

SLAC is operated by Stanford University for the Department of Energy

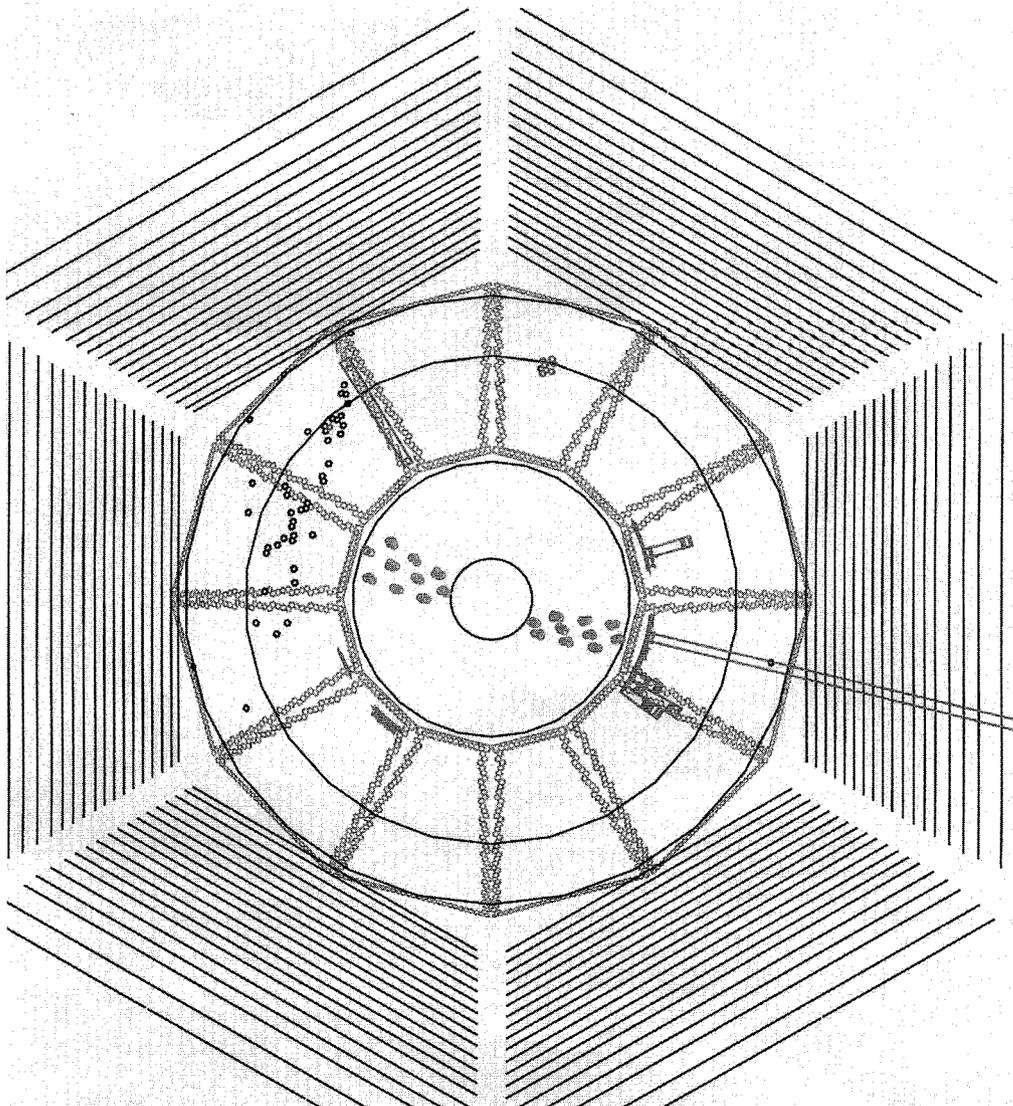
BaBar Finishes Test Run

THE BABAR COLLABORATION SPENT November through January commissioning the newly completed detector. Many collaborators worked long hours fixing problems and developing the computer programs needed to operate the experiment. By the end of January, BaBar was taking cosmic ray data with all systems running. With cosmic rays coming in at 30 Hz, millions of events were accumulated in a matter of days.

A major effort has been made to check how well BaBar is functioning. The performance of all systems has been evaluated, and to the relief of all concerned, it matches simulations.

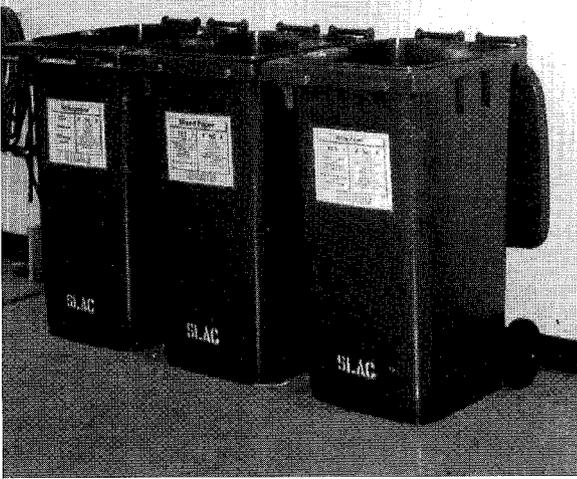
The collaborators would like to thank the army of SLAC employees who made the assembly of BaBar possible. This team will now move the detector onto the PEP-II beam line. The eagerly anticipated first beam is expected in early May.

—W. Innes



The picture is a display of a typical event showing a single cosmic ray muon traversing the detector. The raw data is plotted on a cross sectional view of the detector. The inner points are hits in the three stereo views of drift chamber. The circular histogram shows the energy deposit in the CsI calorimeter. The little circles show hits in the Cerenkov detector (DIRC), which form a Cerenkov ring. There are matching hits in the outer Instrumented Flux Return, but they are not shown since, in raw form, they would obscure the rest of the picture.

SLAC Pilot Recycling Project Goes Site Wide



Recycle collection containers for the new program.

WHAT! MORE GREEN CONTAINERS? Perhaps you first saw them at the A&E, Central Laboratory and Annex, or the Computer building, where a Pilot Recycling Project funded by DOE-OAK was operated to test new methods for collecting recyclable materials. With the success of the pilot project, SLAC is planning to achieve a 2 to 3 year payback on its investment in new recycle containers as well as provide improvements over the old recycling program.

Under the old recycling program, employees deposited recyclable materials in open-top containers (20 to 50 gallons in size) located indoors in buildings or trailers. The recycling subcontractor came into the buildings and manually collected the materials from these containers. This service resulted in subcontractor labor costs charged to SLAC.

The pilot project showed that cost savings could be achieved with reduced collection costs and income earned from the recycled materials (white ledger paper, newspaper, and mixed paper, redeemable beverage containers and corrugated cardboard). In order to achieve these goals, different collection techniques were tested. These techniques included changing the types of collection containers, changing the scope of janitorial services and recycling subcontractor collection services, and increasing employee participation. New collection containers (see picture) are typically 32- or 64-gallon in size and equipped with wheels so that they can be easily moved. They are constructed of durable plastic so they can be unloaded mechanically into a compartmentalized truck (to keep

the recycle materials segregated).

Better labeling of containers helps improve the segregation of materials and achieve higher monetary returns from the recycled materials. For example, white paper provides a monetary return of up to 7 times higher than mixed paper (up to \$115 per ton for white paper versus \$15 for mixed paper depending on market prices).

The last key factor is employee participation. In the pilot project, employees participated by using the new collection containers, even though they were not always as close by. By keeping small collection boxes in their offices or nearby, employees reduced the frequency of trips to the collection containers. I thank the participants for their patience and participation in the pilot project. Based on the lessons learned, we believe all employees can make the site-wide program a success.

Additional factors essential to the success of the recycling program are the planning and conscientiousness of the Building Managers and Administrative Associates in developing appropriate collection container locations for their areas. The Purchasing Department has been essential in successful contract negotiations with the recycling subcontractor and making the project show a monetary return.

The Facilities Department (x2207) will operate the site-wide program. If you have questions or see a need for additional recycle containers, please discuss with your Building Manager. If you have additional questions, please call Rich Cellamare at x3401.

—Rich Cellamare

About Those Vendors And Subcontractors

ATTENTION ALL REQUESTORS!! All our subcontracts (supplies, services, construction, whatever) have enforcement and penalty provisions to help us get what we pay for. However, these contract clauses are no good at all if you don't notify the Buyer of any problems you might be running into. This is because only the Buyer who is handling the contract has authority to withhold payment or impose a monetary penalty. So, if deadlines are missed, if an item is defective, or if the specifications haven't been met, do not waste your time arguing or negotiating with the subcontractor, supplier, or vendor. Instead, contact your Buyer right away!! If you don't know who the responsible Buyer is, call Alan Saltzberg (x3701).

And another thing: these subcontracts also state that firearms, weapons, explosives, alcohol, contraband, and controlled substances (except prescription medications) are not allowed on the site. Any violation of these prohibitions is a breach of the contract (as well as a safety issue) and should be immediately reported to both the Buyer and to Rick Yeager(x5333).

—Rachel Claus

Work Safe, Work Smart

An incident involving days away from work was reported on 1/27/99, according to Sharon Haynes, Worker's Compensation coordinator. There were 92 calendar days since the last incident on 10/27/98. SLAC's record number of days between claims involving days away from work remains at 150 days.

Keep SLAC In The Black



BUYING RECYCLED OR REMANUFACTURED toner cartridges can save SLAC as much as \$18,000 per year. Their cost is 60 to 70% of those sold by the original equipment manufacturer (OEM). When remanufactured toner cartridges were first introduced to the marketplace (over seven years ago), they had a bad reputation for being

unreliable or not performing as well as the original ones. Today, office supply vendors such as Office Depot warrant remanufactured cartridges for page yield, life cycle, and output performance "on a par with comparable OEM cartridges." Remanufactured cartridges are refurbished to have comparable life to the original ones. Also, remanufactured cartridges do not appear to significantly impact on the operation of a printer that is properly maintained.

Although not all OEM cartridges used at SLAC have remanufactured equivalents, many of the ones commonly used at SLAC do (typically Hewlett Packard models). As a result, the potential cost saving from using remanufactured cartridges appears to be considerable. For example, in recent years, SLAC purchased over 600 toner cartridges, with less than 10 percent of them being remanufactured ones. As a result, SLAC spent as much as \$51,000 for original toner cartridges versus \$33,000, for remanufactured ones.

As a suggestion, if you haven't tried a recycled cartridge for a while, give one a try. While you do not have to convert from buying all OEM to all remanufactured cartridges, try a remanufactured cartridge and compare to see if you can find any significant differences. You should keep an OEM cartridge as a backup. If you don't find a difference, continue using remanufactured cartridges so that we might increase their usage from less than 10 percent to 70 percent. This increase in usage can result in a cost saving of nearly \$10,000.

Also, please arrange to return those laser printer toner cartridges that the office supply vendor can recycle. If they cannot take them, it may be possible to return the used cartridges back to the manufacturer or an agent for the manufacturer, using a form that accompanies the cartridge. Save the original box and re-pack the cartridge so that it can be properly returned to the vendor or manufacturer.

If you have any questions on using or returning remanufactured cartridges or getting rid of old ones, check with the vendor first. If you have questions on disposal of cartridges or you have some recent experience you wish to share on your use of remanufactured toner cartridges, please give me a call at x3401.

—Richard Cellamare

FactinOs

Register the Next Generation

Is your daughter between the ages of 9 and 16? Circle April 22 on your calendar to bring her to work on the annual Take Our Daughters To Work Day (boys are welcome for part of the program). The schedule is being planned now; check the SLAC home page announcements for updates and look for flyers. Registration is limited for this event.

Safety First and Foremost

By now, all the department representatives have been chosen to lead the annual site-wide Safety Stand Down meetings on Friday, March 12. Take a few minutes to read over the focus topics (an attachment to Burton Richter's All Hands memo dated 2/18/99).

SLAC Staff Invited to Open House

After you have learned about safety, how about going to the Stanford Bookstore for the 9th annual Office Products Open House, being held March 12 from 11 AM - 2 PM at the Stanford Bookstore on campus. You can save 25% on all in-stock supplies that day only.

Immerse Yourself in a Good Web Site

All Stanford students, faculty, and staff can take advantage of computer based training, with 250 courses to choose from. All you need is the time and a PIN number from Campus. PIN numbers can be obtained by calling 725-8181. Check out the Information Technology Systems & Services (ITSS) web site at www.stanford.edu/group/itss-customer/ip/cbt for more information.

The Saga of Sand Hill Road Construction

The first major activity in the Sand Hill Road project will be the construction of a new parking structure at the Shopping Center, adjacent to Quarry Road, which began in February. There may be some short delays on Sand Hill Road, but they are expected to be minimal during this phase. Of course, this is all subject to change depending on any roadblocks that may pop up. Construction updates are posted at <http://www.stanford.edu/dept/SMC> or you can phone Project Infoline at 926-0240.

IN THE WINTER OF 1998, the Directors of SLAC and Japan's High Energy Accelerator Research Organization—KEK—signed a Memorandum of Understanding (MOU) to work collaboratively on R&D for a next-generation normal-conducting linear collider. Both laboratories, together with their own national collaborators, had made significant progress in working toward a preconceptual design, and important progress had been made in developing common understanding of collider physics and technologies. (*Note:* See International Linear Collider Technical Review Committee Web Site URL: <http://www.slac.stanford.edu/xorg/ilc-trc/ilc-trchome.html>. The complete ILC-TRC report and updates to it are available there.) Additionally, the national and international particle physics communities, through reports from such organizations as the Japanese High Energy Physics Advisory Panel, the U.S. DOE's High Energy Physics Advisory Panel (which recommended "...that Stanford Linear Accelerator Center continue research and development with Japan's National Laboratory for High Energy Physics [now High Energy Accelerator Research Organization] toward a common design for an electron-positron linear collider,") and the International Committee on Future Accelerators, ICFA, urged a common approach and development of a collider that would be about 10 times bigger than the SLC in both physical size and in energy. Working together to solve basic technical problems seems to lead naturally in that direction, while the nature of future possible collaboration for an advanced design stage still needs to be addressed.

How was this approach to collaborative R&D to be implemented? Although KEK and SLAC personnel had much informal collaboration over the past 15 years, which helped to smooth out the formal collaboration's start-up, more formal structure had to be designed. Working or study groups were established in a number of technical areas where there were particular challenges, and one group was established to optimize the machine physics parameters. These groups, collectively, are called the International Study Groups or ISG, and they have met semiannually since the implementation of the MOU. Meetings to plan the ISG meeting agendas precede the ISG meetings, and are themselves opportunities for significant work. The ISG meetings alternate in location between SLAC and KEK, with the first meeting held at SLAC in January 1998 and the second meeting held in July 1998 at KEK.



Pictured: (l-r) Paul Emma, Nan Phinney, Kathy Thompson (back), Olivier Napoly, and David Burke.



NLC Project Leader David Burke was surprised during the socializing with a cake celebrating his 50th birthday.



Pictured: (l-r) Kaoru Yokoya, Eleanor Mitchell, Mitsuo Akemoto, Seishi Takeda, and Clay Corvin.

ISG-3 Meeting

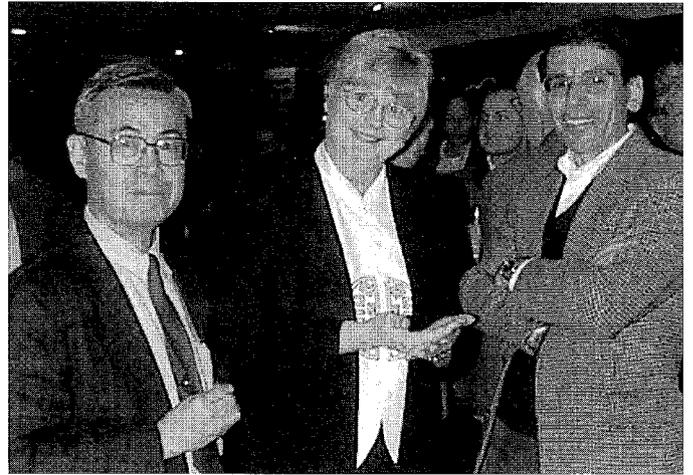
However, forming study groups was merely the beginning. Then the process began with the first ISG meeting of learning to work together, to define and share responsibilities, to learn about cultural differences and to work with these in productive ways, to develop trust in each other's abilities and working tools, in order to move forward. This process wasn't always easy; personal relationships had to be established before solid, useful work could be accomplished.

By this third ISG meeting, held at SLAC January 25-28, 1999, what was obvious was that this collaboration is successful. Friendships have formed among the scientists and engineers of the two laboratories, work plans have been proposed and met, and the spirit of camaraderie and collegiality is strong, and certainly evident to any new observer. The technical meetings were arranged with an opening session at which all participating groups presented their agendas for the week. A brief morning "base-touching" meeting was held each day for all delegates together, but the hard work was done by each study group working independently where they reviewed and analyzed the work accomplished to date and assessed the problems still in need of solution. Occasionally when interface areas were of concern, or whole machine parameters were to be discussed, two or more groups held a joint session. The pre-session continental breakfasts each morning also provided an informal time to visit and discuss each day's plans.

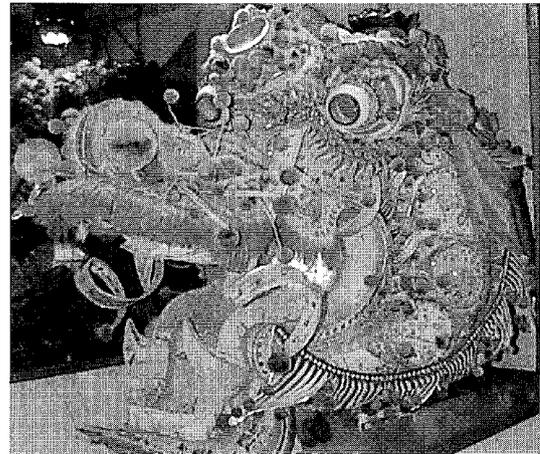
By the final day of ISG-3 each group was able to present a summary of its discussions and a plan for the next six-month work period. Some groups also presented tentative outlines for their contributions to a comprehensive report on the two years of collaboration that will be prepared at the end of this year. However, be assured that with e-mail and telephone contact, interactions among group members will remain strong until the time of the agenda-setting meeting in May and the next ISG meeting in Japan in July.

While much hard work is done during these meetings, there is also time for visiting together, reinforcing friendships, and socializing. The accompanying photographs show the ISG-3 delegates at a much-welcomed respite from their formal meeting activities where discussions continue in a more relaxed and informal atmosphere. This, too, fosters communication and collegiality. In summary, the ISG-3 meeting is proof that collaboration has benefits far greater than the scientific and technical achievements initially envisioned.

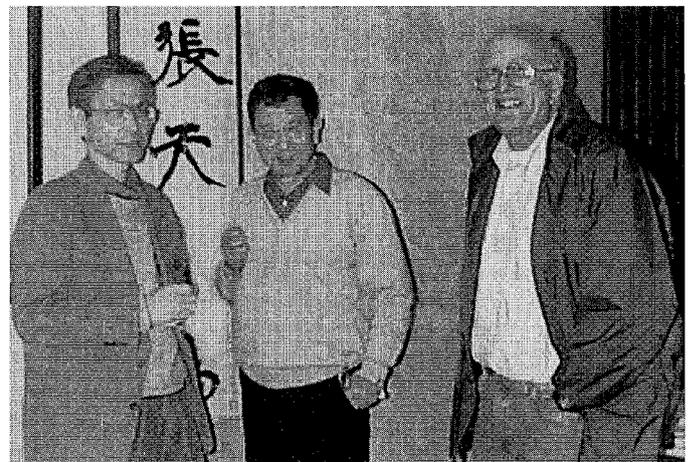
—Albe Larsen



Pictured: (l-r) Nobutera Hitomi, Robbin Nixon, and Karl van Bibber.



A dragon was the featured centerpiece for the festivities.



Pictured: (l-r) Toshiyasu Higo, Juwen Wang, and Roger Miller.

The B-Factory And The SSC: An Unlikely Pair

THE B-FACTORY STARTED in 1994, the year after the Superconducting Supercollider was axed by Congress. Not a propitious time, one might say. "There's no question that the DOE learned lessons from the demise of the SSC," said B-Factory project leader Jonathan Dorfan. Four years and a bit later, what conclusions can be drawn about why one project failed with \$2 billion already invested, and another succeeded?

Foremost is the consideration that the SSC demise was not about science, but about politics and budgets. When Congress axed the SSC, they cited excessive cost and mismanagement. Coming in on time and on budget at \$177 million, the B-Factory proved that with the cooperation of Congress, the DOE and the three labs involved (SLAC, Lawrence Berkeley National Lab and Lawrence Livermore National Lab), a big science project could be accomplished successfully. The Congressional role in the success of the B-Factory is not to be underestimated. Once OMB outlined the funding profile, Congress did not deviate and the \$177 million was allocated as promised. The message here is that a realistic budget profile is critical to the success of a project.

The happy ending for the B-Factory construction comes about because of specific changes in management of multilab projects. One such change was the designation of a leading lab, which could work synchronously with others. While easy to say, it is a fact that labs have different styles and cultures, so the leading lab must be able to acknowledge the similarities and work with the differences. In the case of the B-Factory, an important management step was the appointment of an individual at each lab who reported directly to his Lab Director on issues involving the B-Factory. Reporting to the top helped expedite the allocation of resources and prompt decisions.

Another management change that came out of the SSC and was instrumental in the success of the B-Factory was the development of a conflict resolution process, even before any conflicts occurred. Having this type of agreement ahead of time gave the process credibility. A communications process, set up in the early stages of the project, was critical to cooperation among the various entities, including DOE. When times got tough due to delays in construction, and decisions had to be made, having the process in place meant a quicker turnaround on decisions.

Lastly, the SSC cost overruns showed the need for powerful financial tracking systems that could monitor expenses in real time. The consistent funding plan approved by Congress and the prudent management of those funds has led to a political plus for the DOE, a project on time and on budget. Now it remains to be seen if the lessons learned from the SSC and the management model developed for the B-Factory will be put to use in future big science projects such as the Spallation Neutron Source and the Next Linear Collider.

SLAC's Web Of Safety

I RECENTLY HEARD FROM a supervisor who was hesitant to post a flyer with Operating Safety Committee (OSC) division representative names in his building. He was concerned that this would "short circuit" the good communication system that his department management had set up, which encouraged the workers to bring any safety concerns to their supervisor or ultimately the department head, if necessary.

Please rest assured that the existence of the OSC in no way suggests that workers should stop discussing safety concerns with their fellow workers, supervisor, safety coordinator, or an ES&H Division subject-matter expert (called out in the ES&H Resource List). In addition, everyone should recognize that there are valuable safety resources readily at hand through the ES&H Manual, Bulletins, and Updates. Also, the Medical Department is SLAC's home base for occupational health concerns. One of the Integrated Safety Management System (ISMS) Verification Team's "Opportunities for Improvement" noted that SLAC should "Develop policy and a formal mechanism for articulating management expectations for active feedback and interaction with employees regarding ES&H, beyond the Safety & Environment Discussion process."

SLAC's response recognized that "this has been done through the Operating Safety Committee...each division has established a communication mechanism through its OSC members." So remind yourselves of the many avenues open to you at SLAC for expressing hazard concerns or investigating safer and healthier ways to perform your jobs. The OSC is just one strong strand in a web of safety support which surrounds each one of us.

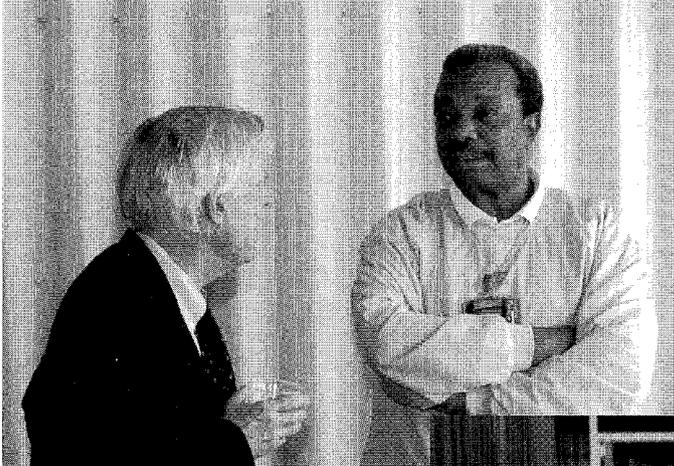
-Janice V. Dabney

Bookstore Spring Sale

IF YOU HAVE BEEN procrastinating about purchasing items with SLAC artwork, you have another chance. SLAC staff will receive a 20% discount as well as free delivery (to SLAC) for orders placed via the website between March 1 - 6. Don't hesitate! Check out the web address at www.bookstore.stanford.edu. Orders will be delivered to SLAC for pickup on Friday, March 19th, in the Breezeway.

Ten Year Service Awards

ON JANUARY 25, EMPLOYEES WHO completed ten years of service at SLAC were honored at an awards ceremony in the cafeteria. SLAC Director Burton Richter handed out 10-year Stanford pins as well as engraved watches to the honorees. The 58 honorees were: Alonzo Baker; Mer Baldoza; George Barillas; Scott Beebe; Ramon Berger; William Burgess; Andrea Chan; Ed Clay; Phil Cutino; Scott DeBarger; Lance Dixon; Paul Emma; David Engesser; Ali Farvid; Chris Foundoulis; Allan Freese; Mark Freytag; Ben Goodman; Wanda Gorecki; Linda Hendrickson; Frank Hoang; John (Rusty) Humphrey; Greg Johnson; James Kang; David Kharakh; Terri Lahey; Wesley Leonard; Tim Lienhart; Jim Logan; Lee Lyon; Linda Malmstrom; Helmut Marsiske; Matt McCulloch; Noel McMahon; David Millsom; Son Nguyen; Robbin Nixon; Heinz-Dieter Nuhn; Larry Peckler; Joseph Perl; Long Quach; Kathleen Ratcliffe; Mary Regan; Michael Riordan; Mike Robertson; Julie Rogers; Mike Rogers; Jim Sebek; Larry Sherman; Howard Smith; Steve Smith; George Sopar; Cherrill Spencer; Pete Thunen; Anthony Tiscareno; Cordell H. Wilson; Mike Woods; and Tracy Yott.



Pictured: (l-r) Bernie Lighthouse and Alonzo Baker.



Pictured: (l-r) Burt Richter and Chris Foundoulis.

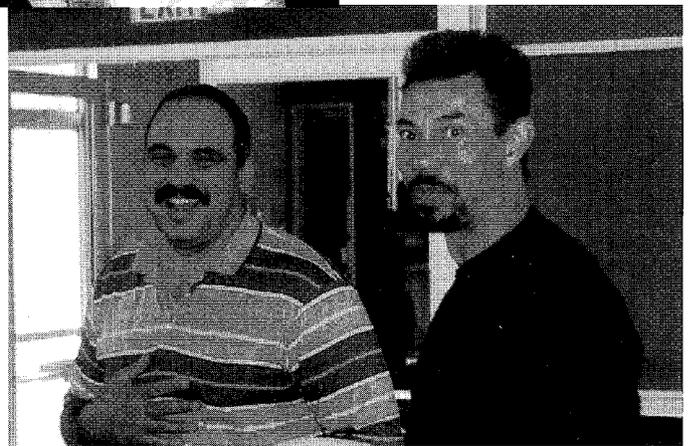


Pictured: (l-r) David Kharakh and Scott DeBarger.

(Photos courtesy of John Beach)



Pictured: (l-r) Burt Richter and Wanda Gorecki.



Pictured: (l-r) Phil Cutino and Jim Logan.

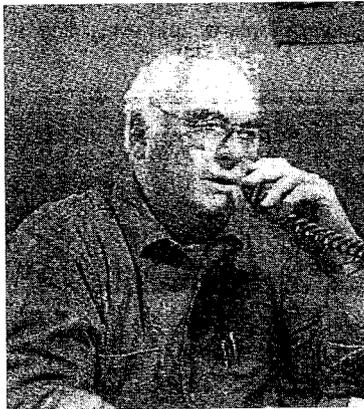
Do you use the web? Do you create web pages? If so, you should take a look at SLAC's Web Policy and Support page located at <http://www.slac.stanford.edu/slac/www/support.html>. This page provides links to web:

- Policies
- User Resources
- Author Resources
- Support Coordinators (WSCs)
- Committees

The web policies you should be aware of are linked-to under the Policies section of this page. The User Resources include, primarily, browser support on various computing platforms. The Author Resources include a form for requesting web space through your Web Support Coordinator (WSC), and many links to more information about AFS and Unix, colors, converters, design, editors, file transfer, FrontPage, graphic management, JavaScript sources, on-line training and tutorials, site management, SLAC-specific resources, and validation. These links are checked and new links are added frequently (look for the "new" graphic). If you have a great source of information you'd like to share, send the URL to me and I'll add it to the page. Under the Web Support Coordinator category, you can find out about the role of the WSC and who is the assigned WSC is for your group. Finally, if you want to know how the web is managed and who handles the technical questions, check out the Web Committees section of the page.

—Ruth McDunn

Ham Operators At Your Service



THE SAN JOSE MERCURY NEWS recently ran a story on Dick Collins, who retired from SLAC in January, 1991 after working in the Klystron Department maintaining the 5045 LINAC Klystrons and their XK5 predecessors. He was considered a very skilled supervisor, always treating people with

Dick Collins organized the South County Amateur Radio Emergency Service and, up until last month, was its only president.

respect and extolling their contributions.

Collins was a member and past president of SLAC's Ham Radio Club. He became interested in ham radios in 1952 and spent most of his spare time on his ham radio hobby for the past 44 years. During this time he aided police and fire departments in southern San Mateo county, setting up alternative emergency radio services whenever and wherever required. Collins was recently honored in the San Carlos City Hall council chambers for his four decades of public service. He organized the South (San Mateo) County Amateur Radio Emergency Service in 1977, and served as its president up to the time of retiring to move to Oregon.

Keeping up with this fine tradition of public service, SLAC has had a Ham Radio Operators club for over thirty years. There are currently 10 active members according to David Price, President of the club. The ham operators are in the SLAC Emergency Plan, and are trained to provide routine health and welfare messages for SLAC family members. For example, if there is an emergency, SLAC's logistics group calls telecommunications who locates a ham operator to be ready to send out messages

If you are interested in learning more about the SLAC Ham Radio Club, contact David at x4090. You must have be licensed in order to operate ham radio equipment; David can give you information on obtaining a ham radio operator's license.

SLAC Milestones

RETIRED

Bradley, Patricia, P/C Elect. Support, 1/31/99

Johnson, Ralph, CD, 2/28/99

Malmstrom, Linda, BSD Purchasing, 1/31/99

DECEASED

Kendall, Henry, Physicist, Nobel Prize Winner, 2/15/99

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