



## Richard B. Neal Honored

ON SEPTEMBER 5<sup>th</sup>, SLAC held a Symposium on Electron Linear Accelerators to honor retired Associate Director Richard B. Neal on the occasion of his 80th birthday. Dick Neal left SLAC in 1985 after an illustrious career spanning 35 years during which he worked first at Stanford University and then at SLAC. Dick was one of the key physicists in charge of design and construction of the MARK III one GeV Electron Linear Accelerator at the High Energy Physics Laboratory at Stanford, and then Director of the SLAC Technical Division, responsible for the construction and operation of the SLAC three kilometer-long linear accelerator.

The Symposium, which was attended by close to 200 people, started with an opening address by SLAC Director Burton Richter and was followed by a succession of eight talks: *The Construction of SLAC and the Role of R. B. Neal* (Pief Panofsky), *Personal Remarks* (Richard Neal), *Lessons Learned from the SLAC Linear Collider* (Nan Phinney), *Alternate Approaches to Future Linear Colliders* (Greg Loew), *The SLAC-based Next Linear Collider Technical Program* (Dave Burke), *Ideas for Advanced Electron Linacs* (Bob Siemann), *Electron Linac Therapy* (Richard Levy, Varian Associates), and *Linac-based Free Electron Lasers* (Kwang-Je Kim, LBNL).



*Nancy Hendry registers Marvin Chodorow, while Roger Miller writes a nametag. John Ashton reloads his camera in the background.*



*Dick Neal and his wife Gail chat with a well-wisher, while Urban Cummings (l) reviews his notes.*

It was both an interesting technical meeting and a nostalgic affair for many retired SLACers who came back to meet and celebrate the contributions of their friend and much-respected technical director and associate. (Some of these colleagues can be recognized in the photographs shown on pages 4-5.) Pief Panofsky together with Nancy Hendry, assisted by his organizing committee (Greg Loew and Bob Siemann), Nina Adelman Stolar and Eleanor Mitchell, put in much of the effort to make this birthday celebration a huge success.

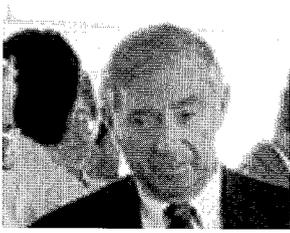
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(Photos Courtesy of John Ashton, Joe Faust, and Harvey Lynch)



*Leah Chodorow chats with Ed Ginzton.*

## A Message from Arthur Bienenstock



AFTER 20 EXCITING AND rewarding years as SSRL's director, it is time for me to step down and say good-bye for a while to those who have made those years so rewarding.

It is good-bye, first of all, to the SSRL staff, faculty and directorate who have forged a superb users facility. They started at a time when there was no corresponding facility in the world in which large numbers of scientists came for short periods, week after week, to do different experiments. In the context of parasitic SPEAR operation, they created an atmosphere of true "welcome," in addition to technical and intellectual support of cutting edge experiments.

It is good-bye and thanks, as well, to our colleagues in other SLAC divisions, who have supported us in these endeavors. Without their foresight in adding a synchrotron radiation port to SPEAR, there would be no SSRL. They helped us learn the many skills required to develop and operate a storage-ring based facility.

I must also thank my graduate students and post-docs, who have kept me alive in science and kept SSRL's scientific capabilities personally meaningful. Together, we played a role in the

development of EXAFS as a tool for the study of amorphous alloys and then went on to develop wide angle, grazing incidence and small angle anomalous X-ray scattering for the same purpose. You were a constant source of satisfaction and pleasure. I am pleased to have you all as colleagues now.

I step down now with the sense that SSRL has a magnificent future. It is running extremely well. The results are good science and technology.

As for me, I am excited about the possibility of going to Washington as Associate Director for Science of the Office of Science and Technology Policy. It is an opportunity to work for the health and vitality of all U.S. science and science education within the political system, a prospect I relish. Over the years, I have become an increasingly strong supporter of that system, which works best when people work and speak loudly for the things in which they believe. Thus, I am pleased with the prospect of becoming a more integral part of it.

As I look to the future, I see an extremely strong synchrotron radiation community with SSRL an integral part. The only threat that this community faces to its continuing vitality and effectiveness is a decline in the health of all American science and technology. Thus, it is natural for me to want to go to Washington "to fight the bigger fight."



### Crummy Mice & Other Keyboard Ergonomics

JUST LIKE A REAL mouse, our computer mouse loves dust and crumbs. Give it a cleaning every once in a while to reduce resistance. When it starts sticking on the mousepad, it's already past due for a degunking.

Don't let that mouse get higher than the keyboard; overreaching can cause sprains and strains, and the higher elevation gives the mouse delusions of grandeur. Choose a mouse size that fits your hand so your fingers can relax around its (metaphorical) neck. For advice or to see some samples, call Medical for an appointment.

A couple of non-mouse tips: Allowing your arm to swing from your shoulder brings some of the larger arm muscles in to help with the job. Try keyboard commands to give your hands a break from the mouse. Lastly, occasionally switch hands. With mice, it helps to be ambidexterous.

--Gloria Labrador R.N.,C.O.H.N.



#### DATES TO REMEMBER

**11/10/97:** Benefits Fair (November is open enrollment month; check your mailbox for information. Be sure your current address is on file with the Benefits Office.)

**11/13/97:** 26th Annual SLAC Run/Walk/Roll

#### **WELCOME GUESTS AND NEW EMPLOYEES**

The following people joined SLAC through mid-September: **Glen Biggus**, SCS; **Pedro Colon**, PCD; **Richard Dominiak**, Technical Information Systems; **Paul Harrison**, BBR; **Warren Matthews**, SCS; **Ellen Moore**, ES&H; **Derek Owen**, Accel. Dept. Operations; **Aron Soha**, EC; **Mossadek Talby**, BBR; **Hirohisa Tanaka**, EC; **Foster Thompson**, Metrology.

## Off To The Races...

SLAC's WHIMSICAL ENTRY IN the Sand Hill Challenge (pictured right), sponsored by Scientific American magazine, weighed in at 1,445 pounds and measured almost 13 feet in length. It may have had the highest kinetic energy, but for some reason a car made out of bread passed "Z Mobile" in our heat during the race. Maybe it was the yeast in the bread?

Ossie Millican (MFD Machine Shop) was one of the people who assembled the car. "It was never intended to be a 'speed' car—just a way of displaying the accelerator to lots of people at one time." Z Mobile sure met that goal judging from the number of children and adults gathered around the car at the end of the race.



*SLAC welcomed spectators of the Sand Hill Challenge to its Visitor Center after the race.*

The car was designed around the prototype separation chamber from the original PEP ring, with the addition of part of the accelerator from the former Administration Building display. The brakes were borrowed from the Coil Winding Dept, the wheels and axle were formerly on a trailer owned by Ossie, the decals were compliments of the Tech Pubs office. MFD then made the other necessary bits and pieces to hold the car together. Thanks to all those who helped put the car together.



*SLAC Director Burton Richter waves to the crowd during the parade at the Sand Hill Challenge.*



Z Mobile's driver, Eric Bong (Mechanical Engineering Group) steered to the finish line to the cheers of several thousand onlookers. Maybe it was his leather motorcycle gear that was getting so much attention. The course, four-tenths of a mile long with a two percent grade, started at the Addison-Wesley campus and ended just past the main entrance of SLAC.

Finish line operations were organized by Patricia Wurster and a cast of dozens of hard working people, up at the crack of dawn to set up equipment. They relayed finish information back to the starting line and they have official photo finishes for the race vehicles. A big thank you to Rick Yeager and his Security Staff for their outstanding support during all the planning and implementation of this event.

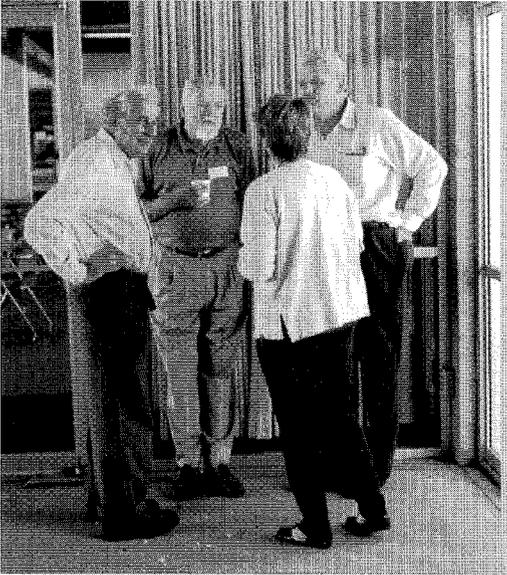
Godzilla, designed by Melissa Sartain (see photo below) and fabricated by Carl Rago and his crew, was a crowd puzzler. Kids gathered around wondering how Godzilla could breathe smoke. "Schools are lining up to borrow this thing," said Rago. "It's been a big hit."

*(continued on Page 6, Column 1)*



*(Photos Courtesy of John Seeman and P.A. Moore)*

## Richard B. Neal



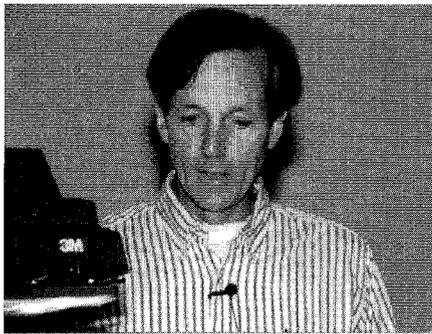
*Dave Ritson, Bill Kirk and Richard Taylor inform SLAC Archivist Jean Deken of the way it really was.*



*Richard Taylor (l) chats with Arnold Eldredge (r), with Martin Berndt in the background (far right)*



*Adele Panofsky*



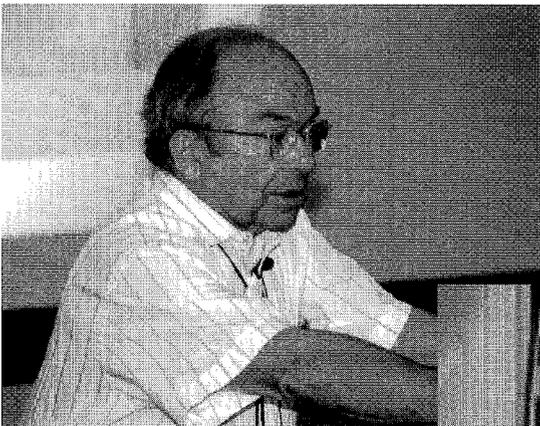
*Dave Burke expounds on the NLC.*

In the evening, the party continued at the California Café, with more celebration and speeches by M.C. Sid Drell, Herb Kinney who shepherded SLAC's affairs through the mazes of the government (first at the AEC, then at ERDA, and finally at DOE), and Dick Neal himself, who entertained everybody with an amusing "theory on aging" and praise for his ever-charming wife of 53 years, Gail. The day was an unusually memorable SLAC occasion, cementing friendships, past, present and future, spanning close to half-a-century.

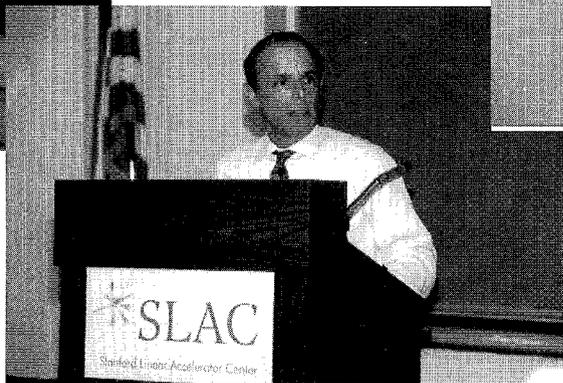
--G.A. Loew



*Pief and Dick debate who made the largest contribution to the lab--each graciously citing the other.*



*Pief Panofsky's talk followed Burton Richter's welcome address (left). Guest speaker Richard Levy, Varian Associates, (below) and Kwang-je Kim, LBNL, (right) gave the last two talks.*



## Commentary

First, we were delighted to get a 14% response rate, and to have so many comments. Thank you. The responses were from a variety of divisions, some more than others; the breakdown in terms of years of service was quite even at about 25% in each category. Females make up about 20% of the SLAC population, and yet had 32% of the survey responses. We will leave it to the sociologists for an explanation.

Overall, 69% of the respondents say that they are moderately or well informed about the issues facing the lab; and 88% say that they are aware of issues facing them on the job. These numbers can be viewed positively that staff feel they are knowledgeable about the larger picture at SLAC and how they are impacted.

SLAC could do better in terms of how views are accepted by management, since only 58% indicated that they felt their views were moderately or very important. Fully a third of the respondents feel that their opinions are not important, and this is an issue of concern and calls for more active listening and sharing of information between staff and managers.

Of the various information channels, the Director's All Hands meetings and memos were clearly the most useful, and were in first place. The Interaction Point and various email and newsgroups almost tied for second place. Supervisors came in third place in terms of usefulness as an information source, and other employees and training programs were a close tie for fourth place.

Curiously, the SLAC Web site came in about fifth in terms of usefulness of information, yet it generated the most comments of any category, about 15 in all.

Other comments focused on management (about 10 remarks), supervisors (another 10), and then miscellaneous remarks. We were not able to read everything clearly, so please excuse any errors in transcription if we didn't reproduce your comments exactly. Comments will be posted in their entirety on the Web at a site to be announced. If you do not have access to the web, contact Vickee Flynn for a copy.

## So, What's Next?

Your feedback and comments (especially those dealing with management and supervisors) were presented at the Key Managers' meeting in September. Please continue to seek out your Key Managers for sharing information from the Directorate and other meetings.

Web-specific comments were presented at the Web Coordinating Committee meeting in September. A group which has been working on a redesign of the Home Page has been reviewing the web comments for application to the redesign.

This communications survey will be used as a baseline information for future surveys and be included in the annual self assessment for the Department of Energy. If there are any questions or comments about the survey, please contact TIP Editors P.A. Moore at ext. 2605 or Vickee Flynn at ext. 4208 (email: [tip@slac.stanford.edu](mailto:tip@slac.stanford.edu)).

# Communication Survey Results

We asked, you responded. Our thanks to the people who took the time to complete the survey from the August, 1997 TIP.

## Questions and Percentage Responses

N=162 (14% of SLAC employees, based on 1200 employees who work 50% time or more and receive benefits)  
N with comments = 61

1. *How well informed do you feel about important issues facing the Lab?*  
Very well informed: 12%      Moderately well informed: 57%      Not well informed: 27%
2. *How well informed do you feel about issues affecting your job?*  
Very well informed: 22%      Moderately well informed: 46%      Not well informed: 27%
3. *How important do you feel staff views are to the Lab's management?*  
Very Important: 21%      Moderately important: 37%      Not important: 36%
4. *How useful are these information channels in informing you about the Lab?*  
(Answers were on a scale of 5 to 1, with 5 being very useful and 1 being seldom useful.)
 

	5	4	3	2	1
a. SLAC Web site	27%	23%	24%	10%	12%
b. The Interaction Point	28%	30%	28%	7%	4%
c. Email services/newsgroups	31%	28%	19%	9%	7%
d. Your supervisor	30%	25%	21%	10%	13%
e. Other Employees	19%	31%	31%	12%	3%
f. Dept./Group meetings	16%	27%	29%	17%	9%
g. Flyers posted around site	7%	23%	38%	21%	9%
h. Presentations, Workshops, Seminars	9%	33%	27%	16%	12%
i. Director's All-Hands Meeting	36%	30%	18%	6%	7%
j. Training Courses/Programs	22%	28%	23%	16%	9%

## Demographic Information

Division Response: ( Our apologies to BSD for mislabeling them BIS in the survey. )

Tech	35%	ES&H	14%	Research	23%	Other	6%
SSRL	6%	BSD	11%	PEP-II	3%		

Classification:

Exempt	64%	Non-exempt	23%	User	3%
Contractor	2%	Other	2%		

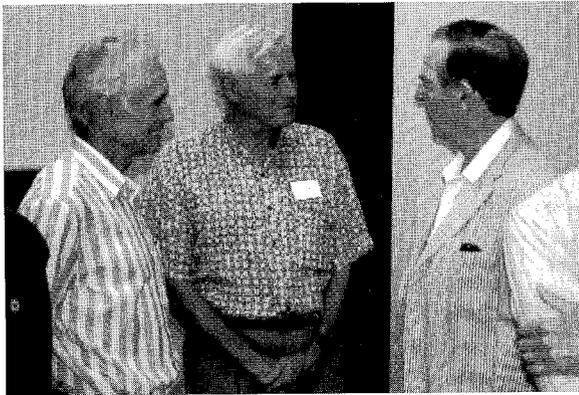
Length of Service at SLAC (in years)

0 to 5	25%	5 to 10	23%
10 to 20	24%	Over 20	25%

Gender:

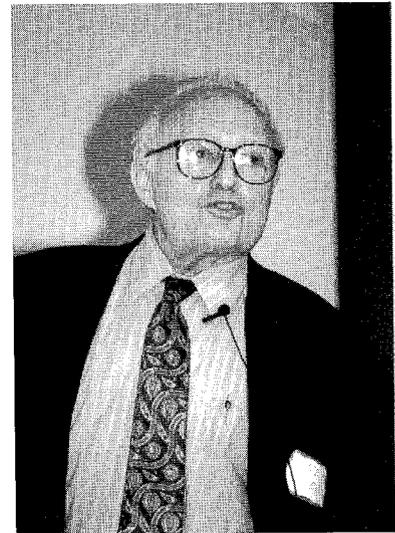
Male	60%	Female	32%
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# Honored *(continued)*



*Dieter Walz and Ken Crook (l-r) warmly greet Dick Neal (foreground).*

The evening celebration at the Vintage Room of the California Café, (located at the Stanford Barn) let people get together in a less structured setting.



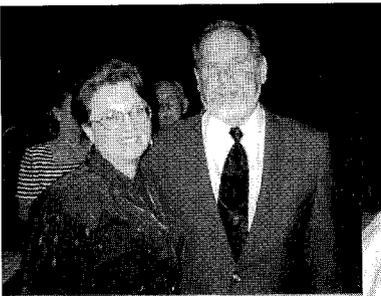
*Greg Loew expresses his views on future Linacs.*



*A smiling Marty Briedenbach of SLD enjoys a pleasant evening with SLC's Nan Phinney.*



*(l-r) Pat and Al Lisen delayed their trip to Oregon to see old-time chums Robert Gould (cartoonist and builder of bridges), Al Odian, and Dieter Walz.*



*Dick Neal, Jr. and his spouse.*



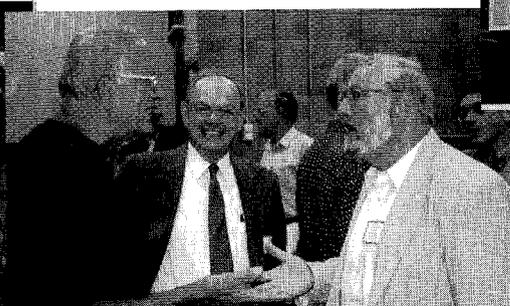
*(l-r) Charlie Sinclair (CEBAF) charms Helen Quinn (Theory) and Jean Deken (Archives).*



*TV and Esther Huang enjoy a pictorial on phases of Dr. Neal's life.*



*(l-r) Earl "Ken" Johnson and Alex Tsang discuss engineering.*



*(l-r) Roger Miller and Vern Price chat with Herman Winick.*

## Off To The Races...(continued)



*Thousands of fans lined Sand Hill Road to watch on race day.*



*The after-race crowd checks out SLAC's Z car.*

After the race, several hundred people went through the SLAC Visitor Center during the Open House and participated in bus tours of the research yard. Many thanks to Nina Stolar and all those volunteers who assisted in the tours, open house, displays and exhibits. Ralph Nelson and his band, "Wild Oats and Honey," were part of the entertainment as well.

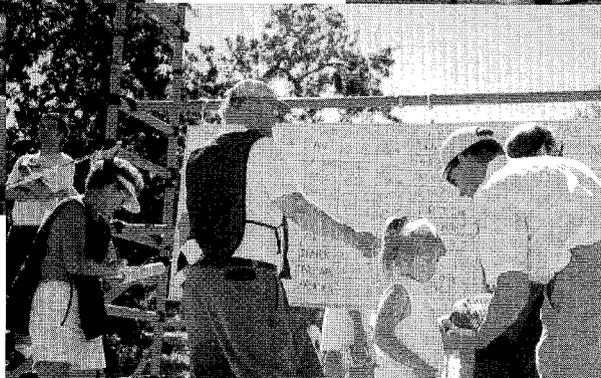
The event, organized by James MacNiven, owner of Buck's Restaurant in Woodside, raised almost \$100,000 for the Every Kid a Start-Up Fund. The fund will make grants to programs combating teenage drinking and driving on the Peninsula. This was the first annual Sand Hill Challenge and the organizing committee is planning the next one, but whether it's every year or every two years is still being debated.



*Ruth McDunn positions equipment on the Timing Tower.*



*"Wild Oats and Honey" entertained the crowds after the race.*



*Bebo White and his crew carefully transcribed finish-line data.*

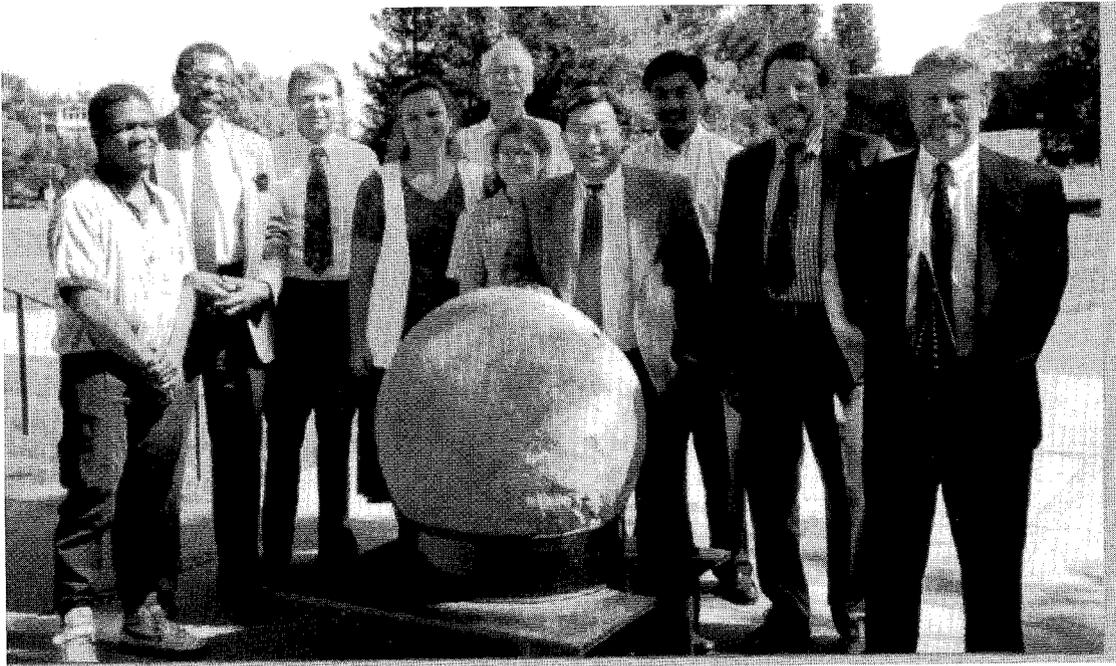
## Meet the Staff of the DOE/OAK Stanford Site Office at SLAC

SLAC IS A NATIONAL user facility operated by Stanford University for the US Department of Energy. The DOE maintains offices at SLAC to provide field management and implementation of Office of Energy Research programs and projects assigned to the Oakland Operations Office (OAK), as well as institutional management of SLAC and SSRL. This provides DOE/OAK with an onsite presence to improve operational awareness in program and project management, ES&H, and business operations; to improve customer service and performance results; to improve communications with SLAC, regulators, and users; and to facilitate partnering for process improvements and cost efficiencies.

In support of SLAC R&D, the SSO

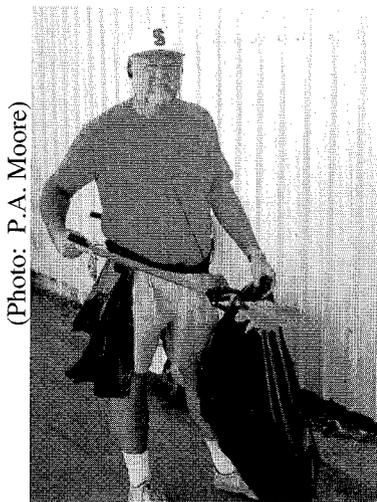
works closely with its major customer, the DOE Office of Energy Research specifically the Office of High Energy and Nuclear Physics, the Office of Basic Energy Sciences, and the Office of Biological and Environmental Research. The SSO has been delegated line management responsibility for implementation of ES&H requirements at SLAC. In addition, it has been delegated project management responsibility for the B-factory (PEP-II/ BaBar), the \$293M, five year project, which when completed in early 1999 will pursue the question of why we live in a matter dominated universe. The SSO also relies on the Oakland office for matrix support in functional areas which include: contract management, finance & accounting, budgeting, personnel, ES&H, legal, public affairs, security, and information management.

--J. Muhlestein



*(l-r) Michael Johnson, Administrative Assistant; Dr. James M. Turner, Manager of DOE/OAK; Bill Franzwa, Project Engineer for the B-Factory; Anita Schinnerl-Martin, limited-term assignment for Construction Management; Dr. Marty Molloy supports HQ/ER program management (HEP, Synchrotron Radiation); he is also the ES&H Sr. Facility Operations Manager; Susan Almeida, Institutional/Business Manager; James S. Hirahara, Associate Manager for site management, DOE/OAK; Hanley Lee, Coordinator of site-wide ES&H programs; also oversees infrastructure projects for the site office; John S. Muhlestein, Director of the SSO since 1990; and David Treacy, DOE Project Manager for the B Factory.*

## Unsung Heroes



(Photo: P.A. Moore)

*Act Locally: Hal Smith shown with his back-saving, trash-picking device. He needs his strength for toting the trash bag back!*

SLAC OWES HAL SMITH twenty bucks for tools, not including labor. The price is cheap for the service provided. We're not talking about Hal Smith and his regular day job in the Controls Department.

We're talking about Hal's lunch time advocacy which encompasses four categories: make friends, influence people, clean up the environment and lose weight. So how does Hal accomplish all this?

During his lunch time he walks (that's the weight control aspect and he's down by 13 pounds so far), he also picks up trash,

meets people like Piero Piannetta on his walk around SPEAR, and influences people, like P.A. Moore who agreed to take a photo and write this article.

Hal has been at SLAC for— are you ready?—33 years as of September. "I never thought I'd spend most of my career in one place," said Hal. His education is from Diablo Valley College, West Valley College, and Foothill College.

While he has been in one place, Hal is not standing still. His first job was in the Electronics Dept. calibrating instruments, then he went to the Accelerator Physics doing magnetic measurements, and then Power Supply Maintenance Group, then became an Accelerator Operator, and on to the Instrumentation and Controls Department to head up the Personnel Protection Systems Group. Now he is the Safety Systems Review Officer for the Controls Dept.

"SLAC's been good to me," said Hal. We could also say the opposite, that having an employee like Hal who voluntarily takes on a messy task, is good for SLAC. About that \$20? It's the cost of a trash tool from the hardware store. Hal's is worn out already, after just a couple months of trash collection. Hal has noticed a difference; if there is no trash laying around, people are less prone to litter a clean area. So you know what to do.... pitch in!

### Work Safe, Work Smart

Since the Workers' Compensation claim of 8/7/97 was filed, there has been one more claim involving days away from work. The incident occurred on 8/29/97. The number of calendar days between the 8/7/97 claim and 8/29/97 claim is 22 days. SLAC's record number of calendar days between claims is 77.

## FactinOs

### All Stirred Up

Hrvoje "Harv" Galic of Library Services reported that SPIRES-HEP passed another big milestone. Their 350,000th entry was added to the database on Tuesday, September 16, 1997 at 07:27:24 (local time). The honor belongs to: THE MIXMASTER UNIVERSE IS UNAMBIGUOUSLY CHAOTIC. By Neil J. Cornish, Janna J. Levin (Cambridge U.), DAMTP-R7-49, Sep 1997.

### All Trimmed Down

Apologies to SLD. The recent power outage was necessary to trim trees near our power lines. SLAC does the trimming, not PG&E, since we are a contractor-maintained facility. The "Factino" author gratefully acknowledges ALL those who helped set the record straight.

### All in the Family

SLAC retiree John Grant won third place in the Soap Box Derby.

### All Moved In

The Public Affairs Office has relocated to Room 103 of the Central Lab. It is a short distance from their old office, but a large step in having the space to accommodate the needs of the staff and their customers. The old office, Room 138, will provide telephones and computer support for Orange Room users during meetings.

### All around the Ring (PEP-II, that is)

Take your department on a noon walking tour of PEP-II. To reserve space, call or email Teri Peterson (x4463, or terip@slac.stanford.edu).

### All Volunteers Step Forward

The date for the SLAC Christmas party has been set for December 19<sup>th</sup>. Party volunteers, please call Bernie Lighthouse at x2358.

### All Gone

Bob Gex slipped away from SLAC after 35 years in the Library. He didn't want a farewell party, but he will be missed.