

Published weekly for employees of Lawrence Livermore National Laboratory

Friday, July 9, 2004

Vol. 29, No. 27

Energy Secretary lauds Laboratory workforce

By Charles Osolin and Dale Sprouse

NEWSLINE STAFF WRITERS

Secretary of Energy Spencer Abraham got a closeup look Thursday at two of his department's scientific crown jewels at the Laboratory, and had high praise both for the facilities and for the Lab employees who operate them.

In a whirlwind three-hour visit hosted by Lab Director Michael Anastasio, Abraham cut a ribbon to officially open LLNL's new Terascale Simulation Facility (TSF) and signed racks that will become part of the facility's BlueGene/L and Purple supercomput-

Additional coverage of the secretary's visit on pages 7 and 8 ers. BlueGene/L will be the world's fastest supercomputer when it is fully operational by

June of next year, capable of processing 360 trillion operations per second.

The secretary, accompanied by University of California President Robert Dynes and UC Vice President for Laboratory Management Robert Foley, also toured the National Ignition Facility (NIF), which will be the world's most powerful laser facility when completed later this decade. While at NIF, he presented DOE Science and Technology Awards to LLNL and Los Alamos National Laboratory employees representing the teams that conducted the first experiments at the facility.



From left: Michael Anastasio and Dona Crawford watch as Secretary Abraham signs the first Blue-Gene/L rack.

NIF is "an essential element of our nuclear Stockpile Stewardship Program and our mission of maintaining the reliability, the safety and the security of this nation's nuclear deterrent," Abraham said. "That is why it is so important that this facility be completed on time by 2008."

See VISIT, page 8

Abraham praises Security for exercise performance

By David Schwoegler

NEWSLINE STAFF WRITER

During his visit to the Laboratory Thursday, Energy Secretary Spencer Abraham stopped at the Security Department to witness

See FORCE, page 5

Laboratory veterans unveil commemorative display

Laboratory armed forces veterans unveiled a display case in the lobby of Bldg. 111 Wednesday as part of the ceremonies marking Veterans Observance Month.

The display case contains photos of veterans and ceremonies, certificates and an American flag that flew on the aircraft carrier USS Nimitz. Lab veteran Martin Davis' son Christopher, who recently served on the carrier in the Persian Gulf, arranged for the flag to be sent to the Lawrence Livermore Laboratory Armed Forces Veterans Association.

Col. George Sakaldasis, a U.S. Air Force veteran, represented senior management at the brief unveiling ceremony. "I'd like to thank each and

everyone of you who is a veteran. It is individual sacrifice that makes the difference," Sakaldasis said. "The country owes you a debt of gratitude.



JACQUELINE MCBRIDE/NEWSLINE

Col. George Sakaldasis, left, LLAFVA members Chelle Clements, Chris Trapp, and Marty Davis unveil display case in honor of Veterans Observance Month.

Events like this are important so we can all recognize the sacrifice that preserves the freedom we enjoy today."

See VETERANS, page 4

DOE awards Computation for diversity best practices

A Computation Directorate program to recruit underrepresented computer scientists to the Laboratory has received a Department of Energy 2004 EEO/Diversity Best Practices Award.

The award was presented July 1 at DOE's annual Human Resources and EEO/Diversity Symposium, which was held in Pittsburgh, Penn. this year. Linnea Cook of Computation and Ellen Hill and Susane Head of Recruiting and Employment accepted the award on behalf of the Laboratom.

"We're honored by the recognition of this Computation and Human Resources team effort and gratified to be able to contribute to best practices that can be shared throughout the Department of Energy/NNSA complex," said Dona Crawford, associate director for Computation. "Recruiting talented computer scientists from underrepresented communities is important to current and future workforce needs of the Computation Directorate as well as the Laboratory as a whole."

This award is the result of an effort led by Cook, Computation Recruiting and Diversity

See COMPUTATION, page 4



Villa lends helping hand

— *Page 3*



Speaker spirituality

— Page 5



Spotlight on education

— Page 8

Friday, July 9, 2004 2 Newsline



AB COMMUNITY NEWS

Weekly Calendar

Technical Meeting Calendar, page 4



There will be a scheduled power outage from 7 a.m. to 3 p.m. today that will affect Bldgs. 142, 254 and Trailer 2554. Air conditioning, heating and elevators also will be

affected. For more information, contact Mark Cardoza, 3-0490.



There will be a scheduled **power outage** today from 7 a.m. to 3 p.m. Bldg. 121 and Trailers 1277 and 1280 will be affected. Air conditioning, heating and elevators

also will be affected. For more information, contact Mark Cardoza, 3-0490.

Monday

A Fidelity retirement counselor will be available today to assist with assessing the current state of retirement accounts, learn-

ing how to diversify, planning asset allocation, and identifying income strategies. Fidelity Investments Mutual Funds are available to UC's workplace retirement plan participants in addition to the UCmanaged investments pools. If you would like to set up a consultation with a representative, call 800-642-7131. When calling, be sure to specify that you are an LLNL employee.



Gene Skoropowski, managing director of California's Capitol Corridor Joint Powers Authority and a Dublin resident, will speak

on "The Future of Passenger Railroads," today at 7 p.m. at the Pleasanton Museum on Main Street, 603 Main St., Pleasanton. Admission is \$5 per person. Reservations are required. For more information and for reservations, call (925) 462-2766.



The Pleasanton Downtown Association is hosting the **Downtown Pleasanton** Wine Stroll from 6-9 p.m. on Thursday, July 22. Tick-

ets for the event are \$20 per person and will be available for purchase from 5:45 to 8:30 p.m. or until they sell out only on the day of the wine stroll at two locations. No tickets will be pre-sold before the event. Purchase tickets in front of the Museum on Main Street, 603 Main St. near the Pleasanton Arch, and at the south end of Main Street. The ticket price includes a commemorative wine glass and a map and listing of tasting locations. The event is limited to the first 700 participants.

HERS Breast Cancer Foundation Presents "Magic Happens," a Las Vegas-style magic show with illusionist Ryan M. Adler at 6:15 p.m., Saturday, July 24, at the California School for the Deaf, 39350 Gallaudet Drive, Fremont. The cost is \$30 for adults or two for \$50, \$15 for youth or two for \$20. The ticket price includes the show, refreshments and a silent auction. For tickets, call (510) 505.9255 or e- mail magic@hersfund.org. VISA and Master-Card accepted.

Meeting to focus on pool closure

A brown-bag discussion on the recent closure of the Laboratory swimming pool will be held at noon Tuesday, July 13, in the Bldg. 123 auditorium. All employees are invited.

Deputy Director Glenn Mara, and Associate Directors Jan Tulk (Administration and Human



Resources) and Dave Leary (Lab Services) will discuss the reasons necessitating the closure and answer employee questions.

The pool was closed in late June following an inspection that identified potential serious structural integrity concerns.

Lab scientist's estimate of photon mass listed in 2004 authoritative compendium

When Dmitri Ryutov gave a talk on the upperbound estimate of a finite photon mass in 1996, he never thought it would have long-term implica-

But to his surprise, his paper, "The Role of Finite Photon Mass in Magnetohydrodynamics of Space Plasmas," that appeared in a plasma physics journal in 1997, has recently piqued the interest of particle physicists and astrophysicists worldwide.

Ryutov's estimate has been selected to appear in the 2004 edition of the "Review of Particle Physics," a bi-annual authoritative compendium of particle data, as the best estimate of photon mass to date, eight years after the original discussion.

"I had already forgotten about all of this until I got the notice," Ryutov said. "This opens up the whole review of the best estimate of photon mass. The only way to know is to improve the estimate."

Photon mass is assumed to be zero, but physicists have been trying for years to figure out how

small the mass actually is. The finite-mass photon is perfectly compatible with Einstein's relativity theory. Ryutov suggested an upper-bound estimate

based on observations of the solar wind: The photon mass is less than the electron mass divided by 10 billion of trillions. Still, even this tiny mass would have a strong impact on large-scale astrophysical phenomena, Ryutov said.

Now, that the estimate is in the limelight, Ryutov said that he's considering improving his estimate by measuring the magnetic fields around giant molecular clouds such as the Eagle Nebula. He said it's easier to estimate the photon mass by using astrophysical objects. But by measuring the

magnetic fields of such objects, other details need to be kept in mind, such as magnetohydrodynamical flows, he said.

"The paper was a consequence of my interest," Ryutov said. "It was just my hobby. If I can find some spare time, I will continue thinking about how I can improve this estimate."



Pascal M. Rapier

Pascal. M. Rapier of Corvallis, Ore., died June 28. He was 90.

Born in Atlanta, Ga., to Paul Edward and Mary Clare Moran Rapier, he married Martha Elizabeth Doyle in 1945. They had recently celebrated their 50th wedding anniversary.

He graduated from Georgia Tech in 1939 with a bachelor's of science degree in chemical engineering. In 1959, he received a degree in theoretical physics from the University of Nevada, and in 1961, he received his Ph.D. from UC Berkeley.

He made significant discoveries while researching the origin of cosmic rays, galactic red shift and faster-than-light phenomena. He contributed to various professional journals and books, including "Marks Standard Handbook for Mechanical Engineering," 10th Edition. He also obtained patents for geothermal energy recovery devices. His biography is listed in Who's Who in America and Who's Who in the World, 1995-2004.

Rapier worked at the Laboratory from 1960-65 on a seawater conversion project. He returned in 1977 as a scientist in geothermal research until retiring in 1983.

He was a member of Sigma Pi Sigma and The Gideons International.

He is survived by his wife, Martha; children Caroline Elizabeth Hanson of Tujunga, Calif., Paul Doyle Rapier of Riverbank, Calif., Mollie Clare Byrd of Livermore, John Lawrence Rapier of Wiesbaden, Germany, and James Andrew Rapier of Lancaster, Calif.; 17 grandchildren and five great-grandchildren.

Memorial contributions can be made to The Gideons International or a charity of one's choice.

Editor's note: Obituary information should be sent to newsline@llnl.gov or faxed to 2-9291.

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Friday, July 9, 2004 Newsline 3

Around the Lab



Villa helped build veterans group from the ground up

By Don Johnston

NEWSLINE STAFF WRITER

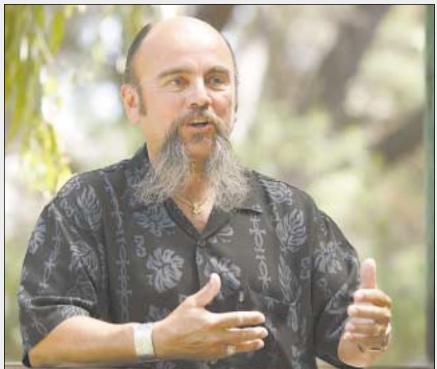
Al Villa became a founding member of the Laboratory veteran's association in 1985 because he wanted veterans to have the kind of recognition and support he and others who fought in Vietnam never received.

"The organization was all about recognizing veterans at the Laboratory. We found out there were over 100 veterans at the Lab, but they weren't recognized," recalled Villa, a facility maintenance coordinator in Plant Engineering. "It's not like it is today. We weren't recognized for what we did for the country."

The intent of what is today the Lawrence Livermore Laboratory Armed Services Veteran's Association (LLLAFVA) was to provide recognition and support to "veterans of all services, both men and women." Other founding veterans included Clay Felicitas and Bruce Frame.

Early meetings were informal, providing veterans an opportunity to "socialize and talk about what was on their minds. It was a good healing organization."

This was particularly important to the Vietnam veterans who returned to a deeply divided nation and few public displays of gratitude, Villa said. "There was really no help for veterans on how to cope."



Al Villa

JACQUELINEMCBRIDE/NEWSLINE

Villa remembers vividly his return in 1970 from a one-year tour of duty in Plieku, Vietnam, where he served as a platoon leader in the 52nd Combat Infantry, as he struggled to re-acclimate himself to civilian life. He said it was a shock returning to the Bay Area a matter of hours after battling for survival in the central highlands of Vietnam.

"It was difficult to 'come back to the world' as veterans used to say," Villa said, noting most veterans received no thanks for their service in Southeast Asia and no support services for transitioning back to civilian

life. "This was not a way to treat someone who put their life on the line every day.

"The whole



time you were in Vietnam your adrenalin was pumping. You had no idea if you were going to die tomorrow," he said. "You develop a special bond with a lot of guys. Every day your life is in their hands. You didn't care who they were. You get to know people really well.

"But you don't have that when you return here. It's different. You are on your own," Villa said. "Vietnam is something that you don't forget. It's with you all the time.

"When you return you still have the adrenalin pumping, but there's no way to release it," he remembers. He found "release" in roaring down the highway on his motorcycle.

But it wasn't until he became a part of the Lab's veterans association that "many of us could talk about those issues."

He celebrated his 21st birthday in Vietnam—"a fast way to grow up"—and returned to his native Bay Area as a 22-year-old casting about for future direction.

After a short stint in his father's construction company, Villa came to the Lab in 1971 through the DOT (Demand Occupational Training) program and went to work as a fabricator in the Fabrication Department.

Active in Amigos Unidos in the late 70s, Villa dedicated his energy to building the LLLAFVA from the mid 1980s, helping to start the association's scholarship program, supporting outreach to other veterans through such programs as the Stand Down at Camp Parks, establishing the memorial Rose Garden in 1986 and in the late 1980s bringing the traveling Vietnam Memorial Wall (a portable replica of the original in Washington D.C.) to Livermore.

"Al was the moving force that brought the wall to Livermore," said Chelle Clements, a member of the LLLAFVA executive board. "There was quite a waiting list and that took a lot of work.

"Al has always had a strong sense of veterans working in the community and he's kept the association working for a long time," Clements said. "He's one of the first people I call when something needs to get done."

Have car, will travel . . . to work



Anne M. Stark/Newsline

For more than 50 years, a small group of residents living in northern Contra Costa County have been carpooling to work at the Laboratory. As employees retired or have left the Laboratory, different employees took their place. This is the oldest, continuous Laboratory carpool (in number of years in operation, not in the ages of the employees). It abides by a humorous set of maxims set up more than 20 years ago, such as a late arrival of more than five minutes results in the offender buying bagels for everyone.

Membership in the carpool has involved a number of unique personalities in various disciplines. Participants typically come from towns such as Danville, Orinda, Lafayette, and Walnut Creek and everyone takes a turn driving to the Laboratory. Recent members include from left, Max Creamer (since 1984) of the Laboratory Counsel's Office, Mona Garcia (since 1996), who just retired from the Director's Office, JC Chen (since 1987) of Engineering and John Belluardo (since 2003) of the DOE/NNSA Livermore Site Office. Since Garcia's departure, the group is looking for another member. Interested employees can call Belluardo at 2-2567 or 648-4877.

Newsline Friday, July 9, 2004



News you can use



Summer Student Calendar (



Are you a summer student intern and want to expand your horizons while learning useful skills and networking with other interns? Check out the Student Bulletin Board at http://education.llnl.gov/sbb/ for more information about seminars, panel discussions, tours and to register for events online.

ICMT seminar

"Scientific Data Mining: The Sapphire Project," by Chandrika Kamath, Center for Applied Scientific Computing

(CASC). 1:30 p.m., Bldg. 219, room 163. Contact: Paula Ashley, 3-3691.

Homeland Security and Terrorism Seminars

"Cyber Security R&D Challenges: A Homeland Security Perspective," by Simon Szykman, director Cyber Security R&D for the Homeland Security Organization. 9 - 10 a.m., Sandia Bldg. 904 auditorium (across East Avenue). Contact: Barry Goldman, 2-5177, or Catherine Dawson, 294-6147. Foreign nationals will not be allowed to participate.

Immediately following, Sandia's Gary Richter, SNL/CA will speak on, "Insight into Terrorism" from 10 - 11:30 a.m.

Wednesday 14

ICMT Seminar

"Big Physics in Small Spaces: Modeling Biological Flow at the Microscale," by David Trebotich, Center for Applied

Scientific Computing (CAR). 9 a.m., Bldg. 319, room 205. Contact: Paula Ashley 3-3691, or David Trebotich, 3-2873.

Professionalism Seminar

"Professionalism in the Work Place," by Shirley Wiley, business communication and etiquette

expert. 11 a.m. – 1:15 p.m., Hertz Hall (just outside LLNL East Gate). Lunch will be served. Contact: Susane D. Head, 2-5218.

Seminar

"How to Create Effective Poster Presentations," by Marsha McInnis. 9 –10:30 a.m., Bldg. 415, room 218. Contact: Barry Goldman, 2-5177.



Panel Series

"Careers/Challenges for Young Researchers," is the second in a series of related panel discussions. Lunch

will follow with an opportunity to network with panel members. 10:30 a.m. - 12 p.m., Bldg. 543 auditorium. Contact: Karen Lema-Crowe, 2-6233.

Please send your summer student calendar items to lucchetti1@llnl.gov

Technical Meeting Calendar



FRONTIERS IN CHEMISTRY & **MATERIALS SCIENCE**

"Science and Technology for Future Communications Networks," by Cherry A. Murray,

senior vice president for Physical Science Research, Lucent Technologies, Bell Labs. 3:30 p.m., Bldg. 235, Gold Room. Coffee and cookies will be served. Foreign nationals may attend if an approved security plan is on file that includes Bldg. 235. For more information on Murray, go to http://www.bell-labs.com/org/physicalsciences/profiles/cherry.html. Contact: Julie Sedillo, 3-3506.



CHEMISTRY & MATERIAL SCI-ENCE/MATERIALS SCIENCE AND TECHNOLOGY DIVISION

"Oxide/Semiconductor Integration for Electronics Appli-

cations," by applicant Rhett T. Brewer,

Rutgers University. 10 a.m., Bldg. 151, Stevenson Room 1209. Contact: Wayne King, 3-6547, or Rebecca Browning, 2-5500.

ICF/HEDES PROGRAM

"Ion Acceleration from the Interaction of Ultra-intense Laser Pulse with Thin Foils," by interviewee Matthew Allen, LLNL. 11 a.m.noon, Bldg. 319, room 205. Contact: Bruce Remington, 3-2712, or Louann Arredondo, 2-6710.



CHEMICAL BIOLOGY & NUCLEAR SCIENCE DIVISION/ CHEMISTRY & MATERIALS SCIENCE DIRECTORATE

"The Total Synthesis of (\pm) -Dibromophakellstatin via a Diastereoselective Vicinal syn-Diazidation Reaction, ' by interviewee Raymond Chung, Yale University. 2 p.m., Bldg. 151, room 1209 Stevenson Room. Foreign nationals may

attend if appropriate security plan is on file, which includes Bldg. 151. Contact: Jeff Tok, 3-1549, or Eryn Davis, 2-0475.

LC CUSTOMERS MONTHLY MEETING

9:30 - 11 a.m., Bldg. 451 White Room (open area). Contact: Teresa Delpha, 3-7329.



PHYSICS AND ADVANCED **TECHNOLOGIES/N DIVISION**

""From Positrons to Neutron Beams," by Wolfgang Stoeffl, N Division. 1:30 p.m., Bldg.

211, room 227, badge required. Contact: Theresa Schantz, 3-0240.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.

Join the Livermore Laboratory Employee Services Association (LLESA) in celebrating 50 YEARS OF EMPLOYEE SERVICES AT LLNL



Networking Group Games and Exhibits

Thursday, July 15, 2004 11:30 a.m. — 1:00 p.m. at the Picnic Area near B317

> BBQ lunch catered by the LLL Armed Forces Veterans Association

Free Chair Massage

Enter a trivia contest

Climb a rock wall

Open Monday through Friday 10:00 a.m. — 4:30 p.m., the LLESA Office is located in Bldg. 415, Room 142. No deliveries/no refunds. Buyer's responsibility to pick up orders.



Friday, July 9, 2004 Newsline 5

News of note



Speaker focuses on spirituality role in medicine

By Leslie Schwartz

NEWSLINE STAFF WRITER

Albert Einstein once said, "The most beautiful thing we can experience is the mysterious. It is the source of all true art and science." This idea represents John Astin's message to Lab employees on the relationship of the mind and body in matters of spirituality and medicine.

As the second speaker of the 2004 LLNL Cancer Awareness Campaign, Astin visited the Lab Wednesday afternoon to present his talk entitled "Coping with Illness: The Role of Spirituality." He currently works in San Francisco at the California Pacifica Medical Center as a researcher in the growing field of Complimentary Alternative Medicine (CAM).

CAM relates to the upsurge of interest in the spiritual dimensions of life and how we make meaning of our everyday experiences, encompassing "everything that doesn't fall within conventional, mainstream medicine," Astin said.

More than 80 percent of Americans believe that spiritual and religious practices can help patients recover from illness, according to a 1998 CBS news poll. "Illness doesn't only have to do with a breakdown in the human body, but is based on the whole person, including his/her thoughts and feelings," Astin explained.

While there is very little evidence that CAM can alter the course of cancer, more of a current focus exists on developing beneficial strategies to alleviate related cancer symptoms. Meta-analyses have also shown that greater involvement with religion is positively correlated with better health, as outlined in Astin's presentation.

Moreover, in the case of cancer, spirituality has

been associated with a higher quality of life and better physical functioning and well being overall

Astin's message emphasized focusing on the contexts in which we experience illness and suffering. "One of the most challenging things about being ill is the feeling of loss of control," he said.

Spirituality can help one regain a sense of control by "not only taking charge, but through the process of positive yielding where we learn to let go and accept things as they are." He said CAM presents possible positive approaches that can help cancer patients in

both their inward and outward battle in the future.
The 2004 Cancer Awareness Campaign contin-

ues this month through July 27.

The cancer survivors and memorial walk will begin at 12:15 p.m. on Tuesday, July 13, on the south lawn of Bldg. 361. The walk is to honor those who have passed away as a result of cancer and to celebrate the lives of those who have survived. The 30-minute on-site walk will begin and end at the lawn area in front of Bldg. 361. All employees are invited to participate. Cancer survivors are asked to wear red T-shirts. A banner, which will be used to lead the walk, will have the names of those to remember. The banner will be available to add names prior to the walk, from 12-12:15 p.m. This time will also be set aside for remembrance and celebration.



The route for the cancer survivors and memorial walk is set for Tuesday, July 13.

"Stamp Out Breast Cancer," by Ernie Bodie will be held at noon Wednesday, July 21, in the Bldg. 123

in the Bldg. 123 auditorium. Bodie, a prostate cancer survivor, is the director of Breast Surgical Services at Kaiser Permanente and founder of the Breast Cancer Research postage stamp, which has so far raised more than \$35 million for breast cancer research.

"Survivors and Caregivers" at 12:15 p.m. on Tuesday, July 27, will feature a panel of Lab and Sandia survivors and the loved ones who provided care and support for them who will share the vital role caregivers play.

For further information, contact Mark Costella, 2-8999, or Cathy Kaplan, 3-6555.

COMPUTATION

Continued from page 1

program manager, and supported by all parts of the Computation organization. Laboratory Human Resources recruiting specialists supplied "extra effort" to support and add to Computation's initiatives.

Cook called the award-winning effort "unique in its extensive involvement of people from all levels of the Computation Directorate and the Lab's human resources specialists."

Because of the low number of African American computer scientists at the Lab, Computation focused its extra recruiting efforts primarily on this area, she said. "Almost all of this additional work was devoted to finding and enticing to the Laboratory, more African American computer scientists who have the background and record of achievement that our hiring managers look for."

Computation's multifaceted plan added new initiatives and built on existing efforts. The plan

- Creating a new recruiting program manager position and hiring an experienced recruiter/technical manager who had made recruiting minorities a priority in the past.
- Surveying major universities (mostly in California) to identify those with the highest number of African Americans in computer science. Three universities were added for this targeted recruiting.
- Creating eight diversity-focused \$5,000 scholarships that include LLNL summer internships.
- Providing resources for a Computation-sponsored summer student program targeting underrepresented minorities. Many employees volunteered to be mentors for the students
- Establishing and funding a pipeline hiring system that supports the hiring of students just prior to college graduation.
- Conducting targeted recruiting at diversity centers, conducting e-mail campaigns and hosting more extensive receptions featuring ethnic food and technical talks.
 - Continuing to work with the Science and

Engineering Alliance (SEA) HBCU Program as a source of new interns and hires.

• Working through the HR recruiting specialists to develop minority contacts benefiting the entire Laboratory, beyond the Computation Directorate.

"Pipeline hiring" was established by CAR Department Head Steve Ashby and is important because its approach looks to broader, long term institutional needs rather than the needs of individual programs, Cook said.

She noted competition from private industry in recruiting highly qualified under-represented computer scientists is very stiff.

Looking to the future, she said: "Computation expects to continue and expand upon these successful efforts."

Computation plans to expand the scholarship program, continue to hold talks and receptions targeting minority students at selected universities across the country, increase the number of diverse computer science summer students by both hiring some into permanent jobs and finding additional diverse applicants.

FORCE

Continued from page 1

the JCAT demonstration, and to make a special presentation in the form of an award to the Protective Force Division.

The secretary's recognition commemorated the Lab achieving the highest rating possible on the March 16 force-on-force exercises. These special force-on-force security assessments at Livermore were part of the Office of Independent Oversight and Performance Assurance (OA-10) Special Review of DOE Protective Forces that was requested by Abraham.

"Our Department of Energy facilities are worth billions of dollars," Abraham said. "We employ many thousands of scientists, engineers, researchers, analysts, and others. And, as is particularly the case here at Lawrence Livermore, we are the custodians of national security assets that, simply put, must not be allowed to fall into the wrong hands.

"So we have an awesome responsibility to protect all of that. Lives depend on it. Not just the lives of DOE employees, but millions of our fellow citizens. There can be no room for error in carrying out this duty."

While giving out the award, Secretary Abraham said: "Given the scores you earned on the recent force-on-force exercises, I have every confidence that you will help lead the way —not just here at Lawrence Livermore — but throughout the entire department in implementing a security regime best equipped to handle emerging dangers in an uncertain and hazardous world. So once

again, let me congratulate you on this success."

Positive results achieved by Livermore's Protective Force during the exercises contributed greatly to the overall rating, which was the highest rating given by OA-10. The award was special recognition for a job well done by the Livermore Protective Force and the contribution they made to the Lab's overall rating.

Force-on-force exercises are a vital part of inspection activities used to gauge the effectiveness and capabilities of a site's protective force. This type of exercise is used regularly within the DOE complex to evaluate the effectiveness of the Protective Force at each site in protecting that site's critical assets against an armed aggressor. During these exercises, the armed aggressor force is made up of other protective force team members from DOE sites throughout the complex.





CLASSIFIED ADS

See complete classified ad listings at https://www-ais.llnl.gov/newsline/ads/

AUTOMOBILES

1994 - Mitsubishi Eclipse - GS 16 Valve DOHC. Very good shape, power windows and locks, AC, 5-speed, cruise control, 112K miles. \$3,700 obo. 925-245-1114

1976 - Oldsmobile Omega. Rebuilt engine, carb, trans, \$1,500 obo. 209-832-1181

1996 - Taurus GL, \$2700, 96k miles, AT, remote access, power locks/windows, newer tires, runs good. 925-449-6399

1991 - Mazda MPV, 135K mi, 6cyl, all power options, well maintained, great commute/family car, orig owner. \$2,500. 415-543-3643

1990 - Oldsmobile 88 Royal; \$1,200. Runs well, good tires, poor paint. 925-606-7422

2000 - Acura 3.2 TL Absolutely perfect one owner car, 36k miles with all options, cd, leather, tint, bra, coco mats \$19,700 obo. 209-667-1039

1980 - Lincoln Towncar, 84K, \$1,000 obo, one owner, runs great, clean, white. 925-447-2375

1966 - Ford Mustang, In-line 6, 3-spd, Red w/GT lights; \$7500 obo 209-993-7340

1997 - 1997 Merc. Mountaineer, Excellent Condition, runs great, 110K mi. \$6,800 obo. Contact Michelle 925-449-9017

1997 - Laser red Mustang, excellent condition in & out, 66K miles, 5-speed, automatic windows and locks, spoiler. \$7000. 925-846-7536

1984 - El Camino SS, new tires, brakes, minor body damage, 90k miles, \$3,000. 925-828-6117

AUTOMOBILE ACCESSORIES

Set of 31x1050 Kumho Venture MTs mounted/balanced on 15x8 Rock Crawlers w/chrome caps, lugs, stems. \$250 obo. Good condition. Taken off Explorer 4x4. 209-356-1747

4 - 10.50 x 15 Goodyear tires W/ chrome spoked wheels 5 on 5.5 spacing for Jeep. 85% treadwear left on tire. \$400 obo. 925-462-5260

Removable tow mirrors for an F-150 truck. These slide over your existing mirrors, they look nice and are in great shape. \$20. 925-846-7335

VW wheels (steel), tires, hubcaps. Set of 4 from new Beetle. Michelin 205/55R16, around 30k left on tires. \$100 obo. 925-417-7593

4ea. 20 inch 100 spoke rims w/ radial tires and adapter fits 5 lug car/tire size 255-352-R20 \$1500 obo, ask for Vincent 209-830-6189

Top Deck Tonneau cover, fits full size pickup, short box, Pewter color, \$500. 209-838-3279

BICYCLES

BMX Free Agent Bike, Hellcat heavy duty & good condition. \$160. 952-606-6422

Childs bicycle. Trek 220: 20 inch frame, 24 inch wheels. Excellent condition. \$100. 510-339-6375

BMX Powerlite mini, custom-built, Crupi, Answer, Black Widow, excellent condition, extras. \$600. 925-846-5227

Women's mountain bike. Excellent condition, barely ridden. 21-speed. Costco bike. \$40.00 obo. 925-240-7374

Lady's bike and men's bike, make offer. See at 1163 Hillcrest Court, Livermore, or call 925-447-3967

BOATS

Kayak: Dagger Vengeance, new, never used, with paddle. \$350. 925-846-5227

1985 Regal Majestic 210 21ft. cuddy cabin, Chevy 305 on board battery charger, automatic bilge, bimini top,. 50mpr+. \$5000 obo. 925-980-6190

10ft pole pylon extention for skiboat use. Breaks down in 2 pieces to store, white. \$100 obo. 925-456-3010

35 HP Evinrude electric-start outboard. Ancient but solid. Includes gas can. \$400 obo. 925-516-2570

CAMERAS

Nikon N2020 with 50mm Nikkor 1.14 lens and Speedlight SB20 \$40, additional lens, Kalimar 60 300mm \$25. 925-449-3488

Camera and dark room equipment, Mamiya M645-1000S, Rollei TLR, Zone VI 4x5 Field Camera, meters Sekonic, Pentax, Enlarger, etc. Reasonable offers! 925-443-9599

ELECTRONIC EQUIPMENT

Pioneer receiver, \$30; Teac cassette, \$15; Pioneer turnable, \$35; 2 speakers, \$20; VHS tape, .50 ea; 8-track tapes, .40 ea. 415-543-3643

Table top TV. Compact, AC/DC with VHF channels. Only \$10. Works good, great for van, boat, kitchen counter. 510-537-7222

Mac clone w/G4 card, 592mb ram, 3 HDs. 17-in monitor, Zip drive, flatbed & slide scanner, inkjet & laser printer, extras. 925-837-0421

5CD player in excellent condition w/remote. \$25 obo. 925-516-2570

GIVEAWAY

Kitchenaid stand mixer. Broken: motor runs, but nothing turns. Model KSM90, white, includes bowl and standard attachments. 925-449-8783

Single hospital bed with mattress and metal frame. Pickup at Rockridge in Oakland. 415-543-3643

FREE CATS!! 6 mo. old gray female, VERY loving and friendly, and 1 1/2 yr old tabby male, also friendly. Includes scratching post, food, bowls, etc. 925-463-1832

HOUSEHOLD

Leather sofa, 7-ft., beige color, excellent condition; \$200. 925-485-1912

GARAGE SALE July 10, 6949 Bear Creek Dr. Livermore, prom dresses, name-brand clothes, queen head-board/bedframe water bed, suitcases, household items. 925-443-7020

Dining table (glass) w/4 chairs \$250, 925-449-1481

Queen-size bed with Serta mattress, boxspring, frame and headboard, \$50. 415-543-3643

Executive Lite Oak Desk, (60in.W X 32in.D) has file cabinet & drawer. Return (50in.W X 29in.D) w/keyboard tray, drawer & printer cabinet. Pics-online. \$385. 925-443-7729

Sofa table, oak with glass, \$40. 925-455-5985

Refrigerator/Freezer, 22 cubic feet, 7 years old, works great, \$250. 209-833-1219

Child's oak bedroom set, captain's bed, headboard, chest of drawers, desk, corner unit, bookshelves. \$400 obo. Call after 5pm 925-672-9827 Super-single waterbed, bookcase headboard, excellent condition, needs heater. \$100. 209-599-4644

Dinette table, square glass top, rounded corners w/4 chairs. Light color, good condition, \$80. 925-449-7371

Small refrigerator and microwave oven suitable for college dorm. Used one semester. Both for \$60. 925-804-6288

Oak hutch \$175 209-838-3950

Mahogany desk, china cab, sofa table. Small recliner, wing back chair with ottoman. Coffee table w/ matching sofa table. Pictures. Brentwood. 925-513-1108

Two pillow back couches, \$250 each/\$400 both. Very good condition, cream color, traditional design, rolled arms, skirted bottom. 925-606-0735

Portable dishwasher, microwave x2, sq. oak living room table, Qn. waterbed, children's canopy bed, floor speakers. Livermore area. 925-371-8879

Queen bed - mattress, box spring, frame, in good condition. \$100. 925-485-1988

Refrigerator: white, frostfree, freezer on top, exc. condition. \$200 obo. U-haul from Discovery Bay, only 23mi. from Livermore. 925-516-2570

Lost & Found

Found prescription safety glasses at Hazard Control training center, T2627 on 6-30-04. Please call 925-423-1094 to claim them. 209-499-3633

Earring (silver semi-circle 2 mm thick x 1 cm in diameter) found on 6/30 in parking lot near library. Pick it up at lost & found: Bldg 271 Rm 1011. 408-293-6369

MISCELLANEOUS

Estate sale on Rockridge, Oakland on Saturday, 7/10. Many small items and furniture pieces. Call for location, time, and details. 415-543-3643

Delta 10in table saw w/stand, \$400 Hardly used. Same type used on "This Old House." 209-833-7149

Table Saw, Delta 10 in., 1.5 HP, 115/230V, w/32 in. unifence, mobile base & dust collector. Excellent condition. \$400. 209-239-8984

Oakland A's tickets 7/17 vs Chicago; 7/23, 7/24, 7/25 vs Texas MVP 3rd baseline Sec 125/Row 13/Seats 1&2 \$28 per ticket. 925-449-5481

Lawnmower- 1996 Lawnboy Silver Series, self-propelled, rear bag/mulch, 21 in. cut, 5.5 HP. Good condition. Not used for last four years. \$150 obo. 925-648-1866

Thomas/Brio train accessories: tunnel, overpass bridge \$10 each, Crane \$5, Roundhouse \$15. 925-454-0877

Comic Books, 3000+, most in sleeves, all makers: Marvel, DC, etc. \$450 obo. 925-449-8429

21 inch Snapper lawn mower 3.5 hp BS engine. Starts and runs fine. Needs 1 new front tire. Still going strong \$75. 925-685-4922

1ct diamond with two 1/2ct tw diamond bands. Set in 14kt white gold. \$4000 obo. 209-595-1363

Walker, for increased mobility. Over \$200 new. MIMI LITE-DELUXE. \$80 obo. 925-447-8557

6 ft. picnic table w/2 benches; solid construction, redwood, in excellent condition; \$75. 925-960-1081

White tubular metal sofabed frame. You add the futon. \$75 obo. 925-516-2570

MOTORCYCLES

1994 KX60, excellent condition, trailridden only, sparky, green sticker, extras. \$1200 obo. 925-846-5227

1999 - Suzuki RM 250 perfect bike. New fork seals, tires, handlebars, spokes, and N-style graphic kit, fmf pipe, green sticker. \$2,800 obo. 209-664-1029

Race Kart - Cadet, \$950 obo. 209-838-0304

Champion sidecar, all options, beautiful \$2500. 925-828-6117

MUSIC INSTRUMENTS

Cymbal stand. Yamaha, boom stand, double braced. Unused! \$65. Boom arm, same, \$30. 925-373-6255

Help wanted: LLESA Dance Band needs 1st Alto and 1st Trumpet players. Skills rusty? Come and practice with us. 925-443-2245

PETS & SUPPLIES

TB 7yo broodmare by Candi's Gold (>\$28K in earnings), \$800. TB 4yo flashy bay filly started over fences, never raced, 100% sound - \$2500. 925-443-1547

Dog crate for small/medium size dog, \$25. Igloo dog house for medium/large size dog - \$25. Please leave a message if we are not at home. 925-449-1526

Two, sweet, teenaged Arabian geldings available for sponsorship in the Livermore hills. Neither have been ridden much lately, and are in need of patience and attention. Located next door to Morgan Territory Land Bank with miles and miles of trails. For more info contact Kitty at 925-961-1196 or Lauren at 925-447-4830.

RECREATION EQUIPMENT

GO-PED motor scooter sport (style) asking 300 obo. 209-521-4846

Golf equipment - clubs, bags, \$10-\$25 per item. Call me for the list. 925-485-1988

Sailboard - Fanatic Bat, complete speedlite rig (mast, boom, etc.), 5.6 m2 sail, garage storage rack, excellent condition. \$900 obo. 925-934-0203

Jennings Starmaster compound bow for sale. Great for target or hunting. Camo, 50-70lb., adj. draw Ing 25-32, IBO speed 313 fps., \$175 obo. 925-455-4528

RIDESHARING

Express your commute, call 2-RIDE for more information or visit http://www-r.llnl.gov/tsmp.

BERKELEY - Rider/driver needed to complete a 4-person carpool. Leave north Berkeley at 7 am; leave LLNL at 4:40 pm. 510-524-8332, ext. 2-5949

Modesto - Permanent rider positions available on luxury van departing OSH at 6:40 am, leaving LLNL 4:30 pm. 209-545-3866, ext. 3-8056

SERVICES

Swim Lessons - Experienced, former LLESA instructor and CSUH graduate; all ages; your home or mine. Certifications, \$50, 4 lessons, 30 min each. 209-835-5031

CONCRETE-foundations, custom, stamped, colored, sealing & more. Over 20 years experience. Free estimates. Lic #787092-B 408-806-9816

Swim Lessons - Experienced, former LLESA instructor and CSUH graduate; all ages; your home or mine. Certifications.\$50, 4 lessons 45 min each. 209-835-5031

Sign up for Horseback Riding Lessons at a fabulous Equine facility on Crow Canyon Road with great trainer. Lessons start at \$40. 925-484-0697

SHARED HOUSING

Livermore, CA. - 3bed/2bath. New appliances, carpet, & paint. Quiet neighborhood. <1 mile from LLNL.

\$1,750/mo. with \$2,000 deposit. Contact Brian 925-980-8364

Livermore - Unfurnished room for rent Internet access available, pvt. bathroom, full house privileges 1/2 utilities, NP, NS, 5 minutes from LLNL. 925-371-0911

TRUCKS & TRAILERS

1995 - Toyota Tacoma SR5 v6 4x4 130k, runs great, very clean, new tires, wheels, 2nd owner, many extras, 10,000 obo. 209-833-0636

2002 - Toyota Tundra SR5 access cab. V8, 2WD, 22,400mi, 1 owner, perf condition. \$19,900. 925-463-1832

1997 - Ford F150 4.6L V8, auto, 109,500mi, Extended Cab, 3rd door, A/C, pwr locks, windows, etc, tow package, bucket seats. Excellent condition. 209-538-1568

1989 - Ford Bronco Eddie Bauer 4x4 160K original miles, power windows & locks, air cond, opt. 3rd seat, have all maint. records \$6100 obo. 209-603-0450

1964 - Chevy pickup. Primer, all there, runs good. Great project truck. Must sell. \$2500 obo. 209-744-9776

1997 - Toyota T100, 4WD, king cab, tow package, bed liner, box, CD, great condition. \$10,500. 925-634-2886

1986 - Chevy suburban 3/4 ton, 4X4 168K miles. \$2,800 obo. 925-443-1715

VACATION RENTALS

Mountain cabin near Arnold. 4 bed, 2 bath, fully-equipped kitchen. Near lakes, streams, hiking, fishing. Peaceful, beautiful. 925-245-1114

Soooo cute beach cottage in Santa Cruz. 2 bed, 2 bath. Spa, fullyequipped kitchen, near harbor. Lots of room in September. 925-245-1114

SOUTH LAKE TAHOE - 3 Bed/2 bath Chalet, nicely furnished, quiet area, all amenities, park w/lake, tennis, etc. Great for vacation. RESERVE NOW! 209-599-4644

Maui, HI - Kahana Reef oceanfront 1BR/1BA condominium. Beautiful two-island view, oceanside pool, and BBQs. LLNL rates for yearround reservations. 925-449-0761

Gualala - Stunning ocean views, walk to downtown galleries & restaurants. 2bed/2bath custom built 1999 home. http://www.coralcove.us. \$511/weekend 925-606-1845

WANTED

I am looking for a mountain bike suitable for a 6ft2in 265lb rider. 925-606-0674

Wanted - Legal version of Photoshop 6 or 7 for PC, incl. book and CD and willingness to sign transfer of ownership document. 925-447-8415

Looking for someone to do complete concrete patio job. About 2.5 cubic yards. Need ASAP. 925-513-4767

Working Betamax VCR. Preferably stereo, but mono OK. 707-746-1478

Due to space limitations, Newsline may withhold ads that have already run. They will still appear on the Web.

Friday, July 9, 2004 Newsline 7

ENERGY SECRETARY'S VISIT



Earlier in the day, Secretary Abraham (center) cut a ribbon marking the completion of the Terascale Simulation Facility. From left: Camille Yuan-Soo Hoo of NNSA, UC President Robert Dynes, AD Bruce Goodwin, Director Michael Anastasio, AD Dona Crawford and UC VP Robert Foley.



AD George Miller (right) shows Energy Secretary Spencer Abraham (left) and reporter Otis Port one of NIF's targets.



The Energy secretary, with the help of AD Dave Leary presented a special security award to Protective Force Captains John Smalls and Charles Johnson (from left).



Following the ribbon cutting, the secretary showed off the cavernous room that will one day house the multiple racks of ASC Purple. Top right, Anastasio, Secretary Abraham get an update on EUVL from John Taylor.



Throughout the day, the secretary was greeted by large crowds, including his visit to the National Ignition Facility.

Photography by Joseph Martinez, Jacqueline McBride, Frank Nunez and Bryan Quintard.



At left, Nick Lanier, Gail Glendinning and Bruno Van Wonterghem were presented special awards by Secretary Abraham while Anastasio looked on. Above, Anastasio, NIF Project Manager Ed Moses, UC President Robert Dynes and Secretary Abraham (from left) get a look at the progress made on the NIF target chamber

8 Newsline Friday, July 9, 2004

Abraham encourages labs to promote science literacy

Secretary of Energy Spencer Abraham announced Thursday that the U.S. Department of Energy and its national laboratories are launching an initiative to promote science literacy and help develop the next generation of scientists and engineers

"It is critical that we leverage the resources of this department — and of all our national labs — to help create a new generation of scientists who will achieve the scientific breakthroughs and technological advances so essential to our future security and prosperity," Abraham told a gathering of researchers and graduate students at the Stanford Linear Accelerator Center (SLAC).

Abraham visited SLAC Thursday morning before coming to the Lab in the afternoon. While there, he announced a "series of changes in the way the Department of Energy will address the growing and serious problem of science and math literacy in this nation."

Abraham outlined a seven-step program named STARS: Scientists Teaching and Reaching Students. The program is designed to enhance the training of America's mathematics and science teachers; grow

students' interest in science and math, especially in the critical middle school years; and draw attention to the women and men who have done DOE science so very well — and thereby encourage young people and prospective teachers to pursue careers in math and science.

"The risks of a scientifically illiterate nation in the 21st century are too great for business as usual," Abraham said. "We will work with our partners at the National Science Foundation, the Department of Education and others as we explore new opportunities to attack this challenge."

Lab Director Michael Anastasio commended Abraham's initiative as a way to "prepare the next generation of scientists and engineers."

"I applaud the Secretary's call to enhance science education," Anastasio said. "Our Laboratory has long been committed to promoting science education for the benefit of the nation and our local communities.

"We look forward to working with DOE in promoting science education to prepare the next generation of scientists and engineers."

Each year the Laboratory spends more than

more than \$700,000 "in-kind" in local K-12 education outreach each year.

Through the Science and Technology Education Program and the Edward Teller Education Center, LLNL provides teacher professional development and curriculum enhancement for kindergarten through community college. The Lab is a major sponsor of the annual Tri-Valley Science & Engineering Fair, which is affiliated with the Intel International Science Fair, and three Expanding Your Horizons Conferences for young women in middle and high schools. The Laboratory reaches out directly to students of all ages by hosting career fairs, school tour programs and classroom speakers.

Abraham also announced his appointment of Peter McPherson, chairman of the secretary's advisory board, to impanel a blue-riboon committee to recommend additional ways to improve science and math education. McPherson accompanied the secreatry on his vist to LLNL and SLAC, and was briefed on the Lab's myriad education programs.

More information about the labs' science education offerings is available at http://www-ed.fnal.gov/doe/doe_labs.html.

VISIT

Continued from page 1

In his remarks at the Terascale Simulation Facility, Abraham noted that in 1995, DOE's Advanced Simulation and Computing Program set out to obtain a computer system that could process 100 teraflops (trillion floating-point operations per second) – the capability required for three-dimensional, full-system weapon simulations for the Stockpile Stewardship Program.

"With the opening of this building we are much closer to making that promise a reality," he said. "Once completed, (Purple) will represent an improvement in computing power by a factor of over one million over that used for weapons simulations in 1995. Purple's success will be the fulfillment of that very ambitious goal."

The secretary said the combined computing capability of Purple and BlueGene/L "is essential for both stockpile stewardship on the one hand and for science on the other.

"I hardly need to tell all of you just how vital it is for the United States to stay on the cutting edge of supercomputing technology," he said. "In fact, our administration and this department in particular have been working very hard to reclaim America's lead in supercomputing, and today's events are a very major part of that goal – a goal which I am absolutely convinced we can and will achieve.

"I really want to thank all of you here for the hard work and the dedication and the commitment that you all put in to allow us to fulfill that responsibility."

To house its supercomputers, the TSF has more than an acre of unobstructed computer floor space. The facility has 10 megawatts of electrical power, 23 miles of electrical conduit underground and 44 miles within the building, and 130 miles of fiber optic cable. Computers and staff are expected to begin moving into the building within the next few weeks.

Dona Crawford, LLNL's associate director for Computation, praised the Laboratory's "strong partnership" with IBM in the development of four generations of supercomputers – ASCI Blue, at three teraflops; ASCI White, at 12 teraflops; Purple, at 100 teraflops; and BlueGene/L, at 360 teraflops. IBM's Dion Rudnicki said the collaboration provided an opportunity for IBM and the Laboratory "to protect and demonstrate U.S. competitiveness" in supercomputer development.

Bruce Goodwin, associate director for Defense and Nuclear Technologies, praised the rapid construction of the facility and presented the secretary with a commemorative TSF T-shirt.

In a ceremony on the outdoor patio at the National Ignition Facility, the secretary presented three team awards in recognition of the successful completion of the first joint Los Alamos-Livermore experimental campaign on NIF. Following "first light" from the facility's first four beamlines in January of this year, the series of increasingly complex hydrodynamic experiments started in May and was completed in June.

Accepting the awards on behalf of their teams were

experimental physicists Nick Lanier of Los Alamos and Gail Glendinning of LLNL and Bruno Van Wonterghem of the NIF Project.

Citing the geographical distance between the laboratories, Abraham said the partnership forged on the experimental campaign "truly demonstrates the national nature of this new facility."

When completed, NIF will focus 192 untraviolet laser beams on a target the size of a pea, momentarily creating the immense pressures and temperatures found in stars and supernovae. NIF is the only facility that can obtain the conditions necessary for ignition and thermonuclear burn in the laboratory.

Abraham noted that NIF is only 80 percent complete with the first four of its 192 laser beams operational, yet early experiments have already produced extremely useful information and a second round of experiments "are now under way to produce even more unique information."

Calling the science at NIF "complex" and the work undertaken there "as ambitious and large as anything we are doing" in the DOE complex, the secretary told NIF employees:

"My hat is off to you for what you are up to here at NIF. No previous simulation operation has been able to come close to the precision that this new facility will ultimately provide.... It will allow us to confidently determine just how well [U.S. stockpiled nuclear] weapons will perform without testing and to be able to do that accurately."

Abraham also thanked President Dynes and the University of California for their roles in the significant scientific and technical advances made at the national laboratories, including the "phenomenal" progress at NIF since his previous visit in November 2002.

George Miller, associate director for National Ignition Facility Programs, presented the secretary with a sample of NIF amplifier laser glass mounted on a wooden base and a laser pointer.

Ed Moses, NIF Project manager, led the secretary on a tour of the laser facility to close out his NIF visit. Other activities during the secretary's visit included:

- A presentation to the Laboratory's Protective Force Division recognizing LLNL's performance during the March force-on-force exercises (see related story).
- A demonstration of JCATS (Joint Conflict and Tactical Simulation), the Laboratory's state-of-the-art combat simulation program.
- Briefings and demonstrations led by Karena McKinley, director of the Industrial Partnerships and Commercialization (IPAC) Office, and Norma Dunipace, IPAC's partnership development manager, highlighting the Laboratory's efforts to transfer technology to the private sector; officials of three of the Laboratory's business partners Cepheid, ORTEC, and Metal Improvement Company participated in the presentations.
- A briefing by Livermore engineer Donald Lesuer on the Laboratory's Russian Transition Initiative project, which is helping former Russian weapons scien-

tists transfer their skills to the production of parts for commercial aircraft and launch vehicles.

Abraham's previous visit to the Laboratory in November 2002 was to present Director Emeritus Edward Teller with the Department of Energy's highest honor, the Gold Award.

Newsline staff writer Leslie Schwartz contributed to this article.

DISPLAY

Continued from page 1

The oak display case was built by apprentice carpenter Dana Jacobs. Jon Stella represented the Carpenter's Shop at the ceremony. "This was a great opportunity to work on a good project," Stella said.

The month of veterans' activities continues Wednesday July 14, when a panel of Lab veterans deployed in Afghanistan, Bosnia and Iraq will discuss their experiences at noon in the Bldg. 543 auditorium. Veterans Observance Month will culminate with a noon July 28 steak barbecue and membership drive in the Lab pool area.



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