

Calendar

[Have a safe day!](#)

Tuesday, May 12
2:30 p.m.

[Special Theoretical Physics Seminar](#) - One West (NOTE DATE and LOCATION)
Speaker: Simon Catterall, Syracuse University
Title: Exact Lattice Supersymmetry
3:30 p.m.
DIRECTOR'S COFFEE
BREAK - 2nd Flr X-Over
THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY

Wednesday, May 13
11 a.m.

[Academic Lecture Series](#) - Curia II
Speaker: Vincenzo Cirigliano, Los Alamos National Laboratory
Title: Kaons as Laboratories for Fundamental Physics: Course 2, Lecture 2
3:30 p.m.
DIRECTOR'S COFFEE
BREAK - 2nd Flr X-Over
4 p.m.

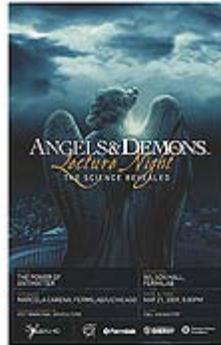
[Fermilab Colloquium](#) - One West
Speaker: David G. Stork, Ricoh Innovations and Stanford University
Title: Did Early Renaissance Masters 'Cheat' Using Optics? Computer Science, Physics, and Art History Address a Bold Theory

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

Feature

Fermilab on the power of antimatter, *Angels & Demons*

When Ron Howard's new film "Angels & Demons" starring Tom Hanks hits movie screens on May 15 viewers will see a fictionalized view of antimatter as a doomsday device.



Matter and antimatter notoriously destroy one another upon contact, making antimatter a favorite weapon in science fiction.

While the depiction of antimatter in "Angels & Demons" is far from real, the material is. And unlike its pop culture reputation, antimatter isn't bad. In fact, it can help diagnose disease, fight cancer and uncover how the universe created structure from free flowing energy.

Antimatter is one of the most expensive materials in the world to produce. It requires a particle accelerator that generates six billion electron volts of power and a vacuum storage container, which keeps the antimatter from touching air or other regular matter.

And most of it is here in Chicagoland.

Fermi National Accelerator Laboratory in Batavia produces and stores the world's most antimatter for a significant amount of time.

Scientists from Fermilab will explain antimatter's medical and research uses as well as its safe and complex production during a lecture at 8 p.m. on May 21 in Ramsey Auditorium. Scientists will also discuss the truths and falsities of antimatter and particle physics that are described in Dan Brown's best-selling book.

Tickets cost \$5 and are available by calling (630)840-2787.

For more information visit the lecture [Web site](#).

Director's Corner

Interdependence

At Fermilab we have a strong tradition of serving the university community. Fermilab's start in the '60s, in competition with other institutions that aimed to build the largest accelerator in the world, was anchored



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in the idea of creating a truly national laboratory, one that would serve all institutions equally—where users would be "at home and loved," as Leon Lederman said at the time. The contractor selected for this new laboratory was URA, an organization that embodied these principles. The tradition of service is also a part of our scientific staff. Our scientists not only carry out research, but tackle many of the supporting roles necessary to make experiments and accelerators work.

Today we think less of service and more of partnerships. University scientists work together with us in all aspects of the experiments from design to construction to physics exploitation. The relationship of our laboratory to high-energy physics groups at universities and other laboratories is quite special. It is an interdependent one. We could not carry out the Fermilab program without strong partnerships with the university community and with other laboratories. As Fermilab benefits from this relation so do universities and other laboratories by taking an integral part in national projects of scale.

In this respect, particle physics and nuclear physics are quite different from most other disciplines. The detectors our communities build and use are extremely complex and require very large teams with the integration of many disciplines. In most other scientific disciplines the work may take place at a large facility, usually an accelerator, but the experiments comprise relatively small groups. Typically in particle physics our projects bring together several dozen institutions and

Weather



Mostly sunny
70°/51°

[Extended Forecast
Weather at Fermilab](#)

Current Security
Status

[Secou Level 3](#)

Wilson Hall Cafe

Tuesday, May 12
- Creamy turkey vegetable
- Chili dog
- Shepherd's pie
- Chicken cacciatore
- Italian panini w/provolone
- Assorted sliced pizza
- Super burrito

[Wilson Hall Cafe Menu](#)

Chez Leon

Wednesday, May 13
Lunch
- Pork braciote w/ chorizo
sausage filling
- Roasted poblano pepper
cream sauce
- Latin fried rice
- Coconut cake w/rum
caramel sauce

Thursday, May 14
Dinner
- closed

[Chez Leon Menu](#)
Call x3524 to make your
reservation.

Archives

[Fermilab Today](#)

[Result of the Week](#)

[Safety Tip of the
Week](#)

[ILC NewsLine](#)

Info

[Fermilab Today](#)

Learn more about antimatter in an eight-minute podcast by Keith Gollwitzer, head of Fermilab's antimatter production, <http://www.fnal.gov/pub/today/antimatter.mp3>

[Read more](#) information about antimatter in a *symmetrybreaking* article.

-- Tona Kunz

Photo of the Day

Tree planted in physicist's honor



On Monday, April 27, approximately 30 people gathered at the Fermilab soccer field to plant a tree in honor of Doug Moehs, a Fermilab physicist who lost a battle with cancer in November 2007. Larry Allen, from AD's Linac Group, submitted this photo of a plaque that was placed next to the tree.

In the News

Using crab cavities, KEKB breaks luminosity world record

From [Interactions.org](#), May 11, 2009

A team of accelerator physicists at the KEK High Energy Physics Laboratory in Tsukuba, Japan, has broken the world's luminosity record by utilizing new accelerator devices called "crab cavities." The team at the KEKB electron-positron collider, home to the world's highest luminosity particle accelerator, installed the first pair of these futuristic superconducting radio-frequency cavities over two years ago.

Until 2007, the electron and positron bunches in the KEKB accelerator beams crossed at a 22 milliradian angle. The crossing angle itself has been one of the novel features of KEKB design, providing an effective beam separation after collision without a high detector background level, and it has been successfully used to achieve its world luminosity record. To boost the luminosity further, however, it was necessary

hundreds of scientists that integrate their separate and remarkable skills.

To emphasize our mutual interdependence and in recognition of the roles that our partner institutions play in the Fermilab program, we will start next week to publish profiles of our partners in Fermilab Today. These institutions are supported by either DOE or NSF, in some cases, by foreign funding agencies. They provide many of the ideas for the physics program and together with us carry out construction and data analysis and train the future generation of physicists. We will highlight their essential contributions to the Fermilab program and the national HEP program.

Accelerator Update

May 8-11
- Four store provided ~32.5 hours of luminosity
- TeV quench during shot setup
- LRF4 repaired
- B0 QPM communication problems resolved

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

Announcements

Latest Announcements

[Winners of the Asian/Pacific Quiz contest: Week 1](#)

[English Country Dancing: May 17](#)

[Concerned about H1N1? Ask a question](#)

[Vanpool/Transit Lunch and Learn - May 13](#)

[Argentine Tango classes through May 13](#)

[Rapid Hardware Prototyping and Industrial Control Application Development Seminar offered May 13](#)

[Co-ed softball season begins May 13](#)

[French, Greek and other ethnic dances in John Parrish workshop, May 14](#)

is online at:

www.fnal.gov/today/

Send comments and

suggestions to:

today@fnal.gov

Visit the Fermilab

[home page](#)

to recover an effective head-on collision while retaining the crossing angle.

[Read more](#)

In the News

FY 2010 Department of Energy Office of Science request

From **AIP FYI**, May 8, 2009

Describing the Department of Energy as “a science and technology house,” Energy Secretary Steven Chu appeared at an afternoon briefing yesterday to describe the major components of the FY 2010 Department of Energy budget request. Saying that the \$26.4 billion request invests in the Obama Administration’s priorities of climate change policy, economic prosperity, national security and legacy, clean and secure energy, and science/discovery/innovation, Chu said that a “science core” was at the center of all the department’s activities.

The first of Secretary Chu’s exhibits set the stage for his remaining presentation. Entitled, as were all of the exhibits, “New Energy for America’s Economy,” it projected non-hydroelectric renewable generation beyond 2028. “On track to double production of renewable generation in next few years,” the exhibit stated. This production is predicted to be significantly higher than it would have been because of the economic stimulus act funding – in the case of wind generation, twice as much as it would have been in 2012.

[Read more](#)

[Toastmasters demonstration meeting - May 14](#)

[May is Motorcycle Safety Awareness Month - send us your photos - meeting May 19](#)

[Angels & Demons Lecture Night: "The Science Revealed" - May 21](#)

[Deadline for The University of Chicago Tuition Remission Program - May 22](#)

[NALWO - Brown Bag Lunch - Chinese Pottery - May 26](#)

[Are you Fit to a T? May 27 event](#)

[Nanotechnology Lecture: Crafting of Self-Assembling Materials for Medicine & Energy - Fermilab Arts Series](#)

[Science Adventures for children](#)

[Discounted rates at Grand Geneva Resort, Lake Geneva, WI](#)

[Summer co-ed volleyball league begins June 1](#)

[Registration for Users' Meeting is open](#)

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

[Discount tickets to "1964"...Beatles tribute - June 6](#)

[Susan Werner - singer/songwriter performs on Arts Series](#)

[SciTech summer camps](#)

[Recreation Department announces Club & League Fair drawing winners](#)

[Additional Activities](#)

[Submit an announcement](#)