improve the Lab's infrastructure. Funds have already been received to:

- Support a comprehensive effort to modify existing radioactive-waste minimization facilities and to provide additional facility support in the area

meantime, however, some important facts are known - both positive and negative.

"While we are pleased to note that the RHIC construction project will get almost \$50 million in the FY92 budget," Robbins said, "we are very disappointed to learn that funding was not provided for the Reactor Neutron Beam Lines and Facilities Upgrade Project to provide new instrumentation for our HFBR.

"But it is encouraging to report," he added, "that DOE is continuing to provide strong support for the Laboratory's infrastructure. In FY92, the budget will include two new projects for BNL. The first, to be funded at \$3.3 million, will replace transformers, switchgear, deteriorated ductbanks and feeders to ensure continuity of power for programs and research machines. The other project, to be funded at \$1.2 million, will provide for the rehabilitation of the Laboratory's sanitary system."

BERA Presents . . .

Plan now to attend these two events sponsored by the Brookhaven Employees Recreation Association (BERA):

• **Fox Family Bluegrass** — On Friday, February 15, at 8 p.m., this talented quartet from the Adirondacks returns to Berkner Hall, for an encore to last summer's exciting performance.

At \$6 each, tickets are now on sale at the BERA Sales Office in Berkner Hall, from 9 a.m. to 2 p.m. weekdays; at the Recreation Office in Personnel, Bldg. 185, after 2 p.m.; or from the following people: Rick Backofen, Bldg. 197B, Ext. 2973; Michelle Cummings, Bldg. 459, Ext. 2077; Kay Dellimore, Bldg. 185, Ext. 2873; Elizabeth Pergan, Bldg. 179A, Ext. 2937;

Coming Up

Senior Scientist David Weber, Medical Department, will present the next Brookhaven Lecture on Wednesday, February 20, at 4 p.m., in Berkner Hall. His topic will be "Functional Imaging of the Brain, Heart, Lungs and Skeleton — What to Expect of SPECT."

Note to Employees:

Attendance at lectures, meetings and other special programs held during normal working hours is subject to supervisory concurrence.

Melvin Schwartz (cont'd)

Schwartz views the Lab as an ideal place with all the resources for creative individualists who wish to propose experiments and see their projects through to results in a relatively short time.

Schwartz cites the Instrumentation Division as "a resource that goes way beyond engineering."

As he explains, "The division has two roles: the first is innovative and creative, working on ideas that arise not necessarily in response to specific needs. The second is service, solving specific technical problems. Some of the best ideas, such as modular electronics, have come out of Instrumentation's first role and have been applied to its second role. Therefore, I'd like to see the most made of this resource."

Another Lab resource under Schwartz's purview is the Center for Accelerator Physics. He explains, "This group has the responsibility to investigate new technologies for the accelerators of the future. By developing successful technologies, we hope to go beyond the current size and energy limitations of present accelerators, and open new physics frontiers."

Because he'd like to make the most of the people and facilities at the Lab, "I personally prefer to work here," adds Schwartz, who would like to resume research that he began at the AGS in 1974 and continued at Fermi National Accelerator Laboratory through 1979, studying pion-muon bound states. He also has some ideas for looking for unusual particles in heavy-ion collisions both at the AGS and RHIC.

Concludes Schwartz, "I'd like to see a renewal of the productivity seen at

Jean Ramirez, Bldg. 197C, Ext. 2119; Maryann Reynolds, Bldg. 703, Ext. 5241; and Sharon Smith, Bldg. 510A, Ext. 3995. Tickets may also be bought at the door.

• **Atlantic City Trip** — On Saturday, March 9, a bus will leave the Brookhaven Center promptly at 9 a.m., headed for the Trump Castle Hotel and Casino on the Marina. There will be an extra pickup at LIE Exit 63, if necessary, and the bus will return to BNL at about 11:45 p.m.

The initial cost will be \$20, but the hotel/casino will give a \$12.50 coin return, \$4 towards food and a \$5 deferred-return bus voucher, which can be redeemed on the next BERA bus trip scheduled for Saturday, April 20. Tickets are on sale now at the BERA Sales Office.

For information, call Louisa Barone, Ext. 3347; M. Kay Dellimore, Ext. 2873; or Rosalie Piccione, Ext. 3160.

Social Club

The following events are on the Social Club's calendar:

- **U.S. Hot Rod & Truck Show** — Friday, March 1, 8 p.m., Nassau Coliseum; All tickets discounted at \$12.50 (orig. \$17.50); money due now to ensure good seats.
- **Ringling Brothers Barnum & Bailey Circus** — Sunday, March 17, 11 a.m., Nassau Coliseum; All tickets discounted at \$11.50 (orig. \$13.50); money due now to ensure good seats.
- **New Orleans Trip** — May 8-12
- **Walt Disney World** — July 10-27
- **Hawaii** — 9 days, leaving October 31.

For information and reservations, contact Doris Terry, Ext. 7610.

Brookhaven in the early '60s through the mid '70s. Over the last decade, there haven't been any major physics discoveries in the U.S., so Brookhaven hasn't been any worse off than anyplace else. This is a great lab, and it has a great future with RHIC."

Back to Brookhaven

In accepting the position, Schwartz returned to Brookhaven and the New York metro area: A Bronx native and a member of the Bronx High School of Science class of '49, Schwartz earned both his A.B. and his Ph.D. in physics from Columbia University, in 1953 and 1958, respectively.

First coming to BNL in August 1955, Schwartz performed his Ph.D. thesis research through May 1956 as a guest research assistant at what was then BNL's only accelerator, the Cosmotron. While finishing his thesis, he was employed by the Lab, first as a research associate, then an associate physicist, from June 1956 through May 1958.

Back at Columbia, Schwartz continued at Brookhaven, working at the AGS as a guest associate physicist 1958-63, while climbing up the academic ranks from assistant professor to professor of physics. After moving to Stanford University, he still maintained his ties with BNL, as a guest senior physicist, 1966-72, and a research collaborator, 1973-81.

Melvin Schwartz is a member of the National Academy of Science, and a fellow of the American Physical Society. In addition to the Nobel Prize in Physics, Schwartz was the recipient of the 1964 Hughes Prize of the American Physical Society.

— Marsha Belford

Arrivals & Departures

Arrivals

Joseph J. Christian.....Chemistry
Joseph Montalto.....Reactor
Michael J. O'Brien.....S&EP
David G. Robbins.....S&EP
Melvin Schwartz.....Director's Off.
Chang Su.....Chemistry
Deming Xi.....Physics

Departures

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

Stephen S. Adler.....Physics
John Bura.....Plant Eng.
Edith P. Lehman.....Medical
Philip Rappa III.....Biology
Cosmore D. Sylvester.....NSLS
Anthony W. Weaver.....Plant Eng.
Frank R. Winter.....Central Shops

Black Women Achievers Featured in Poster Exhibit

Are you familiar with Harriet Tubman and Sojourner Truth?

They are two of the African-American women achievers who will be featured in a poster exhibit from the Smithsonian Institution entitled "Black Women: Achievement Against Odds," to be shown at Berkner Hall, from Monday, February 11, through Friday, February 15, from 11:30 to 1:30 p.m. each day.

The exhibit will be sponsored by two BERA organizations — the Afro-American Culture Club and the Art Society — in celebration of Black History Month. There will be an opening day reception with refreshments.

The 17 posters review achievements of African-American women in areas ranging from the arts to the sciences. The exhibit is on loan from the Division of Museum Services of the Nassau County Department of Recreation and Parks.

Sojourner Truth

Born a slave in New York State, Sojourner Truth (1797-1883) was once sold for \$100. After she was freed, she was an outspoken abolitionist known as "The Black Joan of Arc."

She organized the first sit-in, refusing to leave President Lincoln's office until he dealt with the question of how the nation would help freed, unemployed slaves after the Civil War. In another Washington D.C. protest, she rode on horse-drawn streetcars until she was removed by force. She later sued the streetcar company and was awarded damages.



Harriet Tubman

Harriet Tubman (1826-1913) helped more than 300 slaves escape to their freedom in the North via a series of hiding places in homes and other spots known as the Underground Railroad. A bounty of \$40,000 was offered for Tubman dead or alive, but that did not deter her from her anti-slavery efforts, and it is believed that she never lost a "railroad passenger."

For leading her people to freedom, the former slave woman was known to them as Moses. Tubman was also honored for her assistance to the Union Army during the Civil War.

Review of Women's Programs Within the National Labs

As part of the education initiatives introduced by Energy Secretary James Watkins, the U.S. Department of Energy (DOE) is reviewing the national labs' educational outreach programs aimed at female students of all ages, as well as career-enhancement opportunities for women employed at the national labs.

This evaluation has so far included a DOE Review of Laboratory Programs for Women, held last November at Argonne National Laboratory. Five women employees from BNL attended the meeting, and one, Chemist Louise Hanson of the Department of Applied Science, chaired a panel on women's committees.

To stimulate new ideas for women's educational programs at Brook-

haven, Hanson will present an overview of this DOE meeting on Wednesday, February 13, at 5:15 p.m., in Room B, Berkner Hall. Open to all members of the Lab community, this meeting is sponsored by Brookhaven Women in Science.

During the panel that Hanson chaired, women from five national laboratories discussed the committees and other mechanisms through which women employees may raise issues, voice concerns, ask for information and lobby for change, thereby affecting lab policies on women's status and opportunities. As the panel uncovered, several approaches both official and unofficial have been tried with varying degrees of success at the different labs.

Cooking Exchange

A varied-menu Cooking Exchange demonstration will be held at the Recreation Building in the apartment area on Wednesday, February 13, at 12:15 p.m.

All are welcome — especially newcomers to BNL. Come and get acquainted, or reacquainted. New ideas and participation are encouraged.

A donation of \$2 per adult is requested to cover expenses for the ingredients and a light lunch; there is a \$1 charge per child for baby-sitting.

For more information, please call one of the following: Louise Bunnicki, 744-5867; Barbara Kowalski, 744-3569; Miryam Rothenstein, Ext. 3092; or Eiko Tanaka, Ext. 3017.

Toastmasters Club

Humor is the spice that can make an otherwise bland speech interesting. So, on Tuesday evening, February 12, the Toastmasters Club will present Jerry Burke, who will speak on how to make a technical presentation fun.

A mechanical engineer at UNISYS, Burke is an accomplished speaker who has enjoyed considerable success in Toastmasters' humorous speech contests, at both the area and division levels.

The Toastmasters Club meets Tuesdays, from 5:15 to 7:15 p.m. in the main conference room of Bldg. 475. All are welcome, especially for February 12, which has been designated guest night. For more information, call Margaret Foster, Ext. 3644, or Greg Van Tuyle, Ext. 7960.

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ANITA COHEN, Editor
MARSHA BELFORD, Assistant Editor
LIZ SEUBERT, Reporter

35 Brookhaven Ave., Upton, N.Y. 11973
(516) 282-2345

Scotch Doubles

The Scotch Doubles Tournament will be held on Sunday, February 24, at 1:30 p.m., at the Port Jeff Bowl. The cost is \$20 per couple. The tournament is open to BNL employees and immediate family members.

Applications are available at the BERA Sales Office. Deadline for applications is Friday, February 15. If you need a partner or have any questions, contact Maryann Reynolds, Ext. 5241, or Ed Sperry IV, Ext. 2697.

Surf & Turf With Love At the Center

For Valentine's Day, Thursday, February 14, the Brookhaven Center will serve a special surf & turf dinner from 5 to 7 p.m. The \$10.25 price includes filet mignon, lobster tail, baked potato and broccoli spears.

Cafeteria Menu

Monday, February 11	
Soup: Cream of tomato	.75/.95
Entree: Taco bar	(each) .90
Entree: Chef's choice w/1 veg.	3.10
Fitness: Baked fish w/1 veg.	3.10
Carvery: Hot pastrami sandwich	2.85
Grill: Grilled Reuben	2.85
Tuesday, February 12	
Soup: Hearty lima bean	.75/.95
Entree: Buffalo wings w/1 veg.	3.10
Entree: Baked broccoli & cheese casserole & 1 veg.	3.10
Fitness: Chef's choice	3.10
Carvery: Hot roast beef sandwich	2.85
Grill: Turkey melt	2.45
Wednesday, February 13	
Tribute to Black History Month	
Soup: Oxtail	.75/.95
Entree: Spicy baked catfish*	3.45
Entree: Smoked pork shoulder*	3.65
Entree: Oven-roasted chicken w/dumplings & giblet gravy*	3.45
*served w/two veg. & choice of biscuit, roll or cornbread	
Carvery: Hot Black Forest ham sandwich	2.85
Grill: Double cheeseburger	2.65
Thursday, February 14	
Valentine's Day Special	
Soup: Oyster stew	.75/.95
Entree: Oven roast prime rib of beef*	3.85
Entree: Cornish hen w/gravy*	3.85
Entree: Stuffed flounder w/crab meat*	3.85
*served w/two veg. & roll	
Carvery: Hot corned beef sandwich	2.85
Grill: Chili dogs	1.50
Friday, February 15	
Soup: Hearty black bean	.75/.95
Entree: Baked fish	3.10
Entree: Chef's choice	3.10
Fitness: Sauteed chicken Provencale	3.10
Carvery: Hot turkey sandwich	2.85
Grill: Fried fish	2.95

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position. Consideration is given to candidates in the following order: (1) present employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action plan, selections are made without regard to age, race, color, religion, national origin, sex, handicap or veteran status.

Each week, the Personnel Division lists new placement notices. The purpose of these listings is, first, to give employees an opportunity to request consideration for themselves through Personnel, and, second, for general recruiting under open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people.

Except when operational needs require otherwise, positions will be open for one week after publication.

For more information, contact the Employment Manager, Ext. 2882, or call the JOBLINE, Ext. 7744 (282-7744), for a complete listing of all openings.

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

LABORATORY RECRUITMENT - Opportunities for Laboratory employees only.

MK 5203. MATERIAL HANDLER - (3 openings) Supply and Material Division.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

NS 8835. BUDGET POSITION - Requires BS in accounting or equivalent work experience and excellent communication skills. Familiarity with MIS inquiry systems, in particular the accounting and budget systems, and C/SCSC is highly desirable. Will assist senior-level administration personnel in supporting diversified needs of Department. Must be able to work under minimum supervision. Accelerator Development Department. (Reposting)

NS 6745. TECHNICAL SECURITY POSITION -

Requires bachelor's degree or equivalent in a technical discipline and several years' security experience with computer-based alarm, assessment and access-control systems is desired. Will be responsible for the planning, specification, coordination, implementation and maintenance oversight of physical security systems throughout the Laboratory. Must be able to obtain and maintain a security clearance. Safeguards & Security Division.

NS 6092. ADMINISTRATIVE POSITION - Requires BS in computer science or related field plus experience in designing and developing database applications. Will be involved in setting up databases for safety, maintenance, inventory and other administrative areas. Experience with dBase IV and spreadsheet applications is highly desirable. Excellent analytical and communication skills are required. Alternating Gradient Synchrotron Department.

DD 0103 ELECTRICIAN A - Under minimum supervision lays out, constructs, installs, maintains, repairs and operates electrical systems, equipment, controls and related devices. Plant Engineering Division.

LL 8665. ENGINEERING POSITION - Requires a B.S. degree in health physics, nuclear engineering or physics. An advanced degree and ABHP certification is preferred. Knowledge of neutron dosimetry, computers and accelerators is desirable. Responsibilities will include research-facility review for radiation protection concerns. Will assist in resolution of radiation safety questions and program development. Must be able to obtain and maintain a security clearance. Safety and Environmental Protection Division.

Motor Vehicles & Supplies

87 HONDA ACCORD - h/b, a/t, ac, immaculate, orig. owner, 45k mi., \$7,000. Beth, Ext. 3555.

87 CHEVY BLAZER - 51k mi., 4wd, blue, excel. cond., asking \$11,000. 929-4962.

86 HYUNDAI EXCEL - 4-dr., 4-spd., excel. body, loses oil, needs eng. work or engine, \$650. Larry, Ext. 4295.

86 BUICK CENTURY - 4-dr., a/t, ac, loaded, 75k mi., mint cond., 821-6321 after 5 p.m.

86 SUBARU - 80k mi., dependable, good cond., \$2,500; '74 Volvo, runs, damage to front, good for parts, best offer. Walter, Ext. 3357 or 368-1650.

85 FORD LTD WAGON - 6-cyl., ac, a/t, 68k mi., excel. cond., \$3,800. Barbara, Ext. 2456.

85 CHEVY S-10 4x4 PICKUP - black, must see, excel. cond., asking \$6,500. 727-7350.

84 FORD ESCORT - 53k mi., body good, exhaust system 1 yr. old. Frank, Ext. 2314 or 567-5131.

83 VW GOLF - convertible, white, 5-spd., excel. cond., 57k mi., \$5,300. 929-3044.

82 PLYMOUTH HORIZON - high mileage, runs well, good cond., \$900 or best offer. Alan, Ext. 4714 or 744-5093.

81 KAWASAKI 440 LTD - 13k mi., new battery, tires, chain sprockets, rear brake, sissy bar, v.g. cond., must sell, moving, \$500 neg. 474-5715.

81 PONTIAC - s/w, 61k mi., needs work, asking \$650. Ed, Ext. 7786.

80 FORD E-250 - heavy-duty suspension, p/s, p/b, a/t, new brakes & tires, good work van, windows, \$1,000. Jim C., Ext. 4150.

79 TOYOTA CELICA GT - h/b, 5-spd., sunroof, new muffler, reliable, good rubber, extra pair of snows, asking \$800. Marty, Ext. 2521 or 878-4996.

79 DATSUN 210 - new front tires & rear shocks, gas eng., needs work, \$150 or reas. offer. Ext. 5318.

78 OLDS CUTLASS - 2 dr., V-8, rebuilt, dual turbo, exhaust, ac, good cond., \$1,000. Kathy, 345-3778.

77 LINCOLN MARK IV - two for the price of one, one runs, other for parts, reasonable. Bob, Ext. 5010.

73 AMC GREMLIN - 3-spd., 2-dr., good cond., needs little body work, asking \$300. O. Booker, Ext. 3082 or 727-5912.

72 CUTLASS 350 - convertible, a/t, new tires, clean int., mint cond., \$3,600 or best offer. Charlie, 878-2405.

56 JEEP CJ - good shape, runs OK, \$400. John, Ext. 3840.

TIRES - 4, B.F. Goodrich radial, all terrain, T/A 33x12.50, R16.5 LT, chrome & black rims, 8 lugs, mint cond., Ext. 2705 or 475-9452 after 5:30 p.m.

TIRE - snow, ER78-14, on 5-hole G.M. rim, \$15. Tony, Ext. 3658.

CHEVY BIG SHIELD - for new body-style pickup, 1988 & up, \$20. John, Ext. 4424.

Boats & Marine Supplies

19' BOWRIDER CRUISER - 1972, w/1976 115-h.p. Johnson, canvas, trailer, w/elec. winch, \$2,500. Frank, Ext. 2314 or 567-5131.

19' BAYLINER BOWRIDER - 1988, 125-h.p. Force, p/trim, p/tilt, am/fm cass, low hrs., full canvas, galv., Escort trailer. Ext. 7125 or 929-8641.

13' BOMBARD - inflatable, 1987, 30-h.p. Mariner, trailer, all access., excel. cond., great scuba diving, must sell, moving, asking \$3,000. 474-5715.

Furnishings & Appliances

BEDROOM SET - bed w/headboard, 2 side tables, chest drawers, dressing table, large mirror, good cond., \$450. Ext. 5405.

DINING ROOM - maple oval table w/3 leaves, 2 armchairs, 4 side chairs, \$500; china closet, \$375, or \$800/both. Arleen, Ext. 4519 or 924-6051.

KITCHEN TABLE - Bistro type, w/2 chairs, almond, \$45. 473-7667.

WATERBED - king size, brand-new, never used, top of the line, orig. \$300+, asking \$150. 878-5934, leave message.

COUCH - good cond., best offer. Jo Ann, Ext. 4120 or 689-7963.

SOFA - loveseat, chair, large, blue/brown/off-white country print, \$400/all. Judy, 929-6997 eves.

MICROWAVE - Panasonic, 1.4 cu. ft., 700 watts, like new, orig. \$395, sell for \$75. Ernie, 588-4987.

STOVE - GE, electric, 4-burner, oven, 12 yrs. old, good cond., you pick up, \$50. Bill, Ext. 7961.

RADIO - 1920, in 30" cabinet, \$25; 8-track stereo, \$20; cabinet/TV cart, short-corner, maple finish, \$50; 4 wooden room dividers, \$20/each. 289-8212.

FREEZER - upright, 2 mo. old, 10 cu. ft., excel. cond., \$225. Joe, Ext. 3397.

BABY'S PLAYPEN - wood; kerosene heater w/6" exhaust; Sears 17,000 Btu air conditioner; 7 electric baseboard heaters. Frank, Ext. 3120.

Tools, House & Garden

SOCKET WRENCH SET - Craftsman, 30-piece, 3 ratchets, standard/metric, \$40. Ext. 5240.

WOOD LATHE - 12"x36", motor, scrolling chuck, drill chuck, bench tools, \$275; belt sander, disc., 4"x36", 6" disc, 3/4-h.p. motor. \$150. 584-6002.

SPACE HEATERS - space, 15,000 Btu, LP gas, non-vented, like new, \$55; Reddy heater, 50,000 Btu, kerosene, excel. cond., \$85. 473-7667.

FIREWOOD - seasoned, oak. 732-2849.

Sports, Hobbies & Pets

CAMERA LENS - Pentax A, 50mm, 1:1.4, \$75. Marty, Ext. 3749 or 286-5897.

FINCHES - young, home-bred, unusual markings, Zebra, Society, Red Eye, Orange Ear. Kelly, 744-3069.

EXERCISER - Schwinn Air Dyne, air resistance, excel. cond., \$300. 369-2716 after 6 p.m.

HOCKEY SKATES - CCM brand, boy's, size 5, like new, top quality, \$35. Bosshard, 924-5220.

BICYCLES - Schwinn, woman's & man's, 10-spd., \$45/ea.; Universal car bike carrier, \$15, all excel. cond. 473-7667.

BMX PARTS - cranks, frames, bars, etc., cheap; Redline cranks, \$60; Redline bars, \$19. Ext. 4428.

ICE SKATES - boy's, size 11, double blade, excel. cond., \$5. Paul, 924-8143.

FIGURE SKATES - woman's, size 7, \$19; man's, size 8, \$16. Paul, Ext. 4309.

DRYSUIT - Poseidon, man's, large, like new, must sell, orig. \$1,500, asking \$500. 474-5715.

Ads Due Early

Because the Lab will be closed for the Presidents' Day holiday on Monday, February 18, the classified ad deadline for the Brookhaven Bulletin of Friday, February 22, has been moved up one day, to 4:30 p.m., on Thursday, February 14.

Audio, Video & Computer

CALCULATOR - Hewlett-Packard HP48SX, scientific, w/programming manual & Macintosh serial interface, mint. \$175. J.G. Skora, Ext. 4379.

COMPUTER - Commodore 1541 disk drive, Okidata color printer, games avail. Frank, Ext. 2314 or John, 567-5131.

COMPUTER - Commodore 64 keyboard, 1541 disc drive, 1902A monitor, \$400 or reasonable offer. Ext. 5318.

COLOR TV - 19", remote control, cable ready, \$120; Sony portable stereo, w/cassette, \$40. Ext. 5240 or 3201 after 5 p.m.

CELLULAR PHONE - Technophone, all features, compact, \$150/neg. Sue, Ext. 7235.

PHONE - GE, 2-line, 32-number memory, 1 yr. old, \$30. Tina, 751-1331.

Miscellaneous

VALENTINE GIFT BASKETS - \$39.95, plus delivery & tax. Lynn, 924-0848.

ENCYCLOPEDIAS - *World Book*, new volumes, your selection. Frank, Ext. 3120.

OPERA TICKETS - *Louisa Miller* at the Met, Santi, Dunn, Jones, Pavarotti, Pleshka, Row S, orchestra center, matinee, March 2. Ext. 3922.

WEATHER VANE - iron horse, \$35; typewriter, \$20; rocking chair, \$100; record player, \$20; bucket seat cover, \$5/ea. Kathy, 744-2203.

AFGHANS - lap & baby, variety of colors. Jean, Ext. 2534.

GOWNS - mother of the bride, more, size 10-12-14, excel. cond., \$5/ea. Judy, 698-4882 after 6 p.m.

SUITCASES - two, 24"l x 17"h, 26"l x 20"h, blue, w/keys, good cond., \$40/both. Paul, Ext. 4309.

Free

DISHWASHER - Kitchenaid, old, timer weak, good for parts/marginal operation. Culwick, Ext. 4930.

REFRIGERATOR - not running, you pick up. Ed, Ext. 7786.

Car Pools

EAST ISLIP-OAKDALE-BOHEMIA - need 1 more driver for car pool. Frank, Ext. 2314 or 567-5131.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, creed, sex or national origin of the applicant.

For Rent

CORAM - 2-bdrm. house, 2 full baths, eik, l/r, d/r, fp, gar., 15 min. from Lab, \$1,000/mo. + util. & sec. 472-0430.

EASTPORT - 3-bdrm. house, 2 baths, l/r, d/r, kitchen, large fam. rm., bsmt., 2-car gar., \$950/mo. incl. yard maint., avail early Feb. Ray, Ext. 2012 or 325-0928.

HOLBROOK - 1-bdrm. apt., eik-l/r combo, full bath, priv. ent., 15 min. from Lab, \$550/mo. includes all + sec. 472-0430.

HOLBROOK - 1-bdrm. house, unfurn., avail. Feb., 20 min. from Lab, near RR & MacArthur AP, no pets, \$670/mo. + util, neg. Fred, Ext. 7947 or 588-2268.

HOLTSVILLE - large apt., l/r, bdrm., eik, priv. ent., w/w, full bath, 15 min. from Lab, off-street parking, \$650/mo. incl. util. 289-2159.

MASTIC BEACH - 1-bdrm. apt., full bath, full kit., all new, priv. ent., for single, \$550/mo. pays all. Anthony, 281-2513.

MEDFORD - 1-bdrm. apt., l/r, eik, deck, priv. ent., no children/pets, \$575/mo. + elec., 15 min. to Lab. Bobbi, Ext. 2456 or 654-1993 after 5 p.m.

MIDDLE ISLAND - 2-bdrm. condo, 1 1/2 baths, partially furn., all appl., 5 min. to Lab, \$875/mo. + util. 751-8351.

MT. SINAI - 1-bdrm. apt., view of Harbor, l/r, kitchen, bath, w/w, w-d, cable, priv. ent., no pets or smoking, \$650/mo. + dep. Harriet, 331-1839.

N. BAYSHORE - 2 bdrm., l/r, eik, d/r, w/w, den, semi-furn., 1 1/2 baths, single working adult, igp, carport, gar., no pets, \$550/mo. + 1/2 util. Walt, 698-0576 or 231-6017.

PATCHOGUE - 2-bdrm. apt., full bath, eik, 15 min. from Lab, \$675/mo. + elec. 758-9835.

RIDGE - 3-bdrm. ranch, eik, l/r w/tp, 2 1/2 acres, quiet area, full bsmt., min. from Lab., \$950/mo. + util. Jim, Ext. 4606 or 654-5049.

ROCKY POINT - 3-bdrm. house, 2 full baths, new kitchen, multi-level decks, 1/2 acre, \$1,050/mo. + util. & sec. 231-5141.

SHIRLEY - 3-bdrm. house, custom built, 2 baths, cathedral ceilings, fieldstone fp, 2-car gar., deck, fenced, min. to beach & BNL, \$900/mo. + util. & sec. 924-5062.

SOUND BEACH - 1-bdrm. apt., full bath, kitchen-l/r combo, cable, priv. ent., \$650/mo. incl. all; also, 2-bdrm. apt., bath, l/r, eik, near all, \$675/mo. + elec. Ext. 2671 or 744-3284 after 4 p.m.

SOUTHAMPTON - waterfront, nature-lover's house, 2 bdrm., 1 bath, deck, wood-burning stove, next to refuge, \$900/mo. + util. Ann, Ext. 2666 or 283-5376.

CATSKILLS - 3-bdrm. chalet w/sleeping lot, fully furn., near Hunter & Windham Mts., great for skiing. Kay, Ext. 4501 or Bea, Ext. 3642.

CLAREMONT, NH - 2-bdrm. condo, 40 mi. to Killington, Okemo, Magic Mt., Mt. Sunapee, \$300/wk., \$225/wknd. Frank, Ext. 7749 or 758-7913.

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, 2 baths, beach, pool, tennis, golf, Feb. \$250/wk; Mar., \$300/wk. 689-5378.

NORTH MYRTLE BEACH, SC - 1-bdrm. condo, sleeps 4, tennis, fitness, in/outdoor pool, golf course, beach rights, Feb. \$250/wk. Joann, 472-6742.

For Sale

BROOKHAVEN TOWN - 10 acres, industrial, on LIE, terms, tax abatement for 10 yrs. 928-1020.

CENTEREACH - 4-bdrm. hi-ranch, l/r, d/r, eik, 2 full baths, large fam. rm. w/tp, deck, fenced yard, \$133,000. 698-8514.

CORAM - Strathmore East, 4-bdrm. ranch, 2 baths, cath. l/r, 2-car gar., gas heat, fenced corner lot, \$120,000. Ext. 3791 or 928-7154 after 7 p.m.

HOLBROOK - Birchwood split-level, 3 bdrm., 1 1/2 baths, deck, bsmt., sprinklers, oak floors, \$145,000. Norman, Ext. 3897.

MIDDLE ISLAND - 3-bdrm. ranch, eik, den w/tp, d/r, l/r, 1 1/2 baths, screened porch, patio, full bsmt., wooded 1/2 acre, \$149,500. 924-6051.

MIDDLE ISLAND - Lake Pointe, 2 bdrm., l/r-d/r area, cac, gas heat, wood deck off master bdrm., w-d, all appl., bsmt., pool, tennis, will pay half closing cost, ask. \$69,000. Bob, 924-7316.

N. SHIRLEY - two story, 3-4 bdrm., l/r, d/r, 2 baths, 1/2 bsmt., new appl., laundry rm., 2 decks + pool w/deck, 1/2 acre, near LIE, Lab, \$134,000. Kathy, 345-3778.

RIDGE - 2-bdrm. house in adult community Leisure Knoll, ac, newly carpeted & decorated, walking distance to rec. hall, pool, tennis, lots of extras, 5 mi. to Lab, \$135,000. 744-3366.

RIDGE - Leisure Knoll, 1-bdrm. duplex, all appl., walk to clubhouse, tennis courts, etc., low taxes, immed. occupancy, over 55 only, \$89,000. Ted, Ext. 4589 or 475-8581 eves.

SHOREHAM - N. 25A, 4 bdrm., 2 1/2 baths, 2-car gar., low taxes, SWR schools, energy efficient, full fenced, 10 min. to Lab, \$165,000. Rich, 744-0960.

HUBBARDTON, VT - 38 deeded acres on town-maintained road, w/power & phone, 30 min. to Killington ski area, view of Lake Bomoseen, ask. \$35,500. Tom, Ext. 2823.

Wanted

LAVA LIGHT - any color, Lincoln Logs, any cond., table tennis, 5'x9'. 289-8212.

HOUSEMATE - to share 3-bdrm. house, furn., quiet, renovated, w-d, cable, fenced, 10 min. to Lab, \$375/mo. Henry, Ext. 5110 or 399-6947.

HOUSEMATE - to share 2-bdrm. condo in M.I., 5 min. to Lab, \$450/mo. + util. 751-8351.