

Calendar

Tuesday, November 30

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4:00 p.m. Accelerator Physics and

Technology Seminar - 1 West

Speaker: P. Bauer, Fermilab

Title: Materials Research for

Superconducting RF Cavities at Fermilab

Wednesday, December 1

11:00 a.m. Fermilab ILC R&D Meeting - 1

West

Speaker: A. Xiao, Fermilab

Title: Lattice Design of 6km ILC Damping

Ring

Speaker: B. Ng, Fermilab

Title: Instability Issues of the Small ILC

Damping Ring

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4:00 p.m. Fermilab Colloquium - 1 West

Speaker: R. Geroch, University of

Chicago

Title: Faster Than Light?

Wilson Hall Cafe

Tuesday, November 30

Chicken & Rice Soup

Mushroom Swiss Burger \$4.75

Baked Meatloaf with a Roasted Tomato

Demi-Glace \$3.75

Parmesan Baked Fish \$3.75

Southwestern Turkey Wrap \$4.75

Ham & Pastrami Calzones \$3.25

South of the Border Burritos with Chips &

Queso \$4.75

[Wilson Hall Cafe Menu](#)

[Chez Leon](#)

Electron Cooling celebrates



The E-cool installation team next to the Pelletron. Front row: Jerry Nelson, Wayne Johnson, Dan Assell, Bill Pritchard, Jerry Leibfritz, Ron Kellett, Mike Frett, Kermit Carlson. Back row: Sharon Austin, Kourosch Taheri, Kelly Hardin, Jeff Sims, Mike Andrews. Not present: Arnold Germain, Steve Jakubowski, Tom Regan, Todd Nebel, Lou Dal Monte, Fernando Juarez. (Click on image for larger version.)

On June 1, the Electron Cooling project stopped its operations at the Wide Band Lab. Five months and more than 10,000 manhours later, almost all equipment is installed in its new location, the Main Injector tunnel and the adjacent MI-31 building. Most importantly, the entire move and installation took place without any accidents leading to lost workdays or restricted work duties--a major achievement since up to 20 people worked simultaneously in the narrow, 100-foot-long electron cooling section in the Main Injector tunnel during the shutdown.

To celebrate the good and safe

Director's Corner

Good Morning!

For the first two months of the annual shutdown, the Main Control Room E-log made for pretty quick reading. The typical entry at the start of a shift was "Shutdown continues." The



Mike Witherell

important shutdown work was going on in the tunnels. For the last month, the typical entry was upgraded to "Shutdown continues. Beam to Linac and Booster."

Last weekend the MCR E-log became much more interesting, as things became a lot busier in the MCR. The shutdown is over, and beam studies are going on throughout the accelerator complex. Saturday the Main Injector came back into operation more quickly than expected, making it possible to introduce beam into the Antiproton Source on Sunday. Beam circulated in the Tevatron and the Recycler for the first time during the All Experimenters meeting on Monday. Simultaneously, MiniBoone received first beam from the Booster.

Of course, an enormous amount of work must be done over the next week or so before the accelerators and experiments are operating normally again. And, as we were reminded around this time last year, many setbacks can occur during early operation. But this is an exciting time of year, as the experts bring the accelerators back to life and we start

Weather



Rain/Snow Likely **40°/28°**

[Extended Forecast](#)

[Weather at Fermilab](#)

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performance, the project leaders organized a small party for the entire installation crew, which includes employees from the Accelerator, Technical and Particle Physics Divisions, as well as contractors. Each team member received a blue "Fermilab Safety Champion" cap.

"We feel very lucky to have this team working on the electron cooling installation," said project manager Jeff Sims. "This group takes safety very seriously--not only for themselves, but also for the people working around them."

Since the installation in the Main Injector tunnel is complete, only a small team is necessary to complete the electron cooling equipment inside the MI-31 building. In the next two months workers will finish the installation of the accelerator inside the Pelletron vessel. Commissioning of the Pelletron, which will provide a continuous beam of electrons to cool antiprotons, will begin in February.

Fermilab Arts Series Presents "The Christmas Schooner"

The Fermilab Arts Series presents "The Christmas Schooner" on Saturday, December 4 at 8:00 p.m. in Ramsey Auditorium.

Tickets are still available for this event.

Back by popular demand, this musical tells the story of the first schooners to brave the ferocious storms on Lake Michigan and deliver Christmas trees to Chicago for the



[The Christmas Schooner](#)

another long physics run.

Announcements

Symmetry Email Notification

Hard copies of the new issue of Symmetry will be distributed this week. To receive an email notification with the table of contents and links to online versions of all stories, please [sign up now](#).

The Dawn of X-ray Astronomy, December 10

The Fermilab Lecture Series presents "[The Dawn of X-ray Astronomy](#)," presented by 2002 Nobel Prize winner Riccardo Giacconi. Friday, December 10, 2004, at 8 p.m. in the Ramsey Auditorium. Tickets are \$5. For reservations call x2787.

Commuters invited to hearing

Construction to improve the Wilson Street bridge over the Fox River in Batavia is scheduled to begin early in 2006. A Public Information Meeting is being held on Wednesday, December 1, from 5 to 8 p.m. at Batavia City Hall, 100 N. Island Avenue. Interested parties may view exhibits that present the proposed improvements. City of Batavia representatives will answer questions.

[More information](#)

Wilson Hall Super Science Stocking Stuffer Sale

The Wilson Hall Super Science Stocking Stuffer Sale will be outside One West on December 1 and 2 from 10:00 am to 1:00 pm. Fermilab apparel, coffee mugs, keychains, science kits and more.

Holiday Book Fair

Holiday Book Fair Fermilab's Recreation Office will sponsor its "Holiday" Book Fair,

holidays. Filled with music and dance, this production is perfect for audiences of all ages. Get your tickets early -- this show sold out in record time when it was at Fermilab in December of 2001!

[read more](#)

Accelerator Update

November 24 - November 29

- CHL lost a nitrogen compressor due to a power loss.
- Main Injector experts established a 120 GeV beam on Saturday.
- Tevatron experts established a partial turn of beam on Sunday, but then quenched at D2.
- The Antiproton Source took reverse protons during the Monday midnight shift.

[Read the Current Accelerator Update](#)

[View the Tevatron Luminosity Charts](#)

In the News

From *Scientific American*, December 2004

Back to the Future

Physicists gaze into the crystal ball

By Graham P. Collins

"Predictions are hard to make, especially about the future," said Nobel physicist Niels Bohr, many years ahead of Yogi Berra. But from October 7 to 9, more than 150 leading physicists gathered at the University of California at Santa Barbara to engage in just that daunting task. Commemorating the 25th anniversary of the school's Kavli Institute for Theoretical Physics, they looked back at the past quarter of a century of physics and ahead to what will happen in the next.

[Read more](#)

From BBC News: Monday, 29 November, 2004, 10:37 GMT

hosted by Books are Fun, in the Atrium on Monday, November 29 from 10:00 AM until 6:00 PM and on Tuesday, November 30 from 7:00 AM until 3:00 PM. The Book Fair will accept cash, personal check, MasterCard, Visa, American Express and Discover card. A portion of the proceeds from the Book Fair subsidizes some of Recreation Office's Programs.

2005 Charitable Giving Campaign

Fermilab employees have the opportunity to contribute annually by payroll deduction to one, two or three IRS approved charities of their choice. To participate, a contribution of at least \$52.00 on an annual basis for one charity or \$78.00 for two or more can be pledged. If you would like to participate in the Charitable Giving Campaign in 2005, employees must complete and return [an enrollment form](#) to payroll by December 1, 2004. For more information, contact Fermilab's Equal Opportunity Office at x3591, x4633 or x3415.

[Upcoming Activities](#)

Device to probe limits of physics

UK physicists have completed the first crucial element of an experimental device designed to probe the forces that shape our Universe. The Atlas experiment will explore the fundamental properties of matter and look for "new physics" beyond the limits of our current understanding. It will be housed at the Large Hadron Collider (LHC) particle accelerator, due to begin operating in 2007. The LHC could create mini-black holes as particles collide at high energies.

[Read more](#)