

At the Nobel ceremonies with Martin Perl



Martin Perl (left) and Frederick Reines (center) receive the Nobel from His Majesty the King of Sweden.

Top three photos copyright Joseph Perl



Her Majesty the Queen of Sweden, the Chair of the Swedish Academy of Science, Princess Victoria, Martin Perl, the Major Domo of the Awards Ceremony



Joseph Perl, Jed Perl, Anne Bernard, and Matthew Perl accompanied Perl to Stockholm for the awards ceremony.

by P.A. Moore

WITH AN HONOR like the Nobel Prize, considered the most prestigious in the world, what is there to say? Martin Perl, an eloquent man, finds adjectives like "elegant" and "elaborate" can only begin to describe the week-long series of ceremonies that took place in Sweden in December.

The Nobel awards are scheduled to commemorate the anniversary of the death of Alfred Nobel on December 10. They include the award ceremony itself, an elaborate banquet for 1300 people, and a series of smaller dinners and festivities. "We get to know the other prize winners. The camaraderie builds up during the week and it's wonderful," said Perl.

At the Nobel ceremonies, which take place in the Stockholm Concert Hall, normally each person is individually awarded a diploma and a medal. However,

Frederick Reines, the co-winner for physics, had just come out of the hospital and was unwell, so Perl assisted Reines to center stage and they received their awards together. A small gesture of assistance, but a larger statement of the role of scientists as colleagues and of our common humanity.

Chatting with the nobility was a regular occurrence during all these events. Perl sat between the Queen and Princess Lillian during a smaller dinner for 150 people at a castle in Stockholm. What does one talk about with the Swedish royal family? "We talked about our travel experiences and our children," said Perl. "I was very pleased to have my children at the awards ceremony and banquet."

What next for Martin Perl? Like most people, he cannot help but enjoy the renown, but as a scientist, he can't wait to get back to the lab.



Courtesy of Paul Tsai

SLAC collaborators and spouses who accompanied Perl to Stockholm for the Nobel award ceremony, left to right: Laura Tsai, Paul Tsai, Fran Feldman, Judy Finer, Martin Perl, Haim Harari, Aviva Harari, and Gary Feldman.

SLAC holiday party revisited



Santa with the Carl Rago family.



Los Altos High School Main Street Singers provided holiday music.



Enjoying the festivities are (left to right) Bernie Culver, Bonnie Rose, and Margaret Helton.



Dave Coward (left) and Tom Glanzman (right) look on as Ben Bigornia puts his hopeful ticket into the raffle box.

EVER THROW A PARTY for a thousand people? It's easy. Just ask Karen McClenahan in SLAC Personnel: "All it takes is a great committee and two months of planning." The SLAC planning committee members were Anita Carrillo, Tineke Graafland, Pat

Jones, Bernie Lighthouse, Mary Parish, and Pauline Wethington. A big thank you for all their hard work on our behalf.

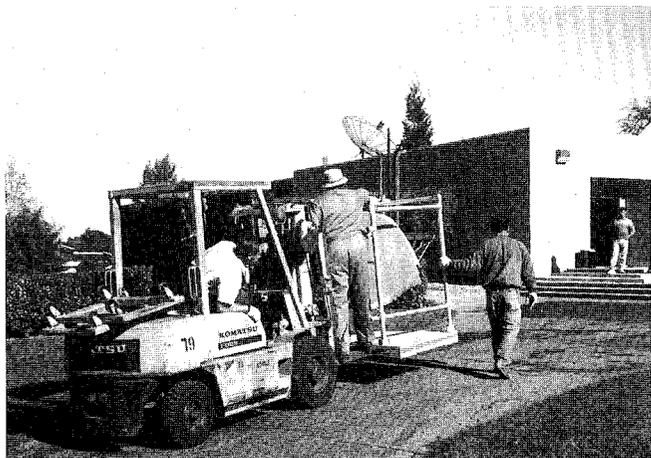
While Santa went around spreading good cheer, SLAC staff Santiago Limon took his black bag to collect the used dishes and

beverage containers. Herb McIntye was on hand with his walkie-talkie, coordinating the efforts of the audio visual technicians. SLAC staff also remembered others in need, giving donations to the Second Harvest Food Drive, hoping to surpass the 1994 goal of 2000 pounds.

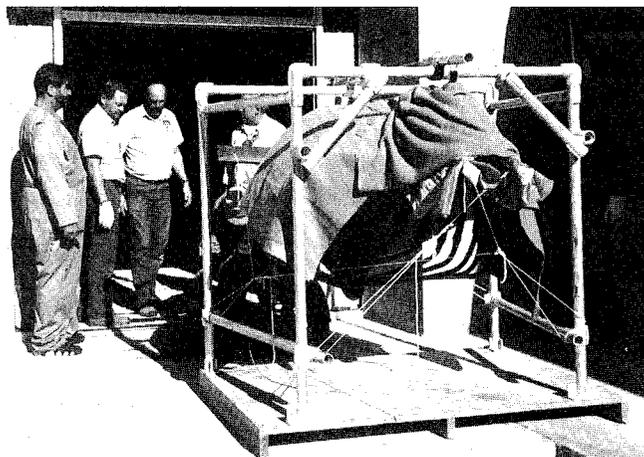
Food, entertainment, and prizes were all part of the holiday festivities. This year's menu was a big hit and much of the credit goes to the hard work of Toni Concepcion in the SLAC cafeteria. "We talked about all sorts of food ideas, from burritos to sandwiches, as well as the traditional prime rib dinner," said committee chair McClenahan, "and we welcome any ideas and suggestions." It's never too early to volunteer for next year's party—after all, there are only about 330 days left!

—Penny Nichols

Paleoparadoxia moves to new home



Photos: P. A. Moore



MOVING THE CAST of the paleoparadoxia from Auxiliary Control (Building 3) to its new site in the Visitor Center involved six people, a 25-ton flatbed truck, and a forklift, shown here. People involved in the move include Percy Clay, Rich Elkin, Ray Garza, Marcus Hodge, Elaine Hubbard, and Richard Torres.

After off-loading from the truck, the fossil cast was put on a rolling pallet and wheeled into the Visitor Center with only an inch to spare getting through the doorway. Adele Panofsky is now reassembling the fossil replica in a display case.

Laboratory reports minimal storm damage

DECEMBER 1995. Storms raged through the Bay Area and took our minds off the holiday season, with heavy rain, winds exceeding 100 miles per hour, and power outages that lasted from several hours to several days.

SLAC fared better than some of the surrounding community with relatively light storm damage, consisting mostly of broken tree branches, an occasional downed tree, localized flooding, and short power outages, reported Facilities Manager Richard Yeager. "I have experienced hurricanes in the Gulf Coast and typhoons in Asia, and the wind damage from this storm is similar," said Yeager.

Large branches and trees fell near the cafeteria, SSRL, gate 17, and the MCC and 101 cooling



towers. The Palo Alto Fire Department worked with SLAC Facilities to remove downed trees throughout the site. According to Yeager, "A fair number of trees have been loosened by the wind, and if we get another storm with high winds, I would anticipate additional losses."

Light flooding occurred at the MCC lower parking lot, but the water level in the Beam Switch Yard required pumping by an outside vendor. Roads around the site had surface flooding and debris

which made driving hazardous.

The Auditorium and Central Lab had some minor leaks inside the buildings, as did the ES&H Training Center. Building 280, which houses the PEP-II team, had serious leaks that will require major roofing repairs. Throughout the site, leaks are still being discovered and Security is monitoring them and placing protective plastic coverings on equipment and work areas.

Power went out in some buildings such as the Central Lab at various points during the storm but was restored within an hour. An emergency generator was ordered for the Computer Building in case of major disruptions but it was not needed and the order was canceled.

—P.A. Moore

Name dialing now offered

TELEPHONE USERS now have the option of dialing by name rather than extension, when calling people at SLAC. The Telecommunications department has recently implemented a new directory within the telephone system that enables you to use the name dialing capability on SLAC's telephone system to call any person or department in the SLAC telephone directory.

To use this capability, dial extension 8777. (From outside SLAC, dial 1-(415)-926-8777.) Then spell the last name, followed by first name, using the tone keypad on your phone. No blank or punctuation is needed between names. For "Q," press 7. For "Z," press 9. The system will tell you as soon as it finds a unique match or will provide a list of all the possible matches it finds and let you select the one you want.

When you create voice messages through express messaging or from inside your own voice mailbox, you can use name

addressing by pressing 11 before any entry in your list of recipients. Follow the other directions just as you would for name dialing.

Initial response from those testing the name dialing capability was enthusiastic. It promises to reduce the need to print paper directories and will provide quick access to SLAC directory information 24 hours a day, 7 days a week.

To ensure that people can reach you as quickly as possible, please take a minute today to test your entry in the name dialing directory. Report any misspelled names to Rose Rafael on ext. 2254 or by e-mail to phone@slac.stanford.edu. You may also contact Rose to add a nickname or initials, or make other suggestions to clarify your listing in the name dialing directory.

Note that nicknames have already been included as alternate listings for persons who have them listed in the SLAC directory.

Voice mail users should note that when someone calls you using name dialing, the system will play your personal verification instead of spelling your name to the caller. We strongly recommend that you include both your name and extension in your personal verification. That will allow persons to call you back directly when your line is busy or when they receive a voice message from you. To check your personal verification, log into your voice mailbox and press 89. To record a new verification, press 5. Press # to stop recording and check the new verification.

Some useful numbers for SLAC telephone users to know are summarized below.

—Brenda Eberle

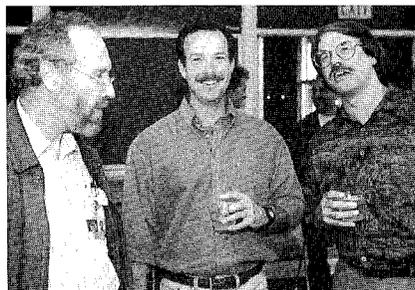
Useful Numbers to Know

To report an emergency from a SLAC phone:	9-911
To access your voice mailbox:	ext. 4242 or 1-(415)-926-4242
Express messaging:	ext. 4555 or 1-(415)-926-4555
Name dialing:	ext. 8777 or 1-(415)-926-8777
SLAC main number:	1-(415)-926-3300

Ten-year service awards celebrated

FORTY-THREE EMPLOYEES with 10 years of service came together to celebrate their anniversaries on December 14. The party took place in the SLAC Café where the honorees, their supervisors, and department heads munched on finger food and enjoyed champagne and other beverages. Burton Richter delivered a short speech thanking the awardees for their contributions throughout the lab. Each employee received a SLAC watch and a Stanford University pin after shaking hands with Richter.

Following are the honorees: Mark Ame, Barbara Jane Barrera,



Joe Faust

Heinz Schwarz (left) talks with two awardees, Alan Hill (center) and Paul Corredoura (right).

Piotr Blum, Gregory C. Bologoff, Toni S. Campos, Pierre D. Capeder, David N. Cha, Paul Corredoura, Teri L. Church, Joseph F. Davis, Mohammad T. Dormiani,

Ishwar C. Garg, Sharel A. Gomez, Guy A. Hall, Gunther Haller, Jerrilyn L. Hanlon, Paul E. Hart, Alan S. Hill, John A. Hodgson, Darryl D. Hopkins, Nisy E. Ipe, Raymond R. Jensen, Artem V. Kulikov, Denise M. Larsen, George P. Laxson, Jr., Ih Lin, Ossie L. Millican III, Thomas J. Moss, Judith B. Nowag, Athikorn Pienpicharn, David L. Price, Alan S. Rackelmann, John Rock, Donald W. Rositch, James J. Russell, Rafe H. Schindler, Hamid Shoaee, Walter H. Tompkins, Arnold E. Vlieds, Julia R. Weinberg, Donald S. Williams, Alan P. Winston, and Reuben Yotam.

—Karen McClenahan

Calling assistance: new phone-in feature

EARLIER THIS YEAR the voice menu for outside callers to SLAC was expanded to include additional options. The purpose in expanding the menu was to allow callers to the most frequently asked for departments to be put through directly, without waiting for someone to look up the number for them. Since the menus were lengthened, several SLAC employees who regularly need to call in from outside SLAC have asked for ways to get past the menu directly to someone who can help them. The mysteries of the menus are explained below. Other tips are also provided to help you get the type of calling support you need more quickly.

From inside SLAC

To request calling assistance from inside SLAC, dial 0. You will be connected to a brief announcement that is actually a menu with two options. To use name dialing, press 2. For other types of assistance, simply stay on the line, or press 0 to bypass the announcement and go directly into the call-support queue.

Monday through Friday, 7:30 AM through 4:30 PM, inside calls in the call-support queue are routed to an operator at SLAC. Outside those hours, calls are routed to the Stanford operators. The Stanford operators can help you with directory assistance requests for SLAC or Stanford numbers. They can

also report telephone or voice mail system outages to the appropriate SLAC personnel. However, they are not able to place outgoing calls for you. If you require help to set up a complex conference call, an international call, or other unique type of call outside the normal weekday hours, call the support line (dial 0) in advance so the operators can make arrangements for you to complete your call.

From outside SLAC

From outside SLAC, dial SLAC's main number 1-(415)-926-3300. To use name dialing (see article, p. 4), select menu option 2. For other types of assistance, stay on the line, or press 0 to bypass the other menu options and go directly into the call-support queue. Your call will be answered by a Stanford University operator who can provide directory assistance for SLAC and Stanford numbers. If the operator is not able to provide the information you need, they will transfer you to someone at SLAC who can assist you.

Class of service

All telephones assigned to individuals at SLAC have been upgraded to class of service 3 (able to call within the US and Canada, without assistance). Telephones in common areas such as labs and lobbies have been upgraded to class of service 2 (local calling capability). If you know of a tele-

phone that has still not received the appropriate class of service, please call Rose Rafael on ext. 2254 with the extension, the name of the person to whom the telephone is assigned, and the location. If you need class of service 4 (international calling capability), you still need to place an order through your ATOM (Area Telecommunications Office Motivator) and get the appropriate group leader approval.

Directory assistance

If you are calling only to get someone's SLAC telephone number, you can now bypass the menus entirely by calling ext. 8777 or 1-(415)-926-8777 to access the name-dialing function. For campus directory assistance, you can call the campus operators by dialing 88-0. For local directory assistance, call Pacific Bell by dialing 9-411. For long-distance directory assistance, call AT&T by dialing 9-1-(area code)-555-1212.

—Brenda Eberle

Welcome Guests and New Employees

The following people joined SLAC during the period from November 1995 through part of January 1996.

David Anderson, PEP-II B Factory; **Amilcar Avila**, Manufacturing; **Vibha Bansal**, Technical Information Services; **Claudio Dib**, Theory; **Bo Hong**, Klystron; **T. K. Kuo**, Theory; **Careron Mackenzie**, Manufacturing; **Ivan Schmidt**, Theory; **Mike Seidel**, Accelerator Theory & Special Projects.

IN MEMORIAM

Geoffrey Sherman Arnold, son of Ray Arnold (ESA), was killed in a car accident on January 2 on I-280 near Edgewood Road in Redwood City. Geoffrey, a junior at Lewis and Clark College in Portland, Oregon, worked as a summer student at the damping rings in the Accelerator Department.

A memorial scholarship fund will be created in Geoffrey's name to benefit a Gunn High School graduate. Donations can be made to: PAUSD, "Geoffrey Arnold Memorial Fund," and forwarded to Vickee Flynn or Rainer Pitthan, MS 20.

New dosimeters, ID badges have arrived

by Operational Health Physics

ANYONE who works at SLAC for more than thirty days per year must receive a dosimeter, the proper training for radiological safety, and the Employee Orientation to Environment, Safety, and Health training. Occupational radiation dose measurements are required by law. The thermoluminescent dosimeter, or TLD, records your radiation exposure here at SLAC. Dosimeters cannot be issued until the proper training has been completed. The training, once completed, is good for two years, at which time retraining is required.

By now, most of you have been introduced to the new Panasonic dosimeter. The change to the new dosimetry system brings SLAC up-to-date in the world of dosimetry. While the old system produced accurate results and was recently re-accredited by the Department of Energy Laboratory Accreditation Program (DOELAP), the equipment and materials became more limited as the dosimetry industry moved to the newer automated systems.

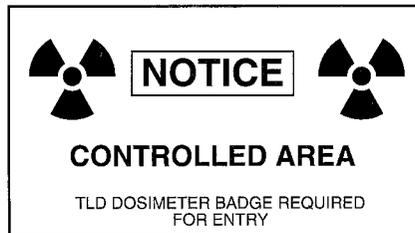
In addition to the type of dosimeter SLAC is now using, the other significant change is the separation of the picture badge from the dosimeter. The purpose of the SLAC picture badge is to identify your training and SLAC status. As with the dosimeters, these colored picture badges cannot be issued until the proper radiological safety training and the Employee Orientation to Environment, Safety and Health training courses have been completed.

You can use the picture badge to gain access to the site during non-business hours. To enter a Controlled Area, however, both the picture badge and the dosimeter must be shown. A Controlled Area is defined as an area within SLAC where:

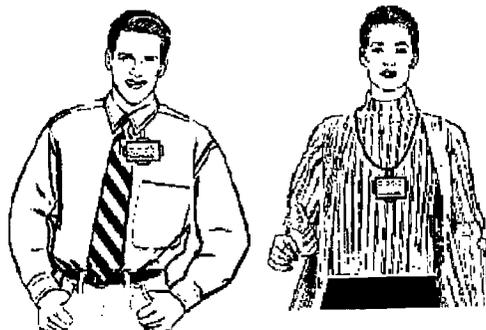
1. There is radioactive material.
2. There are radiation areas.

The accelerator facility is surrounded by a fence, which is one of the Controlled Area boundaries. A few portions of buildings outside of the fenced area are used for storing or handling radioactive materials. These areas are also posted as Controlled Areas. A dosimeter is required for entry into any Controlled Area.

Remember, the purpose of the



dosimeter is to monitor your radiation exposure while at SLAC. The effectiveness of the dosimeter depends on SLAC personnel. The dosimeters should not be removed from the site, should never be used at another facility that monitors for radiation, and must be worn properly. Bulletin # 21A and the *Radiation Worker Study Guide* provide guidelines for wearing the dosimeters. The following pictures illustrate the right ways to wear your dosimeter.



The front of the dosimeter must be facing out. It must not be blocked by the picture badge—this will have an adverse effect on your dose measurement.

Dosimeter Questions

Distribution of the new badges has raised some questions. The following are the top ten questions asked at SLAC.

Do I have to show my picture badge at the gates, or only the dosimeter?

The dosimeter alone will not get you on site during off hours. When entering the main gate, any picture ID (including California driver's license, SLAC picture badge, and Stanford ID) must be shown to gain access during non-business hours. When entering a Controlled Area, both the SLAC picture badge and the dosimeter must be shown (this verifies that you have had the proper training to enter a Controlled Area). Alpine Gate, Gate 17, and the Sector 30 Gate are entry points into Controlled Areas; therefore, both the dosimeter and the picture badge must be shown to enter through these gates.

Do I have to wear the dosimeter around my neck?

The dosimeter must be worn on the upper torso, between the neck and waist, on the outside of clothing, as shown in the illustrations (at left). The picture badge may be worn separately, or behind the dosimeter.

How do I wear the picture badge if there isn't a hole in it?

The Security department is providing the necessary material for wearing the picture badge. They will have a slot punch, pouches, clips and necklaces available at the Sector 17 and 30 gates.

I never go inside a Controlled Area, so why do I need a dosimeter?

SLAC management has mandated that everyone who will be on the site for more than thirty days be monitored for radiation. If you do not work in a Controlled Area simply keep the dosimeter in a safe place in your office.

See Questions, p. 7

Questions, continued from p. 6

Where do I get my new badge?

Dosimeters will still be issued by the Dosimetry Office, located in Building 24, Room 130. The Dosimetry Office is open for business Monday through Friday from 1:30 PM to 4:30 PM. Morning appointments may be made by calling ext. 4569. The picture badge system will be transferred to the Security Department sometime in the near future. An announcement will be made when this change occurs. The announcement will include the location and hours of the new picture badge office. Until then, pictures for the picture badges will be taken in the Dosimetry Office in the location and during the hours mentioned above.

Do I turn in the old badge when I get the new one?

Yes, the new dosimeter is replacing the old dosimeter. Turn in the old dosimeter so your radiation exposure can be recorded.

When does my dosimeter expire?

The dosimeters for quarterly or RWT-trained employees will be exchanged

every quarter, as in the past, during the months of March, June, September and December. The dosimeters for annual or GERT-trained employees will be exchanged once a year, during the month of December only.

When does my picture badge expire?

The picture badge expires when your employment status at SLAC has changed, or when your radiological safety training expires. The radiological safety training expiration date is printed on the badge. You will be issued a new picture badge upon retraining.

Note: Retraining should be completed before the training expiration date.

What happens if the dosimeter gets wet?

The dosimeter case (hanger) has a gasket that is intended to prevent water from getting inside where the dosimeter is. If the outer dosimeter case gets wet, it can be dried off. If water gets inside the case, it will be visible through the plastic. Water inside the dosimeter can cause the TLD reader to misread the TLD elements. If for some reason you suspect

your dosimeter has been compromised by water, bring it to the Dosimetry Office for evaluation.

When you enter the Controlled Areas through either the turnstile near the fitness room or the turnstile at Gate 17, how does the guard know if you have a dosimeter?

There is a camera mounted near each of the turnstiles. If the dosimeter is not visible to the guard, he or she will ask you to hold the dosimeter next to your face. Once the guard is certain you have your dosimeter, you will be allowed access to the area.

For information about the SLAC picture ID call Rick Yeager, ext. 5333, or send e-mail to ryeager@slac.stanford.edu. More information about the dosimetry program is available on the SLAC ES&H Dosimetry Page on the World Wide Web. The URL is: <http://www.slac.stanford.edu/esh/dosimetry/dosimetry.html>

Small business grants available

DO YOU KNOW of SLAC technology that could benefit from outside involvement? DOE makes Small Business Innovation Research (SBIR) grants available to small businesses for development leading to a product. Many SLAC researchers know of internal technology that could be of interest to an outside company, but that needs further work before it can be commercialized. Often SLAC can't spend its own money because the project would be outside the laboratory's primary mission, but might be able to spare some subsidized staff time for a joint development. The SBIR program can fund such development work at SLAC through a small business partner.

Generally it works like this: a SLAC employee knows of some laboratory technology that might interest a particular small business. The

small business Principal Investor (PI) makes a plan that calls for:

Phase I: Feasibility development (up to \$75,000)

Phase II: Pre-commercialization (up to \$750,000)

Phase III: Product development (funded by the small business with its commercial partners or investors).

A small business that is successful in a Phase I effort can apply for a Phase II grant. The small business uses the grant not only for its own activities, but also to support SLAC's activities, by transferring part of its funding to SLAC. The collaboration is normally done under a Cooperative Research and Development Agreement. In this way the small business benefits from SLAC's unique ideas and resources, the laboratory sees some of its technology used to benefit US soci-

ety and industry, the employee may work on an interesting project, and everyone involved benefits from exposure to a larger pool of experience and technologies.

DOE is looking for Phase I projects in certain areas, many of which overlap SLAC technologies. Examples include high-energy physics detectors, nuclear physics instrumentation and techniques, medical applications (advanced imaging technologies), and others. If you know of a possible match between a small business and some SLAC technology, or you wish to be informed of similar opportunities that periodically arise, contact the Office of Technology Transfer at ext. 2213. We can help, but time is short. Proposals must be submitted to the DOE no later than February 13, 1996.

—Fred Murphy

TechPubs Users Group:

Customer feedback helpful

LAST MONTH, several customers of SLAC's Technical Publications Department attended the first meeting of the newly formed TechPubs Users Group (TPUG), a forum established to promote communication between TechPubs customers and staff. Most came with suggestions and ideas for improving the services provided.

A concern voiced by several attendees was the inconsistent and often long turnaround times sometimes experienced for scientific papers submitted for editing and formatting. While one attendee expressed appreciation for the professional quality of work provided by the TechPubs editorial staff, another pointed out that this quality is irrelevant for users who can't wait as long as it sometimes takes to get their papers processed.

Consistent turnaround times are difficult to achieve given large fluctuations in the amount of work coming through the department and diminishing staff resources for processing them, indicated TechPubs Manager Kathryn Henniss. She added, "Like many groups at SLAC, we're finding it no easy task to balance competing demands for limited resources." As an example, the Editorial Office may on occasion be faced with having to make changes to a paper for one of SLAC's Nobel prize winners, incorporating several last-minute rounds of changes in a funding proposal that may bring in thou-

sands of dollars to the lab, and completing a job for a particularly insistent customer...all within a couple of days. "These situations are of course frustrating for everyone, and we're looking for ways to avoid them," said Henniss.

Another suggestion made at the TPUG meeting was for the TechPubs editors to provide a library of TeX and LaTeX templates. "Having a good set of templates would help those of us at SLAC who are responsible for preparing scientific papers on our own, who don't always go through TechPubs," said Lilian DePorcel (Research Division, Group B). In response to DePorcel's suggestion, a new WWW page containing pointers to templates and other TeX/LaTeX resources is being developed by TechPubs staff. The new "SLAC TeX Resources Page" will be unveiled and discussed at the January TPUG meeting.

As the first meeting drew to a close and the attendees adjourned for refreshments, Henniss thanked everyone for coming and most especially for their feedback. "It's hard to know what's not working for our users without this kind of input," said Henniss. "When our customers let us know what is most important to them, we can and will focus on those areas."

The next meeting of the TechPubs Users Group is on Tuesday, January 30 at 4:00 PM in the Orange Room (Building 40).

Safety Tip of the Month

For the best current estimates of how earthquakes located on different faults in this area will shake various local cities, try this Web site:

<http://www.abag.ca.gov/bayarea/eqmaps/pickcity.html>

Compare a 7.1 Hayward quake with a 7.1 San Andreas Peninsula

tremor. Maybe you should think about preparing for that quake.

For a private web site focusing on home mitigation and preparedness for earthquakes, try the "Epicenter":
<http://nwlinc.com/epicenter/>

—Rich Huggins

All meetings are held in the Orange Room, unless another location is listed. Larger meetings and conferences have a contact listed. Please notify the Public Affairs Office of any updates (send e-mail to nina@slac.stanford.edu or call ext. 2282).

January 25, 1:00 PM
Staff Accelerator Tour
Auditorium

January 27, 9 AM–4 PM
Science Teachers' Workshop
H. Quinn, PA Moore

January 30, Noon
Stanford String Quartet
Performance
Auditorium
Everyone Welcome!

January 30, 4:00 PM
TechPubs Users Group

February 5–9
SLD Week
TBA

February 8–12
AAAS Meeting
Baltimore, MD

February 14, 1:30 PM
SLAC Web Users Group
SCS Conf Room

February 15–16
BaBar Technical Board

February 22, 1:00 PM
Staff Accelerators Tour
Auditorium

February 29–March 2
HEP with e^+e^-
Colliders Workshop
Auditorium
C. Baltay, Yale U/D. Burke

February 26, 7:00 PM
OS/2 Users Meeting
Auditorium

February 27, 2:00 PM
TechPubs Users Group

March 4–8
SLD Week
TBA

March 8
SLUO Executive Committee

March 13, 1:30 PM
SLAC Web Users Group
SCS Conf Room

March 14–15
BaBar Technical Board

March 16
BaBar Executive Board

March 18–22
APS General Meeting
St. Louis, MO

March 19, 8:00 AM–2 PM
SUBB Mobile Blood Drive
Auditorium Lobby

March 21, 9:00 AM
Staff Accelerators Tour
Auditorium

March 22, 1:30 PM
Building Mgrs Training Coop
Auditorium

March 25, 7:00 PM
OS/2 Users Meeting
Auditorium

March 26–28
DOE PEP-II Lehman Review