

SHOP YOUR CLASSIFIED ADS

FOR SALE

WASHER - 1957 Speed Queen wringer type washer in excellent condition and twin portable galvanized tubs being evicted by a new automatic washer. Give these items a home for Christmas. Only \$80. Call J. Uher, Ext. 2201 or SAville 4-4687-J after 6 p.m.

EICO VACUUM TUBE VOLTMETER - VTVM - Excellent condition. Factory wired with photocell and attachment to use as photometer or densitometer. \$25. Call Dr. Tonna, Ext. 301.

LIONEL - O gauge track, 68 pieces. 6 switches, 3 transformers, 2 locomotives. 19 cars (some working models). Trestle set. Village set. Miscellaneous parts. Reasonable price. Very good condition. Phone EMerson 3-6621.

AMERICAN FLYER "S" GAUGE TRAINS engine, fender 4 freight cars, 2 automatic switches, automatic uncoupler, transformer and plenty of track. \$15. Call Gene Rogers, Ext. 481.

1952 FORD - 8 cylinder, 4-door sedan. Excellent condition. New battery and snow tires. Owner leaving Laboratory this week. \$200. Call Ext. 402.

LIONEL TRAINS - 2 trains, track layout, many accessories. Call ATLantic 4-9314.

ICE SKATES - Girl's figure ice skates. Size 3, white, worn only few times. Asking \$6. Call SAville 4-0764-J.

MOVIE CAMERA - Bell and Howell, Weston light meter, American Flyer electric train, girl's size 3 figure skates. Or suitable swap for some of the fol-

lowing: girl's size 5 or 6 figure skates; desk lamp; filing cabinet; language records (French, German); tape recorder or phono system components. Call Ext. 2263 or ATLantic 6-8215.

1953 OLDS - 4 door sedan, radio and heater, good condition. Call Ext. 678.

1951 PACKARD - automatic transmission. De Meutter, Ext. 301 or 514.

GE MOTOR - One-third h.p. 115V 60 cy. 6.0 am. 1725 rpm. Call B. Fox, Ext. 784.

ELECTRIC TRAINS - Union Pacific Double combination 027 gauge. \$5. Ext. 459.

GUNS - Daisy-Red Rider, lever action type, plastic stock and forearm, 1,000 shot, peep and open sight. Like new. Daisy-Pump type plastic stock, 50 shot force feed action "take down" model with peep and open sight. Very good condition. Quick sale. Call GROver-55960 after 5:30 p.m.

WANTED

GOOD MICROSCOPE - in trade for excellent photographic equipment. Call Ken, Ext. 2229.

TAPE RECORDER - also medium-fi; monaural phono system components; girl's size 5 or 6 figure skates; language records (French, German); filing cabinet; desk lamp. Call Ext. 2263 or ATLantic 6-8215.

LADDER - 6 foot step ladder. Call MRickard, Ext. 691.

HOUSE - want to rent a furnished, two bedroom house. Call P. Tichler, Ext. 593.

STURDY BUNK BED - Call ATLantic 6-8807.

CAR POOLS

Would like to join or form car pool from Smithtown-vicinity Rte. 111 and Bypass. McRickard, Ext. 691.

Want to form or join car pool from Center Moriches. Call Ext. 614.

FOR RENT

HOUSE - 3 bedrooms. In Bellport-East Patchogue area, fully furnished, including washer and dryer, rent very reasonable. From January 15 - June 15. Going to university to teach. Call Ext. 359 or ATLantic 6-8292.

FOUND

BLACK WOOL GLOVES - in front of Administration Building 12/14/59. White decoration with rhinestones. Call Ext. 2106.

ONE MONEY ORDER - Contact Postmaster, Upton, N.Y.

ARTICLE - from IL NUOVO CIMENTO, entitled "Experimental Results on Pion Production Compared with Predictions of the Isobar Model".

PAIR WHITE GLOVES - Call Ext. 2106.

Answers to Home Safety Quiz

Fire Safety - all **NO**

Safety From Falls - all **YES**

Safety From Poisoning - all **YES**

Other Safeguards - all **NO**

the Bulletin Board

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CHRISTMAS HOLIDAYS PAY SCHEDULE

A half-day Thursday, December 24, and Friday, December 25, will be observed as regular Laboratory holidays.

Members of the staff who are paid on a weekly basis will be paid on Thursday, December 24. The Peoples National Bank facility will be open from 8:00 a.m. to 12:30 p.m. on Thursday, December 24, and all checks will be distributed during those hours at the bank.

Weekly employees on a shift basis who will be off Thursday, December 24, may obtain their checks after 4:00 p.m. on Wednesday, December 23, from the Cashier. Those on a shift basis who are off both Wednesday and Thursday may have their checks mailed to them if they will leave their life number, name and address with the Cashier not later than Monday, December 21.

REACTOR PHYSICISTS TO MEET AT BROOKHAVEN

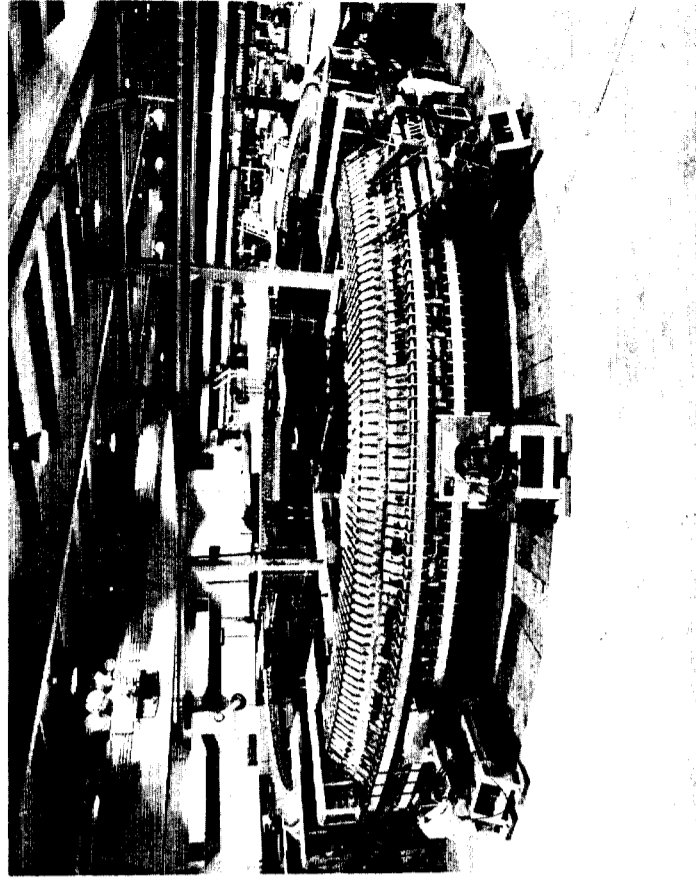
On December 17 and 18, the Atomic Energy Commission's Advisory Committee on Reactor Physics is holding a meeting at Brookhaven. The meeting is sponsored by the AEC's Division of Reactor Development. Among the topics to be discussed by the Committee are the following: nuclear cross sections, the physics of pulsed neutron reactors, nuclear codes, and reactor physics research of interest to industry. Approximately twenty persons are expected to attend the meeting.

UPTON RIFLE AND PISTOL CLUB

At the annual election meeting of the Upton Rifle and Pistol Club, the following officers were elected:

Frank German, President; Roy Domish, Vice President; Carl Goodzeit, Secretary; Paul Buhl, Executive Officer; Al Lukas, Treasurer; Pete Colombo, Chief Instructor.

The next monthly meeting will take place on January 7.



Last week the "New Cosmotron" hit its stride after being inoperative for a period of two years. The experiment which was being run tested not only the Cosmotron but the new experimental area which has been added to the old building. The Cosmotron produced its most intense circulating proton beam, a steady 10^{11} protons per pulse and about 25% of these circulating particles were extracted to make an external beam of 2 to 3×10^{10} protons per pulse.

The "New Cosmotron" differs from the old in several important ways. The accelerator is now covered with a massive shield of heavy concrete six to nine feet thick and weighing 8,000 tons. On the basis of tests made during last week's run this shield will provide adequate protection against radiation for both personnel and experiments even if the circulating beam is increased tenfold to an intensity of 10^{12} protons per pulse. The new experimental area represents another important improvement. It is a room 100 feet wide, 180 feet long, 60 feet high, free of all obstructions and serviced with a large crane. This room is about equal in size to the room previously occupied by the Cosmotron itself and represents more than a tenfold increase in the space available for setting up experiments. In addition the new area is supplied with large sources of electrical power and cooling water needed by the numerous electromagnets which are an essential part of high energy experiments. The crane serving this area makes changing these electromagnets around for different experiments a comparatively simple task. The cranes also make it possible to erect massive structures of concrete and steel around the electromagnets to serve as shielding against radiation produced by the external proton beams.

(Continued on Page 2)

COSMOTRON—Cont'd

The Cosmotron itself has been modified so that it can eject its circulating protons into any one of three external beams which traverse the floor of the experimental area in convenient directions. An experimenter thus has at his disposal rather exceptional resources. He has the needed power, the ability to move things around with few limitations as far as space is concerned and when he is ready to run, the all important high energy protons can be directed at the target he has selected. The multiplicity of external beams makes it possible to conserve Cosmotron operating time by running an experiment in one beam while the next experiment is being set up along the line of one of the other beams. When the first experiment is completed the transfer to the second can be effected with little loss in time.

The experiment which was run last week was the most difficult one attempted at the Cosmotron so far. It constituted the first real test of the new experimental area and the method of doing experiments for which the area was designed. The external proton beam was focussed on a stainless steel target to produce pi mesons at an energy of 1.5 billion electron volts. These pi mesons (about 500,000 of them per pulse) were in turn focussed on a second target of polyethylene to produce neutral K mesons (K⁰) at an energy of about 300 million electron volts. These K mesons, after being purified of charged particles by a magnet, traversed a liquid hydrogen bubble chamber where the various interactions of the particles with the protons of hydrogen can be observed. Of particular interest is the so called cascade or Xi particle generated in these interactions. These are the heaviest "elementary" particles known and only a few have been observed. It is hoped that enough will be produced to learn something about their life time and interactions with protons. The run was a successful one resulting in 30,000 bubble chamber pictures which are now being analyzed.

HOME SAFE HOME - ??



Experience has shown that the average American is three times more likely to be injured away from his job than he is while at work. Although no records of off-the-job accidents as such are kept at BNL, our relatively low on-the-job injury rate (4 disabling injuries per million manhours compared to six for all industry) would indicate a higher hazard ratio for our people while off-site.

One of the obvious off-site accident producers is the automobile, what with over 38,000 fatalities per year. Applying the average country-wide accident experience to the BNL Staff would produce one or two auto injuries EVERY MONTH! Accidents at home rank next after automobiles with 28,000 fatalities and an even greater number of injuries.

Here is a home safety quiz prepared by the National Safety Council. Can you score 100%? (Answers on page 4)

Fire Safety

Do you use your fireplace without a fire screen?

Do you allow trash to pile up in attic or basement?

Have you ever used gasoline or kerosene to start or perk up a fire?

Are your room heaters near bedding, curtains or clothing?

Safety From Falls

Do you get help when you're carrying a heavy load - or one you can't see around?

Are your basement stairs well lighted and free from clutter?

Safety From Poisoning

Are you sure ALL medicines are out of reach of young children?

Do you make yourself read the label on medicine before you take it?

Do you read cleaning fluid labels before buying to make sure they contain no carbon tetrachloride?

Other Safeguards

Right now, are you using gas or electric appliances that need repair?

Do you allow creepers and toddlers to stray from your sight - even for "just a minute"?



BERA BOWLING

GREEN LEAGUE

The Fire Department held their lead position by beating the Reefers 3-1. The Shamrocks took the Teasers 4-0 and Chemistry rolled over the Electrons 4-0. High games were: Kinney, 200; Lucas, 197; Ratyca, 190; Webster, 190; and Tierney, 202.

Standings	WON	LOST
Fire Department	29	15
Shamrocks	27	17
Reefers	24	20
Electrons	18	26
Chemistry	17	27
Teasers	17	27

BLUE LEAGUE

The Techs with only 4 men took 3 points from the Skins. Hildenbrand was high for the Techs with a 491, while Bugala was high man for the Skins with a 519.

The Irregulars stepped out of the dark to take all four points with a 459. Peters tried to help the Fire Department with a 456. The Downunders won (2) 3 points from Biology. Perry was high for the winning team with a 438. Schairer rolled a 478 to help his team take a point.

The Thumpers picked up an easy 4 points from the Cosmotron team on a forfeit.

RED LEAGUE

The Metalliks marched right over the Bismuth Kings just like five tin soldiers. They took 3 points with W. Tremel, high scorer, making a 505.

The Loopers rolled loops around the Seven-Tens, but not quite tight enough. S. Majeski rolled a 531 to help the Loopers get 3 points. The Seven-Tens' Captain, Flashy Fred Cermak rolled a 475 to push out one point for his team. The Nuclides, with only four men, took three points from the Gnats. Varela was high for the Nuclides with a 435. For the Gnats it was Newman with a 455. Did Sucher receive his payola?

The Woodbutchers chopped 3 points from the Hot Lab. W. Ruppert was high

with a 452 for the Woodbutchers. Chick (The Beach Comber) Williams helped the Hot Lab boys to get one point with a 425.

PURPLE LEAGUE

The Phoubars, by taking four points away from the Fiscal team, moved into first place. Phoubars had D. Vogt 197-546, Ole 186-519, B. Brown 202 and T. Marrion 170. Fiscal had Ebertbach with a 188 and H. Bohn 182.

The Designers, taking three points from the Bowl Aids, still are in second place. Ed Sperry had 214-529, Rocklein 183-532, and Cuccia 188. For the losers McIver 182, Schultz 177 and Walsh 171. The Toppers took four points from the Ptuis and moved into a second place tie with the Designers. Zelenka had 199-509, Rosenka 181, and Green 175. The losers had Beckwith with a 197-521 and D. German 180.

The Chain Gang took four points from the Dirty Birds. Maile had 174, Lacey 176 and Brems 162. Grisoli for the losers had 163.

VOLLEYBALL LEAGUE

The first round of the volleyball season ended with considerable shouting, hilarity, long games, and blistered feet. The Cosmotron team swept their three games to widen the gap between them and the rest of the league. Medical has protested the victory pending the outcome of saliva tests to determine if the Cosmotron team spiked Medical's pep pills.

The league resumes play January 7th. Anyone interested in playing should contact the Recreation Office, Ext. 391. Regardless of rampant rumors, it isn't true that Personnel is hiring only "six-footers" to play on their team. They all footers" to play on their team. They already have some fellows who appear to be playing with "three" feet, all of them left.

Standings	WON	LOST
Cosmotron	7	2
Medical	4	5
Personnel	4	5
Bubble Chamber	3	6

FOOD FOR THOUGHT

Always put off until tomorrow what you shouldn't do at all.

SET SHOTS

Your reporter first apologizes for not being present at last week's games, but judging upon hearsay and the score-book, I'll make a guess at how the games progressed.

The two-way tie for second place was broken unexpectedly this week as Metallurgy knocked off Chemistry after Biology took care of the Old Timers. Biology tore off a 14 points first quarter and were never headed in a 41-36 win. W. Ream's high of 15 wasn't enough against the balanced scoring of Biology, with G. Sabine at 14, R. Yount at 9, and A. Gathke with 8. Fine foul shooting by Biology was the difference as they hit 13 of 17. They needed it because they were scoreless from the floor in the last period.

Metallurgy made it easily past Chemistry with balance the overpowering factor. Everyone got into the act with H. Frei at 11, J. Brandon, W. Kenney, and A. Prodehl with 8 each toward a 45-27 victory to take over second place. Coupled with the even scoring, Metallurgy held W. Lark, who is usually good for double figures, to a mere two hoops.

Games next week will see Metallurgy vs. Old Timers at 7:30 with Chemistry meeting the Thumpers in the preliminary at 6:15. These games are the last ones this year and close out the first one-third of the season.

HOLIDAY SCHEDULE

GYMNASIUM: Preparations for Department Parties and the Christmas and New Year Holidays make necessary a schedule revision. The Gym will be closed for EVENING activities from Wednesday, December 16 and for ALL activities from December 28th to January 4th.

RECREATION BUILDING: The Recreation Building will be closed for general activity from December 22 to January 4th. The building will be open during these dates for scheduled group activities only.

SWIMMING POOL: The Pool will be closed December 24, 25, 31 and January 1st. It will be open on: Tuesday and Wednesday, December 22 and 23; also Tuesday and Wednesday, December 29 and 30.