

Calendar

Thursday, May 19

2:30 p.m. Theoretical Physics Seminar - Curia II

Speaker: U. Haisch, Fermilab

Title: The Good, The Bad and The Ugly in Inclusive Radiative B-Decays

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY

Friday, May 20

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

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

Speaker: V. Buescher, University of Freiburg, Germany

Title: Search for Supersymmetry at DZero

Weather



Thunderstorms Likely **73°/52°**

[Extended Forecast](#)

[Weather at Fermilab](#)

Current Security Status

[Secou Level 3](#)

Wilson Hall Cafe

Oddone: ILC Will Bring the World to Fermilab

This article is the final piece of a three-part series on the EPP 2010 meeting at Fermilab.

In presenting the EPP 2010 panel with his vision for the future of Fermilab, Director-designate Pier Oddone offered guidance from a bumper sticker: "If you want to predict the future, help create it." Then he made his own intentions even clearer by quoting Daniel Burnham: "Make no little plans; they have no magic to stir men's blood," said Burnham, the famed architect whose design of the 1893 Columbian Exposition transformed Chicago into a world city.

Oddone, who assumes the Director's office on July 1, picked up the theme: "When Burnham built the Columbian Exposition, the world came to Chicago. When we build the ILC, the world will come here."

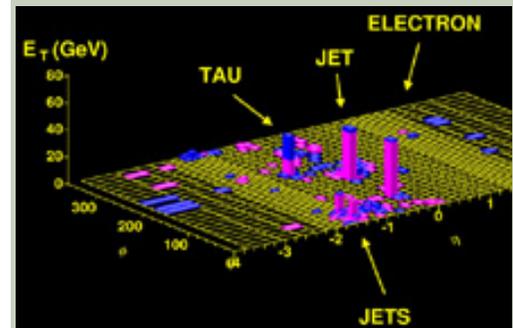
To Oddone, a focus on leadership means results will follow. He described Fermilab as the world leader in neutrinos, in flavor physics, and at the high-energy frontier. Without new investment in a domestic accelerator program, he saw the lab falling to a secondary position by the next decade. "But with new and re-directed investment," Oddone said, "we would have a powerful new discovery machine at the energy frontier with the International Linear Collider,



Pier Oddone at the EPP 2010 meeting.

Fermilab Result of the Week

Tautally Top



An event display showing one of the two candidate top+anti-top \rightarrow tau+electron+neutrinos+jets events. The neutrinos are inferred from the imbalance in momentum transverse to the beam. One jet has a displaced vertex in the silicon micro-vertex detector, consistent with a b-quark. (Click on image for larger version.)

The Standard Model of particle physics organizes the fundamental particles and describes the laws that govern the interactions of the particles through three of the four fundamental forces. Quarks and leptons are organized into three generations, with only the first generation present in the familiar particles of matter: protons, neutrons, and electrons. A [recent analysis](#) of Run II CDF data explores a decay chain that consists of entirely third generation quarks and leptons, searching for top quarks that decay to tau leptons through the decay of W bosons.

Top quarks are produced in approximately one in every ten billion collisions at the Tevatron, and are very challenging to detect. The easiest top signature requires at least one energetic lepton amongst the decay products. Here we search for events with two leptons: one electron or muon, and one tau. Finding tau leptons is particularly difficult, and finding top is already akin to

Thursday, May 19

Southwestern Chicken Tortilla Soup

Philly Style Cheese Steak \$4.75

Baked Fish w/ Roasted Leeks and

Peppers \$3.75

Tomato Basil Chicken Parmesan \$3.75

Classic Cuban Panini \$4.75

Four-Cheese Pizza \$2.75

Marinated Grilled Chicken Caesar Salads

\$4.75

The Wilson Hall Cafe now accepts Visa, Master Card, Discover and American Express at Cash Register #1.

[Wilson Hall Cafe Menu](#)

[Chez Leon](#) is now open. Call x4512 to make your reservation.

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accompanied by a powerful neutrino program. Our goal is to have no question about the ILC by 2010, and to position the US and Fermilab to host the ILC."

[read more](#)

-- Mike Perricone

Why Did the Turtle Cross The Main Ring Road?



A painted turtle found on the Main Ring Road at Fermilab. (Click on image for larger version.)

The answer: To lay its eggs. For the past several weeks, turtles at Fermilab have been crossing the Main Ring Road to lay their eggs near the berm. In the process of crossing the road, several of the turtles have been killed by cars, bicyclists and pedestrians.

The turtles nest from late May to mid July and lay anywhere from two to twenty eggs. The hatchlings look like small round flat stones. When their shells are dry, they blend into the road very easily. When the shells are wet, they are black. Employees and users are asked to watch out for these small hatchlings and avoid running them over. If the stone has feet and a tail, it is a turtle, and it deserves a fair chance.

More information about turtles at Fermilab is [available online](#).

searching for a needle in a haystack...why go through so much work?

The high masses of the third generation particles mean that the couplings of these particles to the elusive Higgs boson are strong. Models of Supersymmetry predict the possibility of a charged Higgs boson which could be produced in top decay, and might preferentially decay to taus. This first measurement in Run II finds two candidate events with one background event predicted. It is consistent with no enhanced rate due to Supersymmetry, but only excludes the most extreme possible rate enhancements. With the full dataset expected in Run II however, this search will eventually either discover — or place stringent limits on — the possibility of this enhanced third generation decay of the top quark.



Sarah Demers Konezny (student) and Kevin McFarland (Professor) of Rochester University, posing at Sarah's graduation ceremony. Not pictured: Tony Vaiciulis (postdoc), Rochester. (Click on image for larger version.)

[Result of the Week Archive](#)

Announcements

- Elizabeth Clements

Photo of the Day

Sunset at Casey's Pond



Photo courtesy of Rick Meaderdes (Click on image for larger version.)

Accelerator Update

May 16 - May 18

- During this 48 hour period Operations established one store that combined with an existing store provided the experiments with approximately 30 hours and 27 minutes of luminosity
- Booster suffered from RF, EAPS, and Chopper problems
- NuMI sent beam during Recycler shot setup
- TeV quenched after store 4148 terminated

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

In the News

From *Scientific American* May 2005

Quantum Black Holes

Physicists could soon be creating black holes in the laboratory

By Bernard J. Carr and Steven B. Giddings

Ever since physicists invented particle accelerators, nearly 80 years ago, they have used them for such exotic tasks as splitting atoms, transmuting elements, producing antimatter and creating

Third Thursday Lunchtime Cleanup Today

The Thursday Lunchtime Cleanup will be on May 19 from 11:45 a.m. to 1:30 p.m. Transportation to the clean-up site will be available outside the east ground floor entrance of Wilson Hall. Cleaning gear will be provided, and hot dogs and refreshments will be served. Call Bob Lootens at x3303 for more information.

[more information](#)

Work in Wilson Hall

Starting tomorrow, FESS will bring equipment into Wilson Hall to conduct repairs on the south window wall under the thirteenth floor. The equipment will remain in Wilson Hall for approximately two weeks. Contact [Elaine McCluskey](#) with any questions.

Fermilab Co-ed Volleyball

The rosters for the Fermilab Coed Volleyball are due Friday, May 20 by noon. Games will begin play on May 23 and are held on Mondays and Tuesdays at the outdoor volleyball courts located behind the pool in the village. If you are interested in participating contact Jenny Thorson, x3470, jthorson@fnal.gov.

Fermi Summer Picnic and Cougar Game - July 30

Join us under the tent at the Kane County Cougar Stadium for a picnic and baseball game on Saturday, July 30. This event is open to Fermilab employees, visiting researchers, retirees, on-site contractors and their immediate families and friends (must be accompanied by someone working at Fermilab). The picnic will begin at 4:00 PM under the Fermilab tent and run until 6:00 PM. The game with reserved seating begins at 6:00 PM. The

particles not previously observed in nature. With luck, though, they could soon undertake a challenge that will make those achievements seem almost pedestrian. Accelerators may produce the most profoundly mysterious objects in the universe: black holes.

[Read more](#)

cost for the whole event is only \$12.00 per person, which includes your reserved game ticket and all-you-can-eat buffet with your choice of Hot dogs, Hamburger, or Bratwurst, Potato Salad, Potato Chips, Cookies and Cream Ice Cream Cup, assorted cans of pop, Miller Lite Beer on tap and White Zinfandel wine. Deadline for registration is Friday, June 17.

[more information](#)

Children's Treasure Hunt Party - August 5

This two-hour event offers an introduction to the safe use of snorkeling gear and the aquatic environment. The Party will be held on August 5 at the Village Pool from 9 AM - 11 AM. The cost for each child is \$20.00. Cost includes an introduction to snorkeling basics, treasure hunt in an artificial reef environment, pirates treasure to keep, use of snorkel gear and a personal snorkel to keep. Children ages 5 to 12 yrs of age are accepted. Children must know how to swim and be comfortable in the water. Registration deadline is July 29.

[more information](#)

[Upcoming Activities](#)