

Calendar

[Have a safe day!](#)

Friday, Feb. 12

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

4 p.m.
[Joint Experimental-Theoretical
Physics Seminar](#) - One West

Speaker: Jason Steffen,
Fermilab
Title: First Results from the
Kepler Mission

Monday, Feb. 15

2:30 p.m.
Particle Astrophysics Seminar
- 1 West

Speaker: Richard Carrigan,
Fermilab
Title: Starry Messages:
Searching for Signatures of
Interstellar Archaeology
THERE WILL BE NO
PARTICLE ASTROPHYSICS
SEMINAR THIS WEEK

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

4 p.m.
All Experimenters' Meeting -
Curia II
Special Topic: Muon Collider
Ring Magnet Progress

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

[Upcoming conferences](#)

Campaigns

[Take Five](#)

[Tune IT Up](#)

H1N1 Flu

Feature

Fermilab ecologists take to skies for annual deer count



An overpopulation of deer can damage the ecosystem. Damage done to a tree by deer is visible in the photo from 1997.

If you see a helicopter overhead today, go ahead and wave.

Rod Walton, Fermilab's ecologist, and Ryan Campbell, environmental consultant, will take to the skies this morning to survey Fermilab's whitetail deer population.

They'll make several passes over the site, systematically counting the whitetail deer in quadrants of the laboratory as part of Fermilab's annual deer population survey.

A pilot has to fly the helicopter at 300 to 500 feet above the ground for the ecologists to count effectively. If the helicopter is too close to the ground, deer get frightened and scatter, and if it is too high, the deer are difficult to see. They do the survey in the winter when the deer are easier to spot.

"You can't do it unless there is a good snow cover," Walton said. "It has to be a sunny, snowy morning, so they cast a slight shadow."

Walton started the deer-counting program 10 years ago as a method of tracking the population. After each count, Walton reports the number of deer to the U.S. Department of Agriculture, and the organization then removes excess deer.

Recovery Act Feature

Drilling for neutrinos



Geologist Steven Kroll examines a soil sample collected near the Main Injector at a depth of about 25 feet.

Steven Kroll doesn't mind getting his hands dirty. Simply touching a sample of soil or rock allows him to understand its makeup, a useful skill for a geologist who investigates sites for future construction projects.

That is exactly what Kroll and his crew did at Fermilab for several days in December and January while conducting a [site investigation](#) for the [Long Baseline Neutrino Experiment](#).

"I'm looking to see how the soil feels and how easily it breaks apart," said Kroll, a geologist at Patrick Engineering Inc., a consulting firm in Lisle. He also could tell at a glance how much of the dirt was made up of clay or sand.

Funded by the American Recovery and Reinvestment Act, Kroll worked with Groff Testing Corporation, a soil and rock drilling company from Kankakee to collect hundreds of soil and rock samples from depths as great as 650 feet.

As a drilling rig penetrated the earth, making the soil look like putty despite the single-digit temperatures, Kroll periodically retrieved roughly three-inch diameter samples from a two-foot-long hollow cylinder. He broke the samples into pieces, gently rolled each piece between his fingers and took notes in a field journal aged with water stains and the dust of the earth.

Kroll then placed the sample into a jar to undergo deeper analysis at a lab for more detailed specifications. "I'm good, but I'm not that good," he said with a grin.

For information about H1N1, visit Fermilab's flu information [site](#).

Weather

 **Mostly cloudy**
23°/14°

[Extended Forecast](#)
[Weather at Fermilab](#)

Current Security Status

[Secou Level 3](#)

Wilson Hall Cafe

Friday, Feb. 12

- Breakfast: Chorizo burrito
- Chunky vegetable soup w/ orzo
- Buffalo chicken wings
- Cajun breaded catfish
- Teriyaki pork stir-fry
- Honey mustard ham & Swiss panini
- Assorted sliced pizza
- Carved turkey

[Wilson Hall Cafe menu](#)

Chez Leon

Wednesday, Feb. 17

Lunch

- Spicy honey-brushed chicken
- Garlic roasted potato wedges
- Tossed salad
- Sticky toffee pudding

Thursday, Feb. 18

Dinner

- Crab cakes w/ tomato cream sauce
- Spice crusted pork tenderloin w/andouille sausage gravy
- Horseradish mashed potatoes
- Fried okra
- Cappuccino-fudge cheesecake

[Chez Leon menu](#)

Call x3524 to make your reservation.

Archives

"Ten years ago, if you walked into Big Woods, there was nothing on the ground. You could see all the way through the woods. It looked like someone had gone through the forest with a lawn mower upside down and had trimmed everything at the same height," Walton said. "We do this for the health of the ecosystem."

When the program began, there were between 600 to 800 deer on site, and 15 to 25 deer-related car accidents on site per year. Today the USDA keeps the herd between 100 to 150 deer, and Fermilab has had one or two deer-related accidents each year.

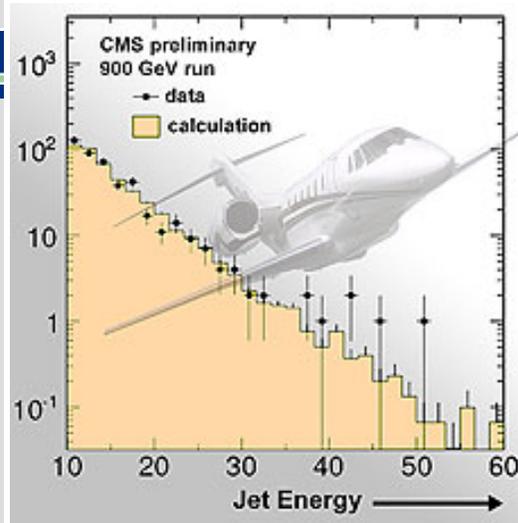
"Now we have a very consistent and healthy population," Walton said. "We only need to remove 25-50 deer each year."

Each deer is autopsied to assess its condition and look for disease, and the deer meat is donated to local food pantries in Cook, DuPage and Kane counties.

-- *Rhianna Wisniewski*

CMS Result of the Month

Jets at CMS: First high-energy collisions



CMS measured the distribution of the production of jets in its early data. With the upcoming higher energy and increased data set, CMS physicists expect to see jets with more than 20 times the energy indicated here.

This result of the month finds us poised between the long-anticipated data taken before Christmas and the exciting prospect of taking even more data at higher energies in the near future.

CMS physicists have been using this time wisely to understand how our detector works and to verify that we can successfully measure

Combined with a series of seismic tests that *Fermilab Today* will report on in a future article, the results of the site investigation will provide engineers with information critical to developing a design and to constructing underground tunnels and caverns on Fermilab's site for the future neutrino project.

"We are interested in understanding the self-supporting standards of the rock and soil," said Fermilab engineer Chris Laughton. "This will tell us if we can rely upon the ground to support the facilities, just like we did for Fermilab's other neutrino experiments, or if we need concrete reinforcement."

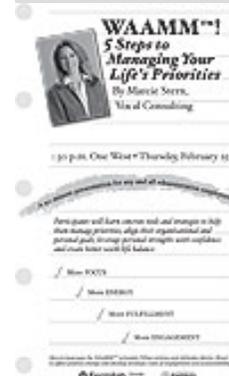
Preliminary results confirm that Fermilab's site consists of mainly clay and limestone. "It's very supportive and good to build on," Kroll said.

Fermilab will receive a detailed geotechnical report within the next few weeks.

-- *Elizabeth Clements*

Special Announcement

Administrative employees event Feb. 25



Managing priorities and balancing your personal and professional goals can be difficult. An event to help administrative employees achieve this work/life balance will take place at 1:30 p.m. on Thursday, Feb. 25, in One West. Marcie Stern from Vocal Consulting will give a talk titled "WAAMM! 5

Steps to Managing Your Life's Priorities." During this 90-minute presentation, Stern will teach strategies and skills to help attendees manage their priorities, align their organizational and personal goals and more. All administrative professionals are welcome.

Special Announcement

[Fermilab Today](#)

[Result of the Week](#)

[Safety Tip of the Week](#)

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the phenomena predicted by the Standard Model. Only after we demonstrate that we can see the expected should anyone take seriously claims of unexpected discoveries.

When the LHC again turns on, it will have the highest-energy beams in the world. However, equally important are the total number of collisions recorded. Just as buying a million lottery tickets improves your odds of winning the jackpot, the more collisions you have, the better chance you have of finding something truly rare. And, as the size of the CMS data set grows, we will discover common things first, followed by a long line of increasingly rare phenomena, hopefully culminating in something totally unexpected.

The most common high-energy interactions at the LHC are collisions between the quarks and gluons in the beam. Because these collisions are governed by the strongest of the four known forces, these kinds of interactions dominate the early data. These quarks and gluons experience post-collision interactions that convert them into jets, blasts of particles travelling in the same direction as the scattered object.

CMS measured the scattered energy of jets in the data taken from the running period just before Christmas. The data agrees rather well with the theoretical predictions. Since these predictions have been verified by other experiments, failure to confirm would have indicated a problem with the detector, rather than a discovery.

This confirmation sets the stage for the next measurement and all those that will follow, each hopefully exploring successively rarer phenomena. Be sure to watch this column for the steady series of measurements that will hopefully end with the three most exciting words in physics.

"Huh...that's weird..."

-- *Don Lincoln*



FTL, Oracle and ProCard systems down this weekend

Due to a database upgrade and quarterly patching, the Oracle E Business suite, Fermi Time and Labor (FTL) and ProCard application systems will be unavailable from 8 a.m. on Saturday, Feb. 13, until 9 a.m. on Sunday, Feb. 14.

[Announcements](#)

Latest Announcements

[Unleash those stomach butterflies - join Toastmasters](#)

[Engineers Week activities - Feb. 15-19](#)

["Ask HR" sessions to be held at FCC and Wilson Hall](#)

[Barn Dance Feb. 14](#)

[March 5 deadline for The University of Chicago Tuition Remission program](#)

[Blood drive sign-up today](#)

[Service Award program](#)

[2010 standard mileage reimbursement rate](#)

[Chicago Bulls discount tickets available online](#)

[Introduction to Argentine Tango series of classes - FREE](#)

[Qi Gong, Mindfulness and Tai Chi Easy for Stress Reduction](#)

[Excel 2007 Advanced class - Feb. 18](#)

[Ukrainian egg decorating class - Feb. 22](#)

[Weight Watchers at Work new session](#)

[BLAST! The Movie: intro, film and Q&A - Feb. 19](#)

[Applications accepted for awards in URA Visiting Scholars program](#)

[Fermilab Family Open House - Feb. 21](#)

[Python Programming class - Feb. 24-26](#)

[Conflict Management and Negotiation Skills - March 3 and 10](#)

These young physicists have contributed to the analysis of the first jet data. Group photo, from top left: Sertac Ozturk, Cukorova University and Fermilab; Seema Sharma, Fermilab; Chiyong Jeong, Texas Tech; Selda Esen Koylu, Brown University; Jason St. John, Boston University; Jim Hirschauer, Fermilab; Kalanand Mishra, Fermilab; Cosmin Dragoiu, University of Illinois, Chicago. Individual pictures: top: Kostas Kousouris, Fermilab, and bottom: Keith Rose, Rutgers University.

[Adobe Acrobat Professional 9.0 Level 1 class - March 4](#)

[On-site housing for summer 2010 - March 8 deadline](#)

[DreamWeaver CS3: Intro offered March 9 or March 16](#)

[Adaptive Leadership: Coaching for Individual Differences class - March 9](#)

[Excel Power User/ Macros class - March 11](#)

[Hiring summer students for 2010](#)

[FRA Scholarship 2010](#)

[Submit an announcement](#)

Classifieds

Find new [classified ads](#) on *Fermilab Today*.