

the Bulletin Board

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HIGH FLUX BEAM REACTOR CRITICAL



Oct 30

At 8:34 p.m. last Sunday evening, BNL scientists, engineers and technicians brought the High Flux Beam Reactor to its first self-sustaining nuclear chain reaction. With the HFBR in action, researchers have at their disposal a source for one of the highest concentrations of neutrons ever produced in a research reactor. The term "flux" refers to the number of neutrons passing through one square centimeter of space in one second.

The HFBR's maximum flux at the core of more than a quadrillion neutrons, will provide scientists with one of the most powerful tools available for study in the fields of solid-state and low-energy physics, metallurgy and nuclear chemistry. Among the experiments planned for the first operating period are studies on the structure of liquids and solids; neutron bombardments of magnetic materials; and the measurement of neutron cross sections. (A neutron cross section is the measure of probability that a nuclear reaction will occur - it is the apparent area presented by a target nucleus to an onrushing particle.)

TENSION MOUNTS as the assembled personnel watch the indicators, which show the regulating rods being withdrawn. When the rods are in the proper position, the reactor's fuel cells begin a self-sustaining chain reaction and the reactor goes critical. Moments after this picture was taken, criticality was achieved.

Heavy Water Moderated

The reactor, designed to operate at 40 megawatts, is cooled and moderated by heavy water and contains a heavy water reflector. It is fueled with fully enriched uranium alloyed with aluminum and silicon and clad with wrought magnesium-silicon aluminum alloy. The core consists of 28 curved-plate fuel elements housed in the lower, spherical portion of the reactor vessel. Cool heavy water, pumped into the upper cylindrical part of the vessel, flows down between the fuel element plates, and is discharged into the bottom of the vessel. The water then flows upward outside the core and leaves from an outlet pipe at the upper part of the vessel, to dissipate its heat through exchangers before recirculation through the core.

16 Control Rods

The reactor is controlled by 16 neutron-absorbing rods, which are located

outside the core instead of penetrating the core as in other reactors. They are divided into two sets, with eight main rods operating above the core and eight auxiliary rods below the core mid-plane. The principal neutron-absorbing material in the rods is europium oxide.

Outside the core vessel is a water-cooled thermal shield. This secondary vessel provides emergency containment to keep the core covered with heavy water in the event of a leak in the primary vessel.

The entire reactor system is housed in a hemispherical building with an inside diameter of 176 feet. The building shell is constructed of welded steel plates. While the reactor is in operation the air inside the building is maintained at a slight negative pressure to insure that any air leakage is inward rather than outward. Access to the building is provided by an air lock system.

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HIGH FLUX BEAM REACTOR

Began in 1956

The first work on the HFBR began in 1956 with physics calculations by Brookhaven scientists to determine the reactor system which would best meet the Laboratory's research needs. A project group was established in 1958 to work out the preliminary engineering design. The Lummus Company was selected in early 1960 to provide architect-engineering services, with assistance from Combustion Engineering, Inc., on nuclear engineering matters.

A site report was prepared and submitted to the AEC in August, 1960. Detailed design work was started following approval of the site report by the AEC and AEC's Advisory Committee on Reactor Safeguards. Construction work, started in the fall of 1961, was carried out by the AEC's Brookhaven Office.



MICROPHONE IN HAND, Robert Powell, Head of the Reactor Division, announces that the new High Flux Beam Reactor has reached a self-sustaining, chain reaction as Joseph Hendrie, the HFBR's Project Engineer, watches the gauges.

BERA CONCERT SERIES



The second concert of the 1965-1966 season will be given by the Rampal/Veyron-Lacroix duo on November 10 at the Brookhaven Center at 8:30 p.m.

Jean-Pierre Rampal, considered one of the world's leading masters of his instrument, was born in Marseilles, the son of a father who taught the flute at the Conservatoire.

Robert Veyron-Lacroix, son of a French industrialist, was born in Paris and revealed unusual musical talent at a very early age. He too studied at the Conservatoire, where he became pro-

ficient in a number of instruments; he chose the harpsichord - with the piano second in line.

The program will include:

Sonata in F minor.....	Telemann
Deux sonates des jeunesses.....	Mozart
Suite in C minor.....	Bach
Sonata (1958).....	Poulenc
Suite paysanne hongroise.....	Bartok

Season tickets: Adults, \$10; children (under 18 years old), \$5.

Single admissions: Adults, \$3; children, \$1.50; non-employee guests, \$3.50.

BNL SHORT SUBJECTS

Slo-Break Basketball

This is the last week to enter your departmental team in the BERA Slo-Break Basketball League. Entry blanks, obtainable at the Recreation Office, should be accompanied by a \$32 entry fee by Friday, November 5th. Seven men are needed to enter a team.

League play will begin the week of November 29. If there are any questions or help needed call either George Latham, Ext. 373, or John Van Norman, Ext. 7795.

A captains' meeting will be held Wednesday, November 10 at 12 noon in the Recreation Office. If your department does not have a team and you want to play, call the Recreation Office and have your name added to the player pool. The names in the pool will be distributed to the team captains.

Auto Sport & Touring Club To Hold Second Rally

The Brookhaven Lab Auto Sport and Touring Club will conduct its second Rally of the season Saturday evening, November 6. Titled "Moonlight Rally", it is designed for the newcomer to the sport with NO SPECIAL EQUIPMENT ALLOWED. Registration begins at 7 p.m. in the Lab Cafeteria parking lot. First car off at 7:45. Trophies will be awarded to the First, Second, Third and Dead Last Driver and Navigator. The event is open to all Lab employees, their guests and Club members. Registration fees - Club members, \$2; BNL employees (non-members), \$2.50; guests, \$3. Lab employees (non-members) may have \$1 of their fee put toward membership in the Club if they apply for membership within two weeks after the event. For any further information call Pete Hendricks, Ext. 7677.

Bridge Evenings Planned

By popular demand, the Hospitality Committee plans to host two bridge playing evenings a month for women - newcomers and oldtimers as well. The beginners are being instructed by Mrs. Frances Arnold. The second and fourth Tuesdays of every month are the set dates. Watch the BULLETIN BOARD for information on whether the gatherings will be in the Center or Recreation Building.

November 9 - Recreation Bldg. - 8 to 11
November 23 - Brookhaven Center - 8 to 11:30

"You act like a child, but you have the devil in you. And God will punish you....yes!"

—Summer and Smoke, Nov. 12, 13, 19, 20.

CAFETERIA MENU

THURSDAY, NOV. 4

Entrees

Beef Burgundy, Buttered Noodles.....	.65
Chicken Cacciatore, Rice.....	.65
Polish Sausage, Sauerkraut.....	.70

Hot Special

Egg & Pepper on a Roll, French Fries, Cole Slaw.....	.60
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Special Sandwich

Minced Ham on White, Potato Chips, Pickle.....	.45
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FRIDAY, NOV. 5

Entrees

Salmon Steak, Maitre d' Sauce.....	.65
Breaded Veal Steak, Tomato Sauce.....	.65
Seafood Newburg on Toast.....	.65
Corned Beef Hash.....	.55

Hot Special

Grilled Cheese, French Fries, Cole Slaw.....	.50
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Special Sandwich

Tuna Club, Sliced Egg, Potato Chips, Pickles.....	.60
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MONDAY, NOV. 8

Entrees

Honey Glazed Ham Steak.....	.65
Chili Con Carne, Crackers.....	.65
Little Links, Mashed Potatoes, Brown Gravy.....	.50

Hot Special

Hot Turkey Sandwich, French Fries, Tomato.....	.75
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Special Sandwich

Genoa Salami & Provolone on French Bread, Tossed Greens.....	.65
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TUESDAY, NOV. 9

Entrees

Roast Beef, Pan Gravy.....	.65
Turkey Tetrazzini.....	.65
French Toast, Bacon, Syrup.....	.50

Hot Special

Beef Barbeque, French Fries, Tomato.....	.65
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Special Sandwich

Cooked Salami, Cream Cheese, Potato Salad, Pickles.....	.60
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WEDNESDAY, NOV. 10

Entrees

Beef Stew, Vegetables, Buttered Noodles.....	.70
Roast Leg of Veal, Gravy.....	.65
Baked Quarter Chicken, Country Gravy.....	.65

Hot Special

Pastrami on Rye, Dill Pickle, Potato Salad.....	.65
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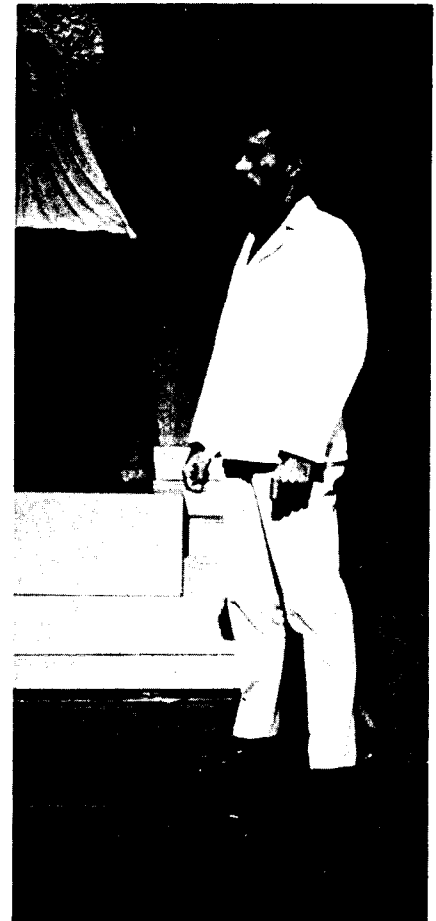
Special Sandwich

Sliced Turkey on a Roll, Cole Slaw, Sweet Pickle.....	.65
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Expectant Mothers Classes To Be Held

A series of expectant mothers classes is scheduled to start Thursday, November 4, from 1 - 3 p.m. at the Suffolk County Health Center, 15 Horseblock Place, Farmingville. These classes are sponsored by the Suffolk County Department of Health. Registration for this course is open to all expectant mothers, and there is no fee; just call 732-7071, Ext. 854.

STARRING IN "SUMMER AND SMOKE"



Julie Peierls (Alma) and her husband, Ronald, of the Physics Department, are active members of the Theater Group. Julie's most recent appearance at BNL was as Lucy Brown in "Threepenny Opera," and she also appeared in "Thurber Carnival." Her acting credits are extensive and include such roles as Essie in "The Devil's Disciple," Cindy in "The Desperate Hours," Helen in "Look Homeward, Angel," Blanche in "A Streetcar Named Desire," Lizzie in "The Rainmaker," Laura in "Tea and Sympathy," and Emily in "My Three Angels."

J. Anthony Nardi (John) is a member of the Bubble Chamber Group. "Summer and Smoke" represents his theatrical debut, and in preparing the role of John, something more than time and effort were given - a luxuriant beard was also sacrificed to the characterization.

Tickets are now available for "Summer and Smoke." The performance dates are Friday and Saturday, November 12, 13, 19 and 20. The tickets can be obtained by calling any of the persons listed below.

Directors Office.....	E. Murgatroyd
AGS.....	M. Semerjian
Applied Math.....	J. Kelly
Biology.....	L. Kalbach
Chemistry.....	E. Darcy, A. Nappi, E. Sayre
Cosmotron.....	B. Keck
HIRD.....	F. Rizzo
Hot Lab.....	M. Kinsley
Instr. & Health Physics.....	D. Sieger
Medical.....	M. Follenius, R. Korsos
Nuclear Eng.	L. Duvall, G. Jones
Personnel.....	M. Williamson
Physics.....	S. Doxsee, P. Towey
Reactor.....	E. Holz
Recreation.....	M. Walters

SIX VEHICLES OPEN FOR BIDS

Six motor vehicles, located in the rear lot of Building T-87, will be available for public sale. Inspection will be permitted from November 1st through November 5th. Bid opening will be held on November 8th.

This sale will be conducted by General Services Administration. For further information, call Jo Jackson, Ext. 2509.

GYMNASIUM TO REOPEN ON NOVEMBER 9

From Tuesday, November 9, through the month of April, the Gym will be open until 9:30, Monday through Friday evenings. Equipment is available for badminton, basketball, volleyball, exercising and other sports.

SCHEDULE

Monday

5:00 to 7:00 p.m. Volleyball League
Badminton
Table Tennis
7:00 to 9:30 p.m. General Activities

Tuesday

5:00 to 7:00 p.m. Volleyball League
Fencing Club
Judo Club
General Activities
7:00 to 9:30 p.m. General Activities

Wednesday

5:00 to 7:00 p.m. Archery Club
Basketball League
(1 game)
Table Tennis
8:30 to 9:30 p.m. General Activities

Thursday

5:00 to 6:45 p.m. Judo Club
General Activities
6:45 to 9:30 p.m. Basketball League
(2 games, 7 & 8:10)
Table Tennis

Friday

5:00 to 9:30 p.m. Tennis (by posted
self-service
reservation).

This schedule is subject to revision depending on the organized activities' final structure. Consult the posted schedule in the Gymnasium.

TEN PIN ALLEY . . .

The ladies are holding their own in the Mr. & Mrs. Black & Blue league this week - Jane Perrson rolled a 195. The Sharks occupy first place in the league standings, followed by the HC2Ls.

In the Red league - W. Brown bowled a 214-594 series and J. Van Norman rolled a 223-589 series to lead their team, the Twisters, to victory. The Twisters manage to hold on to first place in the standings and the Chug A Mugs are four points behind them in second place. M. Ruthbart rolled a 211 and B. Fox a 200 for the Chug A Mugs. J. Allinger, holding true to form, bowled a 209 for the Ah Sos.

With the Gray league, the standings at the end of the first quarter find the Losers in first place with 35 wins and 14 losses. The Fabricators hold second notch, and there is a tie for third place between the Bankers and the Bar Flies. Two men joined the 678 club - Gallagher (Splitters) with a 689 series, and Davis (AGS Beam Boys) with a 678 series.

The Nightingales, of the Rose league, hold first place in the league standings with a 2906 high gross team series; they are just two points ahead of the second place Unpredictables.

Brita McGonigle of the Pink league bowled 53 pins over her average last week. There is a tie for first place in the league standings between the All Toes and the Diamonds.

Cooking Exchange Group Meets

The Cooking Exchange Group will meet from 3 to 5 p.m. on Thursday, November 11, at the Recreation Building in the Apartment Area. All Lab wives are cordially invited to attend.

BERA Film Series Presents . . .

The Exterminating Angel and Case of the Mukkinese Battle-Horn

Thursday, November 11
8:30 p.m. - Lecture Hall

Feature: The Exterminating Angel

This is a film by the great director Luis Bunuel. A group of affluent guests come to a dinner party and are constrained to stay far longer than they expected. Bunuel long ago earned a reputation for castigating the world and showing contempt for humanity. Exterminating Angel is a savage film of extraordinary power and imagination, but it is probably not meant to be explained or extended.

"Bunuel is the first man who has taken the medium of the screen and used it to the fullest. He shows what hitherto has been denied us, not to shock, but to convince. . . . They should take Bunuel and crucify him or at least burn him at the stake. He deserves the greatest reward that man can bestow upon man."

HENRY MILLER

Short: Case of the Mukkinese Battle-Horn

Peter Sellers stars in this completely mad and thoroughly enjoyable spoof of a British mystery film. As a Scotland Yard inspector, he searches for clues to a notorious gang smuggling Mukkinese battle-horns. (It sort of looks like a trumpet - but with a bit more plumbing, of course.) This film is not guaranteed to make any sense.

"This little item is winging from the moment it begins." NEW YORK TIMES

"All of us are in the gutter, but some of us are looking at the stars."

-Summer and Smoke, Nov. 12, 13, 19, 20.

THREE-DAY MEETING WILL DISCUSS INSULIN

From Monday morning, November 8, through Wednesday, November 10, BNL will be host to some sixty of the world's leading individuals specializing in hormone activity.

The meeting, officially called the "Symposium on Structure and Function of Polypeptide Hormones: Insulin," will be a program of presentations of papers, lectures and discussions featuring some of the leading researchers in the field. Among the dignitaries is Dr. Dorothy Crowfoot-Hodgkin, a Nobel Laureate.

Attendance at the three-day program is by invitation only.

Scotch Doubles Deadline Set

Patchogue Bowling Center
Saturday, November 13
3:00 p.m.

The deadline for the Scotch Doubles Bowling Tournament is this Friday, November 5, at 3 p.m., or before if the maximum of 80 teams is reached. The Tourney is four games of bowling fun with prizes of Scotch and trophies, and an added touch of free hors d'oeuvres between periods of competition. The fee is \$5 per team. Looking for a partner? Call a matchmaker; L. Jacobson, Ext. 7772, F. Walsh, Ext. 2164, or P. Towey, Ext. 602. More information and additional application forms are available at the Recreation Office.

Zelem Receives Committee Appointment

President Toby Colletti of the Long Island Federation of Labor, AFL-CIO, appointed Danny Zelem to the Committee on Full Employment at the Fourth Biennial Convention, which was held at the Concord Hotel, Kiamesha Lake, N.Y. Mr. Zelem was the delegate for the Directly Affiliated Local Union 24426, AFL-CIO, Upton, New York.

Attention, BNL Art Connoisseurs

Starting with the opening on Tuesday evening, November 16, an exhibit of "color-motion" paintings will be on view in the BNL Exhibit Hall. The works of fourteen well-known artists in this exciting new field of art will be represented, including Ben Cunningham - "a pioneer in optical illusion"; and Paul Reed - "a one-man show at the Corcoran Gallery in Washington". Watch in next week's BULLETIN BOARD for further details.

Expressway to Link With William Floyd

The Director's Office has been advised by Traffic Authorities that by the summer or fall of 1968, the Long Island Expressway will be linked with the William Floyd Parkway.

CLASSIFIED ADS SUPPLEMENT

FOR SALE

1962 CHEVROLET - Corvair 95, ½ ton pick-up truck, r/h, 5'x8½' box, side ramp, tail gate, independent suspension, excel. cond. \$725. R. Kerzner, Ext. 2852 or YA 4-3298.

1963 OLDSMOBILE - F-85 Cutlass, convertible, auto. trans., ps, r/h, bucket seats, red/white interior, seat belts, console, good cond. Asking \$1450. N. Reiss, Ext. 2569.

1959 IMPERIAL - Excel. cond., ps, power windows, pb, push button trans., sky blue w/white & blue leather interior, immaculate. \$750. B. DiLello, Ext. 2380 or 2384.

1957 OLDSMOBILE - 88, convertible, ps/pb, new tires, excel. cond. \$325. Ext. 601 or MO 9-4794 evenings.

1963 PONTIAC - LeMans, convertible, all white, ps, r/h, bucket seats w/floor console, auto. trans., very clean. \$1195. Ext. 379.

1961 FORD - Galaxie, 4 dr., 6 cyl., std. trans., well cared for, excel. cond. all around. \$600. M. Declimente, Ext. 2430.

1964 OLDSMOBILE - Sports Olds, V8, 3-speed auto. trans. w/console and all acces., excel. cond., 14,000 mi. \$2200, firm. Dick, Ext. 2430.

1960 OPEL - Great economy car, 32 mpg, r/h, seat belts, new parts. Better than the average Opel. 878-0771 after 6.

1963 FALCON - 2 dr., std. trans., excel. cond. owner leaving country. L. Resnick, Ext. 7651 or 281-6960.

1960 METROPOLITAN - Convertible, two tonneau covers, service manual, chains, 30 mpg, looks & rides well. \$200. Ext. 2795.

1961 FORD - Fairlane, excel. cond., 2-dr. sedan, 6 cyl., std. trans., r/h, new engine, generator, fuel pump, shocks, wheel bearings, 2 new tires, 4 safety belts, tuned up recently. \$700. Owner leaving country. O. Stimsvoll, Ext. 7607.

1958 OLDSMOBILE - Super 88, 4-dr. hard-top, 58,000 mi., ps/pb, needs work. \$250. R. Goldstein, Ext. 345.

1963 FORD - Fairlane 500, 4 dr., black, V8, std. trans., r/h, excel. cond. 281-8529.

1963 CHEVROLET - Corvair, convertible, auto. trans., bucket seats, r/h, w/w, red w/black interior, excel. top w/new rear window. \$1300. 475-0088.

1960 RAMBLER - American, good cond., good shape, good buy. \$370. JU 8-2271.

1957 CHRYSLER - Windsor, hardtop, auto. trans., pb/ps, new paint & tires, excel. cond. \$395. Jean, Ext. 7163 or 281-6223.

1959 PORSCHE - Silver-gray coupe, mint cond. \$1550. Ext. 2169 or HR 3-2614.

1964 CHEVROLET - Chevy II, std. trans., 4 dr., r/h, excel. cond. Asking \$1500. AT 6-9260.

1960 OLDSMOBILE - Dynamic 88, full power, excel. cond., 4-dr. hardtop, r/h, etc. AT 6-9260.

1962 AUSTIN MINOR - 2-dr. sedan, heater. \$300. Ext. 301-39 or AT 6-0630 after 6.

1958 MGA - 44,000 mi. \$850. Ext. 2533.

1964 VOLKSWAGEN - Sedan, 18,500 mi. \$1150. Ext. 2138.

1958 RENAULT - New points, plugs & shock absorbers, just inspected. Runs well and provides inexpensive, dependable transportation. \$75. Ext. 460 or HR 3-2594.

1965 MOTORCYCLE - All-State, 1500 mi., excel. cond., many extras included. GR 5-0037.

1963 CHEVROLET - Belair, std. trans., 6 cyl., r/h, w/w, 32,000 mi., excel. cond. \$1100. Also Chevrolet Belair, 283, auto. trans., ps, r/h, w/w, 29,000 mi., excel. cond. \$1400. S. Wagner, Ext. 618.

1965 MOTOR SCOOTER - All-State Cruisair, 125 cc, w/windshield & spare wheel, 1000 mi. \$275. J. Olsen, Ext. 441.

1960 TR3 ROADSTER - Excel. cond., wire wheels with Michelin-X tires, overdrive in 2nd, 3rd, & 4th gears, excel. top & side curtains, luggage rack, r/h. B. Fox, Ext. 2528.

1963 CHEVROLET - Impala, 4-dr. sedan, white w/red interior, 283-V8 engine, ps, auto. trans., custom & convenience acces., r/h, seat belts. Reduced for quick sale, \$1600. B. Fox, Ext. 2528.

1965 PONTIAC - Tempest, 4-dr. sedan, r/h, auto. trans., ps/pb, 326-V8 engine, back-up lights, clear plastic seat covers, 6000 mi., guaranteed. \$2400. R. Kerzner, Ext. 2852.

BOAT - 1961 Chris Craft Cavalier, must be seen to be appreciated. \$3200. Ext. 2138.

12' SAILBOAT - Beetle Cat, new mast. Special fall price, \$390. Ext. 2513.

21' BOAT - Cabin Cruiser, 65 hp Gray-Marine. Good buy. AT 6-9555 or AT 6-8759 after 7.

HOUSE - In Hauppague, Colonial, 8½ rms., & basement. Dining rm., 4 bedrms., fireplace in den, eat-in kitchen, 2½ baths. Built-up patio, storms & screens, attached garage, fenced plot, tall trees, near school, ½ acre. AN 5-8662 after 5.

HOUSE - (For sale or lease) Port Jefferson Station, 3-bedrm. Ranch with appliances, \$15,900; \$140/mo. lease until June 1966; \$150/mo. lease until June 1967. C. Zuroff, HR 3-7292.

CAPE COD HOUSE - Beautifully landscaped, 3 bedrms., dining rm., eat-in kitchen, basement, attached garage, covered terrace, two-zone oil hot water heat, shades, storms & screens. Fourth bedrm & second bath roughed in. Conveniently located to shopping, schools, churches, Southern State & Wantagh Expressway. N. Massapequa vicinity. Available in January 1966. \$21,900. Don, Ext. 639.

HOUSE - 3-bedrm. Ranch w/1½ baths, full dining rm., screened-in back porch, finished recreation rm., fenced-in back yard. Located in Shoreham on ½ acre lot plus. Tom, Ext. 2877 or SH4-9085.

HOUSE - Two story, seven rms., spacious and sunny, steam heat, 1½ baths, 2-car garage, large screened porch. Conveniently located near shopping & schools. Phone evenings only from 5-9; Mon., Tues., Wed. GR5-4567.

HOUSE - In Brookhaven Village, Beaver Dam Rd., near Old Stump Rd. 6-rm Ranch, lge. screened porch, full kitchen, fire places, game

rm., 120 x 300 wooded, landscaped plot, one block waterfront. To inspect, call 286-8557. For information, contact: Zimmerman, 1216 Cochran Rd., Pittsburgh, Pa. 15216.

HOUSE - 4-yr. old Cape Cod, 4 bedrms., attached garage, full cellar, hand-hewn beams in living rm., formal dining rm., ceramic tile bath, 1800 sq. ft. of living area, modern kitchen with wall oven, washer, dryer, storms & screens of aluminum, hot water baseboard heat, brick front, situated on a rolling wooded fenced ¼ acre plot in Selden. Walk to stores transportation, high school & Community College. State University 10 min. by car, Lab 20 min. Reduced for quick sale, \$17,500. FHA 5 ¾% low-down-payment available. 732-7476.

BABY ITEMS - Crib (with mattress) & matching dresser, \$30; stroller, \$5; playpen & bath-inette, \$5 for both. AT6-1213 after 6.

MISCELLANEOUS - Ping pong table, ¾" masonite top, 2 section folding type, \$30. Fibre-glass archery bow, 30 lb. test, \$10. Ext. 2706.

MISCELLANEOUS - Oil burner, furnace and some controls, \$50; SCIENTIFIC AMERICAN, all issues from Sept. 1961 to Aug. 1965, mint cond., best offer over \$5. JU8-4707.

COINS - \$5 gold piece, 1881; \$20 gold piece, 1896. Fine to extra fine. S. Palermo, Ext. 7677.

MODERN FURNITURE - White bedrm. set, double bed w/bookcase headboard, dresser & chest, \$100; solid mahogany dining rm. set, buffet, breakfront, table & four chairs, \$150. E. Pegan, JU4-5216.

SIAMESE KITTENS - Seal Point, Blue Point, excel. pets, reasonable. 281-6050.

19" T.V. - Philco, portable, less than 1 yr. old, excel. cond. \$100. L. Resnick, Ext. 7651 or 281-6960.

WASHING MACHINE - Auto. Norge, 12 lb. capacity, excel. operating cond. \$49. Jake, Ext. 2211.

BABY ITEMS - Dresser, lamp, baby tenda, all in excel. cond., no reasonable offer refused. Jake, Ext. 2211.

MISCELLANEOUS - 40" gas stove, Maytag, good cond., \$60. Also, Paco 'Scope, 5" wide-band Model S-55. \$75. Cockrill, Ext. 7676 or 286-3649.

MISCELLANEOUS - Heathkit Pawnee 2-meter transceiver, 6-12-110V V.F.O., 4 xtal positions ANL-AQUELCH. 25' mast, 7-element 2-meter beam rotor w/silent control, guy wires, 100' RG58U mount. 20' steel tri-tower bolted construction (ideal for ham work). 21" Emerson table TV - it works. SH4-3926 after 6.

TABLE - Solid mahogany drop-leaf, authentic butterfly style, measures 20 x 46 closed, 54 x 46 open. GR 5-8202.

DELUX CHESS TABLES - 24"x15", 14" high, Walnut trim, walnut & formica top, \$15. 30"x30" mahogany & maple wood top, 28" high, \$55; 15"x15" chess board, inlaid formica, \$10. Cammarano, Ext. 691 or HR3-7142 after 6.

BATTERIES - One 6V Sears battery, 46 pl.; one 12V Autouite battery. Dmitri, Ext. 7227.

STOVE - Kenmore gas range, 5 burners, glass door oven, good cond. reasonable. Elmer, Ext. 650 or PA7-4946.

U.S. ANTIQUE RIFLES - Kentucky percussion, 52" overall, octagon barrel, full curly maple stock & ram rod, brass fittings, shooting cond., \$175; early 1800 percussion musket, 58" overall, full length two-piece stock, round iron barrel, brass fittings, excel. cond., \$65. C. Hamill, Ext. 2390 or AN5-3934.

MISCELLANEOUS - Guitar, Harmony, auditorium, steel strings, almost new, new case. Cub Scout uniform, size 12; Boy Scout uniform, size 14; also, boy's sport jacket, size 16, all in excel. cond. GR5-5894.

MOTOR - Heavy-duty electric, 1 hp, weather-proof design, like new, \$35. Ext. 2315 or 878-9679.

WHEELS - 1 set 15" Ford wheels, good for tubeless snow tires. \$5. AT9-0375 or Ext. 2315.

SHOTGUN - Mossberg, 20 ga., 3 shot, excel. cond., 1½ boxes of shells. \$30. firm. JU8-5833.

FURNITURE - Usable furniture for thrifty people; assorted living rm., bedrm., and odds & ends. All reasonably priced. L. Joiner, Ext. 2741.

MISCELLANEOUS - Complete setting of 4-piece Gorham sterling silver, new Melrose pattern, 15% off. Hi-Fi equipment - 2 amplifiers, speakers including woofers, tweeters & wide-range. T.V., 12" screen, excel. cond., \$50. P. Lieberman, Ext. 7732.

TIRE RIMS - 2, 15", perfect cond., no burrs or dents. B. DiLello, Ext. 2380 or 2384.

KITCHEN SET - Lge. gray Formica top table, 2 chairs. \$25. 286-2280.

MANDOLIN - Flat back, \$10. 286-2280.

ICE BOX - For camping or picnic (Sears - Roebuck). \$5. 286-2280.

TIRES - (3) 5.20x13, like new; 2 black wall, 1 white wall. \$20 for all three. Ext. 601 or MO9-4794.

HEATER - Smith permaglass hot water heater, 30 gal. gas, good cond. \$20. Hank, Ext. 601 or LT9-7785.

8" TABLE SAW - With two-wheeled table. Ext. 379, 2103 or LT9-3269 after 6.

LAWN MOWER - 24" rotary riding lawn mower, Clinton engine, good condition. \$50. Ext. 379, 2103 or LT9-3269 after 6.

CAR RADIO - 12V (transistor output) \$10. Ext. 601 or MO9-4794 evenings.

RADIO HAMS - 14-tube, double-conversion ham receiver, 5 bands (as shown), QST, July 1957. Ext. 423.

NOVICE SPECIAL - AT-1 Heathkit CW transmitter, 4 bands, also ant. coupler. Ext. 423.

AUTO ACCESSORIES - (1) 15" Chevrolet wheel; (3) 15" Chevrolet hub caps, large. Ext. 423.

RECORD PLAYER - Child's 3-speed player & records. Best offer. Garrett, Ext. 2123 or 828-1002.

DOLLS - Chattie Cathy, Kissie, Bride, others. Also, doll crib, carriage, house. Best offer. Garrett, Ext. 2123 or 828-1002.

DRAFTING MACHINE - Bruning. \$45. J. Gries. Ext. 2942.

RADIO - Six transistor, 2 months old, comes with ear phone, case and extra battery. \$8. HR 3-2879.

-Summer and Smoke, Nov. 12, 13, 19, 20.

CARPOOLS

JOIN - Or organize carpool from Huntington area. Flexibility desired. M. Leopold, Ext. 2549.

PAYING RIDER - Wants ride to and from Shirley - Mon., Tues., & Thurs. Ext. 616.

DRIVER - Wanted to join existing carpool from West Islip. Dmitri, Ext. 7227.

DRIVERS - Wanted for on-time carpool, Mineola-Albertson area. Ted, Ext. 657.

DRIVERS - Wanted for on-time carpool, Merrick area. Charlie, Ext. 451.

DRIVER - Or existing carpool wanted who needs another driver, Ronkonkoma area. B. DiLello, Ext. 2380 or 2384.

DRIVER - Wanted to join existing carpool from Commack area. Don, Ext. 657.

DRIVER - Wanted to complete existing carpool from Babylon, N. Babylon, W. Babylon areas. W. Seibold, Ext. 653.

-Summer and Smoke, Nov. 12, 13, 19, 20.

WANTED

1956-1959 MERCEDES - 180, 190, cond. unimportant. Ext. 7632 or AT6-0339.

STUDENTS - Experienced tutoring (by a grad. student at Columbia Univ.) available in Classical languages, Latin and Greek. Anyone interested in learning either, or in improving his present knowledge, please call Ext. 524 (day or evening).

WOOD TURNING LATHE - A. Beckwith, Ext. 2349.

IRONER - (Not a hand iron), good cond., knee control, open on both ends. S.C. Jones, Ext. 2394 or 277-9089.

SPANISH GUITAR - In good cond. A. Kokinellis, Ext. 673 or 2278.

WORK FOR FREE LANCER - Typing, editing, proofreading, illustrating, etc., 2½ yrs. experience technical publications. L. Joiner, Ext. 2741.

FOR RENT

HOUSE - 3-bedrm. Split-level in Southaven, unfurnished, oil baseboard heat, available immediately. Cockrill, Ext. 7676 or 286-3649.

HOUSE - 3 bedrms., living rm., kitchen, bath, hot water heat, washing machine and garage. GR5-7275 after 5:30.

APARTMENT - Neat little furnished apt. complete with kitchen, we supply everything but your clothes, even use of washer and dryer. Everything new and shiney, 5 mi. from Lab. Ideal for couple. 281-3558.

APARTMENT - Brand new, 4 rms., unfurnished, available November 1. All utilities included. JU5-6269 after 5.