

## Calendar

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

Wednesday, April 29  
11 a.m.

#### [Academic Lecture Series](#) -

Curia II

Speaker: Bill Marciano,  
Brookhaven National  
Laboratory

Title: Muon Physics: Past,  
Present, and Future: Course 1,  
Lecture 2

11:30 a.m.

Disability Awareness Group  
Seminar - One West

Speakers: Sara Klaas,  
Shriners Hospital for Children  
and Nick Fonner (Paralympian)  
Title: Spinal Cord Injury  
Awareness

3:30 p.m.

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

#### [Fermilab Colloquium](#) - One West

Speaker: Lefteri Tsoukalas,  
Purdue University  
Title: Inventing an Energy  
Internet: Concepts,  
Architectures and Protocols for  
Smart Energy Utilization

Thursday, April 30  
THERE WILL BE NO  
PHYSICS AND DETECTOR  
SEMINAR THIS WEEK

2:30 p.m.

#### [Theoretical Physics Seminar](#) -

Curia II

Speaker: William Detmold,  
College of William and Mary  
Title: Many-Body Lattice QCD

3:30 p.m.

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

#### [Accelerator Physics and Technology Seminar](#) - One

West

Speaker: Marina Putti,  
University of Genova/Florida  
State University  
Title: Radiation Effects on

## From *symmetry*

### Probing the heart of the atom

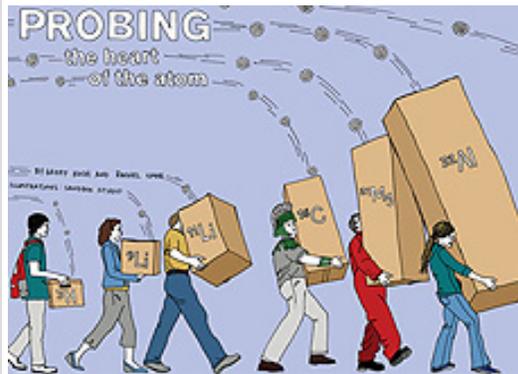


Illustration by Sandbox Studios

*The familiar elements of the Periodic Table come in a number of forms, or isotopes—some found only fleetingly in the most violent events, such as exploding stars. By creating those rare isotopes in the lab, physicists are learning how the atomic nucleus works and deciphering the natural history of the elements.*

Andreas Stolz has a problem. Because of advances in superconducting magnet technology, the Michigan State University assistant professor desperately needs a new metaphor to describe the process he and his international collaborators use to create and isolate exotic nuclei.

Stolz is a physicist at MSU's National Superconducting Cyclotron Laboratory, or NSCL, one of a handful of facilities worldwide that produce rare isotopes using fast-beam fragmentation. Here's how it works: Scientists accelerate a beam of stable, ionized nuclei to nearly half the speed of light and slam it into a thin metal target. The resulting spray of reaction products continues down the beamline, where a network of magnets separates a few sought-after rare isotopes from the rest of the nuclear chaff. This cutting-edge technology helps scientists probe deeper than ever before into the origins and properties of the atom's core.

[Read more](#)

## Special Announcement

## From the Accelerator Division

### Preparing like a wirewalker

*Roger Dixon, head of the Accelerator Division, wrote this week's column.*

Another accelerator shutdown is nearly upon us. It will begin in the middle of June, and we will have a lot of very challenging work to do. We will need to plan our work carefully so that we can get it done safely and on schedule.



Roger Dixon

Working in the accelerator enclosures requires focus and concentration. I was reminded of this several weeks ago when I watched a documentary titled "Man on Wire." It is the story of the French wirewalker, Philippe Petit, who in 1974 successfully walked on a high wire that he secretly, and illegally, strung between the twin towers in New York City.

Such a dangerous stunt requires incredible focus and preparation. When walking the wire, one cannot let thoughts of plunging to the street below become distracting.

I asked myself how Fermilab would approach such a dangerous task. The first things that popped into my mind were appropriate training and the use of safety equipment. I envisioned an expensive mattress as fall protection and a wire only inches above the mattress. My setup would not attract much attention, but I would not end up splayed out like a bug on a windshield either.

But just practicing the steps isn't the full answer. Like all human beings, I get distracted every few minutes. Any safety plan would have to take this into account.

I would like everyone to think about this for the shutdown. When you find out where you will be working, think about what could happen if you got distracted and how to prevent injury when a distraction occurs. Take the time to make your work area safer. Make sure that you have the proper tools and wear the right personal protection for the job. By making your work area safer, you will help yourself and your co-workers.

MgB<sub>2</sub>: A Review and a Comparison with A15 Superconductors

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

## Weather



Chance of rain  
59°/54°

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

## Current Security Status

## Secon Level 3

## Wilson Hall Cafe

Wednesday, April 29  
- Beef barley  
- Cowboy burger  
- Smart cuisine: Caribbean grill salmon  
- Liver w/onions  
- Beef & cheddar panini w/ sauteed onions  
- Assorted sliced pizza  
- Cavatappi pasta w/Italian sausage & tomato ragu

## Wilson Hall Cafe Menu

## Chez Leon

Wednesday, April 29  
Lunch  
- Asian marinated flank steak  
- Jasmine rice  
- Peapods & water chestnuts  
- Orange flan

Thursday, April 30  
Dinner  
- French onion soup  
- Filet mignon w/ cabernet sauce  
- Buttermilk mashed potatoes  
- Asparagus  
- Marzipan cake w/ chocolate sauce

## Chez Leon menu

Call x3524 to make your

## DASTOW '09 set for June 10

After a year's absence, take your Daughters and Sons to Work Day returns to Fermilab Wednesday, June 10. The day will feature several events from 8:45 a.m. to 2 p.m. including: the Cryo Show by Mr. Freeze, bus tours to the buffalo pasture to see the babies, prairie tours, a Fire Department open house and experiment demonstrations. Hot dogs will be provided for lunch. Watch *Fermilab Today* for more details in the coming weeks.

## Photo of the Day

## Fermilab ships completed 3.9GHz cryomodule to DESY



Fermilab's first 3.9GHz superconducting RF cryomodule sits completed in the Industrial Complex Building. It was shipped to DESY on Friday. The cryomodule, which arrived safely on Tuesday, April 28, will become part of the FLASH free-electron laser.

## Special Announcement

## Plan for tour groups frequenting Fermilab

Spring means changes at Fermilab. It brings out the song birds, baby bison and groups of students touring Wilson Hall.

The tours, which will occur frequently during the next two months, sometimes more than one a day, give students and adults in surrounding towns and as far away as Chicago a chance to learn about the science done at the laboratory experiments and in the prairie.

The tours are a great way to generate interest in the sciences and support for Fermilab's future proposed projects, as well as show that the laboratory works to be a good neighbor.

Docents try to schedule tours around the

Remember, once you fall off the wire, it is too late to grow wings.

## Special Announcement

## Earth Day/Arbor Day celebration postponed

The Earth Day/Arbor Day tree planting and celebration that was scheduled for Thursday, April 30, has been postponed due to wet ground conditions. Roads and Grounds staff plan to hold this event on Tuesday, May 5, at 11:30 a.m., weather permitting. Please check *Fermilab Today* for updates.



[Plant a tree on April 30.](#)

## Safety Update

## ES&H weekly report, April 28

This week's safety report, compiled by the Fermilab ES&H section, lists one case reported to the Medical Department last week. An employee strained a shoulder while lifting 50-pound fan elements to change HEPA filters. This case resulted in time away from work. Find the full report [here](#).

[Safety report archive](#)

## Announcements

## Latest Announcements

[Distracted driving seminar - A traffic safety subcommittee event](#)

[Fermilab club & league fair today](#)

[Registration for Users' Meeting now open](#)

[Spinal Cord Injury Awareness Seminar today](#)

[April is National Humor Month...click on the link for the joke of the day](#)

[Greek Folk dance workshop - April 30](#)

[NALWO - spring tea - May 1](#)

[English country dancing, May 3](#)

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)

normal work of the laboratory, but school and bus schedules often mean tours coincide with the lunch hour and times when people frequently use the elevators.

While it's easy to get frustrated by long lines in the cafeteria or at the elevators, please try to remember the tours are part of the laboratory's outreach mission.

And just like spring, the tours will pass.

[In the News](#)

## Nasa scientists snap most distant object in the universe

From *Telegraph*, April 28, 2009

Astronomers at Nasa have snapped a picture of the most distant object ever seen in the universe – a titanic burst of energy from a dying star 13 billion light years away.

The "gamma ray burst" is so far away that its light has taken almost the entire age of the universe to reach us.

When the light began its journey, travelling at 186,000 miles per second, only 640 million years had passed since the Big Bang that marked the dawn of creation.

The event, designated GRB 090423, was first detected by the American space agency Nasa's Swift satellite, which is designed to spot gamma ray bursts.

After Swift recorded an initial blast of gamma and X-rays, ground-based telescopes swivelled to aim at the same point in the sky and observed a fading afterglow of infra-red light.

[Read more](#)

[Word 2007: New Features class May 5](#)

[Excel 2007: New Features class May 7](#)

[National Day of Prayer observance May 7](#)

[Best of Dance Chicago - Fermilab Arts Series - May 9](#)

[Rapid Hardware Prototyping and Industrial Control Application Development seminar May 13](#)

[Co-ed softball season begins May 13](#)

[Summer co-ed volleyball league begins June 1](#)

[Argentine Tango classes through May 13](#)

[New Fermilab Service Desk online](#)

[Discounted rates at Grand Geneva Resort, Lake Geneva, WI](#)

[Conflict Management and Negotiation Skills class June 3 and 10](#)

[Discount tickets to "1964"...Beatles tribute - June 6](#)

[SciTech summer camps](#)

[Additional Activities](#)

[Submit an announcement](#)