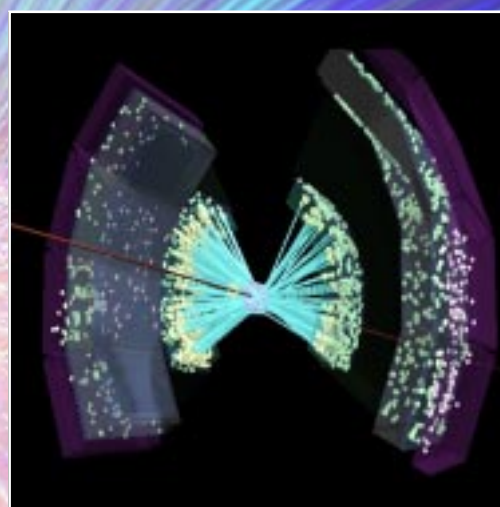
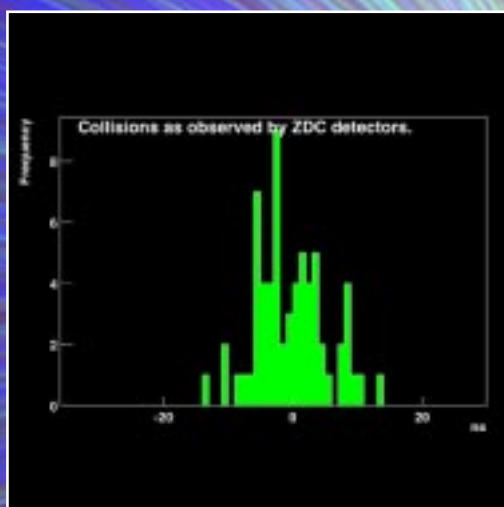


Full-Energy Collisions Are Achieved at RHIC

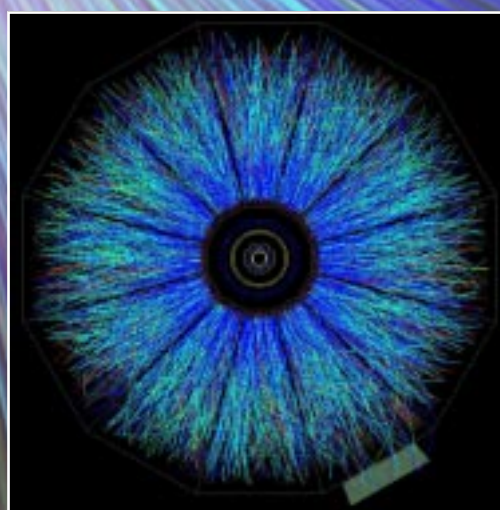
All four RHIC detectors yield more data in quest for quark-gluon plasma

Data from RHIC's BRAHMS detector represent how closely together in time particles emerging from each collision strike two zero degree calorimeters (ZDC) situated opposite each other along the beam path, 20 meters from the collision point. The central peak at zero nanoseconds (ns) indicates the number of collisions happening at a point equidistant from the two ZDCs.



This event display shows particles emerging from a collision and striking various parts of the PHENIX detector. This display shows several hundred reconstructed particle tracks. The collision took place at the center of the image.

A spectacular gold-gold collision at the maximum RHIC energy is seen by the PHOBOS detector. PHOBOS consists of a cylindrical array of silicon detectors and two spectrometer arms surrounding the interaction region where the gold nuclei collide. Dots show the locations where silicon was struck by the thousands of produced particles. The lines emerging from the center are reconstructed trajectories of some of those particles.



Seen is an end view of one of the first full-energy collisions between gold ions at RHIC, as captured by the STAR detector. The tracks indicate the paths of thousands of subatomic particles produced in the collision as they pass through the STAR time projection chamber, a large, 3-dimensional digital camera.

BNL has taken its search for an elusive form of matter to a new level by bringing the Relativistic Heavy Ion Collider (RHIC) up to full collision energy — collisions at 100 billion electron volts (GeV) per nucleon, or 200 GeV at the center of mass.

As of July 18, 2001, all four detectors at the 2.4-mile-circumference, two-ringed particle accelerator had recorded full-energy collisions, which are expected to produce 100 times more data than collisions produced during RHIC's first run last year.

The result will be a clearer picture of what happens when gold ions slam together at nearly the speed of light.

"Everyone is exhausted, yet ecstatic at this success after several months of RHIC restart and commissioning of new systems," said Todd Satogata, Scheduling Physicist for this year's run.

Collisions had already been seen this run at last year's energies, 65 GeV per nucleon (proton or neutron). But, as Satogata said, the goal this year is to run RHIC at the design energy. "Last year was like taking our Indy race car for a few test laps. This year we're driving the first few laps of the real race to produce absolutely world-caliber nuclear-interaction data," he said.

According to Dejan Trbojevic,

Run Coordinator and Head RHIC Commissioner, achieving full-energy collisions was a product of real team work. "It was never a question for anyone to come in at weird times like 3 a.m. to solve a specific problem," he said.

Origins of matter

The goal of RHIC research is to recreate on a microscopic scale the hot, dense conditions that are thought to have existed when the universe first formed,

so scientists can study the basic components of matter. Those components, the quarks and gluons usually bound together inside protons and neutrons, should exist freely for a fleeting instant in the hot, dense "quark-gluon plasma" RHIC aims to create.

"RHIC has already produced some very intriguing results, indicating that we are on the right track toward producing quark-gluon plasma," said Thomas Kirk, Associate Laboratory Direc-

tor for High Energy & Nuclear Physics. But, he added, "those results were based on a very small amount of data. This next run will be much more substantial."

Reaching the "boiling point"

Higher energies will raise the temperature in the collision zone, increasing the chance that the colliding particles will reach the "boiling point" — the temperature at which quarks and gluons can escape from their
(continued on page 2)

Thanks to Many

Derek Lowenstein, Collider Accelerator Department Chair, comments:

The achievement of the latest RHIC milestone — operations at a center-of-mass energy of 200 billion electron volts (GeV) per nucleon for gold-gold collisions — is a testament to the abilities, dedication, and stamina of many persons. This is a significant step from previous operations at 65 GeV per nucleon or 130 GeV center-of-mass.

It has been a long struggle of many sleepless days and nights to reach this point. So I take this opportunity to thank especially all those in the Collider-Accelerator Department and Superconducting Magnet Division for their latest achievement. Many others from the Physics Department, Plant Engineering Division, and Central Shops Division, as well as other areas of BNL also deserve a thank-you from the RHIC operations team.

Now that we have achieved design energy, we have two more immediate goals. First is for BRAHMS, PHENIX, PHOBOS and STAR to collect and analyze data in this new energy regime. Second is for RHIC to achieve design luminosity, about 2,000 gold-gold collisions per second.



Gathered outside Bldg. 902 are some of the accelerator physicists and engineers who worked around the clock to contribute to the success of RHIC's first full-energy collisions: (front from left) Dejan Trbojevic, Fulvia Pilat, Mike Brennan, Todd Satogata; (second row, from left) Leif Ahrens, Jorg Kewisch, Thomas Roser, Steve Tepikian, Joanne Beebe-Wang, Carl Schultheiss, Mei Bai, Christoph Montag, Angelika Drees, Wolfram Fischer; (third row, from left) Ray Filler, Vadim Ptitsyn, Peter Cameron, Harald Hahn, Waldo Mackay, George Ganetis, and Al Marusic. Not pictured are: Haixin Huang, Kip Gardner, and Johannes van Zeijts.

Roger Stoulenburgh CNZ-17-01

Calendar
of Laboratory Events

- The BERA Sales Office is located in Berkner Hall and is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347; or M. Kay Dellimore, Ext. 2873.
- Additional information for Hospitality Committee events can be found at the Lollipop House and the laundry in the apartment area.
- The Recreation Building (Rec. Bldg.) is located in the apartment area.
- Contact names are provided for most events for more information.
- Calendar events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.

— EACH WEEK —

Mondays: Arts & Crafts

4-5 p.m. Rec. Bldg. \$5 per month covers materials. Marcia Leite, Ext. 1040. — Hospitality event.

Tuesdays: Welcome Coffee

10-11:30 a.m. Rec. Bldg. New-comers meet friends. Mimi Luccio, 821-1435. — Hospitality event.

Tuesdays: Yoga Practice Sessions

12-1 p.m., Brookhaven Ctr. North Room. Free. Ila Campbell, Ext. 2206.

Wednesdays: Cooking Exchange

5-6 p.m. Rec. Bldg. \$1 per evening covers cost of ingredients. Marcia Leite, Ext. 1040. — Hospitality event.

Wednesdays: On-Site Play Group Now Meets at Playground

9:30 a.m.-11:30 a.m. Playground in Apt. area, weather permitting. Parents meet while children play. Bring drinks, snacks. Free. Monique de la Beij, 399-7656. Lisa Fugleberg, 205-5128. — Hospitality event.

Wednesdays: Weight Watchers

noon-1 p.m., Brookhaven Center South Room, Mary Wood, Ext. 5923.

Mon. & Thurs.: Cardio Kickboxing

\$5 per class. Mon. & Thurs. from noon-1 p.m. in the Gym. Thursday evenings from 5:15 to 6:15 p.m. in the Brookhaven Ctr. Registration is required. Mary Wood, Ext. 5923, or wood2@bnl.gov.

— NEXT WEEK —

Monday, 7/30

Voicemail Wireless Demo

10 a.m.-2:30 p.m., Berkner Hall. A representative will present special rates to BNLeers on their wireless network. Richard Goll, (516) 343-5900.

Wednesday, 8/1

Divorced & Separated Support Group

noon-1 p.m., Berkner Hall, Room D. Mary Campbell, Ext. 4776, maryc@bnl.gov.

Thursday, 8/2

BERA Bridge Club

7 p.m., Berkner Hall cafeteria. Morris Strongson, Ext. 4192, mms@bnl.gov.

Friday, 8/3

Julius Hastings Symposium "Neutrons & Magnetism"

2-5 p.m., Hamilton Seminar Room, Bldg. 555. Talks by Lester Corliss, retired, BNL; Hanquin Liu, Zhongshan University; Robert Nathans, Stony Brook University; David Mukamel, Weizmann Institute; Aldo Tucciaroni, University of Rome. Refreshments at 5 p.m. All are invited.

At BNL's Annual Science Fair Students Learn Science Is Fun



Roger Shoulenburgh CNE-49-01

Nicole Bosi (pictured at left), a first-grade student at Forest Brook Elementary School in the Hauppauge School District (SD), won first place for her grade level at BNL's 2001 Elementary School Science Fair held in May. Her project — "Does Colored Light Affect the Growth of Plants?" — was one of 488 entries in the fair, which involved over 500 students from Suffolk County elementary schools. The fair was organized and run by BNL's Office of Educational Programs, and teams of BNL scientists and local elementary school teachers judged the projects, based on scientific thought, creativity, thoroughness, and clarity.

The other winners who placed first for their grade levels are: kindergartner Danielle Frosch, Sycamore Avenue School, Connetquot SD, for "My Magnetic Ballroom"; second-grader Maeve Dwyer, Helen B. Duffield Elementary School (HBDES), Northport-East Northport (N-EN) SD, for "What is the Best Shape for Wind Turbine Rotors?"; third-grader Steven Hesse, Boyle Road Elementary School, Comsewogue SD, for "Which Wood Would Win?"; fourth-grader Eric Nelson, Fifth Avenue Elementary School, N-EN SD, for "Getting in Gear"; fifth-grader Greg Albert, Pulaski Elementary School, N-EN SD, for "Pet Therapy"; and sixth-grader Andreana Malkin, HBDES, for "Are You Color-Blind?" — Diane Greenberg

Full-Energy Collisions at RHIC

(cont'd.)

confined space inside protons and neutrons, similar to the way water molecules escape as steam from a pot of boiling water as more energy is added.

If the scientists are successful, then one result would be a dramatic increase in the number of particles produced in the collisions, as well as changes in the distribution of particle types.

For example, scientists expect to see more particles that contain strange quarks and antiquarks, as well as distinct changes in the pattern of particles produced relative to the directions of the colliding beams. As the statistics improve with additional running time, more subtle effects connected with the kinds of particles produced should emerge.

All of these new collision properties are characteristic only of relativistic heavy ion collisions and, all taken together, will allow scientists to reliably infer the production of quark-gluon plasma.

Detector upgrades

Operating at top energy is only the first step in enhancing the physics output of RHIC. Very significant gains will also be obtained by increasing the luminosity, the collision rate at each of RHIC's four detectors — the "eyes" the physicists use to observe the collisions.

Since last year, each of the detectors has also been upgraded significantly. This will increase their ability to see and track the particles emerging from the collisions.

"It's exciting to see the first collisions at full RHIC energy," said Timothy Hallman, Deputy Spokesperson for the STAR collaboration. "There have been some important additions to the STAR detector since last year's run, which will afford more complete information on the thousands of particles produced when the gold ions collide."

William Zajc, Spokesperson for PHENIX, also emphasized upgrades to his collaboration's detector. "We used the time between RHIC runs very productively," he said. "The PHENIX detector today is several times more powerful than last year's version and is now ready for

the highest energies and highest rates RHIC can produce."

Flemming Videbaek, Spokesperson for BRAHMS, added, "The quality of the beams and the length of the running period will guarantee good physics measurements and open a window to discoveries."

That sense of anticipation was echoed by Wit Busza, Spokesperson for PHOBOS, who said, "Clearly, as the colliding nuclei get closer to the speed of light, we see the onset of more and more interesting activity during the collisions. It's exciting to think that any moment now, we might be much wiser in our understanding of matter, in particular, of extremely hot, dense matter."

More data to crunch

The biggest challenge, Busza added, will be to sift through the vast amount of information gathered from millions of collision events.

Fortunately, the computers that analyze the enormous volumes of data collected by RHIC's detectors have been upgraded as well. "The raw computing power at RHIC has more than doubled, while storage capacity has quadrupled," said Bruce Gibbard, Head of the RHIC Computing Facility. RHIC's computers can now store 1.2 petabytes, or 1.2 million gigabytes, of data. The average desktop computer, by comparison, has a capacity of only 20 gigabytes.

This run is expected to last about four times as long as the initial data run in 2000. In addition to the heavy-ion collisions at full energy, this run will also explore collisions of polarized proton beams for the first time in RHIC.

"The achievement of the full-energy RHIC physics program represents the culmination of a decade-long effort to create new knowledge about the birth of the universe," said Kirk. "It is difficult to know how the resulting insights will change and influence our technology, or even our views about nature, but history suggests there will be changes, and some may be profound. Brookhaven is proud to be at the center of this advance."

— Karen McNulty Walsh

In Memoriam

Michael Murtagh, Physics Department



Chair of the Physics Department Michael Murtagh, a senior physicist whose tenure at BNL extended over 34 years, died on Thursday, July 12, at the age of 57.

"Michael Murtagh's unexpected death last week has left a huge void at the Laboratory," noted Laboratory Director John Marburger. "It will certainly be possible to find another physics chair, but we will never find another Mike. He cared passionately about science, and also about people, especially the people for whom

he felt responsible as chairman."

Continued Marburger, "I shall miss his utterly honest, direct manner, as well as his insights into how an organization that wants to do the best science should operate. It will take us all a long time to recover emotionally from the tragedy of his sudden departure."

Peter Paul, BNL's Deputy Director for Science & Technology, added, "Over the past three years, I have come to value Mike Murtagh as a personal friend. To talk with him was always an intellectual pleasure. As a person, he was deeply human, with great sophistication and respect for the people he came in touch with. As a scientist, he had impeccable taste, which helped him guide the department through times of difficult rearrangements. As a science administrator, he was still very much a practicing scientist in spirit. And as Chair of Physics, he gave advice that carried substance and helped to address some of the problems that the Laboratory faced during the transition of the last four years."

Holding a B.Sc. and M.Sc. in physics from National University in his native Ireland, Murtagh came to the U.S. in 1967 to continue his education. He earned his Ph.D. in physics from Harvard University in 1974. Murtagh first came to BNL in 1970, as a guest junior research associate. In 1973, he joined Physics as a research associate. He was named assistant physicist in 1975, associate physicist in 1977, and physicist in 1979, receiving tenure in 1985.

As a particle physicist, Murtagh worked on neutrino-physics using bubble chambers. From 1978 through 1986, he collaborated on Experiment 734 at the Alternate Gradient Synchrotron, studying neutrino elastic scattering from electrons and protons, and searching for neutrino oscillations. The experiment provided the first high quality measurement of neutrino-electron elastic scattering, and its result is still the definitive measurement on neutrino-proton elastic scattering.

From 1991 to 1993, Murtagh served as Physics Associate Chair, becoming Deputy Chair in 1993. In 1998, he was named Physics Chair. He was elected a Fellow of the American Physical Society in November 1996, cited "For significant contributions to the study of neutrino interactions, including charm and strange [particle] production, elastic scattering of electrons and protons, and neutrino oscillations."

Peter Bond, former Physics Department Chair and BNL Interim Director, commented: "When he was faced with problems or issues, Michael would come up with a thoughtful analysis and creative method of addressing them. He cared deeply about the Physics Department and the people in it. One of his great enjoyments was walking around the department and chatting with people at all levels to see how things were going. Even during his recuperations, he continued to be in contact with the department via e-mail or phone."

A resident of Shoreham, Michael Murtagh is survived by his wife Marie, daughters Catherine Pierce and Eileen, and son Stephen. Donations in Murtagh's name may be sent to the American Heart Association.

— Liz Seubert

Correction

The Bulletin regrets that on July 13, 2001, the photo caption for the article "Washington Staffers at BNL" incorrectly affiliates Dan Fischer with the National Institutes of Health. Fischer is affiliated with NIST — the National Institute of Standards & Technology.

RHIC & AGS Users’ Meeting, 8/9 &10

The Relativistic Heavy Ion Collider (RHIC) and Alternating Gradient Synchrotron (AGS) Annual Users’ Meeting will be held on Thursday and Friday, August 9 &10, in the Physics Department’s Large Seminar Room, Bldg. 510.

Topics to be covered will include: the RHIC program and results, theory, new physics at the AGS, a look to the future, a poster session, and a Users’ Group business meeting.

A banquet will be held on Thursday evening at the Brookhaven Center. The fee is \$30 per person, and spouses and friends are welcome. Register by Thursday, August 2, making checks payable to Brookhaven Science Associates and mailing them to the RHIC & AGS Users’ Center, Bldg. 355.

For registration and additional information, contact the RHIC & AGS Users’ Center at userscenter@bnl.gov, at Ext. 5975, or on the web at www.bnl.gov/userscenter/.

BERA Offers

Tickets and coupons for these and other events are available at the BERA Store in Berkner Hall, weekdays, 9 a.m.-3 p.m. For more information, call Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

Bob’s Stores 30% Discount

From Sunday, July 29, through Saturday, August 4, the Lab community is offered a 30 percent discount at Bob’s Stores on presentation of a coupon available at the BERA Store. Or, print the coupon from the Web at www.bobstores.com/cgi-bin/ib.pl?e mail=dellimore@bnl.gov. The discount may not be used for gift certificates or price adjustments on previous purchases, or with other coupons.

Summer Bash, 8/10

Join BERA’s Summer Bash on Friday, August 10, at the Rock Hill Country Club, Manorville. The party will begin at 6 p.m. Tickets are \$15 per person and cover the hot buffet and DJ. There will be a cash bar.

Last Chance for Foxwoods

The BERA-sponsored trip to Foxwoods Casino, Connecticut, is planned for Saturday, August 18, but more people are needed or the trip will be cancelled.

Leaving BNL at 8:15 a.m., participants will go by bus and ferry to Foxwoods, returning to BNL at about 8:15 p.m. Tickets are \$39, which includes transportation, a \$10 food voucher which pays for most of an all-you-can-eat lunch, two free Keno plays, and a \$10 match table play.

Tennis Tournament

Tennis players in the Lab community — employees, retirees, facility users, and summer visitors — may now sign up for this year’s annual Tennis Tournament. Scheduled to run from August 9 through September 6, the tournament may include men’s singles and doubles, women’s singles and doubles, and mixed doubles, depending upon the number of people signing up to play.

Register weekdays, 9 a.m.-3 p.m., by Monday, August 6, in the BERA Sales Office, where the tournament rules are available.

The draw will be posted at the Sales Office and by the tennis courts. Play matches any time after the draw is posted, but play must be completed by the scheduled dates. For more information contact Joe Carbonaro, Ext. 5139, Ken Perkins, Ext. 2147, or e-mail joel@bnl.gov.



Complete BNL’s Mini-Survey

There is still one week left to fill out BNL’s mini-survey, which will remain available until August 3.

The survey offers Lab employees an opportunity to express their opinions on the progress has been made in key areas targeted for follow-up in connection with the 1998 Employee Opinion Survey.

All full- and part-time employees, and staff with term appointments are asked to complete the survey. This year, it is available on line via the Inter-

net. To ensure confidentiality, BNL is again working with International Survey Research (ISR), the independent consulting firm, to conduct the survey. The survey site is on a secure ISR server, accessible at www.isrsurveys.org/bnl. For more information, call Nauman Mirza at ISR, (312) 828-9725.

Employees who prefer to complete a paper survey may pick them up in the Diversity Office, Bldg. 185. For more information, call Lorraine Merdon, Diversity Manager, Ext. 3318.

Summer Sundays

This Sunday, Tour BNL's

Waste Management Division

- Try on waste-management protective clothing (see photo, below left)
- Take a recycling IQ quiz
- Learn about BNL’s environmental restoration projects
- Check out how radioactive wastes are packaged safely
- Learn about the pH of everyday materials and hazardous wastes

Be sure to check out the Whiz Bang Science Show, a lively interactive demonstration of basic scientific principles, presented four times between 10 a.m. and 3 p.m. Don’t miss the Camp Upton Historical Collection, which contains the history of the site during its pre-Lab days as a U.S. Army camp during World Wars I and II.

Summer Sundays are free and no reservations are required. The Sunday program runs from 10 a.m. to 3 p.m., but visitors must arrive before 3 p.m.

Roger Stoutenburgh

Lifeguard Positions

Lifeguard positions are currently open for the BNL swimming pool. Qualified applicants may complete an application or send a resume to M. Kay Dellimore, Human Resources, Bldg. 185. Qualifications include LGT-Lifeguard Training and CPR for professional rescuer. Availability on weekends — Saturdays and Sundays — is essential. For more information, call Susan Dwyer, Ext. 3147 or 3496, after 2 p.m.

Swimming Pool Fees Pro-Rated

Swimmers may now use the BNL pool at a monthly pro-rated fee or with a three-month season ticket. The new fee schedule is:

Daily (employees, visitors, users)	\$2	Family (per month)	\$30
Daily (guests)	\$3	Individual (season)	\$50
Individual (per month)	\$20	Family (season)	\$60

Ayuda Por Favor

September is Hispanic Heritage Month. The Diversity Office is looking for volunteers to help coordinate special events during the month. Contact Rosa Palmore, Ext. 2703, to join the organizing committee.

Classified Advertisements

Placement Notices

The Lab’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 JOBSITE, Ext. 7744 (344-7744), for a list of all job openings; use a TDD system to access job information by calling (631) 344-6018; or access current job openings on the World Wide Web at www.bnl.gov/JOBS/jobs.html.

OPEN RECRUITMENT — Opportunities for Laboratory employees and outside candidates. MK2221. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in structural biology or molecular biology and demonstrated expertise in structural biology, protein purification and crystallography techniques. Current active projects focus on various mechanistic studies of chaperone-protein folding, ATP-dependent proteolysis, and virion-host cell interactions.

Work will involve the determination of the x-ray structure of one or more proteins involved in these pathways. Will be expected to be involved in complimentary biochemical studies. Under the direction of J. Flanagan, Biology Department.

MK2232. SENIOR RESEARCH ASSOCIATE - Requires a Ph.D. in biological sciences with expertise in DNA damage measurement, purification of proteins. Experience in DNA damage measurement, preferably by immunological methods and by gel electrophoresis, is essential. Work will involve development of novel methods for measurement of DNA damages induced by ionizing radiation and other agents, and application of these methods to mammalian cells in measurement of damage induction and repair. Also involves purification of DNA repair proteins and determination of the activity and purity of the preparations. Will participate in in-lab research meetings and literature presentations. Under the direction of B. Sutherland, Biology Department.

TB2045. PRINCIPAL TECHNICIAN – (TW-4, reposting) Requires a BSET degree or equivalent, a thorough understanding of analog and digital circuitry, and the ability to use standard test equipment and work from schematics and verbal instructions. Responsibilities will include testing, fabricating, maintaining and repairing high power RF Systems. National Synchrotron Light Source Department.

TB9089. PRINCIPAL TECHNICIAN - (TW-4) Requires an AAS degree in electronic technology or equivalent and some relevant work experience. Under minimum supervision, performs a variety of evaluation, fabrication, testing, troubleshooting, modification, and maintenance operations on electronic circuits. Requires working knowledge of digital electronics, basic test equipment, circuit board layout from schematics, elemen-

tary electronic design, and basic mechanical fabrication techniques. Familiarity with AutoCAD LT or other CAD software would be a plus. Must be able to work mandatory overtime and be available during nonscheduled hours to respond to C-A operations as required. Collider-Accelerator Department.

DD8716. OFFICE SERVICES ASSISTANT - (CW2, part-time, term) Requires an AAS degree or equivalent related experience. A working knowledge of personal computers and exposure to computerized business systems are required as well as knowledge of Excel, Word, and accounts payable processing. Fiscal Services Division.

Happenings

Greg Condemi, RCD Division, will perform with classic rock band Hadicus Road at The Brickhouse Brewery, W. Main Street, Patchogue, Sat. 8/11, 10 p.m.-2 a.m. Ext. 4098.

Calendar

(continued)

— WEEK OF 8/6 —

Friday, 8/10

*BERA Summer Bash

6 p.m., Rock Hill Country Club in Manorville. \$15 per person includes hot buffet, 7-8:30 p.m. and DJ. Cash bar. Contact Andrea Dehler, Ext. 3347; John McCaffrey, Ext. 2075; Lou Nieves, Ext. 4897; or Laurie Pearl, Ext. 5520.

– WEEK OF 8/13 —

Tuesday, 8/14

Verizon Wireless Demo

11 a.m.-2 p.m., a representative will be in Berkner Hall presenting BNLers with special rates on wireless service.

Wednesday, 8/15

Divorced & Separated Support Group

noon-1 p.m., Berkner Hall, Room D. Mary Campbell, Ext. 4776, maryc@bnl.gov.

Thursday, 8/16

Brookhaven Advocacy Council Meeting

Open Session, 12:30-1 p.m., Berkner Hall, Room C. Nancy Warren, Ext. 7548.

BERA Bridge Club

7 p.m., Berkner Hall cafeteria Morris Strongson, Ext. 4192, mms@bnl.gov.

Friday - Sunday, 8/17-19

Balloon & Music Festival

BERA offers discounted tickets for the Waldbaum’s Balloon & Music Festival at Calabro Airport, William Floyd Parkway. Fri., 1-10 p.m.: Balloon Glow, Jethro Tull music; Sat., 6 a.m.-10 p.m.: Doobie Brothers, Grucci fireworks; Sun., 6 a.m.-10 p.m., WBLI Summer Concert bash. Get tickets in the BERA Store at \$10 adults (\$15 at gate), \$5 children of 4-12 (\$10 at gate). Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

Saturday, 8/18

*Foxwoods Casino Trip

8:15 a.m.-approximately 8:15 p.m. \$39 per person includes bus, SeaJet Ferry, \$10 food voucher, two free Keno plays, and \$10 match table play. Tickets at the BERA Store.

— WEEK OF 8/20 —

Wednesday, 8/22

Apheresis Blood Drive

Brookhaven Center. BNL volunteers from the previous apheresis drive are scheduled to donate platelets. Sue Foster, Ext. 2888, or foster2@bnl.gov.

Note: This calendar is updated continuously and will appear in the Bulletin whenever space permits. Submissions must be received by the preceding Friday at noon to appear in the following week’s Bulletin. Please enter the information for each event in the order listed above (date, event name, description, and cost) and send it to bulletin@bnl.gov. Write “Bulletin Calendar” in the subject line.

BNLers Volunteer for PET, MRI Research Studies

Help to Further the Understanding and Treatment of Disease

With state-of-the-art brain-imaging technology, people with diseases who are willing to volunteer as research subjects, and scientists with a quest for knowledge of the brain-mechanisms at play, what else is required for successful positron emission tomography (PET) or magnetic resonance imaging (MRI) studies?

The answer is control subjects.

Controls are the “normal” subjects whose brain scans provide a reference point for the PET or MRI scientists.

Joanna Fowler, a PET researcher in BNL’s Chemistry Department, says, “We are continuously looking for people to act as control subjects. By providing a direct window into a normal brain, control subjects help to identify the differences, and, more importantly, the causes of these differences, in the brains of subjects stricken with disease.”

Brookhaven scientists use PET and MRI to investigate how different brain diseases will affect brain chemistry and brain function. They are applying these imaging techniques to study the effects of sub-

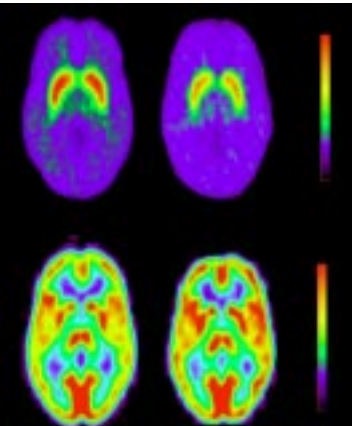
Meet several BNLers who have volunteered as control subjects

Chemist Diane Cabelli said, “There are few things in life requiring so little effort that yield such a sense of contribution.” She continued, “The people who carry out this research are very impressive and do their best to make it as efficient as possible. It was very rewarding to be associated with them and their studies.”

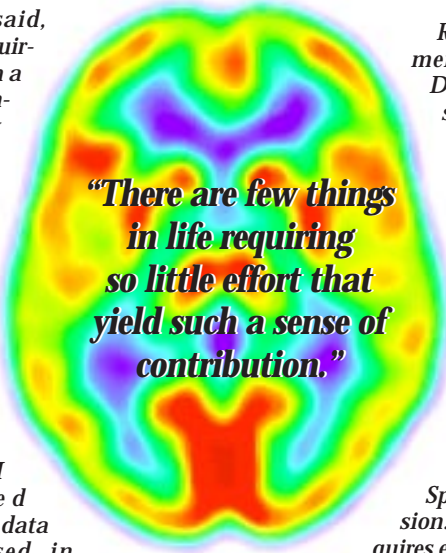
“Everyone involved in the study made me feel relaxed and comfortable,” said Design Engineer Michael Loftus, Superconducting Magnet Division. “I was very proud when I



learned that my data were used in published papers. Becoming involved with research conducted outside my own division was also enjoyable. I will continue to volunteer in the years ahead.”



In a recent study, PET scans showed that obese and control subjects have similar metabolic rates, but obese subjects have fewer receptors for dopamine, a brain chemical that transmits feelings of pleasure and reward.



Richard Ryder, a Tool and Instrument Maker in the Central Shops Division said, “Volunteering for the studies seemed like a good thing. Scientists might be able to find something by looking at my brain that may provide valuable to their research.”

“I was told that there would be no direct benefit to me if I participated in the PET research study, but that my volunteering would help others in the long run,” says Henry Hauptman, an Assistant Systems Specialist in the Staff Services Division. The PET imaging procedure requires establishing intravenous and arterial lines to administer the radiotracer and to take blood samples. But Hauptman describes the discomfort as “no worse than when donating blood. The procedure just takes a bit longer.”



Reflecting on her voluntary participation, Administrative Secretary Lenore Dudzick, Environmental Sciences Division, recalls, “I felt that I had contributed to an important study. The whole process was extremely interesting. So often we are only involved in our own little corner of BNL, that it was exciting to participate in another area’s research.”

Electrician John Passaro, Plant Engineering Division said, “I felt that my participation in these studies has the potential to make the human race better.”

stance abuse, Alzheimer’s disease, attention deficit hyperactivity disorder (ADHD), obesity, and HIV/AIDS. Studies will also begin soon to further the understanding of the aging process and the effects of hormone-replacement therapy on the brain in postmenopausal women.

Having people volunteer as control subjects in a PET or MRI imaging study produces research results that allow scientists to find new and improved ways to prevent, detect, diagnose, control, and treat illnesses.

All imaging studies involving human subjects are reviewed by the Brookhaven Institutional Review Board and the Brookhaven Clinical Research Center before research begins in order to ensure the safety and ethical treatment of the volunteers and that the research is of value to society.

All volunteers are compensated. To learn more about the PET or MRI research program, or to volunteer for a future PET study, contact Naomi Pappas, Research Coordinator, Ext. 5015, or 1-888-352-7380. To volunteer for an MRI study, contact Lisa Zimmerman, Ext. 2773.