

Director's Corner Newsday Series Can Change Misconceptions About BNL

In this occasional column, BNL Director John Marburger will share his perspectives about timely issues related to the Laboratory.

Opening ourselves up to media scrutiny is always a risk, but it is one worth taking if it can change deeply seated public misconceptions. Last Sunday's *Newsday* story on Brookhaven National Laboratory was the first of a yearlong in-depth series that may just do that.

The community reaction has been positive: They think the story put a human face on an otherwise abstract and obscure institution. Small errors and incompleteness matter less to them than the idea that BNL is really just people much like themselves.

As obvious as this seems to us, it takes a special effort for most people to see institutions as anything other than a symbol or an abstraction. Think of how we ourselves view "BSA" or "DOE." It is much easier to think of them as unified personalities — powerful and threatening — than as groups of people struggling to accomplish something.

Breaking through old habits of thought usually requires a special experience. The best way to widen people's perspective on BNL is through a tour of the site with a knowledgeable guide. A long story like the one in Sunday's *Newsday* is not as vivid as a tour, but it gives even more insight into what it might be like to live and work here.

I think *Newsday* is doing the Laboratory, and Long Island readers, a tremendous service by adding dimensions to the public conception of BNL. To judge by community comments on the Lab during the past year, the current perspective is badly out of touch with reality.

Within the Lab many of us were more sensitive to the inaccuracies (gratifyingly few) and a tone that in places seemed to mistake employee concern about budgets and job security for concern about environmental hazards. I expect some future articles will be much harder for us to accept as beneficial to the Lab. The media will always contrast "establishment science" with opposing views of critics outside the system.

But, on Sunday, and again in a science-oriented special in *Newsday*'s "Discovery" section this Tuesday, Brookhaven National Laboratory spoke for itself through the earnest efforts of Charlie Zehren, Earl Lane and their colleagues. I learned something more about the Lab myself, and I know thousands of others did too. That can only help.

— John Marburger
BNL Director

Mammography and Brain Cancer Treatment — New Approaches Under Development at NSLS

Last month, about 350 of the more than 2,400 researchers who use BNL's National Synchrotron Light Source (NSLS) each year flocked to Brookhaven for the NSLS Annual Users Meeting.

Stories about the meeting are planned for next week's *Brookhaven Bulletin*. This week, the *Bulletin* takes a look at the research that two teams of NSLS users are pursuing to help improve some cancer treatment and diagnosis.

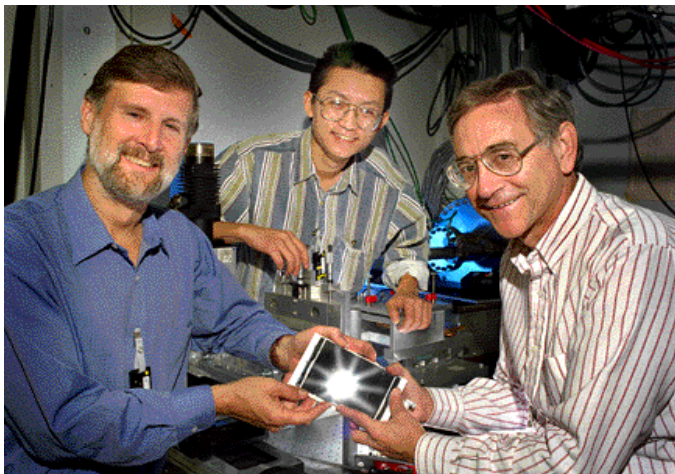
'Dramatic Improvement' in Breast-Cancer Imaging

Tomorrow's mammograms could be much more effective at spotting extremely small and elusive breast cancers, thanks to a new x-ray imaging method, which was developed and is being refined at BNL's National Synchrotron Light Source (NSLS).

Great strides have been made since scientists from BNL, the Illinois Institute of Technology (IIT), North Carolina State University (NCSSU) and the University of North Carolina (UNC) first described their technique last November, in a paper published in *Physics in Medicine and Biology*.

Since then, "Our images of human breast tissue have already shown dramatic improvements over our earlier tissue results," said BNL Physicist William Thomlinson, who heads the experimental team, which is now conducting its research at a dedicated station on NSLS beamline X15A, funded in part by DOE.

"This work wouldn't have been pos-



At beamline X15A at the National Synchrotron Light Source (NSLS), (from left) Nicholas Gmür, Zhong Zhong and Bill Thomlinson, all of the NSLS, examine the monochromator crystals used in their beamline to scan breast cancer tissue.

Roger Stoutenburgh

density of the tissues often hides tumors," said team member Etta Pisano, a physician and Chief of Mammography in the Department of Radiology at UNC. "With our method, we have produced images showing improved detail of cancerous tumors in human breast tissue. The detail is outstanding."

Lots of Potential In Several Areas

The researchers say their method could be used in experimental clinical trials within five years and, possibly, in routine mammography in ten years. Additionally, the technique's

potential applications include imaging of other low-contrast tissues and organs such as kidneys, and nondestructive testing of materials.

Thomlinson, Pisano and their co-authors — BNL's Nicholas Gmür and Zhong Zhong; Fulvia Arfelli and Ralf Menk, formerly of BNL and now at

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Beaming in on Treatment for Children's Brain Tumors

Brain cancer strikes about 1,500 children in the U.S. each year, and nearly half the cases are incurable.

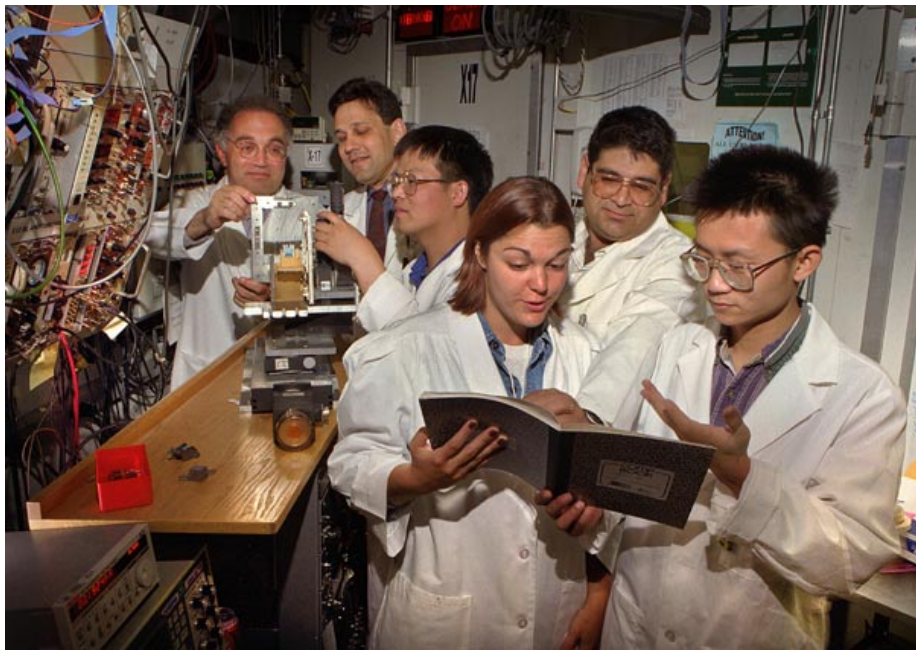
But a now-experimental treatment called microbeam radiation therapy (MRT) at BNL's National Synchrotron Light Source (NSLS) may someday offer a better chance of survival and quality of life for these children.

Nearly ten years ago, researchers at BNL and at the Institute of Pathology (IPath) in Bern, Switzerland, discovered that microbeams — parallel arrays of microscopically thin slices of x-ray beams — have two remarkable effects that make them potentially beneficial for radiation therapy.

First, they seem to cause little or no damage to normal tissues in several animals, even at very high doses. Second, in rats, they can slow down or arrest the growth of gliosarcoma, a certain type of malignant tumor, in the brain or under the skin, by irradiation from only one direction. In conventional radiation therapy, the tumor is commonly irradiated from several different angles.

Conventional radiation therapy of brain tumors is risky in preschool children because developing brain tissues are particularly sensitive to radiation, but BNL's animal studies indicate that MRT is well tolerated by the brains of very young animals.

Avraham Dilmanian, BNL's Medical Department, who leads the research team, said, "We think that microbeams beams do minimal or no damage to normal tissues because a certain portion of the endothelial cells survive. Endothelial cells line blood vessels, and those that happen to lie between the x-ray microbeams remain



Roger Stoutenburgh

The microbeam radiation therapy team — (from left) Avraham Dilmanian, Frank Telang, Baorui Ren, Diana Lombardo and Itzhak Orion, all of BNL's Medical Department, and Zhong Zhong, National Synchrotron Light Source (NSLS) Department — is pictured at the X17B1 beamline at the NSLS. Not present are William Thomlinson, NSLS, and consultant Daniel Slatkin.

undamaged. These cells then migrate, divide and replace the endothelial cells killed by being in the direct paths of the microbeams.

"This cell regeneration may be triggered by chemical signals from a lethally irradiated endothelial cell to its neighbors," continued Dilmanian. "In tumor tissue, endothelial cell regeneration may not be as effective because of fundamental differences between these cells in normal tissue and in tumors. As a result, the tumor's blood vessels no longer function and the tumor may starve to death."

Dilmanian explained that this research was started in the late 1980s by Daniel Slatkin, who worked in Medical first with Per Spanne, who now leads MRT research at the European Synchrotron Research Facility in Grenoble, France, then with Jean Laissue, IPath Director, and Dilmanian himself. Slatkin, who led BNL's MRT research until his retirement in 1996, is now a consultant to Medical, working on this research program.

The research took off with a two-year Exploratory Research Program

(continued on page 2)

Brain Tumors (cont'd.)

grant provided in the early 1990s by BNL.

“MRT’s preferential tumor-killing effect emerged during experiments in 1993, and our excitement about the research increased,” recalled Dilmanian. “Also, last year, we were awarded a small, prestigious grant from the Children’s Brain Tumor Foundation —our proposal was one of four selected for funding from about 30 submitted.”

In a recent experiment, 18 rats with gliosarcoma tumors located underneath the skin and just above the cerebellum were given MRT using long, vertical microbeams from a single direction that reached deep into the cerebellum, a part of the brain that is extra-sensitive to radiation. All the tumors disappeared within 45 days after treatment. Now, six months later, the tumors have not regrown and the rats are apparently normal. As in all MRT irradiations, the dose was delivered in a single session.

These results highlight another advantage of MRT — its single-session aspect. Standard radiotherapy is given in about 30 daily sessions.

Said Slatkin, “At least four years of beam-line and equipment development, as well as studies in microbeam radiobiology will be necessary before human trials can begin. The beam intensity from the new ‘wiggler’ magnet expected to be installed on beam line X17 should be adequate for clinical research in MRT of pediatric brain tumors.”

— Diane Greenberg & Liz Seubert
MRT’s collaborators have included Carl Anderson, Jeffrey Coderre, Aidnag Diaz, Nicholas Gmür, Dennis Greenberg, Xiaoling Huang, Darrel Joel, Maryann Kershaw, Géraldine LeDuc, Michael Makar, Peggy Micca, Ehud Nachaliel, Marta Nawrocky, Oren Rahmanan, Phavitri Ramcharan, Charles Springer Jr., William Thomlinson, Kirsten Trandem, Nora Volkow, Avril Woodhead and Xiao Ye Wu, all from BNL; Jeffrey Allen, Beth Israel Medical Center; William Dean and Tirath Sandhu, Cornell University Duck Research Laboratory; Louis Peña, Memorial Sloan-Kettering Cancer Center; David Archer, IPATH; Jan-Olaf Gebbers, Pathology Institute, Switzerland; Philip Rye, Norwegian Radium Hospital, Norway; Terry Button, Allen Meek and Michael Petersen, State University of New York at Stony Brook; Michael Sandborg, University of Linköping, Sweden; Gregg Kaplan and Anatoly Rozenfeld, University of Wollongong, Australia; and others.

Quality Training

The next series of training sessions covering quality concepts and the BNL approach to quality will be offered by the Quality Management Office to quality-assurance representatives and other interested Lab personnel starting on Wednesday, June 10. The first session will be held in the conference room, Bldg. 426. The remaining 11 sessions will run on successive Tuesdays, usually in Berkner Hall, Room D. All sessions will start at 9:30 a.m. and last for about 1½ hours.

If you plan to attend or would like a course schedule, contact Gina Bernard, Ext. 3689, or e-mail ginab@bnl.gov by Tuesday, June 9.

Arrivals & Departures

Arrivals	
Leeann A. Austin-Rooney.....	Biology
Pramod K. Sharma.....	App. Science
Xiangdong Wei.....	Physics
Departures	
Patricia C. Bounauito.....	Plant Eng.
Robert Foukal.....	RHIC
Evelyn Gallego.....	Physics
Lewis Jiggetts.....	RHIC
Robert E. Meier.....	AGS
Sumitra Ranganathan.....	Env. Prot.
Herbert Schulman.....	ES&H Serv.
Deborah A. Schurberg.....	Adv. Tech.
Sandra G. Sullivan.....	Adv. Tech.
Michael A. Sypes.....	Biology
Mark T. Widmer.....	Chemistry

Join John Marburger: Be a Blood Donor!

If John Marburger can take the time out of his busy workday to donate blood, how about you?

BNL’s own Director was an active donor at the State University of New York at Stony Brook, whose hospital relied heavily on blood contributions from students, faculty and staff. This, however, will be his first donation at an on-site drive at BNL, and he is encouraging everyone to share the joy of helping others in need — and enjoying a break in routine, with free juice and snacks after donating blood.

The next BNL blood drive will take place on Tuesday and Wednesday, June 16 & 17, from 9:30 a.m. to 3 p.m. in the Brookhaven Center.

“Here is a way for us to show we are truly a part of our community,” said Marburger, whose day is filled with wall-to-wall meetings often lasting until late in the evening. “There is something symbolic about giving our own blood to help others live. It sends a powerful message to our neighbors and even affects how we feel about ourselves. We should not pass up this opportunity to make a statement about our essential humanity and our sense of responsibility for people in need.”

According to Susan Foster, BNL’s blood-drive coordinator, the contribution of one pint of blood by one person can

save approximately five lives — lives of our friends, families and neighbors.

Foster hopes that Marburger’s enthusiasm will encourage others to sign up for donations — especially those who have not given in the past.

“Time is precious to all of us, but BNL’s blood drive is on site and convenient to our workplaces. We know we are asking people to contribute some of their time as well as their blood, and we are making it as easy as possible to do so,” says Foster, “The fact that our Director is taking the time to do this is a message about the importance to the Laboratory of this simple act of generosity. I hope other employees will feel more motivated to make the effort as a result.”

To make an appointment to donate, call Foster, Human Resources Division, Ext. 2888, or e-mail foster2@bnl.gov with your name, telephone extension, and preferred date and time to donate. — Darschay Harris
(Harris is an intern in the Public Affairs Office.)



John Marburger

Breast Cancer (cont'd.)

Italy’s ELETTRA synchrotron facility; IIT’s Dean Chapman; Dale Sayers, NCSU; and Eugene Johnston and David Washburn, UNC — published their paper on “Diffraction Enhanced X-Ray Imaging” last year.

At that time, their research team, working at both the NSLS and the Advanced Photon Source at Argonne National Laboratory, had demonstrated that the technique creates a dramatic and previously unachieved contrast between normal tissue and tumors.

Of this new technique — diffraction-enhanced imaging, or DEI — Secretary of Energy Federico Peña said at the time, “This development offers new hope for early detection of breast cancer. I congratulate the team behind this accomplishment and am pleased that the DOE’s national laboratories are helping make such progress in combating this disease.”

Advancing the Technology

To continue this research, the team established its station at NSLS beam-line X15A to ensure having the neces-

sary experimental time to advance the technology over the next two years or more. “The improvements we’ve made since November show that this investment is really paying off,” said Thomlinson.

In conventional mammograms, differences in tissue densities and composition show up as contrasting areas due to x-ray absorption, allowing doctors to see tumors or changes in tissue.

The problem is that differences between healthy and cancerous tissues are very small and scattering of x-rays can lead to blurring and even lower contrast, making it difficult to detect small tumors.

DEI uses a single-energy, or monochromatic, fan beam of x-rays — instead of the broad-energy beam used in conventional imaging.

The key to the new imaging method is an analyzer crystal placed between the tissue and the x-ray detector. The analyzer can differentiate between x-rays that are traveling much less than one ten-thousandth of a degree apart.

“That’s about the size an ant would appear if you were looking at it from a mile away,” said Zhong, a BNL research associate.

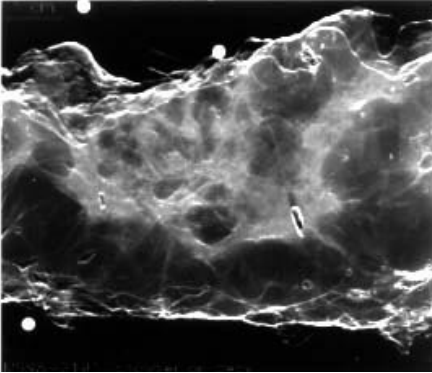
“This method of line-scan imaging reduces scatter and helps us visualize low-contrast areas that otherwise would be lost,” explained Chapman, who is Director of IIT’s Center for Synchrotron Radiation Research & Instrumentation.

Three Types of Images

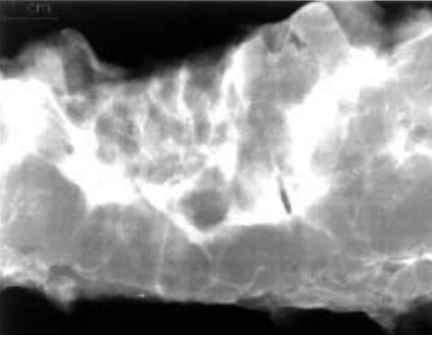
An unprocessed DEI image taken with the analyzer shows extraordinary contrast when compared with a conventional clinical radiograph, or x-ray, or even with an image equivalent to a radiograph taken at the NSLS (see images at left). The DEI image rejects all scattered x-rays, which tend to degrade an image. Such an image, said Thomlinson, is one that radiologists are used to viewing, but not with such high contrast and detail.

Using some data processing, DEI also produces two new and unique types of images: The refraction image depends on how x-rays are refracted, or bent, as they pass through the object and highlights the edges of structures in the sample; the apparent absorption image relies on how much the passing x-rays are absorbed and scattered by the object to provide images that improve upon the contrast in normal radiographs and which are free of radiation effects.

“Our images have come a long way since we first demonstrated the technique using a breast tissue model at NSLS beamline X27C in 1996,” Thomlinson said, “and we are concentrating now on improving them even further.” — Kara Villamil & Anita Cohen



These two images are of the same slice of cancerous human breast tissue, but notice the dramatic improvement in image contrast in the image above compared to the one below, which is comparable to a state-of-the-art hospital mammogram. That’s because the one above was made with a new technique, developed at BNL, that may lead to better mammograms to help doctors diagnose breast cancer earlier and improve patients’ chances of survival.



Marburger to Talk On State of the Lab: 6/19 in Berkner Hall

Employees and facility-users are invited to hear the state of the Laboratory discussed by BNL Director John Marburger and ask questions of him during two meetings in Berkner Hall on Friday, June 19: The first meeting will be held from 11 a.m. to noon, while the second will run from 2 to 3 p.m.

While employees may ask questions of Marburger in person after his presentation, those who wish the Director to be aware of their concerns ahead of time may send their questions to the Public Affairs Office, Bldg. 134; e-mail them to pubaf@bnl.gov; or call ASK1, the question hotline, Ext. 2751, by Friday, June 12.

Computing Corner

No MIX Meeting

There will be no Monthly Information eXchange (MIX) meeting with the Computing & Communications Division (CCD) for June.

LISTnet Meeting June 11

LISTnet, standing for Long Island Software & Technology Network, is composed of 360 information technology companies from around Long Island. LISTnet will meet at Berkner Hall on Thursday, June 11. All are invited to attend the meeting, which will start with talks in the auditorium, 9-11 a.m. Topics to be discussed will include computing and information technology in general, and BNL’s computing programs in particular. From 11 a.m. to 12:30 p.m., CCD members and scientists from other BNL departments and divisions will present demonstrations in the lobby and Rooms A, B and C, focusing on how BNL researchers have used and developed computing technology in innovative ways to solve scientific problems.

JAVA Class Offered for July

CCD will offer a six-session JAVA class of two-hour sessions to be held from 10 am. to noon in the seminar room of Bldg. 515 on the following Tuesdays and Thursdays in July: 7, 9, 21, 23, 28 and 30.

The class is free, but students will be responsible for purchasing textbooks, which will be available in the CCD Documentation Store. Class size is limited and registration is required.

To register or for more information, contact Pam Mansfield, Bldg. 515, pam@bnl.gov or Ext. 7286, by Monday, June 15.

Upcoming Organizational Survey: Questions & Answers

From June 16 to 19, all BNL employees will have the opportunity to complete an Organizational Survey measuring their attitudes and opinions about the Lab as a workplace and about its management and policies. This article answers some of employees' questions about the survey.

Q: Why is BNL conducting an organization survey?
A: As BNL Director John Marburger wrote in his April 27 letter to employees, "To improve the work environment at BNL, it is important to have a clear understanding of the views and attitudes of employees on issues that are important to them. . . . We need a systematic survey to capture completely and accurately your collective perception of the Laboratory's strengths and weaknesses. . . . a snapshot of the Laboratory at present and a guide for future planning."
Q: How can BNL ensure that the survey will meet its intended purpose?
A: A project of this importance requires experience in measuring organizational cultures and climates. To ensure that expertise, as well as an objective way to learn employees' attitudes while ensuring their anonymity, BNL has contracted with the experienced global survey firm International Survey Research (ISR) (see Brookhaven Bulletin, May 22, 1998).
Q: What has ISR done up to this point?
A: ISR conducted a series of one-on-one interviews with senior managers and ran focus group sessions with employees selected at random who represented various levels and job functions at BNL. From categories and issues brought up, ISR formulated a draft survey, which was pretested with another random sample of employees, then revised again. The final survey questionnaire is now being finalized for distribution to all employees.
Q: How will the questionnaire be distributed?
A: A Survey Point of Contact in your department will distribute the questionnaires on June 16, and completing the questionnaire will be considered your work assignment for the 30 minutes or longer that you may take to complete it. If your work area is not appropriate for filling out the survey,

your supervisor will find a more appropriate place. If you choose to complete the survey away from your work area or group, you can go to Berkner Hall, Room D, which has been reserved for 2-5 p.m. Wednesday-Friday, June 17, 18 & 19. Someone will be available there to answer your questions.
Q: How can BNL ensure that employees will have complete anonymity?
A: The first step was contracting with an outside company, ISR, that had no previous relationship with BNL. Next, a BNL Survey Steering Committee and ISR designed the entire survey process to ensure that no comments or responses could be attributed to any individual. Further, the survey questionnaire will not require employees to identify themselves by name. You will be asked to provide some job-related information, but if you work in a group of 20 or fewer, your responses will be combined with other groups for analysis to ensure that individuals will not be identified. Finally, after you finish the questionnaire, you'll put it into a sealable envelope, then deposit the envelope in a sealed ISR ballot box, which will be bulk-mailed to ISR.
Q: Why should I take time from my busy day to complete the questionnaire?
A: It's an opportunity to share your feelings about the Lab's current culture. If you don't participate, then you won't have a voice. Plus, BNL really wants to know what you think. That's why Marburger has urged managers and supervisors to allow their employees ample time to complete the questionnaire at their work stations during usual working hours.
Q: Is there an employee incentive for returning the survey?
A: When you deposit your survey into an ISR ballot box located in your department or division, you can pick up a raffle ticket for a mountain bike from your Survey Point of Contact.
Q: Who can I contact if I have other questions about the survey process?
A: Call Lorraine Merdon, Chair of the Lab's Survey Steering Committee, at Ext. 3318.

1998 Bowling Champs

The BERA Bowling League teams pictured here will be taking home the trophies at tonight's Bowling Awards Party at the Rock Hill Country Club.



HIGH HOPES fulfilled their highest hopes by winning in the Mixed League: (clockwise from bottom left) Anne Corr, Rich Eggert, Sean Elliot and Kristin Eggert.

FORCE showed they were definitely of the strong variety by taking the championship in the Men's League : (clockwise from top left) Rich Eggert, Joe Giuffre, Ron Mulderig Jr., Kenny Koebel and Ron Mulderig Sr.
— Bowling photos by Roger Stoutenburgh



Ray Raynis Bowls Perfect Game



After two years of trying, Ray Raynis joined an elite of "perfect" BNLeers: On May 12, at Port Jefferson Bowl during BERA Men's League night, Raynis, a senior technical specialist with the Relativistic Heavy Ion Collider Project, bowled his very first perfect 300 game.
Raynis's 300 was the third perfect game ever bowled in the Lab's history — matching the achievements of Ron Mulderig Sr. in 1994 and the late Mike Iarocci in 1968.
"I feel very excited, but I also feel relieved because it's finally over with," said Raynis, who was the first BNLeer to bowl an 800 series in BERA league play on April 15, 1994 (see Brookhaven Bulletin of June 10, 1994). "The best thing about finally accomplishing my goal is that my second 300 game won't be as hard now that the pressure from the first is lifted."
Due to a shoulder injury in 1991, Raynis was prevented from playing softball. So he took up the sport of bowling as rehabilitation, but, eventually, it became his sport of choice. Overcoming his injury, Raynis, in addition to bowling one outstanding series and, now, one perfect game, has bowled with two first place teams in BNL's Men's and Mixed Leagues.
He is motivated for more: "Hey, I've done it once, so why not do it again?" asks Raynis. After all, practice makes perfect.
— Darschay Harris

Take a Record Tour

It's June '98 . . . Do you know where your records are?
Almost all Lab departments and divisions send their records to Records, but who knows what happens then?
To satisfy your curiosity and learn how best to use this service, you are invited to join the BNL Records Management team for a tour of the records holding area, Bldg. 494, on Tuesday, June 9, from 2 to 4 p.m. Punch and cookies will be served. For more information, call Corene Wood, Ext. 5070.

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Visit BNL's New Home Page

Colorful, inventive and informative — that's the general consensus on BNL's new main World Wide Web page at <http://www.bnl.gov>, which the Lab unveiled on Monday, June 1.

Kara Villamil, Public Affairs Office, redesigned BNL's home page with a new look and user-friendly organization designed to help Internet users at BNL, on Long Island and around the world find the information they need quickly. Peter Sutherland, Information Services Division, is responsible for server maintenance and systems support.

"The Web has become an important information resource for more and more people, so we want to make our site more informative, more interactive and easier to use," said BNL Director John Marburger. "We want the Lab's employees and neighbors, and our scientific visitors from around the world to feel equally welcome. And we want their thoughts on how to make it better."

The site's new features include:

- an upgraded User & Visitor Information Page.
- a Maps & Directions page.
- a community page, with facts, reports and contact information.
- general information on BNL's scientific discoveries, history and environment.
- environmental reports and Superfund cleanup information
- information on public events at BNL, such as concerts, summer tours.
- links to related sites.
- ways for Website visitors to interact with BNL, such as e-mail and conventional mailing lists, tour requests and an "electronic hotline" for scientific questions from students and teachers.

BNL was one of the first institutions in the world to have a Web site. Shortly after the invention of the World Wide Web in the early 1990s by scientists at CERN, the major European physics lab, Brookhaven physicists created early prototype pages to exchange scientific data with colleagues overseas. Today, BNL's nearly 40,000 individual Web pages include everything from an international digital archive for protein molecule structures to a 24-hour monitor for brown-tide data transmitted from buoys moored in the Peconic Bay.

Also, BNL's 50th anniversary book, *From 50 to the Future*, is among the resources now available via on the Historic Highlights page at <http://www.bnl.gov/bnlweb/highlights.html>, in a 35-megabyte PDF file.

If you have comments, suggestions or additions for the new Website, send e-mail to pubaf@bnl.gov or call Kara Villamil, Ext. 5568.

Summer Jam Soon

Summer is on the way, so get a jump on the season at BERA's next TGIF party: the Summer Jam will be held on Friday, June 12, at the Rock Hill Country Club, off Clancy Road in Manorville, starting at 6 p.m. The cost is \$5 to cover hors d'oeuvres and entertainment; a cash bar will be available. The party is open to all BERA members and their friends, and no reservations are required. For more information, call Charles Gardner, Ext. 5214.

Tennis, Anyone?

Two tennis-court reservation systems will be in effect weekdays from June through September; 11:30 a.m. to 2 p.m., and 4:30 to 7 p.m.

Under the advance reservation system A, players may reserve three of the south courts for weekday play the day before play by signing up at the BERA Sales Office in Berkner Hall between noon and 1:30 p.m.

The on-court scheduling system B offers the two remaining north courts to players who sign the blackboard at courtside at the time of play, first come, first-served.

The complete rules for both systems are posted courtside and in the BERA Sales Office.

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position. Candidates are considered 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, disability or veteran status.

Each week, the Human Resources Division lists new placement notices, first, so employees may request consideration for themselves, and, second, for 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; call the JOBLINE, Ext. 7744 (344-7744), for a complete list of all job openings; use a TDD system to access job information by calling (516) 344-6018; or access current job openings on the World Wide Web at <http://www.bnl.gov/JOBS/jobs.html>.

The following vacancies are exempt from the Director's hiring freeze.

SCIENTIFIC RECRUITMENT - Doctorate usually required. Candidates may send C.V. to M. Kipperman, Bldg. 185.

MK7855. SCIENTIST/ENGINEER - Trained in physics and/or computer science, with at least five years' experience in computing activities and the processing of data associated with high-energy or nuclear physics detectors. Additional preferred requirements include knowledge of and experience with UNIX systems support and administration, including networked file systems, and other tools and utilities. Also preferred is substantial programming experience using modern programming techniques and languages, including C++, Java, C and FORTRAN. Knowledge of and experience with object-oriented databases, object brokers, hierarchical storage managers (HPSS in particular), robotic tape systems and Windows NT are highly desirable. Under the direction of B.G. Gibbard. Relativistic Heavy Ion Collider Project.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

DD7371. SECRETARIAL POSITION - Requires an AAS degree in secretarial science or equivalent experience. Will perform diverse secretarial duties, including typing and revising procedures, preparing procedures for publication, entering data on a training database, and handling file maintenance and organization. Must be proficient in WordPerfect for Windows and have knowledge of database input. Reactor Division.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

DD7323. PLUMBER A POSITIONS - (temporary) Under minimum supervision lays out, constructs or installs, repairs, and maintains water- and gas-distributions systems, related facilities and auxiliary equipment, and equipment utilizing water, gas and heat distribution services. (reposting) Plant Engineering Division.

DD7701. TECHNICAL POSITION - (term appointment) Requires an AAS degree in electronic technology or equivalent, and experience in electronic circuits and electronic instrumentation, including the use of oscilloscopes, digital voltmeters and other test equipment. Duties will include assembling, testing, calibrating and troubleshooting analog and digital electronic circuits and systems. Programmable logic controller (PLC) and/or high-vacuum instrumentation experience a plus. Must have strong construction skills and the ability to work from electronic schematics, rough sketches and verbal instructions. Alternating Gradient Synchrotron Department.

BERA Bridge Club Summer Schedule

The BERA Bridge Club runs a duplicate bridge game every other week. The 1998 summer schedule is as follows: Monday, June 8; Wednesday, June 24 & July 8; Monday, July 20; Wednesday, August 5; Monday, August 17; Wednesday, September 2. All games take place at the cafeteria, starting at 7:15 p.m.

For more information, call Morris Strongson, Ext. 4192, or Willem Van Asselt, Ext. 7778.

Farmers' Market

The good news for BNL's Farmers' Market fans is that this year's market will start next Wednesday, June 10.

As usual, it will be held in the parking lot behind the Science Education Center, Bldg. 438, every Wednesday, 11:30 a.m.-1:30 p.m., rain or shine.

The less-good news is that due to the wet spring, several farmers and market gardeners have had delays in their crops, so some produce stalls will not join the market until later in the season. However, a vendor of spinach, strawberries and herbs is expected, as well as others offering jam and jelly, and this year's innovation: crafts and jewelry.

Healthline Lecture: Healing Art From Tibet

The ancient Tibetan healing art of Reiki is a hands-on method for balancing the elements of mind, body and spirit, and self-empowering people to take control of their health and the direction of their lives.

To find out more about this 2,500-year-old tradition from Tibet, bring your questions to Berkner Hall at noon on Tuesday, June 9, when Reiki Master and New York State-licensed massage therapist Nicole Bernholc will present "The Healing Art of Reiki."

During her talk, which is sponsored by the Health Promotion Program of the Occupational Medicine Clinic, Bernholc will demonstrate this noninvasive healing art.

Trained in the use of oriental acupuncture, trigger-point release techniques and craniosacral therapy, Bernholc is also a certified industrial hygienist, who came to the Lab in 1979 and is now a project engineer in the ES&H Services Division. She has developed and delivered technical education programs for safety professionals.

To register for the lecture, before Tuesday, June 9, complete and return the bottom portion of the flier recently sent to all employees to Mary Wood, Bldg. 490.

Softball

Results reported as of May 29

League E1		League M1	
Cleen Sweep	3-0	Gour-Mets	3-0
Magnuts	3-0	Happy Hour	2-1
Cobras	2-1	OER Wellheads	1-2
Blue Jays	1-2	Stingrays	0-3
Phoubars	0-3		
Scram	0-3	League M2	
League E2		Here For The Beer	1-0
Hammerheads	3-0	Odd Sox	1-0
CCD	2-1	Skeleton Crew	0-1
Gas House Gorillas	2-1	Ten Samurai	0-1
Lights Out	1-1	League E3	
Rockets	1-1	Bombers	3-0
Hy Tech	1-2	Medical	1-2
Mesocyclones	1-2	Sultans of Swat	1-2
Phase Out	0-3	Sure Fire	1-2

