

BSA Distinguished Lecture, 6/24 'North Korea, Iran, and Syria — Lessons Learned from IAEA Inspections'

Olli Heinonen, a senior fellow at the Belfer Center for Science and International Affairs at Harvard University and former Deputy Director General for Safeguards of the International Atomic Energy Agency (IAEA), will give a BSA Distinguished Lecture titled "North Korea, Iran, and Syria — Lessons Learned from IAEA Inspections," on Friday, June 24, at 3 p.m. in Berkner Hall. A panel discussion on current issues in international safeguards and nuclear nonproliferation will follow the talk, from 4 to 5:15 p.m.

Look for more information in the *Bulletin* of Friday, June 17.

Allies in Upgrading BNL's Accelerator Test Facility

To say that it's where dreams are made is a bit over the top, but for some, it is. Like a Hollywood studio, Bldg. 820 is a large, modular, warehouse-like structure, and it houses BNL's Accelerator Test Facility (ATF), which is run by the Physics Department and operated by only about 11 full-time employees. Inside, scientists and engineers from around the world are pushing particles to energies never before reached and x-rays never before as bright. And on March 28 and 29, the facility went dark...just as planned.

At the ATF in Bldg. 820, scientists use state-of-the-art equipment to develop the smaller, more cost-effective particle accelerators of tomorrow: a high-brightness photo-injector electron gun, a 70 MeV linear accelerator, four beam-lines, and high-powered lasers. But Bldg. 820 is also an older structure with some electrical equipment that needed to be upgraded, and other electrical equipment that needed preventive maintenance.

"Our experiments require high stability. A several minute power or HVAC outage could shut us down for an entire day, so ATF staff were concerned about the building's status," said Karl Kusche, a physics research engineer at the ATF. He also unofficially served as a building manager at Bldg. 820 for several years before the Lab implemented its Integrated Facility Management program (IFM) in October 2010.

Work requests for building upgrades and maintenance were piling up, so in October 2010, scientists at the ATF met their new allies East Facility Complex Manager Chris Johnson and Facility Project Manager John Biemer through IFM.

IFM, a Blueprint initiative operated by the Facilities & Operations Directorate (F&O), is BNL's way of managing and maintaining the 350+ buildings on site that have been organized into five different facility complexes. Each facility complex is supported by a facility complex manager and core team of project managers, a multicraft supervisor, a planner/scheduler, and an engineer. "Once Chris and John came into the picture, everything changed," said Kusche.

"With IFM, we are trying to spread the resources as equitably as possible, which works for both the small and large departments," explained Johnson.

"Each of the electrical jobs that needed to be done would've interrupted operations, so we asked ourselves, 'Why not do it all on the same day?'" said Biemer. As a facility project manager, he is responsible for planning, prioritizing, and authorizing work to make sure that his facilities, including the ATF, are maintained properly and that problems get fixed.

Many fixes were needed, so the ATF-IFM team decided to do it all in two days, saving ATF scientists and guest researchers from several months of occasional hold-ups. During the week of March 28, the ATF would be quiet with equipment down for maintenance, as many people involved at the facility would be attending the 2011 Particle Accelerator Conference that BNL hosted in New York City. The team decided that March 28 and 29 was the best two-day window to cut power to the entire building, so crews could work through...

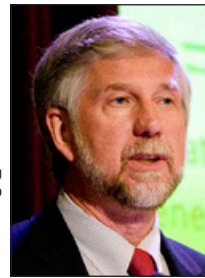
See *ATF/IFM Allies* on p. 2



Doon Gibbs



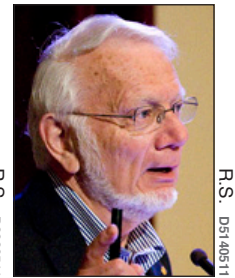
Eric Rohlfling



Steve Dierker



Emilio Mendez



Thomas A. Steitz

2011 NSLS-CFN Users' Meeting at BNL Draws Record Number of Attendees

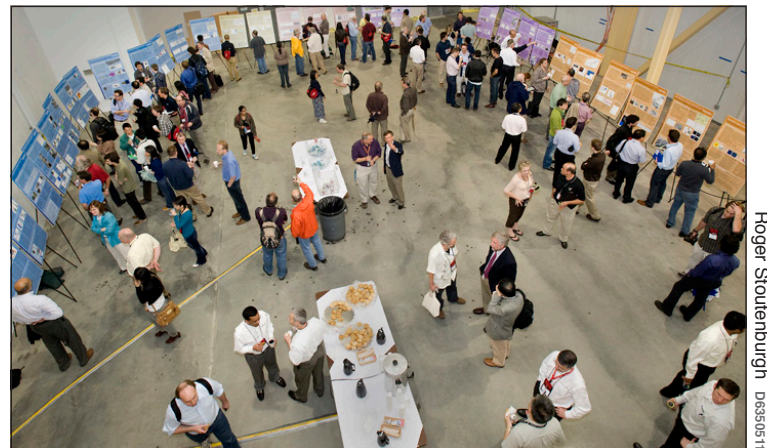
Workshops on cutting-edge nanotechnology, perspective from a Nobel Laureate, and a sneak peek at the quickly growing National Synchrotron Light Source II (NSLS-II) ring building attracted a record number of visitors to Brookhaven for the annual meeting of the National Synchrotron Light Source (NSLS) and Center for Functional Nanomaterials (CFN) user communities.

Nearly 500 visiting scientists, staff members, funding representatives, and exhibitors gathered on May 23-25 for the joint meeting, which included eight workshops and a plenary session packed with invited talks and updates from DOE and Lab management.

"NSLS-II and CFN are key to the Lab's future," said Doon Gibbs, BNL's Deputy Director for Science & Technology, during the plenary session.

That sentiment was echoed and expanded by Eric Rohlfling, Director of the Chemical Sciences, Geosciences, and Biosciences Division in DOE's Office of Basic Energy Sciences (BES).

"Our facilities are only as good as the users who use them," he said, adding that DOE is depend-



Poster session participants inside the NSLS-II ring building

ing on these visiting scientists to help solve the energy crisis of the nation and the world. Based on projections, Rohlfling said, worldwide energy use will almost double to reach 50 terawatts — 50 trillion watts — by the middle of the 21st century.

To try to meet this demand and decrease carbon emissions, BES has developed a strategy that focuses on advancing seven research areas: renewable energy, carbon sequestration, fuel switching (to biomass or photosynthetic materials, for example), electric energy storage, smart grid and transmission, end-use efficiency, and climate science.

Challenging Years Ahead

After much concern over the FY11 budget, the final numbers in the yearlong continuing resolution — signed in mid-April — were not so bad for DOE's Office of Science, Rohlfling said. The office received about \$4.88 billion this year, a "modest" \$35-million reduction from FY10. Based on this number, the Office of Science is negotiating the BES budget with Congress. BES is likely to see a slight increase from FY10, Rohlfling said, but it will still lag far behind the office's original request.

See *Users Meeting* on p. 2

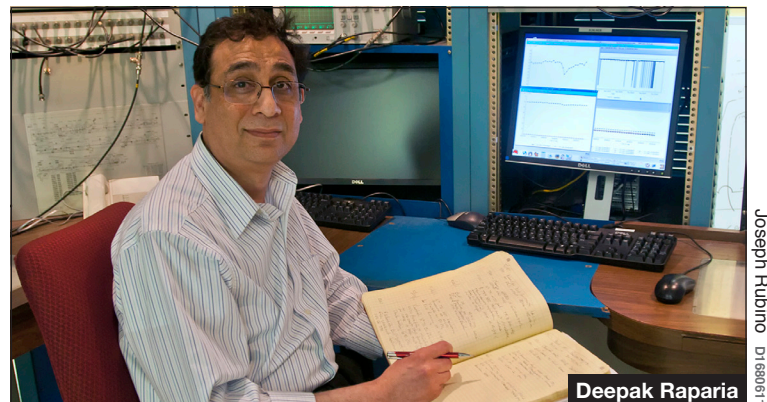
Coming Up...

National Geographic's Explorer in Residence Sylvia Earle to Talk on Our Fate and the Ocean's, 4 p.m. in Berkner Hall, 6/16

Inside Stories...



Seminar on Heat Energy, 6/17; Proposal on Hypertension Measurement Device... see p. 3



Deepak Raparia

470th Brookhaven Lecture, 6/15 Story on Advancing Linear Accelerators... And Keeping It Straight

Lower costs. Greater efficiency. Those words read like notes from meetings held at Brookhaven Lab and in every other conference room across the country. *Higher charged particle densities to increase luminosity and beam power...* now we're talking about one of Brookhaven Lab's unique specialties.

Linear accelerators, or linacs, have come a long way since they were first developed more than 80 years ago. They can be found around the world and have a number of uses. Brookhaven's own 200 MeV linac is a critical component for several operations, including the Brookhaven Linac Isotope Producer, where commercially unavailable radioisotopes are created for medical and industrial uses, and the Relativistic Heavy Ion Collider, where scientists are smashing ions into smaller subatomic particles and analyzing the wreckage to understand better how the universe works.

On Wednesday, June 15, join Deepak Raparia of BNL's Collider Accelerator Department for the 470th Brookhaven Lecture, titled "The Story on Advancing Linear Accelerators...and Keeping It Straight." All are invited to attend this free talk, which is open to the public and will be held in Berkner Hall at 4 p.m. Refreshments will be offered before and after the lecture. Visitors to the Lab ages 16 and older must carry a photo ID while on site.

To join Raparia for dinner at an off-site restaurant following the talk, contact Sandy Asselta, Ext. 4550, sandylee@bnl.gov.

See *Brookhaven Lecture* on p. 3



BNLers from the Accelerator Test Facility and Facilities & Operations Directorate outside of Bldg. 820.

The 2011 NSLS-CFN Users' Meeting (continued from p. 1)



Andrew Ying (right) receives the Julian Baumert Ph.D. Thesis Award from Erik Johnson, the Photon Sciences Deputy Operations Director

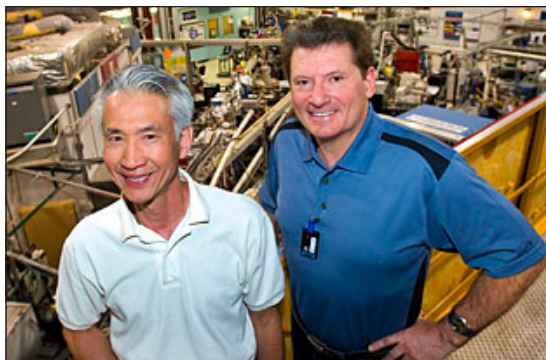


NSLS Users' Executive Committee Chair Tony Lanzirotti

Below: The 2011 NSLS-CFN Users' Meeting organizers



NSLS and CFN Users' Executive Committee members with BNL and DOE management



The National Synchrotron Light Source (NSLS) Users' Executive Committee (UEC) awarded the 2011 UEC Community Service Award for outstanding service, innovation, and dedication to users of the NSLS to Shu Cheung (left) and Dennis Carlson. Shu and Dennis are mechanical technicians in the Photon Sciences Beamline Technical Support group led by wTony Lenhard and Gary Nintzel. They both received \$250 gift certificates from the UEC in recognition of their excellent service, and their names will be engraved on a plaque displayed in the NSLS lobby.



Users' Meeting Co-chair Balaji Raghothamachar (left) and NSLS Users' Executive Committee Chair Tony Lanzirotti (right) with poster winners (from left) George Sterbinsky, National Institute of Standards and Technology; Mengija Gaowei, Stony Brook University; Ishviene Cour, University of Vermont; Megan Bourassa, Stony Brook; and Ashleigh Baber, Chemistry-BNL. Not pictured: Jon Schuller, Columbia University

Users' Meeting from p. 1

Rohlfing told the audience to prepare for an even tougher "budget battle" next year. BES has requested \$1.985 million for FY12, which would include full funding for operating the complex's user facilities, planned upgrades and construction (including NSLS-II), and investment in the core energy research mentioned earlier.

But Rohlfing warned that based on current budget trends, it's unrealistic to think that BES will receive the requested level of funding. As evidence to the difficulties ahead, Rohlfing pointed to a recent recommendation from the Heritage Foundation, a conservative think tank, that BES should eliminate any programs that fund commercialization — a move that would cut the office's FY12 budget by \$506 million.

"We face very difficult and challenging budget times ahead," Rohlfing said. "It's not going to be easy. Bear with us. And keep working. There might be some bad years but you're going to have some good years, too."

Photon Sciences: Moving at Light Speed

The last year has been an exciting one for the Photon Sciences Directorate, said Associate Laboratory Director Steve Dierker, from the reorganization of the directorate to a handful of NSLS-II construction milestones.

NSLS continues to serve its nearly 2,200 yearly users very well, Dierker said. Reliability on both the X-Ray and Vacuum Ultraviolet rings is between 95-98 percent. As a result, visiting and staff scientists have been able to perform a wide range of high-caliber research. Of the almost 900 publications published in FY10, Dierker said, about 170 were in premier journals.

"There's no question that research at NSLS continues to

be highly productive and have high impact in the fields it's carried out in," he said.

Construction of NSLS-II is on track to finish the project 15 months ahead of schedule, in March of 2014 instead of the scheduled June 2015 completion date. This will allow NSLS users and new groups of visiting scientists to advance their research earlier than expected. Construction is now about 60 percent complete and within budget, Dierker said. Construction workers "closed" the half-mile ring building with installation of the last steel beam in October, and in March, project staff were given the OK to start installing accelerator components and beamlines in the first completed fifth of the building.

Also in the last year, there was overwhelming response to a call for beamlines to accompany the six project beamlines currently under development, Dierker said. The user community organized 13 workshops, which helped generate 54 proposals from more than 700 team members from around the world. More than half, 34, were approved.

Six beamlines from this batch will be constructed through a project called NSLS-II Experimental Tools (NEXT), which is funded by DOE. Three beamlines for life sciences will be constructed using funding from the National Institutes of Health. In addition, the National Institute of Standards & Technology will construct two beamlines and the New York Structural Biology Center will build one. Thus, Dierker said he expects that there will be at least 18 beamlines installed and ready for commissioning within the first year of NSLS-II operations. When completely built out, the facility will host more than 60 beamlines.

A Growth Spurt for CFN

Since opening its doors to us-

ers in 2008, the CFN has seen tremendous growth, said facility Director Emilio Mendez. This spurt is best seen in numbers: during the last three years, the facility's users have increased from 107 to 281, its scientific staff from 13 to 24, and its yearly publication count from 34 to 79.

That growth is not finished. Mendez wants to see about 65 staff members filling the CFN's labs and offices in the next couple years. But growth always comes with some amount of pain.

"The number of users is growing tremendously, and this is great," Mendez said. "But because of natural limitations on equipment and staff availability there is a limit on how much we can grow and still do a good job working with our users. The ideal number of users is probably between 300 and 350."

In the future, the competition for time and space will be even larger than it has been, and it will force everyone to do an even better job of writing successful proposals, Mendez said.

To handle the influx of users, the CFN is transitioning to an online proposal system with more emphasis on scientific merit. In the long term, the facility hopes to implement online training and webcasting as well as remote operation of instruments, Mendez said.

The CFN also has installed a variety of new equipment recently, including a mask aligner, a reactive ion etcher for metals, a transmission electron microscope for soft materials, a reactor scanning transmission microscope, an analytical scanning electron microscope, and an upgrade of a high-end transmission electron microscope.

Nanotechnology for Energy and Health

The theme of this year's meeting, "Nanotechnology for Ener-

gy and Health," was emphasized through three invited speakers at the plenary session. The keynote speaker was Thomas A. Steitz, a 2009 Nobel Laureate, Sterling Professor of molecular biophysics and biochemistry at Yale University, and a Howard Hughes Medical Institute investigator.

Starting in the late 1990s, Steitz used x-ray crystallography at NSLS to gather atomic-level structures of a ribosome subunit. That data, along with research at the Advanced Photon Source at Argonne National Laboratory and the European Synchrotron Radiation Facility, contributed directly to Nobel Prize in Chemistry, which he shared with Venki Ramakrishnan of the Medical Research Council Laboratory of Molecular Biology and a former BNL employee and Ada E. Yonath of the Weizmann Institute of Science. Steitz discussed how he arrived at this discovery and the importance of NSLS to the work.

The two other plenary speakers were Gayle Woloschak, a professor in the Department of Radiation Oncology at Northwestern University, and Daniel Hausermann, a principal scientist on the Imaging and Medical Beamline at the Australian Synchrotron. Both speakers discussed how synchrotron light can be used in biomedical applications, ranging from the detection of nanoparticles in mammalian cells (Woloschak) to building a new world-class facility for medical imaging and radiotherapy (Hausermann).

In addition, eight workshops were held during the three-day meeting:

The Awards Go To...

Each year, the NSLS Users' Executive Committee (UEC) presents the UEC Community Service Award, which honors hard work and dedication toward bettering the experience of users and

the user community. This year's award was given to two NSLS employees: mechanical technicians Shu Cheung and Dennis Carlson. The annual Julian Baumert Ph.D. Thesis Award, which is given to researchers who have recently conducted a thesis project that included measurements at the NSLS, was given to Andrew Ying, a physics and chemistry teacher at the Hackley School, a private college preparatory school in Tarrytown, NY.

In addition, during the main session, participants attended the annual poster session and vendor exhibition. *Hors d'oeuvres* were served as attendees mingled and talked, and awards were presented to six students and post-docs: Mengija Gaowei, Stony Brook; Megan Bourassa, Stony Brook; Ishviene Cour, University of Vermont; George Sterbinsky, National Institute of Standards and Technology; Jon Schuller, Columbia University; and Ashleigh Baber, Chemistry-BNL.

A Taste of NSLS-II and Long Island Wine

New to this year's meeting was a second poster session held on the floor of the NSLS-II ring building. Sponsored by the two UECs and by the Photon Sciences Directorate, the session offered an overview of the capabilities and science that's anticipated at the new light source through posters of the six project beamlines and the 34 beamline development proposals approved as a result of the 2010 call last year.

Following the plenary session, meeting participants were transformed into wine connoisseurs at a banquet held at Baiting Hollow Farm Winery, on Long Island's North Fork. The attendees were treated to a wine tasting and a visit with the farm's rescued horses.

— Kendra Snyder



BrookhavenSphere

BrookhavenSphere Team Proposes New Device To Measure and Monitor Blood Pressure: BP-Live

The dangers of high blood pressure threaten about one third of all Americans, the urgency of this situation underlined by articles in the National Safety Council’s Spring 2011 issue and the *Wall Street Journal*, [May 31, 2011. With an idea first suggested on BrookhavenSphere, a cross-disciplinary group at BNL proposes to develop and test a new way to monitor blood pressure and probe the status of the heart and cardiovascular system noninvasively, with precision and in real time.

Existing ways to monitor patients’ blood pressure still include inflatable arm cuffs and a stethoscope and bulky portable or lab-based devices, mostly used after an attack, or, with large time intervals, in anticipation of an attack .

Miniature Device

The BNL group envisions a miniature device that they call BP-Live, which would be worn by individuals. BP-Live would include a high-fidelity pressure transducer or ultrasound generator/receiver. The acquired data would be transmitted directly via Bluetooth to a “smart” device for sophisticated signal processing and analysis, and wireless delivery to a medical professional or user/patient.

Within the group are specialists representing the Medical Department, Instrumentation Division, Computing Sciences Center, and Environmental Sciences Department, all of whom are interested in various aspects of this project, both as users and contributors.

Applications

Applications? They promise to be abundant and novel, and presently unavailable when using conventional methods. Several categories of users would be:

- Doctors performing regular diagnostics and monitoring hypertension patients, predicting or confirming heart attacks due to atherosclerosis or coronary artery spasm (unlike EKG that can only identify a heart attack post-factum, with a significant time lag, BP-Live will be able both predict it or catch it in progress, potentially saving lives), determining, based on the real-time BP data, the most appropriate medication matching the patient’s specific condition. A special category

of people directly benefitting from BP-Live’s predictive capability will be women since they, more often than men, experience heart attacks without any discernable pain symptoms.

- Surgeons and anesthesiologists obtaining patient’s instantaneous blood pressure and heartbeat rate during an operation without a need for an invasive arterial BP measurement
- Pharmaceutical companies needing real-time information to develop new BP medications
- Sportsmen and general population relying on instantaneous BP and heartbeat rate during strenuous exercise
- Medical researchers detecting and measuring immediate arousal by selected emotion, physical, or environmental paradigms in research experiments using instantaneous BP time signature.

“In a nutshell, we will be listening and probing the human cardiovascular system with a powerful and smart miniature digital stethoscope, or, using technical terminology — a sound spectrometer integrated in BP-Live. Is it all possible? R&D will tell,” said Brookhaven Sphere’s Lev Neymotin of the Nonproliferation & National Security Department.

Interest From Farmindale College

“Developing the miniature device and the signal processing system is well within the scope of BNL’s capabilities, and we have found considerable interest at Farmingdale College, which is considering a new signal processing lab, and the management and staff that would be excited to become part of this effort,” Neymotin added. “Their plan is to integrate the signal analysis lab activities with the curriculum, and the BP-Live can become their first project to work on jointly with our BNL project team.”

— Liz Seubert

BNL’s BrookhavenSphere is designed to bring together the collective technical knowledge of the BNL community to pose and solve complex cross-disciplinary scientific and technological problems, formulate and develop research ideas, and propose innovative technological solutions in the service of humanity. Learn more at <http://intranet.bnl.gov/brookhavensphere/>.

New BERA Trips for July

See a list of upcoming BERA trips online: www.bnl.gov/bera/recreation/events.asp. Purchase tickets at the BERA Store in Berkner Hall, weekdays from 9 a.m. until 3 p.m.

In Honor of Flag Day, 6/14

The Brookhaven Veterans Association (BVA) will be collecting American Flags that are no longer fit to serve as a symbol of the U.S. Bring your tattered flags to Berkner Hall on Tuesday, June 14, from 11 a.m. to 1 p.m. The BVA will dispose of it properly.

BrookhavenSphere Seminar, 6/17 In Search of ‘Free’ Heat

A correct understanding of the nature of heat, including waste heat and free heat, is an essential element of sustainability science.

Focusing on this hot topic, Lin-Shu Wang, an associate professor of mechanical engineering at Stony Brook University, will lead a BrookhavenSphere seminar at 11 a.m. on Friday, June 17, in Berkner Hall, Room B. All the Lab community is welcome. Also, please visit the seminar record on BrookhavenSphere and leave your questions or comments to stimulate technical discussion: https://brookhavensphere.bnl.gov/wiki/index.php/SEMINAR:_In_search_of_free_heat.

Wang will make the case that physics in the 19th century overreached in correcting the error of the caloric theory of heat. He believes that the resulting energetic understanding of heat is littered with misleading perspectives, most importantly, that it is

impossible to upgrade heat. He will point out the distinction between latent entropy production systems and ongoing entropy production processes, and introduce the concept of free heat. Further, that it is possible to upgrade heat with spontaneity into free heat — which is the essence of sustainable practices including passive cooling and heating.

Wang, who is the inventor of Turbo-Cool Turbocharging for internal combustion engines and the Hydronic Solar Wall for passive solar heating, earned his Ph.D. in mechanical engineering at the University of California at Berkeley. Presently, he is writing a book entitled *The Entropic Theory of Heat*. Another of his current projects is to introduce the Swiss and German building technology TABS — the paradigm-breaking innovation of passive cooling — to the North American market.

Coming Up, 6/20-24

RHIC/AGS Users’ Annual Meeting RHIC & eRHIC Long Range Plan

This year marks the start of the second decade of the Relativistic Heavy Ion Collider (RHIC) program, when major decisions about the future of the field must be made. The Users’ Meeting will be dedicated to workshops focused on the future of RHIC and eRHIC science and the detectors and machine upgrades needed to bring it about.

Thursday, June 23, will feature plenary talks on experiments from RHIC and the Large Hadron Collider at CERN, Switzerland, other scientific work going on at BNL of interest to the RHIC community, and perspectives from BNL management and funding agencies. All are invited to this day of talks. To register for the entire meeting and obtain more information please go to: www.bnl.gov/aum.

ATF/IFM Allies from p. 1

...as many jobs as possible. They would install a new electrical panel, service the primary high voltage switch gear that all the facility’s power is fed through, and connect a newly installed hot water heater, among more than 10 other work orders and 15 preventative maintenance jobs.

With the date set, a team began preparing for the planned shutdown, including core team members Multicraft Supervisor Kevin Kobus; Planner/Scheduler Wayne DeDicke; Environment, Safety and Health Representative Marteenio Rankine; as well as Tower Line Supervisor John Dowd; and Subject Matter Expert/Electrical Group Leader John Passaro, and many other members of F&O and the Long Island-based Roppelt Electrical Contractors.

They scoped out the facility and planned for every task to be completed. They also obtained a generator to provide electricity to critical experiments and the temporary lights, and arranged for all the F&O craft workers — electricians, carpenters, HVAC technicians, tower line workers, heavy equipment

mechanic operators, and sheet metal workers — that they would need.

And on March 28 and 29, the generator whirled with the ATF’s electrical and steam systems disengaged. They worked their plan — without an injury, an incident, or downtime. The entire project was completed 30 minutes earlier than planned — and three days before attendees from the Particle Accelerator Conference would tour the facility on the last day of the event.

“You can tell that things are starting to swing from reactive to proactive,” added Kusche. “John and Chris have a genuine concern and are great partners for the ATF.”

With that shift to proactive facility care, which is one of the main goals for the Lab’s IFM program, the scientists and guest researchers at the ATF can focus on the accelerators of the future, and be less concerned with the structure where they work.

— Joe Gettler

BLUEPRINT

Brookhaven National Laboratory’s plan for growth and development
<http://intranet.bnl.gov/blueprint/>

Brookhaven Lecture from p. 1

During his talk, Raparia will discuss the evolution of linac structures. He will then explain how advances in technology and our understanding of particle beam dynamics are being used to develop less expensive, more efficient linacs for the future.

Raparia earned a Ph.D. in accelerator physics from the University of Houston in 1990. He also earned masters’ degrees in accelerator physics from Canada’s University of Mani-

toba in 1983 and mathematics from India’s University of Agra in 1981. Raparia held a number of research positions between 1978 and 1990 at the Bhabha Atomic Research Center in India, TRIUMF in Canada, the Texas Accelerator Center, and the physics departments at Texas A&M and the University of Houston. He worked as a scientist for the Superconducting Supercollider from 1990 until 1994. Since arriving at BNL as an associate scientist at the

CALENDAR

— WEEK OF 6/13 —

Tuesday, 6/14

Estate Planning for Your Pets
Noon. Berkner Hall, Room B. Melissa Gillespie, Attorney at Law, discusses how to plan for loved pets in case of disability or death. Please register with Michael Thorn, mthorn@bnl.gov or Ext. 8612.

Crowne Plaza Long Island Hotel
11 a.m.-2 p.m. Learn about BNL rate of \$114/night, includes shuttle to BNL, MacArthur, area shops; full hot breakfast in Yogi American Grill; Wi-Fi. Drawing for “Summer fun basket.” Contact: Donna, 758-2900, ext. 404.

Scharff-Goldhaber Prize Ceremony
4 p.m. Large Seminar Room, Bldg. 510. The annual Scharff-Goldhaber prize, administered by Brookhaven Women in Science, will be awarded to Megan Connors, SBU, who does research at RHIC. She will give a short talk on quark-gluon plasma with direct photon-hadron correlations at PHENIX. Refreshments will follow. All are invited.

Wednesday, 6/15

***BNL Blood Drive**
9:30 a.m.-3 p.m. Brookhaven Center. See details, p.4.

Marriott SpringHill Hotel Suites
11 a.m.-2 p.m. Learn about, rates, advantages of suites, larger than most hotel rooms, with BNL rate including full hot breakfast, internet, shuttle to MacArthur & BNL. Drawing for Visa gift card.

***470th Brookhaven Lecture**
4 p.m. Berkner Hall. Deepak Raparia, Collider Accelerator Department, will tell “The Story on Advancing Linear Accelerators...And Keeping It Straight.” All are invited to this free talk, open to the public. Visitors to the Lab of 16 and older must carry a photo ID. See p.1.

Thursday, 6/16

National Geographic Talk: Oceans
4 p.m. Berkner Hall. National Geographic’s Explorer-in-Residence Sylvia Earle will talk on “How Our Fate and the Ocean’s Are One.” All are welcome to this free talk, open to the public. Visitors to the Lab of 16 and older must carry a photo ID. See Bulletin, 5/27/11 or www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=1281.

Friday, 6/17

***‘In Search of Free Heat’ Seminar**
11 a.m. Berkner Hall, Room B. Lin-Shu Wang, Stony Brook University, will lead the discussion, sponsored by Brookhaven Sphere. See left.

— WEEK OF 6/20 —

Mon-Fri, 6/20-24

***RHIC/AGS Annual Users’ Meeting**
See above, left, and www.bnl.gov/aum.

Arrivals & Departures

— Arrivals —

Alessandra Colli.....	SET
Dipti Ranjan Mahapatra	SET
Annalia Palumbo	NS&T
Juan Zhou	Photon Scis

— Departures —

John Mollica	Site Resources
Susan Signorelli	SET
Damon Turney	SET

Alternating Gradient Synchrotron in 1994, Raparia earned the title of scientist in 2000. He has worked as BNL’s group leader for accelerator physics at the Spallation Neutron Source, a one-megawatt proton beam facility at Oak Ridge National Laboratory, as well as the 200 GeV linac at BNL. He is currently involved in designing a proposed multi-megawatt proton beam facility for FermiLab called Project X.

— Joe Gettler

Area-based PPE Coming Soon To an Area Near You

By Bob Selvey, Industrial Hygiene Program Manager

Area-based Personal Protective Equipment (PPE) requirements were approved in January by the Brookhaven Policy Council. Now, with coordination by the Safety & Health Services Division, facility project managers and research coordination managers are working to implement the requirements across the Lab. All staff members, guest users, and students who enter areas such as laboratories, accelerator facilities, warehouses, and machine shops will be required to follow the new area-based PPE requirements as they are developed for each area.

You may be wondering, “How will I know what PPE is required for a particular area?” The answer: areas requiring PPE for entry will be posted with a placard that has uniform icons and brief text clearly specifying the minimum PPE needed to enter.

You may also want to know which of the following has priority: (1) area-based requirements or (2) operation-based requirements. The answer: the more stringent requirement of the two must be met. In most cases, operation-based requirements will be more stringent but they will only be in effect when the operation is occurring. For example, an apron would be required for a worker in a lab handling a strong acid — but the apron would not be required when the acid is not in use.

Area-based PPE certifications have been performed in the Center for Functional Nanomaterials (CFN) and placards are up in the appropriate rooms and laboratory entrances. Area-based PPE is now being consistently used by the workers in that area. Even though area-based PPE was not yet posted in their building, the Chemistry Department in Building 555 began adhering to the new area-based PPE rules months ago. Staff there took the time to understand the change and adjust their practices. We consider both these efforts early successes in the area-based PPE program.

You should expect to see area certification teams working across all the Brookhaven campus and postings going up now through July 30, 2011. These teams consist of myself as the PPE subject matter expert, the local ES&H Coordinator, and typically the cognizant space manager as well as someone from Integrated Facility Management.

This new policy was adopted only after rigorous study of PPE use at BNL, input from scientists and field workers, a review by Human Performance Improvement experts, and consultation and direction from the Policy Council. Also, we’ve taken some proactive efforts to ease implementation. We were able to use the Blueprint budget to purchase 1,600 lab coats and 1,200 placard holders.

Area-based PPE is not a one-size-fits-all solution and each building, laboratory, and work area will be assessed for its local hazards and conditions, and the appropriate area-based PPE requirements will be based on the results.

Area-based PPE is part of the Blueprint, the Lab’s plan for growth and development. A safe environment is essential for our continued success.

Safety

makes science possible at Brookhaven National Laboratory

<http://intranet.bnl.gov/safety>

BLUEPRINT

Brookhaven National Laboratory's plan for growth and development

<http://intranet.bnl.gov/blueprint/>

Classified Advertisements

Current job openings and a statement of job placement policy at BNL are available on the homepage at www.bnl.gov/HR/careers/. To apply for a position, go to www.bnl.gov and select “Search Job List.” For more information, call Ext. 2882.

Motor Vehicles & Supplies

10 ACURA TSX – 5.5K mi. mint, low mi, silver, palladium metallic w/black leather, runs on reg, orig owner. \$24,800 neg. 264-2421.
08 JEEP LIBERTY – 37K mi. rem. start, r/rack, sunrf, p/w, p/l, a/c, 4x4, excel. \$13,000 neg. 766-7664, jmc3363@verizon.net.
07 NISSAN X-TERRA – 80K mi. dk blu, a/c, p/w, p/l, cd/radio, orig owner, grt cond, well maintd, ask. \$15,500 neg. 987-3839.
06 KAWASAKI VULCAN 500CC – 6.3K mi. rebuilt carbs, pwr to spare, red/blk, v/g cond, gar, pix, \$2,300. thyberg@bnl.gov.
05 VW JETTA – 54K mi. 4dr, sedan, 2L 4cyl, a/t, all pwr, s/roof, a/c, abs, c/c, cd, new tires, dealr maintd, \$9,400. 654-3609.
05 SUBARU IMPRESSA 2.5 RS WAGON – 62K mi. awd, 5spd, a/c, ps/pb/ maint records, non smkr. \$10,600. 286-3681.
04 JAGUAR X-TYPE 3.0 SPORT – 53K mi. awd, 18" wheel, lthr, navig, m/roof, dual p/s, new tires. \$11,000 neg. 413-6903.
03 TOYOTA COROLLA – 14K mi. LE Sedan 4dr, a/t, black, in excel cond, orig owner. \$10,500 neg. 567-9627.
01 FORD TAURUS – 60.2K mi. S/Wgn, SEL, lthr, gray, new tires & brakes. \$2,900 neg. Kenneth, Ext. 7268, 312-6796.
00 JEEP CHEROKEE SPORT – 111K mi. 4x4 a/c, a/t, grt cond, well maintd. \$4,900. Edward, Ext. 7160, 902-7776.

99 TOYOTA CAMRY – 96K mi. fully loaded, a/t, 4/dr, tan. \$4,000. 443-397-2542.
99 HONDA ODYSSEY – 165K mi. Gold, 7-pass minivan, a/c, a/t (new 110K mi), new rad, clean, gd cond. \$3,900. Marc, Ext. 4795.
97 HONDA ACCORD – 150K mi. 4dr-grey cloth int, dk grn, a/t, s/roof, clean. \$3,800 neg. 516-903-8633 or acoleman@bnl.gov.
2-IN HITCH RECEIVER – Curt 13333 md for '03-2011 Dodge Rams, new in box w/ hdware, \$150/new, ask/\$75. Mike, x2550.
RIMS W/TIRES – 4/17" Cobra Rims M-1007-G178, v/gd cond w/245 40" tires, 1 yr old, \$700. Ext. 3217.
STEEL AUTO RAMPS – pr, yellow, sturdy, never bent, reliable, current car is too low to dr up on. William, Ext. 7139.

Boats & Marine Supplies

12' DNA – Fiberglass fishing boat, 15hp susuki o/b w/trailer, runs well, needs tlc. \$750 neg. George, 325-2549.
12' WILDERNESS SYSTEMS TSUNAMI – Kayak, used a few times, perf cond, moving sale, access incl, \$700/neg. Ext. 3004.
22 FT. O'DAY SAILBOAT – Anniv. Ed, '84, slps 3, vhf, new batt & 3.5 gal gas tank; sail-covr, 8hp Nissan outbrd, \$5,000. 878-1307.
5 GAL SAFETY METAL GAS CAN – used, \$20. Janet, Ext. 4147.

Furnishings & Appliances

CHERRY WOOD DRESSERS (2) – \$400; lg dresser w/mirror and a vertical dresser; u pic up, gd cond. Janine, jtruit@bnl.gov.
COFFEE & END TABLES – white & grey marble table, 2/tiered marble & glass end tables, \$200/neg, photos. dcm@bnl.gov.
EDGESTAR 14000 BTU PORTABLE AC – brd new in box, top of line, Mdl AP14001HS, \$500. Lee, Ext. 5866, 718-838-0082.
DINING RM SET – table, 2 leaves, 6 uphol. chrs, china closet, server, u-pic-up W. Islip, \$300/neg, pics. Ext. 7860, dcm@bnl.gov.

On-site Service Station To Take Vacation Week of July 4

In addition to the two days, July 4 and 5, that the Lab will be closed to celebrate the Independence Day holiday, the on-site service station will be closed for three more days, Wednesday, July 6 through Friday, July 8, reopening on Monday, July 11. During that time, the Lab community may have to brace for less economical prices when buying gas off site: many BNLees have noticed that the gas prices on site are very reasonable.

Says Peter Ronalds, who owns the service station, “Our prices cover the amount due given what we pay for the gas; I don’t believe in overcharging. It’s a pleasure to be at BNL, and we are happy to be building up a group of what we are told are satisfied customers.”

To make an appointment to service your vehicle, from oil changes to New York State inspections to extensive diagnosis and repairs, call Ext. 4034.

FREEZER CHEST – lg/Kenmore/\$150/ neg; Glider Rocker maple chair/\$200; Toddler Rocker, w/music/\$25. Ext. 5894.
HAIER WINDOW AC – Model ESA406J, 6000 BTU/h, incl rem ctrl, 1yr old, perfect cond, \$120/neg. Christoph, Ext. 8194.
KITCHEN TABLE & CHAIRS – light maple table w/leaf, 4 spindle back chairs, 60"x 36", excel cond, \$300. 678-3299.
TWIN BEDS – dresser, nite tbl, mirror/\$400; free mattress, l/r couch, chrs/neg; d/r, tbl fmica top, 4 chrs/\$200; lamps, 928-5185.

Audio, Video & Computers

BOSE SOUNDDOCK SERIES II – Digital music syst, slightly used compat w/all iPhone, most iPod, \$150. 347-581-3731.
CANON DIGITAL CAMERA – PowerShot A95, 5 MP, 3 Cmpct cards (1.16 GB space), reg AA batt, USB cable, case, \$40/obo. Ext. 8450.
DIGITAL CAMCORDER – Panasonic Mdl PV-GS31, bit-in-video light, btt pck/chrg, USB cbl, SD mem card, \$50/obo. tony@bnl.gov.
KENWOOD HOME STEREO SYSTEM – incl receiver, CD Player, tuner, duel cass deck & 2 spkrs, \$100. 678-3299.
RPG'S – (PSP) Brave Story Crisis Core (PS2) Dark Cloud 2 Legaia 2 Disgaea Valkyrie Profile 2 Wild Arms, more. Ext. 3040.
UNLOCKED MOTOROLA W375 – in-built FM radio, no charger, \$75. Neena, nnambiar@bnl.gov.

Sports, Hobbies & Pets

2003 YAMAHA ROADSTAR 1600 – Mocha sparkle, Hypercharger, Vance & Hines exhaust, much more. ask/\$5,850. 872-5074.
FOOSBALL TABLE – Harvard soccer game, top quality, electronic scoring, drink holders, mint cond. Toby, 838-5879.
LUDWIG DRUM SET – Accent 5 pc w/ cymbals (crash, ride, highhats), complete kit w/throne, h/ware, pics 840-7188.
SWIMMING POOL – abg, assoc equip for filtering, cleaning/\$1500 neg, you disassemble & pick it up, pics. avail. Ext. 5351.
TREADMILL – Proform 745CS, excel cond, folds up for storage, \$250. 678-3299 or dgordon@bnl.gov.

Tools, House & Garden

COMPOSTER – lg 80 gal plastic rotatable composter w/stand, assembled but never used, \$60. 689-9771.
GARDEN SHED – Plastic shed, 44"h, 56"w, 33"d, can be disassembd, \$40, 20' ext. ladder, working cond, \$20. 689-9771.
LEAF BLOWER – Black & Decker Vortex w/extension cord/\$25. Stuart, Ext. 2851.
MEDICINE CABINET – mirrored, brd new, 15"x24"x43.4" Knotty Alder w/nat. stain, hardwd int, pd/\$239, ask/\$200. 727-8750.

Free

GOLF CUBS – used left & right handed, w/ bags. Richard, Ext. 3868, difranco@bnl.gov.
KITTENS – 7 babies born under shed, calicos/reds. I will spay/neuter and provide 1st vet visit/shots, 4 wks old now, ready to go in 2-3 wks. Ext. 3766 or pgo@bnl.gov.

Miscellaneous

BABY'S ITEMS – Peg Perego stroller, Kelty backpack, crib bedding w/mobile/window/valance/car seat/clothes/toys. mb@bnl.gov.
BABY'S ITEMS – Target Walker/\$10, Safety 1st Rocking Buggy/\$10, Stroller/\$10, Graco Travel Syst Stroller Set/\$75, Ext. 3500.
CHILD SEAT ATTACHMT – for adult bike so child can ride w/parent/\$50; Mongoose Mtn Bike, hardly used/\$100. mb@bnl.gov.
CRIB – wood, Ivory w/gold trim, w/mattress, fitted sheet, bumper, skirt & storage drawer, gd cond, \$93, call 10am-5pm. 929-4446.

Next Blood Drive, 6/15, 6/16



Joseph Rubino DT760611

Meet Marie Hobson — Blood Donor You Can Count on This Fiscal Manager For Blood Donations

Thirty-five years ago, when Marie Hobson was working at a local high school, she began donating blood.

“One of our students had a terrible car accident,” said Hobson, who works in the Lab’s Fiscal Services Division. “The school had a blood drive for the student and I eagerly participated, hoping I could make a difference. I have been donating blood ever since.”

Hobson has also been an apheresis donor. Apheresis is a procedure that is similar to whole blood donation, but the whole blood from a donor is separated into individual components. This type of blood donation is important for patients with certain diseases.

“It’s a small gift that branches out and touches many lives,” said Hobson. “I’m happy to do it.”

Hobson recalls that blood drives weren’t as popular 35 years ago as they are today.

“It is really wonderful to see that so many people have realized the importance of donating blood,” she said. “Although we all hope that we are never in a situation that would require blood transfusions for ourselves, family members, or friends, it’s good to know that there are a lot of devoted people who take time from their daily routines to make sure blood is available to all of us.”

Hobson’s plan: keep donating for as long as she can! — Jane Koropsak

Please Donate Blood on 6/15 or 6/16

Consider rolling up your sleeve for the next BNL blood drive on Wednesday and Thursday, June 15 and 16, 9:30 a.m. – 3 p.m. in the Brookhaven Center.

Donors must be 16 to 75 years of age, in good health and weighing over 110 lbs. Restrictions may apply to some from the UK and Europe. Donors must have a photo ID and know their social security number. To make an appointment, log on www.bnl.gov/hr/blooddrive/. Or, contact Liz Gilbert, Ext. 2315 or gilbert@bnl.gov.

FORD445A – ‘86 ford 445A Tractor, 4x4, 4 in 1 bucket, 2976/hrs, 3pt hitch, gd cond, \$14,800. mike fedunn, 653-6828.
PERFUME – Bvlgari, new 3.4 oz. full bottle never used, \$35. forenza.lady@yahoo.com.

Happenings

CAR SHOW FUND RAISER @ – Miller Pl/Mt. Sinai Historical Soc, Sun, 6/12 on North Country Road, Raffles, music, tours, great cars! \$6pp, kids under 12 free. Ext. 5090 or ccarter@bnl.gov.
CRUISE – 7 Day Caribbean Carnival Cruise on Apr 15th 2012 to St Thomas, Barbados, St Lucia, St Kitts, St Maarten w/1-fun day at sea. All for \$846.72 dbl occup balcony. Call for details. Kim, Ext. 2896, 399-3098 or khayes@bnl.gov.
STRAWBERRY FESTIVAL – June 11, 10a-3p, Trinity Lutheran Church, Rocky Point. Rain or Shine. Tag sale, used furniture sale, bake sale, silent auction & plant sale. 744-9355.

Lost & Found

BLUE NYLON BOMBERS JACKET – lost on 5/27 betw. the housing area & Bldg 1005, blue w/blaze orange lining. Ext. 7333.

Wanted

ACOUSTIC GUITAR – used, in playing cond. Rafael, Ext. 2157 or rlozano@bnl.gov.
BOXTOPS & LABELS FOR EDUCATION – Needed for KG & 4th Grade class. Send to Bldg. 911A. Thanks. Nina, Ext. 5894.
CAR DOLLY – 3500lb to 6000lb capacity. Ed, Ext. 7251, 516-924-4299.
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.
FURNITURE – For new Habitat for Humanity family that has absolutely nothing. Couches, end tables, lamps, beds, nighttables, dressers appreciated. Very reasonable or free. Thank you. Debbie, Ext. 3120 or dreynolds@bnl.gov.

GOLDFISH – lg or sm, for priv spring fed pond for water ecology/nature project. Ernie, 281-7873.
MARINE MECHANIC – wanted, reasonable rates. Jimmy, 772-7112, aichroth@bnl.gov.
PLUMBER TO FIND LEAK – Need to detect domestic hot water leak, under the slab or betw. 2 adj. walls. 732-7634.
REFRIGERATOR – Working cond, looks don’t matter. It’s going in the basement. Bill, Ext. 2906, 929-6189.
SCIENCE FICTION BOOK – need book, ‘Critical Terms for Science Fiction & Fantasy.’ Please loan for 2 weeks. Thanks. 484-9888.
STUDIO APARTMENT – for a couple, near Lab, no smkg, cac, cable/int, kitch, bath are needed. Xiaoya, Ext. or shix@bnl.gov.
TENT RENTAL – Need tent at reasonable rent, roughly 20' x 20', w/tables & chairs, for Sat. 6/25. If you have them or know someone who does, please contact me. Dan, Ext. 4230, 334-1416 or dcarroll@bnl.gov.
WEBSITE MANAGEMENT – Seeking experienced person to manage my working website for me. It needs a tune up & quarterly updating. Ext. 7443 or porqueddu@bnl.gov.

For Rent

PORT JEFFERSON – moving, seek tenant, lg 1 bdrm apt, by Mather Hosp, no maint. fees, walk-in closet, w/d inside, avail July. \$1,225/mo. Ext. 3004 or gcmoving@gmail.com.
SHIRLEY – studio for one, stove kitnette/ l/r/bdrm/combo, priv ent, bath, /nr stores/ beach/major hwys/LIRR, no smkg/pets 15mi to Lab, 1/mo sec. \$650/mo. 804-8609.
SHIRLEY – 1 lg bdrm bsmt apt, suitable for one, close to beaches/parks/freeways/ lirr/lab, all incl, v/nice, no smkg/pets, 1 mo + 2 mos sec. \$750/mo. Ext. 3846.

The Bulletin regrets having to omit most real estate ads for lack of space. Obtain the missing ads from lseubert@bnl.gov or Ext. 2346 (leave your address if you want them sent in the regular mail).

the Bulletin

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Liz Seubert, editor
Joe Gettler, assistant editor
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On the Web, the Bulletin is located at www.bnl.gov/bnlweb/pubaf/bulletin.asp. A calendar listing scientific and technical seminars and lectures is found at www.bnl.gov/bnlweb/pubaf/calendar.asp.

Bldg. 134, P.O. Box 5000
Upton, NY 11973-5000
phone: (631) 344-2345
fax: (631) 344-3368
e-mail: bulletin@bnl.gov