SLAC Synchrotron Lab Director Keith Hodgson wins DOE's E. O. Lawrence Award

By Tom Mead

SSRL Director Keith O. Hodgson has been named a recipient of the Department of Energy's Ernest O. Lawrence Award for 2002. It is the DOE's most prestigious award.

Bestowed by the U.S. Government and presented by the Secretary of Energy, the award recognizes exceptional and relatively recent contributions to the development, use or control of nuclear energy – broadly defined to include the science and technology of particle, nuclear, atomic and molecular interactions.

SLAC Director Jonathan Dorfan called Hodgson, "an inspiring choice – Keith epitomizes the innovative and pioneering qualities shown by Lawrence himself."

Hodgson's award consists of a gold medal, a citation and $25,000. The award, together with those for this year's six other winners, will be presented at a ceremony to be held in late October in Washington, DC.

"We are all enriched by the contributions these researchers have made, ranging from understanding the genetic code to measuring the expansion of the Universe itself," said Energy Secretary Spencer Abraham.

Hodgson's major areas of scientific impact are in chemistry research and structural biology, for which he uses the remarkable properties of synchrotron radiation for x-ray absorption, diffraction and scattering.

"Keith Hodgson is an enormously gifted scientist," said Stanford Provost John Etchemendy. "He has distinguished himself through his own discoveries, as well as through the work of scientists whose research he has made possible. Under his leadership, SSRL has continued to develop as one of the leading facilities for analyzing the structure of biologically important proteins. His work is likely to have consequences we can only now imagine."

Hodgson's award recognizes his seminal contributions to chemistry for the development of new methods that use synchrotron x-rays for investigating structure and function, especially in biological systems. His pioneering protein crystal diffraction studies using synchrotron radiation and his early discoveries provided the foundation for the synchrotron revolution that followed.

His research was also among the earliest to explore and demonstrate the great value of synchrotron radiation for multiple wavelength anomalous dispersion phasing, or MAD phasing, which has become a primary means of solving protein structures and which enables the high-throughput approaches critical to studies of structural genomics.

He developed synchrotron-based, extended x-ray absorption fine structure (EXAFS) as a unique new tool for study of the electronic and metrical details of active sites in metalloproteins.

"It is fantastic that our pioneering work in synchrotron-based science has been recognized by such an honor," said Hodgson. For more information on the award, see: http://www.slac.stanford.edu/slac/media-info/20020926/Default.htm

Safety Concerns to Bring Changes on Sand Hill Road

By Mike Woods

In July 2001 a young SLAC intern, Katherine Pope, was struck by a car and killed as she merged across two traffic lanes approaching the SLAC Main Gate. This prompted cyclists and the city of Menlo Park to review the safety of this roadway.

SLAC also has given emphasis in the last year to safety for cyclists. In May SLAC held a Bike-to-Work Faire and hosted an Energizer Station on Bike-to-Work Day. Menlo Park Mayor Steve Schmidt attended the Bike-to-Work Faire and spoke about "Bike Safety in the Sand Hill Corridor."

In October 2001, the Menlo Park City Council asked its Transportation Division (TD) to investigate means to lower the speed limit on Sand Hill Road from 45 mph to 35 mph. In February, the City Council created a Safety Committee to consider safety improvements for Sand Hill Road between Santa Cruz Avenue and the City Limit at the Highway 280 overpass.

The TD responded by focusing on three areas: reduced speed limit, improvements to bike lanes and improvements to intersections for left-turning cyclists. Initial recommendations were presented to a joint meeting of the city's Transportation and Bicycling committees in June and final recommendations were presented to the City Council in August.

At the August meeting, the City Council unanimously passed all the recommendations proposed by the TD. These include:

- Reduce the posted speed limit from 45 mph to 40 mph.
- Install speed display signs, one for each direction.
- Install larger bike lane signs.
- Repaint faded existing bike lane symbol pavement markings.
- Prohibit parking along the road.
- As a pilot project, install a 3-foot painted median to separate the bike lane from the travel lane on a limited portion.
- Request the California Traffic control Devices Committee to approve

No right turn on red when cyclists are present

Conceptual design for the intersection in front of the SLAC Main Gate. Arrows 1 and 2 show planned indirect left turns by cyclists. Two additional road signs are shown at top, in addition to new lane markings and a new loop sensor.

E-158: A New Challenge to the Standard Model of Physics?

By Tom Mead

Experiment E-158 at SLAC hopes to force a revision of the Standard Model—one of the most elegant and powerful predictive tools in science.

The experiment seeks to measure the electroweak mixing angle—the proportions in which the weak and electromagnetic forces combine to form the electroweak interaction—with the best accuracy ever achieved at low energies.

Four forces call the shots in the subatomic realm: gravity, the electromagnetic force and the weak and strong forces. Physicists and the Standard Model are pretty clear on the weak, strong, and electromagnetic forces, though gravity still has everyone flummoxed.

"If we don't get the measure for the electroweak mixing angle predicted by the Standard Model," E-158 spokesperson Krishna Kumar (University of Massachusetts, Amherst) said, "it could point to new physics at high energies."

The SLD experiment has already made an accurate measurement of the electroweak mixing angle at the 100 GeV energy scale. Now, E-158 is going after an accurate measurement at a lower energy. Lowering the energy scale is equivalent to increasing the length scale at which the electroweak force is measured.

At longer scales, an ephemeral cloud of particle-antiparticle pairs forms a "screen" that effectively reduces the charge of each interacting particle, thus reducing the strength of the electroweak force. The Standard Model makes precise predictions for this evolution with change of energy (equivalently length) scale. While this prediction has been verified for the electromagnetic force between two electrons, E-158's measurement of the mixing angle would verify the equivalent prediction for the weak force.

There have been two previous efforts elsewhere to measure the weak mixing angle at low energy, but the

No right turn on red when cyclists are present

Conceptual design for the intersection in front of the SLAC Main Gate. Arrows 1 and 2 show planned indirect left turns by cyclists. Two additional road signs are shown at top, in addition to new lane markings and a new loop sensor.
New Program Makes Commuting More Affordable

By Miriam Born

Beginning this month, the first batch of benefits-eligible SLAC employees will be deducting a variety of transit costs from their paychecks under a new Pre-tax Transit Pass and Commuter Check Purchase Program.

Linda Ahl (HR) led the effort to include SLAC in this Stanford-wide program. The program allows the purchase of up to $100 per month for Muni, Samtrans, VTA, BART, DB Express and Caltrain passes, and Commuter Checks in $20, $30, $45 denominations. Up to $185 per month in transit-related parking can also be deducted from pre-tax paychecks. The exact amount saved by each individual will vary depending on an employee's tax bracket and the cost of the item(s) purchased.

Robert Hall (EOD), who signed up for a Valley Transit Pass, described it as a great program. "It is wonderful that SLAC will be helping me by allowing me to purchase bus passes on a pre-tax basis."

To enroll in the program, turn in an application to Linda Ahl (MS 11) two months before the desired start date. At the time of the initial purchase, staff members will determine their own monthly transit costs and lock in a one-year deduction schedule.

Lee Lyon, Director of Human Resources, commented, "This is for us to be good citizens—SLAC [by being good] to our employees and our employees by being good to the environment."

The first seven participants handed in their applications on July 28. They will be able to pick up their October passes at the Human Resources Department (AdB Building, Bldg. 41, Room 260A).

Andrew Young (EED) commented, "I am very excited that SLAC has signed onto using this program." He added that his fellow commuters at Stanford have been using commuter checks for two years.

For more details on the program, along with the application form, see: http://www-group.slac.stanford.edu/hr/d/pretax/transit.html

Sand Hill Road

(continued from page 1)

a pilot project for an alternative intersection design to improve left-turning bicycle movements.

Implementation of the improvements should begin this fall. The speed limit will be 35 mph from Santa Cruz Avenue to Sharon Park Drive, then changing to 40 mph until the city limit at Hwy. 280. New speed display signs will be located near Monte Rosa Drive.

One pilot project will install a painted median over a 200' length in each direction between Saga Lane and Sharon Park Drive to facilitate cyclists making indirect left turns into SLAC and onto Sharon Park Drive.

A conceptual design indicating new features for the Saga Lane intersection (at the SLAC Main Gate) has been developed. Changes to signal light timing may also be considered, such as a protected signal phase for pedestrians and cyclists entering SLAC; priority to cross-traffic over left-turning traffic; and longer signal crossing time for cyclists.

The Menlo Park TD is interested in receiving input on these changes. Send e-mail to transportation@menlo.org or give comments to Menlo Park’s Bicycle Commission at: http://www.menlo.org/commissions/bicycles/bikes.htm

E-158

(continued from page 1)

SLAC measurement hopes to be the first to compellingly affirm or reject how the parameter evolves as the interaction energy scale is varied. E-158 is a collaboration of 60 scientists from 11 institutions now conducting an experiment at SLAC’s End Station A. Making the measurement is like drawing a line from an object’s shadow to the object itself, in order to point directly at the light source. Some researchers try to directly map those points of verification by building bigger, more powerful instruments; other researchers use existing instruments to carry out ultra-precise measurements in experiments such as E-158.

The researchers collected roughly 20 percent of the data they need during the first phase of their work, from May to June. The second phase will commence in October.

For more information on the E-158 experiment, see: http://www.slac.stanford.edu/exp/e158/

New Dosimeters Bring Advanced Radiation Detection to SLAC

By Steve Frey

Starting with the fourth quarter of this calendar year, we will be replacing our current DOE-accredited Panasonic personal dosimeters with the latest technological advance in the field: the Luxel.

This new dosimeter is a laser-based technology that offers important new and unique features making it even better than the Panasonic. It produces dose readouts in three dimensions, allowing a far clearer understanding about the radiation that produced the dose.

The Luxel can also be re-read up to 50 times which allows each reading to be thoroughly rechecked if necessary to confirm accuracy and reliability. It is also more accurate and lightweight than the Panasonic. The Luxel is much more rugged and durable as well, being impervious to water and environmental heat.

The Luxel doesn’t need any special care by you other than don’t crush it, slice it, or otherwise try to open it. Its versatile color coding options permit instant determination of what type of worker is wearing it, and whether the dosimeter is worn for any wear period.

The Luxel does not need any special care by you other than don’t crush it, slice it, or otherwise try to open it. Its versatile color coding options permit instant determination of what type of worker is wearing it, and whether the dosimeter is worn for any wear period.

The Luxel provides a permanent record of one’s radiation dose for that wear period. Equipped with the CR39 dosimeter detector, it also provides a better and permanent neutron
dose record than possible with the Panasonic. And it is cheaper to use.

We are excited to bring the Luxel to you, and are confident that you will like it. But we cannot utilize the great capabilities of the Luxel if it is not returned to us at the end of each wear period. Please remember to turn it in.

For more information about Environmental, Health and Safety at SLAC, see: http://www.slac.stanford.edu/ehs

Annual Wine Tour Goes Full Barrel

Charlotte Nix (Group E) enjoys the new oak wine barrels at T Vinis Cellars in Calistoga during the Third Annual SLAC Wine Country Tour, held September 15 in Napa Valley. The tour, which take place each fall, are led by a wine expert and include tastings at area wineries. For information on next year’s tour contact Doug Kerrits (ext. 4550).

In conjunction with the annual SSRL Users Meeting, all are invited to these two events:

SSRL User Research Poster Session

Monday, October 7, 2002, 3:30-4:30 p.m.

Located in the Auditorium Lobby and Breezeway and the pathway to the Auditorium

Vendor Exhibits

Tuesday, October 8, 2002, 2-4 p.m.

Located in the Auditorium Lobby and Breezeway

QuickNews is your weekly e-mail and on the Web link to SLAC news and useful Web links, delivered to your E-mail and on the Web

For more information see: http://www.slac.stanford.edu/pp/quicknews/quicknews.html
SLAC Recycling Program Picks Up the Pace
By Miriam Boon

Every day we separate white from mixed paper and hold onto our soda cans until they get to a recycling bin. SLAC recycles a wide variety of materials including construction materials and, at times, exotic hazardous materials that would otherwise become hazardous wastes. We’re all making a difference, but how much? As it turns out, we’re making a big difference.

“We see real results as to what people are putting in the bins, and we don’t see very many recyclable materials on the trash,” reported Richard Cellamare (ESF). “This helps reduce the quantities and costs of disposing waste to our landfill.”

Everything But the Kitchen Sink?

SLAC currently recycles items such as white paper, mixed paper, newspaper, beverage containers (glass, aluminum, bimetal, and certain plastic), corrugated cardboard, scrap metal, computer and other electronics waste, garden and wood wastes, construction materials and chemicals. A pilot program for transparencies is also in place.

It doesn’t end there. SLAC is constantly looking for more ways to recycle— including recyclable materials that are not easy to collect at SLAC, said Cellamare. “We’re looking into Styrofoam, but it is a very difficult material to handle and collect for recycling.”

Since 1999, when SLAC changed the collection methods of its recycling program, things have significantly improved. Now, thanks to the efforts of John Hubbard (PUR), the subcontractor pays SLAC for money-making recyclables like white paper—the most valuable of all recyclable papers.

After discounting highly variable recyclables such as scrap metal and recycling materials, the percentage of recyclable materials coming out of SLAC has increased. Including all recyclable materials, that percentage was as high as 75 percent in fiscal year 2001.

What You Can Do

Part of the success of the recycling program depends on individuals taking the time to recycle and sorting recyclables properly. If you don’t already have a cardboard desktop box to collect and sort your used paper, get one from Stores (Bldg. 81, ext. 8901).

Employees have also initiated some of their own recycling efforts. For example, the Library initiated the program to reuse paper in the Cafeteria for scratch paper, and Doug Kreutz (BSI) initiated the re-use of woodcuts for art projects.

Reduce First, Then Recycle

In addition to recycling, it is important not to forget the necessity of reduction—the Libraries of waste, which is much more effective than having to recycle.

Being green also means using recycled materials when possible. Liam Robinson of Site and Engineering Maintenance, who oversees the recycling subcontractor and janitorial contracts, told us, “Our group recently purchased 250 gallons of recycled paint which we used to paint the Instrumentation and Controls Alcoves throughout the Klystron Gallery.”

With continued efforts by the Laboratory community, and the addition of recycling programs for new materials, the future of recycling at SLAC looks promising. Let’s do our best to keep it that way.

To learn more about recycling, visit the Recycling Program’s Web site: http://www-group.slac.stanford.edu/sem/recycling/recycle.html

Louise Addis & Joan Winters Receive Archival Advocacy Award

Retired associate librarian Louise Addis and retired systems administrator Joan Winters are the recipients of the Society of American Archivists’ (SAA) 2002 J. Franklin Jameson Archival Advocacy Award.

The award was given on August 22, 2002, during SAA’s 66th annual meeting in Birmingham, Alabama. The Society of American Archivists is North America’s oldest and largest national archival professional association.

The award, established in 1990 and named in honor of an historian and advocate for the archival profession, recognizes individuals who promote greater public awareness of archival activities and programs.

The award celebrated Addis and Winters not only for their involvement in the working group that created the first Web server in the United States, “The Academy commented, “The Society of American Archivists lauds Ms. Winters and Ms. Addis for their sustained efforts and continued commitment to promoting archival activities when they confronted the issues associated with the rapid evolution of information technology.”

For more information on the Society of American Archivists, see: http://www.archivists.org

Joan Winters (pictured left) and Louise Addis in the SLAC Archives and History Office reviewing electronic documents relating to the SLAC Web site.

Guest House Construction Builds Momentum

Commenting on the status of the SLAC Guest House construction, Project Supervisor Bob Kitchens said, “We are scheduled to start framing the first week in October and the project is scheduled to be finished in May 2003 depending on the weather this winter. Framing the building will take 10 to 12 weeks, then the roof will be put on and interior work can begin. Unless we have a raging UI this winter, plan to see our new guest facility taking shape by the end of this year and ready for visitors by the end of the academic year.”

—Linda DuShane White

From the Benefits Office:

HAVE QUESTIONS ABOUT INVESTING YOUR RETIREMENT?

Representatives from Fidelity, Vanguard and TIAA-CREF will be holding individual counseling sessions at SLAC.

Please call the company directly to set up an appointment:

Fidelity
October 16
November 13
December 3

call (800) 642-7311

TIAA-CREF
October 10
November 7
November 19
December 5

call (800) 842-2007
ext. 1005

www.tiaa-cref.org/moc

Vanguard:

October 22
December 10

call (800) 662-0106
ext. 69000

All sessions will be held at: Building 280, Module A, Room 180

Sandra Pickrom selected as New Purchasing Manager

Sandra Pickrom (BSD) has been selected as the new Associate Purchasing Officer and Materials Manager. She will be responsible for the overall administration of the Shipping & Receiving/Delivery, Accounts Payable, General Stores, Metal Stores and Inventory Control functions.

Pickrom started at SLAC in 1987 as a Recepts Control Clerk in Shipping & Receiving and worked her way up to Deputy Associate Purchasing Officer and Materials Manager.

During this period she assumed increasingly more challenging assignments and responsibilities all with a focus towards better customer service.

—Robert Todaro

Sandra Pickrom service, particularly in the Accounts Payable and Shipping/Receiving/ Delivery groups. Her positive attitude and good customer service approach will carry forward in her new assignment and we wish her well.

—Deputy Associate Purchasing Officer

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SCS Helps Fight Your E-mail Enemies: Spam and KLEZ

The SLAC Computing Services (SCS) E-mail Support Group gets many questions. Here is help for two of the issues we are asked about most often:

By far the most common question is what to do about junk e-mail. If you get e-mail that you do not want, no matter what the nature, we need you to expand the e-mail's Internet headers (we need this to track the source of the e-mail) and forward the e-mail to postmasters@slac.stanford.edu.

For more information on how to expand the Internet headers in Outlook, Fine and Netscape, see: http://www2.slac.stanford.edu/comp/net/email/junk_email.html

The second most common question, for the past several months, has been about the KLEZ virus. This virus infects a computer and then uses the e-mail addresses in that computer to send out e-mails.

The really bad part is that it forgets the From address box. So it could send out infected e-mails with your e-mail address as the sender.

Additionally, if there are any bounces or alerts about the message containing a virus then you are going to get the bounce or alert. This can cause a lot of confusion since you never really sent the e-mail.

For more information on the KLEZ virus, see: http://www3.ca.com/solutions/collateral.asp?CT=65&ID=1705
http://securityresponse.symantec.com/docs/vcndata/w32.klez.htm

Policy Update: Transportation Department Changes

SLAC's Transportation Department has had to change some important policies in order to bring SLAC into compliance with Federal transportation regulations.

Cartrain Shuttle Service

An outside vendor now provides shuttle service to and from the Palo Alto Caltrain station. For the schedule, see: http://www-group.slac.stanford.edu/semi/transportation/cartrainbus.html

For the route map, see: http://www-group.slac.stanford.edu/semi/transportation/route.html

Heavy Loads & Hazardous Materials

SLAC cannot operate vehicles greater than 10,000 pounds Gross Vehicle Weight Rating (GVWR), loaded or empty, offsite. SLAC vehicles and drivers are not DOT certified and licensed, and do not conform to DOT requirements.

SLAC will not pick-up, transport or deliver any load that is defined as a hazardous material offsite. Arrangements should be made with outside vendors to transport heavy loads or for moving hazardous materials offsite.

Upcoming Events

- Lunch Bunch, Slackers Win Family Day Volleyball Tournament

Lunch Bunch are the winners of the Family Day Volleyball Tournament: Andrew Zachoszcz, Nicolas Berger, Xuedong Chai, Franz-Josef Decker, Nanying Li, Juan Liu, Richard Pento, Joerg Stelzer.

The winners in the Youth Division were the Slackers: Jenine Fernandez, Alex Marticzewicz, Billie Rose, Brandon Wall.

The winners in the Adult Division were the Lunch Bunch: Teresa Downey, Andrew Zachoszcz, and John Pople.

Lunch Bunch team and their trophy

Lunch Bunch

The Interaction Point

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