

## Calendar

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

Wednesday, Dec. 16  
2 p.m.

#### [Particle Astrophysics Seminar](#)

(NOTE DATE) - One West  
Speaker: Pierre Fayet, École Normale Supérieure, Paris  
Title: More on U(1) Symmetries, New Gage Boson and Light Dark Matter Particles  
3:30 p.m.  
DIRECTOR'S COFFEE  
BREAK - 2nd Flr X-Over  
THERE WILL BE NO FERMILAB COLLOQUIUM THIS WEEK

Thursday, Dec. 17  
2:30 p.m.

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

Speaker: Richard Hill, University of Chicago  
Title: SU(3)/SU(2): The Simplest WZW Term  
3:30 p.m.

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

4 p.m.  
Special Joint Experimental-Theoretical Physics Seminar (NOTE DATE) - One West  
Speaker: Lauren Hsu, Fermilab  
Title: New Results from the Cryogenic Dark Matter Search

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

### [Upcoming conferences](#)

## Campaigns

## Feature

### Happy Holidays from Fermilab



Click on the image above to view the full-size holiday greeting card. Scroll down past the image for instructions on how to send the card to your friends.

Earlier this year, Fermilab's ArgoNeuT experiment recorded signature particle tracks from neutrinos in its detector. These tracks were the first ever seen in a liquid-argon detector in the United States.

To learn more about the ArgoNeuT detector or the particle track milestone, read the [July 1 issue](#) of *Fermilab Today*.

## Feature

### LARP reaches magnet technology milestone



A focusing magnet, with quadrant slices visible, was built by LARP using advanced superconducting material. The magnet just passed a test at Fermilab showing it can withstand greater heat and energy levels that will be needed for the next phase design of the LHC.

The Large Hadron Collider (LHC) at CERN has just started producing collisions, but

## Director's Corner

### Short visit to Perú



Fermilab Director Pier Oddone with distinguished Peruvian scientists Modesto Montoya and Victor La Torre after Oddone received an honorary degree from Universidad Ricardo Palma.

During the last two weeks I visited Perú for the first time in more than 20 years. I found a country much changed and developing quickly. I grew up in Perú and left in 1960 to study in the US at a time when it would have been nearly impossible to study physics in Perú. While Perú has a long way to go in physics, the drive to understand and promote science generally is there, thanks to the heroic effort of a few devoted academics over the last decades. In high energy physics both the Pontificia Universidad Católica del Peru (PUCP) and the Universidad Nacional de Ingeniería (UNI) have groups working at Fermilab in the Minerva collaboration. My visit was an opportunity for building new relations and promoting the importance of science and technology.

While in Perú I received a doctoral degree honoris causa from the Universidad Ricardo Palma, received a medal as the Embajador Científico y Tecnológico del Peru 2010 from the Red Internacional de Ciencia y Tecnología, was made a foreign member of the Academia Nacional de Ciencias, was member of the jury for the master's degree of Kenyi Hurtado, a Minerva graduate student at the Universidad de Ingeniería and participated in several interviews including one on a popular radio and television program talking about "el bosón de Higgs," particle physics and the importance of research on fundamental science. The folks who promoted all these honors and organized my visit also had in mind reaching young people with a living example of the possibilities and

[Take Five](#)[Tune IT Up](#)[H1N1 Flu](#)

For information about H1N1, visit Fermilab's flu information [site](#).

[Weather](#)

Mostly sunny  
19°/13°

[Extended Forecast](#)  
[Weather at Fermilab](#)
[Current Security Status](#)[Secou Level 3](#)[Wilson Hall Cafe](#)

Wednesday, Dec. 16

- Breakfast: English muffin sandwich
- Cajun-style lentil soup
- Cajun chicken ranch
- Braised pork chops
- Chicken parmesan
- Smoked turkey panini pesto mayo
- Assorted sliced pizza
- Chicken Alfredo fettuccine

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

Wednesday, Dec. 16

- Lunch
- Stuffed flank steak
  - Garlic mashed potatoes
  - Cherry cheesecake

Thursday, Dec. 17

- Dinner
- Red pepper soup
  - Beef croustades with boursin and mushroom
  - Spinach with scallions and lemon
  - Roasted potatoes
  - Raspberry parafit with Christmas cookies

[Chez Leon Menu](#)

scientists and engineers have already made significant progress in preparing for future upgrades beyond the collider's nominal design performance, including a 10-fold increase in collision rates by the end of the next decade and, eventually, higher-energy beams.

In a test on Dec. 4, a focusing magnet built by members of the U.S. Department of Energy's multi-laboratory LHC Accelerator Research Program (LARP), using an advanced superconducting material, achieved the goal of creating a magnetic field strong enough to focus intense proton beams in the upgraded LHC interaction regions.

"This success has been made possible by the enthusiasm and dedication of many scientists, engineers, and technicians at the collaborating laboratories," said Eric Prebys of the Fermi National Accelerator Laboratory, who heads LARP, "and by the guidance and continuous support of the U.S. Department of Energy and the encouragement and contributions of CERN and the entire accelerator magnet community."

LARP is a collaboration of Brookhaven National Laboratory, Fermilab, Lawrence Berkeley National Laboratory and the SLAC National Accelerator Laboratory founded by DOE in 2003 to address the challenge of planned upgrades that will significantly increase the LHC's luminosity.

[Read more](#)

-- *Paul Preuss*

[Special Announcement](#)

## Food, magic and funny physicists at potluck party



Fermilab's Inaugural potluck party begins tonight at 5 p.m.

Enjoy food from around the world, singing by Fermilab's Daycare children and comedy skits from some of Fermilab's funniest physicists.

From 5 to 6:15 p.m., Fermilab employees, retired employees, users, contractors, funding agency employees and their families and friends will gather in the Wilson Hall atrium to

excitement of a scientific career. We live in a special time when the interest in physics across the world is piqued by the turn-on of LHC and the potential to answer many mysteries that confront us.

I was struck by Perú's rapid development over the last couple of decades. Lima has extended greatly both in area and height, with many high rise buildings replacing houses in residential areas throughout Lima. The economic crisis seems much attenuated, with a strong informal economy and a booming internal market. It is early enough in the development of the country to channel technologies, especially energy technologies, in the right direction. Perú starts in a good position with 60 percent of its electrical energy generated by hydroelectric power. I had the honor to meet Ing. Pedro Sanchez, the Secretary of Energy and Mines, who expressed his interest in collaborating with DOE in setting up an institute for energy efficiency in Peru. The opportunity for collaboration with DOE labs and US universities across a broad scientific field could be very fruitful.

[Safety Update](#)

## ES&H weekly report, Dec. 15

This week's safety report, compiled by the Fermilab ES&H section, includes four non-recordable injuries, including one involving reaching into a stuck drawer. We have now worked 54 days since the last recordable injury. Find the full report [here](#).

[Safety report archive](#)

[Announcements](#)[Latest Announcements](#)

[Fermilab December Payroll Information](#)

[TIAA-CREF Financial Education Seminar - Dec. 21](#)

[Process Piping Materials, Fabrication, Examination & Testing \(ASME B31.3\) class offered in Feb. 3-4](#)

[Python Programming class offered Feb. 24-16](#)

[East gate to begin closing 1-5 a.m.](#)

Call x3524 to make your reservation.

## Archives

## [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](#)

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enjoy a wide variety of cultural cuisine.

At 5:30 p.m., children from the Fermilab Daycare will sing Christmas songs in the Fermilab atrium.

From 6:30-8:30 p.m., the evening's entertainment will take place in Ramsey Auditorium. Rocky Kolb will emcee the event, which will include skits, songs and more. View the program and find out more at the party [Web site](#).

From *symmetry breaking*

## This week at the LHC

The LHC had a successful weekend, with the experiments recording a total of 50,000 collisions at 2.36 TeV, the LHC's maximum energy for 2009. Collectively, the six LHC experiments saw over one million collision events at 900 GeV, which also provided enough data to characterize the accelerator. Last night, the LHC circulated the highest intensity beams yet, with 16 particle bunches per beam. Each bunch contained approximately 20 billion particles.

The weekend's collision events are an exciting confirmation of the machine's abilities, but there is still a long way to go. This year's LHC run ends this week. The LHC will restart in the first quarter of 2010, following maintenance and hardware preparation for the next milestone, collisions at an energy of 7 TeV (3.5 TeV per beam).

[Read more](#)

[beginning Jan 5](#)

[Fermilab blood drive today](#)

[Inaugural potluck party today](#)

[Free martial arts classes today](#)

[FermiLab Mac Users' group meeting - today](#)

[Scottish country dancing will meet every Tuesday through December](#)

[International folk dancing meets Dec. 17, then not until Jan. 7](#)

[Give the gift of movies](#)

[Book atrium events through the Office of Communication](#)

[FMLA and FTL policy updates](#)

[English Country Dancing - Jan. 3](#)

[Fermilab Management Practices seminar beginning Feb. 11](#)

[Sign up for spring Science Adventures classes](#)

[Argentine Tango at Fermilab meets Wednesday nights](#)

[Prescription eyewear technician location change](#)

[Lederman Science Center holiday hours](#)

[Chicago Blackhawks discount tickets](#)

[Additional activities](#)

[Submit an announcement](#)