

Courant Honored By N.Y. Academy

Ernest D. Courant, a senior physicist, is the recipient of the 1979 Boris Pregel Award for Applied Science and Technol-



Ernest Courant

Doug Humphrey

ogy. A Certificate of Citation and \$1500 will be presented to Courant at the 162nd annual meeting of the New York Academy of Sciences on December 6.

According to an Academy spokeswoman, Courant will be cited "as one of the leaders in the field of accelerator design. The award is given to him for his contributions to the development of high energy accelerators and, in particular, for his role in the discovery of the alternating gradient focusing principle. He took part in the design and construction of the world's first billion volt accelerator, the Cosmotron."

Courant has been on the scientific staff of the Laboratory since 1948. Besides his contributions to the Cosmotron, he played an active part in the analysis of proton orbits and its consequences on the design of the AGS, the construction of which was a result of the discovery of the "strong" focusing principle. Now, Courant has turned his attention to the design of ISABELLE, the third generation of Brookhaven's accelerators, and is currently devoting his time to the Theory Group of ISABELLE's Accelerator Division. He also holds an appointment as a Professor in the Institute for Theoretical Physics at SUNY, Stony Brook. For distinguished career achievement, Courant was also accorded the high honor of election to the National Academy of Sciences in 1976.

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Phys Rev To Relocate

After many years at BNL, the editorial offices of the Physical Review and Physical Review Letters will be housed under a new roof offsite. They will be joined by the composition facility for Physical Review Letters in a 12,000 sq. ft. building which is expected to be completed by the spring of 1980.

On November 3, groundbreaking ceremonies were held at the five-acre site of the new building which is approximately three quarters of a mile north of Brookhaven's main gate on the west side of William Floyd Parkway. Manning the ceremonial shovels were B. Chalmers Frazer, Managing Editor of the Physical Review, and Joseph A. Burton, Treasurer of the American Physical Society. Following the brief ceremony, attended by representatives of the APS, BNL and the Town of Brookhaven, a reception was held at Berkner Hall.

The editorial offices of the Physical Review have been located at BNL since 1951, and the Physical Review Letters was born here in 1958. The production facility which has been located in Brookhaven hamlet for

some years will now rejoin the editorial offices in the new building.

November 3 was also Samuel Goudsmit Day. In New York, at a meeting of the APS Council, the Samuel A. Goudsmit Conference Room was dedicated at the APS headquarters. Later in the afternoon, at the ceremonies on Long Island, the first day of construction of the new building was also dedicated to Goudsmit. Goudsmit, who died last December was a senior physicist at Brookhaven for many years, and also Managing Editor of the Physical Review in 1951 when the editorial offices were moved to the Laboratory site. Goudsmit later became Editor-in-Chief of all APS publications.

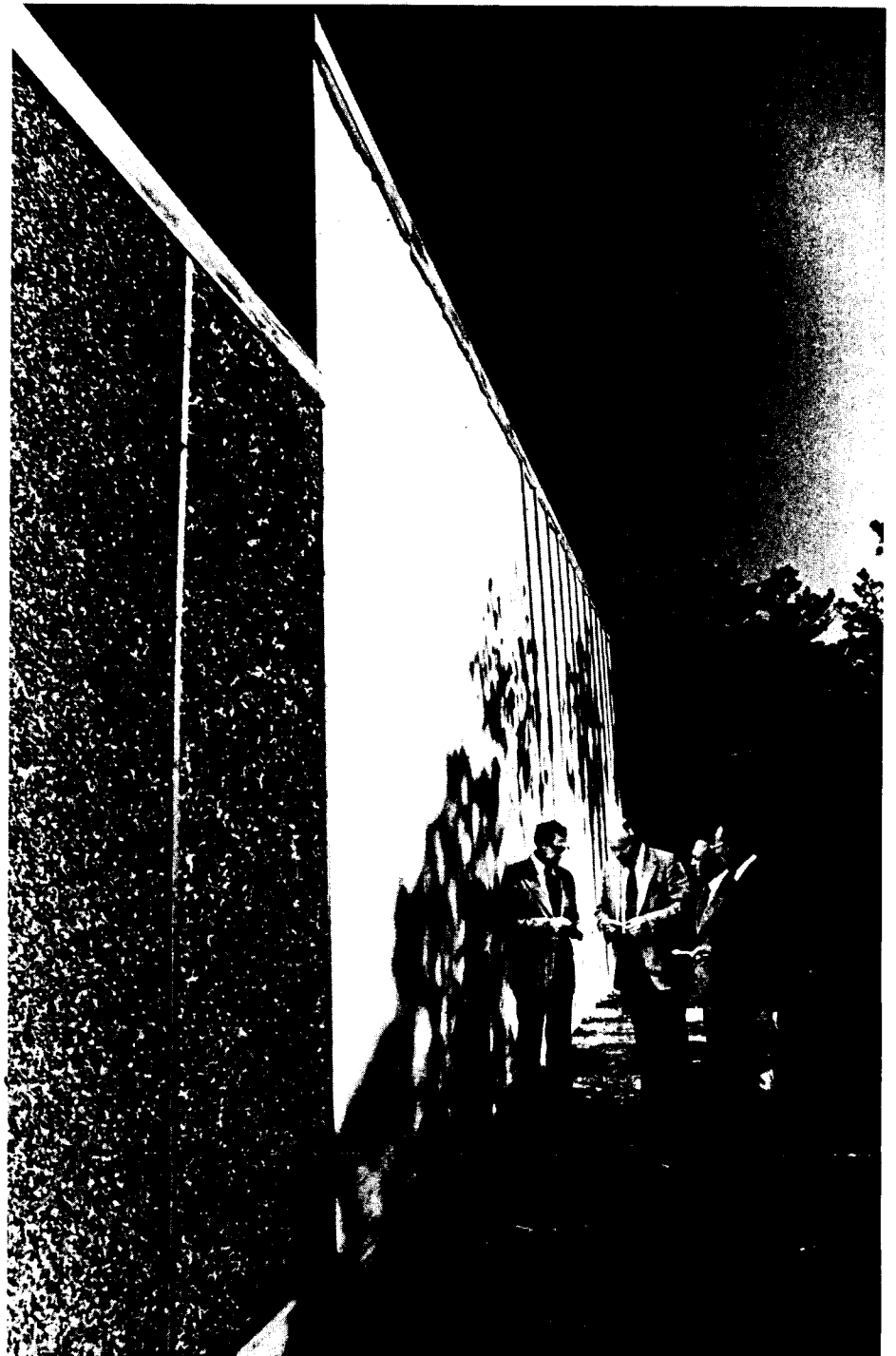
The two journals which are published by the American Physical Society are the leading journals in the world for reporting of physics research. Through the physical location of the editorial offices at BNL, close ties have been maintained between the two institutions. However, as the new building will be close by the Laboratory site, Frazer said that they expect the close association to continue.

Washington Visitor



Mr. M. Len Barry, (right) Controller of the Nuclear Regulatory Commission, paid a visit to the Laboratory last week. He was here for discussions with the DNE staff and for a briefing on the work being done for the NRC. He also toured a number of Laboratory facilities. At the AGS, accompanied by DNE Department Administrator, John B. Spraggins, he was shown around the accelerator complex by Robert Dryden (center).

—photo by Humphrey



Lab Director George Vineyard (left) and Associate Director Vincent O'Leary inspect the south wall of Building 356 which is the subject of a Plant Engineering insulation experiment. With them are John Iulo, Superintendent of the Architectural Division, and Walter Milian, Assistant Superintendent, who are in charge of the project.

—photo by Humphrey

Insulating On The Outside

The outer walls of Building 356 are tastefully cloaked in about five different kinds of finish, in shades of white and beige. It does not mean that someone has gone berserk, but it does represent the latest evolution in a program to find the most economical way of insulating concrete or metal buildings on the outside, and yet be pleasing to the eye.

When a 1976 thermography scan of the site indicated that substantial heat losses were occurring through onsite trailers, polyurethane foam insulation was applied to the roofs and walls and resulted in a significant reduction of heat loss. The application also provided weatherproofing against air and water leaks. The present surfacing experiments are being developed, not only to encompass all these areas, but to be aesthetically appealing, as well.

According to Plant Engineering staff, application of this insulation to the outside of a building has several advantages: it does not inconvenience the occupants of a building when it is being applied, and major structural work is not involved. Maintenance costs normally required for concrete block buildings are reduced. The cost of painting masonry walls and coating the insulation are approximately equal. However, the application of insulation over the masonry walls eliminates the costly operation of repointing and caulking the joints. In addition, as polyurethane insulation emits toxic fumes, it cannot be used on the interiors of buildings unless it is protected by an approved material.

The BNL system consists of spraying

polyurethane insulation on the masonry, or other surface, and coating it with a fire resistive coating. Besides being fire resistant, the coating is applied because the insulation is subject to deterioration by ultraviolet light and must be protected from sunlight. The surface can also be covered with a coat of small stones, or worked to resemble stucco finishing.

Plant Engineering has played their variations on a theme at Building 356 in the following ways. On the north wall, insulation was applied and cut back to the pre-installed wood grounds with a tool similar to a reel lawn mower blade. The surface was then coated and redwood battens fastened to the vertical grounds. On the east wall, projecting wood feature strips were installed and insulation and coating applied to achieve a high textured effect. Variations of methods used on these two walls were applied to the south wall, together with a stone finish and a stucco finish.

The insulation has an R value of 7.14 per inch. (The higher the R value of an insulation material, the more resistance it offers). The BNL treatment is a minimum of two inches which, when added to the existing wall, gives a total R value of 17, in keeping with the DOE recommended standard for exterior walls.

Plant Engineering notes that the costs vary from \$1.75 to \$3.75 per square foot for the systems used, and that the payback periods will be from four to eight years. These figures are applicable to office and other spaces serviced by standard systems.

(Continued on page 2)

Calling BNL Artists

The *Bulletin* would like to feature, once again, designs employees have created for greeting cards, on the cover page of the December 21 holiday issue.

Employees may enter their own designs, or those created by their spouses, depicting themes relative to the upcoming holiday season. The card may be one prepared for the current season, or one from a previous year. Designs will be selected for publication on the basis of quality and their suitability for reproduction in the *Bulletin*.

Please send your designs to the *Bulletin*, Bldg. 460, by December 12.

CREF Values

| | | | |
|-----------|---------|----------|---------|
| January | \$40.90 | February | \$39.47 |
| March | 41.60 | April | 41.61 |
| May | 40.58 | June | 42.12 |
| July | 42.57 | August | 44.50 |
| September | 44.60 | October | \$41.18 |

Art Show in the Wings

The work of six artists currently working in the U.S., France and England, will be displayed in Berkner Hall at the next BERA art exhibit, opening on December 5. On loan from the Pandion Gallery of Greenwich, Conn., and Fishers Island, L.I., the show will reveal an amalgam of highly imaginative techniques through a variety of media: lithographs, aquatints, bronze sculpture and textile collages.

Laboratory employees, their families and guests are invited to come to the opening party on December 5, any time from 5 to 8 p.m. The show will continue at Berkner through December 18, and may be seen between the hours of 11:30 a.m. and 1:30 p.m.

Insulation

(Cont'd)

They are not cost effective in insulating a building envelope where sophisticated air conditioning and other such systems are housed.

As soon as the weather conditions are the same, a new thermography scan of the building will be done and comparisons made with the winter of '76 scan. In addition, metered energy consumption will be contrasted before and after the insulation applications.

If the results are as significant as they think they will be, Plant Engineering will explore the possibility of insulating other buildings on site in the same manner. There are approximately 400,000 square feet of World War II masonry buildings and a large number of metal buildings at BNL that would benefit from this treatment. Plant Engineering also suggests that the system would be useful in the insulation of such buildings anywhere in the country.

Lighter Alert!

The Safety & Environmental Protection Division advises that recently, the Union Pacific Railroad has had two fatal accidents caused by butane lighters. These accidents occurred in welding areas when an employee was welding with a butane lighter in his pocket. A spark from the welder landed on the butane lighter, burned through the plastic housing exposing the fluid in the lighter which exploded. One lighter was in a shirt pocket and killed the individual instantly, the other lighter was in the pants pocket, and caused an amputation. The man later died. *There is the same amount of force in a butane lighter when it explodes as there is in approximately three sticks of dynamite.*

Scholarship Deadline

Only two weeks remain for the children of Laboratory employees to submit applications for the 1980 AUI Trustee Scholarships. Applicants are reminded that the deadline for receipt of applications at the College Scholarship Service, Princeton, N. J. is December 1. The necessary forms and further details are available from the Office of Scientific Personnel, 40 Brookhaven Avenue.



Carl Thien inspects his orchids at his greenhouse in Sound Beach. In front of him on the lower shelf are three of the 50 exotic plants he cultivates. They are known as Orange Sherbet, Malverne Grace and Incandescence. —photos by Humphrey

The Lure Of Orchids

Orchids generally bring to mind lush, tropical settings . . . fern grottos in Hawaii, rain forests in Thailand, jungles in Burma.

Actually, orchids are not unique to these kinds of climates. In fact, they grow here on Long Island, in pine forests, bogs and swamps. Six or seven species are native to this area. But to fully appreciate the endless variety of orchid species, you have to cultivate them yourself. Ken Novak, Department of Energy and Environment, and Carl Thien, Director's Office, are Lab employees who grow orchids.

Novak has a personal collection of over 250 plants. Seven years ago, he started out as an average plant lover who grew common indoor plants in his college dormitory room. Soon, he was looking for something more exotic. His first orchid lived only a few months, but he persisted, and today, he has a houseful of orchids growing in every sunlit nook and cranny.

Novak thinks that many amateur plant growers avoid orchids because of the myth that they are difficult to grow. "On the contrary, they are amazingly hardy, and are even better off neglected rather than pampered," he said. "Most orchids are killed from overwatering and too much tender loving care."

"I want to dispell another myth about orchids," he continued. "They are not rare. It is the largest family of flowering plants, and orchids grow all over the world except in desert and polar regions. I even know of an Australian variety that grows and flowers underground."

"And many orchids do have a fragrance," said Novak. "I have an *Angraecum sesquipedale*, also called Star of Bethlehem, that now has a bud. Around Christmas time, it will bloom into a lovely flower with a sweet, powerful fragrance."

An easy-to-grow orchid is the genus *Phalaenopsis*, originally named because of its resemblance to certain tropical moths. Carl Thien has a *Phalaenopsis* that bloomed at the end of April, and the same flower lasted until the middle of October. "That's one nice thing about orchids. They live a long time," said Thien. "Think about a rose. It's perfect the day it opens from a

bud. Two days later, the petals start dropping off."

Paphiopedilum is another popular orchid because it is also easy to grow and blooms in fall, winter and spring. Commonly called lady slipper, this genus is native to Asia. *Cypripedium*, another variety of lady slipper, grows here on Long Island. All lady slippers have a characteristic pouch, which resembles a slipper. The pouch may look like a water-catcher, but is functionally related to sexual reproduction. Insects are directed down into the pouch and up past the pollen, which they rub against and fertilize with pollen collected from other flowers.

Novak advises the novice orchid grower to begin with a flowering-sized plant, preferably with a bud. "It may be too discouraging otherwise to wait for it to bloom," he said.

That is how he first met Thien, who was growing houseplants and herbs in his greenhouse. Thien's wife, Ginny, brought home some orchid plants from a nursery sale. "They were plain ugly," he recalled. "When orchid plants are not in bloom, they are very unattractive."

Thien bought his first flowering orchid plant from Novak, who sells orchids for holidays and special occasions. "Ken immediately understood what I wanted, and he sold me a *Cattleya* with a spectacular white and yellow orchid in bloom," Thien recalled. That was a year ago, and already the Thiens have over 50 orchid plants in their greenhouse, which is now 90% occupied by orchids. "Birthdays and holidays are excuses for us to buy orchids for each other," Thien said.

Novak buys a lot of orchid seedlings through mail order catalogues. "He is always looking for more and more exotic orchids," said Thien. "He also has time on his side." Thien prefers to buy mature plants instead. He explained that from seedling to first blossom is about a five to seven year growth period. "When you're in your 60's," he quipped, "it doesn't make sense to wait that long for the pleasure of seeing a flower."

Thien has also found that orchids are easy to care for. "Before I started growing



Ken Novak

them, I had the notion that orchids demanded a hot, humid environment," he said. "Actually, here on Long Island, fall through spring is the best growing season." Thien has set up his greenhouse so that temperatures range from 55° F at night to 75° F during the day.

In the summertime, when the greenhouse would be too hot, he takes his orchids outdoors. He has learned, though, not to take his flowering orchids outdoors. "If a bee gets anywhere near an orchid, it will pollinate it, which promptly causes the flower to shrivel up and die. Pollination also ends a growth cycle," he explained. "The plant will then grow seed pods instead of sending up new leaves, and remember that starting from seed takes years before a flower appears."

In spite of some of these few quirks about orchid growing, both Thien and Novak still recommend the hobby to any plant fancier who wants to explore a new world. But even if you do not have a particularly green thumb, you can still enjoy the fragrance of an orchid by reaching for a bottle of vanilla extract. Vanilla beans come from an orchid plant!

United Way Campaign Off To Good Start

The United Way campaign, chaired by Rosalie Piccione, has finished its first week and the results indicate an increased interest at the Laboratory. Returns, so far, are spotty and many departments have not yet made their presentations. However, Supply & Materiel, Central Shops, Fiscal and Staff Services have made very strong showings. Congratulations are due to Lou DiCarlo, Ernie Jochen, Josephine Gazzola and Joan Perullo, who are the respective coordinators.

If you haven't already made your pledge to support United Way, please take a minute to sign your card and forward it to Payroll. Remember, no contribution is too small and fifty cents a week will go a long way to provide badly needed services.

The present standings are as follows:

| Department | No. Employees | 1979 | 1980 |
|-------------------|---------------|------|------|
| Accelerator | 675 | 67 | 5 |
| Applied Math | 132 | 20 | 11 |
| ASDP | 32 | 6 | 2 |
| AUI | 7 | 6 | 4 |
| Biology | 126 | 23 | 16 |
| Chemistry | 115 | 18 | 4 |
| Central Shops | 147 | 17 | 54 |
| DCP | 46 | 44 | 19 |
| DEE | 393 | 52 | 26 |
| DNE | 234 | 60 | 16 |
| Directors | 56 | 26 | 13 |
| Fiscal | 31 | 31 | 31 |
| Instrumentation | 54 | 9 | 1 |
| Medical | 210 | 51 | 13 |
| Personnel | 37 | 18 | 1 |
| Plant Eng. | 429 | 48 | 27 |
| Physics | 339 | 44 | 23 |
| Photo & G.A. | 54 | 14 | 1 |
| Reactors | 57 | 11 | 4 |
| S & EP | 152 | 41 | 4 |
| Staff Services | 59 | 13 | 25 |
| Supply & Materiel | 86 | 52 | 71 |
| Tech. Info. | 25 | 12 | 2 |
| | 3,496 | 684 | 373 |

BROOKHAVEN BULLETIN

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Letters To The Editor

To The Editor:

As many are aware from press reports, a horrible situation exists in Cambodia. The last several years of war, followed by mass murder under the Pol Pot regime, have reduced the population to between three and four million, about one-half the previous level. According to Keo Prasat, the U.N. representative for the current regime, at least two million face starvation in the imminent future.

At this writing, the only organization which is succeeding in bringing large quantities of food, seeds, bowls and pots to the interior of Cambodia, is OXFAM. OXFAM is a private, non-political British-based famine relief organization with American and other affiliates. It has gained respect around the world for its success in feeding the hungry and in helping them feed themselves.

OXFAM is currently devoting considerable effort to sending thousands of tons of supplies to Cambodia by barge and then by truck. As OXFAM representatives are in the interior of Cambodia supervising distribution, they can assure that food goes to civilians only. Millions of dollars are needed to support this last-ditch effort to save the Cambodian people. Money can be sent to: OXFAM America, 302 Columbus Avenue, Boston, Ma. 02116.

Those desiring more information, or who wish to help in any way, are urged to contact the undersigned at extension 2924. A local committee to support OXFAM in this endeavor is being formed.

Tony Fainberg
Dick Fuller

To Those On Bulk Mailing List

We have heard from a number of retired employees that they often receive the *Bulletin* considerably after the date of issue. On investigation, we find that the bulk mailings of the *Bulletin* leave the BNL Post Office either on Friday, or the following Monday. They assure us that the bags are tagged with a yellow tag, which indicates that the material has a time value and should be delivered as fast as possible. It therefore seems that the delay in delivery lies with the receiving post offices. Please check with them. If we could, we would send the *Bulletin* to you by first class mail, but the cost in postage would be horrendous.

Also, please note that with this issue, we are including a list of retirees' names and addresses and we hope it reaches you well before the holiday season.

Arrivals & Departures

Arrivals

Ellen M. Citrolo.....Energy & Env.
Deborah A. Costa.....Biology
Peter Kohut.....Nuclear Energy
Mario Puglisi.....Accelerator
George E. Schwender.....Physics
Mark Shleifer.....Physics

Departures

Kenneth Brezinsky.....Chemistry
James L. Jailer.....Energy & Env.

R/C Aircraft Club

There will be a meeting of The R/C Model Aircraft Club at Berkner Hall Room A, on November 21st at noon. Anyone with questions about the club is invited to attend. For more information contact Bob Larson, Ext. 4656 or Jim Durnan, Ext. 2485.



Call For Singers

The BNL Singers are now rehearsing Christmas music in preparation for the Christmas season. We welcome all interested singers. Rehearsals are on Tuesdays in Berkner Hall at noon. For further information please call Carol Kraner or Peggy Judd, extension 2540 or 2544.

Food Gift Ideas

Solve your gift-giving problems this holiday season with gifts from your kitchen. We'll have new ideas for everyone on your list, at the next cooking exchange on November 28th.

Cooking exchange meetings are held at the recreation building from 12:30 to 2:30 p.m. Admission is \$1.00, and babysitting is provided at 25¢ per child.

Wendy Green, 878-8952, will be happy to answer any questions about the meeting.

Mountain Club

Ten hardy hikers traveled to the Adirondacks this past weekend to enjoy Nature's offerings. The weather was obligingly rain-free, although the trails were often muddy and treacherous. After hiking-in to Calamity Pond, a hearty meal and a pleasant sleep in frosty tents, the assault on the high-peaks was made on Sunday. One group traversed Mt. Colden's icy heights while another undertook the climb to Mt. Marcy's cloudy dome. Early darkness forced the hikers to return to camp for a warm meal and early retirement to the confines of sleeping bags. There was one negative feature of the trip - a "lost" pack at Calamity Pond camp. However, they want to do it again in warmer weather with longer days.

Notice

Because of the two-day Thanksgiving holiday, the Bulletin will not be published next week. Publication will resume on November 30.

Women In Science

On Thursday evening Nov. 8 the Brookhaven National Laboratory - Women In Science sponsored a talk by Warren Winsche. As the featured speaker at the monthly meeting, Dr. Winsche spoke on the organizational structure at BNL and how this institution fits into the larger organization of the Department of Energy. He also spoke about budget apportionment, the influence of heads of departments and the problems of receiving tenure.

The question and answer period following Dr. Winsche's talk emphasized the problems of scientific and professional women and there was a good deal of heated discussion concerning these problems.

The Women in Science organization is a new group on site and as its name implies, the emphasis is on the support of professional women who are working in scientific fields. All women who work at BNL are welcome to join. It is the intention of the organization to vary the programs presented to appeal to the interests of everyone on site.

Please watch for announcements of future programs. For further information call Rosemary Cohen, publicity coordinator, at Ext. 3480.

THANKSGIVING



On Site Diners Note

The Cafeteria will be closed on Saturday, November 17th. On that day, Snack Bar service will be available from 9:00 a.m. to 2:00 p.m. at the Brookhaven Center.

The Cafeteria will operate only the Snack Bar Service from 9:00 a.m. until 2:00 p.m. daily over the Thanksgiving Holiday weekend, Thursday, November 22nd through Sunday, November 25th.

The Center will be closed on Thursday, Friday and Saturday, reopening at 5:00 p.m. on Sunday, November 25th.

Vegetables & Vitamins

Have you always thought that fresh or raw vegetables are better than frozen or canned? Not necessarily. It depends on how they are handled, says the Cooperative Extension.

Leafy, dark green vegetables packed in ice on their way to market keep almost all their Vitamin C. But they lose half of it if left in the refrigerator for over five days. Cooking also causes losses. Even then, leafy, dark greens still contain large amounts of vitamins, especially Vitamin C and Vitamin A.

Since cooking causes vitamin loss, cook vegetables in as little water as possible, only until crispy tender. And don't throw away the water. It's been said that this country has the best fed sinks in the world. Save the cooking liquid for soups, sauces or gravies; some vitamins are water soluble.

When fresh vegetables are canned, they are packed raw with water, and the can is sealed and processed. All the nutrients are sealed inside. Little nutritional value is lost until the can is opened, provided the contents are used within a year.

If you have left-over vegetables, don't forget them in the back of the refrigerator. Cooked vegetables lose about one-fourth of their Vitamin C after one day. After two days, they lose about one-third.

Frozen foods should be stored at 0°F to retain their Vitamin C. Even at that temperature, beans, broccoli, cauliflower and spinach lose one-third to three-fourths of their Vitamin C in a year. On the other hand, acid foods like orange and tomato juice keep very well.

Preschoolers Wanted

The Upton Nursery School has openings for both three-year-olds and four-year-olds, either two or three mornings per week. The Nursery School is at the Recreation Building and is open to children of BNL employees and guests. It has a professional staff and is run by a parents cooperative. For information call Kassie Ruth, 744-2444, or Diedre Trondle, 878-1280.

Bowling

Blue & Gold League

The Aquanauts lead the pack by 10 points with Tom Romano's 202/248 game. Walt Milian had a 226 gross game 527/626 series. Lenny Kalmar 236 gross 644 gross series. Bill Cahill had a 233 gross 647 gross series. Budd Pollock rolled a 502/631 series. Sue Perri leads the ladies with a 185/184-511/664 series. Mike Milian had a 169, Mary Scheidet 168, Ruth Sheehan 222 gross game 612 gross series and Carman Ackerman 216 gross game.

Green League

The Blue Jays took 3 from the Light Source. For the Light Source W. Rambo had a 222/588 scratch series. The Trouble Shooters could only take 4 from the Phou-bars. For the Trouble Shooters M. Angelone had a 560 scratch series. The Sparks lost 11 to the Sandbaggers. The Pinball Wizards took 7 from This Isa Team. J. Spraggins had a 201 and T. Prach a 201. The Old Timers II were postponed.

Red League

Great bowling by J. Morris (203/223/200) 626-704 series, to lead the 76'ers 7-4 over the Freon Loaders. R. Larsen had a 220/200 for 619 gross. T. Rudolf had 614 gross and F. Powers 600 gross. The Sandbaggers took 11 from the Sparks knocking

Cafeteria Menu

Week Ending November 23, 1979

Monday, November 19
Potato leek soup (cup) .35 (bowl) .45
Turkey à la king 1.30
Western omelet & 1 veg. 1.35
Hot Deli - Sloppy Joe (on bread) 1.40 (on roll) 1.50

Tuesday, November 20
Split pea soup (cup) .35 (bowl) .45
Chinese pepper steak on rice 1.45
Poached fillet & 1 veg. 1.40
Hot Deli - Pastrami (on bread) 1.35 (on roll) 1.45

Wednesday, November 21
Cream of cauliflower soup (cup) .45 (bowl) .55
Breaded flounder fillet & fries 1.40
Stuffed pepper w/spaghetti 1.45
Special: Eight foot hero .70 per inch

Thursday, November 22
Snack bar service, 9:00 a.m. to 2:00 p.m.

Friday, November 23
Snack bar service, 9:00 a.m. to 2:00 p.m.

IBEW Meeting

Local 2230, I.B.E.W. will hold its regular monthly meeting on Thursday, Nov. 29, 1979, at 8 p.m. in the Knights of Columbus Hall, Railroad Ave., Patchogue. There will also be an afternoon meeting at 2 p.m. for shift workers in the Union Office at 31 Oak Street, Patchogue. On the agenda will be regular business, committee reports and the President's report. Please note date.

New York Train Trip

The Hospitality Committee is planning a group railroad trip to the city on Tuesday, November 27. Departure will be at 7:55 a.m. from the Patchogue LIRR station. Round-trip fare for adults is \$2.45, children under six years ride free.

Reserve a ticket by sending your fare through the U.S. mail to P.O. Box 322, Upton, New York 11973, no later than Tuesday, November 20. Make checks payable to "Brookhaven National Laboratory." Your tickets will be given to you on the train. Refunds will be made only if cancellations are received by Wednesday, November 21.

Pool Closing

The swimming pool will be closed for maintenance beginning 9:30 p.m., Nov. 30, 1979. The pool will re-open after January 1, 1980.

down 3090 sticks. E. Meier (220) had a 598-682 series, K. Riker (222) 580-652, and R. Jones (222) 630 gross. The Strangers won 8-3 over the Designers. E. Sperry (211) had 611 gross, J. Kierstead 204, F. Griswold 617 gross and T. Romano 611. Isa Team only managed 4 against the Pinball Wizards. J. Sauls grossed 608 as did E. Sperry IV. The Old Timers bowled unopposed with J. Roesler having high game of the season thus far (238) and 614 gross.

Pink League

The Lickety Splits are in first place by 4 with Helen Keeley bowling a 209/524, Mary Grace Meier 181 and April Donegan 165. Deb Johnson had a 180/173, Ellie Kristiansen 175/160 and Pat Jencius 165/162. Other good games were bowled by Renie Rosati 173, Fran Nusz 170, Fran Briening 170, Millie Connelly 169, Pat Lebitski 167, Renee Flack 160 and Sue Dougherty 157.

Purple & White League

The Bippies rolled a team game of 818 net 952 gross with Gail Schuman bowling a 195, Gene Hassell 191, Sharon Smith 188, and Ken Asselta 244/567 series. Other good games were Jere Austin 221, Ken Riker 216, Jim Griffin 204, Mary Austin 192, Pat Manzella 184, Betty Jellett 181, Jeanne D'Alsace 181.

