

## Calendar

### Friday, October 28

**1:00 p.m.** UTeV Lecture - Curia II

Speaker: A. Weinstein, California Institute of Technology

Title: The Search for Gravitational Waves: Their Detection

**3:30 p.m.** Director's Coffee Break - 2nd Flr X-Over

**4:00** Joint Experimental Theoretical Physics Seminar - 1 West

Speaker: A. Weinstein, California Institute of Technology

Title: The Search for Gravitational Waves with LIGO: Recent Results

### Monday, October 31

**2:30 p.m.** Particle Astrophysics Seminar - Curia II

Speaker: P. Garnavich, University of Notre Dame

Title: Supernovae as Cosmological Probes

**3:30 p.m.** Director's Coffee Break - 2nd Flr X-Over

**4:00 p.m.** All Experimenters' Meeting - Curia II

Special Topic: Recent Tevatron Efforts

## Weather



Dense Fog **58°/37°**

[Extended Forecast](#)

[Weather at Fermilab](#)

## Current Security Status

[Secou Level 3](#)

## Fermilab Sets Another World Record for Luminosity!

The Tevatron recently made a vast improvement in peak luminosity.

Operators set a new record on Thursday, October 27 at 2:54 a.m. The new record of  $158E30 \text{ cm}^{-2}\text{sec}^{-1}$  is almost 10 percent larger than the last record of  $145E30 \text{ cm}^{-2}\text{sec}^{-1}$ .

## Carlo Rubbia Gives Liquid Argon Seminar at Fermilab



Carlo Rubbia with physicist Bonnie Fleming and Fermilab director Pier Oddone. (Click on image for larger version.)

One West was packed Wednesday afternoon when Nobel Laureate Carlo Rubbia gave a special colloquium presentation on liquid argon technology. In his talk, Rubbia explained that liquid argon detectors are good for two reasons: they filter out backgrounds and pick up a stronger signal. He told yesterday's crowd: "With liquid argon, we've got the suspenders and the belt."

Often described as the father of this liquid argon technology, Rubbia started his career working on weak interactions at CERN in 1961. Fifteen years later, he spearheaded the first proton/antiproton collider by adapting CERN's Super Proton Synchrotron. It was the first antiproton

## Letter From CERN Director General Robert Aymar

October 26, 2005

Dear Colleagues,

It is with great sadness that I have to announce the accidental death yesterday afternoon of our colleague, José Pereira Lages, who worked for the company DBS.

The team to which Mr Pereira Lages belonged was positioning an electrical switchgear cabinet, weighing 1200kg, on its support in the LHC tunnel. For reasons as yet unknown, the cabinet slipped on its support and fell on him. CERN's emergency services were on the scene immediately, but were unfortunately unable to help.

The operation being undertaken was a common one, and Mr Pereira Lages had a reputation as one of the best forklift truck operators at CERN.

Three enquiries were immediately opened: one led by CERN's security commission, a second by the Geneva works inspectorate and the third by the Geneva police.

All work of a similar nature at CERN has been stopped until further notice. To express sympathy with the victim's family, and with his colleagues, no transport and handling work will resume until after a 24-hour period of respect.

I have sent my personal condolences, in the name of CERN, to Mr Pereira Lages'

## Wilson Hall Cafe

### Monday, October 31

- Cream of Wild Mushroom
- Blackened Fish Filet Sandwich
- Southern Fried Chicken
- Fish Mediterranean
- Eggplant Parmesan Panini
- Pizza Supreme
- Assorted Sub Sandwich

The Wilson Hall Cafe accepts Visa, Master Card, Discover and American Express at Cash Register #1.

[Wilson Hall Cafe Menu](#)

## Chez Leon

### Wednesday, November 2

#### Dinner

- Chicken Marbella
- Green Rice
- Vegetable of the Season
- Caramel Chocolate Cheesecake

### Thursday, November 3

#### Lunch

BOOKED

[Chez Leon Menu](#)

Call x4512 to make your reservation.

## Search

**Search the Fermilab Today Archive**

## Info

factory in the world. In 1983, Rubbia's team, known as the UA1 collaboration, discovered the W and the Z bosons, for which he and Simon Van Der Meer won the 1984 Nobel Prize in Physics. From 1989-1993, Rubbia served as the Director-General of CERN. He is currently a full-time professor at Pavia University in Italy.

Rubbia's visit to Fermilab came at a good time. Of particular interest for Fermilab is the prospect of building a liquid argon neutrino detector. Bonnie Fleming, a Yale professor and former Lederman fellow working on MiniBooNE explained, "In neutrino detection you have three options: make more neutrinos, capture more neutrinos, or get a better reading of those that you do capture." Liquid argon detectors do the latter; they can register 80-90 out of 100 neutrinos, while current methods might register only 20-30 percent. "Heavy liquid argon detectors would be an extremely powerful tool for Fermilab's NuMI beam," said Alberto Marchionni, a neutrino physicist at Fermilab. "This could be a great opportunity for collaboration." Fermilab's director, Pier Oddone was also excited about the visit: "This is exciting technology for Fermilab," he said. "And it is wonderful to have Carlo back."  
—*Siri Steiner*

## ILC NewsLine

### Low Emittance Beams in Focus at Nanobeams 2005

family.

—*Robert Aymar*

## Theory Group to Lead Academic Lecture Series

Next week, Fermilab's Theoretical Physics Department will kick off its academic lecture series aimed at graduate students and young postdocs. The first lecture is from 11 a.m. to 12:30 p.m. Tuesday, Nov. 1 in One West. Subsequent lectures will be held on Tuesdays and Thursdays for the rest of the year. "The lectures are intended to benefit students and young postdocs who are here at Fermilab running experiments, and who therefore don't have the opportunity to attend lectures at their home institutions," said organizer Marcela Carena of the Theory Group. "We want to conduct them in a way close to the types of lectures students get at universities. So it's not just one or two lectures, but a series of in-depth lectures on a given topic."

Fermilab theorist Chris Quigg will lead the first six lectures on Electroweak Theory and Higgs physics. "We will touch on topics of current interest at the Tevatron and look ahead to experiments at the LHC," Quigg said. "I'm looking forward to lively exchanges with the Fermilab 'students.'" Fermilab Frontier Fellow Paul Langacker, of the University of Pennsylvania, will discuss testing Electroweak Theory during the second set of lectures, beginning November 29 and ending December 15. "I'll try to give historical background on how the Standard Model has been tested quantitatively and why we believe it so much," Langacker said. "I'll also show that

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## Tesla

The attendees at the Nanobeams 2005 meeting in Kyoto, Japan

Last week's Nanobeams 2005 workshop made progress toward developing solutions for producing and preserving low emittance beams. In the International Linear Collider design, the colliding beams will be only five nanometers high and several hundred nanometers wide - not an easy feat.

[Read More](#)

## In the News

### From *The Beacon News Online*, October 27, 2005

#### To be the best

They've won 2 Super Bowls and a Nobel Prize, so it's no wonder these Fox Valley champions know what it's like to be the best

...Meanwhile, Leon Lederman doesn't have a commemorative ring, or even a pennant, but he could tell the White Sox a thing or two about being a champion

"They're a baseball team, right?" Lederman teased.

A 1998 Nobel Prize winner for physics, Lederman lives in Batavia and says the life of a champion means more than just "a wonderful party, a little cash and the respect of my children."

The honor "had more of an effect than I expected," he said.

this is still going on and is a part of the experimental program at Fermilab."

After this year's lectures are complete, the Theory Group will ask for student input, Carena said. The goal is to offer the lectures on a continuing basis with an expanded set of topics including CQD, neutrino physics, lattice gauge theory, astroparticle physics and physics beyond the Standard Model. For more information, visit [the Website](#).

—Kendra Snyder

## Announcements

### West Parking Lot

On Saturday, October 29 and Sunday, October 30, asphalt paving and striping work will be started in a large portion of the Wilson Hall west parking lot. The affected area will be barricaded off and will not be accessible for parking both Saturday and Sunday. Any vehicles parked in this area overnight Friday into Saturday morning will be towed to a spot farther out in the west lot. Normal parking should be available on Monday morning. Pedestrian access will be provided so that people can walk from unaffected parking areas to Wilson Hall on Saturday and Sunday. Call Roads and Grounds with any questions or concerns (x3303).

### Prairie Seed Harvest

The [prairie harvest](#) will take place tomorrow, October 29.

### Shutdown Begins March 1

The 14-week shutdown of the Fermilab accelerator complex is scheduled to begin on March 1. A draft schedule on how the shutdown will affect the experiments at the lab is available [online](#). *Fermilab Today* will provide updates in the future.

The director emeritus of Fermilab discovered he had to reign in his frequent wisecracks. The "amateur humorist" realized, "I've got to be more serious because people take everything you say very seriously."

In other words, no tongue-in-cheek comments about being exceptionally smart, or about buying "a pack of racehorses" with his Nobel winnings.

But on the positive side, people listen when a Nobel winner speaks. Lederman has channeled that into an impassioned advocacy for educational reform, particularly when it comes to math and science. He was instrumental in founding the Illinois Mathematics and Science Academy in Aurora and serves as the school's inaugural Resident Scholar.

[Read More](#)

### **GSA Halloween Party**

The GSA Annual Halloween Party will be Friday, October 28 from 7:30 p.m.-midnight at the Kuhn Barn.

### **Scottish Country Dancing and Halloween Party**

The Silk and Thistle group's annual Halloween party will take place next Tuesday, on Nov. 1. Info at 630-840-8194 or 630-584-0825 or [folkdance@fnal.gov](mailto:folkdance@fnal.gov).

### **FSGI01 Will Be Decommissioned On Dec 31, 2005**

We are encouraging users of fsgi01 to migrate their interactive computer usage to other interactive machines in FNALU cluster. You can visit the following [link](#) for information on the cluster.

### **Classifieds Delayed**

Due to technical difficulties, classifieds will not run today. *Fermilab Today* will provide a link as soon as they are available.

### **[Upcoming Activities](#)**