



ON TARGET

THOMAS JEFFERSON NATIONAL ACCELERATOR FACILITY • A DEPARTMENT OF ENERGY FACILITY

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step closer to reality

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12 GeV upgrade proposal reaches critical stage

by James Schultz


A preliminary plan was developed in 1994. Meetings, formal and informal, followed in the intervening six years. Within the last 12 months, the pace has quickened. By late-February the 12 GeV white paper will be published, stating the scientific case for the upgrade and documenting the accelerator and experimental equipment improvements necessary to carry out the scientific program.

The white paper will be distributed to the nuclear physics community before the Nuclear Science Advisory Committee's Long Range planning session scheduled for the end of March. At that meeting the decision will be made.

If all goes as planned, Jefferson Laboratory's upgrade to 12 billion electron volts, or 12 GeV, may be formally urged by the Nuclear Science Advisory Committee (NSAC), a group of distinguished physicists that counsel the Department of Energy and the National Science Foundation on research priorities. At that point, the reality of current budget situations come into play.

"Regardless of the scientific merits, you can never divest projects like this from financial considerations," says JLab interim director Christoph Leemann. "The federal budget is limited. It's a finite pie. People are cost-conscious. Nuclear physics isn't the only discipline seeking funding."

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Peter Kneisel, senior staff scientist, uses the Network Analyzer to send radiofrequency waves through a 7-cell cavity.

12 GeV upgrade proposal reaches critical stage. . .

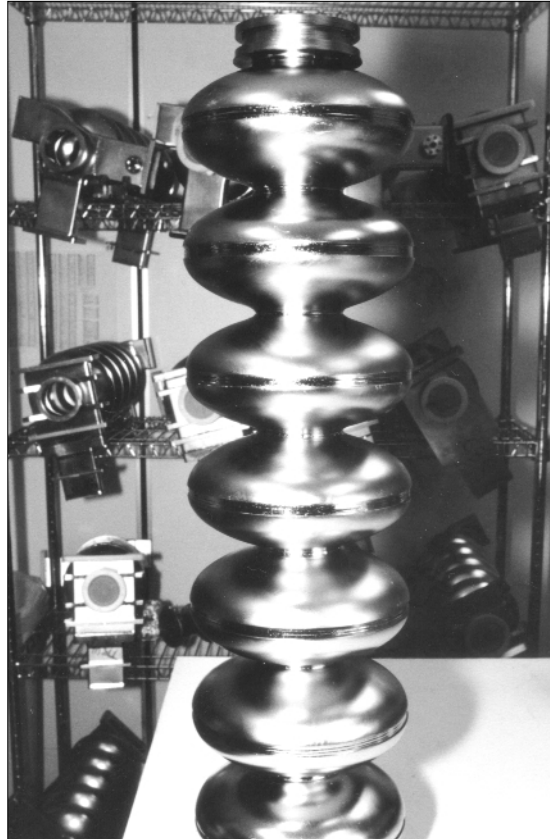
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Nevertheless, those within the user community are strong supporters of the upgrade. The white paper makes the point that increased beam energy, together with a new Hall D detector, will make new phenomena accessible.

Researchers will enlist the unique properties of the Lab's energy-upgraded accelerator to include the spectroscopy of quark-antiquark systems and conduct detailed searches for and studies of the gluons that describe and constrain quark interactions. Scientists will thus have an even more powerful tool for investigating the transition from the regime in which conventional descriptions of nuclear matter applies, to a less-understood area where underlying quark "degrees of freedom" become evident.

Such studies should provide key insights into how matter is constructed from quarks and gluons, complementing the work already underway in Lab halls at lower energies. Advocates believe that investigations at 12 GeV will keep the American nuclear physics program at the cutting edge of physics research worldwide. The December APS/DNP Electromagnetic and Hadronic Physics town meeting chose as its first priority the proposed energy upgrade, noting that the beam-energy increase would substantially enlarge research opportunities.

"At 12 GeV, we can look into corners we couldn't at 6 GeV. For instance, we will examine the decays of a class of particles known as hybrid mesons, created as a result of reactions with high-energy photons. What one expects to find are certain states that could prove or disprove our current theories," Leemann says. "The 12 GeV upgrade is what we think we'll need for vital and forefront physics into the third



The newly designed 7-cell niobium cavity is at the heart of the 12 GeV upgrade.

decade of this century. It buys us long life, scientifically speaking. We are unique today at 6 GeV. At 12 GeV we'll maintain that uniqueness."

Hurdles To Clear

Funding needed for the upgrade is estimated at \$150 million. The task confronting upgrade planners is to devise a higher-energy configuration that will be both economical and efficient. To that end, planners will need to fully exploit the accelerator's total capacity for 50 eight-cavity cryomodules in both accelerator linacs, plus several more in the injector region. Currently, 41 1/4 cryomodules are used to deliver beams up to 6 GeV.

Future cryomodules will be assembled in groups of eight cavi-

ties, rather than the previous configuration, which involved sequential assembly of four cavity pairs. The new arrangement will substantially improve accelerator performance, increase operational efficiency and save money by reducing maintenance costs.

The cavities comprise the innermost components of the cryomodules' three-part system, which also includes a cooling tank of liquid helium and a Thermos-bottle-like structure known as a cryostat. The cryostat provides insulation to allow the cells to remain cooled to two degrees Kelvin, nearly absolute zero.

In order to reach the 12 GeV mark, engineers must develop, install and commission at least 10 of the redesigned modules. Each upgraded unit will have a capacity of over 100 megavolts, more than triple the present levels. The first group of reconfigured cryomodules is scheduled for installation in 2003, with the remainder slated for installation as monies become available.

The cost of each cryomodule won't increase from present levels, but will include more voltage per module, which will translate into higher electron-beam energies. Plans call for the 12 GeV upgrade to be complete by 2006, with the possibility of a final increase to 24 GeV by 2015.

"I'm optimistic," Leemann asserts. "This [upgrade] is truly fundamental — essential science. It has to be done to close the gap in our knowledge about how nucleons and nuclei are built up from quarks. There's a very strong scientific rationale for this project. Given the fact that we can practically apply what we've already learned about superconducting accelerator technology, it will also be very cost effective."

HIGHER BEAM ENERGY □

□
ON JLAB'S HORIZON

Hall D update

Proposal moves new experimental facility a step closer to reality

by James Schultz

A fourth experimental hall is the linchpin of Jefferson Laboratory's planned upgrade to 12 billion electron volts, or 12 GeV, from the current level of 6 GeV. Plans for Hall D are progressing, with a third draft of the hall's design report awaiting the outcome of an evaluation conducted by the Nuclear Science Advisory Committee. The NSAC is expected to issue its five-year research recommendations to the Department of Energy in late March, in the aftermath of a meeting in Santa Fe, New Mexico.

"It makes sense. If you're going to upgrade the accelerator, you should make maximal use of it," says Elton Smith, JLab liaison with the Hall D Group. "One of the justifications for the upgrade is that it allows you to do physics you otherwise couldn't. It's kind of a package deal: you need the higher energy to look for particular kinds of particles and a new hall to detect those particles."

Some 90 scientists and 27 institutions are involved in plans to create Hall D. While the \$36 million project has yet to be approved, the hope is that construction will commence in 2003, with completion in 2006. The hall would be located on the east end of the North Linac and construction would proceed in concert with the 12 GeV upgrade.

Recent computer simulations have enabled planners to fine-tune construction plans, including integrating beam-line design with the hall's detector array and overall architecture. Researchers are also counting on the continuing, rapid evolution of micro-processing power to handle the enormous volumes of experimental data that will flow from the Hall D detectors.

"We have a much better conceptual understanding of the required construction," Smith says. "We'll be hitting a hydrogen target with photons to produce exotic mesons and then looking for the decay byproducts. We'll be able to do a lot of new physics."

Uniquely Suited

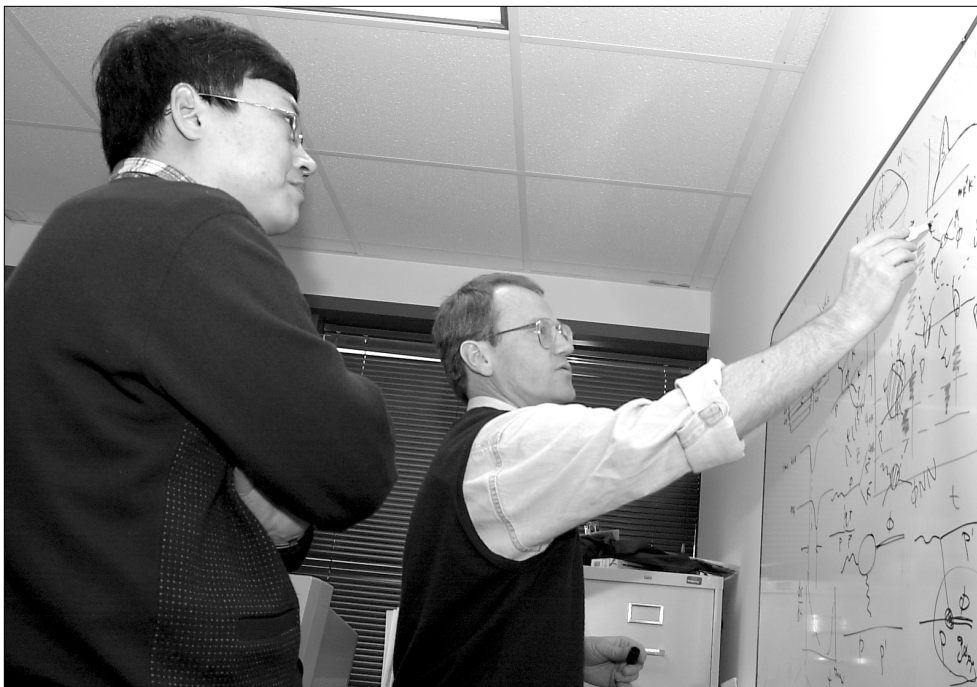
Hall D experiments will examine the decays of a class of particles known as hybrid mesons, created as a result of reactions with high-energy photons. Scientists wish to study meson byproducts in order to find unusual varieties and to better understand how the two quarks that comprise mesons interact with the strong-force-carrying particles called gluons.

Although photon beams are electrically neutral and so cannot be steered and focused by magnets, as can electrons, they can be collimated: sent out in a straight line in a regular stream. The photon beam will be collimated onto a target to produce hybrid mesons, whose byproducts will then be recorded by particle detectors.

At the heart of the Hall D detector will be a superconducting solenoidal magnet, currently stored at Los Alamos National Laboratory. The magnet will be shipped by summer and will be refurbished prior to installation. (If purchased outright, the magnet would cost \$10 million; under the terms of a cross-government agreement, the Lab will adapt it for its new home at a cost of \$1 million.) JLab has also obtained a \$3 million lead-glass array from Brookhaven National Laboratory, which arrived this past summer and is currently in the Lab's physics storage building. Other necessary equipment includes a barrel calorimeter, drift chamber and time-of-flight wall, which will be built from scratch.

While final, formal Department of Energy approval for construction is pending, the committee's report has characterized Hall D's photon-based physics as "...well-suited for definitive searches for exotic states [of mesons]."

JLab is uniquely suited to carry out this program of searching for exotic states."



Elton Smith, staff scientist (right), discusses Hall D physics with visiting researcher, Yongseok Oh, from the Physics Dept., Yonsei University, Korea.

Working together

NASA, JLab agreement enhances research, benefits tech transfer

During a special meeting on Jan. 23, NASA and Jefferson Lab formalized an agreement permitting the two federal labs to expeditiously enter into agreements when performing mutually beneficial work.

JLab Interim Director Christoph Leemann and NASA Langley Director Jeremiah Creedon led the signing ceremony — attended by the media, Dept. of Energy officials, regional industrial leaders and technology transfer managers — in the ARC auditorium.

The Memorandum of Understanding will facilitate the development of mutually beneficial technologies, enhance the rapid transfer of technologies to industry, and provide a mechanism for sharing vital resources and providing support for programs at both facilities. The agreement will benefit the Lab and NASA directly by making the staff, research expertise and equipment of each facility available for the primary research needs of the other.

JLab will benefit by having access to the technologies and expertise of a range of NASA disciplines, including materials science, instrumentation, atmospheric sciences, systems engineering, and the facilities for testing evolving technologies in these areas. And NASA will have access to Jefferson Lab's clean rooms, production facilities, superconducting radiofrequency and ultra-high vacuum technologies, cryogenic capabilities, and the Free Electron Laser User Facility.

The agreement defines how the Lab and NASA Langley will handle liability issues, intellectual property rights, reimbursement of expenses and other legal issues. Having the agreement in place will dramatically cut the amount of paperwork needed when the two labs worked together.

Those at the signing ceremony view the agreement as a mechanism for boosting the joint research carried out by the two labs, and more quickly identifying processes and products that could be beneficial in a commercial setting — all at less cost to the taxpayer.

Two projects are already underway. A NASA researcher is collaborating

with William and Mary researcher Brian Holloway in experiments that use the FEL to produce carbon nanotubes. The lightweight, flexible, but sturdy material could be used to strengthen parts of aircraft and spacecraft. Nanotubes could also find their way into the marketplace in the form of microelectronic components and gas storage media.



NASA Langley Director Jeremiah Creedon (left) and JLab Interim Director Christoph Leemann shake hands at the official signing ceremony — clearing the way for the two federal labs to work together on mutually beneficial projects.

Green Purchasing

Good for the Lab, good for business, good for the environment

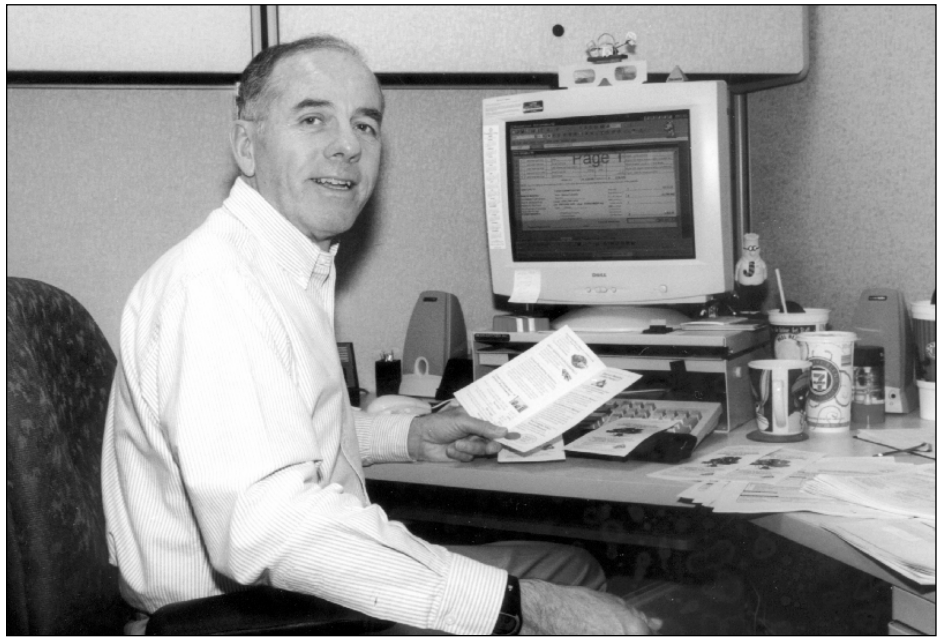
Jefferson Lab, like many government agencies and facilities, is further closing the circle on its recycling efforts. “The next step — dubbed Green Purchasing — gives us the opportunity to positively affect the environment through the choices we make when selecting the products and services we commonly use,” explains Dennis Dobbins, JLab’s Green Acquisition Advocate.

“For years we’ve been recycling all types of materials — paper, cardboard, aluminum cans, scrap metal, batteries, used oil — the list goes on and on,” Dobbins continues. “Now we’re taking the next step and making the conscious decision to buy office supplies and other products that contain significant amounts of recycled or recovered materials.”

According to Dobbins, there are significant benefits to the Lab as a result of implementing Green Purchasing initiatives: preserving natural resources, potential cost savings, and creating markets for readily available products. “Each of us can appreciate the value of preserving natural resources and reduced costs for the goods we buy,” he maintains. A recent price comparison in a major office supplier’s catalog showed the costs of “green” office supplies (1-inch binders, toner cartridges and envelopes) being 29 to 40 percent less than comparable products made with virgin materials. “This is a direct cost savings for the Lab,” Dobbins emphasizes.

“It’s also national policy,” he adds, citing Executive Order 13101, Greening the Government through Recycling and Federal Acquisition. The EO requires each Federal agency as well as their prime contractors to incorporate waste prevention, energy efficiency, and recycling into its daily operations to increase and expand markets for recycled materials through greater preference and demand for such products.

Under this mandate, the Environmental Protection Agency has identified eight categories of recycled or recovered materials: paper and paper products, transportation products, miscellaneous products, non-paper office products, vehicular products, landscap-



Dennis Dobbins, JLab’s Green Acquisition Advocate, pauses while researching prices for “green” office supplies.

ing products, construction products, and park and recreation products. In addition, the EPA has developed comprehensive procurement guidelines that contain detailed product descriptions and the minimum recommended recovered material content to meet “Green Purchasing” applicability for each designated product.

“The Lab’s goal for 2001 is to buy only those office supplies and products that meet or exceed the EPA’s minimum recommendation for recycled material content,” Dobbins says. “Each of us must include Green Purchasing considerations in every JLab purchase we make. This includes credit card and e-commerce purchases. Up to this point, we considered performance, availability, safety, suitability and price when making a purchasing decision. Now, environmental considerations should become a part of our normal purchasing practices.” Copy paper, file folders, remanufactured toner cartridges (printer and fax), writing tablets, note pads, envelopes, plastic office supplies, and shipping and mailing products are all examples of items available today that have recycled material content.

Whatever your job, it is likely in the days and weeks ahead that you will buy a product or material. Choose one that

contains recycled or recovered material when possible, Dobbins urges. All recycled content products are clearly identified on the package, in the catalog, or the product information sheet. When placing an order over the phone, fax, or Web, be sure to specify that the items must meet EPA guidelines for recycled content products.

“Incorporating environmental considerations into the purchasing process doesn’t require any significant changes to the traditional process,” he points out. “You’ll just incorporate environmental implications, right along with your other considerations.” To assist the JLab staff in making the correct purchasing decision, there will soon be a JLab Green Purchasing Web page to provide current information on green products and a list of available suppliers.

“Remember,” Dobbins concludes, “Green Purchasing makes good business sense. It is often more cost-effective, and by reusing materials it has a direct and positive influence on the environment by reducing waste generation and the demand for new materials.”

If you have questions about or suggestions for the Green Purchasing program, contact Dobbins at ext. 5139 or e-mail dobbins@jlab.org.

Publications Management

Assists researchers with electronic publishing of their papers

Getting a physics paper reviewed and ready for publication can be a time consuming and tedious task, admits Kim Kindrew, JLab's Technical Information Specialist. "But, Information Resources is working to change that. We're now able to assist authors in getting their work uploaded into a global network of physics databases and archives. And we're identifying ways to simplify the peer review process and getting ready to take the process electronic."

Joining the Lab about a year ago, Kindrew has been updating and bringing on line the Lab's Publications Management program, which is designed to assist JLab users, doctoral candidates and staff in getting higher visibility for their research papers and dissertations.

"We want to make the peer review process as streamlined as possible, she emphasizes. "Soon authors will be able to submit their papers for review electronically and reviewers will receive those papers via computer. No

more time spent copying and distributing papers."

"Getting JLab research results, theory papers and technical knowledge to the broadest audience possible is good for our authors and for the Lab," Kindrew continued. "It's a growing priority. The papers published – based on research done or technologies or ideas developed here – help demonstrate the Lab's credibility as a world-class, physics research institution. And, as those papers are cited, and their authors referenced or asked to speak at conferences, the more important our work becomes in the world of physics research. It also makes our knowledge and technology more accessible for possible commercialization."

The goal of Publications Management is to seek out new methods for submitting papers for publication, and to encourage authors to upload their papers to the Los Alamos e-print archive to ensure global exposure. Kindrew can assist authors with

these uploads and will provide individual or group instruction upon request.

"We encourage authors to use the Los Alamos e-print archives because it is well developed and used extensively," she explains. Instructions are located on the archive's Web page (xxx.lanl.gov). "Be sure to review the upload policies before attempting to load your paper into the Los Alamos' archive," she suggests. "The site includes a range of physics categories. Browse through them to find the category that offers the best fit for your paper. Older papers you have may be uploaded, also."

"The Los Alamos e-print archive receives more than 800,000 hits in one week – that is 800,000 researchers, physicists and other professionals accessing the site in a seven-day period! Plus the archive tracks how often papers/authors are cited," Kindrew points out. "The Los Alamos archive is accessed by Stanford Linear Accelerator for its SPIRES database (www.slac.stanford.edu/spires/) which further increases a paper's visibility. In addition, SPIRES tracks how often papers are cited and makes that information readily available."

For more information about Publications Management services and resources, access to JLab papers, publication policies, clearance forms, and e-print archiving, visit the Information Resources Web page (www.jlab.org/IR/) and select Research Publications, or contact Kindrew, ext. 7805, e-mail kindrew@jlab.org.



◀ Kim Kindrew, Technical Information Specialist, sits among a portion of the 132 papers, technical notes and dissertations written by JLab staff and users during 2000.

In their own words

Bob May recounts coming to Lab, developing RadCon program

Interview by Judi Tull

I had been working in health physics for a long time before I came here. I graduated from Virginia Tech in 1978 with a B.S. in biology, a special program of study in health physics, and a minor in sociology, something that's always been of interest to me. Right out of school and newly married, I went to work in Richmond for the Virginia Department of Health, where I ran environmental monitoring programs for Surry and North Anna power stations. While there, I developed the state's first mobile environmental testing lab from which we could lead an emergency response to any radiological incident.

From there, I came to Hampton Roads and worked for the Department of Defense at Norfolk Naval Station. In that job, I sampled biological pathways for radioactive material and evaluated dose to the general public. I eventually became a senior manager in charge of the environmental monitoring and radio-analytical branch. After about a decade at NNS, I had exhausted my interest in the nuclear fuel cycle, and right about that time I saw an ad in the paper for a health physicist at CEBAF.

I knew as soon as I got here that this place was a horse of different color – very different from what I'd been involved with before. The type of radiation and its properties are substantially different from the nuclear fuel cycle, and the work environment is very different. There is more brainpower per square foot here than any other place I've been. I found the environment a bit intimidating initially, challenging, but very invigorating. Vigorous questioning is a way of life here. You can't shy away from rigorous debate. After ten years, I'd say that it's been very good for me. It's an incredible place to work!

I was very fortunate to have Geoffrey Stapleton as my mentor for my first few years here. He had a

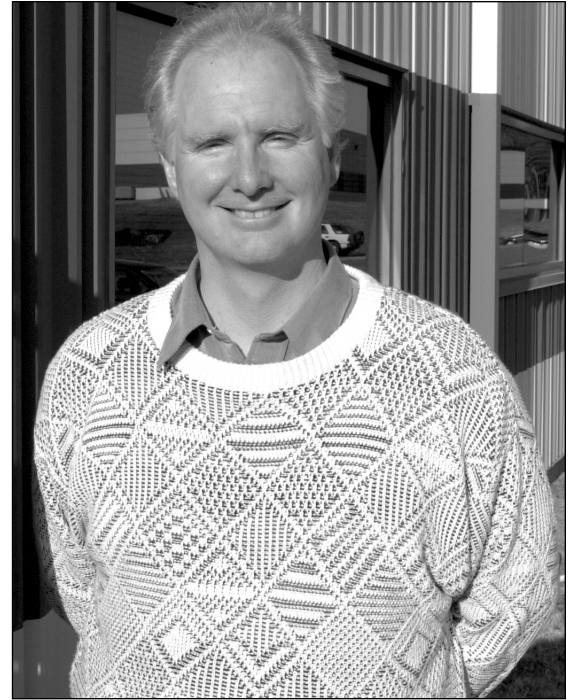
tremendous influence on my life and work.

Coming here was very liberating for me, professionally. I had been used to a lot of strict [Dept. of Defense] procedural ways of doing things. Everything had to go up the chain to the "nth" degree. Here, I have a good working trust with management, that's allowed me to develop the Radiation Control Group and pass on to my team the freedom I've been given. I supervise 11 employees. I think they'd say my management style is somewhat relaxed; I'm not a micro-manager.

I live in Virginia Beach, with my wife and four children and my mother-in-law. I choose to live there because we have strong roots in the community and some wonderful long-time friends. They've seen us through a 10-year process of putting together a family, and they're involved as godparent and friends. They're worth the drive. I often use my commuting time to listen to books on tape – classics like "Tale of Two Cities" and "Ben Hur". At home I like to read action adventures, mysteries, and histories. For me, reading is a form of recreation.

I'm also a certified SCUBA diver, and had the opportunity to dive with my wife and our two oldest children, who are also certified, back in September when we went to the Bahamas. It was a wonderful experience for us. Family is important to me. Our children are adopted, and I think it's essential to give them a sense of permanence and family roots.

People at the Lab might not understand the minutiae of what I do during a day, but they faithfully rely on my group to make sure their work environment is safe. We're constantly monitoring to ensure that the accelerator is within its design goals, and that we



Bob May, RadCon Manager

meet our commitments with the state and federal regulatory agencies. I've been responsible for the development of the programs for radiation safety here, and taken the Lab from the commissioning phase to the operational phase, which has been exciting.

I'm currently involved in reassessing our radiological safety programs with an eye toward the future needs of the physicists who use our facility. We hope to expand the Lab's capability beyond the original assessment so we can do physics at a higher energy level. I've also started a mentoring arrangement with Will Oren, the head of the Engineering Department, so I can learn how an effective department head works. I don't want to limit myself.

What I value most about being here, along with the opportunity to make a contribution to the Lab's mission, are my relationships with the people. They're a group of very talented, very motivated individuals.

Upcoming Activities, Events

Get ready for Spring Arts Festival, Silent Auction

After the great turnout for last year's Spring Arts Festival, the JLab Activities Group and Physics Division couple Joyce Miller and Al Gavalya are planning this year's follow-up.

The CEBAF Center atrium and lobby became an art gallery for an afternoon last year with 30 artists showing off their works. In addition, nearly three dozen individuals donated services, baked goodies, art, and craft items to the Silent Auction. Hundreds of JLab staff, family members, users and students turned out for the event.

This year's art festival will begin with a juried art show at 3 p.m. on March 30 in the CEBAF Center atrium. The Silent Auction will run from noon-4:30 p.m. in rooms L102-104.

"Last year's art contest entries were exceptional," said Joyce Miller. "Many people were surprised at the caliber of the artwork and the breadth of media. Overall, we had a lot of positive feedback on the event. We're hoping for an even larger showing this year. It's a great opportunity for you and your family members to share your interests and talents with your co-workers."

"We also had a nice variety of services, unique gifts, gourmet foods, art,

and craft items for the Silent Auction," Miller added. "Just about anything can be sold at the Silent Auction." Last year's proceeds (more than \$700) were donated to the Peninsula Fine Arts Center in Newport News to support educational programs and exhibitions. Proceeds from this year's event will again be donated to the Fine Arts Center.

The contest is open to all Jefferson Lab employees, their family members, users, students and contract employees. The maximum size of an entry will be 60"X60"X48". Two-dimensional works must be framed and wired for hanging. Artists who submit pieces of sculpture must provide their own pedestal. Each artist can submit up to three original entries for viewing and judging; and are invited to donate a piece to the Silent auction.

This year James Warwick Jones, artist and registrar/preparator for the Peninsula Fine Arts Center, will judge the contest. Prize categories include painting (oil, acrylic, watercolor), photography, mixed media (graphics, fiber arts), sculpture, glass, and best in show. The top three finishers in each category will receive ribbons.

Last year Walt Akers, Administration, won best in show

with his innovative woodworking techniques. Joan Merz, wife of Bill Merz, Accelerator, took best painting honors. The mixed media category winner was Anne Kushnick, wife of Pete Kushnick, Accelerator. Alice Rogan-Nelson, wife of Rick Nelson, Accelerator, took the glass category. Steve Christo, Physics, earned top honors in the sculpture category. And the youngest participant, Gregory N. Adams, son of Greg Adams, Physics, won the photography award with portraits he shot as a two-year-old.

The afternoon will also include entertainment and light hors d'oeuvres. The Duncan and Danielle Band will feature their exciting acoustic folk/rock style. (More information at www.duncandanielle.com.)

"We hope more people take part in this year's art contest and Silent Auction," Miller continues. "Remember, you don't have to be an artist to donate something to the Silent Auction. If you're a good cook, donate a dinner for two, a Sunday brunch or a birthday cake. If you make silk flower arrangements, candles or homemade soaps, we can auction these, too! Dance lessons, dog training — you get the picture — if you do it and can provide it, we can auction it!"

If there's nothing you'd like to make or donate for the auction, just come and have a great time. Bring your checkbook and put a bid on something special, made by one of your colleagues. Watch for the flyer we're sending out with the entry form and deadline information on it," Miller said. Entry form deadline is March 16. All entries for the art show/contest must be brought to rooms L102/L104 in CEBAF Center after 3 p.m. March 29 to allow adequate time for set up. Awards will be presented during the Arts Festival. All artwork must be picked up by noon April 2.

For more information, contact Miller at ext. 7163, or JAG chair Becky Nevarez, ext. 7236.



Budding photographer Gregory N. Adams poses with his mother, Barbara, and his winning photography entry at last year's Arts Festival.

Public Affairs seeks workers for April 21 Open House

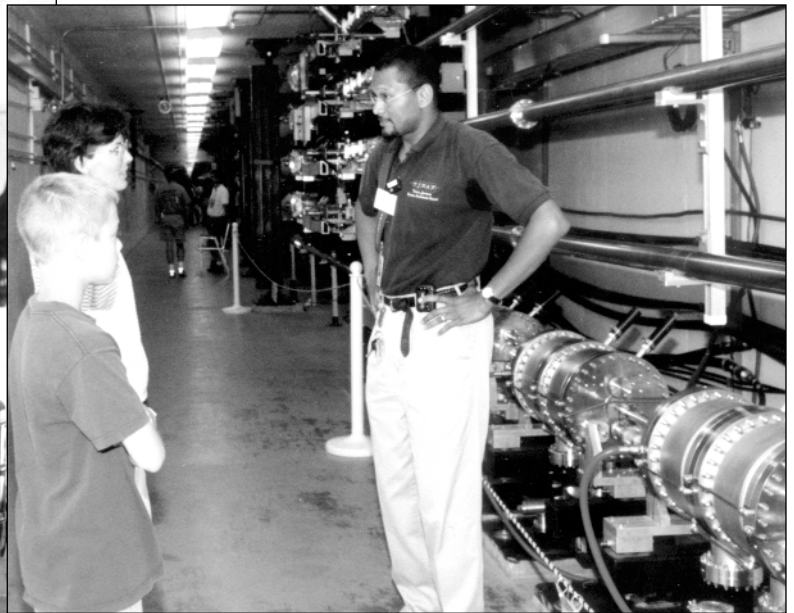
Mark your calendars: Saturday, April 21 is the date for Jefferson Lab's next public Open House.

"The last open house was about two years ago," explains Linda Ware Public Affairs manager. "These events give the public the rare opportunity to see portions of the Lab that are normally not accessible. We hope to open a section of the accelerator and an experimental hall, and have several other areas open across the site. Hosting an open house also gives us the chance to say 'thank you' to the region for its continued support of the Lab."

The call for Open House workers went out in mid-February. "We'll need about 200 employees to work the Open House," Ware says. "We're recruiting staff to work as: bus stop monitors, ushers, greeters, hands-on activity helpers, and tunnel and FEL escorts, and to help with crowd control, souvenir sales, parking, truck ramp assistance, stairway helpers, cryo (liquid nitrogen) shows, and at the information booth. The Open House will run from 10 a.m.–4 p.m. Some workers may have to arrive around 9 and others may find themselves at the Lab until 5.

The Public Affairs staff is also looking for input on displays, exhibit ideas and hands-on activities.

For more information about working the Open House, or to sign up for a specific task, contact Sarah Ingels, Director's Office, ext. 7444 or e-mail ingels@jlab.org.



▲ Ken Surles-Law, Accelerator Crew Chief, answers questions for a couple of June 99 Open House visitors. The Open House provides the public with the rare opportunity to go into the accelerator tunnel and the experimental halls.

▶ Mark Wissmann, Electronics Technician, gets a little help freezing carnations during a cryogenic demonstration during the June 99 Open House. The liquid nitrogen show is always a crowd pleaser.

Physicist entertains, enlightens through upcoming lectures

Physicist and broadcaster Frank Close, from the University of Oxford, will give two entertaining and thought provoking talks about the mysteries of asymmetry on March 1 at Jefferson Lab.

His journey will take the audience from the development of a human embryo to the elusive and mysterious Higgs Boson — the missing elementary particle that will reveal the origin of mass — which physicists around the world are seeking.

The colloquium begins at 4 p.m. and the public lecture is that evening at 7; both are free and will be held in the CEBAF Center auditorium. Dr. Close's book "Lucifer's Legacy – The Meaning of Asymmetry" will be available for signing after the public lecture. Book sales will be by Barnes and Noble; the paperback will be out in March for \$14.95.

Editor's Note on 'Friends of JLab' story

Editor's note regarding the "Friends of JLab" article on page 2 of the January 2001 On Target.

The editor was remiss in not highlighting the work of Gwyn Williams, FEL Basic Research Program manager, in the ongoing process of identifying partnerships and gathering funding for the new building and recommissioning of the new X-ray source, HELIOS mentioned in the article. Apologies to Dr. Williams for the unintentional exclusion.

Thank you all; next Blood Drive set for May 17

Seventy-one units of blood were collected during the Lab's first Red Cross blood drive of the year, reports Vicki Barnett, Medical Services secretary.

She says "thank you" to everyone who participated: donors, volunteers, and recruiters. In addition to the usual

group of donors, four people became first-time donors.

The next blood drive is set for May 17. For more information contact Barnett at ext. 6269 or e-mail vbarnett@jlab.org.

DOE rates JLab 'outstanding' in all areas

The Department of Energy has rated Jefferson Lab "outstanding" in all major evaluation categories under SURA's current performance-based management contract for the Lab. The evaluation incorporates results of the Lab's self-assessment, as well as DOE appraisals, observations, and outside reviews of the Lab during the fiscal year. This marks the third year in which the Lab has received outstanding ratings in all seven areas of responsibilities: science & technology, reliable operations, science & technical manpower, corporate citizenship, EH&S, business practices, and institutional management.

DOE Site Office Manager, Jerry M. Conley, noted in transmitting the evaluation report that "SURA is to be commended for the overall rating of 'Outstanding' and the FY2000 accomplishments... The corporate office of SURA, as contractor for the management of Jefferson Lab, has exercised due diligence in overseeing performance of the Laboratory." Conley indicated that SURA has "maintained close and effective working relations with the Site Office, the Office of Science, Oak Ridge Operations Office, and the Laboratory in contract implementation to assure effective results in the scientific output of the Laboratory and in its overall management."

HUGS summer program seeks applicants

Applications are now being accepted for the 2001 Hampton University Graduate Studies (HUGS) program. The program will be held at Jefferson Lab June 11–29.

The deadline for application submission is April 1.

HUGS at CEBAF (Continuous Electron Beam Accelerator Facility) is

a summer school designed for national and international, second and third year experimental or theoretical nuclear/particle physics graduate students who have finished (or nearly finished) their coursework. Students who are well into a research project are encouraged to apply. Acceptance into the program is competitive, and students participating in the program earn one transferable credit hour from Hampton University.

The 2001 program will focus on experimental and theoretical topics in strong interactions of high current interest. While attending HUGS at CEBAF summer school, students will attend all lectures and seminars offered. The program is simultaneously intense, friendly and casual. All lecturers are internationally renowned leaders in their fields. Students will be housed on-site at the Residence Facility.

Each fellowship covers tuition, fees, room and board, and reimbursement of most, if not all, of the students' domestic, second-class round-trip airfare or mileage, whichever is less. Foreign students' transportation reimbursement includes most, if not all, travel to and from the point-of-entry into the U.S. Students will need to supply funds for incidentals, extra meals, etc.

To apply for a fellowship with the program, submit to the address below a completed application, letter of request for consideration of acceptance into the program, and two letters of recommendation. The deadline for application submittal is April 1. Applications will be accepted after this date but fellowships will only be awarded to students submitting applications by the deadline. All students will be notified by April 30 of acceptance.

Forward all queries and applications to:
HUGS 2001
Jefferson Lab
Attn: Sue Ewing
MS 12H2
12000 Jefferson Avenue
Newport News, VA 23606
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Milestones for January 2001

Hello

Harutyun A. Avagyan, Hall B Post Doctoral Associate, Physics Division

Maud A. Baylac, Injector Scientist, Accelerator Division

Yaroslav S. Derbenev, Accelerator Physicist, Accelerator Division

Deborah M. Gruber, Electronics Coordinator, Accelerator Division

Ann Marie Hageman-Pogorzelski, Mechanical CAD Design Associate, Accelerator Division

Mark K. Jones, Hall C Staff Scientist, Physics Division

Richard M. Kirkpatrick, Mechanical CAD Designer, Accelerator Division

Bert C. Metzger, Hall C Designer, Physics Division

Archie G. Parker, Jr., Radiological Control Technician, Accelerator Division

Tomasz E. Plawski, Accelerator Engineer Controls & Measurement, Accelerator Division

Bodo Reitz, Hall A Post Doctoral Associate, Physics Division

Mark F. Smith, Biomedical Imaging Physicist, Physics Division

Andy T. Wu, Applied Surface Scientist, Accelerator Division

Goodbye

Herbert B. Ashlock, Machinist, Accelerator Division

James M. Johnson, Export Control Manager, Administration Division

Maria K. Niland, Science Education Technician, Director's Office

Congratulations to Year 2000 JLab Graduates

Donna A. Gilchrist, Administrative Staff Assistant, Accelerator Division, earned a bachelor's in organizational management from Bluefield College.

Michael C. Johnson, Staff Computer Scientist, Physics Division, earned a

master's in applied physics & computer science from Christopher Newport University.

Paul C. Letta, Computer Systems Administrator, Physics Division, earned a master's in computer science from the College of William & Mary.

Cynthia D. Lockwood, Staff Services Administrator, Administration Division, earned a bachelor's in organizational management from Bluefield College.

Dreamie Newsome, Plant Engineering Dept. Secretary, Administration Division, earned a bachelor's in business, with a concentration in management, from Christopher Newport University.

Yvonne H. Scott, Human Resources Assistant, Administration Division, earned a bachelor's in organizational management from Bluefield College.

"Milestones" highlights the achievements of JLab staff and users, full-time and term new hires, separations and retirements. To submit staff or users' promotions, special honors and awards send information to magaldi@jlab.org or call ext. 5102.

Update



Glad Grads!

Donna Gilchrist (standing, left), Cynthia Lockwood (right), and Yvonne Scott (seated) completed Bluefield College's 17-month organizational management program in December 2000. The women used the Lab's Tuition Assistance Program (TAP) to help pay for the bachelor's degree program. More than a dozen Peninsula residents participated in the Bluefield College program, which conducted its organizational management classes at the Lab on a weekly basis. For information about TAP, visit the Training & Performance office Web page (www.jlab.org/div_dept/train/) or contact Bruce Ullman, ext. 7170, e-mail ullman@jlab.org.

At a Glance

Calendar of JLab activities and events

March 1: Frank Close, physicist and broadcaster, gives a 4 p.m. colloquium and a 7 p.m. public presentation in the CEBAF Center auditorium. See page 10 for details.

March 1: Deadline for SURA 2001 Graduate Fellowship program applications.

March 5-8: Administration Peer Review.

March 6: Spring Science Series, 7pm in the CEBAF Center auditorium.

Guest speaker Paul Cummings, NNPS, will present the science behind television. Free event, open to students and adults interested in science.

March 9: Deadline for employee medical coverage Open Enrollment period.

March 15: Deadline to the User

Liaison Office for submissions for SURA/CEBAF Thesis prize.

March 26: DMV mobile unit visits Lab.

March 30: JAG-sponsored Spring Arts Festival, 3-5 p.m. Silent Auction, noon – 4:30. See page 8 for details.

April 21: JLab Open House. See page 9 for details.

April 23: DMV mobile unit visits Lab.

April 26: Take Our Children to Work Day.

April 28 – May 1: American Physical Society (APS) Spring Meeting in Washington, D.C.

May 10: Run-A-Round.


May 21: DMV mobile unit visits Lab.

June 21-22: Annual JLab User Group meeting, at JLab. As part of this meeting, there will be two non-concurrent

workshops: Parity-Violating Electron Scattering (organized by Dave Mack and Mark Jones) and Searches for Exotic Mesons (organized by Gary Adams and Haiyan Gao). Winner of 1st SURA/CEBAF Thesis prize to be announced.

For more information about any of these events or activities, visit the Jefferson Lab Web News Page (www.jlab.org/news/) and click on At A Glance in the lower left corner of the page.

To add an event or activity to the calendar, e-mail magaldi@jlab.org.




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