

# NewsLetter

Week of April 11, 2005

Vol. 6, No. 8

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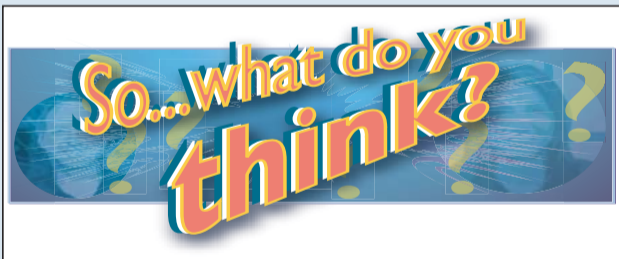
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### Expanding Your Horizons

The Northern Chapter of the New Mexico Network for Women in Science and Engineering, with co-sponsorship from the Lab, recently held its annual Expanding Your Horizons event in the Immaculate Heart of Mary Catholic Church Parish Hall. . . . .Page 8



The Laboratory has temporarily lifted the maximum amount of vacation leave a University of California Lab employee can accrue, because recent events created situations in which some UC employees couldn't take vacation leave. Do you think it's important that employees take time away from the job each year? If so, why?



With the Dual Axis Radiographic Hydrodynamic Test Facility building as a backdrop, Laboratory staff detonate a hydrodynamic experiment on April 1. The experiment involves capturing a high-resolution radiograph of a mock-up of imploding weapon components. It was the most recent in a series designed to gather key data needed by NNSA's Life Extension Program for the W76 warhead on Trident submarine-launched ballistic missiles. Initial analysis showed outstanding data return on all channels. "The Los Alamos success of hydroshot 3625 is a testament to the integrity and technical excellence of Los Alamos stewardship of the W76," said Everet Beckner, deputy administrator for defense programs with NNSA. Photo by John Bass

## Successful Los Alamos experiment supports weapon maintenance

by Jim Danneskiold

Using the world's most powerful flash X-ray machine, the Laboratory successfully captured a high-resolution X-ray image following detonation of a mock-up of imploding weapon components. The experiment, conducted at the Dual Axis Radiographic Hydrodynamic Test Facility, supports continued maintenance of a key nuclear weapon component of the U.S. nuclear deterrent, without a return to underground testing.

Over the next few months, the Los Alamos team will compare the radiographic image with computer models, closely examine any differences and refine the models so they more accurately represent weapon behavior.

"The Los Alamos success of hydroshot 3625 is a testament to the integrity and technical excellence of Los Alamos stewardship of the W76. I am extremely pleased with the great work you've done," said Everet Beckner, deputy administrator for defense programs with the National Nuclear Security Administration.

"You have done an extraordinary job and I'm exceedingly proud of you," Lab Director Pete Nanos said, referring to the Dynamic Experimentation (DX) Division and other organizations involved in the experiment.

"The Laboratory continues to perform extremely complex non-nuclear experiments to provide key data for the National Nuclear Security Administration's program of stockpile stewardship," said Mike Burns, acting deputy associate director for weapons physics at Los Alamos.

DARHT is a high-explosive firing site equipped with a flash X-ray machine that records interior details of dense metal objects to create images of mock-ups of nuclear weapon components at the moment of implosion. Hydrodynamic experiments measure the implosion characteristics of weapon components using simulated materials, which permit scientists to evaluate some crucial aspects of nuclear weapon performance.

The experiment was the most recent in a series designed to gather key data needed by NNSA's Life Extension Program for the W76 warhead on Trident submarine-launched ballistic missiles.

A large number of the Laboratory's technical and operations support staff were responsible for successful execution of the experiment.

This hydrotest at DARHT required close, extensive cooperation between the Laboratory and the Los Alamos Site Office of NNSA. Several technical divisions made important contributions to the experiment, supported by the Principal Associate Directorate for Nuclear Weapons Programs. Programs. They were Dynamic

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## Yielding the right of way

The following information and suggestions on how to yield the “right-of-way” while driving are from the National Safety Council.

Failure to yield the right-of-way, America’s second most common driver error, is not just a breach of driver etiquette, it’s breaking the law. Drivers often rationalize these errors by claiming they “had” the right-of-way. This is a common misconception. The fact is that no one has the right-of-way; traffic regulations only state who must yield the right-of-way. Proper use of the “rules of the road” depends on understanding this concept.

Forty percent of all traffic crashes occur at intersections. When approaching an intersection

- **Cover the brake.** Covering the brake cuts three-fourths of a second off reaction time to stop. Depending on ones speed, this fraction of a second could make a difference in an emergency. Don’t uncover the brake until the intersection is clear of traffic.

- **Observe yield signs and yellow lights.** Slow down to assess the intersection before deciding to stop or proceed through.

- **Delay acceleration.** When stopped at an intersection, make sure it is clear before accelerating. If you are the first vehicle in line, scan left, right, straight ahead and then left again before accelerating. If there is a vehicle ahead of you, count two seconds after seeing its tires begin to move before accelerating.

- **Use the “rule of thirds.”** In the first third of the block, accelerate to a safe and legal speed. In the second third of the block, maintain speed; signal if making a turn and get into the proper lane. In the final third of the block, cover the brake.

- Take caution when entering the roadway from a private drive; yield right-of-way to vehicles, bicycles and pedestrians.

- Reduce speed and yield to pedestrians in work zones and school zones.



## FROM THE TOP

### Seeing safety

This week I’m scheduled to teach Module 2 of the Safety Training and Observation Program (STOP) to the Executive Board.

This module focuses on “seeing safety.” That is, it emphasizes how to use our sensory skills to identify and correct unsafe situations, while recognizing and rewarding safe ones.

Seeing safety flows naturally from making safety a critical workplace priority. We see what we care about. The STOP curriculum frames seeing safety within a four-step total observation process:

- look above, below, behind and inside (ABBI);
- listen for unusual sounds;
- smell for unusual odors; and
- feel for unusual temperatures or vibrations.

Whether it’s as simple as looking for sharp edges before lifting a container, or as complex as smelling for hazardous odors before containing an unidentified spill, seeing safety can help all employees return safely home each day.

If we make “seeing safety” second nature, then we can minimize, and ideally prevent, all workplace accidents and injuries. A total observation mindset is the price we pay to purchase something infinitely more valuable — the day-in, day-out health and welfare of ourselves and our coworkers.

I value your safety, and that’s why I’m asking you to embrace the STOP total observation process. Seeing safety is not about blaming others for unsafe situations, conditions or actions. It is about proactively identifying problems and collaborating on their resolution. By working together, we can make seeing safety part of the Laboratory’s larger safety culture.



Laboratory Director  
Pete Nanos

## ‘Tell Pete’ celebrates second anniversary

by Brooke Kent

Tell Pete celebrated its second anniversary in February. Like any toddler, the e-mail submission system has witnessed immense growth, with 4,136 issues raised during the last fiscal year alone.

“Tell Pete is one of the major tools linking employees with the director. Any employee can submit a concern, suggestion or idea through Tell Pete and know that Pete himself will receive it,” said Dee Dee McInroy, acting leader of the Ombuds Program Office, which administers and tracks the Tell Pete e-mail submission system.

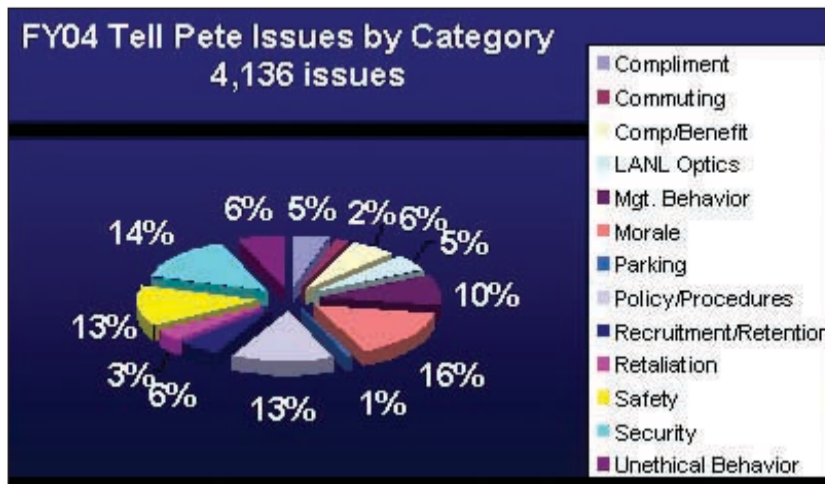
“One common misconception is that Tell Pete is a two-way or question-and-answer venue,” McInroy continued. “Tell Pete was implemented and is managed today as a one-way communication tool for sharing workplace issues with the director. The Ombuds Program Office follows the Ombuds Association Standards of Practice. This means that, in order to ensure the anonymity of every submission, the Ombuds Program Office removes all identifying information before forwarding weekly Tell Pete submissions to the Director’s Office. Pete may share the concerns, suggestions or ideas raised through Tell Pete with his staff and appropriate managers. However, since the Ombuds Program Office removes all identifying information and deletes the original submissions in order to preserve confidentiality, Pete cannot reply back to individual submissions.”

Employees who desire a direct response while retaining anonymity may send e-mail to the Ombuds “Answers” venue (available at [answers@lanl.gov](mailto:answers@lanl.gov)), or in the case of managers, consult the frequently asked questions section of the MyLANL Web site. Additionally, employees may contact the director via [nanos@lanl.gov](mailto:nanos@lanl.gov), an e-mail address which relays submissions while preserving identifying information; since this e-mail address is a nonconfidential venue, the director has the option of responding directly to submissions.

“Tell Pete is a powerful communications mechanism. One e-mail address — [tellpete@lanl.gov](mailto:tellpete@lanl.gov) — allows employees to have direct communication with the director about a wide variety of issues. Whether the topic is park-and-ride shelters, snow-day procedures or the Contingent Worker Project, Pete cares what employees think, and he’s committed to addressing their concerns,” said McInroy.

For more information, call the Ombuds Programs Office at 7-9370, or go to the Ombuds Program Office Web site at [www.lanl.gov/ombuds/](http://www.lanl.gov/ombuds/) online. The Tell Pete Web site is available

at [int.lanl.gov/communications/tell\\_pete.shtml](http://int.lanl.gov/communications/tell_pete.shtml) online. Recent Tell Pete responses are in the Tell Pete archives at [int.lanl.gov/communications/tell\\_pete\\_archives.shtml](http://int.lanl.gov/communications/tell_pete_archives.shtml) online.



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Los Alamos National Laboratory is operated by the University of California for the National Nuclear Security Administration (NNSA) of the U.S. Department of Energy and works in partnership with NNSA’s Sandia and Lawrence Livermore national laboratories to support NNSA in its mission.

Los Alamos enhances global security by ensuring safety and confidence in the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction and improving the environmental and nuclear materials legacy of the Cold War. Los Alamos’ capabilities assist the nation in addressing energy, environment, infrastructure and biological security problems.



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## Mapping out success

# Operational Efficiency Project follows COMPASS resumption efforts

by Kathy DeLucas

The Laboratory's new Operational Efficiency Project will help the Lab develop predictable and reliable operations within a well-defined safety envelope. The Executive Board recently approved the project execution plan for the Operational Efficiency Project.

"Operational Efficiency is the institutional commitment and get-well plan to address

areas of high risk," Laboratory Director Pete Nanos said in describing the project.

The OE scope was developed based on issues identified by the Operations Council and reviewed by senior management at a retreat last June, before the suspension of operations. Many of the same issues were highlighted as a result of resumption and were repeatedly identified in the management self-assessments, said John Bretzke, OE project director.

The scope will include eight functional areas representing some of the Lab's highest areas of risk: safety, quality assurance, software quality assurance, conduct of engineering, safety basis, operations, environmental risk management and training.

These areas ensure that properly trained individuals perform their jobs using quality materials, tools and software in a risk-assessed safety envelope where no one gets hurt, the environment isn't detrimentally affected and the work is conducted in facilities that are well maintained and designed to support programmatic and scientific work, said Bretzke.

Also in March, a special Operations Task Force, staffed by representatives from every directorate, was established to resolve key barriers to the implementation of several elements of the Operational Efficiency Project. The mission of this task force is to

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## Working together



by Tom Bowles,  
chief science officer

An area that we need to improve on at the Laboratory is our ability to work together. This affects virtually everything we do. One of the less desirable characteristics

of Los Alamos has been a tendency to stovepipe. We need to move away from that mindset.

[Laboratory] Director [Pete Nanos] and senior management have very clearly stated that the Laboratory is the survival unit, not divisions, groups or individuals. We are slowly but surely moving toward integrating efforts across the Laboratory. Staff have a definite role in this — you can either help push for this or you can resist it.

As funding gets tighter it becomes more critical that we swim together as a team — the alternative is that we can sink alone one by one. So when someone comes to you from another group with an idea, be open to discussion. And if the opportunity to collaborate arises, use it as a means to help everyone involved.

Working together with the University of California also is vitally important. I often get asked "What is UC doing for us?" The answer is quite a bit.

My office works on a daily basis with the UC Office of the President. UC has a number of groups (such as the Science and Technology Panel) that both assess how the Lab is performing as well as provide advice on how we can improve. That advice in turn is translated into action as UCOP staff works directly with Laboratory staff on various issues. And of course UCOP is fully engaged in preparing a bid for the new contract (under the assumption that the Board of Regents will decide to bid).

While the initiatives in the rebid are held in confidence, it is clear that UC is looking at a number of means to improve science, program and operations performance at the Lab. UCOP staff have been meeting with groups around the Laboratory to get input.

If you have suggestions, you can help UC help us by sending them to me at [cso@lanl.gov](mailto:cso@lanl.gov). I will ensure they are forwarded to the appropriate person at UCOP.

## Los Alamos Employees' Scholarship Fund drive campaign kicks off May 2

by Steve Sandoval

The Los Alamos Employees' Scholarship Fund encourages Laboratory employees, retirees and subcontract personnel to donate to a fund that awards college scholarships to Northern New Mexico area students. Lab workers have until June 15 to return completed forms to the non-profit Laboratory Foundation offices in Española. Remittance envelopes will be included with pledge forms, which are scheduled to be mailed to all Laboratory workers at their mail stops the first week of May.

Debbi Wersonick of the Community Relations Office (CRO), coordinator of employee and corporate giving programs, said Los Alamos Employees' Scholarship Fund drive advisory board members will go out to various technical areas to talk about the scholarship program and to accept completed pledge cards.

Wersonick said Laboratory and/or contract personnel who pledge or make a donation to the scholarship fund will receive an Employees' Scholarship Fund lanyard and retractable badge holder. Contributors will have their names placed on recognition cards,

which will be mounted in the lobby of the Otowi Building cafeteria at Technical Area 3.

Since the program's inception, University of California Laboratory employees and subcontract personnel have contributed more than \$1 million in donations or pledges to the Los Alamos Employees' Scholarship Fund. Some 315 high school seniors or college undergraduates have received scholarships through the fund since 1999. Payroll deductions start in September and will continue unless otherwise instructed by the donor. Employees can make changes to their pledge amounts by contacting the Laboratory Foundation.

Employees also can make a one-time donation. Personal checks can be written to the Los Alamos National Laboratory Foundation. In addition, Lab personnel can make pledges online by going to the foundation Web page at [www.lanlfoundation.org](http://www.lanlfoundation.org). Employees also can pledge through payroll deduction or with a Visa or Mastercard.

For more information on the scholarship fund, write to Tony Fox of the LANL Foundation at [tfox@lanlfoundation.org](mailto:tfox@lanlfoundation.org) by e-mail or call Wersonick of CRO at 7-7870.

## Laboratory co-sponsors community job fair

Reyna Sandoval, right, of Staffing (HR-S) talks with Joan Story at the fourth annual community job fair at University of New Mexico, Los Alamos. The Laboratory co-sponsored the job fair with UNM, Los Alamos, Los Alamos County and other agencies. HR-S personnel provided information about the Lab and accepted résumés from individuals interested in employment with the Lab. Photo by LeRoy N. Sanchez



# Laboratory kicks off its Information Technology Strategy Project

by James E. Rickman

The Laboratory's new institutional Information Technology Strategy Project (ITSP) is designed to strategically align with the Laboratory's central mission.

The goal of ITSP is to develop and implement a business-driven institutional IT strategic plan that positions IT as a strategic asset and provides a context for institutional decisions regarding IT investments, governance and organizational structure, said Charlotte Lindsey, acting chief information officer for the Laboratory and sponsor of ITSP.

For the purposes of the project, the definition of "information technology" generally is synonymous with the definition used by the U.S. Office of Management and Budget. That definition states that IT is "any equipment or interconnected system or subsystem ... used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission or reception of data or information ... (which) includes computers, ancillary equipment, software, firmware and similar procedures services (including support services) and related resources (telecom equipment)."

Under the auspices of ITSP, project personnel are working with consultants and subject-matter experts to capture the current state of information technology at the Laboratory. Among its many objectives, the project endeavors to reduce the complexity of the Laboratory's IT portfolio through reduction of the number of operating systems, applications, etc.; and further strives to optimize acquisition and use of IT resources through purchasing standards, acquisition planning and efficient allocation of resources. Finally, ITSP will develop an institutional IT strategy for the Laboratory and begin implementation by this summer.

"A fundamental philosophy behind the IT Strategy Project is that the Laboratory's mission, goal and objectives must drive IT,"



Camilo Perez, left, of Chief Financial Officer Systems (CFO-Systems), Information Technology Strategy Project leader; and Charlotte Lindsey, the Lab's acting chief information officer, sponsor of ITSP, discuss the future of ITSP during the first monthly review of the project. Photo by James E. Rickman

Lindsey said. "This IT-to-business alignment is paramount in viewing IT as a strategic asset that must be managed, much like other tangible assets, such as facilities or the work force."

In support of the project's asset-management philosophy, the project will reinforce that knowledge and information are enterprise assets and must be readily available to stakeholders, said Camilo Perez of Chief Financial Officer Systems (CFO-Systems), ITSP project leader.

The project potentially affects nearly everyone at the Laboratory. The project will be most visible to employees who have direct control over their own computer configurations, maintenance and upgrades; employees who oversee computer networks, Web pages or online applications; employees who have

computing purchasing authority or acquisition responsibility for themselves or others; and employees who support other computer users through a variety of means.

Because of its potential to affect a large number of people, IT strategy project principals are acutely aware of the need to involve key stakeholders both in the strategy-development process as well as during implementation. Consequently, the project will provide several avenues for employees to become involved in the planning and execution of the project. An ITSP Web site, — [int.lanl.gov/cio/itstrategy/index.shtml](http://int.lanl.gov/cio/itstrategy/index.shtml) — will include moderated discussion forums for feedback and comment as the project progresses. Employees also can submit questions or feedback to [it-sp-faq@lanl.gov](mailto:it-sp-faq@lanl.gov) by e-mail. In addition, the project personnel plan to hold focus groups with those who may be most affected by the project at key stages of the project.

The IT Strategy Project Team — comprised of representatives from the technical and business sides of the institution — is developing a set of "Quick Wins," institutional IT improvements that can be accomplished during the next six months. Quick wins include

- development of an IT cost tracking system,
- implementation of a desktop computing purchasing and lifecycle management system, and
- implementation of a tracking system for software licenses and license purchasing.

ITSP is born out of several initiatives in 2004, including the review of general and administrative budgets and efforts to reduce the cost of doing business. The Executive Board reaffirmed this need at its December strategic planning retreat, and identified the Institutional IT strategy as one of the Laboratory's 2005 fiscal year corporate performance objectives.

For more information about the project, go to [int.lanl.gov/cio/itstrategy/index.shtml](http://int.lanl.gov/cio/itstrategy/index.shtml) online.

## Operational Efficiency ...

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clarify the roles, responsibilities, authorities and accountabilities of the responsible division leader; to identify minimum operational support resource requirements within divisions and directorates; and to identify needed tools. The task force is scheduled to release a report on its recommendations later this month.

Metrics to measure success will be jointly developed by the Los Alamos Site Office and the Laboratory, Bretzke said.

"The success of OE is important to the future of the Laboratory and to the Los Alamos Site Office," LASO Manager Ed Wilmot said. "It is the needed plan to institutionalize improvements for the long-term. We are working closely with the Lab observing how this is being implemented to ensure that this is an integrated approach that encompasses the right activities."

"Ultimately, success means that eventually the project will become a seamless integration of our daily jobs and the way we do business," Bretzke added. "The challenge of OE implementation revolves around the diversity of operations we have at the Laboratory — no one procedure or practice will work for all divisions. Instead, we will develop a process that fits for the different types of operations we do at the Lab. The heart of OE implementation is to make deliberate decisions about applying requirements in a consistent, graded manner," he said.

OE also will implement formalized processes to identify risk and protect people inside and outside the Laboratory. Bretzke said OE is a disciplined, formalized way of conducting operations with a high degree of certainty and consistent results. It will improve how the Laboratory does work, eliminating rework and reducing costs by correcting situations in safety and compliance that pose an unacceptable level of risk. By eliminating those risks it will ultimately lead the Lab to a more reliable operation, he explained.

A new Web page about the Operational Efficiency Project is being developed.

# Laboratory researchers bridge the super-conductivity gap

by Todd Hanson

Laboratory scientists working with a researcher from Chonnam National University in South Korea have found that magnetic fluctuations appear to be responsible for superconductivity in a compound called plutonium-cobalt-pentagallium (PuCoGa5). The discovery of this "unconventional superconductivity" may lead scientists to a whole new class of superconducting materials and toward the goal of eventually synthesizing "room-temperature" superconductors.

In research reported in a recent edition of the scientific journal *Nature*, Nicholas Curro of Condensed Matter and Thermal Physics (MST-10) and a team of researchers provide evidence of how magnetic fluctuations, rather than interactions mediated by tiny vibrations in the underlying crystal structure, may be responsible for the electron pairing that produces superconductivity in the mixture of plutonium, cobalt and gallium.

Superconductivity is an unusual state of matter in which electrical current flows without resistance through a material as a result of the material's electrons acting in pairs. Since the discovery at Los Alamos of PuCoGa5 roughly two years ago, a burning question has been whether the compound was just another garden-variety superconductor, a so-called s-wave superconductor, or an unconventional one that is mediated by magnetic fluctuations, a d-wave superconductor.

Although the temperatures at which superconductivity is observed are usually quite low, a handful of compounds like PuCoGa5 have been found to possess superconductivity at temperatures warmer than minus 427 degrees Fahrenheit. Even though that temperature seems low, PuCoGa5 possesses highest superconducting transition temperature among actinide based compounds found so far. This "unconventional superconductivity" suggests that PuCoGa5 may be one of a very small



handful of superconductors whose superconductivity actually derives from magnetic correlations.

Scientists theorize that having found one uncon-

ventional superconductor like PuCoGa5, they may find more in the future. Making the research even more intriguing is the fact that plutonium is a base actinide material of the compound. This new class of magnetically mediated superconductors might encompass a broad range of materials, metals to oxides, and be the path toward superconductor science's ultimate goal to someday synthesize a "room-temperature" superconductor that would be the basis for the dissipation-less flow of electric current through power lines, and for an even more minute generation of computer chips.

The discovery is the result of collaboration between the Materials Science and Technology (MST), Nuclear Materials Technology (NMT) and Theoretical (T) divisions. In addition to Curro, the team includes Tod Caldwell, Eric Bauer, Joe Thompson and John Sarrao of MST-10; Luis Morales of Nuclear Materials Science (NMT-16); Matthias Graf and Alexander Balatsky of Condensed Matter and Statistical Physics (T-11); and Yunkyung Bang of Chonnam National University, South Korea.

## Successful experiment...

*continued from Page 1*

Experimentation (DX), Engineering Sciences and Applications (ESA), Applied Physics (X), Manufacturing Systems and Methods (MSM), Physics (P), Materials Science and Technology (MST), Chemistry (C), Security and Safeguards (S) and Performance Surety (PS).

The experiment demonstrates that Los Alamos can do major hydrodynamic experiments such as this one, sub-critical and small-scale experiments, and research, development and testing of high explosives in support of the Laboratory's mission.

The first axis of DARHT has been providing high-quality images to NNSA's stockpile stewardship program since late 1999 in several hydrodynamic experiments and dozens of smaller high-explosives experiments, all of which have provided images of unprecedented resolution and clarity.

At DARHT, electron accelerators produce intense, penetrating X-ray beams that, like a flash bulb, can freeze the motion of objects moving at explosively driven speeds of more than 2,000 miles an hour. Electrons used for the snapshot are accelerated to energies of 20 million volts, and are converted to X-rays that expend that energy in just 60-billionths of a second. The second axis at DARHT, when completed, will enable stereoscopic and time-sequenced views of hydrodynamic experiments.

The next hydrodynamic experiment in the current series at DARHT is scheduled for this summer.



## Technology Maturation Fund

### What is the Technology Maturation Fund?

The Technology Maturation Fund is a grant program managed by the Technology Transfer (TT) Division. The fund supports Laboratory technologies identified to have high commercial potential. The intent of the fund is to move promising technologies to the proof-of-concept or prototype stage to attract potential licensees or investors interested in funding a startup company or commercializing a new technology. The Technology Maturation Fund acts similar to a venture capital fund. However, instead of investing in start-up companies, funds are invested in internal technologies.

### What should an employee know about the Tech Mat Fund before applying?

- Funds are allocated from the University of California prime contract through Appendix M, and a portion of TT retained license income.
- Approximately \$450,000 is available in Technology Maturation funds each year.
- Awards are made in amounts up to \$50,000 per project/milestone.
- Proposals are accepted throughout the year; the fund-review panel meets once a month.
- Proposals are reviewed by a panel of TT staff.
- Funds are awarded based on the commercial potential, not scientific merit, of the technology.
- Tech Mat funding is exempt from G&A. However, Organizational Support is applied.

### What else should be considered before applying for Tech Mat funding?

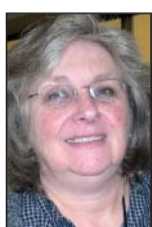
- Funds allocated may not be used to substitute or increase funding from other sources already funded by Department of Energy or Work-for-Others programs. Employees should contact their business team leader if there is a question.
- Awards will be treated as advances on license revenue and a repayment schedule will be developed.
- Work must be conducted in accordance with the Laboratory's Integrated Safety Management requirements.
- Foreign National participation must be approved by Foreign Visits and Assignments and disclosed on form 982, "Unclassified Visit or Assignment by a Foreign National."

### How does an employee apply for a Tech Mat award?

To apply, Laboratory researchers submit a short proposal describing their technology and its market potential. Proposal applications are available at the Technology Transfer Web site at [www.lanl.gov/partnerships](http://www.lanl.gov/partnerships) online. For more information, contact Erica Sullivan, Technology Maturation Fund administrator, at 7-9219 or [eab@lanl.gov](mailto:eab@lanl.gov) by e-mail.

# So...what do you think?

**Q:** The Laboratory has temporarily lifted the maximum amount of vacation leave a University of California Lab employee can accrue, because recent events created situations in which some UC employees couldn't take vacation leave. Do you think it's important that employees take time away from the job each year? If so, why?



**Diann Bruhn of Actinide, Catalysis and Separations Chemistry (C-SIC)**

Employees need to take vacation leave. I'm pleased the Lab realizes some employees donate vacation hours and that it is trying to accommodate dedicated employees so they do not lose their vacation time.



**Joe Martz of Applied Physics (X-DO)**

Of course! Taking time for yourself and family is essential for your well-being, even more so in times of anxiety and stress. I haven't had a vacation since I took

a new assignment in X Division. And now that we're successfully back working hard, I'd love to spend another week in Honduras taking underwater photos.



**Sulema Martinez of Business Systems Support (CFO-System)**

Yes, vacation is very important. It relieves stress, refreshes the mind, recharges your batteries and most important of all, it helps promote a positive and productive attitude.



**Don Thomas of Project Controls (PM-4)**

Absolutely. You have to get away to recharge your batteries and cleanse your mind. But most important of all, you have to re-establish your family ties by

spending a little quality time with your family.



**Frank Gonzales of Compensation (HR-C)**

I think it is really important that people take some time off, especially this year with the [suspension of operations]. People need to take time to re-charge

their batteries.



**Alma Sondreal of Office of Energy and Environment Initiatives (OEEI)**

I think you need to break away from work, just relax and spend some time with your family. And most important of all, make some

time to play golf.

## PEOPLE



### Mills featured in article

Los Alamos scientist **Geoff Mills** of Subatomic Physics (P-25) is featured in an article on neutrino research published on the Web by the Thomas Jefferson National Accelerator Facility in Newport News, Va.

Mills is working at the Jefferson Lab's experimental Hall C to improve understanding of the results of several neutrino experiments, including the MiniBooNE experiment, in which Los Alamos scientists play a key role and which currently is taking data at the Fermi National Accelerator Laboratory, the Long Baseline Neutrino Oscillation Experiment from KEK to Kamioka (K2K) in Japan, and the planned Main Injector Experiment v-A (MINERvA), also at Fermilab.

The article about Mills and neutrino research and engineering at the Jefferson Lab is available at [www.jlab.org/div\\_dept/dir\\_off/public\\_affairs/news\\_releases/2005/neutrino.html](http://www.jlab.org/div_dept/dir_off/public_affairs/news_releases/2005/neutrino.html) online.



**Geoff Mills**

### Muller new MSM Division leader

**James Muller** is the new Manufacturing Systems and Methods (MSM) Division leader. Muller will lead efforts to consolidate and centralize manufacturing capability management and the supporting infrastructure. He will ensure that the full spectrum of required capabilities is developed, maintained and exercised.

MSM Division will negotiate agreements with internal customers and translate product delivery priorities and commitments into line organization activities. Consolidation of these activities will enable flexible, agile and responsive practices critical to providing a capabilities-based approach to manufacturing to meet new and emerging requirements.

Muller has served as acting MSM Division leader since the division's creation in May 2004. He has 14 years in previous management positions at the Laboratory, most recently as the W76-1 Life Extension Program project director. Muller also was manager for all armaments production programs at Aerojet, where he worked for more than 17 years.

## In Memoriam

### John Jensen



Laboratory employee John William Jensen was killed in a snow slide March 6 while taking an avalanche education course in Colorado. Jensen was 32.

Jensen, of Applied Engineering Technologies (ESA-AET), began working at the Laboratory as a graduate research assistant in January 2004. He received his master's degree in mechanical engineering from the University of Texas, Austin, and also earned a bachelor's degree in manufacturing and laser optical engineering from the Oregon Institute of Technology.

Jensen recently was offered a technical staff member position by the Manufacturing Systems and Methods (MSM) Division, according to his mentor and collaborator, Torsten Staab of ESA-AET.

"He was the co-developer of our hand-held sampler and worked with me on all the phases of the project, from concept to systems engineering to rapid prototyping to product development," Staab said.

The handheld device can be used for rapid, cross-contamination-free collection and tracking of forensic evidence. Last May, ESA-AET received a technology commercialization award from the Center for Commercialization of Advanced Technologies for the device.

Originally from Medford, Ore., Jensen also was a member of Atalaya Search and Rescue. At the time of the avalanche, Jensen and a team of other students were taking part in a training exercise in the 12,000-foot elevation Aspen Highlands ski area

### Larned "Larry" Brown Asprey



Laboratory retiree Larned "Larry" Brown Asprey died March 6. He was 85.

Asprey was born in Sioux City, Iowa. He earned a bachelor's degree in chemical technology from Iowa State University in 1940. From 1942 to 1946, Asprey worked for the U.S. Army on the Manhattan Project in Chicago. He then earned his doctorate in chemistry from the University of California-Berkeley.

In 1949, Asprey joined the Lab in the former Chemistry and Metallurgy Research (CMR) Division. He spent the next 35 years as a research chemist working on actinide, fluoride and rare earth (among many other) elements. He spent one year (1981-82) as a visiting scientist with the European Community in Karlsruhe, Germany. After retiring from the then Inorganic and Nuclear Chemistry (INC) Division at the Lab in 1985, he volunteered as an adjunct professor at New Mexico State University. He won the prestigious Glenn T. Seaborg Actinide award in 1986 for his work in actinide chemistry.

He is survived by his wife of 60 years, Margaret "Marge" Asprey; children Pete Asprey, Betty Asprey Strietelmeier of Isotope and Nuclear Chemistry (C-INC), Barbara

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## Patent, license award winners recognized

Cheryl Kuske, left, of Molecular Microbiology and Immunology (B-1), receives her Distinguished Patent Award from Laboratory Director Pete Nanos at the 2004 Patent and Licensing Awards ceremony in the Otowi Building cafeteria at Technical Area 3. Laboratory technical staff members were honored at the seventh annual patent and licensing awards ceremony for copyrighted, patented and licensed technologies developed in the last year. Kuske and collaborators Tom Terwilliger of Cell Biology, Structural Biology and Flow Cytometry (B-2) and Arlene Wise, formerly of the Laboratory, received the Distinguished Patent Award for their patent, "Detection of Phenols Using Engineered Bacteria." Kuske joined the Laboratory in 1990 starting with an Alexander Hollander Distinguished post-doctorate fellowship in the former Life Sciences (LS) Division. She became a staff member in 1993. The Distinguished Patent Award is selected by Laboratory Fellows and recognizes a premier patent exemplifying a significant technical advance, adaptability to public use and noteworthy value to the Lab's mission. The awards ceremony is sponsored by the Technology Transfer (TT) Division.



Harry Martz Jr., center, and Michael Hamada, left, both of Statistical Sciences (D-1) received the 2004 Distinguished Licensing Award for "Optimizing the Availability of a Buffered Industrial Process" and for their work on PowerFactoRE, part of an ongoing collaboration with Procter and Gamble to develop innovative manufacturing reliability methods and systems. PowerFactoRE won a 2003 R&D 100 award. The Patent and Licensing Awards recognized 116 individuals for the 62 new patents issued in the 2004 fiscal year. To review the complete list of winners and awards go to [www.lanl.gov/source/orgs/tt/awards/innov\\_awards.shtml](http://www.lanl.gov/source/orgs/tt/awards/innov_awards.shtml) online. Photos by LeRoy N. Sanchez

## Asprey ...

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Asprey (Pettus), Bob Asprey, Peggy Asprey (Lyon), Tom Asprey and Bill Asprey; numerous grandchildren and great-grandchildren. He also is survived by his sister Winifred Asprey and brother Robert B. Asprey.

## Theodore "Ted" George Handel

Laboratory retiree Theodore "Ted" Handel died Feb. 10. He was 57.

Handel was hired at the Lab in 1971 to work in the former GMX Division. During the course of his career at Los Alamos, he also worked in the former Field Testing (J), Basic and Applied Geosciences (G), Earth and Space Sciences (ESS) and Operational Security and Safeguards (OS) divisions; the Department of Defense programs (TSA-DoD and D-DoD) and the former Nonproliferation and International Security (NIS) Division — now the Nuclear Nonproliferation (N) Division.

Handel retired from the Laboratory in 2003, returning as subcontract employee. He

was working as a subcontract employee in Applied Electromagnetics (ISR-5) at the time of death.

Handel was born in Juliet, Ill. In 1968, he received an associate in applied science degree in electronics technology from Southern Illinois University.

He is survived by his wife, Iris; daughters, Deanna Handel-Lazarus, Danna Henderson and Lesley Henderson; granddaughter Ella Lazarus; mother, Elizabeth Handel; sisters Anne Jordan and Terri Barrowman and brothers Bill, Robert and Steve Handel.

## Raymond "Ray" Newton Rogers

Laboratory retiree Raymond Newton Rogers died March 8. He was 77.

Rogers was born in Albuquerque, N.M. In 1945, he enlisted in the U.S. Navy and served as a radar technician during World War II. Rogers later earned a master's degree in agriculture chemistry and a bachelor's in chemistry — both from the University of Arizona.

His expertise in thermal analysis brought him to the Lab in 1952 in the former GMX Division (GMX-2). He was granted a sabbat-

ical in 1968 to pursue post-graduate studies in archaeology. In 1974, he became the group leader of an explosives research-and-development group and was elected Laboratory Fellow in 1981.

He served on the Department of the Air Force Scientific Advisory Board from 1987 until 1992 with the equivalent rank of Lt. General, receiving the Distinguished Service Award. He later worked for the former International Technology (IT) Division, retiring from the Lab in 1988. He stayed on as a Lab associate until 1993.

Rogers may be best known for his appointment as director of chemical research for the Shroud of Turin Research Project in 1978, applying thermal methods to the study of this relic. In recent years, he further researched material relevant to the dating of the Shroud, publishing his findings in *Thermochimica Acta*.

He is survived by his wife Joan; daughter Amy Canzona and her husband Tony; step-daughters Dawn Janney and Lauren McGavran and her husband Harry; grandson Kenneth and great-grandson Mark.



# Expanded horizons equals expanded opportunities for young women

by Hildi T. Kelsey

The Northern Chapter of the New Mexico Network for Women in Science and Engineering, with co-sponsorship from the Lab, held its annual Expanding Your Horizons — technical career workshops for young women — in the Immaculate Heart of Mary Catholic Church Parish Hall. The EYH program, which promotes the continuing advancement of science and mathematics education for young women in grades eight through 10, attracted 162 female students this year. The corresponding EYH teachers' conference, which runs simultaneously with the student workshops, also was in the Parish Hall.

EYH volunteers, many of whom are Lab employees, hail from different disciplines of math, science and engineering including, but not limited to, biology, electrical engineering, chemistry, physics, physical science and computer science. EYH Committee Chair Georgia Pedicini of High Performance Computing (CCN-7) said the committee began working on the EYH program last October.

A sampling of available workshops included Secret and Hidden Writing — Survey and Cryptology and Steganography; Designing Patterns Using Programming Logic and Mobile Robots; Radiation and Radioactivity; Fingerprints; Adventures in Uncertainty — Variation and Topics in Probability and Statistics; Aquifer in a Box; DNA — The Miracle that Makes Us Unique; Lights and Lasers; Inventing Architecture — Expressive Building and Design with Nature; and Deformation nation: Geology in America.

Lisa Colletti of Actinide Analytical Chemistry (C-AAC) said students were assigned to specific workshops based on the information and special interests listed on their registration forms.

Arianna Sullivan from Capshaw Middle School mentioned that her favorite subject is biology because she is fascinated by “all the things that make up our world and nature.” Also from Capshaw Middle School, Allison Lowry said her main focus is on forensics.

Elena Pacheco from Los Alamos High School attended the Inventing Architecture workshop and said she wants to be an



**‘Don’t let anyone discourage you, whatever your path — be it a straight or winding road — you can get to the destination.’**

**—Abigail Sussman, keynote speaker**

Most of the students were recommended to the program by their teachers while others signed up through different channels. “We recommended students based on their aptitude, interests and ability to pursue science and math in life,” said Diane Medford, a teacher at Los Alamos High School. “We picked those with intrinsic abilities — not necessarily the top students academically, so everyone had a chance at it. The girls are really excited and honored to be chosen — each one feels like someone special.”

After the registration and welcome period, the students eagerly dove into their first team activity — the Column Design Challenge. Sitting on the floor and split into groups scattered throughout the Parish Hall, the young women were given eight sheets of copy paper, one cardstock top, scissors, pencils, a ruler and one roll of scotch tape to design a structural support (single or multiple columns) capable of holding up a load of stacked books. They worked diligently. Ideas flowed like the Rio Grande; scraps of papers flew through the air and the distinct sound of scotch tape tearing filled the room. In the end, every team produced impressive designs capable of supporting multiple, thick volumes.

After the team activity, students broke into one of 16 workshops offered by EYH — some took buses to different locations such as Fuller Lodge, the Wellness Center and other facilities at the Lab while many students attended workshops on-site.

architect since she is “interested in designing buildings and being involved in urban planning.”

It was apparent from the students' positive reactions that the morning workshops were successful. After gathering in the auditorium for lunch, students split up again for afternoon workshops. At 2:30 p.m., students and teachers assembled to listen to Wilderness Ranger Abigail Sussman, the keynote speaker, who gave a talk titled “Adventures of an Unexpected Scientist.”

Sussman explained that as a middle and high school student, “I was pretty sure I wouldn’t be able to be a scientist.” However, as her love for the outdoors grew, Sussman said that she had opportunities that allowed her to see science as a field, which enabled her to be creative and discover the world in her own way. She went on to get a graduate degree in natural resource management.

Her adventures have taken her to Alaska, South Dakota, New York and Washington where she vacillated between being a wildlife biologist, park ranger, environmental educator and natural resource manager. Sussman has spent nine seasons working for the forest service as a wilderness ranger.

She said the two main points that she would like to leave with the young women at the EYH conference are “(1) Young women can do whatever they want to do — the whole world is open to each of them and (2) Don’t let anyone discourage you, whatever your path — be it a straight or winding road — you can get to the destination.”



Maria Janke of Los Alamos High School displays her team's Column Challenge design, Pentacomb, which sported the creative advertising slogan “So sturdy, it makes us look nerdy.”



During the “Stamp of Fingerprints” workshop Stephanie Salazar, left, and Ganelle Roybal dust for prints.



Veronica Lopez uses sampling to calculate the average weight of a pile of wooden blocks during the Adventures in Uncertainty workshop.



Tara Sweatt from Alameda Middle School measures radiation levels during the Radiation and Radioactivity workshop. Photos by LeRoy N. Sanchez