

ON TARGET

THOMAS JEFFERSON NATIONAL ACCELERATOR FACILITY • A DEPARTMENT OF ENERGY FACILITY

Physics Associate Dir.,

Larry Cardman, discusses Hurricane Isabel's impact on Lab, S&T Review, Pentaquark Workshop

DOE review, property

assessment update

SURA Thesis Prize

awarded to Xiaochao Zheng

Document Control:

on the job for its customers

Oct. 29: Come out and play

to help the United Way

Jefferson Lab recovers from effects of Hurricane Isabel

A month after Hurricane Isabel hit the Eastern Seaboard, Jefferson Lab and the surrounding communities are still dealing with the storm's effects.

While the Lab survived the hurricane's onslaught with no major structural damage, tree damage to a small accelerator support building, tree and landscaping debris, siding ripped from several facilities, and some damage to government vehicles is still being dealt with. However, widespread loss of electricity and the extended power outage in the area resulted in the shutdown of Jefferson Lab's Central Helium Liquefier (CHL) — the refrigeration plant needed to run the Lab's superconducting accelerator — and eventually forced the venting of approximately 65,000 liters of liquid helium. It also forced all cryomodules in both the

Continuous Electron Beam Accelerator and the Free-Electron Laser facilities, for the first time since their respective installations, to be warmed from their cryogenic state to near ambient temperatures.

In addition to the scheduled maintenance already underway in the accelerator, a variety of opportunistic maintenance activities have been undertaken on the accelerator site, including the CHL, in order to take advantage of unprecedented access to the warmed-up systems. "The hurricane caused a significant disruption, but we decided to make good use of this unique opportunity," said Will Oren, Accelerator Engineering Department Head, during the Oct. 9 JLab Core Managers' meeting. The scope of pre-hurricane maintenance activities were significantly

Continued on page 4



A NASA satellite image of Hurricane Isabel as it pummels the eastern seaboard.



Department of Energy
Office of Science
Washington, DC 20585

SEP 29 2003

Office of the Director

Dr. Christoph Leemann
Director
Thomas Jefferson National
Accelerator Facility
12000 Jefferson Avenue
Newport News, VA 23606

Mr James Turi
Director
Site Office for the Thomas Jefferson
National Accelerator Facility
12000 Jefferson Avenue
Newport News, VA 23606

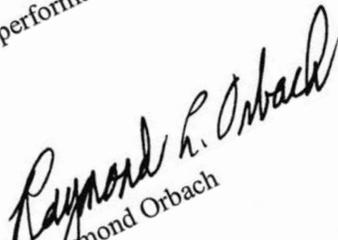
Dear Dr. Leemann and Mr. Turi:

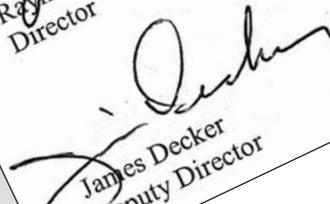
We wish to extend to you our appreciation and recognition for your efforts to ensure that the Thomas Jefferson National Accelerator Facility would weather successfully Hurricane Isabel, a Category 2 storm that would pass almost directly over the laboratory. Your anticipation of problems and preparations resulted in the laboratory experiencing relatively minor damage.

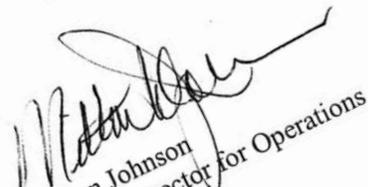
Our appreciation and recognition extend to all the employees of the Thomas Jefferson National Accelerator Facility and the Site Office, who performed with the utmost professionalism and dedication to the laboratory even while concerned about the conditions of the homes and neighbors. And we commend your leadership in making TJ a good neighbor in times of need.

Your performance has set a standard for other laboratories. Congratulations on a job well done.

Sincerely,


Raymond Orbach
Director


James Decker
Deputy Director


Milton Johnson
Deputy Director for Operations


Dennis Kovar
Associate Director for Nuclear Physics

**DOE
commends
Lab response
to Hurricane
Isabel**

Dear Colleagues:

In light of what we have all been through recently, I want to keep this month's column focused and to the point. The visit by Hurricane Isabel to the Lab and surrounding communities has hit us all very hard. I want to take this opportunity to thank all of you who worked so hard to secure Jefferson Lab against the storm and express my personal appreciation for the excellent preparation and your diligent efforts during the recovery process. The Lab has all of you to thank for the fact that damage was kept to a minimum.

I want to particularly recognize those who came in after the storm to assess the damage and begin recovery so that we could resume operations as soon as conditions were safe and power was restored. I understand that the storm personally impacted most of you as well and appreciate that many of you have suffered serious losses to your home and property. I am grateful that all of you survived the storm unharmed. While recovery from Isabel will take some time for the Lab and the Lab community, I applaud not only your ability to come to work and focus under difficult circumstances, but the outpouring of concern and actions to help those most affected by the hurricane as demonstrated by the Red Cross blood drive and the collection of goods for local flood victims.

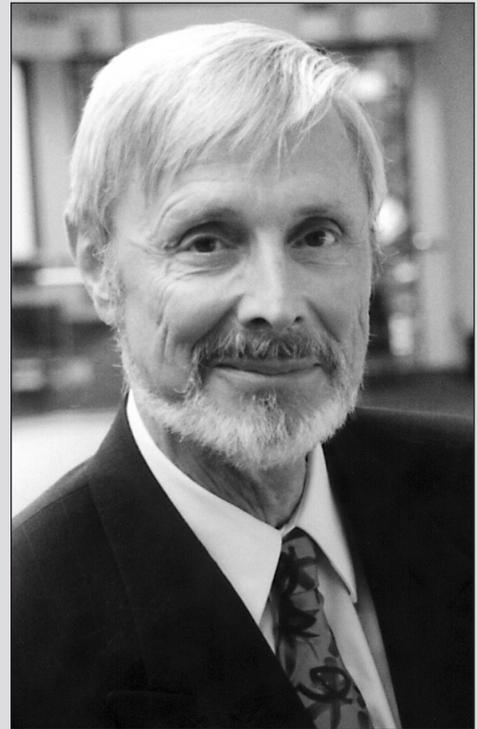
The Lab is continuing recovery from the storm, taking advantage of the fact that the system is "warmed up" to do maintenance that could not be done at any other time. We expect a delay to the Nuclear Physics

research program of about 2 months, which we hope to make up over time as a result of this maintenance activity. We are also working to assure that our SNS commitments are met and that we bring the FEL to 10 kW as soon as practical.

This was the first time we had suffered a power outage sufficient to cause the loss of helium in the CHL and subsequent "warm-up" of the machine. In fact, we had previously made a conscious decision not to have a backup power system due to the cost of such a system and assurances that our power feed to the accelerator site should not remain out for long enough to suffer such a loss to our systems. In light of this experience, we will be looking again at the possibility of back-up power. We will make that decision after we have a chance to further assess the full impact that the "warm-up" has had on resuming operations.

I walked through portions of the Lab after Isabel and spoke to many of you about the need to work diligently toward restoring operations in a safe and disciplined manner. I want to emphasize now more than ever the need to plan and execute our work in a way that protects health and safety. So many of you have additional stresses from the storm both at work and at home, and so please, take whatever time is necessary to avoid accidents or injuries.

My thanks to you all for your efforts and may you and your families enjoy a speedy recovery from the havoc that Isabel brought to our area.



Christoph Leemann
Director

Thank you for
readying Lab
for Isabel

From the
Director

JLab recovers from Hurricane Isabel...



Continued from page 1

expanded to take advantage of the time allotted for the recovery of the CHL and the cool down of the accelerator. By Oct. 10, nine cryomodules in the North Linac (NL13 through NL21) had been cooled to 4 Kelvin and filled to 40 percent.

Accelerator Division staff members have been meeting regularly to refine the schedule of activities necessary for the full recovery of the accelerator. There will be a delay of a month or slightly longer before the start of the next scheduled round of planned experiments. It will take at least a month to restore the Central Helium Liquefier, pump out the vacuum spaces in each cryomodule, and cool the system back down.

After the hurricane, technicians inspected all areas of the accelerator and the Lab's three experimental halls. Hall C Leader, Rolf Ent, said, "Hall C came through the hurricane essentially unharmed. Due to the delay in cryogenics delivery, the cool down of the G-Zero (G0) superconducting magnet was temporarily delayed but is now underway. Further installation of G0 equipment proceeds, and proactive maintenance was planned to make good use of the unexpected down time."

Hall B Leader, Volker Burkert, added that Hall B made it through the storm safely. "Fortunately," he added,

"no damage was done to the experimental areas, which were secured before the storm by the hard work of the technical teams and physicists responsible for detector systems." Hall B staff is currently performing repairs on the large drift chamber systems, a continuation of repair work started earlier this year.

Hall A personnel handled repairs and modifications to the septum magnets and began installing them at the target/detector pivot point so cool down and testing can proceed.

Jefferson Lab's campus electricity came back on Sept. 20 after losing it around 11 a.m. on Sept. 18 during the storm. Electrical power didn't return to the accelerator site until the evening of Sept. 21. By that time, the Lab's superconducting radiofrequency cryomodules were at 250 - 300 Kelvin (-9.67 to 80.33°F).

JLab's Emergency Response team has met to review what worked and what didn't with emergency procedures. Lessons-learned are under development and work has begun to improve areas such as personal communication systems.

During the Oct. 9 Core Managers' meeting, Associate Director of the Physics Division, Larry Cardman, congratulated the staff on effectively addressing the Lab's many needs while balancing storm-related issues at home.

Photos showing some of the damage and results of the hurricane's effect on Jefferson Lab.



Jefferson Lab management recently received the Department of Energy review committee's report from the Lab's annual Science and Technology Review, held June 25-27.

In the cover letter from Dennis Kovar, Associate Director of the Office of Science for Nuclear Physics, to Lab Director Christoph Leemann, Kovar wrote: "The review found that TJNAF is conducting a strong and vigorous research program and that the Lab needs to put a high priority on efficient accelerator operations. I commend Laboratory management and staff for its accomplishments. TJNAF continues to face both challenges and opportunities as it looks to the future. I look forward to working with you to successfully meet these challenges and realize the opportunities."

This review is one in a series of in-depth reviews designed to assess the activities of Jefferson Lab under the Southeastern Universities Research Association-Department of Energy performance-based contract. It is an important factor in DOE's annual assessment of the scientific and technical performance of Jefferson Lab, and is the most heavily weighted peer review for the Lab. The S&T Review examines all supported research and development activities carried out by the Lab as well as facility operations in support of these activities. The relationship with users, activities of the Program Advisory Committee, and plans for the future scientific program and technological upgrades are also within the scope of this review.

A team of eight senior scientists and managers from national and international universities and other DOE laboratories conducted the review. They heard presentations on activities of the scientific and technical programs, the Program Advisory Committee and the Users' Group, held interviews with Lab management and some of JLab's academic users, and toured several facilities on site.

In its report, the committee describes Lab management as "providing a focused vision for the future that balances the needs of the current scientific program, accelerator technological development, and the long term scientific direction of the Lab."

The Nuclear Physics Research program received positive comments from the reviewers. They noted in their report as "particularly noteworthy" the "results on the neutron electric form factor and the neutron A^{n_1} asymmetry at moderate x , which are changing the traditional views of the quark structure and the role of orbital angular momentum in the neutron."

The Theory Group garnered compliments for conducting a strong, diverse and balanced program developing the Generalized Parton Distributions, lattice QCD, relativistic descriptions of few-body structure, and electromagnetic hadron single- and multi-nucleon coupling. And Rocco Schiavilla was cited as doing an outstanding job as interim Theory Group Leader.

While it was noted that FY 2003 accelerator availability had been lower than expected by about 10 percent, the committee wrote that the "newly established JLab Research Operations Committee (JROC) should improve communication and coordinate the needs of the research program with the operation of the machine [accelerator]."

Further, they noted the increasing numbers of experiments with more demanding beam quality requirements, as well as the pressure on the facility to maintain overall productivity. They encourage the Lab "to focus on improving the review process of an experiment in terms of experimental equipment, beam requirements and machine readiness, and possibly analysis strategies and procedures in order to identify special needs early in the process."

The Accelerator Division's Institute for Superconducting Radio Frequency Science & Technology received many positive comments for its 12 GeV upgrade cryomodule development as well as work for the Spallation Neutron Source. The Center for Advanced Studies of Accelerator's was cited for its significant role in upgrading accelerator operations to meet the increasing demands of the research community and for its role in accelerator research & development, including CASA's role in JLab's recent accelerator energy-recovery experiment.

DOE review update

JLab receives S&T Review report; completes personal property assessment



Xiaochao Zheng poses for a photo with Paul Stoler, JLab User Group Board of Directors chair, after he presented her with the 2002 SURA Thesis Prize.

by Melanie O'Byrne

Congratulations!

Xiaochao Zheng wins 2002 SURA Thesis Prize

The 2002 Southeastern Universities Research Association (SURA) Thesis Prize was awarded to Xiaochao Zheng during the Jefferson Lab User Group Meeting on June 12 for her thesis titled "Precision measurement of neutron spin asymmetry A_1^n at large x_{Bj} using CEBAF at 5.7 GeV".

Paul Stoler, chair of the User Group Board of Directors, presented Zheng with the award, a wall plaque and a check for \$1,000. Stoler says the judges were unanimously impressed with Zheng's grasp of physics and the depth of her thesis.

Zheng completed her Ph.D. in the Nuclear Interactions Group at the MIT Laboratory for Nuclear Science (LNS) under the supervision of Bill Bertozzi, leader of the Nuclear Interactions Group and JLab user. And she did it in record time, just three and one-quarter years after arriving in the United States from China. "Other Chinese students said Bill was a great adviser, so I thought 'why not?'" recalls Zheng. "And he is a great adviser. He has a great sense of humor and is very encouraging. When I was preparing for my oral exam, he spent five hours a day with me, getting me used to talking in front of people."

"It is a great pleasure for me that one of my students won the Thesis Prize this year. Xiaochao is an outstanding example of a great student!" says Bertozzi. "Generally, all of my students at MIT are very good. But I

always thought of myself as better than them, until Xiaochao came along. Now I'm not so sure! I was very fortunate to have Xiaochao select my group."

When Zheng arrived at Jefferson Lab in June 2000, she had already selected her research project. "J.P. Chen, my adviser at Jefferson Lab, sent me a list of three possible experiments. One of them already had a graduate student. Another required a septum magnet that had not yet been built, so the timing may have been too late for me. And the third experiment, measuring neutron spin asymmetry A_1^n , was due to start very soon."

For Zheng, the decision was simple. With one more graduate course to complete at MIT, she moved to Newport News to get a jump on her thesis work. Zheng spent a year learning about her challenging experiment and the Jefferson Lab facility; and one year after finishing the experiment she completed a general relativity course by e-mail and facsimile.

Zheng's thesis research was conducted in Hall A, on experiment E99-117, during June and July 2001. Scientists directed the accelerator's continuous electron beam toward a polarized ^3He (helium-3) target. Two high-resolution spectrometers (HRS) detected electrons scattered from neutrons in the helium target.

The experiment provides the first precise data of A_1^n and g_1^n — the spin-dependent structure function of the

Continued on next page



Xiaochao Zheng presents her prize-winning, thesis research during the annual User Group Meeting held in June 2003.

Continued from previous page

neutron — in a special kinematical region called the “valence quark region”, where the quark that got hit by the electron beam carries most of the momentum. After months of analyzing the data, results tend to disagree with predictions from leading-order perturbative quantum chromodynamics (pQCD), a widely employed model of strong interactions. “It is indicated by the data that some of the very simple assumptions of leading-order pQCD are not quite valid,” says Zheng. “It is possible that the quarks’ orbital angular momentum may play an important role in this region.”

Zheng is now a postdoctoral fellow in the Medium Energy Physics group at Argonne National Laboratory, where she is involved in analysis for some Hall A experiments and in some upcoming Hall B experiments, along with her ANL colleagues. She also submitted a letter-of-intent to the Program Advisory Committee this June, requesting 60 days of beam time to measure the parity violating asymmetry of $\bar{e} - {}^2\text{H}$ deep inelastic scattering with a 6 GeV beam in Hall A.

As for the \$1,000 check, “I decided to use this prize to fill my bookshelves at home, partly with physics textbooks and also with Chinese non-physics books,” says Zheng. You can buy a lot of books for \$1,000! “All right, they may not use the full prize,” says Zheng. “Maybe I will use the rest for a vacation.”

Female physicists lead way on JLab experiment

Women making their mark in nuclear physics

by Melanie O'Byrne

A recent physics experiment at the Department of Energy's Thomas Jefferson National Accelerator Facility (Jefferson Lab) in Newport News, Va., set what may well be a new record for accelerator physics: the most female scientists on an experiment. Experiment E00-116, which finished in July, boasts two spokeswomen. A female postdoctoral fellow is overseeing data analysis. The research is central to a female graduate student's doctoral thesis. And the majority of scientists working shifts during the six-day experiment were women, many of them undergraduate physics students.

In a field dominated by men, it is rare to see so many women involved in a single nuclear physics experiment. Cynthia Keppel, a professor at Hampton University and co-spokesperson for the Jefferson Lab experiment, attributes the female majority to what she calls "exactly the best reasons — a change of gender climate and good science." Keppel believes that once the field starts having enough women around, physics experiments run by women will eventually become commonplace.

Ioana Niculescu, also co-spokesperson on this experiment and an assistant professor at James Madison University (JMU), promotes physics to her female undergraduate students and encourages them to pursue careers in physics. One of her JMU undergraduate students, Erin McGrath, became involved in experiment E00-116 at Jefferson Lab this summer and will continue that involvement this academic year.

In the Jefferson Lab experiment, scientists directed the accelerator's continuous electron beam, operating at the highest energies currently available, toward liquid hydrogen and deuterium targets. A third target made of aluminum was used as a control, so background events could be eliminated from the useful data. Electrons scattered from the targets were detected in the high-momentum spectrometer (HMS) and the short orbit spectrometer (SOS) in Jefferson Lab's experimental Hall C.

The experiment investigated a phenomenon known as "quark-hadron duality," where relatively large objects such as proton resonances (hadrons)

Continued on next page



Continued from previous page

behave similarly to much smaller objects like quarks. Physicists hope that understanding this behavior will help them interpret hadron phenomena in terms of the fundamental quarks and gluons that make up matter.

Simona Malace, a graduate student at Hampton University and the University of Bucharest, is particularly proud of this experiment because it is part of her doctoral thesis research. Malace, who graduated from her Master's program in February, found this experiment challenging and saw it as a window of opportunity for her doctoral program. She will present this research at the American Physical Society's annual fall meeting of the Division of Nuclear Physics in Tucson, Arizona, in late October.

It is easy to get carried away with all this "women power," but there were also many men involved in this collaborative experiment. "The pro-

ductivity and congeniality of this collaboration are due to both genders," says Allena Opper from Ohio University, one of the women involved in this research. "The majority of physicists are male and consequently they determine the rules of the game. The men in this group are great." And so are the women.

JLab's Department of Energy Site Office Manager, James Turi, believes physics is a career field full of opportunities for women. He describes the field as gender blind — one where women and men are recognized for their knowledge and their work.

To learn more about careers in physics by visiting the following web sites: www.aps.org/jobs/ (American Physical Society)
<http://careers.iop.org> (Institute of Physics)
<http://spsnational.org/cup/home.html> (American Institute of Physics)



Cynthia Keppel
Joint JLab, Hampton University
physicist and experiment
co-spokeswoman

The women who worked on experiment E00-116 included (left to right): Simona Malace (Graduate Student, Hampton University and University of Bucharest), Ioana Niculescu (Assistant Professor, James Madison University and co-spokesperson), Erin McGrath (Undergraduate, James Madison University), Ya Li (Graduate Student, University of Houston), Tanya Ostapenko (Undergraduate, Gettysburg College), Wendy Hinton (Postdoctoral Fellow, Hampton University), Crystal Bertocini (Undergraduate, Vassar College).

Absent from group photo: Cynthia Keppel (Professor, Hampton University and co-spokesperson), Allena Opper (Associate Professor, University of Ohio), Tiffany Dodaro (Graduate Student, University of Houston).

Document Control on the go

Archives history of Lab's technologies; handles requests for printed products



By Judi Tull

Rows and rows of long, beige fireproof filing cabinets stand sentinel in a quiet room on the second floor of the Applied Research Center (ARC), guarding their precious, historic payload. If there's an engineering drawing that's been done for Jefferson Lab, it's here. More than 40,000 massive sheets of paper tell the story of the Lab's progress and growth.

In an adjoining room, the high-tech workhorses of document reproduction and, now, electronic archiving, hum softly, overseen by Document Control Supervisor Debra Stitts and Document Control Technician Gary Hays.

Stitts has held this job for two years, but been with JLab for almost 14, having started as a receptionist before moving into other positions of increasing responsibility in a variety of departments. Before arriving at JLab, Stitts was already very familiar with Department of Energy research laboratory work, as she had spent the previous 17 years at Fermi Lab in Illinois.

Hays arrived at the Lab two years ago, bringing with him extensive experience in commercial print and documentation.

The Document Control department has three primary responsibilities: to archive and maintain engineering drawings, maintain the drawing database, and to respond to requests for printed products.

The drawings were traditionally received and stored first as paper copies

and then sent out to a vendor for microfiche copies. As revisions of drawings are made, the previous versions of the drawings are destroyed but the microfiche copies are retained. Although the microfiche files were good permanent records, the copies that could be produced from them if someone needed to see an original draft were inferior.

Now, however, all that is changing with the ongoing move toward all-electronic files. Software called Engineering Exec, which is a scaleable print distribution and archival management system, has been in use since September. About half of the archived documents have already been scanned into it. All new documents — and the rest of the old documents on hand — are being scanned into the program. Lab employees have access to the program from their desktop computers, and every version of every drawing will eventually be available to them. "With every copy as good as the original," Stitts commented.

The advantages are obvious. It's a time, money and resource saver. Document Control uses less paper, and engineers who need to see drawings can simply search the database, find what they need, either print to their local printers or send an order to the Document Control Center's printer and pick up their copy, sometimes within an hour or two.

The Lab staff's response to the new capability has been overwhelming,

Continued on next page



Photos: left to right

Gary Hays and Debra Stitts, Document Control staff, pose for a photo in the archive room, which contains more than 38,000 technical drawings dating back to the Lab's beginnings.

Gary Hays pulls a technical drawing from an archive cabinet.

Then he loads the drawing into the large format scanner/printer system.

Continued from previous page

Stitts said. "They've been receptive well beyond our expectation."

When Stitts and Hays sent a memo to department heads announcing a training initiative on the new software back in the fall, they expected a few takers and thought they'd be teaching individuals in very small groups. Instead, they've had turnouts of up to 30 people at a time, and requests for the training are continuing.

The scanning and printing equipment, take up almost a third of the large room the department calls home (ARC, room 225). With the OCE 9600 scanner, drawings that are nearly three feet by four feet can be reproduced in various sizes in under a minute.

After a couple quick pokes at the teal-colored control panel, the original disappears into the scanner and sends the image to a computer linked to the printer. The printer goes to work not only producing the final document but, if requested, also folding and collating it. The goal is for an engineer to be able to bring an original drawing in in the morning and by that afternoon be able to print a copy directly to any local printer. (This process includes scanning, quality control checks, database entry, and loading onto the archive server.)

The Document Control Center has recently added two new pieces of equipment. Through the generosity of Stan Majewski, head of the Lab's Detector Group, Document Control has a new, large-format color printer with a

multi-roll feeder. The printer can produce photo-quality prints and has already become the printer of choice for many of the JLab staff when printing posters. In addition to the printer, the Director's Office contributed a large paper trimmer that can handle paper up to 78 inches, and now resides inside the Document Control Center.

The jobs that Stitts and Hays handle vary widely during the course of a week and even a day, they said. Since many of the drawings they are asked to reproduce from the archives require additional reference drawings to go along with them; a request for even a handful of documents can add up to literally hundreds in the finished package.

On the other hand, they often get requests for 50 copies of a single drawing, as well as poster-sized display pieces for staffers who are on their way to present papers at conferences. They also printed many of the signs and posters for the April 26 JLab Open House.

In most cases, they can get to work on a request soon after it is received, they said, and almost everything can be handled from start to finish within a day.

"Customer satisfaction is our main concern," Stitts said.

Come out and play and help the United Way

Oct. 29 dubbed
fundraising day



Wednesday, Oct. 29 has been designated as Jefferson Lab United Way Day. Instead of the month-long appeal conducted in years past, JLab is dedicating this one day to its 2003 United Way fundraising effort. Complete your contribution form and turn it in that day and you (and your family) will be able to enjoy special activities aimed at thanking employees for their participation in this annual fundraiser.

According to Christine Hummel, JLab's United Way campaign coordinator, some of the special activities planned for the day include a magic show, donuts, music, and a raffle to be held during the Fall Festival (scheduled for 3-6 p.m. behind the Residence Facility). Prizes for the raffle include \$200 cash, a 1-year membership to Gold's Gym (located in Newport News), and a season pass for Busch Gardens (Williamsburg).

JLab's goal for this year's United Way campaign is increased employee participation. The Lab's highest level of participation to date was during 2001, when 30 percent of JLab employees made donations.

"I would like to reach a Lab-wide 50 percent participation goal," said Lab Director Christoph Leemann. "With our communities still dealing with the impact of Hurricane Isabel, many of the local, charitable, aid and disaster response agencies' resources have been severely drained."

"Through the generosity and spirit of the people here at JLab, I know we can play a big part in helping the United Way meet its goal and reach out to our neighbors here in the community who need our support," Leemann continued. "Jefferson Lab is an integral part of our community and supporting our local United Way is one way to demonstrate our leadership and good citizenship and share our good fortune with those in need, and

with those who are working to make our community stronger, healthier, and even more productive."

Participating United Way agencies cover a range of activities and programs, including: the Red Cross, Big Brothers/Big Sisters, Boy Scouts, Girl Scouts, Children's AIDS Network, and local foodbanks, as well as associations supporting the research and treatment of medical conditions and diseases such as mental health, muscular dystrophy, diabetes, epilepsy, cystic fibrosis, cerebral palsy and arthritis. CHROME — the Cooperating Hampton Roads Organizations for Minorities in Engineering — is a member of the United Way that JLab has supported with Science Education activities for many years.

"Supporting CHROME helps at-risk youth develop the knowledge and interests that they need in order to succeed in our high-tech world. CHROME helps to make them aware of the possibilities and opportunities that lie before them," said Jan Tyler, JLab Science Education manager and CHROME board member. "It's a great way of supporting our community today, and helping to make it an even better community tomorrow."

"During fiscal year 2003 alone, JLab volunteers interacted with 33 CHROME clubs — totaling 648 youth — and conducted two 3-day science camps. This kind of interaction makes a big impact in a child's life," Tyler added.

United Way contribution forms are being distributed on campus. Completed forms may be turned in before or on Oct. 29 to Christine Hummel, Admin. Division, MS12K. A United Way sticker will be given to each participant to receive a free Krispy Kreme donut. The sticker will also be used as an admission ticket to the magic show during the Fall Festival. Contact Hummel at ext. 7502 or e-mail chummel@jlab.org, if you have questions. Visit JLab's web site at www.jlab.org/jag for more information.

Continued from page 5

“CASA successfully demonstrated energy recovery for a large final to initial energy ratio, an important test for any future electron-ion collider.”

The committee indicated that JLab’s user community remains pleased with the Lab and committed to its future. User concerns mentioned in the report include the delay in approval of the 12 GeV upgrade, a lack of office space and the length of the experiment backlog.

Another strength of the Lab’s, cited in the report, is its significant role in the mentoring of graduate students. At the time of the S&T Review, JLab had produced 148 Ph.D.s with another 126 in progress.

More recently, Jefferson Lab went through a Personal Property Management Assessment, Sept. 8-11. An independent Department of Energy contractor specializing in property management, accompanied by a DOE Headquarters Property Management official and representatives from the Lab’s DOE Site Office and Oak Ridge Operations, conducted the assessment.

The assessment looked at JLab’s personal property management processes and was a first-of-its-kind event for the Lab. This assessment is being conducted at all seven of the DOE’s Office of Science research laboratories, at the request of the Office of Science.

The scope of the assessment was to identify potential areas where additional management attention may be required to assure that the Property Management System complies with applicable regulations. The team reviewed procedures, processes and other available data and interviewed key employees.

The full range of property management activities were reviewed, includ-

ing: the high-risk property program, data processing equipment sanitization, equipment storage, the Property Manual, stockroom inventory management, commingled property, excess property control, Lab-fabricated equipment, materials reutilization, P-card (purchase cards) control, subcontract property, and property management training.

“The assessment helped us identify specific areas where improvement can be made,” said Kelly Caccetta, Administration Division Associate Director. “The Lab has identified actions to address suggestions discussed in the report, and in several cases we have already begun the process of implementing changes. Overall, the common recommendation from the assessment was to focus on finalizing detailed written procedures for the way we conduct business in these areas.”

“There were no surprises,” Caccetta continued, “and I would like to thank everyone involved in the Lab’s many personal property programs for their efforts in preparing for the assessment, working with the assessment team, and now, addressing programmatic improvements.”

Senior Lab management received the Interim Report in early October. After property assessments have been completed at the seven DOE Office of Science facilities, the contractor will submit the Interim and Final reports to the Office of Science contracting officer.

Larry Cardman, Associate Director of the Physics Division, discussed the results from both the S&T Review and the property assessment during the Oct. 9 Core Managers’ meeting.

DOE Review update...

Two to the Rescue

Accelerator Division's Ryan and Adderley save the day for space research mission



Phil Adderley and Kim Ryan hold a getter (vacuum pump) in its sealed metal container.

*by John Anderson, II
Public Affairs intern*

Two Accelerator Division employees, Kim Ryan and Phil Adderley, recently “saved the day,” for a group of scientists at the William B. Hanson Center for Space Sciences (University of Texas at Dallas).

The scientists desperately needed a piece of equipment for their project, which was set to take place aboard a soon-to-launch Sounding Rocket. Ryan and Adderley’s quick action prevented the scientists from missing their launch window and enduring an extensive project delay, and earned them letters of appreciation from the director of Hanson Space Center and the project’s engineer.

The project required a vacuum pump made of metals that naturally absorb gas (getter) for a mass spectrometer. Shortly before the rocket was to be launched from Wallops Island (Eastern Shore, Va.), the scientists dis-

covered that the box — thought to contain the pump — held a heater! The needed pumps are made in Italy; and take many weeks or even months to order and deliver to the U.S.

During the rush to find a replacement the scientists ran across a Jefferson Lab paper about its load-lock gun for the polarized injector. This paper mentioned the very part that they needed.

Ryan and Adderley were among the names listed on the paper. Ryan was contacted and presented with the situation. She received approval to provide the scientists with the needed pump; then she and Adderley prepared the pump (overnight shipment) for its space assignment. The pump performed as needed; the Hanson project was executed without delay and the project was a success! And a replacement pump was promptly sent to JLab.

Milestones for August 2003

Hello

Daniel Dale, Hall B Sabbatical
Scientist, Physics Division

Philip Cole, Hall B Sabbatical
Professor, Phy. Div.

Robert Lawrence, Programmer, Chief
Information Office

Steven Moore, FEL Staff Computer
Scientist, Accelerator Div.

Curtis Thomas, EESIC Electrical
Engineer, Accel. Div.

Michael Davenport, Mechanical &
Controls Inspector/Evaluator,
Administration Div.

Heidi Fansler, Electro-Mechanical
Technician, Phy. Div.

Goodbye

Deirdre Black, Post Doctoral Fellow,
Phy. Div.

for September 2003

Hello

Mark Peele, Accounting & Financial
Reporting Manager, SURA

Jarreas Underwood, Hall B
Technician, Phy. Div.

Patience Moss, Stockroom Clerk,
Admin. Div.

Goodbye

Glen Warren, Post Doctoral Fellow,
Phy. Div.

Isidoro Campisi, Senior Staff
Scientist, Accel. Div. (departed JLab
for a full time job with the Spallation
Neutron Source being built in Oak
Ridge, Tenn.)

Elena Pentcheva, Technologist/Design
Drafter, Phy. Div.

Igor Musatov, Post Doctoral Fellow,
Phy. Div.

Accelerator Division's Prior and Lawrence win EH&S award

The Accelerator Division's Environmental, Health & Safety (EH&S) Tracking System recently won a National Registry of Environmental Professionals (NERP) award. The mission of NREP is to promote legal and professional recognition of individuals possessing education, training and experience as environmental managers, engineers, technologists, scientists and technicians, and the value of their work to the public, government, employers and insurers.

Through the efforts of Sandy Prior and Bobby Lawrence, the EH&S Tracking System has developed into an integral tool for Jefferson Lab line managers and EH&S staff, according to Bob May, Accel. Div. EH&S department head. The tracking system is used to log important events and inspection findings (deficiencies and proficiencies), enable responsible individuals to follow-up on corrective actions, and provide managers with tools to track their effectiveness.

Sandy Prior submitted a paper co-written by she and Bobby Lawrence on the EH&S Tracking System for the award. "The Accelerator Division congratulates Sandy Prior and Bobby Lawrence for their efforts at developing a recognized tool for tracking vital EH&S information," noted Bob May.

Richard Young, executive director of the National Registry of Environmental Professionals, congratulated Prior and Lawrence in recent correspondence notifying them of the award and the awards-presentation banquet scheduled for November in Florida.

Admin. Manual changes available on web page

Several new and updated Jefferson Lab policies have recently been posted in the Administrative Manual and are

accessible on the JLab web site.

New property policies concerning high-risk property, sensitive property, precious metals and property in the possession of off-site contractors are now available in the web-version of the Admin. Manual as are revised policies regarding recruitment travel, relocation, the SURA/JLab Travel Credit Card, and travel and honorarium for invited guests and consultants.

Lab staff members are asked to review these new policies/policy changes at:
www.jlab.org/div_dept/admin/HR/Admin_Manual/index.html.

Lab built on Nobel Prize winning physics

On Oct. 7, the Royal Swedish Academy of Science announced that a Russian, a Russian-American and a Briton who also has U.S. citizenship are winners of this year's Nobel Prize in physics. Alexei A. Abrikosov and Vitaly L. Ginzburg will share this year's Nobel in physics for their theories about superconductivity, the ability of some materials to conduct electricity without resistance, along with Anthony J. Leggett, for explaining one type of superfluidity, a peculiar behavior exhibited by cryogenic helium.

Without the advances made in these two areas, Jefferson Lab would not exist in its current, unique-in-the-world form. The 338 superconducting, niobium cavities inside the Continuous Electron Beam Accelerator at Jefferson Lab are chilled with liquid helium, making it the largest installed base of superconducting technology in the world today.

Visit JLab's web site at www.jlab.org for several links pertaining to this story.

Jefferson Lab Blood Drive tops goal

Thank you all for another great blood drive, said Vicki Barnett, JLab Medical Services. "Eighty-seven people signed up for the Oct. 3 event, and three were first time donors. By the end of the day we had 76 productive units of blood, and beat our goal of 60 units."

"I would like to thank all the donors and volunteers who helped make this drive such a success at this most needed time," Barnett added. "Your donation saves lives."

The blood supply in the Mid-Atlantic Region is currently very low; JLab donations were critically needed and very much appreciated by the Red Cross. The next JLab blood drive should be scheduled for January 2004.

For more information, contact Vicki Barnett, ext. 6269 or e-mail vbarnett@jlab.org.



Jacqueline Bacon, Director's Office, happily rolled up her sleeve Oct. 3 to give the "gift of life." Thanks Jacquie!



On Target is published by the Thomas Jefferson National Accelerator Facility, a national nuclear physics research laboratory in Newport News, VA, operated by the Southeastern Universities Research Association for the U.S. Department of Energy's Office of Science. News items are published on a space-available basis and are subject to editing. Submit news items to the Jefferson Lab Public Affairs Office, MS12C, 12000 Jefferson Avenue, Newport News, VA 23606.

Editors
Linda Ware
Debbie Magaldi

Contributing Writers
Melanie O'Byrne
James Schultz
Judi Tull

Photographer
Greg Adams



www.jlab.org

Jefferson Lab/MS 12C
12000 Jefferson Avenue
Newport News, VA 23606

