

## Layoff Information

New information on Fermilab layoffs, including an [up-to-date](#) Q&A section, appears on the [layoff Web pages](#).

## Calendar

**Thursday, July 10**

**1 p.m.**

Physics and Detector Seminar  
- West Wing, WH-10NW

Speaker: V. Kuchler, Fermilab  
Title: Update on CFS Status  
and Dubna Site

**2:30 p.m.**

[Theoretical Physics Seminar](#) -

Curia II

Speaker: D. Bettinelli,  
Universita Milano

Title: Electroweak Model  
Based on the Nonlinearly-  
Realized Gauge Group SU(2)  
xU(1)

**3:30 p.m.**

DIRECTOR'S COFFEE  
BREAK - 2nd Flr X-Over

THERE WILL BE NO  
ACCELERATOR PHYSICS  
AND TECHNOLOGY  
SEMINAR TODAY

**Friday, July 11**

**3:30 p.m.**

DIRECTOR'S COFFEE  
BREAK - 2nd Flr X-Over

**4 p.m.**

[Joint Experimental-Theoretical  
Physics Seminar](#) - 1 West

Speaker: J. Zhu, State  
University of New York, Stony  
Brook

Title: From W to Z:  
Electroweak and QCD Results  
from DZero

[Click here](#) for NALCAL,  
a weekly calendar with links  
to additional information.

## Weather

## Feature

### "Flurry of ideas" ties together ANL, Fermilab and UChicago



The fourth Argonne-Fermilab-UChicago collaboration meeting brought together more than 70 scientists.

More than 70 scientists gathered at Fermilab at the end of June for the fourth meeting of the Argonne-Fermilab- UChicago collaboration. The group reviewed the progress made in joint accelerator R&D projects and discussed possibilities for future collaborative work.

Started in 2006 by Fermilab and Argonne, the meetings initially focused on accelerator R&D for the International Linear Collider and, more recently, Project X and the Facility for Rare Isotope Beams (FRIB). While these projects still represent the main focus of the collaboration, a series of research grants provided by the University of Chicago has led to joint projects in other research areas as well.

"The focus of the collaboration has expanded significantly," said Fermilab Deputy Director Young-Kee Kim. "This year, there are more than ten proposals. Six of them include all three institutions."

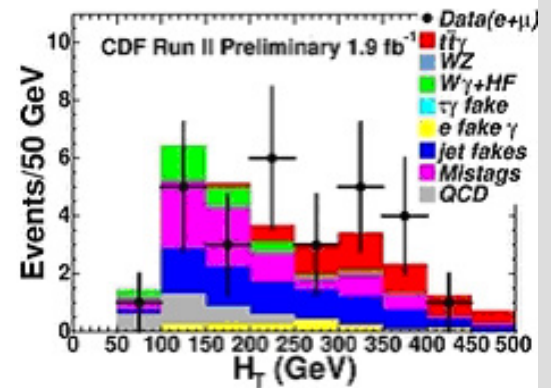
Proposals for new joint projects include the development of new detector electronics, the production of better superconducting cavities and a survey on the public understanding of particle physics and its applications.

"It's really heartening to see this flurry of ideas that tie together these three institutions," Fermilab Director Pier Oddone said. "We have had outstanding support through the community."

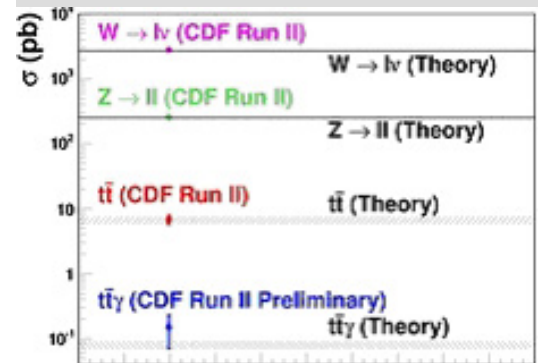
Argonne Director Robert Rosner expressed

## Fermilab Result of the Week

### Shedding light on the top?



Transverse energy (the sum of the transverse energies of the lepton, photon, jets and missing energy) for the events in the lepton + photon + missing energy + b-jet sample.



The measured  $t\bar{t} + \text{photon}$  cross section compared with Standard Model expectations and other Standard Model cross sections (W, Z, top-antitop production).

The Tevatron's Run II has been a boon for top quark physics. During the run, the Tevatron has produced the world's most precise measurements of the top. But the process of the top quark radiating light remains unobserved. The Standard Model production rate for top quark pairs produced in association with a high-energy photon is 100 times smaller than top quark pair production (see figure). If CDF scientists measure any anomalous signal in this channel, it would be a sign of new physics, such as the production of heavy supersymmetric particles decaying into top quarks.

CDF physicists recently developed a broad strategy to search for events where the event contains at least one W boson and b-quark

 **Mostly Sunny**  
85°/65°

[Extended Forecast](#)  
[Weather at Fermilab](#)

[Current Security Status](#)

[Secou Level 3](#)

[Wilson Hall Cafe](#)

**Thursday, July 10**

- Southwestern chicken tortilla
- Philly style cheese steak
- \*Garlic herb roasted pork
- Smart cuisine: southwestern grilled chicken
- Southwestern turkey wrap
- Assorted slice pizza
- \*Marinated grilled chicken caesar salads

[Wilson Hall Cafe menu](#)

[Chez Leon](#)

**Thursday, July 10**

**Dinner**

- Green bean, feta & walnut salad
- Medallions of beef w/ cabernet sauce
- Roasted baby potatoes
- Vegetables of the season
- Pear tart

**Wednesday, July 16**

**Lunch**

- Catfish filet veracruz
- Lemon rice
- Corn & red pepper
- Chocolate pecan bourbon tart

[Chez Leon menu](#)

Call x4598 to make your reservation.

[Archives](#)

[Fermilab Today](#)

[Result of the Week](#)

[Safety Tip of the Week](#)

[ILC NewsLine](#)

his appreciation for the help that Fermilab has provided with regard to the proposed FRIB project.

"I'm incredible satisfied to see this collaboration," Rosner said. "I'm extremely pleased about all the help we get."

Harry Davis, University of Chicago, gave an update on the UC Executive Education Program. Last September, 40 employees from Argonne and Fermilab participated in this leadership program. A second group of employees began taking the course in May.

"To develop leadership skills is not a quick fix," Davis said. "Leaders have to look at the world in different ways. I hope that the participants in this program come away with ideas that are not common to the laboratories."

For more information on the collaboration and the proposed research projects, [visit this Web site](#).

-- *Kurt Riesselmann*

**Feature**

## Laboratory releases Physics Advisory Committee report

The Fermilab Physics Advisory Committee (PAC) met in Naperville, Illinois, from June 17 through 20 for its summer retreat to review aspects of the Fermilab science program.

As noted by Pier Oddone in his [Director's Corner on Tuesday](#), the emphasis of the meeting was on what research program could best be achieved in the context of focusing the laboratory's resources on the Particle Physics Project Prioritization Panel (P5) roadmap.

The charge to the Committee and its comments and recommendations are now available via links from the [PAC Web page](#).

The PAC is a major source of advice to the director about the future direction of Fermilab's experiments and programs. Ever since Fermilab's early days, the PAC's recommendations and comments have offered insight into opportunities and issues important to members of the laboratory community.

The PAC is composed of senior scientists from universities and high-energy physics laboratories in the U.S. and abroad. "The theorists and experimentalists on the Committee offer both breadth of vision and

(the top decay products) and a photon. The analysis group found 28 such events, consistent with the expectation from known processes. To focus in on top quark pair production with a radiated photon, CDF scientists require two additional hadronic jets and a large total transverse energy of the measured objects. Using these requirements, 16 events were observed. These events were consistent with the expectation of 11 +/- 2 events. This analysis does not reveal any signs of new physics.

If one assumes that there is no Standard Model production of the top pair plus photon final state, the probability that the backgrounds alone will produce 16 or more events is only 1 percent. Assuming the Standard Model production, CDF scientists estimates the cross section for this process is 150 +/- 80 femtobarns, larger than the current theoretical estimate but well within the uncertainties of the measurement.

More data will allow CDF scientists to explore these rare processes further. With the head of the Tevatron accelerator's motto as "Run !! Run!! Run!!," who knows what scientists could find.

[Read more](#)



On the way to femtobarn cross sections: From left: Henry Frisch, University of Chicago; Irina Shreyber, ITEP, Moscow; and Andrei Loginov, Yale; performed the search.

[Result of the Week Archive](#)

[Accelerator Update](#)

**Info**

*Fermilab Today*

is online at:

[www.fnal.gov/today/](http://www.fnal.gov/today/)

Send comments and suggestions to:

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

depth of experience," said PAC Secretary Jeffrey Appel. "The combined wisdom of the members is greater than the sum of its parts."

**In the News****A New Name for SLAC**

From *SLAC Today*,  
July 9, 2008

The U.S. Department of Energy has asked the Stanford Linear Accelerator Center to work with them in renaming SLAC. Director Persis Drell has been informing employees of the coming change during her recent meetings with laboratory work groups.

Discussing the proposed name change, Persis said, "SLAC has a long, illustrious history and the name evokes that history. However, our stakeholders have suggested that the name is also no longer fully representative of the laboratory with its increased involvement in photon science and particle astrophysics in addition to our particle physics program." She emphasizes that changing the name of the laboratory in no way diminishes the historical achievements of which the SLAC community is proud. Rather, she says, this is an opportunity to create a new name that better reflects the broader laboratory SLAC is evolving into.

[Read more](#)

**July 7 - 9**

- One store provided ~24 hours and 40 minutes of luminosity
- Kautz Rd substation trips due to harmonic filter failure
- Pbar raises LCW temperature regulation
- Pbar beam stop motor replaced
- FESS repairs Booster East Gallery cooling
- Recycler stash lost
- Bulk power supply trip

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

**Announcements****[Have a safe day!](#)****Performance reviews due**

It is the time of year to reflect on our past year's performance. Please note that completion of the following portions of the review process must occur in July 2008:

- [2007-2008 accomplishment report](#) (completed by employee July 15)
- [2007-2008 performance review form](#) (completed by manager in July)

You will also set goals for the 2008-2009 review period after your initial discussions with your manager in July. If you have any questions about the [performance review process](#), please contact the [Employee Relations department](#).

**Fermilab pool memberships now available at Recreation office**

Fermilab employees and users can now enjoy the Fermilab pool. The pool opened last week and is hosting swimming lessons for both youth and pre-schoolers. Registration for the second (July 21-Aug 1) and third (Aug 4-15) sessions is still open. Swim lesson registration and pool memberships are now available through the Recreation Office (x5427) on WH15.

**Tevatron featured on "Modern Marvels" TV show**

The History Channel will show the premiere of "Modern Marvels: Crashes" today at 8 p.m. CDT. The program includes a five-minute section on the proton-antiproton "crashes" that the Tevatron collider produces. A film crew came to Fermilab in April to interview scientists and film the segment.

