

Calendar

Monday, January 9

2:30 Particle Astrophysics Seminar

Speaker: E. Siegel, University of Florida

Title: Cosmic Magnetic Fields: A New Beginning

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

4:00 p.m. All Experimenters' Meeting
Special Topics: AP2 Line and Debuncher Studies Status

Tuesday, January 10

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

4:00 p.m. Accelerator Physics and Technology Seminar - 1 West
Speaker: M. Edelweiss Monville, Oak Ridge National Laboratory
Title: Simulation of an Active Material Interrogation System Based on Photofission, and Novel Nano-Fabrication Method

Weather



Cloudy **35°/21°**

[Extended Forecast](#)

[Weather at Fermilab](#)

Current Security Status

[Secou Level 3](#)

Wilson Hall Cafe

Muons Inc. Will Co-Host Muon Collider Workshop

Retired Fermilab physicist Rol Johnson and the company he founded in 2002, Muons Inc., are using Small Business Innovation Research (SBIR) grants for basic research on future accelerators.

Now, along with Fermilab's Technical Division, Muons Inc. will co-host the Low Emittance Muon Collider Workshop, to be held at the lab from February 6 to 10,

2006. "Our first projects were to invent ways to cool or shrink beams of muons almost as much as antiprotons are cooled for the Tevatron collider. Now we want to use these new inventions to design a muon collider based on this extreme muon cooling, where muons are accelerated to high energy by recirculating through ILC RF cavities," says Johnson.

Despite problems associated with cooling beams of particles that only live 2.2 microseconds, the potential payoff of higher-than-ever energy collisions continues to motivate Johnson. Calculations indicate



a muon collider with the same circumference as the Tevatron could provide higher constituent center of mass energy and luminosity than



Safety Tip of the Week

Arc Flash: Hidden Danger



Do not work on energized parts, either diagnostic or manipulative, unless special precautions, training and appropriate permits have been completed.

Electrical safety precautions generally focus on the harmful effects of direct contact with energized components. This makes sense because relatively little electrical power is needed to initiate a startle response, upset heart rhythm, "freeze" muscle movements or burn tissues; these are the electrical hazards that most people can expect to encounter in their day-to-day lives. However, there is another kind of electrical hazard called "arc flash" that does not require direct contact to cause serious injury, but can only occur in high power circuits.

An arc flash involves the flow of current through the air between conductors. Since the arc is extremely hot, a number of bad things happen very quickly. The arc radiates intense thermal energy resulting in potential skin/eye burns and fires. The sudden increase in temperature melts metals adjacent to the

Monday, January 9

- Minestrone
- Pot Roast
- Baked Chicken Enchiladas
- BLT Ranch Wrap
- Assorted Slice Pizza
- Chicken Stir Fry

The Wilson Hall Cafe accepts Visa, Master Card, Discover and American Express.

[Wilson Hall Cafe Menu](#)

Chez Leon**Wednesday, January 11****Lunch**

- Tinge Con Tostados
- Rice and Beans
- Pico De Gallo
- Banana Spring Rolls

Thursday, January 12**Dinner**

- Gruyere and Black Forest Ham Crepes
- Shrimp Scampi
- Spinach Fettuccine
- Cassata

[Chez Leon Menu](#)

Call x4512 to make your reservation.

Search

Search the Fermilab Today Archive

Info

Rol Johnson anything else now planned. "Our design goal is 5 TeV with an average luminosity of 10^{35} . The extreme muon cooling that we are developing leads to high luminosity with smaller beams and fewer muons than were previously thought possible," says Johnson.

Johnson and colleagues are still in the research stage, but he says, "We think we've got all the pieces and we now have to put them together to get a believable design for a muon collider and a neutrino factory." The Low Emittance Muon Collider Workshop may help to put it all together. More information can be found at the workshop [website](#).

—Dawn Stanton

Milestones

Doug Michael, co-spokesperson for MINOS, passed away over the winter holiday. *Fermilab Today* will honor his contributions to the lab with an obituary in the near future.

In the News**From *World Science*, January 5, 2006:****Thriving under our noses, stealthily: coyotes**

Scientists have long thought coyotes intently avoid cities, but a new study has found the opposite.

Groups of the historically maligned dog relatives are thriving in some large U.S. cities: they lurk in darkness and come out at night, probably helping the human inhabitants by eating vermin, the study found.

arc and produces a pulse of pressure. Loose objects, including molten metal droplets, as well as nearby people, can be propelled away from the arc. The pressure pulse also produces a loud noise that can damage hearing.

FESHM chapters 5042 and 5040 have been revised to incorporate the arc flash precautions contained in a recent update to NFPA 70E, "Electrical Safety in the Workplace". The most important point to remember is that at Fermilab, we do not work on energized parts, either diagnostic or manipulative, unless special precautions, training and appropriate permits have been completed. In addition, you should stay away from electrical equipment that is being worked on and respect all barriers, signs and the directions given by the electrical worker or safety observer.

[Safety Tip of the Week Archive](#)

Accelerator Update**January 4 - 6**

- During the 48 hour period operations established one store that provided the experiments with 4 hours and 30 minutes of luminosity.
- Kicker and Vacuum problems for 2 days.
- New recycler stash record of 370.1 E30 set on Thursday evening.
- New Tev Initial luminosity record of 171.85 E30 set on Friday owl shift.

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

Announcements

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

Send comments and suggestions to today@fnal.gov

[Fermilab Today archive](#)

[Hurricane Relief Page](#)

[Fermilab Today PDF Version](#)

[Fermilab Result of the Week archive](#)

[Fermilab Safety Tip of the Week archive](#)

[Linear Collider News archive](#)

[Fermilab Today classifieds](#)

[Subscribe/Unsubscribe to Fermilab Today](#)

This animal's amazing ability to thrive in cities has surprised scientists, said Stanley Gehrt of Ohio State University, who is studying coyotes in urban Chicago.

Since the study began six years ago, Gehrt and his colleagues say they have found that urban coyote populations are much larger than expected; that they live longer than their rural cousins in these environments; and that they are more active at night than coyotes living in rural areas.

Coyotes also do some good: they help control rapidly growing populations of Canada geese throughout North America, Gehrt said. And while his coyote research is concentrated in Chicago, he said, the results likely apply to most major metropolitan areas in North America.

[Read More](#)

Summer Housing Requests

The Fermilab Housing Office is now taking requests for houses, apartments, and dormitory rooms for the summer of 2006. 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 Wednesday, March 1, 2006. Requests can be made for any period and need not commence on any particular date. For further information, please call (630) 840-3777 or email housing@fnal.gov. Individual housing requests can be made by using our Online Housing Request [form](#). (Requests for multiple housing units are best handled by direct email.)

[Upcoming Activities](#)