

Isabelle Workshop Ends

7-1230-78



The two-week ISABELLE Workshop has drawn to a close. Over 80 visiting physicists, and an equal number of Brookhaven individuals have participated in parallel sessions on detectors, data handling, and experimental areas at ISABELLE. In addition to the talks, there were a number of informal meetings where specific topics were discussed. One of these sessions was held at the center of the ISABELLE ring where the participants went on a field trip.

—photos by Reben



A meeting of a Workshop subgroup in the new office wing at ISABELLE



Nick Samios, Chairman of the Physics Department and Jim Sanford, Chairman of the Accelerator Department at the center.

Avital Shcharansky's talk, which was scheduled for Thursday, was cancelled due to Mrs. Shcharansky's being taken ill in Chicago on Wednesday. The talk will not be rescheduled, since she will return to Israel directly from Chicago.

7-1227-78 Technician Training Deadline Approaches

It's the bottom of the ninth and, if you planned to apply for BNL's Technician Training Program, you're at bat. Today, July 28, is the final day to complete and return applications for the Program which will send two Lab employees to Suffolk County Community College for up to four semesters. Technically skillful applicants interested in areas such as Mechanical and Electrical Technology, Data Processing and Engineering Science and who have completed 6 months experience at BNL may apply. Don't "resign" yourself before the deadline: completed forms must be given to Peter Paige, Extension 2885, of Personnel no later than today.

Medical Mini-Tour

One of the most popular mini-tours offered by the Special Events staff ran for two consecutive weeks recently under the direction of Ed Ohanian of the Medical Department.

Ed, and a large staff of volunteers played host to almost 2400 people during the two weekends that the tour was offered. Visitors were treated to demonstrations and lectures about the Inhalation Toxicology unit, the Whole Body Counter, and the research on hypertension. As with most medical tours, visitors were reluctant to leave and tended to stay in the area to ask detailed questions about current research. The Medical staff did yeoman service in answering questions, even though the questions were sometimes of a personal nature.

Chem Help-Line

A major improvement in the Chemical Information System (CIS) – a computerized system used by scientists to identify unknown chemical compounds – has made it easier and cheaper for chemists to pinpoint the poisonous and cancer-causing substances found in air, water, and food. BNL's Chemistry Department, which operates the system for the National Institutes of Health and the Environmental Protection Agency, has announced that all of the NIH-EPA CIS data bases have been consolidated onto one central computer, which can be reached by chemists working at computer terminals connected to telephone lines.

The CIS's seven different data bases, which were previously distributed among three different computer systems, have all been installed on the facilities of Interactive Sciences Corporation, a computer company located in Braintree, Massachusetts. The company was contracted to provide computer services to the CIS by the Chemistry Department, which is responsible for all operational aspects of the CIS under an agreement between the National Institutes of Health and the Department of Energy. While Brookhaven handles operational aspects, development of the system is the responsibility of Fein-Marquart Associates (of Baltimore, Maryland), under contract to the EPA.

BNL's involvement with the CIS began in the summer of 1975, and the Lab has been officially in charge of the system's operation since the beginning of this year. Chemistry Department staff currently involved in the project are Herbert Bernstein (who is the CIS operations manager), Kathleen Taylor, Ille Perlman, Lawrence Andrews, Sherie Michale, and summer student Gerard Pelletier.

The Chemical Information System is used by scientists in the U.S., Canada, and Western Europe to identify unknown substances – including pollutants and carcinogens – in water, air, food, and manufactured materials. Nearly 400 scientists currently use the system. They represent over 200 organizations, including government agencies, petroleum and chemical firms, pharmaceutical and cosmetics companies, food manufacturers, and medical facilities.

By careful laboratory work, a chemist can produce a pattern of lines which represents the structure of a chemical compound and is equivalent to its "fingerprint." Without a computer, the next step in identifying the substance would be a time-consuming search through reference books and journal articles, to match the pattern to an identified compound.

Using a computer search system such as the CIS instead, the chemist can find the identity of the substance in a few minutes at a typewriter-like terminal connected to his telephone. In addition to identifying the compound by matching its structure against 110,000 others in its memory, the computer can provide the chemist with information about the chemical's toxicity and can direct him to the literature available on it for more detailed study.

Consolidation of the seven CIS data bases (which provide different ways of identifying compounds) will save both time and money for users of the system. Chemists can now obtain information from all of the data bases at once, instead of having to "plug in" to two or three different computers. The consolidation has also made possible a new simplified system of billing in which a yearly subscription fee and two flat hourly rates replace the component-by-component fees charged in the past. In most cases, the new billing system reduces the cost to users substantially.

Since its beginning in 1971, the CIS has grown from a system based on a single collection of data to one which includes data from England's Mass Spectrometry Data Center and Crystallographic Data Centre; the eight-nation Carbon-13 Nuclear Magnetic Resonance Consortium (based in Holland); and the United States' National

(continued on page 2)



Technician Mort Czaja checks AGS magnet coils for turn-to-turn shorts above. These are part of some 70 coils recently stripped of their radiation damaged outer insulation by a water gun which fires a 1/8 inch diameter stream of water at up to 20,000 psi. Restored coils, as opposed to those newly purchased, represent a \$250,000 savings.

—photo by Rosen

Charred Epoxy Blasted Off

"In use, the Hydro-Blast sounds like a high-powered rocket," remarked Erwin Rodger, a Development Engineer at the AGS. "It's an awesome thing."

Recently used in Rodger's department to clean 70 of the synchrotron's radiation damaged magnets, the Hydro-Blast consists of a hand-held water nozzle which serves as a gun. When the gun is attached to the diesel powered pump, water at up to 20,000 psi is forced through the nozzle's tip which is the size of a pencil point.

The AGS requires about 240 magnets to create a field which deflects moving particles. Radiation damaged epoxy anywhere along the magnet coils can cause an electrical short.

The Hydro-Blast's high pressured water pierces the layer of damaged fiberglass epoxy on the coils and removes it without affecting the copper or the turn-to-turn insulation. The epoxy becomes charred after fifteen or twenty years of nuclear radiation exposure. When it is removed, the magnet's fiberglass insulation will be replaced and the coils impregnated with fresh epoxy.

The gun must be used in favorable weather by trained operators aware of the potential hazards of the forceful stream which can sever an arm or leg. Rodger states that prior to using the Hydro-Blast gun, removing the epoxy and restoring the coils to workable condition was not considered because it took too long and was too expensive.

Use of the gun on the AGS magnets, Rodger projects, represents a \$250,000 savings to the Lab. He feels the gun might also be used for jobs such as removing paint or boiler scale, or on other difficult to clean machinery.

—Rosanne Pagano

Weekend Tour

The 200-MeV LINAC, or linear accelerator, does double duty. It pre-accelerates protons to the 33-GeV AGS for high energy physics research and it pulses protons down three other lines, BLIP, CLIF, and the Medical facility. BLIP, Brookhaven Linear Isotope Production, produces radioisotopes for medical use, and CLIF, Chemical Linac Irradiation Facility, searches for undiscovered radioisotopes.

In addition to learning about the LINAC, weekend visitors can take a long look down the 480 foot tunnel that houses the accelerator.

EXHIBIT CENTER

T
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Museum Lives In Old Bethpage

6-1739-78

TUNE IN!

#502

Question:

What is the possibility of the Laboratory either going on a ten hour day four days a week or a four day work week, to help the economy of our country?

We would like to see a poll taken and the results printed in the Brookhaven Bulletin. There are a lot of us who would be interested in this.

Answer:

Our answer to the possibility of a four-day workweek at the Laboratory is the same as it was to Tune In #345 in December, 1973.

Scheduling nonexempt employees to a 10-hour day would require their being paid overtime because of the Federal Wage-Hour laws governing Federal contractors such as AUI.

Furthermore, four-day workweek plans have been most successful in production-type operations where many employees perform the same or similar work either on an assembly line or in a large clerical setup where many of the tasks are repetitive. At Brookhaven, much of our effort goes to the support of 24-hour research facilities and there are very few repetitive or production-type jobs being performed.

Very truly yours,
Joseph S. Washburne, Manager
Personnel and Labor Relations

P.S. Approximately only one percent of the 41,500,000 wage workers in the U.S. work a four-day week.

Arrivals & Departures

Arrivals

- Thomas R. Brown.....Accelerator
- Paul A. Kessler.....Applied Math.
- Richard A. Satter.....Plant Engrg.
- John S. Sullivan.....Accelerator

Departures

- Cesar Dopazo.....Energy & Env.
- Andree-Marie Kendirgi.....Accelerator
- Leo B. Levitt.....Nuclear Energy
- John F. Monahan.....Applied Math.

Service Awards

The following employees will receive service awards during the month of July.

Thirty Years

- David E. Alburger.....Physics
- Philip R. Davis.....Chemistry
- Mary R. Dohrman.....Safety & Env. Prot.
- Frank L. Magnani.....Plant Engineering

Twenty-Five Years

- John M. Densieski.....Chemistry
- Richard W. Emanovsky.....Biology
- Helen Z. Kondratuk.....Biology
- Leigh F. Phillips.....Safety & Env. Prot.
- Reese D. Thomas.....Accelerator

Twenty Years

- Louis F. Both.....Accelerator
- Lawrence M. Cook.....Medical
- Arthur Friedman.....Physics
- Amanda L. Harrison.....Medical
- H. George Latham.....Biology
- Donald M. Miller.....Accelerator
- Chester A. Smith.....Accelerator
- Paul R. Tichler.....Reactor
- Rino Tulipano.....Accelerator

Ten Years

- David J. Diamond.....Nuclear Energy
- Joseph P. Kenneally.....Contracts & Procur.
- William H. Kropp.....Nuclear Energy
- Jacqueline Larrie.....Medical
- Otto W. Lazareth, Jr.....Nuclear Energy
- Karl E. Peterson.....Central Shops
- Robert L. Rowley.....Personnel
- James J. Shields.....Central Shops
- Grace N. Vestal.....Staff Services

Notice On King Tut

Four hundred people have paid for reservations to see the King Tut exhibit. As of today, we have confirmed spaces from the Museum for 160 people. Of the remaining number, 160 have been rejected and 80 are still in limbo. As soon as we are notified concerning these last 80, a lottery will be held for the confirmed spaces. Those who are not drawn will have their checks refunded.

Individual Ticketron tickets will go on sale September 18. Hopefully everyone will be notified by the first week in September as to whether or not they will be going with our group.



Looking up the hill toward the Manetto Methodist Church (second from left). The Village is a recreation of mid-1800 Long Island rural life.

The Old Bethpage Village Restoration is among a handful of the "live, outdoor museums" located throughout the country. The Village has been restored from about 17 buildings which have been moved to Old Bethpage from their original Long Island sites. The Village is a depiction of rural life on the Island as it would have been in the early to mid-1800's.

There are 12 buildings which the public may wander through and enjoy. The Schenck House is the oldest of the lot. Martin Schenck was the Dutch-descended owner of the home, built in 1760. Its neatly arranged rooms are large and open, and contain sleeping closets which, on very cool Long Island evenings, might be inviting, although too short, for a 20th century lodger.

The walking tour of the outdoor museum will take about three hours. It follows the Village's unpaved, wide streets which wind up and down a very picturesque site. Blacksmith, hat, shoemaker and carpentry shops all are located on a block. In each, museum staffers perform the shop's craft as it would have been done in the period. Several handmade hats and shoes, for example, made by the staff are displayed.

The Powell farm, located in the farthest corner of the museum grounds, is the only building on its original site and is a working farm where out back, vegetables are grown and farm animals are attended to. In the Powell kitchen, butter is churned and bread is baked. Village staffers perform all the farm tasks and are knowledgeable and friendly when asked to explain what it is they are doing. And on a hot day, it's good to know that homemade ice cream is sometimes made, ready by mid-afternoon; tasters welcome.

The museum has acquired the buildings of two East Norwich, Long Island stores which were managed by John Luyster, c. 1840 and John Layton, c. 1865. The stores provide a colorful contrast because the type of goods sold during those years still stock the shelves. What was indispensable for rural life in 1840, in some cases, had become obsolete only 25 years later. Penny candy, however, has certainly not fallen to obsolescence, and is sold in both stores. It is interesting to note the change in the quality, amount and variety of goods sold in the two neighboring markets.

There are homes from Hempstead, Jericho and Middle Island, in addition to the Manetto Hill Methodist Church from Plainview. The Church is a fine example of the simplicity of mid-century, Methodist architecture. Even on a warm day, the Church's situation on a hill provides a slight breeze which moves its thin, white curtains.

The Church is at the opposite corner from what would have been its sole spiritual competitor, the Noon Inn. John Noon's establishment, c. 1850, houses a worn, wooden bar, tables and patriotic wall-hangings. Instead of the fine ales once drained within its walls, today, pretzels and birch beer are the Inn's specialties.

The cassette tour which can be rented provides many small facts concerning the buildings and is largely unnecessary as the guides in each home or shop provide thorough information. Very comfortable shoes are advisable as is a quick browse through the Village gift shop. A cafeteria, located in the Reception Center, offers the usual fare which can be eaten on a pleasant patio dining area. Also in the Center is a movie, run every hour.

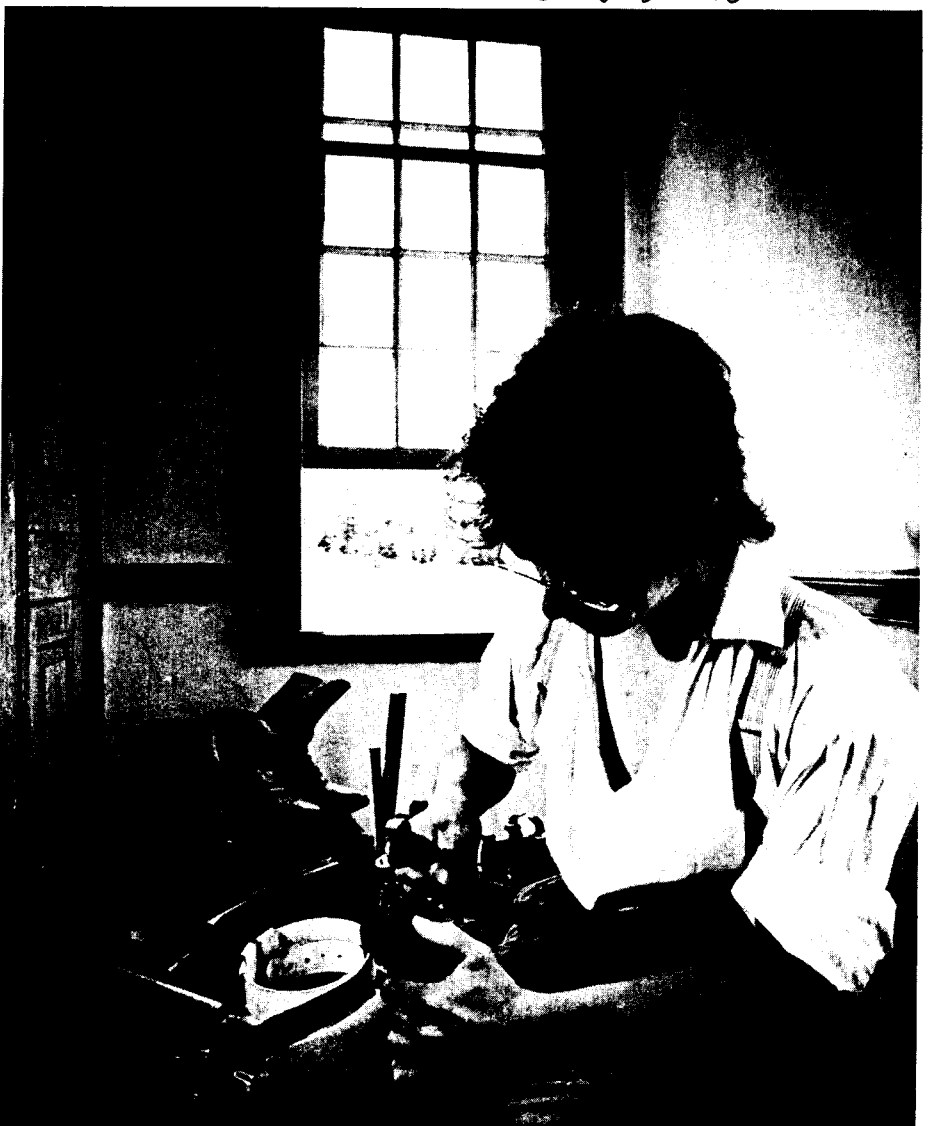
Village historian Elizabeth Hitz points out that the museum tries to show "not

just how 'it' was or how 'they' lived," because essentially, not all that much has changed in a little over one hundred years. "Attitudes, lifestyles, nuclear family life and politics" have not undergone the drastic alteration one might initially imagine, according to Ms. Hitz, and the museum does not try to exaggerate the changes that have taken place.

More than simply old buildings all in one spot, the Old Bethpage Village spon-



Graveways were places of repose both for the living and dead in the 1850's. Benches and ornamental trees line the cemetery, where no one is buried, at Old Bethpage.



Old-time, handcrafted workmanship may be gone, but at Old Bethpage Restoration Village, staff members show it is not forgotten.

sors an ambitious year-round program of activities to which the public is invited.

Other upcoming events held on the museum grounds include the ladies sociable, August 5 and 6. Not a picnic or carnival, the sociable is patterned after documented affairs held by ladies auxiliaries of the 1840's to 1860's as a fund-raising endeavor. Featured will be ice cream, lemonade and a band.

Pleasure driving will be demonstrated August 13. Horse drawn vehicles entered by the American Driving Society will be exhibited. The public is welcome to take advantage of the chance to see a variety of interesting, authentic period vehicles and as one curator noted, "very beautiful horses."

The Long Island Fair, a continuation of the Old Mineola Fair, will be held October 6, 7, 8, 9 at the Village and like true, old-time country fairs, there will be cider, doughnuts, the Old Bethpage Band and contests of produce and handcrafted items. A handmade quilt will also be raffled.

In December, the Ladies Fair is held where the handiwork of historical needleworkers is displayed. Also, December 26 through 29, the Village is open between 2 p.m. and 9 p.m. for its "Candlelight Evenings."

The entrance to Old Bethpage Village Restoration on Round Swamp Road may be reached from Exit 48, Long Island Expressway. Signs clearly mark the direction. Open daily in July and August from 10 a.m. to 5 p.m., admission to the Village is \$2.50 for adults and \$1.50 for children. For more information, call (561)420-5280.

6-1734-78 Rosanne Pagano

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Interns End Term

Representing seven area high schools, nine BOCES students completed their BNL science internships July 27. Annually, the Board of Cooperative Educational Services (BOCES) selects gifted and talented youth to participate in its summer session of advanced-level courses offered in both the arts and sciences.

The BOCES Summer Science Internship places high school underclassmen in institutes such as BNL and Stony Brook University to work with scientists who are involved in research of mutual interest. The students, selected by high school faculty members, are placed for three weeks and receive no remuneration for the educational experience.

In the Department of Energy and Environment, Shane Bouslough worked on both the software and hardware aspects of computer technology. Keith Fuchs studied different facets of instrumentation in data collecting and how this applies to actual fieldwork. David Goland, also in Energy and Environment, worked with a group involved in the analysis of effluents from industrial smoke stacks.

Both Susan Cercie and Abigal Villoda were placed in the BNL Biology Department. Susan's work in biochemistry analyzed enzyme systems that are part of the DNA repair system. Abigal helped to prepare the necessary media for the maintenance of cultures and learned the inoculation procedure.

The Medical Department hosted BOCES students Valerie Hook, Carolyn Bender and Helen Jablonski. Caroline studied not only the appearance of aberrant configuration in microscopy and histology, but also what is considered to be the acceptable range. Behaviorally induced hypertension on rats and mice was studied by Valerie while Helen was involved in a particle uptake study of mice exposed to those substances that are the products of our technological environment.

Donna Annette, who worked in S&EP, made an ecological study of the Peconic River and learned the different types of sampling techniques involved.

BNL was one of the first local organizations to participate in the BOCES program whose objective is to reinforce the interest of high school students in pursuing careers in science.

—Rosanne Pagano
7-1516-78



Susan Cercie, a junior at Shoreham-Wading River High School, applies techniques involved in cytogenetics used in her investigation. BNL's Dr. William Farland of the Biology Department supervised Susan's research. —Reben

Letters To The Editor

Dear Editor,

I would like to express my sincere thanks for the basket of fruit and the many cards sent to me from my friends and co-workers while out on sick leave. I expect to be home from the hospital shortly and hope I will be able to return to work in the near future. Thanks again.

Lou Dendato

Retiring 5-843-78



Julius Stapon will retire July 30, 1978 after 10 years of service in BNL's department of Plant Engineering. Hired July 1, 1968, Julius plans to enjoy his winters in Florida and summers on Long Island. Plenty of fishing is also on his agenda.

Golf Tournament Reminder

The next BGA tournament will be held at the Suffolk County Golf Course in Riverhead on July 31. Starting time will be 12:30 p.m.

For reservations and information call Dick Hildenbrand, Extension 3273.

Its . . . Cricket

The Brookhaven International Cricket club traveled to Ithaca to play against Cornell University last Saturday, July 22, to return the visit Cornell made last year. Four carloads of enthusiastic club members made the trip and stayed overnight for the game. The match was a disappointing loss to Brookhaven. Winning the toss Brookhaven elected to bat first; but were all out for only 25 runs. Cornell scored the necessary runs for the loss of two wickets to win the match. This victory by Cornell evens the series (1-1) between Cornell and Brookhaven. The next intramural match will be played on Sunday, Aug. 6 at the softball field. All are welcome to participate.

Help-line

(Continued)

Bureau of Standards and National Institute of Occupational Safety and Health.

"The need for systems like the CIS has grown due to the impact of recent government regulations which require manufacturers and processors to fully identify the chemicals to which they expose the public and their employees," said BNL's Herbert Bernstein.

"Among these regulations is the Toxic Substances Control Act (Public Law 94-469, October 1976), which requires the government to establish 'a standard means for storing and for obtaining rapid access to information' about chemical substances," he said. "The CIS meets all of the defined requirements of a Toxic Chemical Structure Nomenclature Search system, and can provide much of this government-required access to chemical data."

Bernstein noted that the EPA's Office of Toxic Substances has contributed funds to the Chemical Information System, enabling expansion of the system to help meet the new government requirements in the area of chemical data and data retrieval systems.

BNL's staff can and do use the CIS services. Anyone who wants information on the system should call Kathleen Taylor at Ext. 4379.

Tour Guide Luncheon



The annual luncheon in honor of the BNL Tour Guides was held in Berkner Hall on June 30. The services of the Tour Guides in escorting visiting groups around the Laboratory is an important contribution to Brookhaven's public relations. From left to right - 1st row: Ted Erickson, Beth Salata, Bonnie McNair, Vincent Lodestro, Madeline Windsor, Don David. 2nd row: Audrey Bangel, Kathy Van Noy, Carole Kerr, David Comstock, Anne Mauro, Janet Sillas. 3rd row: Diane Grady, Jackie Larrie, Joan Perullo, Marge Stoeckel, Frances Scesny, Elinor Adams, Gail Bird. Other Tour Guides not pictured are: Marie Brenner, Francine Donnelly, Carolyn Eterno, Doug Hof, Melody Howard, Karen Kalish, Louise Kilcoyne-Tanner, Marion Newton, Betty Pergan, Carol Roberts, Elaine Rowland, Gail Waite, and Pam Walton.



Dance Designer

Monday through Friday, BNL's Rippie Bowman designs structures to shield employees from excess radiation in AGS. Two or three times a month, though, Rippie "designs" to expose people to, not keep them from, something very different than radiation: Rippie is a weekend disc-jockey.

For about three years, Rippie has gone "public"; that is, he has left his basement where he practiced privately for four years, to appear at BNL dances, area clubs and weddings. He selects the music he will play at an event from his own extensive record

collection. Rippie also owns a sound system which he brings with him, and because he totes his material to his jobs, he is known as a mobile disc-jockey.

Rippie has had no formal training but says he has always been interested in music. He learned about style from listening to the radio and became familiar with the necessary electronics in connection with his work.

He would someday like to work for a radio station but not, as he says, "as the morning d-j who wakes you up every day"; Rippie would rather be involved in "mixing," which is scheduling and programming various sets of music, or in making commercials.



It'll Make You Want to "Come, Blow Your Horn"

Members of the 1978 Dinner-Theatre committee Rosalie Piccione (seated, right), Marge Stoeckel and Charlie Flood (standing, left and right), confer with chairwoman Josephine Gazzola (seated, center) and producer-director, Richard Dolce (seated, left). Neil Simon's first stage play, "Come, Blow Your Horn" will be performed September 15, 16 and 17 in the Brookhaven Center as "BNL Presents Broadway '78." The three-act, light comedy will complete an evening of dining and dancing at the Center. —photo by Rosen

