Kavli Institute Inauguration a Memorable Event

By Tom Mead

On the afternoon of Monday, March 17, distinguished guests and a large crowd of members of the SLAC Community witnessed the inauguration of the Kavli Institute for Particle Astrophysics and Cosmology at Stanford University and SLAC. Among the speakers was Roger Blandford, who will take the reins in October as the Institute's Director.

Founded by physicist and philanthropist Fred Kavli, the Kavli Foundation is dedicated to the goals of advancing science for the benefit of humanity and promoting increased public understanding of and support for scientists and their work.

(See KAVLI, page 2)

DOE Security Condition Levels Explained

By Rick Vaeger

Following the Monday, March 17 upgrade of the national threat condition from Yellow to Orange by the Department of Homeland Security, the Department of Energy (DOE) raised the Security Condition (SECON) status of their facilities from "SECON-3" modified to "SECON-2."

SECON Level 2 is an elevated security posture for DOE, and reflects a heightened need for vigilance in light of recent global events.

DOE SECON status corresponds with the National alert levels as follows:

- National Level Red/SECON Level 1: Severe risk of terrorist attack or, an attack is in progress.
- National Level Orange/SECON Level 2: High risk of terrorist attack.
- National Level Yellow/SECON Level 3: Significant or elevated risk of terrorist attack.
- National Level Blue/SECON Level 4: Guarded or general risk of terrorist attack.
- National Level Green/SECON Level 8: Low risk of terrorist attack.

DOE Headquarters in Washington, D.C. directs the Laboratory to assume one of the above levels, or to assume a modified level such as SECON Level 3v, the level that we were at before the recent upgrade. At each of these levels, SLAC's Safeguards and Security takes a series of enhanced security actions.

The most visible changes begin at SECON Level 2 and involve checking the photo ID for all persons in a vehicle and visually checking the cargo area of all delivery vehicles.

At SECON Level 1, the Laboratory would be closed to public access so that tours and public events would be cancelled. SECON Level 1 would be similar to the actions that took place at SLAC immediately following the September 2001 attacks.

(See SECURITY, page 2)

Exploratorium to Honor Pief Panofsky

By Sharna Williams

Pief Panofsky doesn't know much about museums, he claims, but he knows what he likes. So when his friend Frank Oppenheimer came to his office in the mid-60's with an idea for a hands-on science museum, Panofsky did what he could to help him.

Now one of the most famous science museums in the world, Oppenheimer's Exploratorium in San Francisco will thank Panofsky later this month with a Lifetime Achievement Award.

"Pief's achievements have been exemplary as a scientist in the field of high energy physics and as a humanitarian," says Dr. Goetry Delacote, the Exploratorium's Director since Oppenheimer's death in 1987. "As a lifetime Exploreratorium Board member, Pief has also played a leadership role in this institution since its founding."

Physicists Oppenheimer and Panofsky met soon after World War II when they worked together on a linear accelerator in Berkeley. Panofsky later moved to SLAC, and Oppenheimer became a rancher and teacher in Colorado after being blacklisted by the House un-American Activities Committee.

"Frank was a very humble, soft-spoken fellow, and a capable experimental physicist, but public education was really his bag, it was his mission," Panofsky remembers.

His teaching experience convinced Oppenheimer that hands-on exploration was the best way to learn science, and he returned to California to start a museum based on this idea.

Panofsky supported Oppenheimer, helping choose the Palace of Fine Arts in San Francisco as the location. SLAC sometimes loaned equipment or guest speakers to the museum, and helped with exhibit design.

Oppenheimer's goal for the museum was to bring visitors' perceptions closer to scientific reality, Panofsky explains. "So originally he was going to call it the Perceptorium, but then he got convinced that nobody could figure out what that means."

"At the Exploratorium there's much more immediacy between what you experience and what really goes on. There's no glass wall between you and the exhibits."

Panofsky will receive his award at the Exploratorium's 26th Annual Awards Dinner on Wednesday, April 30. For more information, call (415) 561-0322.

For more information on the Exploratorium, see: http://www.exploratorium.edu/about/about_explo.html

For more information on Panofsky, see: http://www.slac.stanford.edu/grp/dpt/people/pief.html

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(See SECURITY, page 2)
Save Our Science Days and HEP Operations Schedule to Change

By Lee Lynn

On March 11, I sent all SLAC employees a memo to clarify, add detail and answer questions about the SLAC Cost Reduction Measures. I’d like to take this opportunity to reiterate the most salient points of that and previous memos regarding this matter.

As Greg Loew wrote in his memo of February 27, while the proposed FY04 HEP budget was about $7M higher than this year’s budget, it still would not be sufficient to run our HEP program as planned next year. We have now been able to evaluate all the new budget information, and, in order to optimize our science program and avoid any budget-driven involuntary layoffs, we have had to make some relatively minor changes to the assumptions we had made and to the plans you had generously accepted. While chief among those changes is a calendar shift of the scheduled leave-without-pay days, there are other details to be addressed.

Save Our Science Days Changed to Week of June 30 - July 4, 2003

All SLAC HEP staff will have to take four days as leave without pay during the week of June 30 through July 4. That is four days of leave without pay from June 30 through July 3 and a paid holiday on July 4. Some staff with unusual schedules may have to work out the exact arrangements with their supervisors. This change was made in order to support our science program and to schedule the days without pay at what may be a more desirable time for many staff. I hope this change causes no undue inconvenience for you.

Those four days will be considered a temporary layoff. While staff will continue to accrue sick and vacation leave, and full contributions will be made to their health and welfare plans, they cannot use vacation, personal time off or any of the four day paid holidays to cover the four shutdown days. Contributions to retirement plans are based on eligible earnings for that pay period and therefore will be reduced slightly.

Earned Vacation Must Be Taken

In addition to the changes addressed above, we also have to ask all HEP staff to use all the vacation they earn during this fiscal year. Put another way, your vacation balance on September 30, 2003, should be no more than it was on October 1, 2002. Check your pay stub or call Human Resources for your balances. There is a little more flexibility about PTO days and the birthday holiday in that staff has until December 31 to use them.

This change was made in order to optimize our science budget and to plan for the remainder of FY03 and FY04. The HEP operations schedule for the remainder of FY03 and FY04 now includes running the B Factory through June 29, 2003. We will also run E-158 from July 5 through the end of August. Finally, PEP II will be turned on in September to do Personnel Protection System (PPS) checks and then to get back up and running. The goal will be to run from September 2003 through June 2004.

Stanford Salary Freeze

Regarding the Stanford Salary Freeze, SLAC is following Stanford University HR policies. Fortunately, the salary freeze decision applies to the 2003-04 salary program only, so SLAC and the University expect to be able to return to a modest-sized raises in FY05.

We expect the effect of these measures and policies will be to allow SLAC to budget-driven layoffs or further mandatory leave-without-salary programs during FY04. Finally, I would like to say that I very much appreciate the cooperation and understanding that we have received from all of you this year. I have marked your response to this difficult budget situation and to our decisions on how to deal with it. We can all be proud that we have managed this very difficult budget year with no budget-driven involuntary layoffs and with a program that involves all of the high energy physics faculty and staff.


Kavli

(continued from page 1)

In this example of that dedicated purpose, the Foundation pledged $7.5 million to establish the new Institute, which will focus on recent developments in astrophysics, high-energy physics and cosmology. The Institute (located in a new structure between the ROB and the auditorium) will open its doors in 2005.

At the site of the future 25,000 square-foot Institute, Kavli unveiled a 7-foot tall, steel and glass sculpture that was created at the Lab. The artwork, an an-yet-unnamed ‘window to the Universe’, incorporates a piece of SLAC history in the form of the window from the 19-inch bubble chamber.

The sculpture was designed by Catherine Carr (MD), fabricated by the MED Shop and welded by Scott Johnson (MFD) and Eric Gallant (MFD), Ernie Miholits (SEM) designed the foundation. (See Bubble Chamber Glass Finds New Home, p. 1).

In his remarks after the unveiling of the sculpture Kavli said, “Now we are starting our wild ride on the stars to new vistas.”

Security

(continued from page 1)

on New York and Washington, D.C. This may vary depending on the information received from DOE Headquarters.

At both the Yellow and Orange levels, we are required to verify the identities of personnel entering the site. SLAC employees, scientists, users and contractors operating vehicles are required to show their SLAC E.D. Passengers in these vehicles are required to show photo E.D. during the current Orange (SECON Level 2) level, but not under the Yellow (SECON Level 3) level.

All visitors operating a vehicle and all their passengers in the vehicle are required to show a photo E.D. under both Orange and Yellow levels.

At SECON Level 2, the Security Officers at site entrances will continue to contact a visitor’s SLAC Points-of-Contact to verify the visit. Therefore your continued assistance in advising the Main Gate of arriving visitors is appreciated. You can do this by completing the SLAC Site Entry Authorization form, found under the ‘Site Entry’ heading at the Safeguards and Security Web site (https://www-internal.slac.stanford.edu/sec/).

Additionally, Security Officers will visually check enclosed cargo areas of delivery vehicles entering the Laboratory (all cargo vehicles at SECON Level 2; selected cargo vehicles at SECON Level 1). A check of cargo is being prepared for posting at the two entry gate indicating the current SECON Level to arriving personnel.

All of us need to remain aware and report any suspicious activities to Security Officers or SLAC Safeguards and Security Ext. 2513. Please stay alert and supportive of our Safeguards and Security Officers and staff members during this critical period.

For more information on Safeguards and Security at the Lab see: https://www-internal.slac.stanford.edu/sec/.

OMB Official Visits SLAC

Jud Parriott, Science Program Examiner for the Internal Office of Management and Budget (OMB), visited SLAC on Monday, March 10. One step on his tour was the Final Focus Test Beam (FFTB) where researchers explained progress at SLAC on advanced accelerator technology.

Jud Parriott (left from above) is shown with FFTB researchers (from left to right): Mark Hogan, Patrick Maggiori (USC), Caitlin Leoni-O’Connell, Dwayne Johnson (SLAC), Mohit Jawarnejad, Ben Couss, Tony Katamovou (USC), Eric Colby and Robert Noble (all ARDB).
Recent Talk Explores Hydrogen Energy Technology

By Shazwna Williams

Jules Verne once prophesied that ‘water is the coal of the future.’ On Wednesday, March 12, Ticianne Schiros (FEBI) encouraged her colleagues at SSRL to help make that happen. About 30 people came to the hour-long talk on “Scientific Challenges and Research Opportunities in Hydrogen Energy Technologies,” and many stayed afterward to discuss issues raised in the talk.

SSRL Deputy Director Jo Stähle introduced Schiros, saying that “the broader topic—the future of energy resources in the world—is an important one.”

“DOE has estimated that CO₂ emissions will increase 60 percent in the next 50 years,” Schiros said, “with potentially dramatic climate change consequences. This is why developing alternative fuel sources, like hydrogen, is so important.” Schiros said she hoped her talk would inspire some SSRL researchers to work on effective means of making and storing hydrogen.

Hydrogen cells are already available for use in cars and in fact hydrogen fueling stations have appeared in Iceland and Southern California. However, they are expensive and the current method of storing the fuel—cryogenics—is energetically inefficient. Moreover, fossil fuels are required to make the hydrogen.

There are many potential ways to make hydrogen renewable. Schiros’s own research work focuses using the sun’s energy to strip hydrogen from water, a process called photocatalytic decomposition. Other possibilities for hydrogen production include biomass decomposition and photochemical processes. For example, algae can be forced to make hydrogen, and decomposing peanut shells can produce hydrogen along with fertilizer while sequestering CO₂ in the form of solid carbon.

“Recommended for making this effort,” according to Schiros. Unlike many other energy sources, “with hydrogen cells the payoff is huge and they essentially have no negative consequences.”

For more information on hydrogen energy technology, see: http://www.eere.energy.gov/hydrogenandfuelcells/

For more information on SSRL, see: http://www-ssl.slac.stanford.edu

Meet the Local Safety Committee

By Linda Ahlf

The Local Safety Committee (LSC) would like to introduce itself. We are a committee of union and management representatives providing a resource for voicing safety concerns. The LSC is proving to be effective in addressing safety issues and promoting communication between union and management representatives.

This committee is made up of union members and management representatives. From management we have Jack Hahn (ESKH), Ian Evans (SSL) and Barry Welb (HR). From the union, we have Matt Nebeil (EFD), Marty O’Donoghue (SEM) and Rocky Pena (SSRL). Lee Lyser is the newest administrator and Linda Ahlf is the committee secretary (both HR). In addition, a member of the SLAC management regularly attends the Local Safety Committee meetings.

Both workers and management can bring concerns about unsafe or hazardous working conditions to the LSC. The issues are discussed at our monthly meetings, assigned to the relevant committee person, who reports back at the following month’s meeting. Minutes are kept to track issues and to make sure nothing slips through the cracks.

Should some emergency problems come up, the committee can access necessary resources at the highest levels at the Lab. This process is a great way to get safety concerns addressed in a forum where results are the most important product.

Workers with safety concerns can talk to their committee representatives, and their problems will be addressed by the committee.

For more information on this Committee, contact Linda Ahlf, Ext. 2545, lab@ssl.slac.stanford.edu

ORION Planning Workshop Held

By Tom Maid

The second three-day workshop planning the capabilities of the ORION Center for Advanced Accelerator and Beam Physics, Research concluded on February 20 at SLAC.

In keeping with the international mix of the 95 workshop registrants, ORION, like SSRL, will be a university and national laboratory collaboration. It will integrate the center of, and dedicated user facility for, experimental research in plasma and laser acceleration of particles, beam-plasma physics, ultra-short pulse electron and radiation sources, and potentially, laboratory astrophysics.

This graphic shows how the unique interrelationships of the ORION Center and its state-of-the-art facilities (outer circle) converge to enable advances in basic physics (mid-level), ultimately leading to the energy frontier.

As Tom Katsonides, USC Professor of Engineering and co-director of the nascent ORION Center, noted, “It is at the highest energies that we see Nature on the smallest of scales. The realities within those smallest scales are the foundation upon which the origin of our Universe, stable matter, galaxies, and ultimately life, depends. The development of entirely new approaches to reaching such high energies is, at its heart, the true motivation behind ORION."

“ORION is about more than developing future accelerators. It turns out that the short bunches, lasers and plasmas involved in these new approaches exhibit in themselves rich new physical behavior that ORION will unveil along the journey to the energy frontier.”

Research will begin, at inception of the Center, with experiments at the Final Focus Test Beam (FFTB), an extensively instrumented beamline at the end of the SLAC main linac that can deliver 30 GeV electron and positron beams. The FFTB will be available for two or three more years.

In the longer-term, these experimental activities will be concentrated at the ORION facility, funded through the Center. The ORION Facility will be based on the Next Linear Collider Test Accelerator (NLCTA), operating at SLAC, which is capable of providing beams from 50 to 350 MeV in energy. For ORION, the NLCTA will be augmented with a new high brightness photoinjector source, two experimental halls, extraction beam lines, a user laser room and a data acquisition area.

The Center is being designed to provide for the research needs of the users. Thus, this workshop was used to explore the range of experiments envisioned by potential users and to review the types of beams available as well as the desired beam parameters. The workshop was an opportunity for the research community to provide input on the facility’s test beams, layout, shared diagnostic equipment, simulation and computing capabilities, and user support infrastructure.

“This workshop,” said Katsonides, “was extremely useful for ensuring
Employee ES&H Training Assessments for 2003

The Environment, Safety and Health Division (ES&H) has opened the Employee Training Assessment (ETA) for this year, with updates to regulatory and class information. In a continuing effort to improve the SLAC training experience, changes have been made to the instructional layout and design, simplifying the process and making it easier for supervisors to find and enter required information. Please see the Web page at: http://www.slac.stanford.edu/esh/training/eta/

Supervisors are required by SLAC policy to annually ensure that ETAs are completed or updated for each of their employees.

What is an ETA?

An ETA establishes basic training requirements in environment, safety and health areas for an employee.

This information is entered into a database used by supervisors and employees to track ES&H training in their group.

Why do an ETA?

For SLAC policy, a review of ES&H training requirements must be completed by each employee's supervisor for:

- All personnel during their annual performance review,
- New personnel, and
- Personnel whose duties or hazards change significantly.

The assessments define training required by regulations, DOE orders and SLAC policies. This helps a supervisor and employee determine what training is appropriate for them.

For more information about this and other ES&H Training, please see the ESH! Web site: http://www.slac.stanford.edu/esh/training/or contact Rod Hiemstra, Training Coordinator (Ext. 3662, esh-training@slac.stanford.edu).

Contact: Larissa Williams, Ext. 3166, larissa@slac.stanford.edu

Choose ENERGY STAR Products

By Linda Fieguth

ENERGY STAR® is a government-backed program helping businesses and individuals protect the environment through superior energy efficiency. The ENERGY STAR® label (shown below) is now on major appliances, office equipment, lighting, home electronics and more.

Through its partnerships with more than 7,000 private and public sector organizations, the ENERGY STAR® program delivers the technical information and tools that organizations and consumers need to choose energy-efficient solutions and best management practices.

Executive Order 13123 (issued by President Clinton on June 3, 1999) calls for Federal agencies to purchase ENERGY STAR® and other energy-efficient products when acquiring energy-using products (if life-cycle cost-effective). For product groups where ENERGY STAR® labels are not yet available, we are required to select products that are in the upper 25 percent of energy efficiency as designated by the Federal Energy Management Program.

SLAC is committed to encouraging the purchase of energy-efficient products in a manner that does not impede product performance, safety or overall value.

For more information about the ENERGY STAR® products and to obtain access to the product database, see: http://energystar.gov/

Polices and Procedures Update

From the Benefits Office:

Have Questions About Investing Your Retirement?

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

Please call the company directly to set up an appointment:

Fidelity
Apartment 1
May 6
June 3
Call (800) 662-7131

Vanguard
April 2
Call (800) 862-0106 ext. 14500

TIAA-CREF
April 24
May 22
June 19
Call (800) 842-2007

www.meetvanguard.com

TIAA-CREF
April 24
May 22
June 19
Call (800) 842-2007

www.tiaa-cref.org/moc

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

For more information on retirement and other benefits, see:
http://www-group.slac.stanford.edu/hr/b/

Milestones

Awards
Dabevec, Janice (TD), a 2nd place winner of poetry contest hosted by the Palo Alto Public Art Commission, notified 3/3/03.

Pritzkau, David (ARDB), APS Award for Outstanding Doctoral Thesis, Research in Beam Physics, notified 3/3/03.

Krishna Kumar/Vickee Flynn, U of Massachusetts/SLAC

Research in Beam Physics, for Outstanding Doctoral Thesis, Pritzkau, David (ARDB), APS Award Commission, notified 3/3/03.

http://www-project.slac.stanford.edu/ypp/photography.html

For complete event listings, see: seminars@slac.stanford.edu

Please send additions to:
Tip@slac.stanford.edu, or mail to TIP Office, MS 96, Stanford Linear Accelerator Center, 2575 Sand Hill Road, Menlo Park, CA 94025.

TIP is available online at: http://www-group.slac.stanford.edu/tip/