BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

Get The Soot Out!

America's love affair with the automobile was soured in the last decade by spiraling prices at the pumps. For most people in the market today, a car's best selling point is high fuel mileage. That's why more people are discovering diesel cars.

Compared to current gasoline engines, diesel engines give better mileage per gallon. EPA estimates show diesel cars to get 25 to 50 percent better mileage than cars running on gasoline. But as one might say, there's no such thing as a free ride. Diesel engines emit soot, which may be harmful to health and the environment.

For every 10,000 miles on the road, a diesel car meeting 1981 standards puts out 13 pounds of soot. That's about 50 to 100 times more than the average gas gulper. In gasoline engines, fuel and air are mixed, then burned. In diesel engines, burning occurs as the fuel and air are being mixed, which results in incomplete burning and formation of soot. The problem is inherent in diesel engines.

About 18 months ago, Tom O'Hare, Associate Chairman for Energy Technology, DEE, gathered together a number of engineers and scientists to discuss the problem. The group included Tom Butcher, a mechanical engineer; Jeff Gaffney, a physical-organic chemist; C. Krishna, a mechanical engineer, Bill Marlow, an aerosal physicist; and Richard Sapienza, a catalytic chemist. With various areas of expertise represented, the scientists came up with a way to reduce soot emissions by adding alcohol to the fuel and by coating the combustion chamber with platinum.

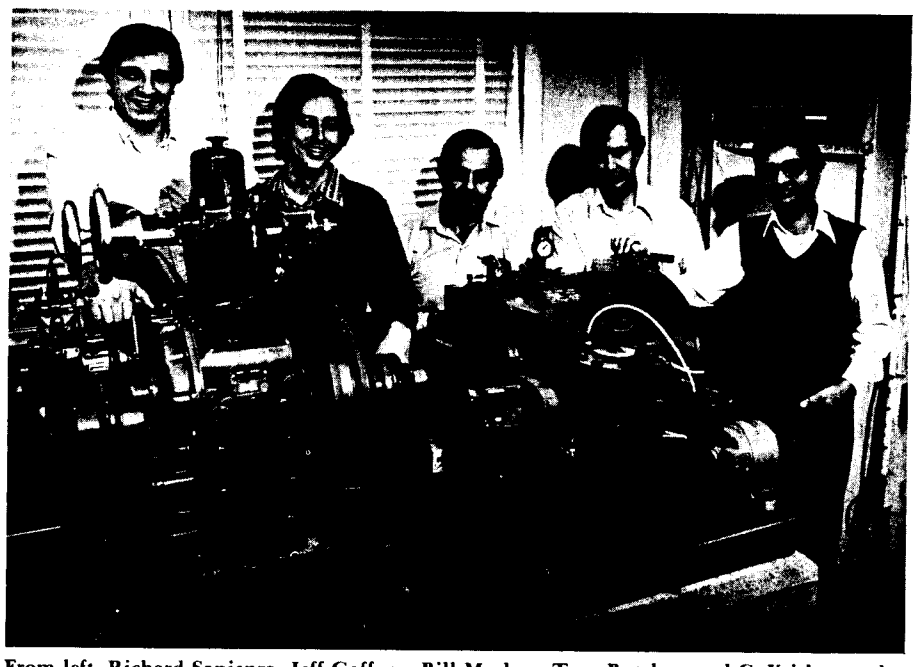
Supported by DOE's Division of Fossil Energy with seed money specially allocated to the development of new programs, the group set up experiments to make quantitative measurements. They knew that alcohol ties up soot precursers, giving them more time to react with oxygen and burn up. They also knew that platinum is a catalyst that encourages more complete burning. But exactly how much soot was reduced with what amounts of alcohol, with or without platinum?

Assisted by Technical Specialist Jeb Barry, the group set up experiments on a CFR one cylinder test engine. Since diesel fuel is highly variable, cetane was used. A colorless, oily hydrocarbon, cetane is a standard fuel for testing the performance of diesel engines. Cetane is to diesel fuel what octane is to gasoline.

The group found that small additions of alcohol to the cetane made a big difference. The optimal amount was 7 percent alcohol, which resulted in a 35 percent reduction of soot.

Even more significant was the work done with platinum. Using a technique called vacuum sputtering, Jim Hurst, Chemical Associate in the Physics Department, coated the test engine's piston and valve faces with platinum. The group said their test results were surprising to many people who had not expected that a catalyst like platinum could be so important. It burned soot and its precursers, created soot suppressants, and inhibited large particle formation. Coated with platinum and running on pure cetane, the test engine had a soot reduction of about 42 percent. With the effects of alcohol and platinum combined, soot emissions could be reduced by as much as 80 percent.

Although they did not use diesel fuel in their experiment, the group is confident of their results—more so in that they did do some tests using diesel fuel and got comparable numbers.

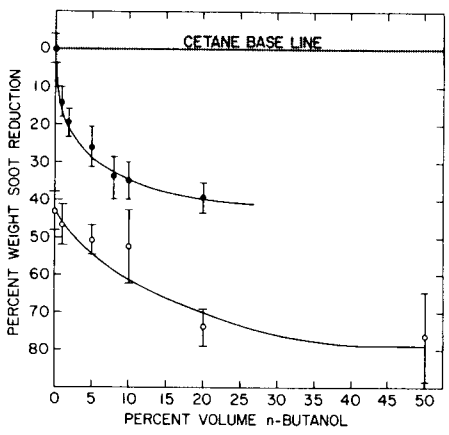


Mort Rosen

From left, Richard Sapienza, Jeff Gaffney, Bill Marlow, Tom Butcher, and C. Krishna gather around a one cylinder test engine on which they did experiments to reduce soot emissions in diesel engines.

The work is done, the reports are written, and a member of the group is presenting a paper at a meeting of the American Chemical Society this week. The group has more ideas, however, and they think the work could be expanded in a few directions. How does the platinum affect other pollutants that were not measured? What are the effects of other metals? For example, what would happen inside aluminum engines instead of the iron ones used now? What other kinds of fuel additives might make good "dieselhol?"

Diesel cars are becoming more popular, and American car manufacturers estimate they will make up about 25 percent of the market by the mid-80's. This kind of research will aid the development of diesel-powered vehicles that will meet that demand efficiently and safely.



This graph shows the effect of alcohol and platinum on soot reduction in a one cylinder test engine running on cetane, a component of diesel fuel. The top curve shows that soot emissions are reduced as alcohol is added, the optimal amount being 7 percent alcohol for a 35 percent reduction in soot. The bottom curve shows that when the engine's piston is coated with platinum, soot is reduced by about 42 percent, with even greater reduction as alcohol is added.

Lab Service Cancelled

Dr. Laura Sbarra, head of the Occupational Medicine Div., Medical Dept., has asked that the following notice be brought to the attention of all employees:

"It is with deep regret that I must announce that, effective Monday, April 6, the Clinic will no longer be able to fulfill requests from employees for outside laboratory work.

"Due to budgetary limitations, we have not been able to increase our staff in proportion to the large demand for this type of service.

"Requests for laboratory work should be taken to the private off-site laboratory of your physician's choice."

Congressmen To Visit BNL

A Congressional delegation, headed by Long Island Representative William Carney, has asked to pay a visit to BNL for a briefing on the Laboratory's programs and major facilities, and for detailed information on the impact of next year's budget. Their visit is scheduled for Saturday, April 4, and the Congressmen are expected to be here until late in the afternoon.

Choosing the Laboratory Site

From March 3 to June 6, 1946, while IUG was evolving into AUI, members of various committees were trying to convert an idea into a laboratory. One of the busiest was the Site Committee. After all, what good is a laboratory with no place to function?

The Site Committee was chaired by Norman F. Ramsey who called the group's task "the most difficult problem on which to achieve agreement." In his "Early History of Associated Universities and Brookhaven National Laboratory" (BNL Lecture No. 55,3/10/66), he explains:

> It was agreed that the ideal site would be 10 square miles of land located at Grand Central Terminal in New York City, but such a site was clearly an impossibility. As a compromise it was agreed that the site could be within one hour's drive from some major station. . . of the Pennsylvania or New Haven Railroad, so scientists traveling by train would be able to spend one full day at the laboratory and still be at their own university on the days immediately preceding and following.

IUG had established other criteria for the site which would ideally be located in an area with a good climate, a satisfactory community and a good institution of higher learning nearby. Further, power and water would be available, as would labor and materials.

Seventeen sites were seriously considered for the laboratory: one in Massachusetts, two in Connecticut, five in New York and nine in New Jersey. Because most of the prospective sites were in New Jersey, IUG decided to incorporate AUI there. Many of the sites were then eliminated as being geographically unsuitable for such reasons as their close proximity to concentrations of populations and inadequate supplies of cooling water. One example of the sites thus affected was David's Island, or Fort Slocum, an island approximately 3000 feet long and 1500 feet wide, about a mile from shore off New Rochelle. Although considered otherwise acceptable, David's Island was ruled out by the Manhattan District because they felt the population density was too high. In retrospect, as Ramsey points out, "it is interesting to note that this site was too small anyway for even a 35-GeV accelerator, but an accelerator of such a size was then beyond our power of imagination."

Only two of the original sites still met the requirements - if the one hour time limit were discarded. An engineering study was commissioned to analyze the merits of Camp Upton on Long Island and Fort Hancock, on the Sandy Hook Penisula near Red Bank, New Jersey.

The engineering study was strongly in favor of Camp Upton which was recommended by the Site Committee with reservations. This prompted the IUG Planning Committee to visit the site. Ramsey went along and recalls that event:

> Although the Planning Committee was pleased by the size and various facilities, such as the swimming pool which one could never hope to build with government funds, it was rather appalled by the appearance of the site. Not only was the land flat but it was covered with ugly barracks from both World Wars I and II and with an even uglier ex-prisoner of war stockade. The housing in the immediate vicinity of the laboratory appeared sufficiently unattractive that there was a genuine worry that it would be impossible to attract a strong staff to the location. At this point I recalled that my wife, as a girl, had spent a number of her summers in the village of Bellport, and had always described those summers with pleasure. Consequently the Planning Committee drove to the village of Bellport to look at the housing there. Finally, on the town dock of Bellport we agreed that the Camp Upton site would probably be satisfactory and that it was the only site we could procure sufficiently rapidly to assure the existence of the laboratory at all. George Kistiakowsky (Harvard) summarized the view of those present when he said that we could agree on this site on the basis of "equalization of disappointment."

By January 15, 1948, this view had changed. AUI's final report, "The

(Continued on page 2)

Sillas, Tyler Win Election

On May 1, Janet Sillas and Nelson Tyler will take their seats on the BERA Executive Board replacing outgoing members Carol Beckner and Gail Williams. Continuing their terms on the Board are Don David, Dennis Klein, Patricia Oster and Rosalie Piccione.

The Board would like to thank the members of the nominating committee and all four candidates for their diligent cooperation in making this year's election a success.

Nelson Tyler

Janet Sillas

Mort Rosen

Golf

There will be a meeting of the Golf League on Friday, April 3 at 5 p.m. in the recreation hall. Refreshments will be provided at the meeting.

You're On The Air

Users of the BNL radio pocket paging system are reminded that the government radio frequencies used by BNL are authorized only for official Laboratory business. Attention is called to the fact that the radio pages are "on the air." These pages can be received on Long Island, in parts of New England and have been received in Washington, D.C. Suffice it to say that with the advent of VHF scanners, there are many ears listening to our frequencies. Users of all BNL radio systems are encouraged to maintain a high standard of radio operation.

For those who wish to have personal paging service, commercial radio service is now available on Long Island.

Equipment Demo

On April 6, in Room D, Berkner Hall, Kratos Inc./Schoeffel Instrument Division, will show a full range of monochromators, solar simulators, arc lamp illumination systems, monochromatic illumination systems and photo detection systems. Also on display will be high pressure liquid chromatograph fluorescence and absorbence detectors, state-of-the-art pumps, and microprocessor controllers.

Choosing A Site (continued)

Founding of Brookhaven," explained:

Camp Upton has however proved to be a happy compromise. It is near New York City, just beyond commuting range, yet the immediately surrounding territory is very thinly populated, with less than 100 people living within a three-mile radius and approximately only 17,000 within a ten-mile radius. The water supply is ample, and the Long Island sand provides admirable foundation for heavy construction. The existing Army structures on the four-square mile area have proved to be easily convertible into laboratories, so that the laboratory has saved at least a year in getting its research under way. It is hoped that plane transportation, utilizing the flight strip two miles from the Laboratory gate, will permit improved access to the New England institutions.

At the first meeting of the New Jersey corporation of AUI on July 10, 1946, the Trustees voted to request that the government make Camp Upton available for the laboratory. Then, AUI promptly reincorporated in New York State. At the first meeting of AUI as a New York corporation, on July 30, 1946, the request for Camp Upton was confirmed by the Trustees.

— Anita Cohen

In Memoriam

Herman O. Drews, Fabrication Assistant in the Central Shops Division, died Sunday, March 29 at the age of 59. He first came to the Lab in 1963. A resident of Middle Island, he is survived by his wife, Annie, and two sons, Dennis and Richard.

Tune In!

Why doesn't the on-site bank cash insurance checks for BNL employees anymore? There was a time they did cash Connecticut General Insurance Company checks or Liberty Mutual Compensation checks, but it has now become virtually impossible.

There are some of us who don't have checking or savings accounts and pay our bills by cash or money orders.

Isn't there anything that can be done to help employees in this predicament?

Answer:

I have discussed this problem with the bank and they have agreed to cash such checks in the future. However, tellers will be required to obtain their supervisor's approval.

— B. McAlary
Fiscal Officer

WIS To Present Speaker On $$$

Joan Gittleson will talk on "Financial Planning," Tuesday, April 14, after the Women In Science dinner meeting. Ms. Gittleson is a financial planner with offices in Melville and Merrick, is acting chair of the Womens Council of the L.I. Association for Commerce and Industry, and writes the "Money Matters" column for the L.I. Review.

Dinner starts at 5 p.m. in Room A Berkner Hall. Make your reservations by April 10. Send a check for $7, made out to SAGA Corp., to Eena Mai Franz, Bldg. 830 (Ext. 7103).

Phone Facts

At the end of the regular work day today, communications personnel will begin to finalize the cutover to the Lab's new telephone system. With this effort continuing over the weekend, only the GTE pushbutton telephones will be operable on Monday, April 6.

New features and new procedures for dialing off site will also be in effect as of Monday. Most employees were introduced to these at training sessions and can refresh their memories by consulting their "Telephone User's Guide" or the recently distributed addenda to the yellow pages of the BNL Directory. In addition, the often-asked questions and their answers given below may help to fill any gaps in your knowledge of the new system.

Q: With the new phone system, I have been assigned a new phone number. Will an addendum to the Directory be issued listing the new numbers on site?

A: Yes, in about two weeks. But in order for your name and number to appear in the addendum, you must send a completed Telephone Directory Change Form (241D) to Staff Services, Bldg. 179, by Friday, April 13. This form can be found on page XXXIX of the Directory and should automatically be completed by anyone whose new number begins with a 5, as well as anyone else whose number has been changed.

Q: What should I do if my phone doesn't work properly?

A: First, determine whether the phone is broken or there is another problem. For example, if you try to use a feature or make an outside call and you receive a fast busy signal, this does **not** mean your phone is broken. A fast busy signal means your phone has not been programmed either for that feature or for the treatment necessary to call the area you dialed. However, if you think your phone has been programmed for the feature or treatment in question, check your Guide or the Directory addendum to make sure you're using the phone correctly - then try again. If you still have problems, call Ext. 4031. On this special "hotline," representatives from GTE will be available to answer your questions beginning on April 4. After 30 days, questions should be directed to the old telephone information number, Ext. 2529.

Q: What should I do to correct the situation if it turns out that my phone has not been programmed for either the features or the treatment I need?

A: Request a change in features and/or treatment by submitting an approved Inter-Lab Requisition Form (ILR) to Staff Services, Bldg. 179.

Q: When will we receive the overlays that will fit over the pushbuttons on our phones and summarize the access codes for the most commonly used features?

A: These will be distributed within a couple of weeks.

Q: I've notified my frequent callers that our new exchange is 282, but what will happen if someone tries to call me using 345?

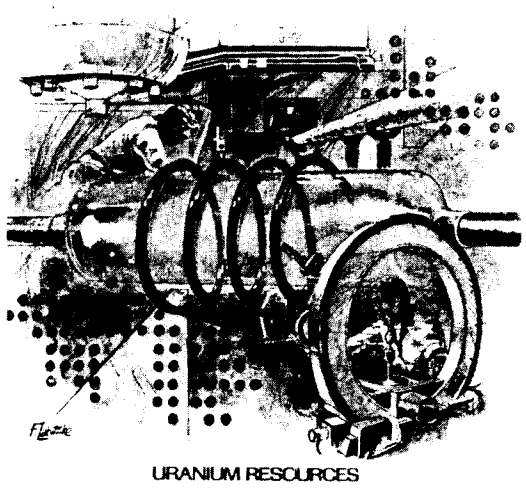
A: Anyone who calls a Lab number using the 345 exchange will be put through to a recording which will advise them to redial the number substituting 282 for 345.

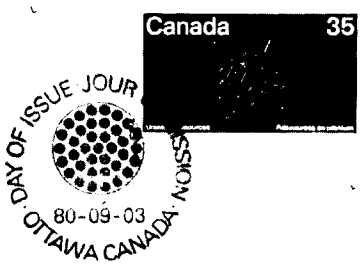
Further questions should be directed to the "hotline," Ext. 4031. However, Bill Webster, Manager, Staff Services Division, requests that telephone users, "Please be patient for a while. The communications people have done a fine job, but there are over 3500 phones at BNL and it may take a few days to get the kinks worked out of the system."

In Appreciation

To all the wonderful friends at BNL who showed how much they care, our sincerest thanks.

— The Stafford Family

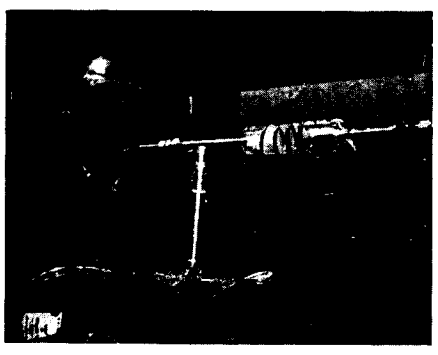


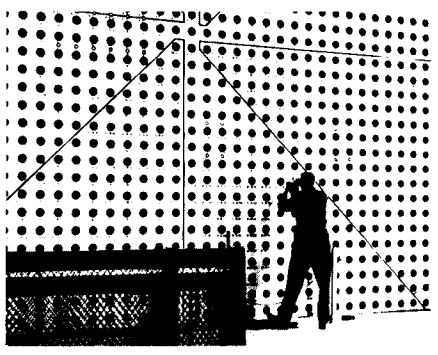


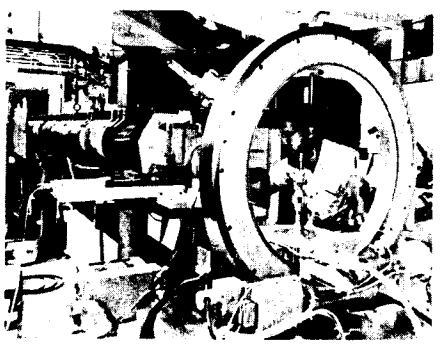
URANIUM RESOURCES
Uranium deposits found in Canada's Great Bear Lake region are some of the richest in the world

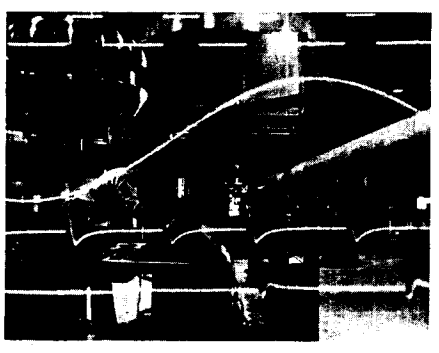
The Creative Mind At Work

This painting on the first day cover for a new Canadian stamp was done by a Long Island designer, Fred Labitzke, South Farmingdale. Some months ago he called the Public Relations Office requesting photographs relating to nuclear research. From the BNL photos below, he created this striking design. You will note how he combined features from each photo to make up the final painting.









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Hospitality News

Salvatore Nicosia, Deputy Commissioner of the Suffolk County Department of Consumer Affairs, will be the guest speaker at the Hospitality Committee's morning coffee get-together on Tuesday, April 7, at 9:30 a.m., in the Brookhaven Center. He will discuss matters which concern you as a consumer. A question and answer period will follow the discussion.

Coffee, tea and danish will be served. Please come and bring the children. Babysitting will be provided free of charge. We suggest you bring along a toy or two for your child to play with.

Cooking Exchange

Come join the BNL Cooking Exchange at their next meeting on Wednesday, April 8, at 12:30 p.m., in the Recreation Building. Recipes for an Italian meal will be demonstrated and will include ricotta pie and Monte Bianco, plus other delicious surprises.

All BERA members and their families are welcome to attend. There is a $1 cover charge and babysitting is provided at 50¢/child.

Contact Ruth Fernow at 928-8465 for further information.

Bowling

Red League

The 76'ers shut out the Blue Jays 11-0. R. Larsen (205) grossed 637. The Sandbaggers won 8-3 against the Old Timers II. K. Riker (200) grossed 619. The Strangers took the Designers 8-3. The Old Timers won 8-3 over This Isa Team. E. Sperry IV (208) grossed 602. The Freon Loaders were shut out 0-11 by the Light Source. F. Powers grossed 636.

Purple & White League

The Unpredictables won all 7 giving them a 1 point lead in first place. Jim Griffin rolled the high game and series with games of 247/201/212-660. Nate Carter rolled a 154 triplicate and Ed Frantz converted the 6/7/10. Other good games were bowled by Ed Meier 215, Ed Sperry 215, Gene Hassell 202, Arnold Benson 201, Caryl MacDougall 213, Ginny Walker 204, Betty Jellett 191, Elsie Murray 186, Jeanne Penoyar 182, Fran Brown 182/183, Pat Manzella 180.

Pink League

Great series by Deb Johnson with a 196/505. Other good games were bowled by Mary-Grace Meier 186, Ellie Kristiansen 170/166, Ellie Adams 170/156, Marge Stoeckel 170, Karen Alberico 168/157, Millie Connelly 167, Fran Nusz 153.

The BNL team, consisting of R. Adams, R. Larsen, E. Meier, J. Morris, K. Riker, finished 8th overall in the L.I. Industrial Tournament.

Degree Days

March

23	24	25	26	27	28	29
30.5	29.7	26.5	26.7	19.2	25.5	12.7

On The Aisle

This spring's offering by the BERA Theater group at Berkner Hall is a pair of one act plays: "Feiffer's People," by Jules Feiffer, and "GOD," by Woody Allen. It is a pleasure to give each production an unqualified endorsement.

In "Feiffer's People," Director Roscoe Mack stages more than 40 vignettes, in which we view ourselves and our motives from the satirical perspective of Jules Feiffer. This staging has been accomplished without becoming submerged in logistics, which is commendable; it has also been accomplished by a largely non-veteran cast, which is remarkable. A degree of underplaying results which nicely compliments Feiffer's introspective brand of humor.

Richard Mould, George Reiter, and Neil Baggett are involved in several particularly successful skits, but all 15 cast members have their moments. Noteworthy, for example, are the byplay between Chris Pendleton and Kurt Fuchel, and the interpretive dancing of Lizzie Soenarjati.

Director Frank Castellano takes us from the subtlety of Feiffer to the frenzy of Woody Allen. In "GOD", we find the playwright, Hepatitis of Rhodes, and the actor, Diabetes, contriving a play which has no beginning, middle, or end. They ask for help from Doris Levine of Great Neck and ensuing events beggar description. Joseph Indusi and Robert Cordero bring off a notable audience participation gambit. Gus Basile is delightfully implausible as the inventor Trichinosis, and James Sands sparkles as the King.

Among others in the cast of 24 are characters such as Bursitis (Roger Podd), Blanche DuBois (Ruth Basile) and a Greek chorus which sings Dixie. These supporting players provide a suitably frenetic background for the solid performance of William Love in the principal role of Diabetes. Richard Perry as Hepatitis is a pleasure to watch as his play disintegrates; Jane Love, as Doris, contributes substantially to his undoing, to the viewers' enjoyment. The impact of the overall presentation is greatly enhanced through technical effects staged by Ken Czyscinski.

Last performances are tonight and tomorrow at 8:30 p.m.

— Karl Swyler

Volleyball

Standings as of 3/30/81

A Division	
No Names	9-0
Las Bolas	8-1
High Society	5-4
Mixed Ups	4-5
Nuts & Bolts	1-8
Kings Court	0-9
B Division	
TNT	6-3
Leftovers	5-4
Oh Nos	5-4
Lemufs	4-5
Puff & Stuff	4-5
Semi Tough	3-6

No Names swept up Nuts & Bolts, 15-0, 15-4, 15-11. Las Bolas over Kings Court, 15-2, 15-6, 15-3. High Society over Mixed Ups, 15-12, 15-6, 15-6.

Semi Tough over TNT, 15-5, 15-7, 8-15. Leftovers over Oh No's, 15-2, 15-10, 15-4. Puff & Stuff over Lemufs, 16-14, 15-5, 15-1.

Mountain Club

There will be a Mountain Club meeting on Tuesday, April 7 at 5:15 p.m. in the north room of the Brookhaven Center. White water canoeing, summer hiking and other club activities will be discussed.

Ron Dobert (top) and Ed Schwaner check out the single engine airplane they flew down to the Bahamas.

Leave The Flying To Us

Last month, two BNL employees got a flying start on summer. Ron Dobert and Ed Schwaner, members of the BNL Aviation Club, flew a rented single engine Piper Warrior south to the Bahamas for a vacation under the palm trees.

They took off from Brookhaven Airport in sub-freezing temperatures before dawn one day in March. Nine and a half hours later, they were enjoying temperatures in the 80's when they stopped for the night in Stuart, Florida, about 25 miles north of West Palm Beach.

The next day, they set out for the Bahamas, 75 miles east across the ocean. Neither of the men had flown over water before. They carried life vests, as required by FAA, and also had a life raft as an extra precaution. Said Dobert, "The trip took 40 minutes, 15 of it totally out of sight of land both behind and ahead. With no land in view, it was like steering a boat in thick fog — no reference points."

They were never lost, however, because they used radio navigational signals. Schwaner explained that most airports send out radio signals on which pilots can set a compass bearing. "When we got out of range of Stuart," said Schwaner, "we flipped a switch and picked up the signal from an airport in the Bahamas."

They landed on the coral strip at Marsh Harbor, Great Abaco Island. All the tourists there had come either by sailboat or by plane. "We took it easy bicycling around and soaking up the sun," said Dobert.

He also said their flight down and back was smooth and easy. They had no engine problems and got some extra push from tail winds both ways. Their average speed was over 100 miles an hour, and they flew at an altitude of about 3500 feet. "From that height, we could navigate visually by watching for outstanding features like interstate highways, rivers and lakes," said Dobert, "but we weren't too high to miss some scenic detail."

A winged friend aloft over Sanibel Island in the Gulf of Mexico, one of the places visited by Dobert and Schwaner.

For example, Schwaner said that they flew past the Kennedy Space Center at Cape Canaveral. Guided by an air traffic controller there, they passed into the edge of the restricted air space over the area and were close enough to spot the gantry of the space shuttle.

Both men have been FAA licensed since 1978 to fly single engine land planes, and they try to make a similar trip every year. They are already talking about flying into the wilds of Canada or maybe even Alaska next.

On this trip, Dobert and Schwaner actually paid more for their plane fare than the ordinary traveler would on a commercial flight down and back, but they had the covenience of personal transportation for side trips. And for them, getting there and back was most of the fun.

NYC Train Trip

The Hospitality Committee is planning a group railroad trip to the city on Wednesday, April 15. Departure will be at 7:55 a.m. from the Patchogue LIRR station. Round-trip fare for adults is $3.25, children under six years ride free.

Reserve a ticket by sending the fare through the U.S. mail to P.O. Box 322, Upton, New York 11973, no later than **Thursday,** April 9. Make checks payable to "Brookhaven National Laboratory." Tickets will be given out on the train. Refunds will be made only if cancellations are received by the Friday preceding the scheduled trip.

Arrivals & Departures

Arrivals

Cheryl Y. Jackson ..... Biology
Ralph E. Vega ..... Safety & Env. Prot.

Departures

Garo H. Armen ..... Energy & Env.
Linda E. Barello ..... Nuclear Energy
Ellen A. Cherniavsky ..... Energy & Env.
Suzanne T. Fino ..... Contr. & Proc.
Robert I. Goldberg ..... Energy & Env.
Franz Reidinger ..... Energy & Env.
Daniel J. Spandau ..... Energy & Env.
Gary P. Utz ..... Sys. & Adm. D.P.
Hideki Yoshizawa ..... Physics

R/C Airplane Club

There will be a meeting on Wednesday, April 8, at 12 noon in Room C of Berkner Hall. Club business will be discussed, and interested persons are invited to attend. For more information, call Manny Santos, Ext. 2022.

Cafeteria Menu

Week Ending April 10, 1981

Monday, April 6

Beef barley soup	(cup)	.55
	(bowl)	.65
American chop suey		1.50
Western omelette & 1 veg.		1.50
Hot Deli - Pastrami	(on bread)	1.65
	(on roll)	1.75

Tuesday, April 7

Cream of tomato soup	(cup)	.55
	(bowl)	.65
Sauteed chicken breast on rice		1.65
Beef liver & onions w/1 veg.		1.55
Hot Deli - Barbequed beef	(on bread)	1.65
	(on roll)	1.75

Wednesday, April 8

Split pea & ham soup	(cup)	.55
	(bowl)	.65
Veal pattie parmesan & 1 veg.		1.55
Roasted turkey breast & 1 veg.		1.60
Hot Deli - 8-foot hero		.75 per inch

Thursday, April 9

Hot borsch soup	(cup)	.55
	(bowl)	.65
Batter fried steak w/1 veg.		1.65
Scalloped ham & potatoes		1.55
Hot Deli - Chili dog		1.70

Friday, April 10

New England clam chowder	(cup)	.60
	(bowl)	.70
Tuna noodle casserole w/1 veg.		1.60
Sauerbraten & potato pancakes		1.65
Hot Deli - Smoked, baked ham	(on bread)	1.65
	(on roll)	1.75

Classified Advertisements

Autos & Auto Supplies

77 KAWASAKI - KZ650 Header filters, S&W shocks, dynoguards, Continentals, good cond, many extras. Joe, Ext. 7633.

TIRE - Firestone GR-70-15, 66 Olds hubcaps, am radio, windshield wiper motor. Make offer. Ron, 281-3149.

66 BRONCO - 6 cyl eng, trans w/transfer case, running cond. 744-3968 or 473-2318 after 6 p.m. 2

72 CHEVY — Van, 350 eng, bubble top, sink, refrig, bed, new tires, good cond. $1,700. 732-5445 after 6 p.m.

78 YAMAHA SR500 - Classic, 2,000 mi, mint cond w/accessories. $1,300. Leo, Ext. 4615 or 587-0870 after 6 p.m.

73 HORNET - Sportabout, 81K mi, 304 V8, a/t, a/c, am/fm, excel cond. $800. Bob, Ext. 4551 or 289-2159 after 6 p.m.

77 YAMAHA - 360cc elec start, lug rack, blue, 7,500 mi, like new. $995. John, Ext. 4185 or 929-8204.

72 CHEVY WAGON - 8 cyl, good cond. $600; 1968 Karman Ghia, eng very good, body needs work. $600. 744-2552.

TIRES - (5) Firestone '721' radials, DR78-14, 1 new, 4 have 75% tread. $125 for all five. Dave, Ext. 7517 or 4574.

73 HONDA - CB 350, w/sissy bar, luggage rack. $600. John, Ext. 3651.

79 HONDA - XR80 dirt bike, very good cond. $450. 929-4850 after 3 p.m.

75 HONDA - CB360T, like new, 7,000 mi, sissy bar, eng guards, 65 mpg, helmet incl. $900. Danny, 472-1130.

66 FORD FALCON - 6 cyl, 2 dr, coupe, runs good. w/1972 Maverick eng. $295. 281-1705.

TIRE - never used, Michelin w/w on GM wheel, balanced, 225x15, orig $95. Now $70. Alyce, Ext. 2902.

80 SUNBIRD - 4 cyl, a/t, 22,200 mi, vinyl top am/fm radio, rust proofing. $4,300. Lou Licalzi, Ext. 3354.

79 CHEVY BLAZER - every option, mint cond, custom extras, low mi, $8,500; also Audiovox am/fm cassette car stereo, 40 watt, bass treble, CAS600A, cost $289. Now $65. Lou, 732-6634.

77 PONTIAC - Grand Safari Wagon, V8, a/t, p/s, a/c, very good cond, reasonable mileage. $4,000. 744-5375.

67 CHEVY - ½ ton truck, 283 eng, new tires, spare snows, no rot. $800. Bob, 878-2885 after 6 p.m.

75 VOLVO - 245DL, am/fm, a/t, p/s, reg gas, excel in and out. $2,800. J. Lynch, Ext. 4510 or 744-0843.

AUTO CASSETTE PLAYER - Pioneer model KP-292, fits under dash, many features, $40; am/fm stereo radio for Chevy Citation, speakers not incl, $45. Ext. 3992 or 298-4172.

73 PLYMOUTH - wagon, 9 pass, p/s, p/b, trailer hitch, reg gas. 298-4089.

TRAILER HITCH - U-Haul type, 2⅛" ball bumper mount. $25. 757-3642.

73 PLYMOUTH DUSTER - 2 dr, 6 cyl, a/t, good cond, new tires. Slavin, 941-9242.

75 FORD F-250 CAMPER - Special Pick-up truck w/10½' Hornet Camper slide-on, self-contained, many extras. $6,500. Will sell camper separately. 929-4840.

76 DATSUN B210 HATCHBACK - 4 new wide radials, 8 trk player, mint cond, 39 mpg. $2,600. 744-3509 eves.

8 FOOT TOP - for pick-up, good cond. $100. Steve, 585-8395.

79 CHEVY C-10 - pick-up, 32,000 mi, 250-6 cyl, a/t, p/s, p/b, am/fm 8 trk, radials, damage l/fender. $3,600, neg. Ken, Ext. 2350 or 758-9334.

73 CHEVY - sta wgn, good cond, a/c, a/t, needs no work. $800 firm. Ext. 2358 or 286-0497.

73 FORD TORINO - 302 eng, opera window, coupe, am/fm stereo, mechanically sound. $800. 654-8865.

75 TRIUMPH TR6 - new tires, new paint, new shocks, 60,000 orig mi, very good cond. Bonnie, Ext. 5181 or 698-4444 after 6 p.m.

80 HONDA - motorcycle, Twinstar, brand new, many extras. Ext. 2482.

79 CHEVETTE - 18,000 mi, 2 new snows, 4 dr, stick shift. $3,750 firm. Ext. 4275.

77 YAMAHA - XS400, mags, 6 spd, very good cond, fairing. $975. Ext. 7927 or 878-2891 after 6.

BATTERY - 36 mo, used one week, 12 volt. $25. Tony, Ext. 3194.

70 CUTLASS - Cruiser wgn, p/s, p/b, a/c, runs well. Asking $500. Bob, Ext. 4672 or 929-4753.

74 VW DASHER - high mi, runs good. $900. Ext. 4709.

FIRESTONE TIRES - (3) H78-14 slightly used w/rims. $35 ea. Durston, Ext. 2598 or 928-5754 eves.

WHITE ROLL BARS - for mini pickup, excel cond. 698-3030 after 7 eves.

75 VW BUG - custom, am/fm radio, new upholstery, 55,000 mi, good cond, good gas mi. $2,500. 929-4840.

Boats & Marine Supplies

1978 MERCURY OUTBOARD - long shaft manual stainless steel prop. $950. 286-3335 after 6.

16' FIBERGLASS CHRIS CRAFT - tri/hull, 75 hp, 4 cyl, re-built last year, trailer tanks. $1,500. 744-2552.

MOTOR - 40 hp Johnson, 2 tanks, controls, block completely rebuilt. $500. Dave, Ext. 7517, 4574.

1976 BAYLINER - 20', 4 cyl, IO cabin w/accessories, trailer w/braking system. $7,000. John, Ext. 4973.

25'FIBERGLASS WHEELER - inboard 225 hp Chrysler f/w cooled, flying bridge, dual controls. 286-4504 after 7 p.m.

JOHNSON 6 HP MOTOR - w/6 gal tank, very good cond. 698-8286 after 6 p.m.

30' OLSEN - twin 283's fwc, new cushions, sleeps 6, many extras, excel cond. 727-8487.

ANCHOR - Danforth type, 5 lb. $12. Sandy, 286-1022 or Ext. 3369.

CAT BOAT - 24 ft, good cond, Dacron sails, aux eng. Ext. 2964 or 325-1787.

Miscellaneous

STRAWBERRY PLANTS - ready now for planting, healthy, best 2 varieties, 10 plant min. $2. Chris, 878-0621.

PANTS - 4 pr made in France, never worn, 100% wool, size 8 - 10. Chris, Ext. 2907.

TV - Zenith b&w 19", $55; Keystone 126X camera, used once. $10. Ron, 281-3149 after 5:30 p.m.

CANOPY TOP - for single bed w/wooden posts. $25. 475-4199.

EASTER CHOCOLATES - homemade. Call Gene for price list. Ext. 4033 or 4474.

DOORS - exterior, new 2'8" x 6'8" x 1¾", 3 windows L & R, pre hung fir. $110 ea. 924-6582.

LADIES SCHWINN BIKE - 3 spd, 26", $25; Grind stone w/seat, $50; parts for Colt Singer old treadle machine. $50. 732-3338.

WOOD STOVE - 24" deep box stove, flue pipe and 5' chimney kit, all brand new. $225. Dave, Ext. 7517/4574.

SURDIAC COAL STOVE - Gotha II w/two (1) ton bins, heavy duty. Asking $1,050. 473-7075.

BATHROOM SINK - commode; blue, vanity pink marbelized formica, excel cond. $75; Phonemate, needs minor work. $20. Ext. 7291.

REFRIG - Gibson side by side, 2 cu ft. $175. Ext. 4452.

TURNTABLE - Model #1019 dual w/new Shure cartridge. As is, $50. Alyce, Ext. 2902.

GERBILS - free, cute fuzzy, no trouble. Lois, Ext. 2921 or 929-4753.

TABLE - 4 chairs, modern teak, very good. $90. Ext. 4369 or 744-9577.

COUNTER TOP STOVE - $75; wall oven, $75. Ext. 7785.

LAWN BOY - mower body, 21", $15. 929-8317 after 6 p.m.

COMPOUND BOW - target model, 40-50 lbs. laminated limbs, can be used for hunting. $100. Joe, Ext. 3273.

12 AQUARIUM SET UPS - 10-20 gal, hoods, stands, misc, heaters, filters, pumps, etc. Best offer. Pat, 929-8443.

PROPANE TANK - 20 lb, reg, 12 ft hose. $15. Pete, Ext. 4782 or 289-7218.

FREE - You take 17 cu ft refrig, no-frost, 2 dr, coppertone, looks new, needs work. 265-3982 after 6 p.m.

SURDIAC 512 - coal burning stove, used 1½ seasons, $1,050 new. Asking $450. J. Lynch, Ext. 4510 or 744-0843.

SEARS GARAGE DOOR OPENER - receiver or transmitter inoperative, drive unit good. $40. Ext. 3992 or 298-4172.

ICE CREAM MAKER elec, 5 qt, Model EX-5, like new, $20; baby crib, good cond. $30. Tom, Ext. 4084.

DOUBLE BED - and twin beds, good cond. Grace, Ext. 3642 or 929-6964 after 6 p.m.

ABOVE GROUND POOL - 32x16 w/walk around deck, fence and filter. $350. Rich, Ext. 3573.

BICYCLE - Fuji, 10 spd, 24" wheels, 18" frame, excel cond w/pump. Ext. 3887 or 286-0353 after 6 p.m.

WETSUIT TUNIC - "Spring Suit," medium, $35; 8 lb weight belt, $5. Greg, Ext. 7960 or 2370.

GOLF CLUBS - registered w/MacGregor, 9 -irons, 4 - woods. 283-7280 after 6 p.m.

PORTABLE STEREO - Panasonic 5500X, am/fm cassette (Dolby) 110/220v/battery, $400. Sell for $275. 473-3604.

CUPOLA - Stephenson, 28" x 28" x 30" h, redwood painted white w/copper roof, new - never used. $225. Pat, Ext. 2452.

POPULAR MECHANICS MAGAZINE - 1957 to 1974, complete. Dennis, Ext. 4259 or 736-2534 after 6 p.m.

BICYCLE - 21" Motorbecane, brand new cond. Ext. 2495.

RADAR DETECTOR - Fuzzbuster Elite, latest and best model, like new. $100. 744-1081 after 3 p.m.

SIAMESE CAT - chocolate point, altered and declawed, beautiful pet. $25. 265-1072.

SCANNER - Regency high band, $25; small furnace hot air oil, $30. Paul, Ext. 4665 or 727-4859.

QUARTZ HEATER - saves energy and money, new one year guarantee, new design. $38. 924-4991.

KART CONVERSION - hardly used, purchased in 1980. Ext. 2498.

SUIT - boy's 3 piece, beige, matching shirt also, size 8s, worn 3 times. Carol, Ext. 3325 or 744-7493.

AUTO DECK - digital radio plus 8 trk, new. $125. 928-0281 after 6 p.m.

OPERA TICKETS - NYC Opera, "La Boheme" April 19th. $25 ea. Ext. 7785.

NATIONAL GEOGRAPHICS - 25 yrs, 50 to 75. $50. 732-0203.

GIRARD RECORD CHANGER - in mahogany cabinet; tall lamp. Make offer. Ann, 286-2280.

ROCKET - w/launch kit, $10; pogostick, $5; Logix 0600 computer kit, $10; TCR Jamcar set, $20; misc games. 345-3177.

EASTERN AIR LINES - half fare coupon (NY, LA or SFO). Best offer over $40. Andy, Ext. 4210.

DINING ROOM SET - excel cond; kitchen set, table w/five chairs, good cond. Dom, Ext. 4851 or 732-6995.

LIVING ROOM - semi/formal, sold separately or as a unit: 3 tables; 3 chairs; 3 tablelamps; 7 ft. sofa; 2 commodes. Mint cond. Best offer. Ext. 2065 or 981-1327.

Real Estate

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

For Sale

ROCKY POINT - assume $26,600 8½% mortgage; 4 bdrms, eik, l/r, f/r, d/r, hardwood fin. bsmt, playroom, garage, 1/3 acre, beach rights. $52,000. 751-9096 or Ext. 4138.

N. SHOREHAM - assume $20,000 6% mortgage; owner will hold 2nd mortgage on 4 bdrm. Colonial, eik, fp, 3/4 acre, beach rights. 928-4068 after 5 p.m.

LAKE LUZERNE - 109 acres, 1 hr. north of Albany, excel for camping, horseback riding, hunting; bear, deer & bobcat taken from property. $27,500. 924-3293.

WESTHAMPTON — area, mobile home, 12'x60', 2 bdrms, eik, stove, refrig, washer/dryer, laundry rm, 2 tool sheds, porch, patio, wooded landscaped plot. $10,500. 698-2501 after 5 p.m.

For Rent

STONY BROOK VILLAGE - large Colonial, furnished, beautiful location, 4 bdrms, 2½ baths, July & August. 751-8158.

NEAR SUNY - attractive studio apt., for one in private home, w/w carpet, a/c, fp, priv. entr. $275/mo. incl. all. 751-7491 eves.

MIDDLE ISLAND - furnished room(s), 12 min. from Lab. A block from Spring Lake Golf Course, priv. entr, util. refrig, washer/dryer, furnished, cooking facilities can be arranged. 924-7972.

YAPHANK - Townhouse, 5 min. from Lab, l/r, kit, dinette, 3 bdrms, 1½ baths, bsmt, garage. All appliances. Recreational facilities. 765-2102.

MASTIC BEACH - unfurnished, charming 2 bdrm apt, stove, refrig & all util included, avail April 15. $350/mo. 399-4692.

Wanted

SWIMMING TEACHER - for children and babies. Ext. 7107 or 924-8630 or 924-4991 after 5 p.m.

UTILITY TRAILER - U/Haul type. Norman, Ext. 2043 or 472-3985.

BABYSITTER - my home only, wkdays, Shirley area. Peggy, 281-9188.

ELECTRIC HEDGE TRIMMERS - weed whacker (cord type or fixed blade) reasonable. Bob Peck, Ext. 3565 or 924-9210.

ICE AXE - wood or metal; Crampons and straps; good cond. Mike, 929-8944.

HOUSE - 3/4 bdrm., 1 yr. beginning Sept. Visiting Scientist and family. Ext. 3786.

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

PERSON - share apt., furnished, all util. incl. Center Moriches. $225/mo. Pat, Ext. 3376/4960.

RUG - 8x10 reasonable. Ext. 3139 or 585-5256 after 6 p.m.

2 TO 7 - Channel Dig. prop. R/C equip; also .61 Model gas engine. Louise, Ext. 4973.

USED BABY STROLLER - in good cond. D. Huszagh, Ext. 2408.

BLUE WALDBAUM'S TAPES - will pay $2.00 every $100. worth of tapes. Fred, Ext. 4261.

SAILING DINGHY - under 100 lbs. Pete, Ext. 4782 or 289-7218.

BACK PACKING TENT - four man, good cond. Gene, Ext. 4033 or 4474.

HOUSE — 3 bdrms, Bluepoint, Bayport, Sayville. 40's. 475-3981 eves/wkends.

BABYSITTER - Moriches area from 4-6 wkdays for two boys, 9 & 10. Prepare dinner, light washing and ironing. Ext. 7982 or 878-0164 after 6 p.m.

POWER LAWN MOWER - must be in good running cond. Joe, Ext. 4069 or 261-7825.

CUB SCOUT UNIFORM - shirt, any size/cond, need left front panel. Dennis, Ext. 4259 or 736-2534 after 6 p.m.

PLOW - and or cultivator for Sears garden tractor. Davis, Ext. 4504.

PORT-A-CRIB - 286-0796.

TIRES - (2) G78-15 reg. tires. Lee, Ext. 7629 or 929-3023.

WITNESS TO ACCIDENT - on morning of Thurs. March 26, at Brookhaven Ave, and Technology St. Please call Ext. 3294, Lee.

QUEEN SIZE BED - w/mattress; bureau; wardrobe; book cases; sofa. Inexpensive. Ext. 7164 or 928-3658.

WITNESS TO ACCIDENT - Upton Road, 5 p.m., March 23, brown car & beige van. Ext. 2073.

Car Pools

MATTITUCK - have car, wishing to join 4-5 person car pool. Bill Stars, Ext. 4278 or 298-9648 eves.

CORAM/NORTH ISLE APT - wish to start car pool or join existing car pool. Ext. 7102.

PLAINVIEW VICINITY - one driver to join existing car pool. Harry, Ext. 4917.

Lost & Found

LOST - Cross stainless steel mechanical pencil, lost March 23rd. Reward. Ext. 4841.

FOUND - man's wedding band, outside ISABELLE Bldg. 902B. Vern, Ext. 7982.

Services

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

BABYSITTING - will babysit at my home, day time, 345-3176.

SANDBLASTING - trailers, chassis, any kind equipment w/wo primer coat. Reasonable rates. 744-3968 after 4 p.m.

ROTOTILLING - new or existing gardens, lawns, $15/hr. Dave, Ext 7517 or 288-3011 eves.

SEWING CLASS - for beginners. 744-2816.

SMOKED EELS - and various fish to your taste. $2.50 per lb. Lou, 732-6634.

PROFESSIONAL INCOME TAX - service by experienced preparer. Jack, Ext. 7942 or 864-2236.

1980 INCOME TAX - prepared by experienced tax accountant, p.m. and wkends. Low fee. Bob, 475-3981.

SIGHT SEEING FLIGHTS - aerial photogr, Long Island, Conn., New York, modern all weather aircraft. Ron, Ext. 2491.

CLEANING - houses, apts., experienced worker, free estimates. Chris, 589-5126.

ROTOTILLING - $15/hr free garden consultation, planning and pH test w/every job. Bob Geib, 878-4556.

PROFESSIONAL TYPING — 727-5475.

CARPETS INSTALLED - quick dependable service, free estimates, repaired. Jim, 821-0187 after 5 p.m.

SPRING TUNE UP SPECIAL - w/oil change and filter incl, low price, auto repairs. 751-8608.

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

HOUSE PAINTING - interior/exterior, professional, quality materials, insured. Bob, 289-7657 after 6 p.m.

FIRESIDE CHIMNEY SWEEPS - fireplaces, wood, coal and oil flues, dustless removal, insured. Bill, 584-6425.

PAINTING - exterior and interior, neat professional work, free estimates. 399-2076 anytime.

MOTORCYCLE ACCESSORIES - for street and dirt, best prices, lab discounts. Ext. 2311.

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

FOLDING BABY CRIB - w/mattress, good cond. 286-0269, 6 p.m. to 8 p.m.

Classified Ad Policy

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

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

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

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

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

NAME (Please Print) .....

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

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

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