

## Calendar

**Wednesday, Sept. 17**  
**3:30 p.m.**  
 DIRECTOR'S COFFEE  
 BREAK - 2nd Flr X-Over  
 THERE WILL BE NO  
 FERMILAB COLLOQUIUM  
 THIS WEEK

**Thursday, Sept. 18**  
 THERE WILL BE NO  
 PHYSICS AND DETECTOR  
 SEMINAR THIS WEEK  
 THERE WILL BE NO  
 THEORETICAL PHYSICS  
 SEMINAR THIS WEEK  
**3:30 p.m.**  
 DIRECTOR'S COFFEE  
 BREAK - 2nd Flr X-Over  
 THERE WILL BE NO  
 ACCELERATOR PHYSICS  
 AND TECHNOLOGY  
 SEMINAR TODAY

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

## Weather



**Sunny**  
 79°/53°

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

## Current Security Status

[Secon Level 3](#)

## Wilson Hall Cafe

## Feature

### Safety slogan voters win Fermilab gear



Prizes available for those who voted on the best  
 safety slogan of the year.

We asked for your vote, and you delivered!  
 More than 400 people submitted their votes for  
 the best safety messages displayed at  
 Fermilab site entrances. The following slogans  
 received the most votes.

1. Drive carefully - leave collisions to the  
 accelerator. (208 votes)
2. Many quantum worlds? Be safe in this  
 one. (113 votes)
3. Obey the speed limit, even light has one.  
 (99 votes)
4. CP violation is fine. Safety violation is  
 not. (67 votes)
5. I almost tripped on that same thing  
 yesterday. (65 votes)

All participants, regardless of their voting  
 choice, were eligible for prizes. The prizes and  
 randomly selected winners are:

- Fleece pullovers: Vic Majdanski, Evelyn  
 Aponte and David Ritchie.
- Baseball caps: Donatella Torretta, Pat  
 Oleck and Steve Conlon.
- Flashlights: Jeffrey Berryhill, Andrew  
 Johnson and Greg Derylo.

Thank you for your participation. If you have  
 suggestions for future safety messages,  
 please e-mail them to Tim Miller, [tmiller@fnal.gov](mailto:tmiller@fnal.gov).

--Kurt Riesselmann

## From the Particle Physics Division

### Underground science

*Greg Bock, acting head of the Particle Physics  
 Division, wrote this week's column.*

Quick: How many  
 collaborations use the MINOS  
 hall, 350 feet underneath the  
 Fermilab site? If your answer  
 was "One," you are mistaken.



Greg Bock

About 10 groups of physicists  
 have used the hall to conduct,  
 build or plan tests and  
 experiments in the five years  
 since its completion. Demand  
 for this underground space has become so  
 high that the Particle Physics Division has  
 named Catherine James as the MINOS area  
 coordinator. She makes sure that tenants  
 obtain access to the area without interfering  
 with each other's projects.

The best known tenant of the area, of course,  
 is MINOS. The MINOS collaboration installed  
 its neutrino detector in 2004 and uses the high-  
 intensity muon neutrino beam that traverses  
 the hall for its neutrino oscillation search.  
 MINOS has already published several [physics  
 results](#) and presented its latest findings this  
 summer at the International Conference on  
 High Energy Physics.

The MINOS area has attracted many other  
 groups of physicists who need an intense  
 neutrino beam or who value the layers of rock  
 above the hall to hide their detectors from  
 cosmic rays. Among them is COUPP, which  
 installed its first dark matter detector in the hall  
 in late 2005. Earlier this year, COUPP  
 published its first dark matter [search results](#).  
 This fall, the collaboration plans to replace its  
 one-liter bubble chamber with a 30-times  
 larger one, improving the sensitivity of its dark  
 matter search. Another group of physicists  
 uses the MINOS area to test charge-coupled  
 devices, or CCDs, for possible dark matter  
 detection.

A nice feature of neutrino experiments is that  
 you can line them up one in front of the other  
 so that they can share a neutrino beam.  
[MINERvA](#) will soon begin to install prototype  
 neutrino detectors in front of the MINOS

## Wednesday, Sept. 17

- Smart cuisine: Cajun-style lentil soup
- Cajun chicken ranch
- Smart cuisine: tilapia w/ jalapeno lime sauce
- Parmesan baked pork chops
- Smoked turkey panini pesto mayo
- Assorted sliced pizza
- Chicken alfredo fettucine

### [Wilson Hall Cafe Menu](#)

#### Chez Leon

## Wednesday, Sept. 17

### Lunch

- Pork satay w/peanut sauce
- Jasmine rice
- Coconut cake w/ rum caramel sauce

## Thursday, Sept. 18

### Dinner

- Spinach & feta in phyllo
- Roasted prime rib
- Herb & garlic potatoes
- Dilled baby carrots & green beans
- White chocolate mousse

### [Chez Leon Menu](#)

Call x4598 to make your reservation.

#### Archives

### [Fermilab Today](#)

### [Result of the Week](#)

### [Safety Tip of the Week](#)

### [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)

#### Feature

## Unusual entertainment at Fermilab Saturday



Michel Lauziere. Photo courtesy of Michel Lauziere.

He juggles.

He wears a giant balloon.

He plays the drums with his head.

Michel Lauziere – self-titled “Master of Unusual Comedy” – specializes in putting a different spin on entertainment, including turning household items into musical instruments. This Saturday, the artist, humorist and magician will bring his wacky melodies to Fermilab.

Back by popular demand, Lauziere will return to Wilson Hall’s Ramsey Auditorium at 7 p.m., Saturday, Sept. 20, for a family-friendly show.

A quick tour of YouTube videos of Lauziere’s work turns up a bizarre collection of talents, not the least of which is his unique ability to find new ways to perform as a one-man band.

Lauziere has performed in more than 50 countries on five continents. For the show “Late Night with David Letterman,” Lauziere played “March of the Toreador” from the opera “Carmen” using 300 glass bottles, 16 baking pans, 16 golf balls, 16 mousetraps, springs, coat hangers and a pair of in-line skates. See the episode [online](#).

“Trust me,” Letterman said on the YouTube video. “You’re going to see something you’ve never seen before.”

But perhaps save an extensive YouTube search for after your visit to see Lauziere live at Fermilab – you wouldn’t want to ruin the surprise.

detector. MINERvA plans to measure low-energy neutrino interactions both in support of neutrino oscillation experiments and to study the particle interactions inside nuclei.

In 2009, the NOvA collaboration expects to receive approval for the construction of its off-axis neutrino experiment. The collaboration is already carrying out the design for blasting out its own underground space, adjacent to the MINOS hall. The new space will allow NOvA scientists to position a 222-ton neutrino detector off the center of the MINOS muon neutrino beam. NOvA will build a second detector, which weighs 15,000 tons, in Ash River, Minn. The major [science goal](#) of the NOvA experiment is the observation of muon neutrinos transforming into electron neutrinos. The observation will bring us a step closer to understanding what role neutrinos play in the evolution of the universe.

Two smaller neutrino physics groups have ties to the MINOS area as well. In 2005, the [PEANUT collaboration](#) used the muon neutrino beam to test emulsion technology for the OPERA neutrino experiment in Italy, which looks for the transformation of muon neutrinos into tau neutrinos. This fall, the [ArgoNeUT collaboration](#) will install its liquid-argon neutrino detector in the MINOS area. Within six months, the collaboration expects to record tens of thousands of muon neutrinos--the first real test of this technology in the United States.

Other tests and measurements are underway or proposed, from studying the motion of cavern floors to testing neutrino beam instrumentation to measuring radiation induced by muon beams.

So far, there seems to be no letup in the desire to use the MINOS area. If you build it underground, they will come.

#### Safety Update

## ES&H weekly report, September 16, 2008

This week's safety report, compiled by the Fermilab ES&H section, lists two minor first-aid incidents. The laboratory has worked 27 days without a reportable incident. The full safety report is [here](#).

[Safety report archive](#)

#### Announcements

For more information or to make reservations, call (630) 840-ARTS (2787). Tickets cost \$17 for adults or \$9 for guests 18 and under. For information about Michel Lauziere, check out his Web site at <http://www.michellauziere.com>.

-- Kathryn Grim

#### In the News

### Opinion: From U.S. to Europe: A changing of the guard on the frontier of physics

From *MinnPost.com*, Sept. 15, 2008

In December 1951, scientists from 21 nations met in Paris to consider ideas for reviving Europe's prominence in physics in the aftermath of World War II. Most of America's best trained physicists had worked in Europe's prewar laboratories. But with Europe shattered, a new generation of physicists had to go to the United States or the Soviet Union to conduct research.

The result of that meeting long ago in Paris is culminating now as scientists at the CERN laboratory near Geneva warm up their mighty Large Hadron Collider to begin smashing atoms and taking back their lead in physics, according to an essay in [this week's Nature](#) (PDF).

And American physicists find themselves where their predecessors were decades ago, going to Europe if they want to do cutting-edge studies. Indeed, 26 scientists from the University of Minnesota are among the 1,700 worldwide who are collaborating on experiments at CERN that will explore the deepest mysteries of the universe. The United States contributed \$531 million toward the \$10 billion collider, but Europe has taken the lead in financing and building it.

[Read more](#)

#### In the News

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

#### Dark matter, dark energy talk in D.C

The Smithsonian in Washington D.C. will feature three prominent physicists in a discussion about dark matter and dark energy on Sept. 24. Fermilab theorist Joe Lykken and University of Chicago astrophysicists Rocky Kolb and Michael Turner will discuss upcoming research, including the use of accelerators, particle detectors and telescopes to unravel the mystery of what constitutes the 96 percent of universe that does not consist of known matter. [Click here to learn more](#)

#### Teen robotics club sign up Saturday

Computing Division's Dave Dykstra is seeking high school students for the competitive Batavia Robotics club he coaches. An organizational meeting will be held the afternoon of Saturday, Sept. 20. Teams will be formed soon. To attend, contact Dave Dykstra [dwd@fnal.gov](mailto:dwd@fnal.gov). To learn more, see a [previous Fermilab Today story](#).

#### Tango lessons get new time, class

The ongoing Wednesday dance lessons in Ramsey Auditorium will meet at new times. The beginner class will meet at 7 p.m. The intermediate/advanced class will meet at 8 p.m. The new basic I & II level classes, starting Sept. 24 and running through Oct. 15, will meet at 6:30 p.m. for the first class and 7 p.m. thereafter. The four-set class costs \$60 per person. Pay at the first class. To sign-up, e-mail Pamela Noyes, [noyes@fnal.gov](mailto:noyes@fnal.gov).

#### Flu shot clinics for 2008 season

Use the east entrance of each building for the following clinics: Oct. 2 from 9 a.m. to 1 p.m. in Wilson Hall, ES&H training room, Oct. 14 from 9 to 11:30 a.m. in the Industrial Center Building's main floor lunch room, Oct. 21 from 9 to 11:30 a.m. Wilson Hall ES&H training room. Active full-time employees, term employees and temporary employees are eligible for the vaccinations. Not eligible are: contractors, family members of employees, visitors/experimenters, seasonal employees, dayworkers, on-call employees and retirees. Register online at the [ES&H homepage](#) or call ext. 3232. Bring your Fermilab ID card and a completed consent form from the ES&H homepage. Wear a loose-fitting shirt. Pregnant employees need a note from a doctor.

#### [Additional Activities](#)

## Physics collides with sexy for a brief moment

From *The Canberra Times*, Sept. 13, 2008

Forget those stories about high levels of cyber-hits generated by news of Britney Spears or Amy Winehouse going into bad behaviour meltdown.

They've been spectacularly upstaged by a big underground machine that is being primed to re-create the origins of the universe the Big Bang.

In cyberspace, the world has gone crazy for the Large Hadron Collider a multi-billion dollar device that sends proton beams whizzing around a 27km circular tunnel on the outskirts of Geneva.

A rap video clip, showing dancing scientists in white lab coats and hard hats rappin' the LHC on location in those high-tech tunnels, had had more than 2.5 million hits on You Tube in the last four days. Kate MacAlpine (rap name: Alpinecat), a physics trainee with the team operating the high-energy particle accelerator, wrote the lyrics during her daily bus commute to work.

Yesterday's revelation that troubled British singer Amy Winehouse is buying a country farmhouse "to escape her demons" generated 47 news stories. Britney Spears did slightly better with around 60 stories on her MTV music awards makeover and plans for a Christmas album. But on Google News yesterday, there were just under 4000 news reports on the Large Hadron Collider's warm-up experiments, and the mix of elation and doomsday hysteria the switch-on had generated.

[Read more](#)