

The Interaction Point

Events and Happenings
in the SLAC Community
June 1993, Vol. 4, No. 6



Experiment E-146

A NEW LOOK AT AN OLD REACTION

by Spencer Klein

MOST MODERN PHYSICS experiments have hundreds of collaborators working together for a decade or more, cost millions of dollars, and test theories developed in the past few years. However, a recent SLAC experiment, E-146, bucks all of these trends. With help from SLAC technicians, 11 collaborators put E-146 together in four months to test a theory developed 40 years ago.

E-146 tests an effect first predicted in 1953–56 by three Russian theorists. Called the LPM effect after Landau, Pomeranchuk, and Migdal, who performed the calculations, it predicts that high-energy electrons passing through dense materials such as lead and uranium should emit far fewer low-energy photons than the traditional Bethe Heitler formula, which itself dates to 1934.

When Landau first considered the LPM effect, it was largely of theoretical interest, since the requisite energies were far beyond the capabilities of available accelerators, hence the lack of previous experimental tests. However, technology has evolved greatly in the last 40 years, and the LPM effect is now relevant in a variety of areas of physics, ranging from SSC calorimeter design to ultrahigh-energy cosmic rays to axion production in supernovae. Of equal interest, many nuclear effects,



The E-146 collaboration and helpers with the calorimeter that was the core of the experiment. Seated, from left: Carl Hudspeth, Gerard Putallaz, Ben Smith, Joe White. Standing, from left: Lew Keller, Steve St. Lorant, Perry Anthony, Peter Bosted, Linda Kelley, Spencer Klein, Leon Rochester, Jerry Davis, and Ralph Becker-Szendy. Members of the collaboration not pictured are Matteo Cavalli-Sforza, Gary Niemi, and Martin Perl.

including color transparency (studied by SLAC NE-18), are closely related. However, the electromagnetic LPM effect has an edge over the strong force-based color transparency, which predicts that in certain circumstances quarks can move through nuclei without interacting. This is because good electromagnetic effect calculations exist, allowing for good numerical comparisons with the data.

At its simplest, the LPM effect measures the physical size of low-energy electromagnetic interactions. When an electron passes near an atom, it can interact with the nucleus and emit a photon: a process called bremsstrahlung.

Because the electron is very light, the nucleus-electron momentum transfer is very low, and therefore the Heisenberg uncertainty principle requires that the size of the interaction be very large, up to a millimeter long at E-146 energies. If the electron is disturbed while traveling this distance, then the interaction is disrupted, suppressing the bremsstrahlung. This becomes important in dense materials. Thus, the LPM effect predicts that the electron can multiple scatter enough to suppress the emission of low-energy photons.

Continued on page 2

Continued from page 1

The apparatus required to measure LPM suppression is simple. In E-146, a 25-GeV electron beam was directed through a thin target where it might emit a photon. Then the electron beam was bent down into a wire chamber that measured its momentum, while the photons continued downstream into a calorimeter that measured their energy.

This experimental simplicity is also evident in the E-146 collaboration. In both size and organization, the 11 person, UCSC-SLAC-Livermore-American University group fits the 1960s better than the 1990s, having fewer individual members than many collaborations have countries. E-146 is less than 18 months old, having its origins in the February 1992 SLAC Workshop on High-Energy Electroproduction and Spin Physics. The proposal was submitted to SLAC in June 1992 and approved by the Experimental Policy Advisory Committee in December. The beam was tested in January, and we took data in March

and April. Results should be out for the summer conferences; the on-line analysis is already the best data existing on the LPM effect. This speed was possible because E-146 was built almost entirely from existing equipment, following the "building block" approach prevalent in the 1950s and 60s. The precision BGO calorimeter was built at the University of California, Santa Cruz in 1984, the wire chambers were 1985 vintage from American University, and most of the electronics, borrowed from many sources, date from the 1970s and '80s. The computers and data-acquisition software are a mixture of that used by the just-completed E-142 and the soon to run E-153.

Even the beam was recycled. Because beam time is precious, we developed a novel technique to use the particles thrown away by SLD. During normal SLC operations, about 10% of the beam is scraped away by collimators in sectors 28-30 of the linac. In the collimators, a small portion of the scraped beam is converted into high-energy

photons. Some of these photons continue down the beam pipe, past the bending magnet that bends the electrons and positrons into the SLC arcs and the beam switchyard. There a target converts them into electrons and positrons. The electrons are captured by the A-line optics and transported into End Station A. By adjusting the collimators in the A-line, intensities up to 100 electrons per pulse were obtained at energies between 400 MeV and 25 GeV.

Besides its usefulness to E-146, this technique could be used by other experiments requiring a high-energy, low-intensity beam. Already, the E-144 collaboration has used it to test a tungsten-silicon calorimeter. In short, E-146 has shown that, even in this era of thousand-physicist, multi-decade, intercontinental collaboration, it is still possible for a small group to do good physics in a short period of time.

Take Me Out to the Ball Game

SLAC'S ANNUAL DAY AT THE 'STICK is scheduled for Sunday, July 25, when the hometown Giants take on the Philadelphia Phillies. The Giants and Phillies have the first- and second-best records in baseball, and both have a strong first-place lead in their division. And you thought nothing could beat the excitement of the annual Experimentalists vs Theorists game...

Tickets to the game cost \$6.25 per person, including round-trip transportation to the game. And this year's seats are rumored to be the best yet—in the upper deck directly behind home plate. The buses will leave at 11:15 AM from SLAC's front



entrance; the game starts at 1 PM. To order tickets, send your check payable to SLAC along with the bottom portion of the orange information sheet to: Giants Game, MS 11. Checks must be received by July 13. Tickets may be picked up at the lobby desk of the A&E Building.

—Sarah Morisseau

Welcome Guests and New Employees

Weng Hong Chan, Klystron; **Mike Coffaro**, Mechanical Fabrication; **Rose Colbert**, Environmental Protection & Waste Management; **Harmut Dutz**, Experimental Facilities; **Pius Fischer**, Mechanical Design; **Charles Green**, Experimental Facility; **Martin George**, SSRL; **Pavel Gurevich**, Theory; **Jack Harris**, SSRL; **Michael Hays**, Environment, Safety, & Health; **Gerhard Heimlinger**, Experimental Group I; **Hans Imfeld**, Mechanical Engineering; **Jerry Jobe**, Business Services; **Joan Johnson**, SSRL; **Yvette Ladd**, SSRL; **Wenhao Liu**, Experimental Group C; **Yiyan Liu**, Experimental Group A; **Charles Martell**, Theory; **Kelly Moore**, Controls; **Sarah Morisseau**, Editorial Services; **Wilfred Oswald**, Theory; **Flemming Pedersen**, Experimental Group C; **Katsumi Tanaka**, Theory; **Samir Saxena**, Group C; **Knut Skarpaas**, Linear Detector.

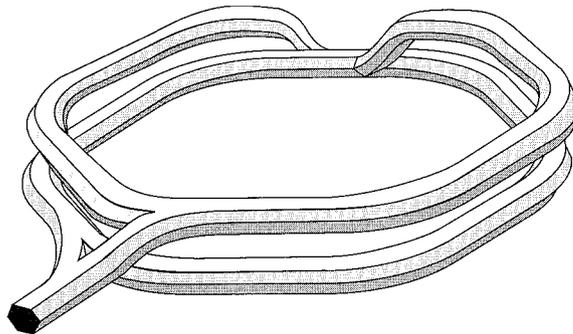
Kowalski Panel Reviews B-Factory Proposals

A CRUCIAL REVIEW that will help determine the site of the B factory began on June 21 with a detailed examination of the PEP-II upgrade proposed for the SLAC site. Led by Jonathan Dorfan of SLAC, David Hitlin of CalTech, and Michael Zisman of the Lawrence Berkeley Laboratory (LBL), a total of 30 scientists and engineers from SLAC, LBL, and the Lawrence Livermore National Laboratory (LLNL) made presentations on this project to the review panel of 16 physicists, chaired by Dr. Stanley Kowalski of MIT.

In this proposal, a new storage ring carrying 3.1 GeV positrons is added to the existing PEP tunnel, above a 9 GeV electron ring built mainly from refurbished PEP components. The two rings cross at a single interaction point, which is surrounded by a state-of-the-art particle detector to record the results of electron-positron collisions. Physicists who have proposed this ambitious project are particularly excited by its potential to study slight differences between B mesons and their antiparticles—a phenomenon they have dubbed “CP violation.”

The total cost of the SLAC/LBL/LLNL collider comes to \$161 million (in 1993 dollars). In addition, the detector will cost another \$59 million; at least half of this amount will come as in-kind contributions from foreign institutions that have expressed strong interest in the project, according to Dorfan.

Following the SLAC review, the panel travels to Ithaca, New York, to hear from Cornell physicists about another B factory proposal. This is an upgrade of its very successful CESR electron-positron collider, which is now generating over a million B mesons per year. The proposed Cornell machine is also asymmetric—having unequal electron and positron energies—but has major differences from the SLAC/LBL/LLNL design. The Cornell design calls for superconducting cavities to supply microwave power to the circulating beams, while the PEP-II cavities operate close to room temperature. And its beams would cross at a slight angle, whereas the PEP-II beams clash head-on.



Following the Cornell review, the panel will meet to prepare a report on the two B factory proposals, which is due to be completed by July 7. Based on this review, the Clinton Administration is then scheduled to make its siting decision by the middle of July.

This tight schedule is necessitated by the Congressional appropriations process for the 1994 fiscal year, which should conclude in early August. Already the House has approved \$36 million for a FY1994 start in its version of the Energy and Water Development Appropriations Bill. If the Senate follows suit—and the Administration selects SLAC as the appropriate site—the long-awaited PEP-II project could begin this October.

—Michael Riordan

A WORD OF THANKS

A very large segment of the SLAC staff pitched in to help the B-Factory Group prepare and conduct the Kowalski Panel Review. We wish to personally thank each and every one of you for your concern and hard work. We look forward to having many of you involved in the construction of PEP-II and its particle detector.

—Jonathan Dorfan and
David Hitlin

CAFETERIA CONSTRUCTION

USUALLY NO ONE would pay much attention to a cement pump or a truck full of lumber and concrete blocks around SLAC. But when the truck is parked in front of the cafeteria next to a mound of dry cement on the sidewalk, people start asking questions.

According to Glenn Tenney of the Business Services Division, the construction outside the cafeteria and auditorium is the addition of a 10-foot by 60-foot storage facility

to the west side of the building. Two-thirds of the area will serve as “dry storage” for the cafeteria, and the remaining space will be used to store furniture for the breezeway. The addition is the result of a Tiger Team complaint of inadequate storage, and will be completed by the first week of August. “It is not going to have any affect on people’s use of the breezeway or auditorium,” Tenney says.

—Sarah Morrisseau

MEET YOUR MEDICAL DEPARTMENT



Shown above are the present Medical Department staff: Back row, left to right: Eileen Derr, Health Promotions Coordinator; Kevin Carr, Staff Psychologist; Margaret Deansely, M.D., Medical Director; Virginia Arezone, Nurse. Front row, l. to r.: Gloria Labrador, Nurse; Marion Lisotto, Medical Secretary.

OUR MEDICAL DEPARTMENT has undergone many changes since Margaret Deanesly, M.D. became its director in 1988. Those changes include the physical facility, the staff, and the philosophy.

In 1988 Eileen Derr became the Health Promotions Coordinator. Her task was to create and administer a wellness program for the employees at SLAC. She has also taught classes and conducted one-on-one counseling. Eileen has a background in program creation and administration with the Red Cross and Kaiser Hospital. She is also a Registered Dental Hygienist and a Health Educator. Her health education certifications include aerobics, nutrition, weight loss and smoking cessation. Eileen is presently in a Masters' Program in Health Care Administration.

Marion Lisotto, the Medical Secretary, also joined the department in 1988. Marion has worked in the medical field in various capacities for 20 years.

Two nurses have joined the staff in the last six months. Gloria Labrador received her R.N. from the Marian School of Nursing in the Philippines. She worked in oncology at Kaiser Hospital for five years and at the Cowell Student Health Center at Stanford. More recently she worked in the Oncology Department of the Palo Alto Medical Clinic.

Virginia Arezone received her R.N. from Dealoness Hospital School of Nursing in Spokane, Washington. She was an Occupational Health Nurse for Chevron, and worked at St. Mary's Hospital in San Francisco.

Our newest staff member is Kevin Carr, L.M.F.C.C. Kevin is the staff psychologist at SLAC. He comes to us from the Stanford Help Center.

Kevin is not new to SLAC. He has conducted several workshops and groups here. Kevin is also a member of the MidPeninsula Mental Health Group. He has a certificate in alcohol and substance abuse studies, and specialized training in psychosynthesis.

In addition to staff changes, the physical facility was completely remodeled and refurbished. It is now a pleasant and inviting facility. In 1990, the Medical Department became part of the newly formed ES&H Division with Matt Allen as the Associate Director.

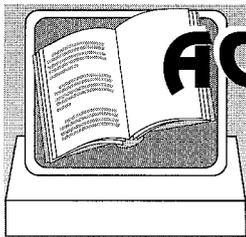
At the helm as all of these changes took place was Margaret Deanesly, M.D. The doctor received both her Bachelor's and M.D. from McGill University in Montreal, Canada. She is in great demand as a teacher and guest lecturer, and acted as medical advisor for "AM San Francisco, Chicago and Los Angeles" and the television program "Over Easy" with Hugh Downs for PBS. She has been a physician with the Palo Alto Medical Clinic for over twenty-five years. She was also the staff physician for the Standard Oil Company in San Francisco for four years.

Doctor Deanesly is a strong proponent of educating employees to take care of themselves, and personal responsibility and empowerment are at the core of the Medical Department's philosophy.

If you have any questions or comments please call us at ext. 2281, and we will do our best to help you.

—Eileen Derr

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ACCESS TO INFORMATION

SIMPLIFYING SLAC E-MAIL ADDRESSES

WHEN YOU SEND E-MAIL to someone at SLAC, you no longer need to include the name of the computer on which the person receives his or her mail. For example, you can address mail to the Help Desk in the Computer Building at `SERVDESK@SLAC.STANFORD.EDU` rather than

`SERVDESK@SLACVM.SLAC.STANFORD.EDU`

That is, you don't need to know that the Help Desk receives its mail on SLACVM, the VM system. Software developed by SCS called the Mail Router will translate between the "generic" address that doesn't have a specific computer's name to one that does.

Clearly generic addresses are easier to remember. And when you change computers on which you receive your mail, you don't need to change your generic mail address or notify anyone of the change.

Everyone who has a VM account now has an entry in the Mail Router. You can change your own "real" address—the one that has the name of the computer on

which you receive your mail—at any time on VM, AIX (on the computer known as JUNO), and VMS (on the computer known as SCS). If you don't have an account on any of these platforms, contact the Help Desk to enter the change for you.

To change your "real" address, enter the command:

`MAILROUTER`

In response, the Mail Router will present an Oracle screen that displays an entry for your computer ID. Press the tab key to move the cursor to the Destination field, and type the "new" destination over the old one. To save the change, which will go into effect early the next day, press the PF key that corresponds to "Commit." You can see the PF key map by pressing PF1 on VM or ctrl-k on VMS or AIX.

Unless you have a strong aversion to the e-mail ID you have or the one we picked for you, we suggest that you don't change your e-mail ID for several reasons: you will have to notify potential correspondents; certain commands such

as `TELL` and `FINGER` will only work with your logon ID, not your e-mail ID unless it's the same as the logon ID. Display your generic e-mail ID by entering the VM and VAX command:

`BINLIST your_last_name, your_first_name`

If there is an e-mail ID for you, you'll see it on the line "Send E-MAIL to:". Besides the extensive help in the Mail Router program (press the PF key for Help), a writeup on the Mail Router is located on these systems:

SLACVM:

`mailrouter listing *`

SLACVX:

`doc$mail:mailrouter.memo`

UNIX machines:

`/usr/local/doc/how-to-use/Email-Routing`

For a clear discussion of e-mail addressing in general, we recommend an award-winning article by Carol Gedney of the University of Illinois called "Understanding E-Mail Addresses," which Mike Sullenberger of SCS adapted for SLAC use. The article is located on these systems:

System	File name (location)
SLACVM:	<code>Mailaddm listing *</code>
SLACVX:	<code>doc\$mail:email-address.memo</code>
Unix machines:	<code>/usr/local/doc/intro/Email-Addresses</code>

—Teresa Downey

NEW COMPUTER DOCUMENTATION AVAILABLE

THE FOLLOWING new documents are available for Mac users at the SCS Help Desk: Revision 1 of "Using the Mac at SLAC"; "Tailoring Your Mac for Use at SLAC"; and "Recommended Mac Software and Hardware."

The last two documents are stored on Public Disk 1 in Microsoft Word form. The files are "Recommended Hardware/Software" and "Tailoring Mac" in the folder General Help.

The document "Using WDSF to Restore Backed Up Files for Unix Users (Including NeXTs)" describes how to restore Unix files that are backed up daily (and automatically) with the Workstation Data Save Facility (WDSF). The PostScript form of this document is in the file `/usr/local/doc/how-to-use/WDSF-Restore.ps`. The FrameMaker form is in `/usr/local/doc/src/WDSF-Restore.frame`.

—Ilse Vinson, SCS

VIDEO CONFERENCING CENTER NOW OPEN

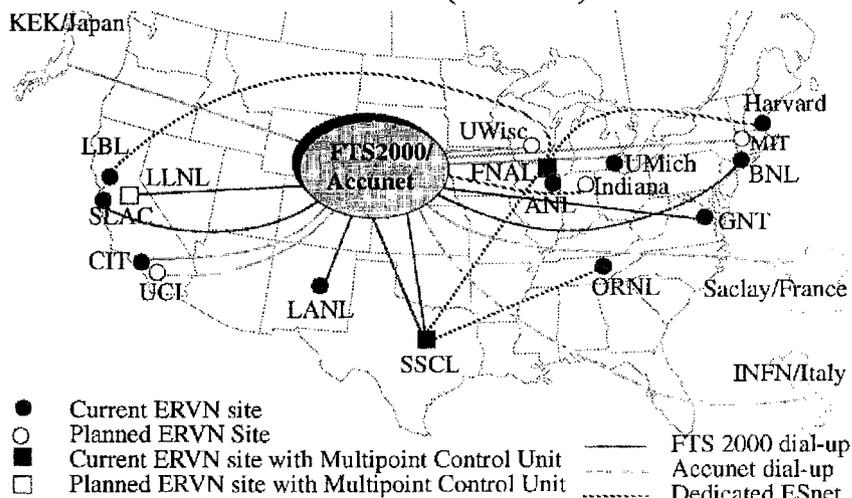
SLAC NOW HAS A VIDEO conferencing center located in the Computer Building, Room 112. The system allows SLAC users to video conference with many US and foreign labs and some DOE locations. It uses the Federal Telecommunications System (FTS 2000) dial-up digital telephone network for transmission and equipment from VTEL and Teleos. The dual monitor system allows point-to-point and multi-point conferences and is easy to operate with either a remote control or table top controller. Also provided in the center is a telephone, fax, document camera, and overhead projector. Connection to another site is as easy as making a telephone call provided that the system has been scheduled in advance.

Scheduling a video conference can be tricky. Besides requiring consideration of time zone differences, sites that we conference with are busy at least 30 hours per week. So it is very important that you first coordinate your conference with the people offsite that you wish to conference with. Each site has their own scheduling system and procedures. After you have coordinated scheduling and room availability with the people from other site(s), schedule SLAC's conferencing system through the SCS Help Desk by calling ext. 4357 (HELP) or sending e-mail to SERVDESK.

You can display pending and reserved SLAC video conferences by querying the online conference room calendar with the VM command: VIDEO.

VIDEO will display pending and reserved conferences for the day or month you specify. "Pending" means that the Help Desk is waiting for Telecommunications

DoE Energy Research Videoteleconferencing Network (ERVN)



and SSC approval. "Reserved" means that the Help Desk has received Telecommunications and SSC approval. For more details about VIDEO, enter the VM command: HELP VIDEO.

So far, the B Factory and SLD have been pilot testing the system. The B Factory and the Video Conference Working Group already have regularly scheduled weekly meetings. The system has also been used as an alternative to the Yellow Room video link to LBL when it had problems. An audio conferencing unit is available and works fairly well with sites that want to join a video conference but don't have a system yet. The system has been received positively by early users.

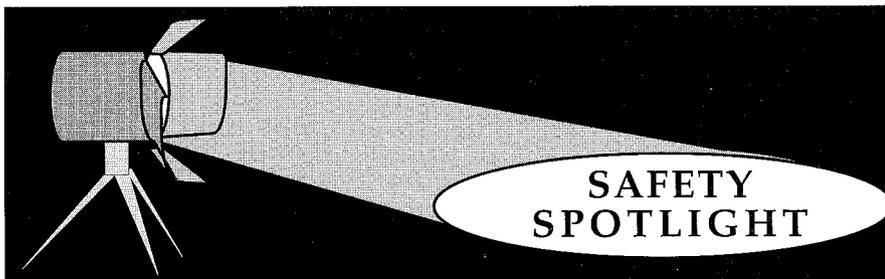
After we get more experience with scheduling and system availability, we will address such issues as making it available during evenings and weekends, and cancellation charges or other measures to ensure that the system is available to people who need to use it. Because of time zone differences, we anticipate that the system will need to be available

outside of normal working hours.

More DOE sites and laboratories are being added to the Energy Research Video Network (ERVN). Today, we can video conference with ANL, BNL, CalTech, FNAL, Harvard, INFN-Italy, KEK, LANL, University of Michigan, ORNL, Saclay (France), SSCL, UCI, and DOE Germantown. Some of these sites are connected by means other than FTS 2000, such as AT&T, Accunet service, and dedicated ESnet lines (see figure). Sites planning to be added include LLNL, MIT, Indiana University, University of Wisconsin, and the University of Colorado.

In the future, we hope to extend the system by equipping other rooms at SLAC with teleconferencing, adding extra features such as PC connectivity, an online directory of other conference sites and contacts to facilitate user scheduling, exploring and implementing interoperability with non-ERVN systems such as Stanford's teleconferencing system, and integrating desktop video conferencing.

—Janet Dixon and Les Cottrell



ES&H TELEPHONE HOTLINE NEWS

TIPS ON HOW TO HANDLE environment, safety, and health (ES&H) problems are just a phone call away. The ES&H Hotline, staffed by Judy Nowag of the ES&H Division, tries to help callers find the information they need to answer their questions and to solve their ES&H problems.

For example, one visiting scientist recently phoned the hotline to ask for assistance with the design of a research project to test radioactive materials. He needed information on specific environment, safety, and health issues. He had questions about air pollution, radiation, and toxic waste. The ES&H Hotline put him in touch with an environmental engineer, an industrial hygienist, and a waste management expert. He was able to quickly establish all of the necessary guidelines for designing his research project and did not waste a lot of time going down unproductive avenues.

Another caller had a question about what precautions were needed when using a gas-powered saw in a test lab. The hotline

directed him to an ES&H safety engineer who assured the caller that the saw could be safely used in the lab if the doors were left open and the fan was operating to expel exhaust fumes.

The hotline is a great resource for information on a wide range of topics, from radiation to waste management. If you see a potential environmental, safety, or health hazard or if you see a safety violation, report the problem directly to line management. If you've tried the usual channels for bringing attention to a hazard without success, the hotline may be able to help. If you're just plain stumped, the hotline may be a good place to start.

Although there are limits to what the hotline can do (for example, the hotline does not have the authority to enforce safety violations) the hotline will make a concerted effort to try to help you solve ES&H issues.

The ES&H Hotline may be reached at ext. 4641.

—Jack LaVelle and Melinda Saltzberg

RICKANSRUD REPLACED BY JOBE IN BUSINESS SERVICES

GENE RICKANSRUD, who has been at SLAC for 32 years, is retiring as Associate Director for Business Services. Replacing him is Jerry Jobe, who has held several positions at SLAC, including Assistant Budget Officer, until he became the Vice President of Finance and Administration for Analyteck, Ltd.

Many of Jobe's new responsibilities mirror those from his previous tenure and draw on his experience in private business. "Jerry has well-rounded business experience combined with a thorough knowledge of SLAC, its mission, and its research," Director Burton Richter said in a memo announcing Jobe's appointment.

All meetings are held in the Orange Room, unless another location is listed. Larger meetings and conferences have a contact listed. Please notify the Public Affairs Office of any additions or changes by calling ext. 2204 or sending e-mail to NINA@SLACVM.

June 21–July 2

Physics Teachers Workshop
H. Quinn, PA Moore,
A. Erzberger

June 21–August 20

Summer Science Program
Beige Room
J. Martinez, K. McClenahan

July 8–9

SSRL X-ray Absorption
Spectroscopy Workshop
SSRL Conference Room
G. George, I. Pickering

July 25

SLAC Day at Candlestick
Buses to Stadium

July 26–30

SLD Week (TBA)

July 26–August 6

SLAC Summer Institute
Topic: Spin Structure in
High-Energy Processes
Auditorium/Orange Room
D. Leith, L. Dixon, D. Burke,
L. Vassilian

August 6, Noon

SLUO Executive Committee
Inst Reps Meeting
(TBA)

August 9–11

3rd DOE Technology Transfer
Conference
Hosted by LLNL, Berkeley

August 10–15

International Lepton Photon
Symposium (Ithaca)

August 31

SERI Deadline

EVENT CALENDAR: July–August 1993

Jobe officially rejoined SLAC on June 1, but has been visiting officials from the Department of Energy in Washington, DC. His appointment includes an overlap with Rickansrud, whose "common sense approach has served us all very well and [whose] vast experience and store of knowledge will be sorely missed," Richter said.

—Sarah Morisseau

EARLY RETIREMENT ATTRACTS 149

THE UNIVERSITY'S Staff Early Retirement Incentive (SERI) program was well received at SLAC. One result has been brightly colored bulletin boards as planners compete for attention in announcing their favorite employee's retirement party. This news comes as no surprise to those of you who have just attended your 25th party and see the notification for the 50th party newly tacked to your local bulletin board.

Just how well received was SERI? We had about 355 people eligible for SERI, and 149 took advantage of the offer. Some have already left the laboratory and gone on to new adventures away from SLAC (some couldn't wait for the opportunity!) and others (presumably more reluctant to leave a place they have known so long) are not leaving until later this year. About one half of the group has elected to leave this August.

Some of the retirees will be replaced and others will not, but all will be missed. Some will come back to SLAC in various capacities. SLAC thanks all of its retirees for their long and dedicated service to the laboratory. Shown here and on the next two pages are about half of the retirees who elected to be photographed. The remaining retiree photographs will be featured in next month's *Interaction Point*.

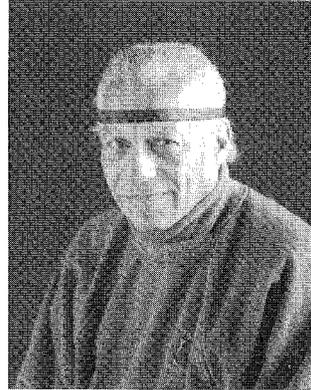
—Lee Lyon



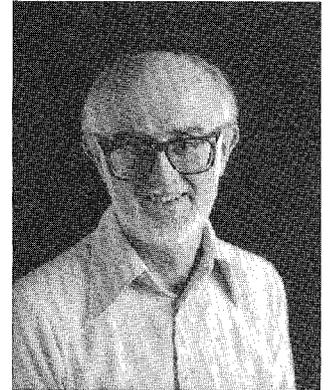
Robert Beach



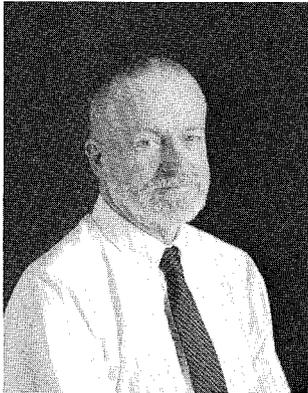
Mary Beth Beerbohm



Winston Bell



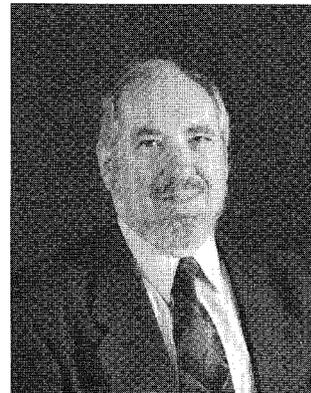
Martin Berndt



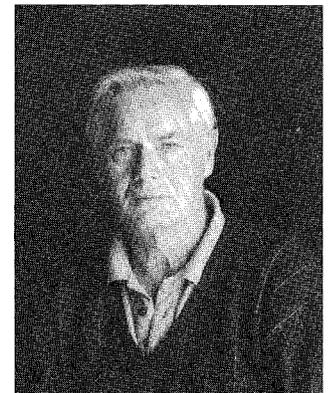
John L. Brown



Mary Bryant



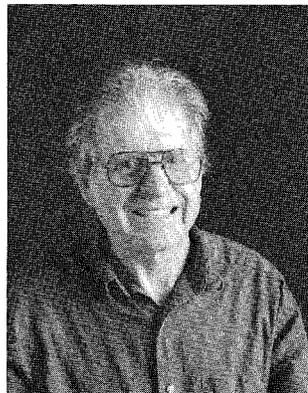
Joseph Cobb



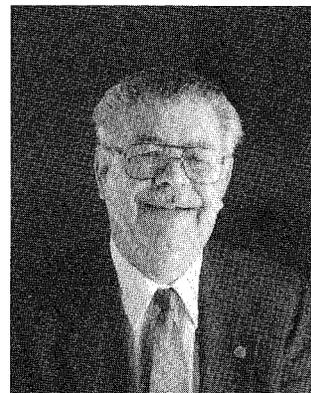
Ken Crook



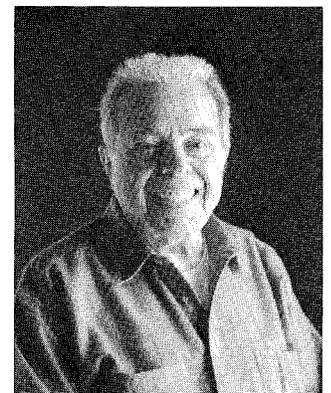
Roderick Curry



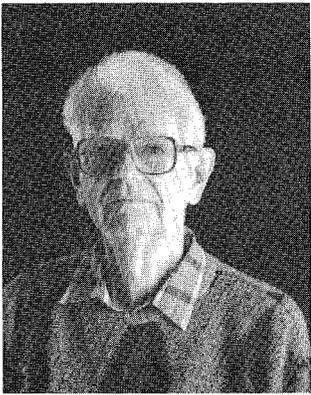
Sean Dyer



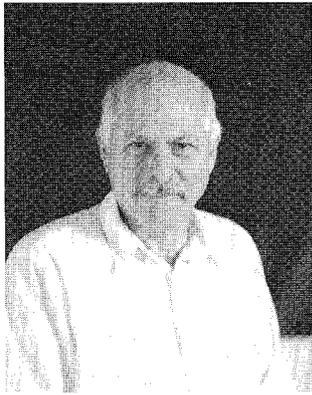
Harry Greenhill



Frank Guidi



Richard Helm



Dale Horelick



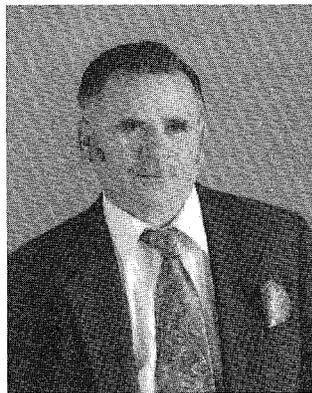
June Hu



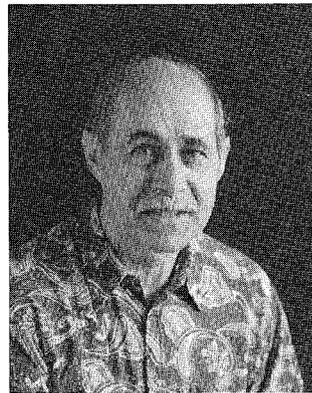
Richard Hu



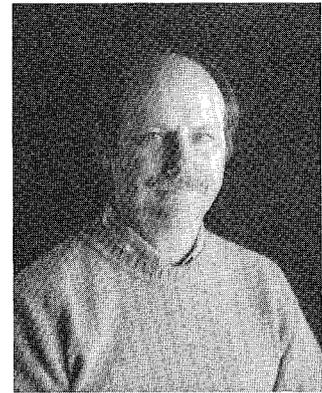
Homer James



Walter Kapica



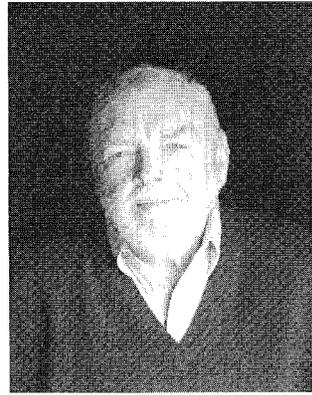
Aurel Keck



Albert Keicher



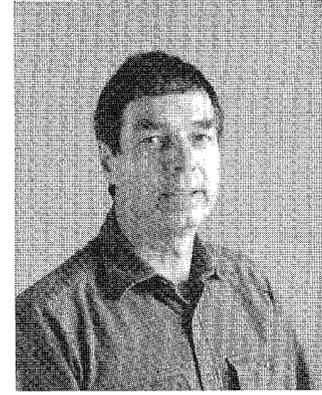
Yvonne Kennedy



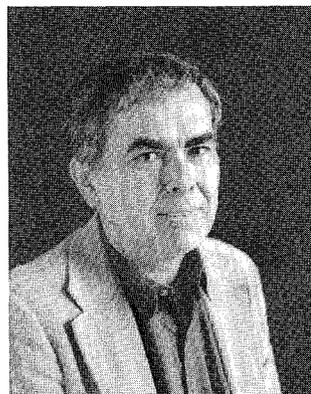
Bill Kirk



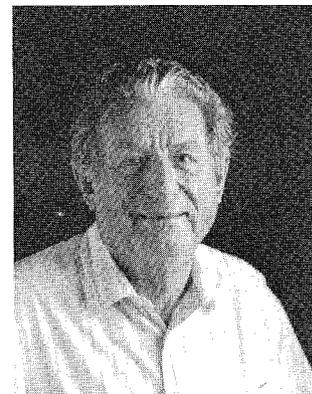
Shirley Livengood



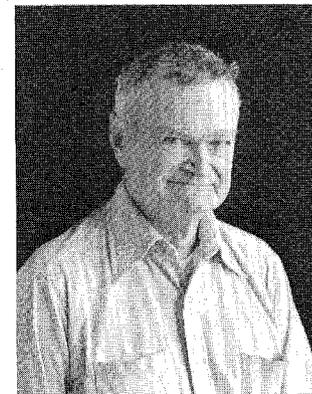
Phil Morton



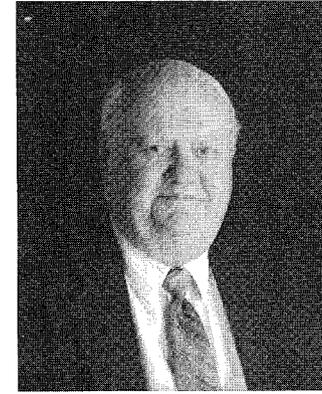
Dale Ouimette



Ray Pickup

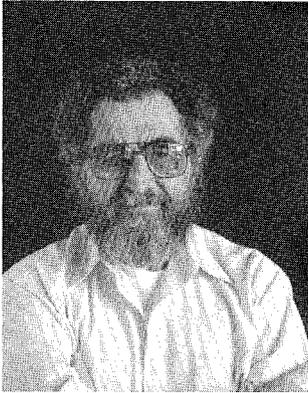


Daryl Reagan



Eugene Rickansrud

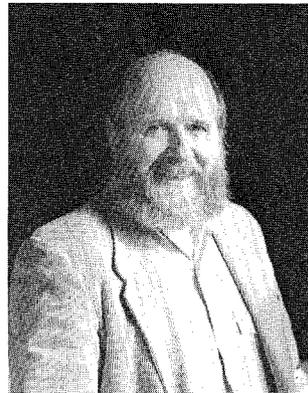
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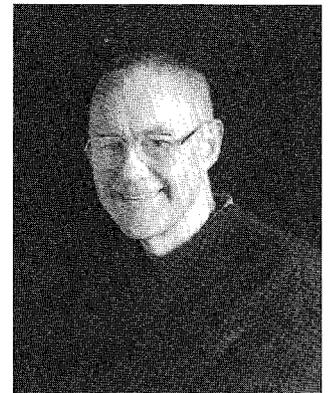
Antonio Roder



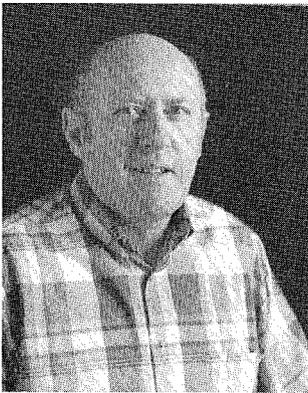
Barbara Rupp



Dave Sherden



Knut Skarpaas



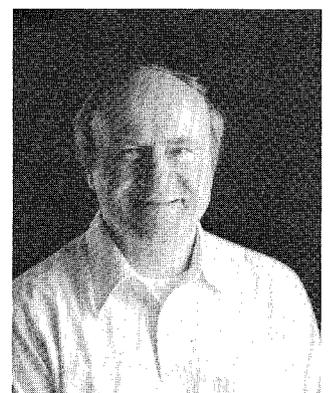
Ronald Stickley



Jose Trevino



Al Triplett



Armin Wolff

CHILD & FAMILY SERVICES: EMPLOYEES ELIGIBLE

CHILD AND FAMILY Services, a part of Faculty & Staff Services, supports families of Stanford University (and that means SLAC), Stanford University Hospital, and Lucile Salter Packard Children's Hospital by linking them with programs and services that can meet their family needs—child and elder care, recreation, health, education, and services. The office staff is available on an appointment and drop-in basis to discuss child care options both on campus and in nearby communities as well as to share information and resources on issues such as parenting, special education, and pre- and post-natal health. They can provide information and assistance on a wide range of family concerns including the ones listed below. If you have ques-

tions or special needs not mentioned here, please call Child & Family Services at 723-2660.

- Caring for a chronically ill, disabled, or special-needs child
- Caring for an older adult family member
- Adolescence
- Support groups and telephone hotlines
- Child care centers for infants and children
- Family home child care for infants and children
- Public schools in the Stanford area
- Before- and after-school programs for children of school age
- Summer programs—recreational and educational—for children
- Where to look for child care
- How to decide between a child

care center and a licensed home care provider

- How to evaluate a potential child care provider and/or center
- Establishing good communications and relations with your child care provider.

—Kathleen Sullivan



SELF-ASSESSMENT

SLAC'S ES&H SELF-ASSESSMENT PROGRAM was initiated last month and is presently underway throughout the laboratory. Self-assessment is designed to be an on-going process to identify the strengths and weaknesses of ES&H policies, procedures, and their implementation, and which will evaluate the overall effectiveness of SLAC's ES&H program. As Burt Richter stated in a May 24 memo to department heads, the purpose of the self-assessment program is "to step back and take a fresh look at how well we are executing our ES&H responsibilities. This process of continually assessing our performance and taking action toward improvement should be pursued as diligently in the areas of environment, safety, and health as it is in our technical and research activities. The self-assessment program provides a vehicle for assuring that that happens."

This is not a finger-pointing or fault-finding exercise. Nor is it a repeat of the self-assessment review which was conducted in 1991 before the arrival of the Tiger Team. Instead, it is an effort to obtain an honest assessment of what works and what doesn't and why. To that end, each division is looking at its own operations in accordance with its own division-specific plan which was developed within the broader framework of the site-wide plan. The site-wide program is being coordinated by Mary Ross of the ES&H Division. She is

STEPS

assisted by division coordinators who in turn are assisted by self-assessment team members from within their division.

The intent of the self-assessment program is to focus on different aspects of ES&H each year so that over a period of time, all aspects of ES&H are eventually covered. This year's self-assessment program focuses on four areas: Worker Safety and Health, including Hazard Communication; Training and Certification; Packaging and Transportation of Hazardous Materials; and Hazardous Waste Management. Not all of these areas apply to all of the divisions.

For additional information about the self assessment program for your division, contact your division's coordinator directly.

—Melinda Saltzberg

FORWARD

SELF-ASSESSMENT DIVISION COORDINATORS

Division	Coordinator	Extension
Business Services	Glenn Tenney	4747
Director's Office & Personnel	Karen Campbell	2298
ES&H	Melinda Saltzberg	2376
Research	Steve Williams	2276
SSRL	Ian Evans	3110

PERSONAL

SAFETY

AROUND

SLAC

"I'VE ALWAYS BEEN concerned about walking to the car after a late meeting when it's dark; many areas don't have adequate lighting, and there is no 'buddy system' per se around here," Janice Dabney commented, expressing a common concern.

Employees are reminded that the most important step to take when walking alone is to use common sense. With caution, there should be no need for serious concern; an increased awareness of your situation and surroundings will ensure your personal safety.

SLAC safety and security coordinator Rich Yeager outlined sev-

eral things to do when leaving at night. First of all, know exactly where you are going when you leave the building. Having a specific travel route in mind will reduce the amount of time between destinations. Avoid any areas where people are loitering. Always carry your keys in your hand when walking to the car; doing so will eliminate the time spent searching for them at the car door. Once inside, lock your doors. Most importantly, always be aware of your surroundings — whether it be 10 a.m. or 10 p.m.

"People get very comfortable with their surroundings," Yeager said. "Today that is not a good

idea." Although fear is unnecessary, we must all be conscious of the potential for an unpleasant incident.

If at any time you feel uncomfortable, go back inside the building and call the main gate. A mobile guard will come by to escort you to your car.

If you do find yourself in a threatening situation, the best thing to do is to draw attention to yourself. Scream, honk the horn, do anything to deter the assailant and call attention to the situation. Most likely, the person will run away. At the very least, the guards will arrive.

—Trevor Payne and Sarah Morrisseau

Stars Collide in Thrilling 14–8 Theory Victory

THEORY SPOILED a desperate Three-Peat attempt by Experiment in the annual softball rematch at SLAC on The Green last May 22. Each spring Theory and Experiment vie for supremacy on the softball field. Burton (Big Daddy) Richter and Sidney (Lefty) Drell mentor the teams in a spirited competition and game of honor. This year's game was aggressive, injury-laden, and spotted with controversy. Nevertheless, when the dust settled after nine intense innings, Theory had earned this year's coveted bragging rights as lab champions.

From the coin toss to the final out, this year's Theory team was one of destiny. As lineups were pulled together and the annual disagreement about foul lines was haggled over by team captains, a sense of urgency gripped the near-capacity crowd.

Lefty Drell had a rocky first inning, giving up three quick runs before settling into a groove. Drell's patented knuckler-stealth pitch allowed the Experimental batters to score only in the first, third, and seventh innings. Catcher James (BJ) Bjorken went to the well time and again for Drell's out pitch. Experimental pitcher Bill (The Gentleman) Kirk was hammered for four important Theory runs in the first inning. Kirk's split-finger fastball split for good by the fourth inning after he gave up a total of eight runs. Kirk was relieved by Dick (Zany) Zdarko, who allowed four more runs in the sixth and two insurance runs in the eighth to seal the win for Theory.

In the first inning, Big Daddy Richter jumped on Lefty Drell's hanging curve and smashed a solid base hit to open the game. With bases loaded, Ron Cassel blasted a long drive deep into Panofsky Grove. But this year Cassel was denied as Theory right fielder Carl Schmidt motored into the Grove and snagged Cassel's fly on a full speed run between the redwoods. What could have been a major rally was cut short as Experiment was held to just three runs.

Theory scored four runs in the bottom of the first off the bats of Schmidt, Falk, Dixon, and Haber. Experiment squeezed two runs over the plate in the third inning but Theory countered with another four-run inning on hits by Don Finnell and Patrick Huet. The game was up for grabs when Theory exploded in the bottom of the sixth for four more runs, putting the game out of reach for Experiment.



Some members of the winning team: Front row, left to right: Ovid Jacob, Adam Falk and Daisy the Dog, Michael Peskin, Karl Schmidt; Middle row: David Atwood, Alex Kagan, Howie Haber, Don Finnell, Lance Dixon, Patrick Huet, Collin Morningstar; Back: BJ Bjorken.

The scoring barrage was started by Dixon's two-run home run shot and capped by a two-run RBI double by Alex Kagan. Kagan hit a towering blast that bounced off the wall of the A&E building and should have been a HR. While Kagan stood at the plate admiring the length of his drive, fleet-footed Oliver Bardon raced down the ball and pegged a perfect relay. Realizing his folly, an embarrassed Kagan bolted around the bases but was cut off by Tracy Usher who nearly tagged him out. By all accounts it was the longest double ever seen.

In the seventh, Woods blasted a monstrous three run dinger for Experiment that closed the gap to 8–2, but Drell skunked the heart of the order in the eighth and ninth innings to preserve the win.

This year's Purple Heart was awarded to Carl Schmidt who broke his finger in the first inning but played on. Quote of the day by Michael Peskin: "I thought long and hard about what I could do to help the Theory team, but decided to show up anyway." Nevertheless he went 3 for 3, and scored three runs.

A rumor is going around that next year's game will feature a new rival on the field—Accelerator Physics. Please submit your best matrix design for a scoreboard for that tournament.

— Nina Stolar and Lance Dixon