

## Calendar

### Monday, September 26

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

Speaker: E. Kolb, Fermilab

Title: Acceleration Without Dark Energy  
Galaxy-Galaxy Gravitational Lensing

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

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

### Tuesday, September 27

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

**Note:** There will be no Accelerator Physics and Technology Seminar today

## Weather



Mostly Cloudy **66°/46°**

[Extended Forecast](#)

[Weather at Fermilab](#)

## Current Security Status

[Secou Level 3](#)

## Wilson Hall Cafe

### Monday, September 19

- Wisconsin Cheese
- Corned Beef Reuben
- Stuffed Chicken Breast
- Shepherd's Pie
- Turkey Craisins Wrap
- Meat Lovers Pizza
- Pacific Rim Rice Bowl

The Wilson Hall Cafe accepts Visa, Master Card, Discover and American

## Scientist Battles Stigma of Physics Career Breaks



Elizabeth Freeland, mother of two, works with the Lattice QCD group at Fermilab.

From the time she earned her PhD, it took almost a decade for Elizabeth Freeland to get where she is now, crunching numbers for the Theoretical Physics Department on the third floor of Wilson Hall. After receiving her doctorate in condensed-matter physics from Johns Hopkins University in 1996, Freeland took a five-year career break for motherhood before turning back to the field. She was met with a series of hurdles built by her absence. "There's this mindset that if you take time to do anything but physics, then you're not serious," Freeland said.

Geography limited Freeland's initial job search. Her husband, also a physicist, accepted a job at Brookhaven National Laboratory, and Freeland followed, unable to find a job for herself in the same field. Shortly after, the couple moved to Chicago. Freeland always wanted to have children, and she says she didn't want to push her personal dream aside for a professional one. So in 1999, the couple started a family. "I didn't want to have children when I was 40," Freeland said. "I wanted to have them in my late 20s or

## Safety Tip of the Week

### ES&H Perspectives With Rich Ruthe

Rich Ruthe has worked in the ES&H field for 25 years. This includes the EPA, OSHA and the chemical industry.

For the past eight years, Ruthe has been the Senior Safety Officer for the Technical Division.



Rich Ruthe

As a result of this broad experience, Ruthe has identified the following guidelines for preventing injuries:

**Think it through** - Before you begin a task, take a few seconds to review the process. Do I really understand the steps? What could go wrong? Do I have everything I need?

**Use the right tool** - Using the wrong tool is a good way to get hurt. Poor task preparation or on the spot improvisation can lead to incorrect tool selection. In accident investigations, personal pocket knives are commonly identified as misused tools.

**Report work injuries** - Little injuries can become big injuries if ignored. If a work activity causes you pain, discuss this with your supervisor, ES&H organization and/or the Medical Department. In most cases, work processes can be modified to eliminate discomfort.

**Take it home** - Many of the ES&H principles you learn at work can be

Express at Cash Register #1.

[Wilson Hall Cafe Menu](#)

## Chez Leon

**Wednesday, September 28**

### Lunch

- Ham, Gruyere & Green Onion Crepes
- Salad of Field Greens
- Fennel & Arugula
- Peach Melba

**Thursday, September 29**

### Dinner

- Corn Chowder w/Spicy Red Pepper
- Lobster Medallions w/White Wine Sauce
- Spaghetti Squash w/Green Onions
- Sauteed Pea Pods
- Chocolate Almond Napoleons

[Chez Leon Menu](#)

Call x4512 to make your reservation.

## Search

**Search the Fermilab Today Archive**

## Info

Fermilab Today is online at:  
<http://www.fnal.gov/today/>

Send comments and suggestions to  
[today@fnal.gov](mailto:today@fnal.gov)

[Fermilab Today archive](#)

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[Fermilab Result of the Week archive](#)

[Fermilab Safety Tip of the Week archive](#)

[Linear Collider News archive](#)

[Fermilab Today classifieds](#)

early 30s, which is not the best time in terms of an academic or science career."

In 2001, Freeland renewed her job search. To secure a full-time job, Freeland needed research experience, so after sending out numerous letters looking to help labs on "small projects" she came to Fermilab hoping to collaborate on summer research. Although Freeland said the lab's staff was very supportive of her situation, she needed a grant to support her research, and grants required her to have a full-time affiliation with less than a five-year break after graduate school. As a mother of two and a part-time physics teacher at the School of Art Institute of Chicago, Freeland had neither, and the search for a grant came up empty. "If I couldn't get a grant, I couldn't have day care, and if I couldn't get day care, I couldn't do the work," she said.

Freeland eventually earned enough money from teaching to pay for day care while conducting part-time research at Fermilab, spending a day or two in the lab and teaching the rest of the week. Then she found a "loophole"-- a grant from the American Association of University Women for which she was eligible. Her application was accepted, and the one-year grant allowed her to start at the lab full-time in July working on Lattice QCD calculations. QCD, or quantum chromodynamics, is a theory that describes strong interaction. Now collaborating with the Lattice QCD group, Freeland studies QCD's effect on the decay of subatomic particles through numerical analysis.

Although her story is one of success, Freeland says the traditional method of awarding grants and hiring, as well as

applied when you are off the job. And don't forget the additional opportunity to pass on good practices to your family and friends.

[Safety Tip of the Week Archive](#)

## Accelerator Update

**September 14 - 16**

- During this 48 hour period Operations established one store that combined with an existing store, providing the experiments with approximately 44 hours and 34 minutes of luminosity.
- NuMI kicker problems
- Stacking suffers from DRF1 troubles

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

## In the News

**From Penn State Live, September 22, 2005:  
Probing Question: What is antimatter and why does it matter?**

The place is England. The year is 1928. One of the founding theorists of quantum mechanics, Paul Dirac, is scratching his head because solutions to his equations have yielded unexpected results. For the solutions to make sense, he reasons, there must be a particle that has the mass of an electron but the opposite charge. At the time, such a thing was not known to exist.

[Read More](#)

## Announcements

cultural attitudes toward career breaks, sets others up for failure. "You should be able to sit down at a lunch table and say 'When is a good time to have children or how can I deal with this?'" she said. "You should be able to ask that question to a group of physicists and not have it looked at as a negative." For information on coming back from a career break, visit Freeland's [Web site](#).

—*Kendra Snyder*

### **Prairie Seed Harvest**

[The Prairie Seed Harvest](#) will take place on October 1 and October 29.

### **Upcoming Classes**

September 27: Excel Intermediate

September 28: Word Intermediate

October 11: Excel Advanced

October 12: Word Advanced

October 11, 12, and 26: Interpersonal Communication Skills

October 24-27: C++ for Embedded Programmers

[More Information](#)

### **Identity Theft Class**

Wellness Works will present this brown-bag seminar from 12:00 p.m. to 1:00p.m. in the 1-West conference room on Thursday, October 6.

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