

Calendar

Monday, Aug. 4

PARTICLE ASTROPHYSICS SEMINARS WILL RESUME IN THE FALL

3:30 p.m.

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

4 p.m.

All Experimenters' Meeting - Curia II

Special Topic: CMS Installation and Commissioning

Tuesday, Aug. 5

Noon

[Summer Lecture Seminar](#) -

One West

Speaker: N. Saoulidou, Fermilab

Title: Neutrino Physics and Experiments

3:30 p.m.

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

4 p.m.

[Accelerator Physics and Technology Seminar](#) - One

West

Speaker: D. Bocian, CERN

Title: Quench Limit Simulations and Measurements for Steady State Heat Deposits in LHC Magnets

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

Weather



Thunderstorms likely 90°/74°

Extended Forecast

[Weather at Fermilab](#)

Current Security Status

[Secou Level 3](#)

Feature

Tevatron experiments double team Higgs boson



Scientists from the CDF and DZero collaborations at DOE's Fermilab have combined Tevatron data from their two experiments to restrict the mass of the Higgs boson. Their results indicate that a mass for the Higgs of 170 GeV/c² is excluded, with 95 percent probability (see graphs). This is the first time that the Tevatron experiments directly restrict the Higgs mass.

Joint CDF, DZero effort lands Fermilab in Higgs territory.

Batavia, Ill.--Scientists from the CDF and DZero collaborations at the U.S. Department of Energy's Fermilab have combined Tevatron data from the two experiments to advance the quest for the long-sought Higgs boson. Their results indicate that Fermilab researchers have for the first time excluded, with 95 percent probability, a mass for the Higgs of 170 GeV. This value lies near the middle of the possible mass range for the particle established by earlier experiments. This result not only restricts the possible masses where the Higgs might lie, but it also demonstrates that the Tevatron experiments are sensitive to potential Higgs signals.

"These results mean that the Tevatron experiments are very much in the game for finding the Higgs," said Pier Oddone, director of Fermilab.

Combining results from the two collider experiments effectively doubles the data available for analysis by experimenters and allows each experimental group to cross check and confirm the other's results. In the near future, the Fermilab experimenters expect to test more and more of the available mass range for the Higgs.

Safety Tip of the Week

Yellowjackets



More people are stung by yellowjackets than any other type of bee or wasps. Notoriously aggressive, the yellowjacket's shiny yellow and black striped abdomen makes it easy to identify. *Image courtesy of Wikipedia.*

During the summer, people spend a lot of time outdoors. Unfortunately, so do insects. As temperatures fall in late summer, the yellowjacket population peaks.

Although yellowjackets (a type of wasp) normally consume carbohydrates, they feed their larvae captured insects. The peak in the yellowjacket population happens just as the supply of insects is declining. They scavenge more aggressively at this time, taking food from trash containers and picnickers.

You can reduce your risk of a yellowjacket close encounter by not using scented products or wearing clothes that are brightly colored or patterned. Drink from closeable containers. If a yellowjacket lands on you, avoid swatting or squishing it. A crushed yellowjacket releases a chemical that signals other wasps to attack.

Yellowjackets are unlikely to sting unless agitated by fast movements or rough handling. They may land on your skin by chance, to take a drink of sweat or to inspect a smell. If you are patient and calm, they will eventually fly away. If you can't wait, you can very gently brush them off with a piece of paper using slow deliberate movements. You can use this same approach to evict a yellowjacket from inside a vehicle.

Wilson Hall Cafe**Monday, Aug. 4**

- *Potato leek soup
- Monte Cristo
- *Savory roasted chicken quarters
- Lasagna roll ups
- Chicken ranch wrapper
- Assorted slice pizza
- Szechuan style pork lo mein

[Wilson Hall Cafe Menu](#)**Chez Leon****Wednesday, Aug. 6
Lunch**

- Spicy Italian sausage & 3 cheese calzone
- Caesar salad
- Fresh fruit plate

**Thursday, Aug. 7
Dinner**

- Melon & prosciutto
- Ancho chili pork tenderloin with caramelized onions
- Red rice
- Vegetable of the season
- Hazlenut cake with blueberries

[Chez Leon Menu](#)

Call x4598 to make your reservation.

Archives[Fermilab Today](#)[Result of the Week](#)[Safety Tip of the Week](#)[ILC NewsLine](#)**Info**

The Standard Model of Particles and Forces--the theoretical framework for particle physics--predicts the existence of a particle, the Higgs boson, that interacts with other particles of matter to give them mass. The mechanism by which particles acquire different mass values is unknown, and finding evidence for the existence of the Higgs boson would address this fundamental mystery of nature.

The CDF and DZero experiments each comprise some 600 physicists from universities and laboratories from across the nation and around the world. Currently, Fermilab's plans call for the Tevatron experiments to continue operating through 2010. In that time, both groups expect to double their analysis data sets, improving their chances to observe the Higgs.

Scientists expect operations to begin at the Large Hadron Collider at CERN, in Europe, sometime later this year. Observation of the Higgs is also a key goal for LHC experiments.

The Tevatron accelerator and the experiments are operating at peak performance. The Tevatron continues to break records for luminosity, the number of high-energy proton-antiproton collisions it produces. The more luminosity the Tevatron delivers, the more chances experimenters have to see the Higgs. Moreover, by continually improving their experimental techniques, the CDF and DZero physicists have been able to boost their sensitivity to the Higgs and other phenomena by more than the margin afforded by the increased data alone.

[Read more](#)

[Graphics and photos](#)

Feature

Bottle traps are an effective non-pesticide method for clearing an area of yellowjackets. Information on the construction and use of these traps is provided at numerous online sources. If you need help with an insect problem, you can contact Roads & Grounds at x3303. They can provide advice and/or schedule a visit from the laboratory's pest control contractor that comes to Fermilab every Monday.

Accelerator Update**July 30 - August 1**

- Three stores provided ~43 hours 15 minutes of luminosity
- Pbar magnet H717 repaired in place
- FESS installs pond water spray heads at MI-20

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

Announcements**[Have a safe day!](#)****UEC elections underway**

Elections for the 2008-2009 Users Executive Committee are now open. Votes must be cast by Aug. 5. More information is available [here](#).

U.S. visa application changes

Applicants might experience longer-than-usual waits at U.S. Consulates during their visa application process. The Visa Office has reported that applicants have experienced waits for visas in excess of five weeks. While five weeks is unusual, it is a trend toward longer visa processing caused, in part, by security clearances.

Applicants for U.S. visas should make sure that they provide all the paperwork required for their visas. Check the U.S. Consulate's Web site prior to applying to find out what paperwork is required. Do not rely on past experience - processes change. Anyone whose visa application has been pending for four weeks should notify the Visa Office. Similarly, anyone contemplating applying for a U.S. visa abroad should contact the Visa Office prior to making travel plans. You also should advise the Travel Office of your visa application plans during the travel authorization process.

Fermilab Today

is online at:

www.fnal.gov/today/

Send comments and

suggestions to:

today@fnal.gov

Interactive vehicle safety seminar Friday



An Interactive Vehicle safety seminar will take place in the Wilson Hall west overflow parking lot on Friday, Aug. 8.

While you are sober, Fermilab's Traffic Safety Subcommittee members want you to understand how alcohol impairs you so that you can comprehend the danger. Using a vision-altering device dubbed "beer goggles" the subcommittee will give you an alcohol-free chance to experience driving a golf cart as though under the influence of alcohol.

You can wear the goggles during an event from 11:30 a.m.- 1 p.m. on Friday, Aug. 8, as part of the Interactive Vehicle Safety Seminar in the Wilson Hall west overflow parking lot. You can also watch a simulated vehicle roll-over and get child safety seats installed and inspected.

In case of rain, the even will take place on Tuesday, Aug. 19, in the same location.

-- Rhianna Wisniewski

You've all heard people joke about beer goggles - the term for visual delusion caused by consuming too much alcohol. This phenomenon can make your date look overly attractive and blind you to your impaired motor skills.

The results can be disastrous, especially behind the wheel of a vehicle.

Free osteoporosis screening Aug. 8

Wellness Works and Delnor-Community Hospital will host an osteoporosis screening between 7:30 and 11 a.m. on Aug. 8 in the Emergency Operating Center on the ground floor of Wilson Hall. Only Fermilab employees who have not participated in a previous screening are eligible. The free heel scan is an ultrasound test that measures the bone density in the heel. Participants will need to remove their sock and the shoe from one foot. (Ladies, please do NOT wear panty hose.) Participants with heel/ankle fractures or surgery to both feet are excluded from this screening. Sign up instructions are on the [ES&H homepage](#).

Summer intern photo Aug. 5

VMS will take a photo of all summer interns at 11:45 a.m. in the Wilson Hall atrium. Please come on time.

Review help for supervisors

Managers and supervisors who need help with the performance review can attend a review briefing from 8:30 - 11:30 a.m. on Thursday, Aug. 7. The briefing will help answer questions about the performance review process, including the form and compensation. [Learn more and enroll](#)

Mileage reimbursement rate increases

The Internal Revenue Service and the General Services Administration have increased the 2008 standard mileage reimbursement rates to 58.5 cents per mile, effective Aug. 1, 2008.

[Additional Activities](#)