

## Furlough Information

New furlough information, including an [up-to-date](#) Q&A section, appears on the [furlough Web pages](#) daily.

## Layoff Information

New information on Fermilab layoffs, including an [up-to-date](#) Q&A section, appears on the [layoff Web pages](#) daily.

## Calendar

### Monday, March 24

THERE WILL BE NO PARTICLE ASTROPHYSICS SEMINAR THIS WEEK

**3:30 p.m.**

DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over

**4 p.m.**

All Experimenters' Meeting - Curia II

### Tuesday, Mar. 25

**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

 **Partly sunny**  
43°/34°

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

## Current Security Status

[Secon Level 3](#)

## Wilson Hall Cafe

## Feature

### Hands-on student science program attracts attention



Students and their parents will enjoy the 21st annual Wonders of Science show.

High school teachers will take science out of the textbook and put it into children's hands at Fermilab's annual Wonders of Science event.

"The show is an excellent opportunity for families to share a fun time together while learning about science," said event coordinator Mary Jo Murphy.

On Sunday, March 30, from 1-2 p.m. award-winning high school teachers will perform fast-paced demonstrations on chemical and physical phenomena. Portions of the 20-year-old event have appeared on TV shows such as the "Late Show with David Letterman" and "CBS News."

"This is one of our most exciting events every year," said Spencer Pasero, an education program leader at Fermilab. "We all have our favorite demonstrations, but there is always something new and exciting to look forward to."

This year's performance, which will have a magnetism theme, will involve a group of current and retired high school teachers who were recognized locally and nationally for their ability to engage young minds. That group includes Lee Marek, of the University of Illinois at Chicago (formerly of Naperville North High school); Tom Redig, of Downers Grove North High School; and Karl Craddock, of William

## Safety Tip of the Week

### Preventing disc damage



The arrow points to one spinal disc. *Image courtesy of ©2008 Downing Chiropractic and Wellness Center*

At a recent meeting of the Central States Occupational Medicine Association, Dr. Terry Nicola, from the Chicago Medical Center at University of Illinois, gave a presentation on lower back vertebral-disc damage. He noted that each disc is like a chewy jelly donut. It has a central, soft core surrounded by 15 layers of fibrous tissue. In spite of their toughness, the outer layers can rupture causing the contents to leak and press on adjacent nerves. This, in turn, can produce pain and weakness.



Dr. Terry Nicola from the Chicago Medical Center at University of Illinois.

Those who are physically active tend to have less back pain. Although disc damage does not always closely correlate to pain, damage does increase with age, affecting nearly everyone by age 65.

To prevent injury, make sure you follow ergonomic practices when working at your desk. Practice safe lifting techniques, and maintain the arch in the lower back. Contrary to the perception that strengthening your rectus abdominis ("six pack") muscles will protect your back, you also need to work on your internal oblique and transverse muscles. The latter muscles are responsible for pulling your back inward to help maintain the arch. A good exercise is single-leg lifts while lying on your back using a lower-back support. Do this 30 times per leg. Also useful; march in place with your lower back properly arched. Any kind of vigorous exercise increases blood flow and endorphins and seems to help reduce back pain.

[Safety Tip of the Week Archive](#)

**Monday, Mar. 24**

- not available

[Wilson Hall Cafe Menu](#)**Chez Leon****Wednesday, March 26****Dinner**

- Roast pork calypso  
 - Fried plantain slices  
 - Black beans & rice  
 - Mango mousse w/coconut cookies

**Thursday, March 27****Dinner**

- Closed

[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)

Fremd High School in Palatine.

The program is designed for ages 7-12 and Scout troops are welcome. Students will receive a packet of magnetism experiments and supplies, which they can use to replicate the experiments at home. Some experiments include testing everyday objects to see if they are magnetic, testing the strength of magnets and investigating whether magnets work through a solid, liquid or a gas. Tickets are \$4 and can be ordered using a form from the Fermilab Education Office [Web site](#). For additional information, contact Nancy Lanning at [lanning@fnal.gov](mailto:lanning@fnal.gov) or (630) 840-5588.

**Milestone**

## APS recognizes Bardeen

The American Physical Society has recognized Fermilab physicist Bill Bardeen for his outstanding contributions as a referee for APS journals. The list of recognized scientists also includes Rick Van Kooten, DZero user from Indiana University and a member of Fermilab's Physics Advisory Committee.



Bill Bardeen

The highly selective award program, introduced this year, recognizes 534 scientists from 33 countries who have been exceptionally helpful in assessing manuscripts for publication in the journals in last two decades. For more information on the program and a list of all scientists recognized in 2008, read the [APS announcement](#).

**In the News**

## From dark matter to light

**From *Science News*, March 21, 2008**

*New models of galaxy formation show the gastro in physics*

A few years ago Avishai Dekel gave up chess in favor of mud wrestling. Dekel is a cosmologist and he isn't known to frequent strip clubs. But there are two types of cosmologists: those who study fundamentals, like the initial conditions and content of the early universe, and those who immerse themselves in the messier problem of galaxy evolution, replete with gas and stars that heat and cool, form jets, make black holes, and

**In the News**

## Unwise retreat in funding research

**From *Daily Herald*, March 22, 2008**

We turn the key in the ignition, and the car starts up.

When our rooms grow dark, we flip the switch, and the lights go on. When we want to relax, we turn on our TV sets, and hundreds of channels are available for our entertainment.

We take all this for granted, never thinking about how these amenities came to be.

It all started with research. A man or woman found support for development of a great idea, and it evolved into something useful for society. Innovations that have made our lives easier, more enjoyable. Innovations that have broadened our access to information. Innovations that can lead to much more, including finally breaking us free of our dangerous reliance on foreign oil.

Yet, Washington regards research as something that can be diminished in value in the interest of fiscal discipline. This unfortunate point of view is reflected in funding cuts at the Fermilab National Accelerator Laboratory in Batavia. It has forced the layoffs of 1,900 Fermilab employees -- and is a setback for the continuation of cutting edge research.

[Read more](#)**Accelerator Update****March 19-21**

- Two stores provided 38 hours and 30 minutes of luminosity  
 - MI cooling problems

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

sometimes explode.

Martin Rees of the University of Cambridge in England calls the two classes of cosmologists chess players and mud wrestlers. Cosmology is "a fundamental science just as particle physics is," says Rees. "The first million years [of the universe] is described by a few parameters ... but the cosmic environment of galaxies and clusters is now messy and complex."

Now that the chess players have established those basic parameters—such as the relative amounts of invisible dark matter, even-more mysterious dark energy, and ordinary matter—more cosmologists are turning to the mud. Recent surveys of the shapes, colors, and masses of galaxies have put a new focus on the nitty-gritty of galaxy formation.

[Read more](#)

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

#### **Javascript course deadline today**

Enrollment for an intermediate/advanced Javascript: AJAX course will close Monday. This course is for middle-tier and back-end engineers with strong object-oriented experience, front-end developers, architects and systems analysts looking to improve or update their Web development skills. [Learn more and enroll.](#)

#### **New Computer Programming Courses**

The first of five computer programming courses is offered on March 27 from 1-3:30 p. m. "To Copy or Not to Copy: A Deeper Look at Values in C++", is aimed at programmers with C++ experience. The course deals in depth with issues related to copying values in C++ programs. Attendees will learn to identify and take advantage of opportunities for improved performance and will be prepared for related new techniques that will become available in the next C++ standard. TRAIN credit will be awarded to participants. Course registration is free and now [open](#). Future courses are at two-week intervals.

### [Additional Activities](#)