

International Committee Meets at SLAC

LAB DIRECTORS FROM AROUND the world met at SLAC in January for the semi-annual meeting of the International Committee for Future Accelerators (ICFA). Hosted by SLAC Director Burton Richter, ICFA members discussed topics related to particle accelerators, technology and design, and received updates on the Large Hadron Collider, the Next Linear Collider, and the future of the Internet.

David Williams, a computer specialist recently at CERN, reported that Internet reliability, bandwidth and speed were being affected by the increased use of the public Internet lines. "Intranets and Extranets are now necessary for private traffic," said Williams. "The American car industry is already investigating such possibilities. So physics must do the same."

David Leith, SLAC's Associate Director, Research Division, heads a committee of DOE laboratory scientists to look into challenges faced by the High Energy Physics community in response to increasing demands for Internet use.

Chris Llewellyn-Smith, CERN Director, reported that NSF and DOE have initialed an umbrella agreement about their share of funding for the Large Hadron Collider, a project being developed at CERN for proton physics. Approval by Congress is expected in the Spring for this major international project.

SLAC's Dave Burke presented a status report on interlaboratory collaboration for R&D toward a TeV-scale linear collider. "The Technical Review Committee's report was a valuable exercise in developing a common language of technical definitions and evaluations techniques," according to Burke.

ICFA was created in 1976 by the International Union of



Hirohata Sugawara of KEK laboratory listens attentively to comments from Chris Llewellyn-Smith from CERN.

Pure and Applied Physics. Its goals are to promote international collaboration in all phases of accelerators and to arrange world-wide meetings for the exchange of information. The Committee has 16 members, selected primarily from the regions most deeply involved in high energy physics. The next ICFA meeting will be in Hamburg in August.

The lab directors attending the meeting were: A. Astbury (TRIUMF), B. Barish (Caltech), T. Ekelof (Uppsala), J. Feltesse (Saclay), E. Fernandez (Barcelona), R. Hemingway (Carleton), K. Hirata (KEK), V. Kadyshvsky (JINR, Dubna), J. Kang (Korea), J. Lefrancois (Orsay), C. Llewellyn-Smith (CERN), Y. Nagashima (Osaka), J. Peoples (Fermilab), B. Richter (SLAC), R. Rubinstein (Fermilab), H. Schmal (CERN), F. Sciulli (Columbia), A. Skrinsky (BINP, Novosibirsk), K. Stanfield (Fermilab), H. Sugawara (KEK), N. Tyurin (IHEP, Protvino), W. Shuhong (IHEP, Beijing), B. Wiik (DESY).



Members and guests from the ICFA meeting at SLAC in January.

Meet Ree Dufresne

ON HER FIRST DAY as coordinator for the SLAC Users Organization (SLUO), Ree Dufresne found out that her immediate task would be logistical arrangements for the SLAC 2000 New Ideas Forum. This meant communicating with high energy physicists around the world, requesting topics for the Forum.

"Nothing like jumping right into a job," said Dufresne.

Then, two months later came the SLUO Annual Meeting which involved communicating with more than 1100 users from activities such as BaBar, SLD, E-155, and GLAST. "Thanks to Karen Heidenreich and Sonja Cronin," said Dufresne, "SLUO is now working on Data Client to track users as they come and go from here to their home institutions and back. This system will make a big difference for the SLUO Executive Committee."

As Coordinator, Dufresne works closely with the SLUO Executive Committee, which represents the Users. The Committee works to help maintain SLUO's integrity and, at the same time, help integrate users into the fabric of the SLAC environment to facilitate smooth research projects.

The SLUO Executive Committee is recommending changes that will make SLAC more user friendly. Users may now get a SLUO information sheet and a Computer Account request form by simply e-mailing Dufresne a FAX number to SLUODESK@slac.stanford.edu. If the person is a User who will be physically working on-site, a visit to the SLUO desk in the Central Lab Annex will get the User all the necessary information to complete ES&H requirements, be photographed, badged, and directed to the appropriate Group Secretary.

In addition to opportunities which exist on Campus for auditing physics classes, SLUO is now offering classes to Grad students and users on Friday mornings here at SLAC. The *Series on Supersymmetry* taught by Michael Peskin will be completed in February. A new *Series on CP Violation* taught by Helen Quinn is also being scheduled. Dufresne provides the logistical coordination for these courses.

So what has it been like in just one year? "A roller coaster ride," said Dufresne, "and I truly enjoy it."



← TechPubs

LaTeX with the Ease of Word?

THE TECHNICAL PUBLICATIONS Department is considering proposing the purchase of a site-license for a powerful authoring application, **Scientific WorkPlace**. TechPubs is soliciting feedback from members of the scientific and technical authoring community at SLAC who have used **Scientific WorkPlace** or are interested in it.

Scientific WorkPlace provides a WYSIWYG ("what you see is what you get") front end to a LaTeX compiler. This powerful program allows those working on a PowerMac or PC (Windows 3.1 and up) the ease of authoring found in products like Microsoft Word (but with a much better math module), combined with the high quality of type-setting afforded by LaTeX.

At the VM Phaseout Fair held in February, many authors who tried out the application were enthusiastic about the functionality of the embedded Maple kernel, which allows authors to evaluate, graph, or plot equations all within the document authoring application. The program also allows users to link to Mathematica.

Scientific WorkPlace comes equipped with a suite of more than 100 document templates. For the VM Phaseout Fair demo, TechPubs staff also pre-loaded the application with LaTeX templates designed for SLAC Pubs and Reports.

Authors familiar with this application are invited to give feedback in the evaluation process by using the WWW form at: <http://www.slac.stanford.edu/grp/techpubs/announce/sciword.html>

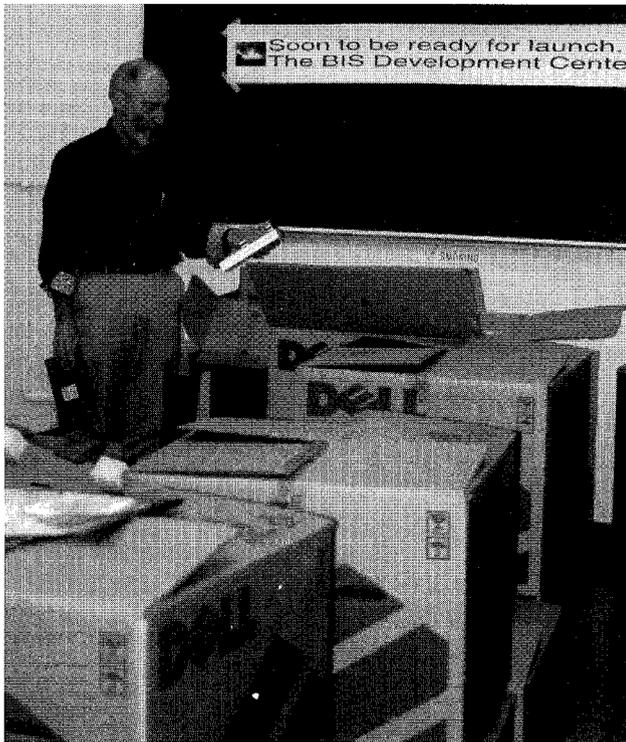
Those interested in finding out more about the application or trying it out themselves, please send email to Ruth McDunn (mcdunn@slac.stanford.edu).

--The TechPubs Department

Work Safe, Work Smart

After 53 days without a lost-time incident filed, a claim was made on January 17. From 1/17 to 2/14/97, there were 27 calendar days without a lost-time incident being filed, according to Sharon Haynes, the Worker's Compensation Coordinator.

BIS Development Center Ready



BEFORE: Bill Johnson is surrounded by boxes in what used to be the Yellow Conference Room and the ADP/Production Control Office in the A&E Building. These rooms were reconfigured to become the "home" for all the BIS Application Teams. Bill Johnson and Jeff Lwin migrated BSD personnel from Windows 3.1 platforms and onto "standardized" Windows NT machines.



AFTER: Max Schleicher and Carol Tam use the new center to collaborate on BIS tasks. For the duration of the implementation project, these two rooms will serve as the BIS Development Center, with workstations for the ten Applications Teams. We can expect more changes in BIS as PeopleSoft continues implementation. Maybe this is where our new paychecks are being designed?

Sixth International World Wide Web Conference: April 7-11

"REGISTRATION IS UP!" says Bebo White, co-chair of the WWW6 conference to be held at the Santa Clara Convention Center. Co-sponsored by SLAC and Stanford, the conference takes place from April 7-11. Details can be found at:
<http://www6conf.slac.stanford.edu>

A now-annual event, the Web conference is organized under the auspices of the International World Wide Web Conference Committee. The conference fosters development of the Web by providing a forum for discussion and exploration of the underlying technology. The conference will have tutorials, workshops and three days of papers and panel presentations. Volunteers are needed. See the Web pages for how to sign up.

Recently confirmed speakers include Tim Berners-Lee providing the keynote address. Followers of history will need no introduction to Berners-Lee, but Luddites may be interested to

know that he is the man who invented the Web at CERN. Other speakers include Mae Jamison, former NASA astronaut; Howard Rheingold, original Well developer; and Paul Saffo, Director of the Institute for the Future.

An important topic at this conference is a day devoted to developers. "Developing for the Web is now a complex business proposition," says Nick Ragouzis of the Enosis Group. "This day is designed to appeal to those trying to move their product development and business operations to the next level." Developers Day, Friday, April 11, will have a three-track program on architecture, user interface, and technology and society.

The WWW6 conference will be sharing some sessions with Computing in High Energy Physics (CHEP) in Berlin, Germany and Hypertext 97 in Southampton, England.

Demand for MES Beamtime at SSRL

SYNCHROTRON-BASED SPECTROSCOPIC techniques have proved to be essential tools for solving many types of environmental problems facing society today. For example, X-ray absorption fine structure (XAFS) spectroscopy is used to determine the speciation of toxic contaminants such as arsenic, lead, and uranium in contaminated waters, soils, plants and microbes. XAFS spectroscopy is also used to characterize the stability of fissile materials, spent nuclear fuel, and high-level radioactive waste. Other synchrotron-based techniques including X-ray scattering methods, X-ray imaging and microprobe techniques, and infrared spectroscopy are also important tools for environmental scientists. These techniques probe the molecular structures, long-range average structures, and oxidation states of ions, and their application to environmental studies had led to the development of a new disciplinary field, *Molecular Environmental Sciences* (MES). The success of synchrotron techniques in solving MES research problems has led to rapid growth of the MES synchrotron user base, and substantial increases in demand for MES beamtime. For example, MES research at SSRL has increased approximately three-fold since 1993.

A working group was recently convened at SSRL on January 18-19 to study the rapid rise in demand for MES beamtime and facilities, and to make facilities recommendations to accommodate future MES synchrotron research needs. Those attending the meeting included 13 scientists from universities and national labs who are active members of the MES research community, and 7

representatives from the four DOE-funded national synchrotron laboratories, who provided technical information and operations knowledge about the facilities. It was concluded that current and planned US-DOE synchrotron facilities should be adequate for MES beamtime and facilities needs in the near future, i.e., 1997 and 1998. Beyond this timeframe, however, it was anticipated that additional MES synchrotron facilities will be needed, due to an increase in the application of synchrotron-based spectroscopic and x-ray scattering methods to environmental basic research and engineering areas, where these techniques have not yet been applied (such as for routine environmental monitoring programs). MES operations and user support models were also discussed, and recommendations for future facilities were made.

The SSRL MES program at SLAC figured prominently in discussions during the workshop as a model for MES efforts at other US synchrotron facilities. The SSRL MES staff is composed of Drs. John R. Bargar and Gordon E. Brown, Jr., who conduct basic research and provide support for MES users. Another important component of the SSRL MES program is the high-flux MES-dedicated beamline (BL-11), which is currently under construction and will feature a chamber for experiments with toxic and radioactive samples, a high-throughput multi-element detector with advanced signal-processing capabilities, and other equipment suited to MES research. MES plans for the future at SSRL include the hiring of technical support staff to run BL-11 and providing user support for MES researchers.

--John Bargar



Steve St. Lorant and Brad Youngman from Experimental Facilities Department take a breather from the task of getting End Station A ready for E-155.



The Stanford String Quartet, which held a recital to an appreciative SLAC audience last month are: (l to r) Phillip Levy, Susan Freier, Benjamin Simon, and Stephen Harrison



Attention QuickMail Users

BEGINNING MARCH 1, 1997 each time the QuickMail utility (MAT) is run (normally once a month), any Mail or Mail Log files residing on the QuickMail server older than 120 days will be deleted. Also, any QuickMail account that has been inactive for more than 120 days will be deleted and no new QuickMail accounts will be established.

In mid-January the QuickMail server crashed at least three times. Bringing it up after the last crash and running the monthly utility was difficult and costly. Many older files were deleted. Crashes and problems seem to occur more often when there is a large volume of files left on the server. Before this last crash there were close to 20,000 files on the server.

All QuickMail users are highly encouraged to Save or File (or Delete) your Mail and Mail Log files to your Mac, and not leave them on the QuickMail server.

Mac users should also look into moving off QuickMail and onto Eudora. Eudora is the supported mail system for Macs, whereas support for QuickMail has been reduced. (People in the PEP-II Division, and those people in other Divisions doing PEP-II related work, should remain on QuickMail until the end of the PEP-II project. This will minimize the risk of disruptions to their e-mail communications, especially with collaborators from other labs who are also on QuickMail.)

SLAC does not intend to make any further upgrades to the QuickMail software. SCS will continue to provide central QuickMail support until the B-Factory construction project finishes, or until the current software breaks or becomes unmaintainable in a cost-effective manner, whichever comes first. This is due to: the high cost of support for QuickMail in the SLAC environment, and the availability of Eudora as an alternative supported device.

If you no longer need your QuickMail account, please notify the HELP desk at x4357 and ask to have your account deleted. Be sure to Save or File any mail files you want to keep before having your account deleted.

See this web page for more information on Eudora:

http://www.slac.stanford.edu/comp/winnt/software/eudora_pro/eudora_pro.html

--Ken Martell

Welcome Guests and New Employees

The following people joined SLAC through mid-February: **Jens Brose**, Experimental Group E; **David Chon**, BaBar; **Freddie Chow**, SCS; **Rachel Denning**, Technical Publications; **Sandrine Emery**, PEP; **Albert Hofmann**, SSRL; **Akihiro Ino**, SSRL; **Shinichi Masuda**, ARD-A; **Stephen Pelham**, PCD; **Charles Rayburn II**, SCS; **Paul Vavra**, Experimental Group E.



ISDN Proposal Approved

A PROPOSAL TO PROVIDE a production Integrated Services Data Network (ISDN) service was presented to the Associate Directors Committee on Computing (ADCC) in January, and met with a favorable response. The full proposal and the Executive Summary are viewable on the Web.

The production ISDN service would be an upgrade and expansion to the current ISDN Pilot model. The current model is not cost effective to build on from a financial, technological, management, or security standpoint.

The proposed model will support 46 simultaneously-connected users from a pool of about 140 users, with the capability of doubling that capacity if needed. There will also be better security and management tools will be included. (The current model allows 9 simultaneously-connected users from a pool of 22 users.)

An Internet Service Provider (ISP), WinterLAN, was also recommended for users living outside the local calling area from SLAC. The local calling area is roughly within a 12 mile radius of SLAC which Pacific Bell defines as the users' phone number prefix.

For more information on the proposal and ISDN, see the following Web pages:

Full proposal: <http://www.slac.stanford.edu/comp/net/isdn/slaonly/isdn/proposal.html>

Executive Summary: <http://www.slac.stanford.edu/comp/net/isdn/slaonly/isdn/executive.html>

Please send any feedback to Ken Martell (kmartell@slac.stanford.edu), or Les Cottrell (cottrell@slac.stanford.edu).

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• **SLAC Area Code Changes** •
• **from 415 to 650 on** •
• **August 2, 1997.** •
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Science Tribes and Science Funding

SHARON TRAWEEK, known for her anthropological view of SLAC and KEK in the book **Beam Times and Life Times** (1988), spoke at campus recently on the topic "Cultural Reality Wars." She argued that the United States is 25 years into a social dislocation creating new language, models, templates and paradigms. All of these have serious implications for what research is funded, since "some knowledge is prized, while other knowledge is despised," according to Traweek.

"How do we make knowledge? What are our tools, sites, and methods?" Responding to these rhetorical questions, Traweek reviewed 750 years of history and the different methods of categorical thinking used in the past: from the use of dyads such as light and dark (or Coke and Pepsi), to triads (Father-Son-Holy Ghost), and natural laws (the speed of light). All these methods are commonly used and accepted as ways of knowing.

Since WWII, however, new ways of thinking have influenced the knowledge that is created, funded, and disseminated. These new methods are heavily influenced by computers and technology. An example cited by Traweek was the grocery store middle manager who used to decide what products to buy, what price to sell them, when to ship, and how much to keep in stock. Now, computer scanners

read bar codes and products are ordered using just-in-time shipping. The personal knowledge of the relationship between the customers and the products in an individual store is no longer valued.

With some trepidation, since she is a professor at UCLA, Traweek drew a parallel to deans, department chairs and other academic personnel who are responsible for logistical arrangements of students and class timetables, wondering what the future brings for this group. "The tools that we use may become the masters of the process, not the scholar who uses the tools," cautions Traweek.

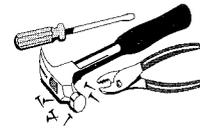
Science is caught in this paradigm shift. The current anti-science mood, as exemplified by the cancellation of the SSC, was "the revenge of C students," a remark Traweek quoted from ex-SSC lab director Roy Schwitters.

What are the implications for those in the midst of this social dislocation? "There is a fault line for those who are over or under the age of 45. The older group grew up without copy machines and computers. The younger group has this technology," said Traweek. She suggests that working at the fault line creates a tension necessary for a successful transition to the next paradigm, whatever that might be.

Faculty Milestones

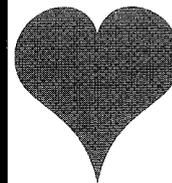


Elliott Bloom, Group K, will be on sabbatical from June 30, 1997 through August 8, 1997. Bloom will be working at the Aspen Center for Physics in Colorado on Particle Astrophysics problems in theory and experimentation.



Auditorium Retrofit

WHAT'S ALL THIS CONSTRUCTION in the SLAC Auditorium? Now that we have a Visitor Center and our site is visited more often by the general public, it is necessary for SLAC to conform to codes requiring access for the handicapped. These repairs included retrofitting bathrooms to accommodate wheelchairs, refitting doors with push bars, and resurfacing a brick path with asphalt to have a smooth walkway for handicapped visitors. Some of the Auditorium work is near completion; however, more changes will occur as SLAC moves toward a more accessible facility.



Dates for upcoming **Mobile Blood Drives** at the SLAC Auditorium will be on the following **Wednesdays** from 8:30am to 3:00pm:

March 19
June 18
September 17
December 17

Donors receive a mini-physical including multiple blood tests and cholesterol screening. Requirements for donating: must be free of cold/flu symptoms; weigh at least 110 pounds; maintain normal eating habits/eat within 6 hours prior to donating; and, drink plenty of fluids before and after donation. There is a 15 minute resting period after donating--enjoy refreshments with others after donating.

For further information, please contact Kristy Nelson in the Public Affairs Office, x2204 (NelsonKD@slac.stanford.edu).

Dixon Farewell



Cherrill Spencer (Mechanical Engineering) gives a certificate of appreciation to Janet Dixon for her volunteer service to the Women's Interchange at SLAC (WIS) at a farewell party in Dixon's honor. Dixon, who left SLAC's Telecommunications Department recently to become Director of Telecommunications at Blue Shield in San Francisco, was a co-founder of WIS in 1991, and continued her active support of the organization during her SLAC career.

Dixon has a doctorate in Education and her dissertation was recently published as a book, **Predicting Seniors' Use of Cyberspace**.

Professor Emeritus Benjamin M. Page Dies at 85

BENJAMIN M. PAGE, Professor Emeritus of geology, and one of the leading experts on the formation of California's coastal ranges, died at his home in Palo Alto on January 31 at age 85. Memorial services were held at Stanford Memorial Church.

Page received all three of his academic degrees from Stanford, all in geology. He joined the faculty at Stanford in 1943, and led the Department of Geology as chair from 1957 to 1969. Though he took emeritus status in 1976, he remained active in research and teaching, publishing some of his best-known scientific papers. From 1985 to 1988 he edited the journal **Tectonics**.

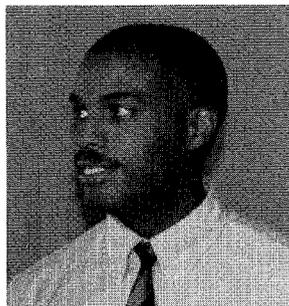
He had a particular interest in the geology of Stanford and the Bay area. Wolfgang Panofsky, founding director of the Stanford Linear Accelerator Center, credits Page for the geological studies that allowed engineers to place the two-mile long particle accelerator on safe foundations. According to geology Professor Emeritus Robert Coleman, "His scientific work helped us understand and cope with the geological hazards related to earthquakes, landslides and flooding in the Bay area."

At a 1993 division session of the Geological Society of America, Page accepted an award honoring him for a career of contributions by quoting wisdom he said he had gained from a predecessor. The late professor C.F. Tolman, he said, taught him a profound fact: "One day while in a reflective mood, Tolman said to me, 'You know, Ben, people are almost as interesting as rocks.'"

Donations are welcome to the Benjamin M. Page Endowment Fund in the School of Earth Sciences at Stanford, (415) 723-9777.

--Janet Basu

Al Green Receives Award



MANY OF US REMEMBER Al Green. He was formerly a participant in S L A C ' s S u m m e r S c i e n c e P r o g r a m

which provides research opportunities for 20 undergraduates in physics, mathematics, engineering and computer science. Then Al went on to become director of the same program for several years while completing his Ph.D. in physics at Stanford University in 1993.

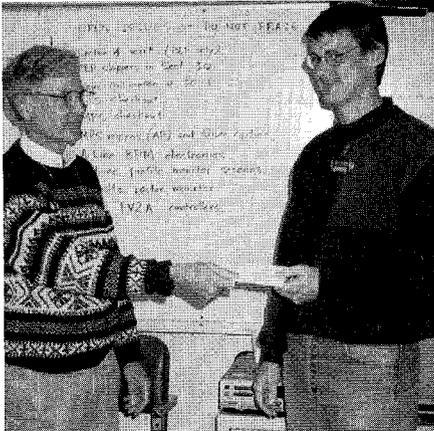
Green is now a research physicist for Science Applications International

Corporation (SAIC) in McLean, Virginia, and he recently received the 1997 Black Engineer of the Year Award for Most Promising Scientist. The awards program recognizes the top 30 African Americans in science and technology in the United States.

At SIAC, Dr. Green's research has focused on applied solid state physics with emphasis on semiconductor surfaces and interfaces. He has also been involved in materials and advanced coatings for robust field emitter technology, leading to the development of advanced infrared detectors and microantenna technology.

Green is continuing his interest in education in a variety of ways. In 1993, he hosted a PBS-TV children's show "Newton's Apple," where he explained the general principles of electromagnetism. As co-founder and board member of Minority Students in Physical and Mathematical Sciences based in Washington, D.C., he encourages undergraduate students in the physical sciences to pursue graduate degrees.

Rackelmann is a Winner as Damping Ring Area Manager



Alan Rackelmann (r) accepts dinner certificate from Jym Clendenin.

BECAUSE OF RESTRICTED ACCESS and special safety considerations, the job of keeping the accelerator housing (the below-ground areas) clean has become increasingly more difficult. During the past 6 months, while the accelerator was shut down, the Area Managers were in friendly competition to see in which area the cleanliness could be most improved.

Just before the lock-up of the housing for the start up of E-155, the area judged to show the greatest improvement was determined by Jim Allan (ES&H) to be the Damping Rings. The award (a fully-paid dinner for 2 at Evvia Restaurant in Palo Alto) was presented at the 08:15 Accelerator Maintenance Meeting on February 13 by Jym Clendenin (SLC physicist) to Alan Rackelmann, the Damping Ring Manager.

Other Accelerator Area Managers are: Al Baker (Arcs and Final Focus), Roslind Pennacchi (Linac Area), Patrick Smith (Injector), Robin Gray (PEP-II), and Joe Sodja (Injector).

FactinOs

Paychecks: New Look, Same Old Money

It's still your SLAC paycheck, but starting March 22, it will be different. Sorry, no, there's no increase in the amount of money printed on them. But SLAC checks will have a new design, according to Carol Tam, SLAC Payroll Manager. In preparation for our new Business Information Systems (BIS) which will use the PeopleSoft software application, a laser printer will print payroll checks. Facsimiles of the old and new checks will be distributed to staff for comparison sometime in March.

Chain Letters a No-No

Either hard copy or electronic, chain letters sent using SLAC computers, typewriters, printers, or paper are a misuse of government property. If you know someone who is sending these kinds of messages, please let them know it's a no-no.

Did you know?

No parking? It might be because the number of users (researchers from around the world) has increased to nearly 2000. Users come from 100 US universities, 20 national laboratories, and more than 100 foreign institutions. Half of this number are in high-energy physics, and the other half in the synchrotron division. HEP researchers work for several years on long-term collaborations, while SSRL users typically are here for one or two weeks for use of beam lines.

Praise for Purchasing

Let's hear it for the Purchasing Department! Records show that SLAC purchases \$1 worth of goods and services for what is known as a "process cost" of only \$.0215. This figure puts us ahead of other Labs, with the Thomas Jefferson facility (formerly CEBAF) coming in at \$.023.

Music and Fun!

Join an aerobics class on M-W-F at noon in the Training Center. New members are welcome--classes are ongoing. Exercisers pay the instructors directly, and the cost is about \$30-\$40 (depending on number of class members) for 12 classes. Individuals can join any time. For more information, contact Karen Campbell x2298, or Maureen McNear x3861.

Save those Soaps

If you're a frequent traveler, save those hotel shampoos and soaps for donation to the Battered Women's Shelter in Mountain View. Bring donations to room R310 in the Central Lab, or call P.A. Moore x2605.

Nose for News?

Send those Factinos to xanadu@slac and see your name in print! Photos and articles are also welcome.