

Calendar

Friday, December 17

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4:00 p.m. Joint Experimental

Theoretical Physics Seminar - 1 West

Speaker: T. Han, University of

Wisconsin

Title: Smoking Gun Signatures for

Little Higgs Models at Hadron

Colliders

Monday, December 20

THERE WILL BE NO PARTICLE

ASTROPHYSICS SEMINAR THIS WEEK

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4:00 p.m. All Experimenters' Meeting -

Cura II

Special Topic: NuMI Instrumentation

Wilson Hall Cafe

Friday, December 17

Beef Pepper Pot

Buffalo Chicken Wings \$4.75

Cajun Breaded Catfish \$3.75

Spaghetti with Meat Sauce \$3.75

Honey Mustard Ham & Swiss Panini

\$4.75

Double Stuffed Pizza \$3.25

[Wilson Hall Cafe Menu](#)

[Chez Leon](#)

Weather



Sunny 33°/27°

[Extended Forecast](#)

[Weather at Fermilab](#)

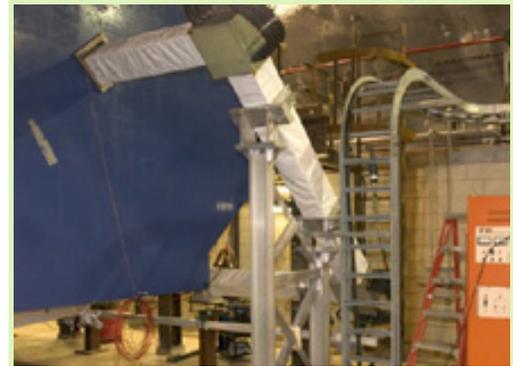
Fermilab and Berkeley Lab Collaborate with Meyer Tool on Key Component for European Particle Accelerator



(Left to Right) Joseph Rasson (Berkeley Lab), Bruce Strauss (DOE-Office of High Energy Physics), Eileen Cunningham (Meyer Tool), Jim Brosnahan (IL State Representative), Tom Peterson (Fermilab), Phil Pfund (Fermilab), Frank Meyer (President Meyer Tool) and Jim Kerby (Fermilab) stand in front of the first completed distribution box. (Click on image for larger version.)

Officials at Fermilab and Berkeley Lab announced on Wednesday the completion of a key component of the U.S. contribution to the Large Hadron Collider, a particle accelerator under construction at CERN, in Geneva, Switzerland. After a competitive bid process, Berkeley Lab awarded Meyer Tool and Manufacturing, a woman-owned small business in Oak Lawn, Illinois, the contract to manufacture eight cryogenic distribution boxes, components of the cooling system for the new accelerator, which is due to begin operating in 2007. Meyer Tool has successfully completed the first box.

MINOS Magnet Passes Test



The magnetic coil in the MINOS near detector in October. (Click on image for larger version.)

The MINOS collaboration has taken one of the last hurdles to make the MINOS near detector operational. On December 10, Fermilab employees switched on the powerful magnetic coil winding through the core of the detector. At the end of the 15-minute test, a current of 5,000 amps flowed through the total of nine loops. Each loop includes a 65-foot section that goes straight through all 281 planes of the near detector and a 65-foot section outside the detector that returns the current, delivering it to the next loop.

"This was an important event both for the scientists and the safety people," said project manager Cat James. "The coil is well insulated against electric shocks, but the residual magnetic field outside the detector is a safety hazard

for people with pacemakers. We will install a barrier to alert visitors to this hazard. The next step is to have the magnet running unattended for a long time, as it will operate during data-taking."

[Secon Level 3](#)

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"Meyer Tool has an excellent working relationship with Fermilab and Berkeley Lab," said Bruce Strauss, U.S. LHC Accelerator Program Manager in the DOE's Office of High Energy Physics, who visited Meyer Tool yesterday morning to celebrate the completion of the first box. "Since its inception, Fermilab has always supported and utilized the great number of machine shops and small manufacturing businesses that are in the Chicago area. Because of the success that we are seeing today, we have confidence that Meyer will deliver the remainder of the boxes on schedule and on budget."

[read more](#)

In the News

From the *Nebraska News*, December 15, 2004

Discover Magazine Cites Work Of UNL Scientists

Findings of two research projects involving University of Nebraska-Lincoln scientists were named among the 100 most important discoveries and developments in science in 2004 by Discover magazine.

Each year, Discover selects the 100 top science stories of the year to feature in its Year in Science issue. Global warming topped the 2004 list, which is featured in the January 2005 issue. Research involving UNL physicists Greg Snow and Dan Claes and agronomist Ken Cassman made the list.

"This is terrific news," said Prem Paul, the university's vice chancellor for research. "Having research our scientists are involved with listed

Fermilab engineer Jim Kilmer designed the coil and supervised the fabrication by a contractor.

Walter Jaskierny worked on the power supply, a non-trivial task. The installation of the coil took place a couple of months ago, carried out by

Leon Beverly and his crew. Getting the solid, 65-foot coil pieces underground required advance planning.



A crane lowered the coil pieces through the roof of the MINOS service building into the MINOS shaft. (Click on image for larger version.)

"Five years ago we had to design both the ceiling crown surrounding the bottom of the MINOS shaft, and the sump trench below the shaft, such that we could bring these long pieces underground," said Cat James. "The coil ended up being the last thing to go in."

At present, the MINOS collaboration is calibrating the near detector. "We have recorded more than five million cosmic ray events," said MINOS physicist Peter Shanahan.



The delivery of the 65-foot coil pieces in September required an extended flatbed truck. (Click on image for larger version.)

among the year's top 100 discoveries by a major science magazine is indicative of the high quality of our research efforts."

Snow and Claes were part of an international team at Fermi National Accelerator Laboratory near Chicago that established the mass of the top quark, a discovery that ranked as Discover's No. 57 story.

[read more](#) Read the [original Discover article](#) on the measurement constraining the mass of the elusive Higgs boson. For a list of all Discover Top 100 science stories of 2004, [click here](#).

Cashier's Office Holiday Schedule

The Cashier's Office will be closed December 23, 2004 thru January 03, 2005. Please submit all time sensitive payment requests no later than 10:00 a.m. on December 20, 2004.

Payroll Department Holiday Schedule

The Payroll Department will be closed December 23, 2004 thru January 2, 2005.

New Classifieds on Fermilab Today

New [classified ads](#) have been posted on *Fermilab Today*. A permanent link to the classifieds is located in the bottom left corner of *Fermilab Today*.

Habitat Restoration Meets Tomorrow

Habitat Restoration will meet from 9:00 a.m. to noon tomorrow. Join fellow employees in removing non-native bushes on the Fermilab Campus. [more information](#)

Fermilab Folk Club Barn Dance

The Fermilab Folk Club will host a Barn Dance on Sunday, Dec. 19 at 2:00 p.m. with music by The Dust Devils and calling by Tony Scarimbolo. [more information](#)

Fermi Singers

The Fermi Singers will be performing a Winter Concert early in 2005. However, if you miss their sound, feel free to stop by the Chapel at Naper Settlement on Dec. 17 at 6:30 pm. This is the second year the Singers will be at Naper Settlement. [more information](#)

Lederman Science Center Holiday Schedule

The Lederman Science Center will be open December 20, 21 and 22 from

8:30 - 3:30 pm. and closed December 23 and 24. The following week the Center will be open December 27, 28 and 29 from 8:30 - 4:00 pm. and closed December 30 and 31.

[Upcoming Activities](#)