

## Calendar

### [Have a safe day!](#)

Thursday, Sept. 9  
2:30 p.m.

#### [Theoretical Physics Seminar](#) -

Curia II

Speaker: Matthew Buckley,  
Fermilab

Title: A New Way to Measure  
Spin at Hadron Colliders

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO

ACCELERATOR PHYSICS

AND TECHNOLOGY

SEMINAR TODAY

Friday, Sept. 10  
3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO JOINT

EXPERIMENTAL-

THEORETICAL PHYSICS

SEMINAR THIS WEEK

8 p.m.

#### [Fermilab Lecture Series](#) --

Ramsey Auditorium

Speaker: Dr. Paul Sereno,  
University of Chicago

Title: A Croc Odyssey: Speedy  
Gallopers with a Taste for  
Dinosaurs

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

### [Upcoming conferences](#)

## Campaigns

## Take Five

## Tune IT Up

## Weather

## In Brief

### The Employee Advisory Group wants your feedback

Since May, 22 Fermilab employees from areas throughout the laboratory have gathered each month as part of the Employee Advisory Group to discuss issues raised in the [employee focus groups](#).

Summaries of the discussions from each of these meetings are now [available online](#).

During the four meetings the group has held so far, members have discussed: dual track for management and technical staff, the performance review process, how to communicate Fermilab's long-term strategic plan and perceptions about HR. You can learn more about these and upcoming meeting topics on the [EAG meetings web page](#).

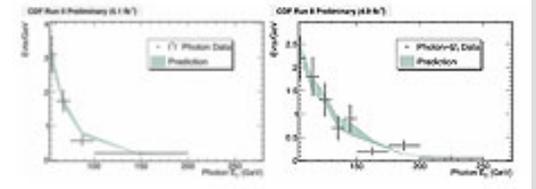
In each of these meetings, advisory group members provide Fermilab senior management with employee perspectives, concerns, insights and suggestions with regard to the development and implementation of new and revised policies that affect the Fermilab workplace.

In order to best advise senior management in future meetings, [Fermilab's Employee Advisory Group members](#) need to hear from you. If you would like to communicate an observation or suggestion regarding one of the upcoming discussion topics, please contact one of the Employee Advisory Group members.

## University Profile

## Result of the Week

### A search for new physics in Z + photon



A comparison of the photon  $E_\tau$  distribution in data with the expected Standard Model distribution. On the left are results for  $\gamma+Z \rightarrow$  dilepton (electron + electron or muon + muon) candidate events, on the right, results for  $\gamma+Z \rightarrow$  neutrino + neutrino candidate events.

When looking for new physics, scientists usually start by observing a rare Standard Model process to see if anything else appears.

A present CDF analysis involves the production of a very rare Standard Model process:  $p + \bar{p} \rightarrow Z + \gamma$ .

The only ways this process can happen are if the colliding particles radiate a photon or if a photon results from the decay products of the Z. The Z cannot reradiate a photon. However, undiscovered heavy particles can enhance the production of photons together with Z bosons and leave a particularly striking signature of high-energy photons.

Among new models predicting such enhancements are ones which include large extra dimensions and anomalous trilinear gauge couplings and the phenomenon of dark matter.

For this measurement, we looked at the energy distribution of the photons produced in association with the Z particle. We expected Standard Model Z + gamma production but explored the possibility that there could be additional high-energy photons. For our measurements to be accurate, our analysis needed to account for the multiple ways that other particles in the detector could mimic the photon, called background.

We predict the total background using a combination of data-driven techniques and simulations of known physics processes.

While we found no significant excesses, the

 Sunny  
73°/51°

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

**Current Security  
Status**

[Secon Level 3](#)

**Wilson Hall Cafe**

Thursday, Sept. 9

- Breakfast: Apple sticks
- Southwestern chicken tortilla
- Philly style cheese steak
- \*Garlic herb roasted pork
- Mardi Gras jambalaya
- \*Southwestern turkey wrap
- Assorted sliced pizza
- \*Marinated grilled chicken Caesar salad

*\*Carb restricted alternative*

[Wilson Hall Cafe Menu](#)

**Chez Leon**

Thursday, Sept. 9

Dinner

- Gourmet greens, pear & parmesan salad
- Beef Wellington
- Whipped potatoes
- Green beans
- Chocolate soufflé w/ crème Anglaise

Wednesday, Sept. 15

Lunch

- Tri-colored tortellini w/ gorgonzola cream
- Sautéed spinach
- Raspberry mousse w/cookies

[Chez Leon Menu](#)

Call x3524 to make your reservation.

**Archives**

## The Johns Hopkins University

NAME:

[The Johns Hopkins University](#)



HOME TOWN:

Baltimore, Maryland

MASCOT:

Blue jay

SCHOOL COLORS:

The university's official colors are gold and sable. Its athletic colors are Columbia blue and black.

PARTICLE PHYSICS

COLLABORATIONS:

Babar, CDF and CMS

EXPERIMENTS AT FERMILAB:

CDF and CMS

NUMBER OF SCIENTISTS AND

STUDENTS AT FERMILAB:

Two faculty, two postdocs and one graduate student

COLLABORATING AT FERMILAB

SINCE:

1969

MAJOR CONTRIBUTIONS TO  
FERMILAB EXPERIMENTS:

Major hardware contributions include vertex detectors for CDF (SVX, SVX', SVX II) and CMS (forward pixels) while a major software contribution for CDF and CMS is Frontier, which allows worldwide database access.

PARTICLE PHYSICS RESEARCH

FOCUS: Heavy quark physics, both bottom and top, and the search for the Higgs boson and "beyond the Standard Model" particles.

WHAT SETS PARTICLE PHYSICS AT  
JOHNS HOPKINS UNIVERSITY  
APART?

Our experimental group has a very strong synergy with our theoretical particle physics group.

FUNDING AGENCIES:

National Science Foundation, Department of Energy

View all [University profiles](#)

**In Brief**

large amount of data produced by the Tevatron has allowed us to place the world's strictest limits on Z-photon interactions. These constraints are more than an order of magnitude better than the limits set by LEP and a factor of two improvement on the last Tevatron search, which was based on a data set half the size of what we currently have.

[Learn more](#)

-- edited by Andy Beretvas and G.P. Yeh



Top row from left: John Freeman and Vadim Rusu, Fermilab. Bottom row from left: Tom Phillips, Duke; and Max Goncharov, MIT.

**Accelerator Update**

Sept. 6-8

- Four stores provided ~ 25.25 hours of luminosity
- Store 8060 quenched
- NuMI and MiniBooNE accessed their collision halls

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

**Announcements**

[Fermilab Today](#)[Result of the Week](#)[Safety Tip of the Week](#)[CMS Result of the Month](#)[User University Profiles](#)[ILC NewsLine](#)**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)Visit the Fermilab [home page](#)[Unsubscribe](#) from *Fermilab Today***EAP offers September webinar**

Fermilab's Employee Assistance Program offers a webinar in September titled "The Many Faces of Loss: Healing Through Grief".

The webinar will be broadcast on Tuesday, Sept. 14, at 2 p.m. CDT and Thursday, Sept. 16, at 11 a.m. CDT.

Anyone interested in virtually attending the live events can register through the Fermilab [EAP website](#) with the User ID "Fermilab" and the password "eap".

The event is one of the monthly one-hour Webinars offered by Fermilab's Employee Assistance Program. All Webinars are archived so they can be viewed at a later date if the scheduled date/time is not convenient.

**In the News****More West Nile mosquitoes found in Kane**

From *The Courier News*, Sept. 1, 2010

Mosquitoes collected in traps in Carpentersville, Montgomery and at Fermilab near Batavia have tested positive for the West Nile virus, bringing the total number of positive batches to 13 this year, the Kane County Health Department announced Tuesday.

Previously, the health department collected mosquitoes in the Aurora, Elburn, Batavia, Huntley, Montgomery and South Elgin areas that tested positive for the virus. Three birds collected this summer have tested positive; they were found in the Aurora, Pingree Grove and South Elgin areas, according to a department press release.

In addition, last week health department reported its first human case of West Nile virus of the season, a 46-year-old man from Burlington, the release noted.

"We have seen mosquitoes collected from all parts of our county that have tested positive, telling us the virus is in our communities," Executive Director Paul Kuehnert said in the release. "Until we have the first killing frost, we're going to continue to see a risk for West Nile."

[Read more](#)**Latest Announcements**[Fox Valley Robotics 5th-8th grade info meeting - Sept. 10](#)[ReadyTalk Tutorial - Sept. 10](#)[Toastmasters - Sept. 16](#)[DSD at User's Center on Sept. 10](#)[Fermilab International Folk Dancing resumes at the Barn Thursdays from today](#)[Argentine Tango, Wednesdays through Sept. 29](#)[Heartland blood drive total was 90 lifesaving units of blood](#)[Chicago Blackhawks pre-season discount tickets](#)[Reduced parking behind Ramsey Auditorium - Sept. 7-17](#)[Junior Prairie Rangers - Sept. 18](#)[Workshop on Accelerator-Driven Sub-Critical Systems & Thorium Utilization](#)[Sign up for fall Science Adventures](#)[Regal Movie Theater discount tickets](#)[Fermilab Lecture SeriespPresents A Croc Odyssey: Speedy Gallopers with a Taste for Dinosaur - Sept. 10](#)[Gizmo Guys - Fermilab Arts Series - Sept. 25](#)[Family Science Time - Saturday, Sept. 25](#)[Submit an announcement](#)