

the Bulletin Board

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AUGUST 7, 1962

BERA FILM SERIES

"THE GOLDEN COACH"

Monday, August 13 - 8:30 p.m. - Lecture Hall

"The Golden Coach" was produced in Italy with English dialogue. Jean Renoir's magnificent tale of Italian "commedia dell'arte troupe" which comes to a Spanish province in South America in the Eighteenth Century, stars Anna Magnani. In her first English speaking role, she plays Camilla, the richly temperamental star of the troupe. The story is based on Prosper Merimees "Le Carrosse du Saint-Sacrement," with music from the work of Antonio Vivaldi. Renoir says, "I want it to reflect Magnani's well known emotional power, while revealing for the first time to American audiences, the Magnani of the music halls with her lusty talent for song and dance, buffomery and mimicry, laughter and pathos."

VISITORS

A group of about fifteen Trainees from the New York Operations Office of the Atomic Energy Commission will tour the Laboratory on Thursday, August 9.

The National Science Foundation Institute in Radiochemistry at Philadelphia College of Pharmacy Science will tour BNL on Friday, August 10.

WHERE WERE YOU?

Where were you last Wednesday night; sitting home hoping for excitement? There's plenty of it at the Recreation Building in the Apartment Area every Wednesday evening from 9:00 to 12:00. Come dance to the music of Frank Campbell's combo. Come alone, bring a date or friend. Only 50¢ admission; beer, soda and pretzels are available. See you there!

BOWLING CALENDAR

August 8	Entries being accepted.
August 24	Expiration of entry priority for last year's teams.
August 31	Deadline for all team entries.
September 4-7	League Team Captains' meetings.
September 4-7	Exec. Board Meeting.
September 17	Season Starts.

THE NEW VOLATILITY

STUDIES LABORATORY

Spent nuclear reactor fuel must be replaced with fresh when only a fraction of the uranium has been fissioned. The value of the uranium in the discharged fuel is great enough to warrant its recovery. The development of new chemical processes for the recovery of uranium and plutonium from irradiated reactor fuel will be studied in the new laboratory (Building 835) of the Nuclear Engineering Department, to be completed in September.



The New Volatility Studies Laboratory

In the reprocessing, the uranium must be separated from the fission products, as well as from cladding and matrix materials. Valuable amounts of plutonium are produced in fuels containing high ratios of uranium-238 to uranium-235; this must also be separated and purified. The high value of the uranium and plutonium necessitates minimum recoveries of 99%. Handling these materials in subsequent fuel refabrication requires that they be freed from radioactive fission products by a factor of one million. These specifications are considerably more stringent than those commonly encountered in the chemical industry.

Laboratory studies in BNL's Nuclear Engineering Department have led to two new methods, each of which gives promise of having significant advantages over those now in use. Building 835 will be used to house the engineering-scale work in the development of these methods. The experimental floor area is 36 x 72 feet, and is serviced by a five-ton overhead crane. The process equipment will be erected in a concrete pit, and will be enclosed by a protective barrier. Facilities include a small chemistry laboratory, and a mechanical equipment room.

Both processes are based upon the fact that the hexafluorides of uranium and plutonium are volatile and thereby may be separated from contaminant solids or liquids. Before this step, however, the fuel must be dissolved or disintegrated.

(Continued on Page 2)

New Volatility Studies Lab. - (cont'd.)

The Nitrofluor process being developed by the Volatility Processing Section utilizes a solution of nitrogen tetroxide or nitrosyl fluoride in hydrogen fluoride to dissolve the fuel assemblies. The resulting solution is evaporated to dryness in order to isolate the uranium and plutonium salts, for the subsequent fluorination steps. The uranium is converted by treating the solids with liquid bromine trifluoride, and the plutonium is then converted with fluorine gas. The final trifluoride, and the plutonium is then converted with fluorine gas. The final separation and purification of the uranium hexafluoride is performed by distillation. The plutonium hexafluoride, considerably less in amount, would be collected and purified by absorption techniques.

In the Fluidized Bed method, which is being developed by the Chemical Technology Group I, the fuel is immersed in a bed of inert granular material such as aluminum oxide, which is passed in an upward direction, both to react with the fuel materials at temperatures in the vicinity of 1000°F and to suspend, or fluidize, the bed. The main purpose of the bed is to transport the heat liberated during the gas-solid reaction to the cooled wall of the vessel. With sufficient gas flow through the bed, fluidization of the particles occurs, promoting uniform chemical reaction and heat removal. Control of the reaction is maintained easily by diluting the reactant gas with an inert gas such as nitrogen. The fuel matrix materials are first volatilized out of the system in these reactions, and the uranium and plutonium then converted to their hexafluorides by the use of fluorine gas at appropriate temperatures, after which each can be freed from the fission products by the methods mentioned above.

The engineering-scale studies to be conducted in Building 835 are a necessary part of the total process development. Here, the information previously learned on small-scale equipment will be checked, and the performance characteristics of prototype equipment will be determined.

**ASST. MANAGER
OF THE CAFETERIA**



Mrs. Rose Pirozzi has been designated as Assistant Manager of the Cafeteria, and is responsible for service in the absence of Mr. George Head, Manager. Mrs. Pirozzi has been employed in Brookhaven's Cafeteria since 1958, and has been with Slater Food Service, the concessionaire, since their arrival on site in 1960 to operate the Cafeteria.

Mrs. Pirozzi will be available during the day to aid patrons and see that all goes well.

Arrivals and Departures

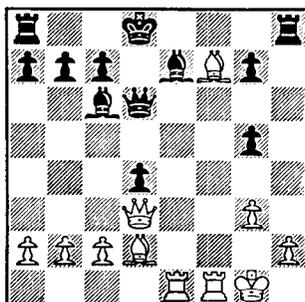
WELCOME TO BNL

ACCELERATOR	
Harold T. Costorf	Ext. 2314
Stephen K. Schutter	2410
BIOLOGY	
Gerald Courtin	2543
Sylvia Zvingilas	384
CHEMISTRY	
George H. Megrue	607
COSMOTRON	
Steven E. Perry	772
INSTRUMENTATION & HEALTH PHYSICS	
Henry Buchanan	2334
NUCLEAR ENGINEERING	
Edward G. Divis	
PHYSICS	
Charlotte C. Millaci	2245
Mary A. Simack	2245
PLANT MAINTENANCE	
John A. Kehlenbeck	2389
Walter R. Kirkman	2389
William E. Rembt	639

- MEDICAL**
- Richard L. Golden
- Joseph J. Monte
- NUCLEAR ENGINEERING**
- Joan McNally
- PERSONNEL**
- Eugene Brusie
- PHYSICS**
- Vincent W. Yannett
- PLANT MAINTENANCE**
- HERMAN SCHREIBER

CHESS PROBLEM

This week's diagram was taken from a game in Manchester in 1890, between Taubenhaus, playing with White, and Schallopp, playing with Black. It is Black's move and win. How? Answer elsewhere in this week's BULLETIN BOARD.



TENNIS TOURNAMENT

The 1962 BNL Tennis Tournament is now in its third week, and the sound of smashing serves, and furious forehand drives, can be heard reverberating across the courts, interspersed with anguished moans from people panting in short (pants).

Play has been as such a fast pace, that one contestant showed this reporter a lopsided ball which he claimed came as the result of one, mind you, one smash (WOW!).

Some of the old perennials are still on the scene (Brandon in Men's Singles, Merkle and Connell in Mixed Doubles, and Kevey with a new partner in Men's Doubles), while new entrants are also making their presence felt (Monard in Men's Singles, Bittman, Kahn, Schoessler, and Strauch in Mixed Doubles, and Bittman and Scott in Men's Doubles).

The Semi Finals will get underway in Men's Doubles and Mixed Doubles this week, while the Men's Singles finds eight "Racketeers" playing in the Quarter Finals.

RECENT DEPARTURES

- CHEMISTRY**
- Gidon Czapski
- COSMOTRON**
- George Birrell
- Rudolf F. Nissen

SOFTBALL



by ROGER CALDWELL

Hank Gorczyca pitched the slo-ball equivalent of a perfect game, as the E.A.O. defeted the Gnats 25-0. This is the first shutout of the year for any of the BNL Leagues. The E.A.O. men sparkled in infield play, whirling through three double plays. You may find the Gnats scattered in out of the way corners at the Hot Lab, sitting in sack-cloth, pouring ashes over their heads.

Following their time honored formula, the Untouchables outlasted the Upton Downers 13-10, in a generally lackluster game. The Untouchables countered the good fielding play of the Downers with heavy clubbing by Conway and Bindel.

One of the original Old Timers, George Lowe, can always be counted on for a hilarious performance, if not always great pitching. He was in rare form Thursday night, personally reducing each Phoubar to helplessness with his wit and his wip-like arm. Only incidental to Big George's performance was the score (Old Timers 17 — Phoubars 6), and some amazing fielding by the Old Timer's trio of fly-chasers, McKenna, Holmquist, and Nichik.

On the strength of Larry Cooke's three-run homer, Medical moved in to the lead in the Laboratory League by defeating the Bubble Boys 12-9. he only road block left for the Medicalmen is Health Physics. It's not that they must defeat the meter wavers, but Health Physics has a double-header with the Bubble Boys, and one win for H.P. sews it up for Medical. The big problem for Medical is, therefore, Health Physics. I suggest that it would help if the Medicalmen brought liquid refreshments down to Princeton Field, on August 13, as it is well known that the Health Physics play best when the atmosphere is congenial.

SOLUTION TO CHESS PROBLEM

- | | |
|---------------------------|-------------------------|
| Taudemhaus (WHITE) | Schalopp (BLACK) |
| 1. | 1. R x P |
| 2. R-B5 | 2. R x B |
| 3. Q x R | 3. Q x P Check |
| 4. K-B1 | 4. Q-R6 Check |
| 5. K-K2 | 5. Q-N5 Check |
| 6. | 6. Q x R Check |
| if on | |
| 2. K x R | then 2. Q-R3 Check |
| 3. K-N1 | 3. Q-R8 Check |
| 4. K-B2 | 4. Q-N7 Mate |

ATTENTION BOWLERS

WINTER BOWLING

LEAGUES FORMING

N O W

Len Baker, President of the BERA Bowling Board, says "Bowl for fun, bowl for health. Keep fit by joining our BNL Leagues now!"



Preparations are now underway for another big bowling season. We expect as many or more teams as last year. The organizing is starting earlier to avoid past difficulties, where some teams couldn't get into the league of their choice. Another change is the granting of entry priority to last year's teams. The priority is for the same league only, and at least three of last year's bowlers must be on this year's roster. This priority will expire on August 24 — one week before the deadline for all entries — August 31. League openings for new teams will be assigned on the basis of the date the entry was received. Full payment of \$3.50 per bowler must accompany each team entry.

Last year there was a Monday and Wednesday League at Maggio's in Patchogue, a Tuesday and Wednesday League at Port Jefferson, plus a Ladies' League on Tuesday at Port Jefferson, all starting at 6:00 p.m. If there is sufficient demand, these can be changed, or other leagues started.

Now is the time to get busy and get a team together. The roster can contain from five to ten bowlers. Entry blanks are available at the Recreation Office. Remember, the earlier you enter, the better chance of getting into the league of your choice!

FOLK DANCING

There will be folk dancing every Monday evening at 8:00 p.m. at the Recreation Hall.

TEAM-OF-FOUR

A large turnout is expected for the duplicate bridge team-of-four event on Thursday, at 7:45 p.m., in the Recreation Hall.

Enter your team in advance, if possible, by calling Les Lawrence, Ext. 2345 or 2591.

SOCCER

There will be a gathering of soccer enthusiasts at 5:15 p.m., Wednesday, August 8, at the Ball Feld near the Police Station.

ANNOUNCEMENT

The optician will not be at Building T-100 on August 16 and 20.



There is really only one beautiful child in the world and every mother has it.

CLASSIFIED ADS

FOR SALE

1958 ENGLISH ANGLIA - Std. trans., 2 dr., r&h, good tires, two new snow tires, 37,000 miles, good cond. J. Ford, Ext. 2560 or LT 9-3776.

1958 THUNDERBIRD - White convertible, white wall tires, r&h, excell. cond. AT 4-0536.

1956 THUNDERBIRD - Like new, 4 extra snow tires, 48,000 original "Little Old Lady" driven miles. Also: Small motorcycle, 2 cycle, 165 cc, Harley Davidson, new engine in May '62. \$150. Jeff, Ext. 322.

1960 FIAT - 2 dr., r&h, elec. windshield wipers, directionals, \$525. Rich Kerzner, Ext. 2411 or MO 5-5037.

1962 PONTIAC TEMPEST - 2,300 miles. Must sell - entering service. Asking \$2500. JU 8-3828 after 5:00 p.m.

1956 AUSTIN-HEALEY - With overdrive, wire wheels, new vinyl top, heater, good cond. \$900. GR 5-2306 after 5:30 p.m.

1958 PONTIAC - Perfect cond. p.s., p.b., 2 dr. hard-top convertible, r&h. SE 2-3338.

1956 CHEVROLET - 2 dr., Bel-Aire model, r&h. Ext. 2776.

1953 MERCURY - 2 dr., hard top, good engine. Ext. 2210 or AT 1-6133.

1956 CHEVROLET - Sedan, 4 drs., std. shift, very good cond. \$450. AT 6-0279 after 5:30 p.m.

HOUSE - 7 rooms on wooded half-acre in beautiful North Shore community. Private beach rights. Must see. SH 4-9877 evenings. SAILFISH HULL - \$50. Jeff, Ext. 322.

SAILBOAT - Old Town, white cap, 14 ft. long, 6 ft. beam, 24 in. freeboard, 7.5 hp outboard on bracket, brand new dacron sails, 2 jibs, stainless and bronze rigging, paddle and anchor. Painted this spring, and is in water. This is an excell. family boat with plenty of room and very stable. Reasonably priced. MO 9-9202 after 6:00 p.m.

14' MOTOR BOAT - Mooring cover and anchor, chain, steering gear, seat cushions, life preservers. Needs paint. Best offer over \$160. Lellouche, Ext. 550 or HR 3-2115 after 6:00 p.m.

SAILBOAT - 19' long with outboard motor. \$250. HR 3-1949 after 6:00 p.m.

BOAT - Sail the briney deep for only \$250. 12' fiberglass covered plywood boat with 14 hp Evinrude motor, navy top and side curtains, cruise-a-day tank and extras. Also trailer to fit this boat. \$75. Mac, Ext. 378 or AT 1-9559 after 5:00 p.m.

14' RUNABOUT-Fiberglass bottom, Sea King dry as a bone. Plus: Mastercraft railer with winch, plus a 15 hp Evinrude outboard motor. Accessories include anchor and line, oar locks, oar, floor boards, 3 life cushions and Motor Manual. Everything for \$325.00 G. Sabine, Ext. 391, or JU 8-5586.

16' LAPSTRAKE-CRUISERS, INC. - Everything but the motor; remote controls, navy top, full canvas cover, six cushions, battery, self-bailer, water skis and trailer. All A-1 condition. \$250. GR 5-5960 after 5:30 p.m.

RIDING LAWN MOWER - Sears, 24 in. rotary, 4 hp, used one year, \$125. John Handloser, Ext. 645 or AT 6-0167.

OVERCOATS - New cond., used only 2 or 3 times. 1) size 42 regular, dark brown, \$35. 1) size 39 short, navy blue, \$25. Owners moving to Florida. R. Betts. Ext. 670 or 941-4367 after 6:00 p.m.

CARRIAGE - Bilt-Rite folding coach, excell. cond., includes mattress, \$30. S. Rabin, Ext. 423 or AT 6-8403.

CAMERA - 135. 35mm, 5 years old. Used very little, but needs shutter repair. \$10. Bill, Ext. 2255.

SCALETRIX - English model motoring set. Track, 2 cars, control, fence. Five months old. Lellouche, Ext. 550 or HR 3-2116 after 6:00 p.m.

LABRADOR RETRIEVER PUPPIES - Available soon, a select few Show and/or Field type Labrador Retriever puppies. Dam is the holder of many awards from major shows including Westminster. In addition, she is an excell. Gun Dog. The Sire Champion Kirkside Royalist, is selected to be one of the most perfect type Labs in the Country. Del Sieger, Ext. 2169 or GR 5-3195.

FREEZER - Frigidaire Imperial, upright, 15 cu. ft., 512 lb. capacity, like new cond., 2 yrs old. \$200. Warren, Ext. 445.

SCOTT ELECTRIC LAWNMOWER - good condition, 50 ft. of line, 24 inch rotary, will sacrifice for \$45. Also have a Maytag Ironrite Mangle. Like new condition and very seldom used. \$50. Call HR 3-3036.

ELECTRIC FAN - 13 inch diam. Electric deep fryer and cooker. Ext. 2776.

1962 WESTINGHOUSE AUTO. WASHING MACHINE - Ext. 2776.

SPEED GRAPHIC - Pacemaker 3¼ x 4¼, full synch., cpld. r. f., film pack adapter, roll film adapter, flash gun and slave, hvy. duty tripod, carrying case. \$160. T. McKinley, Ext. 2556.

FM TUNER EICO - Nearly new, \$28. Ext. 711, or come to Apartment 3D.

ADMIRAL TV - 12 in. screen. Not new, but in good cond., \$18. Ext. 711, or come to Apartment 3D.

BABY CARRIAGE - Lifts out for car bed. Baby Sleeper, rocker seat, almost new. Painted wooden record and phonograph cabinet. Ext. 2776.

BABY ITEMS - Feed/play table, car bed, sterilizer, training chair, etc. \$25. Grace Schiro, Ext. 2645 or AT 6-8234.

FOR RENT

APARTMENT - 4½ large rooms in Patchogue Garden Apartments. Unfurnished, two bedrooms, ground floor, new refrigerator. Available September 1, or earlier. \$128. per mo. M. Stern, Ext. 2241 or GR 5-8556 after 7:00 p.m.

FURNISHED HOUSE - 2½ bedrooms, living room with fireplace, dining room and kitchen, large basement, fully furnished, large garden in quiet and beautiful spot in Patchogue Shores. Available September 1. YA 4-3822.

HOUSE - Unfurnished, 3 bedrooms, one year lease, available September 1. Wall to wall carpet in living room, one bedroom drapes and curtains, freezer in basement, landscaped yard, private beach rights, 10 miles from Lab. \$120 per mo. Ext. 2245 or SH 4-3814.

APARTMENT - Blue Point, 5 rooms and bath, summer porch, heat and all utilities incl. Adults please. EM 3-6509 after 6:00 p.m. for appointment.

FURNISHED APARTMENT - 3 rooms, Brightwaters-Bayshore area. MOhawk 5-5776 after 6:00 p.m.

FURNISHED APARTMENT - 2½ rooms, full kitchen, all utilities, private entrance, garage. Available September 1. YA 4-3806.

APARTMENT - 5 rooms, unfurnished, \$100. per mo. including heat. GR 5-7651.

WANTED

RIDER - To share driving and expenses to West. Leaving August 20 for two weeks. J. Mayeski, Ext. 2187.

ROLLIFLEX CAMERA - 2¼x2¼. R. Hammerstrom, Ext. 301-94.

HI-FI TURNTABLE - Used, need not have changer. \$15-\$20. Marty Benis, Ext. 2208.

HOME - For 6 weeks old kittens (six). E. Edwards, Ext. 2223 or AT 6-8592.

LADIES' ENGLISH BICYCLE - In good cond. E. Church, AT 6-0339.

TRANSFORMERS - 110v, 220v. For use with European electrical appliances requiring 220v. C. Erginsoy, Ext. 2608.

PICK-UP TRUCK - One-half ton, in running cond. 1956 or older. Ext. 2210 or AT 1-6133.

HOME - 2 male kittens, one is an orange tiger and one is beige and white. Betty, Ext. 432.

BABYSITTERS - Anyone interested in babysitting for on-site resident, please call Personnel Services, Ext. 2106.

LOST & FOUND

PIPE - Lost. Black leather labeled "Longchamp," France. Personnel Services, Ext. 2107.

PRESCRIPTION SAFETY GLASSES - Found. Brown leather case. Personnel Services, Ext. 2107.

SWEATER - Light blue chasmere lost on July 29. Ext. 2148.

GOLD WATCH - Found in Ladies Room of Bldg. 510. Eleanor, Ext. 780.

EYEGLASS CASE - Found in Research Library. Personnel Services, Ext. 2107.

RED WOMEN'S SWEATER - Found. Personnel Services, Ext. 2107.

EYEGLASSES - Found in Bank, July 30. Ext. 2266.

EYEGLASSES - With wire frames, found in Chemistry Building. Personnel Services, Ext. 2107.

CARPOOLS

Would like to join a carpool in Center Moriches area. N. Whitney, Ext. 777, or AT 4-0025.

Would like a ride from the East Setauket-Poquott area. Tom Moffett, Ext. 627.