

## Calendar

### Thursday, June 9

**9:00 a.m.** [Users' Annual Meeting](#) - Auditorium

THERE WILL BE NO THEORETICAL PHYSICIS SEMINAR THIS WEEK  
THERE WILL BE NO DIRECTOR'S COFFEE BREAK TODAY

**4:00 p.m.** Accelerator Physics and Technology Seminar - 1 West  
Speaker: J. Wei, Brookhaven National Laboratory  
Title: The SNS Ring: Design, R&D and Construction

**5:30 p.m.** [Graduate Student Association New Perspectives Poster Session](#) - Wilson Hall Atrium

### Friday, June 10

**9:00 a.m.** GSA – [Annual Fermilab Student Conference](#) – New Perspectives 2005 - Curia II

**12:00 p.m.** Summer Lecture Series - 1 West  
Speaker: L. Lederman, Illinois Math and Science Academy/Fermilab  
Title: Neutrinos: Past, Present and Future

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

**4:00 p.m.** Joint Experimental Theoretical Physics Seminar - 1 West  
Speaker: R. Erbacher, University of California, Davis  
Title: Top Quark Properties from CDF

### Saturday, June 11

**9:00 a.m.** GSA – [Annual Fermilab Student Conference](#) – New Perspectives 2005 - 1 West

## Weather

## Planning is Your Priority, OSTP's Looney Tells Users

Patrick Looney, Assistant Director for Physical Science and Engineering in the Office of Science and Technology Policy, advised Fermilab users on Wednesday morning that advancing the science of matter, space and time requires a keen



Patrick Looney addressed the Fermilab community yesterday at the Users' Meeting.

from the vantage point of a policy advisory body operating out of the Executive Office of the President, he outlined the political realities of Washington that would be involved in making the machine a reality.

"In DC, if you get 'No' as an answer, you're out of luck," Looney told the full house in Ramsey Auditorium, opening the Users Annual Meeting. "If you say, 'Can we have several billion dollars to build this machine?' you will get a 'No.' You want to try to ask a question that will not get a 'No,' such as, 'Can we keep this path going?' Then you need to make the decisions one at a time, and not try to make them all at once." He used the ITER fusion reactor project as an illustration of step-by-step decision-making, while admitting that ITER was hardly a

sense of timing, planning and communicating.

Looney said building the proposed International Linear Collider "is not impossible-not easy, but not impossible." And

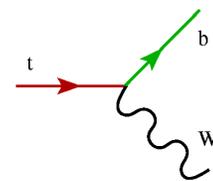
## Fermilab Result of the Week

### Lonely Top Quarks

The discovery of the top quark ten years ago at the Tevatron opened the door for more detailed

studies of this mysteriously heavy elementary particle. By colliding protons and anti-protons at the Tevatron it

is possible to produce top quarks in a variety of ways. Most of the time, the top quark is produced together with an anti-top quark. However, there are ways to produce a top quark on its own as well. These single top quark events provide a laboratory to directly study the interactions between top quarks, bottom quarks, and W bosons and open a window to yet undiscovered particles or forces. Finding single top quarks produced via the weak force at the Tevatron is challenging because the signal is small and there are large backgrounds to contend with.



[Different views of the Wtb vertex at the Tevatron: top quark decay, s-channel and t-channel top quark production.](#) (Click on image for larger version.)



Chance Thunderstorms 89°/67°

[Extended Forecast](#)

[Weather at Fermilab](#)

**Current Security Status**

[Secou Level 3](#)

**Wilson Hall Cafe**

**Thursday, June 9**

Tomato Florentine

Grilled Chicken Cordon Bleu Sandwich  
\$4.85

Chimichangas \$3.75

Chicken Marsala \$3.75

Maryland Crab Salad \$4.85

Italian Sausage Calzones \$3.50

SW Chicken Salad with Roasted Corn  
Salsa \$4.85

The Wilson Hall Cafe now accepts Visa,  
Master Card, Discover and American  
Express at Cash Register #1.

[Wilson Hall Cafe Menu](#)

[Chef Leon](#) is now open. Call x4512 to  
make your reservation.

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paradigm: "The one thing ITER did right,"  
Looney said, "was to make a

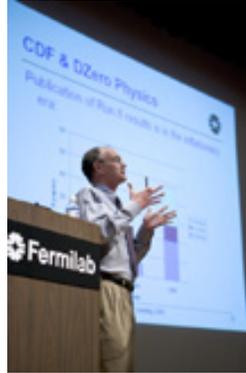
construction  
decision only  
after \$1 billion  
had been spent  
on R&D."

Ironically, ITER  
also figured in  
Looney's  
assertion on  
the need for  
international  
consensus on

US responsibility to take its "turn" in  
building a big machine. He said the US  
was pressed from the highest levels of  
other governments, by Prime Ministers  
and presidents, to rejoin ITER. "We need  
to have other countries press the US to  
step up to the plate," Looney said.

[read more](#)

-Mike Perricone



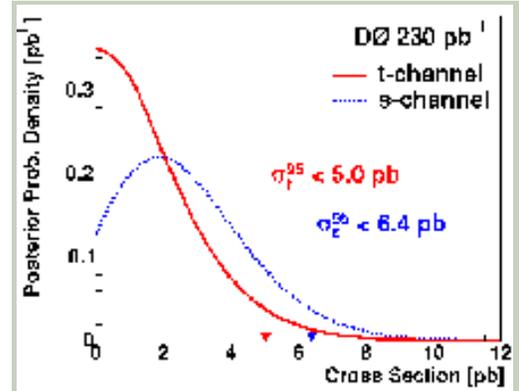
Director Mike Witherell  
also spoke yesterday at  
the end of the day. (Click  
on image for larger version.)

**ILC This Week**

## GDE: Director's Corner from Barry Barish



The new GDE communications web page  
(Click on image for larger version.)



Bayesian posterior probability density as a  
function of the production cross section for  
the two different single top quark production  
mechanisms. (Click on image for larger  
version.)

The DZero experiment has recently  
completed a search for single top quark  
production with a large sample of data.  
The analysis maximizes the acceptance  
for single top quark events at every step.  
Separation of the single top quark signals  
from the large backgrounds is achieved  
through the use of neural networks that  
combine the separating power from  
several discriminating variables. This  
search improves the sensitivity of  
previous searches for single top quark  
production by a factor of two.

Nevertheless, no evidence for single top  
quark production was found, resulting in  
upper limits on these production  
mechanisms. This sets important  
constraints on our understanding of these  
top quark interactions. The search for  
single top quarks at Dzero continues with  
further improved analysis techniques and  
a growing data sample.

A plain English summary of this  
measurement can be found [here](#),  
together with a link to the full article  
submitted for publication.

Fermilab Today is online at:

<http://www.fnal.gov/today/>

Send comments and suggestions to

[today@fnal.gov](mailto:today@fnal.gov)

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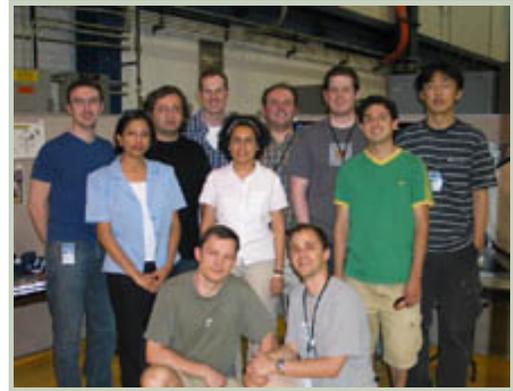
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This is our new [GDE communications web page](#), which we have installed on the Interactions.org Linear Collider Communication website. It represents what will become an important tool for us to inform each other and the community what is going on with the GDE. I plan to write a regular short article, "The Director's Corner," to share my personalized views of the accomplishments, developments and plans, as we work through the steps of creating the global design for the ILC.

This interim web page will be published weekly and will then migrate to and evolve into a regular part of the ILC GDE website, which we are creating. We are working hard to develop our own operational GDE website in time for the Snowmass ILC Workshop. We plan to make it the working website for the meeting. We are putting considerable effort into designing what will be an informative and functional website for the GDE. This is essential for the functioning of such a widely dispersed collaboration. To design the website, we have contracted with Xeno Media, who recently created the new Fermilab and SLAC websites, and we are involving many persons representing different parts of our ILC community in reviewing their work and progress, to ensure that we will have the features and functionality we will need. A well-designed functional website will go a long way toward helping to bridge the great distances separating those of us that need to work closely together on a daily basis to develop the ILC design.

[read more](#)

[Linear Collider News Archive](#)



(Left to Right) (Top) Mathieu Agelou, Jovan Mitrevski, Reinhard Schwienhorst, Aran Garcia-Bellido, Matt Tilley, Daekwang Kau, (Middle) Supriya Jain, Shabnam Jabeen, Philip Perea, (Bottom) Miroslav Kopál and Len Christofek have contributed to this analysis.

[Read more](#)

(Click on image for larger version.)



Miroslav Kopal (University of Oklahoma) (left) and Iain Bertram (Lancaster University) have made important contributions to the triggering used in this analysis.

[Result of the Week Archive](#)

## Accelerator Update

### June 6-June 8

- During this 48 hour period Operations established one store that combined with an existing store provided the experiments with approximately 44 hours and 32 minutes of luminosity
- NuMI off four hours
- Booster off due to GMPS failure

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

[Announcements](#)

## In the News

### From *Lamar News*, June 8, 2005

#### Auger chooses SE Colorado

by Virgil Cochran

The Pierre Auger Collaboration today officially named Southeastern Colorado as the site for a cosmic ray observatory that will cover portions of at least three counties.

Pablo Bauleo, a postdoctoral researcher at Colorado State University, a top scientist in the project, said the full Auger Collaboration unanimously adopted a resolution naming the Colorado site as the Northern Hemisphere site during its meeting in Orsay, France. The resolution recommends Utah as a backup northern site and recommends continued contact with a third potential backup site in Idaho.

[Read more](#)

## Computer Security Training Sessions

"The Fermilab Computer Security Team is hosting another series of Computer Security Training Sessions on June 16 in Wilson Hall One West starting at 9:00 a.m. There will be two computer security related sessions offered to fulfill ITNA requirements along with an informational session about Spyware and Phishing. While all three sessions are open to all, it is recommended that summer students attend to learn about proper computing usage while here at the Lab. Admission is free.

9:00 Basic Computer Security

10:00 Security Essentials for Desktop System Administrators

11:00 Dangers of Spyware and Phishing

Please send any questions to

[nightwatch@fnal.gov](mailto:nightwatch@fnal.gov).

[Upcoming Activities](#)