

Calendar

Thursday, November 16

12:30 p.m. Special Particle Astrophysics Seminar - Dark Side WH-6NW (note date and location)

Speaker: P. Oh, University of California, San Diego

Title: New Views of the High-Redshift Universe

1:00 p.m. ALCPG ILC Physics and Detector Seminar - Hornet's Nest WH-8XO

Speaker: R. Abrams, Indiana University

Title: ILC Muon Detector Prototype

Testing at Fermilab

2:30 p.m. Theoretical Physics Seminar - CANCELLED

3:30 p.m. Director's Coffee Break - 2nd Flr X-Over

4:00 p.m. Accelerator Physics and Technology Seminar - 1 West

Speaker: T. Anderson, Fermilab
Title: Accelerator Vacuum 101 Made Easy

Friday, November 17

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

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

Speaker: A. Garmash, Princeton University

Title: Measurement of the weak phase γ from $B_{\pm} \rightarrow D[K_S \pi^+ \pi^-] K^{\pm}$ at Belle

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

Weather

Employees learn about their risk of osteoporosis



Melodee Probst of Delnor Hospital discusses the results of a bone density scan with Fermilab employee Ruth DeJerd.

Yesterday, Melodee Probst, radiological technologist from Delnor Hospital, scanned Ruth DeJerd's heel with an ultrasound machine and broke the bad news: her bone density was a little below normal. Sandy Boyd, hospital outreach and screening specialist, discussed with DeJerd methods to maintain and promote bone health.

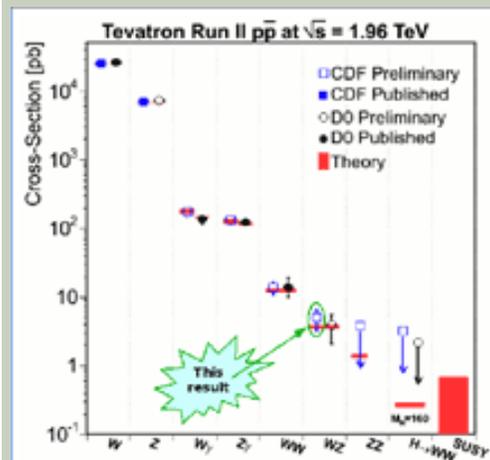
DeJerd, of the Main Injector Recycler Office, was grateful for the screening. "Now I know I have a problem," said DeJerd. "I started taking calcium last week--I'll definitely continue."

Appointments for yesterday's free screening filled quickly. Within two hours of inviting sign-ups, Fermilab's Medical Office reported all 43 spots taken. Due to the high demand, the Delnor group has agreed to return to Fermilab on November 28. Screenings will be held from 8:30 a.m. to noon. Employees will be able to make appointments through the ES&H website.

After a morning of screenings Boyd said,

Fermilab Result of the Week

WZ couple: Discovering a match made in heavies



The summary of current electroweak cross section measurements by CDF and DZero during Run II. (See description below.)

The mediators of the weak interaction, the massive W and Z gauge bosons, are readily produced at the Tevatron and have been studied extensively by the CDF and DZero experiments. But producing pairs of heavy gauge bosons is far more rare. While one W boson is produced in every 3 million Tevatron collisions, and one Z boson in every 10 million, WZ pairs are produced only once per 20 billion events. Facing these odds, it is no wonder that WZ has never been observed—that is, until now.

The elusive WZ has finally been netted at CDF. We found it by searching for WZ production in its most easily observable signature, where 3 charged leptons are produced along with missing energy from a neutrino. CDF observed 16 of these signatures, and about 13 of them are expected to be WZ events. If WZ production was not actually happening in the Tevatron, the probability of getting

Chance of Showers **40°/29°**[Extended Forecast](#)[Weather at Fermilab](#)**Current Security Status**[Secon Level 3](#)**Wilson Hall Cafe****Thursday, November 16**

- Minnesota Wild Rice with Chicken
- Tuna Melt on Nine Grain
- BBQ Ribs
- Chicken Casserole
- Buffalo Chicken Wrap
- Assorted Slice Pizza
- Toasted Pecan Chicken Salad

[Wilson Hall Cafe Menu](#)**Chez Leon****Thursday, November 16****Dinner**

- Tortilla Soup
- Swordfish and Vegetable Kebobs
- Lemongrass Rice
- Cassata

Wednesday, November 22**Lunch**

- Cheese Fondue
- Mixed Green Salad
- Grapefruit Slices w/Candied Rind

[Chez Leon Menu](#)

Call x4598 to make your reservation.

Search**Search the Fermilab Today Archive****Info**

"We've definitely seen some people who need follow up." Bone loss can affect men and women of any age and any ethnicity. Women, ages 50 and older, of Asian, Caucasian and Hispanic descent are at the highest risk. About half of these women have low bone mass, according to the National Osteoporosis Foundation. In non-Hispanic African-American women this number is about 35 percent. Bone loss is preventable through diet, supplements and exercise. "It's easier to maintain healthy bones than it is to rebuild them," said Boyd. "Catching bone loss early will lead to fewer problems. We are encouraging patients to take the initiative in discussing this with their doctors."

--D.A. Venton

Particle Astrophysics Center discusses new leadership

Hugh Montgomery addressed the members of the Particle Astrophysics Center yesterday.

Members of Fermilab's Particle Astrophysics Center gathered yesterday to discuss the center's future and new leadership. "The center will play a prominent role in the future of Fermilab, and we are currently without a director," said Hugh Montgomery, Fermilab's associate director for research. Montgomery was referring to the fact that PAC founder Rocky Kolb retired from his position as director in September and has not yet been replaced.

this result would only be 2 in a billion.

This indicates that our results are significant; and we have, in fact, observed WZ production.

Finding the WZ pair is important because it teaches us about how gauge bosons interact with each other, and it confirms Standard Model predictions. Observing such a rare process at CDF also represents an important experimental milestone in our pursuit of the Higgs particle and new physics at the Tevatron. We look forward to a bright future as we continue to collect data from Run II!



Seated, from left: Mark Neubauer and Shih-Chieh Hsu. On screens, from left: Elliot Lipeles, Frank Wurthwein and Rami Vanguri (all from UC San Diego).

Figure caption (at top): The standard model (SM) expectations are shown as red bands. Also shown are the experimental limits and expectations for a 160 GeV SM Higgs boson decaying to W boson pairs and the approximate cross section range expected if there was Supersymmetry (SUSY). Circled is the new WZ result from CDF.

[Result of the Week Archive](#)**Accelerator Update**

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

Send comments and suggestions to today@fnal.gov

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Kolb, now chair of the U.C. Department of Astronomy and Astrophysics, and Fermilab Director Pier Oddone have established a committee to search for a new director in a process that is expected to take about a year.

Montgomery announced at the meeting that Fermilab physicist Scott Dodelson will serve as the interim director while the committee makes a selection, with a term stretching from December 1, 2006 to September 30, 2007.

After the announcement, Dodelson offered suggestions for the coming year, including the formation of committees to attract visitors, provide outreach, and chart the center's future. He noted some of the center's successes, and said he didn't want to impose too much "top-down" structure. "In the past things have just percolated here--and I think we want to maintain that," said Dodelson.

--Siri Steiner

Photo of the Day



Four million pounds on the head: Fermilab physicist Tim Koeth sent us this picture, taken before the Chicago Cyclotron Magnet was dismantled and removed in August. The magnet is Fermilab's sole tie to Enrico Fermi himself--he directed many of the first experiments that used it before it came to Fermilab 35 years ago.

In the News

November 13 -15

- Two stores provided 45 hours and 53 minutes of luminosity
 - Pbar LCW leak found in Transport
 - Booster kicker problems
 - NuMI off for chiller work
 - PBar lithium lens trouble
 - Recycler damper work
 - TeV records the Kuril Island earthquake
- [Read the Current Accelerator Update](#)
[Read the Early Bird Report](#)
[View the Tevatron Luminosity Charts](#)

Announcements

Entertainment Book Sale in the Atrium

Would you like to save money on restaurants, stores and entertainment? Entertainment discount books will be sold in the Atrium today, November 16, from 11:30 a.m. until 1:00 p.m. Cash, checks, Visa and MasterCard will be accepted. You can also buy the books anytime during business hours in the Recreation Office.

Blood Drive

Mark your calendars! Fermilab's blood drive will be held on December 11 on the Ground Floor NE Training Room of Wilson Hall, and on December 12 from 8 a.m. to 2 p.m. at ICB Ground Floor East (follow the signs). Appointments can be scheduled [on the web](#) or by calling Margie at x3411 or Diana x3771.

Exciting Explorations program

The Children's Center will be adding days to the Exciting Explorations daycare program as needed during the holiday break. Parents who are interested in using this program should contact Susan at x3762 or email daycare@fnal.gov with their requests for specific dates. We will offer sessions if there is enough interest. The cost is \$35.00 per day/per child and

Science Magazine November, 2006:

Japanese Latecomer Joins Race To Build a Hard X-ray Laser

SAYO, HYOGO PREFECTURE, JAPAN-- It's the scientific version of keeping up with the Joneses. Once researchers in one region plan a big, new experimental device, researchers everywhere want their own. The latest example: x-ray free-electron lasers (XFELs), which promise beams that are vastly brighter and with higher energy and shorter pulses than today's workhorse synchrotron x-rays.

[Read More](#)

children should bring their own lunches.

Weekly time sheet due early

Due to the upcoming Thanksgiving Holiday, weekly employees will need to report their time early. Employee time sheets for the week of November 11-19 are due in Payroll by 10 a.m. on Thursday, November 16. Payday will be Wednesday, November 22.

[Upcoming Activities](#)