

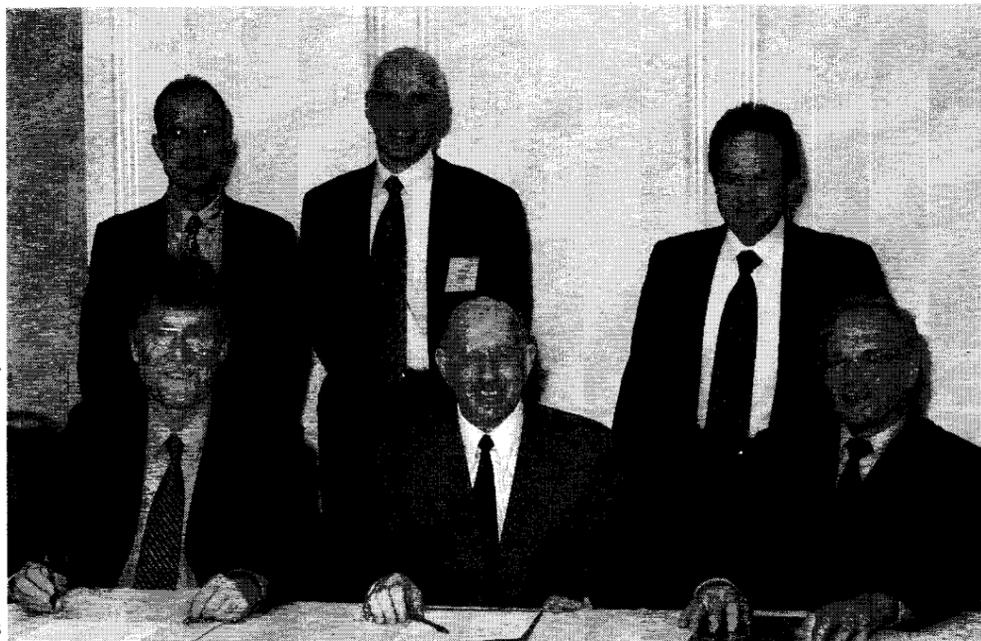
German and U.S. Laboratories to Collaborate on the Development of X-Ray Free Electron Lasers

By Neil Calder

Representatives from SLAC and DESY, Germany's leading particle physics and synchrotron radiation laboratory, gathered in Washington, D.C. last week to sign a laboratory-to-laboratory Memorandum of Understanding (MoU) that establishes a unique international collaboration for the development of x-ray free electron lasers.

"We are all excited by the colossal discovery potential of x-ray free electron lasers," said SLAC Director Jonathan Dorfman at the signing. "International collaboration is the most efficient, responsible and cost effective way of building world-class science facilities. There is already dynamic collaboration between SLAC, DESY and Japan's KEK laboratory on research and development for a future high-energy physics linear collider. Today's agreement establishes stronger bonds between international centers of excellence."

SLAC and DESY are advanced in the planning for two facilities—the Linac Coherent Light Source (LCLS) at SLAC and the TESLA X-ray Free Electron Laser (TESLA-XFEL) at DESY. The LCLS project engineering and design has been authorized and the facility is scheduled to become



At the MoU signing ceremony: (front row, left to right) Albrecht Wagner, Chairman of the DESY Board of Directors; Jonathan Dorfman, SLAC Director; Jochen Schneider, DESY Research Director; (back row, left to right) Jerry Hastings, Project Manager of the SPPS Experiment; John Galayda, Director of LCLS project; Keith Hodgson, Director of SSRL

operational in 2008. TESLA-XFEL is expected to be operational in 2011.

When completed, the facilities will be a giant leap forward in synchrotron radiation research, generating x-ray pulses ten billion times brighter and a thousand-fold shorter in duration than existing sources. These ultra-brilliant beams will explore previously inaccessible realms of dynamics in the chemical, biological and materials sciences as well as in nanoscale phenomenology and atomic and plasma physics.

"These machines can be used to

observe atoms in the process of forming or breaking bonds in molecules—in effect, freeze-frame photography of molecular formation," said John Galayda, head of the LCLS project.

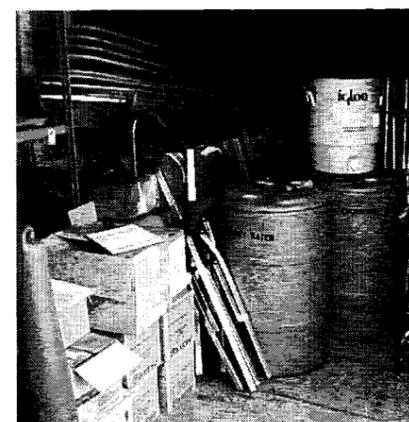
The MoU sets the framework for practical collaboration between DESY and SLAC on the many technical challenges to be faced in fully exploiting the capabilities of x-ray free electron lasers. This collaboration will be based on exchange of personnel and equipment and open interchange of research results, know-how and data. ●

SERT-ainly Prepared for Disaster

By Miriam Boon

In almost every community across the Bay Area, citizens stand ready to cope with emergencies when and if they should occur. SLAC is no different in this regard—we have a team called the SLAC Emergency Response Team (SERT).

"SERT is all about disaster preparedness, people helping people, rescuer safety and doing the greatest good for the greatest number of people," said Nimfa Santos (SHA),



The triage trailer stocked with supplies

a Registered Nurse in the Medical Department who coordinates SERT along with Steve Mahaley (SHA). The team consists of 40 volunteers, 30 of whom have completed Federal Emergency Management Agency (FEMA) training. Some also serve on their hometown teams. One is a member of the National Ski Patrol.

(See SERT, page 2)

Meet Ivan Jackson, Your Neighborhood Marguerite Driver

By Linda DuShane White

Most of us have taken the Marguerite at one time or another. Others use the shuttle every day. But what it is like sitting behind the wheel of a shuttle bus?

If you haven't met Marguerite driver Ivan Jackson, you're in for a treat. Jackson is one of the many shuttle drivers who make getting around SLAC and Stanford a little easier.

"Prior to the semester starting it was pretty quiet out here. It gave me a chance to get familiar with the route. There was – and still is – a lot of construction," said Jackson. "Overall it is a great experience. It is like riding around in a country club atmosphere but I'm not in a golf cart, I'm in a bus. There's an aura out here. Every one here is into their education. I feel that way about my bus. I'm a professional driver. I've gotten my training, and now I feel like I'm a part of this whole atmosphere. The faculty and the staff, everyone's friendly."

Before coming to Stanford, Jackson worked for the San Francisco Airport rental car shuttle, a very different working atmosphere. He says of his Stanford route, "I really enjoy it. I started here in September. I was



Marguerite driver Ivan Jackson

assigned the B Counterclockwise route on Campus, which goes from the CalTrain station and back around to the Campus."

"No matter what is going on I keep an attitude that I'm a professional. We're providing a service and I enjoy it. Stanford has its own transit system. Like San Francisco has Muni, Stanford has Marguerite."

Free transportation has been offered at Stanford since the 1880s, starting with a horse and buggy, then graduating to electric streetcars in 1929. The Marguerite came in 1973, and was named after one of the Stanford family horses.

The SFO Shuttle Bus Company

(See JACKSON, page 2)

Family Giving Tree Wish Drive Makes Holiday Wishes Come True

By Erin Smith

Last year the SLAC community donated over 240 gifts to the 2001 Giving Tree Drive, making it a huge success. This year we hope to do even better!

The Family Giving Tree is a Bay Area-based non-profit organization dedicated to fulfilling the holiday wishes of kids who would otherwise go without gifts. Last year, in their 12th year of operation, the organization provided gifts for 35,000 youngsters of all ages.

All this is made possible with the help of other non-profit agencies that provide the screening, listing, and direct interaction with those in need, as well as corporate sponsors that host the giving trees, generous individuals who donate gifts and funds, and enthusiastic volunteers who make the program work.

Your gifts and donations are used to ensure that all children registered with the program will get a gift this holiday season. If you are interested in donating to the drive, just look for the Wish Cards, located in buildings throughout the SLAC site. Planned locations include: the SLAC Cafeteria (Bldg. 42), Central Lab (Bldg. 40), A&E (Bldg. 41), ROB (Bldg. 48), SSRL (Bldg.

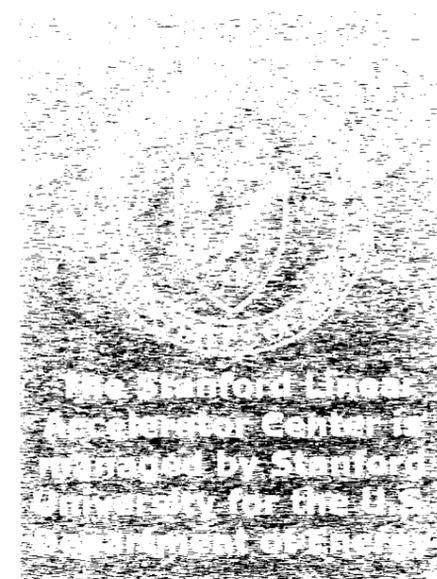
120/137), NLC Offices (Bldg. 214) and MCC (Bldg. 5). And there may be more!

For more information on the Family Giving Tree, see: <http://www.familygivingtree.org/> ●

31st Annual Run, Walk & Roll

Thursday, November 21
Klystron Gallery

For more information, see:
<http://www-project.slac.stanford.edu/slacrace/>



Jackson

(continued from page 1)

began operating the Marguerite shuttle service in September. Making improvements in service and driver training is important to them. According to Helmut Bredow, Marguerite Project Manager, Jackson exemplifies this service. "He's one of our stars. In fact, as new drivers come in, they'll ride with him to get the customer service focus that he has. It's just the way you approach people."

Jackson emphasizes that in training drivers, "Safety is the number one priority, customer service is number two and scheduling is number three. There are some things with scheduling that you just can't do because of traffic, or the bus could break down, but safety is always first."

"I'm starting to have a rapport with the regular customers. I round the corner and see their faces light up. 'There he is, he's on time, that means I'm going to make it to my train. I'm surprised when I get to the end of the line how many people say 'thank you.' It's a free service. That makes you feel good, too. We're transporting precious cargo, human beings you know."

Jackson has been educating himself about all the destinations on Campus and often provides an informal tour. Marguerite on Campus is open to all, as is the SLAC Marguerite. The SLAC Commuter Marguerite, however, is open only to the SLAC community.

For information on SLAC Marguerite schedules see: <http://www-group.slac.stanford.edu/sem/transportation/caltrainbus.html>

For more information on Stanford Marguerite schedules see: <http://facilities.stanford.edu/transportation/marguerite/MargueriteSched.shtml>

SERT

(continued from page 1)

The team's training is achieved through a course designed by FEMA. The 18-hour course has been taught for the last two years by Paul Staudenmaier (SEM), who leads the Morgan Hill Community Emergency Response Team (CERT), and Mahaley, the SLAC Emergency Management Coordinator. The course's eight modules include first aid, disaster preparedness, hazardous material and fireproofing, disaster medical, disaster psychology, search and rescue, and terrorism. Last month, Mahaley went to the FEMA Emergency Management Institute in Emmitsburg, Maryland to attend the "CERT Train the Trainer Course."

SERT has yet to be activated, but they stand ready. To stay in practice and prevent important skills from falling into disuse, SERT has quarterly meetings and yearly drills.

Emergency response teams are very popular in this area because of the proximity to the San Andreas fault. For that reason, SLAC's team tends to focus on being prepared for earthquakes.

SERT has a trailer located between the A&E building (Bldg. 41) and the Test Lab (Bldg. 44) that contains medical and other emergency supplies. This is where a triage area would be set up in case of disaster. There is also a trailer at the Fire Station with emergency rescue equipment.

SLAC Café menu now available online

Find it in the Gateway to SLAC Resources: <http://www2.slac.stanford.edu/gateway/cafeteria/>

SLAC Logo-Wear Sale On Now

Proceeds Benefit Employee Organization

November is logo-wear time. Stop by the Panofsky Auditorium Breezeway during lunchtime (Noon -1:30 p.m.) on any of five days—November 14, 15, 25, 26 and 27—to see the selection of colors and logo styles available for order.

More Choices Available

In addition to the embroidered logo-wear that we have been offering from Lands' End, we are also offering t-shirts, sweatshirts, sweatpants and jackets with a silk-screened logo.

Two logo styles are available in the silk-screened items: the original logo design (round seal with the beam pipe cross-section) and the newer SLAC logo with the colored swish.

40th Anniversary T-Shirts and Mugs

Due to popular demand, we will also take orders for commemorative 40th Anniversary t-shirts (in a variety of colors) and 40th Anniversary coffee mugs.

All items will be delivered on or

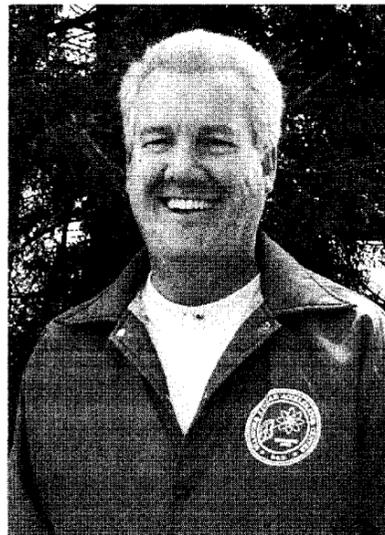


Ziba Mahdavi (BIS) sports a sweater with the new SLAC logo

before December 18—just in time for the holidays!

Proceeds from this sale will benefit Friends of the Linear Accelerator, SLAC's non-profit employee organization.

For more information, contact Doug Kreitz (ext. 4550).



Michael Scharfenstein (ESH) wears a jacket with the traditional SLAC logo



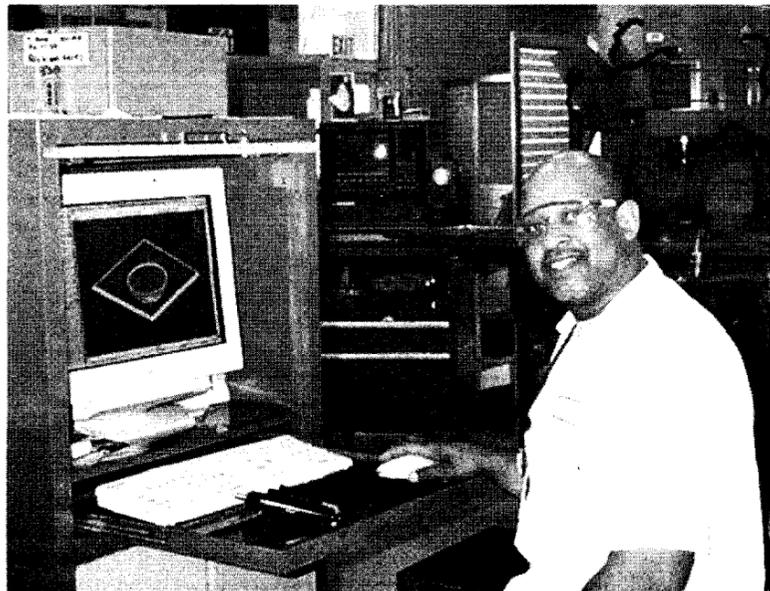
Carol Tam (ACC) shows off her sweatshirt with the traditional logo

e-DNC Hub Brings Any-to-Any Communication to MFD

By Kelley Ramsey

The Mechanical Fabrication Department (MFD)—also known as "the Muscle of SLAC"—faces the ongoing challenge of keeping current with new manufacturing techniques while continuing to use existing mills and lathes. The solution? A 16-port serial hub was installed to allow any workstation in the shop to send a CAD/CAM part program to any computer numerical control (CNC) machine tool.

The new system incorporates a Greco e-DNC (Direct Numeric Control) communications hub running embedded Windows XP. The hub connects to PC workstations on the LAN via TCP-IP, and then sends tool path data directly to each machine through RS-232 cabling. Each machine is outfitted with a Greco Mini-File, bringing enhanced CNC technology to the traditional mills and lathes.



Cliff Caston (MFD) programs a part that will be sent through the Greco system to the tree mill (in the background) for manufacturing

MFD currently has four workstations running computer-aided manufacturing applications such as Solid Edge, TekSoft Pro-CAM and EDS Unigraphics. The advantage of having the ability for any workstation to communicate with any machine is the seamless integration of manufacturing processes, moving toward a paperless shop environment.

Light Fab will always be able to take

a sketch and create the part program, but by working directly from CAD models provided by designers, engineers or physicists, the shop can continue to turn out state-of-the-art fabricated parts quickly and accurately.

For more information on the Mechanical Fabrication Department, see: <http://www.slac.stanford.edu/grp/mfd/>

Winter Shutdown

The Laboratory, except for a few areas, will be closed from the end of the day Friday, December 20, at midnight through the end of the day Sunday, December 29, at midnight (see Calendar, page 3).

Tuesday, December 24 and Wednesday, December 25 are University holidays. December 23, 26, and 27 are non-paid days when staff will have to use personal time or vacation time to receive full pay (there may be a few staff with unusual schedules for whom the exact dates will be somewhat different). SSRL staff will have a slightly different schedule due to operational requirements; SSRL management will inform staff of the schedule.

SLAC will be open for work on December 30 and 31. Staff are encouraged to take vacation on those days, giving themselves almost two weeks off at this special time of year. Even though the Lab will be open, there will be minimal services available from administrative units.

New Year's Day (Wednesday, January 1, 2003) is a University holiday. We will return to a normal work schedule and full staffing on Thursday, January 2, 2003.

HOLIDAY CALENDAR

November

| | | | | | | |
|--------------------|---------|---------|---------|---------|---------|---------|
| 24 Sun. | 25 Mon. | 26 Tue. | 27 Wed. | 28 Thu. | 29 Fri. | 30 Sat. |
| University Holiday | | | | | | |

December

| | | | | | | |
|-------------------------------|----------------------------|----|--------------------------------|----|----------------------|-----------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Family Giving Tree Wish Drive | | | | | | |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Family Giving Tree Wish Drive | | | | | | |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | | | SLAC Holiday Celebration | | | Winter Shutdown |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| Winter Shutdown | | | University Holiday | | Winter Shutdown | |
| 29 | 30 | 31 | 1 | 2 | 3 | 4 |
| Winter Shutdown | Limited Services Available | | University Holiday | | Normal Work Schedule | |

Record Number of Departments On Property Control "Honor Roll"

By Leslie Normandin

The final physical inventory results for fiscal year 2002 have been submitted to DOE. The departments and groups that had 100% accountability are members of the "Honor Roll." They are:

BSD Division

BSD Division Office
Accounting
Budgets
Business Systems & Lab Support
Purchasing Dept

Director's Office

Director's Office
Affirmative Action
Human Resources
Communications

ES&H Division

ES&H Division Office
Environmental Protection & Restoration
Operational Health Physics
Radiation Physics
Safety, Health & Assurance
Waste Management

SSRL Division

Administration
Accelerator Systems Department
Spear3 Project

Research Division

Research Division Office
BABAR Group
Computation Research
GLAST
Group A
Group B
Group C
Group E
Group G
Group K
Physical Electronics
SLD Group
Technical Information Services
Theoretical Physics

Technical Division

Technical Division Office
Accelerator Research Dept A
Accelerator Research Dept B
Advanced Computations Dept
Klystron/Microwave Dept
Metrology Dept
Next Linear Collider Program

SLAC achieved a rating of "outstanding" locating Sensitive Property and Equipment (over \$5,000). We want to congratulate everyone on a job well done! Let's keep up the good work.

You can continue to help by notifying Property Control when you move or transfer bar-coded property. Notification can be done from the BIS property Web site (<http://www-bis.slac.stanford.edu/main/property.asp>) or contact anyone in the department (ext. 2231, MS 85A).

Remember—if you have property laying around that you no longer use or need, you should take the item to Salvage or call them to make arrangements for pickup (ext. 2329).

Use Appropriate Headgear on Scooters and Mopeds



A bicycle helmet (shown left) does not provide adequate protection for riders of scooters and mopeds. Instead, wear an approved motorcycle helmet (shown right).

By Joe Kenny

In recent months a number of motorized scooter and moped drivers were observed wearing inadequate head protection. Specifically, bicycle helmets were worn instead of the required motorcycle helmets.

Bicycle helmets lack the necessary face guard and are not capable of withstanding forces expected during a high-speed crash. Do your head a favor—when climbing on that scooter

or moped, make sure your headgear has what it takes to protect you. And remember, it's the law.

Approved motorcycle helmets are available in Stores as items 84-350-042-04 (small), 84-350-042-07 (medium), and 84-350-042-09 (large).

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

Now in full color...

The Interaction Point Online Edition

<http://www2.slac.stanford.edu/tip/>

Science Buddies Seeks Advisors

By Neil Calder

You can help a pre-college student explore the sciences by joining the Science Buddies program.

Science Buddies is an online peer mentoring program for Bay Area middle and high school students. Students in the program complete a project for entry in a local science fair. The program helps students from all walks of life develop a love of science and an understanding of the scientific method.

Anyone with a science or engineering background (just out of college to those with doctorates) and regular access to the Internet and e-mail can volunteer. It is not at all necessary for an Advisor to be an expert in a certain field in order to be a great mentor.

The 2002-2003 program serves 250 middle school students (grades 6-8), and runs roughly from November through March. Each middle school student is matched with a high school student (peer 'Mentor') and an adult science professional ('Advisor') to form a project team.

For about 12 weeks, Advisors correspond online with their student team and help the primary mentor answer the younger student's questions. Advisors provide advice and encouragement as the student chooses a research question, devises a hypothesis, designs and conducts a measurable experiment, analyzes data, and presents findings.

A Science Buddies representative will be on site to give a demo of the online forum and to explain the program on Friday, November 22, at 1:00 p.m. in the Orange Room (Bldg. 40).

For more information, please contact Neil Calder (COM), ext. 8707. Also see: <http://www.sciencebuddies.org>

The Interaction Point

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The Interaction Point is published bi-monthly every first and third Friday. Submissions are due the second and fourth Tuesdays of each month.

Send submissions to tip@slac.stanford.edu, or mail to TIP Editor, MS 58, Stanford Linear Accelerator Center, 2575 Sand Hill Road, Menlo Park, CA 94025.

TIP is available online at: <http://www2.slac.stanford.edu/tip/>

Donate to the Holiday Food Drive

By Erin Smith

For more than a decade, SLAC has sponsored an annual Holiday Food Drive to benefit the Second Harvest Food Bank of Santa Clara and San Mateo counties. Second Harvest is a nationwide organization dedicated to rallying community resources to assist people who are hungry.

Food drives provide nearly 45 percent of the food the Second Harvest Food Bank distributes annually. Last year, the SLAC community donated over 1,076 pounds of food!

Please look for a barrel in your area and donate towards the drive this year.

For more information about the Second Harvest Food Bank, see: <http://www.secondharvestsjca.org/index2.html>

Flu Shots Are Still Available

in the **Medical Department**
(Bldg. 41, Rm. 135)

Tues., Wed., Thurs.
10:00-11:00 a.m.,
1:30-2:30 p.m.

No Appointment Necessary
For more information call Ext. 2281

Retirees and Contractors are welcome

POLICIES AND PROCEDURES

Update Your Home Address before December 16

The Payroll Department will be mailing your W-2 forms to the address indicated on your personnel record. If you have had a recent change of home address, please notify the Human Resources Department.

To ensure timely delivery of your W-2 form, please submit any home address changes before December 16 to: Personnel Records, MS 11. There is a change of address form available at: <http://www-group.slac.stanford.edu/hr/r/nameaddchange.html>

Contact:

Sandra Czech, Records, ext. 3345, sczech@slac.stanford.edu

Claudia Ransom, Records, ext. 2366, claudia@slac.stanford.edu

Paychecks to be Produced Using New System

The November 22 paycheck will be the first paycheck to be produced after the upgrade to PeopleSoft HR 8. Paychecks have not changed in format or content.

To assure there are no inaccuracies, Payroll is asking you to review your paycheck or direct deposit advice. Please contact the Payroll Department if you have any questions or notice any discrepancies.

Contact: Marty Sorensen, Accounting Office, ext. 4240, mfsor@slac.stanford.edu

Update on Sharon Heights Shell Station Restriction for Government Vehicle Users

Until further notice, SLAC government vehicles can no longer use the Sharon Heights Shell station for fueling, in addition to the previously reported (TIP, 10/18/02) restriction on repairs or parts.

The Transportation Department is working to get the Sharon Heights station back on the approved list but, for now, all official vehicles must be taken elsewhere.

Below are some of the stations near SLAC that can be used:

Woodside Chevron (2950 Woodside Road, Woodside, 650/851-1771)

Portola Valley Shell (Alpine Road at La Cuesta Drive, West of Hwy. 280, Portola Valley, 650/854-5230)

Chevron (104 Alpine Road, Redwood City, 650/854-4504)

Woodside Shell (1667 Woodside Road, Redwood City, 650/366-3342)

Stanford Campus Texaco (715 Serra Street, Stanford, 650/328-7851)

Important: Please save all your gas receipts, along with your full name and vehicle number, and either mail them or turn them in to the Transportation Department (MS 83) by the third Thursday of each month.

Contact: Paula Grenda, Transportation Department, ext. 2238, paula@slac.stanford.edu

Upcoming Events

Wed. Nov. 20-21, 8:30 a.m.
Redwood Room
SLAC MEETING
Charles Young, Coordinator
Experimental Program Advisory
Committee Meeting
<http://www.slac.stanford.edu/grp/rd/epac/>

Wed. Nov. 20, Noon
Redwood Room CD
SLAC YPP ASTROPARTICLE
PHYSICS LECTURE
Eduardo do Couto e Silva, SLAC
"GLAST's Role in Detecting Dark Matter"

Thur. Nov. 21, Noon
Yellow Room
SLAC/STANFORD HUMAN
RESOURCES EVENT
Tom Castillo/Kathleen Sexton,
Stanford U
COMPASS Snacks: Internal
Interviewing Skills 101
<http://www-group.slac.stanford.edu/hr/t/c.scedule.html>

Thur. Nov. 21, Noon
Klystron Gallery Road
SLAC *SPECIAL* EVENT
SLAC Run, Walk & Roll
<http://www-project.slac.stanford.edu/slacrace/>

Tues. Nov. 26, 4:15 p.m.
Panofsky Auditorium
(Refreshments-3:45 p.m.)
SLAC DEPT. COLLOQUIUM
W.K.H. (Pief) Panofsky, SLAC
"Nuclear Weapons After the Cold War"

Tues. Dec. 3, 8 a.m.-3 p.m.
Panofsky Auditorium Lobby
SLAC/STANFORD BLOOD DRIVE
Linda Ahlf, SLAC
Call x2354 for Appointment - Drop-ins Welcome!
<http://www-group.slac.stanford.edu/hr/d/Blooddrive.html>

Fri. Dec. 6-7
Redwood Room
SLAC MEETING
Jonathan Dorfan, SLAC
Scientific Policy Committee Meeting

Mon. Dec. 9-13
Panofsky Auditorium
SLAC PHYSICS MEETING
A.J. Stewart Smith, Princeton/
Barbara Barrera, SLAC
BaBar Detector Collaboration Mtg.

Please send additions to: seminars@slac.stanford.edu

For complete event listings, see: <http://www.slac.stanford.edu/grp/pao/seminar.html>

MILESTONES

Service Awards

45 years

Wilson, Perry (ARDA), 11/1/02

35 years

Sodja, Joseph (AD), 11/6/02

25 years

Spencer, James (ARDB), 11/1/02

Yang, John (ESRD), 11/1/02

Kerr, Glen (ESRD), 11/2/02

Rago, Carl (TD-NLC), 11/7/02

15 years

Graham, Corinne (SEM), 11/1/02

Ethier, Henry 'Skip' (ACC), 11/1/02

5 years

Murphy, Brendan (AD), 11/17/02

Deceased

Smith, Bill (formerly with ESD), age 65, passed away on November 6, 2002.

To submit a Milestone, see: <http://www.slac.stanford.edu/pubs/tip/milestoneindex.html>

See Awards and Honors at: <http://www.slac.stanford.edu/slac/award/>