

# INTERACTION POINT

September 3, 2004

[Back to SLAC Homepage](#)

[Back to TIP Homepage](#)

In this issue:

[FRONT PAGE](#)

## FEATURES

- [Director's Corner: SLAC Has a Unique Contribution to Make to International Linear Collider](#)
- [Official Press Release \(on Interactions.org\): International Panel Recommends "Cold" Technology for Future Particle Accelerator](#)
- [Unity in Beijing: The Global Nature of Particle Physics Communication](#)
- [SPEAR3 Project Wins DOE Award for Excellence](#)
- [SSI a Triumph in Science and Sociability](#)
- [Meson Visualizations: A Collaboration of Art and Physics](#)
- [Echoes of the Past in Silicon Chips](#)

## ANNOUNCEMENTS & UPDATES

- [The Role of SLAC Citizen Committees in ES&H](#)
- [SULI Students Celebrate a Summer of Physics](#)

## Director's Corner: SLAC Has a Unique Contribution to Make to International Linear Collider

By Jonathan Dorfan



As many of you know, the worldwide high energy physics community has reached an important milestone on the path to building an electron-positron linear collider, a facility that will unlock some of nature's greatest mysteries.

The International Technology Recommendation Panel (ITRP), after eight months of very hard work, recommended on August 19th that superconducting ("cold") technology, rather than conventional room temperature copper ("warm") technology developed by SLAC and its Japanese partner KEK, be used for the linacs that will have to accelerate the electrons and positrons to record energies of 500 GeV.

[See whole story...](#)

## SPEAR3 Project Wins DOE Award for Excellence

By Keith Hodgson and Nina Stolar

On August 13, Secretary of Energy Spencer Abraham presented the Secretary's Excellence in Acquisition Award to the SPEAR3 Management team in a ceremony at the DOE



## SSI a Triumph in Science and Sociability

By Shawne Neeper

The 2004 SLAC Summer Institute (SSI) bubbled with the vitality of a new, topic-a-day format that brought textbook learning directly alongside cutting-edge research. Themed on Nature's Greatest Puzzles, SSI opened on August 2 with the first puzzle: dark matter. In each of the nine weekdays that followed, SSI's 332 participants explored another Great Puzzle from the ground up.

Each day began with three, one-hour talks covering background and current understanding in one of the 10 puzzles. After lunch, students returned to Panofsky Auditorium to hear researchers from around the world report their latest advances on the puzzle of the day.

[See whole story...](#)

## Echoes of the Past in Silicon Chips

By Heather Rock Woods

Thermal oxide is the real on-off switch for your computer. The nanometers-thick film on the surface of silicon transistors helps turn on and off the flow of electricity through the

- [Next Ashley Fellow Announced](#)
- [TRAFFIC TIPS](#)
- [Stretch Break Exercise Software Now Available](#)
- [The Role of the Employee in ES&H](#)
- [Sand Hill Review Available—Take a Literary Breather!](#)
- [Milestones](#)

## EVENTS

- [Get Ready for SLAC Family Day: Our Universe, Large & Small](#)
- [Biggest Kids Day Yet a Roaring Success](#)
- [Give Blood Today, Save A Life Tomorrow](#)
- [Upcoming Events](#)

## ABOUT TIP

- [Staff/Contact](#)
- [Submission Guidelines](#)

headquarters in Washington, DC. The Fourth Annual DOE Project Management Awards pay tribute to those teams or individuals who have achieved outstanding results through resourceful, innovative thinking and implementation.

The \$58M, 3-GeV SPEAR3 accelerator—jointly funded by DOE and the National Institutes of Health (NIT)—is now providing 3rd generation light source capability for the SSRL user community.

[See whole story...](#)

## Meson Visualizations: A Collaboration of Art and Physics

*By Shawne Neeper*



How would neutron decay look at human scale and in full Technicolor? From September 9 to October 1, the halls of the Research Office Building (ROB, Bldg. 48) will come alive with visualizations of quantum phenomena from standard-model collisions to particle-wave duality.

The exhibit marks the debut of artist Dawn Meson's body of work entitled Sum over Histories. In these paintings, Meson uses color, translucency, texture and shape to represent the tiny, invisible interactions that pervade our everyday world.

[See whole story...](#)



transistor, providing the 0 and 1 binary signals modern electronics run on. There are several million transistors on each computer chip.

As technology produces smaller chips that require thinner oxides, the ability of thermal oxide to act as the basis for integrated circuits is starting to break down.

[See whole story...](#)

## Get Ready for SLAC Family Day: Our Universe, Large & Small

**Saturday, September 18  
11:00 a.m. – 3:00 p.m.**

Everyone in the SLAC Community is invited! Please use Web form for lunch reservations, activity sign ups and to pre-order t-shirts.

### **Preliminary Program Highlights**

### **ENTERTAINMENT, MUSIC AND MORE ON CENTER STAGE**

Welcome: SLAC Director Jonathan Dorfan

DJ Eddie McGee (RP): Music for dancing and zany entertainment

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The Stanford Linear Accelerator Center is managed by [Stanford University](#) for the [US Department of Energy](#)

Last update Thursday September 02, 2004 by [Emily Ball](#)