

Calendar

Thursday, June 17

11:45 a.m. Lunchtime Cleanup - WH, Ground Floor, East Side

2:30 p.m. Theoretical Physics Seminar - Curia II

Speaker: I. Scimemi, Universitat de Barcelona

Title: Unveiling epsilon/epsilon through $K > 3$ Pion

3:30 p.m. DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over

4:00 p.m. Accelerator Physics and Technology Seminar - 1 West

Speaker: K. Seiya, Fermilab

Title: Slip Stacking in the Main Injector

Friday, June 18

3:30 p.m. DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over

4:00 p.m. Joint Experimental Theoretical Physics Seminar - 1 West

Speaker: A. Evdokimov, ITEP, Moscow

Title: First Observation of a New Narrow Ds Meson at 2632 MeV

Wilson Hall Cafe

Thursday, June 17

Aztec Tortilla Soup

Hot Italian Sub \$4.75

Chicken Picata \$3.75

Thai Beef \$3.75

Roast Beef Cheddar on Kaiser Roll \$4.75

Beef Strombolis \$2.85

Marinated or Cajun Chicken Caesar

Salads \$4.75

[Wilson Hall Cafe Menu](#)

[Chez Leon](#)

Weather

Two Student Experiments Win Fermilab Awards at Illinois Science Fair



Tom Junk (left) presented David Erbs (center) and Doug Finney (right) with their awards.

(Click on image for larger version.)

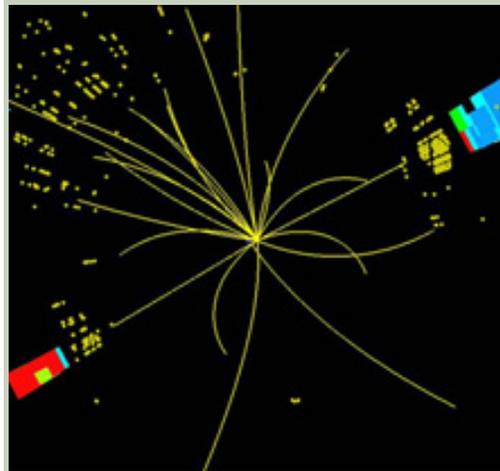
Two student experiments, a mini-accelerator and magnetic shock absorbers, earned Fermilab Special Recognition Awards at last month's Illinois State Junior Academy Science Fair. Held May 7th and 8th at the University of Illinois, the exposition hosted 1000 student projects selected from regional science fairs around the state.

"IJAS has the best student scientists in Illinois," said Larry Bennett, president of the Junior Academy of Science. Exceptional projects were awarded special cash prizes, funded by 28 research institutions. Universities Research Association, Inc. and the Illinois Consortium for Accelerator Research sponsored the \$100 Fermilab Awards, given to Doug Finney of Dundee Crown High School and David Erbs of Cuest Academy in Palatine, Illinois.

Finney studied how an externally applied magnetic field affected the ability of fluid to resist flow through a thin tube. He proposed using this technology to build

Fermilab Result of the Week

Quest for Hidden Dimensions



A spectacular e^+e^- event observed in the search for extra dimensions is the highest-mass (475 GeV) central and fully reconstructed Drell-Yan event observed so far. (Click on image for larger version.)

Do we really live in a three-dimensional universe, or does the universe merely appear three-dimensional to us? This is one of the most profound physics questions raised in the last century.

DZero physicists have studied this puzzle. By analyzing pairs of electrons and photons produced in high-energy collisions at the Tevatron, they looked for echoes from hidden dimensions of space, which would show up as unexpected patterns in the energy and direction of produced particles. DZero experimenters

have pioneered searches for hidden dimensions at proton colliders in 2000, and now, with much higher statistics available in the new run of the Tevatron, they have





Chance Thunderstorms 80%/61°

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controllable shock absorbers for cars. Erbs, an 8th grader, built a mini-accelerator that used ring magnets to accelerate steel balls. With large enough magnets, the accelerator could launch objects into space.

"I really learned something from them both," said Tom Junk, a professor at the University of Illinois and judge of the winning projects. "They went the extra distance."

Correction

Yesterday's article, "Fermilab Colloquium Today," stated that Nobel Laureate Douglas Osheroff was a member on the board that investigated the Columbia space shuttle accident in 1993. The Columbia space shuttle accident occurred in 2003. *Fermilab Today* regrets the error.

Accelerator Update

June 14 - June 16

- During this 48 hour period Operations established two stores that combined with an existing store provided approximately 34 hours and 23 minutes of luminosity to the experiments.
- The accelerators set a NEW LUMINOSITY RECORD with a luminosity of 78.33E30
- An Accumulator RF station (ARF1) required tunnel access to repair
- A TeV quench aborted store 3574
- TeV experts help resolve a colliding beam proton problem

[View the current accelerator update](#)

[View the Tevatron Luminosity Charts](#)

In the News

set the most stringent limits on the existence of hidden "large" spatial dimensions that would be felt only by the carrier of gravity. The sensitivity of the search can be expressed as a limit on gravity's strength, the so-called Planck scale; their limit is 1.43 TeV. They also tested a different model, in which an extra dimension is curled at a much smaller radius $\sim 10^{-19}$ m, and is felt by the three other force carriers. Such a picture would connect ("unify") all the forces of nature at much lower energies

than contemplated conventionally. This first dedicated test of this kind of model with a "small" extra dimension has set a limit on its inverse size of 1.13 TeV. While searches have not revealed hidden dimensions yet, the two most energetic events observed in these searches, while consistent with the Standard Model, are similar to what one would expect from extra dimensions. The experiment continues to acquire more data with which it will be able to extend this search with ever greater sensitivity.



Alex Melnitchouk of Brown University contributed to this analysis.



From *The New York Times*, June 14, 2004

Pioneer Who Kept the Web Free Honored With a Technology Prize

HELSINKI, Finland, June 13 - If Tim Berners-Lee had decided to patent his idea in 1989, the Internet would be a different place.

Instead, the World Wide Web became free to anyone who could make use of it. Many of the entrepreneurs and scientists who did use it became rich, among them Jeffrey P. Bezos (Amazon.com), Jerry Yang (Yahoo), Pierre Omidyar (eBay) and Marc Andreessen (Netscape).

[read more](#)

Trigger meisters Kyle Stevenson (left) of Indiana University and Bill Lee of Florida State University develop and maintain the Run II trigger lists with which this data was collected. (Click on image for larger version.)

[Result of the Week Archive](#)

Announcements

Third Thursday Lunchtime Cleanup Today

There will be a Lunchtime Cleanup from 11:45 a.m. to 1:30 p.m. today. Meet at the East Ground Floor entrance to Wilson Hall for transportation to the cleanup site. Cleaning gear is provided, and hot dogs and refreshments will be served. Contact Bob Lootens at x3303 for more information.

[more information](#)

Claim Your Bikes Outside Wilson Hall

Wilson Hall Building Manager Stan Boyson requests all bicyclists to claim their bikes that are located in the Wilson Hall bike rack. Tags will be placed on all of these bikes. Bicyclists must remove the tag and bring it to the ComCenter on the Ground Floor of Wilson Hall. Bikes that are not claimed by June 21 will be removed and relocated to storage. Contact Stan Boyson at x4753 with any questions.

Fermi Singers Concert

Don't forget to mark your calendars for July 7! Take a half hour out of your day to hear your friends and colleagues sing in the Auditorium. The concert is at noon and the group serves a treat of cookies and cakes following the performance. Don't miss it!