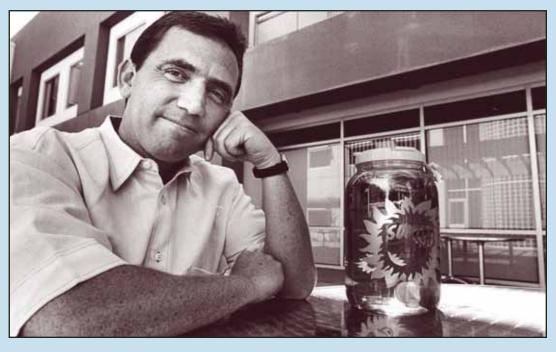


Published weekly for employees of Lawrence Livermore National Laboratory

Friday, October 7, 2005

Vol. 30, No. 39

Santer recognized for climate work



Climate scientist Benjamin Santer recently won the Office of Biological and Environmental Research Program's Distinguished Scientist Fellowship.

By Anne M. Stark

NEWSLINE STAFF WRITER

Human-induced climate change is likely to be one of the major environmental problems of the 21st century, and effective policies to mitigate human effects on climate will require sound scientific information.

Providing that information is what climate scientist Benjamin Santer hopes to continue doing as the Lawrence Liver-more National Labor- atory's winner of the Office of Biological and Environmental Research (BER) Distinguished Scientist Fellowship.

Santer, who is well renowned in the climate change research community and has contributed to several reports of the Intergovernmental Panel on Climate Change, has worked in the Laboratory's Program for Climate Model Diagnosis and Intercomparison (PCMDI) for 13

See SANTER, page 3

Real-time biodetection and NIF early light teams earn science and technology awards

By Anne M. Stark

NEWSLINE STAFF WRITER

A group of researchers that developed a device that can identify harmful biological particles in real time and the team that achieved the National Ignition's early light are this year's winners of the sixth annual Laboratory Science and Technology Awards.

Laboratory Director Michael Anastasio and Deputy Director for Science and Technology Cherry Murray handed out the awards Monday during a ceremony and reception in the Bldg. 453 auditorium.

"I really believe in the Science and Technology Awards," Anastasio said. "This is a wonderful way to give recognition across the Laboratory for truly outstanding accomplishments. It's an opportunity for us to say thank you from the Laboratory for the hard work you do. You are the ones who are out in front and make real things happen."

Established in 2000 by then-director Bruce Tarter and then deputy director for science and technology, Jeff Wadsworth, the Lab's Science and Technology Awards are given annually for notable achievements. Recipients are selected by the senior management and in addition to recognition, receive a monetary award and memorabilia.

The group led by principal investigators Eric Gard of Chemistry and Materials Science's Chemical Biology and Nuclear Science Division, Matthias Frank of the Physics and Advanced Technologies' M Division and Engineering's Vincent Riot, developed

See S&T AWARDS, page 7

Lab starts FY06 under continuing resolution

As reported in *NewsOnLine* earlier this week, the Lab has begun FY2006 under a continuing resolution that funds operations through Nov. 18.

"We've been here before," said Director Michael Anastasio. "This continuing resolution allows for funding of ongoing DOE/NNSA total operations at a rate of spending that's somewhat lower than the 2005 budget and our proposed 2006 budget," he said.

Should the budget not be established by Nov. 18, Congress will provide another continuing resolution to continue operations.

"There are still a number of federal budget questions pending that will need to be resolved in conference. But now, with the federal aid that will

See BUDGET, page 8

Stargazers unify observation effort

By Anne M. Stark

NEWSLINE STAFF WRITER

Amateur stargazers were vital to a recent mission of LLNL astrophysicists Christopher Mauche, Duane Liedahl, Diego Torres and a group of professional astronomers when they made an intensive series of multiwavelength observations of

the mysterious binary star system AE Aquarii.

In a binary star system, two stars orbit each other around a mathematical point called the center of mass. In the AE Aquarii binary, the stars are a normal low-mass star like the sun and



A magnetic cataclysmic variable star system.

white dwarf.

The unique features of AE Aquarii are the extreme properties of its white dwarf, whose spin

See ASTRONOMERS, page 8

a white dwarf, a compact star

with a mass comparable to

that of the Sun and a radius

comparable to that of the

Earth. The two stars are so

close together in AE Aquarii

that the orbital period is just 10

hours. The low-mass star is

distorted by the gravity of the

white dwarf into a tear-drop

shape and plasma flows out of

the low-mass star toward the

Retiree tours

- Page 2



DDLS provides view of the dark side

— Page 3



HOME prepares for record run

− Page 5

2 Newsline Friday, October 7, 2005



Lab community news

Weekly Calendar

Technical Meeting Calendar, page 4



The 2005 HOME (Helping Others More Effectively) Campaign will sponsor the fourth "At HOME in the Community" activity

from 9-11 a.m. at the Tracy Animal Shelter, 370 Arbor Road, Tracy, where "People for Pets" and volunteers will walk dogs. For more information, call Chelle Clements, 3-8134.



Physicist J. Anthony "Tony" Tyson will deliver a **Director's Distinguished Lecturer Series** presentation entitled "Petabytes from the Sky: The Puzzle

of Dark Energy," at 3:30 p.m. in the Bldg. 123 auditorium. The presentation will be rebroadcast on Lab TV Channel 2 Thursday, Oct. 20, 10 a.m., noon, 2, 4, and 8 p.m. and Friday, Oct. 21, 4 a.m. See page 3 for more information.

In celebration of the World Year of Physics 2005, DOE's Office of Science is co-sponsoring a television docudrama, "Einstein'a Big Idea," from 8-10 p.m. on PBS (KQED), with repeat broadcasts on Oct. 13 at 3 a.m. and Oct. 16 at noon. The NOVA presentation, based on David Bodanis' bestseller, "E=mc²" examines the 100-year history of the world's most famous equation and the countless ways it has changed the world. For more information, go to the Web at www.pbs.org/nova/emc²



The "Run for HOME" kicks off the Lab's annual HOME Campaign at noon. The race starts at the Z-3 parking area west of Bldg. 132. The HOME

Fair features agencies listed in the campaign and takes place from 11:30-1:30 in parking lot Z-1. All employees are welcome. For details and a map, see page 5.

RETIREES' CORNER

Art Krakowsky Engineering, 1993) and wife Carol took two granddaughters on a two-week Elderhostel tour of Greece, followed by a five-day home stay. They toured with 14 other grandparents and 16 other 13-15-year-old grandchildren. The tour included lectures, dance lessons and a sampling of all sorts of wonderful Greek food and music. The grandchildren performed an ancient play written by Aristophenes. The tour included many famous archaeological sites and museums including Athens, Olympia, Delphi and Thessaloniki. Most participants climbed Mt. Olympus (home of the Greek gods) and the group ended the tour with four days

eral Greek islands.

Ron (Mechanical Engineering, 1990) and Barbara (Mechanical Engineering, 1993) Hill have been volunteers at the Lab's blood drives for the past five years. They are

aboard nine sailboats, cruising, swimming and visiting sev-

tremendously impressed to know that Lab employees donate more blood than any other organization in Northern California. (Sign up now for the drive scheduled for Oct. 10-13 in the old Central Cafe). Barbara coordinates more than 30 retirees who help as greeters and in the canteen. Ron fills in wherever and whenever he is needed.

Garith (Mechanical Engineering, 2002) and **Amy** (Laboratory Services, 2002) **Helm** spent 10 days in France with Amy's dad, Frenchie Allec (Procurement, 1990) and

her stepmom, Marie. It was the first time Frenchie had been to the country of his parents' birth. They took a river cruise along the Rhone, through Provence for eight days, touring sights where van Gogh painted, quaint villages and gothic cathedrals along the river, learning the history of the region and doing some winetasting in Burgundy. Frenchie met several people who were familiar with the town his parents were from and was able to converse in French with them. They went through 15 locks on the river between Arles and Lyon, which also made the cruise very interesting. After the river cruise, they spent three days in Paris, attended mass at Nortre Dame Cathedral and saw the major sights of the city. One evening, Garith and Amy came across a carnival near the Louvre. They rode the Ferris wheel and were able to see the Eiffel Tower all lit up when they stopped at the top — quite spectacular. Everywhere they went the French people were warm and welcoming.

Margie O'Dell will be setting up the schedule for next year's (January through June) retirees travel group. She would like retirees to volunteer to present a program or to suggest someone. They may call her at (925) 449-7262 or e-mail her at mardon4308@comcast.net.

There will be no retiree luncheon in October because of the dinner/dance being held at the new Livermore Community Center on Saturday, Oct.15 (happy hour 6 p.m., dinner 7 p.m.). Retiree association members should have received a letter announcing the dinner/dance.

Please send any input to Jane or Gus Olson. E-Mail: AugustO@aol.com or JaneRubert@aol.com. Phone: (925) 443-4349, snail mail address: 493 Joyce St., Livermore, 94550

IN MEMORIAM

Jon B. Bryan

Jon B. Bryan, a 37-year resident of Livermore, died Sept. 27, after a battle with cancer. He was 64.

Bryan was born Nov. 9, 1940, in Scott City, Kan. He graduated from Kansas State University in 1968 with a doctorate in physics. He worked at the Laboratory and retired in 1993, after 30 years of service.

He is survived by his wife of 31 years, Gail Livermore, 94551, or t (Voelker) Bryan; his brothers, Joel Bryan of Scott City, Road, Martinez, 94553.

Kan., and Tom Bryan of Ireland; his father, J. Arthur Bryan of Scott City, Kan., and numerous nieces, nephews and cousins.

Burial will be at Scott City Cemetery in Kansas at a later date. Donations may be made to the Livermore Amador Genealogical Society, P.O. Box 901, Livermore, 94551, or to Kaiser Hospice, 200 Muir Road, Martinez, 94553.

Gloria Jean Glasscox

Retired Laboratory employee Gloria Jean Glasscox died Sept. 12. She was 63.

Glasscox was born in Dayton, Ohio, on March 21, 1942. After graduating from high school, she moved to the Bay Area. She was active in the community and established Clorox's Youth Center and numerous theatrical and dance groups throughout the East Bay.

In 1983, she moved to Pleasanton. She received and father Tomansina and Arthur Lumpkin; an her bachelor's degree from the University of San Betty Charles. Services were held in Oakland.

Francisco and was employed by the Lab as a quality assurance engineer until she retired. Later she pursued a career as a realtor.

She is survived by her daughter, Pamela Rene Hall; son-in-law David Hall; three grandchildren, Michele Beacham, Timothy Ross Jr. and Anna Marie Bell; and six nieces and nephews. She was preceded in death by her husband Benjamin Glasscox, mother and father Tomansina and Arthur Lumpkin; and sister Betty Charles. Services were held in Oakland.

LAB TV broadcasts

For information about Lab TV broadcasting and video production, contact LLTN, 3-3846.



MONDAY- FRIDAY, OCT. 10-14

To help kick off the Laboratory's annual charity drive, the HOME Campaign will broadcast programs from local United Way organizations; the Tri-Valley Community Fund; and the Habitat for Humanity, featuring Lab participants.

- "Celebrate Living," United Way of Stanislaus County.
- "Habitat for Humanity," news coverage of Lab participants.
- "The Big Picture," "Think Again," "Discovery" and "Show and Tell," United Way of America. "Tri-Valley Community Fund."

For more information on the HOME Campaign, see: http://home.llnl.gov/index.html

These programs will appear on Lab TV Channel 2, 4 and 7 at 10 a.m., noon, 2, 4 and 8 p.m. and 4 a.m.

Newsline

Newsline is published weekly by the Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.

Contacts:

Media & Communications manager: Lynda Seaver, 3-3103

Newsline editor: Don Johnston, 3-4902

Contributing writers: Bob Hirschfeld, 2-2379; Linda Lucchetti, 2-5815; Charles Osolin, 2-8367; David Schwoegler, 2-6900; Anne M. Stark, 2-9799; Stephen Wampler, 3-3107. For an extended list of Lab beats and contacts, see http://www.llnl.gov/pao/contact/

Photographer: Jacqueline McBride Designer: Julie Korhummel, 2-9709 Distribution: Mail Services at LLNL

Public Affairs Office: L-797 (Trailer 6527), LLNL, P.O. Box 808,

Livermore, CA 94551-0808

Telephone: (925) 422-4599; Fax: (925) 422-9291 **e-mail:** newsline@llnl.gov or newsonline@llnl.gov

Web site: http://www.llnl.gov/pao/

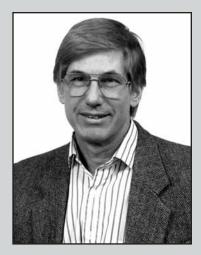
Friday, October 7, 2005

DDLS looks to the dark side of the universe

Physicist J. Anthony "Tony" Tyson will deliver a Director's Distinguished Lecturer Series presentation entitled "Petabytes From the Sky: The Puzzle of Dark Energy" at 3:30 p.m. Tuesday, Oct. 11 in the Bldg. 123 auditorium.

Tyson, a distinguished professor of physics at the University of California, Davis, is an experimentalist interested in gravitational physics. His current research is in cosmology: dark matter distribution, gravitational lens effects, cosmic shear and the nature of dark energy. These investigations use software for pattern recognition, detection of transients in images, large database handling and processing, and new instrumentation for optical astronomy.

Tyson directs the national effort to build a new facility — the Large Synoptic Survey Telescope



J. Anthony "Tony" Tyson

(LSST) — a new kind of telescope-camera. The LSST will sharply probe the physics of dark energy and will create hundreds of petabytes of data. The required automated image analysis of this large database presents exciting technical challenges. With its large aperture and wide field of view, LSST promises to shed light on mysterious dark energy, considered to be the most urgent issue in the physics of our universe.

Tyson will discuss recent images of dark matter and the excitement about his group's exploration of the Universe's dark side.

The presentation will be rebroadcast on Lab TV Channel 2 Thursday, Oct. 20, 10 a.m., noon, 2, 4, and 8 p.m. and Friday, Oct. 21, 4 a.m.

For further information http://www.physics.ucdavis.edu/Cosmology/Cosmology_Group.html

Complex-wide facilities meeting

Bruce Scott, associate administrator of the National Nuclear Security Administration's Infrastructure and Environment program, visited the Lab this week as a sponsor of the first annual Energy Facility Contractors Group (EFCOG)/ Infrastructure Management Working Group (IMWOG) meeting.

About 100 facilities management representatives from across the Department of Energy complex gathered in the Bldg. 123 auditorium to hear panel discussions on such topics as performance measures, innovations in alternate financing, improving work management and optimizing safety integration, and strategic initiatives in real property management.

Denise Robinson, the Lab's institutional facilities manager, hosted the meeting, stating that LLNL was proud to



National Nuclear Security Administration's Bruce Scott sponsored and attended the first annual EFCOG/ IMWOG meeting at the Lab this week. Denise Robinson, the Lab's institutional facilities manager, hosted the DOE-wide information exchange for some 100 participants.

organize the first event bringing together facilities managers to share best practices and exchange information.

New resource on Web for learning about ISMS

A new Environmental Management System (EMS) Website (http://www-epd.llnl.gov/ems/index.htm) is now available. The site is a resource for employees to learn about the integration of the Laboratory's Integrated Safety Management System (ISMS) with ISO 14001, an international environmental management standard, and their own roles and responsibilities under the integrated EMS.

Bill Bookless, associate director for the Safety and Environmental Protection Directorate, recently discussed the EMS and ISO 14001 in a *Newsline* column "Adopting this standard is an important step for the Laboratory to maintain an environmental management program consistent with DOE-approved parameters, which is necessary under the UC-DOE contract," Bookless said. "Laboratory employees should be aware of how the EMS will help us enhance our role as good stewards of the environment while supporting our work activities."

Bookless and Ellen Raber, head of the Environmental Protection Department, encourage all employees to visit the Website, which presents a variety of EMS-related information, including the LLNL Environmental Policy, information on roles and responsibilities, a glossary of EMS terms, links to ES&H and pollution prevention resources and an EMS "helpline."

The site will receive frequent updates over the next several months as information and tools supporting the EMS are compiled.

SANTER

Continued from page 1

years, which, in his words, has given him "the opportunity to work together with world-class scientists at a world-class research institution.

"Any success I've had over the years is largely due to the success of PCMDI as a whole," Santer said. "I would hope that this award could be used to enhance our group's capabilities."

Santer will receive \$1.25 million over five years contingent on his continued employment at Lawrence Livermore. Santer was selected following external peer review of applications based on: evidence of sustained scientific excellence; significant scientific achievements; number of publications; research relevance to programmatic goals in BER; and recommendations from individuals at non-affiliated institutions.

This is the first year that the Department of Energy's BER program is handing out fellowships. The fellowships are given out in four divisions: climate

change research, environmental remediation sciences, life sciences and medical sciences. One scientist from each division is honored this year.

"Human-induced climate change will be one of the major problems confronting our nation — and the nations of the world — in the 21st century," Santer said. "Ideally, governments will use the best-available scientific information to make rational decisions on appropriate policy responses to the climate change problem. The fellowship represents a tremendous opportunity to advance climate change research at the Laboratory."

Santer received the award in the climate change research category. He is one of the world's leading scientists in the identification of human caused climate change in both observations and climate model simulations. "His work is marked by its depth and insight, and he is known for thoroughly exhausting all avenues in his pursuit of a solid answer or conclusion," the citation reads.

His achievements include:

• Pioneering use of novel pattern-based statistical techniques, called "fingerprint" methods, to identify

human-caused changes in greenhouse gases and sulfate aerosol particles in observational surface temperature records.

- Analysis of tropospheric temperatures and the height of the stratosphere-troposphere boundary, showing that accurate model simulations of climate change require inclusion of radiative forcing from human activities.
- Contributions to the periodic Scientific Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC).

"I believe that climate change will be a significant problem for our country," Santer said. "The national labs are the right place to do integrated science research. I'm really honored that DOE considers me worthy of this award. I consider it an award not only for myself, but for my colleagues at PCMDI and at research institutions around the world."

In his career, Santer has received several honors, awards and fellowships, including the "Genius Award" by the MacArthur Foundation and the E.O. Lawrence Award.

4 Newsline Friday, October 7, 2005



News you can use

Hula-la



Hula teacher Teresa Kamakea attempts to prove that nearly anyone can master this Polynesian dance form, using a cross section of DNT employees during the directorate's annual picnic and awards ceremony on Wednesday at May Nissen Park in Livermore.

*** Technical Meeting Calendar ***

Friday 7

INSTITUTE FOR GEOPHYSICS AND PLANETARY PHYSICS

"Halo Substructures," by Christopher Kochanek, Ohio rsity. Noon, Bldg. 219, room

State University. Noon, Bldg. 219, room 163. Property protection area. Foreign national temporary escorted building access procedures apply. Contact: Wil vanBreugel, 2-7195, or Lisa Lopez, 3-0250.

LIVERMORE PROJECTS COMMITTEE

"Uranium Processing Facility Project at the Y-12 Plant," by Daryl L. Boyer, LLNL. "Neutron Generator Output Measurement Issues," by David Walsh, SNL/NM. 8:45 a.m., Bldg. 132 auditorium. All attendees must have a SP access card or obtain special approval to attend this meeting. For LLNL, contact Barbara Sherohman, 3-6379, with any SP access questions. For SNL, contact Ann Stayton, 294-2582, with any SP access questions. Property protection area. No temporary building access for foreign nationals. Contact: Scott Couture, 3-4100, or Frances Mendieta, 3-7825.

CHEMISTRY AND MATERIALS SCIENCE

"Structural Studies of Bacterial Transcriptional Regulators: Protein Mechanics of Sigma54 Activators," by David Wemmer, Department of Chemistry, UC Berkeley. 2 p.m., Bldg. 151, room 1209. Property protection area. Foreign national temporary escorted building access procedures apply.

Contact: Julio Camarero, 2-6807, or Kathy Ricard, 3-8024.



INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH (ISCR)

"ForNet: A Distributed Network Forensics System," by Nasir Memon, Polytechnic

University, Brooklyn. 10 a.m., Bldg. 451, room 1025, White Room. For more information, go to http://www.llnl.gov/casc/calendar.shtml.Property protection area. Foreign national temporary escorted building access procedures apply. Contact: Rao Vemuri (ISCR), 2-9167, or Erica Dannenberg, 3-2167.

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH (ISCR)

"Stable MHD Discretizations," by Timothy Barth, NASA Ames Research Center. 2:30pm, Bldg. 451, room 1025. For more information, go to http://www.llnl.gov/casc/calendar.shtml. Property protection area. Foreign national temporary building access procedures apply. Contact: David Keyes, 2-1325, or Erica Dannenberg, 3-216.



LIVERMORE COMPUTING/ DEVELOPMENT ENVIRONMENT GROUP

"TotalView 7 and 7.1 Presentation and Q&A

Session," by John V. DelSignore, Etnus, LLC. 9:30-11:30 a.m., Bldg. 453, room 1001. Refreshments available at 9 a.m. Common use facility. Foreign nationals may attend. Contact: Matt Wolfe, 4-6674.



PHYSICS AND ADVANCED TEHNOLOGIES/ N DIVISION

"Europium Neutron-Capture Cross Section and Statistical Properties of Gamma-Ray Cascade," by Undraa Agvaanluvsan. 1:30 pm, Bldg. 211, room 227. Property protection area. Foreign national temporary escorted building access procedures apply. Contact: Undraa Agvaanluvsan, 3-1356, or Pat Smith, 2-8210.



INSTITUTE FOR GEOPHYSICS AND PLANETARY PHYSICS

"The Smallest Massive Black Holes," by Aaron Barth, UC, Irvine. Noon,

Bldg. 219, room 163. Property protection area. Foreign national temporary escorted building access procedures apply. Contact: Bob Becker, 3-0664, or Lisa Lopez, 3-0250.

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

Please submit your meetings through the Technical Meeting Calendar form on the Web, located at http://wwwr.llnl.gov/tmc/index.html

For information on electronic mail or the newsgroup llnl.meeting, contact the registrar at registrar@llnl.gov.

Top 10 reasons why YOU should attend the Run for HOME

- 1. Do not arouse the wrath of the great and powerful Oz.
- 2. Don't get stuck in Kansas; go to the HOME run.
- 3. The HOME run is a place where there isn't any trouble. It's not a place you can get to by a boat or a train. It's far, far away, behind the moon, beyond the rain, over in the Z-1 parking lot.
- It takes the courage of a lion to wear a costume in front of your co-workers.
- Don't wile away the hours, conferring with the flowers, consulting with the rain.
- Use your brain; go to the HOME run.
- 7. It takes a heart to help others.
- The lions and tigers and bears will get you. Oh my!
- You don't want to be turned into a flying monkey, do you?
- Pay no attention to that man behind the curtain; go to the HOME run.

Run for HOME times to remeember

11:30 a.m. Race participants gather

Noon **Race begins**

11:30 a.m.-1:30 p.m. HOME Fair open

12:25 p.m. Race awards given



Wednesday, Oct. 12

Campaign looks to HOME run

ach year, the Laboratory's HOME (Helping Others More Effectively) Campaign starts off with a bang as skaters, runners and walkers take part in a Lab tradition — the "Run for HOME." This year's event on Wednesday, Oct. 12 is co-sponsored by the Administration and Human Resources Directorate (AHRD) and Biosciences Directorate (BIO). Co-chairs are Rita Brown and Sheryl Goodman (AHRD) and Sarah Wenning (BIO).

The HOME Fair

Defense and Nuclear Technologies (DNT) is sponsoring the 2005 HOME Campaign. The goal this year is to exceed \$1.65 million and boost participation to 50 percent.

All employees are invited to learn more about the many nonprofit agencies represented in this year's HOME Campaign. Visit the tent in parking lot Z-1 where you'll find 136 booths with representatives ready to answer questions and provide information about the agencies and their help to the community. The fair will be open 11:30 a.m. to 1:30 p.m. Parking lots A-1, A-2, Z-1, Z-2, Z-3, Z-4, and Z-7 will be closed from 11 a.m. to 2 p.m.

Fun and entertainment

Everybody attending the Run for HOME will receive vendor-provided samples of Red Bull, Sugar Free Red Bull, Aquafina flavored water, Lipton Green Tea; Dasani flavored water, Coke Zero, Kellogg's Nutrigrain Bars, granola bars and Mother's cookies.

Participants are encouraged to dress up in costumes. With "There's no place like HOME" as the theme, there's hope of finding at least one tin man, scarecrow or lion along the course. A costume-judging station will be set up in the Z-1 parking lot. The five costume award categories are: most humorous; nost colorful; most creative; best Wizard-of-Oz theme; and best large group.

Participants will be entertained at the start line by the Amador Valley High School marching band. In addition, to put everyone in the mood, Isom Harrison and Sharon Emergy of TID will perform "Somewhere Over the Rainbow." Music will be provided by TID's "Free Lunch" band, a classic rock/blues ensemble made up of Technical Information Department

For more information about the 2005 HOME Campaign and the Run for HOME, go the Web at http://home.llnl. gov/

The parking lots near Bldgs. 41, 111, 132, 140 and 170 will be closed on Wednesday, Oct. 12, from 11 to 2 p.m. Employees who park in lots A-1, A-2, Z-1, Z-2, Z-3, Z-4 and Z-7 will not be able to Vasco Road leave those parking lots during the Run for HOME. Mesquite Way 1. Roller blades 2. Competitve runners 3. Recreational runners Finish Costume judging East Avenue

L'Toto' to go Go to the Central Café or the Web at http://home.llnl. gov/run/ media/pdf/Toto_flyers_ai.pdf for a "Toto" flyer, redeemable for a free snack at the Run for HOME on Wednesday. Oct. 12.

Instructions for those running in HOME race

The race will start promptly at noon. All participants should gather at 11:30 a.m. in the Z-3 parking area west of Bldg. 132. Prior to the start of the race, all participants should arrange themselves in the following order:

> skaters (first); competitive runners (second); recreational runners (third) and walkers (last). Race volunteers will be situated in the starting area with signs indicating where race participants should assemble.

There will be separate start times for skaters and runners/walkers. The starting gun for skaters will go off approximately two minutes before the start gun for runners and

walkers. As participants come across the finish line, they will need to note the elapsed time on the clock. Since the race clock will begin timing when the runners and walkers' starting gun goes off, skaters will need to add two

minutes to their clock times. Upon crossing the finish line, all racers will be handed finish cards and should continue moving toward the finish card tables. At the tables, they will be given pencils to fill out the cards prior to depositing them into the boxes provided. From the finish card tables, race participants should proceed to the T-shirt table for their free shirt. Then they can continue to the refreshments area, and finally, to the HOME fair tent.

There will be six individual race winner awards: 1st place open male; 1st place open female; 1st place master (over 50) male; 1st place master female; 1st place open male skater; and 1st place open female skater. These individuals will be approached by volunteers and escorted to the award winners' table for recording purposes. (If a participant is in the masters' category and thinks he/she may be a winner, stop by the winners' table to confirm.) After checking in at the finish table, the category winners will be asked to report to the awards stage by 12:25 p.m. Here, they will be awarded a certificate for \$75 which they may donate to the charity of their choice. At Site 300, awards will be given to the 1st place male and female runners only.

All participants who turn in a finish card will receive a certificate of participation.



CLASSIFIED ADS

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

AUTOMOBILES

1994 - Geo Prizm LSi, 4D sedan, 1.6L, at, ac, ps, pb, AM/FM/cass premium sound, 30 mpg, good cond, 98,000 mi, green, \$2,900. 925-443-5890

1966 - AC Cobra replica. Red with white rally stripes. Muncie M-21, manual 4-speed, Chevy 350 engine, stereo with amps and subwoofer. 925-960-1669

1996 - Nissan Altima; 132,520 miles. Power everything, air conditioning, great commuter. Best offer. 925-513-4767

1931 - Model A Ford hood, complete top and sides. Original and in perfect cond. \$450.OBO 209-832-7566

2001 - Toyota Corolla CE. 31K miles, automatic transmission, power steering, air conditioning, AM/FM stereo, cassette, dual front air bags. 408-439-5034

1997 - ElDorado in beautiful condition. All pwr., tires like new, leather pwr. seats, low miles. Just \$10,000.00 OBO 510-582-2938

1992 - Jeep Wrangler,68K, tilt wheel, 4 tops (1 hard, 1 soft, 2 bikini), weld forged alloy wheels, 32-in. BFG TA ATs, 2.5-in. lift flares, 5 spd., Posi trac. \$7500 925-932-6516

1970 - Porsche 911T Targa, 80 percent restored to original condition, classic car. Pictures available. \$7,500. 530-644-4364

2000 - Dodge Grand Caravan Sport. excellent condition, 54K miles, CD, leather, front/rear air. \$10K. 925-803-

2001 - Chrysler 300M - excellent condition. 66K miles. All leather. Fully loaded. \$12,300 209-832-7204

AUTOMOBILE ACCESSORIES

Car manuals: Haynes workshop, 84-88 Corolla, 75-79 Corolla, 71-74 Celica \$8 each. 925-447-7070

Lumber rack, fits Toyota Tacoma extra cab, heavy duty, custom built by Drake Welding. Paid \$550.00. Sell for \$275.00. 925-249-1303

Tire chains, heavy duty (these are real chains) cost \$225.00; sell for \$75.00. Used only one time. Fits truck with 15-inch tires. Evenings only 925-625-8272

Cooler/warmer 12V, plugs into vehicles 12-volt DC power outlet. Great for trips. Paid \$32. New. \$20 925-648-0671

Car cover, soft, breathable, waterproof, lockable cover, made for Lexus sedan, never used, still in box \$55 925-447-6221

Nissan Pathfinder 17x8 wheels and tires. Fit up to 2005 Pathfider/Infinity. 209-609-2162

4x4 M+S tire, cooper courser, size 33x12.5x16.5, less than 5K miles, excellent condition, paid \$150, sell for \$75. 925-200-2543

BICYCLES

Schwinn Le Tour womens' or uni-sex style 10 speed, \$40. 925-447-6221

Bianchi 30 spd. road bike. Frame-Reynolds 631 55 cm, fork/handlebar-carbon, components-Campagnolo Veloce, wheels-Campagnola. 1 yr old, \$1.400/obo. 209-599-4014

BOATS

Sea Doo 60-inch round ski tube, 4 padded handles, heavy-duty tube with rugged nylon cover. New in box. Paid \$100 plus tax. \$60 925-648-0671

ELECTRONIC EQUIPMENT

Portable electronic typewriter. 1994 Smith Corona Spellmate correctable with extra ribbons & correcting tape. Great condition, hardly used. \$30 OBO. 925-846-

Olympus P-10 digital photo printer. Prints 4×6 , photo lab quality 310 dpi dye sub-limination prints. Paid \$160. New in

unopened box. \$90 925-648-0671

Nice starter stereo equipment. Akai stereo cassette deck \$50.00, Sony AM FM stereo receiver, \$50.00. Excellent conidtion. Can bring to work. 510-537-7222

Apple computer system (CPU, monitor, keyboard, mouse, and printer). 11 year old Mac Performa 6300CD, 15 inch monitor. Must take all items. \$1 or BO 209-835-8008

Sony WEGA TV, 27-inch, flat-CRT, with remote & manual, Works great, 4 years old, \$250 or BO. 925-838-0546

Maxtor DiamondMax 200GB SATA-150 internal hard drive for P.C. Only a month old. Paid \$200, asking \$135. 925-443-9182

GIVEAWAY

Free used bricks. Come and get them in Pleasanton. 925-600-1817.

Free gray landscaping stones. Approx. 3-inch in diameter. Come and get them in Pleasanton. 925-600-1817.

Free moving paper and boxes (various sizes). You pick them up. Call before 8 p.m. on weekdays/weekends to schedule pick-up. 925-417-6734

TV-free 20 inch Sylvania. Older, but works great. Lost remote. Great for kids room. 209-835-7473

Firewood, half pickup load. Some logs, but mostly 2-by-4 pieces about 12-18 inches long. You load and haul. 925-447-4841

FREE-25 cu. refrigerator/frost-free freezer, white, great condition, I need room in my garage...you haul, 209-983-0190

Free trundle bed, not entire day bed. 925-706-2088

Car-top locking ski rack. This is a Barrecrafters ski rack in good condition. It carries up to 4 pairs of skis. 209-835-8008

Sand box with cover. Little Tikes turtle sand box with cover FREE! Will deliver to Lab. 209-835-7473

Down matress/comforter for a king size bed. Newly dry cleaned. 925-449-9215

3 bookcases, 5-6 shelves, 6 ft high; TV stand; cheap construction but serviceable 925-447-6719

HOUSEHOLD

Wooden desks - 1 executive good condition \$50, 2 older \$20 ea, you move, near lab 925-596-0165

Twin sleigh bed, purchased @ Levitz 4 mths ago, mattress in plastic, moving, need to sell ASAP. Paid \$600.00, take \$300.00 OBO, 209-688-1086

Chairs- Set of 4 for dining room table, \$25.00; other chairs, \$5.00-\$15.00; Floor lamp, red maple, Circa 1940 \$25.00; box fan \$5.00 925-447-4841

Cardboard boxes, sturdy, for moving/storage, folded flat for easy loading: 40 for \$50 925-447-7070

Futon, Full size, honey maple, top-'O-the-line mattress,2 yrs. new, \$1000 new asking \$200, pics avail, call eves. 209-839-

Huge annual multi-family garage sale 926 Alden Lane, Livermore, October 14-15 8 a.m.-4 p.m. 925-455-9414

Ceiling fan, 52-inch Westinghouse indoor, outdoor with light fixture, 5 oak resin blades. Paid \$80 plus tax. New in unopened box. \$50 925-648-0671

Brass headboard, twin bed, \$25 925-447-6221

Sofa and loveseat, mauve, blue and teal, off-white background, good condition, hardly used, \$200, you move. 925-485-9148

Thomasville - Fisher Park- pecan king pier group w/2 armoires, triple dresser w/beveled mirror. New \$11K, asking \$3K. 209-833-8105

Patio set. Wrought iron with leaf trim. Rectangular glass top table with 4 chairs. \$30. 925-462-2197 Twin blue race car bed. Like new! \$150.00 510-364-1968

Inn-keeper's table, 4 leaves, 6 chairs, seats 18 when extended. Light birch. \$300 925-447-6410

Assorted seasoned hard shell gourds for hobbies, art or decoration. Call for appointment. 925-455-1776

Double bed w/mattress & box spring, matching headboard, night stand, 3-drawer dresser w/mirror, desk w/bookshelf & chair. Pictures available, \$550. 209-823-8089

Rotisserie show time in box, \$150 obo 925-735-6002

Consolidating households. Two dining room sets for sale: Each set includes a round oak table w/4 chairs. \$100 per dining room set. 209-823-8126

Many household items: washer/dryer, fridge, TempurPedic king mattress, TV, lamps, coffee tables, kitchen table, more 925-447-6719

Dresser + 2 chests, dark cherry wood/silver hardware, \$300. Pier 1 wrought iron dining set-glass,wrought iron base, 4 chairs, \$225. 925-321-2363

LOST & FOUND

Gold band found in parking lot near T-3520. Please call (ext. 3-5049) and identify markings and will return to owner. 209-835-3782

MISCELLANEOUS

Livermore High class of 1985 - 20 yr. reunion 10/22/05 at Garre Winery. 408-354-5785

Heavy-duty, free-standing Gorilla rack shelf unit, (5)18-inch.-x-36-inch., adjustable height shelves, excellent condition, \$40.00, very close to LLNL 925-449-8806

White crib in excellent condition for \$25.00; folding baby high chair with unique design, \$10.00; and a baby walker for \$5.00. 925-447-4841

Local Livermore honey, pure, unprocessed. Get a jump start on allergy season. 12 oz bears \$3, Pints \$6, quarts \$10. 925-447-8557

New electric wheelchair, top of the line-Whiz Shoprider. \$1,500 obo. 415-673-9546

R.C. Gorman picture Title-La Noche (lady with bowl of chilis) Paid \$150, asking \$50 925-447-7088

Monopoly pinball machine for sale. Works great. Paid \$3000 brand new. Will sell for \$1300. Make me an offer! 925-577-4555

Baby swing, Cosco Juvenile Beginnings Gentle Motion, 3 position, harness, snack tray, 2 speeds. Paid \$45 plus tax. New in unopened box. \$30 925-648-0671

Industrial jig saw, good for detail. Hardly used. Excellent quality, heavy-duty. If interested, will bring to work. 45.00 510-537, 7222

Dinning room table seats 6 w/2 leafs \$250.00 Hutch w/lined inserts for silver-ware ect.\$250.00 -Dark walnut 510-364-1968

Angus cross bred beef cattle for sale.~800 pounds available through October. Call for appointment. 925-455-1776

For sale: Disneyland tickets 2, 2-Day park hopper passes. We are selling for \$75.00 each. Tickets expire Jan. 15, 2006. 925-443-0288

Daniel Glover (Pianist)- in concert, an evening of music to benefit the Valley Concert Chorale. Sat, Oct 22, 7:30 p.m. 925-449-7009

Allen engine analyzer/tuneup machine w/dual scope readout; and sun gas analyzer/tuneup machine. \$200/BO each. 209-848-1375

ParaBody GS4 home gym - \$1195 - barely used/like new. Manufacturer info search for GS4. 925-426-0133

Running stroller-\$25, hardy used; portacrib-\$50; White children's table & 2

chairs-\$25; One Step Ahead children's sleeping cot-\$25. 925-443-4615

MOTORCYCLES

1987 - Yamaha XT350 Dual Sport, 6K orig. mi, large tank, skid plate, hand protectors, disc protect, new tires, white/red, \$1050. 209-747-8594, Home 209-931-1705

1988 - Yamaha MX100, great beginners' bike, runs great, \$530 209-836-3481

MUSIC INSTRUMENTS

Terratec EWS88MT 10-channel multi-track recording PCI sound card for P.C. Excellent condition. Paid \$300 but practically giving it away at \$75. 925-443-9182

PETS & SUPPLIES

2 medium-size male rats, cage, and exercise wheel for sale. \$20 209-830-6408

Free. 2 Year old, fun loving, neutered male Goldendoodle looking for a good home. Active dog enjoys playing with people and other dogs. 415-334-2813

Female chocolate Lab puppy. AKC. Born 6/28/05. Has all shots. \$500 or b.o. 209-832-8950

Lab/mix puppies. Choc./black female pure bred. Male black lab mix. Great family or hunting. \$100.00 each. 209-772-9332 209-772-9332

Mixed breed working dogs. Mostly Border Collie, Kelpie with Wire Fox Terrier. Ready to go. Call for appointment. 925-455-1776 Registered quarter horse mare, 4 years old,

trained western/English/trail. Poco Tivio bloodlines. Have pictures. \$3,600 530-644-4364 2 loving ponies-1 gelding Sorrel(5yrs 9H)

broke, 1 mare, black(11H 3yrs.) Halter broke. Must go together to good home. \$1000 209-304-3775

Free orange tabby male cat. About 3 years old. Good cat, needs a lot of TLC. 925-765-3297

RECREATION EQUIPMENT

Air hockey table, electric. Great condition 60 inches by 30. You haul away. \$25. 838-7864.

Stair master 4000PT. Just like at the gym. \$650.00. 925-249-1303

Fishing float tube and fins, used once. Made by Browning. \$60 925-634-2701 Bird house, hand made. Never used.

\$8.00 510-537-7222 Swimming pool, 289-gallon water capacity, 120-inch-x-72-inch-x-22 inch. Paid

\$32. New in unopened box. \$20 925-

648-0671

Health Rider aerobic fitness machine, it worked for me until I joined a gym. \$20

925-447-6221

Soccer cleats, girls Adidas, size 7, worn once. \$25. Call 925-455-8526

Skis boots & poles, 2 sets. Skis are 160 and 200cm in length. Nordica boots size, 22 & 29 cm. Salomon bindings. Must take entire package. \$1 or BO 209-835-8008

Horse hay (beardless barley) available for recreational trail & equestrian activities. Call for appointment. 925-455-1776

Skis/boots/poles. Great beginner setup. Vital/S20 180cm skiis, Marker/M28 bindings, Metric 130cm poles, and Nordica/Next-87 size=27 boots. \$100 obo. 925-200-2543

RIDESHARING

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

Walnut Creek - Leave Rudgear Rd. @ 0600 Leave Lab. @ 4:30, ext. 3-7152

Modesto - Ripon - Looking for an inexpensive, comfortable and reliable ride to LLNL or Sandia from Modesto, Ripon and outlying areas??? You've found your ride!!! 209-544-6411, ext. 2-2727

Stockton - looking to start or join carpool from Stockton 6:30 a.m. to 4 p.m., page me, 00154, 209-954-1703, ext. 3-0475

Gustine Newman Patterson - Rider/driver needed, typical hours are 7 a.m.-4:30 p.m., but can be flexible, 209-854-3418, ext. 2-3026

SERVICES

Support group for better relationships-personal/business! Codependents Anonymous (CoDA) Meets Tuesdays Noon T3520/R1174. Just come or call for info.

Interior, exterior painting. Time to paint before the holidays. Excellent references. Excellent workmanship. 25 yrs. exp. 510-537-7222

Daycare opening in my Livermore loving home for your 1-2 children. Close to lab, gated house/yard & resonable rates. 925-447-0887

CONCRETE-Foundations, custom, stamped, colored, sealing & more. Over 20 years experience. Free estimates. 408-806-9816

Hauling Service. Estate clean-outs, attics, garages, sheds and barns. Misc... 925-373-9540

To TRADE

Prof. sand blaster w/filtration system. Cyclone model DP38, rarely used. \$1200.00 or trade for tools recreation equipment lawn and garden stuff or ? 925-

TRUCKS & TRAILERS

1987 - Ford Ranger longbed. Original owner. Great for dump runs. Best offer. 925-513-4767

1996 - Ford Ranger, XLT, extra cab, bedliner, long bed, cassette. Runs well. Nice work truck. \$4,950.00 OBO 510-537-

2001 - F-250, crew cab (4 door) long bed, 7.3 diesel, white w/tan leather, lear camper shell, exc. cond. 59K miles, \$24K 925-606-0397

1989 - Ford 4x4 quadravan E250XL, 108K miles, receiver, window graphics, custom wheels, rebuilt trans, new tires, thorough maintenance, rare, VGC, \$9500. 925-

VACATION RENTALS

Waikiki - Looking for small condo or studio to rent in Waikiki area from Dec.23-Jan 6. Dates are open, near the zoo. 510-

SOUTH LAKE TAHOE - 3 bedroom, 2 bath chalet, nicely furnished, quiet area, all amenities, close to all skiing, reserve now for holidays! 209-599-4644

Donner Pass/Soda Springs, 2 br, 1 ba + loft, close to everything, it's a beautiful time of year to go to the mountains. 209-836-3481

WANTED

Wanted to purchase: 1970s vintage Raleigh International model bicycle, 23.5 inch frame size. 925-846-1453

Wanted- Person to help with yardwork, painting, auto repair, odd jobs, weekends or evenings Livermore or Pleasanton 925-447-7070

Looking for an inexpensive used autoharp. Also, information on where to get some introductory lessons. 925-337-5279

Looking for good working upright freezer and good working gas dryer. 209-204-

Brentwood science class is needing used LEGOS for a science project. If you have any unwanted LEGOS laying around please call 925-513-1919

Odyssey 2-ball putter wanted, good condition required. 209-814-4064

Friday, October 7, 2005



ANNE M. STARK/NEWSLINE

The NIF Early Light Campaign team received one of the two 2005 Laboratory Science and Technology Awards for the effort that successfully demonstrated the individual beam performance of the NIF laser and its utility to perform experiments.

S&T AWARDS

Continued from page 1

BAMS (Biological Aerosol Mass Spectrometer). An instrument about the size of three podiums, BAMS can analyze individual aerosol particles in real time and at high rates to almost instantly identify the presence and concentration of harmful biological particles in air samples.

Using a laser to peel cells apart and a mass spectrometer to identify the chemicals inside, BAMS can identify airborne pathogens at the single-cell level in about 100 milliseconds. Combining an understanding of laser-particle interactions, the biochemistry of bacteria and mass spectrometry

analysis, BAMS is a prototype system that can identify pathogens and differentiate between harmful anthrax spores and benign agents.

BAMS, which also won a 2004 R&D 100 award, is designed for operation in office buildings that could be targets for a terrorist attack, or at ports of entry such as airports or train stations to monitor for potential epidemic diseases. Future biomedical applications could include rapid detection of respiratory diseases such as tuberculosis and SARS.

The Livermore employees who developed BAMS come from several directorates — PAT, CMS, Energy and Environment, Engineering and Nonproliferation, Arms



Anne M. Stark/Newsline

Director Michael Anastasio, right, congratulates Rick Sacks, one of the many members on the NIF Early Light Campaign team.



Anne M. Stark/Newsline

The BAMS (Biological Aerosol Mass Spectrometer) team is made up of researchers from PAT, CMS, Energy and Environment, Engineering and NAI.

Control and International Security

"This is a tremendous honor," Gard said. "I'm proud of the team that developed BAMS. This project was started with LDRD (Laboratory Directed Research and Development). This funding mechanism was the only way I was able to come to the Lab and help develop this technology. It's been a real honor to take this from basic development out to the field."

Key participants of the NIF Early Light Campaign team received the award as representatives of the entire team effort, which successfully demonstrated the individual beam performance of the NIF laser and its utility to perform experiments.

Accomplishments of the NIF Early Light Campaign included:

- Demonstration of the assembly, installation, commissioning, and performance of the first four beams of NIF from the master oscillator to targets located at the center of the target chamber.
- Validation of assembly, transportation, installation and commissioning strategies leading to individual beam line performance that could meet or exceed all major NIF requirements in terms of power, energy and pulse length.
- Validation of NIF as a premier facility for performing quantitative experiments in four areas:
 - 1) laser-plasma interaction
 - 2) hohlraum energetics
 - 3) hydrodynamics
 - 4) shock physics

Ed Moses, NIF associate director, expressed his appreciation of the hard work by all of the directorates that supported the NIF Early Light Campaign. "Early light is the work of hundreds of people," he said. "We have to remember all the work that has done before us, and all the work that is going on around us. First light was the proof of principle that NIF can succeed."

NIF Early Light team

Phil Arnold, Jerry Auerbach, Rick Beeler, Brent Blue, Gina Bonanno, Mark Bowers, David Braun, Rob Broderick, Scott Burkhart, Kelly Campbell, John Celeste, Peter Celliers, Gilbert Collins, Gary Deis, Eduard Dewald, Laurent Divol, Sham Dixit, Milo Dorr, Gaylen Erbert, Dustin Froula, Gail Glendinning, Siegfried Glenzer, Gianluca Gregori, Christopher Haynam, Glenn Heestand, Mark Henesian, Mark Hermann, Glenn Hermes, Denise Hinkel, Joe Holder, Mark Jackson, Kenneth Jancaitis, Don Jedlovec, Steve Johnson, Ogden Jones, Dan Kalantar, Jeff Kass, Tom Kohut, Larry Lagin, Otto Landen, Bruce Langdon, Doug Larson, Dean Lee, Brian MacGowan, Andrew Mackinnon, Kenneth Manes, Christopher Marshall, Joseph McDonald, David Munro, Mark Newton, Christoph Niemann, Mike Nostrand, Tom Parham, Dave Peterson, Bob Reed, Valerie Roberts, Harry Robey, Richard Sacks, Jochen Schein, Marilyn Schneider, Michael Shaw, Peter Stry, Laurance Suter, Greg Tietbohl, Paul Vanarsdall, Bruno Van Wonterghem, Russell Wallace, Franz Weber, Paul Weber, Stephen Weber, Paul Wegner, Ronald White, Clifford Widmayer, Edward Williams, Wade Williams, Douglas Woods, Steven Yang, Bruce Young, Rich Zacharia

BioAerosol Mass Spectrometer (BAMS) team

Henry Benner, Michael Bogan, Keith Coffee, David Fergenson, Matthias Frank, Eric Gard, Norman Madden, Sue Martin, Tom McCarville, Vincent Riot, Paul Steele, Herbert Tobias, Todd Weisgraber, Bruce Woods 8 Newsline
Friday, October 7, 2005

ASTRONOMERS

Continued from page 1

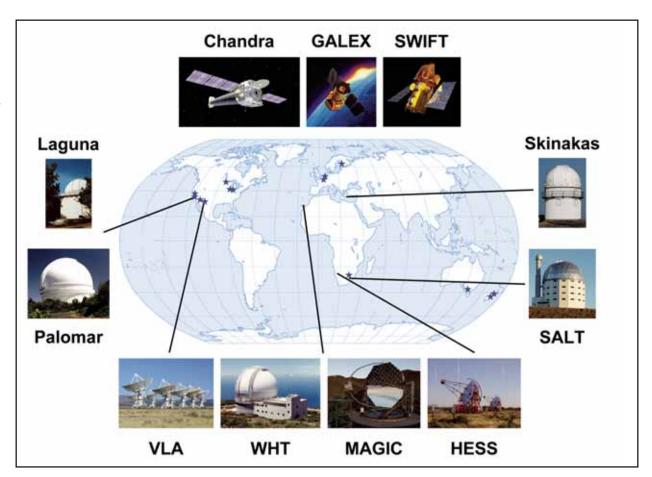
period is 33 seconds and whose magnetic field strength is 1 million Gauss (roughly 2 million times that of Earth). Because of these properties, AE Aquarii is classified as a "magnetic propeller," with most of the mass lost by the low-mass star being flung out of the binary by the magnetic field of the white dwarf. The spiral flow is much like that of the flow of water from a rotating garden sprinkler. Only a small amount of mass falls onto the white dwarf, which produces what Mauche characterized as "auroras on steroids."

To gain a better understanding of this complex system, Mauche and his colleagues recently observed AE Aquarii over an interval of fives days with telescopes on the ground and in Earth orbit. The ground-based facilities included the Very Large Array, which is sensitive to radio waves; optical telescopes with diameters of roughly 1-10 meters; and the MAGIC and HESS telescopes, which are sensitive to TeV (tera-electron volt) gamma-rays. The spacebased facilities were NASA's Chandra X-ray Observatory, SWIFT, and GALEX, which are sensitive to X-ray and ultraviolet radiation.

Using optical telescopes with diameters of roughly 10-50 centimeters, amateur astronomers affiliated with the American Association of Variable Star Observers (AAVSO) and the Center for Backyard Astrophysics (CBA) provided observations in the gaps the professional coverage.

This coverage by amateur astronomers was critical to the campaign, since no one site on Earth can observe a given star for more than half a day; long observations are hard to secure on large optical telescopes; coordinating observations between different observatories is very difficult; and weather is always a potential problem.

"I have worked with the AAVSO on a number of satellite observations over the past 12 years, and in nearly every case we got good data and did useful science," Mauche said. "In the present case, we relied on the amateur astronomers to provide optical coverage between our vari-



The photos around the map indicate ground- or space-based telescopes. The stars on the map indicate individual am- ateur astronomers who contributed during the five-day observation of the binary star system, AE Aquarii.

ous ground- and space-based observations. We were fortunate that AE Aquarii lies on the celestial equator, so astronomers on both hemispheres could observe the source. The star is also bright enough to observe with modest-sized telescopes, and it varies chaotically and pretty much continuously, so it is an interesting source to monitor."

Responding to an alert by the AAVSO and CBA, amateur astronomers from around the world - including New Zealand, Australia, South Africa, Finland, Belgium,

France and the United States — contributed more than 16,000 optical brightness measurements of AE Aquarii during the five-day interval of Mauche's multi-wavelength campaign.

In addition, the AAVSO database contains more than 45,000 observations of AE Aquarii dating back to September 1944, providing a rich historical record of the brightness variations of this enigmatic binary star system.

BUDGET

Continued from page 1

be needed due to Hurricanes Katrina and Rita, we also may see some impact on an already

constrained overall federal budget," Anastasio said

Since the Lab does not have a final budget, Anastasio has directed the senior management council to proceed "cautiously and deliberately" with workforce planning. In addition, during a CR, under federal guidelines, no new project starts are allowed.

"In the next few weeks, we hope to get a clearer budget picture and resolution in conference for our programs. Until then, we must all operate as conservatively as possible."

Long way up

A new meteorological tower was erected in the northwest corner of the Lab at the end of September. The 170-foot tower replaces an older 120-foot one and holds more instruments. Servicing instruments will be safer and easier with an electrical lift that replaces the old manual platform lift.

JACQUELINE MCBRIDE/NEWSLINE





UC-LLNL
PO Box 808, L-797
Livermore, CA 94551-0808

Newsline