

## Calendar

**Thurs., February 1**
**1:30 p.m.** Particle

Astrophysics Seminar - (NOTE LOCATION) Comitium

Speaker: O. Dore, CITA

Title: Cosmological Microwave Background: The Next Chapter

**2:30 p.m.** Theoretical Physics Seminar - Curia II

Speaker: R. Britto, University of Amsterdam

Title: Constructing One-Loop Amplitudes

**3:30 p.m.** DIRECTOR'S

COFFEE BREAK - 2nd Flr X-Over

**4:00 p.m.** Accelerator Physics and Technology Seminar - 1 West

Speaker: N. Eddy, Fermilab

Title: Beam Control and Monitoring with FPGA-Based Electronics: Status and Perspectives

THERE WILL BE NO ALCPG ILC PHYSICS AND DETECTOR SEMINAR THIS WEEK

**Fri., February 2**
**3:30 p.m.** Director's Coffee Break - 2nd floor crossover

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

Speaker: A. Anastassov, Rutgers University

Title: Search for the MSSM Higgs in the Tau Pair Decay Mode at CDF

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

## Weather


**Snow Flurries 21°/12°**
[Extended Forecast](#)  
[Weather at Fermilab](#)

## Feature

### Get ready for a 'saucy romp'

# AQUILA THEATRE COMPANY

"...hugely enjoyable and very funny."  
 --The London Times

Imagine Monty Python meeting Umberto Eco at a medieval pageant, and you'll have some idea of what to expect a couple of Saturdays from now in Ramsey Auditorium. At 8:00 p.m. on February 10, one of the most internationally acclaimed touring theatre companies, Aquila, will perform Chaucer's "Canterbury Tales."

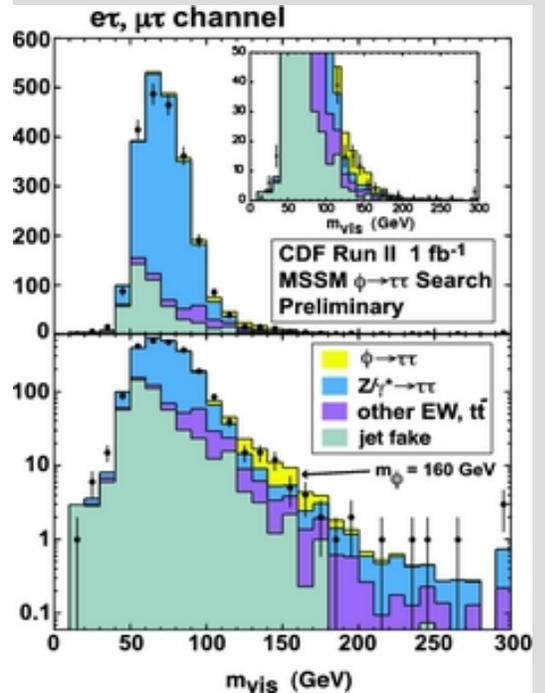
The story? On a warm spring morning in April a group of travelers gather at the Tabard Inn near London and prepare to journey to the sacred shrine at Canterbury, the resting place of the martyr Sir Thomas Becket. It's the 1380s, and the motley group of medieval pilgrims set out on the journey for a variety of reasons: Some go for spiritual renewal and others go just for the fun of it. Geoffrey Chaucer's *Canterbury Tales* draws from classical Greek and Roman poetry, and from medieval literature, to tell a story that is wonderfully bawdy, yet thought-provoking.

The Aquila theater company is a composed of British and American artists dedicated to classical drama. The company has gained international recognition for bringing a modern, hip sensibility to classical texts.

For more information or reservations, call 630/840-ARTS (2787) weekdays from 9 a.m. to 4 p.m. If you call when the office is closed, an answering machine will give information and a means of placing ticket orders. You can also check out the web site at [www.fnal.gov/culture](http://www.fnal.gov/culture).

## Fermilab Result of the Week

### Tautal excess



The signature plot of the analysis for the mass of the di-tau system.\*

Are CDF scientists seeing hints of the Higgs boson?

Or is nature teasing them yet again?

The Higgs, thought to impart mass to all particles, decays preferentially to heavier ones. The tau lepton, a heavy cousin of the ubiquitous electron, is thus a good choice for Higgs searches.

CDF physicists have recently completed a search for tau pairs from Higgs decays. When they examined their signature plot, shown above, they saw something interesting: excess data in a certain mass region. Fitting programs used to extract Higgs signatures claimed a slightly enhanced probability for the Higgs at masses between 150 and 160 GeV/c<sup>2</sup>. Seeing a signal at this luminosity (1 fb<sup>-1</sup>) would make sense if the Higgs were part of a larger supersymmetric theory, rather than the currently accepted standard model. Is the ever-so-shy Higgs boson finally peeking out? Or is there a more prosaic answer?

Most probably the latter, but time will tell.

**Current Security Status**[Secon Level 3](#)**Wilson Hall Cafe****Thursday, February 1**

-Santa Fe Black Bean  
 -Sloppy Joe  
 -Stuffed Peppers  
 -Sauteed Liver & Onions  
 -Baked Ham & Swiss on a Ciabatta Roll  
 -Assorted Slice Pizza  
 -Crispy Fried Chicken Ranch Salad

[Wilson Hall Cafe Menu](#)**Chez Leon****Thursday, February 1  
Dinner**

Beef Fondue with Assortment of Sauces  
 Salad of Greens with Pears and Shaved Parmesan  
 Chocolate Almond Mousse in Nut Cups

**Wednesday, February 7  
Lunch**

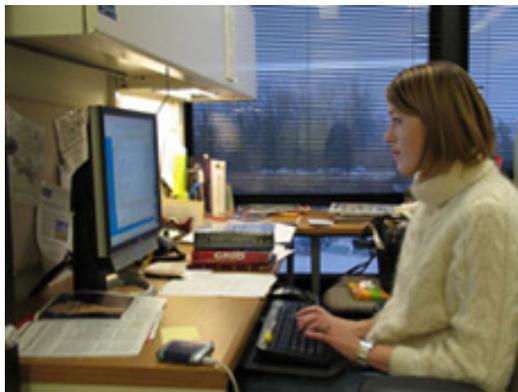
Trout with Saffron Butter Sauce  
 Winter Vegetable Medley  
 Plum and Marzipan Tart

[Chez Leon Menu](#)

Call x4598 to make your reservation.

**Archives****Fermilab Today****Result of the Week****Safety Tip of the Week****ILC NewsLine****Info****Special Announcement****Da Bears**

Wear something with a Bears logo and get a free 16 oz. fountain drink or 12 oz. regular coffee (not Starbucks) this Friday between 11:30 a.m. and 1:30 p.m. in the Wilson Hall Cafeteria. The cafeteria will also serve a "tailgate" menu, complete with fried wings.

**From iSGTW****From iSGTW's new editor**

Former *Fermilab Today* intern Danielle Venton will be editing iSGTW from her new office at CERN.

With this issue, I begin my tenure as Editor-in-Chief of International Science Grid this Week....

[Read More](#)**In the News****The New York Times,  
January 30, 2007:****Eye on Cosmos Is Lost to Short Circuit on Hubble**

The Hubble Space Telescope is flying partly blind across the heavens, a result of a short circuit on Saturday morning in its most popular instrument, the Advanced Camera for Surveys.

NASA engineers reported yesterday that most of the camera's capabilities, including the ability to take the sort of deep cosmic postcards that have inspired the public and to track the mysterious dark energy splitting the universe to the ends of time, had probably been lost for good.

[Read More](#)

For now, the CDF results put the tightest constraints yet on the production of an uncharged minimally supersymmetric Higgs. The CDF team is adding more data and sensitivity to their analysis. We await the results with bated breath.

[Learn More](#)

**\*Graphic at top of page:** \*Since tau decays have neutrinos, which don't interact with the detector, the full invariant mass of the di-tau system cannot be calculated. Instead, a partially reconstructed mass called visible mass ( $m_{vis}$ ) is used. " $\phi$ ," shown in yellow, represents a hypothetical Higgs signal.

**Image below, from left:** Amit Lath (Rutgers), John Conway (U of California, Davis), Anton Anastassov (Rutgers), Cristobal Almenar (U of California, Davis) and Dongwook Jang (Rutgers).

**Accelerator Update****January 29 - 31**

- Two stores provided 41 hours and 48 minutes of luminosity
- MI/Recycler and NuMI off for HV101 replacement
- Store 5199 lost due to quench
- Store 5201's luminosity of 278.08E30 set New Record

[Read the Current Accelerator Update](#)[Read the Early Bird Report](#)[View the Tevatron Luminosity Charts](#)**Announcements****English and Scottish dancing**

English country dancing will meet this Sunday, February 4, at Kuhn Barn, starting at 2 p.m. and will continue to meet on the first Sunday of the month through the winter and spring. Scottish Country Dancing will meet Tuesday, January 30, at Kuhn Barn. Instruction begins at 7:30 p.m. and newcomers are always welcome. Most dances are fully taught and walked through, and you do not need to come with a partner. Info at 630-840-8194 or 630-584-0825 or folkdance@fnal.gov.

**Upcoming Activities**

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)