

Calendar

Thursday, Oct. 16
THERE WILL BE NO PHYSICS AND DETECTOR SEMINAR THIS WEEK

2:30 p.m.

[Theoretical Physics Seminar](#) - Curia II

Speaker: Keith Ellis, Fermilab
Title: The Assault on One-Loop QCD

3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY

Friday, Oct. 17

3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
THERE WILL BE NO JOINT EXPERIMENTAL-THEORETICAL PHYSICS SEMINAR THIS WEEK

Saturday, Oct. 18

7 p.m.

Title: [The Atom Smashers](#) - Ramsey Auditorium

Sunday, Oct. 19

2:30 p.m.

[Fermilab Arts Series](#) - Auditorium

Title: George Winston in Concert

Tickets: \$25/\$13

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

Weather

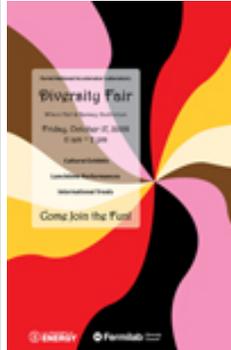


Sunny
56°/36°

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

Feature

Busy Friday: Diversity Fair and Labwide Party



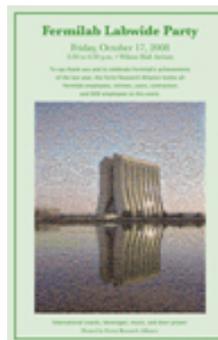
Friday you get a chance to celebrate diversity *and* the achievements of the last year.

From 11 a.m. to 2 p.m., the Planning Group for Multicultural Events, a subcommittee of the [Diversity Council](#) formed last July, will hold its

inaugural event with a Diversity Fair. The fair will give employees a chance to see the many aspects of diversity at the laboratory. The fair includes a variety of [performances](#) in Ramsey Auditorium, noon to 1 p.m., including music and dance, as well as tables with ethnic food in the atrium. About a dozen display tables in the cafeteria and atrium will provide information on ethnic groups from Europe, Asia, the Americas and Africa. Other display tables will have information on veterans, people with disabilities as well as gay, lesbian, bi-sexual and transgender people.

From 3:30 to 6:30 p.m., employees will gather for the Labwide Party in the Wilson Hall atrium. The Fermi Research Alliance hosts the party to say thank you and to celebrate the achievements of the past year. The party will feature international snacks, beverages, music and door prizes. All Fermilab employees, retirees, users, contractors and DOE employees are invited.

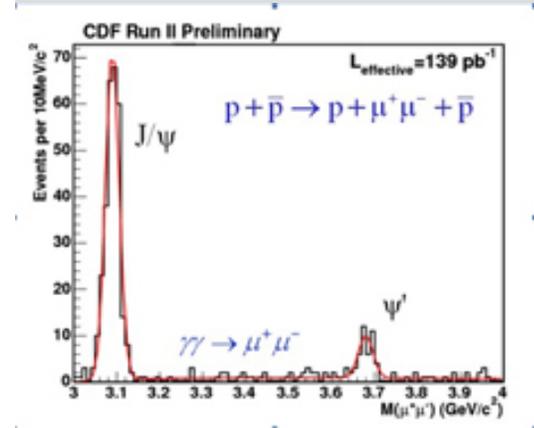
Because of these activities, the cafeteria will serve lunch from 11 a.m. to 1 p.m. on Friday. The cafeteria will close at 1 p.m.



Feature

Fermilab Result of the Week

Charmed particles all alone at the Tevatron



This plot shows the exclusive charmonium events observed for the first time at a hadron-hadron collider.

We always think of the Tevatron as a proton-antiproton collider, but it is also a photon-photon collider. Protons are electrically charged and carry with them electromagnetic fields. When a proton and antiproton pass each other, photons can interact and convert into a pair of charged particles: electrons, muons, taus or quarks. In this process, referred to as exclusive production, a proton and antiproton escape from an interaction intact and continue to travel down the beampipe.

Electron and muon pairs are the easiest exclusive events to measure and CDF scientists have now observed both. These reactions have previously been observed in electron-positron collisions and electron-proton collisions, but this is the first observation of them in hadron-hadron collisions. CDF physicists observe these electron or muon pairs with no other particles visible in the CDF detector.

CDF collaborators also observed exclusive J/ψ and Ψ' production (bound states of a charm and an anti-charm quark) decaying to muon pairs. This reaction has also been seen in electron-proton collisions, but never before in hadron-hadron collisions. In these collisions, a photon in the electromagnetic field of one proton fluctuates into a charmed-quark pair. This pair scatters elastically on the antiproton,

Current Security Status

[Secon Level 3](#)

Wilson Hall Cafe

Thursday, Oct. 16

- Minnesota wild rice w/chicken
- Tuna melt on nine grain
- Italian meatloaf
- Chicken casserole
- Vegetarian salad wrap
- Assorted sliced pizza
- Mandarin chicken

[Wilson Hall Cafe menu](#)

Chez Leon

Thursday, Oct. 16

- Dinner
- Roasted red pepper & portabella mushroom Salad
 - Surf & turf
 - Potato cups
 - Brussels sprouts
 - Lemon Napoleons

Wednesday, Oct. 22

- Lunch
- Grilled salmon w/scallion sauce
 - Lemongrass rice
 - Pineapple upside down cake

[Chez Leon menu](#)

Call x4598 to make your reservation.

Archives

[Fermilab Today](#)

[Result of the Week](#)

[Safety Tip of the Week](#)

[ILC NewsLine](#)

Info

Local girl's Fermilab project wins state fair



Emily Launer, a family friend of Fermilab theorist Carl Albright, looks over her award-winning Illinois State Fair presentation on Fermilab with Albright.

Emily Launer last May presented her award-winning eighth-grade history project at the Illinois State Fair in Springfield. Launer, a family friend of Fermilab theorist Carl Albright, has had a strong interest in Fermilab since she was in fourth grade.

She completed the class assignment, a paper and a power point presentation, which she later shared with a Fermilab audience. The presentation focused on the history of Fermilab, information she got from interviewing Albright.

In Springfield, her presentation won Superior place out of hundreds of students. Launer took home a blue ribbon. Launer said she had an advantage since her information came from a person involved in the history and not from a text book.

"I was so excited when I heard she won," Albright said.

Launer, who attended St. Mary's school in DeKalb, said she chose to do her presentation on Fermilab because she loved the topic and she "knew she had great resources."

"I was fascinated by Fermilab because everything was so big. There was so much work put into making the accelerators," Launer said.

Launer is now a freshman and swimmer at Rosary High School in Aurora.

Feature

thereby forming a charmonium hadron. These data should help scientists improve their knowledge of this poorly understood, rare scattering mechanism.

Another exclusive process also was observed for the first time in this study: production of another charmonium hadron called a X_c , decaying to a J/Ψ and a photon. This process occurs in a very similar way to the production of the Higgs boson with no other particles - both protons going down the beam pipes. Scientists hope to see this process at the LHC. This observation of X_c 's is the best evidence so far that the proton-Higgs-proton final state must occur with a detectable rate at the LHC if the Higgs exists.



The authors of this analysis are

Mike Albrow
(Fermilab)

Long Zhang
(Univ. Alberta)

James Pinfold
(Univ. Alberta)

In the News

Fermilab: Where physics and bison meet

From *Chicago Tribune*, Oct. 16, 2008

Underground, particles collide into one another as scientists try to find out what makes up the universe.

Above ground, the universe as we know it is abundant—plants, trees and animals live on more than 6,000 acres at Fermi National Accelerator Laboratory, or Fermilab.

Fermilab, in west suburban Batavia, is known for physics research. But the grounds surrounding the particle accelerator are open to the public for a different kind of exploration. People can come to the lab to enjoy nature, learn about science and just have fun.

"[Fermilab] is as open as possible," said spokesman Kurt Riesselmann.

[Read more](#)

Fermilab Today

is online at:

www.fnal.gov/today/

Send comments and

suggestions to:

today@fnal.gov

Education volunteer nominations due Oct. 27



PPD's Jerry Zimmerman received the 2007 Director's Award.

Each year, Fermilab has more than 200 volunteers who help to keep the laboratory's K-12 education programs running like well-oiled machines. These volunteers are role models and mentors for teachers and students, answer tough questions about Fermilab and its science, maintain Lederman Science Center exhibits, visit area classrooms and more.

And once a year at a reception, the laboratory recognizes the efforts of one of these especially dedicated volunteers with the Director's Award. Last year's recipient, Jerry Zimmerman, also known as Fermilab's "Mr. Freeze", won for his years of work educating students and the public through his cryogenics show.

To nominate a candidate for this award, download a nomination form. Candidates can include Fermilab staff members, users or contractors. Submit or e-mail completed forms to Carol Angarola or Gayle Millman, WH15W, MS226 by Monday, Oct. 27 for consideration.

Nominations will be chosen by a selection panel. The Director's Volunteer reception will take place on Wednesday, Nov. 5 at 5 p.m. on the 2nd floor crossover. Director Pier Oddone will present the winner with an award of \$1,000, made possible by an anonymous donor.

[Learn more](#)

Announcement

In the News

Stanford Linear Accelerator Center renamed SLAC National Accelerator Laboratory

From *Interactions.org*, Oct. 15, 2008

New name honors successful past, launches a future of scientific expansion

The U.S. Department of Energy (DOE) has renamed Stanford Linear Accelerator Center the SLAC National Accelerator Laboratory.

What's in a name? Great past, great future, great science. . . .

"The new laboratory name acknowledges the distinguished accomplishments SLAC has achieved over the years, and its exciting future as a multi-program Department of Energy National Laboratory," said Under Secretary for Science Dr. Raymond L. Orbach. "The laboratory's world-leading set of core capabilities makes it a key member of the Department's National Laboratory complex, and fuels the Office of Science research capabilities for the future."

[Read more](#)

Accelerator Update

Oct. 13-15

- Four stores provided ~36 hours of luminosity
- Accumulator and NuMI kickers fixed
- Pelletron resumes providing cooling

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

Announcements

[Have a safe day!](#)

Traffic safety poster contest
The Traffic Safety Subcommittee is sponsoring a traffic safety poster contest for fourth and fifth grade students of Fermilab employees, users and contractors. The posters should promote increased traffic safety awareness. Entries are due Oct. 31. The contest winner will be announced in *Fermilab Today*. The top posters will be displayed in the Wilson Hall atrium. For more information and an entry form, [click here](#).

"The Atom Smashers" panel

Portion of bike path closes for construction Monday



Map of bike path closures and alternate routes.

Beginning Monday, Oct. 20, the bike path between Road D and the Wilson Hall east parking area will close for construction. A project will begin Monday to install a redundant source of drinking water for Wilson Hall. Crews will excavate and install a water service pipe between the reflecting pond and the Tevatron berm, adjacent to the bike/walking path. Check the map above for alternate routes. All bicyclists should follow Illinois regulations and be aware of your surroundings and traffic.

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discussion at Fermilab
Fermilab will show the 78-minute directors' cut of the PBS documentary "[The Atom Smashers](#)," which looks at the race for discovery between Fermilab and CERN. The event includes a panel discussion with scientists featured in the film, including Nobel Laureate Leon Lederman. Saturday, October 18, at 7 p.m., in Fermilab's Ramsey Auditorium. Tickets are \$5. For tickets, call (630) 840-2787.

Town hall meeting with future director general of CERN
Fermilab will host an open town hall meeting with Rolf-Dieter Heuer, the designated director general of CERN, Oct. 28, at 10:45 a.m. in Ramsey Auditorium, followed by a reception in the WH Art Gallery (2nd floor) at noon. The town hall meeting includes a 10-minute presentation by Heuer and a 60-minute Q&A session. Everyone is invited. Heuer would like to meet with all members of the U.S. particle physics community.

[Additional Activities](#)