

Calendar

Mon., January 8
12:00 p.m. [Continuing Resolution](#) Question and Answer Session - 1 West
3:30 p.m. Director's Coffee Break - 2nd floor crossover
4:00 p.m. All Experimenters' Meeting - Curia II
 Special Topics: Wireless Network Name Change; First Demonstration of Beam-Beam Compensation in the Tevatron

THERE WILL BE NO PARTICLE ASTROPHYSICS SEMINAR TODAY

Tue., January 9
3:30 p.m. Director's Coffee Break - 2nd floor crossover

THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY

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

Weather



Mostly Cloudy 39°/25°

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

Current Security Status

[Secon Level 3](#)

Wilson Hall Cafe

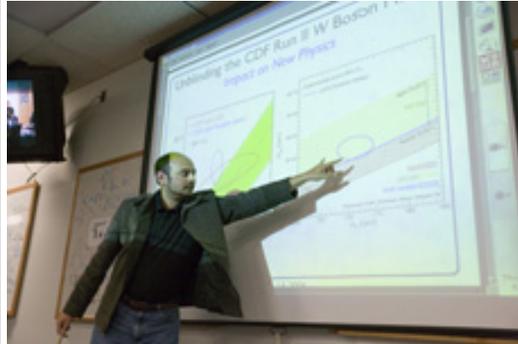
Monday, January 8
 NA

[Wilson Hall Cafe Menu](#)

Chez Leon

Fermilab Press Release

New CDF measurement suggests a lighter Higgs



Though a public release was made today, Ashutosh Kotwal of Duke University presented the results to the CDF collaboration on December 14.

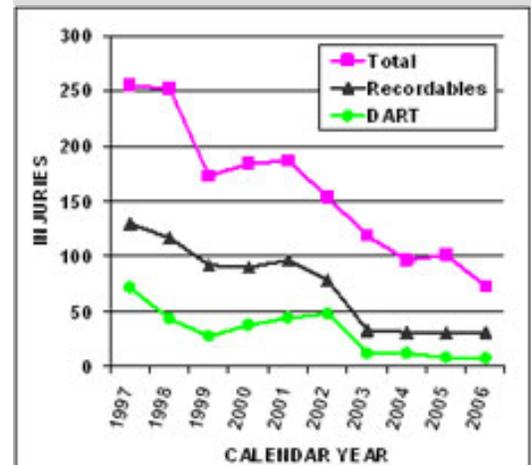
Today the CDF collaboration announced the world's most precise measurement by a single experiment of the mass of the W boson, the carrier of the weak nuclear force and a key parameter of the Standard Model of particles and forces. The new W-mass value leads to an estimate for the mass of the yet-undiscovered Higgs boson that is lighter than previously predicted, in principle making observation of this elusive particle more likely by experiments at the Tevatron particle collider at Fermilab.

Scientists working at the Collider Detector at Fermilab measured the mass of the W boson to be $80,413 \pm 48 \text{ MeV}/c^2$, determining the particle's mass with a precision of 0.06 percent. Calculations based on the Standard Model intricately link the masses of the W boson and the top quark, a particle discovered at Fermilab in 1995, to the mass of the Higgs boson. By measuring the W-boson and top-quark masses with ever greater precision, physicists can restrict the allowable mass range of the Higgs boson, the missing keystone of the Standard Model.

"This new precision determination of the W boson mass by CDF is one of the most challenging and most important measurements from the Tevatron," said Associate Director for High Energy Physics at DOE's Office of Science Dr. Robin Staffin. "Together, the W-boson and top-quark masses allow us to triangulate the location of the elusive Higgs boson."

Safety Tip of the Week

2006 injuries



With the arrival of a new year, it's a good time to reflect on progress we've made toward reducing injuries at work. The graph above shows excellent progress over the past ten years. However, our OSHA recordable cases and DART cases (Days Away, Restricted and Transfers) have nearly stagnated since 2003.

In 2006, Fermilab and its subcontractors had 73 total injuries, of which 31 were recordable and 7 involved days away or restricted. For recordable cases, the top categories were strains or sprains (8) and skin injuries (6). Slip, trip, or fall accidents were the cause of four of the seven DART cases, with another two coming from overexertion and pre-existing conditions. A deer-car collision caused the single non-strain or sprain DART case.

Based on our 2006 experience, we need to watch out for slips, trips, and falls. For example, make sure your pathway is clear, watch out for ice, and get a solid footing. Avoid awkward reaches and make sure you have a good grip on items you are moving. Another key factor is working within our limits. This is especially true with pre-existing conditions such as bad backs, prior ergonomic problems, or chronic health conditions.

[Safety Tip of the Week Archive](#)

Accelerator Update

Wednesday, January 10**Lunch**

Chicken Curry
 Steamed Jasmine Rice
 Sautéed Oriental Vegetables
 Coconut Flan

Thursday, January 11**Dinner**

Shrimp Chowder
 Veal Saltimbocca
 Steamed Green Beans with
 Red Onions
 Tomato Risotto
 Lemon Napoleons

[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/

Send comments and suggestions to:
today@fnal.gov

[Read Full Press Release](#)**Readers Write****What's up with the coyotes?**

A photo that ran last Wednesday caught the eye of Fermilab mail carrier Julius Borchert.

Dear FT:

The pictures of coyotes by Greg Vogel are excellent. This is the same coyote I saw last week on Dec. 28th. It was the third day in a row I had seen coyotes at work. It is very unusual for coyotes to be up during daylight; I have no idea why they are being active under the sun these days.

Before December, I had only seen a coyote once during the year I have worked here. I wonder what's going on?

--Julius Borchert, Fermilab mail carrier

Lab Ecologist Rod Walton explains:

Our coyote population at the lab has increased fairly dramatically over the last ten years. We don't have any systematic counts, but I suspect we have roughly 20 animals on the site now. As a result, sightings are more and more common.

Julius is correct that coyotes are more or less nocturnal, but they are around during the day as well, especially in an area like Fermilab, where they are really under no danger and the supply of mice and other food items (e.g., goose eggs in the Spring!!) is plentiful. This is especially true during January and February, when they are searching for mates. Like other canines, the gestation period for coyotes is roughly 9 weeks, so mating in late January means the pups would be born in March. That timing is good, because it avoids the worst of the winter (well, normally there would be a worst...) and give the pups the maximum time to mature before the next winter sets in.

January 3 - 5

- Three stores provided 42 hours and 7 minutes of luminosity
- MiniBooNE still off for absorber work

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

In the News**New York Times,
January 7, 2007:****Congressional Budget Delay Stymies
Scientific Research**

The failure of Congress to pass new budgets for the current fiscal year has produced a crisis in science financing that threatens to close major facilities, delay new projects and leave thousands of government scientists out of work, federal and private officials say.

"The consequences for American science will be disastrous," said Michael S. Lubell, a senior official of the American Physical Society, the world's largest group of physicists. "The message to young scientists and industry leaders, alike, will be, 'Look outside the U.S. if you want to succeed.' "

[Read More](#) (subscription required)

Announcements**Q&A with Oddone**

Director Pier Oddone will hold an informal question and answer session on the current budget situation today at noon in One West. For more information, see Friday's "[Special Director's Corner](#)."

Change in Wireless Connectivity

On Tuesday, January 9, between 6:00 a.m. and 7:00 a.m., the lab's general wireless network name will be changed in response to DOE recommendations to improve computer security. Windows and Mac users will be prompted to connect to the new network name, some Unix users may need to modify their system configuration. It is not necessary to know the new network name in advance; it will be displayed the first time a machine attempts to connect to the wireless network. Additional information on the name change and instructions on how to connect are available from any system connected to the Fermilab network by visiting this [website](#).

Digital Certificates Training

Best Regards,
Rod Walton

([Click here](#) to read about the interplay between coyote and goose populations at the lab.)

Digital Certificates are commonly used at Fermilab and the broader open science community. When shopping online, the underlying technology that allows a transaction to remain secure is based on the use of digital certificates. Fermilab is now offering a beginning level course that will provide a background on certificates and give instructions for installing certificates in your browser, including the two most popular certificates at Fermilab: KCAs and DOEGrids. Internet Explorer, the Netscape family, and Safari will be addressed. You will get the opportunity to create your own digital certificate in the new hands-on portion of this class. Classes are scheduled for Jan. 19th, Feb. 15th, and March 12th. To enroll in one of the sessions please visit [this website](#).

[Upcoming Activities](#)