

Calendar

Thurs., February 15

11:00 a.m. Academic Lecture Series - 1 West
 Speaker: T. Becher, Fermilab
 Title: Course 4, Part 2: QCD Effects in B Decays

1:00 p.m. ALCPG ILC Physics and Detector Seminar - West Wing (WH10NW)
 Speaker: P. Garbincius, Fermilab
 Title: Developing an International Cost Estimate for the ILC

2:30 p.m. Theoretical Physics Seminar - (NOTE LOCATION) Theory Conf Rm (WH3NE)
 Speaker: R. Kitano, Stanford Linear Accelerator Center
 Title: A New Model of the Higgs Boson

3:30 p.m. DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over

4:00 p.m. Accelerator Physics and Technology Seminar - 1 West
 Speaker: R. Johnson, Muons, Inc.
 Title: The Low Emittance Muon Collider Workshop Summary

Fri., February 16

3:30 p.m. Director's Coffee Break - 2nd floor crossover

4:00 p.m. Joint Experimental Theoretical Physics Seminar - 1 West

Speaker: A. Seiden, University of California, Santa Cruz
 Title: P5 Report: The Particle Physics Roadmap

Special Announcement:

Fermilab will host a Blood Drive on February 19 and 20, in the Wilson Hall Ground Floor NE Training Room from 8:00 a.m. to 2:00 p.m. on both days. Appointments can be scheduled on the [ES&H Website](#), or by calling Margie at x3411 or Diana at x3771.

From the Director

No furlough

With the budget that is on the way to the President for signature, we can say with confidence that a furlough will not be required at Fermilab.

Read more about the 2007 budget [here](#).



Pier Oddone

Feature

Subzero crew de-ices the lab and keeps things moving



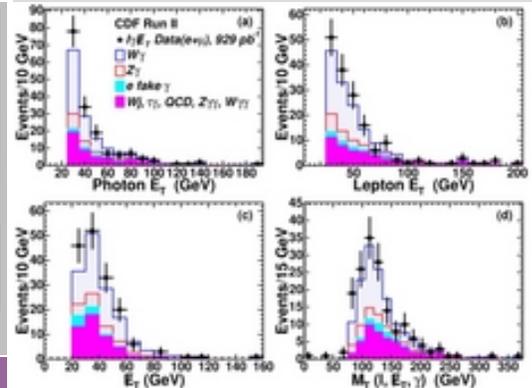
If this water line froze, the pit could flood and the pump could shut off, possibly taking down the Tevatron.

While most of us are fast asleep, members of the FESS Operations Mechanical group are out in the bitter cold, dressed like Eskimos, checking the nooks and crannies of the lab for freezing conditions that might rupture pipes, damage equipment or bring down an experiment. They do it around the clock when temperatures dip below zero. "These are the folks that people rarely hear about," said Operations Manager Bill Shull. "But they are the ones that are in the dark, and in the cold, making sure things get done."

Already this winter, this crew of 14 mechanics has unfrozen a water pipe leading to the Director's house, chipped ice off the Central Utility Building cooling towers, thawed pumps that remove water from the 350-foot deep NuMI project, and unclogged a frozen hydrant near the bison barn using a blowtorch. "On

Fermilab Result of the Week

New data, new questions



The Run II distributions for events in the Lepton+Photon+Missing Energy sample (one of a few samples studied). The level of excess observed in Run I is not confirmed by the new data.

In Run I, which ended in 1996, CDF recorded an event that appeared to contain two photons, two electrons, and missing energy (indicating a particle that escapes detection). Such events are expected to be very rare in Standard Model of particle physics, so there is a chance that this "super event" was caused by the production of a new particle. However, healthy skepticism is in order since "anything can happen once." Yet it is also true that any hints of something new should be vigorously pursued.

The unknown nature of possible new phenomena in the energy range accessible at the Tevatron is the motivation for a "signature-based" search strategy, which does not focus on a single model of new physics, but casts a wide net for finding new phenomena. One investigation searched inclusively for events containing a lepton (electron or muon), a photon, and any combination of additional leptons, photons and missing energy. These related events are sometimes referred to as "cousins." The Run I search did not find any more "super events," but it did note an intriguing 2.7 sigma excess of events involving a lepton, a photon and missing energy.

In Run II, CDF now has ten times the data collected in Run I. It is time to look again, with the same selection criteria as before, in order to perform an *a priori* test for an excess and for other "super" events. Tests so far find 163 events with a lepton, photon and missing

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

Weather



Sunny 15°/1°

Extended Forecast

Weather at Fermilab

Current Security Status

Secon Level 3

Wilson Hall Cafe

Thursday, February 15

-Tomato Florentine
-Grilled Chicken Cordon Bleu Sandwich
-Chimichangas
-Chicken Marsala
-Smoked Turkey Melt
-Assorted Slice Pizza
-SW Chicken Salad w/Roasted Corn Salsa

Wilson Hall Cafe Menu

Chez Leon

Thursday, February 15

Dinner
BOOKED

Wednesday, February 21

Lunch

-Spinach Strudel
-Confetti Salad
-Orange and Olive Oil Cake

Chez Leon Menu

Call x4598 to make your reservation.

Archives

Fermilab Today

Result of the Week

Safety Tip of the Week

ILC NewsLine

Info

these shifts, you never know what to expect," said crew-member Bill VanDuzen, who normally works the 4:00 p.m. to 12:00 a.m. shift, staying until 4:00 a.m. when temperatures get below zero. "It's the problem-solving aspect of the job that I like."

Each winter presents new problems: A few years ago, discharge nozzles in the main ring moat froze. Team supervisor Steve Shirley remembers going out on top of the ice with a row-boat. "We just pushed ourselves with oars across the ice, then drilled out the nozzles," he said.

Everyone in the group makes sacrifices to keep things going, sometimes working 12 hour shifts, often working outdoors in the subzero weather. "Most of the guys here are not the type to ask for attention," said Shirley. "We feel like if things are running right, then we have done our job."

--Siri Steiner

You can do a few simple things to help the Mechanical Group keep the lab unfrozen:

- If you notice a draft, look for a source such as open doors and windows. If it feels unusually cold and you can't find a reason, call FESS.
- Keep doors within buildings open to allow for better ventilation.
- If you think a pipe is freezing, allow water to trickle until a plumber arrives.

From iSGTW

LEADing Weather Research



This spring LEAD will launch fine-scale forecasts automatically in response to tornado-watch conditions. This experiment, the first of its kind, will run during the southern Great Plains' tornado season.

Severe storms in the United States take the lives of hundreds of people and cause more than 13 billion dollars in damage every year.

energy versus an expectation of 150.6 ± 13.0 . So, unfortunately, the level of excess observed in Run I is not confirmed by the new data. So far, they also find no new "super" events.

However, in evaluating all the different combination possibilities, CDF finds three events with two leptons, a photon and missing energy, compared to an expectation of 0.6 ± 0.1 events. As often happens, while answering one question, a new question is added to the list.

One more chapter in this saga is nearing an end, but there are many more to write as the full Run II dataset is collected.

[Learn More](#)



Looking for new things: From left, Henry Frisch (University of Chicago) and Andrey Loginov (first as a graduate student at ITEP, Moscow, then as a postdoc at Yale University) performed the search at CDF.

Accelerator Update

February 12 - 14

- MI trips linked to H- problems
- NuMI trips linked to H- problem and auto-tune bug
- LRF3 water skid power supply failed
- Store 5226 set Record Luminosity with $284.3E30$
- Store 5226 lost due to quench

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

Announcements

Fermilab Today is online at:
www.fnal.gov/today/

Send comments and suggestions to:
today@fnal.gov

“Could we do a better job forecasting and understanding the weather if we adapted to the weather as it evolves?” asks Kelvin Droegemeier, the project director of Linked Environments for Atmospheric Discovery, which explores that very question.

With grid-enabled technology, LEAD works to improve the quality of forecasts and expand accessibility to sophisticated weather research.

[Read More](#)

In the News

New York Times **February 14, 2007:**

Just in Time, Senate Passes Spending Bill

WASHINGTON, Feb. 14 (AP) — The Senate on Wednesday passed a \$464 billion spending bill that closes out last year’s unfinished budget business while providing clues about how the new Democratic Congress and President Bush will do business.

[Read More](#)

Housing Assignments for Summer, 2007

The Fermilab Housing Office is now taking requests for houses, apartments, and dormitory rooms for the Summer of 2007. Since there will be a large influx of experimenters, and requests are anticipated to be in excess of our available facilities, you are urged to submit your request for reservations to the Housing Office by Thursday, March 1, 2007. Requests can be made for any period and need not commence on any particular date. For further information, please contact the Housing Office at (630) 840-3777, or housing@fnal.gov. Individual housing requests can be made using our housing request form [online](#). (Requests for multiple housing units are best handled by direct email to housing@fnal.gov).

NALWO Slide presentation

Today, February 15, Susan Kayser of NALWO will offer a slide presentation on her travels in Egypt from noon until 1:30 p.m. in 1 North of Wilson Hall. Lab women, guests, visitors, users and employees are invited. Taxi service is available from the Village by calling x4225. Please bring your own sack lunch or snack. For additional information, contact the Housing Office at 630-840-3777 or housing@fnal.gov, or call Rose Moore at 630-208-9309.

[Upcoming Activities](#)