

## RHIC Physicists Nab New Record — Heaviest Antimatter

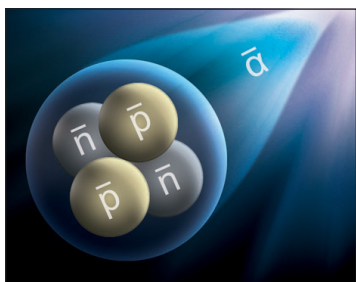
**Newly discovered antihelium-4 could be heaviest stable antinucleus detectable for decades to come**

Members of the international STAR collaboration at the Relativistic Heavy Ion Collider (RHIC) — a particle accelerator at BNL used to recreate and study conditions of the early universe — have detected the antimatter partner of the helium nucleus: antihelium-4. This new particle, also known as the anti-alpha, is the heaviest anti-nucleus ever detected, topping a discovery announced by the same collaboration just last year.

The new record will likely stand far longer, the scientists say, because the next weightier antimatter nucleus that does not undergo radioactive decay is predicted to be a million times more rare — and out of reach of today's technology.

"This discovery highlights the extraordinary capabilities of RHIC to investigate fundamental questions about the nature of matter, antimatter, and the early universe," said William F. Brinkman, Director of the DOE Office of Science.

Steven Vigdor, BNL's Associate Lab Director for Nuclear & Particle Physics, who leads the RHIC program, said, "Barring a new breakthrough in accelerator technology, or the discovery of a completely new production mechanism, it is likely that antihelium-4 will remain the heaviest



A rendering of antihelium-4 (anti-alpha) emerging from a collision in the Relativistic Heavy Ion Collider

est stable antimatter nucleus observed for the foreseeable future."

The STAR physicists describe the discovery in a paper in *Nature*, published online April 24, 2011.

The ability to create and study antimatter in conditions similar to those of the early universe is no small matter: One of the great mysteries of physics is why our universe appears to be made entirely of ordinary matter when matter and antimatter are understood to have been created in equal amounts at the time of the Big Bang.

At RHIC, head-on collisions of gold ions moving at nearly the speed of light simulate conditions just after the Big Bang. In these atomic smashups, quarks and antiquarks likewise emerge with approximately...

See *Antimatter* on p. 2



Roger Stoutenburgh 1D5190411

## Energy Secretary Chu Visits BNL Tours Lab Facilities, Holds All-Employee Meeting

On his second visit to Brookhaven Lab, on April 21, U.S. DOE Energy Secretary Steven Chu spoke to nearly 1,300 BNLers about the importance of science and technology to the future of the country, and he got a first-hand look at the ways in which the Lab is doing its part.

The first stop on Chu's afternoon tour was one of the Laboratory's newest projects, the National Synchrotron Light Source II (NSLS-II). After being welcomed by Laboratory Director Sam Aronson, Chu talked with Associate Laboratory Director for Basic Energy Sciences Jim Misewich about Brookhaven's energy strategy and partnerships, ranging from the Smart Grid consortium to a recent collaboration with General Electric to study batteries in action using the National Synchrotron Light Source (NSLS). Chu then heard how NSLS-II will advance work in these fields and numerous others



Energy Secretary Steven Chu



DOE Brookhaven Site Office Manager Michael Holland



Laboratory Director Sam Aronson



Watch a video of the all-employee meeting online:  
<http://real.bnl.gov/ramgen/bnl/2011/04/Chu.rm>  
(RealPlayer required)

from Steve Dierker, Associate Laboratory Director for Photon Sciences. While walking through pentant 1 — the first fifth of the NSLS-II ring building to finish installation of conventional facilities like walls, plumbing, and electricity — Dierker explained the machine's components, construction progress, and the wide-ranging beamlines under development.

At the Relativistic Heavy Ion Collider (RHIC), Chu was shown the PHENIX detector by Associate Laboratory Director for Nuclear & Particle Physics Steve Vigdor, Collider-Accelerator Department Chair Thomas Roser, PHENIX Operations Manager Ed O'Brien, and Run Coordinator Takao Sakaguchi. After Vigdor explained the...

See *Chu's Visit* on p. 2

## BNL Hosts Successful 2011 Particle Accelerator Conference in NYC

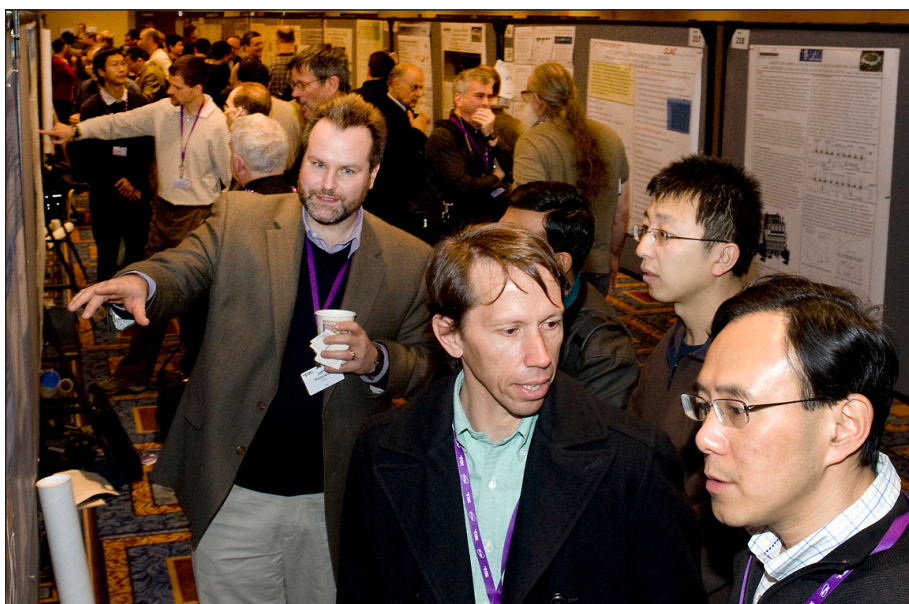
Written by Thomas Roser and Vladimir Litvinenko, Collider-Accelerator Department

BNL hosted the 2011 Particle Accelerator Conference (PAC'11) in New York City from March 28 to April 1. This was the 24th in the series of Particle Accelerator Conferences that started in 1965 in Washington, D.C., but also is the first of the newly formed regional North American PAC. The regional North American PAC will alternate with the International PAC when it is located in North America on a three-year cycle.

PAC'11 was a great success. Chaired by BNL's Thomas Roser, with Vladimir Litvinenko as Science Program Committee Chair and Michael Sivertz as Local Organization Committee Chair, it attracted more than 1,000 accelerator scientists, engineers, students, and industrial exhibitors. The event also continued the traditional strong emphasis on all aspects of accelerator science and technology by providing the opportunity for a large number of oral and poster presentations.

The conference opened on a sober note as Roser and Litvinenko expressed deep sympathy to all victims of the March 11 earthquake and tsunami in Japan and wished all those in Japan a fast and full recovery to normality.

Three plenary talks brought to light the role and the future



At the PAC'11 poster conference, two of this year's award winners: user of BNL's ATF facility Patric Muggli (center), University of Southern California, who won the IEEE-NPSS Particle Accelerator Science and Technology (PAST) Award, talks to Zhirong Huang (right) of SLAC National Accelerator Laboratory, a winner of the U.S. Particle Accelerator School Award.

promise of accelerators for fundamental scientific discoveries in high-energy physics, nuclear physics, and photon sciences. Two facilities of special interest to BNL — eRHIC, a proposed electron-ion collider at the Relativistic Heavy Ion Collider (RHIC); and National Synchrotron Light Source II (NSLS II), now under construction — were among the highlights.

Industrial and medical applications of accelerators were given a prime spot in the program. Speakers covered a wide range of

benefits that accelerators bring to society: from homeland security to advanced cancer treatment facilities.

Big colliders — the Large Hadron Collider (LHC) at CERN, Switzerland; the Tevatron at Fermi National Accelerator Laboratory; and RHIC — had their traditional spotlight in the program. The audience was excited to learn about steady LHC progress toward its luminosity goals, the top-notch performance at the Tevatron, and new milestones in RHIC's unique po-

positron collider at KEK, in Tsukuba, Japan, and the J-PARC facility in Tokai, Japan, a large audience learned first-hand of the devastation to these major accelerator facilities resulting from the March 11 earthquake.

The success and plans of the X-ray Free Electron Laser (FEL) in SLAC National Accelerator Laboratory and the promise of the next cohort of light sources — at NSLS II and MAX-IV in Sweden — dominated the "photon" hemisphere of the conference. Future projects planning to use



Roger Stoutenburgh D1460411

At a PAC'11 conference session are: (front, from left) Thomas Roser, BNL; Vladimir Litvinenko, BNL; Vladimir Shiltsev, FermiLab; Derek Lowenstein, BNL; and others.

larized proton program. Another highlight was the series of three talks discussing eRHIC's unique promises for science.

During invited talks about the electron-positron collider at KEK, in Tsukuba, Japan, and the J-PARC facility in Tokai, Japan, a large audience learned first-hand of the devastation to these major accelerator facilities resulting from the March 11 earthquake.

The success and plans of the X-ray Free Electron Laser (FEL) in SLAC National Accelerator Laboratory and the promise of the next cohort of light sources — at NSLS II and MAX-IV in Sweden — dominated the "photon" hemisphere of the conference. Future projects planning to use

unique features of energy recovery linacs, or linear accelerators, were also presented. They ranged from plans for a traditional incoherent light source at Cornell University and a soft-X-ray FEL source in Thomas Jefferson National Accelerator Facility (JLab) to an X-ray FEL oscillator suitable for eRHIC.

Another success discussed was the Spallation Neutron Source at Oak Ridge National Laboratory — the first pulsed spallation neutron source to break the one-megawatt barrier — and new plans for an even more powerful sister facility in Europe.

Exciting topics covered in the advanced accelerator section included plasma accelerators that are now demonstrating dramatic progress both in the energy (reaching tens of billions of electron volts in less than a meter) and the quality of the generated beams...

See *PAC'11 Conference* on p. 3



## Annual Joint NSLS/CFN Users' Meeting, 5/23-25

The Joint National Synchrotron Light Source (NSLS) and Center for Functional Nanomaterials (CFN) Users' Meeting, to be held May 23-25, will provide a venue for scientists from diverse disciplines who use the NSLS and CFN facilities to share their work and discuss future directions for their research. New research results and advances in experimental capabilities in synchrotron radiation and the nanosciences will be highlighted.

This year's theme will focus on "Nanotechnology for Energy and Health" to highlight the vital roles served by DOE's Synchrotron User Facilities and Nanoscience Research Centers. Scientists who use both the NSLS and CFN are actively engaged in developing nanoscience, nanotechnology, and nanoscale imaging for life science applications.

The program includes updates from DOE's Basic Energy Sciences and BNL management, invited talks, workshops, a poster session, and exhibits showcasing new technology and instrumentation.

The keynote speaker on Tuesday, May 24, will be Thomas A.

Steitz, Sterling Professor of Molecular Biophysics and Biochemistry, and Professor of Chemistry at Yale University. Steitz is one of three recipients of the 2009 Nobel Prize in Chemistry for his work in describing the structure and function of the ribosome, the protein-making factory that is key to the function of all life.

Following Tuesday's plenary session, the NSLS Users Executive Committee (UEC), in conjunction with the Photon Sciences Directorate, will host a poster and information session of the future NSLS-II beamlines.

The Tuesday main meeting and plenary sessions are open to all, free of charge. For more information on the meeting, go to [www.nsls.bnl.gov/users/meeting/page.aspx?year=2011&id=home](http://www.nsls.bnl.gov/users/meeting/page.aspx?year=2011&id=home).

Users are reminded that the last day to register without paying a late fee is Friday, May 6. Go to [www.nsls.bnl.gov/users/meeting/registration/?year=2011](http://www.nsls.bnl.gov/users/meeting/registration/?year=2011). BNL employees and guests are welcome to register for workshops and other meeting events (registration and a nominal fee are required). For more information, go to: [www.nsls.bnl.gov/users/meeting/page.aspx?id=home](http://www.nsls.bnl.gov/users/meeting/page.aspx?id=home).

## BNL's APAA Offers Dr. Mow Shiah Lin Scholarship

Applications are now being accepted for the seventh Dr. Mow Shiah Lin Scholarship sponsored by the Asian Pacific American Association (APAA) at BNL. The annual \$1,000 scholarship was initiated to honor the late BNL scientist for whom it is named.

In memory of Lin's distinguished research, achievements, and inventions, the scholarship is granted each year to an Asian immigrant with a student visa who is matriculating toward a doctorate in environmental & energy technology, biology, or chemistry at an accredited institution of higher education on Long Island, including Brooklyn and Queens. Such is how Lin began his career.

BNL scientists and members of APAA choose the winner. The selection criteria include academic records, references, career goals, and other factors deemed appropriate by the selection committee. The scholarship is granted independent of financial need.

Applications and more information can be obtained by calling the Diversity Office, Ext. 6253, or by sending an e-mail to [sge@bnl.gov](mailto:sge@bnl.gov), or by visiting the APAA website, [www.bnl.gov/bera/activities/apaa/](http://www.bnl.gov/bera/activities/apaa/). The application deadline is May 31.

Mow Shiah Lin began his career at BNL in 1975 as a postdoctoral fellow, and he advanced to co-lead a research team working with an environmental remediation company to use selected bacteria to convert toxic oil wastes, such as used motor oils, into useful products. In 2001, Lin shared an R&D 100 Award, given by *R&D Magazine* to honor the top 100 technological achievements of the year, for a technology to recover silica from geothermal brine. Lin died suddenly due to a brain aneurysm at the height of his career in 2003, and his fellow employees, friends, and family contributed funds to establish the scholarship.

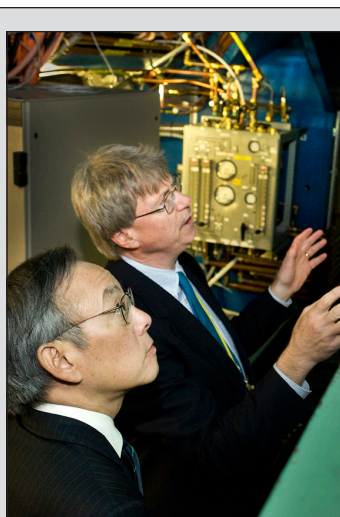
### Antimatter from p. 1

...equal abundance. A major fraction of the stable antimatter produced in RHIC collisions leaves a clear signal in the STAR detector before annihilating with ordinary matter in the outer part of the experimental apparatus.

By sifting through data for half a trillion charged particles emitted from almost one billion collisions, the STAR collaboration has detected 18 examples of the unique "signature" of the antihelium-4 nucleus. Consisting of two antiprotons and two antineutrons in a stable bound state that does not undergo radioactive decay, the antihelium-4 nucleus has a negative electric charge that is twice that of an electron, while its mass is very close to four times that of a proton. Data plots show that the newly discovered anti-alphas are very cleanly separated from the lighter isotopes, and are at the expected mass.

The scientists also measured the antihelium-4 production rate in nuclear interactions, and found that it is consistent with expectations based on a statistical coalescence of antiquarks from the soup of quarks and antiquarks generated in RHIC collisions. But the fact that 12 antiquarks combine to build such a complex antinucleus in a way that bears out these predictions is remarkable considering it all takes place in the midst of rapidly expanding matter created at trillions of degrees and surviving for only ten trillionths of a trillionth of a second.

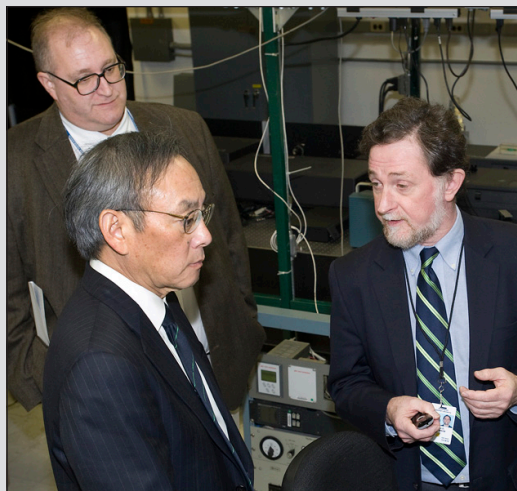
Knowing the production rate of these antinuclei is important to a wide range of scientific disciplines, including searches for new phenomena in the cosmos. For example, it ties in with the scientific goals of an experiment known as the Alpha Magnetic Spectrometer (AMS), which will be delivered to the International Space Station via



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### Chu's Visit from p. 1

...complementary nature of the PHENIX and STAR detectors, and the program's quest for a better understanding of quark-gluon plasma and the origin of proton spin, O'Brien guided Chu through the nooks and crannies of PHENIX.

Chu's last stop was a very quick visit with Peter Johnson, Chair of the Lab's Condensed Matter Physics and Materials Science Department. At the Ultrafast Laser Spectroscopy Laboratory in building 480, Chu and Johnson discussed the mysteries of high-temperature superconductors and how Brookhaven scientists are making discoveries that are leading to an understanding of how they work.

Following Chu's tour of the facilities at BNL, DOE Brookhaven Site Office Manager Michael Holland and Aronson introduced him to a packed Berkner Hall, and to those watching online via webcast, for an all-employee

meeting with the Secretary.

"If you go through the entire 20<sup>th</sup> century and look at wealth creation in the United States, it was largely founded on what was discovered in laboratories, universities, and what was developed in entrepreneurial companies and bigger businesses in the United States. That is going to be more true going forward than it has been in the past," Chu said.

He spoke of the race to develop mass-market electric cars that can go 300-400 miles on a single charge, explaining that DOE and the national laboratories are supporting research to develop the batteries that could power those cars — batteries with higher energy capacity that are also cheaper to manufacture and safer.

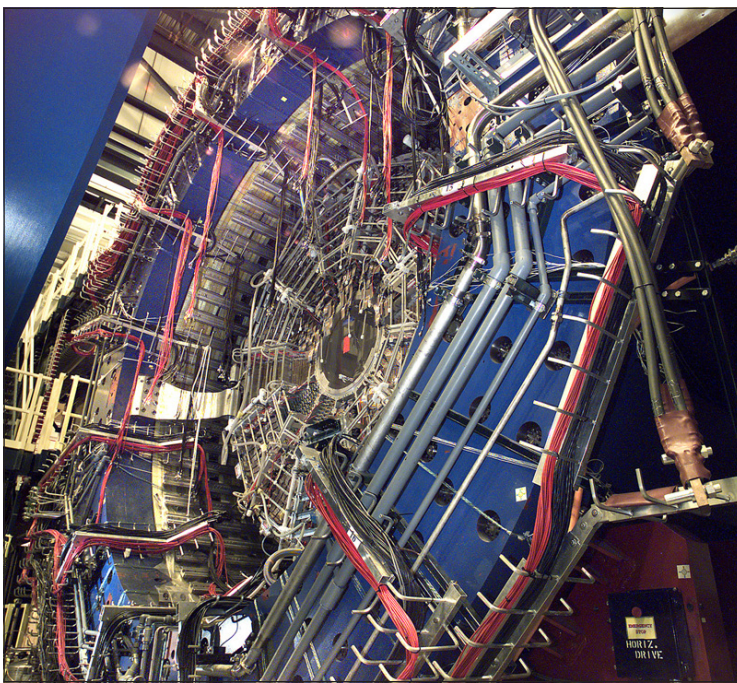
"Many things and surprising events from basic research have found their way into very practical things," Chu said in support of science and technology as he set the stage for rigorous federal budget negotiations in the future.

Then, for nearly forty-five minutes, Chu offered his thoughts and responses to questions asked by BNLeers in the audience. These questions ranged in subject from carbon sequestration to educational programs to immigration issues for visiting scientists to what the United States needs to do in order to reclaim leadership in various scientific fields.

Chu also explained new ways that DOE is working with the current administration. "Every time something happens, it seems the President just turns around and says, 'Chu, fix it,'" he added, referring to last year's oil spill in the Gulf of Mexico and Japan's nuclear reactors following last month's earthquake and tsunami.

A video of the entire all-employee meeting, including the question-answer session, is available online at <http://real.bnl.gov/ramgen/bnl/2011/04/Chu.rm>.

— Kendra Snyder and Joe Gettler



Roger Stoulenburgh D0341298

The STAR detector at the Relativistic Heavy Ion Collider at BNL

one of the last space shuttle missions, scheduled (as the Bulletin goes to press) for launch on April 29, 2011. This experi-

ment will search for antimatter in space.

"If AMS were to find evidence for the existence of bulk

antimatter elsewhere in the cosmos, the new measurement from the STAR experiment would provide the quantitative background rate for comparison," said Hank Crawford, a STAR collaborator from the University of California, Berkeley, Space Sciences Laboratory. "An observation of antihelium-4 by the AMS experiment could indicate the existence of large quantities of antimatter somehow segregated from the matter in our universe," he said.

In 2010, the Large Hadron Collider at CERN, the European laboratory for nuclear and particle physics research, began its own collisions of heavy nuclei at energies more than an order of magnitude higher than at RHIC. Experiments there also have the capability to study production of antinuclei, and it will be interesting to see what those experiments find at higher energies.

See *Antimatter* on p. 3





Organizing committee members at PAC'11 included: (front, from left) Volker Schaa, Frank Naase, Thomas Roser, Vladimir Litvinenko, and Christine Petit-Jean-Genaz; (back, from left) Michael Sivertz, Anna Petway, Doreen Cantelmo, Elaine Lowenstein, Derek Lowenstein, Susan Pankowski, Todd Satogata, and Kevin Brown. Not present were several local committee members: Mei Bai, Tracy Blydenburgh, Scott Bronson, Nick Franco, Kaitlin Scholl, and Kendra Snyder.

**PAC'11 Conference from p. 1**  
Progress in novel methods of cooling muon and hadron beams was another highlight. On the engineering side, two dominant themes were progress with superconducting radio frequency accelerators and also with synchronizing accelerator and laser components at the femtosecond time scale. (one femtosecond is  $10^{-15}$  part of a second, i.e., one millionth part of one trillionth part of a second.)

All future accelerator facilities — from the Facility for Rare Isotope Beams (FRIB) at Michigan State University to Project-X, a proposed high intensity proton accelerator complex at Fermilab — were discussed at the conference. The wealth and diversity of accelerator research was covered in 147 talks and nearly one thousand posters.

Following long standing tradition, PAC'11 held the Louis Costrell Honorary Awards Session, where winners of the APS-DPB (the outstanding doctoral thesis award in beam physics), and the IEEE-NPSS (the particle accelerator science and technology award and doctoral student award) and new fellows were presented. Michael Blaskiewicz of BNL was presented as a newly elected fellow of the American Physical Society (APS). The most prestigious award of the ceremony — the APS Robert R. Wilson prize for Achievements in the Physics of Particle Ac-



Among PAC'11 participants were: Ernest Courant, BNL; Al Garren, Particle Beam Lasers; Joseph Bisognano, SRC/UV-Madison; and Robert Warnock, SLAC.

celerators — was awarded to Yaroslav Derbenev, JLab.

On the evening before the official start of the conference, 90 graduate students participated in a student poster contest. The quality of the posters was so high the number of the awards needed to be increased from two to three.

In addition, four one-hour tutorials were added as introductions for junior members of the accelerator science community and, in fact, anyone who wanted to broaden his or her knowledge. The tutorials were popular, filling the lecture hall at 8:30 in the morning each day.

One of the many achievements of the conference was the work of the editorial team, which processed and published PAC'11 pre-proceedings online before the closing bell. This feat had never been accomplished by any previous PACs and the team led by Todd Satogata of JLab are to be congratulated.

During the conference, Derek Lowenstein, BNL's As-

sociate Chair for Accelerator Applications & Education, organized a high school teachers' day. Forty physics teachers from the area attended for a day of instruction and hands-on experiments. The program was very well received.

Following the conference, on Saturday, April 2, approximately 100 conference participants joined a bus tour to BNL where they visited the new electron beam ion source (EBIS) pre-injector and the NSLS-II project, as well as the Accelerator Test Facility and the Energy Recovery Linac test facility.

As Roser concluded in his article in Monday Memo, April 11, "Preparing and organizing such a large conference is a very big effort and I would like to thank everybody involved for their hard work and the long hours they put in. I also extend a big 'thank you' to all the staff who came to the Lab on Saturday to showcase our facilities."

For more on PAC'11, see <http://www.bnl.gov/pac11/>.

**Antimatter from p. 2**

"The discovery of the antihelium-4 nucleus also has special synergy with a major scientific anniversary: the 100th anniversary of Ernest Rutherford's seminal gold foil experiments, in which he used ordinary-matter helium-4 (alpha) particles to probe the structure of matter," said Brookhaven physicist Aihong Tang, a member of the STAR collaboration and a lead author on the *Nature* paper. "These experiments, conducted in 1911, established the very existence of atomic nuclei for the first time, and marked the dawn of our modern understanding of atoms."

The STAR collaboration is composed of 54 institutions from 12 countries. Research at RHIC is funded primarily by the DOE Office of Science and by various national and international collaborating institutions, with support from many funding agencies. Measurement capabilities vital to antihelium-4 identification were added to the STAR experiment in 2009 with the installation of a large time-of-flight detector. This device was constructed jointly by U.S. and Chinese institutions and was funded jointly by the DOE Office of Science and the National Natural Science Foundation of China, China's Ministry of Science and Technology, and the Chinese Academy of Sciences. The antihelium-4 discovery was announced simultaneously in the U.S. and in China.

— Karen McNulty Walsh

**Yankees, Mets Tickets**

Purchase tickets at the BERA Store, which is open Monday through Friday from 9 a.m. until 3 p.m. Prices include ticket, bus transportation, and drivers' tip. Buses will leave BNL at 4 p.m. and depart after the game at about 11 p.m.

**New York Yankees:** Thursday, July 7; Wednesday, August 10; Tuesday, September 20. \$20 per person. Yankees tickets go on sale Friday, May 6.

**New York Mets:** Three Fridays: May 27 (\$40 per person); July 15, and August 5 (\$45 per person).

**AdoptaPlatoon Plant Sale, 5/5,6**  
**Volunteers Needed, Please**

The AdoptaPlatoon group of the Brookhaven Veterans Association will host a plant sale on the Thursday and Friday before Mother's Day, May 5 and 6, in the parking lot outside Berkner Hall from 11 a.m. until 1 p.m. In case of rain, the sale will be moved to the lobby of Bldg. 400. All proceeds go towards supporting troops in Afghanistan. Anyone able to help with the sale should call Joanne Rula (Ext. 8481).

**Arrivals & Departures**

— Arrivals —

Christopher Bruno ..... Fac. Ops  
Mark Marco..... S&H Svces  
Brian McCaffrey..... Fac. Ops  
Chengshi Yan..... Biology

— Departures —

None

**BREA Tours BNL Facilities, 5/18**  
**Retirees, Come Get to Know the RFB, CFN, NSLS-II**

On Wednesday, May 18, the Brookhaven Retired Employees Association (BREA) is sponsoring a morning tour of the Research Support Building, the Center for Functional Nanomaterials (CFN), and the National Synchrotron Light Source II which is now partially complete. The program also includes a luncheon. Retirees and their guests can make reservations by emailing Ken Mohring at [kenwad-ingraver@gmail.com](mailto:kenwad-ingraver@gmail.com), or Eena-Mai Franz at [SKOOSILD@aol.com](mailto:SKOOSILD@aol.com) or by sending a note to BREA at Bldg. 421. The cost of the luncheon is \$8. The schedule for the day is at the BREA website, [www.bnl.gov/bera/activities/brea/Tours.asp](http://www.bnl.gov/bera/activities/brea/Tours.asp).

**Elder Law & Estate Planning Update, 5/2**

A talk on "Elder Law and Estate Planning" will be given by Elder Law Attorney Nancy Burner on Monday, May 2, at noon in Berkner Hall, Room B. Please register with Michael Thorn at [mthorn@bnl.gov](mailto:mthorn@bnl.gov) or Ext. 8612. Burner will also talk on "Elder Law and Medicaid Updates," June 2.

**CALENDAR**

**Today, Friday, 4/29**

**Hybrid Vehicle Display**

10 a.m.-2 p.m. Berkner Hall parking lot. Local car dealers display hybrids. Open to the public. Visitors to the Lab of 16 and older must carry a photo ID.

**Bird Watching Walk on Site**

Noon-1 p.m. Berkner Hall upper lobby. Meet the group, be taken to watch birds with Lab ecologist Tim Green and birder Ernie Lewis. Wear appropriate clothes and shoes. Group will return to Berkner by 1 p.m.

**Saturday, 4/30**

**BNL at Suffolk Earth Day Festival**

All day family event. Scully Estate on the Great South Bay, Islip. BNL's Environmental Protection Division will host a booth, with interactive displays, giveaways. "Green" fun for all, activities for children.

**— WEEK OF 5/2 —**

**Monday, 5/2**

**\*Elder Law, Estate Planning**

Noon. Berkner Hall, Room B. Talk by Nancy Burner, Elder Law Attorney. All the Lab community is welcome. See notice below, left.

**Wednesday, 5/4**

**Learn About Fairfield Inn, Medford**

11:30 a.m.-2 p.m. Berkner lobby. Representatives of Marriott's Fairfield Inn at Medford will showcase the hotel. Special BNL rate of \$89 includes complimentary breakfast, wireless internet, indoor pool, whirlpool spa, fitness center, roundtrip transportation to BNL, MacArthur Airport, LIRR at Ronkonkoma. Contact Steve Kaye, [stevkaye@marriott.com](mailto:stevkaye@marriott.com), 447-6200 Ext.703, for more information.

**Thursday, 5/5**

**\*AdoptaPlatoon Plant Sale**

11 a.m.-1 p.m. Berkner Hall parking lot. Buy plants for Mothers' Day from the AdoptaPlatoon group of the Brookhaven Veterans Association to help support troops in Afghanistan. See notice at left.

**\*Brookhaven Advocacy Council**

11 a.m.-1:30 p.m. Berkner Hall lobby. Membership drive. Learn more about the council. See notice below, left.

**Friday, 5/6**

**\*AdoptaPlatoon Plant Sale**

11 a.m.-1 p.m. Berkner Hall parking lot. See above, 5/5

**BJ's Wholesale Club**

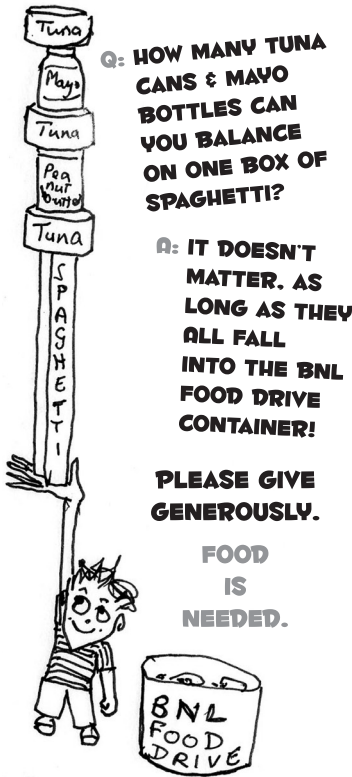
11:30 a.m.-1:30 p.m. Berkner Hall lobby. BJ's holds membership drive with discounts. Memberships are 15 months at \$43.50 (normally \$50 for 1 year). Rewards card with 2 percent back \$76.04. Enjoy giveaways and maybe win a membership.

**Brookhaven Advocacy Council Needs Members: Learn More, Stop by Berkner, 5/5**

If you are a good listener who can maintain confidentiality, remain impartial, and base your judgment on fact rather than emotion, consider becoming a Brookhaven Advocacy Council (BAC) member. BAC members have the opportunity to participate in establishing an atmosphere of trust between BNL management and employees.

The BAC is a key component of BNL's system of ensuring a respectful, fair and equitable workplace. The members advise and make recommendations to the Lab Director on resolving employee/guest/user concerns or issues that are brought to the BAC's attention. The BAC functions independently of the Human Resources & Occupational Medicine Division, reporting directly to the Lab Director.

Members of the BAC will host a table in Berkner Hall lower lobby on Thursday, May 5, 11 a.m. – 1:30 p.m. To learn more about the BAC or if you are interested in becoming a member, stop by to chat, or visit [www.bnl.gov/bac](http://www.bnl.gov/bac).





## 'You Talk' Tuesdays Workshop for non-native speakers of English To practice giving talks or presentations

The English for Speakers of Other Languages (ESOL) Program invites non-native English speakers to "You Talk" Tuesdays, a workshop in which you can come and practice your upcoming talk or presentation. Peers will give advice, and the BNL ESOL Program Coordinator will provide feedback on pronunciation, grammar,

and presentation style.

This is an informal workshop to practice public speaking in a friendly and supportive environment. Topics include using gestures and eye contact, and knowing your audience.

The schedule for "You Talk" Tuesdays is May 17, 24, and 31. The participants will meet from noon to 1:15 p.m., in Building

400, conference room 2 (RSB 2) on May 17 and 31, and in conference room 1 (RSB 1) on May 24. Feel free to bring your lunch. You can come to one or more sessions. Please do not come later than 12:15 p.m. Contact ESOL Coordinator Jennifer Pieniazek, Ext. 4894 or [jpieniazek@bnl.gov](mailto:jpieniazek@bnl.gov) to register or for more information.

### 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 benefits-eligible employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present benefits-eligible 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. Access current job openings on the World Wide Web at [www.bnl.gov/HR/jobs/](http://www.bnl.gov/HR/jobs/).

To apply for a position, go to [www.bnl.gov](http://www.bnl.gov). Select "Job Opportunities," then "Search Job List."

**LABORATORY RECRUITMENT** - Opportunities for Laboratory employees only.

**MAIL CLERK** - (Temporary: May 2, 2011 through September 16, 2011) Under immediate supervision processes, picks up and delivers incoming, outgoing and intra-Laboratory mail. Training required. Staff Services Division. Send transfer form to Diana Hubert, Bldg. 400B.

**OPEN RECRUITMENT** - Opportunities for Lab employees and outside candidates.

**DRIVER (LG-6)** (reposting) - Requires a high school diploma. Requires a Class A CDL license with endorsements and must meet all DOT / BNL medical protocols. Must have telephone and be available for off hour response. Must provide number to BNL for emergency call in situations i.e.: snow removal and other unscheduled events. Must possess written/verbal skills with ability to follow written/oral instructions, procedures, work orders and communicate verbally with customers and supervisors. Industrial grounds equipment i.e. Toro Groundmaster, light power tools i.e. landscaping equipment; masonry/grounds experience a plus. Off site pick up/delivery of materials i.e.: hot asphalt and experience with Vac Master 1000/4000 also a plus. Snow removal/plowing experience required. Candidate must be able to pass a 40-hour Hazwoper training class. Site Resources Division. Please apply to Job ID #15445.

#### Motor Vehicles & Supplies

07 KAWASAKI NINJA ZX-6R - 5.5K mi. b/c, orig ownr, new exh. & sprockets; smokd blinkers, gd maint., \$5,500 neg. 942-4336.  
00 TOYOTA COROLLA VE - 121K mi. 4 cyl, 4 dr, a/t, a/c, v/gd cond, brakes/tires rec replacd. \$3,700 neg. Wayne, Ext. 5936.  
99 TOYOTA COROLLA CE - 116K mi. 4D Sedan, 4-cyl, 1.8 L, FWD, a/t. Vg.cond. Kenwood stereo. \$3,700. Ext. 2752, 751-6571.  
99 DODGE DURANGO - 95K mi., gd cond. \$1,800 neg. 816-0707, [bmicari@bnl.gov](mailto:bmicari@bnl.gov).  
HARDTOP (JEEP) - from a 95 Jeep Wrangler 450. Bobbi, 291-0245, [bmicari@bnl.gov](mailto:bmicari@bnl.gov).

#### Furnishings & Appliances

**FREEZER CHEST** - 1g Kenmore/\$130/ neg. Glider Rocker maple chair/\$200, 516-740-8418 or [lcade@uspsports.com](mailto:lcade@uspsports.com).  
**RANGE** - GE 30" self-cleaning, free-standing electric range, coil burners, beige, v/gd cond. \$50. Ext. 5128.  
**SOFA** - dk brn Ashley 84" w/recliner sectns at ea end, used <1yr, disassembled for transport, \$350/obo. Ext. 2824, 727-3218.  
**TODDLER TRAIN BED** - Little Tikes. 70"L x 34.5"W x 41.75"H Max: 50 lbs. Rob, Ext. 5301 or [BNLtoddlerstuff@gmail.com](mailto:BNLtoddlerstuff@gmail.com).

#### Audio, Video & Computers

20 SPACE STUDIO RACK - Yorkville RK1 slanted studio rack w/wheels, excel cond, orig/\$100, ask/\$75. Josh, Ext. 2854.  
**CANON PRINTER** - All-in-One Printer, lightly used, \$25. Linda, Ext. 2383.

**FLIP ULTRA HD 8GB** - 2nd generation, w/battery. 2 hours video in 720p. Comes with case. \$125. Jesse, Ext. 2122.

**FUJIFILM FINEPIX DIGITAL CAM** - 6.3mp. 1gb Storge, Hi Snsitivity, Picture Stabiliztn Button, High Spd Op. \$100. Ext. 2122.

**IPHONE 3G** - mint, unlocked, running iOS 4.2.1. car/wall charger, USB charg.cble, factry reset, \$200/neg. [nnambiar@bnl.gov](mailto:nnambiar@bnl.gov).

**KEYBOARD / SYNTH STAND** - like Quiklok QLX-11, simple, strong design, excel cond, orig/\$50 ask/\$30. Josh, Ext. 2854.

**RCA STEREO SYSTEM** - 100 Watts, 5 CD Compact System, Includes Remote, AM/FM Radio \$50. Jesse, Ext. 2122.

**SONY TV** - 36" Sony Triniton Wega TV. Excellent condition. Will deliver locally. \$75. Ext. 2752, 751-6571 or [woody@bnl.gov](mailto:woody@bnl.gov).

**TV/VCR COMBO** - Sharp 15" with remote. Works well. Asking \$35. Lynda, Ext. 7235 or [fitz@bnl.gov](mailto:fitz@bnl.gov).

**XBOX 360** - incl 2 new controllers, headset, HD of 120gb, 11 games/all in orig cases, ask/\$300, 887-9027.

#### Sports, Hobbies & Pets

**50 GALLON AQUARIUM W/CABINET** - Fluval filter, extras asking \$250.00. Richard, Ext. 5684 or [jonesr@bnl.gov](mailto:jonesr@bnl.gov).

**AB LOUNGE** - do sit ups w/o being on the flr, works well, excel cond, orig/\$90 ask/\$50. Josh, Ext. 2854.

**AB WORKS BY NORDIC TRACK** - gives back & neck support, ability to work out diff. areas. \$50. 909-7080, [lysik@bnl.gov](mailto:lysik@bnl.gov).

**DOG KENNEL** - 3'x 6'x 6' chain link kennel with gate. My dog would not use it (big baby). \$250 you pick up. Daniel, 375-4343.

**GUITARS** - Aria STG-Series, elec strat, excl cond, \$150 Magnum Acoustic 6-strg, cut-away, \$75, pics. 831-3469, [harrisc@bnl.gov](mailto:harrisc@bnl.gov).

**HALF BOARDER WANTED** - 6 y/o Warmblood cross mare. WTC jumps 3'6". Trailer loads, clips, crosssties, and bathes. \$350/mo. I pay shoes, Vet bills. Pics. 942-4336.

**MOUNTAIN BIKE** - GT Avalanche 3.0 disc. Hrd tail, fr sspen, disc brks,'08 MdI, undr 5 mi. Lke new, \$300. [mvescovi@bnl.gov](mailto:mvescovi@bnl.gov).

**POMERANIAN PUPS** - males, females, ready end of May, \$500/ea, call for details. 347-684-1273 or [zysamay@yahoo.com](mailto:zysamay@yahoo.com).

**SHIBA INU FOR ADOPTION** - 3yr old male, good w/kids & other dogs, housebroken, grt temperament, needs home ASAP - please call for info! Ext. 7146, 767-9755.

#### Tools, House & Garden

**ELECTRIC POWER WASHER** - Campbell Hausfield Std Duty elect pwr washer 1300 PSI, \$35. Linda, Ext. 2733, 395-6784.

**LAWN MOWER** - Craftsman, gas, 21 cut, push type v/gd cond/\$100. 475-8162.

#### Miscellaneous

**BABY'S ITEMS** - Safety 1st Rocking Jitter Buggy, \$10, pic upon request. Rachel, Ext. 3500 or [irachel@bnl.gov](mailto:irachel@bnl.gov).

**BABY/TODDLER ITEMS** - toys, high chrs, back carrier, lots more, Email for list, pics of items. Rob, [bnltoddlerstuff@gmail.com](mailto:bnltoddlerstuff@gmail.com).

**DOUBLE STROLLER** - Graco DuoGlider in gd cond, \$70 or best offer. Ext. 3621.

**INFANT TO TODDLER ROCKER** - reclining, w fold-out kickstnd, adjustable, \$25, excel cond. Nina, Ext. 5894, 475-1297.

**LIVE RENT-FREE** - Waterfront home in Massapequa, 3BR, beach backyard, patio, dock. In exch, care for elderly gentleman in home. Rick, Ext. 3005 or [rhuono@bnl.gov](mailto:rhuono@bnl.gov).

**ROOF SHINGLES** - GAF High Def. 30year. Energy Star white 1 3/4 bundle \$20.00. Ripp Bowman, Ext. 4672.

**MET OPERA TICKETS** - for *Die Walkure* at Metropolitan Opera for May 5, with bus from North Shore Public Library. Michiko, Ext. 7761 or [mtanaka@bnl.gov](mailto:mtanaka@bnl.gov).

**YANKEE TICKETS** - 4 Tix for Sun. May 1, vs. Toronto, 1pm, Sect. 234 Row 15 seat 5-8. \$65/ea, grt seats in left field fair territory. 767-0357 or [mrosenfe@bnl.gov](mailto:mrosenfe@bnl.gov).

#### Lost & Found

**KINDLE W/RED LEATHER CASE** - Lost in the vicinity of Bldg. 400. Nanci, Ext. 2821.

#### Free

19 INCH COLOR TV - Hitachi color tv Model CT19471. Good working cond. No remote. [brookhaven@optonline.net](mailto:brookhaven@optonline.net).

**CHILDREN'S BIKES** - 2 girls', 16.5" & 12"; 1 boys' 12" bike. aAll w/training wheels, pics avail. Sonya, [skiss@bnl.gov](mailto:skiss@bnl.gov).

#### Wanted

**ADOPT-A-PLATOON** - Monetary donations gratefully accepted towards mailing shipments to military overseas and to send goodie packages to BNL family members. Thank you. [jrula@bnl.gov](mailto:jrula@bnl.gov).

**APT RENTAL** - 1/bdrm apt less than 10min from BNL, short term, from June to August. Luozhou, 347-277-4904 or [oe05071lz@gmail.com](mailto:oe05071lz@gmail.com).

**BNL FAMILY MEMBERS IN MILITARY** - If you have a family member that has been deployed overseas, please contact Adopt-a-Platoon so we may send them a goodie package. [jrula@bnl.gov](mailto:jrula@bnl.gov).

**DONATIONS OF DOG/CAT FOOD** - For pets of struggling families/elderly and or Kent Animal Shelter. Collection bins are in Bldgs.: 134, 400, 510 (X5864), 725, 901, 902. Kathleen, Ext. 3161 or [kratto@bnl.gov](mailto:kratto@bnl.gov).

**LOOKING FOR EUROS** - Will pay the exchange rate for the day for your Euros. Angela, Ext. 5322.

**NONWORKING LAPTOP** - Nonworking laptop any brand. Pierrot, Ext. 2589, 730-6184 or [pierrot@bnl.gov](mailto:pierrot@bnl.gov).

#### Yard & Garage Sales

**WADING RIVER** - 4/30, 9a.-3p. 5 Thomas Dr., fundraiser for Girl Scout GOLD award project providing for local homeless families. More info @ [GSforGold@gmail.com](mailto:GSforGold@gmail.com).

#### For Rent

**BELLPORT VILLAGE** - 1 bdrm upstrs apt in 2-Fam home, village amens, priv ent & drwy, carpeted; lots light; lr/kit combo; no smkg/ no pets, util incl. \$1,100/mo. 275-0745.

**FLANDERS** - 1g furn bdrm in a hse in beaut neighborhd, share L/R bath, kit. All util incl, no smkg/pets, quiet BNL employee only. \$700/mo neg. 445-4027.

**MASTIC** - New 3 Bdrm house, 2 full bath, formal l/r, d/r, fully equipped elk, patio, nr LIRR/Free way, quiet, walk to shop 7 min to Lab, no smkg/pets, 1 mon. Sec. \$1,950/mo neg. 335-4907.

**MIDDLE ISLAND** - sublease 1 bdrm in a 2 bdrm apt, u will share it w/me (chem dept), 2nd flr, quiet, lake view, balc, a/c., 12 min to Lab, no smkg/pet, avail 4/30. \$650/mo neg. Shengliang, 540-204-2910 or [szhao@bnl.gov](mailto:szhao@bnl.gov).

**MIDDLE ISLAND** - Lg. 1-bdrm bsmt apt, pvt ent, phone, cable, internet, strictly no pet/smkg, quiet, all incl, nr Lab., BNL employee only. 1 month sec. \$800/mo. Istvan, Ext. 7020, 672-2451 or [dioszegi@yahoo.com](mailto:dioszegi@yahoo.com).

**PATCHOGUE VILLAGE** - 2 B/R house-1 block to water & park, 1.5 car gar, newly renov kit, bath, & master b/r, huge priv yard, deck, no smkg/pets. Utils not incl. \$1,800/mo. Ext. 7278, 730-6831, [lmac15@optonline.net](mailto:lmac15@optonline.net).

**PORT JEFFERSON** - Avail Jun 1. Upstairs Fairfield 2BR apt; indr heated pool, gym, laundry. Walk to beach, shops, lib, hosp, bus & LIRR. Rental include hot water and heat. \$1,675/mo. Ann, 791-9818.

**S.SETAUKET** - 2 bdrm apt, priv ent, nr to Lab/SBU, 3-Village school, quiet/clean, incl all, ca, w/d, high spd int, more, pic in: <http://tinyurl.com/6nddms>. \$1,100/mo. Lin, 482-4648 or [sunysboch@yahoo.com](mailto:sunysboch@yahoo.com).

**SHIRLEY** - beautiful main flr, 1 bdrm apt, pvt ent, lr/kit combo, granite, new appl, full bath, hardwd flrs, off sr prkg, no smkg/pets, single person, credit check 1st & last sec, incl all. \$1,000/mo. 848-6353.

**SHOREHAM** - share house w/professional. Large, furnished bedroom, cable TV, intnet, no smkg/pets, 8 miles to BNL, available now. \$675/mo. 578-0108 or [ggt19582003@gmail.com](mailto:ggt19582003@gmail.com).

#### For Sale

**BAYPORT** - Grt. S. Bay area, 2,300 sq.ft ranch, nr.1 acre, wooded, priv., 3 bdrm, 2+half ba, den, lr/dr, kit, util rm, scrmd porch, carport. \$2,300/mo. or \$585,000. 617-332-6264.

**SHELTER ISLAND** - 5BR, 2Ba Ranch, scenic waterview on acre w/130+ dock; fp, cath. ceilg, fin. walk-in basement, sep. 2+car gar, shed; brick patio w/stone fireplace; outdoor shower. \$1,595,000 neg. Ext. 4931, 775-8160 or [signorel@bnl.gov](mailto:signorel@bnl.gov).

#### In Appreciation

**MY BNL FAMILY** - I feel honored to have worked at BNL for the last 48 years and especially to have worked with such great people. I will forever have fond memories of BNL. Thank you all.

— George, Ext. 4453



Roger Stoutenburgh D5160311

### On-Site Bird-Watching Walk Today, 4/29

Celebrate Earth Week with a lunchtime bird-watching walk today, Friday, April 29, guided by Lab ecologist Tim Green and birder Ernie Lewis. Green and Lewis will point out birds and identify them.

Bring binoculars if you have them. Take precautions against ticks: wear heavy socks and trousers.

The group will meet in the upper lobby of Berkner Hall near the couches at noon and return by 1 p.m. All are welcome. For more information, call Elaine Lowenstein, Ext. 2400.



Joseph Rubino D0570910

### Join a Softball Team This Year!

The softball season is out there, waiting for players to start. Last year, after many exciting games, one of the winning teams was Blunt Force, in the M1 League. New players for this year can get information about how to join at the Softball League website, [www.bnl.gov/bera/activities/softball/](http://www.bnl.gov/bera/activities/softball/), or contact Pat Browne, [browne@bnl.gov](mailto:browne@bnl.gov), Ext. 8217, or Eric Kramer, [ekramer@bnl.gov](mailto:ekramer@bnl.gov), Ext. 8226.



Roger Stoutenburgh D1241110

The winning Blunt Force team of 2010: (back, from left) Tracy Blydenburgh, Stefano Giorgio, Shaniece Bell, Marissa Familette, and Regalado Sanchez; (front, from left) Marcelino (Jr.) Santiago, Devonne Turner, Clarence (Charlie) Wilkins, John Blydenburgh, and Sean LiVigni. Missing from the picture were: John Addressi, Pete and Kerry Bonte, Brian Boyle, Jeffrey Chinga, Steve Coleman, Liz Flynn, Arthur Harris, John McCaffrey, William McPherson, and Jean Odin-McCabe.