

## Users Consider Impact of Federal Budget on AGS-RHIC Physics

The annual AGS-RHIC Users' Meeting, held at the Lab on May 9 & 10, was a tale of two accelerators — and the federal budget:

BNL's Relativistic Heavy Ion Collider (RHIC) is having the best of times, in that it is being constructed on track within the cost and schedule baselined in 1994, and is making the transition from construction to installation.

However, the current fiscal year (FY) has been the worst of times in that a \$5-million cut in RHIC's construction budget has extended the machine's commissioning date by three months, to June 1999, and increased its final cost by \$20 million.

Meanwhile, the Alternating Gradient Synchrotron (AGS) is also having the best of times, in that it is the world's most intense proton synchrotron and has a full subscription of users who are taking every advantage of that beam.

However, it has been the worst of times in that the FY96 budget has so far allowed only a minimum of running time this year and, while hopes have been expressed regarding increased time next year, next year's budget to pay for that time remains flat.

"Basic research in the U.S. has attractive prospects, but only with the cooperation of the users, administra-

tors and sponsors in these especially tight budget times," stated Thomas Kirk, BNL's Associate Director for High Energy & Nuclear Physics. "I don't know what all the answers will be this year or next, but I do know that it is the users who can hold the bottom line, as long as their experiments and results are compelling."

### AGS: More Upgrades Outlined

Today's AGS, as the users were informed by AGS Accelerator Division Head Thomas Roser, remains the world's most intense proton synchrotron, with  $6.33 \times 10^{13}$  protons per pulse (ppp) at its peak and typical beam intensities of  $6 \times 10^{13}$  ppp.

Roser outlined three upgrades which would result in increasing the AGS's intensity to more than  $10 \times 10^{13}$  ppp. In addition, with a peak power of 1 megawatt, this beam would be powerful enough to be used by accelerator physicists to test the concept of a muon collider.

In fact, on behalf of the Division of High Energy Physics (DHEP), Office of Energy Research (OER) in the U.S. Department of Energy (DOE), Earl Fowler, Facilities Operations Branch Chief, offered his congratulations for the world's record proton intensity.

Regardless, the 600 or so present-day users of the AGS's proton beam



**At the 1996 AGS-RHIC Users' Meeting are: (from left) William Molzon of the University of California, Irvine, who is chairman of the AGS-RHIC Users' Group Executive Committee; Sylvia McDonald Monlyn, Director of the Office of Strategic Planning, Budget & Program Evaluation, U.S. Department of Energy (DOE), who spoke at the meeting about women in DOE; and Thomas Kirk, BNL's Associate Director for High Energy & Nuclear Physics.**

fear "the research at the AGS is being marginalized because it isn't the highest energy accelerator, so, when the

budget cuts come, the AGS will be on the block," commented William Molzon of the University of California, Irvine, who is chairman of the AGS-RHIC Users' Group Executive Committee.

He elaborated: "Though the AGS's high-energy physics program receives high marks when it is reviewed, there is insufficient money for sufficient running time. And when the money is granted, it is not budgeted effectively: While \$45 million is spent for 12 weeks of running time, \$49 million, or only \$4 million more, would pay for 24 weeks. So researchers have to spend two years to take one-year's worth of data."

Kirk pointed out, "We have an operating accelerator and experimental program right here and now, while particle physicists elsewhere are engaged in things that won't happen for another three to 15 years — but you can't offer graduate students opportunities for thesis experiments unless it is something on a reasonable scale. We are not saying that you shouldn't put effort into the future, such as the Large Hadron Collider at CERN, etc., but that you have to maintain your scientific output in the meantime — and you can do that here at the AGS."

### Pushing for Extra Run Time

BNL's Director Nicholas Samios added, "The AGS's present program is great, and planning for the AGS of the year 2000 and beyond is taking place. In two years, SLAC and Fermilab won't

(continued on page 2)

## BNL Starts Second Round of Clinical Trials Of BNCT — A Therapy for Brain Tumors

Encouraged by results over the past 20 months, BNL, in collaboration with the University Medical Center at Stony Brook, has begun a second round of clinical trials of boron neutron capture therapy (BNCT), an experimental treatment for brain tumors.

Brookhaven researchers are continuing clinical trials at a higher dose of radiation, under another protocol covered by the U.S. Food and Drug Administration (FDA) investigational new drug application. In addition to increased radiation dose, the new protocol has other provisions for improving the effectiveness of the therapy

Arjun Chanana, a senior scientist in BNL's Medical Department, is the principal investigator and the physician in charge of the new protocol. He explained that the researchers — who include Medical's Jacek Capela, Jeffrey Coderre, Darrel Joel, Ben Liu, Daniel Slatkin and Lucien Wielopolski — are studying the treatment on glioblastoma multiforme, an especially virulent type of brain cancer that affects about 7,000 Americans each year. Life expectancy of patients with this form of cancer is limited, with fewer than three percent surviving beyond five years.

At present, BNL is the only location in the U.S. where researchers are conducting clinical trials of BNCT on brain tumors. Brookhaven's BNCT program is funded by the Office of Health & Environmental Research in the U.S.



Department of Energy's Office of Energy Research.

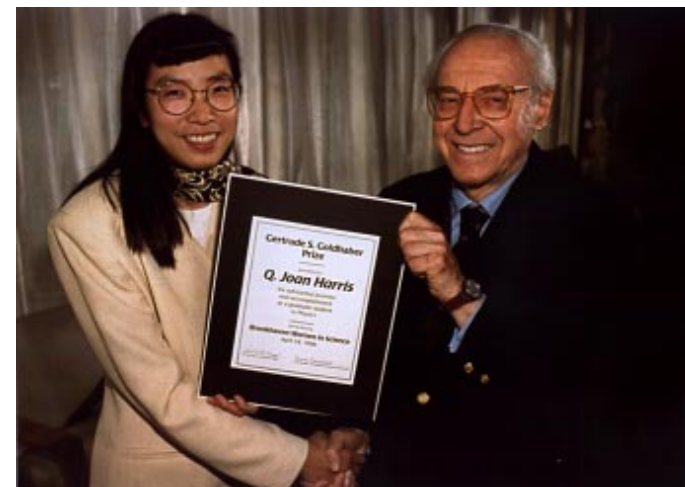
### First Results Are Encouraging

After the Brookhaven researchers treated a single patient at the Lab in September 1994, a multipatient, FDA-approved, clinical trial was begun in February 1995.

Of the 15 patients treated with BNCT at Brookhaven since 1994, eight are still alive. The initial clinical trial proved that the type of BNCT used had no adverse effect on normal brain function and that BNCT delayed tumor regrowth in almost all patients.

In contrast with standard radiation therapy and chemotherapy, which are delivered in multiple sessions over many weeks, BNCT is delivered during a single session. Patient survival following BNCT, as used in the first round, compared favorably with the survival achieved following standard therapy.

In BNCT, a compound containing the element boron is administered intravenously to the patient, in whom it accumulates preferentially in malignant tumor tissue. The tumor is then irradiated with neutrons produced by the Brookhaven Medical Research Reactor (BMRR). Some of the boron atoms absorb neutrons and then self-destruct, releasing powerful but very short-range radiation selected (continued on page 2)



## Q. Joan Harris Wins Goldhaber Prize

Q. Joan Harris, a graduate student in physics at the Massachusetts Institute of Technology (MIT) who carried out her thesis research at BNL's National Synchrotron Light Source and High Flux Beam Reactor, was awarded the Gertrude S. Goldhaber Prize in Physics on April 24. Nominated by AUI Trustee Robert Birgeneau, MIT, a long-term visiting physicist at BNL, Harris was recognized for work that included studies of liquid crystals, random field effects in disordered magnetic systems and the physics of systems with competing spin anisotropies. Presented by Brookhaven Women in Science (BWIS), the \$500 award honors noted nuclear physicist Gertrude Scharff-Goldhaber, who has long encouraged education and opportunities for women in science. She was the first woman Ph.D. to be hired at BNL, when she and her husband, former BNL Director Maurice Goldhaber, now AUI Distinguished Scientist emeritus, came to the Lab in 1950. At the ceremony, organized by Vinita Ghosh and Louise Hanson of BWIS, Maurice Goldhaber presented the award to Harris (see photo at left), who was introduced by Gen Shirane, Physics, her mentor at the HFBR. Harris then gave a seminar on synchrotron studies of random magnets.

— Liz Seubert



# BNL Switches to Thermoluminescent Radiation Dosimeters

Since January, you may have noticed a change in the device that you wear to measure your on-the-job radiation exposure in radiological areas. But the change isn't for the sake of appearance: For the past four months, instead of clipping a film badge to your person, you have been wearing a thermoluminescent dosimeter (TLD).

Worn the same way that a film badge was, "TLD is the state-of-the-art and most accurate way to date of gauging a worker's radiation dose," says George Holeman, Team Leader of Personnel Monitoring within the Safety & Environmental Protection Division. "As a result of the switch, because the TLD is more sensitive than a film badge, we have begun reporting very small doses, from exposures that, in the past, we could only report as minimal."

With the old film badge, film within the badge would be exposed when the wearer was exposed to radiation. After each monthly exchange, the film would be developed and, based on the negative's optical density, the dose was estimated.

When a worker wearing one of the new TLDs is exposed, lithium fluoride (LiF) crystals within the badge absorb the radiation and retain it as stored energy. After the badge is turned in, the LiF crystals are heated, causing

them to emit this energy in the form of light. The emitted light is measured, and, since it is proportional to the amount of absorbed radiation, the dose can be determined.

All BNL employees, guests and visitors are required to wear TLDs while working in or being escorted through an area where radioactive materials or external sources of ionizing radiation are found. Since radiation dose is cumulative over time, TLDs are evaluated monthly, so exposure is monitored and limited under Lab standards for occupational exposure.

After appropriate training, employees and guests who regularly require dosimeters are issued permanent badges, which are exchanged monthly. At the time of need, visitors' badges are issued to employees and guests who only occasionally work in radiation areas, and to visitors who are properly escorted through radiation areas.

While the old film-badge dosimeter resembled a clip-on tie bar, a TLD looks like a car-alarm clicker with a clip-on strap. On the front of permanent badges, the 1.5-inch-wide by 2.5-inch-long black plastic holder has a bar-coded label on which is printed your last name, first initial, life number and badge-location code.

On the back of the badge is a red plastic window through which is seen

a bar-code label: This window allows verification that the TLD is present within the black-plastic holder and that it is positioned correctly. The TLD is made up of four LiF crystals which measure three forms of radiation: beta radiation, photons and low-energy neutrons.

So, found on the bottom front of the badge is a circle of aluminized Mylar film with the word "HARSHAW" printed; it allows beta radiation to penetrate the badge and be detected. Above the beta window is a bump, a raised piece of plastic which permits the measurement of penetrating photon radiation. Adjacent to the bump, the LiF crystal found under the top right corner of the holder is used to resolve photon energy. Low-energy neutrons are detected by a crystal in the bottom right corner, adjacent to the beta window.

A clear pouch containing two pieces of plastic is attached to the badge of any worker exposed to high-energy neutrons.

On the bottom of the front of permanent badges is a blue or yellow strip, colors that will be alternated depending upon the month (blue is for May, yellow for June, blue for July, etc.). Visitors' badges always have a red strip along the front bottom, to identify their wearers as requiring proper escort.

"Though we are measuring the same types of radiation with a more sophisticated device, a TLD can't work any better than a film badge if it isn't worn or worn properly," explains Holeman. "So, the general rules of using a personnel dosimeter remain the same [see box at right]." — Marsha Belford

## How to Wear A Dosimeter

- Wear a dosimeter when warning signs or a representative of the Safety & Environmental Protection (SEP) Division directs you to do so.
- Clip your TLD between your neck and waist, with the name tag facing out.
- If you have the supplemental neutron pouch, then it must sit between your badge and your body.
- When you are assigned a direct or self-reading dosimeter, then it must be worn next to your TLD, unless directed otherwise by your SEP rep.
- Wear your BNL TLD only at the Lab.
- Never wear a TLD assigned to someone else.
- Report damaged, missing or lost TLDs to your supervisor or SEP rep.
- Return your TLD to the badge board at the end of your work day.
- Expect your TLD to be exchanged during the first weekend of the month.
- Do not tamper with the badge or deface the bar-coded label.
- Do not obstruct the HARSHAW circle on the front of the badge which detects beta radiation.
- Do not place the TLD on hot surfaces such as dashboards, sun visors or car trays.

## AGS-RHIC Users Meet (cont'd.)

be operating [due to construction of upgrades], so DOE will have extra money for operating — so we're pushing for it" on behalf of AGS proton-beam users.

As for now, Kirk said, "We are trying to get money for an additional month's proton run in June, by putting it together from various sources," including an OER contingency fund, discretionary funds from BNL's Director and money from other sources outside the high-energy physics community.

Concurred Fowler, "We are trying to help increase the running time this year and to substantially increase it for next year."

For next year, Samios also pointed out that the funding proposed for energy research in the President's budget, which was already submitted to Congress, "looks good — relatively flat dollars, which, in these budget-slashing times, isn't bad. The strategy in the field is to ask for some increases and to try not to take any more cuts, which is a reasonable expectation because science is not high on the hit list, and Congress has sympathy for basic research."

Agreed Fowler, "It is remarkable that the budget for energy research has held up as it has. If it can be kept at constant dollars, then we can do what we are committed to do, including what you want to do."

### Looking at the AGS in Year 2000

For the year 2000 and beyond, "We are looking into the future, and we see that we are not yet prepared to quit doing fixed-target experiments at the AGS," stated Kirk. To plan for the first decade of "AGS-2000," a week-long workshop, which is concluding today and sponsored by BNL and DHEP, has been exploring the use of the AGS for precision measurements and rare-process studies.

In 1999, OER's Division of Nuclear

Physics (DNP) will pick up the majority of the operating cost for the AGS when it becomes an injector for RHIC; however, the AGS will only be used by RHIC for four hours a day — leaving 20 hours of operating time open for particle physics.

Concludes Kirk, "AGS-2000 will be extremely cost efficient for DHEP to operate," and Fowler agreed, "DHEP hopes for interesting physics from AGS-2000, but at a much lower price."

### RHIC: A Flagship Initiative

While the future of the AGS-2000 is being planned, RHIC's future is certain: "RHIC is the flagship initiative of our program," declared Dennis Kovar, Heavy-Ion Program Manager of OER's DNP. "Utilization of the AGS is part of that program, and we plan a smooth transition as the AGS is moved from High Energy to Nuclear Physics."

And, as reported to the users, the long-range plan of the Nuclear Science Advisory Committee noted, "RHIC remains our highest construction priority. Its timely completion and operation is of utmost importance for discovery of the quark-gluon plasma and study of this new form of matter."

Continued Kovar, "The nuclear physics community has analyzed where it wants to go and has decided that RHIC is the forefront. The reality is, given the federal budget, we cannot get there as fast as we'd like. But, with BNL's receiving one-third of the nuclear physics budget, we are getting there as fast as we can."

### Concentrating on the End Game

With 70 percent of the collider construction completed, "The conventional construction for the RHIC project is done, and the focus of the project is shifting from accelerator and detector design and production to the integration and commissioning of their subsystems," declared RHIC Project Head Satoshi Ozaki.

In fact, Ozaki reported, RHIC will take delivery of the last Northrop-Grumman dipole magnet at the end of May, and more than half of the corrector-quadrupole-sextupole magnets have been assembled in house.

Not only are magnets being installed in the tunnel, but performing the interconnections between them is proceeding on schedule. In addition to having commissioned the AGS-to-RHIC transfer line, the 25-kilowatt, liquid-helium refrigeration system, which had been mothballed since 1985, "came to life beautifully."

Planning for RHIC now focuses, according to Ozaki, on the "end game: how to commission the collider and its detectors to assure full-scale physics as soon after startup as possible."

### Experimental Update

Regarding RHIC's detectors, Asso-

## New BNCT Trials (cont'd.)

tively in the tumor. Because the boron concentrates in the tumor cells, researchers hope that BNCT's selective radiation will control the cancer's growth without seriously affecting normal brain cells nearby — a hope that was fulfilled in the initial clinical trial.

The second phase of clinical trials will increase radiation dose to tumor in part by either increasing patient exposure time to neutrons or increasing the power of the BMRR from 2 megawatts to 3 megawatts. Increasing the radiation dose to the tumor will also increase the dose to normal brain tissue, but this dose is still well within the limits that physicians consider safe for the normal brain.

Also enhancing the radiation dose to tumor is a new collimator, a neutron guide developed at Brookhaven and installed at the reactor.

Yet another change in the FDA-sanctioned protocol is an allowance for applying the neutron radiation to two sides of the brain, as is done in all

ciate RHIC Project Head Thomas Ludlam reported that construction of RHIC's detectors is 30-40 percent complete: "The two large detectors, PHENIX and STAR, are well into construction, while we are just starting on the two smaller detectors, BRAHMS and PHOBOS."

And, since polarized protons are being proposed to be collided in RHIC at energies up to 500 billion electron volts, both large detector groups have plans to take advantage of this spin-physics opportunity.

Further, besides having possibilities for the proposed spin-physics program, "a new experiment — total and differential cross sections and polarization effects in proton-proton elastic scattering — has come on the map, with the goal to extend these measurements to the top energy of RHIC," added Ludlam. — Marsha Belford

standard radiation therapy. This option will make BNCT more effective for patients with deeper-seated tumors.

### Patient Criteria

"As encouraging as results were in the initial clinical trial, BNCT is still considered experimental," Chanana emphasized. "So this new study is designed to investigate the therapy's safety, identify any potential adverse effects and study its effectiveness — all at a higher radiation dose."

"At present," Chanana added, "the program is limited to patients with a diagnosis of glioblastoma multiforme who are at least 18 years old and have never had radiation, chemotherapy and/or immunotherapy for their brain tumors." In selecting patients for this second clinical trial of BNCT, the researchers will also consider other factors, such as the tumor's location.

Patients and physicians interested in BNCT can learn more by calling Brookhaven's BNCT Office, at (516) 344-3684. — Mona S. Rowe

## Watch That Laptop!

Employees who travel with laptop computers should be aware of a hustle recently described by the U.S. Federal Aviation Administration.

The alert warns of a hustle being employed at airports nationwide to steal laptop computers. It works like this: Two people look for a "mark" — someone carrying a laptop who is approaching a metal detector. Positioning themselves in front of the mark, they stall until the mark puts the laptop on the conveyor belt. Then, after the first person moves through the metal detector easily, the second person sets it off, beginning a slow process of emptying pockets, removing jewelry, etc. While this is happening, the first person takes the laptop and quickly disappears. Sometimes a third person will take a handoff from the first one.

To avoid becoming a mark, if you're traveling with a laptop computer, try to avoid lines to enter a metal detector, or at least delay putting luggage and laptop on the conveyor belt until you're sure you'll be the next person through. As you move through the metal detector, keep your eyes on the conveyor belt and watch for your luggage and laptop to come through — and watch for what those in front of you are picking up.

## Fly to Block Island

To tour the island on foot, or by bicycle or moped, the BERA Aviation Club will fly to Block Island on Wednesday, June 5; the rain date is June 12.

For the 45-minute flight each way, planes will depart from the Brookhaven and Islip-MacArthur Airports at 8 a.m. and return around 6 p.m. If all seats are taken, the cost for the flight will be \$40 per person.

Those interested may contact Louis Addressi, Ext. 4672, or Vincent Castillo, Ext. 3772.

## In Memoriam

*The following retirees passed away recently:*

**William Francis**, who retired from BNL as a Custodian Services Supervisor in the Plant Engineering Division on December 31, 1984, died on April 27. He was 76 years old. He had started at the Lab on November 28, 1960, as a janitor in the then Plant Maintenance Division.

**Patrick J. Glynn**, who greeted nearly everyone at the Lab during his almost 30 years in special services, died on May 12. He was 70 years old.

Glynn came to BNL on November 5, 1962, as a janitor in the Plant Maintenance Division, but moved into special services in 1965. He retired from the Staff Services Division (SSD) as Special Services Supervisor, on October 31, 1993. He is survived by his wife Mary Glynn, who retired from SSD on the same day. He is also survived by three sons, two daughters and six grandchildren. Donations in Pat Glynn's memory may be sent to: Brookhaven Memorial Hospital Medical Center Hospice, 405A South Country Road, Brookhaven NY 11719.

## BROOKHAVEN BULLETIN

Published weekly  
by the Public Affairs Office  
for the employees of  
**BROOKHAVEN NATIONAL LABORATORY**

**ANITA COHEN**, Editor  
**MARSHA BELFORD**, Assistant Editor

Bldg. 134, P.O. Box 5000  
Upton NY 11973-5000  
Tel. (516) 344-2345; Fax (516) 344-3368

The Brookhaven Bulletin is printed on paper containing at least 50 percent recycled materials, with 10 percent post-consumer waste. It can be recycled.



## 84 Win Savings Bonds for Perfect Attendance

BNL's 1995 Perfect Attendance Awards of \$200 savings bonds have been won by 84 full-time employees. This year is the first in which a new contract with Laboratory employees represented by the International Brotherhood of Electrical Workers placed them among those eligible for the award, accounting for 54 winners. Of the 30 awardees from the technical and clerical weekly schedules and the Oil,

Chemical and Atomic Workers International Union, who have been eligible in past years, 11 have also won previously. In the caption below, the names of one-time previous winners are highlighted with a single star; two stars indicate employees who have won twice before; three, three times; and four stars denote a record-breaking four times as a previous winner.

— Liz Seubert



**Congratulations to the perfect attendees: (front, from left) Dollie Johnson, Plant Engineering (PE) Division; Frederick Ligon, PE; Armand DiFilippo, Alternating Gradient Synchrotron (AGS) Department; Dolores Janes, Information Services Division (ISD); Susan Evans, PE; Brian Rohena, PE; Zaida Rosado, PE; Glenda Radich, Administrative Support Division (ASD); Patria Cortes, PE; Min-hsiung Yang, PE; (middle row, from left) John Sterzenbach, PE; Henry Floege, Central Shops Division (CSD); Alvin Vestal, CSD; Ernie Sohn, CSD; Marcia Bero\*, Safety & Environmental Protection (SEP) Division; Paula Pozzoli\*\*\*\*, ASD; Veronica Varlack, ASD; Franklin Snell, PE; Charlie Brown, PE; Bryan Hanlon, ASD; Joseph Lorenzoni\*, Relativistic Heavy Ion Collider (RHIC) Project; Harold Dorr, RHIC; (back, from left) Herman Butts, PE; Jim Sorohan, PE; Craig Sirot, PE; Jerry Hobson, PE; Mark Peragine, RHIC; Jim Callihan, PE; Roy Johnson, PE; Ray Mayo, PE; Robert Schnoor, PE; Rich Ryder, CSD; Lawrence Lettieri\*\*, SEP; Alex Reben, ISD; Joseph Domiano, AGS; Donald Von Lintig Jr. \*, AGS; Fred Orsatti\*\*, RHIC; Bill Dalton,**

**CSD; Laurie Pollard, CSD; Gerald Greenidge, CSD; Ron Brewer, CSD; Frank Zambriski, PE; and Thomas Walters, PE.**

**Not present were: ASD: Barbara Boerjes, Mattie Brown, Samuel Cortes, Frank Haibon, Linwood Johnson, Carl McKeever, Joseph Modjeska, Jerome Quigley, Clarence Wilkins, Shelby Williams; AGS: Charles Gardner\*; Biology Department: Phyllis Tinsley-Smith\*\*\*; CSD: Randolph Seibel, Joseph Zeneski; Department of Advanced Technology: Maureen Anderson\*; Financial Services Division: Jennifer Schretzmayer; ISD: Eva Esposito, Neal Jackson; National Synchrotron Light Source Department: Lynette Bennett\*; PE: Kerry Botts, Alfonso Canedo, Bessie Gardner, Clarence Hicks, Kenneth Johnson, Richard Lutz, Lonnie Muldrow, John Popielaski, Jeffrey Raynor, Jesus Santana, William Schmidt, Edward Sujeski, Jeffrey Tabacco, Felix Thompson; Reactor Division: Felicia Kramer; SEP: Roy Barone, Joseph Cracco\*\*, John Foley, Daniel Harrow, Eric Klug\*\*\*\*, Antonino Realmuto and Gary Schaum.**

— Photos in this issue by Roger Stoutenburgh

## 50 YEARS AGO THIS WEEK

*This series, which recounts the earliest days of Associated Universities, Inc. (AUI), and BNL, will run as appropriate throughout 1996 and 1997, the 50th anniversary years of AUI and BNL, respectively.*

• **May 18, 1946** — As chairman of the Subcommittee on Incorporation, George Pegram reports to the Planning Committee of the Initiatory University Group (IUG) on the status of the group's incorporation. The committee had been asked to study the legal aspects of incorporation, then submit articles for incorporation in New York, New Jersey and Connecticut.

In carrying out these instructions, Pegram first engaged J.J. McCloy of the firm of Milbank, Tweed, Hope, Hadley and McCloy, as legal counsel.

Thus, this report makes three recommendations: that the state of incorporation be the same as that in which the laboratory will be located; that, before proceeding further with adopting articles of incorporation, it be determined, in consultation with representatives of the Manhattan District, the government agency overseeing the creation of a research laboratory in the Northeast, that the powers and responsibilities proposed for the corporation be adequate from the government's standpoint; and that the committee agree on the participation fund amount — referring to the matter of whether each university should underwrite the project with any of its own funds.

In his Brookhaven Lecture of March 30, 1966, Norman Ramsey described this controversy: "It was originally proposed that each university should [underwrite the project] to the extent of \$100,000. The Manhattan District, however, indicated at the time that from its point of view there would be no advantage to such an underwriting. So the universities happily withdrew this offer.

"Later," Ramsey added, "the Manhattan District representatives indicated that it would be helpful if the universities did

underwrite the project to some extent with their own funds. This change caused considerable irritation to the universities, but all save one — Harvard — agreed that they would contribute \$25,000 per institution.

"In order to achieve the required unanimity," Ramsey recounted, "the other representatives on the [IUG] argued eloquently against Kistiakowsky, the Harvard representative. They expressed consternation and surprise that Harvard University, the richest of the nine institutions, should be the one institution unwilling to make its contribution. To this, George Kistiakowsky made the simple reply, "How do you think it got that way?"

To resolve these issues, the subcommittee agrees to ask each of the presidents of the nine sponsoring universities to designate a member to the Subcommittee on Incorporation.

Also at this meeting, the Subcommittee on Contract is formed anew. Under the chairmanship of Joseph Campbell, Columbia, it includes: Nathaniel Sage, Massachusetts Institute of Technology; Raymond Woodrow, Princeton; and F. Wheeler Loomis, University of Illinois. It is proposed that a representative of the Manhattan District draft a contract for criticism by this committee.

One additional change in the Planning Committee's organization takes place at this meeting: Lee DuBridge suggests that, in view of his departure from the University of Rochester to become president of the California Institute of Technology, a new chairman be selected. Robert Bacher, Cornell, is nominated and elected chairman of the Planning Committee, and Columbia's I.I. Rabi agrees to nominate Bacher as IUG chair at its next meeting on June 1. *(To be continued on May 31.)*

## Food Service Numbers

Flik International Corporation, the new contractor operating the cafeteria, now has as its Lab telephone number Ext. 3541; the former Ext. 3548 is no longer assigned to Flik.

To contact the food service by fax, dial 345-6475. Flik's e-mail address is catering@bnl.gov.

## Strength Training III

To be held from noon to 1 p.m. on Tuesday, May 28, in the North Room, Brookhaven Center, the third and final part of the Strength Training Workshop offered by the Health Promotion Program of the Occupational Medicine Clinic will focus on toning the muscles of the lower body. Presented by exercise physiologist Laura Tipaldo, the workshop will cover basic physiology, as well as stretching and strengthening techniques that will help eliminate back pain and fatigue, and ease lifting and other chores.

For more information and to register, contact Mary Wood, Ext. 5923.

## ANS Meeting

John Mulligan, a senior nuclear advisor with the Korean Peninsula Energy Development Organization, will speak on the "Democratic People's Republic of Korea's Light-Water Reactors: Project Status," at the next meeting of the Long Island Section of the American Nuclear Society (LIANS), on Wednesday, May 22, at the Radisson Hotel, Islandia.

For more information and reservations, call Vera Meier, Ext. 7702, by Monday, May 20.

Art & Castle Bus Trip

All are welcome to join the glorious art, crazy castle bus trip sponsored by the Art Society on Saturday, June 29, After a coffee stop, see Bush-Holley farmhouse near Greenwich, with 18th-century furnishings and pictures by American Impressionist artists such as Childe Hassam and John Twachtman, who lodged there early in this century. Lunch at the little village of Chester, then visit one-of-a-kind Gillette Castle, built for superb cliff-top views by millionaire William Gillette, who was mad about turrets, innovative door latches, sprinkler systems — and Sherlock Holmes. The bus will leave BNL’s tennis-court parking lot at 6:45 a.m. and return around 9:30 p.m, with a speed-food stop on the way back. The cost of \$30 per person covers bus and museums. Call Liz Seubert, Ext. 2346 or 286-8563, evenings, for reservations.

Softball

Standings as of May 10

League E1		League E2	
System	1-0	Lights Out	2-0
Magnets	2-0	Phase Out	2-0
Phoubars	2-0	Contaminators	2-0
Ice Men	1-1	Hy Tech	2-0
Cleen Sweep	0-1	CCD	1-1
Titans	0-2	Hammerheads	1-1
Blue Jays	0-2	Feds	0-2
		Scram	0-2
League E3		Sure Fire	0-2
Bombers	1-0	Phythinphytos	0-2
Pick-Up Sticks	1-0	League M1	
Medical	0-1	Snake Bites	2-0
Mesocyclones	0-1	Gour-Mets	2-0
		Good Timers	1-1
League M2		Stingrays	1-1
no scores: rained out through 5/10		Parke Avenue	0-2
		OER Wellheads	0-2

IBEW Meeting

Local 2230, IBEW, will hold its regular monthly meeting on Monday, May 20, at 6 p.m., in the Knights of Columbus Hall, Railroad Avenue, Patchogue. The agenda includes regular business, committee reports and the president’s report. There will be a meeting for shift workers at 3 p.m. at the union office.

Bowling

Red and Green League

R. Eggert 234/212/635 scratch series, J. Griffin 230/215/614 scratch, G. Weresnick 222/200, R. Wiseman 210/207/607 scratch, R. Raynis 204/201, J. Meier 235, R. Mulderig 232/611 scratch, D. Fisher 227/605 scratch, T. Prach 215, K. Koebel 206, E. Larsen 206, A. Pinelli 205, H. Arnesen 202, K. Riker 201.

Purple and White

G. Mehl 268/192/631 scratch series, E. Sperry IV 244/222/623 scratch, D. Riley 204/185, E. Meier 194/182, M. DiMaiuta 188/186, Donna King 186/179, K. Conkling 193/176, M. Musso 219, R. Wiseman 212, M. Stevens 199, R. Picinich 191, S. Logan188, K. Riker 188, E. Sperry III 187, P. Callegari 183, S. Frei 181, M. G. Meier 177, Diana Fisher 172, D. Botts 171, A. Wynkoop 171. The Odd Balls are the winners of the second half.

Bowling Awards Party

The BERA Bowling League’s annual awards party will be held at Rock Hill Country Club on Friday, June 7, from 6 to 10 p.m. Featuring dinner and an open bar, the party costs \$10 for league members and \$15 for guests. For tickets, contact Debbie Botts, Ext. 3888, by Friday, May 31.

Spring Walk

Put a spring in your step — rain or shine, by joining the Spring Walk on Thursday, June 6. Sponsored by the Director’s Office and organized by the 1996 Healthfest planning committee, the walk will kick off at 11:45 a.m. in front of the Science Education Center, Bldg. 438, with a pre-walk stretch led by the BNL Aerobic Dance Club. Then at noon, you and your coworkers may stroll, stride, strut or speed walk along the two-mile course. Register with Health Promotion Specialist Mary Wood by completing the form below. The first 200 registered walkers will receive an incentive award.

1996 Spring Walk registration

Name: \_\_\_\_\_

Ext.: \_\_\_\_\_ Bldg.: \_\_\_\_\_

Life #: \_\_\_\_\_

Return to Mary Wood, Bldg. 490, by Monday, June 3.

Equipment Demo

On Thursday, May 23, from 11 a.m. to 2 p.m. in Berkner Hall, representatives from Aerotech MidAtlantic Inc. will demonstrate their latest high-accuracy positioning systems. These include linear servo motors, vertical lift stages, brushless servos, PC bus-based motion controllers and two-axis gimbal mounts.

Summer Swim Lessons for Kids

Registration is now being taken for summer swim lessons for children of all Lab employees and guests. Sponsored by the Brookhaven Employees Recreation Association (BERA), lessons will begin on Monday, July 1, and end Wednesday, August 28: • **Lessons:** Each child will be scheduled for one lesson each week for a total of eight lessons. American Red Cross certificates will be awarded to children who qualify. • **Time:** Monday through Friday, 2:15 to 3:15 p.m., but children must arrive by 2 p.m. so they may have time to prepare for class. • **Fee:** \$45 per child upon registration; in addition, each child must pay the \$2 daily admission fee or present a season ticket for each lesson. • **Height requirement:** For their safety, children each must be a minimum of 42 inches tall. • **Registration:** Applications may be picked up at: the Human Resources Division, Bldg. 185, 8:30 a.m.- 5 p.m.; the BERA Sales Office, Berkner Hall, 9 a.m.- 1:30 p.m.; or the swimming pool, Bldg. 478, during its open hours. Mail or deliver applications with checks covering the registration fees payable to BERA to the Recreation Office, Bldg. 185, no later than Friday, June 14.

Arrivals & Departures

Arrivals
None
Departures
This list includes all employees who have terminated from the Lab, including retirees: <b>James R. Luneberg</b> .....RHIC <b>Yue Peng</b> .....Biology

Classified Advertisements

Placement Notices

The Laboratory’s placement policy is to select the best-qualified candidate for an available position. Consideration is given to candidates in the following order: (1) present employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action plan, selections are made without regard to age, race, color, religion, national origin, sex, handicap or veteran status. Each week, the Human Resources Division lists new placement notices. The purpose of these listings is, first, to give employees an opportunity to request consideration for themselves through Human Resources, and second, for general recruiting under open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people. Except when operational needs require otherwise, positions will be open for one week after publication. For more information, contact the Employment Manager, Ext. 2882, or call the JOBLINE, Ext. 7744 (344-7744), for a complete listing of all openings. Current job openings can also be accessed via the BNL Home Page on the World Wide Web. Outside users should open “http://www.bnl.gov/bnl.html”, then select “Scientific Personnel Office ” for scientific staff openings or “Employment Opportunities” or “BNL Human Resources Division” for all other vacancies. **SCIENTIFIC RECRUITMENT** - Doctorate usually required. Candidates may apply directly to the department representative named. **SCIENTIST** - Physician with an interest and board certification in any of the following: psychiatry, neurology, radiology, nuclear medicine and/or internal medicine. Imaging experience is desirable. Will work with the neuroimaging sciences group in imaging studies involving Positron Emission Tomography (PET), Single Photon Emission Computed Tomography (SPECT) and Magnetic Resonance Imaging (MRI). The studies will focus on functional, neurochemical and pharmacological aspects pertaining to substance abuse, neuropsychiatric disease, oncology and aging. Contact: Nora Volkow, Medical Department.