Fermilab Today

Tuesday, Nov. 11, 2008

Calendar

Tuesday, Nov. 11
11 a.m. - 1:30 p.m.
Veterans Day event - Kuhn Barn (for registered participants)
2:30 p.m.
Special Joint Experiment-Theoretical Physics Seminar - One West (NOTE DATE)
Title: Study of multi-muon events at CDF
Speaker: Paolo Giromini, INFN Frascati
3:30 p.m.
DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
4 p.m.
Accelerator Physics and Technology Seminar - One West
Speaker: Sergei Nagaitsev, David McGinnis, Valeri Lebedev - Fermilab
Title: Alternative Project X Configuration

Wednesday, Nov. 12
3:30 p.m.
DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
4 p.m.
Fermilab Colloquium - One West
Speaker: Michael Lemonick, Princeton University and *Time* Magazine
Title: William Herschel, the First Observational Cosmologist

Click here for NALCAL, a weekly calendar with links to additional information.

Weather

Rain/Snow
43°/40°

Extended Forecast
Weather at Fermilab

Current Security Status

Feature

Power outage shows strength of Tevatron team

An anchor-shaped bracket connects the electric lines to the Pi-shaped power poles north of Wilson Hall. A metal pin on one of the anchor-shaped brackets became loose, causing a static line that serves as a lightning rod to fall and hit the insulator and power lines. The ensuing arc of electricity triggered a shut down of the master power station. (Click to see larger image)

When most of Fermilab went dark Wednesday, non-essential support staff went home, but many engineers, technicians and physicists picked up flashlights and buckled down for work.

Instead of their normal jobs--running the cutting-edge machinery in an international race to discovery--the men and women were switching to the role of a high-tech pit crew: inspecting and returning to life the highest-energy particle accelerator currently operating.

At 2:30 p.m. Wednesday, a power arc at a power line on site had brought Fermilab's accelerator complex and its key component the Tevatron--a 4-mile particle raceway--to a standstill. Two nearly 6,000-ton particle detectors reading data from an average of 2.5 million proton-antiproton collisions a second ground to a halt as the engine powering bunches of particles racing toward them silenced.

The outage wasn't a monumental problem. Outages of up to a few seconds occur several times a year. Outages of up to 10 minutes occur occasionally. They cause little concern because the temperature of the superconducting magnets in the Tevatron particle collider rises slowly.

Director's Corner

Mobilization

Pier Oddone

Last Wednesday we had a laboratory-wide power failure. A bracket on one of the new power poles broke, leading to a short in one of the 345kv phases feeding the site, bringing down our master substation. Beyond losing beams, not having lights and having to safely send people home, when such an event occurs, the transients in the electrical distribution systems have the potential to create broad damage to equipment across the laboratory. This incident is ironic. We had worried a lot about such an incident with the old power poles, which were in very bad shape, attacked by woodpeckers and termites. The risk of a power failure from a pole breaking was a primary motivation for the installation of new metal poles.

What has been remarkable is to see is the speed and efficiency of the recovery, how the laboratory mobilized at all levels to minimize the lost time. There are many aspects to deal with to recover from such an event. We must reestablish power by modifying the way we route electricity through the site. We must investigate the cause of the failure and take steps to ensure that it doesn't happen again. We must test every component of detectors and accelerators to make certain that that equipment is functional and calibrated. We must repair broken components (we had several). For concatenated machines like the Tevatron we have to ensure not only that components are whole or repaired, but that the interfaces between accelerators and between detectors and accelerators allow the overall ensemble to work as a system. This is a demanding task and the laboratory staff has once again risen to the challenge and performed admirably.

Photo of the Day

Secon Level 3

Wilson Hall Cafe

Tuesday, Nov. 11
- Golden broccoli & cheese
- Southern style fish sandwich
- Coconut crusted tilapia
- Chicken w/arthichokes and mushrooms
- La grande sandwich
- Assorted sliced pizza
- Chicken fajitas

Wilson Hall Cafe Menu

Chez Leon

Wednesdsay, Nov. 12
Lunch
- Eggplant parmesan
- Romaine, walnut & apple salad
- Espresso coupe

Thursday, Nov. 13
Dinner
- Closed

Chez Leon Menu

Call x3524 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/

Send comments and suggestions to:
today@fnal.gov

But an outage of an hour, which occurs only once every one or two years, creates some challenges. Such outages push the system past a temperature threshold that usually requires a day or two of downtime. It's a speed bump, but it's also a chance to test how well the divisions of the laboratory work together.

Read more

--Tona Kunz

In the News

President-Elect Obama urged to promptly name White House science advisor

From ***AIP FYI***, Nov. 7, 2008

"It is essential to quickly appoint a science advisor who is a nationally respected leader with the appropriate scientific, management and policy skills necessary for this critically important role." – Letter to Senator, now President-Elect, Obama

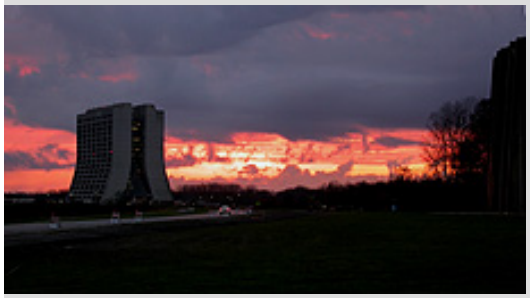
Almost 180 organizations, including the American Institute of Physics, the American Physical Society, and the American Astronomical Society signed letters to Senator Barack Obama and Senator John McCain urging them to quickly appoint a White House Science Advisor by Inauguration Day. The October letters also ask that this position be called the Assistant to the President for Science and Technology and that it be made a cabinet-level position.

A similar recommendation was made in a report issued last summer by the Woodrow Wilson International Center for Scholars. The first of three overarching recommendations in this report, "OSTP 2.0," stated:

"The President should appoint a nationally respected leader to be Assistant for Science and Technology. This individual should serve at the cabinet level. The appointment should be made early in the new Administration, along with the appointments of heads of cabinet-level agencies."

Read more

Winter sunset



Computing Division's John Urish sent in this photo of a sunset, taken Nov. 6 looking toward Wilson Hall.

Accelerator Update

Nov. 7-10
- TeV continues to recover
- D2 wet engine gets overhaul
- Pelletron power supply replaced
- Next store might come Tuesday midnight shift

Read the Current Accelerator Update
Read the Early Bird Report
View the Tevatron Luminosity Charts

Announcements

Have a safe day!

Scottish country dancing Nov. 11

Barnstormers Model Airplane Club meeting Nov. 12

Fermilab health fair Nov. 13

International Folk Dancing, Nov. 13

Public lecture on history of Fermilab Nov. 14

Join Fermilab volleyball, training

Barn dance Sunday, Nov. 16

NALWO Thanksgiving feast Nov. 17

English Country Dancing, Nov. 23

Director's volunteer award Nov. 25

Exciting Explorations! child care program offered Nov. 24-26

Additional Activities