

SLAC LIGHTSOURCE USER ACCESS GUIDELINES & AGREEMENT

Introduction

Welcome to SSRL and LCLS, SLAC's lightsource user facilities. We hope that your stay here will be enjoyable as well as safe. We take very seriously the challenges of safety and security here. These guidelines are intended to call your attention to concerns which you may encounter at SLAC and to encourage you to be alert for and avoid potential problems.

Use of Information Resources

Consistent with the Stanford University and U.S. Department of Energy policies, users need to be aware of certain responsibilities regarding the use of information resources and the serious consequences to us as individuals if we do not adhere to these. SLAC information resources are U.S. Government property and, as such, are subject to "appropriate use" requirements found in Federal law and the provisions of the SLAC contract pertaining to the proper use, protection, accountability and disposition of government property. These laws and policies apply to all data-communication and telecommunication facilities and services (including, but not limited to, e-mail, instant messaging, telephones, voice mail, faxes, SLAC data, networking services, storage media, computers and associated peripherals and software), whether for administration, research, teaching or other purposes. Connecting equipment not owned by SLAC to SLAC networks is a use of SLAC information resources. The section on Use of SLAC Information Resources outlines the responsibilities of those who use SLAC information resources. For additional information related to computer security policies, see <http://www.slac.stanford.edu/comp/policy/policy.html>.

Safety

Everyone who uses SLAC facilities is expected to be familiar with access requirements and to participate fully in training and safety programs relevant to the performance of their tasks. In addition to the guidelines related to safety and security outlined here, we maintain a significant amount of safety-related information on the user webpages, see <http://www-ssrl.slac.stanford.edu/safety/> and <http://www-ssrl.slac.stanford.edu/lcls/users/safety.html>

To aid in maintaining a safe environment for users, SSRL and LCLS have established Directorate Safety Offices to address laboratory and experimental safety matters. In addition, SLAC has several safety committees which oversee specific safety areas, including: ALARA, Earthquake, Electrical, Environmental, ES&H Coordinating Council, Fire Protection, Hazardous Experimental Equipment, Hoisting and Rigging, Laser Safety, Local Safety Committee, Non-Ionizing Radiation, Operating Safety, Radiation Safety, Safety Overview, SEDAC, and ESHAC.

For the purpose of these guidelines, **Employee** or **User** or **Experimenter** and **Supervisor** or **Proposal Spokesperson** are generally interchangeable.

The experimental conditions at SLAC are varied and demand that everyone pay considerable attention to safety. A large number of different experiments are performed by users who are, for the most part, associated with the Laboratory for only a short time during the year and use a relatively small area. In addition, experiments utilize extremely intense radiation and frequently, hazardous samples.

Everyone at SLAC is expected to carry out their responsibilities in a safe manner, to be mindful of any potentially unsafe conditions or practices and to report these to their supervisor, the SSRL Duty Operator or LCLS Floor Coordinator, the SSRL or LCLS Safety Officers, or to the appropriate SLAC Safety Committee.

The requirements described here apply to everyone who visits and utilizes our facilities. If you have questions related to any safety procedures at SSRL, please contact Matt Padilla at 650-926-3861 or Behzad Bozorg-Chami at 650-926-3872, or Zoe Van Hoover at 650-926-8772 at LCLS. If you have any other questions, please let us know. We look forward to working with you.

OVERVIEW – INTEGRATED SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEM (ISEMS)

DOE Office of Basic Energy Sciences' Safety Policy: The Office of Basic Energy Sciences (BES) is committed to conducting research in a manner that ensures protection of the workers, the public and the environment, and it is a direct and individual responsibility of all BES managers and BES supported researchers and their staff. Funds provided by BES for research will be applied as necessary to ensure that all BES research activities are conducted safely and in an environmentally conscientious manner. Only research conducted in this way will be supported.

The message is valid for all our activities and is consistent with SLAC policy to protect the safety and health of its employees, its users, the public, and the environment as well as to protect property from loss or damage. We all have a responsibility towards maintaining and promoting safety in our day-to-day lives and assuring that we minimize our impact on the environment. So whether you're at home, at the office or on the experimental floor, take the time to consider your safety and health, and that of your colleagues, co-workers, friends and family, and how best you can protect it.

Consistent with SLAC's Integrated Safety and Environmental Management System (ISEMS), job/task specific hazards and controls are covered by a Work Planning and Controls (WPC) process which plans for safe work by identifying tasks and their hazards, establishing controls to mitigate risks, authorizing and releasing work, documenting results and monitoring effectiveness. For SLAC lightsource users, this safety review is conducted each time a proposal or beam time request is submitted, so it is important that spokespersons fully disclose any potential hazards at that time. This process prompts the specific reviews, controls, procedures, training and personal protective equipment necessary to safely complete experiments or activities by seeking the participation of those who will perform the work. Area Hazard Analyses (AHAs) have also been prepared for each work area at SLAC to: 1) determine the hazards that may be present in each area; 2) determine appropriate controls for these hazards; and 3) provide a mechanism to communicate these hazards.



During normal work hours, and during all times of operation, there is an operator/floor coordinator on duty. **The Duty Operator (at SSRL) or Floor Coordinator (at LCLS) should be the first point of contact if you have any questions or concerns.** The safety organization includes the SLAC Associate Laboratory Directors for SSRL and LCLS, who are who are responsible for safety policies and practices and who are assisted by the SSRL and LCLS Safety Officers, group leaders and supervisors, and ultimately you. All of the SLAC safety organization is available to help as well. We adhere to all SLAC safety regulations.

The following pages will provide you with safety guidance in a number of general areas. They are not, however, a substitute for comprehensive training which may be necessary for operation of certain equipment, nor do they supplant applicable DOE, SLAC or other regulations which are in force at SLAC. Detailed information about regulations is available from your supervisor, Safety Officers, SLAC Safety Committee members, or through the SLAC ES&H Division.

As part of your initial orientation concerning your work here, your supervisor or proposal spokesperson will identify the potential hazards, if any, to which your work might expose you or others. He/she will also instruct you in the proper methods for safely going about your work.

You are the person best able to assure your safety and health. Please work defensively by looking for potential hazards, including back, eye or repetitive motion injury risks; electrical hazards and hand traps before you start a job. **PLAN YOUR WORK FOR SAFETY.**

If any unexpected circumstances arise during work execution, or if the scope of work changes, be sure to stop, reassess the job hazards, determine appropriate controls for any new hazards, and incorporate those controls into a new work plan before proceeding.

It is the specific responsibility of the Spokesperson for each experiment to:

- Identify all safety concerns associated with the experiment and communicate these to the SLAC staff on documents related to your proposed experiment (e.g., proposal submissions, beam time and/or user support requests);
- Notify User Administration in advance of all users expected to be on-site for scheduled experiments;
- Implement procedures for the safe handling; storage and disposal of hazardous materials;
- Ensure that all participants in the conduct of the experiment are familiar with all safety aspects and procedures for safe operation of the experiment; and
- If not planning to be on-site for scheduled experiments, Spokespersons must appoint a lead contact who will be available on site.

Should you notice any additional hazard, please inform your supervisor. If he/she is not available or unable to correct the hazard, contact the SSRL or LCLS Safety Officer, Beam Line/Instrument Scientist, Duty Operator/Floor Coordinator, Accelerator Operator, or a representative on the SLAC Safety Committees (SSRL Accelerator Operator - x2751, SSRL Beam Line Duty Operator x4040, LCLS Floor Coordinator x6267, SLAC MCC X2151).

ALCOHOL POLICY: Alcohol is not permitted to be stored or consumed on site except at functions which occur after working hours in designated non-working areas and which have been approved in advance by the SLAC Director.

SMOKING POLICY: Smoking is not permitted inside buildings. Smoking outside is permitted in designated areas only.

FIREARMS may not be brought to the SLAC site.

Children may enter the SLAC experimental floor areas only for brief **guided** tours. Tours must be approved in advance by a designated individual at each facility, by SLAC Security and by ES&H if the tour involves an RCA.

Escorts must take responsibility for the safety of their guests; go only to authorized areas; follow postings, safety and security procedures; and remain within visual contact of their guests at all times. Temporary one-day badges are issued at Gates 17 or 30. Do not bring pets to SLAC.

No person may participate in any experimental activity at SLAC unless he/she is a bonafide member of an experimental group and has completed the appropriate training as well as read and signed the SLAC LIGHTSOURCE USER ACCESS GUIDELINES & AGREEMENT.

If you have a question or concern regarding safety, security or health matters, please discuss it with your supervisor or SLAC point of contact. If this does not result in a satisfactory resolution of the issue, contact a SLAC Associate Laboratory Director and then the SLAC Director. Finally, you may file a written complaint directly with DOE at:

U.S. Department of Energy
Director SLAC/DOE Site Office
SLAC National Accelerator Laboratory
2575 Sand Hill Road, MS 8A
Stanford CA 94025

The following topics are covered in the SLAC Lightsource User Access Guidelines & Agreement:

Chemical Safety
Construction Safety
Cryogenic Safety
Earthquake Safety
Electrical Safety
Emergencies, Fire, Medical & First Aid
Ergonomic Safety
Guidelines for Working Alone
Hutch Authorization and Operation at LCLS
Hutch Authorization and Operation at SSRL
VUV Beam Line and Vacuum Chamber Authorization and Operation at SSRL
Injury and Illness Reporting
Laser Safety
Magnetic Field Warning
Mechanical Equipment Safety
Radiation Safety and Interlocks
Radiation Protection Information and Procedures for SLAC Lightsource Users
Pedestrian, Vehicular and General Safety and Security at SLAC
Use of SLAC Information Resources

After reviewing this material thoroughly, please sign the access agreement to verify that you have understood the contents of this briefing. If you have any questions, please contact Matt Padilla at 650-926-3861 or Behzad Bozorg-Chami at 650-926-3872 at SSRL, or Zoe Van Hoover at 650-926-8772 at LCLS, or the Operational Health Physics Department at 650-926-4041.

All on-site users must annually review **the SLAC Lightsource User Access Guidelines & Agreement.**

After reviewing this material thoroughly, please sign the attached access agreement to verify that you have understood the contents of this briefing. If you have any questions, please contact Matt Padilla at 650-926-3861 or Behzad Bozorg-Chami at 650-926-3872 at SSRL, or Zoe Van Hoover at 650-926-8772 at LCLS, or the Operational Health Physics Department at 650-926-4041.

CHEMICAL SAFETY

YOUR RIGHT TO KNOW: You have a right to know what hazards you may be exposed to in your workplace and to know what precautions are in force to protect your health and safety.

YOUR RESPONSIBILITY: You are responsible to help maintain a safe and healthful work environment by learning and complying with all regulations applicable to your activities.

CHEMICAL: Is any element, chemical compound, or mixture of elements and/or compounds. By this definition most sample material is considered a chemical – keep this in mind when filling out proposals and beam time requests.

HAZARDOUS MATERIAL: Any chemical or material that, due to its physical or chemical properties, poses a risk to the health or safety of humans, environment, or the laboratory. This includes, but is not limited to, chemicals/materials (including gasses) that are **FLAMMABLE, CORROSIVE, REACTIVE, TOXIC, CARCINOGENIC, RADIOACTIVE,** and materials that are **BIOHAZARDOUS**. Also included are **NANOMATERIALS** – defined as having at least one dimension between 1 and 100 nanometers. Contact the Safety Office for more information. Material Safety Data Sheets (MSDS) must accompany all hazardous materials that come to SLAC.

CHEMICAL PROCUREMENT/SHIPPING: Review information on chemical procurement and proper shipping methods. Keep in mind that samples may fall under these requirements.

EXPERIMENTAL SAFETY: You must obtain approval prior to bringing any hazardous substance to SLAC. Safety checklists for beam time are generated from information submitted in user proposals and/or beam time requests. If you are performing tasks or using samples other than those previously indicated during this process, you run the risk of not being able to perform your experiments. Contact the Safety Office if you are deviating from your original proposed experiment. A Safety Review Summary (SRS) may be required by SSRL for hazards identified during the proposal or beam time request process; if a SRS is generated, the SRS must be signed prior to starting SSRL experiments for that particular SSRL beam time.

STORAGE: Hazardous substances must be kept in properly designed containers with clear labels, stating chemical name, date, responsible person's name and telephone number.

CHEMICAL SPILLS: If you spill a chemical, have been appropriately trained, and you know it can be safely cleaned up, do so. If you discover a situation that is hazardous to the general SLAC population, vacate the area and pull a fire alarm box. Then, from a safe location dial Ext. 9-911 and provide additional information to emergency personnel.

CHEMICAL DISPOSAL: You can get help and advice about chemical handling or disposal from the SLAC Safety Office on ext. 3861.

SAMPLE PREPARATION LABORATORY: For work in the Sample Preparation Laboratory, normal lab practices apply. Approval and orientation is required to use the Sample Preparation Laboratory.

FOOD: Food must not be stored, handled or consumed near chemical use areas.

CONSTRUCTION SAFETY

Construction sites often present unfamiliar hazards at SLAC. In general, you should detour around construction sites. If your work requires you to enter a construction area, observe warning signs (HARD HAT AREA, etc.) and watch for hazards overhead and underfoot.

During LCLS commissioning and early user experiments, some parts of the LCLS experimental areas may be designated as construction areas. If your work will require unescorted access to these construction areas, SLAC ES&H course 375 “Safety Orientation for Construction” is required. If you have not completed this training, you must be escorted in construction areas at all times by a trained worker.

CRYOGENIC SAFETY

The hazards from cryogenic substances are:

- **EXTREME COLD**—Cryogenic liquid and their boil-off vapors can rapidly freeze skin and eye tissue. When transferring liquid, WEAR INSULATED GLOVES, SAFETY GLASSES AND APPROPRIATE CLOTHING (aprons or long pants without cuffs). Follow rules posted at fill stations.
- **EXPANSION RATIO**—Use properly designed dewars, transfer lines with properly designed safety devices in working order. NEVER TRAP COLD LIQUID IN A CLOSED VOLUME without a relief valve. As the liquid warms, the pressure can increase 1000 fold.
- **ASPHYXIATION**—In small spaces (such as experimental hutches) ensure adequate ventilation. Boil-off vapors can displace air. Personnel may not accompany cryogen dewars in elevators. All transport of cryogens in the LCLS NEH elevator must be performed following an approved procedure. Contact the Floor Coordinator for assistance in executing this procedure.

At LCLS, users are not authorized to dispense or use cryogens unless their work plan has been reviewed and approved by the LCLS XFD Safety Officer and the user’s supervisor, and explicit work authorization has been provided.

PROPER PROCEDURES. Know proper filling practices. **DO NOT LEAVE DEWARS UNATTENDED WHILE FILLING.** Secure dewars for earthquake.

FIRST AID. In the event of a cold contact burn, remove clothing which would restrict air circulation to the affected area. Do not rub frozen parts, as tissue damage may result. **OBTAIN MEDICAL HELP AS SOON AS POSSIBLE.** An unconscious person should be removed to a safe location to resuscitate and seek help, except as noted below for oxygen deficiency hazards.

Liquid hydrogen is flammable. Its use constitutes a special hazard and requires safety review and approval.

Procedures for Safe Handling of Crimp Vials at Low Temperatures:

1. In general, crimp vials are not intended for low temperature use. The rubber septa may become brittle at low temperatures, thus compromising the air-tight seal. If it becomes necessary to transport samples in crimp vials at low temperatures, the following guidelines must be followed:
2. Crimp vials consist of 3 pieces: 1) a glass vial, 2) a rubber septum, and 3) an aluminum cap. The sample is introduced into the glass vial in an inert atmosphere glove box, the mouth of the vial is

closed with the septum and the assembly is covered with the aluminum cap. A hand crimping tool is used to make a compression seal.

3. If the sample needs to be kept at low temperatures it must be cooled, transported and stored at dry ice temperatures. If desired, better anaerobicity can be attained by covering the crimped aluminum top with a layer of wax or a saran sheet, which is snugged down around the neck of the crimp-vial with a tightly wound rubber band or wire wrap.
4. If lower temperatures are needed, the sample must be cooled without submerging in liquid nitrogen (LN₂) and transported in a dry LN₂ shipper. When the shipper arrives at its destination, the samples should be transferred to a low temperature freezer (-80 °C). Note, crimp vials should NEVER be submersed in LN₂. This allows LN₂ to leak into the vial. When the vial is removed from LN₂ and allowed to warm, the influxed LN₂ will flash evaporate and produce an extremely rapid pressure-jump. An explosion hazard is created.
5. Whenever possible, plastic cryo-vials (with LN₂ outlet holes in the vial) should be used as an alternative to crimp vials. Capped, stoppered, or removable seal containers should never be submersed in LN₂.
6. Safety glasses and gloves must be worn whenever handling cryogenics. In addition, a face shield must be used when handling crimp vials that have been stored at low temperature.

Oxygen Deficiency Hazards Associated with the SSRL LN Distribution System and LCLS Cryogen Dewars:

1. Air normally contains about 21% diatomic oxygen (O₂) with the remainder consisting mostly of dinitrogen (N₂).
2. Individuals exposed to reduced-oxygen atmospheres may suffer a variety of harmful effects including accelerated heartbeat (17%), dizziness and increased reaction time (16%), loss of muscle control (15%), loss of consciousness and permanent brain damage (12%), inability to move (10%) and death in 5-8 minutes (6%).

At SSRL:

3. At SSRL, oxygen deficiency can occur as a result of a cryogenic spill, for example liquid nitrogen (LN₂). As a result, areas which use LN₂ from a continuous feed are protected with oxygen deficiency hazard (ODH) monitors. At SSRL, this includes some hutches and the entire experimental floor (the ground floors of B120, B130, and B131).
4. In order to insure personnel safety, the exposure limit has been set to 19.5% at which point the ODH monitors will alarm and personnel must evacuate the affected area. For the SSRL experimental floor, the fire alarm will be activated if the oxygen concentration stays below 19.5% for more than 30 seconds forcing personnel to evacuate the building. DO NOT reenter the building until it has been cleared by the fire department. For the case of a local alarm in an experimental hutch or the LN₂ fill station, personnel must exit the hutch or fill station only. DO NOT enter an area in which an ODH alarm is activated even to rescue someone who is down. Rescues may only be done by trained and equipped professionals.
5. The level of risk for oxygen deficiency is calculated for each affected area and posted using an ODH classification scheme in which ODH Hazard Class 0 (ODH 0) is the least hazardous and 4 the most. At SSRL, the experimental floor is ODH 0 and the experimental hutches that use LN on a continuous feed are ODH 1. Untrained visitors may enter an ODH 0 area without an escort after a hazard awareness briefing. Untrained visitors to ODH 1 areas must be escorted by trained personnel.
6. Personnel protective equipment (PPE) must be used for transferring cryogens from fill stations to portable dewars. The requirements include safety glasses/face shields and gloves and are posted at the LN₂ dispensing locations.

At LCLS:

- At LCLS, potentially oxygen displacing cryogenics may be present in dewars. Areas where dewars are present will have a building oxygen deficiency monitor and/or a portable oxygen deficiency monitor in place. Specific training on the configuration of these monitors and instruction on response to these oxygen deficiency monitor alarms will be provided in the LCLS hutch safety orientation provided to each user upon arrival on the experimental floor.

Procedure for Preparing Shipping Dewars with Free Liquid Nitrogen (Hazardous) from SSRL:

- Only properly trained users and staff can prepare dewars for shipping. Contact the Safety Officer for training.
- The appropriate PPE must be used when filling a liquid nitrogen shipping dewar.
 - Cryogenic gloves
 - Protective glasses
 - Long pants (no cuffs) or Apron
 - Closed-toe shoes



Fig. 1. Designated beam line dewar (4 liters) for filling shipping dewars.

- Use the designated beam line 4-liter dewar shown in Fig. 1 to fill the shipping dewar with liquid nitrogen.
- Pour enough liquid nitrogen into the shipping dewar until liquid is observed in the top of the dewar (Fig. 2). This step is **required** for hazardous shipping.
- Cap and insert the dewar into the shipping container.



Fig. 2. For shipping dewars containing free liquid nitrogen (hazardous), fill the shipping dewar until liquid nitrogen is observed.

- Fill out the 'SSRL Free Liquid Nitrogen Dewar Shipping Form', one form for each dewar.
- If any other hazard other than liquid nitrogen is present in the dewar, a 'Hazardous Materials Shipping Form' must also be filled out and attached to the dewar.
- Insert the form(s) into a clear sticky envelope (available at the Crystallography (PX) beam lines or SSRL Shipping and Receiving in Bldg. 120 adjacent to BL1-4) and attach it to the dewar (Fig. 3).



Fig. 3. Attach a plastic envelope containing the proper shipping form to

- Deliver the dewar to SSRL Shipping and Receiving in Bldg. 120 adjacent to BL1-4 and place it in the 'Sample Dewar Shipping' area for 'Outgoing Dewars'.

EARTHQUAKE SAFETY

DON'T PANIC! Act immediately when you feel the ground or building shaking. Keep in mind that the greatest danger is from falling objects.

IF YOU ARE INDOORS: Move immediately to a safe place; under a desk, table or workbench; in an interior doorway; or in the corner of a room. Watch out for falling debris or tall furniture. Stay away from windows and heavy objects. Don't use elevators.

IF YOU ARE OUTSIDE: Try to get to an open area away from buildings, tall trees, and power lines.

IF YOU ARE IN AN AUTOMOBILE: Calmly stop the car away from tall buildings, overpasses or bridges. **Stay in the car.**

Electricity may go out, fire alarms or sprinkler systems may activate. Expect to hear noise from breaking glass, cracks in walls and falling objects.

There may be aftershocks. Sometimes aftershocks will cause damaged structures to collapse.

WHEN YOU FEEL IT IS SAFE, IMMEDIATELY PROCEED TO THE NEAREST EMERGENCY EVACUATION/ASSEMBLY AREA:

- If at SSRL, all SSRL Staff and Experimenters should gather in the main parking lot above Bldg. 120 (next to Building 274).
- If at LCLS, all Staff and Experimenters should immediately proceed to the parking lot northwest of the NEH Building.

Wait in the emergency evacuation/assembly areas until given further instructions by the SSRL Duty Operator, LCLS Floor Coordinator or PAFD. If a Duty Operator/Floor Coordinator is present, he/she will take charge of safety activities. Cooperate with him/her and assist him/her if requested. Look for your co-workers and report any missing persons. Someone will be appointed to account for personnel. Check in with that person and **DO NOT LEAVE**, either for personal business or in response to a request from the person in charge, unless you **CHECK OUT** with that person. Do not re-enter the building until it is declared safe by the SLAC Structural Evaluation Team.

Do not use the telephone (including a cell phone) except for emergency response activities.

During an earthquake, heavy objects can travel long distances. Any equipment that is brought to SLAC must be designed to withstand 0.75G acceleration, both vertical and horizontal, acting together. Wheeled equipment must have locking casters or be chained to a solid building support or wall. All equipment must be prevented from tipping, spilling and rolling.

Equipment weighing over 400 lbs must be reviewed for earthquake safety, and approval for its use must be provided before users may bring the equipment onto the SLAC site.

ELECTRICAL SAFETY / ELECTRICAL EQUIPMENT USE

Normal safe laboratory electrical practice is expected of all staff and users at SLAC. SLAC staff are available to assist with design and construction of equipment, particularly with regard to interlocks and other safety aspects. When working on equipment that could under unexpected energization or start up release energy that may cause injury to personnel, then application of the SLAC lock and tag program must take effect. This program is where the source of energy, i.e. electrical, pneumatic, hydraulic, is locked out in a safe position by the person working on that device. This assures that control of the energy source remains in the hands of the person working on the equipment and that the hazard has been disabled. **RESPECT LOCKS AND TAGS.** Do not remove or tamper with locks or tags.

Users are not permitted to perform work that requires Lock Out Tag Out (LOTO). If you believe that work requiring LOTO may be required, contact your supervisor or the SSRL Duty Operator or LCLS Floor Coordinator for assistance in locating a SLAC staff member who is qualified to perform the work.

ELECTRICAL EQUIPMENT brought with you for use at SLAC must be certified by a Nationally Recognized Testing Laboratory. If your equipment is not certified, please contact the Safety Officer for guidance on obtaining certification for your equipment under SLAC's Electrical Equipment Inspection Program (EEIP). Until the EEIP inspection has been completed and the EEIP sticker has been applied, this equipment may not be installed or operated.

NO PERSON MAY WORK ALONE on an open electrical chassis with power on. (Observation, manipulation and monitoring of energized equipment requires safety office approval and a designated safety watch.)

EMERGENCY PROCEDURES: If you encounter someone hung up on a live circuit, **DO NOT TOUCH THE PERSON!** Either turn off the electrical source or use a non-conducting pole to break the connection. If the person is unconscious, call for help, and perform CPR if necessary and you are able. After an electrical shock, keep the victim warm and quiet. Get medical help.

CIRCUIT BREAKERS: No circuit breaker shall be operated that has not been analyzed and appropriately labeled. Among other things, the category specifies the PPE that must be worn to operate a particular breaker. Unless specifically trained and authorized, individuals are prohibited from operating any circuit breaker. If you believe a breaker must be operated, at SSRL, contact an operator at SPEAR Control (x2751), a Duty Operator (X4040) or Matt Padilla (X3861). At LCLS, contact the Floor Coordinator (x6267), Zoe Van Hoover (x8772), or the accelerator control room (x2151).

EMERGENCIES, FIRE, MEDICAL & FIRST AID

EMERGENCY TELEPHONE NUMBER: 9-911

HALLWAYS AND AISLE WAYS MUST BE KEPT CLEAR FOR EMERGENCY EGRESS. Do not park in fire lanes.

Fire alarm pull boxes are usually located near exterior doors at SLAC. The fire alarm at SSRL is a loud continuous sounding horn. At LCLS, the fire alarm is a loud klaxon accompanied by a verbal announcement of the fire alarm location and flashing strobe lights.

Emergency response is provided by the Palo Alto Fire Department Paramedics -- dial 9-911 on any phone at SLAC or pull the fire alarm.

WHEN THE FIRE ALARM SOUNDS, LEAVE THE BUILDING BY THE NEAREST CLEAR EXIT. Move away from the building, and do not impede the access of the Palo Alto Fire Department (PAFD). If you initiated the alarm, be available to explain the circumstances.

IMMEDIATELY PROCEED TO THE NEAREST EMERGENCY EVACUATION/ASSEMBLY AREA:

- If at SSRL, all SSRL Staff and Experimenters should gather in the main parking lot above Bldg. 120 (next to Building 274).
- If at LCLS, all Staff and Experimenters should immediately proceed to the parking lot northwest of the NEH Building.

Wait in the emergency evacuation/assembly areas until given further instructions by the Duty Operator, Floor Coordinator or PAFD.

The SLAC Medical Department (A&E Bldg. 41, Rm. 137) provides non-emergency medical services for SLAC and visitors during normal working hours. See your supervisor or point of contact for details. After hours treatment is provided at Palo Alto Medical Clinic Urgent Care Center, Stanford Hospital Emergency Unit or your own health care provider.

RESPIRATOR USE: A respirator is defined as anything that covers your mouth and nose. Before using any respirator, you must complete a "CORRECT USE OF PERSONAL RESPIRATORY EQUIPMENT" form. This form is available from SLAC, Stores and Medical Dept. The SLAC physician must review and approve the completed form before a respirator can be issued to you. Training may be required before use of some respirators. This training and qualification is not provided to users.

ERGONOMIC SAFETY

Repetitive motion injuries are appearing in office workers and others who spend a large amount of their working day typing on computers. These types of injuries also appear in other professions where the same type of tasks are performed repeatedly.

Repetitive motion injuries or cumulative trauma disorders are musculoskeletal problems involving muscles, tendons and nerves, usually manifesting themselves as tendonitis or carpal tunnel syndrome.

Education, simple changes in individual behavior, work habits, and work stations can help prevent such disorders from occurring.

WORK STATIONS: Adjust your seat so that you are comfortable, with back supported and feet flat on the floor. Organize your work area so that all material and tools are within easy reach and at a comfortable level. Adjust your display to a comfortable viewing height, with the top of the screen at or just below eye level and avoid glare by positioning your screen away from light sources.

PERSONAL BEHAVIOR: Take frequent breaks - Every hour, stand up, move around and get the circulation going.

Stretch - Whole body overhead stretch and hand/finger stretches will help relieve muscle tension.

Vision breaks - take frequent vision breaks, and do "hard blinks" (tightly close and then opening wide) to help restore lubrication.

Posture - remind yourself to sit in a neutral position, not hunched over your desk.

GUIDELINES FOR WORKING ALONE

As SLAC becomes larger and more spread out, staff members and users may find themselves working alone or out of the sight of other persons. Because of potential safety concerns, the following guidelines are to be followed by staff, supervisors, users, and visitors:

Employees and their supervisors must review work assignments and schedules to ensure that an employee or user is not assigned to work with potentially dangerous equipment or materials without adequate back-up.

Examples of activities which **must not be carried out without safety office approval and a designated safety watch:**

- work on a live electrical circuit(s)
- work in a confined space

Examples of activities which **must not be carried out unless a second person is standing by** specifically to render aid:

- handling a highly toxic or explosive material
- handling a large quantity of a flammable material

Examples of activities which should not be carried out unless someone is near enough to respond to a call for help or in a position to notice if you were to become unconscious:

- work with machine tools
- heavy lifting or moving heavy objects
- rigging, climbing or working on elevated surfaces should not be done by users and requires assistance from the Duty Operator or Floor Coordinator.

It is difficult to define exact guidelines which cover every situation that might occur. It is important that you plan your work for safety, and seek help and guidance whenever a question exists.

If you find yourself unexpectedly in a situation such as those above, stop the activity. Do not proceed until you have sought the necessary assistance.

None of the activities listed above may be performed by users unless the work plan has been approved by the SSRL or LCLS Safety Office, and the work has been authorized by the user's supervisor.

HUTCH AUTHORIZATION AND OPERATION AT LCLS

This search procedure provides a method to verify that no one is left inside the LCLS hutch while the x-ray beam is present, and to verify the integrity of the exclusion barriers. The search team searches wherever a person may be, such as in alcoves, or behind equipment or shielding. The search procedure must be performed before allowing x-ray beam into any hutch, and whenever there has been a loss of security in an HPS zone.

Each search of LCLS Hutch 1 will require two searchers – one trained and qualified to lead the search, and one trained and qualified to act as the second searcher. At any given time, the list of qualified search leaders and second searchers will be posted at the beam line. Floor Coordinators and other LCLS Experimental Facilities Division (XFD) staff (such as instrument scientists and engineers) will be trained and qualified to act as search leaders. Users will initially be trained as second searchers only, but may be signed off as search leaders with additional experience, observation by qualified staff, and training.

Only persons who have been trained and qualified as search leaders may be issued the LCLS Hutch Search Preset key, which is used to initiate the hutch search. **The LCLS Hutch search preset key must remain on the premises at all times.** Before leaving the LCLS experimental floor, call the Floor Coordinator at (x6267) or transfer possession of the key to another qualified search leader and log this transaction in the HPS log at the beam line. In order to participate in the hutch search as a lead searcher or second searcher, users must read and sign this access agreement, including the following specific items related to hutch search authorization:

- I understand that hazardous radiation levels exist in experimental hutches when the x-ray beam is on.
- I agree that while I am designated as Lead Searcher or Second Searcher for the purpose of Hutch Operation, I will not permit any person to be locked inside a hutch for any reason. After each access to the experimental hutch, I will conduct a search to assure that no one is inside before I engage the “Search Reset Switch”.
- I will not designate any person to act in my stead as Lead Searcher. I will enter my name in the HPS Logbook as Lead Searcher whenever I take possession of the Hutch Search Preset Key.
- I will not tamper with any hutch interlock or component. I will operate the hutch interlock controls in the manner prescribed by LCLS.
- I understand that evidence of failure to scrupulously follow these rules may result in loss of search qualification. The penalty for locking a person in a hutch is to be declared *persona non grata* at SLAC for three years. This penalty shall apply to all persons involved or aware of the action.

The two person search team, plus an optional designated search trainee are the only individuals allowed in the hutch during a search. “Searching around” workers in the hutch is strictly prohibited. Never attempt to evade a search. Never tamper with, modify, or disable HPS system components.

HUTCH AUTHORIZATION AND OPERATION AT SSRL

In most SSRL x-ray hutches, hutch operation means that you, the experimenter, are assigned the responsibility to search the hutch after each access to assure that no person is ever locked inside. Hutch operation training is part of the SSRL Safety Talk, which is given to new beam line users (and returning users who want a refresher) Monday-Friday at 2 pm (meet in the User Administration Lobby to participate). **In order to act as a Responsible Safety Search Person, you must participate in hutch operation**

training on your first visit, and you must annually review and sign the User Access Agreement at the end of these guidelines which includes the following specific items related to hutch authorization:

- I understand that hazardous radiation levels exist in experimental hutches when the x-ray beam is on.
- I agree that while I am designated as Responsible Person for the purpose of Hutch Operation, I will not permit any person to be locked inside a hutch for any reason. After each access to the experimental hutch, I will conduct a search to assure that no one is inside before I engage the “Search Reset Switch”.
- I will not designate any person to act in my stead as Responsible Person. I will enter my name in the Beam Line Log Book as Responsible Person whenever I take possession of the Search Reset Key.
- I will not tamper with any hutch interlock or component. I will operate the hutch interlock controls in the manner prescribed by SSRL.
- I understand that evidence of failure to scrupulously follow these rules may result in loss of Responsible Person status. The penalty for locking a person in a hutch is to be declared *persona non grata* at SLAC for three years. This penalty shall apply to all persons involved or aware of the action.

To determine if your safety and hutch authorization are current, check the Access List via the web at http://www-ssrl.slac.stanford.edu/~proposals/nobars_list.html. VUV beam line users who do not use hutches are not required to participate in the hutch demonstration; however, this additional training is recommended.

- **Hutch search reset keys are to remain on the premises at all times.** Search Reset (SR) keys must be dropped into the drop box at the beam line BEFORE you leave SSRL. When depositing the key, make a log entry in the experimental station logbook. To retrieve the key upon your return, call the Duty Operator at 926-4040 or use the building page (dial 161 and clearly speak your message which will broadcast over the loud speakers).

For the latest information on the status of the SSRL beam lines, call 650-926-BEAM (2326).

Definition of Terms:

1. Hutch Operation means searching and securing an experimental hutch prior to bringing x-rays into it.
2. Responsible Person means the person, from the group of persons authorized to act in this capacity, who is actually in possession and control of the Search Reset Key. Only one person shall act in this capacity at one time. This person’s name shall be entered in the Beam Line Log Book either by the SSRL Duty Operator or by the person receiving the key. Logbook entries shall be made in a timely manner.
3. Search Reset Key is the key that engages the Search Reset Switch located inside the hutch. The Search Reset Key shall remain in the possession of the Responsible Person at all times. After each access search the hutch, engage the Search Reset Switch, remove the Search Reset Key and close the hutch door.

VUV Beam Line and Vacuum Chamber Authorization and Operation at SSRL

VUV chambers at SSRL connect directly to the vacuum system containing the SPEAR3 beam so anything that happens on a VUV endstation can affect operation of the synchrotron as a whole and every other user at the lab. It is essential that VUV users be aware of this responsibility whenever they open the beam line to their chamber. There are numerous hazards inherent in the operation of a vacuum chamber and VUV beam line, both to the experimenter and the equipment. For each beam time there will be one person chosen to be the Responsible Operator. This person will ensure that duties are only delegated to persons whose competence is commensurate with their responsibility.

Since VUV chambers may change from one run to the next, an updated Chamber Operating Procedure is required before the experimenter will be put on line. This procedure will be provided by the Chamber Custodian, updated by the Responsible Operator, and signed by all experimenters who will use the chamber during the run.

A VUV Safety Talk will be held at the beam line at 10AM, or as arranged, on the experimenters' first day of beam time. At this time experimenters will sign the Chamber Operating Procedure, agreeing that they have read and understood it.

Definition of Terms:

1. **Responsible Operator** – Chosen before the beginning of the beam time, the Responsible Operator will manage all activity at the beam line and ensure that duties are only delegated to persons whose competence is commensurate with their responsibility. This may be an experimenter or SSRL staff scientist.
2. **Chamber Custodian** – The Chamber Custodian is the contact person for the use of the chamber. They are responsible for changes to the configuration of the chamber and the Chamber Operating Procedure.
3. **Chamber Operating Procedure** – The Chamber Operating Procedure is a live document. The current version for a given chamber can be found on the web at:
<http://www-ssrl.slac.stanford.edu/xraywiki/xraywiki.php?n=VUV.HomePage#toc4>
It gives step-by-step procedures for going between well defined chamber states.

INCIDENT NOTIFICATION, INJURY AND ILLNESS REPORTING

Any work related injury or illness whether or not it results in lost time must be reported immediately according to the following **Incident Notification Process**:

Life-Threat (smoke, fire, explosion, large hazardous material release): 1) call 911, 2) call ext. 5555 (Security), 3) inform supervisor. (If in doubt, call 911 or ext. 5555.)

Non-Life Threatening Injury: Contact supervisor and call ext. 5555. Contact SLAC Medical at ext. 2881 if Monday-Friday, 8am-4:30pm. The SLAC Medical Department is located in the SLAC A&E Building 41, Room 132.

Non-Life Threatening Chemical & Radiation Incidents, Facilities or Equipment Damage: Contact supervisor and call ext. 5555.

LASER SAFETY

Be aware that lasers are in use at numerous facilities at SLAC including the experimental halls. Lasers are classified according to their potential hazards to personnel present while in operation. Class I lasers are considered safe, while class IV are considered the most hazardous. A beam from a class IV laser can expose personnel to the following hazards according to ANSI standards:

- Hazard to the eye or skin from direct beam exposure
- May pose a diffuse reflection or fire hazard
- May also produce laser generated air contaminants and hazardous plasma radiation

At SLAC, any lab, hutch or facility containing class IV lasers or exposure to class IV laser beams will be a controlled access area with an engineered safety system to control or mitigate the hazards. It will have posted both outside and inside appropriate warning signs to alert personnel to the presence of class IV lasers and the specific hazards associated with the lasers in use there. Access to a class IV laser lab is limited to qualified individuals with the proper training and knowledge of the lasers, their hazards, and the engineered safety systems put in place to control them. Visitors can enter a controlled access area only if escorted by a qualified individual who is specifically authorized to enter the area.

Individuals who intend to work with lasers in their experiments or be qualified to access these areas while lasers are in operation are required to complete additional laser safety training and an eye exam before being qualified to do so. Authorization to operate lasers or be qualified for unescorted entry must first be obtained in writing from all of the following individuals:

- The individual's supervisor, manager or representative
- The Building Area Manager
- The SLSO (System Laser Safety Officer) for that specific lab or area
- The SLAC LSO (Laser Safety Officer)

Any individuals who are not QLO's (Qualified Laser Operators) are considered visitors in the controlled area. Visitors must be escorted at all times by a QLO and must follow the QLO's instructions regarding appropriate eye wear and other laser safety procedures.

MAGNETIC FIELD WARNING

Work in accelerator housings, accelerator support buildings, and R&D areas, where magnets operate, or substations and industrial areas that contain panel-boards, switchgear, breakers, and other equipment that operate at high current will expose personnel to magnetic fields in excess of the safe thresholds published by the American Conference of Industrial Hygienists (ACGIH). Persons wearing cardiac devices must seek the advice of the physician that implanted the pacemaker or ICD before entering.

MECHANICAL EQUIPMENT SAFETY

Normal safe laboratory practice is required of every employee and visiting experimenter at SLAC. Special procedures and authorizations are established regarding use of certain tools and equipment. Some general safety practices are:

- **PLAN YOUR WORK** with safety in mind.
- **DO NOT WORK ALONE** when using power tools except small hand tools such as a hand electric drill.
- **KEEP YOUR WORK AREA NEAT.** Packing material, tools and supplies should be put away or disposed of in a timely manner; especially flammable materials.

DO NOT OBSTRUCT AISLE WAYS.

POWER TOOLS: Wear **SAFETY GLASSES**, and other proper protective clothing when using any power tool.

MACHINE TOOLS, SHEARS, BRAKES, SAW AND GRINDERS: Before using any tool in the SSRL shop you must be checked out by the shop custodian for proper training. Access to the SSRL shop is provided for staff only.

WELDING: Wear proper protective clothing; protect others from the weld flash and fumes. **DO NOT** weld metals which contain or are coated with CADMIUM or NICKEL. They produce highly toxic fumes.

SMALL SPACES: Make sure that you have adequate ventilation before entering small spaces such as hatches, etc. Be alert for odors; work with a partner.

FORK LIFT TRUCKS: You must be checked out and licensed to use a fork lift vehicle. Staff should see their supervisor for assistance, while users should talk to the Duty Operator/Floor Coordinator.

RIGGING AND CRANE USE: Rigging objects to be safely lifted on a crane is highly technical and requires special knowledge. At least one trained person must be in attendance when loads are being lifted. The Duty Operator/Floor Coordinator can help.

RADIATION SAFETY AND INTERLOCKS

Every person who enters the fenced-in parts of SLAC (Accelerator Area) must have in their possession a valid SLAC ID badge. Personnel dosimeter badges that measure radiation dose may also be required, depending on the area to be visited and the duration of the visit,

Dosimeters are required when visiting a Radiological Controlled Area (RCA) for more than 1 day per calendar year, when working at SSRL experimental areas/beam lines and when working with radioactive samples. The LCLS experimental floor is designated as a Controlled area (CA), but not an RCA. This designation means that LCLS users who will not be working with radioactive samples or other sources are required to have GERT training, but are not required to wear a dosimeter. Users can get a dosimeter from Jackie Robleto or other User Administration staff.

SLAC ID badges and dosimeters (as appropriate) must be worn on the upper torso between the neck and waist on the outside of clothing and must be visible at all times while working in an RCA or CA. SSRL and LCLS user ID badges and dosimeters are valid for only 3 months, and these must be returned to User Research Administration quarterly before you leave SLAC.

Users who will handle radioactive material in the course of their experiments are required to complete Radiation Worker Training (RWT).

Synchrotron radiation beams are the most intense sources of x-rays in the world. A monochromatic beam at SLAC can deliver dose rates of hundreds of RADS PER SECOND. For this reason the protective devices, such as interlocks, shielding enclosures, etc. designed to prevent personnel exposure must not be circumvented or tampered with in any way; even if this means an experiment cannot continue. Problems should be brought to the attention of the SSRL Duty Operator or LCLS Floor Coordinator and he/she will contact the appropriate person to address the situation.

LABORATORY X-RAY GENERATORS: Every x-ray generator at SSRL or LCLS shall have a designated custodian. That custodian shall control the use of the machine and assure that anyone who uses it has received proper training.

UV-VISIBLE LIGHT HAZARDS: In addition to the generally known hazard of biological damage from penetrating x-rays, synchrotron radiation in the visible and ultraviolet (UV) spectral region can cause damage to the eyes or skin.

Particular care should be taken when viewing objects struck by synchrotron radiation since reflected radiation could cause eye damage.

All glass viewports that look into systems containing visible and UV radiation must be covered with an opaque shield and carry a warning sign.

Any window capable of transmitting UV synchrotron radiation (lithium fluoride, sapphire, etc.) shall have an opaque cover and shall carry a caution sign. Such a window constitutes a special hazard and requires a safety review and approval.

<p style="text-align: center;">RADIOLOGICAL PROTECTION INFORMATION AND PROCEDURES FOR LIGHTSOURCE USERS</p>
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Please read the follow excerpt from the Radiological Control Manual prior to working in experimental areas.

As a user at SLAC, you may encounter some areas and operations which are known to produce radiation as a normal part of the working process and environment. SLAC is dedicated to keeping radiation exposures **As Low As Reasonably Achievable (ALARA)**. Please follow our ALARA philosophy.

A. BASIC RADIATION PROTECTION CONCEPTS:

You should minimize exposure to radiation by staying out of posted radiation areas. The three best methods to minimize radiation exposure is to:

- 1) Limit **Time** spent in radiation areas. Radiation dose is directly related to how long you spend in a radiation area.
- 2) Remain at a **Distance** from radiation sources since the further away from a radiation source the less radiation exposure you will receive.
- 3) **Shield** radiation sources to reduce exposure from that source.

While working at SLAC, we do not expect that you will enter any radiation areas.

B. RISKS OF LOW LEVEL RADIATION:

People are constantly exposed to ionizing radiation from natural background sources such as cosmic rays and radioactive elements found in the earth's crust. The average annual radiation dose received from background radiation is about 300 mrem.

In addition to natural background radiation, you may be exposed to occupational radiation while pursuing your occupation and studies. Radiation exposure received while at SLAC is considered occupational. The

annual radiation dose limit set by the DOE and SLAC for occupational exposure for any non-radiological worker is <100 mrem.

The risks associated with low-level radiation exposure are small and considered acceptable when compared to that of other occupational health risks. There is a slight risk of cancer which may be caused by chronic exposure to low-level radiation doses.

Prenatal radiation exposure should be reduced to a minimum since the developing embryo is especially sensitive to ionizing radiation. Questions regarding prenatal exposure should be directed to the Medical Department at ext. 2281.

C. RADIATION PROTECTION POLICIES:

- 1) The Safety Orientation for Non-Employees (SON), or Employee Orientation for Environmental Safety and Health (EOESH for individuals who will be on-site more than 60 days/year), is required to enter the SLAC Accelerator Area. Either of these courses satisfies the pre-requisite for General Employee Radiation Training (GERT) which is required to enter the experimental area which has been designated as a "Controlled Area" (CA).
- 2) A dosimeter and completion of GERT training are required for entry into a "Radiologically Controlled Area" (RCA).
- 3) Radiation areas are identified with signs as discussed in Section G (below). Only RWT trained users (RWT I, RWT II) are allowed to enter Radiation Areas or to handle radioactive material.
- 4) Questions regarding radiation protection policies may be directed to the Radiation Protection Field Operations at ext. 4299.

D. DOSIMETRY:

Proper training and dosimeters are required in order to enter an RCA or radiation area. Wear dosimeter between your waist and chest outside of your clothing and in front of your body. The dosimeter monitors your radiation exposure; it does not protect you from nor warn you of radiation areas. The following are some rules regarding the treatment of the dosimeter badge:

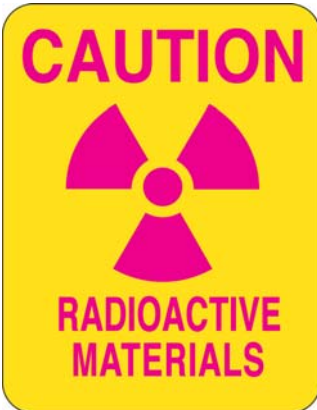
- 1) Do not leave your dosimeter in a vehicle.
- 2) Return your dosimeter to the User Administration Office before leaving SLAC. Do not wear your dosimeter off-site where you may encounter radiation exposure, such as other job sites, during air travel or during medical/dental x-rays.
- 3) Pick up your new dosimeter when you return to SSRL or LCLS during the run. The dosimeter is the radiological record of your work at SLAC. After returning your dosimeter, your radiation dose will be reported to you upon written request.

E. RESPONSIBILITIES:

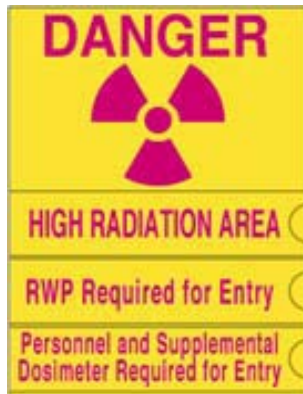
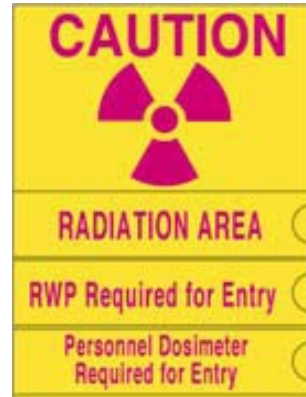
It is everyone's responsibility to be aware of radiological areas while working and visiting SLAC and to obey all radiological postings and instructions (both written and verbal). **SLAC DOSIMETERS MUST REMAIN AT THIS FACILITY. DROP OFF YOUR DOSIMETER BEFORE YOU RETURN TO YOUR HOME INSTITUTION. IT IS YOUR RESPONSIBILITY TO COMPLY WITH THIS REQUIREMENT.**

F. RADIOLOGICAL POSTING:

Become familiar with radiological postings you may encounter while at SLAC. As an unescorted SSRL or LCLS user, you are only allowed access to the SSRL or LCLS experimental areas where and when your experiments have been scheduled. General Employee Radiation Training is required to enter a Controlled Area or RCA. You are **not allowed** to enter "**Radiation Areas**", nor are you allowed to handle radioactive materials unless you are trained as a Radiological Worker (RWT). If you are an LCLS user, you are additionally **not allowed** to enter a "**Radiologically Controlled Area**". You may not bring any radioactive materials to/from SLAC without approval by the Safety Officer and SLAC Radiation Protection. Radioactive materials are always identified with radioactive identifying labels. Common to all radiological postings and labels is the standard tri-foil symbol; the colors being Yellow and Black or Yellow and Magenta.



You may not bring any radioactive materials to/from SLAC user facilities without approval by the Safety Officer and SLAC Radiation Protection.



PEDESTRIAN, VEHICULAR AND GENERAL SAFETY AND SECURITY AT SLAC

As you make your way around the SLAC site, please exercise caution to avoid obstacles and ensure the safety of pedestrians who frequently walk, jog, or bike at SLAC. Pay attention to signage, and obey the posted speed limit at SLAC which varies depending on the location.

When using one of the turnstiles at SLAC, remember that only one person is allowed to enter at a time. Tailgating (having someone else sneak through the turnstile) is prohibited. If you see anyone attempting to do this, or if you observe any other suspicious behavior, report this to Security immediately. Please be diligent and contact Security at x5555 to report anyone on the site who violates our safety or security policies or if you see anything that concerns you. SLAC Security is available 24 hours a day, 7 days a week.

SLAC requires operators of motorized vehicles, including personal vehicles as well as government vehicles to have a valid California driver's license or a California-recognized license issued by another state or by a foreign jurisdiction of which the operator is a resident. In addition, any individual who intends to operate a motorized vehicle on the SLAC site must follow the requirements of Chapter 13, Traffic and Vehicle Safety. Users are not authorized to operate SLAC or government vehicles.

USE OF SLAC INFORMATION RESOURCES

Everyone who uses SLAC computers accounts or information resources is required to complete Cyber Security Basics training course which is available via the web. Consistent with the Stanford University and U.S. Department of Energy policies, everyone needs to be aware of their responsibilities regarding the use of information resources and the serious consequences to us as individuals if we do not adhere to these. SLAC information resources are government property and, as such, are subject to "appropriate use" requirements found in federal law and the provisions of the SLAC contract pertaining to the proper use, protection, accountability and disposition of government property. These laws and policies apply to all data-communication and telecommunication facilities and services (including, but not limited to, e-mail, instant messaging, telephones, voice mail, faxes, SLAC data, networking services, storage media, computers and associated peripherals and software), whether for administration, research, teaching or other purposes. Connecting equipment not owned by SLAC to SLAC networks is a use of SLAC information resources.

Any member of the SLAC community who, without authorization, threatens the access and sharing of information is engaging in unethical and unacceptable conduct. Such unethical conduct includes destroying, altering, dismantling or damaging SLAC information resources, or interfering with access to or use of these SLAC resources.

This section outlines some of the responsibilities for use of SLAC information resources. This, together with more detailed policy and security information available at <http://www.slac.stanford.edu/comp/policy/policy.html>, will contain relevant new information as it develops.

General

- Suspected misuse of SLAC information resources must be reported at once. This is an affirmative duty. The SCS Help Desk (Ext. HELP [4357]) can ensure that you are put in contact with the proper authority for receiving such a report.
- SLAC information resources -- including browsing the World Wide Web (WWW) -- may only be used for work related to SLAC business. Minor incidental personal use is allowed if it satisfies the following criteria:
 - It does not impact or interfere with the legitimate job performance;
 - It does not impact or interfere with the work of any other employee/user or the correct functioning of any SLAC information resource;
 - It does not support running a business or paid consulting;
 - It does not involve illegal activities or violate SLAC policy;
 - It does not involve any activity that will potentially embarrass SLAC, DoE or Stanford University or result in a loss of public trust.
- Legally protected information subject to privacy laws or confidentiality requirements such as data that might give unfair advantage to a vendor, e-mail, and personnel records is stored on SLAC computers:
 - Users should take appropriate steps to safeguard legally protected information for which they are responsible. For information concerning the protection of data from unauthorized use, contact the SCS Help Desk.
 - Users should not attempt to gain unauthorized access to legally protected information. Users suspecting that they have accidentally gained access to such information should not use or disseminate the information and should report the incident to security@slac.stanford.edu.

Computer Hardware and Software

- SLAC computer accounts are normally intended for use only by the individual assigned to that account. Each account holder is responsible for the resources used by that account and for taking necessary precautions to prevent others from using the account. Shared accounts require adequate justification and explicit authorization. Users shall not seek to gain or enable unauthorized access to information resources.
- Passwords must be chosen with care and not divulged to anyone. Different classes of systems, for example business systems, scientific computing systems and accelerator control systems have different requirements on user passwords. Users are responsible for following the password policies for the systems on which they have accounts.
- Users shall not interfere with the intended use of SLAC information resources or without authorization destroy, alter, dismantle, disfigure, prevent rightful access to, or otherwise interfere with the integrity of computer-based information and/or information resources.
- Unauthorized copying of copyrighted software is strictly prohibited.

Electronic Communications

- Because electronic communications (e-mail, instant messaging, news groups, contributions, etc.) pertain to SLAC business, their content reflects on SLAC. Therefore, it is important that such items be professional and not personal in nature. Use of SLAC's electronic communication facilities to send fraudulent, harassing, obscene, threatening, racial, sexual or other unlawful messages is prohibited and illegal, as is use of SLAC information resources for lobbying of any kind.

- Electronic communication files such as e-mail are not intended for general dissemination. Unauthorized perusal of such files is not permitted. Conversely, sensitive data should not be sent as e-mail because no means of storage or transmission available at SLAC is completely secure.
- SLAC's contract with the government makes virtually all information on SLAC computer systems, including e-mail, available to the government. It is not SLAC policy to routinely monitor e-mail. However, SLAC cannot and does not guarantee the privacy of e-mail communications.
- E-mail may be discoverable in a legal proceeding and in some circumstances, e-mail may be retrievable even after it has been "deleted".

SLAC requires that users act in accordance with these responsibilities, SLAC policy, University policy, and relevant laws and contractual obligations. In order to assure all relevant parties that no misuse of resources occurs, SLAC reserves the right to sample stored or in-transit data at any time. Improper use of computing facilities may lead to disciplinary actions up to and including termination and/or legal action.

After reviewing this material thoroughly, please sign the attached access agreement to verify that you have understood the contents of this briefing. If you have any questions, please contact Matt Padilla at 650-926-3861 or Behzad Bozorg-Chami at 650-926-3872 at SSRL, or Zoe Van Hoover at 650-926-8772 at LCLS, or the Operational Health Physics Department at 650-926-4041.

SLAC Lightsource User Access Agreement

I have read and understand the SLAC Lightsource User Access Guidelines, dated August 2009, and I agree to abide by the regulations cited therein, including but not limited to:

1. Using SLAC information resources only in accordance with applicable policies.
2. Complying with SLAC Environmental, Safety & Health policies.
3. Complying with hutch authorization and operation, including:
 - I understand that hazardous radiation levels exist in experimental hutches when the x-ray beam is on.
 - I agree that I will not permit any person to be locked inside a hutch for any reason. After each access to the experimental hutch I will conduct a search to assure that no one is inside before allowing x-ray beam into any hutch.
 - I will operate the hutch interlock controls in the manner prescribed by SLAC.
4. Not tampering with, adjusting, or repairing any hutch interlock or component, **P**ersonnel **P**rotection System (**PPS**), **H**utch **P**rotection **S**ystem (**HPS**).
5. The proper storage, handling and disposal of hazardous materials.
6. Complying with electrical safety policies.
7. Ensuring that a second person is in attendance when working with potentially hazardous equipment or materials.
8. Not smoking inside buildings, and not parking in fire lanes.
9. Returning my ID badge and quarterly dosimeter at the conclusion of my visit if I do not plan to return in the last 90 days. If I will return within 90 days, I will return my ID badge and dosimeter at the conclusion of the run year.
10. I recognize the requirements needed to operate a motorized vehicle at SLAC, and I acknowledge that my failure to possess, show upon request, or report the invalidation of my driver's license will result in my being prohibited from driving on the SLAC site.
11. If I am officially notified of new or additional policies related to safety, security, or site access, I agree to abide by these policies or immediately cease using SLAC resources.

Printed Name

Signature

Institute Affiliation (for non-Staff Users)

Proposal Spokesperson (Supervisor for Staff)

Date

Proposal No:

Facility

Beam Line