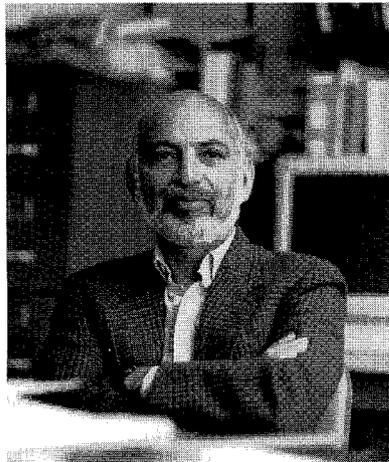


SLAC is operated by Stanford University for the Department of Energy

American Physical Society 2000 Prizes

Martin Breidenbach Awarded W.K.H. Panofsky Prize

PROFESSOR MARTIN BREIDENBACH WAS recently notified that he had won the American Physical Society's W. K. H. Panofsky 2000 Prize. Breidenbach came to SLAC in 1966. At that time, he was working for MIT at End Station A on deep inelastic scattering of electrons on protons, which was of essential importance for the development of the quark model in particle physics. This work in the late 1960s and early 1970s was the basis for the Nobel Prize in physics that was awarded to Henry Kendall and Jerome Friedman, both of MIT, and Richard Taylor of SLAC in 1990. Breidenbach began working for Stanford in 1972 on the SLAC-LBL Magnetic Detector (aka MARK I) at SPEAR that discovered the Ψ and Ψ' 25 years ago. This experiment earned Burton Richter, SLAC's Director Emeritus, a Nobel Physics Prize in 1976 that was shared with Samuel C.C. Ting for the parallel discovery of the J at Brookhaven. Shortly after that, Breidenbach helped build the follow on detector MARK II which was used at SPEAR and then at PEP I. When SLC got started, Breidenbach worked on the controls system for SLC and the beginnings of SLD. He has been co-spokesman with Charlie Baltay



on SLD for the past 16 years. The SLC achieved record luminosity in the run that ended SLC in October, 1998. Breidenbach is now spending some time with NLC and the NLC detector and is thinking about gravitational radiation. He also earned the status of Fellow with the American Physical Society in 1985.

The citation on the award reads as follows:

"For his many contributions to $e+e-$ physics, especially with the SLD detector at the Stanford Linear Collider. His deep involvement in all aspects of the project led to important advances both in the measurement of electroweak parameters and in accelerator technology."

This APS prize was established in 1985 by friends of W.K.H. Panofsky and the APS's Division of Particles and Fields. It is awarded annually to recognize and encourage outstanding achievements in Experimental Particle Physics.

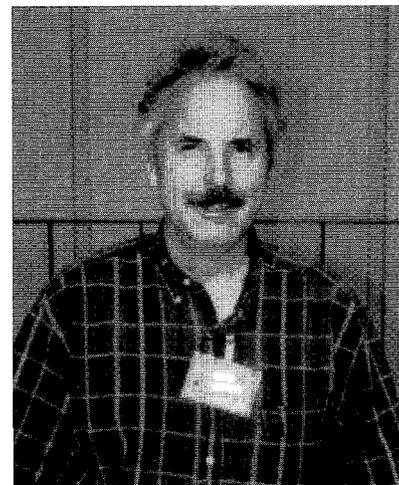
Raymond G. Arnold Awarded Tom W. Bonner Prize

RAYMOND G. ARNOLD, a Professor with American University, was recently notified that he had won the APS Tom W. Bonner 2000 Prize. Arnold has been at SLAC in the ESA group since 1973, working on a series of experiments in End Station A using the high intensity electron beam to measure the quark structure of protons, neutrons and various nuclei. Most recently, Arnold led several collaborations that used the SLAC polarized electron beam to measure the spin structure of the proton and neutron.

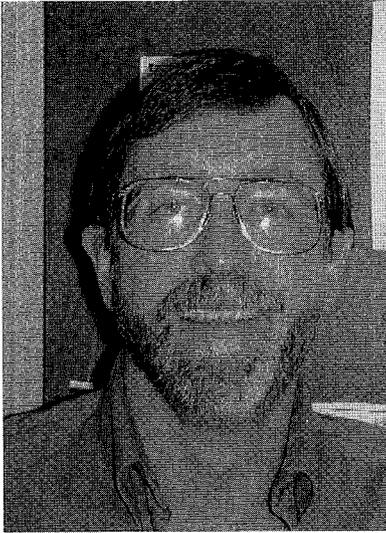
The citation on the award reads as follows:

"For his leadership in pioneering measurements of the electromagnetic properties of nuclei and nucleons at short distance scales that addressed the fundamental connection of nuclear physics to Quantum Chromodynamics and motivated new experimental programs."

The purpose of this award is to recognize and encourage outstanding experimental research in nuclear physics, including the development of a method, technique, or device that significantly contributes in a general way to nuclear physics research. This prize was endowed in 1964 as a memorial to Tom W. Bonner by his friends, students and associates.



New Sexual Harassment Adviser Appointed



BOB FULLER WAS RECENTLY appointed as a sexual harassment adviser. Fuller works as a Technical Administrator in the Controls Department. He joins Jean Hubbard, who has served as a SLAC sexual harassment adviser since 1996. Hubbard is a Senior Buyer in the Purchasing Department. SLAC is unusual in that two people serve in these roles so that a person can speak to either a male or female, depending on one's comfort level.

The appointment of sexual harassment advisers comes out of the University's Policy on Sexual Harassment (SH). Advisers receive training and support from the University's SH Policy Office, headed by Laraine Zappert, the Coordinating Adviser. Advisers are available to provide information about the University's policy or to consult about options to address specific concerns.

Confidentiality and privacy issues are respected to the extent that this is reasonably possible. For example, a sexual harassment adviser can be consulted on a confidential or "off the record" basis as long as no names or identifying information is provided. Since many consultations about sexual harassment stem from communication problems, one of the roles sexual harassment advisers can play is to help individuals communicate clearly about situations that concern them.

As a reminder, the sexual harassment policy prohibits unwelcome conduct of a sexual nature, such as "unwelcome sexual advances, requests for sexual favors, and other visual, verbal, or physical conduct" when (1) it is "implicitly or explicitly suggested that submission to or rejection of the conduct will be a factor in academic or employment decisions or evaluations, or permission to participate in a University activity", or (2) the conduct "has the purpose or effect of unreasonably interfering with an individual's academic or work performance or creating an intimidating or hostile academic, work or student living



environment." The policy also prohibits reprisals against individuals who raise issues about sexual harassment.

In addition to the sexual harassment advisers, the Human Resources Department can also advise on specific situations that may violate the policy against sexual harassment.

Sexual Harassment Advisors:

Bob Fuller x2192
Pager: 424-7093
E-mail: rwf@SLAC.stanford.EDU

Jean Hubbard x3556
E-mail: ejean@SLAC.stanford.EDU

Human Resources:

Susan Hoerger x2358
Pager: 991-7683
E-mail: shoerger@SLAC.stanford.EDU

Ombudsperson:

Ellen Waxman x3826

-Susan Hoerger

Holiday Party

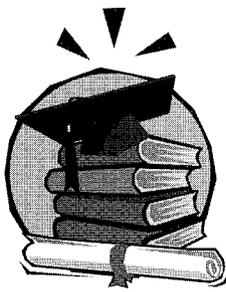
PUT DECEMBER 16th ON your calendar....That's when the annual SLAC holiday party will be held. If you want to help plan this party, better hurry up because the committee is already working on planning this event. Contact Barbara Johnson at x2354 if you wish to lend a helping hand!

Coming Soon...

The Director's Corner will start with the next issue of TIP.

Winter Closing

DIRECTOR JONATHAN DORFAN HAS announced that the Laboratory, except for a few very limited areas, will be closed from the end of the day Thursday, December 23, 1999, at midnight (0:00), through the end of the day Sunday, January 2, 2000, at midnight (0:00). SLAC will be closed during this entire period, with the exception of staff who are requested to work for a critical reason and those needed to ensure site safety and security. Please check the All Hands memo dated September 8, 1999 (subject: Winter Closing) for complete details. TIP staff wishes you a happy holiday season!



Staff Tuition Reimbursement Program

(Amounts paid for graduate school tuition may be taxable if not related to the employee's current job.)

THINKING ABOUT GOING BACK to school and finishing that degree? Or getting an advanced degree that will open a door to new career development opportunities? Starting September 1999, the University will pay tuition costs up to \$2000 per fiscal year for regular staff members enrolled in courses meeting requirements of undergraduate or graduate degree programs that are related to their performance of their current jobs or planned career development.

To be eligible for the Staff Tuition Reimbursement Program (STRP), an employee must:

→Be a continuing regular staff member (working a minimum of 50% time and not in a fixed term position). STRP assistance is prorated for regular staff working less than full-time.

→Have completed one year in an on-going regular position.

→Have discussed career development and performance objectives with his or her supervisor.

→Be admitted to an undergraduate or graduate degree program at an accredited United States college or university.

→Not receive financial assistance from other sources that would duplicate STRP (e.g., scholarships, grants, departmental funds).

→Provide evidence of satisfactory completion no later than four weeks after each course is completed. (The University must be reimbursed funds used for courses that are not completed satisfactorily.)

STRP assistance is limited to regular tuition and general recurring fees for degree programs only. It is not available for certificate programs or correspondence courses. It does not reimburse such costs as books, course materials, room and board, laboratory breakage fees, tutoring fees, auditing fees, late fees, transportation or parking. Tuition costs beyond STRP limits may qualify for SLAC's reimbursement program.

Employees can obtain STRP application forms from the SLAC Human Resources Department. (Ask for Jeff Cashdollar, x2265, or Barbara Johnson, x2354.) If the application is approved, the employee will receive an authorization letter to provide to the college or university. Although the STRP payment will be made directly to the educational institution, for the 1999-2000 school year only, an employee may be reimbursed directly for prepaid tuition.

—Susan Hoerger

Benefits of a Credit Union



NEW (OR NOT SO NEW) SLAC staff members take note. There are many affiliations offered to us through Stanford University, and membership for yourself and your family in the

Stanford Federal Credit Union is one of these. The SFCU currently serves over 40,000 member-owners. Once you join the credit union, you are permitted to remain a member for life.

Some of the benefits of joining the Stanford Federal Credit Union include access to the latest in high-tech financial services, including online brokerage services, low interest loans, high yield savings products and competitive credit cards. It means no charge for phone calls, teller use or transactions at SFCU ATMs.

Additional services include domestic and international wire transfers, automobile Fleet Manager Service, group discount programs for area attractions and discount warehouses.

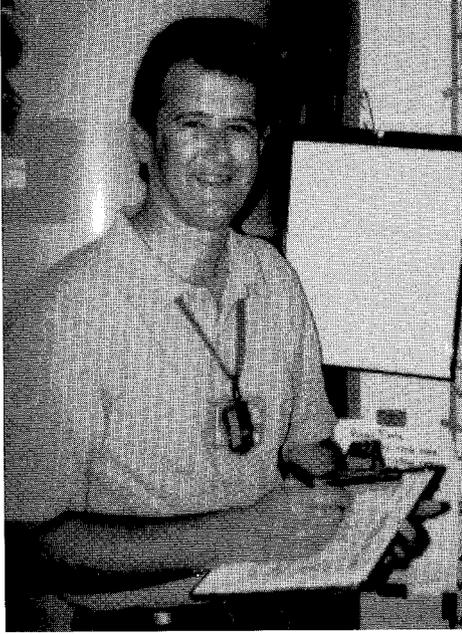
Is a credit union for you? Only you can decide, based on a comparison with a bank or other financial institution. Credit unions are not-for-profit and member-owned, which means that profits are given back to members in the form of lower rates on mortgage, home equity and car loans, as well as higher yields on savings, checking, money market and certificate of deposit accounts.

The SCFU maintains an ATM machine in the A&E Building, Room 101.

For more information, visit the Web site www.sfcu.org or phone 650-723-2509.

—P.A. Moore

Meet the SLAC Air Quality Program Manager



HOW OFTEN HAVE YOU thought about how the plating or paint shops, chillers, or BaBar affects our air quality? As the SLAC Air Quality Program Manager, Butch Byers thinks about this everyday.

Byers prepares permit applications, conducts negotiations for sources of air emissions, and oversees all air quality issues with local, state, and federal regulators. In addition, he performs and supervises air quality modeling and emissions testing activities, and

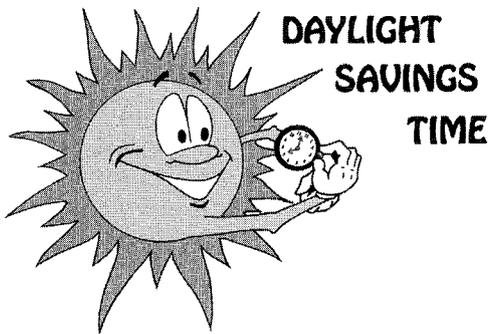
tracks chemical and material use for both federal and state regulatory reporting programs.

If you have concerns about how machinery or operations in your area affect air quality, contact Byers. See the listing for Air Pollution Program on the ES&H Resource List or send email to bbyers@slac.stanford.edu.

This article is the first in a series to feature staff members of the ES&H Division. These articles describe how ES&H staff provide technical assistance, coordination, and oversight to ensure the SLAC scientific mission is accomplished while protecting our workers, the public, and the environment.

Most staff members featured in these articles can be found on the ES&H Resource List. To receive a copy of the ES&H Resource List, contact Kristina Rowledge at x3420. The ES&H Resource List is also available on the ES&H Web site at <http://www.slac.stanford.edu/esh/esh.html>

—Roxanne Jones



Daylight Savings Ends, But Safety Awareness Keeps Right On Ticking

THERE ARE CYCLICAL EVENTS, such as turning the clocks back, which tell us that a) we are getting older; b) we are here to tell about it; c) it's nothing personal. Just as the arrival of autumn is marked here by falling leaves or chillier mornings, certain tasks performed by you call for corresponding actions which grow out of a heightened awareness of personal safety.

Some examples: four or more hours per day on the computer should trigger a call from you or your supervisor to the SLAC Medical Department to request an ergonomic evaluation. And the repetitive motion involved in keyboard work should also set off a little bell inside your brain to stretch, walk around, or change tasks every 20 minutes or so. Similarly, entering an operating machine shop on site should have the corresponding action of putting on safety glasses.

Remember the multiple choice test you took a few

paragraphs ago? Well, turning the clocks back might not be personal, but taking responsibility for your health and safety definitely is. The good news is that you are never alone, since you have partners in this effort: your supervisor, your safety officer, the Medical Department staff, and many others. Among the "many others" are your Operating Safety Committee representatives—they can help ensure that you have the information needed to move into a new season safely.

As you get older (sorry, it's unavoidable), your safety partners definitely want you here to tell about it, so remember us when you need some guidance or support or have ideas to share. Because yes, safety is about taking it personally.

—Janice Dabney
Chair, Operating Safety Committee

Networking is the Name of the Game

THIS IS A STORY about two heroes at SLAC who worked to make waste minimization happen. The heroes: Forrest Brown in Plant Engineering and Yolanda Pilastro in Waste Management. Their achievement is inspirational in showing that reuse options exist for excessed equipment and that networking, as well as persistence, are important tools in making waste reduction a reality.

For SLAC to conduct high-energy physics experiments, high-voltage electrical power from the local utility grid system is distributed through the Master Substation. Various electrical equipment such as transformers and circuit breakers are used to convert electrical power to run powerful magnets, klystrons, and electron beams. In some cases, an individual piece of electrical equipment handles as much as 15,000 kilovolt-amperes (kVA), enough electricity to power 150,000 one hundred-watt light bulbs.

DOE contractors are required by Federal procedures to determine if excessed equipment is reusable by other DOE or Federal facilities. If the equipment is not reusable by these agencies, the next step is to place advertisements to resell the equipment to companies or organizations outside the government. SLAC Property Control performed both of these measures for several pieces of excessed electrical equipment from the Master Substation. After weeks of waiting, no interest in reusing the equipment was shown by any Federal or outside agency. It would have been easy to give up at that point and the equipment would have been disposed of as waste or sold as scrap.

But when scrapping large electrical devices, transportation costs can get prohibitively high, since the equipment must be dismantled to make it road-worthy. The labor to arrange for salvaging can exceed the value of the scrap metals – removing the oil from the equipment, removing portions of the equipment that interfere with its transport on highways, and hoisting and rigging the equipment onto suitable transportation.

Generating interest in the excessed electrical equipment is where our heroes' networking and persistence came in. Brown recognized that the equipment was both useful and of value; Pilastro used her waste management experience and network connections to see if nearby power companies could use some of the equipment.



Pictured (l-r): Forrest Brown and Yolanda Pilastro stand in front of the 35 ton, 60-kV transformer which was removed by PG&E for reuse. Their efforts resulted in savings of around \$60K for SLAC.

What did their efforts mean for SLAC? A 60-kV transformer, with the oil removed, weighing approximately 35 tons was reused by Pacific Gas and Electric. PG&E reviewed the transformer's condition and specifications with SLAC and found that the equipment was reusable. They removed the equipment from SLAC free of charge, relieving SLAC of hoisting/rigging and transportation costs. The result: PG&E was able to reuse a transformer and SLAC saved an estimated \$60,000 by not transporting the transformer to a salvaging or waste disposal firm.

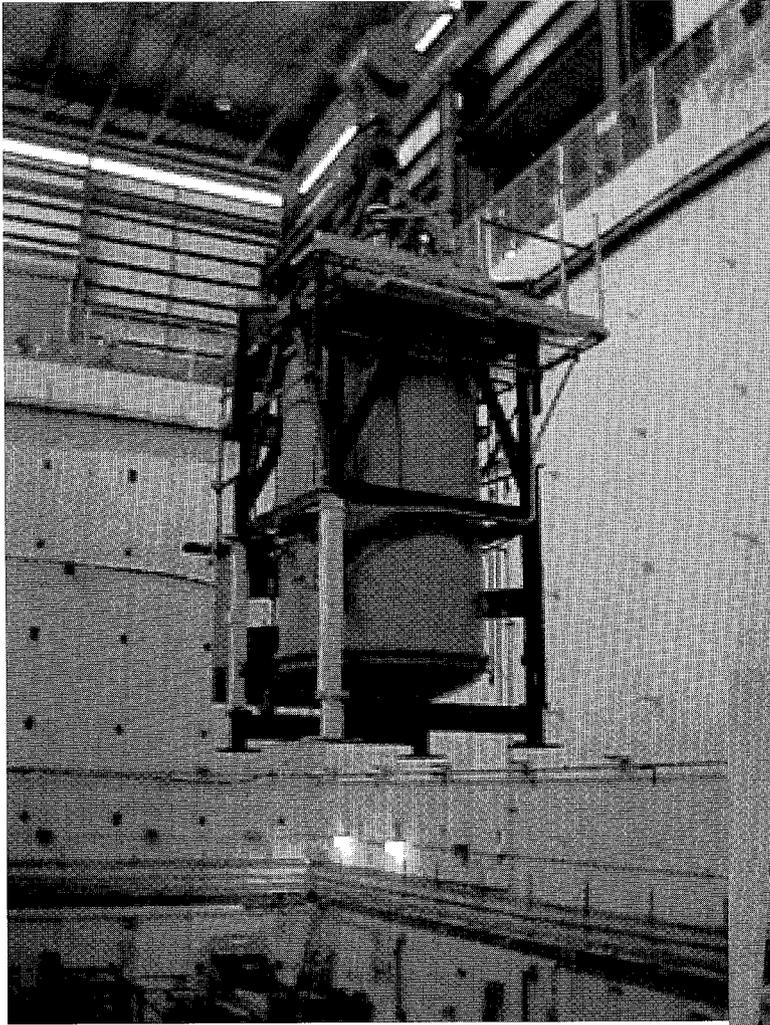
In addition, PG&E also helped SLAC dispose of a 27-ton, 230-kV oil-insulated circuit breaker which was not readily reusable because it was obsolete. PG&E loaded the circuit breaker onto a separate transport vehicle so that it could be managed at a salvage company.

Plant Engineering has also developed experience in finding other firms that reuse high-power electrical equipment that would otherwise become scrap. A 230-kV sulfur hexafluoride gas-filled circuit breaker weighing approximately 17 tons was reused by an original equipment manufacturer in California. In addition, an out of state power company reused some rare, variable-voltage regulators from SLAC.

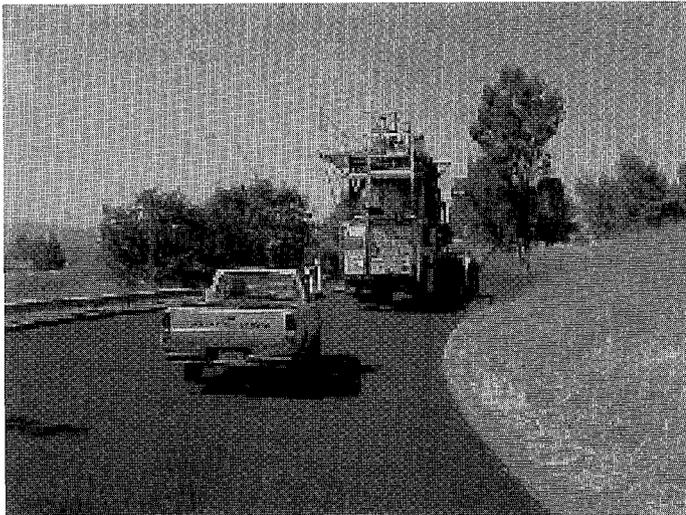
The efforts of Brown and Pilastro and their persistence in finding reuses for the excessed equipment resulted in these cost-effective, waste-reducing alternatives. Overall, their cooperation saved SLAC and DOE many thousands of dollars in rigging, transportation, and disposal costs.

—Richard Cellamare

Have Refrigerator, Will Travel



The 10 ton cold box is lifted out of its position in the collider experimental hall.

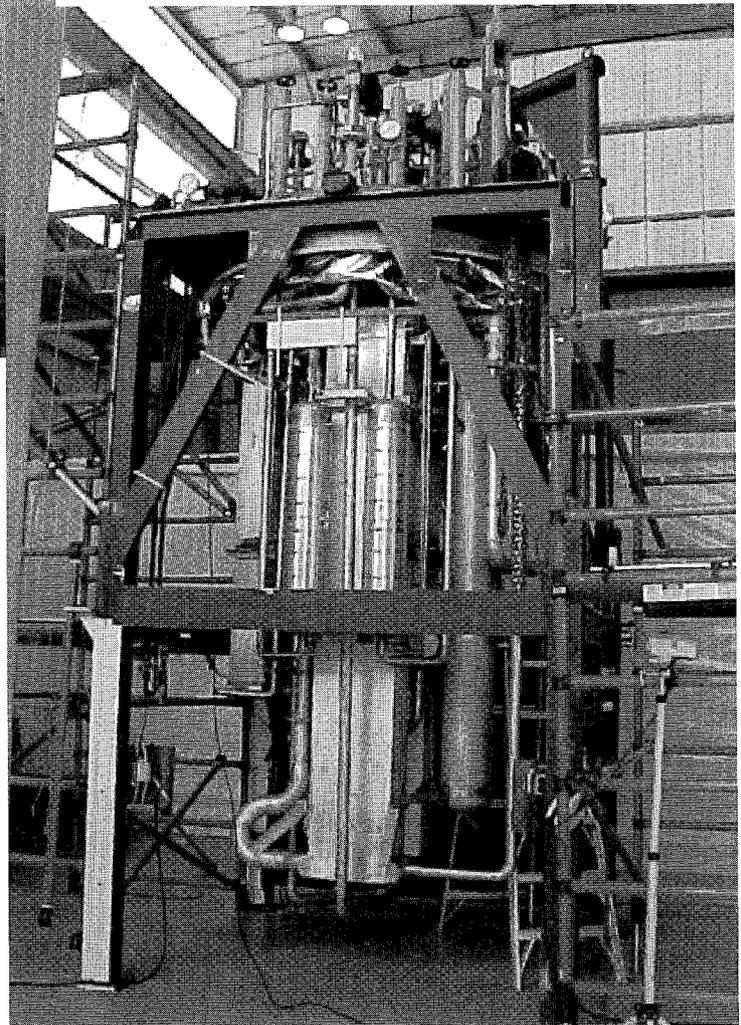


The cold box on the road to its new home in the research yard.

THE CTI - 4000 HELIUM LIQUIFIER was moved last month from the SLD Collider Experimental Hall down to the research yard. The liquefier had provided many years of reliable service in cooling the superconducting final focus magnets of the Stanford Large Detector. In its new location, it will be modified to provide 20 Kelvin temperature refrigeration for the liquid hydrogen target in the upcoming E -158 End Station A experiment.

The CTI - 4000 consists of a 10 ton cold box, a 4 ton helium dewar, a valve box and associated controls. The disassembly and movement of the liquefier was carried out by members of the Experimental Facilities Department cryogenics and electronics support group and the Plant Engineering rigging group. The modified CTI - 4000 is scheduled to be operational in the spring of 2000.

-John Weisend



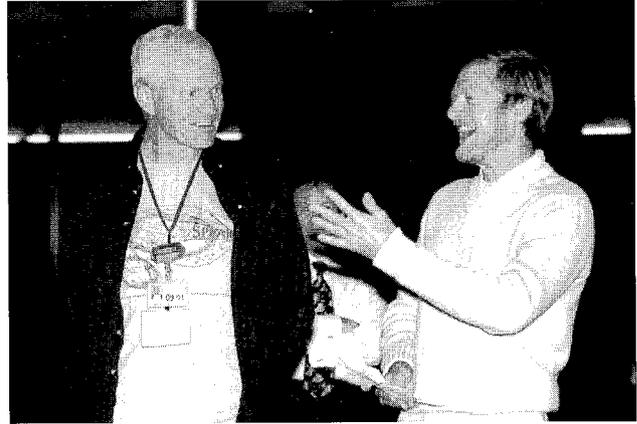
The cold box with the outer vacuum vessel and superinsulation removed. The cryogenics group will now modify it to perform as a 20 Kelvin temperature refrigerator and upgrade the existing sensors.

SSRL Users Group Honors Tom Hostetler

TOMHOSTETLER, A PRINCIPALS&E Technician in SSRL's Experiment Support Group, was selected to receive the second annual Farrel W. Lytle prize at the SSRL Users' Organization meeting dinner held in October. This prize is presented to a SSRL user or staff member who provides exemplary service to the lab. Lytle presented the award to Hostetler, which consisted of a plaque and a \$1000 check presented by the users. The plaque will remain at SSRL with the names of all award members engraved on it.

Hostetler has been at SLAC since 1967, when he began his career with the Bubble Chamber group. He then worked for EB, went to SPEAR, to EA, to MCC, and finally to SSRL where he now serves the user community by preparing, maintaining and improving their beamline equipment. Since Hostetler is known for his "hobby" of collecting elemental standards for experiments to use in calibrating the monochromator energies, Piero Pianetta presented him with a element, "Tomium", which dates back to 1967, coincidentally when Hostetler began working at SLAC. He also received a chain saw, which fell apart during the presentation, to cut through red tape when helping users.

When not at work, Hostetler serves on the board of Rainbow Girls, a Women's Service Group which assists blind children, and also volunteers with Jacob's Heart, a Monterey Bay Area support group for children with cancer. He has lived in Santa Cruz for the past 10 years.



Tom Hostetler (l) shares the stage with his supervisor, Hal Tompkins (r) during the awards ceremony.

About the Farrel W. Lytle award:

Lytle was one of SSRL's original users and has maintained this connection for over 25 years. He is internationally recognized at the "father" of modern EXAFS, which is an X-Ray absorption spectroscopy made practical by synchrotron radiation. It is now used for structure determination in everything from biological materials to catalysis to environmental science. The award was established by the SSRL users' organization in Lytle's name to honor him. He was also the first recipient of the award.

Tying the Knot



ON SUNDAY, October 10, 1999 TWO SLAC staff members, Luda Cantor and Ted Fieguth, were married at Valley Presbyterian Church in Portola Valley. Following the ceremony, a dinner party was held at the Carnelian Room in San Francisco, where the couple and their families were treated to a spectacular view of

the bay area and its bridges from a height of 52 stories.

Luda is an engineer—specializing in heating, ventilating, air conditioning and energy conservation projects—working in the Facilities Department of the Business Services Division. She will, however, take on all jobs brought her way, and you may recall the article in the last issue of *The Interaction Point* describing her Main Quad path and lighting project. Luda was born and raised in Moscow, USSR, and immigrated to the United States in 1979. Before coming to SLAC in 1992, she worked for many years at Intel, where among other things she used her expertise in the design and construction of clean rooms.

Ted works for the Experimental Facilities Department of the Research Division, where he has been employed as an engineering-physicist for 30 years. Ted has worked on many of SLAC's experiments and projects, and is also the SLAC Laser Safety Officer. He remembers with fondness the early days when he worked on experiments for LASS, the streamer chamber, the 40-inch and 82-inch chambers and, later on, SLC. Most recently, Ted has been working on PEP-II and BaBar construction and commissioning.

We wish Luda and Ted the very best on their new life together.



Just How Big Is The WWW?

The Online Computer Library Center Office of Research recently conducted a project to characterize the structure, size, usage, and content of the Web. Full details are available at www.oclc.org/oclc/research/projects/webstats/

	1997	1998	1999
Web Site	1,570,000	2,851,000	4,882,000
Unique Sites	1,230,000	2,035,000	3,659,000
Unique Public Sites	800,000	1,457,000	2,229,000

The researchers at OCLC determined that the web has about 3.6 million sites. Of these, 2.2 million are available to the public and contain nearly 300 million web pages. About 400,000 web sites are accessible by fee or with prior authorization. About 1 million sites are "under construction" or have trivial content. Sites containing sexually explicit material make up less than 2% of the public sites (42,000). You can see that the number of public web sites has almost tripled since 1997. The average web site contains about 129 pages. However, the largest 25,000 sites represent almost 50 percent of the web content. In June 1999 the SLAC web site had over 420,000 pages that were being indexed by our search engine. These figures show us why finding what we want on the web is becoming increasingly difficult.

New Book! Stop by the Library and take a look at *Weaving The Web: The Original Design And Ultimate Destiny Of The World Wide Web By Its Owner* by Tim Berners-Lee. SLAC is identified as the first web server outside of CERN and SLACers Louise Addis, Tony Johnson, and Paul Kunz are recognized for their contributions.

-Ruth McDunn

Personnel To Become HR

WITH THE NEW MILLENNIUM on the horizon, it's time for the Personnel Department to change its name. We will now be known as the Human Resources Department effective immediately. The HR staff will begin changing all references to our Department from "Personnel" to "Human Resources". Based on our own internal experience, we recognize that this change to Human Resources may not come easily since the other word has been ingrained in our vocabulary. Nonetheless, we request that staff refer to us as Human Resources or HR (when you wish to be polite). We believe that the new name more accurately describes our work and our department to the outside world.

-Lee Lyon

Work Safe, Work Smart

Four injuries involving days away from work have been reported since the last update on 9/15/99 according to Sharon Haynes, Workers' Compensation Coordinator. SLAC's record number of days between claims remains at 150 days.

SLAC Milestones

MARRIED

Cantor, Luda (Facilities) to **Fieguth**, Ted (EFD), 10/10/99

RETIRED

Ashley, Alonzo, Human Resources, 9/30/99

Coward, David, Group C, 9/16/99

Phillips, Valerie, BSD (Travel), 9/30/99

DECEASED

Barlowe, Richard, BSD (Stores), 10/11/99

Jensen, Joel, formerly with EFD, 9/13/99

Powe, Emmanuel, formerly with PE, 10/11/99

AWARDS

Arnold, Ray, Group ESA/American University, APS (year) 2000 Tom W. Bonner Prize

Breidenbach, Marty, SLD, APS (year) 2000 W.K.H. Panofsky Prize

Hostetler, Tom, SSRL, Farrel W. Lytle Award

Do you have a milestone you would like published in TIP?
Email tip@slac.stanford.edu to have it included.