Setting the Standards for Electrical Safety

By Heather Rock Woods

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See whole story...

Important Safety Contacts

By Larissa Williams

Our safety and the safety of those around us is important at all times. Recently, we’ve had that impressed upon us and a lot of information about safety has been distributed. The most important thing to remember is that we are not alone—there are people throughout the site who have been trained and are knowledgeable about safety, environment and health issues. Any time we have a question or a concern about something, we can get guidance and resources.

See whole story...

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Last update Wednesday November 03, 2004 by Emily Ball

http://www2.slac.stanford.edu/tip/2004/nov05/default.htm
Setting the Standards for Electrical Safety

By Heather Rock Woods

Lloyd Gordon’s (LANL) gentle Texas drawl sounds familiar to every SLAC employee and many users after his recent two-week teaching marathon on electrical safety. In the first four days alone he conducted 11 sessions attended by more than 1,500 people.

"This is a record for me, even though I’ve lectured to 25,000 people in 15 years of training for the DOE," Gordon said during a lunch break that, like most of his breaks, consisted more of answering questions than eating lunch.

His courses at SLAC covered everything, ranging from office-variety electrical safety to how to handle the unique electrical hazards presented by the Lab’s research and accelerator equipment.

An electrical engineer, Gordon is on loan from Los Alamos National Laboratory (LANL), where he is a Division Electrical Safety Officer and Principal Electrical Engineer for R&D Electrical Safety. He consults and advises DOE on safety across its lab complex, and has previously worked at Lawrence Livermore National Laboratory and at two universities.

SLAC management asked him here to give an immediate series of classes in response to an electrical arc flash that badly burned an electrical contractor at SLAC on October 11. (See TIP, October 15, 2004 at http://www2.slac.stanford.edu/tip/2004/oct15/accident.htm)

"When we have a serious accident in our national labs, we have to set a standard of excellence for the whole community," Gordon said. "We need to engage everyone in safety consciousness."
Gauging by the numerous questions he has received, class participants took a serious interest in the material. Craig Moore (SCS) attended the specialized course on Electrical Safety for R&D Equipment (ES&H Course 251). "I really appreciate this, this is a treat," Moore said. "Safety is important everywhere. I'll point out safety problems at an amusement park if I see something out of line."

Gordon was inundated with questions during class breaks.

"People ask really good questions," he said. "They have a lot of interest in home safety, not just the non-technical people, but the technical people too. [SLAC Nobel laureate] Richard Taylor was interested in the R&D safety culture in other countries."

Electrical Safety for Non-Electrical Workers (ES&H Course 239) is now required for all employees. The ES&H course catalog includes this and the other courses Gordon taught in October, but have never before been conducted on such an intense schedule involving the entire Lab at once.

"Normally I teach Course 239 once a month with up to 30 people max," said George Burgueno (SHA), an electrical safety engineer who developed much of the material for the course.

"Lloyd did a beautiful job," Burgueno said. "He's got valuable experience, he's down to earth, he's knowledgeable, and his stories are about useful lessons learned."

Gene Holden (KM), an ES&H instructional designer, said 1,220 people requested higher-level training from Gordon.

In his two-week SLAC stint, he taught the 2.5 hour Course 239 seven times, the seven hour Electrical Safety for R&D Equipment twice (for a total of 550 people), and eight other electrical courses ranging from 2 to 2.5 hours each.

"I'm a high-energy speaker and try to keep the class engaged. At the end of the day I'm beat. I'm taking my vitamins and resting," he said at the beginning of week two.

Video and computer-based training will be available at a later date for employees and users who were unable to take the training courses held October 18-29.
Important Safety Contacts

By Larissa Williams

Our safety and the safety of those around us is important at all times. Recently, we’ve had that impressed upon us and a lot of information about safety has been distributed. The most important thing to remember is that we are not alone—there are people throughout the site who have been trained and are knowledgeable about safety, environment and health issues. Any time we have a question or a concern about something, we can get guidance and resources.

In particular, the following contacts are useful to know.

**Resource List for Environment, Safety and Health**: This list of people trained in specific categories is updated quarterly. It can easily be printed out and hung on walls near phones and is a very good resource to keep current.


**Emergency Information**: ES&H maintains a website with simple, specific instructions of what to do in different emergency situations. It includes important phone numbers such as SLAC Medical (Ext. 2281), SLAC Security (Ext. 2251), the Radiological Support Call-in List, and the ES&H Safety Hotline (Ext. 4641). See: [http://www.slac.stanford.edu/esh/emergency/](http://www.slac.stanford.edu/esh/emergency/)

**ES&H Coordinators (Safety Coordinators)**: Safety Coordinators help SLAC achieve and maintain excellence in matters of environmental concern and the safety and health of its staff and the public. There are representatives within each division who are available to assist us with our questions and concerns:

Director’s Office, Human Resources and Technical Division: Janice Dabney, Ext. 3603, dabney@slac.stanford.edu

Business Services Division: Rick Challman, Ext. 3004, challman@slac.stanford.edu

ES&H Division: Mike Grissom, Ext. 2346, mikeg@slac.stanford.edu
SSRL and LCLS Divisions: Ian Evans, Ext. 3110, evans@slac.stanford.edu
PEP-II: Sandy Pierson, Ext. 3686, esp@slac.stanford.edu
Research Division, Frank O’Neill, Ext. 5300, fgo@slac.stanford.edu


SLAC Citizen Committees

Citizen Committees consist of people from ES&H and from across divisions with expertise in various areas who work together on committees to support the line organization with safety and compliance with regulations.

They review new installations and designs, consult with safety representatives, discuss issues in meetings and report their findings and recommendations. Some of the roles they take are in areas such as approving Hot Work (Electrical Safety Committee) or reviewing projects for hazards (Hazardous Experimental Equipment Committee).

More information about Citizen Committees can be found in the September 3, 2004 TIP article ‘The Role of SLAC Citizen Committees in ES&H’ (http://www2.slac.stanford.edu/tip/2004/sep03/committees.htm) or on the ESH website at: http://www-group.slac.stanford.edu/esh/committees/

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Last update Wednesday November 03, 2004 by Emily Ball
Safety Resources in Meetings

By Larissa Williams

One of the ways to promote a safe workplace is to open every meeting with a discussion about safety. But after the first few meetings, what do we say? What do we do to keep safety first? Some ideas are listed below to help involve your group in safety discussions.

Invite a Speaker

Safety contact personnel (see Safety Contacts article in this issue) are trained and knowledgeable in their fields. With advanced planning and scheduling, individuals will be able to come to your meetings and give brief presentations or have a question and answer session on their programs.

ES&H Safety Videos

The ES&H Training Group has a collection of nearly 100 Safety videotapes available for checkout. Each of them focuses on different safety specialties and vary from six minutes to a half hour in length. Bring a tape to your meetings and play all or part of the subject matter that your group is interested in. Tapes include Bloodborne Pathogens, Carcinogens, Cleaning Agents, Electrical Safety (with five different focuses), Fire Safety, Heat Stress, Laser Safety, Protecting the Environment, Toxicology, and Waste Minimization.

Contact the ES&H Training Team at Ext. 2688, esh-training@slac.stanford.edu, to arrange for checkout of these tapes. For a complete list, see: http://www-group.slac.stanford.edu/esh/training/videos/videos.html

Safety Resource Materials in the SLAC Library

The SLAC Library contains many books and reference materials on safety. Do members of your group have questions on regulatory codes? Do you need examples of surveys or assessment programs? The Library has access to many of the regulatory codes and several interpretive books to aid us in understanding them.
There are also video tapes of many of the presentations given at the Lab, including our Safety Stand downs. Go to the Library in the Central Lab (Bldg. 40, room Y215) or go to the catalog online at http://www.slac.stanford.edu/library/catalog/catalog.html and type 'safety' in the subject field. The Circ-Info link at the top of search result links will tell you if the book is available.

If you are looking for a particular book and it is not in our collection, we can usually borrow it from another library. Contact the SLAC Library at Ext. 2411, email libcirc@slac.stanford.edu, for questions. See: http://www.slac.stanford.edu/library/catalog/catalog.html

Other safety and environmental resources can be found on the ES&H website at http://www.slac.stanford.edu/esh

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Shining Light on the 1918 Influenza Pandemic

By Heather Rock Woods

Researchers have literally unearthed clues as to why the 1918 influenza pandemic was so deadly. Using fragments of the flu genome from Army autopsy tissues and a body buried in the freezing Alaskan permafrost, researchers have assembled genes from the 1918 flu virus. SSRL’s x-ray beams then revealed the structural secrets of a protein encoded by one of the genes.

"It’s been known for many years that the 1918 pandemic was one of the greatest killers ever seen," said Ian Wilson (Scripps Research Institute). Between 20 and 40 million people died worldwide, including an abnormally high proportion of healthy young adults, who rarely die from influenza.

At the time, people did not know influenza was caused by a virus. To find surviving samples of genetic material, Jeffery Taubenberger (Armed Forces Institute of Pathology) and colleagues searched through the Army’s large set of preserved autopsy tissues and took biopsies from Alaskans buried in the permafrost. "Whole villages were wiped out by the flu," Wilson said.

Genetic Information Revealed

From those samples, Taubenberger figured out the sequence of the flu’s genetic information. The virus has eight gene segments that give instructions for making at least 11 proteins. Wilson and James Stevens (Scripps Research Institute) produced one of the viral proteins, called hemagglutinin (HA), and used SSRL’s protein crystallography beam line to see the coils, stalks and heads that make up HA’s structure. Their results appeared in the journal Science.

A ‘ribbon’ representation created from data taken at SSRL shows part of the hemagglutinin (HA) protein.
The intricate shape helps explain why the 1918 flu virus was unusually virulent. HA is the most abundant protein on the virus's surface, making it the main target for the immune system to recognize and attack. HA binds to human lung cells and enables the virus to get into the cell inside sacs called vesicles. HA then undergoes a change in shape and helps the viral and vesicle membranes to fuse, allowing the infection to gain ground.

### Avian Flu Mixes with Human Flu

The structural analysis shows that the 1918 HA protein is more closely related to avian (bird) forms than previously believed. Flus that infect birds and pigs also have eight gene segments, corresponding to human flu, but the proteins look somewhat different.

"That’s one of the reasons influenza is so successful," Wilson said. "It can re-sort these segments from different sources, say one from a bird and the rest from a human." The mixture is devastating because our immune system has no protective antibodies to avian or swine proteins that it has never seen before being infected. In the three flu pandemics last century, Wilson said the HA gene and a second viral gene were replaced by segments from pigs or aquatic birds. "For the 1918 flu, we were interested to see if it’s more avian-like or has features of both, to see why it was so virulent," he said.

Two features in HA’s shape particularly stand out as potentially contributing to the extraordinarily high infection and mortality rates observed in 1918. The receptor binding site (for the virus to attach to human cells) is narrow, and is only a single mutation away from a known swine-avian virus. The mutation makes the binding site slightly larger, which could increase affinity for human cells.

The researchers also observed two patches rich in histidine (an amino acid) which may boost the ability of HA to fuse to the vesicle membrane in order to escape and replicate itself inside human cells. One of the patches is found only in avian forms of HA. "[This] provid[es] tantalizing evidence of a direct jump of this virus from birds to the human naïve population," Wilson added.

"There are 11 gene products involved, and they probably all play a role," he said. "This is just a start as far as we're concerned."
Symmetry Magazine Hits the Stands

By David Harris

The first issue of symmetry has hit the stands. It features articles, commentaries, essays, profiles, reviews and outside perspectives of the work done at both SLAC and Fermilab.

Print copies will be available in the Central Lab (Building 40) from the Communications Office (Ext. 8703, Room G106, first floor), the Library (Ext. 2411, Room Y215, second floor) and other locations around SLAC.

People can subscribe to the magazine by visiting the Symmetry website and may choose to receive either e-mail notifications when new issues are posted or print copies of the magazine. Staff who work on-site should subscribe at: http://www.symmetrymagazine.org/slac. Other readers can subscribe at: http://symmetrymagazine.org/form.html
November 1 - 19 is Health Care Open Enrollment Period

Upcoming events for Open Enrollment are as follows:

Informational Presentations (scheduled 1-hour sessions)

- Monday, 11/8, 12:30 p.m.
  Bechtel Int'l Center, Assembly Room

- Tuesday, 11/9, noon
  SLAC Panofsky Auditorium

- Wednesday, 11/10, 1 p.m.
  Alumni Assoc., Barnes & McDowell Conf. Rooms

- Friday, 11/12, 10 a.m.
  Stanford Management Co.,
  2770 Sand Hill Road

- Monday, 11/15, 1 p.m.
  Alumni Assoc., Barnes & McDowell Conf. Rooms

- Tuesday, 11/16, 1:30 p.m.
  Fairchild Auditorium

- Thursday, 11/18, 10 a.m.
  Tresidder, Cypress N&S,
  459 Lagunita Dr. 2nd flr.

- Friday, 11/19, 10 a.m.
  Tresidder, Cypress N&S,
  459 Lagunita Dr. 2nd flr.
Benefits Fairs Schedule,
(all Fairs 10:00 a.m.–4:00 p.m.)

Friday, 11/5
Fairchild Auditorium

Monday, 11/8
Tresidder, Oak Lounge

For complete information on Stanford Benefits, see: http://benefitsu.stanford.edu/

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Last update Wednesday November 03, 2004 by Emily Ball
Purchase Requisition Deadlines for Calendar Year 2004

For new purchase requisitions and/or subcontracts that will expire before December 31, 2004, requisitions need to be entered into the PeopleSoft purchasing system by the following deadlines.

The Purchasing Department will ensure procurement requests to be awarded or renewed are completed before the winter break (scheduled to begin December 18) for purchase requisitions entered into PeopleSoft by the close of business according to the following schedule.

Enter requisitions for procurements by close of business on:

November 12
for $100,000 and over

November 24
for $25,000 - $100,000

December 2
for less than $25,000

Contact: Janet Adams, Deputy Purchasing Officer, Ext. 8515, jadams@slac.stanford.edu
Order SLAC Logo Items from Lands’ End

SLAC volunteers will have the latest catalogs and can help you order from a full selection of embroidered items from Lands’ End. Note: Delivery will be on or before December 17.

L to r: Carol Bechtel, Karen Lawrence (both HR) and Joan Scott (PUR) model SLAC logowear.

When? November 15-19, from noon to 1:00 p.m. each day

Where? SLAC Guest House (Main Lobby)

For more information, contact Doug Kreitz, Ext. 4550, dougkr@slac.stanford.edu
Property Control Honor Roll

By Leslie Normandin

The list keeps growing. Here are the recipients of the Property Control Honor Roll for departments with 100% accountability of their reportable inventory for fiscal year 2004.

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

Director’s Office
Director’s Office
Affirmative Action
Communications
Human Resources

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

SSRL Division
SSRL Division Office
Spear 3 Project
User & Administrative Services

LCLS Division
The inventory for fiscal year 2004 was completed and reported to DOE in October. You did an ’outstanding’ job of accounting for your property. You deserve a round of applause for taking your property responsibilities seriously.

The majority of you notify Property Control when you move or transfer property. We want to remind those of you still not using the on line property transfer located in BIS to give it a try. Just go to BIS and visit the Property page at:


If you have any questions about Property Control, contact Leslie Normandin, Property Control Manager,
at Ext. 4350, e-mail leslie@slac.stanford.edu.

We’d sure like to see your department listed here next year!

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Last update Wednesday November 03, 2004 by Emily Ball
SLUO Office Relocated

By Nina Adelman Stolar

The SLAC Users Organization (SLUO) office has relocated from the Central Lab Annex (Bldg. 84). SLUO Administrator Fran Spiller, assisted by Olga Iakovleva and Sonja Cronin (all RD), can now be found in the SCS central lobby area (Bldg. 50).

All new SLAC users must register with the SLUO Administrator (Ext. 4505, e-mail sluodesk@slac.stanford.edu) and be entered into the SLUO user database. The SLUO Web site has useful information for new users and visitors, details on the executive committee membership and activity updates.

For more information, see: http://www-group.slac.stanford.edu/sluo/

Olga Iakovleva and Fran Spiller in their new office location in Building 50. (Photo by Diana Rogers)
Public Scanning Station Available in the Central Lab

By Rebecca Reitmeyer

Did you know there is a public scanning station available for SLAC users in the Central Lab (Bldg. 40, Room Y206)? The Ricoh IS450DE duplex scanner can handle paper sizes up to 11 by 17 inches, has a 150 sheet automatic document feeder capacity and scans single (simplex) and double (duplex) sided originals at a rate of 60 pages per minute. (That’s fast, folks.)

The scanner is typically available on a first-come, first-served basis for most one-time projects. Groups interested in using the scanner for larger projects should contact Sharon West (Ext. 2594, west@slac.stanford.edu) so time can be scheduled.
Flu vaccines will NOT be available at SLAC for the ‘04-’05 Flu Season!

For complete information, contact your local health care organization or see: http://www-group.slac.stanford.edu/esh/medical/influenza03.html
TIP Holiday Publication Schedule

Plan your articles now! The Interaction Point will be published on the following days through January 2005:

November 19
December 10
January 21

Stories are due 10 days before publication date. For more information, see: http://www2.slac.stanford.edu/tip/
MILESTONES

Service Awards

5 Years
Hyde, Michael (TIS), 11/8
Luening, Jan (ESRD), 11/15
Rogers, Diana (DO), 11/1
Sharp, Lorin (BU), 11/5

15 Years
Saldivar III, Jesse (SEM), 11/6
Whynott, Nelson (KLY), 11/6

20 Years
Kurz, Roland (MFD), 11/6

25 Years
Pitthan, Rainer (ILC), 11/1

35 Years
Sartain, M. Dale (MFD), 11/12

Deceased
Hay, James (formerly with EFD CRY), on October 12, 2004
Ruby, Stanley (formerly with SSRL), on October 18, 2004

To submit a Milestone, see:

See Awards and Honors at:
http://www.slac.stanford.edu/slac/award/
Annual Pub Week Begins November 15

By Rebecca Reitmeyer

Last November, we introduced the first annual Pub Week dedicated to increasing awareness of what it means to be a SLAC author.

At the second annual Pub Week beginning November 15, members of the TechPubs staff will again be on hand in the Panofsky Auditorium lobby between 11:30 a.m. and 1:30 p.m. each day. We will be happy to answer any questions you have about SLAC documents or to hear your suggestions for improving the registration and submission process. And once again, you will be able to register for prizes and nibble on some goodies!

You’ve Written a Lot This Year!

TechPubs reported 855 preprints to the Office of Scientific and Technical Information (OSTI) for FY2004, an increase of 16 percent over FY2003. Part of the increase in author-submitted preprints can be attributed to outreach efforts during this past year.

"The past year has been one of extraordinary productivity here at SLAC," said Persis Drell, associate director of the Research Division. "The most significant, long-term impact SLAC can make is through the intellectual productivity of our authors. The increase of 16 percent over last year’s publication rate is a contribution in which we can all take pride."

The number of preprints reported also represents a 39 percent increase in author-submitted preprints—those that you registered yourselves before publication elsewhere rather than those that we registered after the fact. Thanks to all SLAC authors for helping us give your paper—and the Lab—the attention it deserves.

Making the Process Easier

This year’s Pub Week theme focuses on ways that TechPubs continues to make it easier for you to register and submit your papers. To compliment idoc, our user-friendly online document registration system, we're working on a comprehensive publications matrix—a set of business rules concerning...
SLAC publications. While we’re constructing this matrix, we’re talking with SLAC-based collaborators to determine when their publications are SLAC documents and when they aren’t. For current progress, check out the agreements we have so far at http://www-group.slac.stanford.edu/techpubs/help/matrix/

Remember that fulfilling your author responsibilities is already easier than it used to be. Log on to idoc at http://idoc.slac.stanford.edu to obtain a document number and then follow the posted submission instructions to either FTP or e-mail an electronic version of your paper to us; we’ll do the rest. Log on to idoc during Pub Week to enter a drawing for your choice of posters or other prizes.
Celebrate Diwali

The Indian Community at SLAC invites you to come and celebrate Diwali with sumptuous Indian Food, Music and More.

Friday, November 12
12-1:30 p.m.
Redwood Conference Room (Bldg. 48)
COST: $10

Please RSVP by Monday, November 8 to:
Kay Ganapathi, Ext. 4157, kayg@slac.stanford.edu

For more information, see: http://www2.slac.stanford.edu/tip/2002/dec06/diwali.htm
SLAC Runners Win 10K Corporate Race

By Michael Toney

On Saturday, October 16, a team of 11 SLAC runners competed in the Habitat for Humanity Home Run, a 10 kilometer race starting and finishing at Stanford Stadium and benefiting the Habitat for Humanity.
The SLAC team overwhelmingly won the 10K corporate race, placing their top five runners in the overall top 20. The team members (shown left to right): (first row) Roger Jones (ARDA), Karl Bane (ARDA), Steffen Doebert (ILC), Michael Toney (ESRD) and Bobby McKee (ILC), the de facto team captain. Second row: Ashley Deacon (SG), Doug McCormick (ILC), Toshiyuki Okugi (ILC)—the top SLAC finisher, despite having run a 2:50 marathon the week before—and Dennis Atkinson (ILC). Not pictured: Yuri Batygin (ILC) and Joong Kwon (SEM).

For complete results, see: http://www.siliconlight.com/htmlpgs/homeset/HomeRun/Homerun.html
About Us:

The Interaction Point

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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:
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