

## Calendar

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

**Friday, August 7**

**3:30 p.m.**

DIRECTOR'S COFFEE  
BREAK - 2nd Flr X-Over  
THERE WILL BE NO JOINT  
EXPERIMENTAL-  
THEORETICAL PHYSICS  
SEMINAR THIS WEEK

**Monday, August 10**

PARTICLE ASTROPHYSICS  
SEMINARS WILL RESUME IN  
THE FALL

**3:30 p.m.**

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

**4 p.m.**

All Experimenters' Meeting -  
Curia II  
Special Topic: Improvements  
to the Pbar source

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

## Campaigns

## Take Five

## Tune IT Up

## Weather

 **Mostly sunny**  
81°/61°

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

## Current Security Status

[Secon Level 3](#)

## Wilson Hall Cafe

## Feature

### Dirt, giant holes evidence of neutrino program upgrades



Construction on areas near MI-10, MI-39 and MI-60 are part of the neutrino upgrade to the Main Injector.

The shutdown has accelerated upgrades to Fermilab's neutrino program.

Three building sites are currently under construction as part of the \$4.7 million Main Injector Neutrino Upgrade Project: new service buildings near MI-10 and MI-39 as well as a building addition to house electrical equipment at MI-60. This work will support future neutrino experiments at Fermilab. The work at MI-39 also represents the first step in boosting the beam power from 400kw to 700kw for the NOvA project.

"Other than the Grid Computing Center, this is the first big construction project in the last few years, and the first big accelerator project since NuMI was built in 2004," said Ron Foutch, FESS/Engineering MINU construction coordinator.

This summer was the first opportunity to make the neutrino upgrades to the Main Injector, which required time during an extended shutdown.

The upgrades allow for testing prior to NOvA's installation, said Elaine McCluskey, project manager in the AD projects group.

The components installed at each of the three construction sites will also benefit other neutrino projects that will use power from the NuMI neutrino beam.

The construction project at MI-39 will be the

## Recovery Act Feature

### ARRA funds accelerate SRF, neutrino research



Congressman Bill Foster examines a piece of superconducting radio frequency equipment during an impromptu tour of Fermilab's Industrial Building 1 after the press conference on Wednesday.

Fermilab's efforts to develop superconducting radiofrequency technology and plans for a long-baseline neutrino experiment got a boost Tuesday with a new round of stimulus funds.

Energy Secretary Steven Chu announced Fermilab's total share of the American Recovery and Reinvestment Act funding rose to \$103.1 million with the new allocation of \$60.2 million to advance LBNE and SRF technology. The funds are part of the \$327 million in DOE Office of Science money allocated Tuesday.

"It really will move the scientific agenda of the laboratory forward in a major way, and it will create jobs for the community," Fermilab Director Pier Oddone told reporters Wednesday in a press conference onsite with Congressman Bill Foster.

The money gives the SRF program what equates to about three years' worth of typical budget funding in one shot. That allows the R&D efforts for both projects to recover from 1 ½ years of delayed and cancelled budgets. The stimulus money ensures the availability of infrastructure and components needed to move Project X and a future particle collider forward on schedule if these projects are approved.

Through the ARRA funding, Fermilab also will

## Friday, August 7

- Italian vegetable soup
- Teriyaki chicken
- Southern fried chicken
- Mediterranean baked tilapia
- Eggplant parmesan panini
- Assorted sliced pizza
- Assorted sub sandwich

[Wilson Hall Cafe menu](#)

## Chez Leon

## Wednesday, August 12 Lunch

- Chicken enchiladas
- Mexican rice
- Confetti salad
- Pineapple flan

## Thursday, August 13 Dinner

- Closed

[Chez Leon menu](#)

Call x3524 to make your reservation.

## Archives

[Fermilab Today](#)

[Result of the Week](#)

[Safety Tip of the Week](#)

[User University Profiles](#)

[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)

Visit the Fermilab [home page](#)

most beneficial in the near term. The project will include a small building that will support a gap-clearing kicker string, a series of magnets that will help to prevent beam losses in the Main Injector tunnel.

To complete the project, excavation crews dug down to within 5 feet of the top of the Main Injector tunnel at the two new service building sites – MI-14 and MI-39. Once AD employees secured the section of the tunnel underneath the digging area, they exposed the top of the Main Injector tunnel. Crews drilled 12 12-inch-diameter holes at MI-39 and 18 12-inch diameter holes at MI-14 into the tunnel ceiling to install the conduits and other utilities.

AD and ES&H employees monitored the construction to ensure safety. They blanketed magnets to reduce exposure to excavation crews and drill experts, and monitored soil removed in excavation and caught and monitored water for contamination.

Once finished, crews filled the hole using a flowable fill concrete substance. The buildings will be constructed this fall and ready by the end of the year.

"This is the first accelerator hardware we've built that was destined for the NOvA project," said Paul Derwent, AD associate project manager for NOvA. "To be able to see a physical thing is nice."

-- *Rhianna Wisniewski*

## Special Announcement

**Rap music seminar at 4 p.m. on Tuesday. All welcome.**



Funky49, a rapper from Tampa, Florida, has written a rap about Fermilab. He will perform it on Tuesday, August 11 at 4 p.m. in One West.

Fermilab might get a little funky on Tuesday afternoon. As part of an Office of Communication seminar on the use of rap music in science communication, rapper

compress several years worth of planned general infrastructure projects into a year, delivering immediate improvements in efficiency, reliability and energy conservation. Local architects are helping to design the projects, and construction bids will go out next year to private contractors.

"The stimulus funding is a big victory for Fermilab, but it is an even bigger victory for the 14th (Congressional) District," Foster said. "This funding will continue to create jobs and help grow our economy, which is precisely the point of the stimulus."

It is estimated the total Recovery Act funding given to Fermilab and for the NOvA experiment in northern Minnesota will provide at least 125 construction and installation jobs for the next four years. It also will financially infuse manufacturing and service industries in various states through purchases from base construction material to high-tech components, and boost American manufacturing capabilities for SRF components.

Foster called Fermilab an "important economic and technical anchor for the 14th District."

"The bottom line is: This is a strong vote of confidence from Congress for Fermilab," he added.

See a breakdown of ARRA funding for Fermilab [here](#).

For more information see Fermilab's Recovery Act [Web page](#) and the DOE [Recovery and Reinvestment Web site](#).

-- *Tona Kunz*

[Watch a video](#) of the press conference

## In the News

**World's biggest particle collider set for restart**

From *NPR*, Aug. 6, 2009

The world's largest particle accelerator will restart at half power in November, physicists in Switzerland announced Thursday. The giant machine broke down last fall, putting the field of high-energy physics on hold.

The Large Hadron Collider, or LHC, is located at CERN, Europe's premier particle physics laboratory near Geneva, Switzerland. The

Funky49, a science rapper from Tampa, Florida, will perform his newly written Fermilab rap in One West at 4 p.m.

Millions of viewers have learned the basics of CERN's Large Hadron Collider on [YouTube from a rap video](#) produced by science writer Katie McAlpine, aka Alpine Kat. Now it's Fermilab's turn.

"I've heard the Fermilab rap and it sounds like something that you'd hear on the radio," said Ben Kilminster, who found Funky49 and asked him to commission a Fermilab rap.

Funky49 will also give a presentation on using rap for science outreach. The rapper produced an album, the Rabbassador, to promote Tampa's Museum of Science and Industry. Lyrics to the Fermilab rap are available on the [Rabbassador Web site](#).

"I contacted him and asked if he'd be interested, and he said that he would consider it his patriotic duty," Kilminster said.

Funky49 will spend the week at Fermilab filming a video for his rap. He will also join The Drug Sniffing Dogs, a Fermilab band, for a performance at 7 p.m. at the Users' Center on Friday, August 14.

### Recreation Feature of the Month

## Classes, events and discounts for August

**Editor's note:** *This is the first of monthly articles highlighting upcoming classes, events, clubs and discounts from the Recreation Department. Check back on the third Friday of every month for the upcoming month's information.*

Summer is almost over, but that doesn't mean it is time to give up on your fitness. Fitness classes are starting now:

- Kyuki Do: Now through Sept. 9 from 5-6 p.m. on Wednesdays. Classes take place at the Recreation Facility, and the session costs: \$55.
- Muscle toning: Now through Sept. 29 from 5:30-6:30 p.m. on Tuesdays and Thursdays at the Recreation Facility. Class session cost: \$77.
- Yoga: Aug. 11-Sept. 29 from 12-1 p.m. on Tuesdays in Ramsey Auditorium. The eight-week class session costs \$85.

The Recreation Department will also host a

massive machine is nearly 17 miles around and designed to smash ordinary protons together at near the speed of light.

Physicists hope that the debris from those collisions will provide evidence of the Higgs boson, a particle that helps to endow other particles with mass. It could also reveal things such as extra dimensions in the universe or dark matter — a mysterious form of matter that is believed to help hold galaxies together.

[Read more and listen to the broadcast](#)

### Announcements

[Newcomers Brown Bag Lunch](#)

[Need help giving a speech? Fermilab Toastmasters Club is the solution](#)

[International folk dancing resumes today](#)

[Yoga Class - August 11 through Sept. 29](#)

[Muscle Toning Class - today through Sept. 28](#)

[Office 2007 New Features class offered in September](#)

[URA Visiting Scholars Program now accepting applications](#)

[Services account password needed for Fermilab Time & Labor reporting](#)

[Bristol Renaissance Faire discount tickets](#)

[Six Flags Great America discount tickets](#)

[Pool memberships available in the Recreation Department](#)

[Raging Waves Waterpark online discount ticket program](#)

[Osteoarthritis \(degenerative arthritis\) seminar](#)

[Accelerated C++ Short Course begins August 6](#)

[Health after 50 seminar](#)

[The University of Chicago Tuition Remission Program August 17 deadline](#)

[What's New in NI LabVIEW 2009? offered](#)

free Tai Chi open house from 12:15-12:45 p. m. and 4:45-5:15 p.m. on Monday, Aug. 24, in the Recreation Facility.

This month, the Recreation Department will also sponsor two events:

- American Cancer Society Open House: Wednesday, Aug. 12, from 11:30 a.m. – 1:30 p.m. in the Wilson Hall Atrium. The ACS will offer cancer prevention education, screening recommendations and services and programs for cancer patients and their families.
- Lunch and Learn: Skeletal conditions in the work place: Wednesday, Aug. 26, chiropractor Greg Markley will lecture on conditions such as shoulder and neck pain and carpal tunnel syndrome.

Employees and users can also contact the Recreation Department to take advantage of special discounts, including:

- Great America tickets
- Renaissance Fair
- Wisconsin Dells coupon books
- Raging Waves Waterpark
- Thai Village Restaurant: \$7 lunch set offered. Menus are available in the Recreation Office or online.

## [August 27](#)

[Process piping \(ASME B31.3\) class offered in October and November](#)

## [Additional Activities](#)

[Submit an announcement](#)

## **Classifieds**

Find new [classified ads](#) on *Fermilab Today*.