BROOKHAVEN BULLETIN
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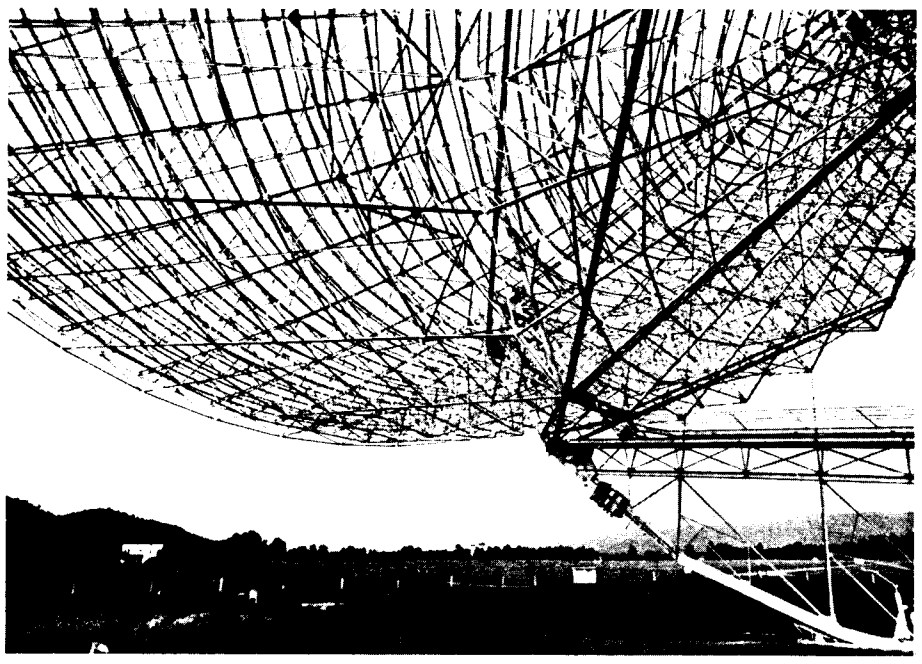
BROOKHAVEN NATIONAL LABORATORY



Doug Humphrey

The two sides of Green Bank are shown here, where the intricate design of the 300-foot Transit Telescope stands out against a scenic backdrop.

Observations On Green Bank

Recently, this reporter had the opportunity to visit Green Bank, West Virginia, one of the sites operated by BNL's "sister" laboratory, the National Radio Astronomy Observatory (NRAO). There, engineer Richard Fleming and public education officer Wally Oref took time from their regular schedules to explain the science of radio astronomy and to talk about Green Bank and the NRAO. AUI has managed NRAO since 1954. As with the large-scale research facilities at BNL, NRAO's radio telescopes are operated for the benefit of the U.S. scientific and academic community. The NRAO is supported by the National Science Foundation.

Every workday, in all kinds of weather, at a roadside park on top of the Shenandoah Mountains in Virginia, two drivers stop and swap station wagons. Then each heads approximately 60 miles back to his point of origin.

The driver heading east soon arrives in Charlottesville, Virginia, where the central offices and computer center for the NRAO are located on the grounds of the University of Virginia. There, the vehicle's cargo of magnetic tapes is quickly unloaded so processing will be finished by 9 a.m. the following morning.

The driver now heading west brought the tapes to the swap point from the Observatory in Green Bank, West Virginia, and returns there with the previous day's printouts from Charlottesville.

Green Bank, the first site acquired for NRAO, was selected in 1957. Located in a valley with an altitude of 2700 feet, it is ringed by mountains reaching 4800 feet which provide natural protection from man-made radio interference. Everthing electrical that we use at home, in business, and industry is a potential source of radio interference. There is a notable absence of these sources near Green Bank, where local industry focuses on tanning, lumber and farming. Further, because of the general inaccessibility of the area, it is not likely to experience any rapid or unexpected surges in growth.

An Impressive Sight

The small town of Green Bank is about one mile away from the 2700-acre Observatory site. Even the most blasé observer cannot fail to be impressed with the other-worldly beauty of NRAO's radio telescopes as they appear suddenly on the peaceful landscape. These technological marvels, which seem oddly out of context this pastoral setting, include some he most sophisticated equipment by radio astronomers today.

as optical astronomers use light in making their measurements, astronomers use radio waves - are similar in nature to light and differ only in wave length.

At Green Bank, as well as at other NRAO sites in Arizona and New Mexico, different types of radio telescopes have been built to collect and measure the radio waves which are basic to this research.

The first telescope built for the Green Bank site was the 85-foot Howard E. Tatel Telescope (the footage in the names of radio telescopes refers to the diameter across the antenna). First used in 1959 as a single observing instrument, it was later joined by two other 85-foot telescopes which can be moved along a 5000-foot baseline to any one of seven observing stations to form a three-element interferometer - a system which can get results as detailed as could be obtained from a single telescope 9000 feet in diameter. It was the primary research instrument used to design and develop NRAO's Very Large Array (VLA) in New Mexico. Obviously, it would be impossible to construct or fund a single telescope of that size. Although this system is no longer used because the VLA does the same kind of research better, the U.S. Naval Observatory in Washington, D.C. has contracted with NRAO to use it to do very precise time standards and earth motion studies.

Two Important Telescopes

Today, Green Bank is known primarily for two other telescopes. The 300-foot Transit Telescope moves in a north-south direction only. Completed in 1962, it is the largest radio telescope of this type in the world and can be used at wavelengths as short as 6 centimeters. At shorter wavelengths the surface is not smooth enough for good observations because its 1.8 acre area is made of panels of $^3/_8$" expanded aluminum wire mesh, to keep the moving weight down and minimize construction costs.

Antenna surfacing material was not a problem in the design of the 140-foot Telescope, the world's largest equatorially mounted (fully steerable) radio telescope. This 2700-ton telescope was specially designed for high precision observations at very short wavelengths and has, in fact, been used

(Continued on page 3)

A Message From The Director

Last Friday, I announced that 77 employees of the Accelerator and Physics Departments were receiving notice of layoff. This is in addition to the reduction of last May when 176 people were laid off because of funding cuts and increased costs of operation.

During the summer and early fall there were conflicting trends in the budget information from Washington which prevented us from making firmer plans. On November 23 an appropriation bill covering most of the budget of the Department of Energy for Fiscal Year 1982 was passed by Congress. The bill has been signed by the President and apportionments to the Laboratories, including Brookhaven, are now being made by DOE.

With the latest reductions in force, I believe the Laboratory is close to being in balance with the federal budget for the current fiscal year, barring unexpected changes in allocations (which can occur). A few areas are not entirely firm and some further modest adjustments of personnel levels might be required.

Layoffs and attrition have now reduced Brookhaven's total work force by about 10%. This reduction is far less than it might have been if Congress had approved the President's September proposal for additional across-the-board cuts of 12%, and if the Lab had not begun to receive electricity from the Power Authority of the State of New York in September. But the cuts were not made, and PASNY power has markedly lessened the impact of the final budget figures.

I am extremely regretful that further reductions in force have proved necessary. We are doing everything we can to assist the terminating employees.

— George H. Vineyard

Holiday Week Shutdown

Because time is getting short, the Cost Cutting Committee last week forwarded a suggestion to the Director in advance of its formal report. The suggestion was to shut down the Laboratory the week after Christmas, largely to save fuel and electricity costs. This proposal has been acted upon and the Laboratory will be closed from 12:30 p.m. December 24 through January 3, 1982. This period includes the regularly scheduled holidays of one-half day on December 24, Christmas Day and New Year's Day.

Employees will have the option of taking either leave without pay, or four day's vacation. Those who do not have sufficient vacation time may have vacation days advanced. Checks normally distributed on December 31 will be given out on December 23.

The proposal to close the Lab for one week after Christmas was first published in an earlier article in the Bulletin and employee reaction was generally favorable. Also, an informal poll this week of non-bargaining unit employees showed a vast majority for the temporary closing. And, on Wednesday, the suggestion was agreed to at a meeting of bargaining unit employees.

The Cost Cutting Committee plans to submit its full report to the Director in the near future.

A Gift of Life

If you haven't yet pledged to donate blood at BNL's next Bloodmobile on December 21 & 22, perhaps you should reconsider. After all. . .

. . . .it is the season to give. What gift could be more valuable even though it costs you nothing?

. . . .It's no accident that the Bloodmobile is scheduled just before a four-day weekend, when, statistics tell us, many accidents will occur. Your blood could be critically important to an accident victim or a patient spending the holiday season in the hospital.

. . . .the need for blood takes no holiday. You might enjoy your holidays even more knowing that you've helped satisfy someone else's desperate need for blood.

Think about it, but not for too long, please! It's important that pledge cards be returned to Len Emma in Bldg. 460 today (just drop them in the Laboratory mail). If you have any questions about blood donation, or if you didn't receive a pledge card, call Len Emma or Elaine Liguori, Ext. 3334.

Brothers Tom and Jim LeMaire (top and center) were the first two people to hand their pledge cards for next week's Bloodmobile to Elaine Liguori (bottom). Won't you join them?

—photo by Humphrey

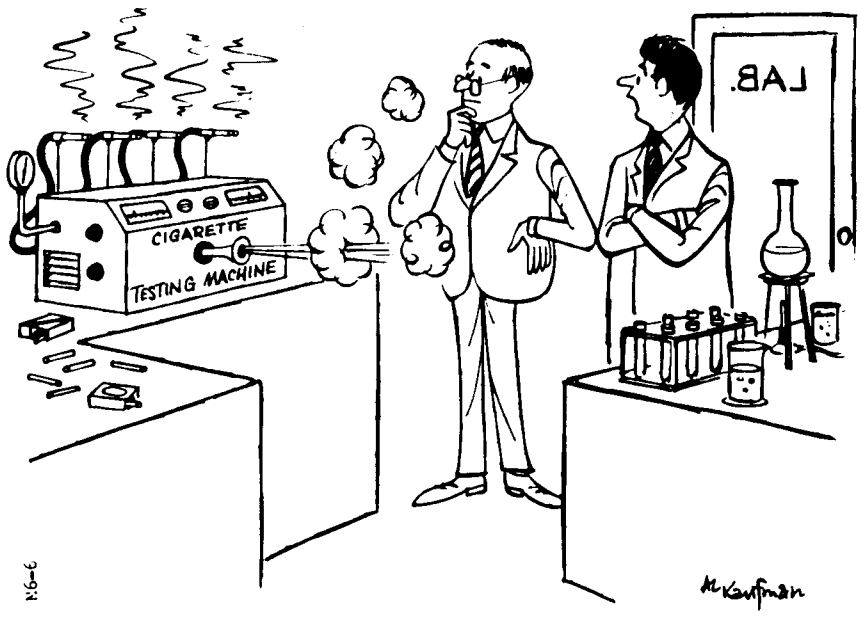
Confessions Of An (Almost) Non-Smoker

This was a first step. I had never gone to a smoker's withdrawal clinic of any sort, but it was going to be on site, so why not give it a try. My previous attempts at giving up the weed had been solo efforts and were spectacularly unsuccessful.

In those earlier tries, I would abstain for about two days, then bum cigarettes from people in other offices, meanwhile maintaining the fiction in my own office that I had quit. At home I smoked in the bathroom with the fond hope that my children would think I had quit. They said, "Mom, who do you think you're kidding?" as the smoke curled out from under the bathroom door. My son, then 10 years old, would help me get groceries and, as he brought them into the house, would hide the cigarettes which the packer always seemed to put on top, right in plain view. Then I would undertake a fruitless search for the cigarettes, trying to remain cool and not scream at my darling son, "where in gawd's name did you put my cigarettes?" Eventually, in desperation, I would fix him with a steely eye and say, "okay, John, where are they?" and he would look crestfallen and hand them to me.

Then, the waves of guilt. You creep, Bernice, you are so self indulgent that you can't give up this stinking habit even if it hurts your own children! However, the self laceration only resulted in my buying another carton of cigarettes, and then another, and on I ploughed through millions of miles of stubs.

The children showed their disapproval for a long time, but eventually gave up. They were resigned that I was determined to go on come hell or high water. And they were right. I did make an effort in that I cut down to the lowest tar and nicotine brand on the market, but it seemed to me that my consumption increased, and eventually I found myself puffing away on an easy two packs a day.



"WE FINISHED ALL THE TESTS WEEKS AGO, BUT IT JUST WON'T QUIT!"

But I was getting tired of it, and it was a monkey on my back. Even so, I would probably have continued on my merry way had not the Lab decided to sponsor a smoking withdrawal workshop. It was billed as educational, not aggressive. In short, nobody was going to back you into a corner and grab your smokes.

At the first meeting everyone was somewhat exhilarated and made jocular remarks about getting a gold plated pacifier. But much to our surprise the workshop leader indicated that it would be a good idea to try and quit that very afternoon. We had expected that that motion would come much later. My personal reaction was vicious resentment. I had been tricked! I looked on the world with a cold eye and it would have given me great pleasure to kick children and small dogs, the smaller the better. However, I made it until 6 p.m. and decided to reward myself by having a cigarette when I got home. It was irrational but what the hell.

Day 2 I brought cigarettes with me, but didn't smoke them. Found I could get through the day without being bitchy or mean. It was difficult to write without a cigarette — the little devils seem to go with writing — good for the concentration. Again I did not smoke all day, but lit up happily when I got home.

The first weekend was a partial failure, or a partial success, depending on how you looked at it. I smoked, but not as much as on previous weekends.

And so it goes. This is not an exciting success story, but it's an okay story. Things are looking pretty good. It's about a 75% cutback now, and I might even get to 100% in the future. I no longer bring cigarettes to work and find I don't think of them that much anymore.

During the 6-session workshop, a sense of camaraderie developed among the participants, a feeling of shared travail. They talked about their problems and why they continued to smoke. They talked about their successes and ways they had devised of kicking the habit. One man carried around a color photo of a healthy lung and one destroyed by emphysema. One look at the picture kept his hand out of the cigarette pack.

Reliable statistics are hard to come by in such workshops. Of the class of 40, in this first non-smoking clinic, Dr. Judith Katsin head of the Employee Assistance Program, says that about 30% quit entirely, which was double the number expected. But everybody gave it a good try and, if nothing else, became aware that perhaps it *was* possible to quit. And who knows, maybe next time around...

—Bernice Petersen

Singing The Holiday Blues

The Holiday Season is something everybody looks forward to. How could someone not enjoy the spirit of giving thanks, of friendship, of peace on earth, and the cozy warmth of logs burning in the fireplace?

Actually, many people would rather skip the whole thing. It is not uncommon for some people to feel depressed or anxious as they think of distant or scattered families, and to feel lonely instead of joyful. Other people don't have families at all and may experience a sense of alienation.

A basic problem is that many people maintain very high expectations about how exciting the activities of the season will be, and the realities just can't measure up. A family that is having difficulty getting along with each other during the rest of the year may find the holidays even more stressful because everyone is "supposed" to be happy.

Those who experience the more negative side of the holiday season may be aggravated by the shopping scene. Aside from high prices, the stores are hot and jammed with other shoppers, all demanding the attention of the few available salespersons. This taxes the heartiest of souls.

Another reason for the blues might revolve around financial limitations. People may feel that they can't provide the type of experience they fantasize for their families and thus they feel disappointed. For others, the disappointment and anxiety may hit after the holidays are over when the bills start coming in. Then, too, the weather is depressing — it is generally cold, dark and damp.

A person who is depressed may worsen the condition by trying to hide it. The media tell us it's time to have fun. But often the feeling is "What's wrong with me that I feel so blue?" Symptoms can range from mild, fleeting sadness to a deeper gloom which may last for several weeks, affecting appetite and sleep patterns as well as mood. Most people do not experience the kind of deep depression that doesn't seem to go away, but nearly everyone at some point this holiday season will feel something negative that seems incongruous with what is happening around them. It's not at all unusual.

Overcoming the reluctance to talk about such problems and bringing them out in the open is helpful in reducing negative feelings which have a tendency to build upon themselves until they become overwhelming. Talking to friends and loved ones may reveal that they are having similar feelings. And the Lab's Employee Assistance Program is available to employees who wish to talk to a professional counselor about such issues. I can be reached on Ext. 4567.

— Judith Katsin, Head
Employee Assistance Program

Equipment Demo

On Wednesday, December 16, Mr. Irwin Math of Math Associates, Inc. will give a brief lecture and demonstration of Analog and Digital Fiber Optics Systems used in control and instrumentation applications. The session will be held in the conference room of Instrumentation, Bldg. 535, from 1:30 to 3:30 p.m.

Cooking Exchange

You are all cordially invited to raise your holiday spirits at the annual party sponsored by the Cooking Exchange. The party will be held in the Recreation Building on Thursday, December 17, between 5:30 and 7 p.m.

Guests are requested to bring a dish of their favorite hors d'oeurves. There will be a charge of $1.00 per person and babysitting will be provided at 50¢ per child. Call Ruth Fernow, 929-8465, for more information.

Celebrating 35 years with the Lab

Doug Humphrey

Anna Kissel, Director's Office, Fred Vandervoort (rear), Physics, and Martin Plotkin, Accelerator, hold the record of being the employees longest in residence at BNL. They first came to work at the Lab 35 years ago, within weeks of each other: Plotkin on November 12, 1946, Kissel on November 25, 1946, and Vandervoort on December 16, 1946. Vandervoort, who spent his earlier years in Fiscal, didn't set out to make his career here. "But when I got to working with the scientific staff," he said, "then I was totally committed to the Lab." Strangely enough, although Vandervoort was put on the BNL payroll three weeks after Miss Kissel, he has a lower life number, 33, than hers, 57. According to Plotkin, back in the early months of BNL history, at a particular date, everyone on the payroll was alphabetized and assigned life numbers. Plotkin holds the lowest life number on site — 28. Through the years, he has worked on the design of five BNL accelerators — a 240" synchro-cyclotron, the Cosmotron, an electron analogue accelerator (a model of the AGS), the AGS, and now ISABELLE.

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Gym Closing

Due to the special BNL blood drive which will be held in the gymnasium, the facility, including the exercise rooms, will be closed to all athletic activities from Friday, December 18 through 5 p.m. on Wednesday, December 23.

Postal Note

Post offices in foreign countries will only accept U.S. mail with postage printed in specific denominations, such as 12¢ or 20¢. They will return mail sent with C stamps or 1982 Christmas stamps, which have no value printed on them. To be sure your mail reaches its foreign destination, be sure it is sent with the proper postage.

Christmas Concert

The BNL Singers will present their annual Christmas Concert at lunch time, in the Cafeteria, on Wednesday, December 16. On that day, the cafeteria staff will prepare a special holiday menu. The Carolers will perform for patients at the Medical Research Hospital around 2 p.m. and complete their tour at the Director's Office.

Do Your Holiday Shopping On Site

For convenient, one-stop shopping, visit the Exhibit Center's Science Shop next week. It will be open to Lab employees December 16, 17 and 18, from 10 a.m. to 3 p.m., for a three-day winter holiday sale.

Tour program coordinator and Science Shop buyer Janet Tempel says she will have a full inventory on hand. There will be plenty of favorites like radiometers, gyroscopes and fresnel lenses. If you're looking for Lab souvenirs, several items like desk thermometers and luggage tags sport the BNL/AUI logo. For the ultimate in easy gift-giving, buy a 1982 calendar that will travel through the mail in its own envelope, and when opened, pops up into a rainbow colored polygon.

The selection is large and wonderful at the Science Shop. Some of the items — tote bags, compasses, magnets — are practical. Many, like the solar and mini lab kits, are educational. All of them have been chosen for wide appeal.

Prices range from 10¢ to $6.50, the majority of the items being priced under $2. The latest addition to the shelves is a battery-powered digital clock that tells time and date. An inch and a half in diameter, it comes in assorted colors. The clock retails for up to $12 in other stores, but is being sold at the Science Shop for $6.50.

The Science Shop is located in the Exhibit Center, Building 701.

EXHIBIT CENTER
Brookhaven National Laboratory

Green Bank (Continued)

successfully for studying and discovering molecular line radio emission down to wavelengths of two centimeters.

These two telescopes run 24 hours a day to accumulate enough of the good data that is the key to successful radio astronomy. As public education officer Wally Oref explained, with accurate and precise data, radio astronomers can "add to the large picture of galactic evolution." Some of the radio waves being collected by NRAO's antennas may be up to 12 billion light years away. "The farther you look back in light years, the farther you look back into the past," Oref said. "Astronomy is the only science that allows us to observe processes that took place billions of years ago."

Solving Universal Mysteries

Since 1951, radio astronomy has found objects never before dreamed of in the universe. The existence of pulsars - rapidly rotating stars that emit regular pulses of radio radiation - or the rapidly moving, powerful pinpoints of light called quasars, and the detection of radio-emitting molecules (some organic) in our Milky Way are only three such discoveries. By viewing these ancient phenomena today, ultimately we may complete our understanding of how the universe was created, how it is evolving, and what its ultimate destiny might be. As Oref said, "This will probably not happen in one giant discovery, but with a lot of people in places like Green Bank collecting little bits of information. What one scientist does may not be significant, but when it's all put together, great mysteries may be solved."

One mystery about which many people are curious is whether some extraterrestial radio waves indicate that there is indeed life in the universe trying to communicate with us. While Oref offers no opinion, he does say, "If it ever happens, contact will come via radio and will be picked up by some radio astronomer or radio telescope operator some lonely evening . . ."

To assure that any interesting results are obtained, two other precautions are taken that prevent interference at Green Bank. First, the Federal Communications Commission has designated a 13,000 mile square area around Green Bank as a radio astronomy quiet zone. Any applications to set up radio transmitting equipment (except CB or ham radio) within this zone must be approved by the FCC and its coadministrators: NRAO and the Naval Communications Station at Sugar Grove, West Virginia.

Diesels, Go; Gasoline, No

Another potential source of interference is almost every automobile on site. The spark plugs in gasoline-powered vehicles "can wipe us out," engineer Richard Fleming explained. So, except for fifteen minutes between each shift, only diesel-powered vehicles are allowed near the telescopes. The NRAO has a fleet of diesels, some of which were converted from gasoline to diesel right in the on-site automotive shop.

The ability to perform such conversions is only one example of Green Bank's self-sufficiency. "We also have a machine shop that can make anything," Fleming said. This group provides replacement parts to keep the radio telescopes functioning smoothly and makes new parts for front-end boxes that house the logic and electronics that control each different experiment a telescope is asked to perform.

Front-end boxes are to radio astronomy as detectors are to physics experiments. They utilize the latest in electronic, cryogenic and vacuum technology. However, there are no outlets within 120 miles of Green Bank that stock commonly used electronic parts. So the Jansky Laboratory boasts well-stocked shelves. If a radio receiver requires an electronic component that is either not commercially available or which would take too long to acquire, it is built in the Jansky Laboratory.

The Jansky Laboratory, the site's main building, is named after Karl G. Jansky, the father of radio astronomy. It also contains offices for visiting observers and staff astronomers, a library, and administrative offices. One of those offices belongs to Martha Haynes, Director of the Green Bank site. In addition to steering the activities of the site's 127 employees, Haynes reviews every request from astronomers who wish to use the site's facilities. Since almost 400 researchers annually conduct experiments at Green Bank, there are many such requests.

Tourists Are Welcome

More than 20,000 people tour the Green Bank site each year. During the summer months, the Public Education office operates hourly tours on a daily basis, and on weekends in September and October.

Oref admits that the site's rural setting and mountain-ringed isolation do limit the activities available to the staff. For example, local TV and radio reception is necessarily pretty poor, but the radio telescopes pick up celestial radio radiation very well. To compensate for the lack of commercial recreation the Observatory runs movies, bingo games and dances and offers such recreational activities as swimming, golf and tennis. "Actually," Oref said, "in a way, this does make for one big, happy community. We all get along very well. You might say, no one is at Green Bank unless they want to be." — Anita Cohen

French Folksinger To Appear At BNL

Sonia Malkine will present an evening of French folk songs at Berkner Hall on Friday, December 18, at 8 p.m. Miss Malkine, born in Paris and educated in France, has sung everywhere from coffee houses to Carnegie Hall in the U.S., and in France has costarred with the famed Jacques Brel. This will be her third appearance at BNL.

Sonia Malkine has appeared at many universities, has performed at the Newport Folk Festival and at the "Clearwater" Sloop Festivals organized by Pete Seeger. She has also produced a series of radio shows for WBAI in New York, and has done a number of TV programs for the educational networks.

Miss Malkine accompanies her songs with the guitar and the *vielle*, or hurdy-gurdy. This unusual instrument, with strings sounded by a rotating wheel instead of a bow, has survived in France as a folk instrument since the Middle Ages. She sings in the old French dialects of Provencal, Languedoc, and Breton, as well as in contemporary French, and gives an informal and informative commentary in English.

This program is sponsored by the French Group of BNL. Tickets, priced at $5 for adults and $3 for students or senior citizens, are available from members of the French Group, and will be sold at the concert. For further information contact Ralph Weston (286-1353 or Ext. 4301), Julia Walenta (928-4926), or Danielle Bisais (Ext. 3187).

In Appreciation

We wish to express our thanks for the support shown us during the loss of our son and brother, Stanley W. Rhodus (an employee of Brookhaven Lab S&M Division summers 1966 to 1967). — Hugh D. Rhodus, Plant Eng.
Hugh S. Rhodus, Plant Eng.

Afro-American Club

A regular meeting of the Afro-American Culture Club will be held on Thursday, December 17 at 5 p.m. in Berkner Hall, Room C. All interested employees are invited to attend. Plans will be discussed for Black History Month, February '82.

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No two people are alike and both of them are glad of it.

•

Sign in a Barber Shop: "I need your head in my business."

Cafeteria Menu

Week Ending Dec. 18, 1981

Monday, December 14

Cream of cauliflower	(cup)	.60
	(bowl)	.70
Salisbury steak & 1 veg.		1.65
Veal scallopini & noodles		1.70
Hot Deli: Baked Virginia Ham	(on bread)	1.70
	(on roll)	1.80

Tuesday, December 15

Pork & cabbage soup	(cup)	.55
	(bowl)	.65
London broil w/mushroom gravy & 1 veg.		1.75
Stuffed pepper & spaghetti		1.65
Hot Deli: Grilled Reuben		1.70

Wednesday, December 16

Christmas Special
Choice of
Chicken Kiev
or
Standing Steamship Round
and
Baked Potato w/Sour Cream w/Chives
or
Rice Pilaf
and
Stringbeans Amandine
or
Glazed Baby Carrots
$2.60 plus tax

Thursday, December 17

Split pea soup	(cup)	.55
	(bowl)	.65
Seafood platter		2.05
Braised beef shortrib & 1 veg.		1.90
Hot Deli: Roasted turkey breast	(on bread)	1.70
	(on roll)	1.80

Friday, December 18

Manhattan clam chowder	(cup)	.60
	(bowl)	.70
Baby beef liver w/onions & bacon & 1 veg		1.65
Spaghetti & meatballs		1.65
Hot Deli: Chili dog		1.70

Holiday Hams

Smoked, bone-in hams, ready for your holiday table - are now available from the cafeteria. At $1.89 per pound, they may be ordered by calling Ext. 3541.

Arrivals & Departures

Arrivals

None

Departures

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

Charles J. Bores ..... Medical
Fay Y. Yang ..... Biology

Coming Up

BERA Dance
January 29

Hold That Date!

Bowling

White League

The Dips remain in first place by 5 points with the Pinsplitters in second. High games were rolled by P. Manzella 215, S. Smith 209, R. Scheidet 200, M. Brenner 190, B. Lebitski 202, K. Conkling 174/186.

Red & Green League

Good games were bowled by M. Iarocci 276, W. Kristiansen 219, C. Bohnenblusch 213, J. Ferrante 212, N. Fewell 211, J. Bohenek 202/208, R. Meier 207, J. Petro 203, J. Connelly 202, T. Prach 201, L. Jacobson 200.

Purple League

W. Milian rolled a 257/592 scratch series, E. Sperry 199, M. Connelly 217, G. Riker 195, B. Jellett 178, A. Spiro 162.

Pink League

D. Johnson bowled a 170/191, A. Donegain 164, M-G Meier 168/181, H. Keeley 160, E. Kristiansen 169, C. Tyler 164, M. Connelly 160, R. Rosati 166/181, C. Beckner 174.

Volleyball

A Division

Final standings for the end of the first third are:

Teddybares	14-4
High Society	13-5
Dinkers	13-5
Mixed Ups	11-7
Nuts & Bolts	8-10
Leftovers	2-16
Las Bolas	2-16

B Division

The B Division of the Mixed League works on a quarterly basis versus a thirds basis for the A Division. Below are the final standings for the first quarter, and the scores for the first games of the second quarter.

Semi Tough	12-3
Puff & Stuff	11-4
TNT	9-6
KMA	6-9
Quirks	5-10
Big Boopers	2-13

TNT over the Quirks 13-15, 15-6, and 15-12. Semi Tough over the Big Boopers, 15-12, 11-15, 15-8. Puff & Stuff over KMA, 15-2, 11-15, and 15-10.

Players please note: The gym will be closed on December 21 for the blood drive, so all games scheduled for that day will be played at the end of the season.

Open League Standings as of 12/2/81

Spikers	12-0
Line 1	7-1
Brewmasters	7-5
Toga	4-4
Burnouts	5-7
Roga	1-11
Pick Ups	0-8

Classified Advertisements

Autos & Auto Supplies

RIMS - (2) 14" four bolt for Fords, $7. ea. or 2 for $12. Bob Doering, Ext. 4474/4483.

BATTERIES - auto, Marine, Industrial, for Domestic, Foreign autos. J. Medina, Ext. 7634 or 924-6971.

74 VW CAMPER - excel cond, rebuilt engine, trans, brakes. #3,250. Firm; 75 Chevy, low mileage, a/c, p/b, need front end aligning, p/w. $1,500. 298-8173 after 6 p.m.

75 AMC - Sportabout wagon, 50,000 mi, 6 cyl, a/t, p/s, p/b. 981-6092 after 5 p.m.

73 OLDS - good running cond, excel inside, full power, asking only $1,200. Ext. 4835 or 289-9811 after 6 p.m.

78 FORD VAN - 351 V8, 4 spd, overdrive, heavy duty susp. & electrics, am/fm/tape, carpeting, 41,000 mi. Ext. 7696.

73 SUPER BEETLE - am/fm radio, low miles on new engine, very clean, asking $2,200. Ext. 5283 or 281-7302.

79 BMW MOTORCYCLE - R65, 650cc, 7000 mi, fairing, touring bags. Ext. 7696.

73 FORD VAN - 202 econoline. 928-0035 after 6 p.m.

73 TOYOTA - Land Cruiser, excel mechanical cond, body good, price negotiable. Jim, 537-0070 between 8 a.m. & 5 p.m. Mon - Fri.

72 PLYMOUTH WAGON - garaged, tuned, loaded, runs great, needs tires. $500. Rich, Ext. 2632.

73 CHEVY - accident damaged 350 V8, 76K miles, good for parts. Best offer. Charlie, Ext. 4758.

68 KARMAN GHIA - needs some electrical & body work. $350. or best offer. 286-3851.

65 CORVETTE STINGRAY - 327 ci, 300 HP, 4 spd, asking $7,500. 581-1745 after 6 p.m.

72 AUDI FOX - low miles, good body & int. needs wiring, runs. $400. 744-4440.

TIRE - (1) A-T Tracker tire 9-15LT, good tread. $20. Ken, Ext. 2350.

70 COUPE DEVILLE - Cadillac, opera roof, half way restored, good cond. Don Schuette, Ext. 3084 or 929-4818.

70 PLYMOUTH SATELLITE - 2 dr, 318-V8, a/t, p/s, good cond. $450. Rick, 727-7626.

TIRES - (4) 155SR13 radials, still legal. $20. for all. Ralph, Ext. 4171.

79 OMNI - 4 dr, am/fm, 4 spd, hi MPG, excel cond, 17K miles. $3,700. Firm. J. Skora, Ext. 3431 or 744-9677.

76 MGB - maroon, exel. running cond., good body. Sacrifice at $3,200. Charles, Ext. 2021, home 878-8901.

72 HORNET - Sportabout, automatic, 2 new snow tires. $800. Janet, Ext. 4049, eves. 744-8087.

72 BMW - beige, a/t, 5,000 on rebuilt engine. $3,300. Ext. 3043 or 928-7599 after 6 p.m.

70 MONTIGO - runs well, R&H, p/b, p/s, a/c. 475-2058.

71 DATSUN 510 - needs work. $200. Carl, Ext. 3533.

71 CHEVY IMPALA - V8, 350, p/s, p/b, a/t, a/c, good running, new tires & more. $250. Daniel, Ext. 4501 noon, 399-2286 eves.

74 PONTIAC CATALINA - $550. Bernie, Ext. 4842 or 331-2298.

62 CHEVY - Buy parts or whole car. Joe, Ext. 2556.

80 VW RABBIT C - 5 spd, 4 dr, H/B, am/fm, excel cond. $5,095. J. Wall, Ext. 3372.

75 OLDS CUTLASS SUPREME - Sport Coupe, V8, a/t, stereo cassette, swivel front seat, powder blue, white int., immaculate, must see. Asking $3,000. Ext. 3381 or 286-1024.

78 CAMARO - lt. silver, 305 V8, a/t, p/s, p/b, a/c, Instr. Michelin s/s snows, excel. mech. cond. Ext. 7766 or 757-2645.

TIRES - (2) 175/70 R13, almost brand new on rims for VW Rabbit Scirrocco or Dasher. $100. 744-5161 after 6 p.m.

73 LINCOLN TOWN CAR - Continental, fully auto power, 8 track stereo radio, extras, clean. 914-253-7224 days.

REPAIR MANUAL - VW Rabbit Scirrocco 1975 thru 1978 including diesel. $10. 744-5161 after 6 p.m.

77 CJ-7 JEEP - completely rebuilt and refinished. 665-0080 or 744-4047.

71 NEW YORKER - a/c, p/s, p/b, good cond. $400. AN1-7964.

70 PLYM FURY 3 - p/s, p/b, heater, 4DSD, some rust, new trans, tune-up motor job. $750. V.g trans. Leon, Ext. 2973.

Boats & Marine Supplies

1967 LARSEN - fiberglass 14' 1972, 50 HP Johnson, full canvas, new battery & tank, anchor & line. $1,100. 821-9067 or 744-4607.

Miscellaneous

HOLIDAY SHOPPERS - Super Soup Luncheon, Sat., Dec. 12, Patchogue Masonic Temple from 11 a.m. to 2 p.m. $2.00.

CHRISTMAS GIFT - and Decoration Sale, Dec. 12 from 10 a.m. to 4 p.m., 1174 Namdac Ave., Bay Shore, behind Gardner Manor Mall.

LAMBERT - 31" trailing lawn sweeper, excel cond, complete w/parts list and manual. Asking $35. 744-3218.

TURNTABLE - dual 1012 w/Shure cartridge. Mitch, Ext. 7685.

LADIES BOOTS - leather, size 8, stacked 2" heel, excel cond. $30. Lisa, 289-0413.

BOY'S DRESS/SUIT - 3 piece, worn once, like new, size 14, $20; Columbia 1-dot bowling ball, 14 lbs., $17; hockey skates, size 5, $10; cleats size 4, $7; insulated, waterproof boots, steel shank, size 3 and 5, $5/pr., excel cond. Ext. 3218.

SNOW PLOW - 6' blade, w/hydraulic piston, pump, motor, etc. $225. 289-0413.

WEBER CHARCOAL GRILL - good cond. $25. Centabar, 669-5181.

OSCILLOSCOPE - Heathkit Mod. IO-102, 5 inch, DC-5MHz, repetitive, good working cond. $125. Cesar, Ext. 4077.

SKI BOOTS - 2 pr. size 9 and 10, $10 pr, ski poles. $15. Ext. 3514.

DRAPES - floor to ceiling, double panels, used for sliding doors, white/tan/gold. $20. 929-6692.

BLENDER - Sears 14 spd w/Insta pulse, harvest gold. Best offer over $15. Alyce, Ext. 2902.

GE CONSOLE STEREO - w/turntable and 8 track tape deck, $150; complete living room sofa, chairs, 4 tables (2 marble lamps, excel cond). Sell all or part. Reasonable. 399-0458.

3-STEP - boat ladder, $15; Royal manual typewriter, portable, $25; exhaust pipe/Honda 750. $5. Joe, Ext. 7128 or 472-4196.

OIL BURNER - motor, gun, pump, good cond. $35. 475-8162 after 6 p.m.

PROPANE GAS SPACE HEATER - wall mounted, used outside air, wood grained cabinet, safety pilot, thermostat and elect. blower, excel cond, used very little. Cost $350. Sell for $150. H. Sauter, Ext. 3783.

TAPE DECK - Technics RS263US Dolby NR System, auto stop, memory rewind tape selector. $100. Al, Ext. 3992.

SOFA - gold, 8 ft., like new cond. $200. 878-0012.

REFRIG/FREEZER - 8.3 cu. ft. Kenmore, almost new, cost $230. Ideal for boat/bar. $100. 928-7826 eves.

CHRISTMAS TREES - live blue/green spruce, 4-14 ft., cut while you wait, or tag and cut later. 289-0876 or 286-0024.

TV - B&W 12" Sanyo portable, used one year. $40. Tsuyoshi, Ext. 4074.

HO TRAIN SET - 2 eng, 10 cars, track and buildings, $50; Sony TC640 reel to reel tape deck. $200. Tom, Ext. 3128.

SEARS - 27" women's 5 spd bicycle, $40; fireplace screen, unused, $8. Jack, Ext. 4411 or 929-8287.

WATERBED - Queen size, heater and liner, 2 yrs. old, $95; pine drop-leaf table, 4 captains chairs, $100; D.V.M. w/touch and hold probes, $60. 924-4685 eves.

COAL STOVE - Haas & Sohn 121.12, 38,000 BTU, used 3 weeks, sells for $725. Asking $625; speakers, Avid 105, 3-way acoustic suspension w/2 side firing tweeter, list $750/pr. Asking $550. Al, Ext. 2072.

CHAIR - upholstered swivel rocker, recently reupholstered, blue, arm and head sleeves, Scotch guard material. 473-4803.

BABY CRIB - yellow, excel cond, mattress, canopy, cost $189 new. Asking $45. 265-1072.

BIKE - ladies Raleigh 3 spd Sturmey Archer, excel cond. Less than ½ price. $95. Firm. 727-3608.

ATARI - with 10 best tapes, space invaders, missile command, asteroids, $325; 76 FORD - van-V8, auto, a/c, cruise, ice box, dual batt., reclining capt. chairs, custom interior, bay window, mags, air shocks, $4,400; WASHER-DRYER - Westinghouse apt size, like new. $350. James B. Boomer, Ext. 3457.

BLANK TAPE CASSETTES - ferrite, chrome dioxide ferrichrome. $2.75 ea. Ext. 2521 or 928-8379 eves.

IRON - and 2 pairs of roller skates. Ext. 3112.

KEROSENE HEATER - 8560 BTU, electronic ignition "Energy Male" model EM-M221 like new. Lou, 283-5019.

SEARS - ½ hp shallow well pump Conair, 42 gal. water tank, hardly used. $150 for both. 286-9390.

DESK - 28"x54", five drawer, wooden. $70. Ext. 4748.

KING SIZE BED - w/frame, $100; Hasselblad camera, $750; Unisuit for divers (large), $200. Ext. 7697.

POINSETTA - large selection. George, Ext. 4612.

FREEZER - Imperial, excel cond, white, paid $675. Asking $375. Ext. 7125 or 475-1706 after 5:30 p.m.

WOOD STOVE - air tight Huntsman, brick lined, approx. 450 lbs, like new. $250. Jim, Ext. 4959.

SLIDE PROJECTOR - 35mm Bell & Howell Model D. $25. Lew, Ext. 5193.

SKI BOOTS - many sizes, most all w/boot tree carriers. Reasonable. 924-5192 eves.

TANDBERG RECORDER - Model 64, 4 track open-reel deck. $220. Ext. 3828 or 751-7250.

BRICKS - common, red, used, mortar. Free. Any amount up to 800. Ext. 2740.

SNOWPLOW HYDRAULIC LIFT - 7½' amber rotating lights, 2 each. 981-6092 after 5 p.m.

CAMPER - 11" slide-in type, like new. $2,000. Ext. 4312.

SMALL CHRISTMAS GIFTS - or stocking stuffers, stuffed animals assorted. $3 ea. Ext. 2964.

REFRIG/FREEZER - Kelvinator, side by side, white, 8 yrs. old. $175. 587-4440.

ADEMCO BURGLAR ALARM SYSTEM - just above wholesale, install yourself easily. Azzara, 423-6022 after 6 p.m.

MEN'S OVERCOAT - cashmere, size 42 reg., like new cond. $50. Azzara, Ext. 4758.

UNICEF 1981 CHRISTMAS CARDS - gifts and stationery. For catalog and order, call Ext. 4959.

EDMUND SCIENTIFIC - 3" Reflector Telescope, used 2 times, orig. $130 plus tax, now $90. Jo, Ext. 2502 or AT6-9482 after 7 p.m.

PLAYPEN - never used, $20; portable crib, very good cond. Sheree, Ext. 2907.

WHITE PORCELIN KNOBS - & cabinet hardware, various sizes. Walt, Ext. 7154.

KITCHEN COUNTER TOP - w/sink and faucet, Butcher Block formica, other sinks, recessed incandescant fixture. John, Ext. 7611.

BIKE - men's Raleigh 10 spd, excel cond, less than ½ price. $95 firm. 727-3608 after 5 p.m.

COUCH - 90" cream wide wale, $75; swivel chair, contemporary, orange, $30; color TV, reconditioned, $85; vacuum cleaner, $15. 924-4685 eves.

TYPEWRITER - manual Olympia International portable, cond., practically new. Ext. 2043.

SLO—COOKER PLUS - Westbend, new; hair dryer w/hood; quartz heater thermotech, new. 924-4991.

SPEAKERS - pair, 2 way, 22" h, 12" woofer, wood grain, 50 watt per channel, $75 for both. 585-1454 after 5:30 p.m.

LIV. RM - furniture and stereo. 399-0458.

POOL TABLE - slate, 9'x5', V. Loria Antigue, leather pockets. 472-1473.

SET-BACK THERMOSTAT - Honeywell Model CT200A unused, $45; 10" sidewalk bicycle, good cond. $15. Ext. 3469 or 281-4371.

HO TRAIN SET - transformer, new engine, 6 cars, 5 houses, 15 ft. of track, $13; Columbia 1-dot bowling ball, 14 lbs. $17. Ext. 3218.

BARBIE CAMPER - car and assorted Barbie furniture, excel cond. 286-1097.

ORGAN - Magnus chord, like new w/10 books. $25. Perfect for Christmas! Eves only, 286-1522.

WASHING MACHINE - GE, excel cond. Owner moved, orig. $350. Now $200 or best offer. 288-1151 eves.

TV - Sears portable B&W 16" mint cond. Asking $75. Ext. 3516 or 399-2813 after 5 p.m.

R.C. MODEL AIRPLANE - Fledgling, OS1-60 engine, 6 channel, 4 Servo's, elec.-start, more, cheap. 472-1473.

BIKES FOR CHRISTMAS - 16 & 20 in. recond, better than new. $35 - $45; piano, oak upright, excel cond. 581-6432 eves.

BOOTS - girl's black leather, size 4, $12; vinyl, $5; Unisex insulated Sears snowsuit, size 10, navy. $15. 473-7681.

TAPE DECK - cassette Technics #RS-263US Dolby automatic stop "Memory Rewind" tape selector. $100. Ext. 3992.

FIREWOOD - seasoned oak, 8'x4'x16"-18" lengths. $50. 924-3236.

TV - 19" B&W, very good cond, sharp. $45. Joe, Ext. 2556.

ICE SKATES - women's size 6, white, never worn. $10. 473-7681.

TICKETS - (2) for Eglevsky Ballet Nutcracker at C.W. Post 12/29/81. Very good seats. $10 ea. Jack, Ext. 4054.

Real Estate

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

For Sale

MILLER PLACE - contemporary ranch house, 4 bdrms, eik, l/r, den, fenced yard, excel cond. Rustic Acres. $78,500. 331-3724.

SHIRLEY NORTH - 3 bdrm ranch on treed ½ acre, partly fenced, fp, full bsmt, patio. Assumable 7% mortgage. $32,500 owner. 399-3465.

ROCKY POINT - unique energy efficient Cape w/panoramic waterview, 3 bdrms, 2 baths, l/r with fp, 2 car garage, new OHW Blue Ray heat. Assume $30 K mortgage at 14%. $64,900. 744-0843.

For Rent

PATCHOGUE - (East) 2 bdrms, kit, l/r, bath. $325/mo. heat incl. Walt, Ext 2913/2907 between 10 a.m. and 3 p.m. or 698-0576 after 6 p.m.

MANORVILLE - sublease apt. Pine Hills Country Club, Exit 69 off LIE. Kitchen, l/r, bdrm, w/fp and dishwasher, laundry in complex. Lease monthly or until Sept. $342/mo. 587-6760 after 6 p.m.

MIDDLE ISLAND - Condo to share, 2 bdrms, 2 baths, cable TV, washer/dryer, 4½ mi. from BNL, non-smoker, available immed. $215/mo. plus ½ elec. Jackie, 924-4611 eves.

STONY BROOK - 4 bdrm, 2½ baths, l/r, d/r, f/r, Colonial, 2 car garage, all appl., partially furnished, walk to Univ. $750/mo. plus util. Ext. 4273.

HUNTINGTON - kit., d/r, l/r, bdrm, 2 baths, fin. bsmt., $350/mo. plus util. Walt, Ext. 2913/2907 bet. 10 a.m. and 3 p.m. or 698-0576 after 6 p.m.

ROCKY POINT - 3 bdrm apt. off/street parking for 2 cars, lg. indoor storage area, sublease Jan.-June '82. $375/mo. incl. heat, water. 821-9438 after 6 p.m.

BELLPORT - house, furnished, 3 bdrms, for 12 mos. or less. Ext. 3335 or 286-0269.

Wanted

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

INDIVIDUALS - to join weight control compulsive eaters group. Individual counseling also. Lois, Ext. 2959 or 286-8720.

GOOD HOME - ½ Lab, ½ Irish setter, 1 yr. old female dog, great w/children. Moving. Needs good home. 399-3465.

HOMES - for kittens or young cat, shots and wormed. Will spay. Lois, Ext. 2959 or 928-9537.

HOUSE TO RENT - Bellport Village or Brookhaven Hamlet. Ext. 5055 or 286-0919.

APARTMENT - 1 or 2 bdrms for 6 mos., beginning Feb. 1. Pushpito, Ext. 4360 or 928-9148 eves.

CLEANING WOMAN - reliable, experienced, thorough worker. 475-8658 after 6:30 p.m.

LOCAL HONEY - Ext. 4959.

TRAILER - for 21 ft., 3000 lb. V-bottom boat, good cond. Reasonable. Art, Ext. 4479.

FLUTE - and trombone for beginning students. Richie, Ext. 4254 or 734-7342.

PING PONG TABLE - w/accessories; pressure canner. Ext. 3372.

HOME - for kittens, young adults. Shots, wormed, free spaying. Lois, Ext. 2959 or 928-9537.

KITCHEN SINK - counter, cabinet, good cond. Ext. 3084 or 821-9296.

TOP ROLL DESK - Barbie doll collection; children's games; girl's bedroom; nice living room furniture; tents. 924-4991.

HALSTON BOTTLES - cologne, perfume, etc. Empty. Ext. 2909 or 473-3202.

MALE LHASO APSO - for stud purpose. Willing to pay fee. 727-7384 after 5 p.m.

INTERESTED PERSONS - Is your present income enough? If answer is no, call for money making ideas. 732-6647.

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

BOWLING BALL - child's 8 lb. Susan, Ext. 4267.

PERSONS INTERESTED - in skiing weekend of Jan. 29 or Feb. 26. For info call Bea, Ext. 3571.

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

RIMS - American Motors A78-13, 13 in., 5 hole. Janet, Ext. 2345 or 929-8152.

USED PIANO - Bill, 744-7577.

ROOMMATE - share 3 bdrm Condo, Strathmore Ridge, 5 min. to Lab, w/w, washer/dryer. $200/mo. plus ½ util. Neil, Ext. 3886 or 924-0309.

HOMES - to adopt baby rabbits, solid white or black. 289-1585.

Car Pools

BROOKHAVEN HAMLET - Bay Road/Edgar Ave. area. Ted, Ext. 4163 or 286-0065.

COMMACK ROAD - Exit 52 LIE, Park-Ride, additional drivers, existing car pool. F. Ferraro, B. Peterson, Ext. 3284 from 8:30 to 5:00 p.m.

BABYLON/WEST ISLIP - driver needed for 4 person car pool. Ext. 2493.

Services

Services are listed as a courtesy to BNL employees. They are neither screened nor recommended by the ***Bulletin.***

FIBER RUSH - and caning. Reasonable rates. Delivery for the Holidays. Jim, Ext. 5025 or 821-1704 eves.

HAND DECORATED - gingerbread, chocolate houses and candies for Christmas. Ext. 7636.

CHEESECAKES - quiches, apple pies, pecan pies, pear tarts. Order for Holidays now. 821-1039.

CHRISTMAS CANDLES - custom made, colorful, 4 sided, inner-glow, life-lasting, refillable. Taking orders now. Mickey, Ext. 3218.

MANUSCRIPTS PREPARED - via word processing. Reasonable. 878-0993.

FIRESIDE CHIMNEY SWEEP - fireplaces, wood coal and oil flues, dustless removal. Insured, lab discount. Bill, 584-6425.

SHEET ROCKING - and spackling, free estimates. Kevin or Tom, 567-6651.

CARPENTRY REPAIRS - and modifications, no job too small. 929-4251 after 5 p.m.

HOUSE RENOVATION WORK - painting, wall paper, tile work, windows, doors, installations, insulations, excel references. 929-4180 before 10 p.m.

TAPING/SPACKLING - reasonabale rates. Bill, 286-8185 eves.

PLUMBINB - lab discount. John, 654-8189.

FIREWOOD - split, seasoned oak 4'x16'x18". $110 delivered. 924-4284 or 924-3919.