

Published weekly for employees of Lawrence Livermore National Laboratory

Friday, October 8, 2004

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Vol. 29, No. 40

Evidence suggests new state of matter

By Anne M. Stark

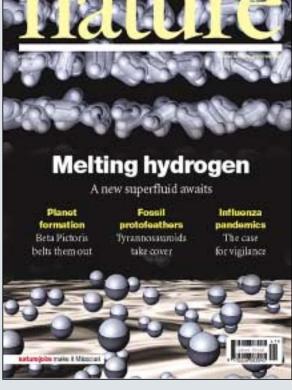
Laboratory scientists have discovered a new melt curve of hydrogen, resulting in the possible existence of a novel superfluid a brand new state of matter.

As reported in the Oct. 7 edition of the journal *Nature*, the researchers present the results of *ab initio* calculations of the hydrogen melt curve at pressures up to 2 million atmospheres.

The measurement of the highpressure phases of hydrogen has been the focus of numerous experiments for nearly a century. However, the phase

boundary that separates the solid and the liquid has remained relatively unknown.

Until now, when scientists Stanimir Bonev, Eric Schwegler, Tadashi Ogitsu and Giulia Galli reported the melt line with



Laboratory research on the melt curve of hydrogen and its relationship to a possible new state of matter made the cover of the Oct. 7 edition of *Nature*.

versus pressure curve has a maximum, which is not directly related to molecular disassociation, but rather to changes in the

See HYDROGEN, page 8

Bay Area conference lauds labs' homeland security role

By Stephen Wampler NEWSLINE STAFF WRITER

OAKLAND — Not only do the national laboratories address immediate homeland security threats,

they also focus on possible dangers as far as a decade into the future. This viewpoint was offered Tuesday by two panelists who spoke on technology perspectives from the

elists who spoke on technology perspectives from the national laboratories at the Second Bay Area Conference on Homeland Security.

This week's conference, held at the Oakland Marriott City Center Hotel, was sponsored by the Bay Area

See HOMELAND, page 7

National vaccine shortage delays annual flu clinics and prompts new supply search

Health Services learned early Tuesday morning that one of the manufacturers and suppliers of flu vaccine — Chiron — has had its license suspended by the British government and, as a result, will not be providing any vaccine to its customers, including LLNL, for the 2004-2005 influenza season.

This action will result in the loss of approximately half the expected national vaccine supply.

HSD has been in the queue for flu vaccine since

See FLU, page 7

Final approval pending for last remaining Lab groups to resume work using CREM

The Laboratory is awaiting final approval to restart the last groups that have remained in a stand-down of usage of all electronic classified removable media (CREM).

To date 27 of 29 Lab groups have received the OK from National Nuclear Security Administration headquarters to resume work using CREM. One of the two remaining programs has been validated by the NNSA Livermore Site Office and now awaits final approval from headquarters. The other program has submitted its validation to the site office and must receive LSO approval before being sent to headquarters. "We expect to be back up and running very soon," said Bill Bookless, associate director of Safety and Environmental Protection and chair of the committee overseeing the CREM stand-

Lab Science and Technology Awards 2004

By David Schwoegler NEWSLINE STAFF WRITER

Laboratory Director Michael Anastasio orchestrated presentation of the fifth annual Science and Technology Awards last Friday before a distinguished Laboratory



audience.

Three teams were seated at the awards luncheon in the Grand Canyon Room of Building 543: the Lab's senior management team and the two winning teams selected in the 2004 S&T competition.

The group led by Jerry Britten developed the pro-

FRANK NUNEZ/TID

See **S&T,** page 8

Curly Hoaglan receives an S&T award from Director Michael Anastasio.



Newly spun Web

See CREM, page 5

— Page 3



Bringing it HOME online





Genomic mystery of diatoms revealed

— Page 5



AB COMMUNITY NEWS

Weekly Calendar

Technical Meeting Calendar, page 4



The Harvest Winemakers dinner will be today at 6:30 p.m. at White Crane Winery, 5405 Greenville Road, Livermore. The event will feature the San Francisco

Bay Area and International Wine Competition wine winners. Cost is \$95 plus tax and gratuity per person and includes hors d'oeuvres, dinner, dessert and drinks. For tickets, call 455-8085 or e-mail to info@whitecranewinery.com.



There will be a scheduled power outage today from 10 a.m. to noon. Bldg. 131 will be affected. Air conditioning, heating and eleva-

tors also will be affected. Contact: Mark Cardoza, 3-0490



There will be a scheduled power outage today from noon to 2 p.m. Bldg. 041 (Sunshine Bldg.) and the Mesquite Post will be

affected. Air conditioning, heating and elevators also will be affected. Contact: Mark Cardoza, 3-0490

The semi-annual downtown Pleasanton Antiques Street Faire will be held today from 8 a.m. to 4 p.m. on Main Street. Admission is free. The event is sponsored by the Pleasanton Downtown Association, Frate and Associates and the Valley Times. There will be more than 425 professional dealers from all over the West. For more information, contact Frate and Associates at (760) 724-9400 or the Pleasanton Downtown Association at (925) 484-2199 or www.pleasantondowntown.net.

Robert J. Lang, internationally known origami artist, author, and engineer will present a slideshow and discuss the industrial and commercial applications of his work in this adult program at 2 p.m. today at the Pleasanton Public Library, 400 Old Bernal Ave. This is a discussion of the industrial and commercial application of origami engineering. For more information on Lange, go to his Website: www.langorigami.com

Public relations efforts earn awards

The Laboratowas recently ry honored with two communication awards from the Public Relations Society of America. "Edward Teller

Remembered," a short video documenting the life of Teller, and the press materials for the Lab's Homeland Security Office both received Compass Awards from the Northern California chapter.

The received the society's highest honor in the Audio Visual — Internal Video Programs category. The video, pro-

video PRSA winners (clockwise from lower left): Kelly Spruiell, Gary Graff, Leonard Walton, Steve Wampler, Jerry Johnson, Mimi Alford, John Danielson, Kirk Hadley, Maria Fogle and Lynda Seaver.

duced by Public Affairs and the Lab Television Network (LLTN), was shown as part of the Edward Teller memorial celebration last November. Teller died in September. Mimi Alford of LLTN and Lynda Seaver

and Gordon Yano, both from Public Affairs, accepted the award. The video was put together by Alford and Seaver. The homeland security press kit was honored in the Press Kits/Media Kits - Services category. Steve

Wampler of Public Affairs and Leonard Walton of the Homeland Security Office, accepted the award. Those who worked on the press kit include Wampler, Lauren Devore, Kirk Hadley, Maria Fogle, Kelly Spruiell, Bob Smith, Nancy Rutter, Gorgiana Alonzo, John Danielson, Walton, Gary Graff, Jerry Johnson and Melissa Villarante.

The PRSA awards honor communication and public relations programs and projects throughout Northern California.

IN MEMORIAM

Anne Dramita (Pannell) Mego

Former Fremont resident Anne Dramita (Pannell) Mego died Oct. 3. She was 70.

Born Feb. 2, 1934, in Roff, Okla., Mego moved to Visalia and then to Fremont, where she raised her family from 1956-1969. During those years, she attended First Presbyterian Church and was a member of the Order of Eastern Star, Orient Chapter 177.

Mego later moved to Livermore and Manteca before settling in Tracy, where she lived for 13 years.

An administrative assistant at the Lab for more than 10 years, Mego enjoyed studying art, tracing genealogy and performing philanthropic work.

She is survived by her daughters, Donna Terry of Stockton and Kathleen Winchell of Tracy; her son Clifford Terry of Stockton; four grandchildren and three great-grandchildren.

She was preceded in death by her husband, Lewis Mego, and her brother, Welland Pannell.

A funeral service will be held today (Oct. 8) at the Masonic Temple, 1601 N. Tracy Blvd., Tracy. Mego will be buried at the San Joaquin National Cemetery in Gustine.

The family requests donations be made to the Tracy Area Genealogical Society, 1141 Adam St., Tracy, CA 95376.

Newsline





The University Relations Program cordially invites laboratory scientists, researchers, post-docs and student employees to

attend the fifth annual poster presentation by participants in the SEGRF (Student **Employee Graduate Research Fellow**ship) Program today from 3-5 p.m. in the West Cafeteria. For more information, call Joanna Allen in the University Relations Program office, 3-9225.



The Oct. 20 Macintosh **Technical Seminar Series** will feature "System Administration with **Apple Remote Desktop**

2," by Michael Lopp of ARD, at 10:30 a.m., Bldg. 543 auditorium. Contact Duane Straub, 2-9774.

Evelyn M. McArthur

Evelyn Maxine McArthur died Wednesday, Sept. 29. She was 78.

McArthur was born and raised in Texas. She moved to California in 1942.

McArther started at the Laboratory in 1965 and after 22 years retired in 1987 as an administrative assistant in the Chemistry and Materials Science Directorate.

After retirement she moved to Manteca; previously she lived in Pleasanton and Livermore.

She was a member of the Church of Jesus Christ of Latter-day Saints. She enjoyed painting, gardening, camping and fishing.

She is survived by her son, Kenneth McArthur of Manteca; three grandchildren and eight great-grandchildren.

Services and burial were private.

Remembrances may be made to any Church of Jesus Christ of Latter-day Saints.

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Around the Lab



Overhaul gives Laboratory Web presence a new look

The top levels of the Laboratory's external Website have been given an overhaul, including a fresh new look, updated content and features, and a new navigational structure.

Roger Cunning of the Director's Office, who led an External Web Redesign workgroup with representation from across the Lab's directorates and programs, said the changes were designed to modernize and update the Website and to "emphasize the Laboratory's highest priority objectives" by highlighting LLNL's science, technology and mission.

Additional objectives included improving the ability of target audiences to locate relevant information about the Laboratory, improving ease of navigation and search results, and providing tools to make it easier for content providers to keep their information up-to-date.

LAWRENCE LIVERMORE NATIONAL LABORATORY SearchLLNE Web Field Fee Westons & Program Secretary Abraham signs speedy BlueGene Science & Technology scientists Na wit curve of hydro Organization **Bisiness Opportunities** voluces lewels in the supercomputing Research Collaboration Education **Community Connections** let Claire Max wine Science & Technology Rightights Public De max & Technolog ice Cente phores 1.1.84. 'n Disco The Forencic Science Canter Laboratory's Dece er in world Annual Report to to detect cheevio Lawrence Unerwork Reflected Laboratory 1900 East Avenue - Lingmone, CA agents sia for the Department NISA

Located on the Web at www.IInl.gov, the Lab's new external home page has a new look, updated content and features and a new navigational structure.

"One of the key target audiences identified by the workgroup was potential job candidates," Cunning said. "So we developed a mechanism to help job-seekers quickly identi-

Lab and links to information about Livermore and the Tri-Valley area are also featured.

2004 HOME Campaign early donation period begins this Monday Beginning Monday, Laboratory employees have an opportunity to donate electronically to the

an opportunity to donate electronically to the HOME(Helping Others More Effectively) Campaign prior to the Run for HOME.

Although employees will be able to donate electronically throughout the entire HOME Campaign, which ends Dec.10, this period from Oct. 11-22 is called the "early donation period." Employees who donate online during this period may elect to not receive a booklet and save the cost and handling associated with it.

fy openings in their particular career fields."

The workgroup created summary pages for each directorate and program office, with short descriptions of its missions and programs and a search feature that locates job openings within that specific directorate or program.

The Lab's redesigned home page, at www.llnl. gov, features a photo linking to the current "top story" at the Lab.

The home page also links to descriptions of LLNL's mission and research programs, educational activities, organization and management, opportunities for business and research collaboration, institutional publications and the library, community outreach activities, science and technology highlights, and curnews releases. rent Detailed directions to the



JACQUELINE MCBRIDE/NEWSLINE

Livermore High School teacher Linda Lamoureux helps student Mary Borrallo with a work assignment in Livermore High's Special Day Class (SDC). Livermore High supports four special education classes for about 72 high school students with special educational needs. This class offers voctional and academic support, prepares students for life beyond high school and supplies all books and class materials. The SDC is one of the agencies employees may donate to through the HOME Campaign. In addition, the first 500 employees who donate online will receive an official 2004 Olympic pin (shown below) to be picked up at the agency fair and HOME run on Thursday, Oct. 28. Once employees donate online they are automatically eligible for all of the weekly

incentive drawings.

A computer and printer are set up in the Bldg. 151 lobby for those who wish to donate online and do not have access to a computer. New online features include printing a receipt, one-time payroll deduction,

as well as donating in tax years 2004 and 2005.



News you can use

Work/life balance focus of talk

Denise Larsen, a marriage and family therapist, will present "The Road to Balance:

Your Work and Personal Life" at noon Thursday, Oct. 14 in the Bldg. 543 auditorium.

The presentation will explore the stressors that occur when trying to combine career and family life; consider the attitudes, beliefs and myths that help or hinder us in our daily activities and learn strategies for

dealing with work and personal stress. Larsen provides individual, group and family therapy and has been a trainer for CONCERN: Employee Assistance Program, conducting sem-

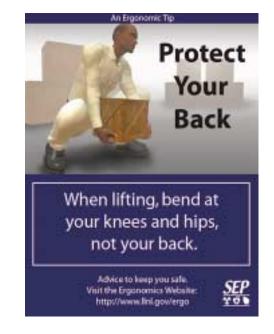


inars for corporations and municipalities. Resources on employee services in support of work/life will

be available at the presentation, which is sponsored by the Worklife Program Office and Work-

life Advisory Council.

For more information, contact Carol Sandoli, 2-9543.



Technical Meeting Calendar



INSTITUTE FOR GEO-PHYSICS & PLANETARY PHYSICS

"GALEX: A Year Exploring The UV Universe," by Christopher Martin, Caltech. Noon, Bldg.

319, room 205. All attendees need to be badged. Contact: Wil van Breugel, 2-7195, or Rachael Mills, 2-6333.

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

"A Progressive Environment for Geometric and Physical Modeling: Working Progress," by Alberto Paoluzzi, Third University of Rome. 10 a.m., Bldg. 451, room 1025 (property protection area). For more information, go to http://www.Ilnl.gov/ casc/calendar.shtml. Contact: Valerio Pascucci (CASC), 3-9422, or Leslie Bills, 3-8927.



CHEMICAL BIOLOGY & NUCLEAR SCIENCE/ BIOSECURITY & NANOSCIENCES LABORATORY

"Self-Assembling Cyclic Peptide Nanotubes as Transmembrane Channels: From Chemical, Biological, and Application-Oriented Perspectives," by Hui Sun Kim, Department of Chemistry, UC Santa Barbara. 2 p.m., Bldg. 151, room 1209, Stevenson Room. Foreign nationals may attend if approved plan is on file, which includes Bldg. 151. Contact: Jim De Yoreo ,3-4240, or Katie Thomas, 2-7903. machine that simulated one of the first experiments on the NIF laser. Presented by Steve Langer, AX Division. 10 a.m., Bldg. 451, room 1025. Contact: Jean Shuler, 3-1909.



PHYSICS & ADVANCED TECHNOLOGIES

"A Surrogate Reaction Technique Benchmark: 92-ZR (alpha, alpha) Surrogate for N+91-ZR," by Jen-

nifer Church, N Division. 1:30 p.m., Bldg. 211, room 227 (badge required). Contact: Florann Mahler, 2-9173.

INSTITUTE FOR SCIENTIFIC COMPUTING

"AntiPatterns in Software Configuration Management," by Juan Hernandez, LLNL. 10 a.m., Bldg. 451, room 1025 (property protection area). Contact: Juan Hernandez, 2-0347, or Leslie Bills, 3-8927.

CHEMICAL BIOLOGY & NUCLEAR SCIENCE DIVISION

Applicant seminar: "On-Chip Separation, Mixing in Microfluidics and Nanogap DNA Junction," by Mingqiang Yi, UC Berkeley. 10 a.m., Bldg. 151, room 1209. Foreign nationals may attend if appropriate security plan is on file, which includes Bldg. 151. Contact: Aleksandr Noy, 4-6203, or Eryn Davis, 2-0475.

STUDENT EMPLOYEE GRADU-

nars/. Refreshments will be served 10 minutes prior to the seminar. Contact: Alice Yamada, 2-4723, or Nancy Wrigley, 3-6287.

CENTER FOR BIOTECHNOLOGY, BIOPHYSICAL SCIENCES & BIOENGINEERING/ BIOSECURITY & NANOSCIENCES LABORATORY

"Plasmons in Metallodielectric Nanostructures," by Peter Nordlander, professor of Physics, Electrical and Computer Engineering, Rice University. 2-3 p.m., Bldg. 123, conference room A. Contact: Thomas Huser, 3-6952, or Rose Gardner, 2-2317.



ENGINEERING /CENTER FOR COMPUTATIONAL ENGINEERING

"Regional Wind Field Classification Employing Cluster

Analysis and Principal Component Analysis," by Lee Glascoe, Ron Glaser and Gwen Loosmore. 10 a.m., Bldg. 235, room 1090 (Gold Room). Contact: Ann Tyler, tyler8@llnl.gov, to obtain the abstract.

INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

"The Youngest Neutron Stars," by David Hefland, Columbia University. Noon, Bldg. 319, room 205. All Attendees need to be badged. Contact: Wil van Breugel, 2-7195, or Rachael Mills, 2-6333.



NANOSCALE SYNTHESIS & CHARACTERIZATION LABORATORY

"Processing and Properties of Metallic Foams," by David C.

Dunand, Northwestern University. 9:30 a.m. Bldg. 235, room 1090 (uncleared area). Contact: Andrea Hodge, 4-3715, or Kathy Silva, 4-2597.

COMPUTATION

Scientists in AX Division recently completed a science run on the LC Thunder



ATE RESEARCH FELLOWSHIP

University Relations Program invites Laboratory scientists,

researchers, post-docs and student employees to attend the fifth annual poster presentation by participants in the SEGRF Program. 3-5 p.m., West Cafeteria. Contact: Joanna Allen, 3-9225.

BIOLOGY & BIOTECHNOLOGY RESEARCH PROGRAM

"Development of a Low Density Array for Gene Expression: Use of Genomic Assays in the Detection of Renal Allograft Rejection," by Ted Rigl, BBRP. 10:30 a.m., Bldg. 361 auditorium. For the complete schedule of seminar speakers, including titles, abstracts and supporting information, visit http://doves.llnl.gov/bbrp_semi-

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

"Performance Prediction and Optimization Using the SDSC PMaC Framework," by Elizabeth Simon, San Diego Supercomputer Center. 10 a.m., Bldg. 451, room 1025 (property protection area). For more information, go to http://www.IInl.gov/casc/calendar.shtml. Contact: John May, (CASC) 3-8102, or Leslie Bills, 3-8927.

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

News of note



Consortium's tree DNA sequencing effort proves poplar

By David Gilbert

An international consortium led by the Department of Energy Joint Genome Institute (JGI) and Oak Ridge National Laboratory has released the first complete DNA sequence of a tree, *Populus trichocarpa*, the Black Cottonwood or poplar, one member of the most ecologically and commercially valuable group of trees in North America.

"The poplar genome sequence will provide researchers with a critical resource to develop faster growing trees, trees that produce more biomass that can be converted to fuels, and trees that can sequester more carbon from the atmosphere or be used to clean up waste sites," Secretary of Energy Spencer Abraham said.

The DOE Office of Science provided a total of \$12 million for the two-year poplar initiative.

Renowned for their vigor, poplars can grow over a dozen feet a year, topping off at 200 feet and six feet in diameter. DOE estimates that by 2050, with improvements in plant productivity and conversion efficiencies, 25 percent of U.S.imported oil could be displaced by plantationgrown trees.

Poplar was chosen as the first tree DNA sequence decoded because of its relatively compact genetic complement, some 40 times



Young hybrid poplar trees.

smaller than the genome of pine. With a genome consisting of more than 480 million letters of genetic code, *Populus trichocarpa* is four times larger than the genome of the first plant sequenced, *Arabidopsis thaliana*, the tiny weedy workhorse for plant molecular geneticists. Rice, the only other plant to be sequenced thus far, is about 430 million bases.

The tree DNA actually sequenced was isolated from a Black Cottonwood specimen collected along the banks of the Nisqually River in Washington State.

"In our initial analysis we found more than 40,000 genes, most related to genes in other plants," said Dan Rokhsar, JGI computational genomics department head. "The trick will be in figuring out how these similar genes have been customized and redeployed in poplar to generate a large woody plant instead of a small weed."

Additional JGI contributors to the poplar project include Nik Putman, Igor Grigoriev, Paul Richardson and Susan Lucas.

The poplar promises to have a role in carbon management by harnessing its built-in mechanism for storing captured carbon dioxide in its leaves, branches, stems and roots. This natural process suggests opportunities to further clean up the air by engineering trees to more effectively shuttle and store more carbon below ground in their roots and the soil.

Ocean algae's genome reveals role in mediating global warming

By David Gilbert

NEWSLINE STAFF WRITER

The Department of Energy Joint Genome Institute (JGI) has generated the first genetic instruction manual of a diatom, from a family of microscopic ocean algae that are among earth's most prolific carbon dioxide assimilators.

This work, published in the Oct. 1 issue of the journal *Science*, has yielded important insights on how the creature *Thalassiosira* pseudonana absorbs the major greenhouse gas CO_2 in amounts comparable to all the world's tropical rain forests combined.

"Now that we have a glimpse at the inner workings of diatoms, we're better positioned to understand the role they and other phytoplankton play in mediating global warming," said Dan Rokhsar, one of the co-authors and head of computational genomics at the JGI. Virginia Armbrust, a University of Washington associate professor of oceanography and the paper's lead author, said that the single-celled diatoms generate as much as 40 percent of the 50 billion to 55 billion tons of organic carbon produced each year in the sea. In the process they use carbon dioxide and produce oxygen.

"We discovered they have

a urea cycle, something no one ever suspected," Armbrust said.

A urea cycle is a nitrogen waste pathway found in animals but has never before been seen in a diatom. Nitrogen is crucial for diatom growth and is often in short supply in seawater.

Only three or four microns in width, as many as 70 *Thalassiosira pseudonana* could fit



A diatom.

frustule as part of their biology, perhaps this could be adapted by humans," Rokhsar says.

There are 46 researchers from 26 institutions working on the project, including JGI's Diego Martinez, Nicholas Putnam, J. Chris Detter, Tijana Glavina, David Goodstein, Uffe Hellsten, Susan Lucas, Mónica Medina, and Paul Richardson.

in the width of a human hair. They are encased by a frustule, a rigid cell wall delicately marked with pores in patterns distinctive enough for scientists to tell the species apart.

"Diatoms can manipulate silica in ways that nanotechnologists can only dream about. If we understood how they can design and build their patterned

CREM Continued from page 1

down and inventory.

Energy Secretary Spencer Abraham ordered the stand-down of all Department of Energy facilities using CREM back in July. DOE laboratories and facilities were ordered to do wallto-wall inventories of all accountable CREM and assess security and inventory procedures before receiving approval for restart.

"We found everything we were looking for," Bookless said.

As part of the process the Laboratory conducted extensive inventories — "counting everything three times to assure everything that needed to be put into accountability is now under accountability." Bookless explained that during the inventory the Lab came across legacy materials that previously were not identified as CREM. They have been entered into accountability.

"It was very thorough search, and in the process we identified a number of ways to sustain our level of confidence in how we handle our CREM."

Bookless will work with Dave Leary, associate director of Laboratory Services, who will appoint a special team to work on continuous process improvements. "We want to make sure that we don't get complacent," Bookless said. "We want to continue to tackle the little details and ensure what we are doing with our CREM is the right thing."

Bookless said the stand-down took the Lab more time than he originally expected, but attributes that to the Lab's own desire for an extensive review. "We wanted to make sure we were consistent and complete with every administrative detail," he said.

Bookless credits the stand-down committee

as well as everyone involved in the inventory processes, particularly the classified administrative specialists (CAS) who worked on much of the inventory and validation. Director Michael Anastasio recently honored each CAS with a special Director's Office award for their efforts.

Bookless also thanked the Livermore Site Office, which worked closely with the Lab to ensure the Lab's approaches to CREM validation were acceptable to headquarters.

"The way everyone pulled together to tackle every detail was fantastic," Bookless said.

Now that the stand-down is almost complete, Bookless reminded all employees to know their classified administrative specialists, to understand the various protocols for handling CREM, to seek out necessary training and to consult Computer Security (2-4655) or the Classified Document Program Office (3-8119) for additional help.



AUTOMOBILES

1995 - Ford Taurus wagon w/third seat. approx. 155,000 miles. Good condition. \$1,500,00, 209-823-8089

1999 - Concorde Sedan 4D.LX.silver.automatic, a/c, all pwr, very clean, very roomy interior,great cond.\$5000. 209-833-1201

1998 - Mercedes Benz ML320, AWD, pwr everything, heated seats, sunroof, tow package, super clean in/out runs perfect, books at 12k, 162k miles, \$9,500. 925-980-9336

1998 - BMW 540i. Silver w/grey leather. Excellent cond., 81k miles, all side air bags, prem. stereo, insp. serv. II done. \$20,000 OBO 925-855-4647

2002 - VW Passat, 1.8L Turbo, auto-all, 34k miles, 32 mpg-H, \$1,800 in extras, custchrome wheels, full warr to 2006, \$18,650 all maint. docs & manuals 209-832-2056

1978 - Chevrolet Monte Carlo. Bad V8 engine, but otherwise generally good condition for age. Lots of potential. \$400 obo. 925-455-0639

1997 - El Dorado, excellent condition, low miles, well maintained, all power, Bose sound, security & extras have to see to appreciate. \$11,500 OBO 510-582-2938

1986 - Covette, red, 82k, original everything, 350cid, auto trans, very clean, runs strong, great body, well cared for... \$8000.00 925-634-0423

1985 - Mazda RX7 GS. 74k miles, good condition. Manual transmission, red. Needs clutch work. First 2k takes it. 209-234-4789

1995 - Camaro, Z28. Has been great car. Kept up well, looks good. 123k miles. Needs engine work. \$3,000. 209-239-0663

1996 - Hyundai Accent, manual, 2 door hatchback, NO AC, smogged, 76K miles, \$2350 209-832-9663

1997 - Dodge Intrepid ES 4dr, V6 3.5L AT, AC, PS, PW, PDL, CC, Dual Power Seats alloy wheels, 63 K miles. \$6400 925-447-8544

2000 - BMW Z3 Convertible. Light blue metallic, beige leather interior, power roof & seat, CD changer, only 36,000 miles, excellent condition \$22,500. 925-292-3363

1997 - Porsche Carrera Cabriolet, 6 speed. 18 in Wheels. 6 CD Changer, Arena Red, Tan Leather, Black Top, 27,000 miles. Garaged, pristine cond. \$43,950 925-964-0599

1965 - 65 Ford Mustang Coupe, 289 Auto, 4 barrel carb, American racing wheels, too many new parts to list. \$3,800.00 OBO 915-980-2965

1991 - Grand Prix GT. Good condition PS, PB, A/C, AM/FM CD, dual power seats, 130,000 miles runs great \$2400 925-455-4849

1993 - Jeep Cherokee SW/4D 6cyl/auto/4WD w/AC/PS/TW/ RoofRack,Towing/Off-road pkgs.AM/FM/Single-CD NEW Tires/Brakes ~135,000 miles,\$3500.00/OBO 925-513-3515

2000 - BMW323i, white, V6, auto, sports package, 85K miles, great condition, one owner, super clean, like new tires. Ask \$15.5K/OBO 925-683-5003

1951 - Ford 2-door sedan/all origial/runs

Classified ads

2821

ANTIQUE-Hoosier-Type Solid Oak Kitchen

Cabinet-1914 Sugar Jar, Porcelein pull out

top. have picts. 1000 OBO 209-823-4609

boxsprings, frame, head and footboard. Solid

California King size bed with mattress,

wood, Serta mattress Excellent condition

Oak dining table and chairs. Pictures avail-

Super single waterbed nice head board and

Silk Lampshades, 2 Brand New and 2 in

Excellent shape, \$75.00 OBO, takes them

almond color, 100% cotton, new, in original

packaging, fits mattress up to 20-inch deep,

SCANDINAVIAN DESIGNS-CherryEntertain-

mentUnit w/TV storage, doors&3drawers,

lighted-glass top sections, extra componet-

shelves.\$285 Picturesvia email 925-382-

Contemporary Dinette Table -- Round

chairs. Best offer. 209-836-9082

smoked glass table top and four comfortable

Light fixtures: flush ceiling fixtures, chande-

liers, wall sconce. All with beveled glass and

gold metal accents. Make an offer. 925-447-

cal king matress/box spring and frame, excel-

lent condition for sale or trade. \$100.00 or

Sofa / Chair - Blue, overstuffed, excellent

condition. Sofa has recliner on each end,

chair is glider-recliner. Sofa \$500, Chair

Twin oak bookcase headboard with frame

with locking top. Excellent cond. Paid \$1200

Pool safety fence; 4 feet tall, 70 feet long, 3

self closing automatic gates, black, excellent

Baby Swing, Kolcraft, toy and music tray, like

Mahogany desk with right return, credenza

with keyboard tray and double bookcase all

in excellent condition. \$250 OBO 209-824-

Lawn edger, Craftsman, Iow mileage, \$40

GE microwave oven, 1.2 cubic ft, 1100

watts. New, still in box \$90. 925-989-8401

Oueen waterbed with frame. Flotation type

with tubes in conventional mattress. Wave-

less, takes regular sheets. Excellent condition

Dishwasher, Mavtag, light use by one person

for 14 years, excellent condition, almond

Full size bunkbed w/futon, silver frame. Full

size mattress and futon pad included. Have

Beautiful small oak china cabinet; lighted top

with beveled glass on doors; storage on bot-

LOST & FOUND

LOST: Steel coffee mug, left in bicycle bas-

ket east of B481 around 1pm 9/10. Approx

logo text: 1369 Coffee House, Cambridge,

MISCELLANEOUS

Snug-Top Camper Shell; Ford or equiv, 8 ft.

Huge multi family GARAGE SALE October

Appliances, furnature, tools, clothes, house-

15 & 16 8AM-4PM @ 926 Alden Lane.

hold, toys, sports, more 925-455-9086

Big Blow Out Plant Sale While Building

long bed, slider window, metallic gray color.

pictures to email. \$300 925-449-1169

tom. Good for small room or apart-

ment.\$350 OBO 209-836-1455

no fenders. 510-683-9433

MA 510-251-2682

\$250 925-443-8869

and mattress. \$50. Solid oak roll top desk

sell for \$500 firm. 925-516-8339

condition. \$800 925-855-0607

new, \$35.00 290-830-9805

OBO, 925-443-9594

\$75.00 925-443-5324

\$25 925-447-7242

\$200. 925-449-4981

nice queen size bedding/comforter 925-961-

all, please call for details. 209-833-5033

Sheet and pillowcase set, queen-size,

\$500.00 obo 925-240-7374

able. \$200 obo. 209-483-8719

drawers b/o. 925-455-8068

\$25.925-447-5623

6663

9160

1920

0820

Used less than 800 miles. Asking \$500 for all or make offer. 925-426-0648

NEW TIRES, four Good Year P185/70R14 \$150 925-449-1340

BICYCLES

2002 Powerlite BMX racing bike.Mint condition.Raced twice. Just like brand new.Ext.2-0498 209-824-1682

Brand new 16 inch boys BMX bike. Still in the unopened box. padding, training wheels, coaster brake. Never opened. \$40.00 obo 925-240-7374

Mens mountain bike. 4 years old. \$75 obo. 209-483-8719

Classic Peugeot 10 speed, \$30. 925-989-8401

BOATS

35 HP electric start outboard Evinrude with gas can. Make offer (925) 766-8233 925-516-2570

2003 Kawasaki STX-12F 3 person jet ski, only 15 hours, good condition. \$6500. 209-823-3744

CAMERAS

Canon EOS 750 QD w/35-80mm EF power zoom, \$100; Canon EOS Rebel Sii w/28-80mm AF, \$125. 925-757-6896

Canon A2E & Rebel G camera bodies + flash & lots of extras! \$700 for everything. 925-381-2034

ELECTRONIC EQUIPMENT

Car stereo system -- includes full range (woffers / tweeters) enclosure and three high power amps. Best offer. 209-836-9082

13 inch black tv. works GREAT! \$40 obo 925-455-0847

GIVEAWAY

6-ft-diam fiberglass spa, redwood siding, almost-new cover, working condition but needs some maintenance, free if u haul. 925-462-5880

Sofa & 2 matching highback armchairs. Solid maroon. Slight wear & tear. You haul. 209-833-1201

Rotwiler Needs Home, Outside Dog, Not Cat Friendly 209-823-6984

Patio table: 48 inch diam. round; green metal frame with glass table top; no chairs. 925-449-0463

Free Computer Accessories. Two 15 inch CRT computer monitors. Work great! 209-835-6556

FREE 21 cu ft freezer. Gibson brand, approx 10 years old. Works great, not frost free so it uses less energy. You haul. 925-449-5543

Dishwasher, Microwave w/ fan, 30 inches above stove type, white, Whirlpool. Sink w/ faucet, 42 inches wide, 3 bowl white, cast iron, chip near edge. 925-373-8297

Friday, October 8, 2004

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

Nursery-1555 Eden Plains Rd, Brentwood. Off Chestnut. Open Sat Sun 8:00 to 4:00 925-240-6311

lawnmower, Honda HR214, gas, runs well,

parts available, \$125 925-837-0516

Band saw, 14in., Enco, 4spd. metal or wood cutting,w/5 extra blades \$170. 209-239-8984

Galileo FS-85 Reflector Telescope with objectives F800mm x 80. With accessories and stand. \$150.00 without accessories \$100.00 obo. 925-240-7374

73-8? Chevy/GMC Truck Bed For Sale. \$150.00 or Best Offer. 925-455-6886

Garage Sale October 9th, Saturday. 4373 Emory Way, corner of Madison. Household items, books, RV stuff. Lots more 925-447-4841

Welder-Lincoln Square Wave 300, TIG.Stick.Pulser.crater fill.AC-DC.Hi-Freq., Water cooled Torch, Stainless Radiator W/brass pump, lots of rod, cups, etc. 925-348-1443

Misc baby items: walking and running strollers. Kelty backpack, car seat, toys, much more. Best offers accepted. 925-855-0607

Beautiful wedding dress, lots of detail, Have photos. Originally \$1300. Sell for \$800 or best offer. 925-989-8401

Ceiling fans 2, Hunter, polished brass with 5 wood grain blades and four lights \$10 each or both for \$18 925-447-7242

MOTORCYCLES

2002 Harley 883 Sportster, 3,200 miles, black and chrome beauty, \$11,000 new, asking \$6,800. 447-8606.

2003 - Motorcycle boots for youth like new just out grew-40.00 209-531-1330

1994 - 1994 Kawasaki KX250, runs great, many extras, \$1,900.00 OBO 925-980-2965

MUSIC INSTRUMENTS

SELMER STUDENT CLARINET, ORIGINAL OWNER, \$250/ OBO. 925-447-4370

Guitar, Lotus Amigo 3/4 size perfect condition with case, \$120 925-484-9028

Peavy HKS-12 Keyboard amp. \$350.00 new 200 watts 12 inch speaker. Nice shape \$200.00 obo. 925-240-7374

PETS & SUPPLIES

Kittens- 2 Cute Tiger Striped Kittens, 10 wks old. Free to good home. 209-824-9966

Chinchillas, born 6/6/04. They are very friendly. \$80.00 each. 925-455-8736

free cat we are moving and she can not gray tiger stripes adult call after 9pm. 209-574-0939

I have many, many rescued kittens looking to be adopted. Adoption fee \$75 includes shots,n/s & deworm. 209-833-0607

Free male Rottweiler. Relocating and cannot take with us. Please call. 510-785-0578

1-1/2 year old male German Shorthair/Lab

\$99.00 obo. 925-240-7374

RELOADING equipment, Misc, call for info or I can email list. \$100.00 OBO takes it all 209-833-5033

RIDESHARING

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

El Cerrito - Berkeley Vanpool has openings for full time or casual riders. M-F 7:45 am to 4:30 pm work schedule. 510-524-5769, ext. 3-7995

Modesto - Vanpool space available, 8-4:30 schedule. Pickup near Pelandale & Sisk. Captain chairs & reading lights. \$118/mo. 209-521-9047, ext. 2-5177

San Jose/Fremont - 14 passenger van needs riders. Leaves San Jose/Berryessa 6:40; leaves Fremont/Mission 7:00; arrives LLNL 7:30; leaves LLNL 4:30. Very reliable. 408-238-1909, ext. 3-3057

SERVICES

Music program for underprivileged children seeks keyboards for music instruction. Will pay \$25 or accept donations. Call 447-2076.

I need an experienced handyman for trim and siding dry rot repairs in Discovery Bay. 925-516-2570

House Cleaning Service, good references and experience.Call now!!! 209-914-4006

Daycare 5 blocks from the LLNL 27 years experience. Ages 16 months and up. 925-443-0408

Tamac Landscapes services-aeration, weed control cleanup&removal,drip-irrig.,sprinkler install/layout/design help F925-550-9999

Electrician to upgrade electrical panel for a Livermore residence. Call after 6:00 pm. 925-449-8328

SHARED HOUSING

Livermore - About 1 mile from LLNL. New 3Bd/2bth house w/Hot Tub. Room w/shared bath. Other roomate rarely home. \$525/mo. includes all utilities. 925-580-2839

Fremont - Sharing with me in a beautiful and clean 4 bedroom/2 bathroom house around Mission San Jose area in Fremont. Close to 680. \$500 a month. 925-249-9186

TRUCKS & TRAILERS

1998 - Chevy 1500, 4X4, 5.7L, AT, Silverado, EC, SB, 3rd door, 4inch lift, 33inch tires, leather, bed liner, good condition, 90k miles. \$13500.00 OBO 209-815-6962

1962 - Ford Ranchero Custom Hot Rod, HOT 289, 5 speed, new interior, tangerine candy with pearl \$9,500 OBO 209-239-6918

1990 - Blazer 4x4, 2 dr, good condition, 131,000 miles, \$2150.00 510-656-1463

1990 - Coleman tent trailer, slps 5, stove, sink \$1,000 925-449-0463

1998 - Fiberglass camper shell for 1998 Ford F 150 insulated tinted windows front slider

great \$12,000 or Best Offer 209-815-1415

2002 - GMC SLT 1500, 2 wheel drive, 20 inch wheel/tires, Fully loaded/Black Leather Dealer serviced 48k miles. Very Clean, \$18K contact Arthur. 707-319-7519

1996 - Honda Accord Coupe EX.5speed,Leather interior CD stacker Full power, AC. 147,000 mi. Tires like new. \$5200 X-24814 925-373-1522

1998 - Nissan Pathfinder LE SUV 4WD, 95K miles. Excellent condition, AC, ABS, leather, dual pwr seats, sunroof, and a lot more for \$9,888. 925-685-4814

AUTOMOBILE ACCESSORIES

Third seat for Ford Explorer, like new. Tan cloth, front/rear facing, seats 3. Seat belts, headrests, and hardware incl. \$795 new, sell for \$350 OBO. 925-757-6896

4 MXV Michelin tires, 225/60/R16 installed to Mercedes Benz S-2001 alloy wheels.

Refrigerator, White.SxS.Frigidaire Elite.clear shelves.great cond. \$200, 209-833-1201

White tubular metal sofabed frame. You add the futon. \$50 firm 925-516-2570

Sofa, biege brush corduroy fabric, newer style, no tears or stains, excellent condition. \$50. 925-803-5804

Maytag Oversized Elecrtic Dryer, 4 years old. \$85.00 obo 925-784-2717

Kitchen Table, White Legs, Wood Top, Expandable, 4 Chairs. One Year Old. \$150/Obo. Picture Avail. 925-447-4370

Oak table w/leaf and 6 chairs \$400, Oak hutch w/light and glass shelves \$300, Oak entertainment center w/lead glass door \$250 925-455-9086

Garage sale 10/8 and 10/9. 258 Amber Way, Livermore. Furniture, household stuff, even the kitchen sink. Rain or shine. 925-443are current. Free! 209-835-1598

Wire dog crates (two) for large dogs, with denim covers and steel floor pans, 28 in. LOST-bicycle on 9/21 parked outside B481 wide, 48 in. long, 27 in. tall. \$140 for both. Big blue 10-spd girlyman bike with wide 925-455-5655 seat, wimpy kickstand, fat whitewall tires and

> free to GOOD/LOVING home, very cute long haired Guinea Pig, 6 months old, very affectionate. Comes with cage and all accessories. 925-961-1920

RECREATION EQUIPMENT

Mini Weber Grill. \$10. 209-833-1201

Redwood play structure with monkey bars two swings, slide, climbing ropes, trapeze and fort. Aproximately 20 ft.x 10 ft. \$950. Jerry 925-648-8004

Foosball table + 3 balls. Great condition. \$50 firm. 925-381-2034

Dyna-glo Mini outdoor patio heater. New, in original box never opened. \$150.00 new,

rear tail light clamps included nice shape 400.00 209-531-1330

Chevy Truck Bed 73-8? \$150 or Best Offer 925-455-6886

1989 - 1989 Ford Ranger Super Cab, V6, 5 speed, tow package, AC/PS sliding rear window, bed liner, \$1,600.00 OBO 925-980-2965 925-980-2965

1996 - Dodge Ram 1500 Laramie SLT. Black with matching fiberglass camper shell. Low miles. Excellent condition. Price reduced. \$9500 OBO. Call after 6 PM. 209-830-0112

VACATION RENTALS

Nice mountain cabin near Arnold. 4 bedr, 2 bath, cozy wood burning stove. Lots of snow in winter. Plan ahead for the holidays. 925-245-1114

Soooo cute beach cottage in Santa Cruz. 2 bedr, 2 bath, spa, fully equipped kitchen. 4 blks from ocean, near harbor. 925-245-1114

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

HOMELAND SECURITY

Continued from page 1

Economic Forum (BAEF) and the Bay Area Science and Innovation Consortium (BASIC). It attracted about 150 emergency professionals, health officers, state homeland security officials, business representatives and others.

"The national labs are set up to think about threats five to 10 years out," said Don Prosnitz, deputy director for LLNL's Homeland Security Organization.

His assessment was seconded by Rick Stulen, the director of the Exploratory Systems and Development Center at Sandia Livermore.

"One of the things that the national laboratories represent, or bring to the table, is the anticipation of what we're going to need tomorrow, not just what we have today."

Prosnitz and Stulen were joined on the national laboratory technology panel by Piermaira Oddone, deputy director of Lawrence Berkeley National Laboratory, and Peter Friedland, chief technologist at the NASA Ames Research Center.

In his presentation, Prosnitz highlighted an LLNL research initiative that, if successful, could help counter engineered biothreats, and discussed the challenges of identifying individuals.

The research initiative under way — called pathomics — may allow a rapid diagnosis of infection one to two days after exposure, rather than waiting days or weeks for symptoms to appear.

"With biology, when we actually know what's happening, with advanced medicine, we can often treat people," Prosnitz told the audience. "We've seen that with anthrax." As of the end of September, the United States has started fingerprinting people who enter the country using passports (visa-waiver countries).

"The first question people ask is: You don't have fingerprints of the terrorists, so why are you doing the fingerprinting," Prosnitz noted.

"Over the long course of time, we'll end up with lots of fingerprints. This will prevent people from being able to change their identities, or assume multiple identities."

Since there are some 500 million visitor entries into the United States every year, Prosnitz emphasized that whatever system is adopted needs to work very rapidly, or there will be huge backups.

The threat, status and challenges of another important homeland security area — detecting explosives — were examined by Stulen. He noted the widely different scales of impact from conventional and nuclear explosives.

One of the largest vehicle bombs, at Oklahoma City, killed 168 people and injured 400 to 600. By contrast, 80,000 people died at once at Hiroshima, with another approximately 150,000 succumbing in the later months and years, Stulen said.

The three faces of today's explosive threats, he said, are suicide bombers that kill tens of people; large vehicle bombs, such as the ones that hit the USS Cole and Oklahoma City; and remotely detonated devices, where the perpetrators remain 100 to 200 yards from the device that they activate.

Two of the principal problems with explosives are that they are easy to obtain and difficult to detect, according to Stulen.

"Our biggest problem, as we look to the future, is the standoff detection of explosives, that is being able to detect at a distance of 10 meters or more," Stulen said.

NASA Ames' Friedland described how his laboratory had created a Disaster Assistance Response Team (DART) for helping rescue people in collapsed buildings. The team, Friedland said, provided assistance in the Oklahoma City and September 11 rescue efforts.

In May of this year, NASA Ames held a oneweek workshop on collapsed structure responses for technologists and emergency responders that attracted about 60 people.

One of nine serious technology candidates to emerge from the workshop, according to Friedland, was LLNL's micropower impulse radar (MIR), which can detect the motion of breathing through thick materials, including reinforced concrete.

The panel's moderator, Paul Saffo, a director at the Menlo Park-based Institute for the Future, also offered his thoughts on the Livermore MIR technology.

"LLNL (has) created an astounding technology — micropower impulse radar. I'm sure none of you woke up this morning feeling my life is incomplete without a personal radar. But if you're an emergency response professional, it is. Imagine a pocket-sized radar that can let you look through walls or do medical diagnostics."

Saffo also pointed out that people in the Bay Area tend to overlook the "extraordinary firepower intellectually" of the area's three Department of Energy national labs.

Tuesday's conference included three other sessions: "National Priorities and Local Security: The Changing Federal Role," "Building State and Regional Preparedness," and "Crisis Management: Leveraging Public and Private Resources."

FLU

Continued from page 1

early this year. Distribution of vaccine from the other U.S. vaccine manufacturer — Aventis — has been put on hold by the U.S. government. Health Services has requested 3,500 doses of vaccine from Aventis and is awaiting word of its possible release. HSD will keep Lab staff updated as more information is provided.

According to the U.S. Department of Health and Human Services: "Our immediate focus will be on making sure that the supply we do have reaches those who are most vulnerable. We will need the help of the public, the public health community and the medical community to make sure that the vaccine goes to those who truly need it most."

Because of this urgent situation, the Centers for Disease Control (CDC) has issued interim recommendations for influenza vaccination during the 2004-05 season. These interim recommendations take precedence over earlier recommendations. See www. cdc.gov/flu for details on these recommendations, as well as other flu-related information.

Priority groups for influenza vaccination

The following priority groups for vaccination with inactivated influenza vaccine this season are considered to be of equal importance:

Other sources of flu vaccine

Because of the uncertainty of vaccine availability, Dr. Jim Seward, Lab medical director, encourages LLNL staff who fit within the new CDC recommendations to obtain vaccine wherever they can, including through their health plans or local clinics. However, since local clinics may be facing a shortage of vaccine as well, you may want to call in advance for vaccine availability. Check Maxim Health Systems Website http://www.maximflu. com/ for the locations of flu clinics in your area.

Health Services is available to answer questions and provide additional information at 2-7459.

• Residents of nursing homes and long-term care facilities.

• Children aged 6 months-18 years on chronic aspirin therapy.

• Health-care workers involved in direct patient care.

• Out-of-home caregivers and household contacts

Intranasally administered, live, attenuated influenza vaccine, if available, should be encouraged for healthy persons who are aged 5-49 years and are not pregnant, including health-care workers (except those who care for severely immunocompromised patients in special care units) and persons caring for children aged under 6 months. Note: LLNL had not planned to dispense FluMist because it is only indicated for a small percentage of our population.

Certain children aged under 9 years require two doses of vaccine if they have not previously been vaccinated. All children at high risk for complications from influenza, including those aged 6-23 months, who present for vaccination, should be vaccinated with a first or second dose, depending on vaccination status. However, doses should not be held in reserve to ensure that two doses will be available. Instead, available vaccine should be used to vaccinate persons in priority groups on a first-come, first-serve basis.

Vaccination for non-priority groups

Persons who are not included in one of the priority groups described above should be informed about the urgent vaccine supply situation and asked to forego or defer vaccination.

Who should not receive influenza vaccine

Persons in the following groups should not

• All children aged 6-23 months (new guideline this year).

• Adults aged 65 years and older.

• Persons aged 2-64 years with underlying chronic medical conditions.

• All women who will be pregnant during the influenza season.

of children aged under 6 months.

Other vaccination recommendations

Persons in priority groups identified above should be encouraged to search locally for vaccine if their regular health-care provider does not have vaccine available. receive influenza vaccine before talking with their doctor:

• Persons with a severe allergy (i.e., anaphylactic allergic reaction) to chicken eggs.

• Persons who previously had onset of Guillain-Barré syndrome during the six weeks after receiving influenza vaccine.

SOUTH LAKE TAHOE - 3Bedroom 2 Bath Chalet, comfortably furnished, all amenities, Enjoy fall colors in Tahoe!!Off-Season Rates! RESERVE NOW! 209-599-4644

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

Truckee Tahoe Donner - ski cabin group has openings. \$625 per person, unlimited

access. Thanksgiving - April 30. Call for additional information 925-447-0596

Solana Beach/Del Mar - Oceanfront condo, deluxe 2 br., 2 1/2 ba., fully equpied, tennis, pool, jacuzzi, gated and covered parking, near San Diego attractions. 925-443-2271

Shaver Lake - Mountain house, sleeps 10 comfortably. \$200 night, gameroom, pool table, snow, water ski fishing. pictures available 510-909-3861 WANTED

Moving help - strong person with truck to move tradmill, couch, big bookcase Milpitas to Livermore. 408-930-6175

Are you remodeling? I need Kitchen Cabinets in good condition. All sizes. 925-550-3809

Need inexpensive (cheap) Bass amp for weekend warrior jam sessions, does your

amp need a new home? Call me! 209-832-3069

24 foot extension ladder 925-513-7416

Golf Clubs -- your broken-in 3,5 fairway woods now sitting in the garage. 510-486-8750

Seeking versatile, experienced vocalist for newly formed music group. Stylistically, think Steely Dan meets the blues w/ horn section. 925-634-3357 Recumbent 2 wheel bicycle for 6 foot 220 pound person. 925-829-5975

Do you have a Apple G4 in good condition at a resonable price. Please give me a call at 209-234-2314

Tutor needed for my son who is 14y old in 8th grade. High school student is okay. 925-449-1340

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

Greenville to close for 10 months starting Monday

Greenville Road will close to through traffic beginning Monday, Oct. 11, south of the National Drive intersection and north of the Marathon Drive intersection

The closure facilitates a City of Livermore construction project to widen Greenville Road and replace the Union Pacific Railroad bridge. However, there will be no anticipated effect to ACE train schedules.



To minimize traffic delays caused by construction detours on Greenville Road, Livermore and Sandia employees should choose alternate commute routes and allow 20-30 minutes additional commute time to get to and from the labs during construction.

Livermore traffic engineers advised that traffic will remain unsettled for the first two weeks of the closure

and detour, as commuters experiment with

alternate routes.

Employees should plan their workdays, medical appointments, day care pick-ups and drop-offs and other commute-related endeavors accordingly through next August.

The City of Livermore offers updates on the project at http://www.ci.livermore. ca.us/ eng/roadwork.html#Greenville.

See the Oct. 1 edition of Newsline for alternate routes.

HYDROGEN

Continued from page 1

intermolecular interactions in the fluid phase, occurring at high pressure."

The team's calculations not only predict a maximum in the melt line, but also provide a microscopic model showing its physical origin in changes in the intermolecular interaction significantly different from earlier models. Based on their new understanding for the physics behind the melting of hydrogen, the researchers are able to propose new experiments to measure the solid-liquid phase boundary.

The calculated melt curve of hydrogen is between 500,000 atmospheres and 2 million atmospheres of pressure. Above about 800,000 atmospheres of pressure, the melt line goes from a positive to a negative slope — a phenomenon that is related to a softening of the intermolecular interactions and to the fluid and solid becoming very similar in structure and energy at high pressure. This change from a positive to a negative slope is gradual and is not directly related to molecular disassociation, as previously speculated.

"Our results provide strong evidence toward the existence of a low-temperature quantum fluid in hydrogen," Bonev said. "The existence of a maximum melting temperature is a unique physical phenomenon in a molecular solid with a close packed structure."

The simulations carried out by the Livermore team are very complex and sophisticated, and required the use of large-scale parallel quantum simulation codes, such as the LLNL GP ab-initio molecular dynamics code, written by Francois Gygi in the Computation Directorate.

S&T

Continued from page 1

cessing methods and tooling that produced both the world's largest multilayer dielectric reflection grating and the world's highest laser damage-resistant gratings. This technology provides

optics for high-energy, short-pulse lasers. Until this breakthrough, no gratings were available for any of these lasers. Britten's team included Hoang Nguyen, Thomas C. Carlson, Leslie M. Jones, Leslie J. Summers, Curly R. Hoaglan, Michael D. Aasen, James D. Nissen and James E. Peterson.

Another team led by Guilia Galli was



selected for their discovery of Bucky-diamond and unraveling the atomic structure of silicon and germanium nanoparticles. The research focuses on how the properties of materials change as they are squeezed and made smaller. Galli believes that this research can lead to the use of nanoparticles to sense the environment. Other members included Jeffrey C. Grossman, Anthony W. Van Buuren, Andrew J. Williamson, Louis J. Terminello, and Francois Gygi.

Established in 2000, the Lab's Science & Technology Awards are given annually for notable achievements in science and technology. As part of the annual institutional awards program, the recognition brings with it a monetary award and memorabilia presented to individuals selected by senior management.





Above, from left to right: James Nissen, Leslie Jones, Hoang Nguyen, James Peterson, Jerry Britten, Tom Carlson, Michael Anastasio, Curly Hoaglan, Leslie Summers and Mike Aasen.

-ivermore, CA 94551-0808 PO Box 808, L-797 Newsline **UC-LLNI**