

Calendar

Wednesday, Oct. 17

THERE WILL BE NO FERMILAB ILC R&D MEETING THIS WEEK

3:30 p.m.

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

4:00 p.m.

[Fermilab Colloquium](#) - One West

Speaker: V. Vassiliev, University of California, Los Angeles

Title: Ground-Based Gamma-Ray Astronomy – from VERITAS to AGIS

Thursday, Oct. 18

11:00 a.m.

Academic Lecture Series - Curia II

Speaker: B. Dobrescu, Fermilab

Title: Physics in Extra Dimensions – Part 2

1:00 p.m.

[ILC ALCPG Physics and Detector R&D Seminar](#) - West

Wing, WH-10NW

Speaker: R. Cassell, Stanford Linear Accelerator Center

Title: Analyzing SiD PFAs: A Path for Improvement

2:30 p.m.

[Theoretical Physics Seminar](#) - Curia II

Speaker: D. Forde, Stanford Linear Accelerator Center and University of California, Los Angeles

Title: On-Shell Methods for One-Loop Amplitude Calculations

3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over
THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY

[Click here for NALCAL](#), a weekly calendar with links

Feature

Green efforts grow at Fermilab



New bins for metal cans and plastic bottles have been added near some elevators in Wilson Hall. The entire building should have the new bins by the end of the year.

At Fermilab, despite what Kermit the Frog says, it is easy being green.

In fact, the laboratory gets greener every year.

Last week, employees celebrated international recognition of Fermilab's environmentally friendly practices after earning ISO 14001 certification.

Even before this certification, the laboratory was recycling and reducing its environmental impact in big ways. Some of these green solutions have saved the laboratory millions of dollars.

Fermilab is a member of TEAM, an initiative to make DOE a government leader in green power and energy efficiency.

"I used to think 'green' referred to saving trees, but it can also mean saving money," said Steve Krstulovich of the Facilities Engineering Services Section.

Krstulovich said that energy improvements made after the laboratory's last energy efficiency audit in 2000 have saved Fermilab about \$2.5 million a year since 2002. A new audit is scheduled for late November.

Fermilab's recent improvements include expanding recycling, removing ozone-depleting and global-warming refrigerant applications and replacing lighting with new higher-efficiency light sources. The laboratory

From the Technical Division

Dimidium facti, qui coepit, habet

This week's column is written by Giorgio Apollinari, head of the Technical Division.

...or, loosely translated, "Well begun is half done." I like to think of these words by Roman poet Horace when looking at our ILC R&D efforts.

Supporting ILC development and preparing Fermilab for a potential U.S. ILC bid are top priorities for Fermilab. To do this,

our laboratory is acquiring the necessary technical and scientific knowledge and tools. In my first *Fermilab Today* column, I'd like to share with you some milestones we achieved toward these goals during the last three months.

In July 2007, the Vertical Cavity Test Facility came online. Located in the Technical Division's Industrial Building 1, the facility allows us to test individual cavities at low power and certify them for high-field operation. The first Vertical Test Stand was successfully commissioned on July 24, when a 1.3 GHz single-cell cavity on loan from Jefferson Lab achieved a 27 MV/m gradient. This was followed by the first nine-cell cavity test in September. It was carried out with a collaboration of physicists from PPD, AD and CD participating in the development of critical diagnostic instrumentation and analysis.

The Horizontal Cavity Test Facility came online Oct. 2. Located in the Meson Building, this joint AD-TD effort is designed to test cavities at 1.8 K with high-power, pulsed radiofrequency. The two types of test stands are crucial to measuring and certifying cavities before they are inserted into a vacuum vessel to make a cryomodule.

Earlier this month, the first ILC-like cold mass



Giorgio Apollinari

to additional information.**Weather****Partly sunny 73°/51°**[Extended Forecast](#)[Weather at Fermilab](#)**Current Security Status**[Secou Level 3](#)**Wilson Hall Cafe****Wednesday, Oct. 17**

- Creamy mushroom chicken soup
- Cajun chicken ranch
- Chicken Wellington
- Parmesan baked pork chops
- Smoked turkey panini pesto mayo
- Assorted slice pizza
- Chicken alfredo fettucine

[Wilson Hall Cafe Menu](#)**Chez Leon****Wednesday, Oct. 17****Lunch**

- Ropa vieja (shredded flank steak)
- Platano maduro
- Moro (rice & black beans)
- Mango flan

Thursday, Oct. 18**Dinner**

- Mussels in saffron sauce
- Duck w/pinot noir sauce
- Moroccan sweet potato stew
- Bittersweet chocolate Irish whiskey cake

[Chez Leon Menu](#)

Call x4598 to make your reservation.

Archives

currently gets about 3 percent of its power from wind, solar, biomass, ocean and geothermal power sources.

Fermilab's Transportation Division has 80 ethanol-85 vehicles and 36 vehicles that run on compressed natural gas. In addition, the Transportation Division uses recycled motor oil and antifreeze in its fleet. The laboratory has been using alternative fuel vehicles since the 1990s.

The laboratory will phase out its CNG vehicles, but replace them with more E-85 vehicles, said George Davidson of the Business Service Section. Government regulations require that 75 percent of purchased vehicles must run on alternative fuels.

More improvements are on the horizon.

Next month, the lab will change nearly all of its cleaning chemicals to those containing 100 percent biodegradable chemicals and lacking phosphates, volatile organic compounds or carcinogens.

The recycling program also is expanding to the Technical Division with additional bins for glass and plastic. New bins are currently being placed in the Industrial Complex. The rest of the division buildings will receive the new bins by the end of the year.

What you can do:

Saving the environment and millions of dollars may seem like a big job, but you can lend a hand. Small actions make a big difference.

- Recycle. Before you throw away anything, stop and think what doesn't need to go in a landfill. Find the nearest receptacle for your mixed paper, bottles, cans, and cardboard and make a habit of recycling.
- Recharge. Switch to rechargeable batteries for as many electronic devices as possible.
- Go paperless. Try to cut down on paper waste by printing less. If you have to print, use recycled paper or print double-sided.
- Do it in the dark. Turn off lights and make sure your computer is asleep when you leave the office. Use fewer lights or put compact fluorescent bulbs in lamps.

-- *Haley Bridger*

Photo of the Day

-- a string of cavities, helium tanks and cryogenic piping -- was completed at the Cryomodule Assembly Facility in MP9. With the assistance of DESY colleagues, the CAF clean room team successfully assembled an eight-cavity string. The string will be inserted into a vacuum vessel by the end of October, becoming the first ILC-like cryomodule assembled in the United States.

All of these achievements were made safely and without accident - an excellent safety performance of all people involved. Because we safely mastered these highly-complicated technical jobs, we need to take a look at our everyday work and strive to improve our overall safety record as well.

With regard to our ILC efforts, are we really half done? Well, poets are probably not the right people to comment on technical progress -- although I'm wondering whether a poetic contribution to the ILC Engineering Design Report could garner additional mileage with funding agencies. Clearly, we are very far from being half-done, but we are certainly off to a good start!

Safety Update**ES&H weekly report, Oct. 16**

This week's safety report, compiled by the Fermilab ES&H section, includes an update on traffic safety at Fermilab. From January through September 2007, there were 32 accidents involving government vehicles. Of these, 17 were caused by improper backing. The Laboratory Safety Committee has set a goal of reducing the rate of vehicle accidents by half during the next 12 months. The full report is [here](#).

[Safety report archive](#)**Accelerator Update****October 15 -16**

- Tevatron cryo system cold
- TeV receives permission to run beam
- MiniBooNE/SciBooNE ready for beam
- Pbar sends beam to Accumulator and Debuncher
- Recycler ready for antiprotons
- DZero must open detector - 8 hour job

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

[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

Cold, complete and ready to make history



A completed cold mass - a string of cavities, helium tanks and cryogenic piping. By the end of October, this cold mass will be inserted into a vacuum vessel for the final assembly of a cryomodule, creating the first ILC-like cryomodule assembled in the U.S.

In the News

Neutrino probe goes under the ground

China Daily, Oct. 15, 2007

SHENZHEN: A China-US collaborated neutrino experiment expected to hopefully unravel one of the mysteries of the universe was launched at the Daya Bay Nuclear Power Plant (NPP) in Shenzhen, in South China's Guangdong Province, on Saturday.

The Institute of High Energy Physics of the Chinese Academy of Sciences is leading the experiment on neutrinos, which are elementary particles that travel close to the speed of light.

More than 190 physicists from 34 research institutes of China, the US, Russia and the Czech Republic will work together for the experiment, including the Department of Energy (DOE) of the United States.

[Read more](#)

Announcements

[Have a safe day!](#)

Wilson Hall exterior restoration work begins today

Wilson Hall will undergo concrete repair, power washing and concrete sealing beginning today, through mid-December, weather permitting. This phase of the Wilson Hall five-year inspection and repair cycle will affect the east side of Wilson Hall only. Noisy work will be limited to early morning hours before 9 a.m. Parking and pedestrian traffic will be limited along the east side, depending on which building bays are being serviced. Motorcycle and bicycle parking will be temporarily moved from the east to the west side lot starting Oct. 29. For more information, contact Russ Alber (630)840-2501 or ralber@fnal.gov.

Wilson Hall east parking lot closed Oct. 22-26

The Wilson Hall east parking lot will be closed Oct. 22-26 to accommodate a tent for the ALCPG07 meeting. Handicapped parking in the east lot will remain available. The Fermilab taxi will pick up passengers on the west side of the building.

Project X physics workshop Nov. 16-17

Fermilab will host a user's workshop Nov. 16-17 to discuss the physics of Project X. The group will meet at 8:30 a.m. Friday, Nov. 16, in One West. A wine and cheese talk by Michelangelo Mangano runs from 4 to 5:30 p.m. The Saturday session will be partly in One West, but also will include parallel sessions in different rooms. Streaming video of the sessions will be provided. The agenda can be found [here](#). You should register if you plan to attend or watch the streaming video. [Online registration](#) is available.

Word 2003: Introduction, Oct. 24

Learn to create, edit, format and add tables to basic business documents with Word 2003 through this training course. For more information, please visit the [Web site](#).

Fright Fest discounted tickets

Buy tickets now for Fermilab Fright Fest Days at Six Flags Oct. 19-21. Tickets are \$25.25 each and available at the Recreation Office, WH15W. If you cannot attend the Fermilab days, ask about other special savings for other weekends.

[Additional Activities](#)

