

## Calendar

Tuesday, Sept. 30  
3:30 p.m.  
DIRECTOR'S COFFEE  
BREAK - 2nd Flr X-Over  
THERE WILL BE NO  
ACCELERATOR PHYSICS  
AND TECHNOLOGY  
SEMINAR TODAY

Wednesday, Oct. 1.  
2:30 p.m.  
[Special Particle Astrophysics Seminar](#) - Curia II

Speaker: Guido Mueller,  
University of Florida  
Title: Gravitational Waves (GW): A New Window to the Universe  
3:30 p.m.

DIRECTOR'S COFFEE  
BREAK - 2nd Flr X-Over  
4 p.m.

[Fermilab Colloquium](#) - One

West  
Speaker: Paolo Brenni, CNR - FST - IMSS, Florence  
Title: The Telephone: An Invention with Many Fathers

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

## Weather

 Mostly sunny  
60°/44°

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

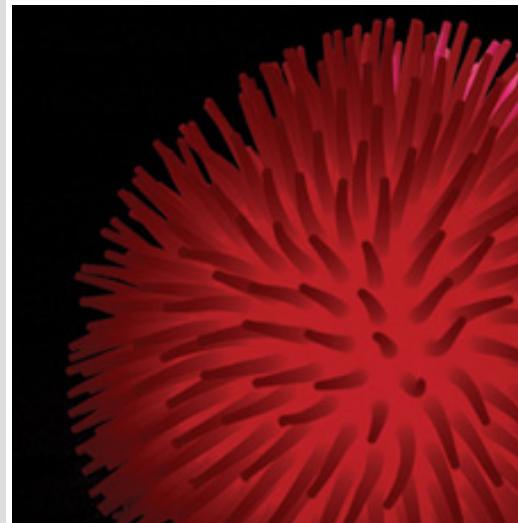
## Current Security Status

[Secon Level 3](#)

## Wilson Hall Cafe

From *symmetry* magazine

### It's a snail shell! It's a Koosh ball! It's physics!



A Koosh ball, shown here, symbolizes dark energy in one image by physicist-photographer David Kirkby.

***Editor's note: The newest issue of symmetry magazine is now [online](#).***

*A physicist-photographer finds cosmic meaning in everyday things.*

Blackboards filled with mathematical equations and scientific machines as large as cathedrals can awe, and sometimes overwhelm.

But Koosh balls are another matter.

Jiggly, squishy, and abstract, the rubber toy harks back to carefree childhood days when a Koosh ball could represent a sea anemone, an alien being, even dark energy, the invisible cosmic force that repels planets and stars away from one another, stretching the universe's like a giant rubber band.

It's just the sort of approachable object David Kirkby uses to grab people's attention and show them the complex and often abstract world of science.

A physicist and amateur photographer, Kirkby sees artistic and educational possibilities in everyday objects and the hidden physics principles they reveal.

## Director's Corner

### A matter of concern

As a community, we have tackled our share of challenges. Together, we have wrung record luminosity from the Tevatron, achieved an extraordinary safety record and survived furloughs to get through a budget crisis.



Pier Oddone

Now we have a new challenge: to become a model institution in the area of diversity, providing an inclusive and respectful environment not only for the staff at Fermilab, but for every collaboration and visiting work group at our laboratory. As an institution Fermilab touches a large fraction of the particle physics community, much larger than is possible for a single institution in any other discipline. As a consequence, our approach to diversity can influence not just our local environment but an entire discipline. It is a tall order that a recent APS study has placed before us.

[A report](#) by the American Physical Society's Committee on the Status of Women in Physics and the Committee on Minorities in Physics highlights the need for Fermilab to address the issue of workplace diversity. At my request, the APS committees came to Fermilab in May to assess Fermilab's climate for physicists and engineers who are women and members of minorities. Among the report's findings:

- Fermilab shows little progress in recent years in the percentages of women and members of minorities in some key areas of our staff.
- While many parts of the laboratory have created welcoming and supportive environments for all, others are perceived as unwelcoming and unsupportive of women and members of minorities.
- Fermilab users are often not aware of our policies on diversity and workplace discrimination and don't know if the policies apply to them. When they do run into problems or have questions about

Tuesday, Sept. 30  
 - Chicken & rice soup  
 - \*Smart cuisine: low carb burger  
 - Smart cuisine: beef Spanish rice  
 - Smart Cuisine: chicken lemon  
 - Peppered beef  
 - Assorted sliced pizza  
 - Chicken tostada

[Wilson Hall Cafe Menu](#)[Chez Leon](#)

Wednesday, Oct. 1  
 Lunch  
 - Cider roasted pork loin  
 - Sage muffins/warm apple salsa  
 - Pumpkin cheesecake

Thursday, Oct. 2  
 Dinner  
 - Frisée & apple salad w/dried cherries and walnuts  
 - Paella  
 - Pineapple flan

[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)

"The goal for me is to present little pieces of science that are not too intimidating and to present images to go with the buzz words people see in the papers," Kirkby says. "People have probably read in the newspaper about dark energy. Taking a picture of a child's toy and calling it dark energy makes it less intimidating. It inspires you to learn more."

For about two years, Kirkby has been uploading his photographs to the online gallery flickr.com. A small cache of his photos focuses on abstract illustrations of physics principles. The collection grew from his photography hobby and a need to explain physics to non-physics majors in the lectures and classes he teaches at the University of California, Irvine.

"The reason I took those pictures and put them on flickr is that it is almost a form of outreach to get people without a science background aware of what is going on with physics," he says.

Everyone, regardless of profession, needs that knowledge. Voters can't intelligently choose how to spend their tax dollars, or weigh in on whether to compete in the global race to the next big discovery, if they don't understand the definitions of the landscape, says Kirkby, who does research with BaBar, the B factory experiment at the Stanford Linear Accelerator Center in California.

For Kirkby, inspiration comes in two forms.

[Read more](#)

-- *Tona Kunz*

[In the News](#)**Suit to halt big collider in Europe is dismissed**

From **New York Times**, Sept. 29, 2008

A federal judge in Honolulu has dismissed a lawsuit trying to stop the running of a giant particle accelerator outside Geneva, dodging the issue of whether it could actually cause the end of the world.

The judge, Helen Gillmor, said in her ruling Friday that the court lacked jurisdiction over the Large Hadron Collider, which is located on the Swiss-French border and was built by CERN, the European Organization for Nuclear Research, with help from the United States and dozens of other countries.

When it is operating at full steam, the collider,

discriminatory treatment at work, many are not sure where to turn.

Just as we brought down accident rates by making safety a top laboratory priority and holding everyone accountable, we will take the same approach to making Fermilab a workplace that is inclusive and respectful of all. Although the APS report discusses only physicists and engineers, we will address the work environment for all members of the laboratory community, including employees, users and contractors. Here are some of the steps we will take, beginning immediately:

- Working with the [Fermilab Diversity Council](#), we will hold professionally facilitated focus groups to look in depth at the workplace environment in every area of the laboratory, including experiment collaborations. We will use the results to re-evaluate our policies and procedures and to make changes where they are needed.
- In a cooperative venture with users, we will review the training on diversity and non-discrimination that users receive when they come to Fermilab, and we will add a University and Collaboration Liaison Subcommittee to the Diversity Council.
- We will identify and publicize information on where to turn for help and advice when issues and questions arise, for members of our staff as well as users and visitors.
- Just as we did for furlough information, we have created a highly visible [Web page](#) for policies and other information related to diversity, including continuously updated policy questions and answers.
- We have already launched a mentoring program to help scientists and engineers with career development. We will expand the mentoring program to include the entire Fermilab community.
- We will carefully analyze the recommendations of the APS report and results from the focus groups and develop an implementation plan.

"For tackling and overcoming tremendous scientific challenges," the APS report notes, "high-energy physics in general and FNAL in particular are unbeatable. By simply applying this can-do ethos to the challenge of...creating an inclusive and welcoming climate for all, FNAL could achieve amazing results in this sphere as well, if it is treated as a priority."

which started circulating protons earlier this month before a series of mishaps shut it down for the winter, will accelerate protons to energies of seven trillion electron volts and slam them together in search of particles and forces not seen since the early moments of the Big Bang.

Last spring, Walter Wagner, a retired radiation safety officer who lives in Hawaii, and Luis Sancho, a science writer and professor in Barcelona, filed the lawsuit, claiming that the collider could produce a black hole that could eat the Earth or cause some other calamitous effect. Predictions of such outcomes have been refuted in safety studies.

[Read more](#)

## In the News

### A trip inside the "Big Bang Machine"

From **CBS "60 Minutes"**, Sept. 28, 2008

"60 Minutes" visits one of the biggest science experiments ever, the Large Hadron Collider

As a rule, physics rarely makes news, but it did this past week after equipment malfunctions delayed for several months the start up of one of the biggest science experiments in history. We are talking about the Large Hadron Collider, a massive, multibillion dollar project designed to unlock the secrets of the universe.

For several years now, thousands of the world's most accomplished scientists have been gathering in Europe, not to explore the heavens but the frontiers of inner space. They are hoping to discover subatomic particles so tiny that they have never been detected. They think these particles will help explain why the universe has organized itself into so many different things - planets and stars, tables and chairs, flesh and blood.

To do it, they have constructed one of largest, most sophisticated machines ever built to replicate what the universe was like a few nanoseconds after it was created. And as Steve Kroft reports, it is all going to happen 300 feet underground on the border between Switzerland and France.

Under the meadows and mountains outside Geneva, Switzerland, 9,000 physicists from all over the world have been taking part in one of the biggest, most ambitious scientific

It was a priority for our first director Robert Wilson, who wrote our [policy on human rights](#) in 1968, and it is a priority for us. I have no doubt that we will achieve amazing results.

## Accelerator Update

Sept. 26-29

- Five stores provided ~48.5 hours of luminosity
- MI-30 power supply transformer problems
- TeV experts investigate low beta quenches
- Pelletron suffers from node problems

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

## Announcements

### Have a safe day!

"Comedy of Errors," Oct. 4  
The New York-based Aquila Theatre Company will perform Shakespeare's "Comedy of Errors" in Ramsey Auditorium on Saturday, Oct. 4, at 8 p.m. Tickets are \$30 adults/\$15 ages 18 and under. Bring a new patron and receive tickets at 50 percent off. Dr. David Bevington, Shakespeare expert at the University of Chicago, will offer a free pre-performance talk at 7 p.m. in One West. [More information](#).

West suburban coupon books on sale  
Entertainment books containing coupons for dining, fast food, travel and shopping in the Chicago west area are on sale in the Recreation Office, WH15W. The books cost \$20.25 each.

Fright Fest tickets on sale  
Tickets to Great America's Fright Fest are on sale in the Recreation Office for \$26.25 each. Fright Fest weekends are October 10, 11, 12 & 13 and October 24, 25 & 26.

Fermilab hosts LHC Grid Fest, Oct. 3  
Celebrate the launch of the LHC Computing Grid at Fermilab's Remote Operations Center on Friday, Oct. 3, at 10:30 a.m. Experts will highlight the successes and challenges of the grid and its applications for other sciences.  
[More information](#)

Scottish Country Dancing Tuesday  
Scottish Country Dancing will take place in Kuhn Barn in the Fermilab Village on Tuesday, Sept. 30. Instruction begins at 7:30 p.m. Newcomers are always welcome. Most

collaborations in history. It's being conducted in a vast subterranean laboratory carved out of earth and bedrock under two different countries. And it has pushed the limits of technology beyond state of the art, towards the boundaries of science fiction.

It's called the "Large Hadron Collider," a massive scientific instrument that took 20 years to create and cost \$8 billion.

Scientist Austin Ball, who helped build it, gave 60 Minutes a tour of the experiment before they sealed it up and began a series of run-throughs. It was during one of those tests that some equipment malfunctioned, setting back the project several months. When it resumes, they hope to begin cracking open the tiniest bits of the atom, by racing them through a 17-mile tunnel and crashing them into each other at nearly the speed of light.

[Read more](#) and view the segment.

dances are fully taught and walked through. You do not need to come with a partner. For more information call (630) 840-8194 or (630) 584-0825 or [e-mail](#).

### Additional Activities